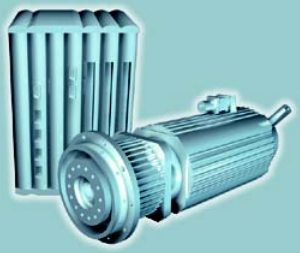
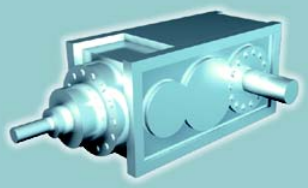
VECTOR

SEW EURODRIVE





Reductoren

A3.B01

Uitgave 06/2004
11225386 / NL

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1 De SEW-EURODRIVE-organisatie

Inleiding

SEW-EURODRIVE is wereldwijd een leidende onderneming op het gebied van elektrische aandrijftechniek. De aanwezigheid over de gehele wereld, het omvangrijke productenpakket en het brede dienstenpakket maken SEW tot de ideale partner bij de bouw van machines, installaties en bij het oplossen van complexe aandrijfvraagstukken.

Op basis van jarenlang opgedane ervaring en verzamelde kennis in de aandrijftechniek ontwikkelt, produceert en verkoopt SEW zelf alle aandrijvingen met componenten voor de vakgebieden werktuigbouwkunde, elektrotechniek en elektronica.

De hoofdvestiging van de firma bevindt zich te Bruchsal in Duitsland. In fabrieken in Duitsland, Frankrijk, Finland, USA, Brazilië en China worden de componenten van het SEW-Baukasten-systeem volgens de hoogste kwaliteitseisen vervaardigd. In assemblagebedrijven in meer dan 30 landen van de wereld worden deze op voorraad gehouden componenten in de omgeving van de klant, met een bijzonder korte levertijd en met gelijkblijvende hoge kwaliteit, tot de gewenste aandrijvingen samengebouwd. Verkoop, advies, service en onderdelenservice van SEW treft u wereldwijd in meer dan 50 landen aan.

Het productenpakket

- Motorreductoren, reductoren en motoren
  - Rechte (motor)reductoren
  - Vlakke (motor)reductoren
  - Kegelwiel(motor)reductoren
  - Wormwiel(motor)reductoren
  - Haakse Spiroplan®-motorreductoren
  - Planetaire motorreductoren
  - Industriële reductoren
  - Spelingsarme (motor)reductoren
  - Energiezuinige motoren
  - Remmotoren
  - Aandrijvingen voor elektrohangbanen
  - Stilstands-motorreductor
  - Poolomschakelbare motorreductoren
  - Aseptische motorreductoren

- Elektronisch geregelde aandrijvingen
  - Frequentieregelaars MOVITRAC®
  - Applicatieregelaars MOVIDRIVE®
  - Servoregelaars MOVIDYN®
  - Technologische opties en communicatieopties voor de regelaars
  - Asynchrone draaistroommotoren en motorreductoren
  - Asynchrone en synchrone servomotoren en servomotorreductoren
  - Gelijkspanningsmotoren, -remmotoren en motorreductoren
  - Asynchrone en synchrone lineaire motoren

- Componenten voor decentrale installatie
  - MOVIMOT®-motorreductoren met geïntegreerde frequentieregelaar
  - MOVI-SWITCH®-motorreductoren met geïntegreerde schakel- en beveiligingsfunctie
  - Veldverdelers, veldbusinterfaces

- Mechanische variatoren
  - Riemvariatoren VARIBLOC®
  - Wrijvingswielvariatoren VARIMOT®

- Explosiebeveiligde aandrijvingen volgens EU-richtlijn 94/9/EG voor categorie 2 en 3

- Dienstverlening
  - Technisch advies
  - Gebruikerssoftware
  - Opleiding en scholing
  - Omvangrijke technische documentatie
  - Wereldwijde service

Inhoud van de catalogus

In deze catalogus worden de SEW-reductoren en hun aandrijfzijdige componenten beschreven. Er worden aanwijzingen voor de selectie, bouwvormen, technische gegevens, keuzetabellen en maatbladen gegeven. Verdere informatie over reductoren, poolomschakelbare motorreductoren, variatoren, servomotorreductoren en gelijkspanningsmotorreductoren treft u aan in afzonderlijke catalogi.

Andere catalogi

- Motorreductoren
- Compact-tandwielkasten
- Spelingsarme planetaire reductoren
- MOVIMOT®-motorreductoren
- Servomotorreductoren
- Energiezuinige motoren DTE/DVE
- Poolomschakelbare motorreductoren
- Mechanische variatoren
- Aandrijvingen voor elektrohangbanen
- Explosiebeveiligde aandrijvingen
- Stilstands-motorreductor
- Planetaire motorreductoren
- Compact-tandwielkasten
- Aseptische aandrijvingen DAS

2 Productbeschrijving en typenoverzicht

2.1 Algemene aanwijzingen

Vermogens en koppels

De in de catalogus opgevoerde vermogens en koppels gelden voor de bouwvorm M1 en vergelijkbare bouwvormen, waarbij de ingaande trap niet volledig onder de olie loopt. Verder wordt uitgegaan van standaarduitvoering en standaardsmering van de motorreductoren en normale omgevingsinvloeden.

Geluid

De geluidsniveaus van alle SEW-reductoren liggen onder het niveau van de toelaatbare geluidssterkten, zoals die voor reductoren in de VDI-richtlijn 2159 en voor motoren in de EN 60034 zijn vastgelegd.

Lakken

SEW-reductoren worden standaard standaard behandeld met machinelak "blauwgrijs"/ RAL 7031 volgens DIN 1843. Op verzoek zijn afwijkende lakken mogelijk.

Oppervlaktebescherming en corrosiewering

Alle SEW-reductoren kunnen op wens ook in een speciale corrosiewerende uitvoering worden geleverd voor toepassingen in zeer vochtige en agressieve omgevingen.

Massa's

U dient er rekening mee te houden dat de in deze catalogus vermelde massa's van reductoren exclusief smeermiddel zijn. De massa's variëren, afhankelijk van de uitvoering van de reductor en de grootte van de reductor. De hoeveelheid smeermiddel is afhankelijk van de bouwvorm, zodat geen algemeen geldende opgave kan worden gedaan. Richtwaarden voor de hoeveelheid smeermiddel als afhankelijke van de bouwvorm treft u aan in het hoofdstuk "Aanwijzingen voor het construeren en het gebruik/Smeermiddelen". De juiste opgave van het gewicht treft u aan in de opdrachtbevestiging.

Gecombineerde reductoren

Uitzonderlijk lage toerentallen zijn te bereiken met gecombineerde reductoren. Hierbij wordt aan de ingaande zijde een rechte reductor aangebouwd als tweede reductor.

Het motorvermogen dient hierbij overeenkomstig het maximaal toelaatbare koppel van de reductor begrensd te worden.

Uitvoering met gereduceerde speling

Rechte-, vlakke- en kegelwielreductoren zijn vanaf de reductorgrootte 37 in de uitvoering met gereduceerde speling leverbaar. De hoekverdraaiingsspeling van deze reductoren is duidelijk kleiner als die van de standaard uitvoeringen, zodat positioneertaakstellingen met een grotere nauwkeurigheid gerealiseerd kunnen worden. De hoekverdraaiingsspeling wordt in de technische gegevens aangegeven in hoekminuten ['']. De maatbladen van de standaarduitvoering blijven onverminderd geldend.

NOCO®-Fluid tegen passingsroest

Alle opsteekmotoren worden standaard geleverd met NOCO®-Fluid, de pasta tegen passingsroest. U dient deze pasta te gebruiken volgens de aanwijzingen in de technische handleiding van de reductor. Service- en demontagewerkzaamheden worden hierdoor vereenvoudigd.

NOCO®-Fluid is veilig voor levensmiddelen overeenkomstig USDA-H1. U herkent de voor levensmiddelen-veilige NOCO®-Fluid aan het USDA-H1-merk op de verpakking.

RM-reductoren

Een speciale uitvoering van de rechte reductoren zijn de RM-reductoren met verlengde lagerpot aan de uitgaande as. Deze zijn speciaal ontworpen voor roerwerk-aandrijvingen en kunnen hoge radiale en axiale belastingen en buigende momenten opnemen. De overige gegevens zijn gelijk aan de standaard rechte reductoren. Speciale aanwijzingen voor de selectie van de RM-reductoren vindt u in het hoofdstuk "Het selecteren van een reductor/RM-reductor".

Internationale markten

Als lid van de AGMA (American Gear Manufacturers Association) levert SEW-EURODRIVE alle reductoren in overeenstemming met de AGMA-specificaties.

Aandrijfzijdige componenten

Voor SEW-reductoren zijn de volgende aandrijfzijdige componenten leverbaar:

- **Aandrijfzijdig deksel met ingaand aseinde, naar keuze met**
  - centreerrand
  - terugloopblokkering
  - motorfundatieplaat
- **Adapter**
  - voor de aanbouw van IEC- of NEMA-motoren naar keuze met terugloopblokkering
  - voor de aanbouw van servomotoren met een vierkante flens
  - met beveiligingsslipkoppeling naar keuze met toerental- of slipbewaking
  - met hydraulische aanloopkoppeling ook met platenrem of terugloopblokkering

Motorbasis

Een motorbasis is een aandrijfgroep bestaande uit een kegelwielreductor, hydraulische aanloopkoppeling en een elektromotor. Deze zijn kant en klaar op een torsiestijf montageframe bevestigd.

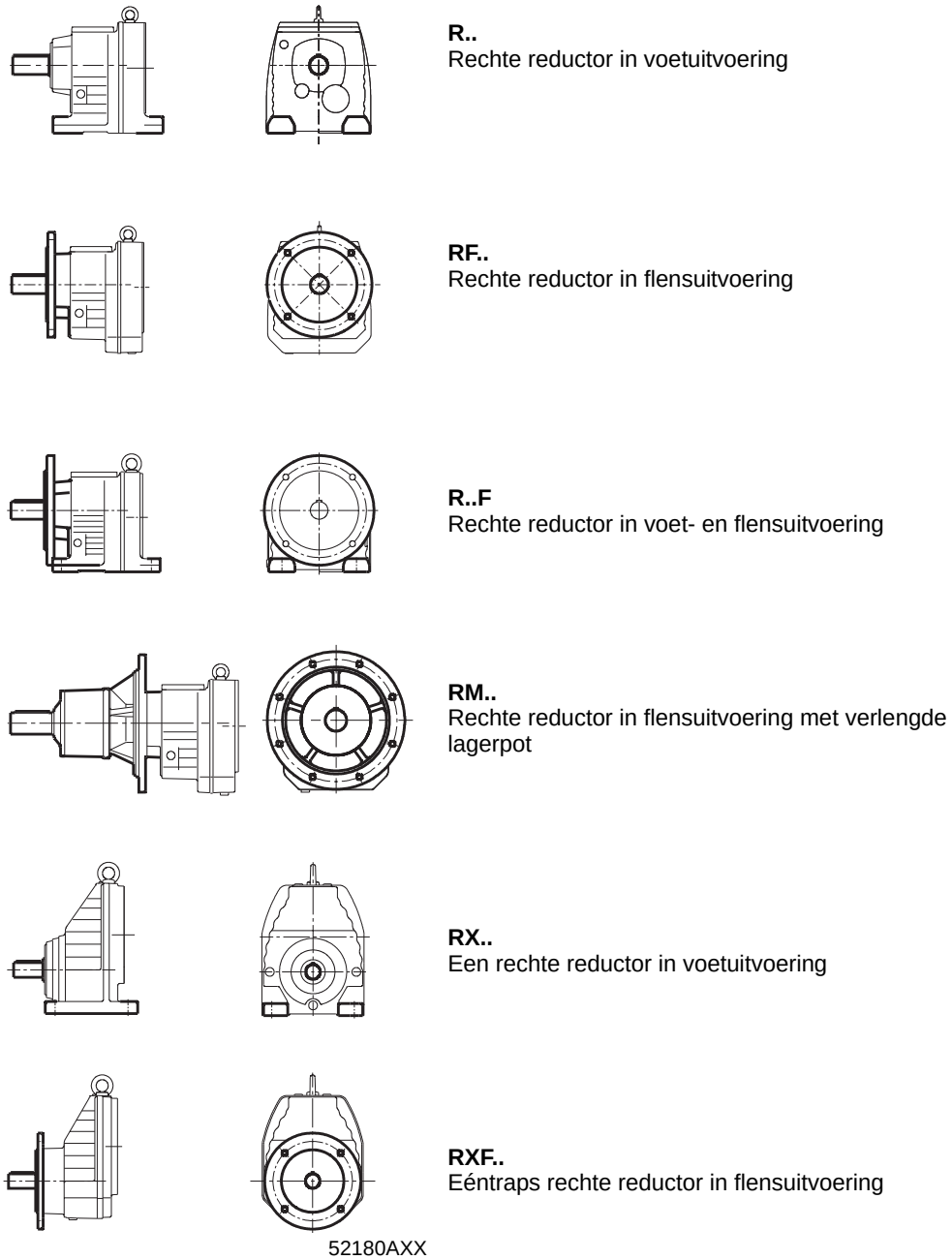
Naar keuze met:

- reactiearm
- mechanisch thermisch beveiligingsvoorziening
- contactloze thermische beveiligingsvoorziening

2.2 Mogelijke uitvoeringen van de SEW-reductoren

Rechte reductoren

Rechte reductoren kunnen in de volgende uitvoeringen worden geleverd:



R..
Rechte reductor in voetuitvoering

RF..
Rechte reductor in flensuitvoering

R..F
Rechte reductor in voet- en flensuitvoering

RM..
Rechte reductor in flensuitvoering met verlengde lagerpot

RX..
Een rechte reductor in voetuitvoering

RXF..
Eéntraps rechte reductor in flensuitvoering

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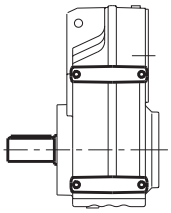
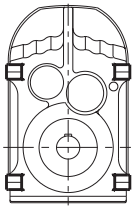
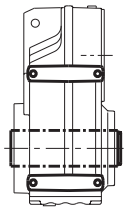
Vlakke reductoren

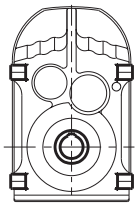
Vlakke reductoren kunnen in de volgende uitvoeringen geleverd worden:





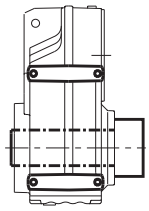
F..
Vlakke reductor in voetuitvoering

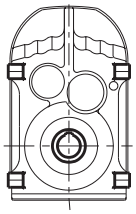




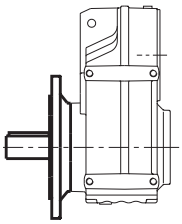
FA..B
Vlakke reductor in voetuitvoering met holle as

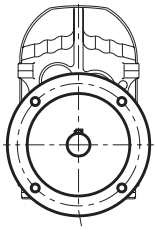
FV..B
Vlakke reductor in voetuitvoering met holle as en splinesvertanding volgens DIN 5480



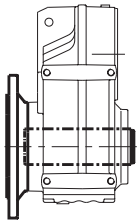


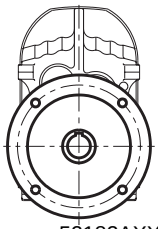
FH..B
Vlakke reductor in voetuitvoering met holle as en krimpschijf





FF..
Vlakke reductor in flensuitvoering B5





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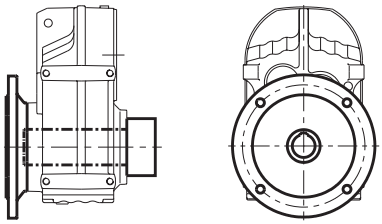
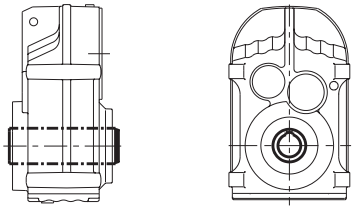
FAF
Vlakke reductor in flensuitvoering B5 met holle as

FVF
Vlakke reductor in flensuitvoering B5 met holle as en splinesvertanding volgens DIN 5480

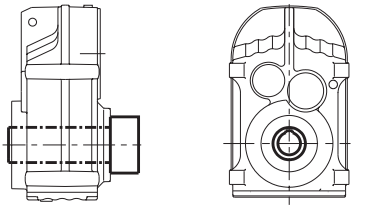


FHF..
Vlakke reductor in flensuitvoering B5 met holle as en krimpschijf



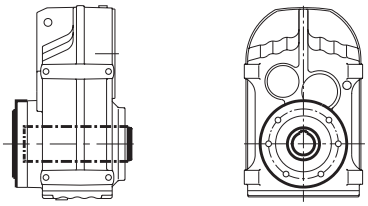
FA..
Vlakke reductor met holle as

FV..
Vlakke reductor met holle as en splinesvertanding volgens DIN 5480



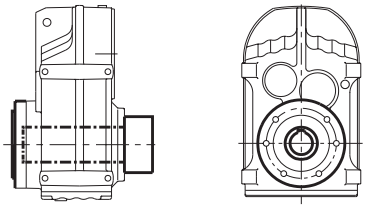
FH..
Vlakke reductor met holle as en krimpschijf

FT..
Vlakke reductor met holle as en TorqLOC®-klemverbinding



FAZ..
Vlakke reductor in flensuitvoering B14 met holle as

FVZ..
Vlakke reductor in flensuitvoering B14 met holle as en splinesvertanding volgens DIN 5480



FHZ..
Vlakke reductor in flensuitvoering B14 met holle as en krimpschijf

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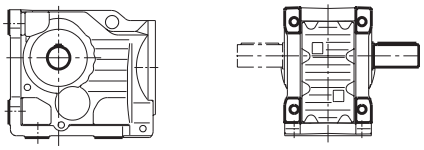
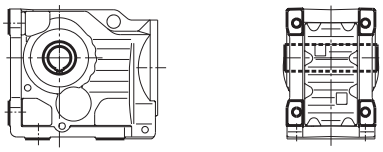
Kegelwiel-reductoren

De kegelwielreductoren kunnen in de volgende uitvoeringen worden geleverd:

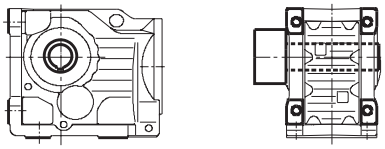


K..
Kegelwielreductoren in voetuitvoering

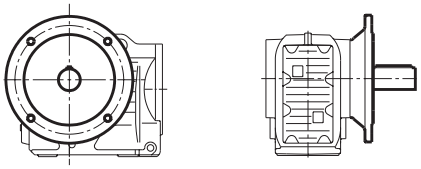


KA..B
Kegelwielreductor in voetuitvoering met holle as

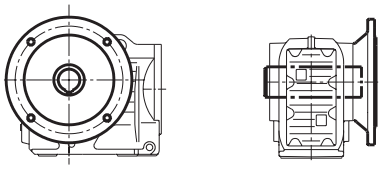
KV..B
Kegelwielreductor in voetuitvoering met holle as en splinesvertanding volgens DIN 5480



KH..B
Kegelwielreductor in voetuitvoering met holle as en krimpschijf



KF..
Kegelwielreductor in flensuitvoering B5



KAF..
Kegelwielreductor in flensuitvoering B5 met holle as

KVF..
Kegelwielreductor in flensuitvoering B5 met holle as en splinesvertanding volgens DIN 5480

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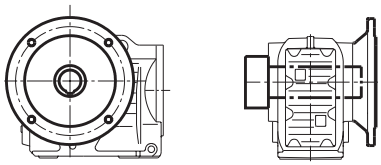
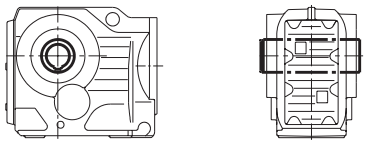
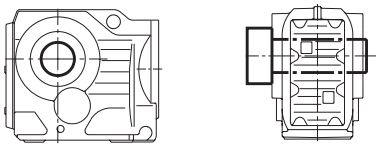


KHF..
Kegelwielreductor in flensuitvoering B5 met holle as en krimpschijf



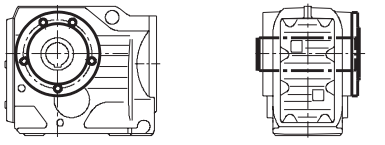
KA..
Kegelwielreductor met holle as

KV..
Kegelwielreductor met holle as en splinesvertanding volgens DIN 5480



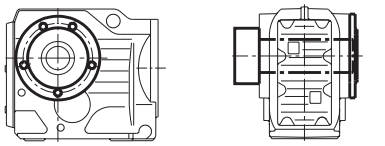
KH..
Kegelwielreductor met holle as en krimpschijf

KT..
Kegelwielreductor met holle as en TorqLOC®-klemverbinding



KAZ..
Kegelwielreductor in flensuitvoering B14 met holle as

KVZ..
Kegelwielreductor in flensuitvoering B14 met holle as en splinesvertanding volgens DIN 5480



KHZ..
Kegelwielreductor in flensuitvoering B14 met holle as en krimpschijf

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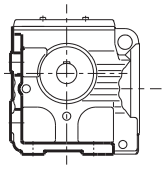
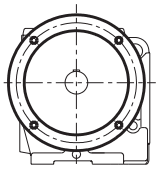
Wormwiel-reductoren

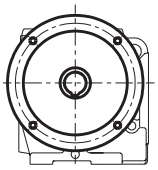
Wormwielreductoren kunnen in de volgende uitvoeringen worden geleverd:



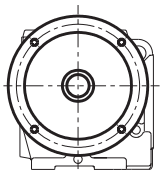
S..
Wormwielreductor in voetuitvoering



SF..
Wormwielreductor in flensuitvoering B5



SAF..
Wormwielreductor in flensuitvoering B5 met holle as



SHF..
Wormwielreductor in flensuitvoering B5 met holle as en krimpschijf

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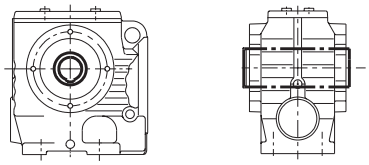
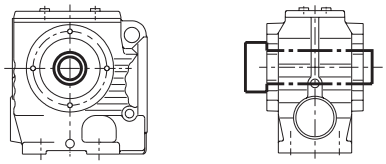
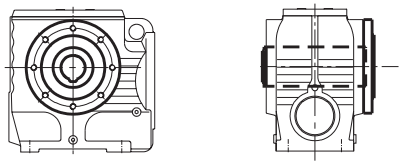


SA..
Wormwielreductor met holle as

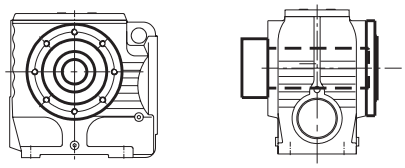


SH..
Wormwielreductor met holle as en krimpschijf

ST..
Wormwielreductor met holle as en TorqLOC®-klemverbinding



SAZ..
Wormwielreductor in flensuitvoering B14 met holle as



SHZ..
Wormwielreductor in flensuitvoering B14 met holle as en krimpschijf

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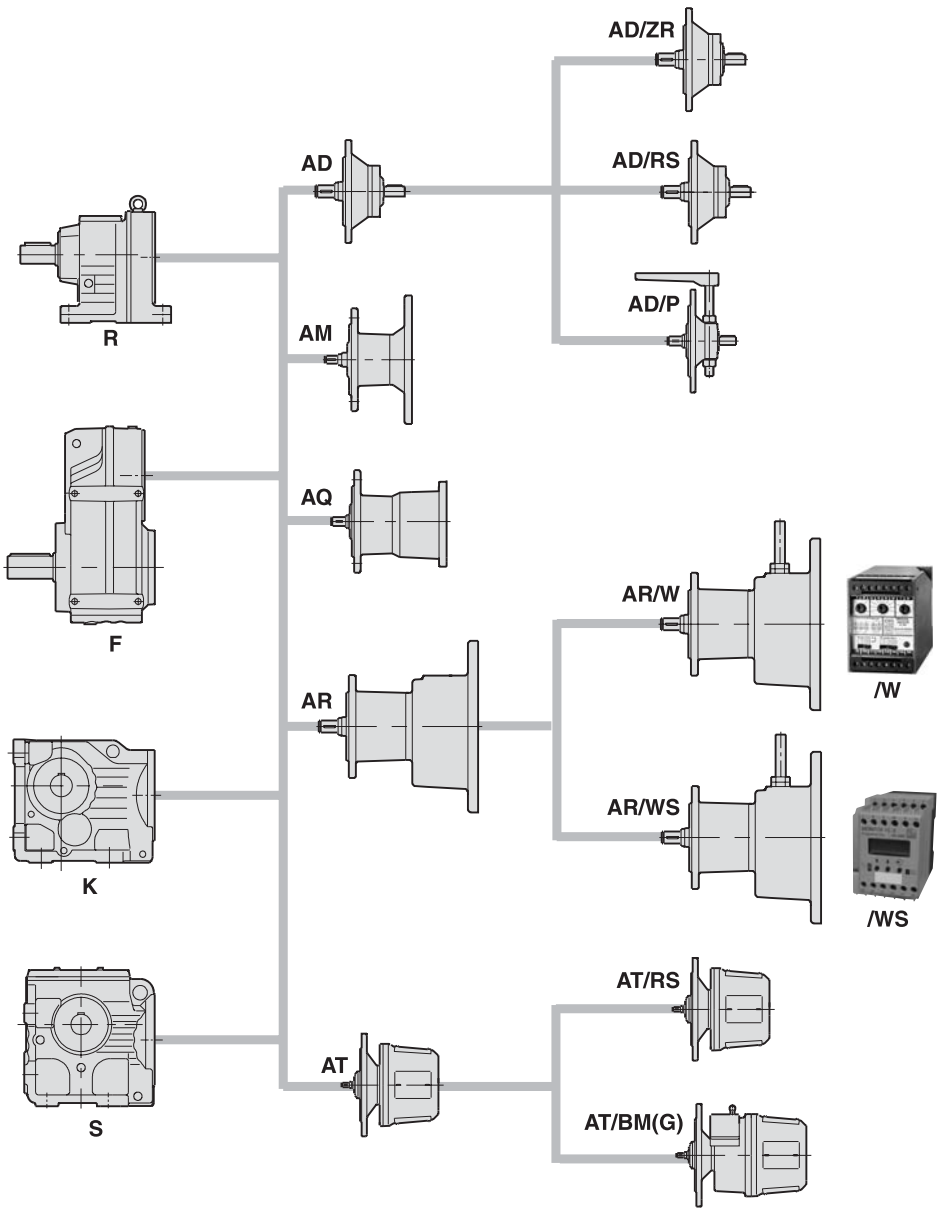
Aandrijfzijdige componenten



Afbeelding 1: overzicht aandrijfzijdige componenten

AD	Aandrijfzijdig deksel	AR/W	Adapter met slipkoppeling en toerentalbewaking
AD/ZR	Aandrijfzijdig deksel met centreerrand	AR/WS[1)]	Adapter met slipkoppeling en slipbewaking
AD/RS	Aandrijfzijdig deksel met terugloopblokkering	/W	Toerentalbewakingsrelais
AD/P	Aandrijfzijdig deksel met motorfundatieplaat	/WS	Slipbewakingsrelais
AM	adapter voor de aanbouw van IEC/NEMA-motoren	AT	Adapter met hydraulische aanloopkoppeling
AQ	Adapter voor de aanbouw van servomotoren	AT/RS	Adapter met hydraulische aanloopkoppeling en terugloopblokkering
AR	Adapter met slipkoppeling	AT/BM(G)	Adapter met hydraulische aanloopkoppeling en platenrem

1) Alleen in combinatie met variator VARIBLOC®

2.3 Typeaanduiding van reductoren en opties

Rechte reductoren

RX..	eentraps voetuitvoering
RXF..	eentraps flensuitvoering
R..	voetuitvoering
R..F	voet/flensuitvoering
RF..	flensuitvoering
RM..	flensuitvoering met verlengde lagerpot

Vlakke reductoren

F..	voetuitvoering
FA..B	voetuitvoering en holle as
FH..B	voetuitvoering en holle as met krimpschijf
FV..B	voetuitvoering en holle as met splinesvertanding volgens DIN 5480
FF..	flensuitvoering B5
FAF..	flensuitvoering B5 met holle as
FHF..	flensuitvoering B5 met holle as en krimpschijf
FVF..	flensuitvoering B5 met holle as en splinesvertanding volgens DIN 5480
FA..	holle as
FH..	opsteekuitvoering met krimpschijf
FT..	holle as met TorqLOC®-klemverbinding
FV..	opsteekuitvoering met splinesvertanding volgens DIN 5480
FAZ..	flensuitvoering B14 met holle as
FHZ..	flensuitvoering B14 met holle as en krimpschijf
FVZ..	flensuitvoering B14 met holle as en splinesvertanding volgens DIN 5480

Kegelwielreductoren

K..	voetuitvoering
KA..B	voetuitvoering en holle as
KH..B	voetuitvoering en holle as met krimpschijf
KV..B	voetuitvoering en holle as met splinesvertanding volgens DIN 5480
KF..	flensuitvoering B5
KAF..	flensuitvoering B5 met holle as
KHF..	flensuitvoering B5 met holle as en krimpschijf
KVF..	flensuitvoering B5 met holle as en splinesvertanding volgens DIN 5480
KA..	holle as
KH..	opsteekuitvoering met krimpschijf
KT..	holle as met TorqLOC®-klemverbinding
KV..	opsteekuitvoering met splinesvertanding volgens DIN 5480
KAZ..	flensuitvoering B14 met holle as

KHZ..	flensuitvoering B14 met holle as en krimpschijf
KVZ..	flensuitvoering B14 met holle as en splinesvertanding volgens DIN 5480

Wormwielreductoren

S..	voetuitvoering
SF..	flensuitvoering B5
SAF..	flensuitvoering B5 met holle as
SHF..	flensuitvoering B5 met holle as en krimpschijf
SA..	Holle as
SH..	opsteekuitvoering met krimpschijf
ST..	holle as met TorqLOC®-klemverbinding
SAZ..	flensuitvoering B14 met holle as
SHZ..	flensuitvoering B14 met holle as en krimpschijf

Opties voor de reductoren serie R, F en K

/ R	met gereduceerde speling

Optie voor K- en S-reductoren

/T	met reactiearm

Opties voor de reductoren serie F

/G	met rubber buffer

2.4 Typeaanduiding aandrijfzijdige componenten

Adapters

AM..	Adapter voor de aanbouw van IEC/NEMA-motoren	
	../RS	..en terugloopblokkering
AQ..	Adapter voor de aanbouw van servomotoren	
	AQA	met spiebaan
	AQH	met klemringnaaf
AR..	Adapter met slipkoppeling	
	../W	..en toerentalbewaking
	../WS	..en slipbewaking
AT ..	Adapter met hydraulische aanloopkoppeling	
	../RS	..en terugloopblokkering
	../BM(G)	..en platenrem
	../HF	..met vastzetbare handremlichting
	../HR	..met zelf terugspringende handremlichting

Aandrijfzijdig deksel

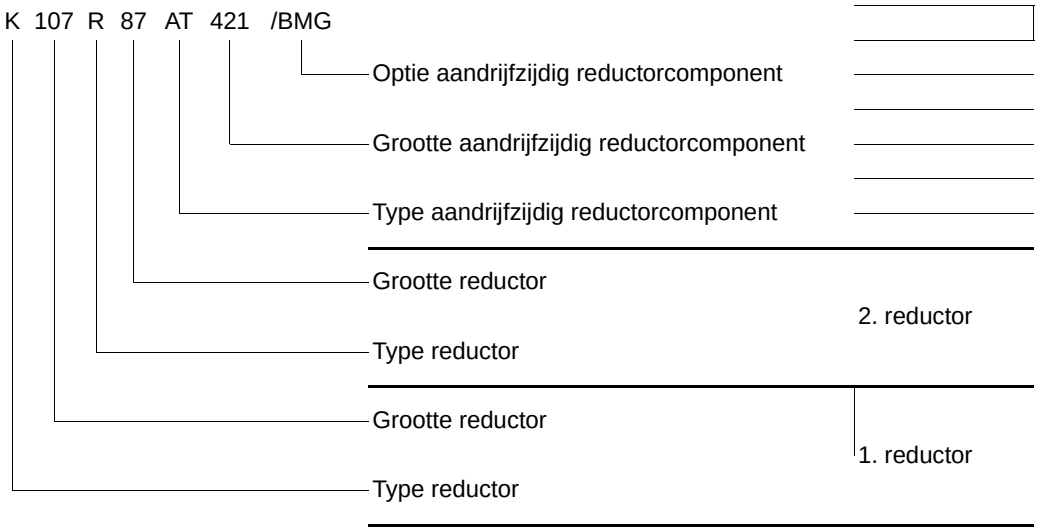
AD ..	Aandrijfzijdig deksel	
	../P	..met motorfundatieplaat
	../RS	..en terugloopblokkering
	../ZR	..met centreerrand

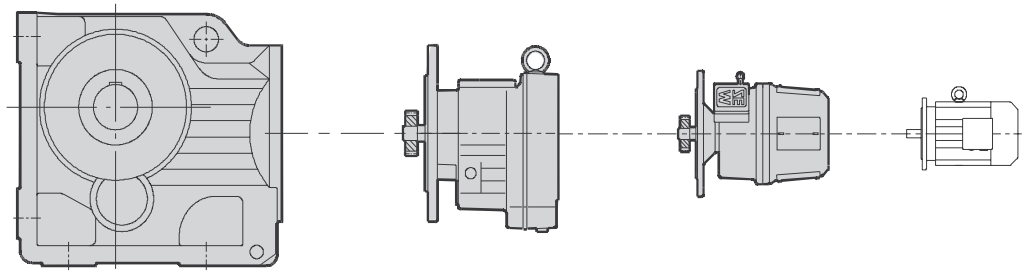
2.5 Typeaanduidingen motorbasis

MK..	Motorbasis	
	../MTS	Mechanisch-thermische bewakingsunit
	../BTS	Aanrakingsvrije thermische bewakingsunit
	../T	Reactiearm

2.6 Voorbeeld voor de typeaanduiding van een reductor

De typeaanduiding van de reductor wordt steeds vanaf de reductorzijde opgebouwd. Een gecombineerde kegelwielreductor met hydraulische aanloopkoppeling heeft bijvoorbeeld de volgende typeaanduiding:





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Afbeelding 2: voorbeeld voor de typeaanduiding

Overige voorbeelden:

- RF 97 AD 3 /P
  - Type reductor: RF rechte reductor in flensuitvoering
  - Reductorgrootte: 97
  - Aandrijfzijdige reductorcomponent: AD3/P aandrijfzijdig deksel met motorfundatieplaat grootte 3

- FH 47 /R /G AQH 100/3
  - Type reductor: FH vlakke reductor met holle as en krimpschijf
  - Reductorgrootte: 47
  - Optie reductor: /R uitvoering met gereduceerde speling
  - Optie reductor: /G rubber buffer
  - Aandrijfzijdige reductorcomponent: AQH 100/3 adapter voor het aanbouwen van servomotoren met klemringnaaf grootte 100/3

2.7 Explosiebeveiliging volgens ATEX

Geldigheidsgebied

Met de EU-richtlijn 94/9/EG, ook ATEX genoemd wordt de explosiebeveiliging voor alle soorten apparatuur voor de Europese markt nieuw geregeld. Deze richtlijn geldt zodoende ook voor reductoren. De EU-richtlijn 94/9/EG is vanaf 01.07.2003 zonder beperkingen geldig voor de toepassing van reductoren binnen de Europese Unie. Andere Europese landen, bijvoorbeeld Zwitserland, hebben zich ondertussen aan deze regelgeving geconformeerd.

Omvang

SEW-EURODRIVE levert explosiebeveiligde reductoren alleen nog overeenkomstig het betreffende ATEX-voorschrift. Dit geldt ook voor opties en accessoires in explosiebeveiligde uitvoering.

Explosiebeveiligde reductoren zijn afhankelijk van uitvoering en dimensionering geschikt voor:

- omgevingen met explosiegevaar door gas, Zone 1 of 2,
- omgevingen met explosiegevaar door stof, Zone 21 of 22.

SEW-EURODRIVE levert motorreductoren en motoren van de categorieën:

- II2G
- II2D
- II3GD
- II3D

voor toepassing in zones 1, 21, 2 en 22.

Solo-reductoren met aandrijfzijdige componenten zijn leverbaar overeenkomstig de volgende categorieën:

Reductoren met adapters AM en AQA, en aandrijfzijdig deksel AD

- II2GD

voor toepassing in zones 1, 21, 2 en 22.

Reductoren met adapter AR

- II3GD

voor toepassing in zones 1, 21, 2 en 22.

De adapters AQH en AT, evenals aandrijvingen op motorbases zijn niet overeenkomstig ATEX-voorschrift leverbaar.

Verdere documentatie

De systeembeschrijving "Explosiebeveiligde aandrijvingen volgens EU-richtlijn 94/9/EG" en de gelijknamige brochure uit de serie "Aandrijftechniek in de praktijk" informeren u grondig over dit onderwerp.

Voor uitgebreide informatie over de explosiebeveiligde producten van SEW-EURODRIVE dient u de catalogus "Explosiebeveiligde aandrijvingen" en de catalogus "Mechanische variatoren" te raadplegen.

2.8 Corrosiewering en oppervlaktebescherming

Algemeen

Voor het gebruik van reductoren onder bijzondere klimatologische of milieu-omstandigheden biedt SEW-EURODRIVE optioneel de oppervlaktebescherming OS aan.

Als uitbreiding hierop zijn nog extra beschermingsvoorzieningen voor de uitgaande assen mogelijk.

Oppervlaktebescherming OS

In plaats van de standaard oppervlaktebescherming zijn reductoren optioneel leverbaar met de oppervlaktebescherming OS1, OS2 of OS3. In uitbreiding op OS1, OS2 en OS3 kan als extra nog de speciale voorziening Z worden uitgevoerd. De speciale voorziening Z houdt in dat grote verdiepingen in de contouren vóór het aanbrengen van de lak met kit worden gevuld.

Oppervlaktebescherming	Laagopbouw	Laagdikte [µm]	Geschikt voor
Standaard	1 × dompelgrondlak 1 × eencomponent-deklak	ca. 50-70	• normale omgevingsinvloeden • relatieve luchtvochtigheid onder 90% • oppervlaktetemperatuur tot max. 120°C • corrosiviteitscategorie C1[1)]
OS1	1 × dompelgrondlak 1 × tweecomponent-grondlaag 1 × tweecomponent-aflak	ca. 120-150	• Geringe milieubelasting • relatieve luchtvochtigheid max. 95% • oppervlaktetemperatuur tot max. 120°C • corrosiviteitscategorie C2[1)]
OS2	1 × dompelgrondlak 2 × tweecomponent-grondlaag 1 × tweecomponent-aflak	ca. 170-210	• Matige milieubelasting • relatieve luchtvochtigheid tot 100% • oppervlaktetemperatuur tot max. 120°C • corrosiviteitscategorie C3[1)]
OS3	1 × dompelgrondlak 2 × tweecomponent-grondlaag 2 × tweecomponent-aflak	ca. 220-270	• Grote milieubelasting • relatieve luchtvochtigheid tot 100% • oppervlaktetemperatuur tot max. 120°C • corrosiviteitscategorie C4[1)]

1) volgens DIN EN ISO 12 944-2

Bijzondere beschermingsvoorzieningen

Voor het gebruik onder sterke milieubelasting of voor bijzonder belastende toepassingen kunnen voor de uitgaande assen van motorreductoren als optie bijzondere beschermingsvoorzieningen worden toegepast.

Maatregel	Beschermingsprincipe	Geschikt voor
Kanisil-oppervlaktelaag	Oppervlaktelaag bij het loopvlak van de askeerring	Sterke milieubelasting en in combinatie met Viton-askeerring
Uitgaande as van roestvast staal	Oppervlaktebescherming door hoogwaardig materiaal	Bijzonder belastende toepassingen met betrekking tot oppervlaktebescherming

NOCO®-Fluid

SEW-EURODRIVE levert bij elke reductor met een holle as standaard het corrosiewerende en glijmiddel NOCO®-Fluid. U dient NOCO®-Fluid bij het monteren van de reductor met holle as te gebruiken. U vermindert daarmee eventueel optredende passingsroest en vergemakkelijkt latere demontage.

Verder is NOCO®-Fluid ook geschikt voor het beschermen van bewerkte metalen oppervlakken die niet tegen corrosie beschermd zijn. Dat zijn bijvoorbeeld delen van aseinden of flenzen. U kunt NOCO®-Fluid ook in grotere verpakkingshoeveelheden bij Vector Aandrijftechniek bestellen.

NOCO®-Fluid is veilig voor levensmiddelen overeenkomstig USDA-H1. U herkent de voor levensmiddelen-veilige NOCO®-Fluid aan het USDA-H1-merk op de verpakking.

2.9 Langdurige opslag

Uitvoering

U kunt reductoren ook in de uitvoering "langdurige opslag" bestellen. Aan het smeermiddel van de reductor wordt dan een VCI-corrosiewerend middel (volatile corrosion inhibitors) toegevoegd. Zonder verdere vermelding wordt de reductor met de oppervlaktebescherming OS1 uitgevoerd. Desgewenst kunt u in plaats van OS1 ook OS2 of OS3 bestellen.

Oppervlaktebescherming	Geschikt voor
OS1	Geringe milieubelasting
OS2	Matige milieubelasting
OS3	Grote milieubelasting

Olievulling

Let vanwege de olievulling op de volgende aanwijzingen:

- **Minerale olie (CLP) en synthetische olie (CLP HC):** de reductoren krijgen standaard overeenkomstig de opgegeven bouwvorm (M1 ... M6) de bedrijfsklare olievulling.
- **Synthetische olie (CLP PG):** de reductoren worden deels met verhoogd olieniveau geleverd. U dient voor de inbedrijfstelling het olieniveau te corrigeren overeenkomstig de vereiste bouwvorm (M1 ... M6). De olievulhoeveelheden voor de reductoren worden in hoofdstuk 8,1 "Smeermiddelen" vermeld.

De reductoren dienen tot de inbedrijfstelling afgesloten te blijven zodat het VCI-corrosiewerende middel niet verdampt.

Controleer in elk geval het olieniveau voor u de reductor in bedrijf neemt!

Opslag-omstandigheden

Raadpleeg bij langdurige opslag de in de volgende tabel vermelde opslagvoorwaarden:

Klimaatzone	Verpakking[1)]	Opslagplaats	Opslagduur
Gematigd (Europa, USA, Canada, China en Rusland met uitzondering van de tropische gebieden)	In dozen verpakt met droogmiddel en vochtigheidsindicator in folie geseald.	Overdekt, beschermd tegen regen, trillingsvrij.	Maximaal drie jaar bij regelmatige controle van verpakking en vochtigheidsindicator (rel. luchtvochtigheid < 50%).
	Open	Overdekt en gesloten bij constante temperatuur en luchtvochtigheid (5°C < ϑ < 60°C, < 50% relatieve luchtvochtigheid). Geen plotselinge temperatuurschommelingen en gecontroleerde ventilatie met filters (vuil- en stofvrij). Geen agressieve dampen en geen trillingen.	Twee jaar en langer bij regelmatige inspectie. Bij het inspecteren controleren op reinheid en mechanische schade. Controleer of de corrosiewering intact is.
Tropisch (Azië, Afrika, Midden- en Zuid-Amerika, Australië, Nieuw-Zeeland met uitzondering van de gematigde gebieden)	In dozen verpakt met droogmiddel en vochtigheidsindicator in folie geseald. Tegen insectenvraat en schimmelvorming door chemische behandeling beschermd.	Overdekt, beschermd tegen regen en sneeuw, trillingsvrij.	Maximaal drie jaar bij regelmatige controle van verpakking en vochtigheidsindicator (rel. luchtvochtigheid < 50%).
	Open	Overdekt en gesloten bij constante temperatuur en luchtvochtigheid (5°C < ϑ < 60°C, < 50% relatieve luchtvochtigheid). Geen plotselinge temperatuurschommelingen en gecontroleerde ventilatie met filters (vuil- en stofvrij). Geen agressieve dampen en geen trillingen. Bescherming tegen insectenvraat.	Twee jaar en langer bij regelmatige inspectie. Bij het inspecteren controleren op reinheid en mechanische schade. Controleer of de corrosiewering intact is.

1) De verpakking dient geleverd te worden door een deskundig bedrijf en moet van een kwaliteit zijn die uitdrukkelijk geschikt is voor de betreffende omstandigheden.

3 Het selecteren van aandrijvingen

3.1 Uitgebreide documentatie

Aanvullend op de informatie in deze catalogus biedt SEW-EURODRIVE u omvangrijke documentatie over het volledige vakgebied van de elektrische aandrijftechniek. Dit zijn in de eerste plaats de publicaties uit de serie "Aandrijftechniek in de praktijk" en de handboeken en catalogi over de elektronisch geregelde aandrijvingen. Verder vindt u op de internetsite van SEW-EURODRIVE (http://www.sew-eurodrive.de) een groot deel van onze documentatie in verschillende talen om te downloaden. Hieronder wordt een lijst gegeven van de voor het selecteren interessante, uitgebreide documentatie. Deze publicaties kunnen bij SEW worden besteld.

Catalogus Motorreductoren

De catalogus "Motorreductoren" verstrekt informatie ten aanzien van

- aanwijzingen voor het selecteren
- technische gegevens
- keuzetabellen
- maatbladen

gedetailleerd over de keuze evenals de werkingsprincipes van SEW-motorreductoren, draaistroom(rem)motoren en de hierbij behorende zaken.

Technische handleidingen

In de SEW-technische handleiding "Reductoren" alsook in de SEW-technische handleiding "Aanloop- en slipkoppelingen" vindt u naast uitgebreide veiligheidsaanwijzingen informatie over

- opstelling
- montage
- demontage
- inbedrijfstelling
- inspectie
- onderhoud
- foutenanalyse

van SEW-reductoren en van aandrijfzijdige componenten en toebehoren.

Aandrijftechniek in de praktijk

- Het selecteren van aandrijvingen
- Geregelde draaistroomaandrijvingen
- Servoaandrijvingen
- EMC in de aandrijftechniek
- Explosiebeveiligde aandrijvingen volgens EU-richtlijn 94/9/EG

Mechanische remmen

- Handboek "Remmen en toebehoren"

3.2 Gegevens voor het selecteren van een aandrijving

Om de componenten voor uw aandrijving eenduidig te kunnen bepalen, dienen bepaalde gegevens bekend te zijn. Dit zijn:

Gegevens voor het selecteren van de aandrijving			Uw opgave
n_{amin}	Minimum uitgaand toerental	[r/min]	
n_{amax}	Maximum uitgaand toerental	[r/min]	
P_a bij n_{amin}	Uitgaand vermogen bij minimum uitgaand toerental	[kW]	
P_a bij n_{amax}	Aandrijfvermogen bij maximum uitgaand toerental	[kW]	
M_a bij n_{amin}	Uitgaand koppel bij minimum uitgaand toerental	[Nm]	
M_a bij n_{amax}	Uitgaand koppel bij maximum uitgaand toerental	[Nm]	
F_{Ra}	Radiale kracht aan de uitgaande as van de reductor	[N]	
F_{Aa}	Axiale kracht aan de uitgaande as van de reductor	[N]	
n_e	Ingaand toerental	[r/min]	
P_m bij n_e	ingaand vermogen = motorvermogen	[Nm]	
M_e bij n_e	ingaand koppel	[Nm]	
$M_{e\ max}$	maximum ingaand koppel	[Nm]	
F_{Re}	Radiale kracht aan de ingaande as van de reductor	[N]	
F_{Ae}	Axiale kracht aan de ingaande as van de reductor	[N]	
J_{Last}	Aan te drijven massatraagheidsmoment	[10^{-4} kgm^2]	
R, F, K, S, W M1 - M6	Vereiste reductorvorm en bouwvorm (hoofdstuk Bouwvormen, Woelingsverliezen	-	
IP..	Vereiste beschermingsgraad	-	
ϑ_{omg}	Omgevingstemperatuur	[°C]	
H	Opstellingshoogte	[m b. NAP]	
S.., ..%ID	Bedrijfssoort en relatieve inschakelduur, alternatief kan ook het nauwkeurige lastspel gegeven worden	-	
Z	Schakelfrequentie, alternatief kan ook het nauwkeurige lastspel gegeven worden	[1/h]	
U_{rem}	Bedrijfsspanning van de rem (AT met rem)	[V]	
M_B	Vereist remkoppel (AT met rem)	[Nm]	
M_R	Slipkoppel (AR)	[Nm]	
Soort aandrijving	... elektromotor ... verbrandingsmotor ... hydraulische motor	-	

3.3 De volgorde bij het selecteren

Voorbeeld Het volgende stroomdiagram toont schematisch de volgorde bij het selecteren van een reductor met componenten aan de aandrijfzijde.

Noodzakelijke informatie over de aan te drijven machine
- technische gegevens en omgevingsinvloeden
- positioneernauwkeurigheid
- berekening van de bewegingscyclus

↓

Berekening van de relevante toepassingsgegevens
- statisch, dynamisch en generatief vermogen
- toerentallen
- koppels
- bewegingsdiagram

↓

Reductorkeuze
- bepaling van de grootte van de reductor, overbrengingsverhouding en uitvoering reductor
- controle van de positioneernauwkeurigheid
- controle van de belasting van de reductor ($M_{a\ max} \geq M_{a\ (t)}$)

↓

Keuze van componenten aan de ingaande aszijde
- bepaling van de aard van het component en de uitvoering
- bepaling van de grootte van het component
- controle van de belasting van het component

↓

Opties
- beveiligingsfuncties (-apparatuur, -voorzieningen)
- rem voor AT
- terugloopblokkering
- centreerrand
- motorfundatieplaat

↓

Controleren of aan alle eisen wordt voldaan.

4 Het selecteren van reductoren

4.1 Rendement van SEW-reductoren

Het rendement van reductoren wordt in hoofdzaak bepaald door wrijving in de vertanding en de lagers. U dient er rekening mee te houden dat het rendement bij het opstarten van een aandrijving altijd lager is dan het rendement bij het bedrijfstoerental. Zeer nadrukkelijk is dit het geval bij wormwielreductoren.

R-, F-, K-reductoren Bij rechte, vlakke, en kegelwielreductoren ligt het rendement, afhankelijk van het aantal tandwieltrappen, tussen 94% (3-traps) en 98% (1-traps).

S- reductoren De vertandingen van wormwielreductoren veroorzaken een hoog aandeel aan glijdende wrijving. Om die reden kunnen deze reductoren hogere vertandingsverliezen en dus lagere rendementen tonen dan de R-, F-, of K-reductoren.

Dit is afhankelijk van de volgende factoren:

- overbrengingsverhouding van de wormwieltrap
- ingaand toerental
- temperatuur van de reductor

De SEW-wormwielreductoren zijn ontworpen als gecombineerde tandwiel-wormwieloverbrenging en hebben om die reden een duidelijk beter rendement dan een pure wormwielreductor. Bij zeer grote overbrengingsverhoudingen van de wormwieltrap kan het rendement $\eta < 0{,}5$ worden.

Zelfremming Bij terugwerkende koppels aan wormwielreductoren is het rendement in achterwaartse richting $\eta' = 2 - 1/\eta$, dus duidelijk ongunstiger dan het rendement in voorwaartse richting η. Indien het rendement in drijvende richting $\eta \leq 0{,}5$ is, dan is de wormwielreductor zelfremmend. Enkele van de SEW-reductoren met de grootste overbrengingsverhouding zijn statisch zelfremmend, echter niet dynamisch zelfremmend. Wanneer de zelfremming technisch benut dient te worden gelieve u Vector Aandrijftechniek te raadplegen.

Inloopproces

Bij nieuwe wormwielreductoren zijn de tandflanken nog niet volledig glad. Daarom is tijdens het inloopproces de wrijvingshoek groter en daarmee het rendement lager dan tijdens later bedrijf. Dit effect wordt sterker naarmate de overbrengingsverhouding toeneemt. De volgende waarden dienen tijdens het inloopproces van het in de tabellen vermelde rendement afgetrokken te worden:

worm	i-bereik	η-reductie
1-gangig	ca. 50 ... 280	ca. 12%
2-gangig	ca. 20 ... 75	ca. 6%
3-gangig	ca. 20 ... 90	ca. 3%
4-gangig	-	-
5-gangig	ca. 6 ... 25	ca. 3%
6-gangig	ca. 7 ... 25	ca. 2%

Het inloopproces duurt normaal ca. 24 uur. Wormwielreductoren bereiken de in de lijst opgevoerde nominale rendementen wanneer:

- de reductor volledig ingelopen is,
- de reductor de nominale temperatuur bereikt heeft,
- met het voorgeschreven reductorsmeermiddel is gevuld en
- de reductor in het gebied van zijn nominale belasting werkt.

Woelingsverliezen

Bij bepaalde bouwvormen van reductoren (→ hoofdstuk "Bouwvormen en belangrijke gegevens bij bestelling") is de eerste trap volledig onder het smeermiddel gedompeld. Hier kunnen bij de grotere reductoren en bij een hoge omtreksnelheid van de eerste trap woelingsverliezen ontstaan die niet verwaarloosd mogen worden. U gelieve ons te raadplegen wanneer u dergelijke reductoren wilt gaan gebruiken.

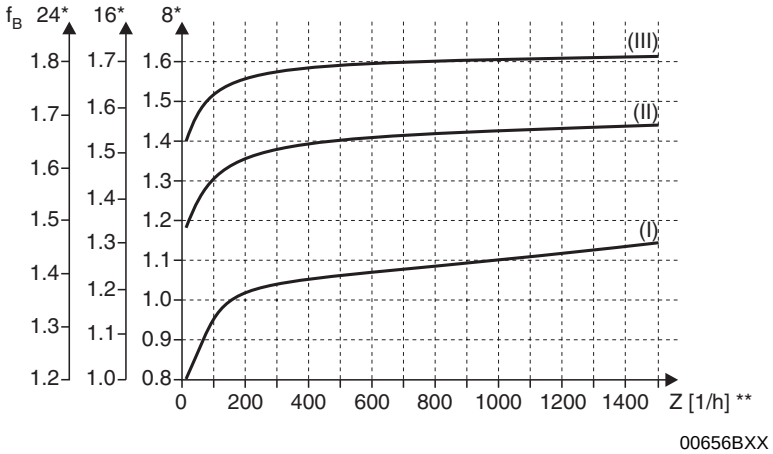
Indien mogelijk is het aan te bevelen de R-, K-, en S-reductor op te stellen in bouwvorm M1 om de woelingsverliezen klein te houden.

4.2 Bedrijfsfactor

Bepalen bedrijfsfactor

Met de invloed van het lastwerktuig op de reductor wordt door de bedrijfsfactor f_B met voldoende nauwkeurigheid rekening gehouden. De bedrijfsfactor wordt bepaald als afhankelijke van de bedrijfstijd per dag en van de schakelfrequentie Z. Daarbij wordt afhankelijk van de massaversnellingsfactor met drie verschillende stootgraden rekening gehouden. De voor uw toepassing juiste bedrijfsfactor kunt u uit afbeelding 3 aflezen. De uit dit diagram bepaalde bedrijfsfactor moet kleiner zijn dan of gelijk zijn aan de SEW-bedrijfsfactor volgens de keuzetabellen.

$$M_a \bullet f_b \leq M_{a\,max}$$



Afbeelding 3: bedrijfsfactor f_B

* Dagelijkse bedrijfsduur in uren/dag
** Schakelfrequentie Z: tot de schakelingen behoren alle aanloop- en remprocessen evenals omschakelingen van lage naar hoge toerentallen en omgekeerd.

Stootgraad

Er wordt onderscheid gemaakt tussen drie stootgraden:

(I) gelijkvormig, toelaatbare massaversnellingsfactor ≤ 0,2

(II) ongelijkvormig, toelaatbare massaversnellingsfactor ≤ 3

(III) sterk ongelijkvormig, toelaatbare massaversnellingsfactor ≤ 10

Massaversnellingsfactor

De massaversnellingsfactor wordt op de volgende wijze berekend:

$$\textbf{Massenbeschleunigungsfaktor} = \frac{\textbf{alle externe Massenträgheitsmomente}}{\textbf{Massenträgheitsmoment auf der Motorseite}}$$

"Alle externe massatraagheidsmomenten" zijn de massatraagheidsmomenten van het lastwerktuig en de reductor gereduceerd naar de motoras. Voor het reduceren naar de motoras wordt met de volgende formule gerekend:

$$J_X = J \times \left(\frac{n}{n_M}\right)^2$$

J_X = het op de motoras gereduceerde massatraagheidsmoment
J = massatraagheidsmoment betrokken op het uitgaand toerental van de reductor
n = uitgaand toerental van de reductor
n_M = motortoerental

"Massatraagheidsmoment aan de motorzijde" zijn de massatraagheidsmomenten van de motor en indien aanwezig, van de rem en de verzwaarde ventilator (Z-ventilator).

Bij een grote massaversnellingsfactor (>10), grote speling in de overbrengingselementen of grote radiale krachten kunnen bedrijfsfactoren f_B > 1,8 optreden. U gelieve ons dan te raadplegen.

Bedrijfsfactor: SEW-f_B

Het bepalen van het maximaal toelaatbare continue koppel $M_{a\ max}$ en de daaruit afgeleide bedrijfsfactor $f_B = M_{a\ max}/M_a$ is niet genormaliseerd en sterk fabrikantafhankelijk. De SEW-reductoren bieden met een SEW-bedrijfsfactor f_B = 1 reeds de hoogste mate aan veiligheid en betrouwbaarheid voor wat betreft de oneindige levensduur op vermoeiingssterkte (uitzondering: wormwielslijtage bij wormwielreductoren). De SEW-bedrijfsfactor is onder omstandigheden niet vergelijkbaar met de opgaven van andere reductorfabrikanten. U gelieve ons in geval van twijfel te raadplegen.

Voorbeeld

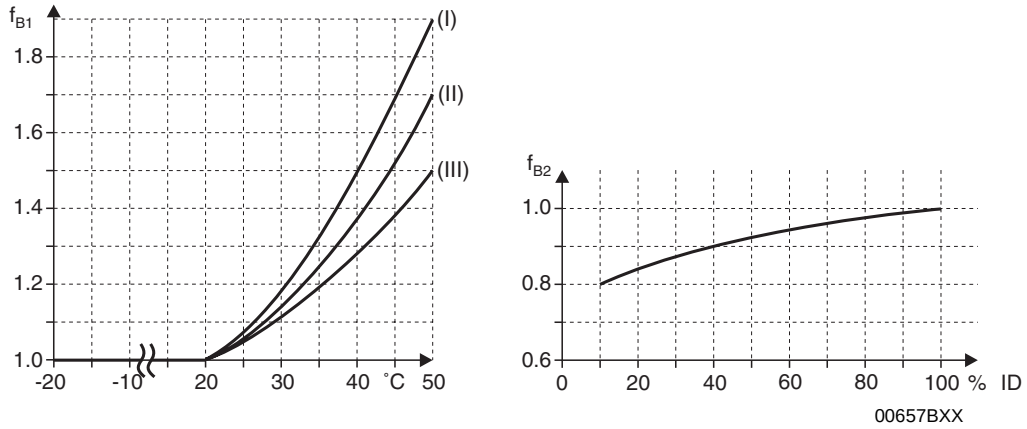
Massaversnellingsfactor 2,5 (stootgraad II), 14 bedrijfsuren/dag (aflezen bij 16 h/d) en 300 schakelingen/h leiden volgens afbeelding 3 tot de bedrijfsfactor f_B = 1,51.

Wormwiel-reductoren

Bij wormwielreductoren dient naast de bedrijfsfactor f_B uit afbeelding 3 nog met twee andere bedrijfsfactoren rekening te worden gehouden. Dit zijn:

- f_{B1} = bedrijfsfactor voor de omgevingstemperatuur
- f_{B2} = bedrijfsfactor vanuit de inschakelduur

De extra bedrijfsfactoren f_{B1} en f_{B2} kunnen aan de hand van de diagrammen van afbeelding 4 worden bepaald. Bij f_{B1} wordt op identieke wijze als bij f_B rekening gehouden met de stootgraad.



Afbeelding 4: extra bedrijfsfactoren f_{B1} en f_{B2}

$$\text{ID (\%)} = \frac{\text{Belastingstijd in min/h}}{60} \bullet 10($$

Bij temperaturen onder -20°C ($\rightarrow f_{B1}$) gelieve u Vector Aandrijftechniek te raadplegen.

De voor wormwielreductoren geldende totale bedrijfsfactor wordt als volgt berekend:

$f_{Btot} = f_B \bullet f_{B1} \bullet f_{B2}$

Voorbeeld

De reductor met de bedrijfsfactor f_B = 1,51 uit het vorige voorbeeld dient een wormwielmotorreductor te zijn.

Omgevingstemperatuur ϑ = 40°C $\rightarrow f_{B1}$ = 1,38 (aflezen bij stootgraad II)

Belastingstijd = 40 min/h $\rightarrow$ ID = 66,67% $\rightarrow f_{B2}$ = 0,95

De totale bedrijfsfactor bedraagt f_{Btot} = 1,51 • 1,38 • 0,95 = 1,98

4.3 Radiale en axiale krachten

Bepaling van de radiale kracht

Bij het vaststellen van de radiale kracht dient rekening gehouden te worden met de op het aseinde gemonteerde overbrengingselementen. Voor de verschillende overbrengingselementen dienen de volgende toeslagfactoren f_Z gehanteerd te worden.

Overbrengingselement	Toeslagfactor f_Z	Opmerkingen
tandwielen	1.15	< 17 tanden
Kettingwielen	1.40	< 13 tanden
Kettingwielen	1.25	< 20 tanden
Smalprofiel V-riemwielen	1.75	Invloed van de voorspankracht
Vlakke riemen	2.50	Invloed van de voorspankracht
Tandriemwielen	2.50	Invloed van de voorspankracht

De radiale kracht op de motor- of reductoras wordt dan op de volgende wijze berekend:

$$F_R = \frac{M_d \times 2000}{d_0} \times f_Z$$

F_R = radiale kracht in N
M_d = koppel in Nm
d_0 = nominale diameter van het aangebouwde overbrengingselement in mm
f_Z = toeslagfactor

Toelaatbare radiale kracht

De toelaatbare radiale krachten worden bepaald op basis van de nominale levensduur L_{H10} (volgens ISO 281) volgens de kogellagerberekening.

Voor bijzondere bedrijfsomstandigheden is op verzoek de bepaling van de nominale levensduur mogelijk op basis van de gemodificeerde levensduur L_{na}.

In de keuzetabellen van de motorreductoren worden de toelaatbare radiale krachten F_{Ra} opgegeven voor de uitgaande assen van voetreductoren met volle as. Voor andere uitvoeringen gelieve u ons te raadplegen.

De opgaven zijn gebaseerd op een krachtaangrijppositie in het midden van het aseinde (bij haakse reductoren gebaseerd op de A-zijdige uitgaande as). Voor de krachtaangrijphoek α en de draairichting is uitgegaan van de meest ongunstige posities.

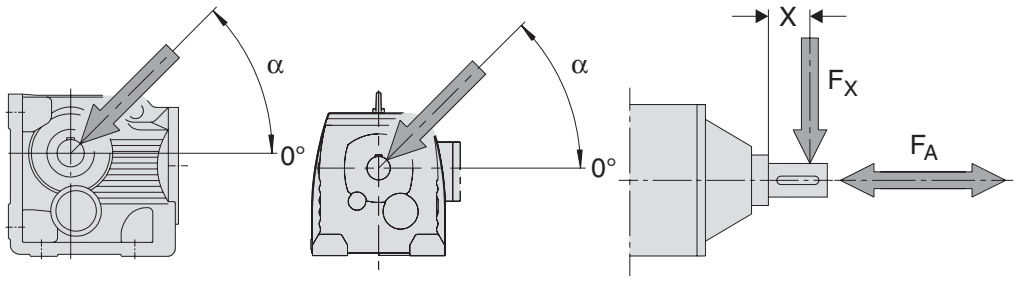
- Bij K- en S-reductoren in de bouwvorm M1 met kopvlakzijdige wandbevestiging is slechts 50% van F_{Ra} volgens de keuzetabellen toelaatbaar.
- Kegelwielreductoren K167 en K187 in de ruimtelijke posities M1 tot M4: bij bevestigingen van de reductor afwijkend van de weergave op de bouwvormbladen is maximaal 50% van de in de keuzetabellen vermelde waarde voor de radiale kracht van F_{Ra} toelaatbaar.
- Rechte reductoren in voet- en flensuitvoering (R..F): bij koppeloverdracht via de flensbevestiging is maximaal 50 % van de in de keuzetabellen vermelde radiale kracht F_{Ra} toelaatbaar.

Grotere toelaatbare radiale krachten

Door de inbouw van versterkte lagers, vooral bij R-, F-, en K-reductoren grotere krachten op de uitgaande as mogelijk. Uit berekening met de juiste krachtaangrijphoek α en de draairichting kan eveneens een grotere radiale kracht worden toegelaten. U gelieve in dit geval Vector Aandrijftechniek te raadplegen.

Definitie van de krachtaangrijping

De krachtaangrijping wordt overeenkomstig de volgende afbeelding gedefinieerd:



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Afbeelding 5: definitie van de krachtaangrijping

F_X = toelaatbare radiale kracht ter plaatse van x [N]

F_A = toelaatbare axiale kracht [N]

Toelaatbare axiale krachten

Indien geen radiale kracht wordt uitgeoefend dan is in het algemeen F_A (trek of druk) 50% van de radiale kracht volgens de keuzetabellen toelaatbaar.

Aandrijfzijdig 40%

- voor aandrijfzijdige deksels met uitzondering van de AD7 en AD8

Aan uitgaande zijde 50%

- rechte reductoren met uitzondering van de R..137... tot R..167...
- vlakke en kegelwielreductoren met volle as met uitzondering van F97...
- wormwielreductoren met volle as

U gelieve Vector Aandrijftechniek te raadplegen bij alle andere reductoruitvoeringen en wanneer wezenlijk grotere axiale krachten of gecombineerde radiale en axiale krachten optreden.

Omrekening aandrijfzijdige radiale kracht indien deze niet aangrijpt in het midden van de as

Indien de kracht niet aangrijpt in het midden van de as gelieve u Vector Aandrijftechniek te raadplegen.

Omrekening radiale kracht aan uitgaande as indien deze niet aangrijpt in het midden van de as

Bij een aangrijppositie buiten het midden van de uitgaande as moeten de toelaatbare radiale krachten met de volgende formules berekend worden. De kleinste van de beide waarden F_{xL} (op lagerlevensduur) en F_{xW} (op assterkte) is de toelaatbare waarde voor de radiale belasting ter plaatse van x. Let op dat de berekeningen voor M_{amax} gelden.

FXL op lagerlevensduur

$$F_{xL} = F_{Ra} \bullet \frac{a}{b + x} \; [N]$$

FxW op assterkte

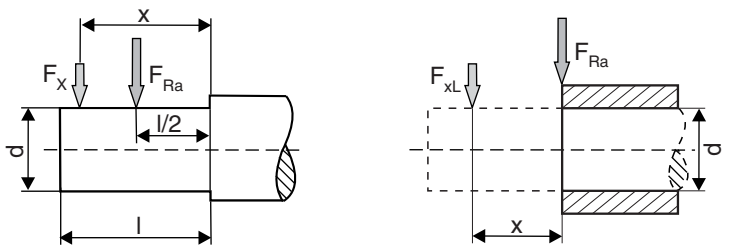
$$F_{xW} = \frac{c}{f + x} \; [N]$$

F_{Ra} = toelaatbare radiale kracht (x = l/2) voor voetreductoren volgens de selectietabel in [N]

x = afstand van de asborst tot waar de kracht aangrijpt [mm]

a, b, f = reductorconstanten voor het omrekenen van de radiale kracht [mm]

c = reductorconstante voor het omrekenen van de radiale kracht [Nmm]



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Afbeelding 6: radiale kracht F_x bij aangrijping buiten het midden

Reductorconstanten voor het omrekenen van de radiale kracht

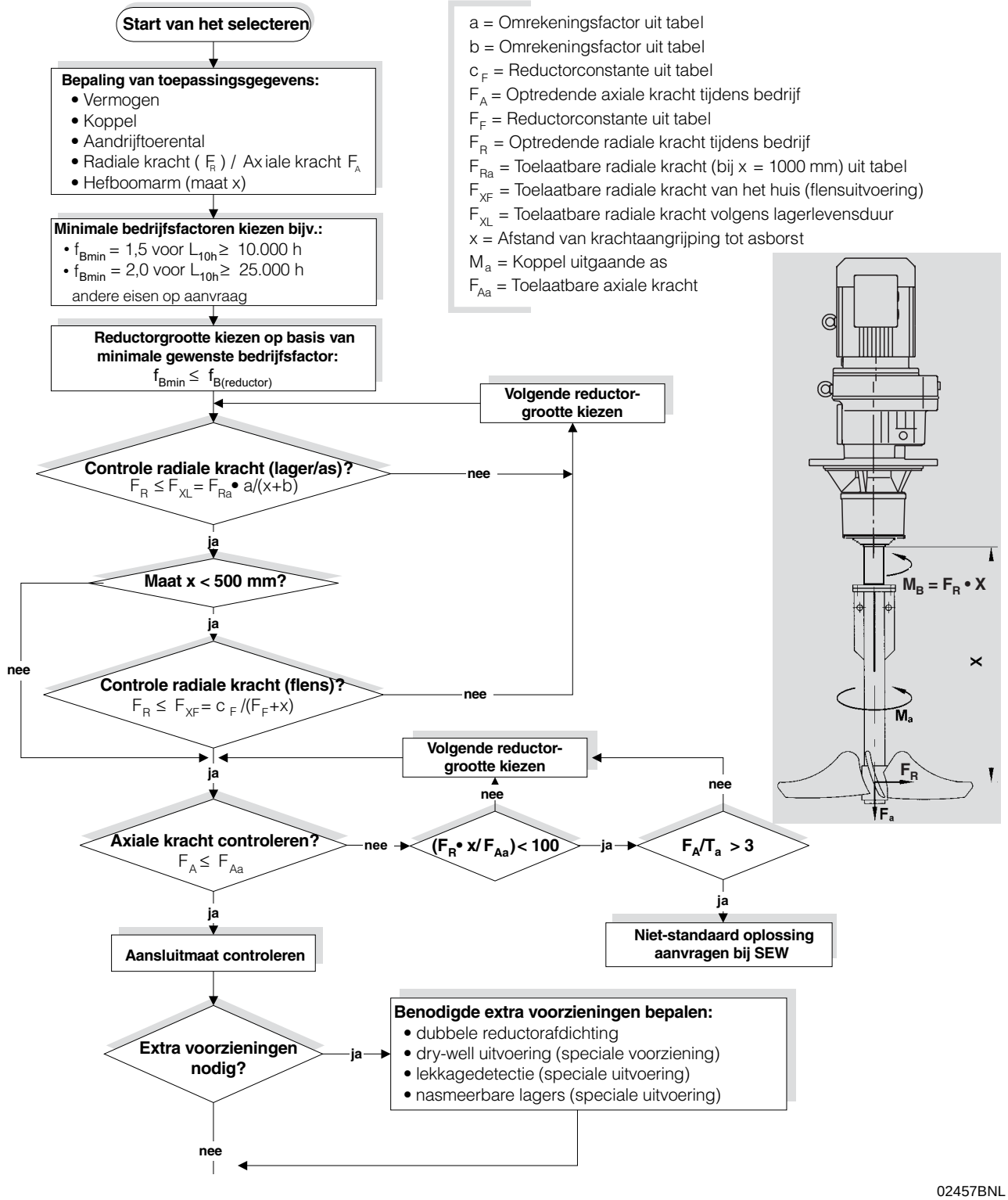
Type tandwielkast	a [mm]	b [mm]	c [Nmm]	f [mm]	d [mm]	l [mm]
R27	106.5	81.5	1.56×10^5	11.8	25	50
R37	118	93	1.24×10^5	0	25	50
R47	137	107	2.44×10^5	15	30	60
R57	147.5	112.5	3.77×10^5	18	35	70
R67	168.5	133.5	2.51×10^5	0	35	70
R77	173.7	133.7	3.97×10^5	0	40	80
R87	216.7	166.7	8.47×10^5	0	50	100
R97	255.5	195.5	1.19×10^6	0	60	120
R107	285.5	215.5	2.06×10^6	0	70	140
R137	343.5	258.5	6.14×10^6	30	90	170
R147	402	297	8.65×10^6	33	110	210
R167	450	345	1.26×10^7	0	120	210
RX57	43.5	23.5	1.51×10^5	34.2	20	40
RX67	52.5	27.5	2.42×10^5	39.7	25	50
RX77	60.5	30.5	1.95×10^5	0	30	60
RX87	73.5	33.5	7.69×10^5	48.9	40	80
RX97	86.5	36.5	1.43×10^6	53.9	50	100
RX107	102.5	42.5	2.47×10^6	62.3	60	120
F27	109.5	84.5	1.13×10^5	0	25	50
F37	123.5	98.5	1.07×10^5	0	25	50
F47	153.5	123.5	1.78×10^5	0	30	60
F57	170.7	135.7	5.49×10^5	32	35	70
F67	181.3	141.3	4.12×10^5	0	40	80
F77	215.8	165.8	7.87×10^5	0	50	100
F87	263	203	1.19×10^6	0	60	120
F97	350	280	2.09×10^6	0	70	140
F107	373.5	288.5	4.23×10^6	0	90	170
F127	442.5	337.5	9.45×10^6	0	110	210
F157	512	407	1.05×10^7	0	120	210
K37	123.5	98.5	1.41×10^5	0	25	50
K47	153.5	123.5	1.78×10^5	0	30	60
K57	169.7	134.7	6.8×10^5	31	35	70
K67	181.3	141.3	4.12×10^5	0	40	80
K77	215.8	165.8	7.69×10^5	0	50	100
K87	252	192	1.64×10^6	0	60	120
K97	319	249	2.8×10^6	0	70	140
K107	373.5	288.5	5.53×10^6	0	90	170
K127	443.5	338.5	8.31×10^6	0	110	210
K157	509	404	1.18×10^7	0	120	210
K167	621.5	496.5	1.88×10^7	0	160	250
K187	720.5	560.5	3.04×10^7	0	190	320
S37	118.5	98.5	6.0×10^4	0	20	40
S47	130	105	1.33×10^5	0	25	50
S57	150	120	2.14×10^5	0	30	60
S67	184	149	3.04×10^5	0	35	70
S77	224	179	5.26×10^5	0	45	90
S87	281.5	221.5	1.68×10^6	0	60	120
S97	326.3	256.3	2.54×10^6	0	70	140

De waarden voor de niet vermelde uitvoeringen worden op aanvraag verstrekt.

4.4 RM-reductoren

Projectering

Bij het selecteren van de rechte reductoren met de verlengde lagerpot RM dient u met grotere radiale en axiale krachten te rekenen. U gelieve de volgende selectievolgorde aan te houden:



Afbeelding 7: RM-reductoren selecteren

Toelaatbare radiale en axiale krachten

De toelaatbare radiale krachten F_{Ra} en axiale krachten F_{Aa} worden voor verschillende bedrijfsfactoren f_B en nominale levensduur L_{H10} opgegeven.

f_{Bmin} = 1,5; L_{10h} = 10 000 h

		Uitgaand toerental n_a [r/min]							
		< 16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
RM57	F_{Ra} [N]	400	400	400	400	400	405	410	415
	F_{Aa}[N]	18800	15000	11500	9700	7100	5650	4450	3800
RM67	F_{Ra} [N]	575	575	575	580	575	585	590	600
	F_{Aa}[N]	19000	18900	15300	11900	9210	7470	5870	5050
RM77	F_{Ra} [N]	1200	1200	1200	1200	1200	1210	1210	1220
	F_{Aa}[N]	22000	22000	19400	15100	11400	9220	7200	6710
RM87	F_{Ra} [N]	1970	1970	1970	1970	1980	1990	2000	2010
	F_{Aa}[N]	30000	30000	23600	18000	14300	11000	8940	8030
RM97	F_{Ra} [N]	2980	2980	2980	2990	3010	3050	3060	3080
	F_{Aa}[N]	40000	36100	27300	20300	15900	12600	9640	7810
RM107	F_{Ra} [N]	4230	4230	4230	4230	4230	4230	3580	3830
	F_{Aa}[N]	48000	41000	30300	23000	18000	13100	9550	9030
RM137	F_{Ra} [N]	8710	8710	8710	8710	7220	5060	3980	6750
	F_{Aa}[N]	70000	70000	70000	57600	46900	44000	35600	32400
RM147	F_{Ra} [N]	11100	11100	11100	11100	11100	10600	8640	10800
	F_{Aa}[N]	70000	70000	69700	58400	45600	38000	32800	30800
RM167	F_{Ra} [N]	14600	14600	14600	14600	14600	14700	-	-
	F_{Aa}[N]	70000	70000	70000	60300	45300	36900	-	-

f_{Bmin} = 2,0; L_{10h} = 25.000 h

		Uitgaand toerental n_a [r/min]							
		< 16	16-25	26-40	41-60	61-100	101-160	161-250	251-400
RM57	F_{Ra} [N]	410	410	410	410	410	415	415	420
	F_{Aa}[N]	12100	9600	7350	6050	4300	3350	2600	2200
RM67	F_{Ra} [N]	590	590	590	595	590	595	600	605
	F_{Aa}[N]	15800	12000	9580	7330	5580	4460	3460	2930
RM77	F_{Ra} [N]	1210	1210	1210	1210	1210	1220	1220	1220
	F_{Aa}[N]	20000	15400	11900	9070	6670	5280	4010	3700
RM87	F_{Ra} [N]	2000	2000	2000	2000	2000	1720	1690	1710
	F_{Aa}[N]	24600	19200	14300	10600	8190	6100	5490	4860
RM97	F_{Ra} [N]	3040	3040	3040	3050	3070	3080	2540	2430
	F_{Aa}[N]	28400	22000	16200	11600	8850	6840	5830	4760
RM107	F_{Ra} [N]	4330	4330	4330	4330	4330	3350	2810	2990
	F_{Aa}[N]	32300	24800	17800	13000	9780	8170	5950	5620
RM137	F_{Ra} [N]	8850	8850	8850	8830	5660	4020	3200	5240
	F_{Aa}[N]	70000	59900	48000	37900	33800	31700	25600	23300
RM147	F_{Ra} [N]	11400	11400	11400	11400	11400	8320	6850	8440
	F_{Aa}[N]	70000	60600	45900	39900	33500	27900	24100	22600
RM167	F_{Ra} [N]	15100	15100	15100	15100	15100	13100	-	-
	F_{Aa}[N]	70000	63500	51600	37800	26800	23600	-	-

Omrekenings-factoren en reductor-constanten

Voor de berekening van de toelaatbare radiale kracht F_{xL} ter plaatse van $x \neq 1000$ mm gelden voor RM-motorreductoren de volgende omrekeningsfactoren en reductorconstanten:

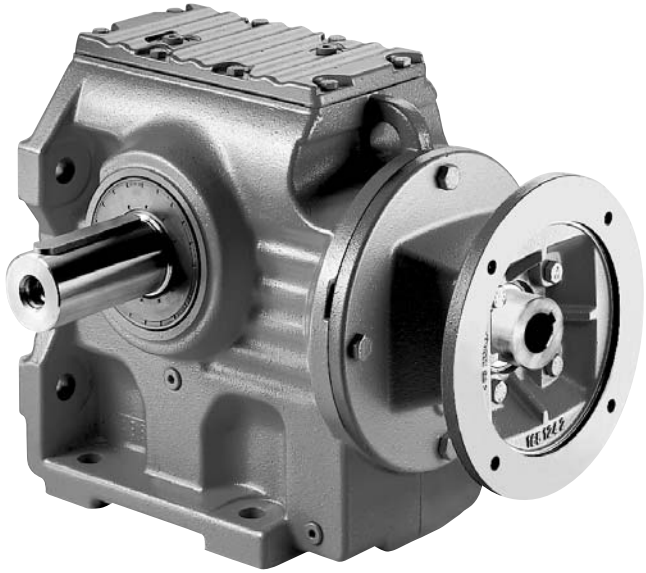
Type reductor	a	b	c_F (f_B = 1.5)	c_F (f_B = 2,0)	F_F
RM57	1047	47	1220600	1260400	277
RM67	1047	47	2047600	2100000	297.5
RM77	1050	50	2512800	2574700	340.5
RM87	1056.5	56.5	4917800	5029000	414
RM97	1061	61	10911600	11124100	481
RM107	1069	69	15367000	15652000	554.5
RM137	1088	88	25291700	25993600	650
RM147	1091	91	30038700	31173900	756
RM167	1089.5	89.5	42096100	43654300	869

Gewichtstoename RM-reductoren

Type	Gewichtstoename ten opzichte van RF, met de kleinste RF-flens Δm [kg]
RM57	12.0
RM67	15.8
RM77	25.0
RM87	29.7
RM97	51.3
RM107	88.0
RM137	111.1
RM147	167.4
RM167	195.4

5 Het selecteren van componenten aan de aandrijfzijde

5.1 Reductoren met IEC- of NEMA-adapter AM



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Afbeelding 8: wormwielreductor met adapter AM

Adapters AM dienen om motoren volgens de IEC-norm of NEMA (bouwvorm C resp. TC) te kunnen aanbouwen aan SEW-rechte, vlakke, kegelwiel- en wormwielreductoren.

Voor IEC-motoren zijn adapters leverbaar voor de bouwgrootten 63 tot 280. Voor NEMA-motoren zijn er adapters voor de grootten 56-365.

De aanduiding van de grootte van de adapter komt overeen met de betreffende IEC- resp. NEMA-motorbouwgrootte.

De koppeloverdracht tussen motor en reductor vindt plaats via een vormsluitende en doorslagveilige klauwenkoppeling. Tijdens bedrijf optredende trillingen en stoten worden door een ingesloten polyurethaan tandkrans effectief gedempt.

Vermogens, massatraagheids-momenten

Type (IEC)	Type (NEMA)	P_m [1] [kW]	$J_{Adapter}$ [kgm²]
AM63	-	0.25	00:44:00 x 10^{-4}
AM71	AM56	0.37	00:44:00 x 10^{-4}
AM80	AM143	0.75	1,9 x 10^{-4}
AM90	AM145	1.5	1,9 x 10^{-4}
AM100	AM182	3	5,2 x 10^{-4}
AM112	AM184	4	5,2 x 10^{-4}
AM132S/M	AM213/215	7.5	19 x 10^{-4}
AM132ML	-	9.2	19 x 10^{-4}
AM160	AM254/256	15	91 x 10^{-4}
AM180	AM284/286	22	90 x 10^{-4}
AM200	AM324/326	30	174 x 10^{-4}
AM225	AM364/365	45	174 x 10^{-4}
AM250	-	55	173 x 10^{-4}
AM280	-	90	685 x 10^{-4}

1) Maximaal nominaal vermogen van de aangebouwde normmotor bij 1400 1/min

Selectie van de reductor

Reductortype bepalen

↓

Reductorgrootte via
- maximumkoppel aan de uitgaande as (Ma max)
- overbrengingsverhouding reductor (i)

uit de keuzetabellen de reductor met de adapter AM bepalen

↓

Controleren op maximaal toelaatbare radiale belasting van de uitgaande as (F_{Ra})

↓

Controleren op maximaal ingaand vermogen aan de adapter (P_m).
(zie “Vermogens, massatraagheidsmomenten” auf bladzijde 43)

↓

Is de gewenste adaptergrootte beschikbaar?

↓

Is de gewenste combinatie uitvoerbaar?

Controle op ingaand vermogen van de reductor (P_n)

De waarden in de keuzetabellen zijn gebaseerd op een ingaand toerental van n_e = 1400 r/min. Het ingaand vermogen van de reductor komt overeen met het maximaal toelaatbare koppel aan de ingaande as. Bij afwijkende toerentallen dient aan de hand van het maximale koppel het ingaand vermogen omgerekend te worden.

Voorbeeld keuzetabel

Aanwijzing: bij meer dan vier mogelijke adapters per reductorgrootte worden de keuzetabellen weergegeven op twee pagina's naast elkaar.

R77, n_e = 1400 r/min — **820 Nm**

i	n_a [r/min]	M_{amax} [Nm]	F_{Ra} [N]	φ (/R) [']	AM63	AM71	AM80	AM90
				3				
195.24*	7.2	820	9920	6				
166.59	8.4	820	9920	6				
145.67	9.6	820	9920	6				
138.39	10	820	9920	6	R 34 kg RF 40 kg	R 35 kg RF 40 kg	R 37 kg RF 43 kg	R 37 kg RF 43 kg
121.42	12	820	9920	6				
102.99	14	820	9920	6				
92.97	15	820	9920	6				

Bij opgave van een getalwaarde: optie met gereduceerde speling is mogelijk, het getal geeft de hoekverdraaiingsspeling aan in hoekminuten ['] van de versie met gereduceerde speling. Geen opgaven (-): Voor deze i is de optie met gereduceerde speling (/R) niet mogelijk.

Toelaatbare radiale kracht bij maximum afneembaar koppel (reductor in voetuitvoering met volle as)

Maximum afneembaar koppel

Uitgaand toerental

Overbrengingsverhouding reductor

Attentie:

De typeaanduidingen, prijzen en massa's zijn gebaseerd op de IEC-uitvoering. Voor de NEMA-uitvoering geldt de extra tabel onder de keuzetabellen (zie de volgende voorbeeldtabel):

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+0,60 kg	-- kg	-- kg	-- kg

Legenda

* Eindige overbrengingsverhouding

Combinatie **is mogelijk.**

Combinatie **is niet mogelijk.**

2 Aantal trappen van de volgende overbrengingsverhoudingen = **2-traps**

3 Aantal trappen van de volgende overbrengingsverhoudingen = **3-traps**

Verwijzing naar de bijbehorende maatbladen

Terugloopblokkering AM../RS

Indien de toepassing slechts een draairichting toestaat kan de adapter AM worden uitgevoerd met een terugloopblokkering. Toegepast worden terugloopblokkeringen met centrifugaallichtende klemelementen. Deze uitvoering heeft als voordeel dat de klemelementen vanaf een bepaald toerental (lichttoerental) contactloos in de terugloopblokkering meeroteren. De terugloopblokkeringen werken daardoor vrij van slijtage, wrijvingsverliezen en onderhoud en zijn geschikt voor hoge toerentallen.

Afmetingen:

De terugloopblokkering is volledig in de adapter geïntegreerd. Dat wil zeggen dat de afmetingen identiek zijn aan die van de adapter zonder terugloopblokkering (zie maatbladen onder het hoofdstuk Adapter AM).

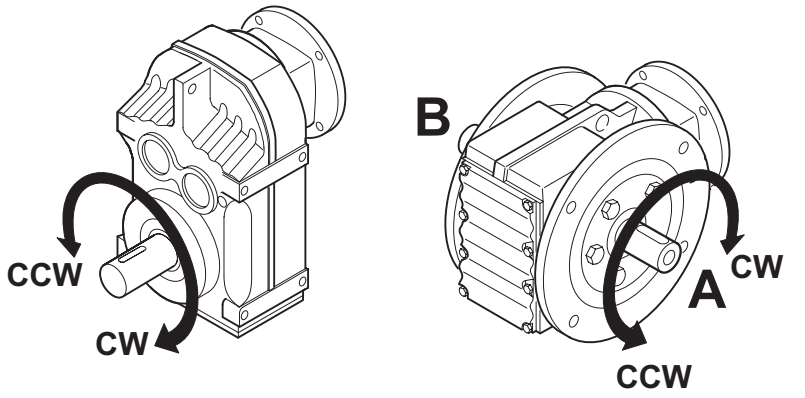
Blokkeerkoppels:

Type	Maximaal blokkeerkoppel terugloopblokkering [Nm]	Lichttoerental [r/min]
AM80, AM90, AM143, AM145	90	640
AM100, AM112, AM182, AM184	340	600
AM132, AM213/215	700	550
AM160, AM180, AM254/256, AM284/286	1200	630
AM 200, AM225, AM324/326 AM364/365	1450	430

Opgave van de draairichting van de uitgaande as bij bestelling

Bij bestelling van een reductor met adapter en terugloopblokkerring dient de gewenste draairichting van de uitgaande as/uitgaande aszijde van de reductor opgegeven te worden. De draairichting wordt gegeven kijkend naar de uitgaande as/uitgaande aszijde van de reductor, bij aandrijvingen met het aseind aan de zijden A en B dient de draairichting aangegeven te worden kijkend naar de A-zijde.

Om schade te voorkomen dient de draairichting van de aandrijving gecontroleerd te worden voor de inbedrijfstelling van de installatie.



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Afbeelding 9: draairichting uitgaande as

CCW = linksom

CW = rechtsom

5.2 Adapter AQ voor servomotoren

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Afbeelding 10: rechte reductor met adapter AQ

Voor het aanbouwen van servomotoren aan SEW-rechte, vlakke, kegelwiel- en wormwielreductoren dient een adapter met een vierkante flens.

Het koppel wordt via een klauwenkoppeling overgebracht. Tijdens bedrijf optredende trillingen en stoten worden door een ingesloten polyurethaan tandkrans effectief gedempt.

Uitvoerings-varianten

De koppelingshelft aan de motorzijde kan naar keuze zowel uitgevoerd worden met een spanringverbinding (krachtsluitend voor gladde motorassen) als ook met een spiebaan (vormsluitend).

- AQH = met klemringnaaf
- AQA = met spiebaan

Koppels, massatraagheidsmomenten

Type	d_{RZ} 1)	$M_{e\ max}$ 2)	$J_{Adapter}$ 3) [kgm²]
AQ..80/..	10	7.7	0,77 x 10^{-4}
	12	13	
AQ..100/.. AQ..115/1 AQ..115/2	10	7.7	1,4 x 10^{-4}
	12	13	
	14	15	
	16	15	
AQ..115/3	10	7.7	3,1 x 10^{-4}
	12	13	
	14	19	
	16	30	
AQ..140/1 AQ..140/2	16	30	5,1 x 10^{-4}
	18	41	
	22	53	
AQ..140/3	16	30	10 x 10^{-4}
	18	41	
	22	75	
AQ..190/1 AQ..190/2	22	75	15 x 10^{-4}
	28	145	
AQ..190/3	22	75	25 x 10^{-4}
	28	170	

1) De rondsel-astapdiameter is afhankelijk van de overbrengingsverhouding, graag overleg met Vector Aandrijftechniek

2) Maximaal toelaatbaar ingaand koppel

3) Aandrijvend massatraagheidsmoment van de adapter

Benodigde motorgegevens

Omdat de afmetingen van servomotoren niet genormaliseerd zijn, dienen voor de keuze van de adapter de volgende gegevens van de motor bekend te zijn:

- asdiameter en lengte
- afmetingen van de flens (lengte van de zijden, diameter, centreerrand en gatenpatroon)
- maximumkoppel

Bij vragen over de keuze en de selectie staan wij u graag terzijde.

Selectie van de reductor

Reductortype bepalen

↓

Reductorgrootte via
- maximumkoppel aan de uitgaande as (Ma max)
- overbrengingsverhouding reductor (i)

uit de keuzetabellen AQ bepalen

↓

Controleren op maximaal toelaatbare radiale belasting van de uitgaande as (F_{Ra})

↓

Maximum toelaatbare koppel aan de ingaande as bij de reductor (Me max) controleren (zie 'Koppels, massatraagheidsmomenten" zie vorige pagina)

↓

Is de gewenste adaptergrootte beschikbaar?

↓

Is de gewenste combinatie uitvoerbaar?

Voorbeeld keuzetabel

Aanwijzing: Bij meer dan vier mogelijke adapters per reductorgrootte worden de keuzetabellen weergegeven op twee pagina's naast elkaar.

R77, n_e = 1400 r/min — **820 Nm**

i	n_a [r/min]	M_{amax} [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3	AQ..100/1-4	AQ..115/1-3
				3			
195.24*	7.2	820	9920	6			
166.59	8.4	820	9920	6			
145.67	9.6	820	9920	6			
138.39	10	820	9920	6	R 36 kg RF 41 kg	R 36 kg RF 42 kg	R 37 kg RF 43 kg
121.42	12	820	9920	6			
102.99	14	820	9920	6			
92.97	15	820	9920	6			

Bij opgave van een getalwaarde: optie met gereduceerde speling is mogelijk, het getal geeft de hoekverdraaiingsspeling aan in hoekminuten ['] van de versie met gereduceerde speling. Geen opgaven (-): Voor deze i is de optie met gereduceerde speling (/R) niet mogelijk.

Toelaatbare radiale kracht bij maximum afneembaar koppel (reductor in voetuitvoering met volle as)

Maximum afneembaar koppel

Uitgaand toerental

Overbrengingsverhouding reductor

Legenda

*	Eindige overbrengingsverhouding
	Combinatie **is mogelijk.**
	Combinatie **is niet mogelijk.**
2	Aantal trappen van de volgende overbrengingsverhoudingen = **2-traps**
3	Aantal trappen van de volgende overbrengingsverhoudingen = **3-traps**
	Verwijzing naar de bijbehorende maatbladen

5.3 Adapter AR met slipkoppeling

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Afbeelding 11: kegelwielreductor met adapter AR

Om de installatie en de aandrijving te beveiligen tegen een overbelasting worden de SEW rechte, vlakke, kegelwiel- en wormwielreductoren uitgevoerd met een adapter met slipkoppeling. Aangebouwd kunnen worden IEC-normmotoren van de bouwgrootte 71 tot 180.

Het koppel wordt krachtsluitend via wrijvingsmateriaal overgebracht. Het slipkoppel van de koppeling is met een stelmoer en schotelveren instelbaar. Afhankelijk van de veersterkte en de ordening van de schotelveren zijn verschillende slipkoppels mogelijk. Bij overbelasting slipt de koppeling en verbreekt daarmee de krachtoverdracht tussen motor en reductor. Schade aan de installatie en de aandrijving wordt hiermee voorkomen.

Gecombineerde reductor met adapter en slipkoppeling

In combinatie met gecombineerde reductoren wordt de adapter met slipkoppeling bij voorkeur toegepast tussen de twee reductoren. Indien gewenst gelieve u Vector Aandrijftechniek te raadplegen.

Selectie van de reductor

De adapter AR met slipkoppeling komt in de typengrootten overeen met de adapter AM voor IEC-motoren.

De keuze van de reductor kan daarom plaatsvinden met behulp van de keuzetabellen voor de adapter AM. Vervolgens dient de typeaanduiding AM vervangen te worden door AR en dient het gewenste slipkoppel bepaald te worden.

Bepaling van het slipkoppel

Het slipkoppel dient op het ca. 1,5-voudige nominale koppel van de reductor ingesteld te worden. Bij de bepaling dient rekening gehouden te worden met het maximum toelaatbare afneembare koppel van de reductor en de door het werkingsprincipe veroorzaakte tolerantie van het slipkoppel van de koppeling (+/-20%).

Bij bestelling van een reductor met adapter en slipkoppeling dient het gewenste slipkoppel opgegeven te worden.

Bij ontbrekende bestelopgave vindt instelling plaats overeenkomstig het maximaal toelaatbare afneembare koppel van de reductor.

Koppels, slipkoppels

Type	P_m [1] [kW]	M_R [2] [Nm]	M_R [2] [Nm]	M_R [2] [Nm]
AR71	0.37	1 - 6	6.1 - 16	-
AR80	0.75	1 - 6	6.1 - 16	-
AR90	1.5	1 - 6	6.1 - 16	17 - 32
AR100	3.0	5 - 13	14 - 80	-
AR112	4.0	5 - 13	14 - 80	-
AR132S/M	7.5	15 - 130	-	-
AR132ML	9.2	15 - 130	-	-
AR160	15	30 - 85	86 - 200	-
AR180	22	30 - 85	86 - 300	-

1) Maximaal nominaal vermogen van de aangebouwde normmotor bij 1400 r/min

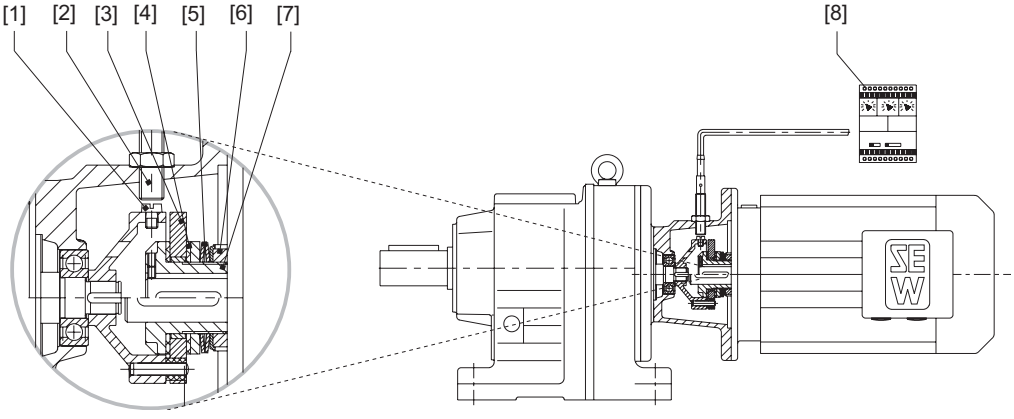
2) Instelbaar slipkoppel overeenkomstig de schotelverenbezetting

Optie toerental-bewakingsrelais / W

Om ongecontroleerd slippen van de koppeling en de daarmee verbonden slijtage van het wrijvingsmateriaal te vermijden wordt geadviseerd om het toerental van de slipkoppeling met een toerentalbewakingsrelais te bewaken.

Het toerental van de uitgaande koppelingshelft van de slipkoppeling wordt via een schakelnok en een inductieve opnemer contactloos bepaald. De pulsen worden door het toerentalbewakingsrelais vergeleken met een gedefinieerd referentietoerental. Bij het onderschrijden van het ingegeven toerental (overbelasting) schakelt het uitgangsrelais (naar keuze maak- of verbreekcontact). Om foutmeldingen tijdens het aanlopen te voorkomen, is het toerentalbewakingsrelais uitgevoerd met een aanloopoverbrugging, die instelbaar is in een tijd van 0,5 tot 15 seconden.

Referentietoerental, aanloopoverbrugging en schakelhysterese kunnen bij het toerentalbewakingsrelais worden ingesteld.



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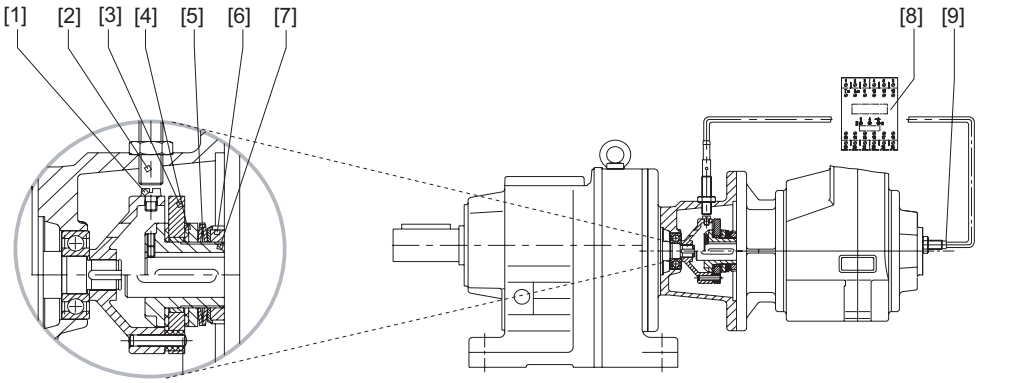
Afbeelding 12: adapter met slipkoppeling en toerentalbewakingsrelais / W

[1] schakelnok
[2] inductieve opnemer (adapter)
[3] meenemerschijf
[4] wrijvingsschijf
[5] schotelveer
[6] stelmoer
[7] slipnaaf
[8] toerentalbewakingsrelais

Optie slipbewakingsrelais /WS

In combinatie met de variatoren VARIBLOC® (zie catalogus Variatoren) wordt in plaats van het toerentalbewakingsrelais een slipbewakingsrelais ter bewaking van het toerentalverschil tussen drijvende en gedreven koppelingshelft toegepast.

Het waarderen van de signalen vindt afhankelijk van de bouwgrootte van de variator plaats met twee inductieve opnemers of een wisselspanningsencoder.



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Afbeelding 13: adapter met slipkoppeling en slipbewakingsrelais / WS

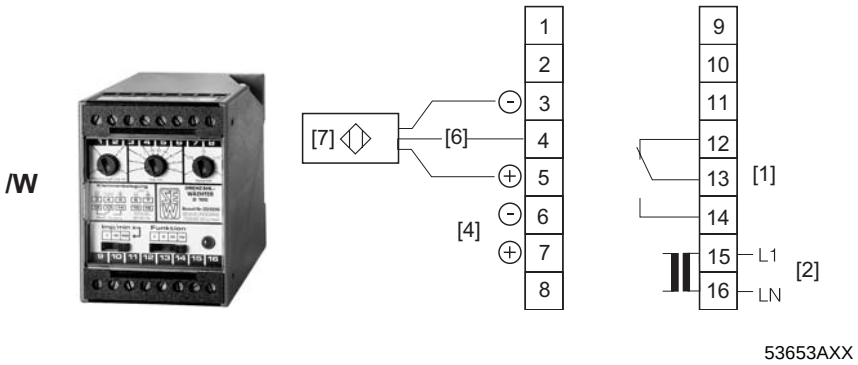
[1] schakelnok
[2] inductieve opnemer (adapter)
[3] meenemerschijf
[4] wrijvingsschijf
[5] schotelveer
[6] stelmoer
[7] slipnaaf
[8] Slipbewakingsrelais /WS
[9] inductieve opnemer IG

Aansluiting

Het aansluiten van de encoder aan het bewakingsrelais vindt plaats via een 2- of 3-aderige kabel (afhankelijk van het type encoder).

- Maximale kabellengte: 500 m bij een leidingdoorsnede van 1,5 mm^2.
- Standaard voedingskabel: 3-aderig / 2 m
- Signaalleidingen gescheiden leggen (niet in meeraderige kabels) en eventueel afschermen.
- Beschermingsgraad: IP40 (aansluitklemmen IP20)
- Bedrijfsspanning: 220 V_{AC} of 24 V_{DC}
- Maximaal schakelvermogen van het uitgangsrelais: 6 A (250 V_{AC})

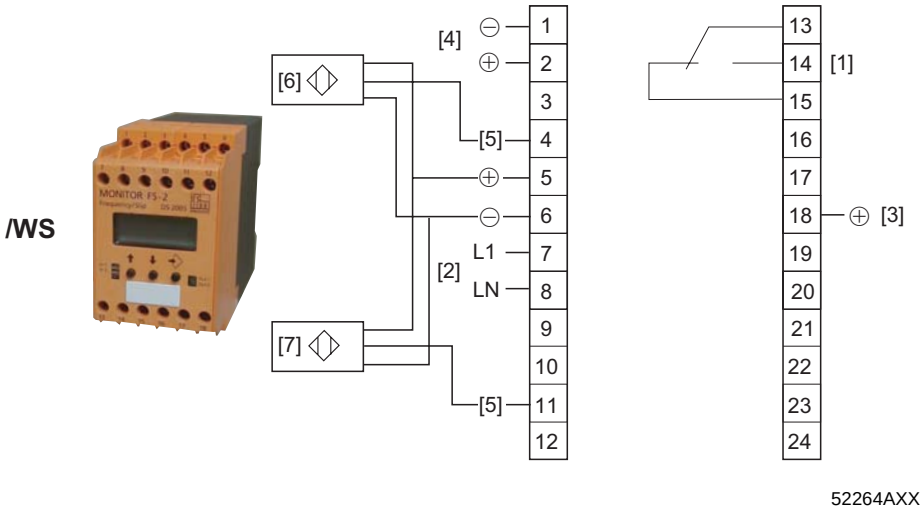
Aansluitingen W



Afbeelding 14: aansluitingen /W

[1] relaisuitgang
[2] voedingsspanning 230 V_{AC} (47...63 Hz)
[3] slip-reset extern
[4] voedingsspanning 24 V_{DC}
[5] brug voor gelijkloopbewaking
[6] signaal
[7] encoder
[/W] toerentalbewakingsrelais

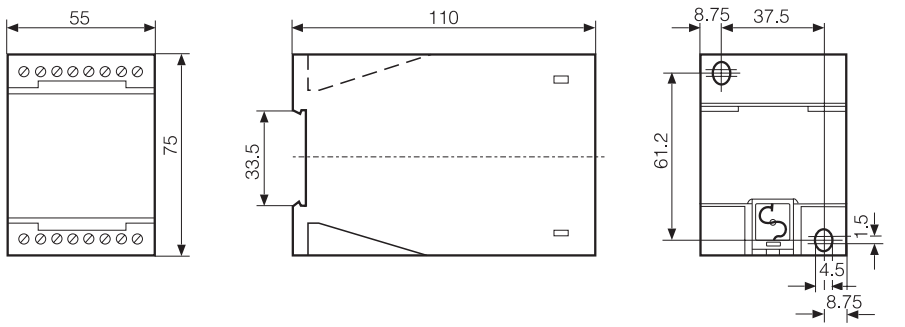
Aansluitingen WS



Afbeelding 15: aansluitingen /WS

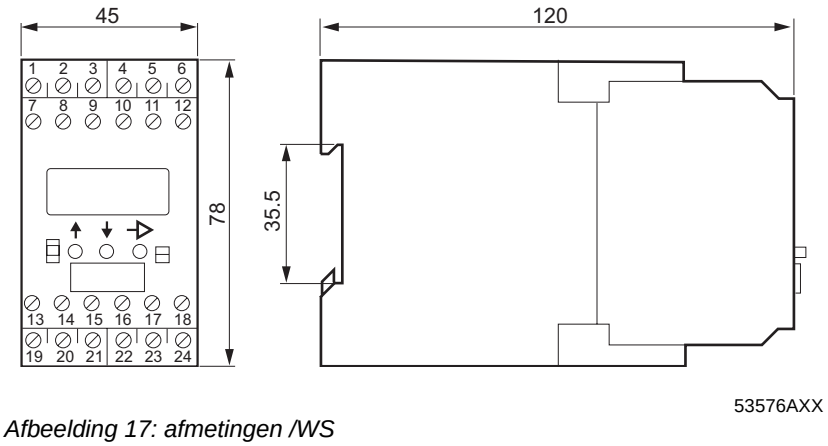
[1] relaisuitgang
[2] voedingsspanning 230 V_{AC} (47...63Hz)
[3] slip-reset extern
[4] voedingsspanning 24 V_{DC}
[5] signaal
[6] encoder 1
[7] encoder 2
[/WS] slipbewakingsrelais

Afmetingen W



Afbeelding 16: afmetingen /W

Afmetingen WS



Afbeelding 17: afmetingen /WS

5.4 Adapter met hydraulische aanloopkoppeling AT

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Afbeelding 18: vlakke reductor met adapter AT

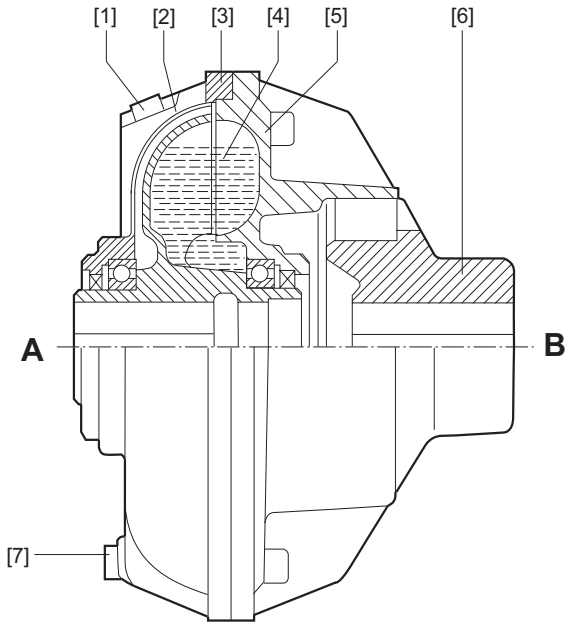
Voor installaties met een zware aanloop (bijv. mengers, roerwerken enz.) kunnen SEW rechte, vlakke, kegelwiel- en wormwielreductoren gecombineerd worden met een adapter met een hydraulische aanloopkoppeling. Door de hydraulische aanloopkoppeling worden motor en lastwerktuig beveiligd tegen overbelasting tijdens het aanlopen en vindt een zachte aanloop plaats. De koppeling is beveiligd tegen aanraken ingebouwd in een behuizing, de koeling van de koppeling vindt plaats via ventilatiegaten in de behuizing. Aan te bouwen zijn SEW-motoren van de bouwgrootten 71 tot 180 (0,37 tot 22 kW).[1)].

Voorkeurstoerentallen zijn 1400 1/min en 2800 1/min, d.w.z. 4- resp. 2-polige aanbouwmotoren. Bij het gebruik van 2-polige aandrijfcombinaties adviseren wij u rekening te houden met de sterkere geluidsvorming.

1) Voor motoren van de bouwgrootte 200 tot 280 (30 tot 90 kW) zijn kegelwielreductoren met een hydraulische aanloopkoppeling op een motorbasis mogelijk.

Aanloop-koppeling

De toegepaste aanloopkoppeling is een hydrodynamische koppeling volgens het Föttingerprincipe. De koppeling is met olie gevuld en bestaat uit een pomprad (motorzijdig) en een turbinerad (reductorzijdig). De toegevoerde mechanische energie wordt door het pomprad omgezet in stromingsenergie en in het tubinerad weer in mechanische energie getransformeerd.



Afbeelding 19: aanloopkoppeling

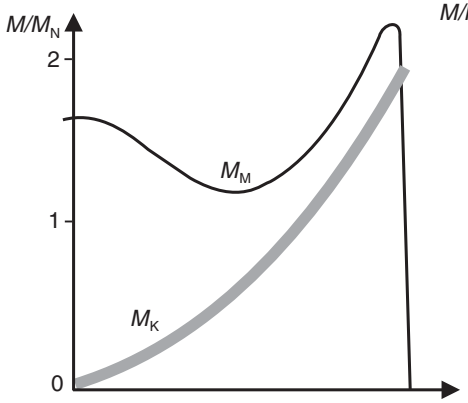
[1] vulschroef
[2] turbinerad
[3] koppelingsschaal
[4] bedrijfsvloeistof (hydraulische olie)
[5] pomprad
[6] elastische askoppeling
[7] smeltstop
[A] reductorzijde
[B] motorzijde

Het overdraagbare vermogen van de koppeling is sterk toerentalafhankelijk. Om die reden wordt een onderscheid gemaakt tussen de aanloopfase en stationair bedrijf. Tijdens de aanloopfase loopt de motor onbelast aan tot de koppeling koppel overbrengt. De machine versnelt in die fase langzaam en zacht. Wanneer de stationaire situatie bereikt is ontstaat tussen motor en reductor de door het werkingsprincipe van de koppeling bepaalde bedrijfsslip. Van de motor wordt alleen nog het lastkoppel van de installatie gevraagd, lastpieken worden door de koppeling gedempt.

De hydraulische aanloopkoppeling is uitgevoerd met smeltstoppen, die bij te hoge temperatuur (grote overbelasting, blokkering) de bedrijfsvloeistof naar de omgeving vrijgeven. Koppeling en installatie worden daardoor beveiligd tegen beschadigingen.

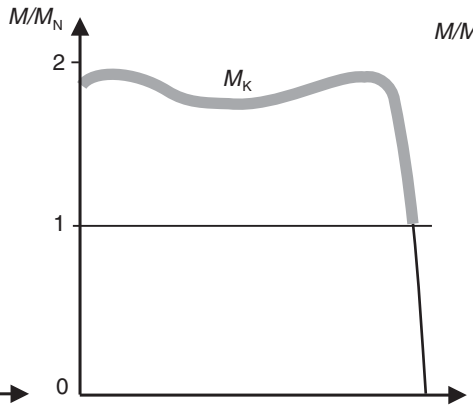
Karakteristieken

Motoraanloop



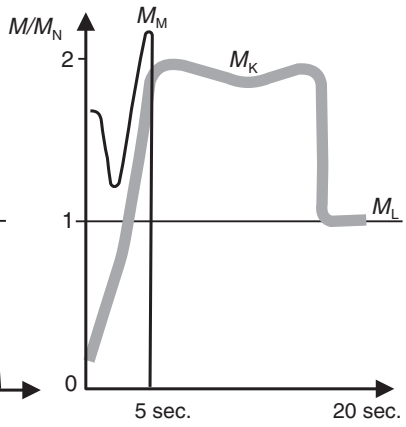
Motortoerental

Aanloop lastwerktuig



Toerental machine

Relatie koppel-/tijd



Tijd

M_{nom} motorkoppel
M_L lastkoppel

M_K koppel koppeling
M_{nom} smeltstop

Selectie van de reductor

Reductortype bepalen

↓

Reductorgrootte via
- maximumkoppel aan de uitgaande as (Ma max)
- overbrengingsverhouding reductor (i)

uit de keuzetabellen de reductor met **adapter AM** bepalen

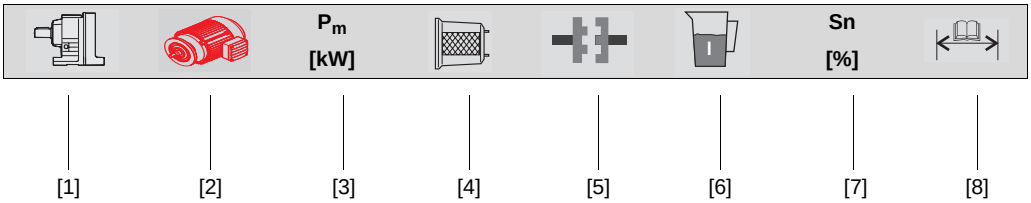
↓

Type adapter via
- motortoerental (n_M)
- grootte reductor
- nominaal vermogen van de aandrijfmotor (P_m)

uit de keuzetabellen bepalen voor **adapter AT**

Voorbeeld keuzetabel adapter AT

ne = 1400 r/min:



[1] grootte reductor
[2] type motor
[3] motorvermogen
[4] type adapter
[5] type koppeling
[6] vulhoeveelheid [l]
[7] nominale slip van de koppeling
[8] verwijzing bladzijde maatblad

Optie terugloop-blokkering AT../ RS

Indien de toepassing slechts een draairichting toestaat kan de hydraulische aanloopkoppeling worden uitgevoerd met een terugloopblokkering. Toegepast worden terugloopblokkeringen met centrifugaallichtende klemelementen. Deze uitvoering heeft als voordeel dat de klemelementen vanaf een bepaald toerental contactloos in de terugloopblokkering meeroteren. De terugloopblokkeringen werken daardoor vrij van slijtage, wrijvingsverliezen en onderhoud en zijn geschikt voor hoge toerentallen.

Afmetingen

De afmetingen van de hydraulische aanloopkoppelingen met terugloopblokkering AT../ RS zijn gelijk aan die van de hydraulische aanloopkoppelingen AT.. (zie de maatbladen in het hoofdstuk hydraulische aanloopkoppelingen AT..).

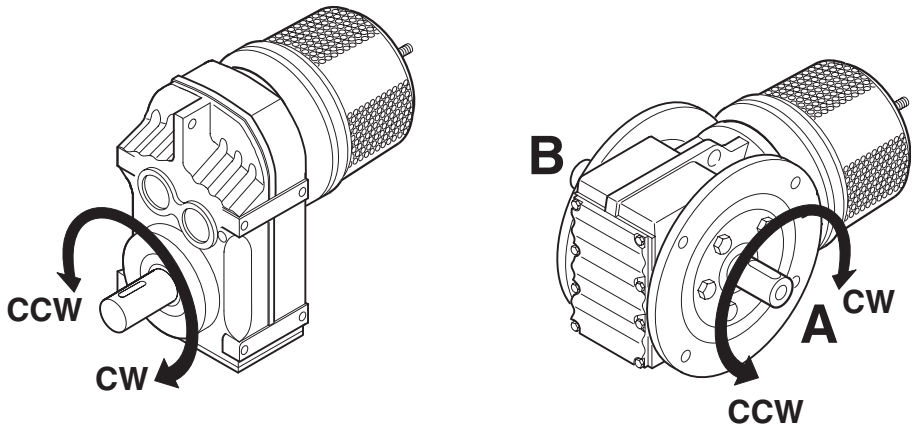
Blokkeerkoppels

Type	Maximaal blokkeerkoppel terugloopblokkering [Nm]	Lichttoerental [r/min]
AT311/RS - AT322/RS	340	600
AT421/RS - AT422/RS	700	550
AT522/RS - AT542/RS	1200	630

Opgave van de draairichting van de uitgaande as bij bestelling

Bij bestelling van een reductor met adapter en terugloopblokkerring dient de gewenste draairichting van de uitgaande as/uitgaande aszijde van de reductor opgegeven te worden. De draairichting wordt gegeven kijkend naar de uitgaande as/uitgaande aszijde van de reductor, bij aandrijvingen met het aseind aan de zijden A en B dient de draairichting aangegeven te worden kijkend naar de A-zijde.

Om schade te voorkomen dient de draairichting van de aandrijving gecontroleerd te worden voor de inbedrijfname van de installatie.



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Afbeelding 20: opgave van de draairichting van de uitgaande as bij bestelling

CCW = linksom
CW = rechtsom

Optie platenrem AT../BM(G)

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Afbeelding 21: vlakke reductor met adapter AT en platenrem BM(G)

Indien de installatie gedefinieerd afgeremd dient te worden, dan kan een adapter met een hydraulische aanloopkoppeling met een SEW-platenrem toegepast worden. Hierbij wordt een gelijkspanningsgevoede elektromagnetisch gelichte rem toegepast die elektrisch licht en door veerkracht remt. Deze voldoet daarmee aan de veiligheidseis, bij stroomuitval te remmen. Het remkoppel kan gevarieerd worden door de soort en het aantal remveren. De rem kan naar keuze aan gelijk- of wisselspanning aangesloten worden; de voor de aansturing van de rem noodzakelijke apparatuur, evenals de aansluitklemmen zijn in een aan de adapter bevestigde klemmenkast ondergebracht. Op verzoek kan de rem ook extra met een handbediende remlichter worden uitgevoerd.

Remkoppels

Type	d_{rz} [1] [mm]	M_{Bmax} [2] [Nm]	Gereduceerde remkoppels (richtwaarden) [Nm]					
AT311/BMG - AT322/BMG	10	9.5						
	12	12.6	9.5					
	16	30	19	12.6	9.5			
	22	55	45	37	30	19	12.6	9.5
AT421/BMG - AT422/BMG	16	30	19	12.6	9.5			
	22	55	45	37	30	19	12.6	9.5
	28	55	45	37	30	19	12.6	9.5
AT522/BM - AT542/BM	22	75	50					
	28	150	125	100	75	50		
	32	250	200	150	125	100	75	50

1) De rondsel-astapdiameter is afhankelijk van de overbrengingsverhouding, graag overleg met Vector Aandrijftechniek

2) Maximale remkoppel

Bestelgegevens

Bij bestelling van een reductor met adapter en aanloopkoppeling met rem dient het gewenste remkoppel alsook de gewenste remspanning opgegeven te worden. Bij ontbrekende opgave wordt het maximale remkoppel ingesteld.

5.5 Aandrijfzijdig deksel AD

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Afbeelding 22: rechte reductor met aandrijfzijdig deksel AD

Voor het aandrijven va een vrij aseinde worden rechte, vlakke, kegelwiel- en wormwiel-reductoren van SEW uitgevoerd met een aandrijfzijdig deksel. De aandrijfassen zijn uitgevoerd in metrische afmetingen volgens de IEC-norm (inch-afmetingen op verzoek). Voor het monteren en bevestigen van aandrijfelementen is de aandrijfas aan de kopse kant voorzien van een centreerboring volgens DIN 332.

De lagers van de aandrijfzijdige as zijn vetgesmeerd. Voor het afdichten van de deksels worden NBR-askeerringen en spleetdichtmateriaal gebruikt. De stevige lagering van de aandrijfas staat hoge radiale belastingen toe.

Selectie van de reductor

Reductortype bepalen

↓

Reductorgrootte via
- maximaal afneembaar koppel (M_{amax})
- overbrengingsverhouding reductor (i)

uit de keuzetabellen reductoren bepalen met aandrijfzijdig deksel AD.
Let bij het selecteren van de AD/P op de aanwijzing op bladzijde 63 !

↓

Controleer de maximaal toelaatbare radiale belasting van de uitgaande as (F_{Ra})

↓

Controleer het maximaal ingaand vermogen op de reductor (P_m) rekening houdend met het maximale thermische vermogen (zie bladzijde 64).

↓

Radiale kracht aan de ingaande as (F_{Re}) controleren

↓

Bij zwaardere eisen (bijvoorbeeld grotere radiale kracht aan ingaande zijde) contact opnemen met de serviceafdeling van Vector Aandrijftechniek.

Voorbeeld keuzetabellen

R107 AD... , ne = 1400 r/min **4300 Nm**

i	n_a [r/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	j (/R) [']	⚠			m [kg]	
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]

[1] Overbrengingsverhouding reductor
[2] Uitgaand toerental
[3] Maximaal toelaatbaar koppel aan de uitgaande as
[4] Berekend ingaand vermogen van de reductor
[5] Toelaatbare radiale kracht bij maximum afneembaar koppel (reductor in voetuitvoering met volle as)
[6] Toelaatbare radiale kracht aan de ingaande as
[7] Bij opgave van een getalwaarde: optie met gereduceerde speling is mogelijk, het getal geeft de hoekverdraaiingsspeling aan in hoekminuten ['] van de versie met gereduceerde speling. Geen opgave (-): Voor deze i is de optie met gereduceerde speling (/R) niet mogelijk.
[8] Hoofdstuk 'Thermisch grensvermogen bij reductoren met aandrijfzijdig deksel' raadplegen (zie bladzijde 64)
[9] Grootte reductor
[10] Type deksel
[11] Gewicht
[12] Verwijzing bladzijde maatblad

De betreffende selectietabellen vindt u op de volgende bladzijden:
- R-reductoren vanaf bladzijde 188
- F-reductoren vanaf bladzijde 297
- K-reductoren vanaf bladzijde 423
- S-reductoren vanaf bladzijde 545

Centreerrand AD../ZR

Als optie is het aandrijfzijdig deksel leverbaar met een centreerrand. Een klantconcept kan daardoor gecentreerd ten opzichte van het aandrijfzijdig aseinde aan het deksel bevestigd worden.

Terugloopblokkering AD../RS

Indien de toepassing slechts een draairichting toestaat kan het aandrijfzijdige deksel worden uitgevoerd met een terugloopblokkering. Toegepast worden terugloopblokkeringen met centrifugaallichtende klemelementen. Deze uitvoering heeft als voordeel dat de klemelementen vanaf een bepaald toerental (lichttoerental) contactloos in de terugloopblokkering meeroteren. De terugloopblokkeringen werken daardoor vrij van slijtage, wrijvingsverliezen en onderhoud en zijn geschikt voor hoge toerentallen.

Afmetingen:

De terugloopblokkering is volledig in de adapter geïntegreerd. Dat betekent dat de afmetingen gelijk zijn aan die van het aandrijfzijdige deksel zonder terugloopblokkering (zie de maatbladen in het hoofdstuk "Aandrijfzijdig deksel AD").

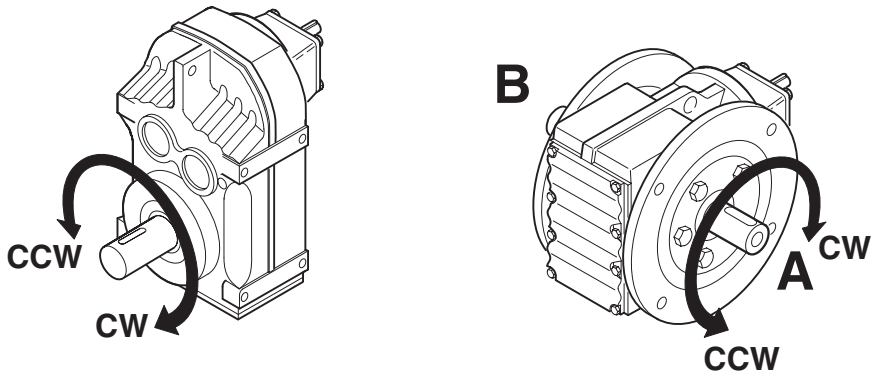
Blokkeerkoppels:

Type	Maximaal blokkeerkoppel terugloopblokkering [Nm]	Lichttoerental [r/min]
AD2/RS	90	640
AD3/RS	340	600
AD4/RS	700	550
AD5/RS	1200	630
AD6/RS	1450	430
AD7/RS	1450	430
AD8/RS	2860	430

Opgave van de draairichting van de uitgaande as bij bestelling:

Bij bestelling van een reductor een aandrijfzijdig deksel en terugloopblokkerring dient de gewenste draairichting van de uitgaande as/uitgaande aszijde opgegeven te worden. De draairichting wordt gegeven kijkend naar de uitgaande as/uitgaande aszijde van de reductor, bij aandrijvingen met het aseind aan de zijden A en B dient de draairichting aangegeven te worden kijkend naar de A-zijde.

Om schade te voorkomen dient de draairichting van de aandrijving gecontroleerd te worden voor de inbedrijfname van de installatie.



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Afbeelding 23: opgave van de draairichting van de uitgaande as bij bestelling

CCW = linksom
CW = rechtsom

Motorfundatie-plaat AD.. /P

Riemoverbrengingen kunnen op een ruimtebesparende wijze uitgevoerd worden met een motorfundatieplaat. De motorfundatieplaat bevindt zich parallel aan de ingaande as en is voorzien van draadgaten voor IEC normmotoren (op verzoek ook ongeboord leverbaar). Via draadzuilen is deze in afstand tot de ingaande as te verstellen.

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Afbeelding 24: rechte reductor met aandrijfzijdig deksel en motorfundatieplaat AD../P

Tip voor het selecteren (beschikbare combinaties)

Per motorfundatieplaat zijn motoren beschikbaar overeenkomstig de volgende tabel.

	Motorfundatieplaat					
Type motor	**AD2/P**	**AD3/P**	**AD4/P**	**AD5/P**	**AD6/P**	**AD7/P**
DT71	5.5					
DT80	5.5					
DT90	5.5	11				
DT100		11				
DV112		11				
DV132			23			
DV160				41		
DV180				41		
DV200					62	
DV225					62	
DV250						103
DV280						103

Combinatie beschikbaar / extra gewicht in kg

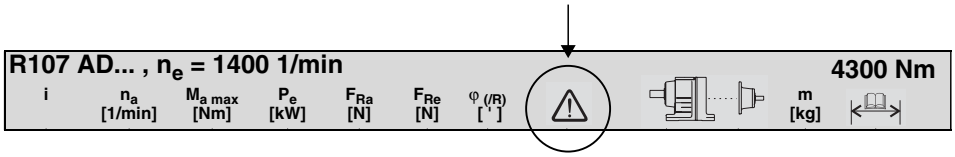
Zou de geselecteerde combinatie reductor-deksel (motorfundatieplaat) niet te combineren zijn neem dan contact op met Vector Aandrijftechniek.

De beschikbare reductor-motorcombinaties voor aandrijfzijdige deksels met motorfundatieplaat vindt u in de betreffende maatbladen L_N.

- R-reductoren vanaf bladzijde 250
- F-reductoren vanaf bladzijde 372
- K-reductoren vanaf bladzijde 497
- S-reductoren vanaf bladzijde 596

Thermische vermogensbegrenzing bij reductoren met een aandrijfzijdig deksel

De in de keuzetabellen voor reductoren opgevoerde vermogens zijn mechanische vermogensbegrenzingen. Reductoren kunnen echter afhankelijk van de bouwvorm nog voor het bereiken van de mechanische vermogensbegrenzing thermisch overbelast worden. Voor minerale smeermiddelen zijn de betreffende gevallen in de keuzetabellen (in de afbeelding is hiervoor een markeerkolom opgenomen) door opgave van de bouwvorm aangeduid.



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Afbeelding 25: keuzetabel

Indien de gewenste bouwvorm overeenkomt met een gemarkeerde gelieve u ons te raadplegen. Met kennis van de werkelijke bedrijfsverhoudingen kan dan een specifiek voor die toepassing geldende berekening van de warmtegrensbelasting plaatsvinden of door passende maatregels (bijv. het gebruik van een synthetisch smeermiddel met een hogere thermische bestendigheid) de warmtegrensbelasting van de reductor verhoogd worden. Voor een narekenening zijn de volgende gegevens nodig:

Type reductor.....

Uitgaand toerental [na]	..... r/min	**Overbregingsverhouding i**	.....
Omgevingstemperatuur	..... °C	**Inschakelduur ID**	.....%
Afgenomen vermogen [P]	..... kW		

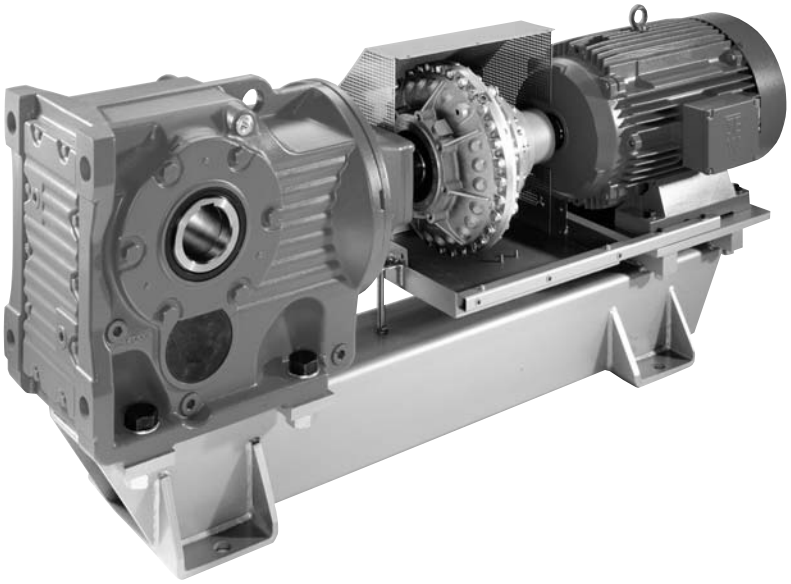
Plaats van opstelling:

.....

...in kleine afgesloten ruimten
...in grote ruimten, hallen
...buiten

Inbouwsituatie: .....
bijv. stalen fundering, betonnen fundering

6 Het selecteren van kegelwielreductoren op een motorbasis MK



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Afbeelding 26: kegelwielreductor op motorbasis MK

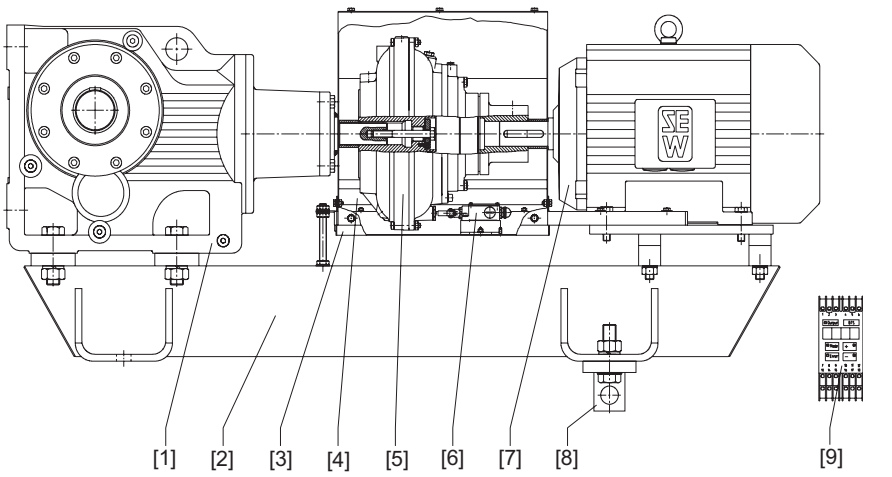
Speciaal voor transportbanden, elevatoren en andere installaties met een zware aanloop staan kant en klare aandrijfsets beschikbaar die bestaan uit een kegelwielreductor, een hydraulische aanloopkoppeling en een elektromotor. Deze zijn kant en klaar op een torsiestijf montageframe bevestigd. Een afdekkap en opvangbak zorgen er voor afscherming van de roterende delen en bij storing wordt de uittredende olie opgevangen. De opvangbak vervult deze functie uitsluitend in de bouwvorm M1, bij andere bouwvormen dient de klant zelf in de gepaste maatregels te voorzien.

In combinatie met een motorbasis zijn kegelwielreductoren van de grootten 107 tot 187 leverbaar met 4-polige motoren van de bouwgrootten 200 tot 280 (30 tot 90 kW).[1)]. De reductoren kunnen zowel met een volle as als ook in opsteekuitvoering gebruikt worden. Het montageprofiel is voor het gebruik als fundatieraamwerk (uitgaande aszijde vrij van radiale krachten door toepassing van een elastische koppeling) standaard voorzien van voetbevestigingsoren. Voor opsteekkasten is als optie een reactiearm leverbaar.

Bij de motorbasis MK zijn horizontale bouwvormen standaard. Neem bij afwijkende bouwvormen contact op met Vector Aandrijftechniek.

1) Voor motoren van de bouwgrootte 71 tot 180 (0,37 tot 22 kW) is de adapter met hydraulische aanloopkoppeling beschikbaar

Opbouw

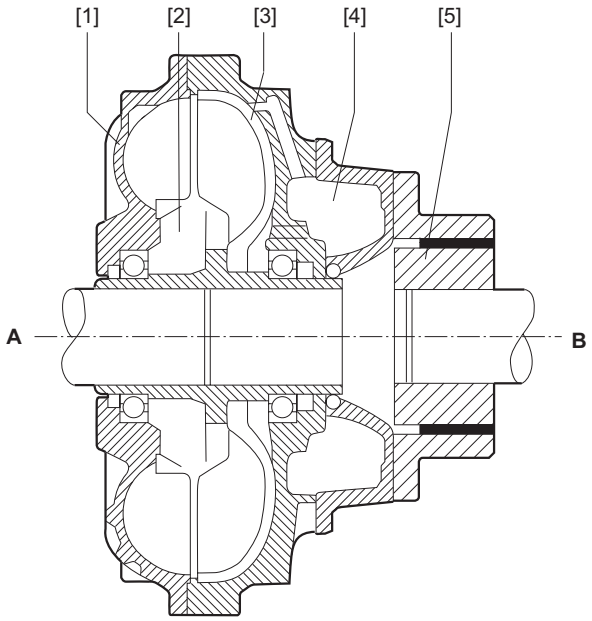


Afbeelding 27: kegelwielreductor op motorbasis MK

[1] kegelwielreductor
[2] montageprofiel
[3] opvangbak
[4] afdekkap
[5] hydraulische aanloopkoppeling
[6] thermische beveiligingsvoorziening (optie)
[7] elektromotor
[8] reactiearm (optie)
[9] toerentalbewakingsrelais (optie, alleen in combinatie met de thermische beveiliging BTS)

Aanloop-koppeling

De toegepaste aanloopkoppeling is een hydrodynamische koppeling volgens het Föttingerprincipe. De koppeling is met olie gevuld en bestaat uit een pomprad (motorzijdig) en een turbinerad (reductorzijdig). De toegevoerde mechanische energie wordt door het pomprad omgezet in stromingsenergie en in het tubinerad weer in mechanische energie getransformeerd. Verder zijn de aanloopkoppelingen op een motorbasis uitgevoerd met een vertragingskamer waarin tijdens stilstand van de koppeling een deel van het olievolume opgenomen wordt. Tijdens het aanloopproces wordt de olie slechts langzaam weer aan het pomp- en turbinerad vrijgegeven. Het aanloopproces wordt daardoor positief beïnvloed en aandrijving en installatie worden in sterke mate ontzien.



Afbeelding 28: aanloopkoppeling

[1] pomprad
[2] bedrijfsvloeistof (hydraulische olie)
[3] turbinerad
[4] vertragingskamer
[5] elastische askoppeling
[A] reductorzijde
[B] motorzijde

De hydraulische aanloopkoppeling is uitgevoerd met smeltstoppen, die bij te hoge temperatuur (grote overbelasting, blokkering) de bedrijfsvloeistof naar de omgeving vrijgeven. Koppeling en installatie worden daardoor beveiligd tegen beschadigingen. Om het legen van de koppeling en het belanden van olie in het milieu uit te sluiten wordt het gebruik van een thermische beveiligingsvoorziening (optie MTS of BTS) aanbevolen.

Reductorkeuze

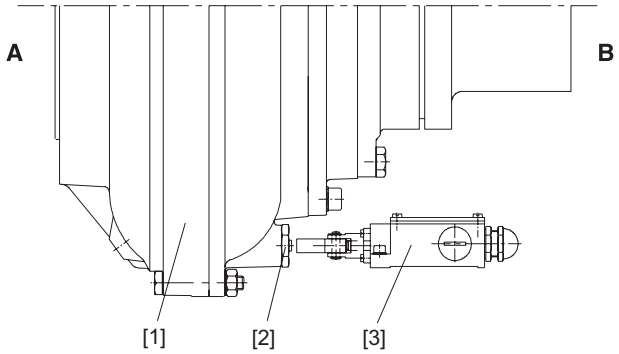
Overleg met Vector Aandrijftechniek.

Reactiearm /T

Zie maatbladen "Kegelwielreductoren op motorbasis MK" (alleen voor opsteekreductoren).

Mechanisch-thermische beveiligingsvoorziening /MTS

Door het gebruik van een mechanisch- thermische beveiligingsvoorziening kan het rondspuiten van de bedrijfsvloeistof naar de omgeving vermeden worden. Een schakelbout die in de koppeling geschroefd is, geeft bij te hoge temperatuur een veerbelaste schakelstift vrij. Deze schakelstift bedient een schakelaar waarmee en waarschuwingssignaal gegeven of de installatie afgeschakeld kan worden.



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Afbeelding 29: mechanisch- thermische beveiligingsvoorziening /MTS

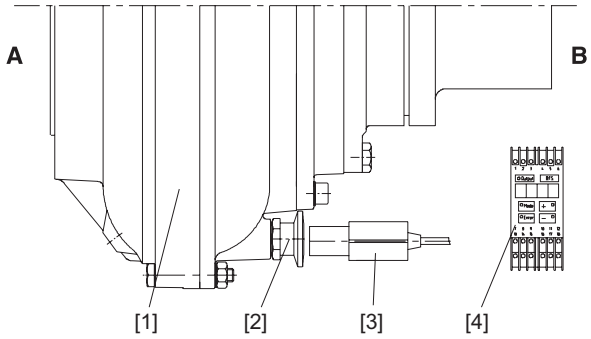
[1] hydraulische aanloopkoppeling
[2] schakelpen
[3] schakelaar
[A] reductorzijde
[B] motorzijde

Ondanks de aanwezige beveiligingsvoorziening is de aanloopkoppeling verder met smeltstoppen uitgevoerd, die echter belangrijk later aanspreken dan de beveiligingsvoorziening.

Mechanisch-thermische beveiligingsvoorziening /BTS

Door het gebruik van een contactloze thermische beveiligingsvoorziening kan het rondspuiten van de bedrijfsvloeistof naar de omgeving vermeden worden. Deze bestaat uit 3 elementen: Een schakelplug die in de koppeling geschroefd is en bij te hoge temperatuur verandert in inductiviteit, een schakelaar, die de inductiviteitsverandering van de schakelplug meet en een verwerkingsapparaat (toerentalbewakingsrelais) dat de signalen van de schakelaar verwerkt. Via dit toerentalbewakingsrelais kan weer een waarschuwingssignaal gegeven of de installatie uitgeschakeld worden.

De schakelplug herstelt zich na afkoeling en is dan weer te gebruiken.



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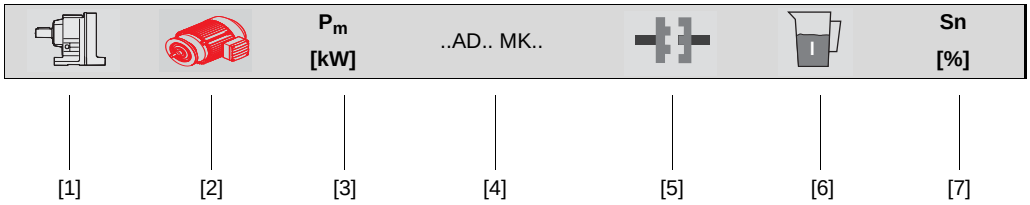
Afbeelding 30: mechanisch- thermische beveiligingsvoorziening /BTS

[1] hydraulische aanloopkoppeling
[2] schakelpen
[3] schakelaar
[4] toerentalbewakingsrelais

[A] reductorzijde
[B] motorzijde

Het selecteren van kegelwielreductoren op een motorbasis MK
Aandrijfzijdig deksel AD

Voorbeeld keuzetabellen motorbasis MK



[1] grootte reductor
[2] type motor
[3] Motorvermogen
[4] deksel motorbasis combinatie
[5] type koppeling
[6] vulhoeveelheid [l]
[7] nominale slip van de koppeling

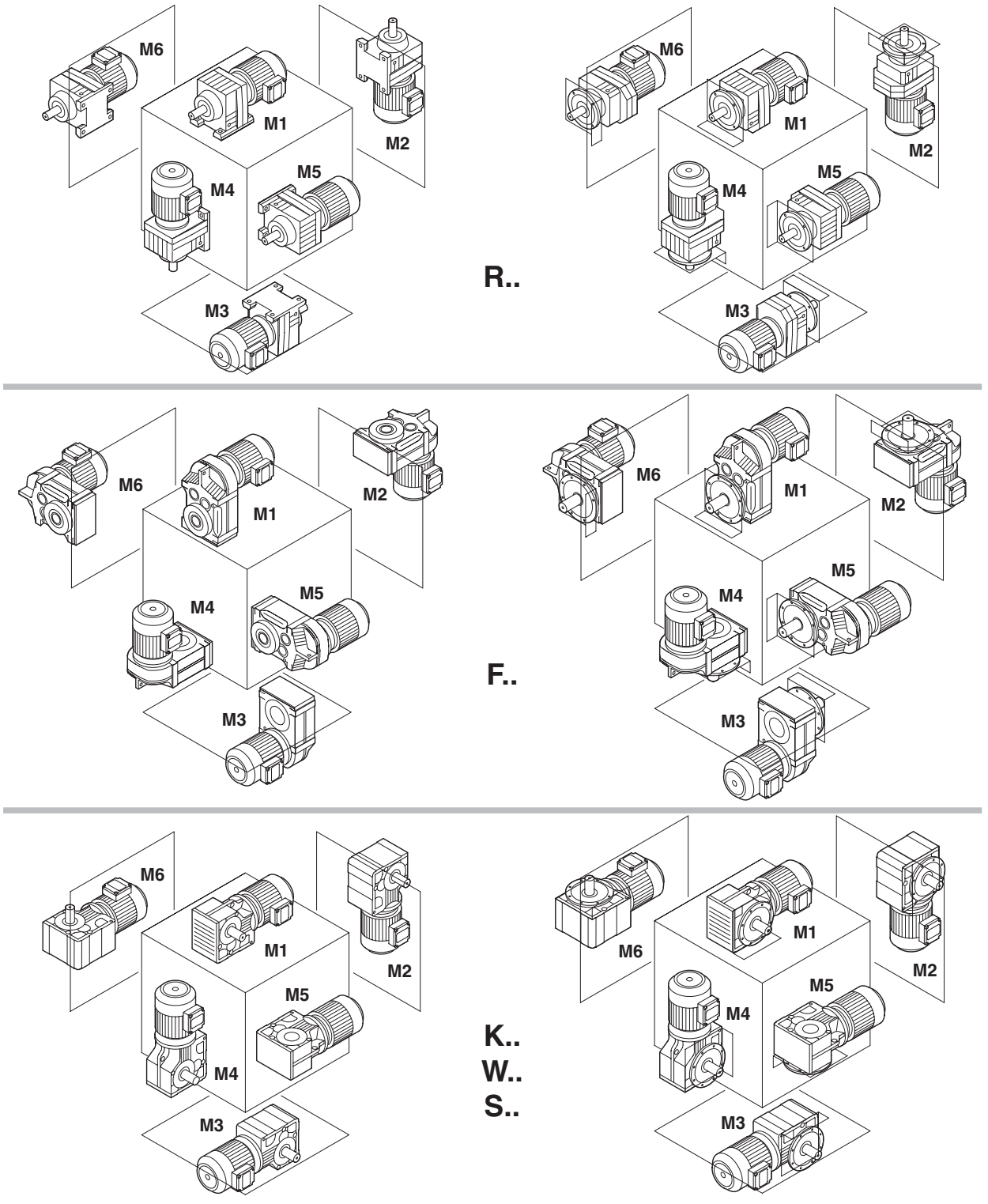
De betreffende selectietabellen vindt u op de bladzijde 501.

7 Bouwvormen en belangrijke gegevens bij bestelling

7.1 Algemene aanwijzingen voor de uitvoeringen

Bouwvormaanduiding

SEW-EURODRIVE maakt bij reductoren onderscheid tussen de 6 bouwvormen M1 ... M6. De volgende afbeelding toont de opstelling van de reductor bij de bouwvormen M1 ... M6.



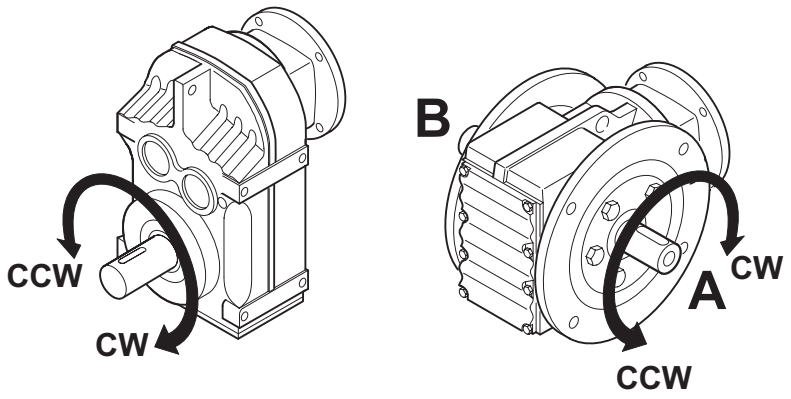
Afbeelding 31: weergave van de bouwvormen M1 ... M6

7.2 Belangrijke gegevens voor het bestellen

Naast de bouwvorm bij de R-, F-, K- en S-reductoren zijn de volgende bestelgegevens vereist om de uitvoering van de aandrijving exact aan te geven.

Draairichting uitgaande as bij terugloopblokkering

Bij aandrijvingen met een terugloopblokkering dient de gewenste draairichting van de uitgaande as/gedreven zijde aangegeven te worden. De draairichting wordt gegeven kijkend naar de uitgaande as/uitgaande aszijde van de reductor, bij aandrijvingen met het aseind aan de zijden A en B dient de draairichting aangegeven te worden kijkend naar de A-zijde.



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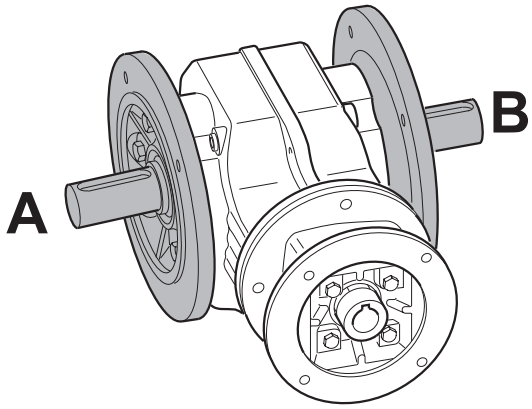
Afbeelding 32: draairichting uitgaande as bij terugloopblokkeringen

CW	=	rechtsom (draaien met de wijzers van de klok mee)
CCW	=	linksom

Positie van de uitgaande as en de flens bij de uitgaande as

Bij haakse reductoren dient bovendien de positie van de uitgaande as en de flens bij de uitgaande as opgegeven te worden:

- A of B



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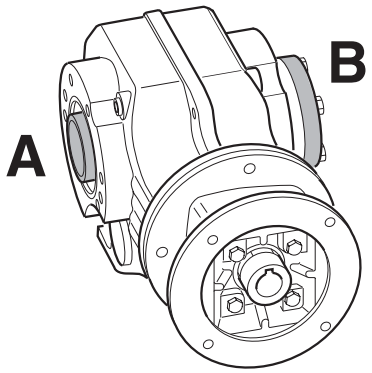
Afbeelding 33: positie van de uitgaande as en de flens bij de uitgaande as

As-aansluitzijde bij haakse reductoren

Bij haakse opsteekreductoren met krimpschijf dient verder aangegeven te worden of de aansluitzijde A- of B-zijdig is. In de afbeelding 34 is de A-zijde de asaansluitzijde. De krimpschijf bevindt zich tegenover de aansluitzijde.



50297AXX

Afbeelding 34: Aansluitzijde bij haakse reductoren

De toelaatbare bevestigingsvlakken (= gearceerde vlakken) staan vermeld in de bouwvormbladen (bladzijde 75 en volgende bladzijden).

Voorbeeld: Bij de kegelwielreductoren K167/K187 in de bouwvormen M5 en M6 is uitsluitend bevestigingsvlak onder mogelijk.

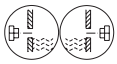
Bestelvoorbeeld

Type (Voorbeelden)	Bouwvorm	Aspositie	Flenspositie	Aansluitzijde	Positie krimpschijf	Draairichting uitgaande as
K47../RS	M2	A	-	-	-	Rechts
SF77	M6	AB	AB	-	-	-
KA97	M4	-	-	B	-	-
KH107	M1	-	-	A	B	-

7.3 Legenda bij de bouwvormbladen

Gebruikte symbolen

De volgende tabel toont welke symbolen in de bouwvormbladen worden toegepast en hun betekenis:

Symbool	Betekenis
	Ontluchtingsventiel
	Oliepeilschroef
	Olieaftapschroef

Woelingsverliezen

* bladzijde XX

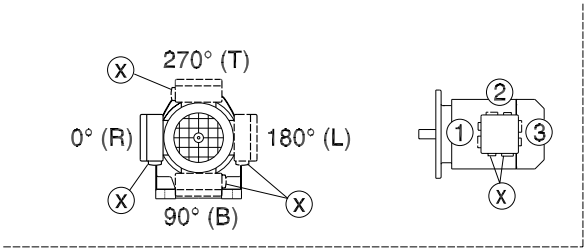
Bij enkele bouwvormen kunnen verhoogde woelingsverliezen optreden. U gelieve ons bij de volgende combinaties te raadplegen:

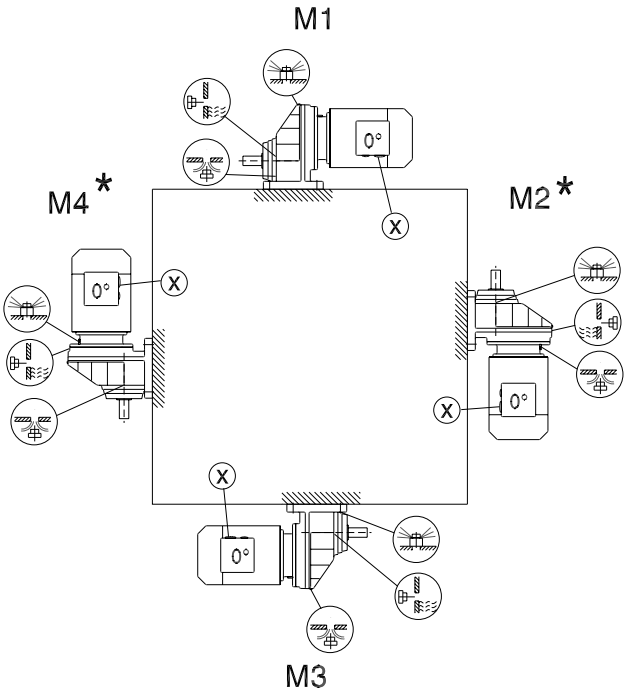
Bouwvorm	Type reductor	Grootte reductor	Ingaand toerental [r/min]
M2, M4	R	97 ... 107	> 2500
		> 107	>1500
M2, M3, M4, M5, M6	F	97 ... 107	> 2500
		> 107	> 1500
	K	77 ... 107	> 2500
		> 107	> 1500
	S	77 ... 97	> 2500

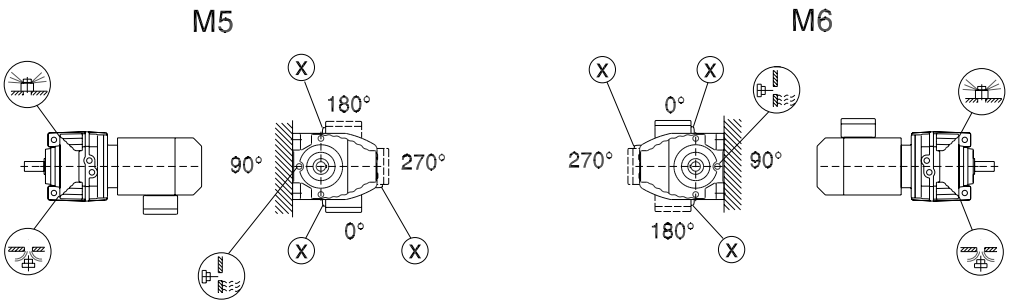
7.4 Bouwvormen rechte motorreductoren

RX57-RX107

04 043 02 00

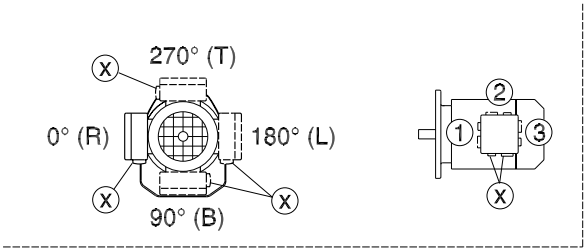




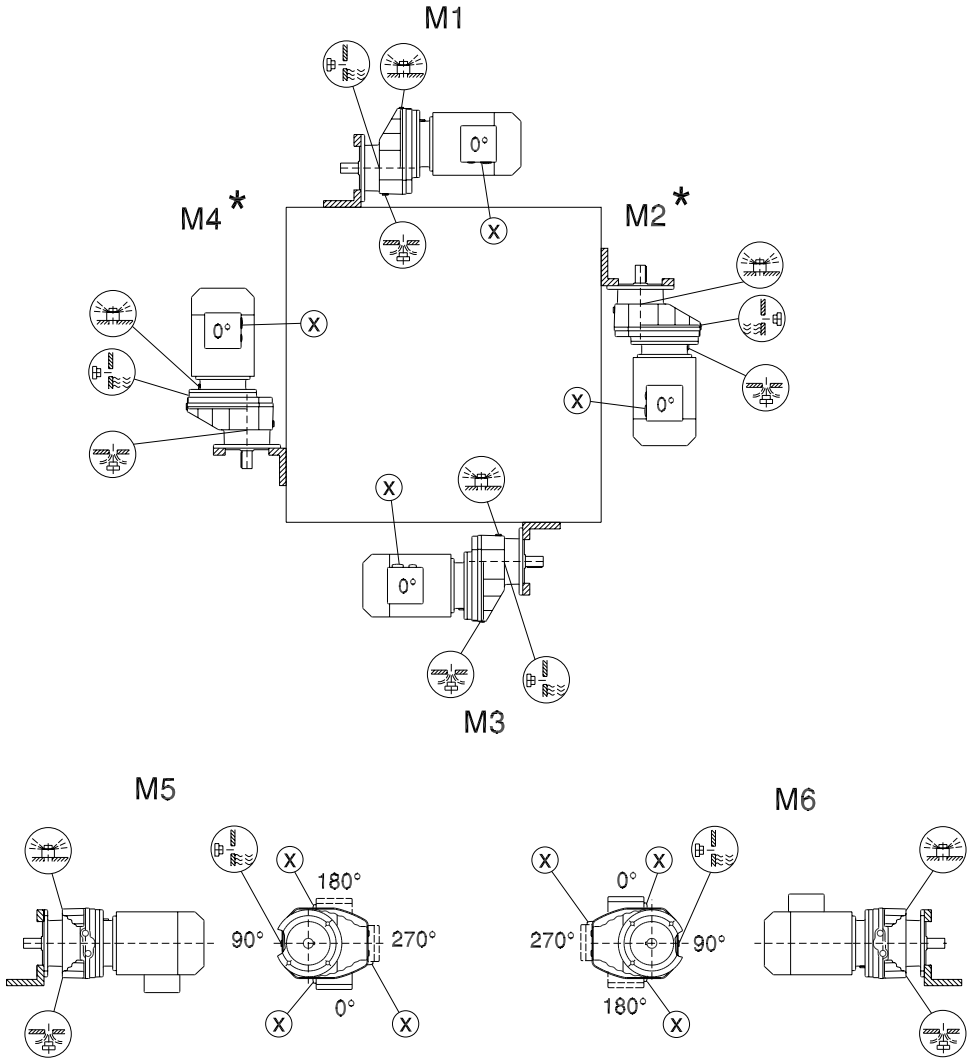


* → bladzijde 74

RXF57-RXF107



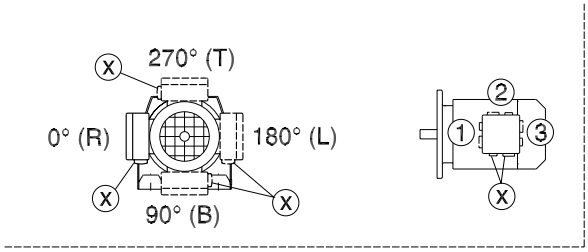
04 044 02 00

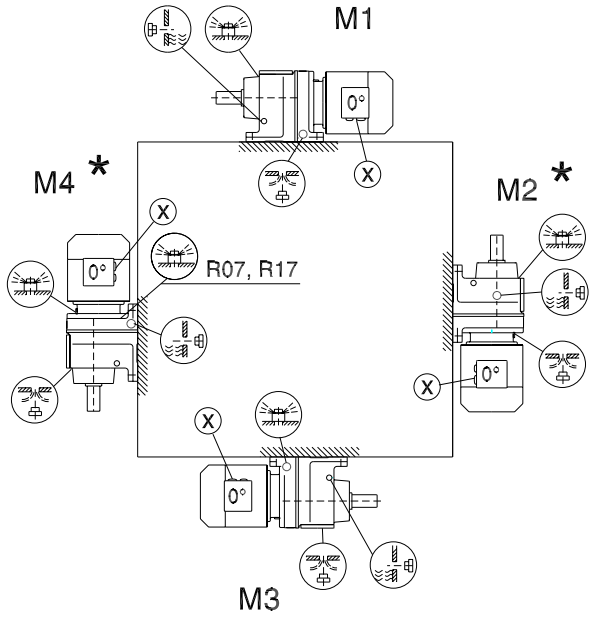


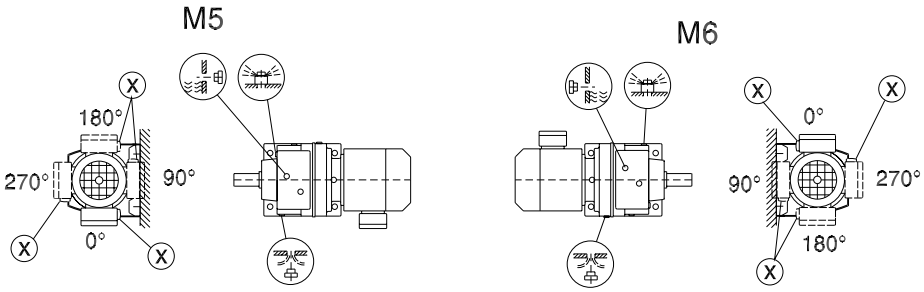
* → bladzijde 74

R07-R167

04 040 03 00





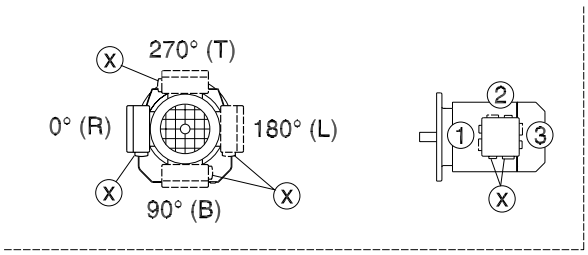


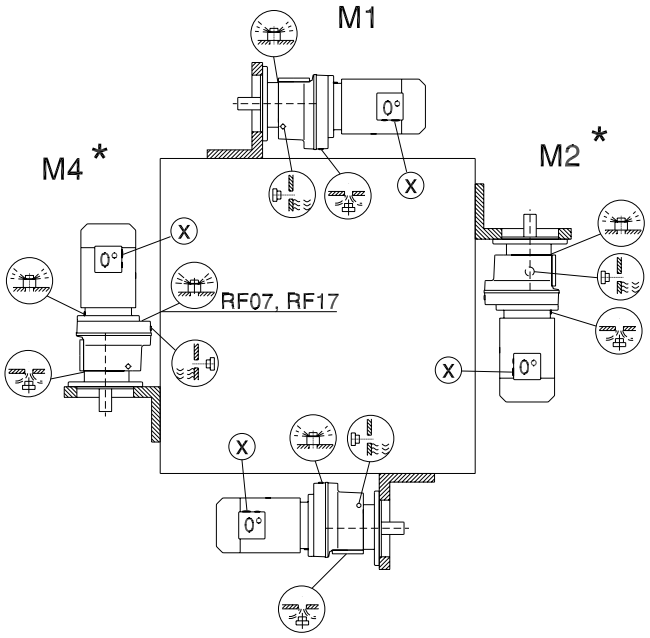
R07		M1, M2 , M3 , M5 , M6
R17, R27		M1, M3 , M5 , M6
R07, R17, R27		
R47, R57		M5

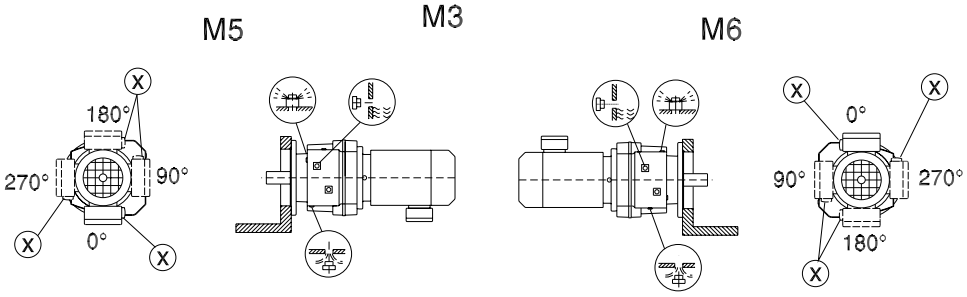
* → bladzijde 74

RF07-RF167

04 041 02 00





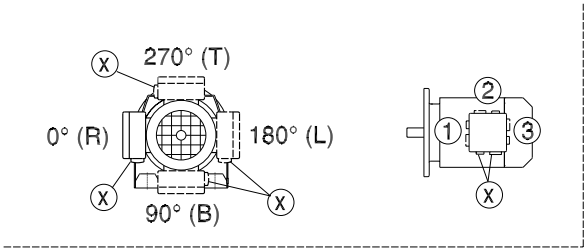


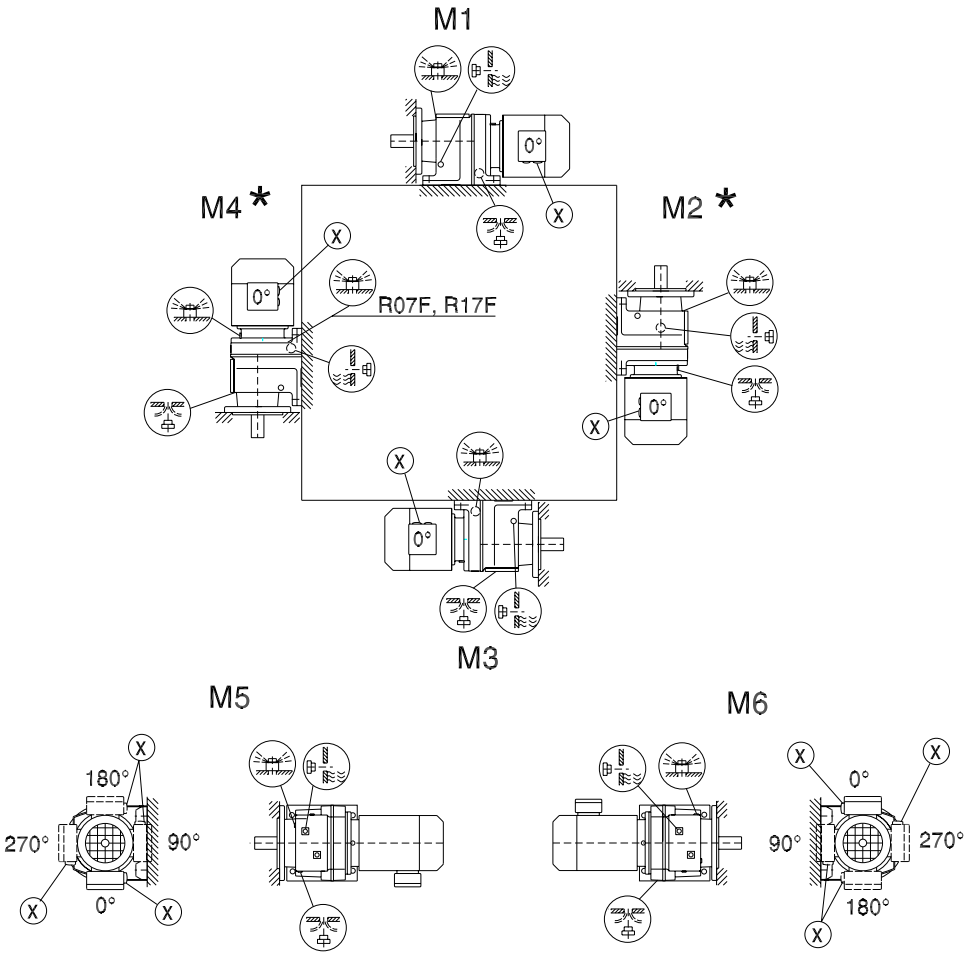
RF07		M1, M2 , M3 , M5 , M6
RF17, RF27		M1, M3 , M5 , M6
RF07, RF17, RF27		
RF47, RF57		M5

* → bladzijde 74

R07F-R87F

04 042 03 00





R07F	⊗	M1, M2 , M3 , M5 , M6
R17F, R27F	⊗	M1, M3 , M5 , M6
R07F, R17F, R27F	⊗ ⊗	
R47F, R57F	⊗	M5

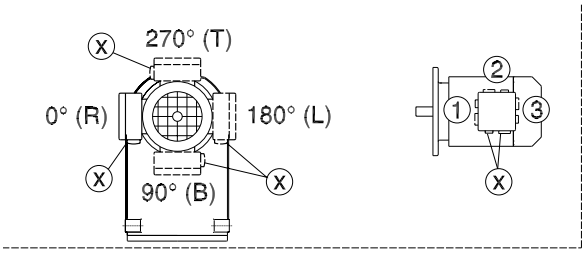
* → bladzijde 74

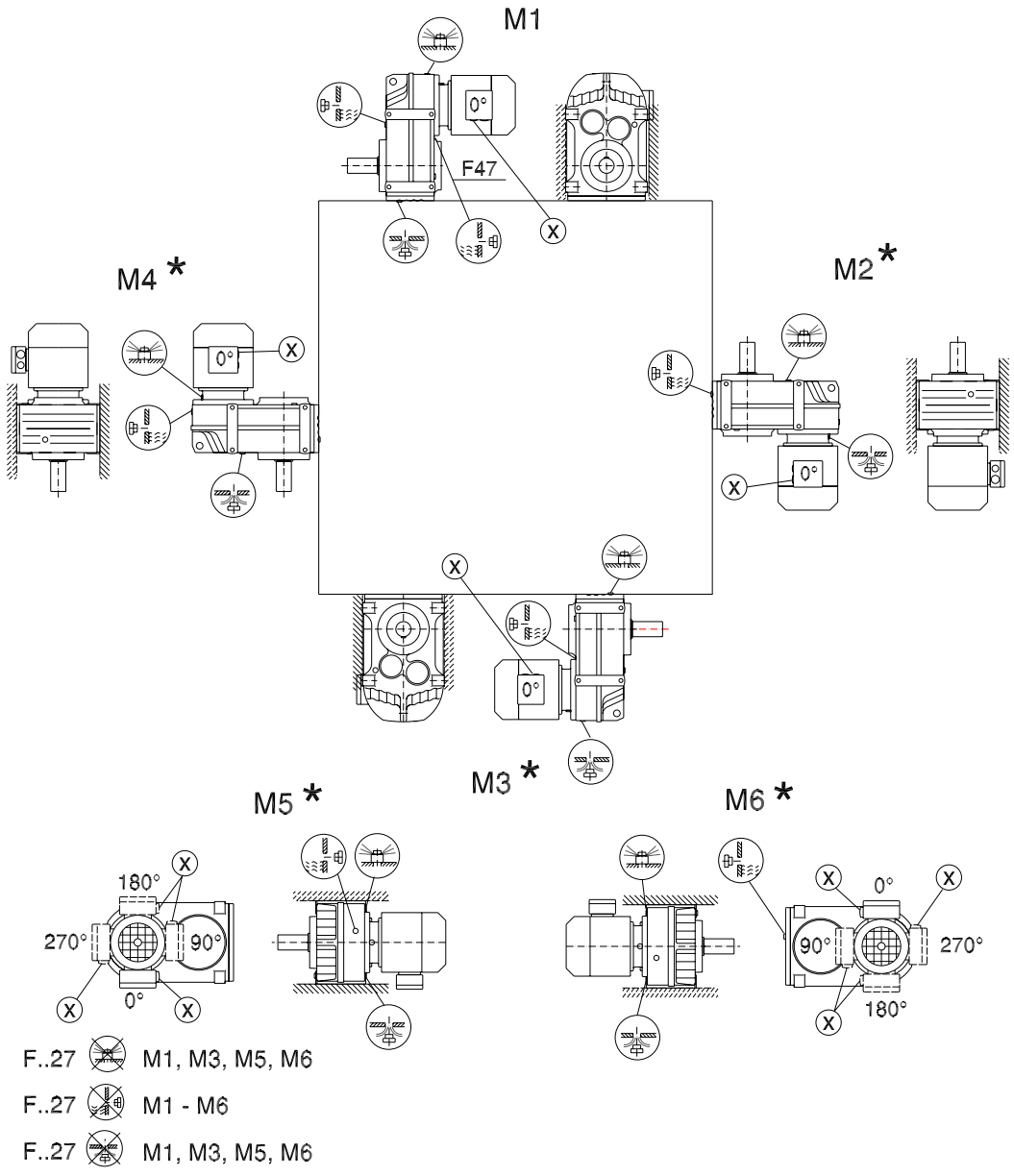
Let op: u dient te letten op de ⓘ-aanwijzingen in de catalogus "Motorreductoren", hoofdstuk "Het selecteren van een reductor/radiale en axiale krachten".

7.5 Bouwvormen vlakke motorreductoren

F/FA..B/FH27B-157B, FV27B-107B

42 042 02 00





F..27 M1, M3, M5, M6

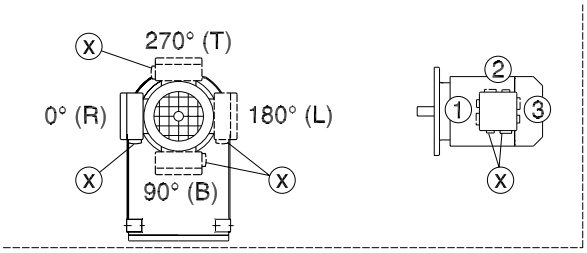
F..27 M1 - M6

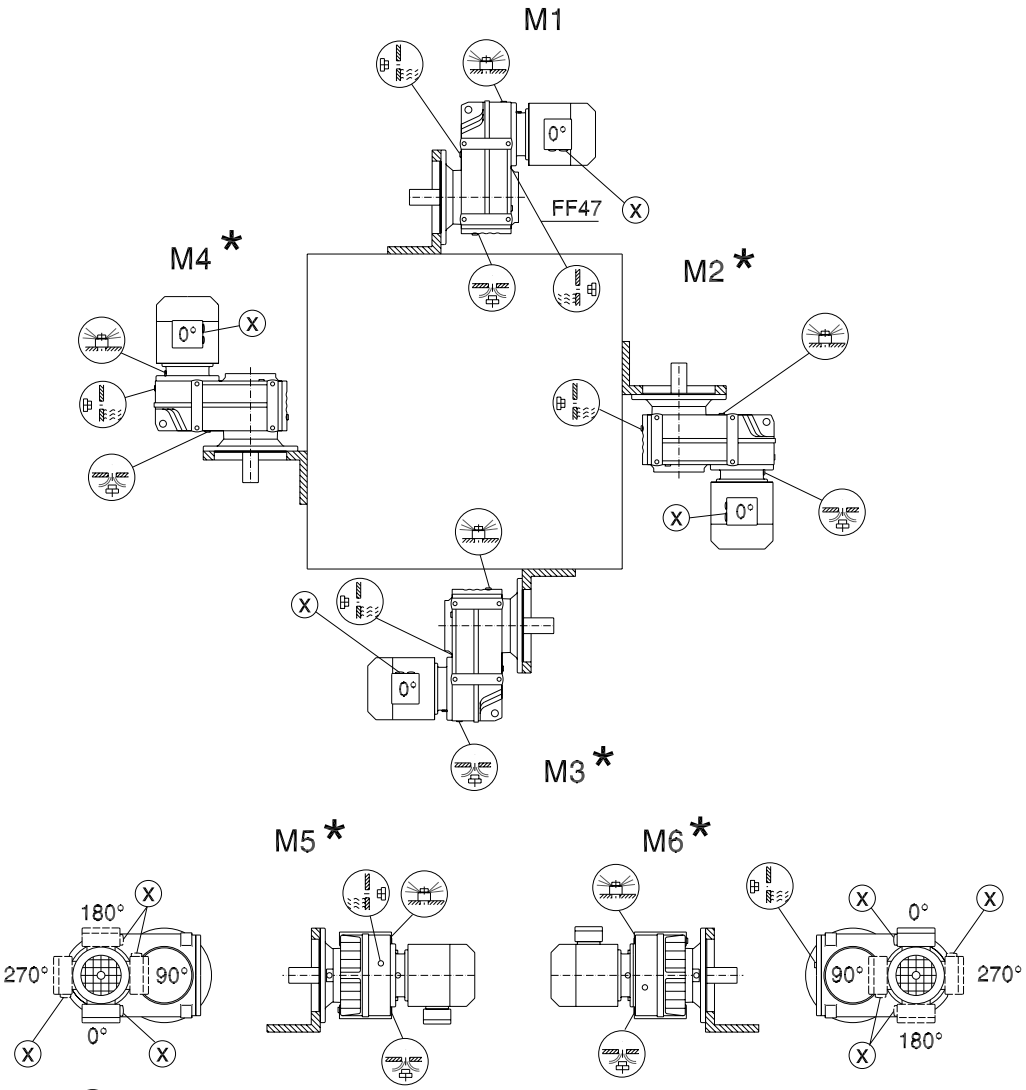
F..27 M1, M3, M5, M6

* → bladzijde 74

FF/FAF/FHF/FAZ/FHZ27-157, FVF/FVZ27-107

42 043 02 00





F..27 M1, M3, M5, M6

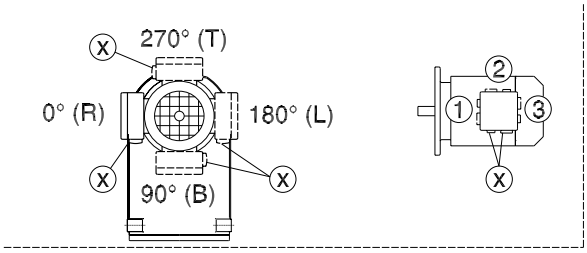
F..27 M1 - M6

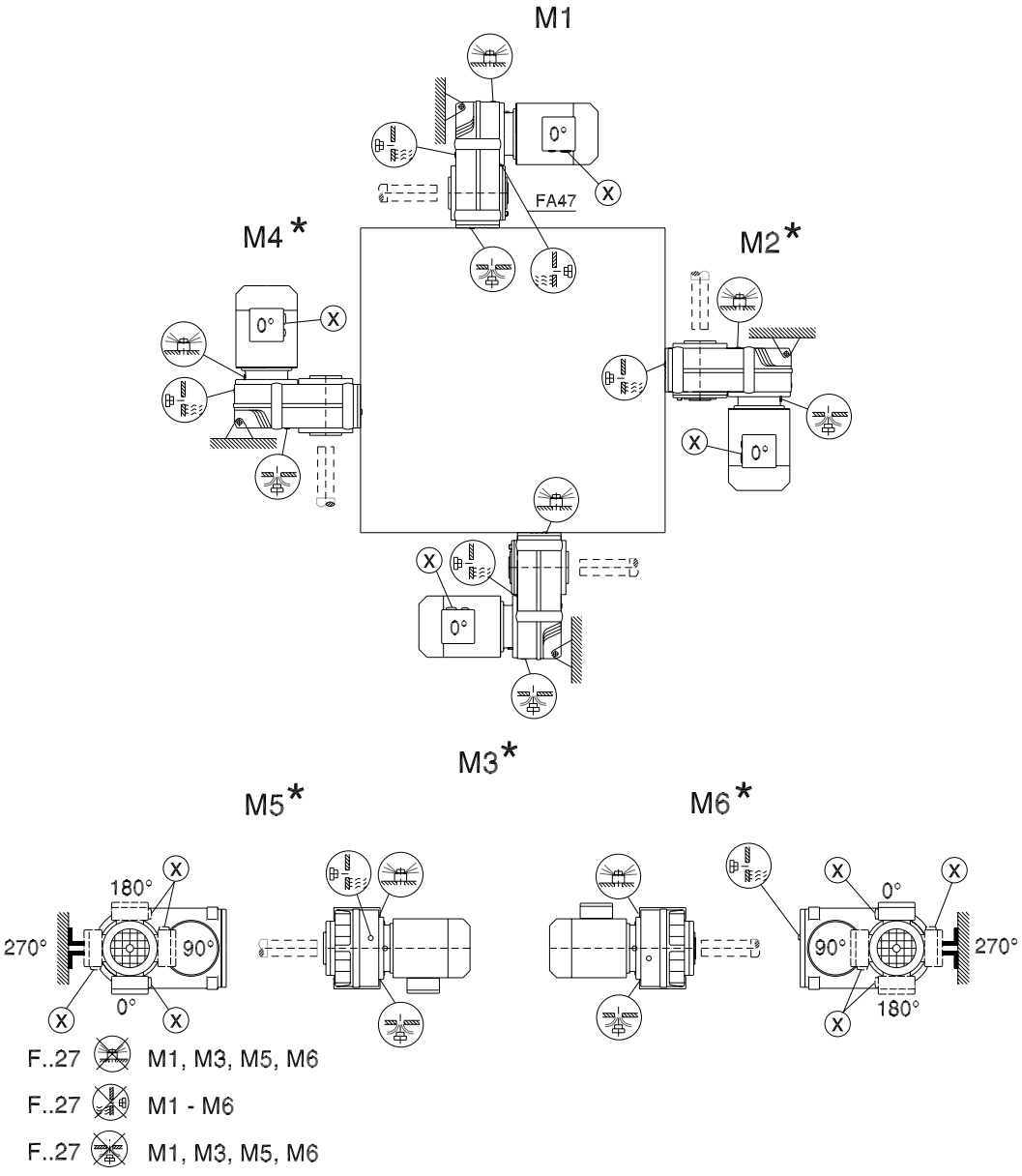
F..27 M1, M3, M5, M6

* → bladzijde 74

FA/FH27-157, FV27-107, FT37-97

42 044 02 00





F..27 M1, M3, M5, M6

F..27 M1 - M6

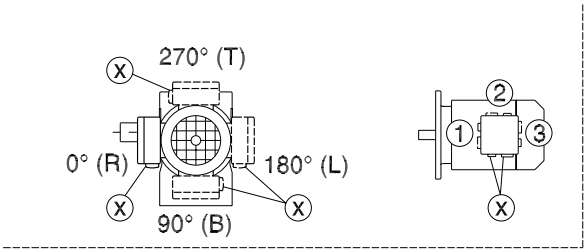
F..27 M1, M3, M5, M6

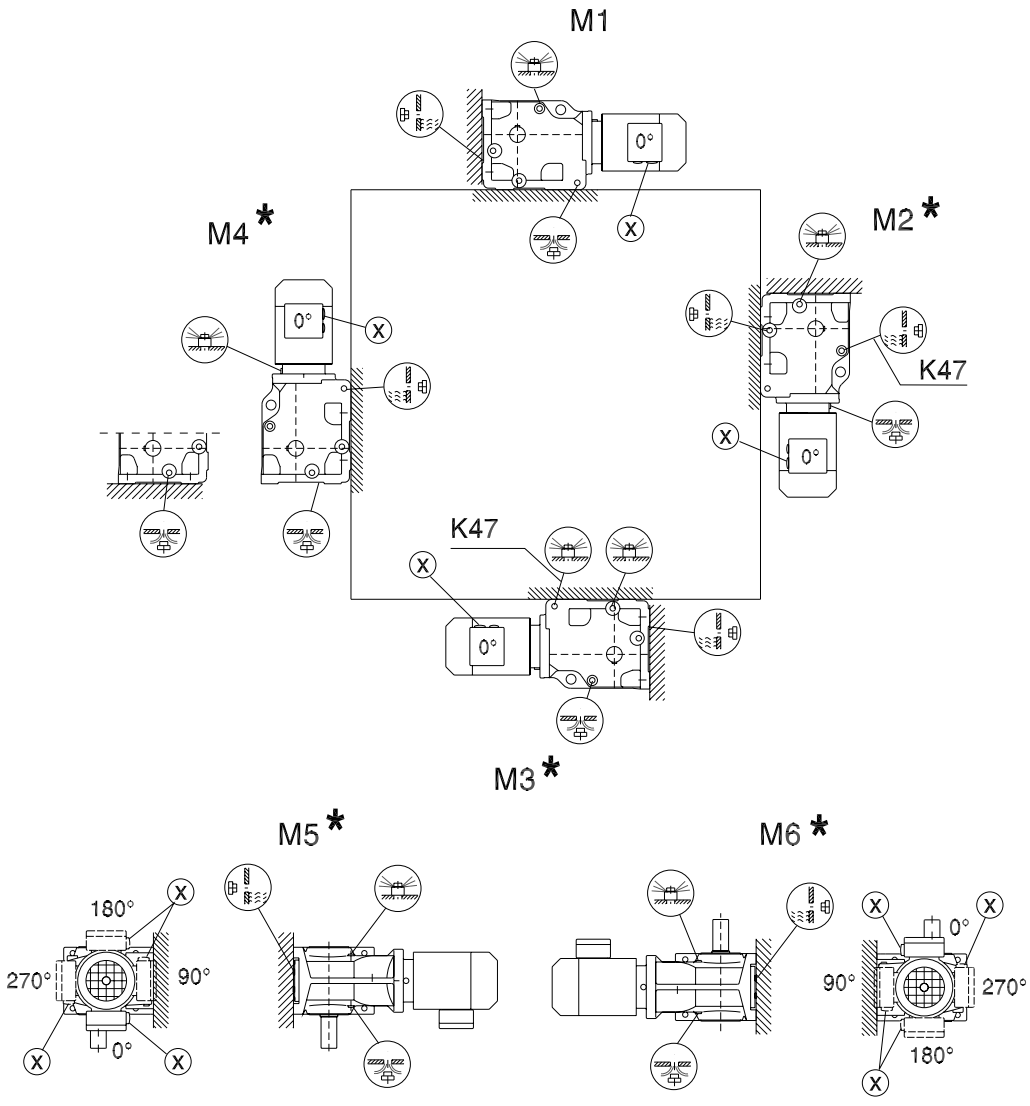
* → bladzijde 74

7.6 Bouwvormen kegelwielmotorreductoren

K/KA..B/KH37B-157B, KV37B-107B

34 025 02 00



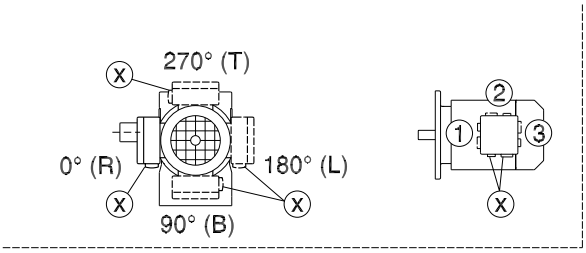


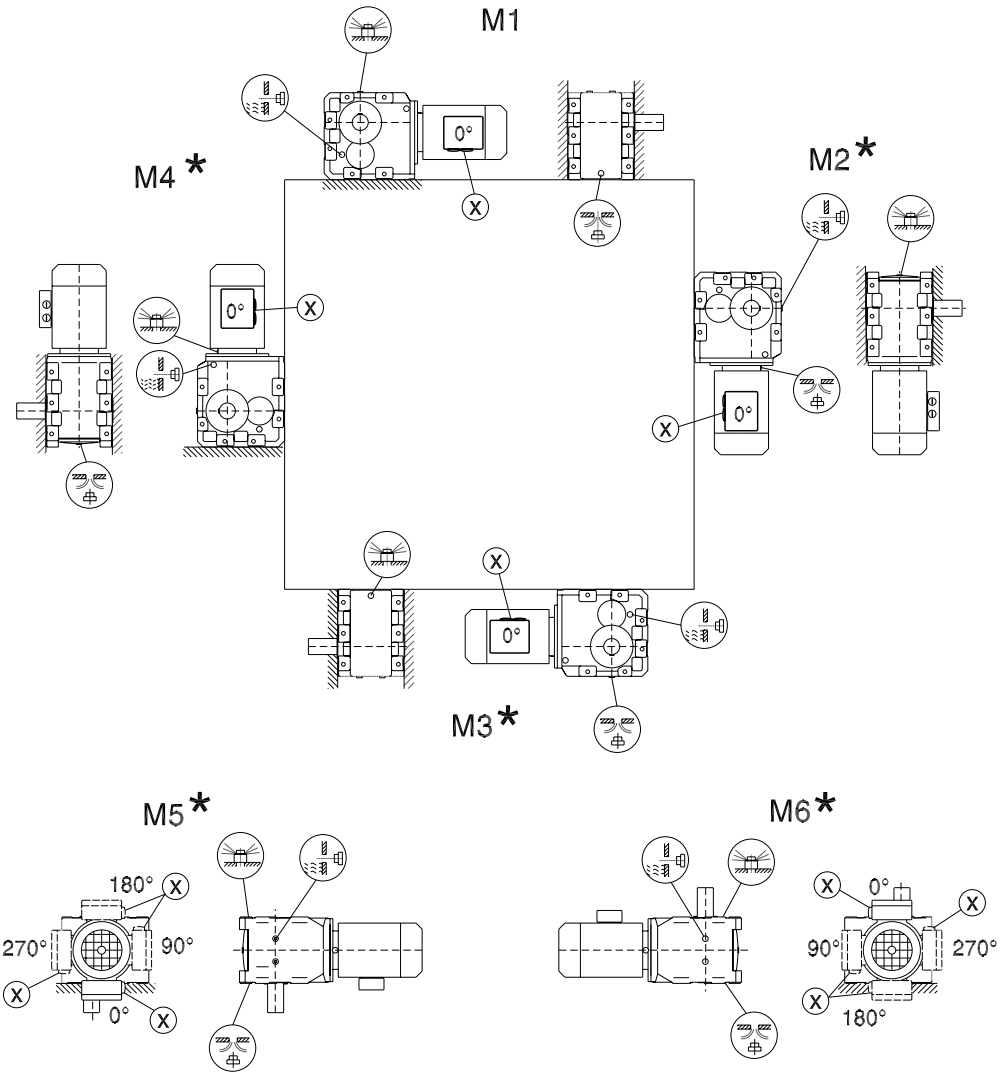
* → bladzijde 74

Let op: u dient te letten op de ⓘ-aanwijzingen in de catalogus "Motorreductoren", hoofdstuk "Het selecteren van een reductor/radiale en axiale krachten".

K167-187, KH167B-187B

34 026 02 00





* → bladzijde 74

Let op: u dient te letten op de ⓘ-aanwijzingen in de catalogus "Motorreductoren", hoofdstuk "Het selecteren van een reductor/radiale en axiale krachten".

KF/KAF/KHF/KAZ/KHZ37-157, KVF/KVZ37-107

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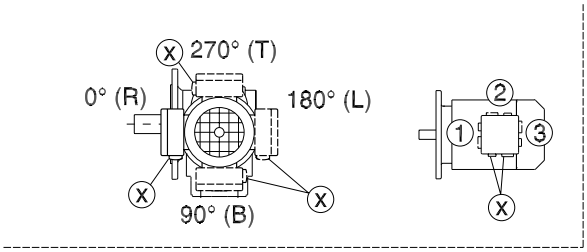
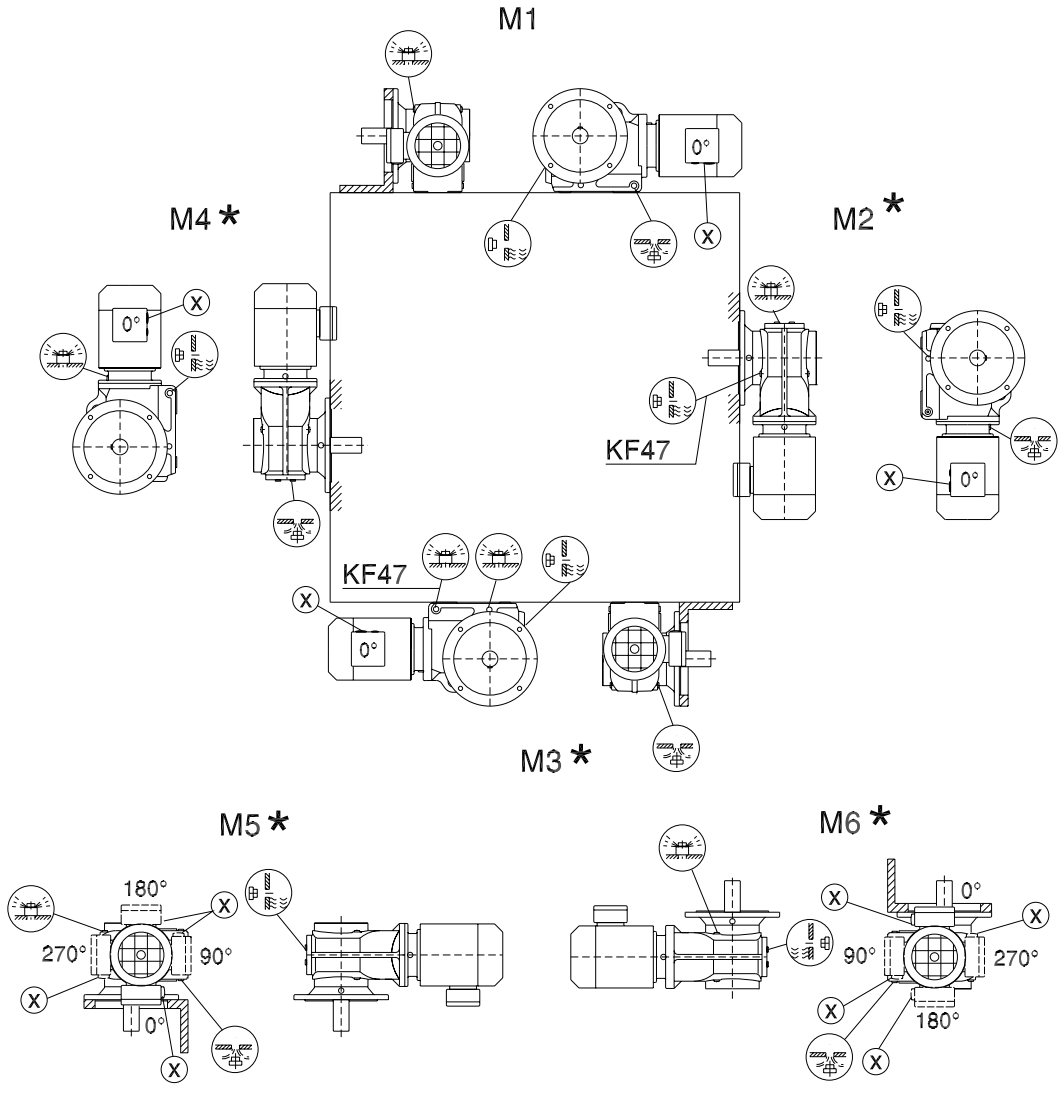
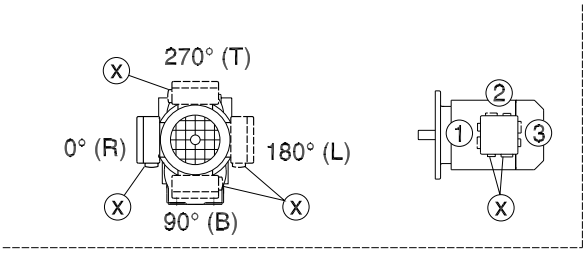


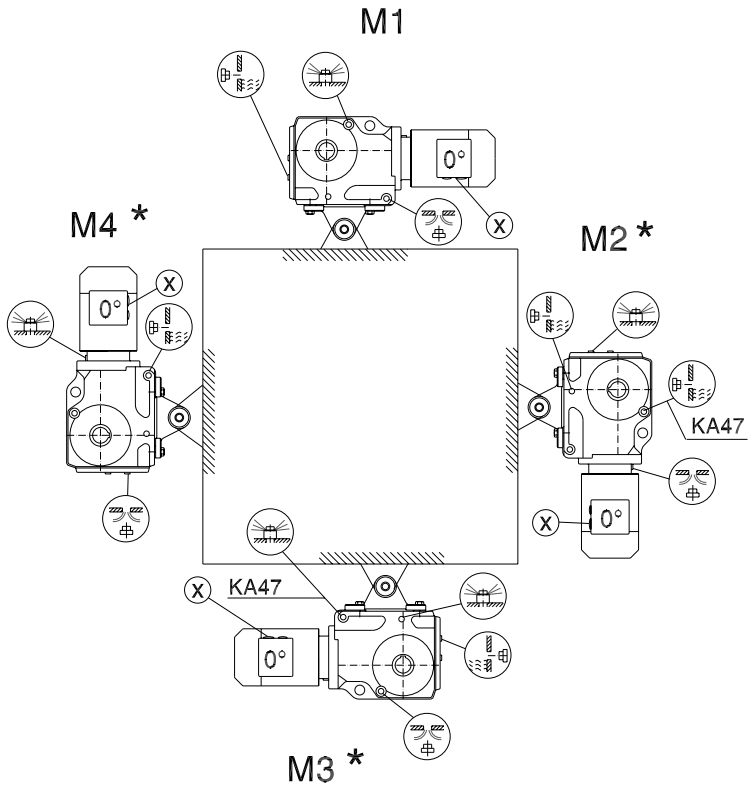


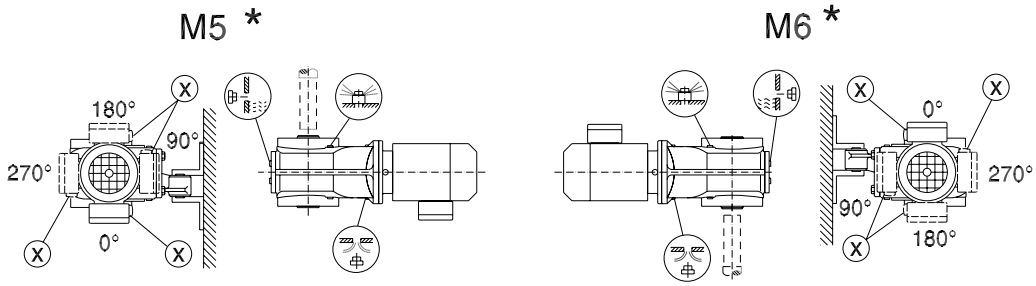
* → bladzijde 74

KA/KH37-157, KV37-107, KT37-97

39 025 02 00



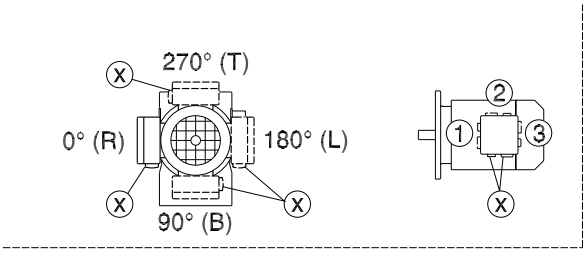


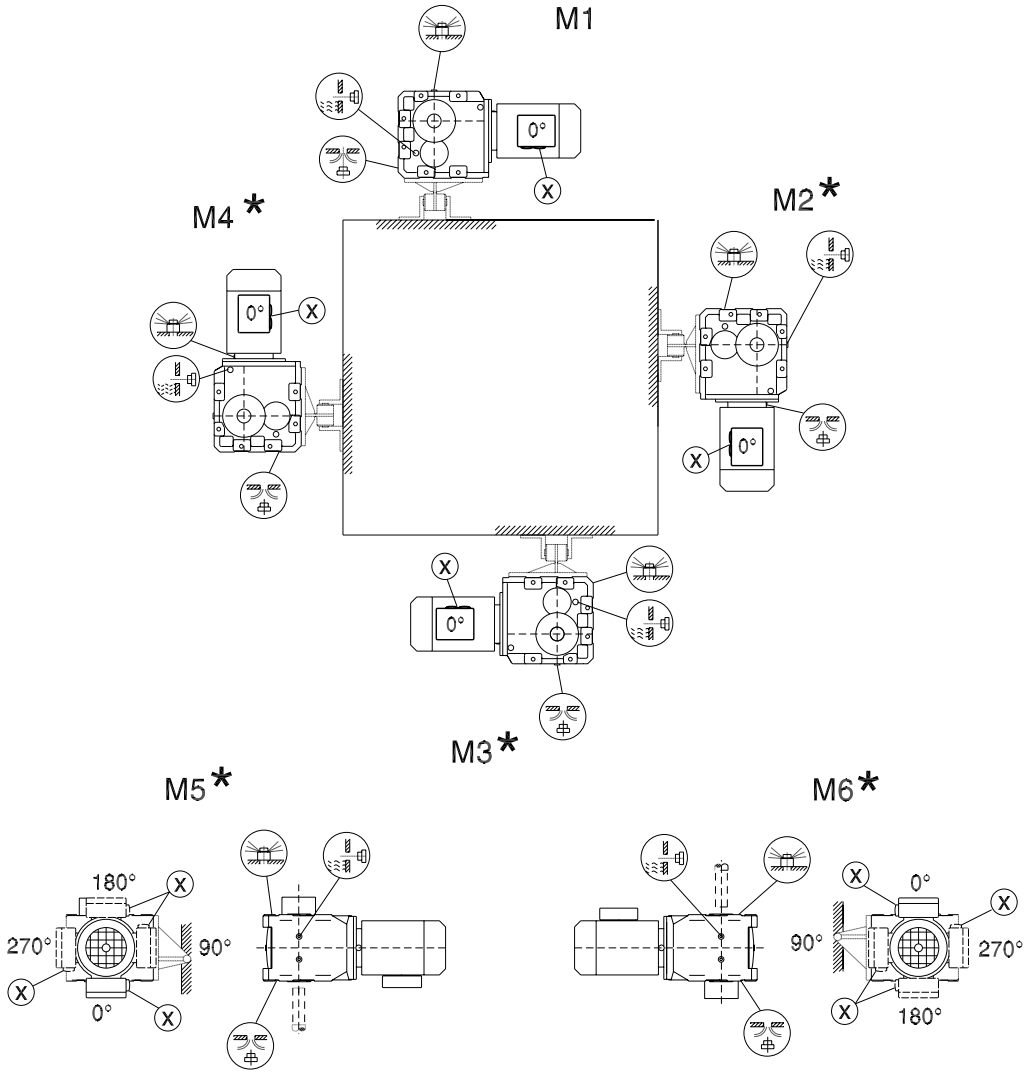


* → bladzijde 74

KH167-187

39 026 03 00

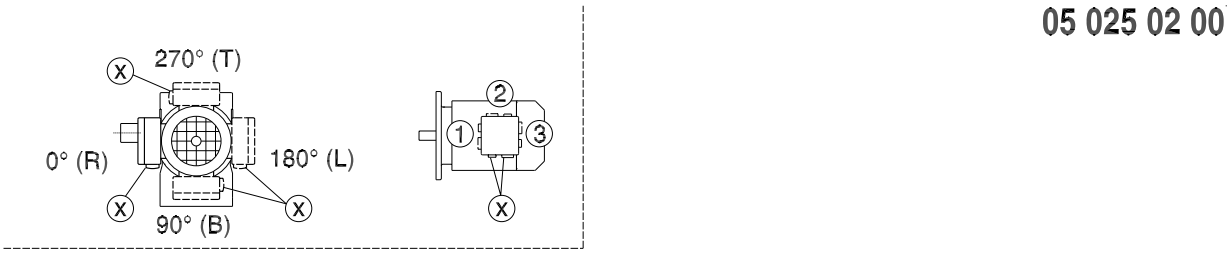


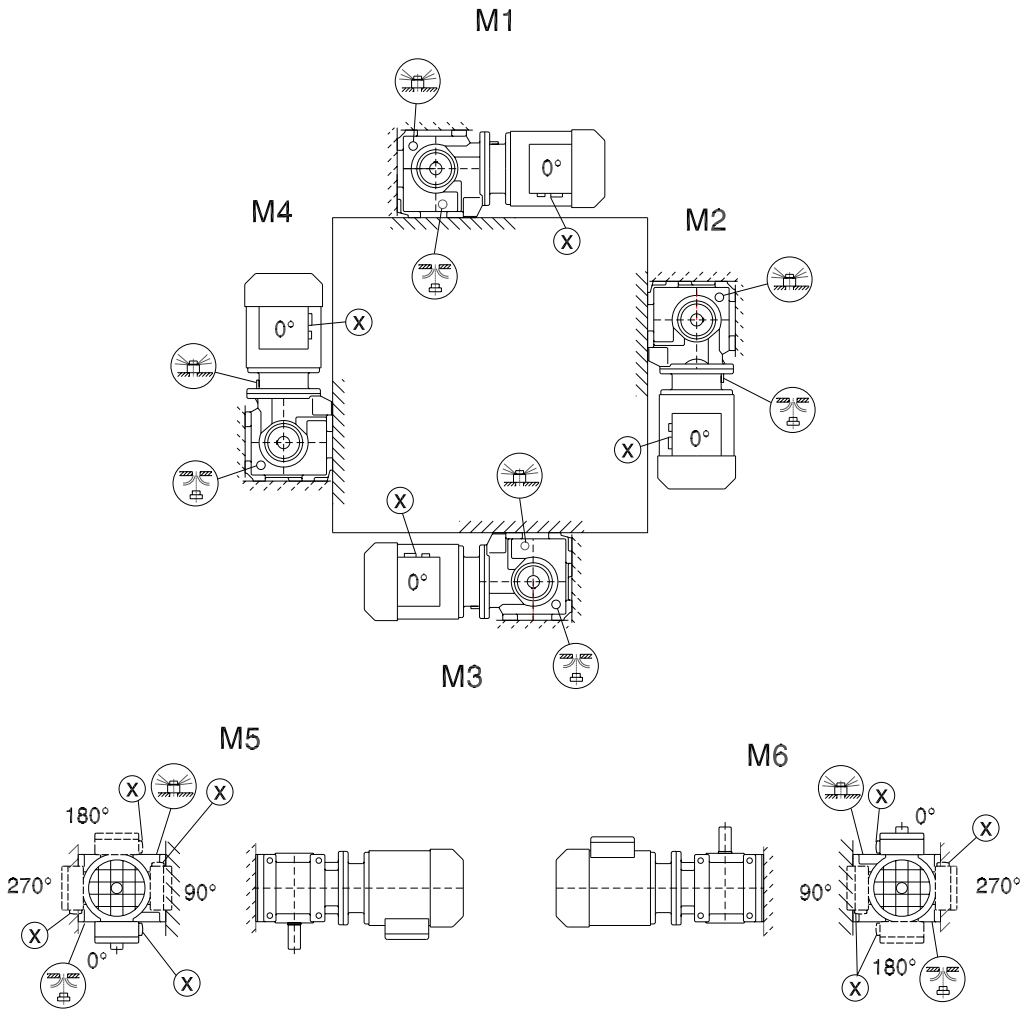


* → bladzijde 74

7.7 Bouwvormen wormwielmotorreductoren

S37



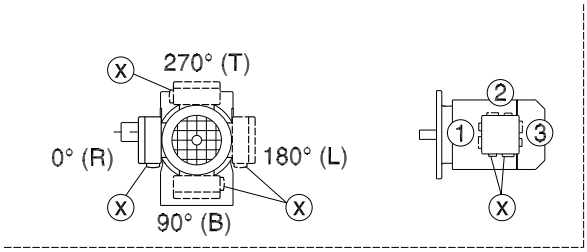


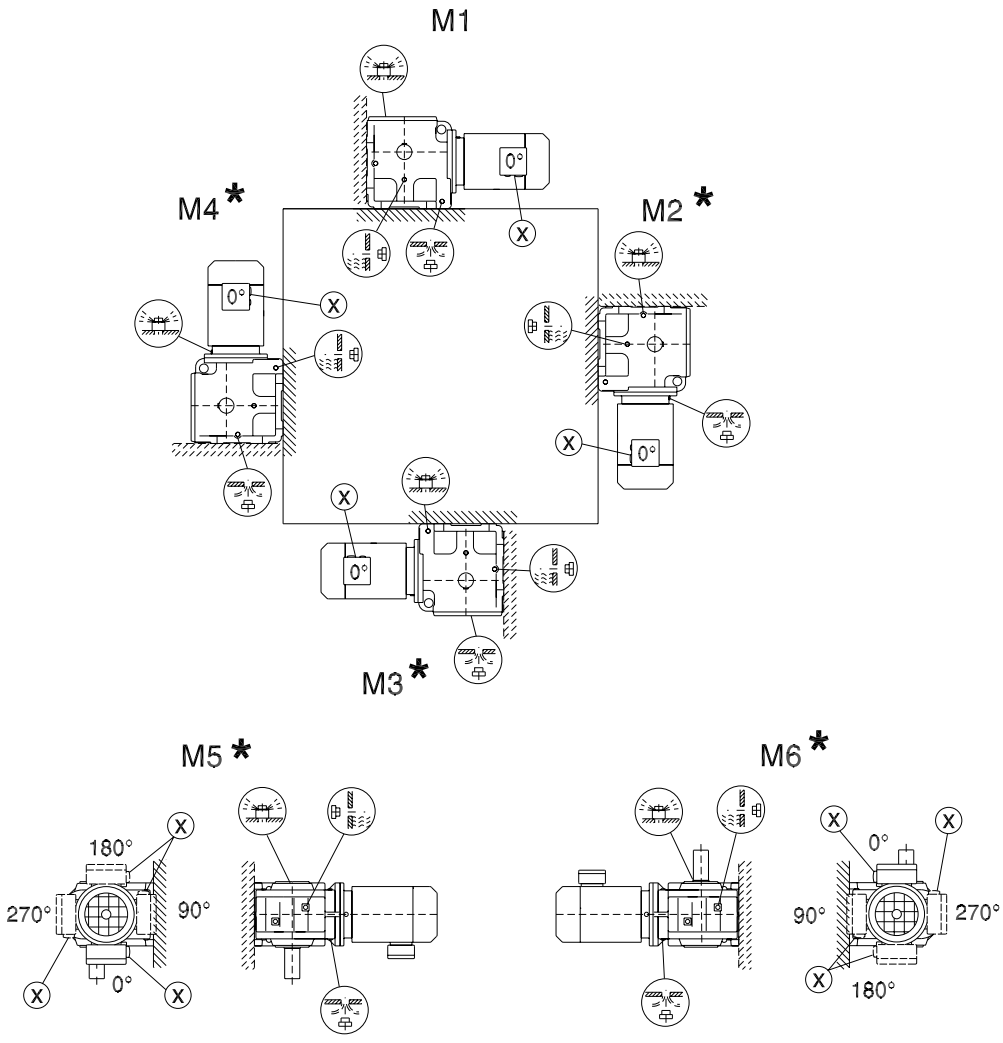
* → bladzijde 74

Let op: u dient te letten op de ⓘ-aanwijzingen in de catalogus "Motorreductoren", hoofdstuk "Het selecteren van een reductor/radiale en axiale krachten".

S47-S97

05 026 02 00





* → bladzijde 74

Let op: u dient te letten op de ⓘ-aanwijzingen in de catalogus "Motorreductoren", hoofdstuk "Het selecteren van een reductor/radiale en axiale krachten".

SF/SAF/SHF37

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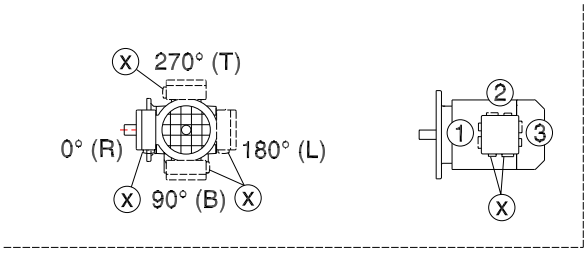

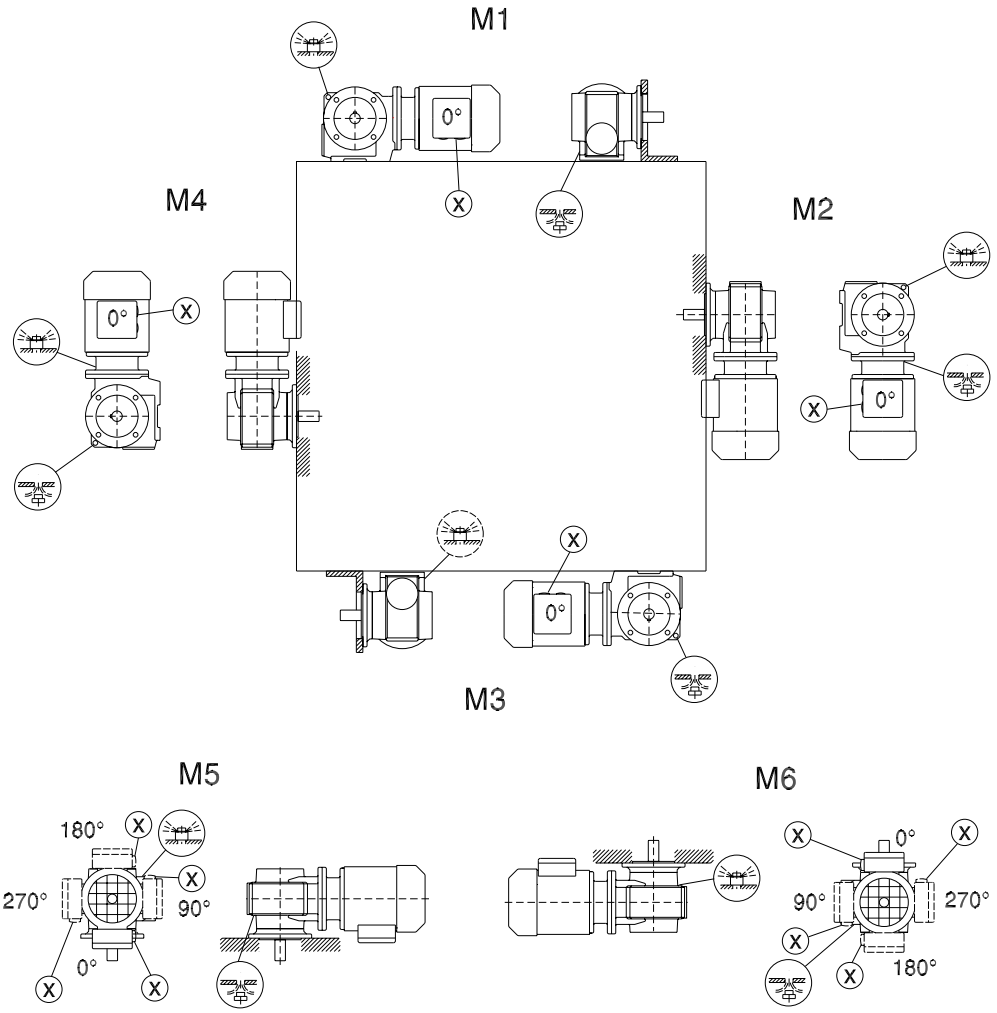

* → bladzijde 74

SF/SAF/SHF/SAZ/SHZ47-97

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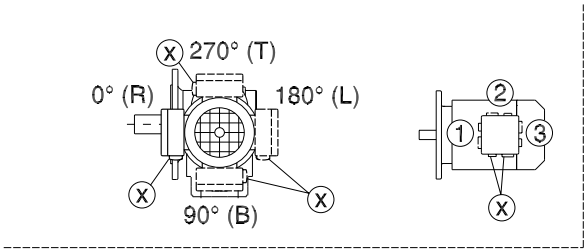
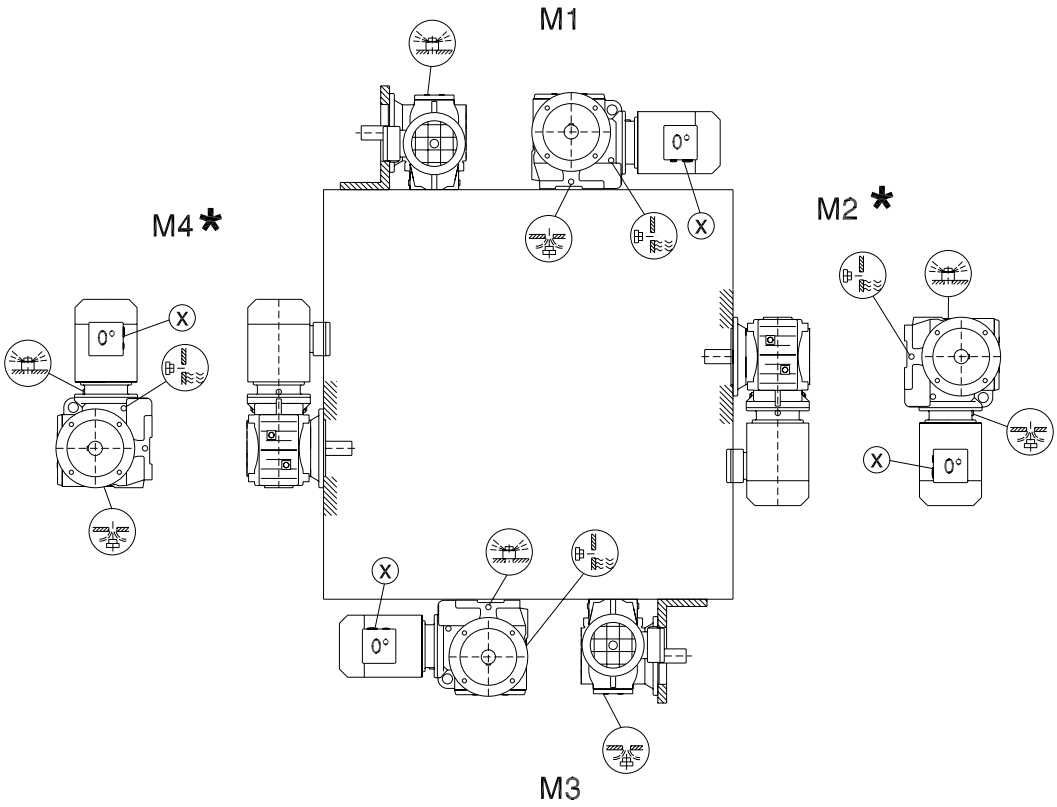
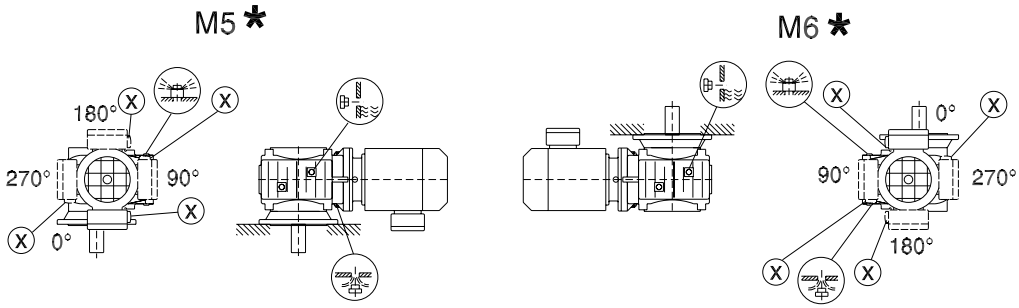


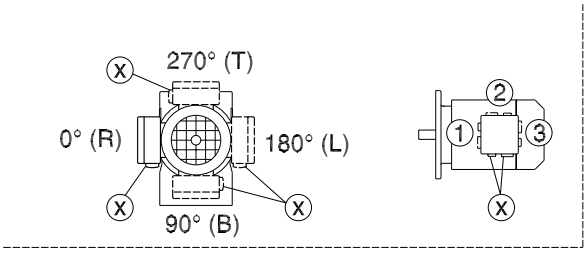


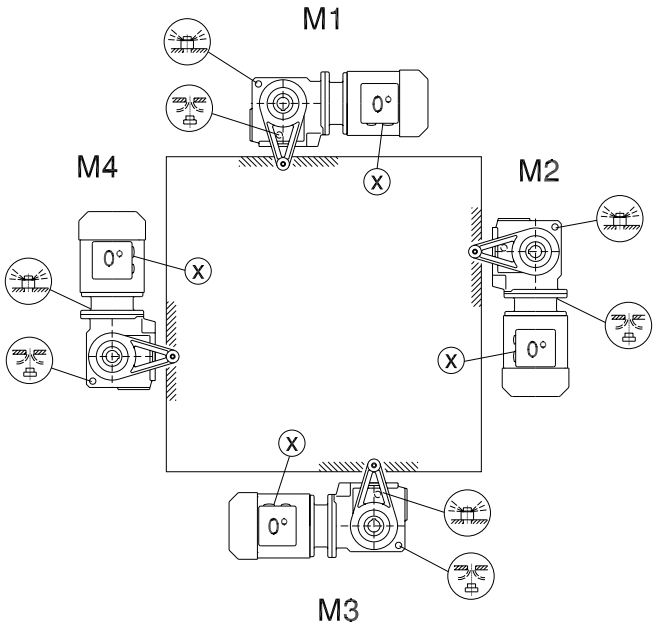


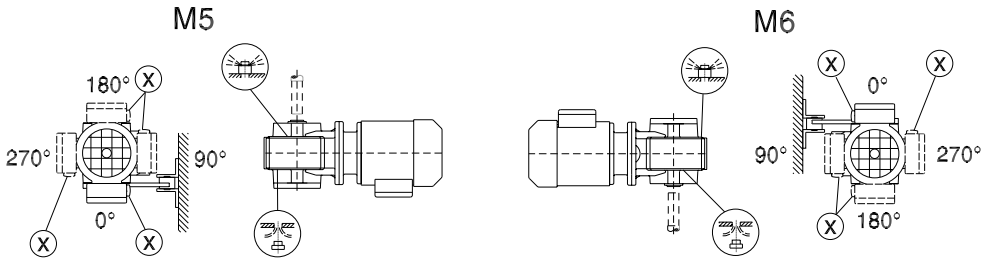
* → bladzijde 74

SA/SH/ST37

28 020 02 00







* → bladzijde 74

SA/SH/ST47-97

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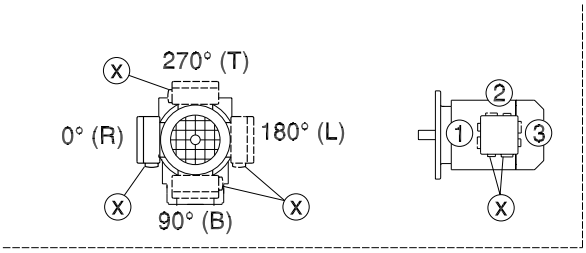

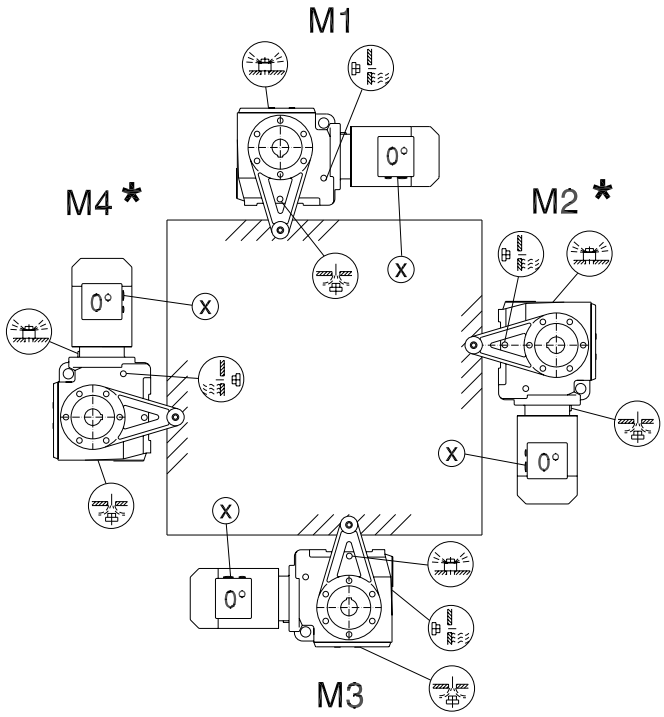

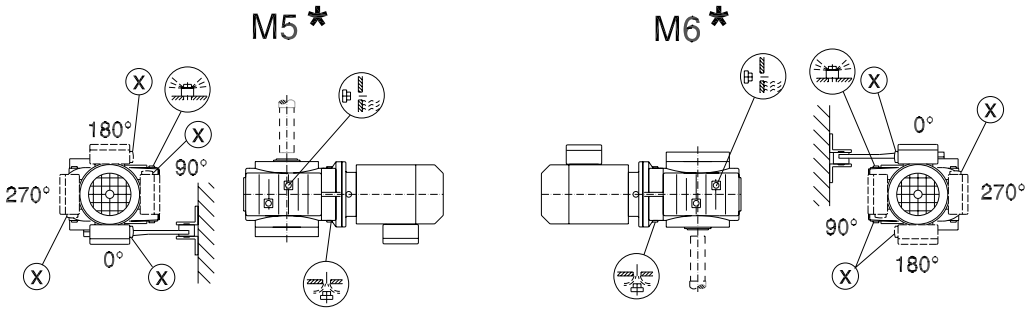

* → bladzijde 74

8 Aanwijzingen voor het construeren en het gebruik

8.1 Smeermiddelen

Algemeen

Indien niet anders overeengekomen, levert SEW-EURODRIVE de aandrijvingen met een bij de reductor en de bouwvorm behorende smeermiddelvulling. Bepalend hiervoor is de opgave van de bouwvorm (M1...M6, → hoofdstuk "Bouwvormen en belangrijke gegevens bij bestelling") bij het bestellen van de aandrijving. Bij latere wijzigingen van de bouwvorm dient u de smeermiddelvulling aan te passen aan de gewijzigde bouwvorm (→ Smeermiddelvulhoeveelheden).

Smeermiddelentabel

De smeermiddelentabel op de volgende bladzijde geeft de toegelaten smeermiddelen weer voor de reductoren van SEW-EURODRIVE. U gelieve de volgende legenda bij de smeermiddelentabel te raadplegen.

Legenda bij de smeermiddelentabel

Toegepaste afkortingen, betekenis van de schaduwmarkering en aanwijzingen:

CLP	= minerale olie
CLP PG	= polyglycol (W-reductor voldoet aan USDA-H1)
CLP HC	= synthetische koolwaterstoffen
E	= ester (oppervlaktewatervervuilingsklasse WGK 1)
HCE	= synthetische koolwaterstoffen + ester (toegelaten USDA-H1)
HLP	= hydraulische olie
	= synthetisch smeermiddel (= wentellagervet op synthetische basis)
	= mineraal smeermiddel (= wentellagervet op minerale basis)
1)	wormwielreductoren met PG-olie: u gelieve ons te raadplegen
2)	speciaal smeermiddel voor Spiroplan®-reductoren
3)	advies: SEW-$f_B \geq 1{,}2$ kiezen
4)	let op kritisch aanloopgedrag bij lage temperaturen!
5)	vloeibaar vet
6)	omgevingstemperatuur
	smeermiddel voor de levensmiddelenindustrie (veilig voor levensmiddelen)
	biologische olie (smeermiddel voor landbouw, bosbouw en waterverwerking)

Vetten voor de wentellagers

Voor de wentellagers van SEW-reductoren en motoren worden in de fabriek de volgende smeermiddelen gebruikt. Wij adviseren bij het verversen van de olievulling ook het vet in de vetgevulde lagers te vernieuwen.

	Omgevingstemperatuur	Fabrikant	type
Reductorwentellagers	-20°C ... +60°C	Mobil	Mobilux EP 2
	-40°C ... +80°C	Mobil	Mobiltemp SHC 100
Speciale vetten voor wentellagers			
	-30°C ... +40°C	Aral	Aral Eural Grease EP 2
	-20°C ... +40°C	Aral	Aral Aralube BAB EP2

De volgende vethoeveelheden zijn gewenst:

- Bij sneldraaiende lagers (motor en ingaande zijde van de reductor): een derde deel van de vrije ruimte tussen de wentellichamen vullen met vet.
- Bij langzaam draaiende lagers (in de reductor en aan de uitgaande zijde van de reductor): twee derde deel van de vrije ruimte tussen de wentellichamen vullen met vet.

Olie voor hydraulische aanloopkoppelingen

Hydraulische aanloopkoppelingen worden in de fabriek gevuld met hydraulische olie Shell Tellus T32. Een lijst met alternatieve oliesoorten verstrekken wij op verzoek.

Smeermiddelentabel

01 805 892

	6) °C -50 0 +50 +100	DIN (ISO)	ISO,NLGI	Mobil®	Shell		ARAL	bp	Tribol	TEXACO	optimol	FUCHS
R...	Standard -10 +40	CLP(CC)	VG 220	Mobilgear 630	Shell Omala 220	Klüberoil GEM 1-220	Aral Degol BG 220	BP Energol GR-XP 220	Tribol 1100/220	Meropa 220	Optigear BM 220	Renolin CLP 220
	-25 +80	CLP PG	VG 220	Mobil Glygoyle 30	Shell Tivela HD 220	Klübersynth GH 6-220	Aral Degol GS 220	BP Enersyn SG-XP 220	Tribol 800/220	Synlube CLP 220	Optiflex A 220	
K...(HK...)	4) -40 +80	CLP HC	VG 220	Mobil SHC 630	Shell Omala HD 220	Klübersynth EG 4-220	Aral Degol PAS 220		Tribol 1510/220	Pinnacle EP 220	Optigear Synthetic A 220	Renolin Unisyn CLP 220
	4) -40 +40		VG 150	Mobil SHC 629	Shell Omala HD 150	Klübersynth EG 4-150				Pinnacle EP 150		
	-20 +25	CLP (CC)	VG 150 VG 100	Mobilgear 627	Shell Omala 100	Klüberoil GEM 1-150	Aral Degol BG 100	BP Energol GR-XP 100	Tribol 1100/100	Meropa 150	Optigear BM 100	Renolin CLP 150
F...	-30 +10	HLP (HM)	VG 68-46 VG 32	Mobil D.T.E. 13M	Shell Tellus T 32	Klüberoil GEM 1-68	Aral Degol BG 46		Tribol 1100/68	Rando EP Ashless 46	Optigear 32	Renolin B 46 HVI
	4) -40 +10	CLP HC	VG 32	Mobil SHC 624		Klüber-Summit HySyn FG-32				Cetus PAO 46		
	4) -40 -20	HLP (HM)	VG 22 VG 15	Mobil D.T.E. 11M	Shell Tellus T 15	Isoflex MT 30 ROT		BP Energol HLP-HM 15		Rando HDZ 15		
S...(HS...)	Standard 0 +40	CLP (CC)	VG 680	Mobilgear 636	Shell Omala 680	Klüberoil GEM 1-680	Aral Degol BG 680	BP Energol GR-XP 680	Tribol 1100/680	Meropa 680	Optigear BM 680	Renolin CLP 680
	-20 +60	CLP PG	VG 680 1)		Shell Tivela S 680	Klübersynth GH 6-680		BP Enersyn SG-XP 680	Tribol 800/680	Synlube CLP 680		
	4) -30 +80	CLP HC	VG 460	Mobil SHC 634	Shell Omala HD 460	Klübersynth EG 4-460				Pinnacle EP 460		
	4) -40 +10		VG 150	Mobil SHC 629	Shell Omala HD 150	Klübersynth EG 4-150				Pinnacle EP 150		
	-20 +10	CLP (CC)	VG 150 VG 100	Mobilgear 627	Shell Omala 100	Klüberoil GEM 1-150	Aral Degol BG 100	BP Energol GR-XP 100	Tribol 1100/100	Meropa 100	Optigear BM 100	Renolin CLP 150
	-25 +20	CLP PG	VG 220 1)	Mobil Glygoyle 30	Shell Tivela S 220	Klübersynth GH 6-220			Tribol 800/220	Synlube CLP 220	Optiflex A 220	
	4) -40 0	CLP HC	VG 32	Mobil SHC 624		Klüber-Summit HySyn FG-32				Cetus PAO 46		
R...,K...(HK...), F...,S...(HS...)	4) -30 +40	HCE	VG 460		Shell Cassida Fluid GL 460	Klüberoil 4UH1-460 N	Aral Eural Gear 460				Optileb GT 460	
	-20 +40	E	VG 460			Klüberbio CA2-460	Aral Degol BAB 460				Optisynt BS 460	
W...(HW...)	Standard -20 +40	SEW PG	VG 460 2)			Klüber SEW HT-460-5						
	4) -40 +10	API GL5	SAE 75W90 (-VG 100)	Mobilube SHC 75 W90-LS								
	-20 +40	CLP PG	VG 460 3)			Klübersynth UH1 6-460						
R32 R302	-25 +60	DIN 51 818 5)	00	Glygoyle Grease 00	Shell Tivela GL 00	Klübersynth GE 46-1200				Multifak 6833 EP 00		
	Standard -15 +40		000 - 0	Mobilux EP 004	Shell Alvania GL 00		Aralub MFL 00	BP Energrease LS-EP 00		Multifak EP 000	Longtime PD 00	Renolin SF 7 - 041

Vulhoeveelheden smeermiddel

De aangegeven vulhoeveelheden zijn **richtwaarden**. De exacte waarden variëren afhankelijk het aantal trappen en van de overbrengingsverhouding. U gelieve bij het vullen beslist te letten op de **oliepeilschroef als indicatie van de juiste oliehoeveelheid**.

De volgende tabellen geven richtwaarden voor de smeermiddelvulhoeveelheid afhankelijk van de bouwvorm M1...M6.

Rechte (R-) reductoren

RX..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
RX57	0.60	0.80	1.30	1.30	0.90	0.90
RX67	0.80	0.80	1.70	1.90	1.10	1.10
RX77	1.10	1.50	2.60	2.70	1.60	1.60
RX87	1.70	2.50	4.80	4.80	2.90	2.90
RX97	2.10	3.40	7.4	7.0	4.80	4.80
RX107	3.90	5.6	11.6	11.9	7.7	7.7

RXF..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
RXF57	0.50	0.80	1.10	1.10	0.70	0.70
RXF67	0.70	0.80	1.50	1.40	1.00	1.00
RXF77	0.90	1.30	2.40	2.00	1.60	1.60
RXF87	1.60	1.95	4.90	3.95	2.90	2.90
RXF97	2.10	3.70	7.1	6.3	4.80	4.80
RXF107	3.10	5.7	11.2	9.3	7.2	7.2

R.., R..F

Reductor	Vulhoeveelheden in liters					
	M1[1)]	M2[1)]	M3	M4	M5	M6
R07	0.12	0.20	0.20	0.20	0.20	0.20
R17	0.25	0.55	0.35	0.55	0.35	0.35
R27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
R37	0.30/0.95	0.85	0.95	1.05	0.75	0.95
R47	0.70/1.50	1.60	1.50	1.65	1.50	1.50
R57	0.80/1.70	1.90	1.70	2.10	1.70	1.70
R67	1.10/2.30	2.60/3.50	2.80	3.20	1.80	2.00
R77	1.20/3.00	3.80/4.10	3.60	4.10	2.50	3.40
R87	2.30/6.0	6.7/8.2	7.2	7.7	6.3	6.5
R97	4.60/9.8	11.7/14.0	11.7	13.4	11.3	11.7
R107	6.0/13.7	16.3	16.9	19.2	13.2	15.9
R137	10.0/25.0	28.0	29.5	31.5	25.0	25.0
R147	15.4/40.0	46.5	48.0	52.0	39.5	41.0
R167	27.0/70.0	82.0	78.0	88.0	66.0	69.0

1) Bij gecombineerde reductoren dient de grotere reductor met de grotere oliehoeveelheid gevuld te worden.

RF..

Reductor	Vulhoeveelheden in liters					
	M1[1)]	M2[1)]	M3	M4	M5	M6
RF07	0.12	0.20	0.20	0.20	0.20	0.20
RF17	0.25	0.55	0.35	0.55	0.35	0.35
RF27	0.25/0.40	0.70	0.50	0.70	0.50	0.50
RF37	0.35/0.95	0.90	0.95	1.05	0.75	0.95

Reductor	Vulhoeveelheden in liters					
	M1[1)]	M2[1)]	M3	M4	M5	M6
RF47	0.65/1.50	1.60	1.50	1.65	1.50	1.50
RF57	0.80/1.70	1.80	1.70	2.00	1.70	1.70
RF67	1.20/2.50	2.70/3.60	2.70	2.60	1.90	2.10
RF77	1.20/2.60	3.80/4.10	3.30	4.10	2.40	3.00
RF87	2.40/6.0	6.8/7.9	7.1	7.7	6.3	6.4
RF97	5.1/10.2	11.9/14.0	11.2	14.0	11.2	11.8
RF107	6.3/14.9	15.9	17.0	19.2	13.1	15.9
RF137	9.5/25.0	27.0	29.0	32.5	25.0	25.0
RF147	16.4/42.0	47.0	48.0	52.0	42.0	42.0
RF167	26.0/70.0	82.0	78.0	88.0	65.0	71.0

1) Bij gecombineerde reductoren dient de grotere reductor met de grotere oliehoeveelheid gevuld te worden.

Vlakke (F-) reductoren

F.., FA..B, FH..B, FV..B

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	0.60
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.60	3.50	2.10	3.50	2.80	2.90
F..67	2.70	3.80	1.90	3.80	2.90	3.20
F..77	5.9	7.3	4.30	8.0	6.0	6.3
F..87	10.8	13.0	7.7	13.8	10.8	11.0
F..97	18.5	22.5	12.6	25.2	18.5	20.0
F..107	24.5	32.0	19.5	37.5	27.0	27.0
F..127	40.5	54.5	34.0	61.0	46.3	47.0
F..157	69.0	104.0	63.0	105.0	86.0	78.0

FF..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
FF27	0.60	0.80	0.65	0.70	0.60	0.60
FF37	1.00	1.25	0.70	1.30	1.00	1.10
FF47	1.60	1.85	1.10	1.90	1.50	1.70
FF57	2.80	3.50	2.10	3.70	2.90	3.00
FF67	2.70	3.80	1.90	3.80	2.90	3.20
FF77	5.9	7.3	4.30	8.1	6.0	6.3
FF87	10.8	13.2	7.8	14.1	11.0	11.2
FF97	19.0	22.5	12.6	25.6	18.9	20.5
FF107	25.5	32.0	19.5	38.5	27.5	28.0
FF127	41.5	55.5	34.0	63.0	46.3	49.0
FF157	72.0	105.0	64.0	106.0	87.0	79.0

FA.., FH.., FV.., FAF.., FAZ.., FHF.., FHZ.., FVF.., FVZ.., FT..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
F..27	0.60	0.80	0.65	0.70	0.60	0.60
F..37	0.95	1.25	0.70	1.25	1.00	1.10
F..47	1.50	1.80	1.10	1.90	1.50	1.70
F..57	2.70	3.50	2.10	3.40	2.90	3.00
F..67	2.70	3.80	1.90	3.80	2.90	3.20

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
F..77	5.9	7.3	4.30	8.0	6.0	6.3
F..87	10.8	13.0	7.7	13.8	10.8	11.0
F..97	18.5	22.5	12.6	25.2	18.5	20.0
F..107	24.5	32.0	19.5	37.5	27.0	27.0
F..127	39.0	54.5	34.0	61.0	45.0	46.5
F..157	68.0	103.0	62.0	104.0	85.0	77.0

Kegelwiel (K-) reductoren

K.., KA..B, KH..B, KV..B

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
K..37	0.50	1.00	1.00	1.25	0.95	0.95
K..47	0.80	1.30	1.50	2.00	1.60	1.60
K..57	1.20	2.30	2.50	2.80	2.60	2.40
K..67	1.10	2.40	2.60	3.45	2.60	2.60
K..77	2.20	4.10	4.40	5.8	4.20	4.40
K..87	3.70	8.0	8.7	10.9	8.0	8.0
K..97	7.0	14.0	15.7	20.0	15.7	15.5
K..107	10.0	21.0	25.5	33.5	24.0	24.0
K..127	21.0	41.5	44.0	54.0	40.0	41.0
K..157	31.0	62.0	65.0	90.0	58.0	62.0
K..167	33.0	95.0	105.0	123.0	85.0	84.0
K..187	53.0	152.0	167.0	200	143.0	143.0

KF..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
KF37	0.50	1.10	1.10	1.50	1.00	1.00
KF47	0.80	1.30	1.70	2.20	1.60	1.60
KF57	1.30	2.30	2.70	3.15	2.90	2.70
KF67	1.10	2.40	2.80	3.70	2.70	2.70
KF77	2.10	4.10	4.40	5.9	4.50	4.50
KF87	3.70	8.2	9.0	11.9	8.4	8.4
KF97	7.0	14.7	17.3	21.5	15.7	16.5
KF107	10.0	21.8	25.8	35.1	25.2	25.2
KF127	21.0	41.5	46.0	55.0	41.0	41.0
KF157	31.0	66.0	69.0	92.0	62.0	62.0

KA.., KH.., KV.., KAF.., KHF.., KVF.., KAZ.., KHZ.., KVZ.., KT..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3	M4	M5	M6
K..37	0.50	1.00	1.00	1.40	1.00	1.00
K..47	0.80	1.30	1.60	2.15	1.60	1.60
K..57	1.30	2.30	2.70	3.15	2.90	2.70
K..67	1.10	2.40	2.70	3.70	2.60	2.60
K..77	2.10	4.10	4.60	5.9	4.40	4.40
K..87	3.70	8.2	8.8	11.1	8.0	8.0
K..97	7.0	14.7	15.7	20.0	15.7	15.7
K..107	10.0	20.5	24.0	32.4	24.0	24.0
K..127	21.0	41.5	43.0	52.0	40.0	40.0
K..157	31.0	66.0	67.0	87.0	62.0	62.0
K..167	33.0	95.0	105.0	123.0	85.0	84.0
K..187	53.0	152.0	167.0	200	143.0	143.0

Wormwiel- (S-) reductoren

S..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3[1)]	M4	M5	M6
S..37	0.25	0.40	0.50	0.55	0.40	0.40
S..47	0.35	0.80	0.70/0.90	1.00	0.80	0.80
S..57	0.50	1.20	1.00/1.20	1.45	1.30	1.30
S..67	1.00	2.00	2.20/3.10	3.10	2.60	2.60
S..77	1.90	4.20	3.70/5.4	5.9	4.40	4.40
S..87	3.30	8.1	6.9/10.4	11.3	8.4	8.4
S..97	6.8	15.0	13.4/18.0	21.8	17.0	17.0

1) Bij gecombineerde reductoren dient de grotere reductor met de grotere oliehoeveelheid gevuld te worden.

SF..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3[1)]	M4	M5	M6
SF37	0.25	0.40	0.50	0.55	0.40	0.40
SF47	0.40	0.90	0.90/1.05	1.05	1.00	1.00
SF57	0.50	1.20	1.00/1.50	1.55	1.40	1.40
SF67	1.00	2.20	2.30/3.00	3.20	2.70	2.70
SF77	1.90	4.10	3.90/5.8	6.5	4.90	4.90
SF87	3.80	8.0	7.1/10.1	12.0	9.1	9.1
SF97	7.4	15.0	13.8/18.8	22.6	18.0	18.0

1) Bij gecombineerde reductoren dient de grotere reductor met de grotere oliehoeveelheid gevuld te worden.

SA.., SH.., SAF.., SHZ.., SAZ.., SHF.., ST..

Reductor	Vulhoeveelheden in liters					
	M1	M2	M3[1)]	M4	M5	M6
S..37	0.25	0.40	0.50	0.50	0.40	0.40
S..47	0.40	0.80	0.70/0.90	1.00	0.80	0.80
S..57	0.50	1.10	1.00/1.50	1.50	1.20	1.20
S..67	1.00	2.00	1.80/2.60	2.90	2.50	2.50
S..77	1.80	3.90	3.60/5.0	5.8	4.50	4.50
S..87	3.80	7.4	6.0/8.7	10.8	8.0	8.0
S..97	7.0	14.0	11.4/16.0	20.5	15.7	15.7

1) Bij gecombineerde reductoren dient de grotere reductor met de grotere oliehoeveelheid gevuld te worden.

8.2 Montage en demontage van de reductor met holle as en spiebaan

- U dient bij de montage beslist de bijgevoegde NOCO®-Fluid te gebruiken. Hierdoor wordt passingsroest vermeden en latere demontage vergemakkelijkt.
- De lengte van de spiebaan X wordt door de klant bepaald, mits X > DK.

Montage

SEW-EURODRIVE heeft twee verschillende aanbevelingen voor het monteren van reductoren met holle as en spiebaan op de aan te drijven as van het lastwerktuig (machine-as):

1. u gebruikt voor het monteren de meegeleverde bevestigingsonderdelen;
2. u gebruikt voor het monteren de optionele SEW-montage-/demontageset.

1. Meegeleverde bevestigingsonderdelen

Als bevestigingsmateriaal wordt standaard meegeleverd:

- bevestigingsbout met onderlegring (2)
- borgring (3)

Machine-as

- De inbouwlengte van de machine-as met asborst [A] dient L8 - 1 mm te bedragen.
- De inbouwlengte van de machine-as zonder asborst [B] dient L8 te zijn.

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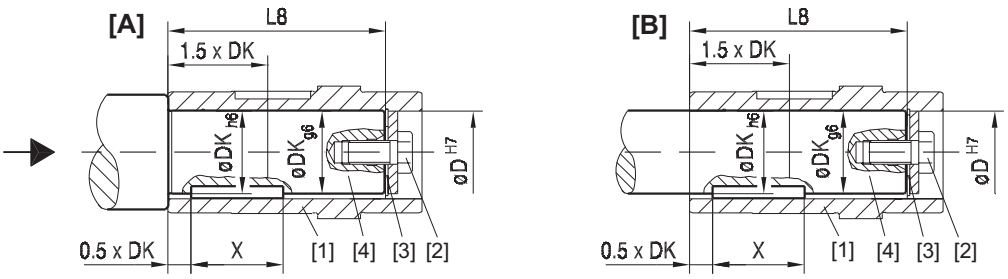

Afbeelding 35: machine-as met asborst [A] en zonder asborst [B]

[1] holle as
[2] bevestigingsbout met onderlegring
[3] borgring
[4] machine-as

Afmetingen en aanhaalkoppels

De bevestigingsbout [2] dient aangehaald te worden met het aanhaalkoppel MS overeenkomstig de volgende tabel.

Type tandwielkast	D^{H7} [mm]	DK [mm]	L8 [mm]	MS [Nm]
SA..37	20	20	84, 106, 104	8
FA..27, SA..47	25	25	88, 105	20
FA..37, KA..37, SA..47 **SA..57**	30	30	105 132	20
FA..47, KA..47, SA..57	35	35	132	20
FA..57, KA..57 **FA..67, KA..67** **SA..67**	40	40	142 156 144	40
SA..67	45	45	144	40
FA..77, KA..77, SA..77	50	50	183	40
FA..87, KA..87 **SA..77, SA..87**	60	60	210 180, 220	80
FA..97, KA..97 **SA..87, SA..97**	70	70	270 220, 260	80
FA..107, KA..107, SA..97	90	90	313, 313, 255	200
FA..127, KA..127	100	100	373	200
FA..157, KA..157	120	120	460	200

2. Montage-/ demontageset

U kunt voor het monteren ook de optionele SEW-montage-/demontageset gebruiken. Deze kan voor het betreffende type reductor met het bestelnummer volgens de onderstaande tabel worden besteld. De levering bestaat uit:

- afstandsbus voor het monteren zonder asborst [5]
- bevestigingsbout voor het monteren [2]
- afdrukschijf voor het demonteren [7]
- tegen verdraaiing geborgde moer voor het demonteren [8].

De standaard meegeleverde korte bevestigingsbout wordt niet gebruikt.

Machine-as

- De inbouwlengte van de machine-as dient LK2 te bedragen. Bij een machine-as **met asborst [A mag de afstandsbus niet worden gebruikt**.
- De inbouwlengte van de machine-as dient LK2 te bedragen. Bij een machine-as **zonder asborst [B] dient de afstandsbus te worden gebruikt**.

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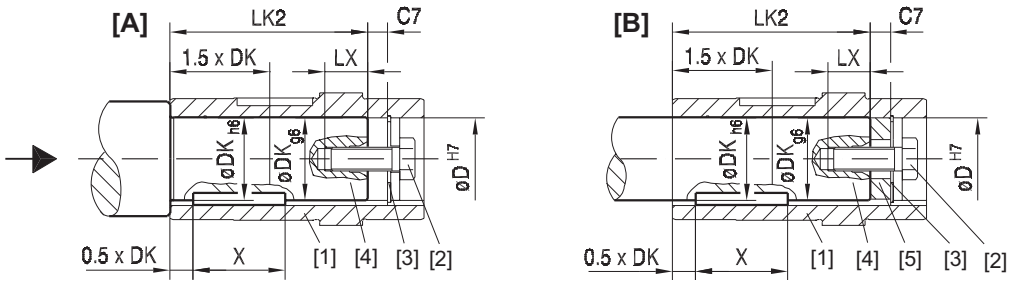


Afbeelding 36: machine-as met asborst [A] en zonder asborst [B]

[1] holle as
[2] bevestigingsbout met onderlegring
[3] borgring
[4] machine-as
[5] afstandsbus

Afmetingen, aanhaalkoppels en bestelnummers

De bevestigingsbout [2] dient aangehaald te worden met het aanhaalkoppel MS overeenkomstig de volgende tabel.

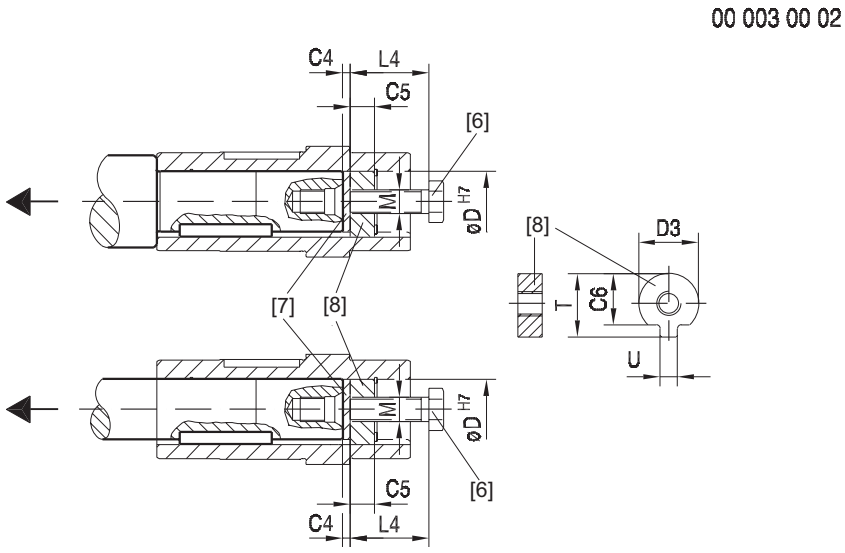
Type	D H7 [mm]	DK [mm]	LK2 [mm]	LX+2 [mm]	C7 [mm]	MS [Nm]	Artikelnummer montage-/demontageset
SA..37	20	20	72, 93 92	16	12	8	643 683 8
FA..27, SA..47	25	25	72, 89	22	16	20	643 684 6
FA..37, KA..37 **SA..47, SA..57**	30	30	89 89, 116	22	16	20	643 685 4
FA..47, KA..47, SA..57	35	35	114	28	18	20	643 686 2
FA..57, KA..57 **FA..67, KA..67, SA..67**	40	40	124 138, 138, 126	36	18	40	643 687 0
SA..67	45	45	126	36	18	40	643 688 9
FA..77, KA..77, SA..77	50	50	165	36	18	40	643 689 7
FA..87, KA..87 **SA..77, SA..87**	60	60	188 158, 198	42	22	80	643 690 0
FA..97, KA..97 **SA..87, SA..97**	70	70	248 198, 238	42	22	80	643 691 9
FA..107, KA..107 **SA..97**	90	90	287 229	50	26	200	643 692 7
FA..127, KA..127	100	100	347	50	26	200	643 693 5
FA..157, KA..157	120	120	434	50	26	200	643 694 3

Demontage

Geldt uitsluitend bij voorafgaande montage met behulp van de SEW-montage-/demontageset (→ afbeelding 36).

Gaat u bij de demontage als volgt te werk:

1. draai de bevestigingsbout [6] los;
2. verwijder de borgring [3] en indien aanwezig de afstandsbus [5];
3. plaats overeenkomstig afbeelding 37 tussen de machine-as [4] en de borgring [3] de afdrukschijf [7] en de tegen verdraaiing geborgde moer [8];
4. monteer de borgring [3] opnieuw;
5. monteer de bevestigingsbout [6] opnieuw; u kunt nu de reductor van de as afdrukken.



Afbeelding 37: demontage

[6] bevestigingsbout
[7] afdrukschijf
[8] tegen verdraaiing geborgde moer voor het demonteren

Type	D H7 [mm]	M	C4 [mm]	C5 [mm]	C6 [mm]	U -0,5 [mm]	T -0,5 [mm]	D3 -0.5 [mm]	L4 [mm]	Artikelnummer montage-/demontageset
SA..37	20	M6	5	6	15.5	5.5	22.5	19.7	25	643 683 8
FA27.., SA..47	25	M10	5	10	20	7.5	28	24.7	35	643 684 6
FA..37, KA..37, SA..47, SA..57	30	M10	5	10	25	7.5	33	29.7	35	643 685 4
FA..47, KA..47, SA..57	35	M12	5	12	29	9.5	38	34.7	45	643 686 2
FA..57, KA..57, FA..67, KA..67, SA..67	40	M16	5	12	34	11.5	41.9	39.7	50	643 687 0
SA..67	45	M16	5	12	38.5	13.5	48.5	44.7	50	643 688 9
FA..77, KA..77, SA..77	50	M16	5	12	43.5	13.5	53.5	49.7	50	643 689 7
FA..87, KA..87, SA..77, SA..87	60	M20	5	16	56	17.5	64	59.7	60	643 690 0
FA..97, KA..97, SA..87, SA..97	70	M20	5	16	65.5	19.5	74.5	69.7	60	643 691 9
FA..107, KA..107, SA..97	90	M24	5	20	80	24.5	95	89.7	70	643 692 7
FA..127, KA..127	100	M24	5	20	89	27.5	106	99.7	70	643 693 5
FA..157, KA..157	120	M24	5	20	107	31	127	119.7	70	643 694 3

8.3 Reductoren met holle as

Zoekranden aan holle assen

De volgende afbeelding toont de zoekranden bij de vlakke reductoren en kegelwielreductoren met holle as:

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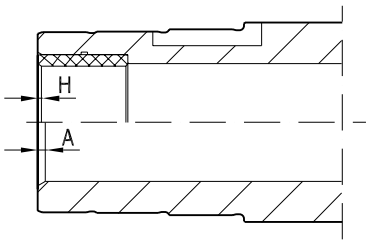


Afbeelding 38: zoekranden aan holle assen

Reductor	Uitvoering	
	met holle as (A)	met holle as en krimpschijf (H)
F..27	2 × 30°	0.5 × 45°
F../K..37	2 × 30°	0.5 × 45°
F../K..47	2 × 30°	0.5 × 45°
F../K..57	2 × 30°	0.5 × 45°
F../K..67	2 × 30°	0.5 × 45°
F../K..77	2 × 30°	0.5 × 45°
F../K..87	3 × 30°	0.5 × 45°
F../K..97	3 × 30°	0.5 × 45°
F../K..107	3 × 30°	3 × 2°
F../K..127	5 × 30°	1.5 × 30°
F../K..157	5 × 30°	1.5 × 30°
KH167	-	1.5 × 30°
KH187	-	1.5 × 30°

Speciale motor-reductorcombinaties

Let bij de vlakke motorreductoren met holle as (FA..B, FV..B, FH..B, FAF, FVF, FHF, FA, FV, FH, FT, FAZ, FVZ, FHZ) op het volgende:

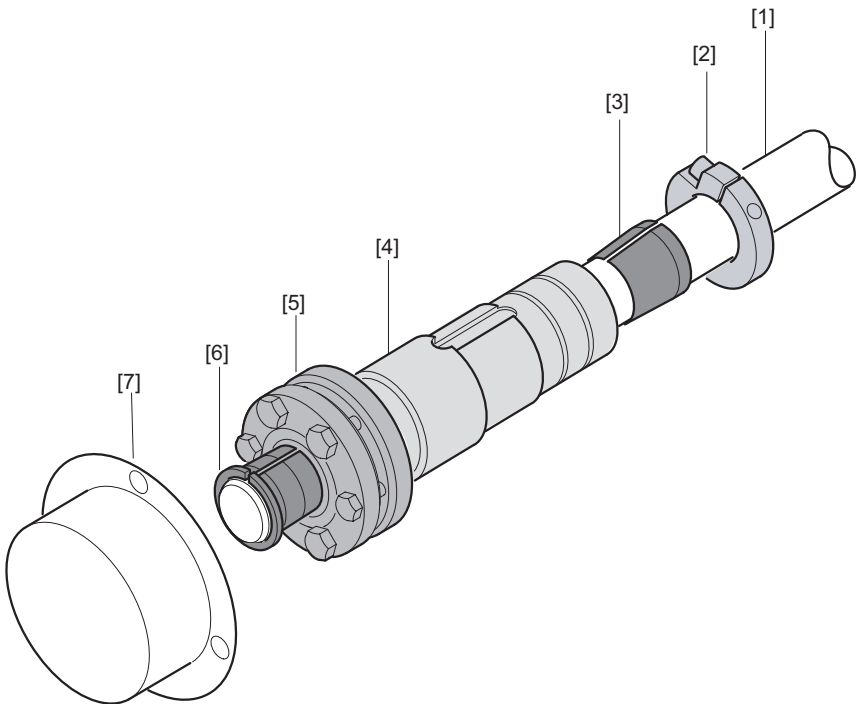
- Indien u een aan de motorzijde doorgestoken machine-as toepast, kunnen er bij de combinatie "kleine reductor" en "grote motor" conflicten ontstaan.
- Let op de motorafmeting AC om vast te stellen of zich een conflict bij een doorgestoken as van de klant zal voordoen.

8.4 TorqLOC®-klemverbinding voor reductoren met holle as

Beschrijving TorqLOC®

De TorqLOC®-klemverbinding dient voor de krachtsluitende verbinding van de machine-as en de holle as in de reductor. Zo vormt de TorqLOC®-klemverbinding een alternatief voor de bestaande holle as met krimpschijf, holle as met spie en holle as met splinesvertanding.

De TorqLOC®-klemverbinding bestaat uit de volgende componenten:



Afbeelding 39: componenten van de TorqLOC®-klemverbinding

[1] machine-as
[2] klemring
[3] conische bronzen bus
[4] holle as met reductor
[5] krimpschijf
[6] conische stalen bus
[7] vaste afdekkap

Voordelen TorqLOC®

De TorqLOC®-klemverbinding kenmerkt zich door de volgende voordelen:

- kostenbesparing, omdat de machine-as gemaakt mag zijn van getrokken materiaal tot de kwaliteit h11;
- kostenbesparing, omdat voor verschillende diameters van de machine-as met één holle-asdiameter en verschillende bussen kan worden volstaan;
- eenvoudige montage, omdat er geen passingzitting moet worden overwonnen;
- eenvoudige demontage ook na veel bedrijfsuren, omdat er geen passingsroest gevormd wordt en omdat de conische verbindingen gemakkelijk kunnen worden losgemaakt.

Technische gegevens

De TorqLOC®-klemverbinding kan voor koppels aan de uitgaande as in het bereik van 92 Nm tot 4300 Nm worden toegepast.

De volgende reductoren kunnen in de uitvoering met TorqLOC®-klemverbinding worden geleverd:

- vlakke reductoren van de reductorgrootte 37 tot 97 (FT37 .. FT97)
- kegelwielreductoren van de reductorgrootte 37 tot 97 (KT37 .. KT97)
- wormwielreductoren van de reductorgrootte 37 tot 97 (ST37 .. ST97)

Mogelijke optie

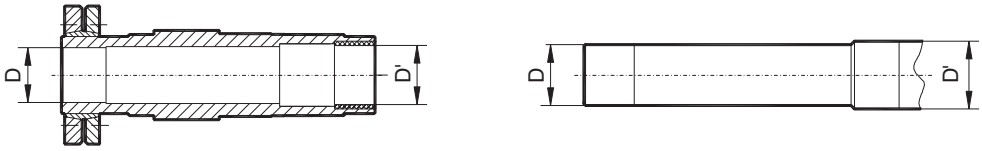
Voor de reductoren met TorqLOC®-klemverbinding zijn de volgende opties beschikbaar:

- kegelwiel- en wormwielreductoren met TorqLOC® (KT.., ST..): de optie "Reactiearm" (../T) is beschikbaar;
- vlakke reductoren met TorqLOC® (FT..): de optie "Rubber buffer" (../G) is beschikbaar.

8.5 Optie getrapte holle as met krimpschijf

De reductoren met holle as en krimpschijf (vlakke reductoren FH/FHF/FHZ37-157, kegelwielreductoren KH/KHF/KHZ37-157 en wormwielreductoren SH/SHF47-97) kunnen als optie met een grotere boring D' worden geleverd.

Standaard is D' = D.



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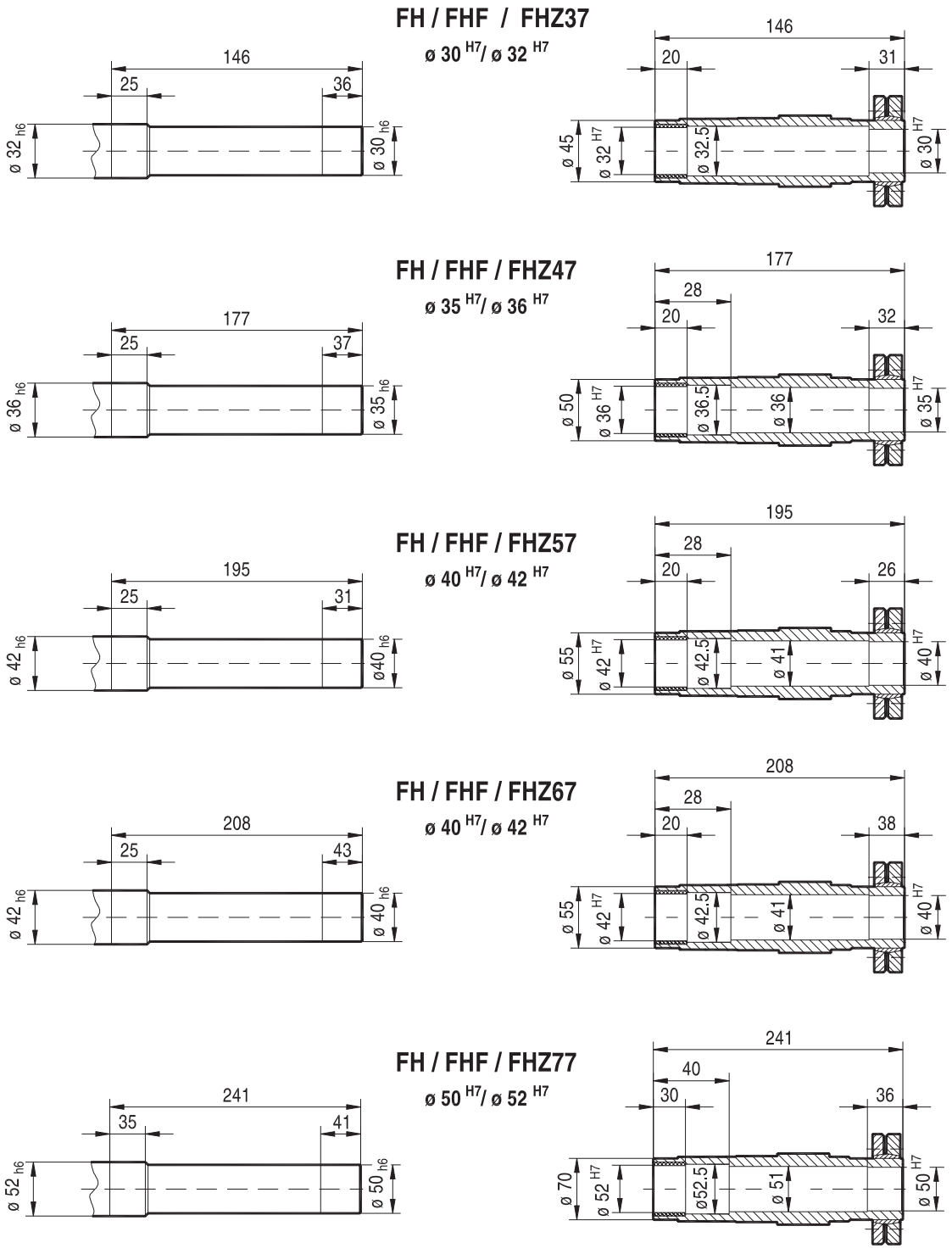
Afbeelding 40: optionele boring D'

Reductor	Boringsdiameter D / optioneel D' [mm]
FH/FHF/FHZ37, KH/KHF/KHZ37, SH/SHF/SHZ47	30 / 32
FH/FHF/FHZ47, KH/KHF/KHZ47, SH/SHF/SHZ57	35 / 36
FH/FHF/FHZ57, KH/KHF/KHZ57	40 / 42
FH/FHF/FHZ67, KH/KHF/KHZ67, SH/SHF/SHZ67	40 / 42
FH/FHF/FHZ77, KH/KHF/KHZ77, SH/SHF/SHZ77	50 / 52
FH/FHF/FHZ87, KH/KHF/KHZ87, SH/SHF/SHZ87	65 / 66
FH/FHF/FHZ97, KH/KHF/KHZ97, SH/SHF/SHZ97	75 / 76
FH/FHF/FHZ107, KH/KHF/KHZ107	95 / 96
FH/FHF/FHZ127, KH/KHF/KHZ127	105 / 106
FH/FHF/FHZ157, KH/KHF/KHZ157	125 / 126

De reductoren met getrapte holle as (met optionele boring D') dienen met vermelding van de diameters D/D' besteld te worden.

Bestelvoorbeeld FH37 DT80N4 met holle as 30/32 mm

Vlakke reductoren met getrapte holle as



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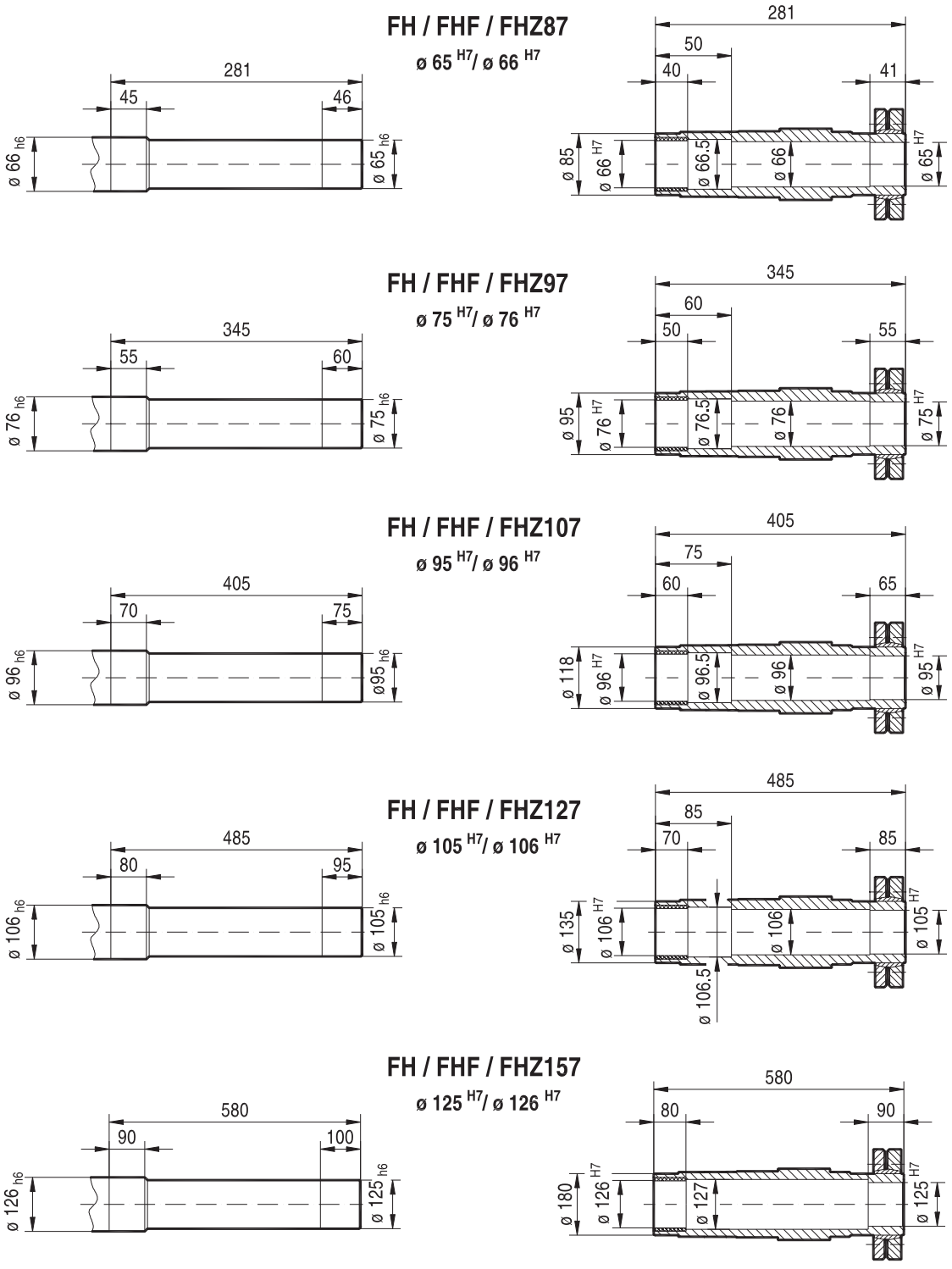
Afbeelding 41: getrapte holle as FH/FHF/FHZ37...77



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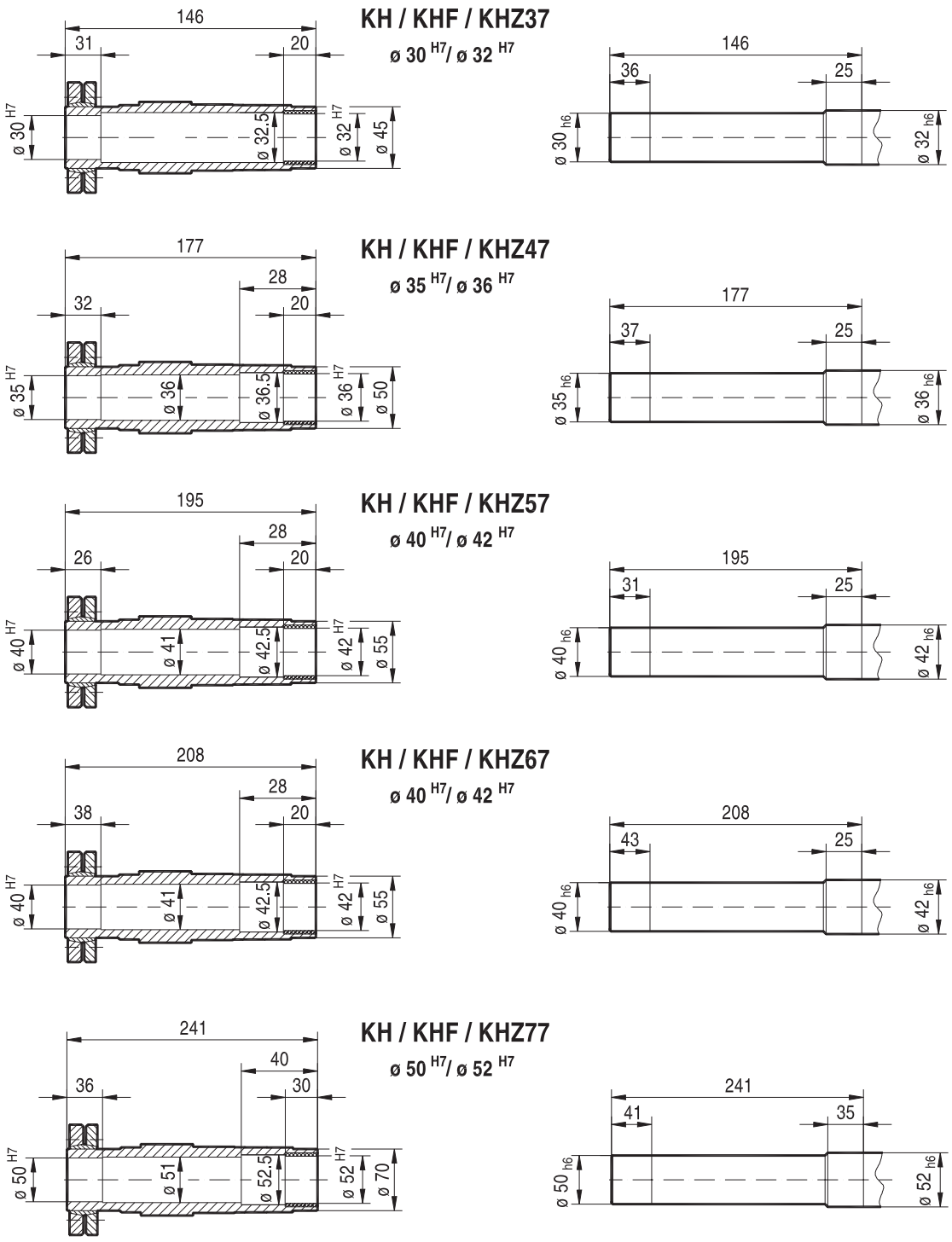
Afbeelding 42: getrapte holle as FH/FHF/FHZ87...157

Kegelwielreductoren met getrapte holle as



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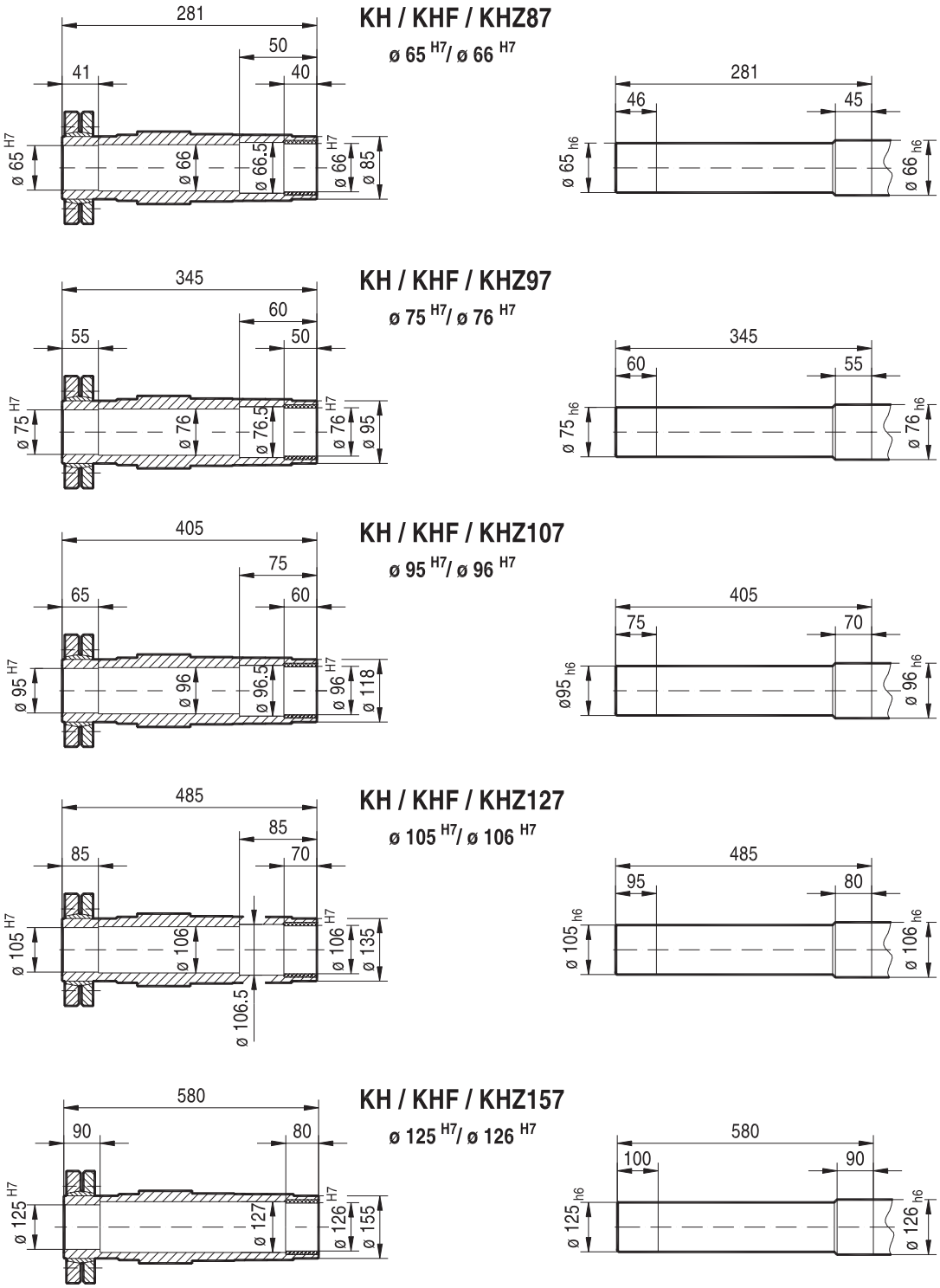
Afbeelding 43: getrapte holle as KH/KHF/KHZ37...77



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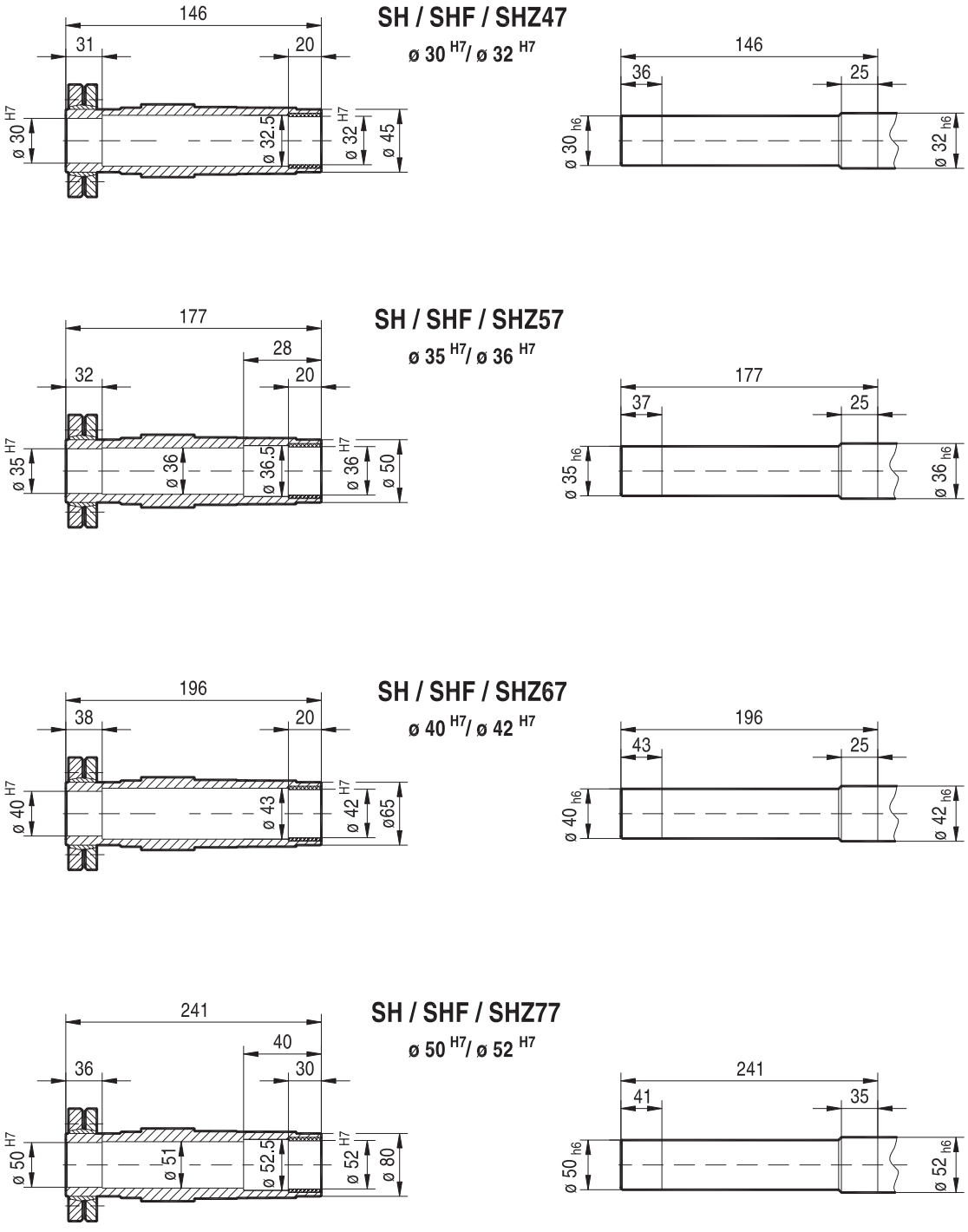
Afbeelding 44: getrapte holle as KH/KHF/KHZ87...157

Wormwielreductoren met getrapte holle as



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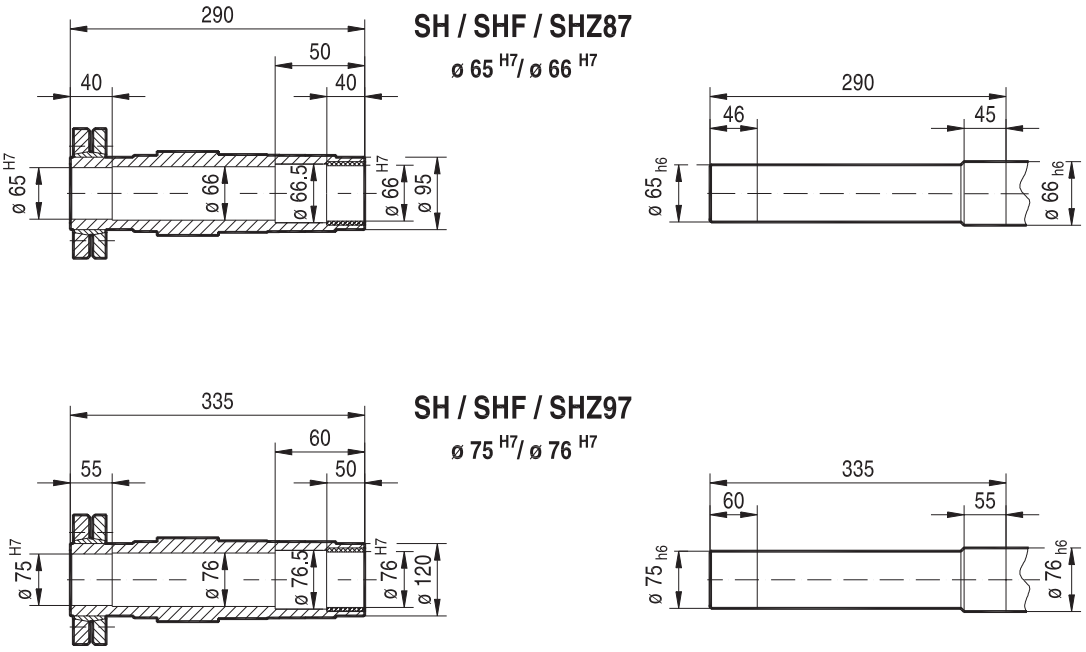
Afbeelding 45: getrapte holle as SH/SHF/SHZ47...77



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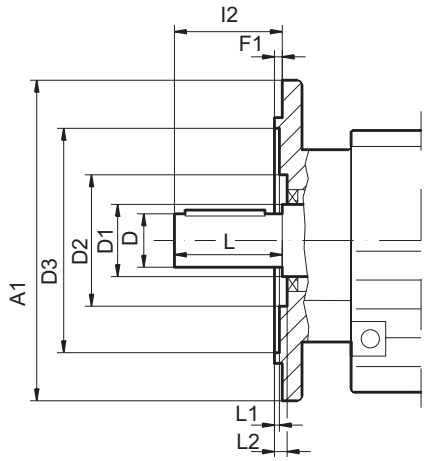
Afbeelding 46: getrapte holle as SH/SHF/SHZ87...97

8.6 Flensafmetingen van de RF..- en R..F-motorreductoren



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Afbeelding 47: flensafmetingen

Let op afmeting L1 en L2 bij de keuze en de montage van de aandrijfelementen.

Type	A1	D	D1	D2		D3	F1	I2	L	L1		L2
				RF	R..F					RF	R..F	
RF27, R27F	120	25	30	54	54	66	3	50	50	1	1	6
	140				-	79	3			3	-	7
	160				-	92	3.5			3	-	7
RF37, R37F	120	25	35	60	63	70	3	50	50	5	4	7
	160				-	96	3.5			1	-	7.5
	200				-	119	3.5			1	-	7.5
RF47, R47F	140	30	35	72	64	82	3	60	60	4	1	6
	160				-	96	3.5			0.5	-	6.5
	200				-	116	3.5			0.5	-	6.5
RF57, R57F	160	35	40	76	75	96	3.5	70	70	4	2.5	5
	200				-	116	3.5			0	-	5
	250				-	160	4			0.5	-	5.5
RF67, R67F	200	35	50	90	90	118	3.5	70	70	2	4	7
	250				-	160	4			1	-	7.5
RF77, R77F	250	40	52	112	100	160	4	80	80	0.5	2.5	7
	300				-	210	4			0.5	-	7
RF87, R87F	300	50	62	123	122	210	4	100	100	0	1.5	8
	350				-	226	5			1	-	9
RF97	350	60	72	136		236	5	120	120	0		9
	450					320						
RF107	350	70	82	157		232	5	140	140	0		11
	450			186		316						
RF137	450	90	108	180		316	5	170	170	0		10
	550					416						
RF147	450	110	125	210		316	5	210	210	0		10
	550					416						
RF167	550	120	145	290		416	5	210	210	1		10
	660					517	6			2		11

8.7 Het bevestigen van reductoren

Voor het bevestigen van de motorreductoren dienen altijd bouten in de kwaliteit 8.8 gebruikt te worden.

Uitzondering

Om de in de catalogus genoemde nominale koppels te kunnen overbrengen, dienen bij de volgende rechte reductoren in flensuitvoering (RF..) en in voet-/flensuitvoering (R..F) bouten in de **kwaliteit 10.9** gebruikt te worden voor het monteren van de flens door de klant:

- RF37, R37F met flens-∅ 120 mm
- RF47, R47F met flens-∅ 140 mm
- RF57, R57F met flens-∅ 160 mm

8.8 Reactiearmen

Leverbare reactiearmen

Reductor	Bouwgrootte					
	27	37	47	57	67	77
KA, KH, KV, KT	-	643 425 8	643 428 2	643 431 2	643 431 2	643 434 7
SA, SH, ST	-	126 994 1	644 237 4	644 240 4	644 243 9	644 246 3
FA, FH, FV, FT Rubber buffer (2 stuks)	013 348 5	013 348 5	013 348 5	013 348 5	013 348 5	013 349 3

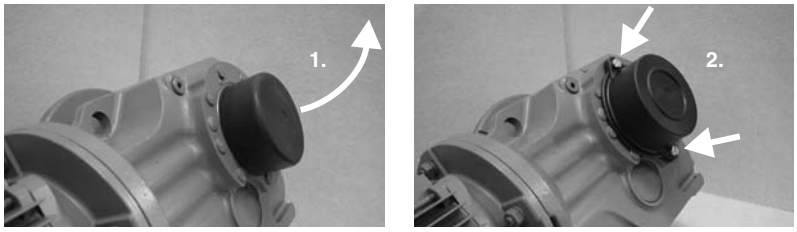
Reductor	Bouwgrootte				
	87	97	107	127	157
KA, KH, KV, KT	643 437 1	643 440 1	643 443 6	643 294 8	-
SA, SH, ST	644 249 8	644 252 8	-	-	-
FA, FH, FV, FT Rubber buffer (2 stuks)	013 349 3	013 350 7	013 350 7	013 351 5	013 347 7

Reactiearmen voor KH167.., KH187..

Voor de reductoren van de grootten KH167.. en KH187.. zijn geen standaard reactiearmen leverbaar. U gelieve ons te raadplegen wanneer u voor deze motorreductoren reactiearmen nodig heeft; wij kunnen u dan adviseren ten aanzien van het ontwerp.

8.9 Vaste afdekkappen

De vlakke, kegelwiel- en wormwielreductoren met holle as en krimpschijf van de groottten 37 tot en met 97 zijn standaard uitgevoerd met een meedraaiende afdekkap. Wanneer uit veiligheidsoverwegingen vaste kappen bij deze motorreductoren nodig zijn, kunnen deze voor het betreffende reductortype onder vermelding van het bestelnummer uit de volgende tabel besteld worden. De vlakke en kegelwielreductoren met holle as en krimpschijf van de grootte 107 en groter alsmede de vlakke reductoren van de grootte 27, zijn standaard uitgevoerd met een vaste afdekkap.



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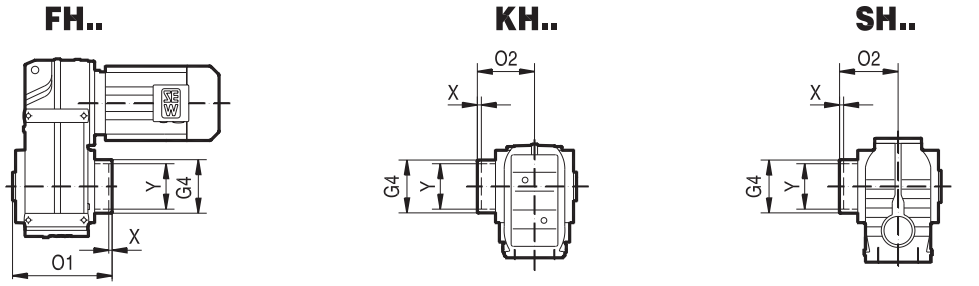
Afbeelding 48: meedraaiende afdekkap vervangen door een vaste afdekkap

1. Meedraaiende afdekkap lostrekken.
2. Vaste afdekkap plaatsen en vastschroeven.

Artikelnummers en afmetingen



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Vlakke motorreductoren	FH..37	FH..47	FH..57	FH..67	FH..77	FH..87	FH..97
Artikelnummer	643 513 0	643 514 9	643 515 7	643 515 7	643 516 5	643 517 3	643 518 1
G4	78	88	100	100	121	164	185
O1	157	188.5	207.5	221.5	255	295	363.5
X	2	4.5	7.5	6	6	4	6.5
Y	75	83	83	93	114	159	174

Kegelwielmotorreductoren[1)]	KH..37	KH..47	KH..57	KH..67	KH..77	KH..87	KH..97
Artikelnummer	643 513 0	643 514 9	643 515 7	643 515 7	643 516 5	643 517 3	643 518 1
G4	78	88	100	100	121	164	185
O2	95	111.5	122.5	129	147	172	210.5
X	0	1.5	5.5	3	1	2	4.5
Y	75	83	83	93	114	159	174

1) Niet mogelijk bij kegelwielreductoren met holle as en krimpschijf in voetuitvoering (KH..B).

Wormwielmotorreductoren	SH..37	SH..47	SH..57	SH..67	SH..77	SH..87	SH..97
Artikelnummer	643 512 2	643 513 0	643 514 9	643 515 7	643 516 5	643 517 3	643 518 1
G4	59	78	88	100	121	164	185
O2	88	95	111.5	123	147	176	204.5
X	1	0	1.5	3	1	0	0.5
Y	53	75	83	93	114	159	174

9 Belangrijke aanwijzingen bij de maatbladen

9.1 Aanwijzingen bij de maatbladen

Omvang van de levering

= genormaliseerde delen worden door SEW-EURODRIVE meegeleverd.

= genormaliseerde delen worden niet door SEW-EURODRIVE meegeleverd.

Toleranties

Ashoogten

Op de weergegeven afmetingen gelden de volgende toleranties:

h	≤ 250 mm	-0,5 mm
h	> 250 mm	-1 mm

Voetreductoren: de aanbouwmotor kan onder het bevestigingsvlak uitsteken; u gelieve dit te controleren.

Aseinden

Diametertolerantie:

∅	≤ 50 mm	ISO k6
∅	> 50 mm	ISO m6

Centreerboringen volgens DIN 332 uitvoering DR:

∅	= 7...10 mm	M3
∅	> 10..0,13 mm	M4
∅	> 13..0,16 mm	M5
∅	> 16..0,21 mm	M6
∅	> 21..0,24 mm	M8
∅	> 24..0,30 mm	M10
∅	> 30..0,38 mm	M12
∅	> 38..0,50 mm	M16
∅	> 50..0,85 mm	M20
∅	> 85...130 mm	M24
∅	> 130 mm	M30

Spieën: volgens DIN 6885 (hoge uitvoering).

Holle assen

Diametertolerantie:

∅	ISO H7 gemeten met een kaliber

Splines-assen

Dm	= diameter van de meetcilinders
Me	= controlemaat

Flenzen

Tolerantie op de centreerrand:

∅	≤ 230 mm (flensgrootten A120...A300)	ISO j6
∅	> 230 mm (flensgrootten A350...A660)	ISO h6

Bij rechte reductoren staan tot drie verschillende flensdiameters per bouwgrootte ter beschikking. In de betreffende maatbladen worden de mogelijke flenzen per bouwgrootte getoond.

Oogbouten, hijsogen

Rechte reductoren R07...R27 worden zonder hijsvoorziening geleverd. In andere gevallen zijn reductoren en motoren ofwel met aangegoten hijsogen, losschroefbare hijsogen of met losschroefbare oogbouten uitgevoerd.

Reductor-/motortype	Afschroefbare		Aangegoten hijsogen
	oogbouten	hijsogen	
R..37-R..57	-	•	-
R..67-R..167	•	-	-
RX57-RX67	-	•	-
RX77-RX107	•	-	-
F..27-F..157	-	-	•
K..37-K..157	-	-	•
K..167-K..187	•	-	-
S..37-S..47	-	•	-
S..57-S..97	-	-	•

Ontluchtings-ventielen

De tekeningen van de reductoren zijn altijd weergegeven met dichtstoppen. Afhankelijk van de bestelde bouwvorm M1...M6 wordt de betreffende dichtstop in de fabriek vervangen door een actief gemaakt ontluchtingsventiel. Hierdoor kunnen de omtreksafmetingen in geringe mate veranderen.

Krimpschijf-verbinding

Holle-asreductoren met een krimpschijfverbinding: u gelieve in voorkomende gevallen het uitvoerige gegevensblad over krimpschijven, gegevensblad nr. 33753..95, bij ons op te vragen.

Splines-vertanding

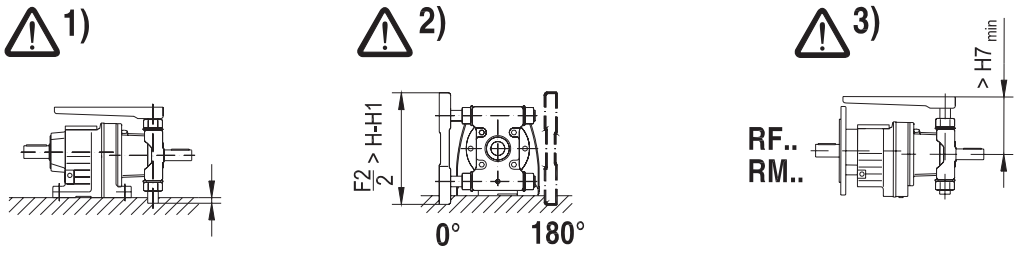
De holle-asreductoren FV.. van de grootten 27 ... 107 en KV.. van de grootte 37 ... 107 worden geleverd met een splinesvertanding volgens DIN 5480.

Rubber buffer bij FA/FH/FV

f = veerindrukking bij $M_{a\ max}$

Aandrijfzijdig deksel met motorfundatie-plaat AD../P

Bij reductoren met aandrijfzijdig deksel en motorfundatieplaat kunnen zich de volgende situaties voordoen:



1. Draadzuilen kunnen na verstelling onder het voetbevestigingsvlak uitsteken
2. Motorfundatieplaat kan onder het voetbevestigingsvlak uitsteken
3. Motorfundatieplaat kan na verstelling botsen met de reductorflens

Deze situaties zijn in de maatbladen op de volgende wijze gemarkeerd:

E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118

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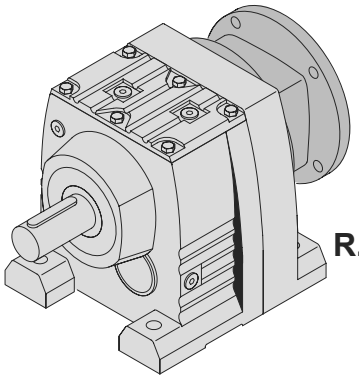
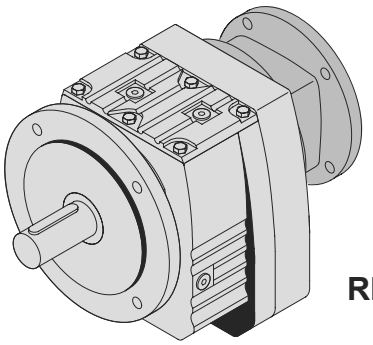
10 R..

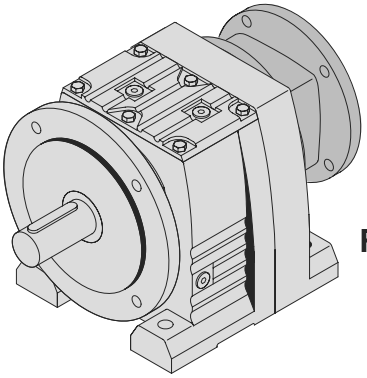
10.1 R.. AM.. [Nm]



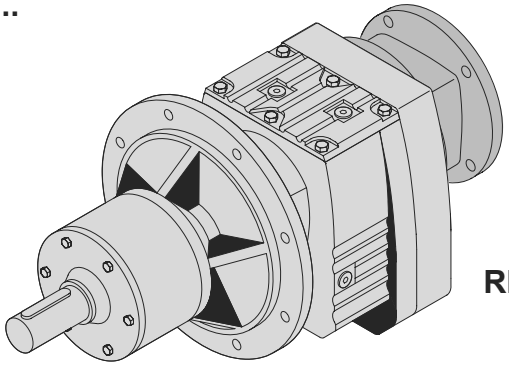
R.. AM..



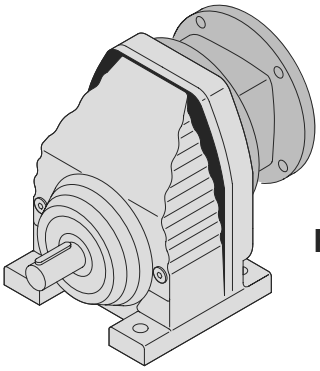
RF.. AM..



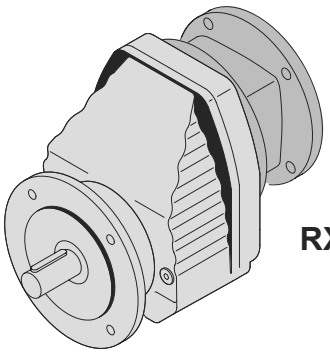
R..F AM..



RM.. AM..



RX.. AM..



RXF.. AM ..

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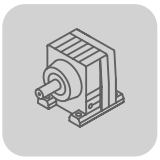


RX57, n_e = 1400 1/min															69 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**			**AM71**			**AM80**			**AM90**		
5.50*	255	39	3100	-												
5.07	276	36	3030	-												
4.35	322	68	2640	-												
3.79	369	69	2480	-												
3.55*	394	69	2420	-												
3.14	446	65	2320	-												
2.91	481	67	2170	-		RX	12 kg		RX	13 kg		RX	15 kg		RX	15 kg
2.64*	530	69	1810	-		RXF	14 kg		RXF	14 kg		RXF	17 kg		RXF	17 kg
2.37	591	69	1500	-												
2.04	686	69	1070	-												
1.92*	729	69	890	-												
1.65	848	69	430	-												
1.48	946	68	112	-												
1.30	1075	63	132	-												

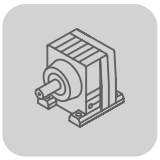
		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC			**NEMA**		
RX	198		**RX**	234	
RXF	199		**RXF**	234	

RX57, n_e = 1400 1/min												69 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM100			AM112			AM132S/M		
5.50*	255	39	3100	-									
5.07	276	36	3030	-									
4.35	322	68	2640	-									
3.79	369	69	2480	-									
3.55*	394	69	2420	-									
3.14	446	65	2320	-									
2.91	481	67	2170	-		RX	20 kg		RX	20 kg		RX	27 kg
2.64*	530	69	1810	-		RXF	21 kg		RXF	21 kg		RXF	29 kg
2.37	591	69	1500	-									
2.04	686	69	1070	-									
1.92*	729	69	890	-									
1.65	848	69	430	-									
1.48	946	68	112	-									
1.30	1075	63	132	-									

	AM182	AM184	AM213/215
NEMA **+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

IEC **RX** 198 **RXF** 199 **NEMA** **RX** 234 **RXF** 234



RX67, n_e = 1400 1/min													134 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**		**AM71**		**AM80**		**AM90**	
6.07	231	43	4010	-								
5.18	270	75	3580	-								
4.53	309	82	3350	-								
4.30*	326	80	3300	-								
3.77	371	87	3090	-								
3.20*	438	100	2800	-								
2.89	484	106	2640	-		RX 15 kg		RX 15 kg		RX 17 kg		RX 17 kg
2.54	551	118	2000	-		RXF 19 kg		RXF 19 kg		RXF 21 kg		RXF 21 kg
2.40*	583	123	1530	-								
2.04	686	134	230	-								
1.86	753	126	225	-								
1.61	870	114	245	-								
1.40*	1000	104	205	-								

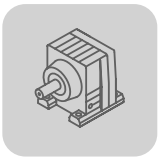
		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC **RX** 200 **RXF** 201 **NEMA** **RX** 234 **RXF** 234

RX67, n_e = 1400 1/min												134 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM100		AM112		AM132S/M	
6.07	231	43	4010	-						
5.18	270	75	3580	-						
4.53	309	82	3350	-						
4.30*	326	80	3300	-						
3.77	371	87	3090	-						
3.20*	438	100	2800	-						
2.89	484	106	2640	-	RX 22 kg		RX 22 kg		RX 29 kg	
2.54	551	118	2000	-	RXF 26 kg		RXF 26 kg		RXF 33 kg	
2.40*	583	123	1530	-						
2.04	686	134	230	-						
1.86	753	126	225	-						
1.61	870	114	245	-						
1.40*	1000	104	205	-						

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

IEC **RX** 200 **RXF** 201 **NEMA** **RX** 234 **RXF** 234



R..
R.. AM.. [Nm]

RX77, n_e = 1400 1/min													215 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**		**AM71**		**AM80**		**AM90**	
8.00*	175	57	6330	-								
7.47	187	53	6200	-								
6.41	218	103	5600	-								
5.63	249	110	5300	-								
5.35*	262	103	5240	-								
4.73	296	123	4900	-								
4.04*	347	143	4500	-								
3.70	378	153	4290	-		RX 25 kg		RX 25 kg		RX 27 kg		RX 27 kg
3.25*	431	182	3200	-		RXF 27 kg		RXF 27 kg		RXF 29 kg		RXF 29 kg
3.08*	455	193	2560	-								
2.70	519	215	1110	-								
2.43	576	215	510	-								
2.13	657	200	435	-								
1.88*	745	187	335	-								
1.67	838	173	315	-								
1.42	986	155	315	-								

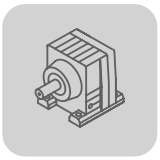
		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

	IEC	**RX** 202 **RXF** 203		**NEMA**	**RX** 234 **RXF** 234	

RX77, n_e = 1400 1/min															215 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM100			AM112			AM132S/M			AM132ML		
8.00*	175	57	6330	-												
7.47	187	53	6200	-												
6.41	218	103	5600	-												
5.63	249	110	5300	-												
5.35*	262	103	5240	-												
4.73	296	123	4900	-												
4.04*	347	143	4500	-												
3.70	378	153	4290	-		RX	32 kg		RX	32 kg		RX	39 kg		RX	39 kg
3.25*	431	182	3200	-		RXF	34 kg		RXF	34 kg		RXF	41 kg		RXF	41 kg
3.08*	455	193	2560	-												
2.70	519	215	1110	-												
2.43	576	215	510	-												
2.13	657	200	435	-												
1.88*	745	187	335	-												
1.67	838	173	315	-												
1.42	986	155	315	-												

		AM182	AM184	AM213/215	-
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC	**RX**	202	**NEMA**	**RX**	234
	RXF	203		**RXF**	234



R..
R.. AM.. [Nm]

RX87, n_e = 1400 1/min													405 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM80**		**AM90**		**AM100**		**AM112**		
8.65	162	139	7890	-									
7.63	183	149	7490	-									
7.20*	194	140	7380	-									
6.45	217	192	6850	-									
5.56*	252	225	6320	-									
5.07	276	250	5980	-									
4.50*	311	290	5500	-									
3.78	370	305	5030	-		RX 43 kg		RX 43 kg		RX 48 kg		RX 48 kg	
3.48	402	405	2730	-		RXF 48 kg		RXF 48 kg		RXF 53 kg		RXF 53 kg	
3.09	453	405	1950	-									
2.76*	507	405	1200	-									
2.48	565	405	470	-									
2.15	651	385	42	-									
1.93	725	355	185	-									
1.60*	875	315	74	-									
1.39	1005	290	74	-									

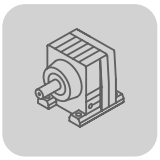
		AM143	**AM145**	**AM182**	**AM184**
NEMA	**+ kg**	-- kg	-- kg	- 1.0 kg	- 1.0 kg

IEC	**RX** 204 **RXF** 205		**NEMA**	**RX** 234 **RXF** 234		

RX87, n_e = 1400 1/min																405 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM132S/M			AM132ML			AM160			AM180		
8.65	162	139	7890	-												
7.63	183	149	7490	-												
7.20*	194	140	7380	-												
6.45	217	192	6850	-												
5.56*	252	225	6320	-												
5.07	276	250	5980	-												
4.50*	311	290	5500	-												
3.78	370	305	5030	-		RX	56 kg		RX	56 kg		RX	72 kg		RX	72 kg
3.48	402	405	2730	-		RXF	61 kg		RXF	61 kg		RXF	77 kg		RXF	77 kg
3.09	453	405	1950	-												
2.76*	507	405	1200	-												
2.48	565	405	470	-												
2.15	651	385	42	-												
1.93	725	355	185	-												
1.60*	875	315	74	-												
1.39	1005	290	74	-												

		AM213/215	-	AM254/256	AM284/286
NEMA	**+ kg**	- 2.0 kg	-	- 5.0 kg	- 3.0 kg

IEC	**RX**	204	**NEMA**	**RX**	234
	RXF	205		**RXF**	234



R..
R.. AM.. [Nm]

RX97, n_e = 1400 1/min													595 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	**AM100**		**AM112**		**AM132S/M**		**AM132ML**	
8.23	170	225	9560	-								
7.16*	196	260	8950	-								
6.56	213	300	8500	-								
5.79	242	420	7630	-								
4.91	285	395	7220	-								
4.52	310	595	6180	-								
4.04	347	595	5380	-								
3.64*	385	595	4530	-		RX 73 kg		RX 73 kg		RX 79 kg		RX 79 kg
3.30	424	595	3730	-		RXF 81 kg		RXF 81 kg		RXF 88 kg		RXF 88 kg
2.92	479	595	2810	-								
2.64	530	595	1980	-								
2.24*	625	595	495	-								
1.96	714	570	19	-								
1.64	854	505	51	-								
1.42	986	455	132	-								

		AM182	**AM184**	**AM213/215**	**-**
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

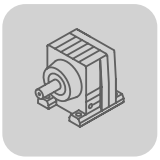
IEC **RX** 206 **RXF** 207

NEMA **RX** 234 **RXF** 234

RX97, n_e = 1400 1/min												595 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM160			AM180			AM200		
8.23	170	225	9560	-									
7.16*	196	260	8950	-									
6.56	213	300	8500	-									
5.79	242	420	7630	-									
4.91	285	395	7220	-									
4.52	310	595	6180	-									
4.04	347	595	5380	-									
3.64*	385	595	4530	-		RX	97 kg		RX	97 kg		RX	115 kg
3.30	424	595	3730	-		RXF	105 kg		RXF	105 kg		RXF	120 kg
2.92	479	595	2810	-									
2.64	530	595	1980	-									
2.24*	625	595	495	-									
1.96	714	570	19	-									
1.64	854	505	51	-									
1.42	986	455	132	-									

		AM254/256	AM284/286	AM324/326
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

IEC	**RX**	206	**NEMA**	**RX**	234
	RXF	207		**RXF**	234



RX107, n_e = 1400 1/min																830 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM100**			**AM112**			**AM132S/M**			**AM132ML**		
6.63*	211	460	9700	-												
5.61	250	455	9080	-												
5.19	270	695	7850	-												
4.65	301	695	7450	-												
4.20*	333	830	6420	-												
3.81	367	830	5550	-												
3.38	414	830	4490	-		RX	105 kg		RX	105 kg		RX	110 kg		RX	110 kg
3.07	456	830	3600	-		RXF	125 kg		RXF	125 kg		RXF	125 kg		RXF	125 kg
2.64*	530	830	2170	-												
2.30	609	830	900	-												
1.95	718	765	555	-												
1.71	819	705	480	-												
1.44	972	645	315	-												

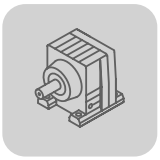
		AM182	**AM184**	**AM213/215**	**-**
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC	**RX**	208	**NEMA**	**RX**	235
	RXF	209		**RXF**	235

RX107, n_e = 1400 1/min																830 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160			AM180			AM200			AM225		
6.63*	211	460	9700	-												
5.61	250	455	9080	-												
5.19	270	695	7850	-												
4.65	301	695	7450	-												
4.20*	333	830	6420	-												
3.81	367	830	5550	-												
3.38	414	830	4490	-		RX	130 kg		RX	130 kg		RX	145 kg		RX	150 kg
3.07	456	830	3600	-		RXF	145 kg		RXF	145 kg		RXF	160 kg		RXF	165 kg
2.64*	530	830	2170	-												
2.30	609	830	900	-												
1.95	718	765	555	-												
1.71	819	705	480	-												
1.44	972	645	315	-												

	AM254/256	AM284/286	AM324/326	AM364/365
NEMA **+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg	- 7.0 kg

	IEC	**RX** 208 **RXF** 209		**NEMA**	**RX** 235 **RXF** 235	



R..
R.. AM.. [Nm]

R27, n_e = 1400 1/min															130 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
				3												
135.09	10	130	4230	-												
123.91	11	130	4230	-												
105.49	13	130	4230	-												
90.96	15	130	4230	-												
84.78	17	130	4230	-												
74.11	19	130	4230	-												
69.47	20	130	4180	-												
61.30	23	130	3980	-												
55.87	25	130	3840	-		R	6.5 kg		R	6.7 kg		R	9.1 kg		R	9.2 kg
48.17	29	130	3630	-		RF	6.4 kg		RF	6.7 kg		RF	9.1 kg		RF	9.1 kg
44.90	31	130	3530	-												
39.25	36	130	3350	-												
36.79	38	130	3260	-												
32.47	43	130	3100	-												
28.78	49	130	2950	-												
24.47	57	130	2770	-												
				2												
28.37	49	130	2940	-												
26.09	54	130	2840	-												
22.32	63	130	2660	-												
19.35	72	130	2510	-												
18.08	77	130	2440	-												
15.63	90	130	2290	-												
13.28*	105	130	2140	-												
11.86	118	129	1990	-												
10.13	138	122	1890	-												
9.41	149	122	900	-		R	6.2 kg		R	6.5 kg		R	8.9 kg		R	8.9 kg
8.16	172	116	870	-		RF	6.2 kg		RF	6.4 kg		RF	8.8 kg		RF	8.8 kg
7.63*	183	112	900	-												
6.59	212	106	880	-												
5.60*	250	99	880	-												
5.00*	280	95	860	-												
4.27	328	87	920	-												
4.00*	350	85	910	-												
3.37	415	79	900	-												

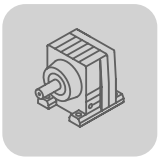
		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC	**R**	210	**NEMA**	**R**	234
	RF	211		**RF**	234

R37, n_e = 1400 1/min															200 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
				3												
134.82	10	200	4950	8												
123.66	11	200	4950	8												
105.28	13	200	4950	8												
90.77	15	200	4950	8												
84.61	17	200	4950	8												
73.96	19	200	4950	8												
69.33	20	200	4950	8												
61.18	23	200	4950	8												
55.76	25	200	4950	9		R	12 kg		R	13 kg		R	15 kg		R	15 kg
48.08	29	200	4950	9		RF	14 kg		RF	14 kg		RF	16 kg		RF	16 kg
44.81	31	200	4950	9												
39.17	36	200	4760	9												
36.72	38	200	4540	9												
32.40	43	200	4120	9												
28.73	49	200	3740	9												
24.42	57	200	3240	9												
				2												
28.32	49	200	3690	7												
26.03	54	185	3860	7												
22.27	63	200	2970	7												
19.31	73	200	2570	7												
18.05	78	200	2390	8												
15.60	90	200	2010	8												
13.25	106	190	1880	8												
11.83	118	183	1810	8												
10.11	138	170	1820	8		R	12 kg		R	12 kg		R	15 kg		R	15 kg
9.47	148	167	1760	8		RF	14 kg		RF	14 kg		RF	16 kg		RF	16 kg
7.97	176	156	1720	8												
6.67	210	144	1000	12												
5.67	247	142	760	12												
5.06	277	135	790	13												
4.32	324	126	820	13												
4.05	346	122	850	13												
3.41	411	112	900	14												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC	**R**	212	**NEMA**	**R**	234
	RF	213		**RF**	234



R..
R.. AM.. [Nm]

R47, n_e = 1400 1/min																300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
				3												
176.88	7.9	300	5420	7												
162.94	8.6	300	5420	7												
139.99	10	300	5420	7												
121.87	11	300	5420	7												
114.17	12	300	5420	7												
100.86	14	300	5420	7												
93.68	15	300	5420	7												
84.90	16	300	5420	7												
76.23	18	300	5420	7												
68.54	20	300	5420	8		R	17 kg		R	17 kg		R	19 kg		R	19 kg
64.21	22	300	5420	8		RF	17 kg		RF	17 kg		RF	19 kg		RF	19 kg
56.73	25	300	5420	8												
52.69	27	300	5350	8												
47.75	29	300	5150	8												
42.87	33	300	4930	8												
36.93	38	300	4630	8												
34.73	40	300	4520	8												
29.88	47	300	4240	8												
26.70	52	300	4050	8												
23.59	59	300	3840	8												
				2												
33.79	41	240	4690	7												
31.12	45	220	4610	7												
26.74	52	300	4050	7												
23.28	60	300	3820	7												
21.81	64	300	3710	7												
19.27	73	295	3530	7												
17.89	78	290	3390	7												
16.22	86	275	3350	7												
14.56	96	265	3230	7												
12.54	112	250	3080	7												
11.79	119	245	3020	7		R	16 kg		R	16 kg		R	19 kg		R	19 kg
10.15	138	230	2890	7		RF	16 kg		RF	16 kg		RF	19 kg		RF	19 kg
9.07	154	220	2780	8												
8.01	175	205	2690	8												
7.76*	180	163	2720	10												
6.96	201	159	2620	10												
6.00	233	156	2470	10												
5.64*	248	155	2410	10												
4.85	289	150	2280	10												
4.34	323	146	2190	11												
3.83	366	144	2090	11												

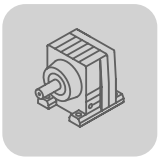
		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

	IEC			NEMA		
		R	214		**R**	234
		RF	215		**RF**	234

R47, n_e = 1400 1/min								300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100	AM112	AM132S/M	
				3				
176.88	7.9	300	5420	7				
162.94	8.6	300	5420	7				
139.99	10	300	5420	7				
121.87	11	300	5420	7				
114.17	12	300	5420	7				
100.86	14	300	5420	7				
93.68	15	300	5420	7				
84.90	16	300	5420	7				
76.23	18	300	5420	7				
68.54	20	300	5420	8	R 24 kg	R 24 kg	R 31 kg	
64.21	22	300	5420	8	RF 24 kg	RF 24 kg	RF 31 kg	
56.73	25	300	5420	8				
52.69	27	300	5350	8				
47.75	29	300	5150	8				
42.87	33	300	4930	8				
36.93	38	300	4630	8				
34.73	40	300	4520	8				
29.88	47	300	4240	8				
26.70	52	300	4050	8				
23.59	59	300	3840	8				
				2				
33.79	41	240	4690	7				
31.12	45	220	4610	7				
26.74	52	300	4050	7				
23.28	60	300	3820	7				
21.81	64	300	3710	7				
19.27	73	295	3530	7				
17.89	78	290	3390	7				
16.22	86	275	3350	7				
14.56	96	265	3230	7				
12.54	112	250	3080	7				
11.79	119	245	3020	7	R 23 kg	R 23 kg	R 30 kg	
10.15	138	230	2890	7	RF 23 kg	RF 23 kg	RF 30 kg	
9.07	154	220	2780	8				
8.01	175	205	2690	8				
7.76*	180	163	2720	10				
6.96	201	159	2620	10				
6.00	233	156	2470	10				
5.64*	248	155	2410	10				
4.85	289	150	2280	10				
4.34	323	146	2190	11				
3.83	366	144	2090	11				

	AM182	AM184	AM213/215
NEMA + kg	- 1.0 kg	- 1.0 kg	- 2.4 kg

IEC **R** 214 **RF** 215 **NEMA** **R** 234 **RF** 234



R..
R.. AM.. [Nm]

R57, n_e = 1400 1/min									450 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63	AM71	AM80	AM90	
				3					
186.89	7.5	450	7110	7					
172.17	8.1	450	7110	7					
147.92	9.5	450	7110	7					
128.77	11	450	7110	7					
120.63	12	450	7110	7					
106.58	13	450	7110	7					
98.99	14	450	7110	7					
89.71	16	450	7110	7					
80.55	17	450	7110	7					
69.23	20	450	7110	7	R 22 kg RF 25 kg	R 22 kg RF 26 kg	R 24 kg RF 28 kg	R 24 kg RF 28 kg	
64.85	22	450	6980	8	RM 37 kg	RM 38 kg	RM 40 kg	RM 40 kg	
57.29	24	450	6630	8					
53.22	26	450	6430	8					
48.23	29	450	6170	8					
43.30	32	450	5900	8					
37.30*	38	450	5530	8					
35.07	40	450	5390	8					
30.18	46	450	5050	8					
26.97	52	450	4800	8					
				2					
26.31	53	450	4750	6					
24.99*	56	450	4640	6					
21.93	64	450	4370	7					
18.60*	75	450	4050	7					
16.79	83	450	3860	7					
14.77*	95	435	3690	7					
13.95*	100	430	3610	7					
11.88	118	405	3430	7					
10.79	130	390	3330	7	R 21 kg RF 24 kg	R 21 kg RF 25 kg	R 23 kg RF 27 kg	R 23 kg RF 27 kg	
9.35	150	370	3180	7	RM 36 kg	RM 37 kg	RM 39 kg	RM 39 kg	
9.06	155	375	2010	9					
7.97	176	355	2020	9					
7.53	186	350	1950	9					
6.41	218	335	1770	9					
5.82	241	320	1820	10					
5.05	277	305	1730	10					
4.39	319	280	1900	10					

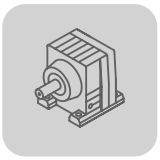
		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

	IEC	**R**	216	**NEMA**	**R**	234
		RF	217		**RF**	234
		RM	217		**RM**	234

R57, n_e = 1400 1/min								450 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100	AM112	AM132S/M	
				3				
186.89	7.5	450	7110	7				
172.17	8.1	450	7110	7				
147.92	9.5	450	7110	7				
128.77	11	450	7110	7				
120.63	12	450	7110	7				
106.58	13	450	7110	7				
98.99	14	450	7110	7				
89.71	16	450	7110	7				
80.55	17	450	7110	7				
69.23	20	450	7110	7	R 29 kg RF 32 kg	R 29 kg RF 33 kg	R 36 kg RF 40 kg	
64.85	22	450	6980	8	RM 44 kg	RM 45 kg	RM 52 kg	
57.29	24	450	6630	8				
53.22	26	450	6430	8				
48.23	29	450	6170	8				
43.30	32	450	5900	8				
37.30*	38	450	5530	8				
35.07	40	450	5390	8				
30.18	46	450	5050	8				
26.97	52	450	4800	8				
				2				
26.31	53	450	4750	6				
24.99*	56	450	4640	6				
21.93	64	450	4370	7				
18.60*	75	450	4050	7				
16.79	83	450	3860	7				
14.77*	95	435	3690	7				
13.95*	100	430	3610	7				
11.88	118	405	3430	7				
10.79	130	390	3330	7	R 28 kg RF 32 kg	R 28 kg RF 32 kg	R 35 kg RF 39 kg	
9.35	150	370	3180	7	RM 44 kg	RM 44 kg	RM 51 kg	
9.06	155	375	2010	9				
7.97	176	355	2020	9				
7.53	186	350	1950	9				
6.41	218	335	1770	9				
5.82	241	320	1820	10				
5.05	277	305	1730	10				
4.39	319	280	1900	10				

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

IEC	**R**	216	**NEMA**	**R**	234
	RF	217		**RF**	234
	RM	217		**RM**	234



R67, n_e = 1400 1/min									**600 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**	**AM71**	**AM80**	**AM90**
					3			
199.81	7.0	600	7560	6				
184.07	7.6	600	7560	6				
158.14	8.9	600	7560	6				
137.67	10	600	7560	6				
128.97	11	600	7560	6				
113.94	12	600	7560	6				
105.83	13	600	7560	6				
95.91	15	600	7560	6				
86.11	16	600	7560	6				
74.17	19	600	7560	7	R 28 kg RF 32 kg RM 47 kg	R 29 kg RF 32 kg RM 48 kg	R 31 kg RF 34 kg RM 50 kg	R 31 kg RF 34 kg RM 50 kg
69.75	20	600	7560	7				
61.26	23	600	7560	7				
56.89	25	600	7560	7				
51.56	27	600	7560	7				
46.29	30	600	7560	7				
39.88*	35	580	7790	7				
37.50	37	570	7900	7				
32.27	43	540	8210	7				
28.83	49	520	8400	7				
					2			
28.13	50	540	8210	6				
26.72	52	540	8210	6				
23.44	60	560	8010	6				
19.89	70	600	7560	6				
17.95	78	590	7330	6				
15.79	89	560	7130	6				
14.91	94	550	6980	6				
12.70	110	520	6650	6				
11.54	121	500	6500	7	R 28 kg RF 31 kg RM 47 kg	R 28 kg RF 31 kg RM 47 kg	R 30 kg RF 33 kg RM 49 kg	R 30 kg RF 33 kg RM 49 kg
10.00	140	470	6220	7				
8.70*	161	440	5960	7				
7.79	180	380	5830	8				
7.36*	190	370	5790	8				
6.27	223	330	5590	9				
5.70	246	310	5450	9				
4.93	284	290	5210	9				
4.29	326	270	5000	10				

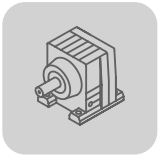
		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC		**NEMA**	
R	218	**R**	234
RF	219	**RF**	234
RM	219	**RM**	234

R67, n_e = 1400 1/min								600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100	AM112	AM132S/M	
				3				
199.81	7.0	600	7560	6				
184.07	7.6	600	7560	6				
158.14	8.9	600	7560	6				
137.67	10	600	7560	6				
128.97	11	600	7560	6				
113.94	12	600	7560	6				
105.83	13	600	7560	6				
95.91	15	600	7560	6				
86.11	16	600	7560	6				
74.17	19	600	7560	7	R 36 kg RF 39 kg RM 55 kg	R 36 kg RF 39 kg RM 55 kg	R 43 kg RF 46 kg RM 62 kg	
69.75	20	600	7560	7				
61.26	23	600	7560	7				
56.89	25	600	7560	7				
51.56	27	600	7560	7				
46.29	30	600	7560	7				
39.88*	35	580	7790	7				
37.50	37	570	7900	7				
32.27	43	540	8210	7				
28.83	49	520	8400	7				
				2				
28.13	50	540	8210	6				
26.72	52	540	8210	6				
23.44	60	560	8010	6				
19.89	70	600	7560	6				
17.95	78	590	7330	6				
15.79	89	560	7130	6				
14.91	94	550	6980	6				
12.70	110	520	6650	6				
11.54	121	500	6500	7	R 35 kg RF 38 kg RM 54 kg	R 35 kg RF 38 kg RM 54 kg	R 42 kg RF 45 kg RM 61 kg	
10.00	140	470	6220	7				
8.70*	161	440	5960	7				
7.79	180	380	5830	8				
7.36*	190	370	5790	8				
6.27	223	330	5590	9				
5.70	246	310	5450	9				
4.93	284	290	5210	9				
4.29	326	270	5000	10				

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

	IEC	**R**	218	**NEMA**	**R**	234
		RF	219		**RF**	234
		RM	219		**RM**	234



R..
R.. AM.. [Nm]

R77, n_e = 1400 1/min															820 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**			**AM71**			**AM80**			**AM90**		
					3											
195.24*	7.2	820	9920	6												
166.59	8.4	820	9920	6												
145.67	9.6	820	9920	6												
138.39	10	820	9920	6												
121.42	12	820	9920	6												
102.99	14	820	9920	6												
92.97	15	820	9920	6												
81.80	17	820	9920	6												
77.24	18	820	9920	7		R	34 kg		R	35 kg		R	37 kg		R	37 kg
65.77	21	820	9920	7		RF	40 kg		RF	40 kg		RF	43 kg		RF	43 kg
57.68	24	820	9920	7		RM	65 kg		RM	65 kg		RM	68 kg		RM	68 kg
52.07	27	820	9920	7												
45.81	31	820	9920	7												
43.26	32	820	9920	7												
36.83	38	820	9920	7												
33.47	42	820	9920	7												
29.00	48	820	9920	7												
25.23	55	780	10100	7												
					2											
23.37	60	820	8870	6												
21.43	65	820	8250	6												
18.80	74	780	7980	6												
17.82*	79	780	7620	6												
15.60	90	740	7390	6												
14.05	100	720	7050	6												
12.33	114	690	6740	6		R	33 kg		R	34 kg		R	36 kg		R	36 kg
10.88	129	660	6490	7		RF	39 kg		RF	39 kg		RF	41 kg		RF	42 kg
9.64	145	630	6300	7		RM	64 kg		RM	64 kg		RM	66 kg		RM	67 kg
8.59	163	630	4110	7												
7.74	181	610	3940	8												
6.79	206	580	3850	8												
5.99*	234	540	3990	8												
5.31*	264	510	3990	8												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC

R	220
RF	221
RM	221

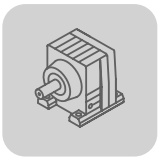
NEMA

R	234
RF	234
RM	234

R77, n_e = 1400 1/min													820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100		AM112		AM132S/M		AM132ML		
				3									
195.24*	7.2	820	9920	6									
166.59	8.4	820	9920	6									
145.67	9.6	820	9920	6									
138.39	10	820	9920	6									
121.42	12	820	9920	6									
102.99	14	820	9920	6									
92.97	15	820	9920	6									
81.80	17	820	9920	6									
77.24	18	820	9920	7		R 41 kg		R 41 kg		R 48 kg		R 49 kg	
65.77	21	820	9920	7		RF 47 kg		RF 47 kg		RF 54 kg		RF 54 kg	
57.68	24	820	9920	7		RM 72 kg		RM 72 kg		RM 79 kg		RM 79 kg	
52.07	27	820	9920	7									
45.81	31	820	9920	7									
43.26	32	820	9920	7									
36.83	38	820	9920	7									
33.47	42	820	9920	7									
29.00	48	820	9920	7									
25.23	55	780	10100	7									
				2									
23.37	60	820	8870	6									
21.43	65	820	8250	6									
18.80	74	780	7980	6									
17.82*	79	780	7620	6									
15.60	90	740	7390	6									
14.05	100	720	7050	6									
12.33	114	690	6740	6		R 40 kg		R 40 kg		R 47 kg		R 47 kg	
10.88	129	660	6490	7		RF 46 kg		RF 46 kg		RF 53 kg		RF 53 kg	
9.64	145	630	6300	7		RM 71 kg		RM 71 kg		RM 78 kg		RM 78 kg	
8.59	163	630	4110	7									
7.74	181	610	3940	8									
6.79	206	580	3850	8									
5.99*	234	540	3990	8									
5.31*	264	510	3990	8									

	AM182	AM184	AM213/215	-
NEMA **+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC	**R** 220 **RF** 221 **RM** 221		**NEMA**	**R** 234 **RF** 234 **RM** 234	



R87, n_e = 1400 1/min															**1550 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM80**		**AM90**		**AM100**		**AM112**				
					3										
246.54	5.7	1550	16900	6											
216.54	6.5	1550	16900	6											
205.71	6.8	1550	16900	6											
181.77	7.7	1550	16900	6											
155.34	9.0	1550	16900	6											
142.41	9.8	1550	16900	6											
124.97	11	1550	16900	6											
118.43*	12	1550	16900	6											
103.65	14	1550	16900	6											
93.38	15	1550	16900	6		R 63 kg		R 63 kg		R 68 kg		R 68 kg			
81.92	17	1550	16900	6		RF 70 kg		RF 70 kg		RF 75 kg		RF 75 kg			
72.57	19	1550	16900	6		RM 100 kg		RM 100 kg		RM 105 kg		RM 105 kg			
63.68*	22	1550	15800	6											
60.35*	23	1550	15200	6											
52.82	27	1550	13500	6											
47.58	29	1550	16900	7											
41.74	34	1550	16900	7											
36.84*	38	1550	16800	7											
32.66*	43	1550	16000	7											
27.88	50	1500	15100	7											
					2										
34.40*	41	1500	9480	5											
31.40	45	1550	7820	5											
27.84*	50	1550	15000	6											
23.40	60	1550	13900	6											
21.51	65	1500	13600	6											
19.10	73	1440	13000	6											
17.08*	82	1390	12600	6											
15.35	91	1340	12100	6		R 62 kg		R 62 kg		R 67 kg		R 67 kg			
13.33	105	1280	11600	6		RF 69 kg		RF 69 kg		RF 74 kg		RF 74 kg			
11.93	117	1230	11200	6		RM 99 kg		RM 99 kg		RM 105 kg		RM 105 kg			
9.90*	141	1180	10400	6											
9.14*	153	1210	10500	6											
8.22	170	1160	10200	7											
7.13	196	1070	9780	7											
6.39	219	1020	9450	7											
5.30*	264	910	8980	7											

	AM143	**AM145**	**AM182**	**AM184**
NEMA **+ kg**	-- kg	-- kg	- 1.0 kg	- 1.0 kg

IEC

R	222
RF	223
RM	223

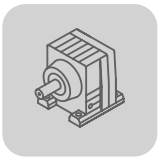
NEMA

R	234
RF	234
RM	234

R87, n_e = 1400 1/min									1550 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM132S/M	AM132ML	AM160	AM180	
				3					
246.54	5.7	1550	16900	6					
216.54	6.5	1550	16900	6					
205.71	6.8	1550	16900	6					
181.77	7.7	1550	16900	6					
155.34	9.0	1550	16900	6					
142.41	9.8	1550	16900	6					
124.97	11	1550	16900	6					
118.43*	12	1550	16900	6					
103.65	14	1550	16900	6					
93.38	15	1550	16900	6	R 76 kg	R 76 kg	R 92 kg	R 92 kg	
81.92	17	1550	16900	6	RF 83 kg	RF 83 kg	RF 99 kg	RF 99 kg	
72.57	19	1550	16900	6	RM 110 kg	RM 110 kg	RM 130 kg	RM 130 kg	
63.68*	22	1550	15800	6					
60.35*	23	1550	15200	6					
52.82	27	1550	13500	6					
47.58	29	1550	16900	7					
41.74	34	1550	16900	7					
36.84*	38	1550	16800	7					
32.66*	43	1550	16000	7					
27.88	50	1500	15100	7					
				2					
34.40*	41	1500	9480	5					
31.40	45	1550	7820	5					
27.84*	50	1550	15000	6					
23.40	60	1550	13900	6					
21.51	65	1500	13600	6					
19.10	73	1440	13000	6					
17.08*	82	1390	12600	6					
15.35	91	1340	12100	6	R 74 kg	R 74 kg	R 90 kg	R 91 kg	
13.33	105	1280	11600	6	RF 81 kg	RF 81 kg	RF 97 kg	RF 98 kg	
11.93	117	1230	11200	6	RM 110 kg	RM 110 kg	RM 125 kg	RM 125 kg	
9.90*	141	1180	10400	6					
9.14*	153	1210	10500	6					
8.22	170	1160	10200	7					
7.13	196	1070	9780	7					
6.39	219	1020	9450	7					
5.30*	264	910	8980	7					

		AM213/215	-	AM254/256	AM284/286
NEMA	**+ kg**	- 2.0 kg	-	- 5.0 kg	- 3.0 kg

	IEC	**R**	222	**NEMA**	**R**	234
		RF	223		**RF**	234
		RM	223		**RM**	234



R97, n_e = 1400 1/min															**3000 Nm**	
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM100**			**AM112**			**AM132S/M**			**AM132ML**		
				3												
289.74	4.8	3000	19800	6												
255.71	5.5	3000	19800	6												
241.25	5.8	3000	19800	6												
216.28	6.5	3000	19800	6												
186.30	7.5	3000	19800	6												
170.02	8.2	3000	19800	6												
150.78	9.3	3000	19800	6												
126.75	11	3000	19800	6												
116.48	12	3000	19800	6												
103.44	14	3000	19800	6												
92.48	15	3000	19800	6		R	110 kg		R	110 kg		R	115 kg		R	115 kg
83.15	17	3000	19800	6		RF	125 kg		RF	125 kg		RF	135 kg		RF	135 kg
72.17	19	3000	18000	6		RM	180 kg		RM	180 kg		RM	185 kg		RM	185 kg
65.21	21	3000	19800	6												
59.92	23	3000	19800	6												
53.21	26	3000	19800	6												
47.58	29	3000	19800	6												
42.78	33	3000	19800	6												
37.13	38	3000	18600	6												
33.25	42	2890	17900	6												
27.58	51	2670	16900	6												
				2												
32.05	44	2560	10600	5												
27.19	51	2560	8380	5												
25.03	56	2830	15900	5												
22.37	63	2720	15300	5												
20.14	70	2610	14800	5												
18.24	77	2500	14400	6												
16.17	87	2400	13800	6												
14.62	96	2300	13400	6		R	105 kg		R	105 kg		R	115 kg		R	115 kg
12.39	113	2190	12700	6		RF	125 kg		RF	125 kg		RF	130 kg		RF	130 kg
10.83	129	2090	12100	6		RM	175 kg		RM	175 kg		RM	180 kg		RM	180 kg
9.29	151	2030	12200	6												
8.39	167	2030	11700	6												
7.12	197	2000	10900	6												
6.21	225	1890	10500	6												
5.20	269	1780	9850	6												
4.50*	311	1630	9500	6												

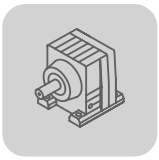
	AM182	**AM184**	**AM213/215**	**-**
NEMA **+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC			**NEMA**		
R	224		**R**	234	
RF	225		**RF**	234	
RM	225		**RM**	234	

R97, n_e = 1400 1/min								3000 Nm					
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160			AM180			AM200		
				3									
289.74	4.8	3000	19800	6									
255.71	5.5	3000	19800	6									
241.25	5.8	3000	19800	6									
216.28	6.5	3000	19800	6									
186.30	7.5	3000	19800	6									
170.02	8.2	3000	19800	6									
150.78	9.3	3000	19800	6									
126.75	11	3000	19800	6									
116.48	12	3000	19800	6									
103.44	14	3000	19800	6									
92.48	15	3000	19800	6	R RF	135 kg 150 kg		R RF	135 kg 150 kg		R RF	150 kg 165 kg	
83.15	17	3000	19800	6	RM	200 kg		RM	205 kg		RM	220 kg	
72.17	19	3000	18000	6									
65.21	21	3000	19800	6									
59.92	23	3000	19800	6									
53.21	26	3000	19800	6									
47.58	29	3000	19800	6									
42.78	33	3000	19800	6									
37.13	38	3000	18600	6									
33.25	42	2890	17900	6									
27.58	51	2670	16900	6									
				2									
32.05	44	2560	10600	5									
27.19	51	2560	8380	5									
25.03	56	2830	15900	5									
22.37	63	2720	15300	5									
20.14	70	2610	14800	5									
18.24	77	2500	14400	6									
16.17	87	2400	13800	6									
14.62	96	2300	13400	6	R RF	130 kg 150 kg		R RF	130 kg 150 kg		R RF	145 kg 165 kg	
12.39	113	2190	12700	6	RM	200 kg		RM	200 kg		RM	215 kg	
10.83	129	2090	12100	6									
9.29	151	2030	12200	6									
8.39	167	2030	11700	6									
7.12	197	2000	10900	6									
6.21	225	1890	10500	6									
5.20	269	1780	9850	6									
4.50*	311	1630	9500	6									

		AM254/256	AM284/286	AM324/326
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

IEC	**R**	224	**NEMA**	**R**	234
	RF	225		**RF**	234
	RM	225		**RM**	234



R..
R.. AM.. [Nm]

R107, n_e = 1400 1/min									4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100	AM112	AM132S/M	AM132ML
				3				
251.15	5.6	4300	29500	7				
229.95	6.1	4300	29500	7				
203.16	6.9	4300	29500	7				
172.34	8.1	4300	29500	7				
158.68	8.8	4300	29500	7				
141.83	9.9	4300	29500	7				
127.68	11	4300	29500	7				
115.63	12	4300	29500	7				
102.53	14	4300	29500	7				
92.70	15	4300	29500	7	R 170 kg RF 175 kg RM 260 kg	R 170 kg RF 175 kg RM 260 kg	R 170 kg RF 175 kg RM 265 kg	R 170 kg RF 175 kg RM 265 kg
78.57	18	4300	29500	7				
72.88	19	4300	29500	7				
65.60*	21	4300	29200	7				
59.41	24	4300	28000	7				
52.68	27	4300	26600	7				
47.63	29	4300	25500	7				
40.37*	35	4300	23800	7				
35.26	40	4300	22400	7				
29.49	47	4300	20700	7				
				2				
30.77	45	4300	21100	7				
27.58	51	4300	20100	7				
24.90*	56	4300	19200	7				
22.62	62	4300	18300	7				
20.07	70	4300	17300	7				
18.21	77	4300	16600	7				
15.65	89	4300	15400	7				
13.66	102	4300	14400	7	R 160 kg RF 165 kg RM 255 kg	R 160 kg RF 165 kg RM 255 kg	R 165 kg RF 170 kg RM 260 kg	R 165 kg RF 170 kg RM 260 kg
11.59	121	4300	13300	7				
10.13	138	4300	12400	7				
8.56	164	4300	11300	7				
7.86	178	2970	13800	9				
6.66	210	2970	12800	9				
5.82	241	2970	12100	9				
4.92	285	2900	11300	9				

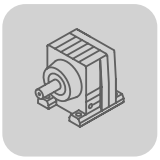
	AM182	AM184	AM213/215	-
NEMA + kg	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC	**R**	226	**NEMA**	**R**	235
	RF	227		**RF**	235
	RM	227		**RM**	235

R107, n_e = 1400 1/min									4300 Nm							
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160			AM180			AM200			AM225		
				3												
251.15	5.6	4300	29500	7												
229.95	6.1	4300	29500	7												
203.16	6.9	4300	29500	7												
172.34	8.1	4300	29500	7												
158.68	8.8	4300	29500	7												
141.83	9.9	4300	29500	7												
127.68	11	4300	29500	7												
115.63	12	4300	29500	7												
102.53	14	4300	29500	7												
92.70	15	4300	29500	7	R	190 kg		R	190 kg		R	205 kg		R	210 kg	
78.57	18	4300	29500	7	RF	195 kg		RF	195 kg		RF	210 kg		RF	215 kg	
72.88	19	4300	29500	7	RM	285 kg		RM	285 kg		RM	300 kg		RM	305 kg	
65.60*	21	4300	29200	7												
59.41	24	4300	28000	7												
52.68	27	4300	26600	7												
47.63	29	4300	25500	7												
40.37*	35	4300	23800	7												
35.26	40	4300	22400	7												
29.49	47	4300	20700	7												
				2												
30.77	45	4300	21100	7												
27.58	51	4300	20100	7												
24.90*	56	4300	19200	7												
22.62	62	4300	18300	7												
20.07	70	4300	17300	7												
18.21	77	4300	16600	7												
15.65	89	4300	15400	7												
13.66	102	4300	14400	7	R	185 kg		R	185 kg		R	200 kg		R	205 kg	
11.59	121	4300	13300	7	RF	190 kg		RF	190 kg		RF	205 kg		RF	210 kg	
10.13	138	4300	12400	7	RM	280 kg		RM	280 kg		RM	295 kg		RM	300 kg	
8.56	164	4300	11300	7												
7.86	178	2970	13800	9												
6.66	210	2970	12800	9												
5.82	241	2970	12100	9												
4.92	285	2900	11300	9												

		AM254/256	AM284/286	AM324/326	AM364/365
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg	- 7.0 kg

IEC	**R**	226	**NEMA**	**R**	235
	RF	227		**RF**	235
	RM	227		**RM**	235



R..
R.. AM.. [Nm]

R137, n_e = 1400 1/min												8000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM132S/M			AM132ML			AM160		
				3									
222.60*	6.3	8000	53400	6									
188.45	7.4	8000	53400	6									
174.40*	8.0	8000	53400	6									
156.31	9.0	8000	53400	6									
141.12*	9.9	8000	53400	6									
128.18	11	8000	53400	6									
113.72	12	8000	53400	6									
103.20*	14	8000	53400	6									
88.70*	16	8000	53400	6		R	255 kg		R	255 kg		R	275 kg
80.91*	17	8000	53400	6		RF	280 kg		RF	280 kg		RF	295 kg
73.49	19	8000	53400	6		RM	390 kg		RM	390 kg		RM	410 kg
65.20	21	8000	53400	6									
59.17*	24	8000	53400	6									
50.86*	28	8000	53400	6									
44.39	32	8000	53400	6									
37.65	37	8000	53400	6									
32.91	43	8000	53400	6									
27.83	50	7680	54100	7									
				2									
29.57*	47	7780	53900	6									
24.12	58	8000	49400	6									
22.00*	64	8000	47100	6									
19.04*	74	8000	43500	6									
16.80*	83	8000	40600	6									
14.51	96	8000	37300	6		R	245 kg		R	245 kg		R	265 kg
12.83	109	8000	34700	6		RF	270 kg		RF	270 kg		RF	285 kg
10.79	130	8000	31100	6		RM	380 kg		RM	380 kg		RM	400 kg
8.71	161	7840	27600	6									
7.59	184	5110	39000	8									
6.38	219	5110	35900	8									
5.15	272	4600	34500	8									

	AM213/215	-	AM254/256
+ kg	- 2.0 kg	-	- 5.0 kg

	IEC	**R**	228	**NEMA**	**R**	235
		RF	229		**RF**	235
		RM	229		**RM**	235

R137, n_e = 1400 1/min												8000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM180			AM200			AM225		
				3									
222.60*	6.3	8000	53400	6									
188.45	7.4	8000	53400	6									
174.40*	8.0	8000	53400	6									
156.31	9.0	8000	53400	6									
141.12*	9.9	8000	53400	6									
128.18	11	8000	53400	6									
113.72	12	8000	53400	6									
103.20*	14	8000	53400	6									
88.70*	16	8000	53400	6		R	275 kg		R	290 kg		R	295 kg
80.91*	17	8000	53400	6		RF	300 kg		RF	315 kg		RF	320 kg
73.49	19	8000	53400	6		RM	410 kg		RM	425 kg		RM	430 kg
65.20	21	8000	53400	6									
59.17*	24	8000	53400	6									
50.86*	28	8000	53400	6									
44.39	32	8000	53400	6									
37.65	37	8000	53400	6									
32.91	43	8000	53400	6									
27.83	50	7680	54100	7									
				2									
29.57*	47	7780	53900	6									
24.12	58	8000	49400	6									
22.00*	64	8000	47100	6									
19.04*	74	8000	43500	6									
16.80*	83	8000	40600	6									
14.51	96	8000	37300	6		R	265 kg		R	280 kg		R	285 kg
12.83	109	8000	34700	6		RF	290 kg		RF	305 kg		RF	310 kg
10.79	130	8000	31100	6		RM	400 kg		RM	415 kg		RM	420 kg
8.71	161	7840	27600	6									
7.59	184	5110	39000	8									
6.38	219	5110	35900	8									
5.15	272	4600	34500	8									

	AM284/286	AM324/326	AM364/365
NEMA **+ kg**	- 3.0 kg	- 2.0 kg	- 7.0 kg

	IEC	**R**	228	**NEMA**	**R**	235
		RF	229		**RF**	235
		RM	229		**RM**	235

R147, n_e = 1400 1/min													13000 Nm	
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM132ML			AM160			AM180			AM200		
				3												
163.31	8.6	13000	62700	5												
146.91	9.5	13000	62700	5												
119.86	12	13000	62700	5												
109.31	13	13000	62700	5												
94.60*	15	13000	62700	6												
83.47	17	13000	62700	6												
72.09	19	13000	62700	6												
66.99	21	13000	62700	6		R	390 kg		R	405 kg		R	405 kg		R	420 kg
61.09	23	13000	62700	6		RF	400 kg		RF	415 kg		RF	415 kg		RF	425 kg
52.87	26	13000	62700	6		RM	570 kg		RM	580 kg		RM	580 kg		RM	590 kg
46.65	30	13000	62700	6												
40.29	35	13000	62700	6												
35.64	39	13000	62700	6												
29.95	47	13000	62700	6												
24.19	58	11900	64700	6												
				2												
20.44	68	12000	64600	5												
18.04	78	10500	67000	5												
15.64	90	13000	62700	5												
13.91	101	12600	63400	5												
11.99	117	13000	60400	5		R	380 kg		R	390 kg		R	390 kg		R	405 kg
9.74	144	13000	54400	6		RF	385 kg		RF	400 kg		RF	400 kg		RF	415 kg
8.26	169	13000	49900	6		RM	550 kg		RM	570 kg		RM	570 kg		RM	580 kg
7.25	193	8670	58400	8												
5.89	238	8670	53200	8												
5.00	280	8670	49300	8												

	-	AM254/256	AM284/286	AM324/326
NEMA **+ kg**	-	- 5.0 kg	- 3.0 kg	- 2.0 kg

IEC	**R**	230	**NEMA**	**R**	235
	RF	231		**RF**	235
	RM	231		**RM**	235

R147, n_e = 1400 1/min									13000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM225		AM250		AM280	
				3						
163.31	8.6	13000	62700	5						
146.91	9.5	13000	62700	5						
119.86	12	13000	62700	5						
109.31	13	13000	62700	5						
94.60*	15	13000	62700	6						
83.47	17	13000	62700	6						
72.09	19	13000	62700	6						
66.99	21	13000	62700	6	R RF	425 kg 430 kg	R RF	455 kg 465 kg	R RF	455 kg 465 kg
61.09	23	13000	62700	6	RM	600 kg	RM	630 kg	RM	630 kg
52.87	26	13000	62700	6						
46.65	30	13000	62700	6						
40.29	35	13000	62700	6						
35.64	39	13000	62700	6						
29.95	47	13000	62700	6						
24.19	58	11900	64700	6						
				2						
20.44	68	12000	64600	5						
18.04	78	10500	67000	5						
15.64	90	13000	62700	5						
13.91	101	12600	63400	5						
11.99	117	13000	60400	5	R	410 kg	R	445 kg	R	445 kg
9.74	144	13000	54400	6	RF	420 kg	RF	450 kg	RF	450 kg
8.26	169	13000	49900	6	RM	590 kg	RM	620 kg	RM	620 kg
7.25	193	8670	58400	8						
5.89	238	8670	53200	8						
5.00	280	8670	49300	8						

		AM364/365	-	-
NEMA	**+ kg**	- 7.0 kg	-	-

10

IEC	**R**	230	**NEMA**	**R**	235
	RF	231		**RF**	235
	RM	231		**RM**	235

R167, n_e = 1400 1/min								18000 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM160**	**AM180**	**AM200**	
				3				
229.71	6.1	18000	120000	5				
186.93*	7.5	18000	120000	5				
153.07	9.1	18000	120000	5				
139.98	10	18000	120000	5				
121.81*	11	18000	120000	5				
107.49	13	18000	120000	5				
93.19	15	18000	120000	5				
82.91*	17	18000	120000	5				
73.70*	19	18000	120000	6	R 650 kg	R 650 kg	R 670 kg	
67.40	21	18000	120000	6	RF 660 kg	RF 660 kg	RF 680 kg	
58.65	24	18000	120000	6	RM 860 kg	RM 860 kg	RM 880 kg	
51.76	27	18000	120000	6				
44.87	31	18000	120000	6				
39.92	35	18000	120000	6				
34.41	41	18000	120000	6				
27.96	50	18000	120000	6				
23.71	59	18000	116500	6				
				2				
46.00	30	7000	120000	5				
37.74	37	9000	120000	5				
30.71	46	10000	120000	5	R 650 kg	R 650 kg	R 670 kg	
24.57	57	14000	120000	5	RF 650 kg	RF 650 kg	RF 670 kg	
21.85	64	13000	120000	5	RM 850 kg	RM 850 kg	RM 870 kg	
19.03	74	16000	111400	5				
16.98	82	15000	108900	5				
14.48	97	18000	93800	5	R 650 kg	R 650 kg	R 670 kg	
11.99	117	17000	88700	5	RF 650 kg	RF 650 kg	RF 670 kg	
10.24	137	17000	82500	5	RM 850 kg	RM 850 kg	RM 870 kg	

		AM254/256	AM284/286	AM324/326
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

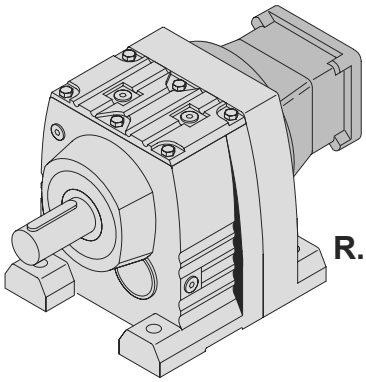
IEC	**R**	232	**NEMA**	**R**	235
	RF	233		**RF**	235
	RM	233		**RM**	235

R167, n_e = 1400 1/min								18000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM225	AM250	AM280	
				3				
229.71	6.1	18000	120000	5				
186.93*	7.5	18000	120000	5				
153.07	9.1	18000	120000	5				
139.98	10	18000	120000	5				
121.81*	11	18000	120000	5				
107.49	13	18000	120000	5				
93.19	15	18000	120000	5				
82.91*	17	18000	120000	5				
73.70*	19	18000	120000	6	R 680 kg RF 680 kg RM 880 kg	R 700 kg RF 710 kg RM 910 kg	R 700 kg RF 710 kg RM 910 kg	
67.40	21	18000	120000	6				
58.65	24	18000	120000	6				
51.76	27	18000	120000	6				
44.87	31	18000	120000	6				
39.92	35	18000	120000	6				
34.41	41	18000	120000	6				
27.96	50	18000	120000	6				
23.71	59	18000	116500	6				
				2				
46.00	30	7000	120000	5				
37.74	37	9000	120000	5				
30.71	46	10000	120000	5	R 670 kg RF 680 kg RM 870 kg	R 700 kg RF 700 kg RM 900 kg	R 700 kg RF 700 kg RM 900 kg	
24.57	57	14000	120000	5				
21.85	64	13000	120000	5				
19.03	74	16000	111400	5				
16.98	82	15000	108900	5				
14.48	97	18000	93800	5	R 670 kg RF 680 kg RM 870 kg	R 700 kg RF 700 kg RM 900 kg	R 700 kg RF 700 kg RM 900 kg	
11.99	117	17000	88700	5				
10.24	137	17000	82500	5				

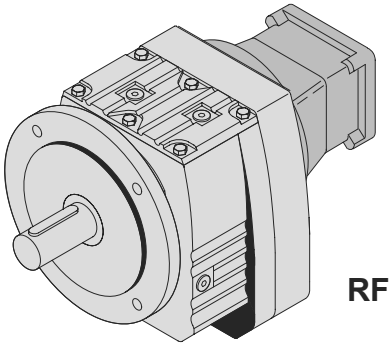
		AM364/365	**-**	**-**
NEMA	**+ kg**	- 7.0 kg	-	-

	IEC	**R** 232 **RF** 233 **RM** 233	**NEMA**	**R** 235 **RF** 235 **RM** 235

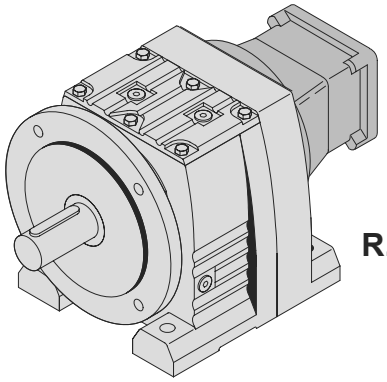
10.2 R.. AQ.. [Nm]



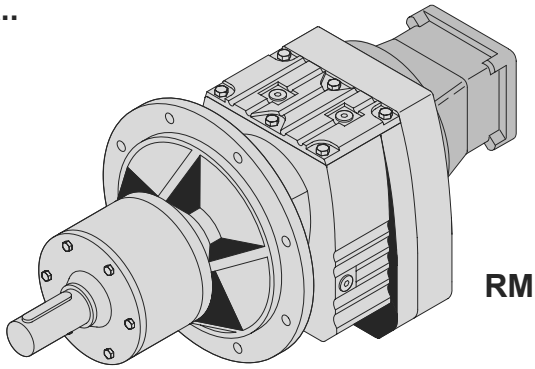
R.. AQ..



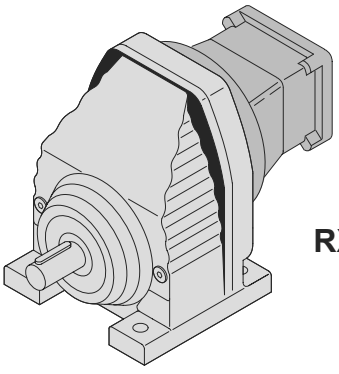
RF.. AQ..



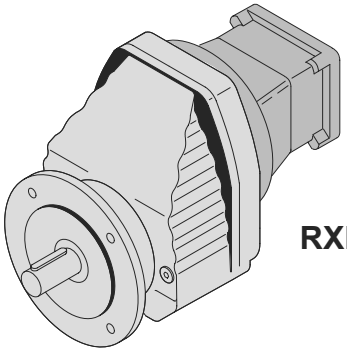
R..F AQ..



RM.. AQ..

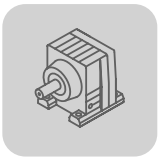


RX.. AQ..



RXF.. AQ..

50393AXX

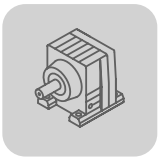


RX57, n_e = 1400 1/min												**69 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AQ..80/1-3**		**AQ..100/1-4**		**AQ..115/1-3**			
5.50*	255	39	3100	-								
5.07	276	36	3030	-								
4.35	322	68	2640	-								
3.79	369	69	2480	-								
3.55*	394	69	2420	-								
3.14	446	65	2320	-								
2.91	481	67	2170	-		RX 14 kg		RX 14 kg		RX 15 kg		
2.64*	530	69	1810	-		RXF 15 kg		RXF 16 kg		RXF 16 kg		
2.37	591	69	1500	-								
2.04	686	69	1070	-								
1.92*	729	69	890	-								
1.65	848	69	430	-								
1.48	946	68	112	-								
1.30	1075	63	132	-								

RX 236
RXF 236

RX57, n_e = 1400 1/min							69 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3
5.50*	255	39	3100	-			
5.07	276	36	3030	-			
4.35	322	68	2640	-			
3.79	369	69	2480	-			
3.55*	394	69	2420	-			
3.14	446	65	2320	-			
2.91	481	67	2170	-	RX 19 kg	RX 19 kg	RX 28 kg
2.64*	530	69	1810	-	RXF 21 kg	RXF 21 kg	RXF 30 kg
2.37	591	69	1500	-			
2.04	686	69	1070	-			
1.92*	729	69	890	-			
1.65	848	69	430	-			
1.48	946	68	112	-			
1.30	1075	63	132	-			

RX 236
RXF 236



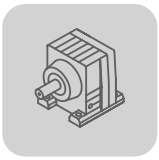
R..
R.. AQ.. [Nm]

RX67, n_e = 1400 1/min												134 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
6.07	231	43	4010	-									
5.18	270	75	3580	-									
4.53	309	82	3350	-									
4.30*	326	80	3300	-									
3.77	371	87	3090	-									
3.20*	438	100	2800	-									
2.89	484	106	2640	-		RX	16 kg		RX	17 kg		RX	17 kg
2.54	551	118	2000	-		RXF	20 kg		RXF	21 kg		RXF	21 kg
2.40*	583	123	1530	-									
2.04	686	134	230	-									
1.86	753	126	225	-									
1.61	870	114	245	-									
1.40*	1000	104	205	-									

RX 236
RXF 236

RX67, n_e = 1400 1/min												134 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..140/1-2			AQ..140/3			AQ..190/1-3		
6.07	231	43	4010	-									
5.18	270	75	3580	-									
4.53	309	82	3350	-									
4.30*	326	80	3300	-									
3.77	371	87	3090	-									
3.20*	438	100	2800	-									
2.89	484	106	2640	-		RX	22 kg		RX	22 kg		RX	31 kg
2.54	551	118	2000	-		RXF	26 kg		RXF	26 kg		RXF	35 kg
2.40*	583	123	1530	-									
2.04	686	134	230	-									
1.86	753	126	225	-									
1.61	870	114	245	-									
1.40*	1000	104	205	-									

RX 236
RXF 236



RX77, n_e = 1400 1/min								215 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..80/1-3	AQ..100/1-4	AQ..115/1-3
8.00*	175	57	6330	-			
7.47	187	53	6200	-			
6.41	218	103	5600	-			
5.63	249	110	5300	-			
5.35*	262	103	5240	-			
4.73	296	123	4900	-			
4.04*	347	143	4500	-			
3.70	378	153	4290	-	RX 26 kg	RX 26 kg	RX 27 kg
3.25*	431	182	3200	-	RXF 28 kg	RXF 29 kg	RXF 29 kg
3.08*	455	193	2560	-			
2.70	519	215	1110	-			
2.43	576	215	510	-			
2.13	657	200	435	-			
1.88*	745	187	335	-			
1.67	838	173	315	-			
1.42	986	155	315	-			

RX 237
RXF 237

RX77, n_e = 1400 1/min								215 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
8.00*	175	57	6330	-				
7.47	187	53	6200	-				
6.41	218	103	5600	-				
5.63	249	110	5300	-				
5.35*	262	103	5240	-				
4.73	296	123	4900	-				
4.04*	347	143	4500	-				
3.70	378	153	4290	-	RX 31 kg	RX 31 kg	RX 40 kg	
3.25*	431	182	3200	-	RXF 34 kg	RXF 34 kg	RXF 42 kg	
3.08*	455	193	2560	-				
2.70	519	215	1110	-				
2.43	576	215	510	-				
2.13	657	200	435	-				
1.88*	745	187	335	-				
1.67	838	173	315	-				
1.42	986	155	315	-				

RX 237
RXF 237

RX87, n_e = 1400 1/min								405 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	**AQ..100/1-4**	**AQ..115/1-3**	**AQ..140/1-2**
8.65	162	139	7890	-			
7.63	183	149	7490	-			
7.20*	194	140	7380	-			
6.45	217	192	6850	-			
5.56*	252	225	6320	-			
5.07	276	250	5980	-			
4.50*	311	290	5500	-			
3.78	370	305	5030	-	RX 42 kg RXF 47 kg	RX 43 kg RXF 48 kg	RX 48 kg RXF 53 kg
3.48	402	405	2730	-			
3.09	453	405	1950	-			
2.76*	507	405	1200	-			
2.48	565	405	470	-			
2.15	651	385	42	-			
1.93	725	355	185	-			
1.60*	875	315	74	-			
1.39	1005	290	74	-			

RX 237
RXF 237

RX87, n_e = 1400 1/min						405 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/3	AQ..190/1-3
8.65	162	139	7890	-		
7.63	183	149	7490	-		
7.20*	194	140	7380	-		
6.45	217	192	6850	-		
5.56*	252	225	6320	-		
5.07	276	250	5980	-		
4.50*	311	290	5500	-		
3.78	370	305	5030	-	RX 48 kg	RX 57 kg
3.48	402	405	2730	-	RXF 53 kg	RXF 62 kg
3.09	453	405	1950	-		
2.76*	507	405	1200	-		
2.48	565	405	470	-		
2.15	651	385	42	-		
1.93	725	355	185	-		
1.60*	875	315	74	-		
1.39	1005	290	74	-		

RX 237
RXF 237

RX97, n_e = 1400 1/min												595 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2		AQ..140/3		AQ..190/1-3			
8.23	170	225	9560	-								
7.16*	196	260	8950	-								
6.56	213	300	8500	-								
5.79	242	420	7630	-								
4.91	285	395	7220	-								
4.52	310	595	6180	-								
4.04	347	595	5380	-								
3.64*	385	595	4530	-		RX 73 kg		RX 73 kg		RX 81 kg		
3.30	424	595	3730	-		RXF 81 kg		RXF 81 kg		RXF 89 kg		
2.92	479	595	2810	-								
2.64	530	595	1980	-								
2.24*	625	595	495	-								
1.96	714	570	19	-								
1.64	854	505	51	-								
1.42	986	455	132	-								

RX 238
RXF 238

RX107, n_e = 1400 1/min												830 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2			AQ..140/3			AQ..190/1-3		
6.63*	211	460	9700	-									
5.61	250	455	9080	-									
5.19	270	695	7850	-									
4.65	301	695	7450	-									
4.20*	333	830	6420	-									
3.81	367	830	5550	-									
3.38	414	830	4490	-		RX	105 kg		RX	105 kg		RX	115 kg
3.07	456	830	3600	-		RXF	125 kg		RXF	125 kg		RXF	130 kg
2.64*	530	830	2170	-									
2.30	609	830	900	-									
1.95	718	765	555	-									
1.71	819	705	480	-									
1.44	972	645	315	-									

RX 238
RXF 238

R27, n_e = 1400 1/min												130 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
				3									
135.09	10	130	4230	-									
123.91	11	130	4230	-									
105.49	13	130	4230	-									
90.96	15	130	4230	-									
84.78	17	130	4230	-									
74.11	19	130	4230	-									
69.47	20	130	4180	-									
61.30	23	130	3980	-									
55.87	25	130	3840	-		R RF	7.6 kg 7.5 kg		R RF	8.3 kg 8.2 kg		R RF	8.8 kg 8.7 kg
48.17	29	130	3630	-									
44.90	31	130	3530	-									
39.25	36	130	3350	-									
36.79	38	130	3260	-									
32.47	43	130	3100	-									
28.78	49	130	2950	-									
24.47	57	130	2770	-									
				2									
28.37	49	130	2940	-									
26.09	54	130	2840	-									
22.32	63	130	2660	-									
19.35	72	130	2510	-									
18.08	77	130	2440	-									
15.63	90	130	2290	-									
13.28*	105	130	2140	-									
11.86	118	129	1990	-									
10.13	138	122	1890	-									
9.41	149	122	900	-		R RF	7.3 kg 7.2 kg		R RF	8.0 kg 8.0 kg		R RF	8.5 kg 8.4 kg
8.16	172	116	870	-									
7.63*	183	112	900	-									
6.59	212	106	880	-									
5.60*	250	99	880	-									
5.00*	280	95	860	-									
4.27	328	87	920	-									
4.00*	350	85	910	-									
3.37	415	79	900	-									

R 236
RF 236

R37, n_e = 1400 1/min												200 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
				3									
134.82	10	200	4950	8									
123.66	11	200	4950	8									
105.28	13	200	4950	8									
90.77	15	200	4950	8									
84.61	17	200	4950	8									
73.96	19	200	4950	8									
69.33	20	200	4950	8									
61.18	23	200	4950	8									
55.76	25	200	4950	9		R RF	13 kg 15 kg		R RF	14 kg 16 kg		R RF	15 kg 16 kg
48.08	29	200	4950	9									
44.81	31	200	4950	9									
39.17	36	200	4760	9									
36.72	38	200	4540	9									
32.40	43	200	4120	9									
28.73	49	200	3740	9									
24.42	57	200	3240	9									
				2									
28.32	49	200	3690	7									
26.03	54	185	3860	7									
22.27	63	200	2970	7									
19.31	73	200	2570	7									
18.05	78	200	2390	8									
15.60	90	200	2010	8									
13.25	106	190	1880	8									
11.83	118	183	1810	8									
10.11	138	170	1820	8		R RF	13 kg 15 kg		R RF	14 kg 15 kg		R RF	14 kg 16 kg
9.47	148	167	1760	8									
7.97	176	156	1720	8									
6.67	210	144	1000	12									
5.67	247	142	760	12									
5.06	277	135	790	13									
4.32	324	126	820	13									
4.05	346	122	850	13									
3.41	411	112	900	14									

R 236
RF 236

R47, n_e = 1400 1/min														300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3			
				3										
176.88	7.9	300	5420	7										
162.94	8.6	300	5420	7										
139.99	10	300	5420	7										
121.87	11	300	5420	7										
114.17	12	300	5420	7										
100.86	14	300	5420	7										
93.68	15	300	5420	7										
84.90	16	300	5420	7										
76.23	18	300	5420	7										
68.54	20	300	5420	8		R	18 kg		R	18 kg		R	19 kg	
64.21	22	300	5420	8		RF	18 kg		RF	18 kg		RF	19 kg	
56.73	25	300	5420	8										
52.69	27	300	5350	8										
47.75	29	300	5150	8										
42.87	33	300	4930	8										
36.93	38	300	4630	8										
34.73	40	300	4520	8										
29.88	47	300	4240	8										
26.70	52	300	4050	8										
23.59	59	300	3840	8										
				2										
33.79	41	240	4690	7										
31.12	45	220	4610	7										
26.74	52	300	4050	7										
23.28	60	300	3820	7										
21.81	64	300	3710	7										
19.27	73	295	3530	7										
17.89	78	290	3390	7										
16.22	86	275	3350	7										
14.56	96	265	3230	7										
12.54	112	250	3080	7										
11.79	119	245	3020	7		R	17 kg		R	18 kg		R	18 kg	
10.15	138	230	2890	7		RF	17 kg		RF	18 kg		RF	18 kg	
9.07	154	220	2780	8										
8.01	175	205	2690	8										
7.76*	180	163	2720	10										
6.96	201	159	2620	10										
6.00	233	156	2470	10										
5.64*	248	155	2410	10										
4.85	289	150	2280	10										
4.34	323	146	2190	11										
3.83	366	144	2090	11										

R 236
RF 236

R47, n_e = 1400 1/min								300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
				3				
176.88	7.9	300	5420	7				
162.94	8.6	300	5420	7				
139.99	10	300	5420	7				
121.87	11	300	5420	7				
114.17	12	300	5420	7				
100.86	14	300	5420	7				
93.68	15	300	5420	7				
84.90	16	300	5420	7				
76.23	18	300	5420	7				
68.54	20	300	5420	8	R 24 kg	R 24 kg	R 32 kg	
64.21	22	300	5420	8	RF 24 kg	RF 24 kg	RF 33 kg	
56.73	25	300	5420	8				
52.69	27	300	5350	8				
47.75	29	300	5150	8				
42.87	33	300	4930	8				
36.93	38	300	4630	8				
34.73	40	300	4520	8				
29.88	47	300	4240	8				
26.70	52	300	4050	8				
23.59	59	300	3840	8				
				2				
33.79	41	240	4690	7				
31.12	45	220	4610	7				
26.74	52	300	4050	7				
23.28	60	300	3820	7				
21.81	64	300	3710	7				
19.27	73	295	3530	7				
17.89	78	290	3390	7				
16.22	86	275	3350	7				
14.56	96	265	3230	7				
12.54	112	250	3080	7				
11.79	119	245	3020	7	R 23 kg	R 23 kg	R 32 kg	
10.15	138	230	2890	7	RF 23 kg	RF 23 kg	RF 32 kg	
9.07	154	220	2780	8				
8.01	175	205	2690	8				
7.76*	180	163	2720	10				
6.96	201	159	2620	10				
6.00	233	156	2470	10				
5.64*	248	155	2410	10				
4.85	289	150	2280	10				
4.34	323	146	2190	11				
3.83	366	144	2090	11				

R 236
RF 236

R57, n_e = 1400 1/min													450 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
				3									
186.89	7.5	450	7110	7									
172.17	8.1	450	7110	7									
147.92	9.5	450	7110	7									
128.77	11	450	7110	7									
120.63	12	450	7110	7									
106.58	13	450	7110	7									
98.99	14	450	7110	7									
89.71	16	450	7110	7									
80.55	17	450	7110	7									
69.23	20	450	7110	7		R	23 kg		R	24 kg		R	24 kg
64.85	22	450	6980	8		RF	26 kg		RF	27 kg		RF	27 kg
57.29	24	450	6630	8		RM	38 kg		RM	39 kg		RM	39 kg
53.22	26	450	6430	8									
48.23	29	450	6170	8									
43.30	32	450	5900	8									
37.30*	38	450	5530	8									
35.07	40	450	5390	8									
30.18	46	450	5050	8									
26.97	52	450	4800	8									
				2									
26.31	53	450	4750	6									
24.99*	56	450	4640	6									
21.93	64	450	4370	7									
18.60*	75	450	4050	7									
16.79	83	450	3860	7									
14.77*	95	435	3690	7									
13.95*	100	430	3610	7									
11.88	118	405	3430	7									
10.79	130	390	3330	7		R	22 kg		R	23 kg		R	23 kg
9.35	150	370	3180	7		RF	25 kg		RF	26 kg		RF	26 kg
9.06	155	375	2010	9		RM	37 kg		RM	38 kg		RM	38 kg
7.97	176	355	2020	9									
7.53	186	350	1950	9									
6.41	218	335	1770	9									
5.82	241	320	1820	10									
5.05	277	305	1730	10									
4.39	319	280	1900	10									

R 236
RF 236
RM 236

R57, n_e = 1400 1/min								450 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
				3				
186.89	7.5	450	7110	7				
172.17	8.1	450	7110	7				
147.92	9.5	450	7110	7				
128.77	11	450	7110	7				
120.63	12	450	7110	7				
106.58	13	450	7110	7				
98.99	14	450	7110	7				
89.71	16	450	7110	7				
80.55	17	450	7110	7				
69.23	20	450	7110	7	R 29 kg RF 32 kg	R 29 kg RF 32 kg	R 38 kg RF 41 kg	
64.85	22	450	6980	8	RM 44 kg	RM 44 kg	RM 53 kg	
57.29	24	450	6630	8				
53.22	26	450	6430	8				
48.23	29	450	6170	8				
43.30	32	450	5900	8				
37.30*	38	450	5530	8				
35.07	40	450	5390	8				
30.18	46	450	5050	8				
26.97	52	450	4800	8				
				2				
26.31	53	450	4750	6				
24.99*	56	450	4640	6				
21.93	64	450	4370	7				
18.60*	75	450	4050	7				
16.79	83	450	3860	7				
14.77*	95	435	3690	7				
13.95*	100	430	3610	7				
11.88	118	405	3430	7				
10.79	130	390	3330	7	R 28 kg RF 31 kg	R 28 kg RF 31 kg	R 37 kg RF 40 kg	
9.35	150	370	3180	7	RM 43 kg	RM 43 kg	RM 52 kg	
9.06	155	375	2010	9				
7.97	176	355	2020	9				
7.53	186	350	1950	9				
6.41	218	335	1770	9				
5.82	241	320	1820	10				
5.05	277	305	1730	10				
4.39	319	280	1900	10				

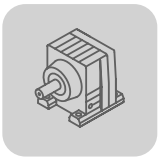
R 236
RF 236
RM 236

R67, n_e = 1400 1/min														600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3				AQ..100/1-4				AQ..115/1-3	
				3										
199.81	7.0	600	7560	6										
184.07	7.6	600	7560	6										
158.14	8.9	600	7560	6										
137.67	10	600	7560	6										
128.97	11	600	7560	6										
113.94	12	600	7560	6										
105.83	13	600	7560	6										
95.91	15	600	7560	6										
86.11	16	600	7560	6										
74.17	19	600	7560	7		R	30 kg			R	30 kg			R 31 kg
69.75	20	600	7560	7		RF	33 kg			RF	33 kg			RF 34 kg
61.26	23	600	7560	7		RM	49 kg			RM	49 kg			RM 50 kg
56.89	25	600	7560	7										
51.56	27	600	7560	7										
46.29	30	600	7560	7										
39.88*	35	580	7790	7										
37.50	37	570	7900	7										
32.27	43	540	8210	7										
28.83	49	520	8400	7										
				2										
28.13	50	540	8210	6										
26.72	52	540	8210	6										
23.44	60	560	8010	6										
19.89	70	600	7560	6										
17.95	78	590	7330	6										
15.79	89	560	7130	6										
14.91	94	550	6980	6										
12.70	110	520	6650	6										
11.54	121	500	6500	7		R	29 kg			R	29 kg			R 30 kg
10.00	140	470	6220	7		RF	32 kg			RF	32 kg			RF 33 kg
8.70*	161	440	5960	7		RM	48 kg			RM	48 kg			RM 49 kg
7.79	180	380	5830	8										
7.36*	190	370	5790	8										
6.27	223	330	5590	9										
5.70	246	310	5450	9										
4.93	284	290	5210	9										
4.29	326	270	5000	10										

R 236
RF 236
RM 236

R67, n_e = 1400 1/min								600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
				3				
199.81	7.0	600	7560	6				
184.07	7.6	600	7560	6				
158.14	8.9	600	7560	6				
137.67	10	600	7560	6				
128.97	11	600	7560	6				
113.94	12	600	7560	6				
105.83	13	600	7560	6				
95.91	15	600	7560	6				
86.11	16	600	7560	6				
74.17	19	600	7560	7	R 36 kg	R 36 kg	R 44 kg	
69.75	20	600	7560	7	RF 39 kg	RF 39 kg	RF 47 kg	
61.26	23	600	7560	7	RM 54 kg	RM 54 kg	RM 63 kg	
56.89	25	600	7560	7				
51.56	27	600	7560	7				
46.29	30	600	7560	7				
39.88*	35	580	7790	7				
37.50	37	570	7900	7				
32.27	43	540	8210	7				
28.83	49	520	8400	7				
				2				
28.13	50	540	8210	6				
26.72	52	540	8210	6				
23.44	60	560	8010	6				
19.89	70	600	7560	6				
17.95	78	590	7330	6				
15.79	89	560	7130	6				
14.91	94	550	6980	6				
12.70	110	520	6650	6				
11.54	121	500	6500	7	R 35 kg	R 35 kg	R 43 kg	
10.00	140	470	6220	7	RF 38 kg	RF 38 kg	RF 46 kg	
8.70*	161	440	5960	7	RM 54 kg	RM 54 kg	RM 62 kg	
7.79	180	380	5830	8				
7.36*	190	370	5790	8				
6.27	223	330	5590	9				
5.70	246	310	5450	9				
4.93	284	290	5210	9				
4.29	326	270	5000	10				

R 236
RF 236
RM 236



R77, n_e = 1400 1/min												**820 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AQ..80/1-3**			**AQ..100/1-4**			**AQ..115/1-3**	
					3							
195.24*	7.2	820	9920	6								
166.59	8.4	820	9920	6								
145.67	9.6	820	9920	6								
138.39	10	820	9920	6								
121.42	12	820	9920	6								
102.99	14	820	9920	6								
92.97	15	820	9920	6								
81.80	17	820	9920	6								
77.24	18	820	9920	7		R	36 kg		R	36 kg		R 37 kg
65.77	21	820	9920	7		RF	41 kg		RF	42 kg		RF 42 kg
57.68	24	820	9920	7		RM	66 kg		RM	67 kg		RM 67 kg
52.07	27	820	9920	7								
45.81	31	820	9920	7								
43.26	32	820	9920	7								
36.83	38	820	9920	7								
33.47	42	820	9920	7								
29.00	48	820	9920	7								
25.23	55	780	10100	7								
					2							
23.37	60	820	8870	6								
21.43	65	820	8250	6								
18.80	74	780	7980	6								
17.82*	79	780	7620	6								
15.60	90	740	7390	6								
14.05	100	720	7050	6								
12.33	114	690	6740	6		R	34 kg		R	35 kg		R 35 kg
10.88	129	660	6490	7		RF	40 kg		RF	41 kg		RF 41 kg
9.64	145	630	6300	7		RM	65 kg		RM	66 kg		RM 66 kg
8.59	163	630	4110	7								
7.74	181	610	3940	8								
6.79	206	580	3850	8								
5.99*	234	540	3990	8								
5.31*	264	510	3990	8								

R 237
RF 237
RM 237

R77, n_e = 1400 1/min								820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
				3				
195.24*	7.2	820	9920	6				
166.59	8.4	820	9920	6				
145.67	9.6	820	9920	6				
138.39	10	820	9920	6				
121.42	12	820	9920	6				
102.99	14	820	9920	6				
92.97	15	820	9920	6				
81.80	17	820	9920	6				
77.24	18	820	9920	7	R 41 kg	R 41 kg	R 50 kg	
65.77	21	820	9920	7	RF 47 kg	RF 47 kg	RF 56 kg	
57.68	24	820	9920	7	RM 72 kg	RM 72 kg	RM 81 kg	
52.07	27	820	9920	7				
45.81	31	820	9920	7				
43.26	32	820	9920	7				
36.83	38	820	9920	7				
33.47	42	820	9920	7				
29.00	48	820	9920	7				
25.23	55	780	10100	7				
				2				
23.37	60	820	8870	6				
21.43	65	820	8250	6				
18.80	74	780	7980	6				
17.82*	79	780	7620	6				
15.60	90	740	7390	6				
14.05	100	720	7050	6				
12.33	114	690	6740	6	R 40 kg	R 40 kg	R 49 kg	
10.88	129	660	6490	7	RF 46 kg	RF 46 kg	RF 54 kg	
9.64	145	630	6300	7	RM 71 kg	RM 71 kg	RM 79 kg	
8.59	163	630	4110	7				
7.74	181	610	3940	8				
6.79	206	580	3850	8				
5.99*	234	540	3990	8				
5.31*	264	510	3990	8				

R 237
RF 237
RM 237

R87, n_e = 1400 1/min												1550 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..100/1-4		AQ..115/1-3		AQ..140/1-2			
				3								
246.54	5.7	1550	16900	6								
216.54	6.5	1550	16900	6								
205.71	6.8	1550	16900	6								
181.77	7.7	1550	16900	6								
155.34	9.0	1550	16900	6								
142.41	9.8	1550	16900	6								
124.97	11	1550	16900	6								
118.43*	12	1550	16900	6								
103.65	14	1550	16900	6								
93.38	15	1550	16900	6		R 62 kg		R 63 kg		R 68 kg		
81.92	17	1550	16900	6		RF 69 kg		RF 70 kg		RF 75 kg		
72.57	19	1550	16900	6		RM 99 kg		RM 100 kg		RM 105 kg		
63.68*	22	1550	15800	6								
60.35*	23	1550	15200	6								
52.82	27	1550	13500	6								
47.58	29	1550	16900	7								
41.74	34	1550	16900	7								
36.84*	38	1550	16800	7								
32.66*	43	1550	16000	7								
27.88	50	1500	15100	7								
				2								
34.40*	41	1500	9480	5								
31.40	45	1550	7820	5								
27.84*	50	1550	15000	6								
23.40	60	1550	13900	6								
21.51	65	1500	13600	6								
19.10	73	1440	13000	6								
17.08*	82	1390	12600	6								
15.35	91	1340	12100	6		R 61 kg		R 61 kg		R 67 kg		
13.33	105	1280	11600	6		RF 68 kg		RF 69 kg		RF 74 kg		
11.93	117	1230	11200	6		RM 98 kg		RM 98 kg		RM 105 kg		
9.90*	141	1180	10400	6								
9.14*	153	1210	10500	6								
8.22	170	1160	10200	7								
7.13	196	1070	9780	7								
6.39	219	1020	9450	7								
5.30*	264	910	8980	7								

R 237
RF 237
RM 237

R87, n_e = 1400 1/min						1550 Nm		
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/3		AQ..190/1-3	
				3				
246.54	5.7	1550	16900	6				
216.54	6.5	1550	16900	6				
205.71	6.8	1550	16900	6				
181.77	7.7	1550	16900	6				
155.34	9.0	1550	16900	6				
142.41	9.8	1550	16900	6				
124.97	11	1550	16900	6				
118.43*	12	1550	16900	6				
103.65	14	1550	16900	6				
93.38	15	1550	16900	6	R	68 kg	R	77 kg
81.92	17	1550	16900	6	RF	75 kg	RF	84 kg
72.57	19	1550	16900	6	RM	105 kg	RM	115 kg
63.68*	22	1550	15800	6				
60.35*	23	1550	15200	6				
52.82	27	1550	13500	6				
47.58	29	1550	16900	7				
41.74	34	1550	16900	7				
36.84*	38	1550	16800	7				
32.66*	43	1550	16000	7				
27.88	50	1500	15100	7				
				2				
34.40*	41	1500	9480	5				
31.40	45	1550	7820	5				
27.84*	50	1550	15000	6				
23.40	60	1550	13900	6				
21.51	65	1500	13600	6				
19.10	73	1440	13000	6				
17.08*	82	1390	12600	6				
15.35	91	1340	12100	6	R	67 kg	R	76 kg
13.33	105	1280	11600	6	RF	74 kg	RF	83 kg
11.93	117	1230	11200	6	RM	105 kg	RM	110 kg
9.90*	141	1180	10400	6				
9.14*	153	1210	10500	6				
8.22	170	1160	10200	7				
7.13	196	1070	9780	7				
6.39	219	1020	9450	7				
5.30*	264	910	8980	7				

R 237
RF 237
RM 237

R97, n_e = 1400 1/min								3000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
				3				
289.74	4.8	3000	19800	6				
255.71	5.5	3000	19800	6				
241.25	5.8	3000	19800	6				
216.28	6.5	3000	19800	6				
186.30	7.5	3000	19800	6				
170.02	8.2	3000	19800	6				
150.78	9.3	3000	19800	6				
126.75	11	3000	19800	6				
116.48	12	3000	19800	6				
103.44	14	3000	19800	6				
92.48	15	3000	19800	6	R 110 kg	R 110 kg	R 120 kg	
83.15	17	3000	19800	6	RF 125 kg	RF 125 kg	RF 135 kg	
72.17	19	3000	18000	6	RM 180 kg	RM 180 kg	RM 185 kg	
65.21	21	3000	19800	6				
59.92	23	3000	19800	6				
53.21	26	3000	19800	6				
47.58	29	3000	19800	6				
42.78	33	3000	19800	6				
37.13	38	3000	18600	6				
33.25	42	2890	17900	6				
27.58	51	2670	16900	6				
				2				
32.05	44	2560	10600	5				
27.19	51	2560	8380	5				
25.03	56	2830	15900	5				
22.37	63	2720	15300	5				
20.14	70	2610	14800	5				
18.24	77	2500	14400	6				
16.17	87	2400	13800	6				
14.62	96	2300	13400	6	R 105 kg	R 105 kg	R 115 kg	
12.39	113	2190	12700	6	RF 125 kg	RF 125 kg	RF 130 kg	
10.83	129	2090	12100	6	RM 175 kg	RM 175 kg	RM 185 kg	
9.29	151	2030	12200	6				
8.39	167	2030	11700	6				
7.12	197	2000	10900	6				
6.21	225	1890	10500	6				
5.20	269	1780	9850	6				
4.50*	311	1630	9500	6				

R 238
RF 238
RM 238

R107, n_e = 1400 1/min												4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2			AQ..140/3			AQ..190/1-3		
				3									
251.15	5.6	4300	29500	7									
229.95	6.1	4300	29500	7									
203.16	6.9	4300	29500	7									
172.34	8.1	4300	29500	7									
158.68	8.8	4300	29500	7									
141.83	9.9	4300	29500	7									
127.68	11	4300	29500	7									
115.63	12	4300	29500	7									
102.53	14	4300	29500	7									
92.70	15	4300	29500	7		R	170 kg		R	170 kg		R	175 kg
78.57	18	4300	29500	7		RF	175 kg		RF	175 kg		RF	185 kg
72.88	19	4300	29500	7		RM	260 kg		RM	260 kg		RM	270 kg
65.60*	21	4300	29200	7									
59.41	24	4300	28000	7									
52.68	27	4300	26600	7									
47.63	29	4300	25500	7									
40.37*	35	4300	23800	7									
35.26	40	4300	22400	7									
29.49	47	4300	20700	7									
				2									
30.77	45	4300	21100	7									
27.58	51	4300	20100	7									
24.90*	56	4300	19200	7									
22.62	62	4300	18300	7									
20.07	70	4300	17300	7									
18.21	77	4300	16600	7									
15.65	89	4300	15400	7									
13.66	102	4300	14400	7		R	160 kg		R	160 kg		R	170 kg
11.59	121	4300	13300	7		RF	165 kg		RF	165 kg		RF	175 kg
10.13	138	4300	12400	7		RM	255 kg		RM	255 kg		RM	265 kg
8.56	164	4300	11300	7									
7.86	178	2970	13800	9									
6.66	210	2970	12800	9									
5.82	241	2970	12100	9									
4.92	285	2900	11300	9									

R 238
RF 238
RM 238

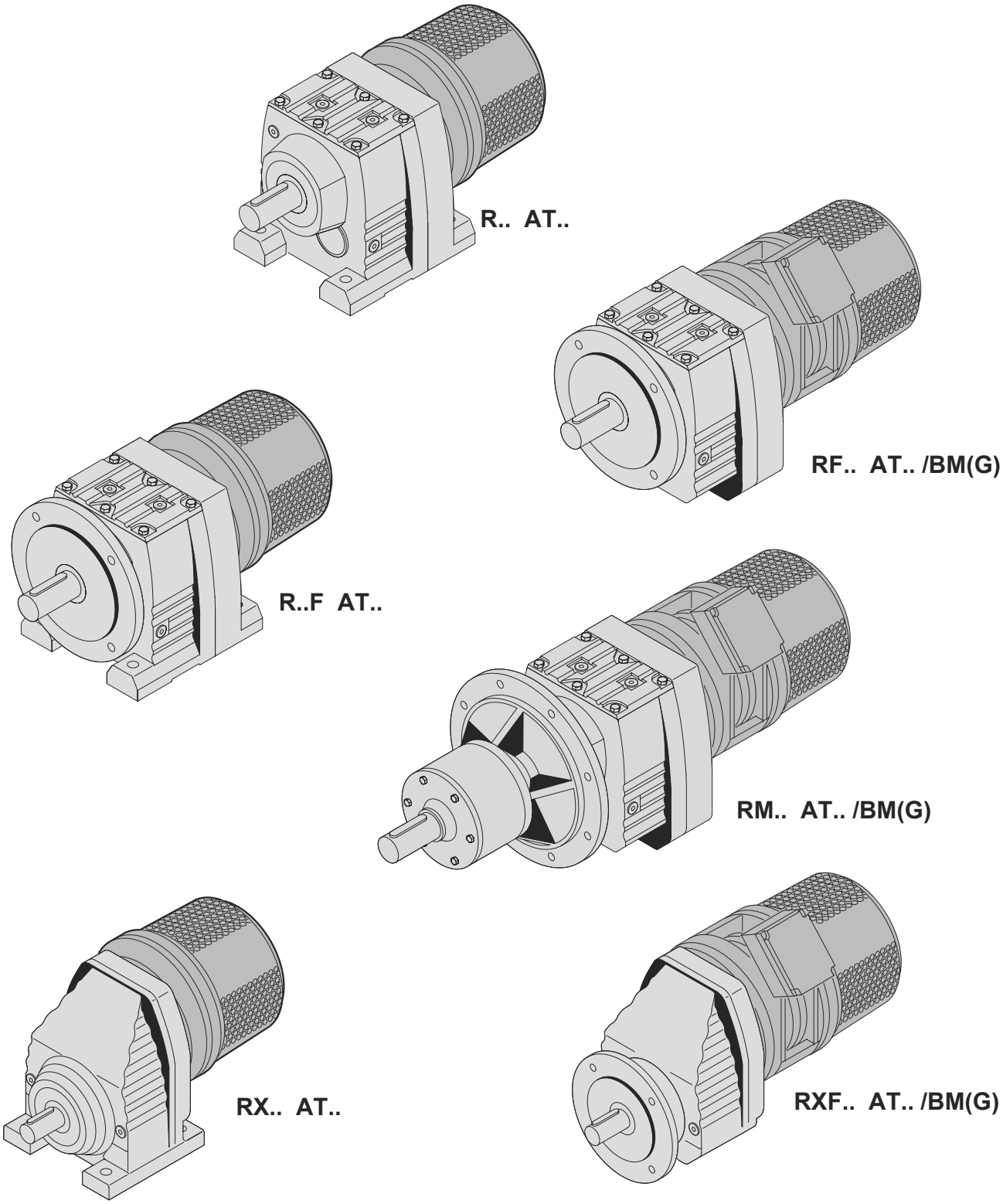
R137, n_e = 1400 1/min						8000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..190/1-3	
				3		
222.60*	6.3	8000	53400	6		
188.45	7.4	8000	53400	6		
174.40*	8.0	8000	53400	6		
156.31	9.0	8000	53400	6		
141.12*	9.9	8000	53400	6		
128.18	11	8000	53400	6		
113.72	12	8000	53400	6		
103.20*	14	8000	53400	6		
88.70*	16	8000	53400	6		R 260 kg
80.91*	17	8000	53400	6		RF 285 kg
73.49	19	8000	53400	6		RM 395 kg
65.20	21	8000	53400	6		
59.17*	24	8000	53400	6		
50.86*	28	8000	53400	6		
44.39	32	8000	53400	6		
37.65	37	8000	53400	6		
32.91	43	8000	53400	6		
27.83	50	7680	54100	7		
				2		
29.57*	47	7780	53900	6		
24.12	58	8000	49400	6		
22.00*	64	8000	47100	6		
19.04*	74	8000	43500	6		
16.80*	83	8000	40600	6		
14.51	96	8000	37300	6		R 250 kg
12.83	109	8000	34700	6		RF 275 kg
10.79	130	8000	31100	6		RM 385 kg
8.71	161	7840	27600	6		
7.59	184	5110	39000	8		
6.38	219	5110	35900	8		
5.15	272	4600	34500	8		

R 238
RF 238
RM 238

R147, n_e = 1400 1/min					13000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..190/1-3
				3	
163.31	8.6	13000	62700	5	
146.91	9.5	13000	62700	5	
119.86	12	13000	62700	5	
109.31	13	13000	62700	5	
94.60*	15	13000	62700	6	
83.47	17	13000	62700	6	
72.09	19	13000	62700	6	
66.99	21	13000	62700	6	R 395 kg RF 400 kg RM 570 kg
61.09	23	13000	62700	6	
52.87	26	13000	62700	6	
46.65	30	13000	62700	6	
40.29	35	13000	62700	6	
35.64	39	13000	62700	6	
29.95	47	13000	62700	6	
24.19	58	11900	64700	6	
				2	
20.44	68	12000	64600	5	
18.04	78	10500	67000	5	
15.64	90	13000	62700	5	
13.91	101	12600	63400	5	
11.99	117	13000	60400	5	R 380 kg RF 390 kg RM 560 kg
9.74	144	13000	54400	6	
8.26	169	13000	49900	6	
7.25	193	8670	58400	8	
5.89	238	8670	53200	8	
5.00	280	8670	49300	8	

R 238
RF 238
RM 238

10.3 R.. AT..



n_e = 1400 1/min:

		P_m [kW]				S_n [%]	
R67	DT71D4	0.37	AT311	T11	0.42	12	241 245
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT321	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT322	T21D	1.53	11	
	DV112M4	4			1.6	12	
R77	DT71D4	0.37	AT311	T11	0.42	12	241 245
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
R87	DT90S4	1.1	AT312	T11D	0.72	15	242 246
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
R97	DT90S4	1.1	AT312	T11D	0.72	15	242 246
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	

n_e = 1400 1/min:

		P_m [kW]				S_n [%]	
R107	DV100M4	2.2	AT421	T21	0.9	13	243 247
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	
R137	DV100M4	2.2	AT421	T21	0.9	13	243 247
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	
R147	DV132M4	7.5	AT541	T41	2.4	8	244 248
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	
R167	DV160M4	11	AT541	T41	2.5	13	244 248
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	

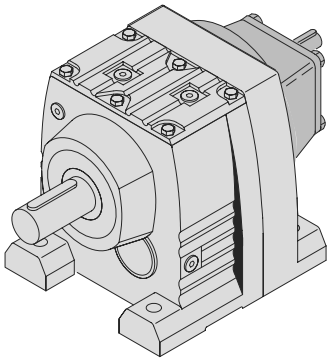
n_e = 2800 1/min:

		P_m [kW]				S_n [%]	
R67	DT71D2	0.55	AT311	T11	0.19	3	230 234
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
R77	DT71D2	0.55	AT311	T11	0.19	3	230 234
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
R87	DT90S2	1.5	AT311	T11	0.29	8.5	231 235
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
R97	DT90S2	1.5	AT311	T11	0.29	8.5	231 235
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	

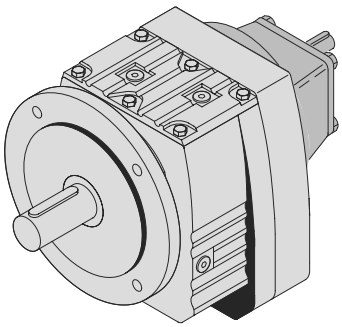
n_e = 2800 1/min:

		P_m [kW]				S_n [%]	
R107	DV100M2	3	AT311	T11	0.4	12	232 236
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	
R137	DV132S2	5.5	AT421	T21	0.4	8	232 236
	DT132M2	7.5			0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	
R147	DT132M2	7.5	AT421	T21	0.6	8	233 237
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	
R167	DV160L2	15	AT522	T21D	1.15	7.5	233 237
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	

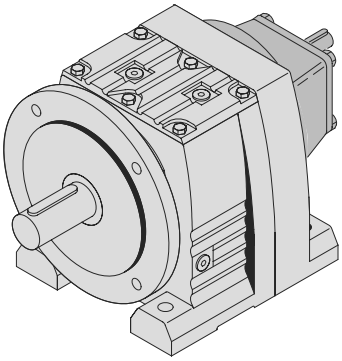
10.4 R.. AD.. [Nm]



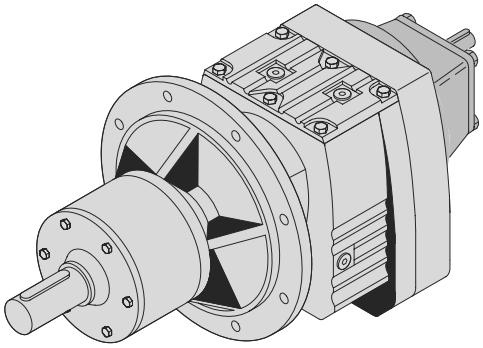
R.. AD..



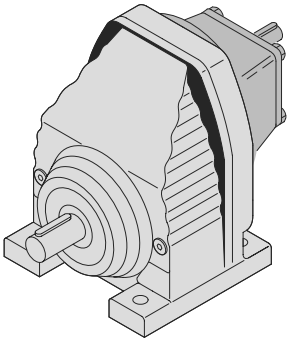
RF.. AD..



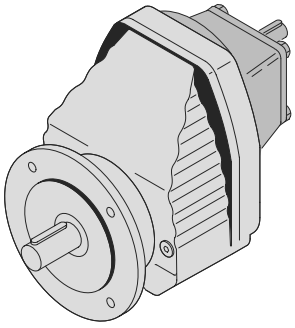
R..F AD..



RM.. AD..



RX.. AD..



RXF.. AD..

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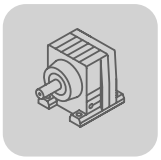


RX57 AD... , n_e = 1400 1/min — 69 Nm

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	
5.50*	255	37	1.0	3120	505	-	-	**RX**	**57**	**AD2**		13	249
5.07	276	34	1.0	3050	635	-	-	**RXF**	**57**	**AD2**		15	249
4.35	322	61	2.1	2690	1110	-	-						
3.79	369	58	2.3	2560	1120	-	-						
3.55*	394	55	2.3	2520	1150	-	-	**RX**	**57**	**AD2**		13	249
3.14	446	65	3.1	2320	980	-	-	**RXF**	**57**	**AD2**		15	249
2.91	481	49	2.5	2370	1190	-	-						
2.64*	530	69	4.0	1810	870	-	-						
2.37	591	69	4.4	1500	1860	-	-						
2.04	686	69	5.1	1070	1810	-	-						
1.92*	729	69	5.4	890	1780	-	-	**RX**	**57**	**AD3**		16	249
1.65	847	69	6.3	430	1710	-	-	**RXF**	**57**	**AD3**		18	249
1.48	948	68	7.0	112	1660	-	-						
1.30	1075	63	7.3	132	1700	-	-						

RX67 AD... , n_e = 1400 1/min — 134 Nm

6.07	231	41	1.1	4020	625	-	-	**RX**	**67**	**AD2**		15	249
5.18	270	75	2.2	3580	1090	-	-	**RXF**	**67**	**AD2**		19	249
4.53	309	71	2.4	3420	1110	-	-						
4.30*	326	69	2.4	3370	1130	-	-	**RX**	**67**	**AD2**		15	249
3.77	371	87	3.5	3090	880	-	-	**RXF**	**67**	**AD2**		19	249
3.20*	438	100	4.7	2800	1700	-	-						
2.89	485	105	5.5	2640	1600	-	-						
2.54	551	118	7.0	2000	1400	-	-						
2.40*	583	123	7.7	1530	1300	-	-	**RX**	**67**	**AD3**		19	249
2.04	685	114	8.3	1260	1310	-	-	**RXF**	**67**	**AD3**		23	249
1.86	754	108	8.7	1180	1330	-	-						
1.61	870	99	9.2	1080	1370	-	-						
1.40*	1000	90	9.6	1030	1420	-	-						

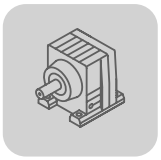
RX77 AD... , n_e = 1400 1/min — 215 Nm

8.00*	175	54	1.1	6350	535	-	-						
7.47	188	50	1.0	6220	665	-	-						
6.41	218	101	2.4	5610	1050	-	-	**RX**	**77**	**AD2**		25	249
5.63	249	107	2.9	5320	970	-	-	**RXF**	**77**	**AD2**		27	249
5.35*	262	101	2.9	5250	1020	-	-						
4.73	296	123	4.0	4900	1800	-	-						
4.04*	347	143	5.3	4500	1570	-	-	**RX**	**77**	**AD3**		29	249
3.70	378	143	5.8	4350	1550	-	-	**RXF**	**77**	**AD3**		31	249
3.25*	431	182	8.5	3200	3160	-	-						
3.08*	455	193	9.5	2560	3040	-	-						
2.70	519	215	12.1	1110	2770	-	-						
2.43	576	215	13.4	510	2680	-	-	**RX**	**77**	**AD4**		35	249
2.13	657	200	14.2	435	2730	-	-	**RXF**	**77**	**AD4**		37	249
1.88*	745	187	15.0	335	2770	-	-						
1.67	840	173	15.7	315	2820	-	-						
1.42	984	155	16.3	315	2890	-	-						

RX87 AD... , n_e = 1400 1/min — 405 Nm

8.65	162	139	2.5	7890	1070	-	-						
7.63	183	145	2.9	7510	1020	-	-	**RX**	**87**	**AD2**		41	249
7.20*	194	136	2.9	7390	1060	-	-	**RXF**	**87**	**AD2**		46	249
6.45	217	192	4.5	6850	1640	-	-						
5.56*	252	225	6.1	6320	1410	-	-	**RX**	**87**	**AD3**		45	249
5.07	276	215	6.4	6140	1440	-	-	**RXF**	**87**	**AD3**		50	249
4.50*	311	290	9.7	5500	3010	-	-	**RX**	**87**	**AD4**		52	249
3.78	370	305	12.2	5030	2840	-	-	**RXF**	**87**	**AD4**		57	249

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
RX87 AD... , n_e = 1400 1/min													**405 Nm**
3.48	403	405	17.6	2730	5330	-	-						
3.09	454	405	20	1950	5240	-	-						
2.76*	507	405	22	1200	5150	-	-						
2.48	564	405	25	470	5050	-	-	**RX**	**87**	**AD5**		66	249
2.15	650	385	27	42	5040	-	-	**RXF**	**87**	**AD5**		71	249
1.93	726	355	28	185	5140	-	-						
1.60*	875	315	29	74	5230	-	-						
1.39	1005	290	31	74	5300	-	-						
RX97 AD... , n_e = 1400 1/min													**595 Nm**
8.23	170	225	4.2	9560	1710	-	-						
7.16*	196	260	5.5	8950	1520	-	-	**RX**	**97**	**AD3**		70	249
6.56	214	300	6.9	8500	1250	-	-	**RXF**	**97**	**AD3**		78	249
5.79	242	420	11.0	7630	2770	-	-	**RX**	**97**	**AD4**		75	249
4.91	285	395	12.2	7220	2820	-	-	**RXF**	**97**	**AD4**		84	249
4.52	309	595	20	6180	4970	-	-						
4.04	346	595	22	5380	4890	-	-						
3.64*	385	595	25	4530	4810	-	-						
3.30	425	595	27	3730	4720	-	-						
2.92	479	595	30	2810	4620	-	-	**RX**	**97**	**AD5**		92	249
2.64	530	595	34	1980	4510	-	-	**RXF**	**97**	**AD5**		100	249
2.24*	625	595	40	495	4280	-	-						
1.96	716	570	44	19	4260	-	-						
1.64	856	505	46	51	4390	-	-						
1.42	988	455	48	132	7450	-	-	**RX**	**97**	**AD6**		105	249
								RXF	**97**	**AD6**		115	249
RX107 AD... , n_e = 1400 1/min													**830 Nm**
6.63*	211	460	10.5	9700	2710	-	-	**RX**	**107**	**AD4**		110	249
5.61	250	455	12.3	9080	2660	-	-	**RXF**	**107**	**AD4**		125	249
5.19	270	695	20	7850	4720	-	-						
4.65	301	695	23	7450	4650	-	-						
4.20*	333	830	30	6420	3780	-	-	**RX**	**107**	**AD5**		125	249
3.81	367	830	33	5550	3590	-	-	**RXF**	**107**	**AD5**		140	249
3.38	414	830	37	4490	3340	-	-						
3.07	456	830	40	3600	6550	-	-						
2.64*	530	830	47	2170	6340	-	-						
2.30	608	830	54	900	6140	-	-	**RX**	**107**	**AD6**		135	249
1.95	716	730	56	1260	6400	-	-	**RXF**	**107**	**AD6**		155	249
1.71	820	640	56	1840	6690	-	-						
1.44	969	540	56	2610	7070	-	-						
R27 AD... , n_e = 1400 1/min													**130 Nm**
135.09	10	130	0.18	4230	750	-	-						
123.91	11	130	0.19	4230	745	-	-						
105.49	13	130	0.22	4230	745	-	-	**R**	**27**	**AD1**		6.0	249
90.96	15	130	0.25	4230	740	-	-	**RF**	**27**	**AD1**		5.9	249
84.78	17	130	0.27	4230	740	-	-						
74.11	19	130	0.30	4230	735	-	-						
69.47	20	130	0.32	4180	730	-	-						
61.30	23	130	0.36	3980	720	-	-						
55.87	25	130	0.39	3840	560	-	-						
48.17	29	130	0.44	3630	540	-	-						
44.90	31	130	0.48	3530	530	-	-	**R**	**27**	**AD1**		6.0	249
39.25	36	130	0.54	3350	510	-	-	**RF**	**27**	**AD1**		5.9	249
36.79	38	130	0.58	3260	500	-	-						
32.47	43	130	0.65	3100	480	-	-						
28.78	49	130	0.73	2950	450	-	-						
24.47	57	130	0.86	2770	420	-	-						



i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	📖
R27 AD... , n_e = 1400 1/min												**130 Nm**
28.37	49	130	0.74	2940	1070	-	-					
26.09	54	130	0.79	2840	1050	-	-					
22.32	63	130	0.93	2660	1000	-	-					
19.35	72	130	1.1	2510	1550	-	-					
18.08	77	130	1.1	2440	1540	-	-					
15.63	90	130	1.3	2290	1520	-	-					
13.28*	105	130	1.5	2140	1500	-	-					
11.86	118	129	1.7	1990	1490	-	-					
10.13	138	122	1.9	1890	1490	-	-	**R**	**27**	**AD2**	6.9	249
9.41	149	122	2.0	900	1140	-	-	**RF**	**27**	**AD2**	6.8	249
8.16	172	116	2.2	870	1150	-	-					
7.63*	184	112	2.3	900	1160	-	-					
6.59	212	106	2.5	880	1160	-	-					
5.60*	250	99	2.7	880	1180	-	-					
5.00*	280	95	2.9	860	1180	-	-					
4.27	328	87	3.1	920	1200	-	-					
4.00*	350	85	3.3	910	1200	-	-					
3.37	415	79	3.6	900	1190	-	-					
R37 AD... , n_e = 1400 1/min												**200 Nm**
134.82	10	200	0.26	4950	670	8	-					
123.66	11	200	0.28	4950	660	8	-					
105.28	13	200	0.32	4950	650	8	-	**R**	**37**	**AD1**	12	249
90.77	15	200	0.37	4950	635	8	-	**RF**	**37**	**AD1**	13	249
84.61	17	200	0.39	4950	625	8	-					
73.96	19	200	0.45	4950	610	8	-					
69.33	20	200	0.48	4950	600	8	-	**R**	**37**	**AD1**	12	249
61.18	23	200	0.54	4950	585	8	-	**RF**	**37**	**AD1**	13	249
55.76	25	200	0.58	4950	340	9	-					
48.08	29	200	0.69	4950	1500	9	-					
44.81	31	200	0.73	4950	1480	9	-					
39.17	36	200	0.83	4760	1440	9	-					
36.72	38	200	0.89	4540	1420	9	-	**R**	**37**	**AD2**	13	249
32.40	43	200	0.99	4120	1380	9	-	**RF**	**37**	**AD2**	14	249
28.73	49	200	1.1	3740	1640	9	-					
24.42	57	200	1.3	3240	1630	9	-					
28.32	49	189	1.1	4000	450	7	-					
26.03	54	173	1.0	4180	585	7	-					
22.27	63	200	1.4	2970	1370	7	-					
19.31	73	200	1.6	2570	1340	7	-					
18.05	78	200	1.7	2390	1330	8	-					
15.60	90	200	2.0	2010	1300	8	-					
13.25	106	190	2.2	1880	1310	8	-					
11.83	118	183	2.4	1810	1310	8	-					
10.11	139	170	2.6	1820	1310	8	-	**R**	**37**	**AD2**	13	249
9.47	148	167	2.7	1760	1310	8	-	**RF**	**37**	**AD2**	14	249
7.97	176	156	3.0	1720	1300	8	-					
6.67	210	144	3.3	1000	910	12	-					
5.67	247	142	3.8	760	880	12	-					
5.06	277	135	4.1	790	890	13	-					
4.32	324	126	4.5	820	900	13	-					
4.05	346	121	4.6	880	910	13	-					
3.41	411	107	4.8	1070	950	14	-					
R47 AD... , n_e = 1400 1/min												**300 Nm**
176.88	7.9	300	0.30	5420	1780	7	-					
162.94	8.6	300	0.33	5420	1780	7	-	**R**	**47**	**AD2**	17	249
139.99	10	300	0.37	5420	1780	7	-	**RF**	**47**	**AD2**	17	249
121.87	11	300	0.42	5420	1770	7	-					

R47 AD... , n_e = 1400 1/min												300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	📖
114.17	12	300	0.45	5420	1770	7	-					
93.68	15	300	0.54	5420	1760	7	-					
84.90	16	300	0.60	5420	1760	7	-					
76.23	18	300	0.66	5420	1750	7	-					
68.54	20	300	0.72	5420	1440	8	-					
64.21	22	300	0.77	5420	1430	8	-					
56.73	25	300	0.86	5420	1400	8	-					
52.69	27	300	0.93	5350	1370	8	-	**R**	**47**	**AD2**	17	249
47.75	29	300	1.0	5150	1350	8	-	**RF**	**47**	**AD2**	17	249
42.87	33	300	1.1	4930	1640	8	-					
36.93	38	300	1.3	4630	1620	8	-					
34.73	40	300	1.4	4520	1610	8	-					
29.88	47	300	1.6	4240	1600	8	-					
26.70	52	300	1.8	4050	1580	8	-					
23.59	59	300	2.0	3840	1560	8	-					
33.79	41	225	1.0	4740	510	7	-					
31.12	45	205	1.0	4660	650	7	-					
26.74	52	300	1.7	4050	1270	7	-					
23.28	60	300	2.0	3820	1250	7	-					
21.81	64	300	2.1	3710	1240	7	-					
19.27	73	295	2.4	3530	1220	7	-					
17.89	78	290	2.5	3390	1210	7	-					
16.22	86	275	2.6	3350	1240	7	-					
14.56	96	265	2.8	3230	1240	7	-					
12.54	112	250	3.1	3080	1240	7	-	**R**	**47**	**AD2**	17	249
11.79	119	245	3.2	3020	1240	7	-	**RF**	**47**	**AD2**	17	249
10.15	138	230	3.5	2890	1240	7	-					
9.07	154	220	3.7	2780	1230	8	-					
8.01	175	205	3.9	2690	1250	8	-					
7.76*	181	163	3.2	2720	1080	10	-					
6.96	201	159	3.5	2620	1070	10	-					
6.00	233	156	4.0	2470	1040	10	-					
5.64*	248	155	4.2	2410	1020	10	-					
4.85	288	150	4.7	2280	990	10	-					
4.34	323	146	5.1	2190	970	11	-					
3.83	365	144	5.8	2090	1970	11	-	**R**	**47**	**AD3**	20	249
								RF	**47**	**AD3**	20	249

R57 AD... , n_e = 1400 1/min												450 Nm
186.89	7.5	450	0.42	7110	1690	7	-					
172.17	8.1	450	0.45	7110	1680	7	-					
147.92	9.5	450	0.51	7110	1660	7	-					
128.77	11	450	0.58	7110	1640	7	-					
120.63	12	450	0.62	7110	1630	7	-					
106.58	13	450	0.70	7110	1610	7	-					
98.99	14	450	0.75	7110	1580	7	-					
89.71	16	450	0.83	7110	1570	7	-					
80.55	17	450	0.91	7110	1540	7	-					
69.23	20	450	1.0	7110	1010	7	-	**R**	**57**	**AD2**	22	249
64.85	22	450	1.1	6980	1560	8	-	**RF**	**57**	**AD2**	26	249
57.29	24	450	1.3	6630	1550	8	-					
53.22	26	450	1.3	6430	1540	8	-					
48.23	29	450	1.5	6170	1530	8	-					
43.30	32	450	1.6	5900	1520	8	-					
37.30*	38	450	1.9	5530	1500	8	-					
35.07	40	450	2.0	5390	1490	8	-					
30.18	46	450	2.4	5050	1460	8	-					
26.97	52	450	2.6	4800	1430	8	-					
26.31	53	420	2.5	4860	1100	6	-					
24.99*	56	410	2.5	4780	1120	6	-					
21.93	64	450	3.2	4370	990	7	-	**R**	**57**	**AD2**	21	249
18.60*	75	450	3.7	4050	950	7	-	**RF**	**57**	**AD2**	25	249
16.79	83	450	4.1	3860	920	7	-					
14.77*	95	435	4.5	3690	920	7	-					

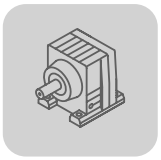
R57 AD... , n_e = 1400 1/min — 450 Nm

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	
13.95*	100	430	4.8	3610	1940	7	-					
11.88	118	405	5.3	3430	1930	7	-					
10.79	130	390	5.6	3330	1930	7	-					
9.35	150	370	6.1	3180	1920	7	-					
9.06	155	335	5.6	2900	1580	9	-					
7.97	176	355	6.8	2020	1450	9	-	**R**	**57**	**AD3**	25	249
7.53	186	350	7.1	1950	1450	9	-	**RF**	**57**	**AD3**	28	249
6.41	218	335	8.0	1770	1410	9	-					
5.82	240	320	8.4	1820	1420	10	-					
5.05	277	305	9.2	1730	1400	10	-					
4.39	319	280	9.7	1900	1430	10	-					

R67 AD... , n_e = 1400 1/min — 600 Nm

199.81	7.0	600	0.51	7560	1510	6	-					
184.07	7.6	600	0.54	7560	1490	6	-					
158.14	8.8	600	0.63	7560	1470	6	-					
137.67	10	600	0.72	7560	1440	6	-					
128.97	11	600	0.77	7560	1430	6	-					
113.94	12	600	0.86	7560	1400	6	-					
105.83	13	600	0.92	7560	1360	6	-					
95.91	15	600	1.0	7560	1350	6	-					
86.11	16	600	1.1	7560	1630	6	-					
74.17	19	600	1.3	7560	1620	7	-	**R**	**67**	**AD2**	29	249
69.75	20	600	1.4	7560	1610	7	-	**RF**	**67**	**AD2**	32	249
61.26	23	600	1.5	7560	1450	7	-					
56.89	25	600	1.7	7560	1430	7	-					
51.56	27	600	1.8	7560	1420	7	-					
46.29	30	600	2.0	7560	1400	7	-					
39.88*	35	580	2.3	7790	1390	7	-					
37.50	37	570	2.4	7900	1390	7	-					
32.27	43	540	2.6	8210	1390	7	-					
28.83	49	520	2.8	8400	1380	7	-					
28.13	50	410	2.2	9270	1140	6	-					
26.72	52	400	2.3	9340	1160	6	-	**R**	**67**	**AD2**	28	249
23.44	60	560	3.6	8010	800	6	-	**RF**	**67**	**AD2**	31	249
19.89	70	600	4.7	7560	1700	6	-					
17.95	78	590	5.1	7330	1690	6	-					
15.79	89	560	5.5	7130	1710	6	-					
14.91	94	550	5.7	6980	1710	6	-					
12.70	110	520	6.3	6650	1700	6	-					
11.54	121	500	6.6	6500	1700	7	-					
10.00	140	470	7.2	6220	1700	7	-	**R**	**67**	**AD3**	31	249
8.70*	161	440	7.7	5960	1700	7	-	**RF**	**67**	**AD3**	34	249
7.79	180	380	7.4	5830	1270	8	-					
7.36*	190	370	7.7	5790	1280	8	-					
6.27	223	330	8.0	5590	1350	9	-					
5.70	246	310	8.3	5450	1390	9	-					
4.93	284	290	9.0	5210	1390	9	-					
4.29	326	270	9.6	5000	1400	10	-					

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
R77 AD... , n_e = 1400 1/min													**820 Nm**
195.24*	7.2	820	0.69	9920	1310	6	-						
166.59	8.4	820	0.80	9920	1270	6	-						
145.67	9.6	820	0.92	9920	1240	6	-						
138.39	10	820	0.96	9920	1240	6	-						
121.42	12	820	1.1	9920	1620	6	-						
102.99	14	820	1.3	9920	1610	6	-						
92.97	15	820	1.4	9920	1600	6	-						
81.80	17	820	1.6	9920	1590	6	-						
77.24	18	820	1.7	9920	1580	7	-	**R**	**77**	**AD2**		35	249
65.77	21	820	2.0	9920	1560	7	-	**RF**	**77**	**AD2**		41	249
57.68	24	820	2.2	9920	1380	7	-						
52.07	27	820	2.5	9920	1360	7	-						
45.81	31	820	2.8	9920	1350	7	-						
43.26	32	820	3.0	9920	1330	7	-						
36.83	38	820	3.5	9920	1290	7	-						
33.47	42	820	3.8	9920	1260	7	-						
29.00	48	820	4.4	9920	1220	7	-						
25.23	55	780	4.8	10100	1210	7	-						
23.37	60	820	5.4	8870	1620	6	-						
21.43	65	820	5.8	8250	1600	6	-						
18.80	74	780	6.3	7980	1620	6	-						
17.82*	79	780	6.7	7620	1600	6	-						
15.60	90	740	7.2	7390	1610	6	-	**R**	**77**	**AD3**		37	249
14.05	100	720	7.8	7050	1580	6	-	**RF**	**77**	**AD3**		43	249
12.33	114	690	8.5	6740	1570	6	-						
10.88	129	660	9.3	6490	1560	7	-						
9.64	145	630	10.0	6300	1550	7	-						
8.59	163	630	11.2	4110	2960	7	-						
7.74	181	610	12.0	3940	2930	8	-						
6.79	206	580	13.0	3850	2940	8	-	**R**	**77**	**AD4**		43	249
5.99*	234	540	13.8	3990	2980	8	-	**RF**	**77**	**AD4**		49	249
5.31*	264	510	14.7	3990	2990	8	-						
R87 AD... , n_e = 1400 1/min													**1550 Nm**
246.54	5.7	1550	1.0	16900	1580	6	-						
216.54	6.5	1550	1.1	16900	1570	6	-						
205.71	6.8	1550	1.2	16900	1570	6	-						
181.77	7.7	1550	1.4	16900	1540	6	-						
155.34	9.0	1550	1.6	16900	1530	6	-						
142.41	9.8	1550	1.7	16900	1520	6	-						
124.97	11	1550	2.0	16900	1510	6	-						
118.43*	12	1550	2.1	16900	1500	6	-	**R**	**87**	**AD2**		61	249
103.65	14	1550	2.4	16900	1480	6	-	**RF**	**87**	**AD2**		68	249
93.38	15	1550	2.6	16900	1460	6	-						
81.92	17	1550	3.0	16900	1440	6	-						
72.57	19	1550	3.3	16900	1150	6	-						
63.68*	22	1550	3.8	15800	1130	6	-						
60.35*	23	1550	4.0	15200	1110	6	-						
52.82	27	1550	4.6	13500	1070	6	-						
47.58	29	1550	5.1	12300	1030	7	-						
41.74	34	1550	5.8	16900	1940	7	-						
36.84*	38	1550	6.6	16800	1890	7	-	**R**	**87**	**AD3**		65	249
32.66*	43	1550	7.4	16000	1840	7	-	**RF**	**87**	**AD3**		72	249
27.88	50	1500	8.4	15100	1800	7	-						
34.40*	41	1360	6.0	11500	1390	5	-	**R**	**87**	**AD3**		64	249
31.40	45	1280	6.2	11700	1450	5	-	**RF**	**87**	**AD3**		71	249
27.84*	50	1550	8.6	15000	3190	6	-						
23.40	60	1550	10.2	13900	3120	6	-						
21.51	65	1500	10.8	13600	3120	6	-						
19.10	73	1440	11.5	13000	3120	6	-	**R**	**87**	**AD4**		70	249
17.08*	82	1390	12.4	12600	3120	6	-	**RF**	**87**	**AD4**		77	249
13.33	105	1280	14.7	11600	3100	6	-						
11.93	117	1230	15.7	11200	3100	6	-						
9.90*	141	1180	18.2	10400	3010	6	-						



i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
R87 AD... , n_e = 1400 1/min													**1550 Nm**
9.14*	153	1210	20	10500	5340	6	-						
8.22	170	1160	22	10200	5360	7	-						
7.13	196	1070	23	9780	5430	7	-	**R**	**87**	**AD5**		85	249
6.39	219	1020	24	9450	5440	7	-	**RF**	**87**	**AD5**		92	249
5.30*	264	910	26	8980	5500	7	-						
R97 AD... , n_e = 1400 1/min													**3000 Nm**
216.28	6.5	3000	2.2	19800	2210	6	-						
186.30	7.5	3000	2.6	19800	2200	6	-						
170.02	8.2	3000	2.8	19800	2180	6	-						
150.78	9.3	3000	3.1	19800	2170	6	-						
126.75	11	3000	3.7	19800	2140	6	-						
116.48	12	3000	4.1	19800	2120	6	-						
103.44	14	3000	4.6	19800	2100	6	-	**R**	**97**	**AD3**		105	249
92.48	15	3000	5.1	19800	2070	6	-	**RF**	**97**	**AD3**		125	249
83.15	17	3000	5.6	19800	2040	6	-						
72.17	19	3000	6.5	18000	2000	6	-						
65.21	21	3000	7.2	19800	1540	6	-						
59.92	23	3000	7.8	19800	1500	6	-						
53.21	26	3000	8.8	19800	1450	6	-						
47.58	29	3000	9.8	19800	3440	6	-						
42.78	33	3000	10.9	19800	3390	6	-						
37.13	38	3000	12.6	18600	3310	6	-	**R**	**97**	**AD4**		110	249
33.25	42	2890	13.6	17900	3300	6	-	**RF**	**97**	**AD4**		130	249
27.58	51	2670	15.1	16900	3290	6	-						
32.05	44	2560	12.2	10600	2340	5	-	**R**	**97**	**AD4**		110	249
27.19	52	2430	13.7	9910	2460	5	-	**RF**	**97**	**AD4**		125	249
25.03	56	2830	17.4	15900	5270	5	-						
22.37	63	2720	19	15300	5300	5	-						
20.14	70	2610	20	14800	5340	5	-						
18.24	77	2500	21	14400	5370	6	-						
16.17	87	2400	23	13800	5390	6	-						
14.62	96	2300	24	13400	5420	6	-	**R**	**97**	**AD5**		125	249
12.39	113	2190	27	12700	5370	6	-	**RF**	**97**	**AD5**		145	249
10.83	129	2090	29	12100	5370	6	-						
9.29	151	2030	33	12200	4250	6	-						
8.39	167	2030	37	11700	4120	6	-						
7.12	197	2000	43	10900	3760	6	-						
6.21	225	1890	46	10500	3890	6	-						
5.20	269	1780	52	9850	6860	6	-	**R**	**97**	**AD6**		140	249
4.50*	311	1630	55	9500	6930	6	M2	**RF**	**97**	**AD6**		155	249
R107 AD... , n_e = 1400 1/min													**4300 Nm**
251.15	5.6	4300	2.7	29500	2160	7	-						
229.95	6.1	4300	3.0	29500	2150	7	-						
203.16	6.9	4300	3.3	29500	2130	7	-						
172.34	8.1	4300	3.9	29500	2100	7	-						
158.68	8.8	4300	4.3	29500	2090	7	-						
141.83	9.9	4300	4.8	29500	2060	7	-	**R**	**107**	**AD3**		165	249
127.68	11	4300	5.3	29500	2040	7	-	**RF**	**107**	**AD3**		170	249
115.63	12	4300	5.9	29500	2020	7	-						
102.53	14	4300	6.5	29500	1990	7	-						
92.70	15	4300	7.2	29500	1960	7	-						
78.57	18	4300	8.5	29500	1890	7	-						
72.88	19	4300	9.2	29500	1390	7	-						
65.60*	21	4300	10.2	29200	3390	7	-						
59.41	24	4300	11.3	28000	3350	7	-						
52.68	27	4300	12.7	26600	3300	7	-						
47.63	29	4300	14.1	25500	3250	7	-	**R**	**107**	**AD4**		170	249
40.37*	35	4300	16.6	23800	3140	7	-	**RF**	**107**	**AD4**		175	249
35.26	40	4300	19	22400	3060	7	-						
29.49	47	4300	23	20700	2920	7	-						

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	
R107 AD... , n_e = 1400 1/min												**4300 Nm**
30.77	46	4300	21	21100	4790	7	-					
27.58	51	4300	24	20100	4710	7	-					
24.90*	56	4300	26	19200	4580	7	-					
22.62	62	4300	29	18300	4490	7	-	**R**	**107**	**AD5**	180	249
20.07	70	4300	33	17300	4390	7	-	**RF**	**107**	**AD5**	185	249
18.21	77	4300	36	16600	4280	7	-					
15.65	89	4300	42	15400	4030	7	-					
13.66	102	4300	48	14400	6880	7	-					
11.59	121	4280	56	13300	6630	7	-					
10.13	138	3740	56	13300	6920	7	-					
8.56	163	3160	56	13200	7270	7	M2	**R**	**107**	**AD6**	190	249
7.86	178	2900	56	13900	6200	9	-	**RF**	**107**	**AD6**	200	249
6.66	210	2460	56	13500	6640	9	-					
5.82	240	2150	56	13200	6920	9	-					
4.92	284	2000	62	12500	6940	9	M2					
R137 AD... , n_e = 1400 1/min												**8000 Nm**
222.60*	6.3	8000	5.7	53400	3730	6	-					
188.45	7.4	8000	6.7	53400	3690	6	-					
174.40*	8.0	8000	7.2	53400	3660	6	-					
156.31	9.0	8000	8.1	53400	3630	6	-					
141.12*	9.9	8000	8.8	53400	3580	6	-					
128.18	11	8000	9.7	53400	3550	6	-					
113.72	12	8000	11.0	53400	3510	6	-	**R**	**137**	**AD4**	255	249
103.20*	14	8000	12.1	53400	3470	6	-	**RF**	**137**	**AD4**	280	249
88.70*	16	8000	14.1	53400	3400	6	-					
80.91*	17	8000	15.4	53400	2760	6	-					
73.49	19	8000	17.0	53400	2700	6	-					
65.20	21	8000	19	53400	2640	6	-					
59.17*	24	8000	21	53400	2570	6	-					
50.86*	28	8000	25	53400	5660	6	-					
44.39	32	8000	28	53400	5550	6	-					
37.65	37	8000	33	53400	5380	6	-	**R**	**137**	**AD5**	270	249
32.91	43	8000	38	53400	5230	6	-	**RF**	**137**	**AD5**	290	249
27.83	50	7680	43	54100	5150	7	M2					
29.57*	47	7780	40	53900	5130	6	-	**R**	**137**	**AD6**	270	249
24.12	58	8000	51	49400	4260	6	-	**RF**	**137**	**AD6**	295	249
22.00*	64	8000	56	47100	11600	6	-					
19.04*	74	8000	64	43500	10600	6	-					
16.80*	83	8000	73	40600	9800	6	-					
14.51	96	8000	83	37300	8660	6	M2					
12.83	109	7390	87	37400	9730	6	M2	**R**	**137**	**AD7**	280	249
10.79	130	7200	101	34700	8730	6	M1-6	**RF**	**137**	**AD7**	305	249
8.71	161	6900	120	31900	7420	6	M1-6					
7.59	184	4600	92	41100	8330	8	M1-6					
6.38	219	4400	104	38900	7810	8	M1-6					
5.15	272	4100	120	36600	7290	8	M1-6					
R147 AD... , n_e = 1400 1/min												**13000 Nm**
163.31	8.6	13000	12.4	62700	2960	5	-					
146.91	9.5	13000	13.8	62700	2910	5	-					
119.86	12	13000	16.9	62700	2770	5	-	**R**	**147**	**AD4**	385	249
109.31	13	13000	19	62700	2720	5	-	**RF**	**147**	**AD4**	395	249
94.60*	15	13000	21	62700	2620	6	-					
83.47	17	13000	24	62700	2530	6	-					
72.09	19	13000	28	62700	5660	6	-					
66.99	21	13000	30	62700	4520	6	-					
61.09	23	13000	33	62700	4440	6	-	**R**	**147**	**AD5**	400	249
52.87	26	13000	38	62700	4280	6	-	**RF**	**147**	**AD5**	410	249
46.65	30	13000	43	62700	4150	6	-					
40.29	35	13000	50	62700	6940	6	-	**R**	**147**	**AD6**	410	249
								RF	**147**	**AD6**	420	249

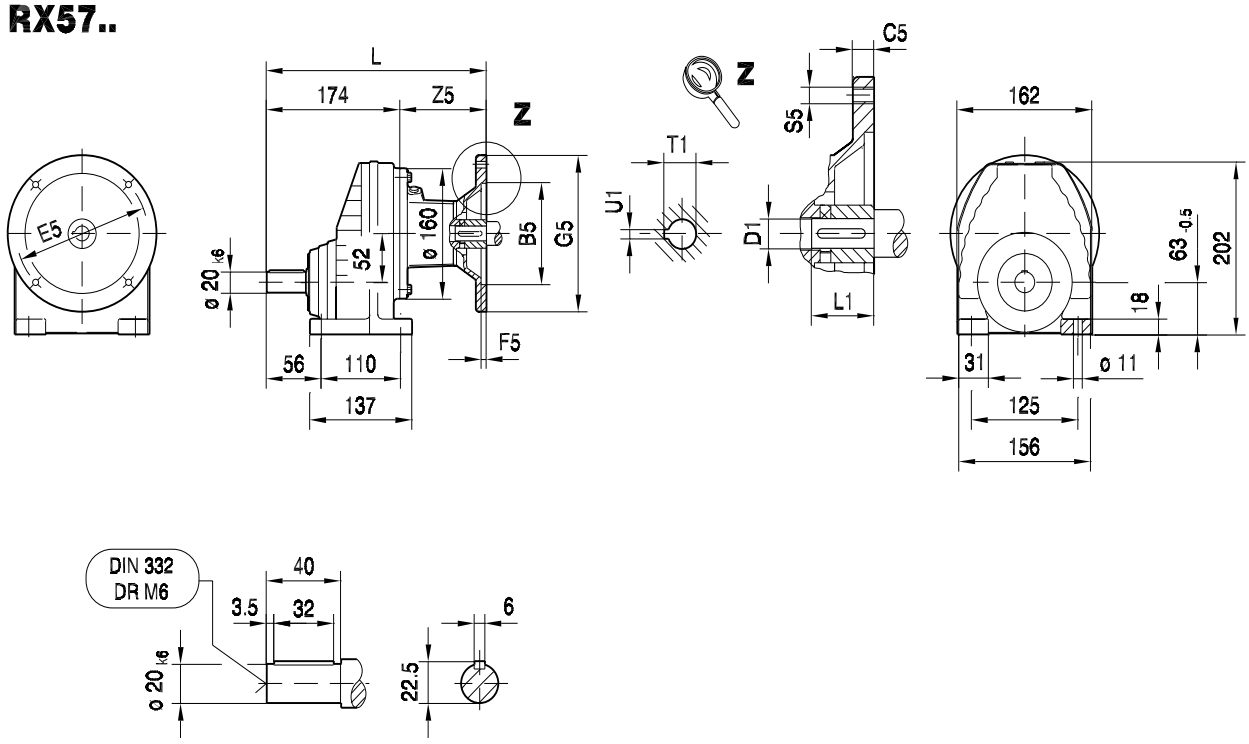
R147 AD... , n_e = 1400 1/min													13000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	
35.64	39	13000	56	62700	16800	6	-						
29.95	47	13000	67	62700	16600	6	M2	**R**	**147**	**AD7**		410	249
24.19	58	11900	76	64700	16500	6	M1-6	**RF**	**147**	**AD7**		420	249
20.44	69	11700	87	65100	23700	5	-						
18.04	78	10300	87	67300	24200	5	-						
15.64	90	13000	127	62700	22300	5	M1-6						
13.91	101	12300	134	64000	22500	5	M1-6						
11.99	117	10600	135	66900	23200	5	M1-6	**R**	**147**	**AD8**		420	249
9.74	144	8650	136	67500	23900	6	M1-6	**RF**	**147**	**AD8**		425	249
8.26	169	7340	136	66900	24400	6	M1-6						
7.25	193	6440	136	65300	23200	8	M1-6						
5.89	238	5230	136	64000	23900	8	M1-6						
5.00	280	4430	135	62600	24400	8	M1-6						

R167 AD... , n_e = 1400 1/min													18000 Nm
229.71	6.1	18000	12.3	120000	6070	5	-						
186.93*	7.5	18000	15.0	120000	5990	5	-						
153.07	9.2	18000	18.3	120000	5860	5	-						
139.98	10	18000	20	120000	5820	5	-						
121.81*	11	18000	23	120000	5740	5	-	**R**	**167**	**AD5**		650	249
107.49	13	18000	26	120000	5660	5	-	**RF**	**167**	**AD5**		650	249
93.19	15	18000	30	120000	5550	5	-						
82.91*	17	18000	34	120000	5450	5	-						
73.70*	19	18000	38	120000	3300	6	-						
67.40	21	18000	41	120000	6660	6	-						
58.65	24	18000	47	120000	6500	6	-	**R**	**167**	**AD6**		670	249
51.76	27	18000	54	120000	6350	6	-	**RF**	**167**	**AD6**		670	249
44.87	31	18000	62	120000	15800	6	-						
39.92	35	18000	70	120000	15100	6	-	**R**	**167**	**AD7**		660	249
34.41	41	18000	81	120000	14300	6	-	**RF**	**167**	**AD7**		670	249
27.96	50	18000	99	120000	25500	6	M2,4	**R**	**167**	**AD8**		680	249
23.71	59	18000	117	116500	25100	6	M1-6	**RF**	**167**	**AD8**		690	249
46.00	30	7000	23	120000	4510	5	-	**R**	**167**	**AD5**		640	249
								RF	**167**	**AD5**		650	249
37.74	37	9000	36	120000	6220	5	-	**R**	**167**	**AD6**		660	249
30.71	46	10000	50	120000	4480	5	-	**RF**	**167**	**AD6**		670	249
24.57	57	14000	87	120000	23600	5	-						
21.85	64	13000	91	120000	23900	5	-						
19.03	74	16000	128	111400	22200	5	-						
16.98	82	15000	134	108900	22400	5	-	**R**	**167**	**AD8**		680	249
14.48	97	18000	188	93800	20300	5	M1-6	**RF**	**167**	**AD8**		680	249
11.99	117	17000	214	88700	20100	5	M1-6						
10.24	137	17000	251	82500	19300	5	M1-6						

10.5 R.. AM.. (IEC) [mm]

01 010 01 01

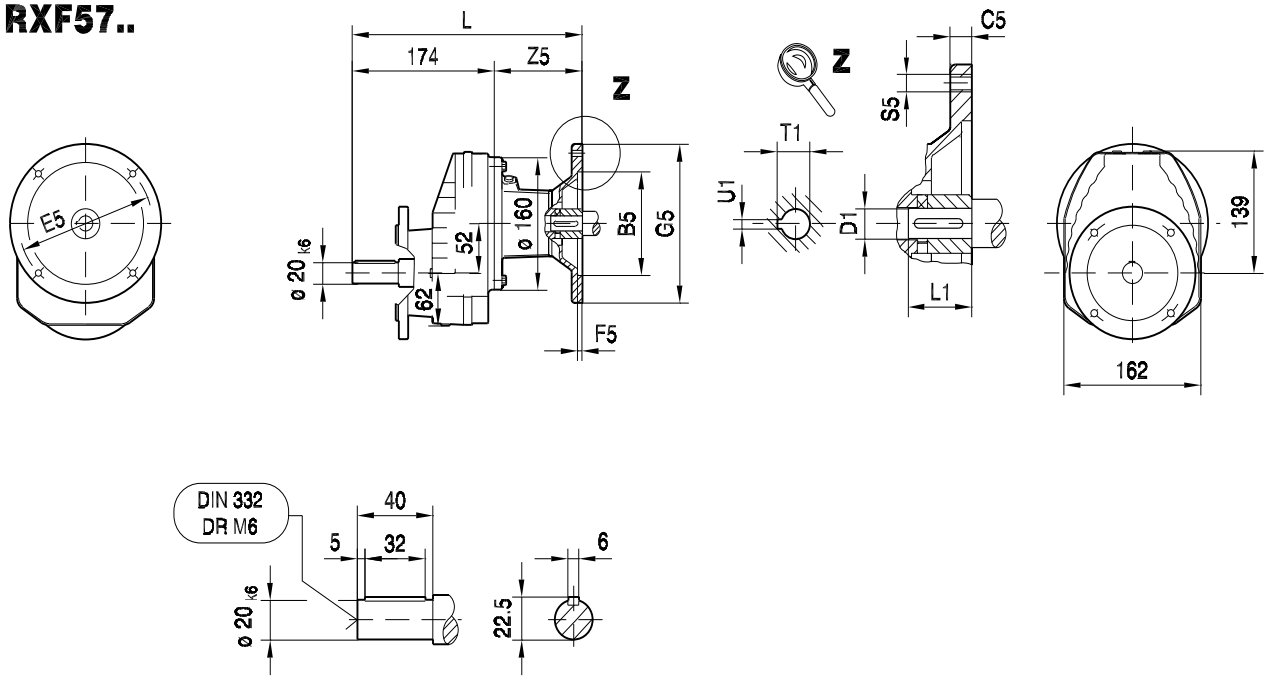
RX57..

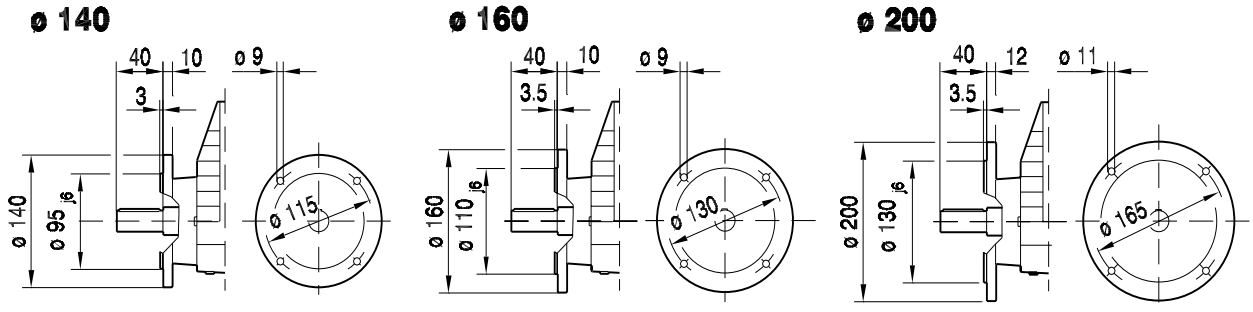


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	240	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	240	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	273	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	273	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	308	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	308	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	365	M12	191	38	80	41.3	10	

01 011 01 01

RXF57..

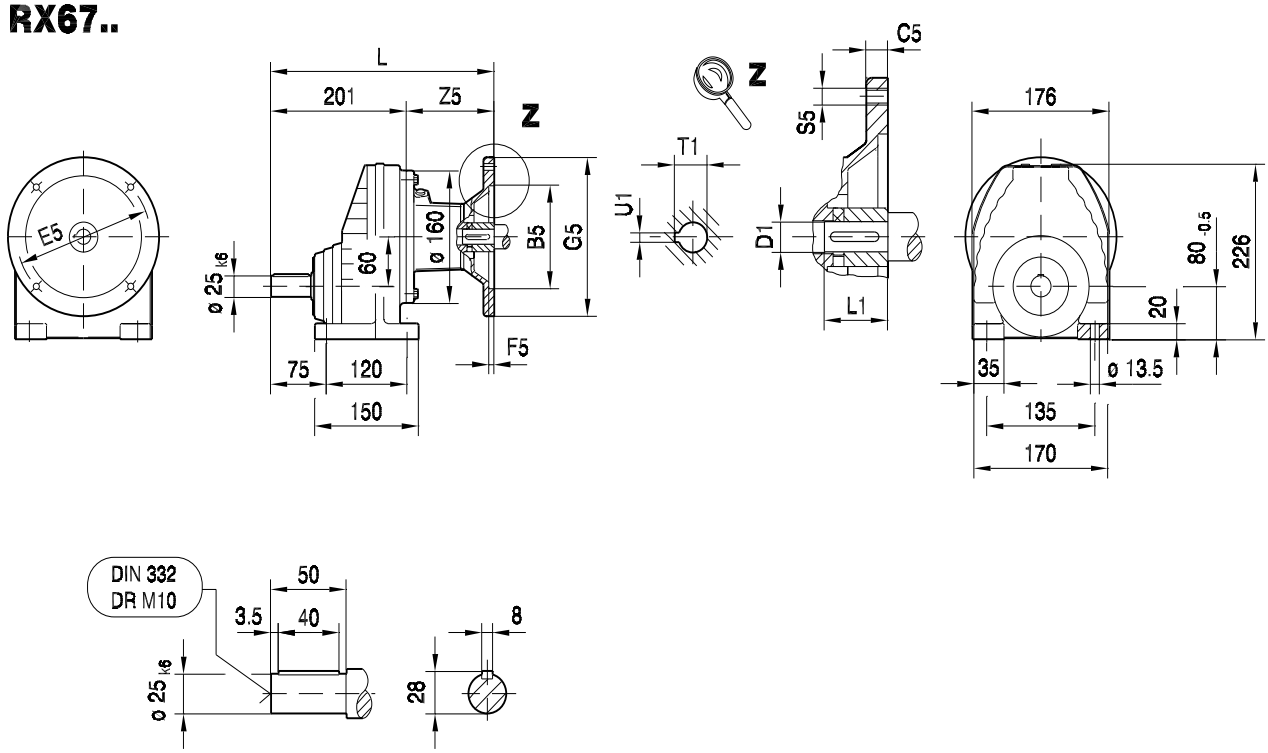




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	240	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	240	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	273	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	273	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	308	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	308	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	365	M12	191	38	80	41.3	10	

01 012 01 01

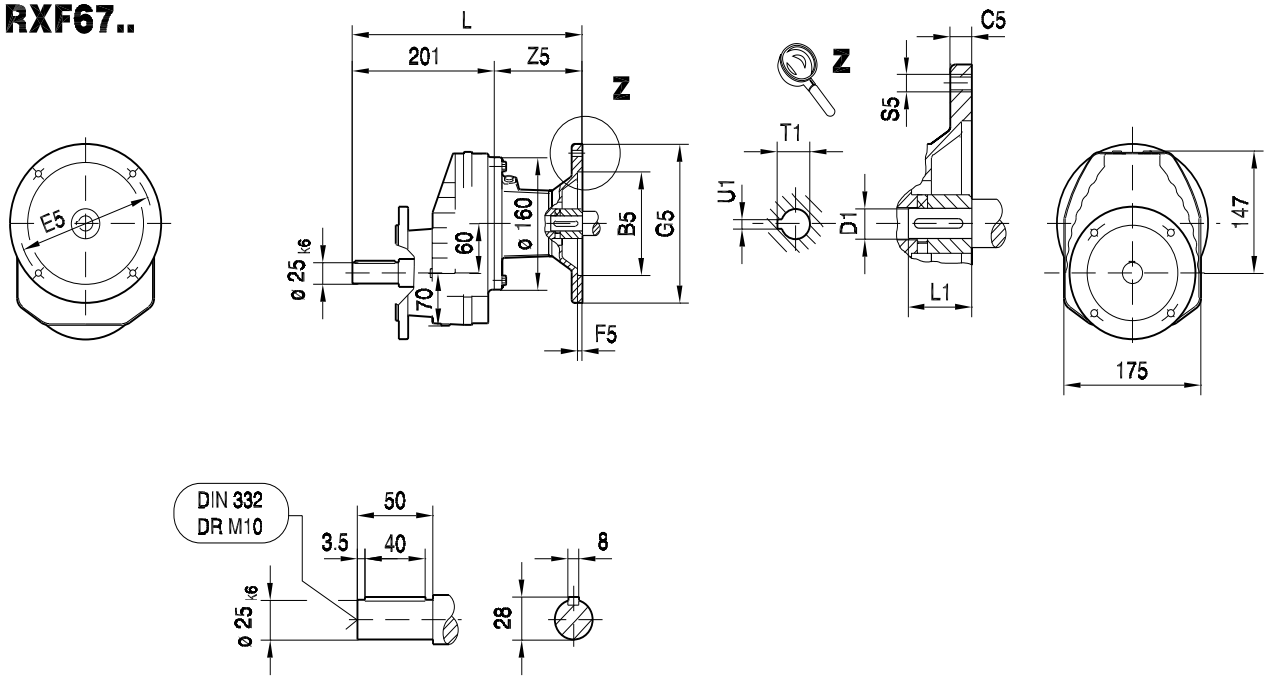
RX67..

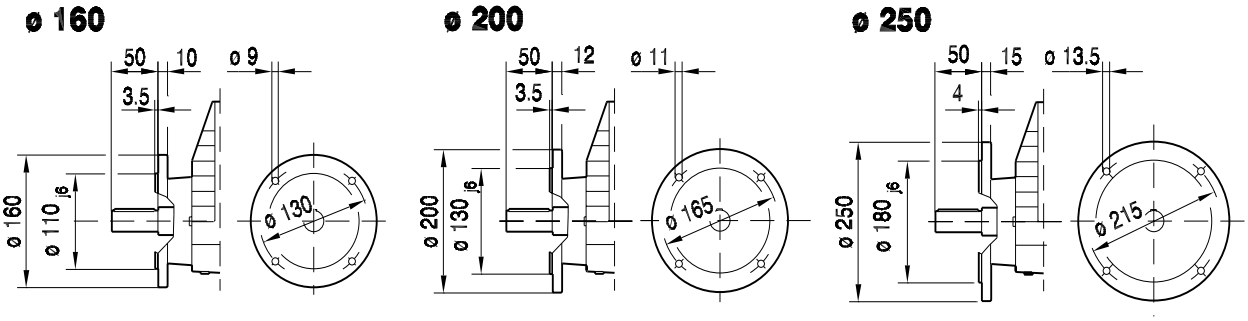


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	267	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	267	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	300	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	300	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	335	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	335	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	392	M12	191	38	80	41.3	10	

01 013 01 01

RXF67..

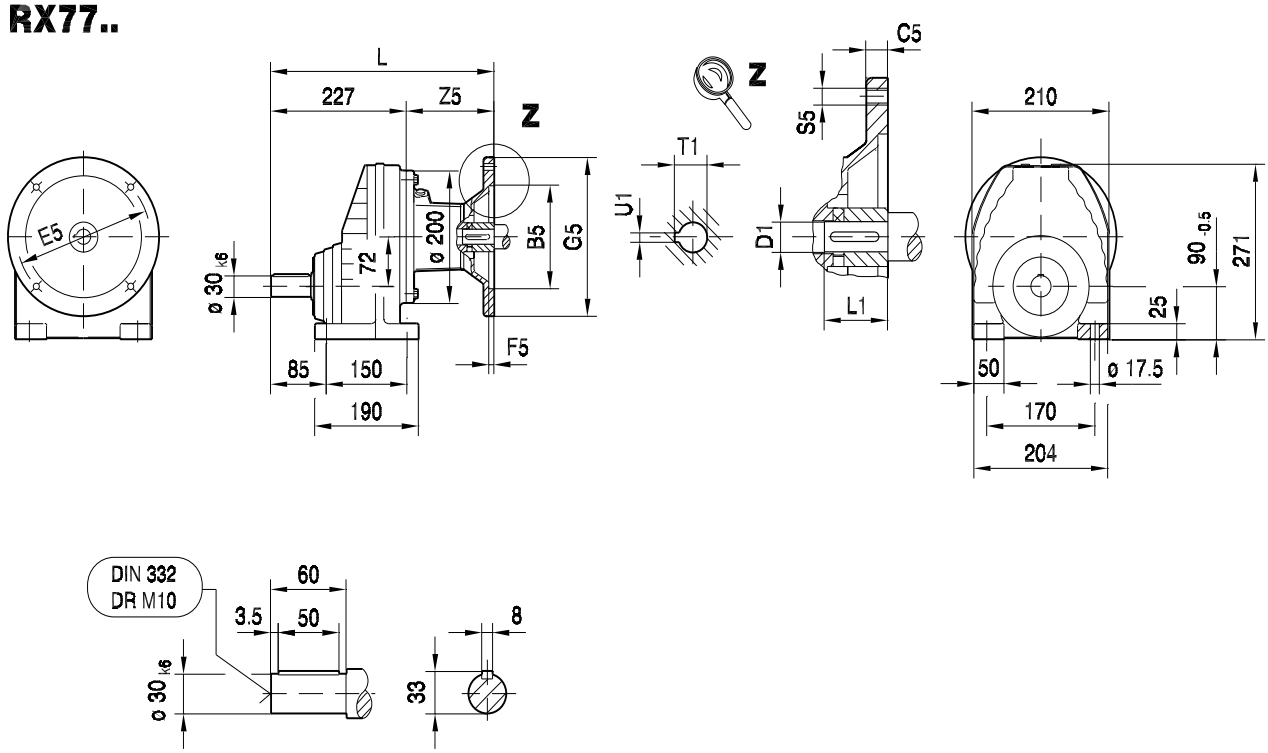




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	267	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	267	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	300	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	300	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	335	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	335	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	392	M12	191	38	80	41.3	10	

01 014 01 01

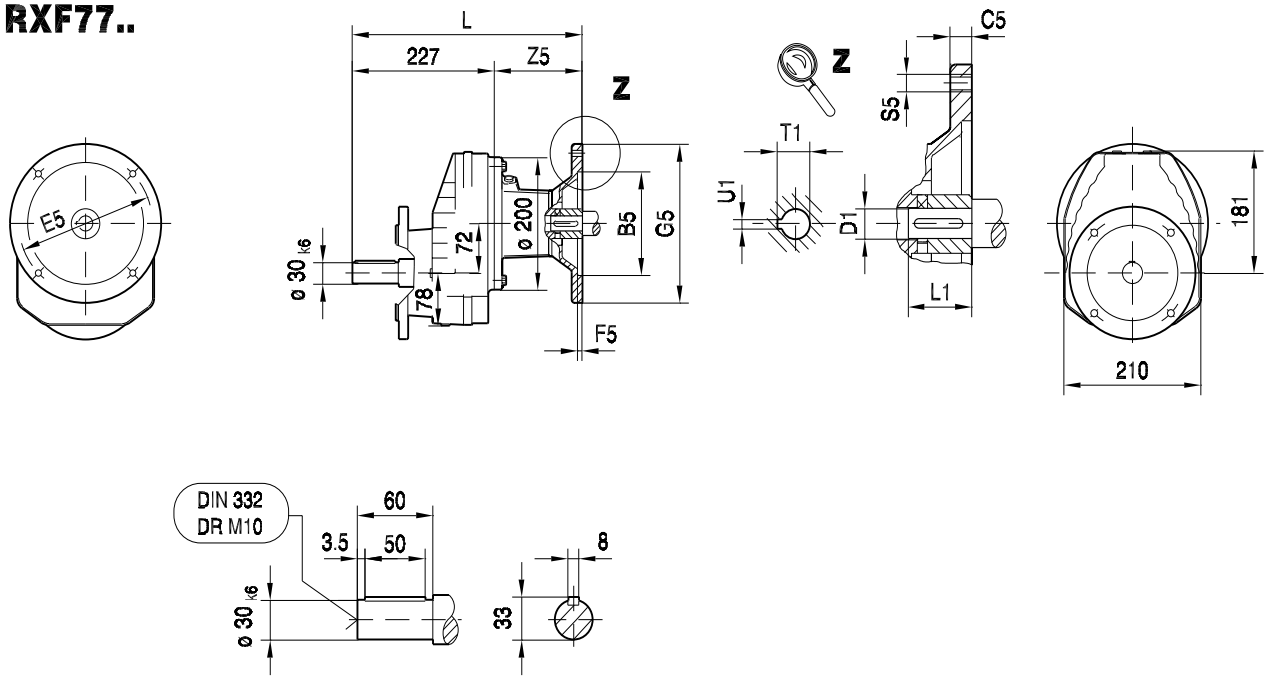
RX77..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	287	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	287	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	319	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	319	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	353	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	353	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	406	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	406	M12	179	38	80	41.3	10	

01 015 01 01

RXF77..



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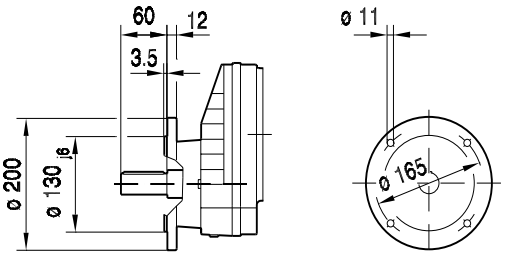

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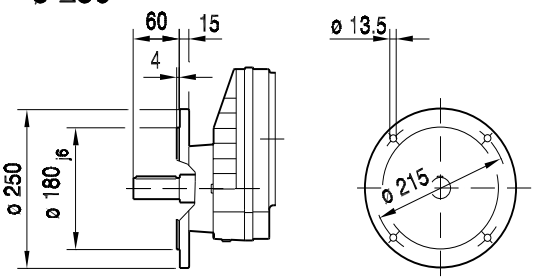
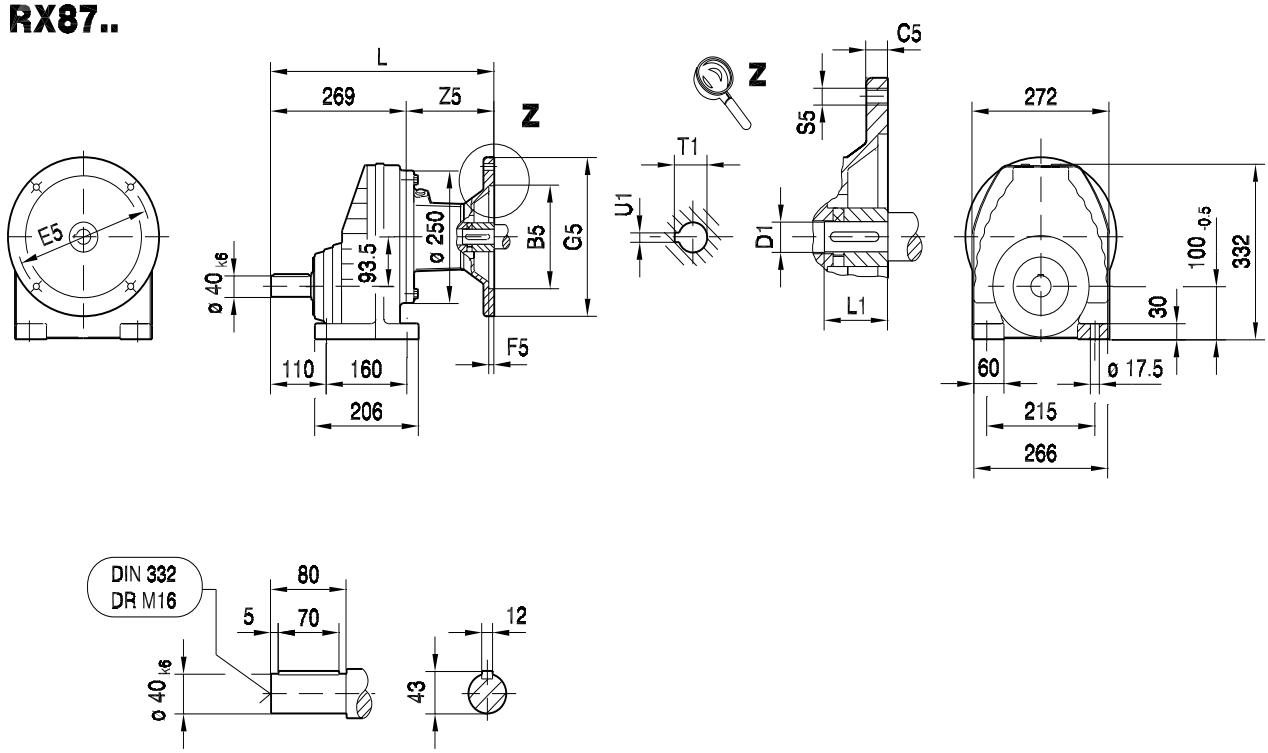


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	287	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	287	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	319	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	319	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	353	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	353	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	406	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	406	M12	179	38	80	41.3	10	

01 016 01 01

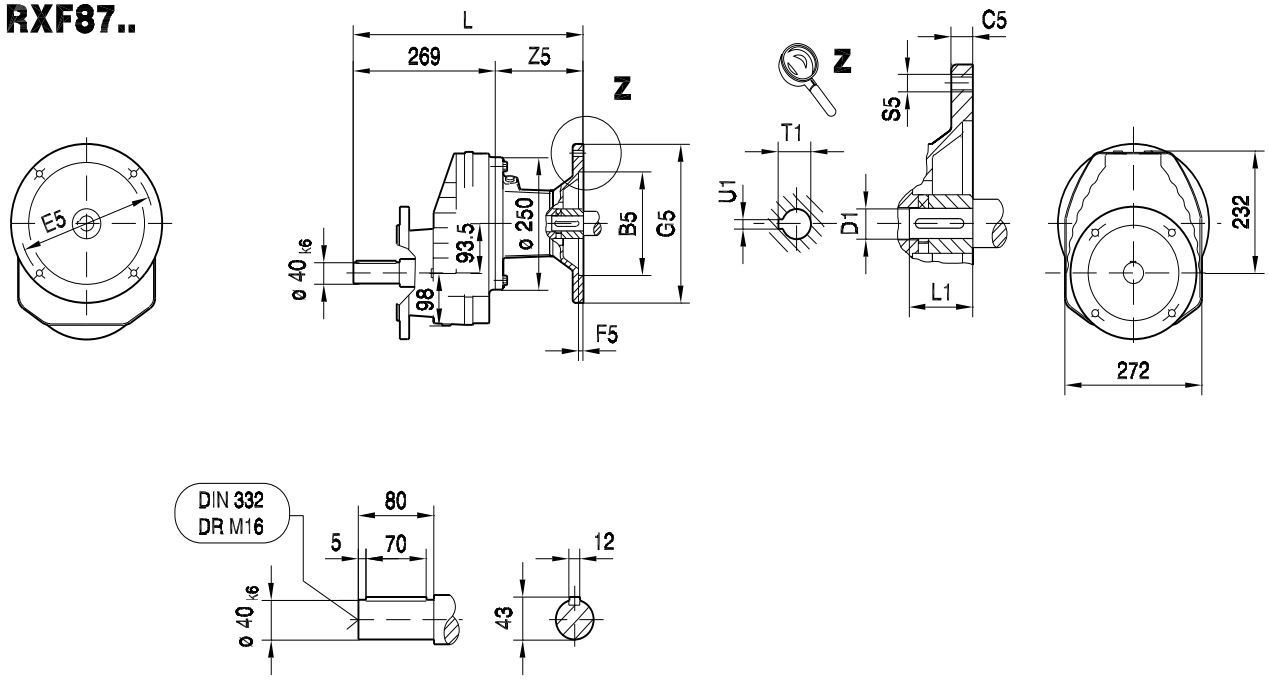
RX87..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	356	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	356	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	390	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	390	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	443	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	443	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	501	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	501	M16	232	48	110	51.8	14	

01 017 01 01

RXF87..



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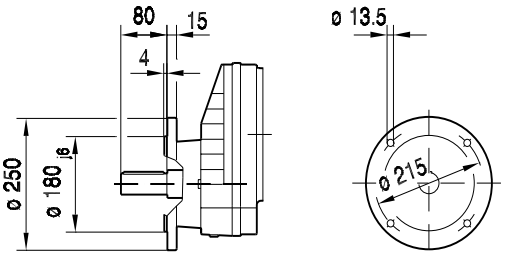

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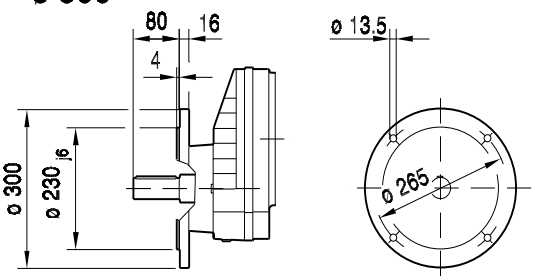
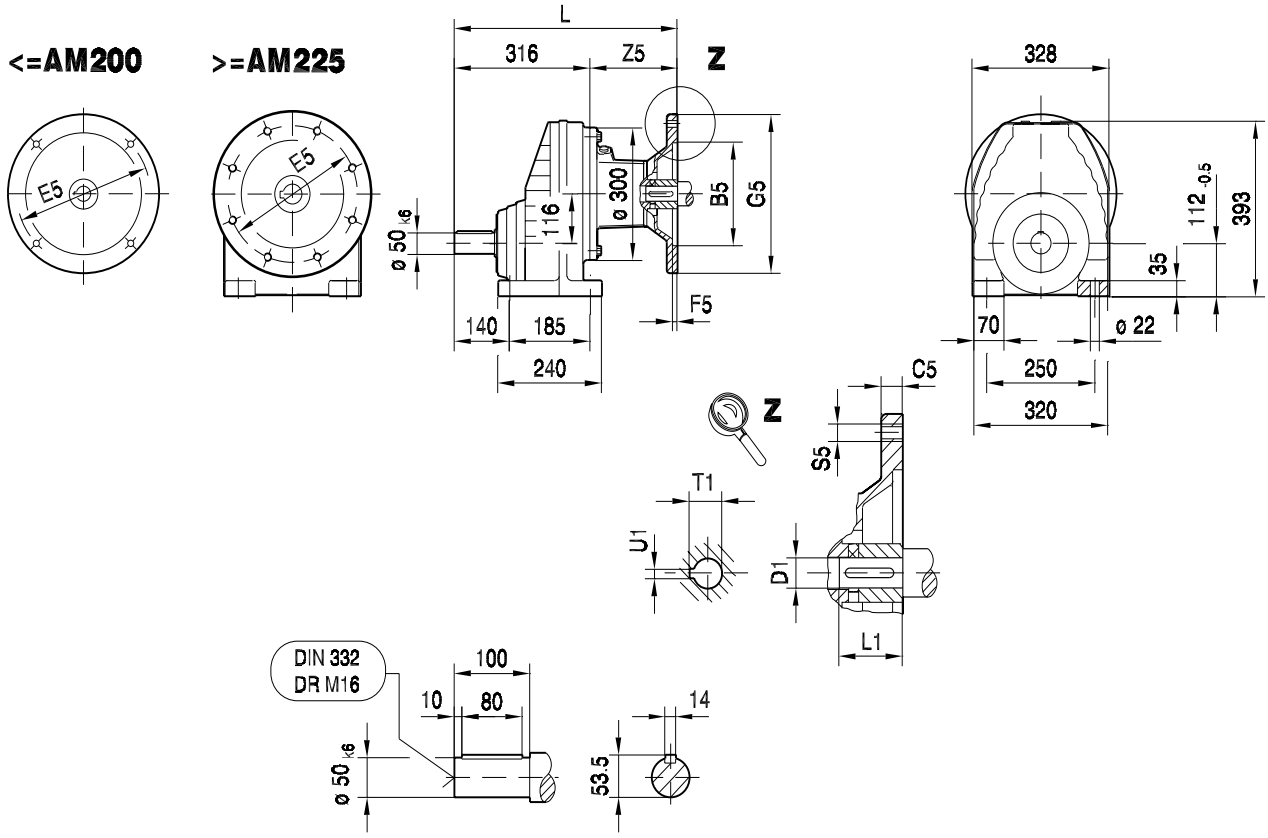


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	356	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	356	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	390	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	390	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	443	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	443	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	501	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	501	M16	232	48	110	51.8	14	

01 018 01 01

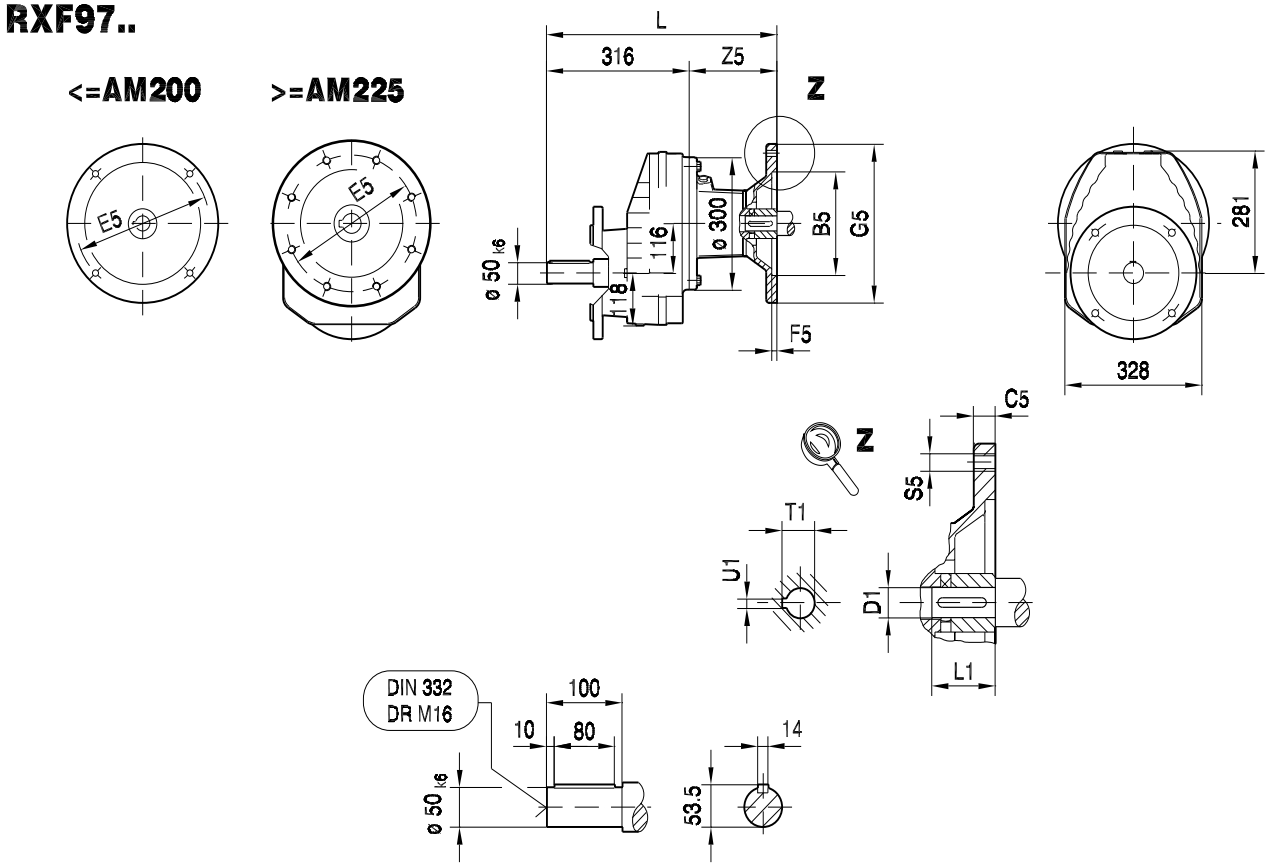
RX97..

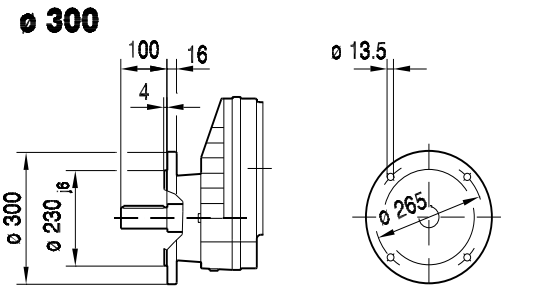


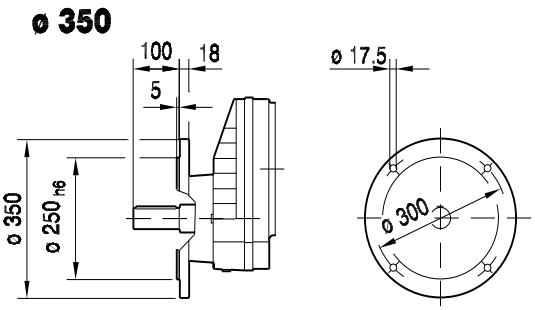
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	432	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	432	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	485	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	485	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	543	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	543	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	584	M16	268	55	110	59.3	16	

01 019 01 01

RXF97..



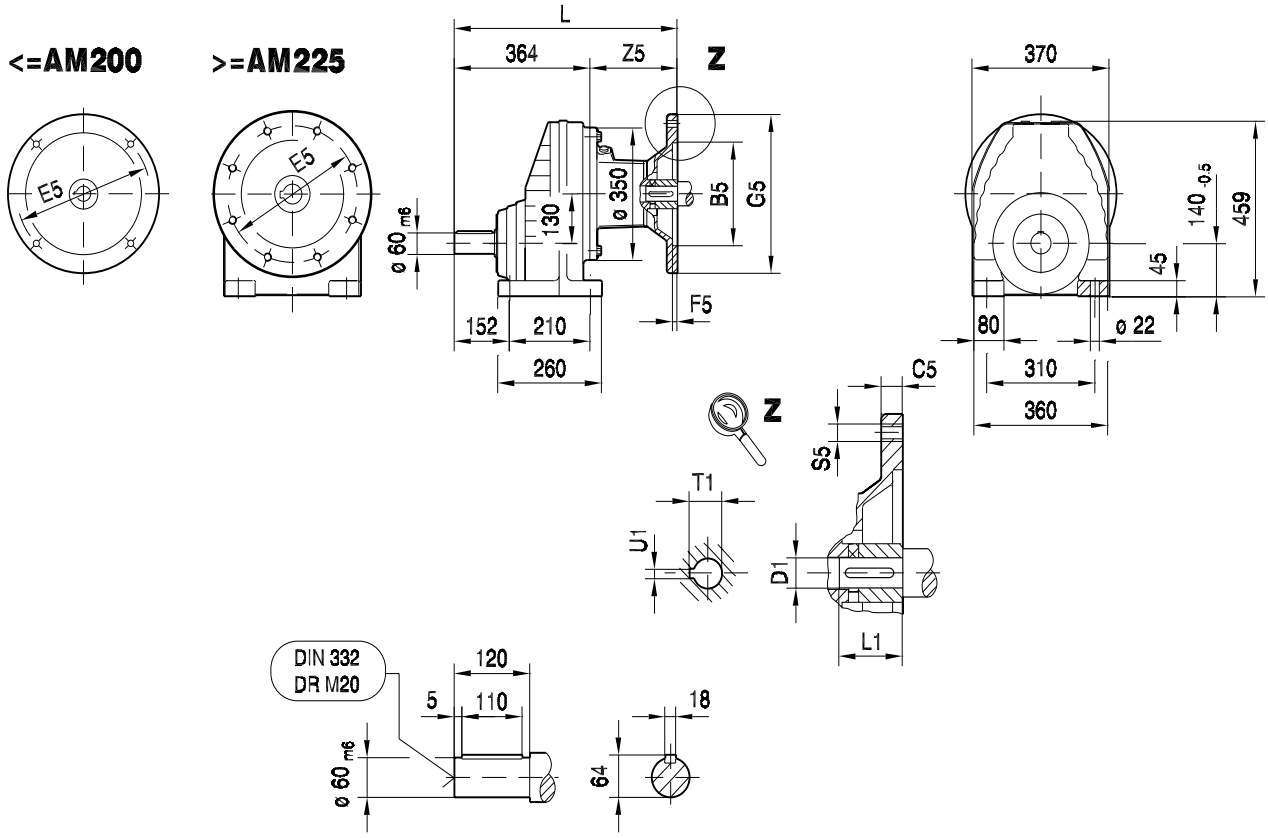




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	432	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	432	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	485	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	485	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	543	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	543	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	584	M16	268	55	110	59.3	16	

01 020 01 01

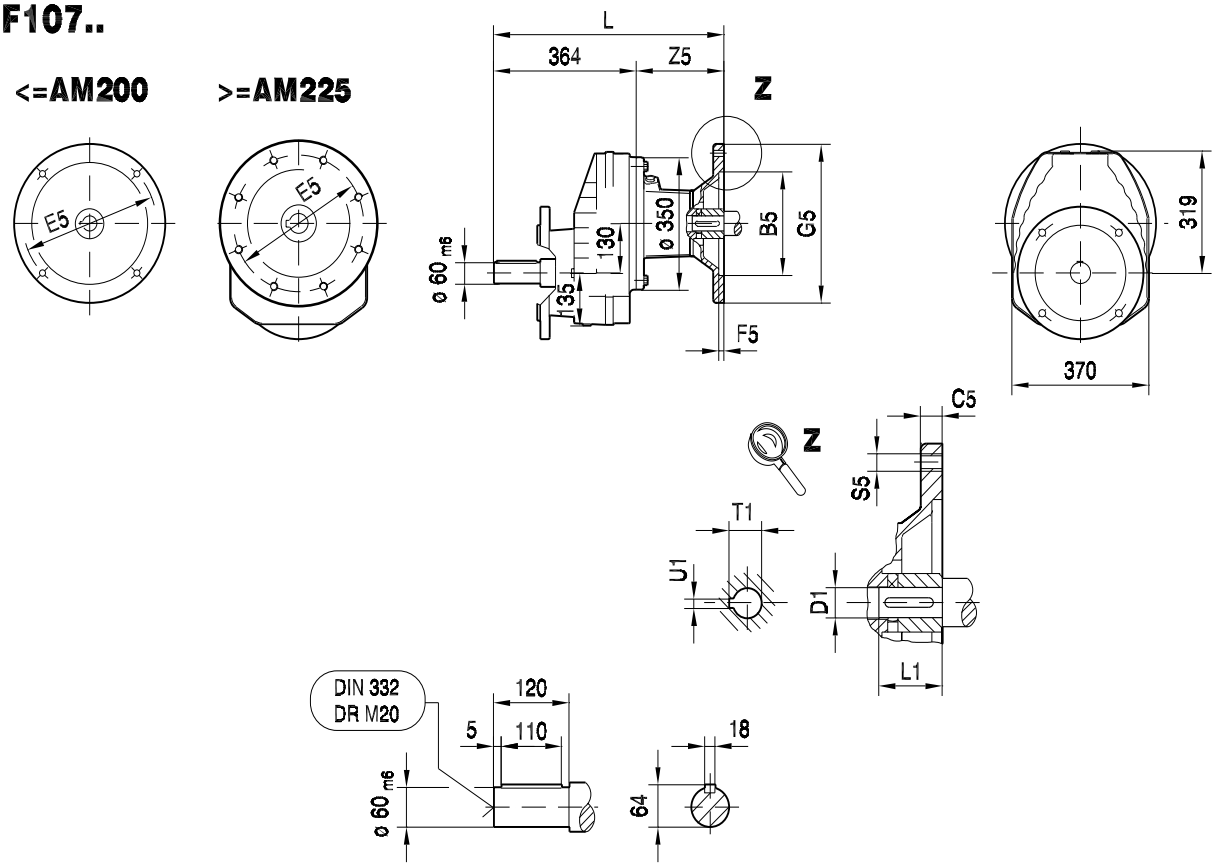
RX107..

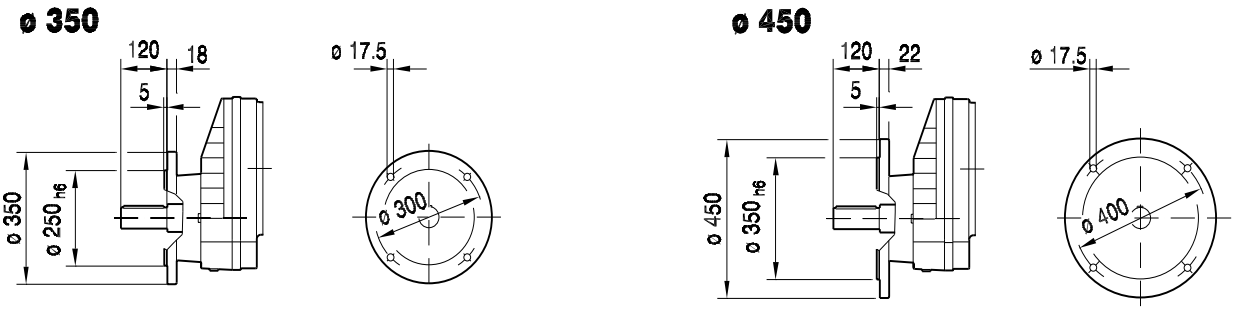


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	474	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	474	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	527	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	527	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	585	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	585	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	626	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	641	M16	277	60	140	64.4	18	

01 021 01 01

RXF107..

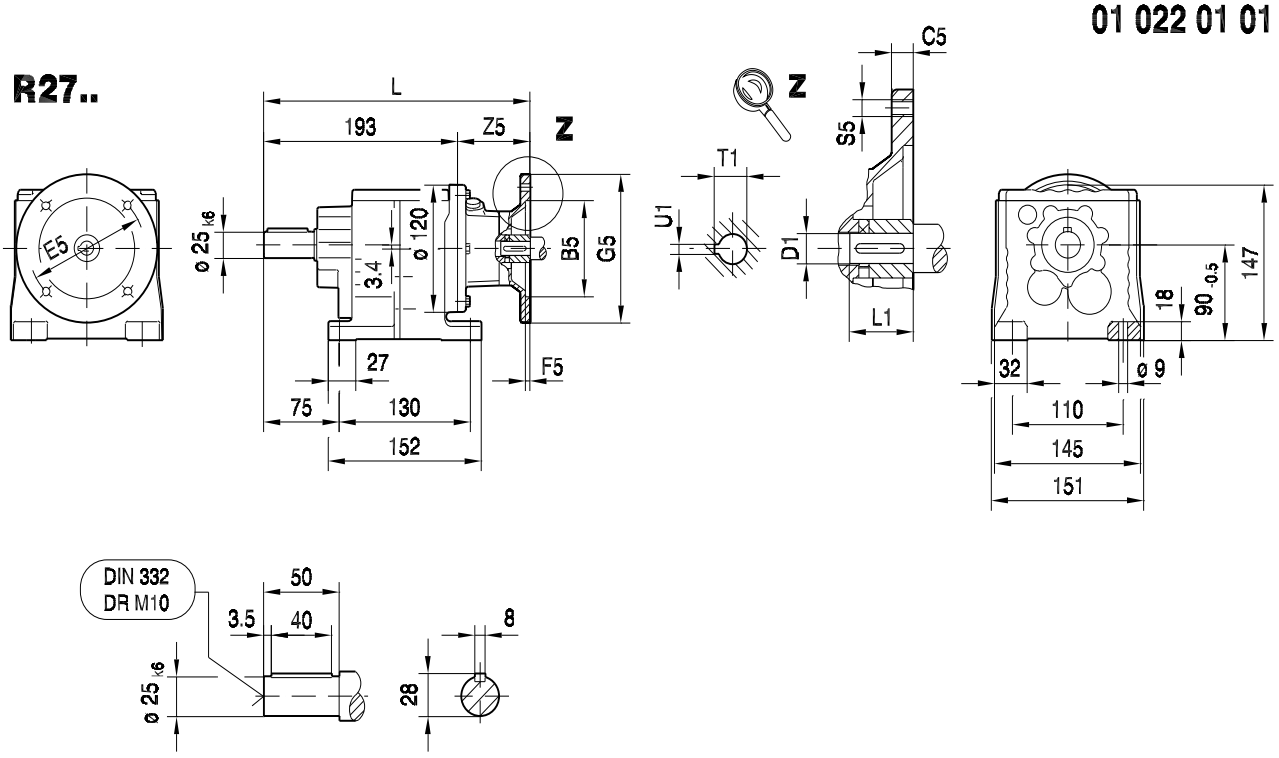




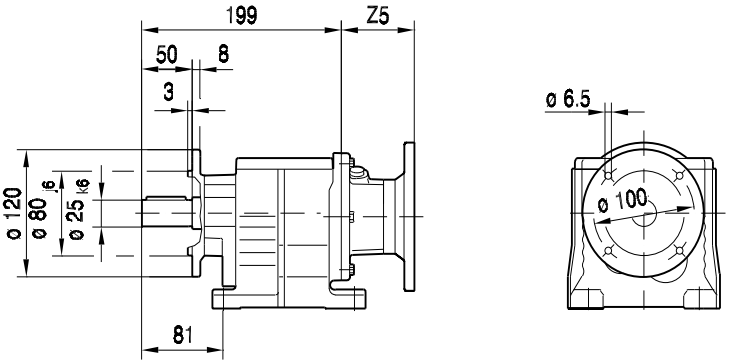
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	474	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	474	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	527	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	527	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	585	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	585	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	626	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	641	M16	277	60	140	64.4	18	

01 022 01 01

R27..



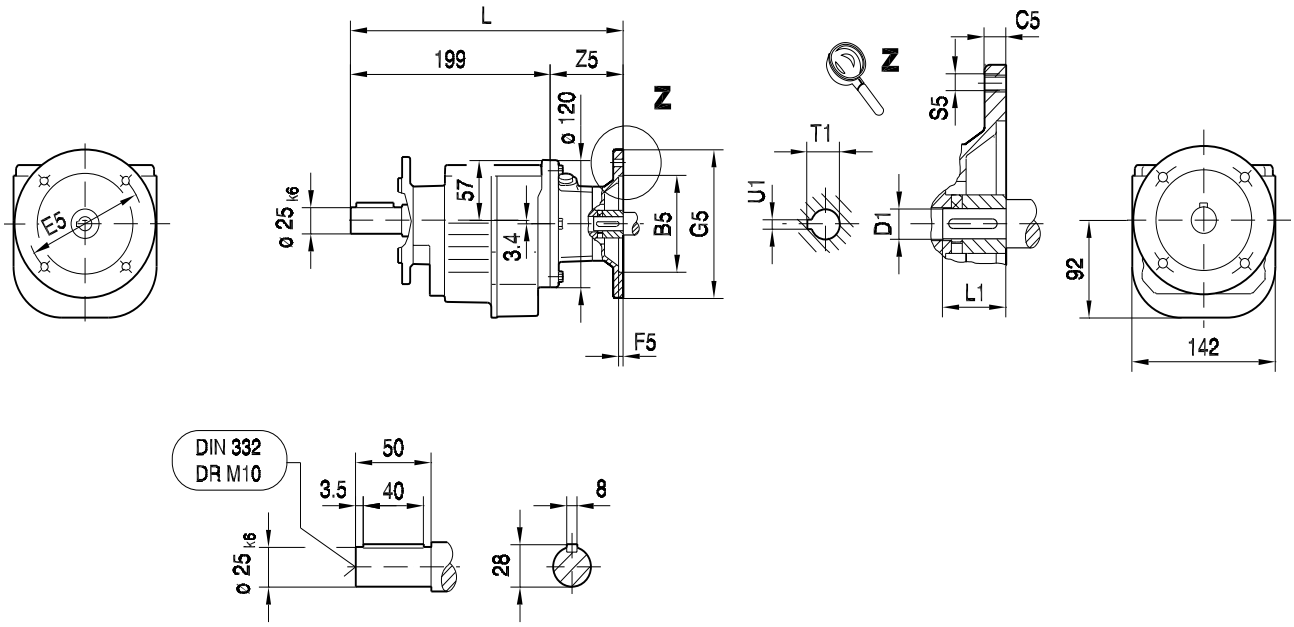
R27F..

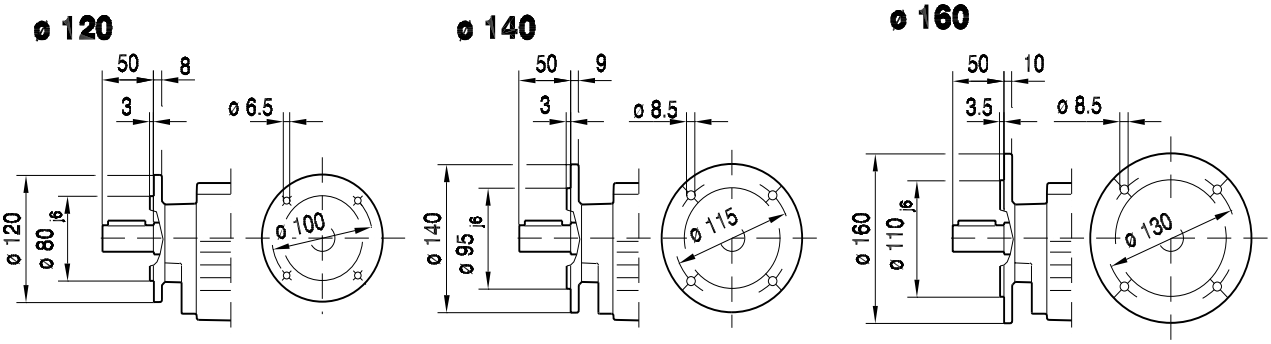


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	265	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	265	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	299	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	299	M10	106	24	50	27.3	8	

01 023 01 01

RF27..

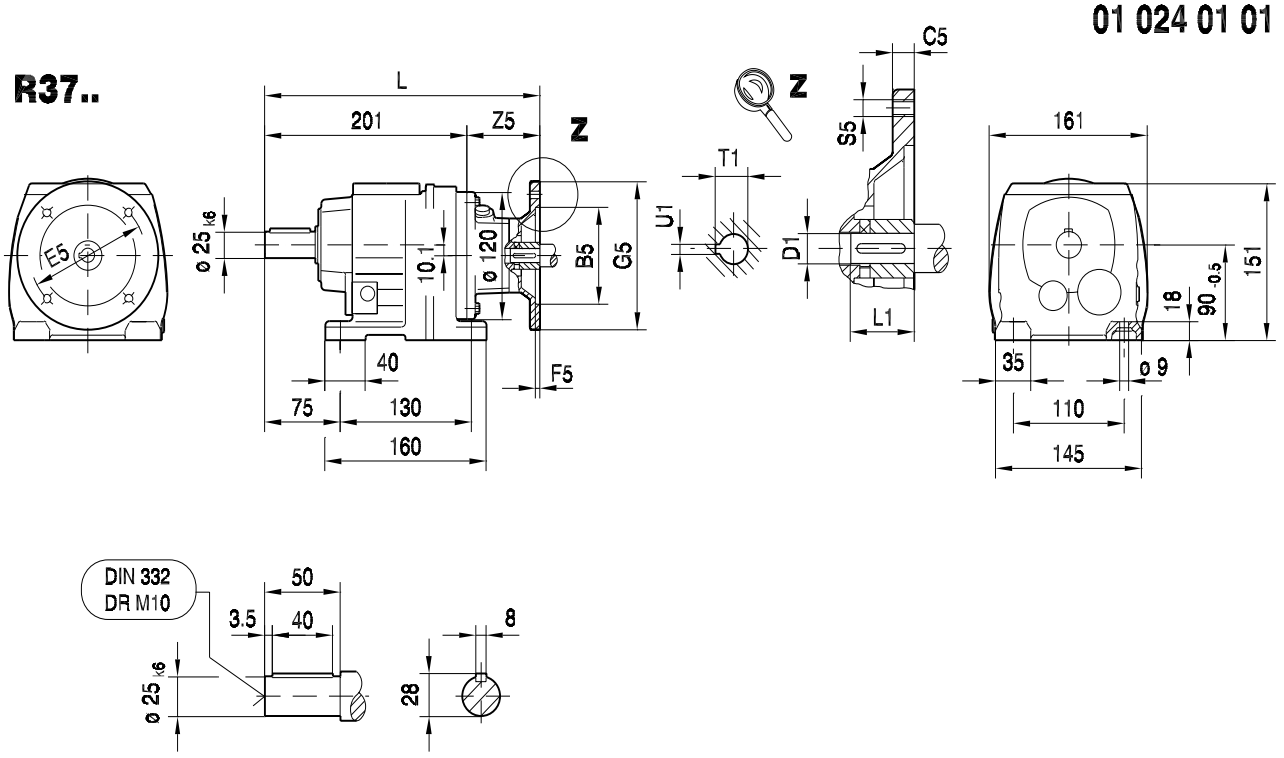




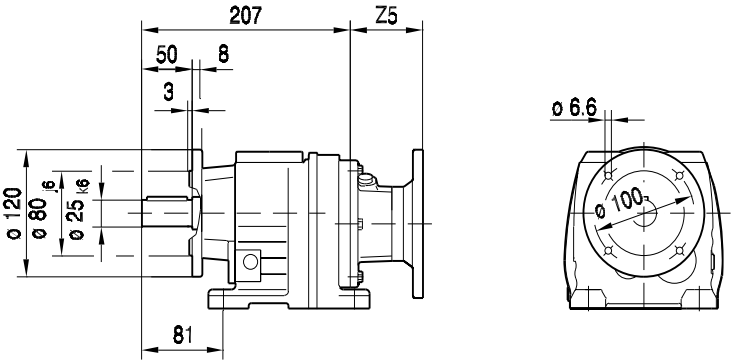
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	271	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	271	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	305	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	305	M10	106	24	50	27.3	8	

01 024 01 01

R37..



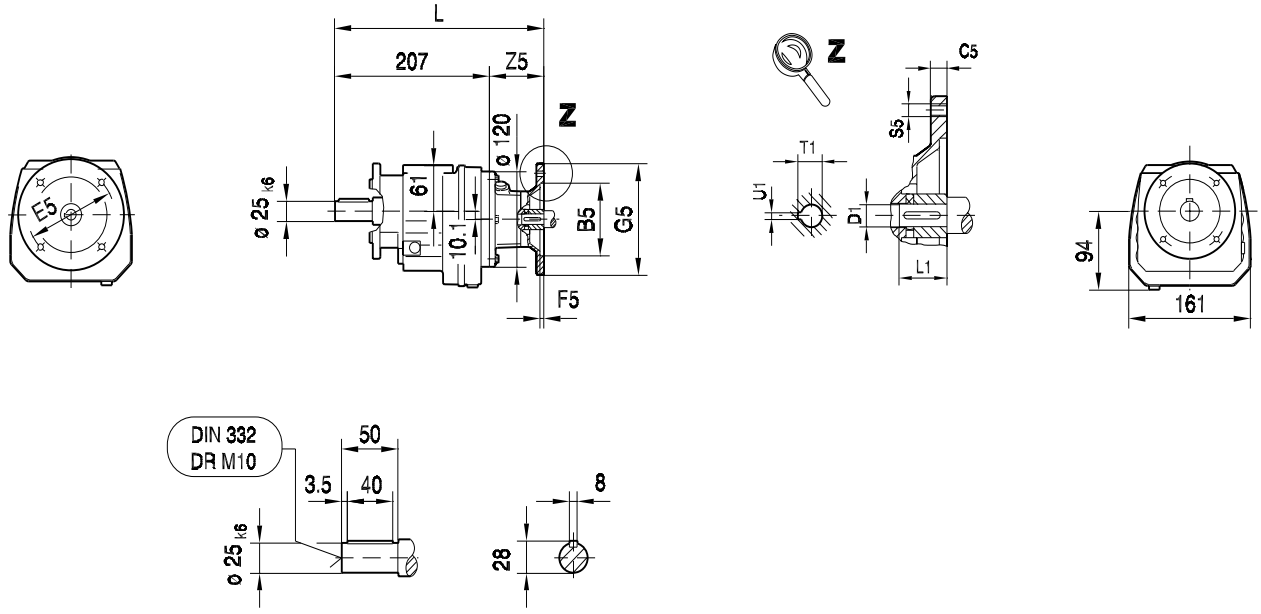
R37F..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	273	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	273	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	307	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	307	M10	106	24	50	27.3	8	

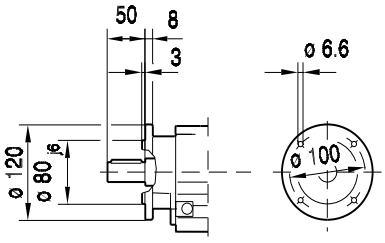
01 025 01 01

RF37..

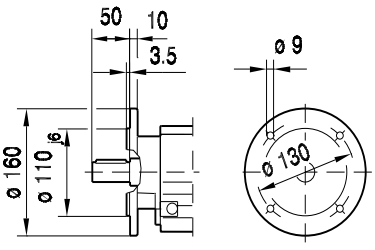


10

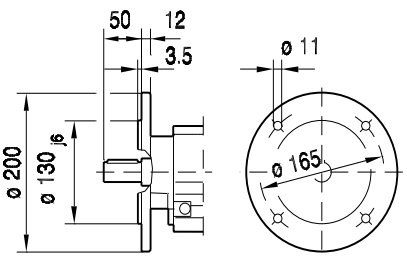
ø 120



ø 160



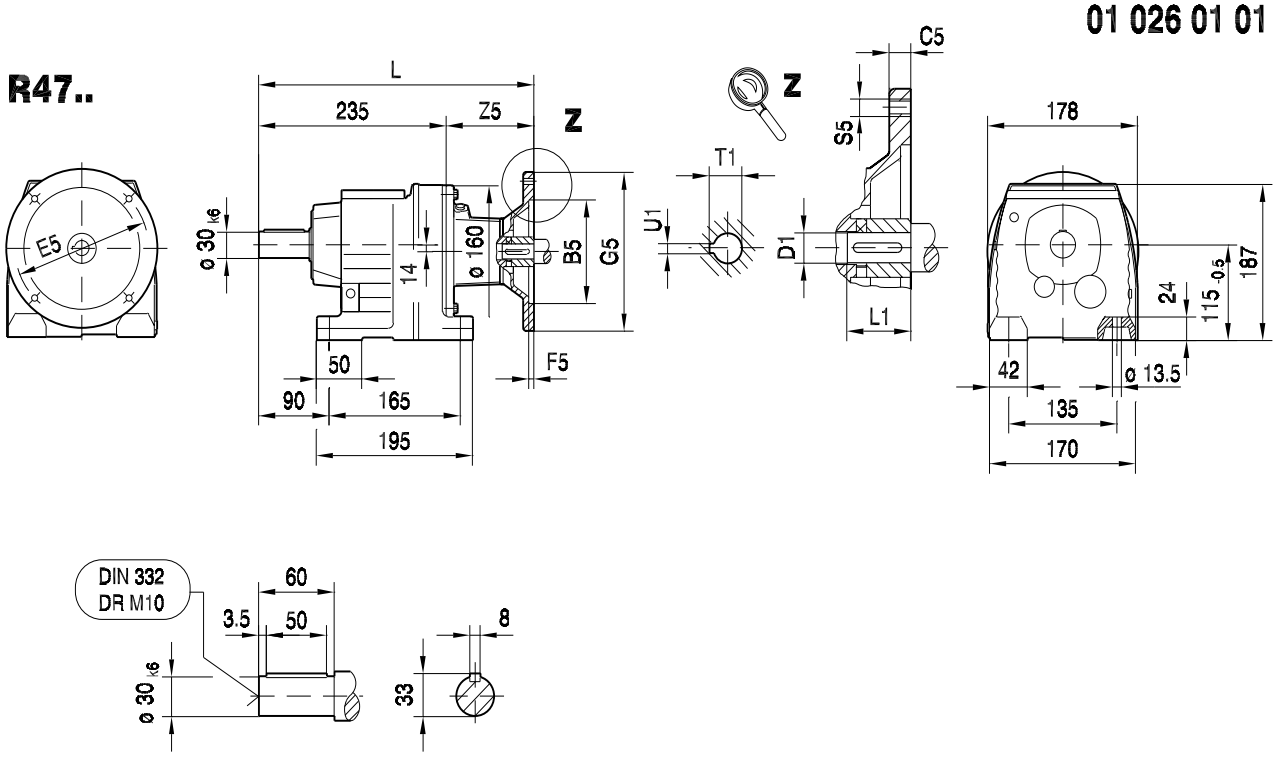
ø 200



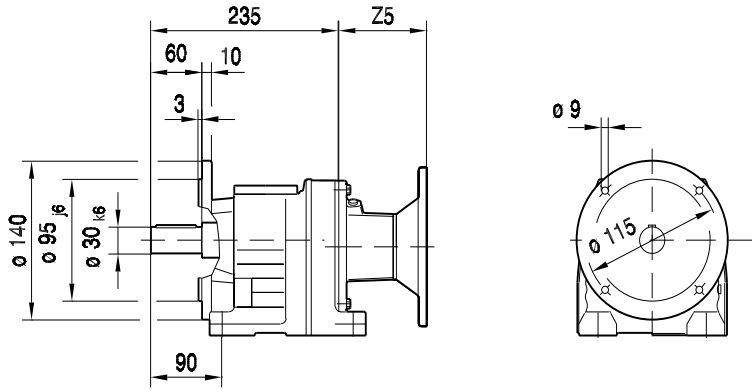
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	279	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	279	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	313	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	313	M10	106	24	50	27.3	8	

01 026 01 01

R47..



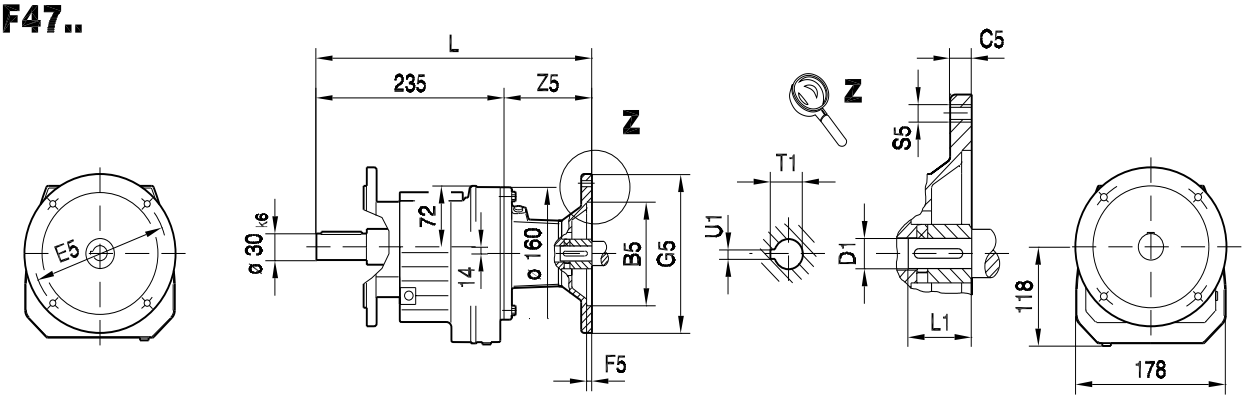
R47F..

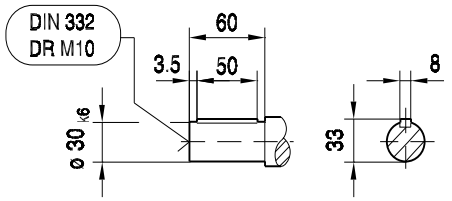


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	301	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	301	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	334	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	334	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	369	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	369	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	426	M12	191	38	80	41.3	10	

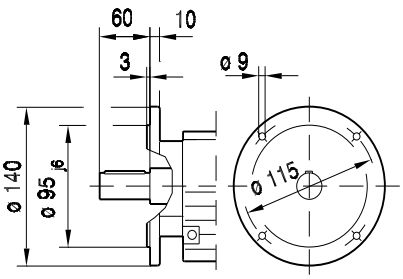
01 027 01 01

RF47..

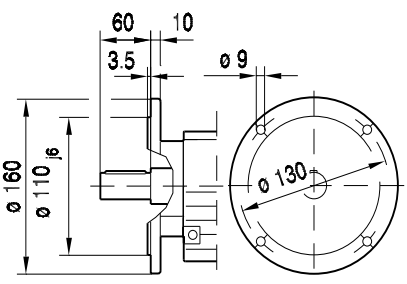




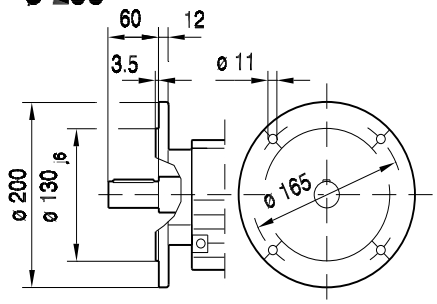
ø 140



ø 160



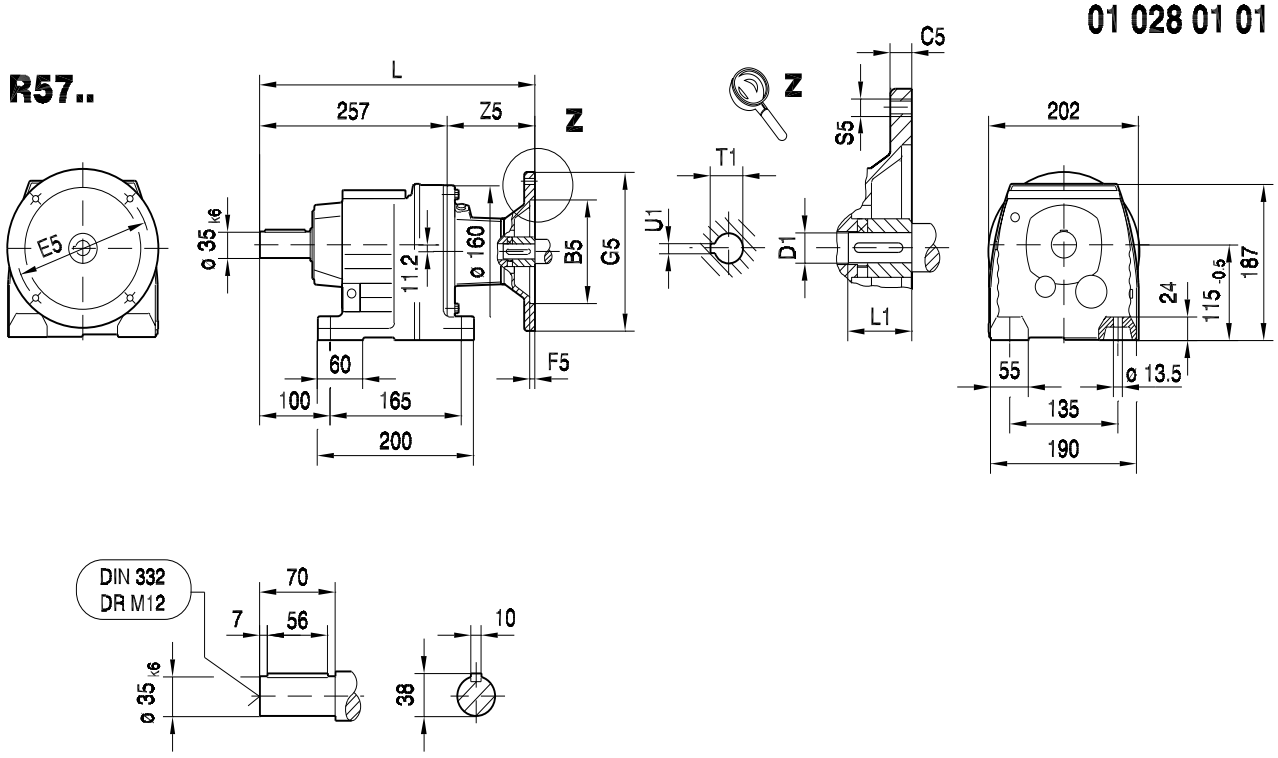
ø 200



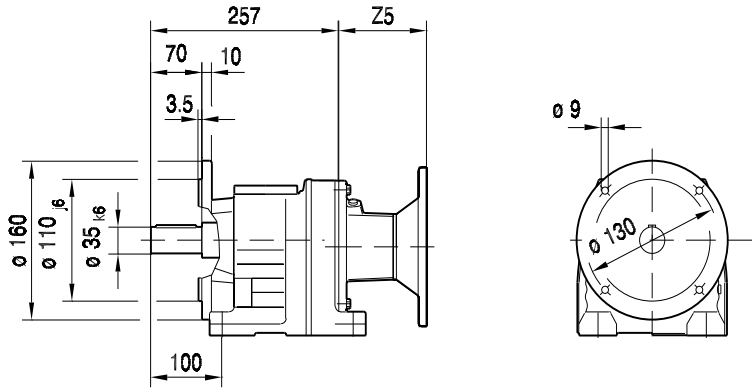
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	301	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	301	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	334	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	334	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	369	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	369	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	426	M12	191	38	80	41.3	10	

01 028 01 01

R57..



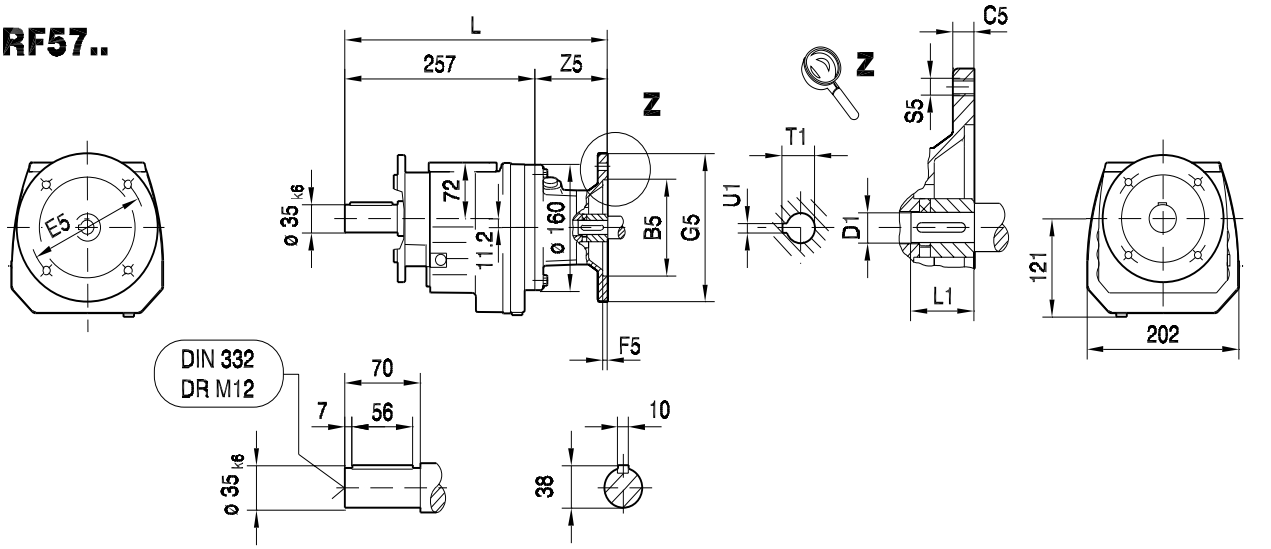
R57F..

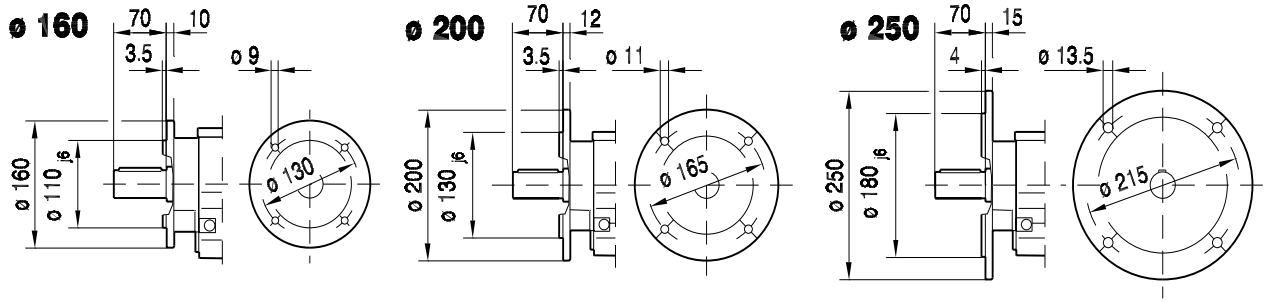


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	323	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	323	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	356	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	356	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	391	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	391	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	448	M12	191	38	80	41.3	10	

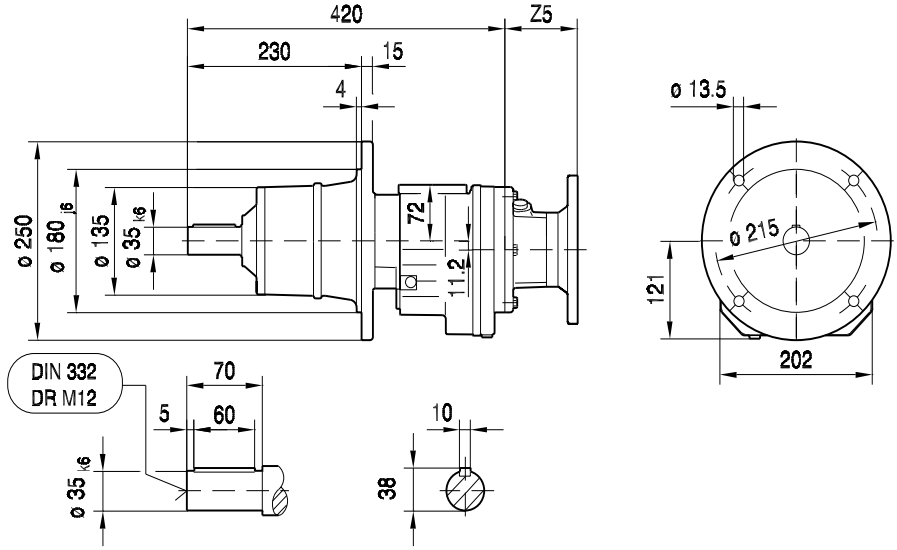
01 029 01 01

RF57..





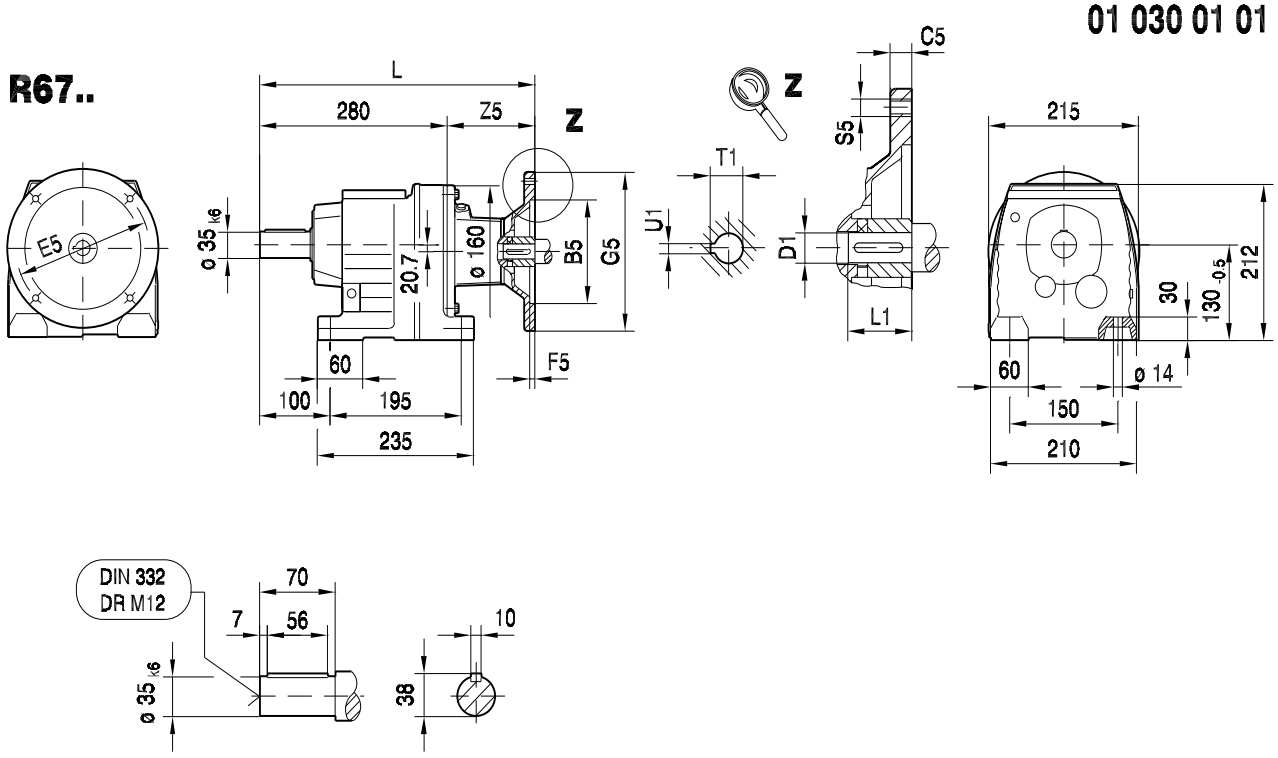
RM57..



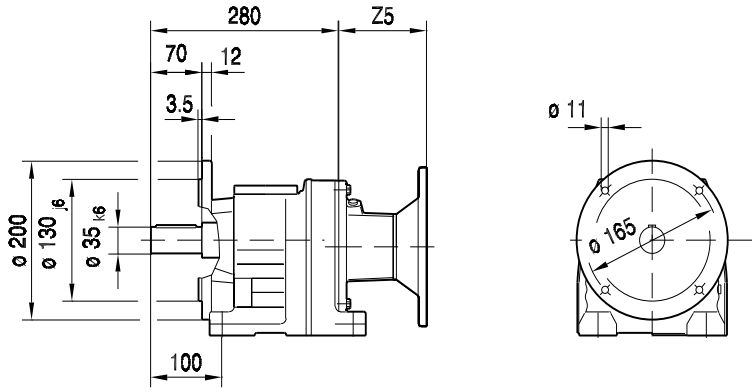
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	323	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	323	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	356	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	356	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	391	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	391	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	448	M12	191	38	80	41.3	10	

01 030 01 01

R67..



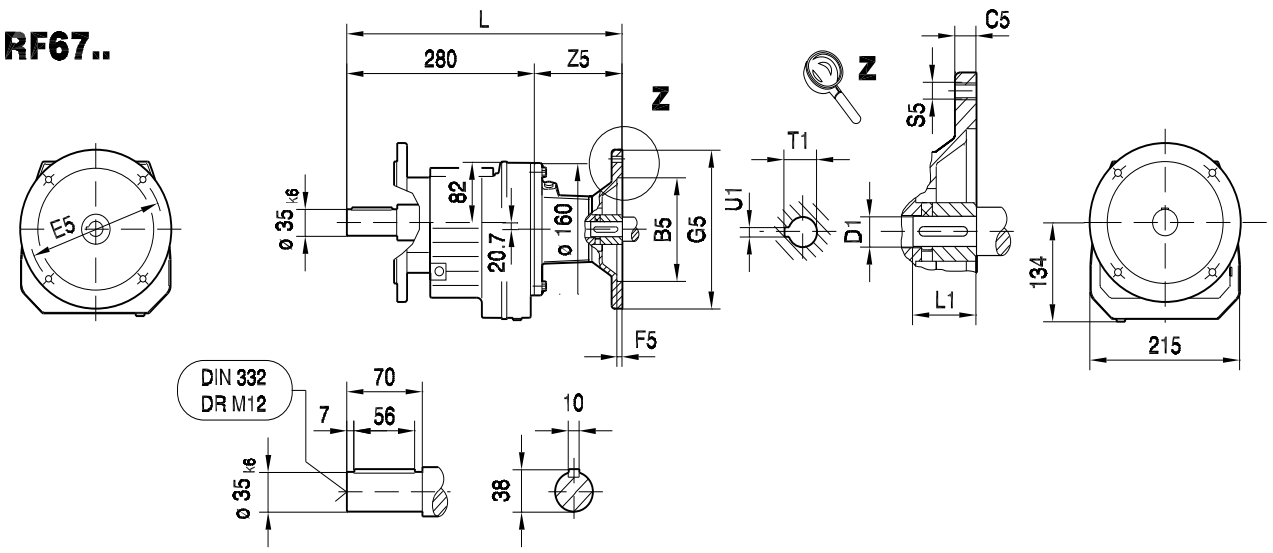
R67F..

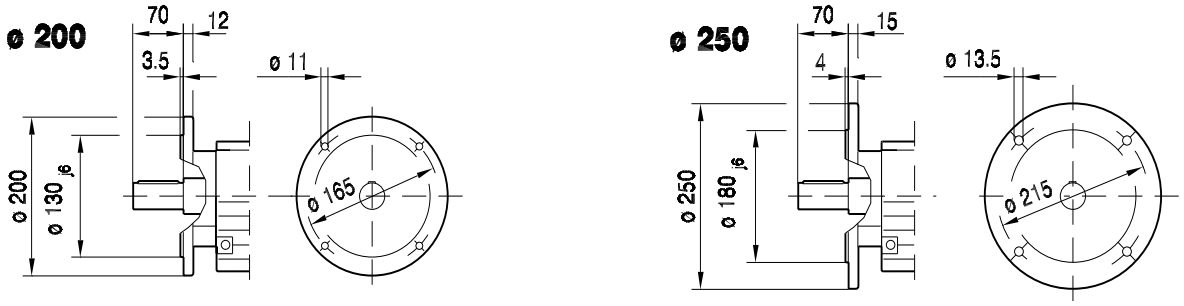


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	346	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	346	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	379	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	379	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	414	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	414	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	471	M12	191	38	80	41.3	10	

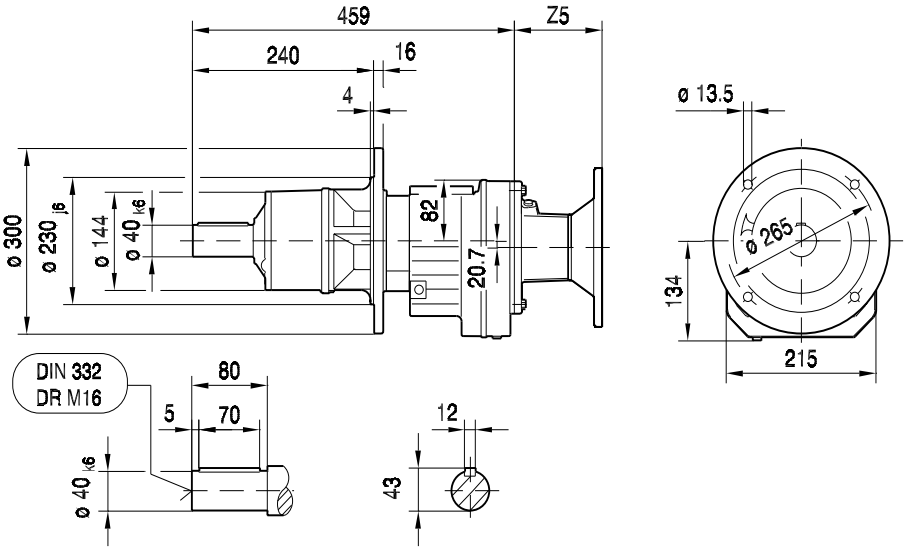
01 031 01 01

RF67..





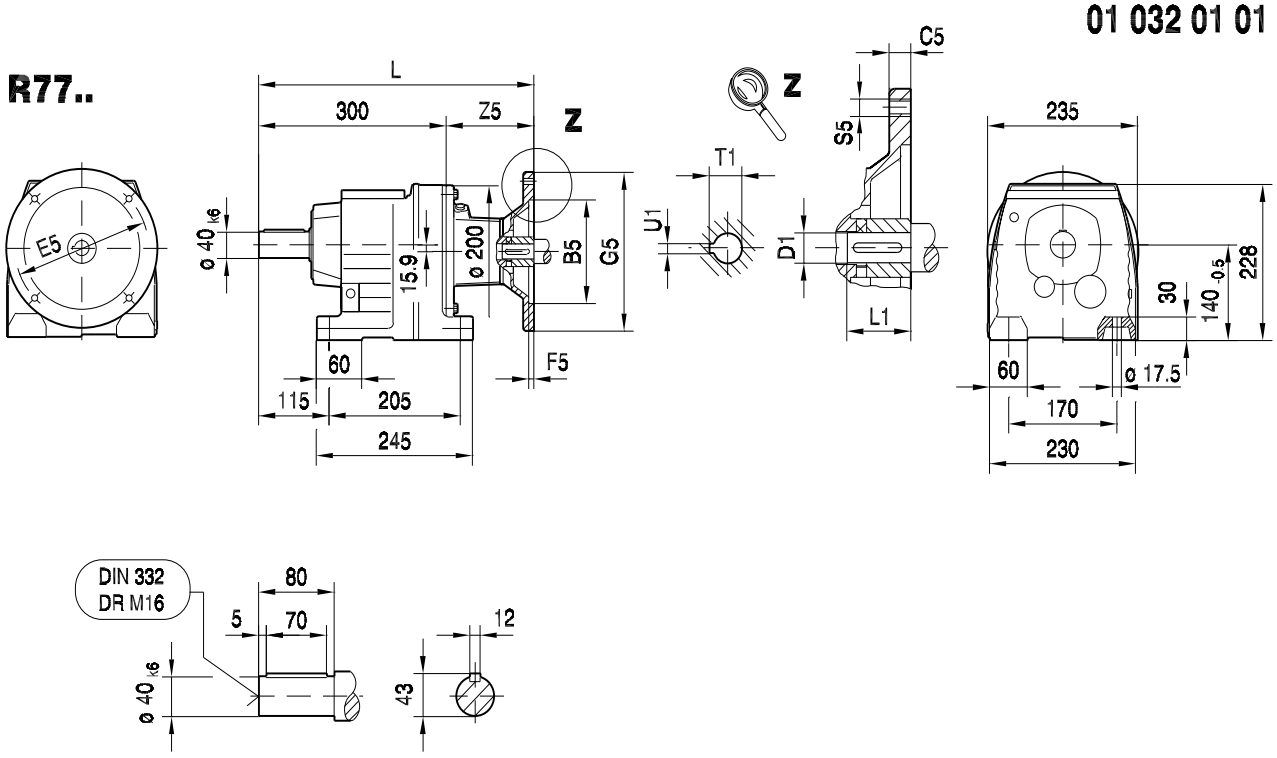
RM67..



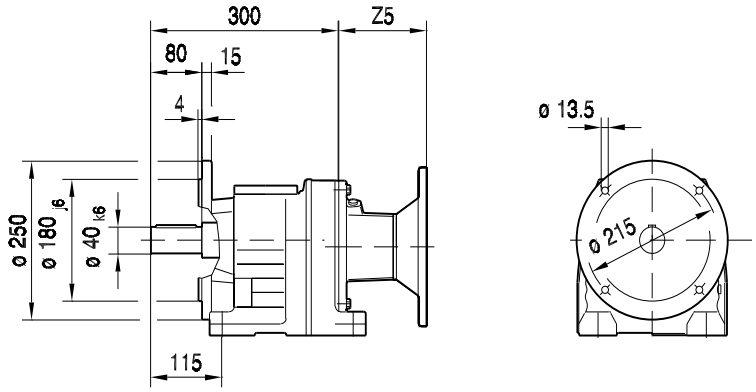
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	346	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	346	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	379	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	379	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	414	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	414	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	471	M12	191	38	80	41.3	10	

01 032 01 01

R77..



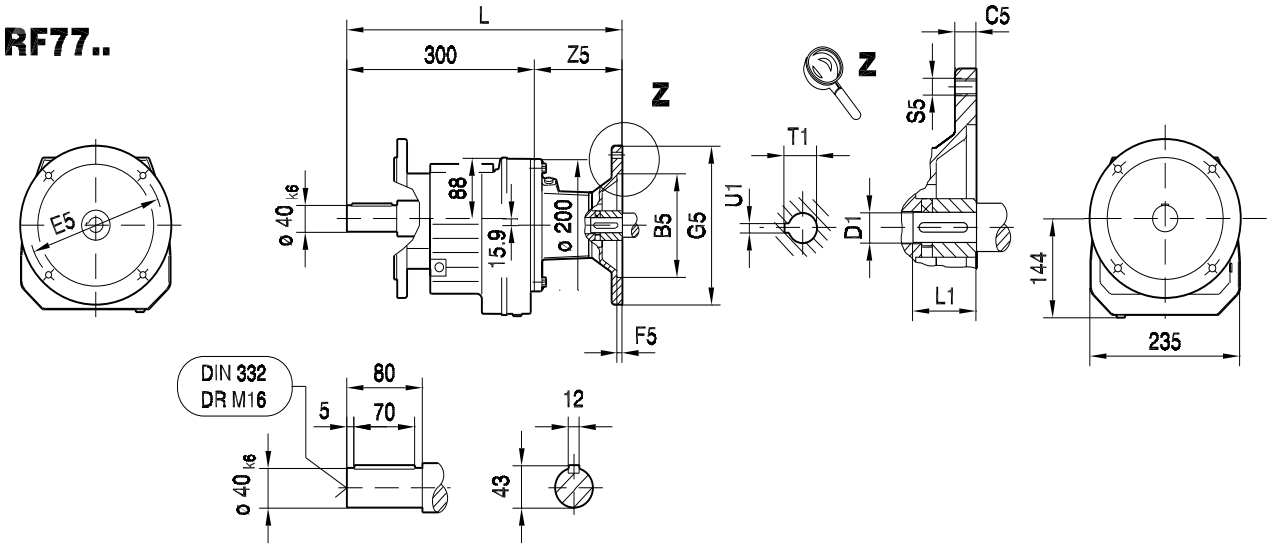
R77F..

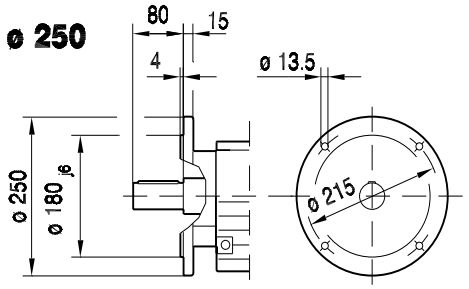


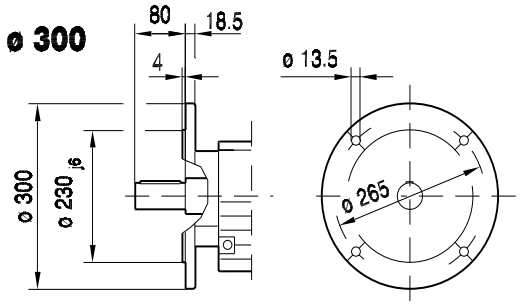
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	360	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	360	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	392	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	392	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	426	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	426	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	479	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	479	M12	179	38	80	41.3	10	

01 033 01 01

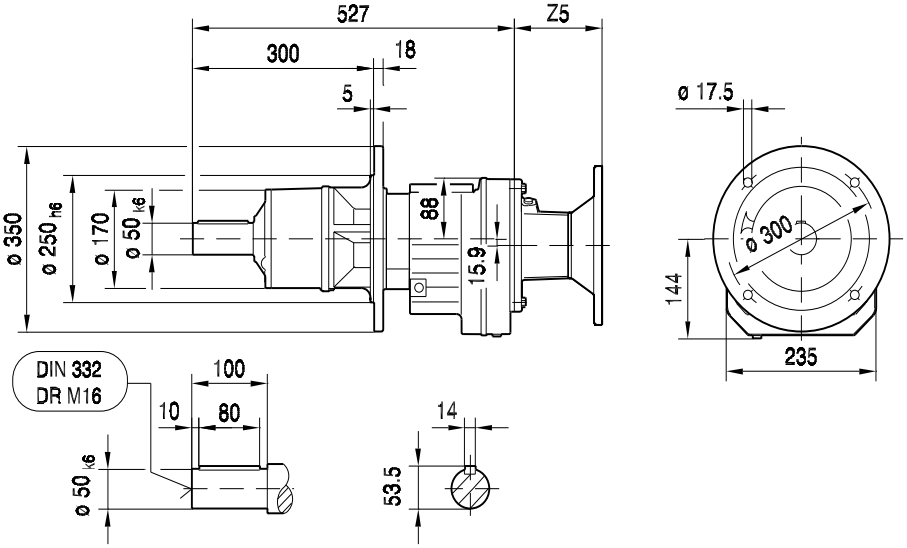
RF77..







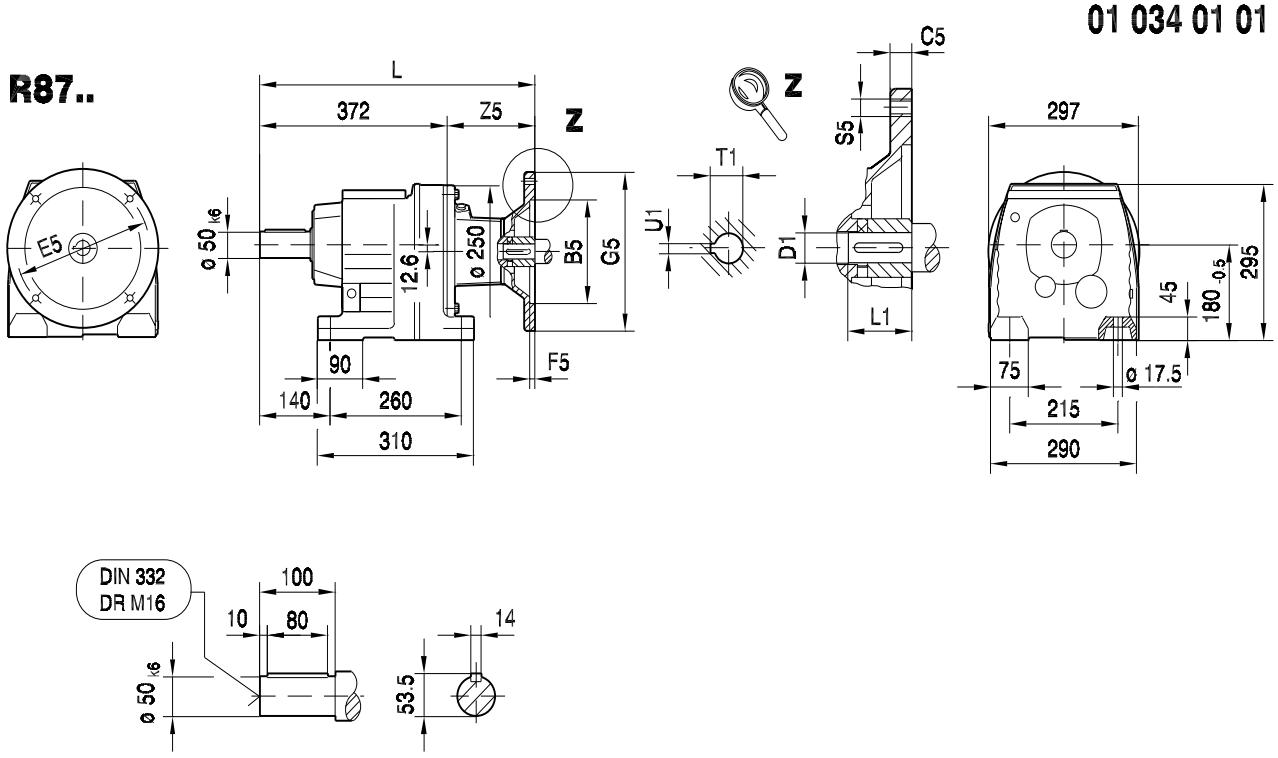
RM77..



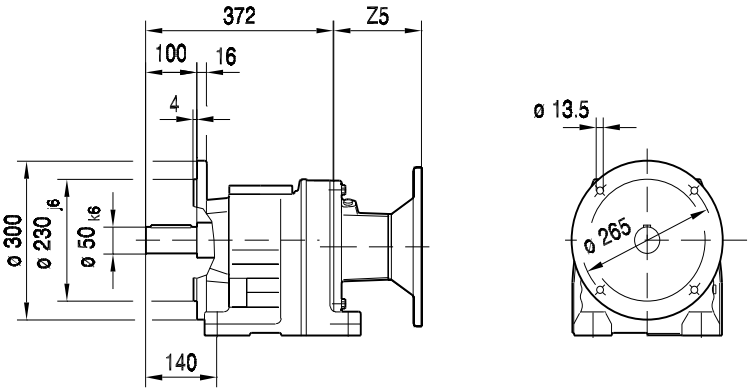
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	360	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	360	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	392	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	392	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	426	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	426	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	479	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	479	M12	179	38	80	41.3	10	

01 034 01 01

R87..



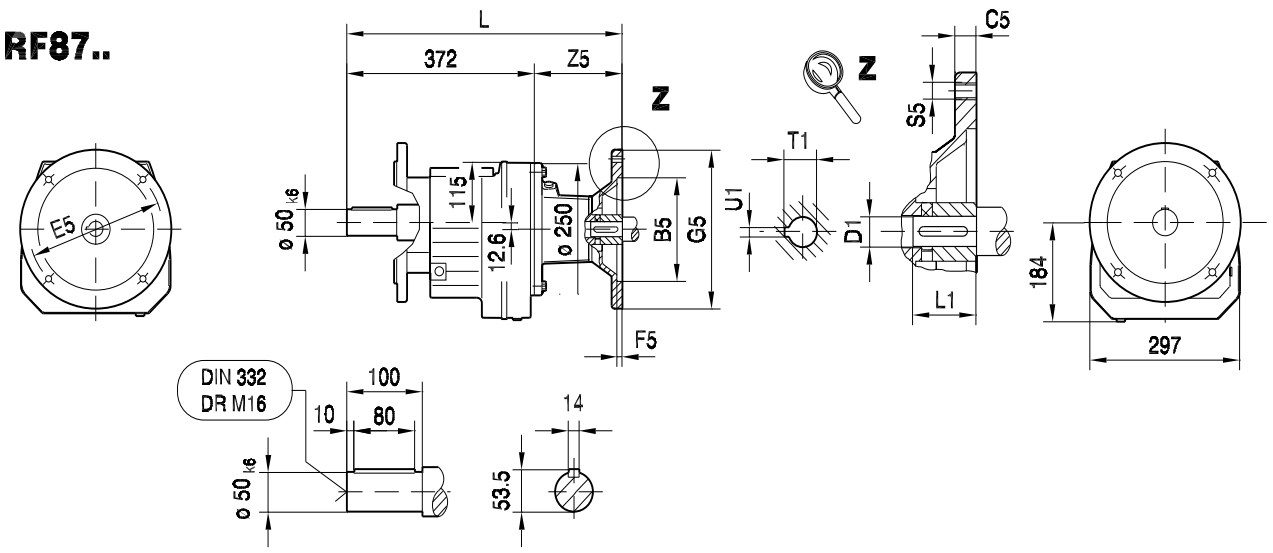
R87F..



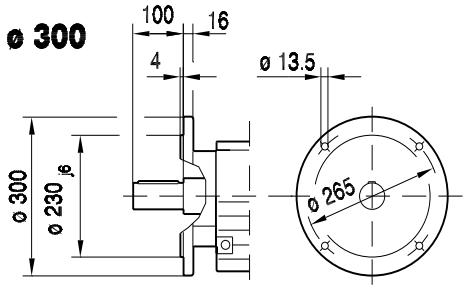
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	459	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	459	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	493	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	493	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	546	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	546	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	604	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	604	M16	232	48	110	51.8	14	

01 035 01 01

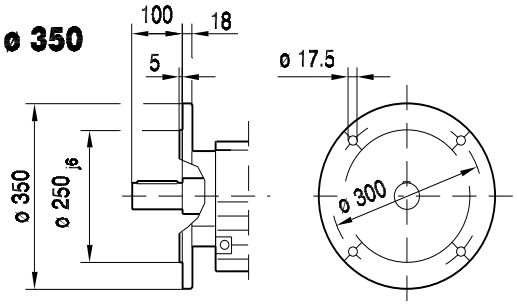
RF87..



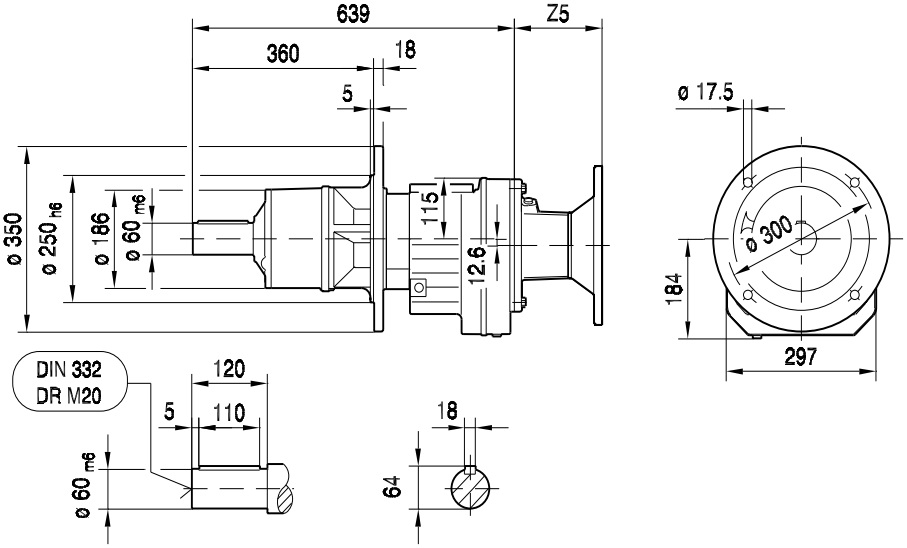
ø 300



ø 350

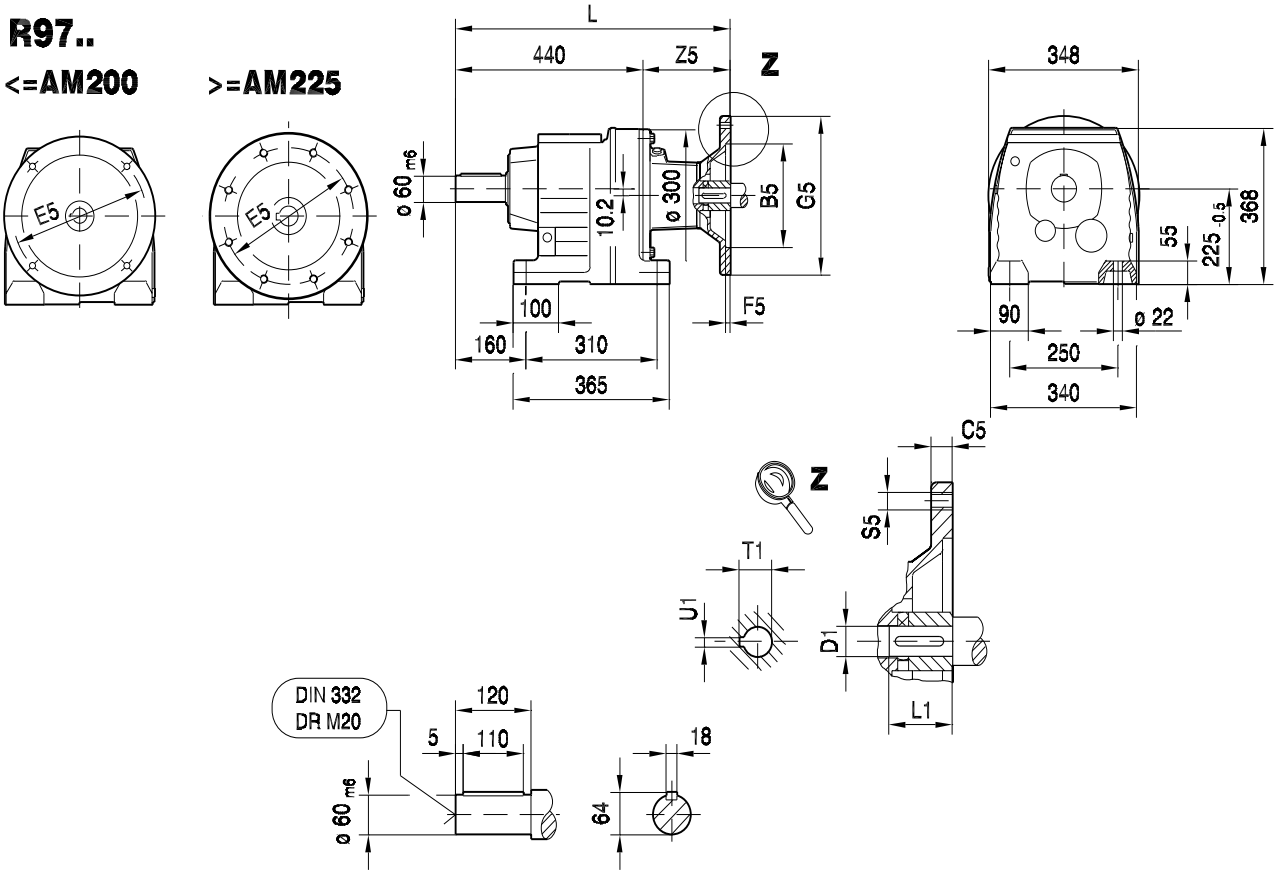


RM87..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	459	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	459	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	493	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	493	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	546	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	546	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	604	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	604	M16	232	48	110	51.8	14	

01 036 01 01

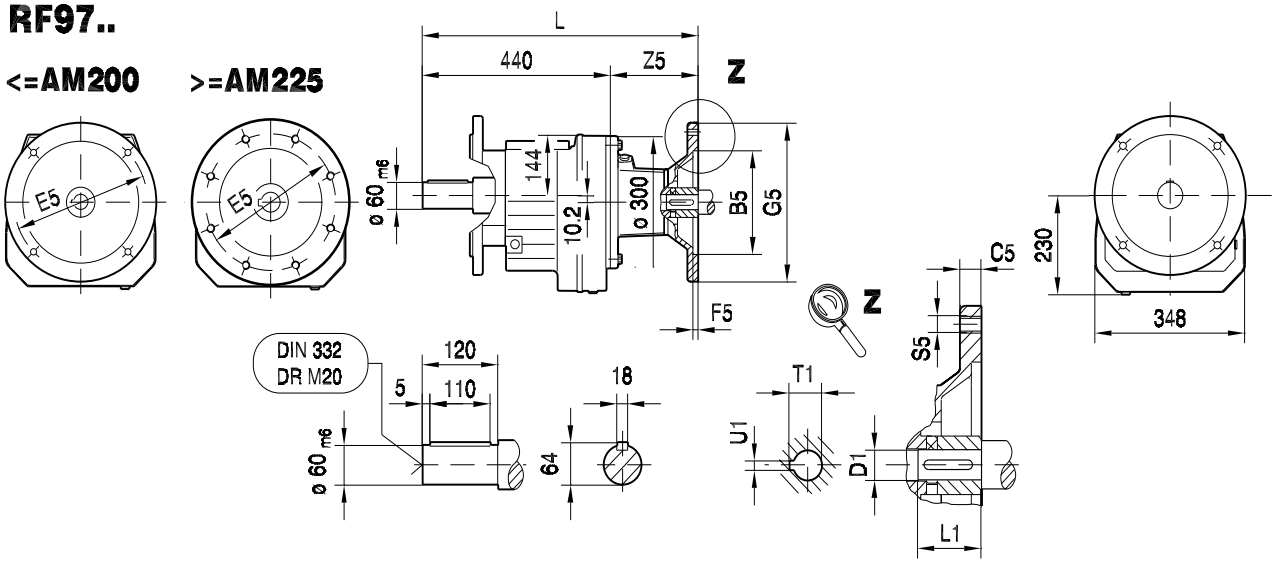


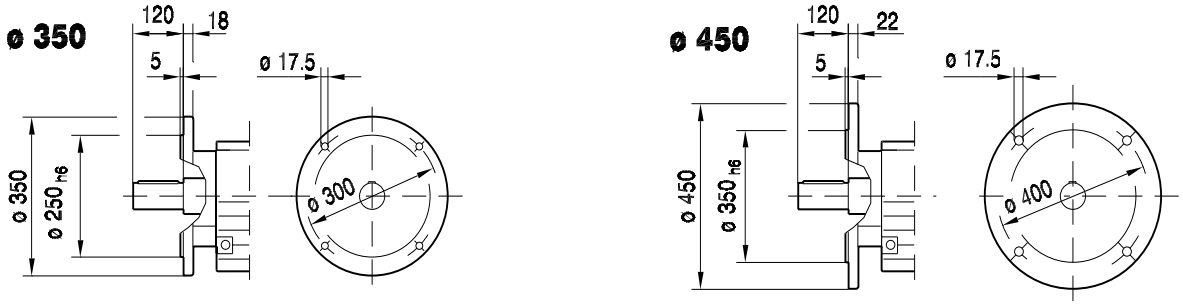
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	556	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	556	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	609	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	609	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	667	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	667	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	708	M16	268	55	110	59.3	16	

01 037 01 01

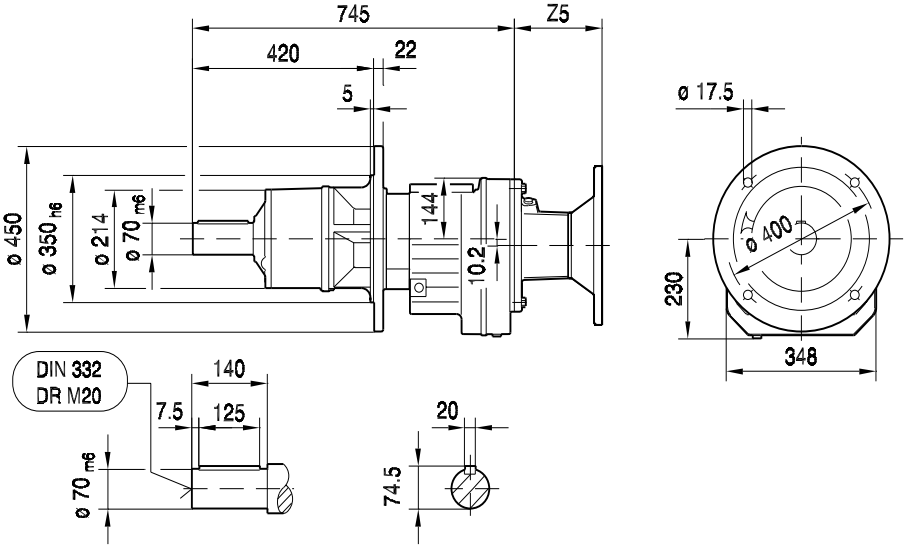
RF97..

<=AM200 >=AM225



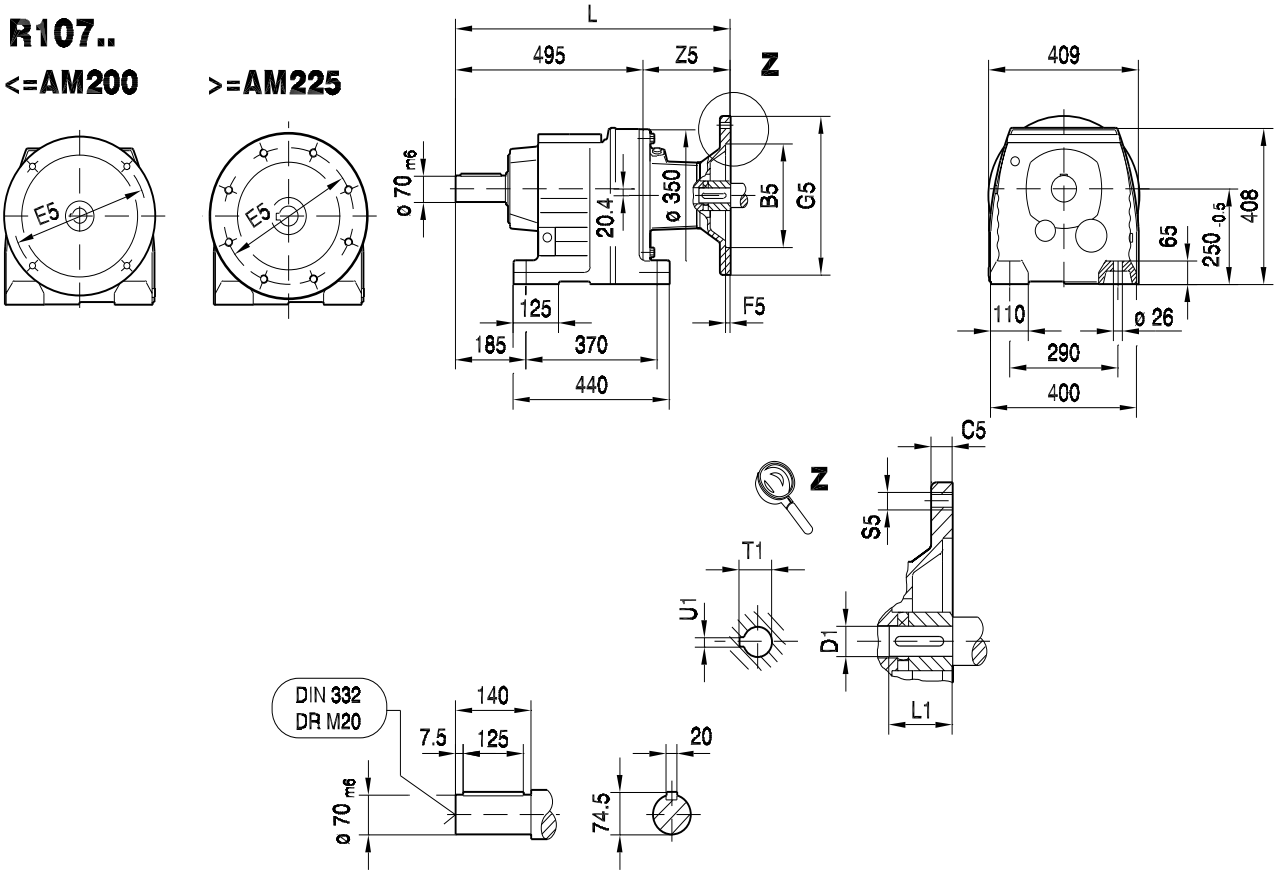


RM97..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	556	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	556	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	609	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	609	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	667	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	667	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	708	M16	268	55	110	59.3	16	

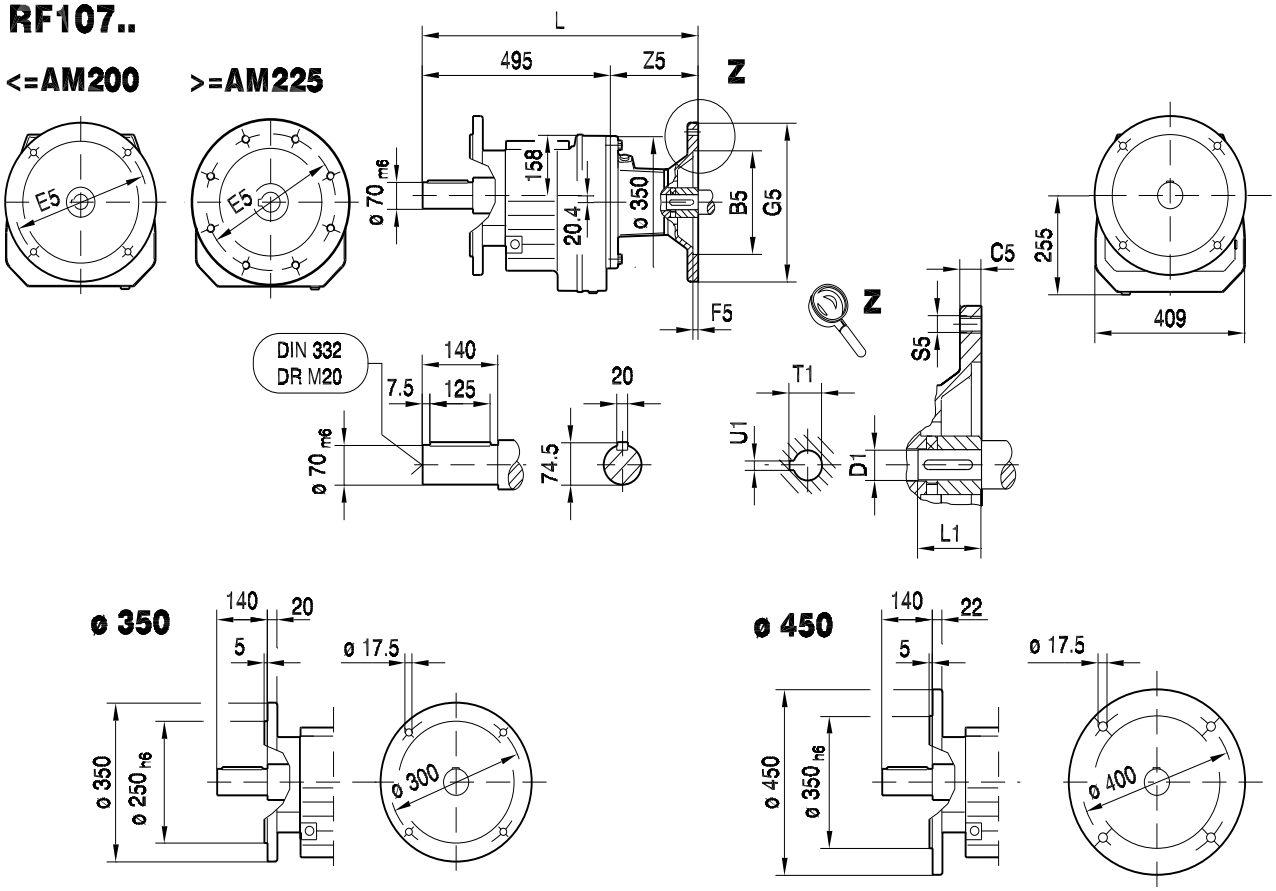
01 038 01 01



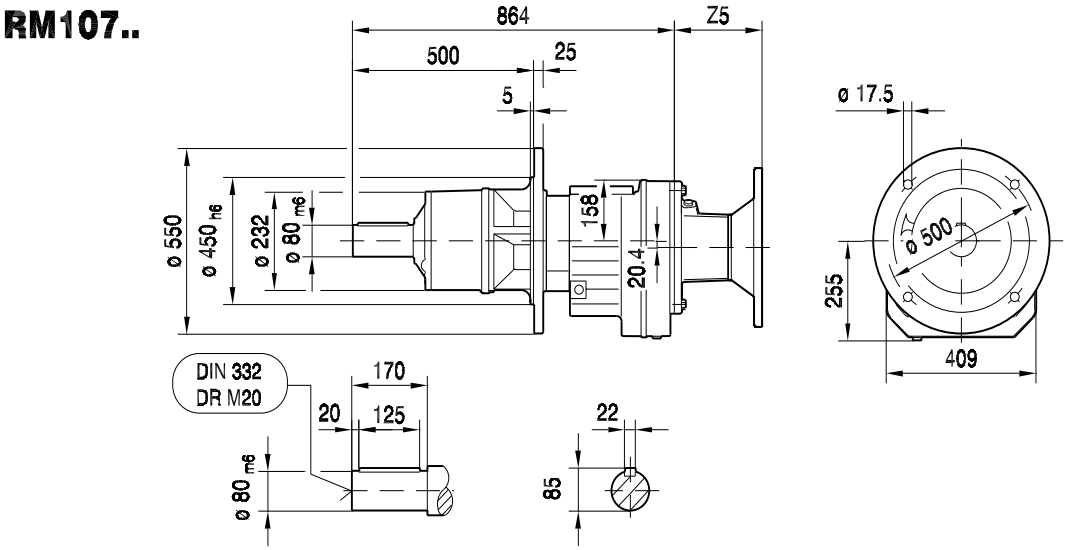
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	605	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	605	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	658	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	658	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	716	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	716	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	757	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	772	M16	277	60	140	64.4	18	

01 039 01 01

RF107..

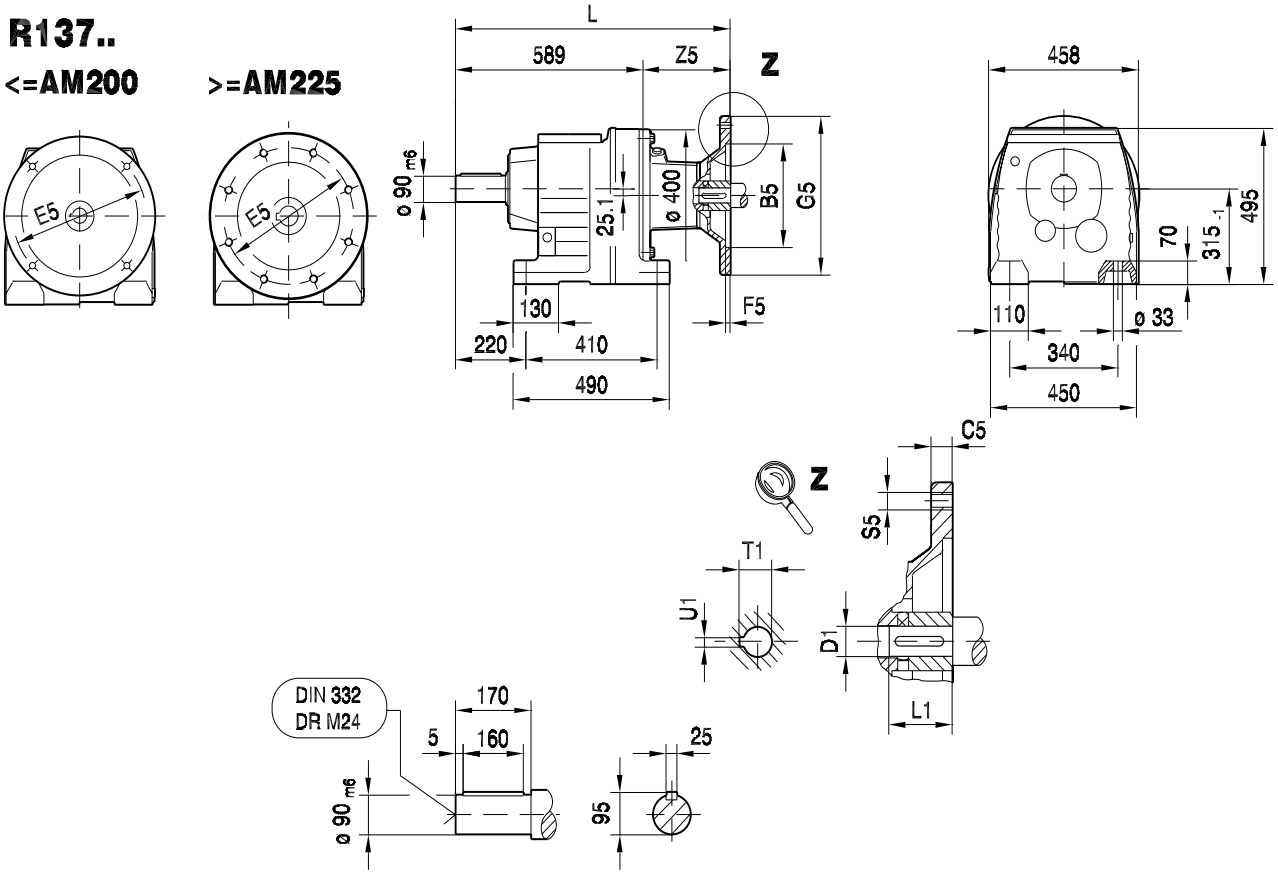


RM107..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	605	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	605	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	658	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	658	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	716	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	716	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	757	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	772	M16	277	60	140	64.4	18	

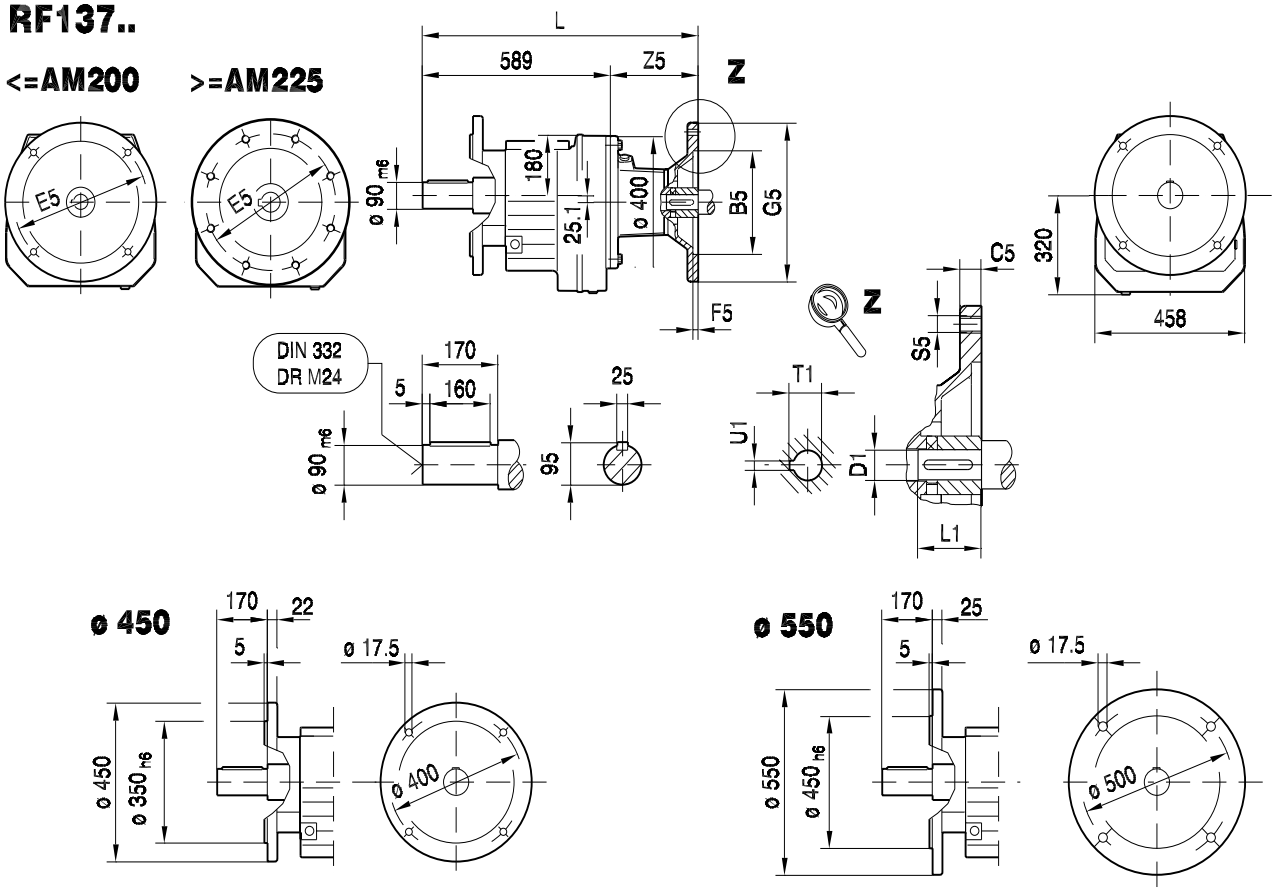
01 040 01 01



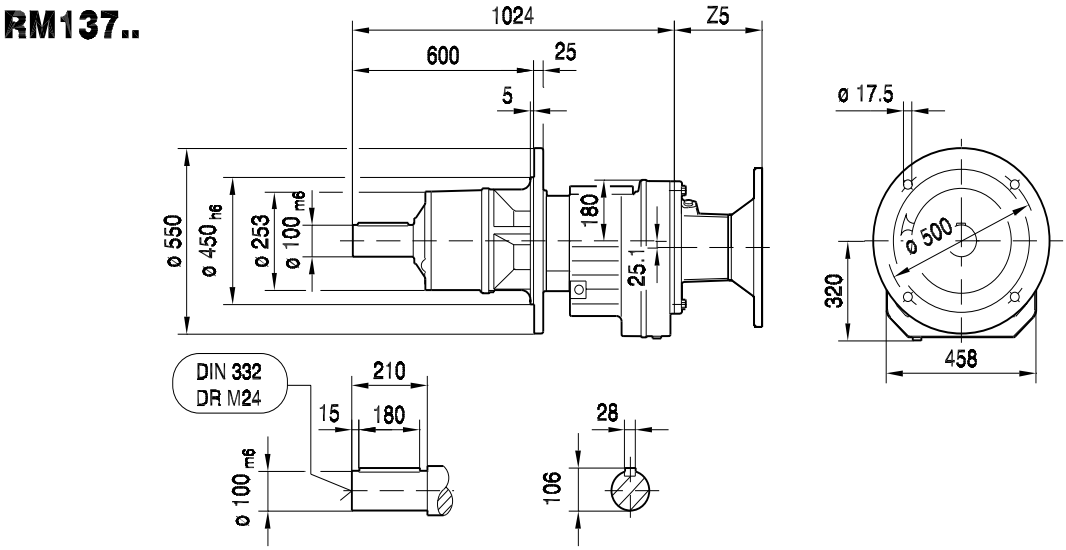
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM132S/M	230	16	265	5.0	300	745	M12	156	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	745	M12	156	38	80	41.3	10	
AM160	250	18	300	6.0	350	803	M16	214	42	110	45.3	12	
AM180	250	18	300	6.0	350	803	M16	214	48	110	51.8	14	
AM200	300	20	350	7.0	400	844	M16	255	55	110	59.3	16	
AM225	350	22	400	7.0	450	859	M16	270	60	140	64.4	18	

01 041 01 01

RF137..

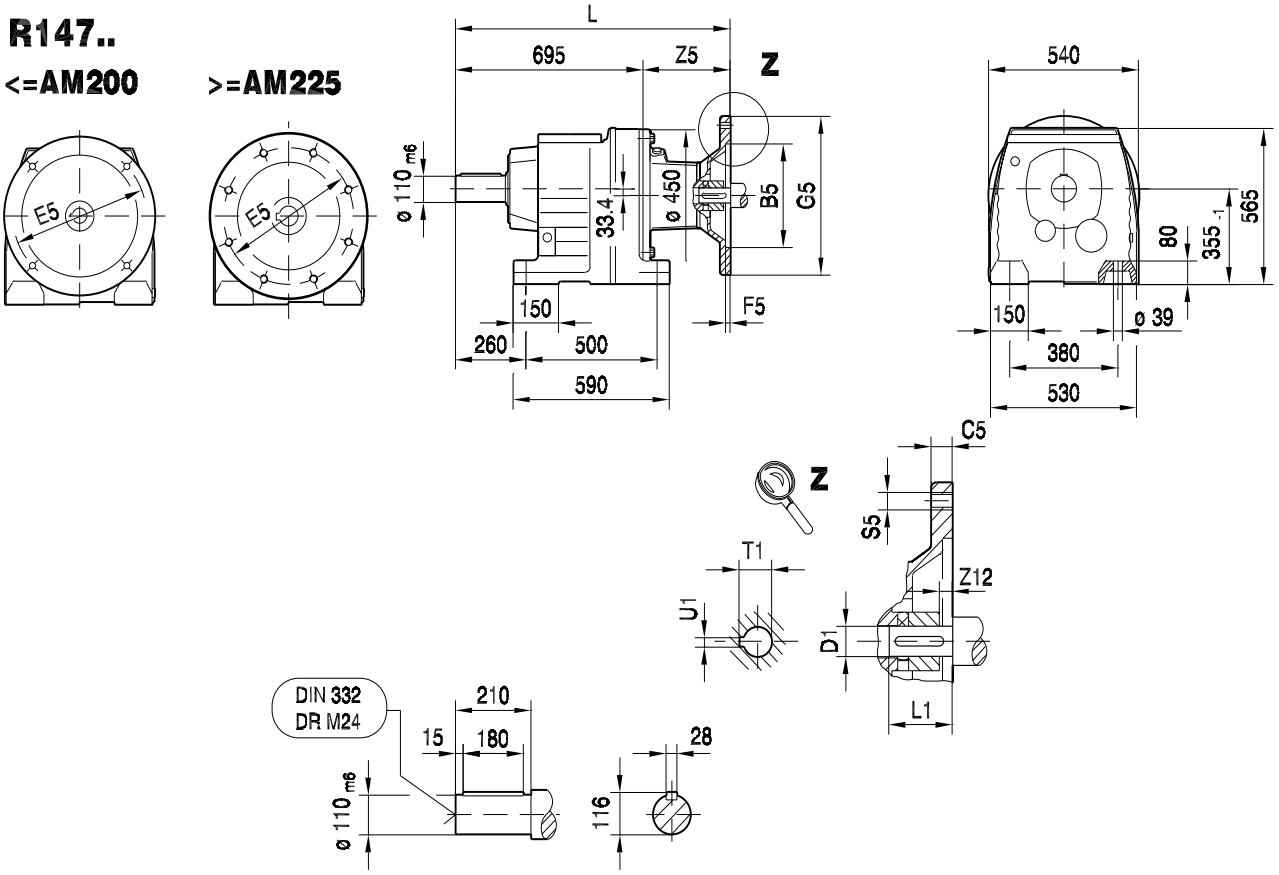


RM137..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM132S/M	230	16	265	5.0	300	745	M12	156	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	745	M12	156	38	80	41.3	10	
AM160	250	18	300	6.0	350	803	M16	214	42	110	45.3	12	
AM180	250	18	300	6.0	350	803	M16	214	48	110	51.8	14	
AM200	300	20	350	7.0	400	844	M16	255	55	110	59.3	16	
AM225	350	22	400	7.0	450	859	M16	270	60	140	64.4	18	

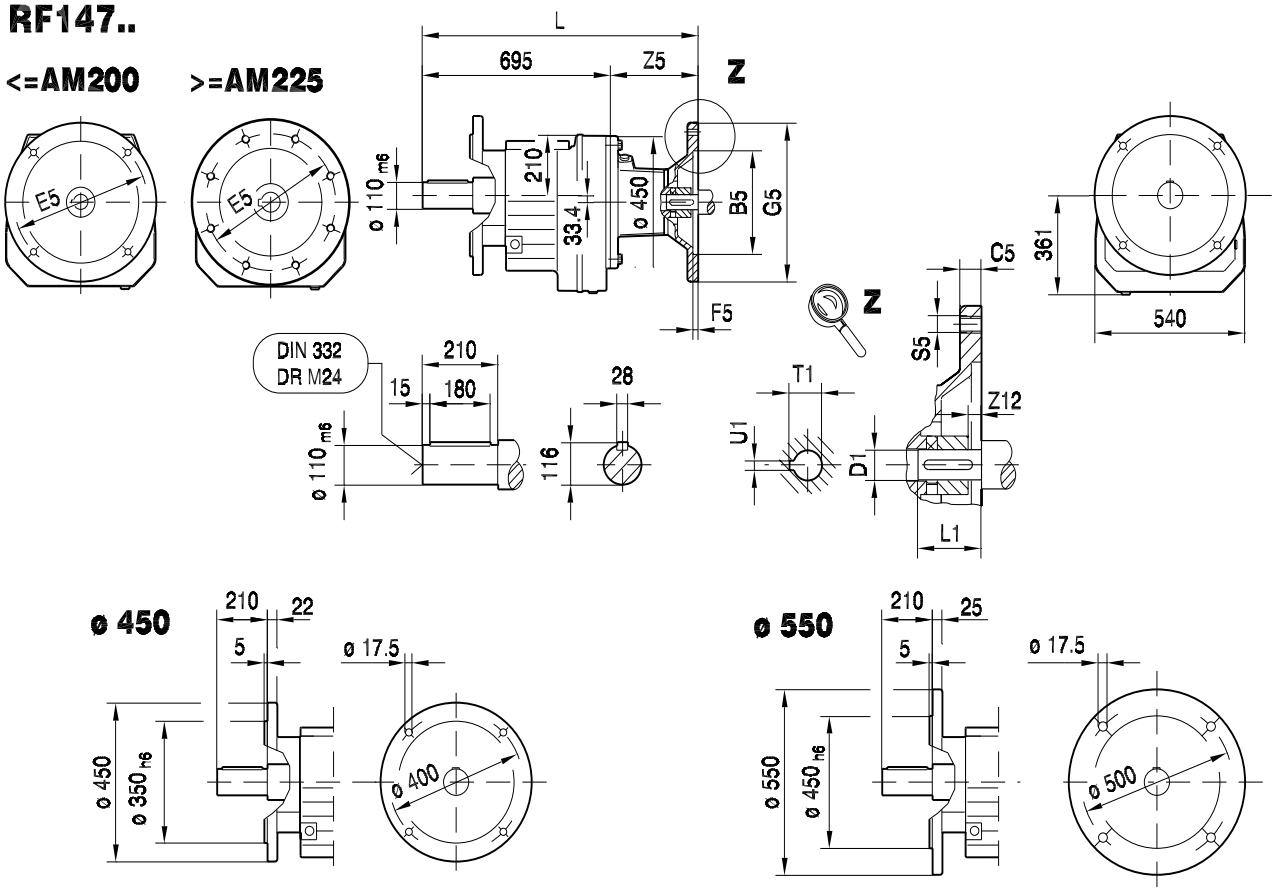
01 042 01 01



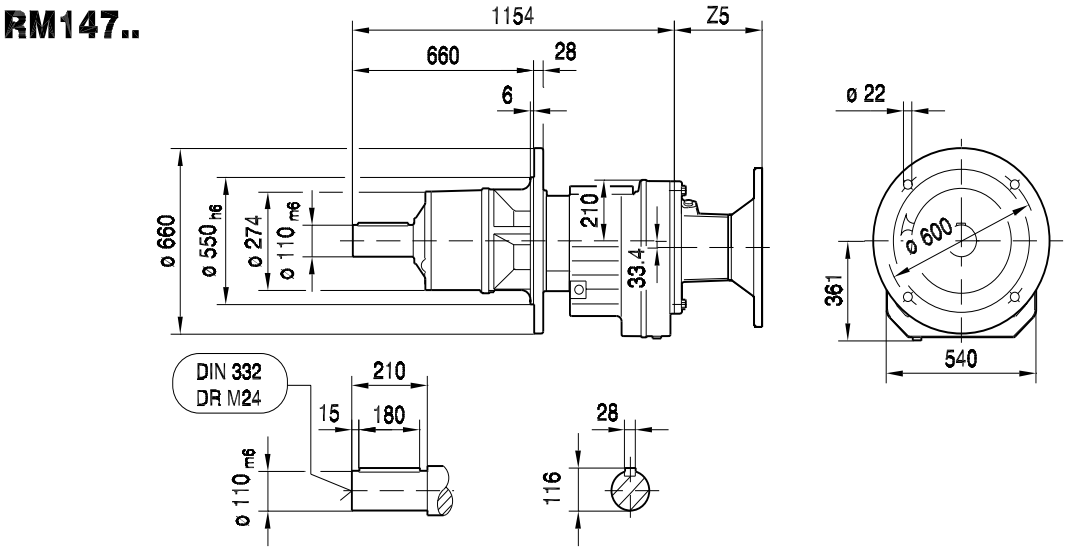
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132ML	230	16	265	5.0	300	843	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	901	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	901	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	942	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	957	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1031	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1031	M16	336	19	75	140	79.9	20

01 043 01 01

RF147..

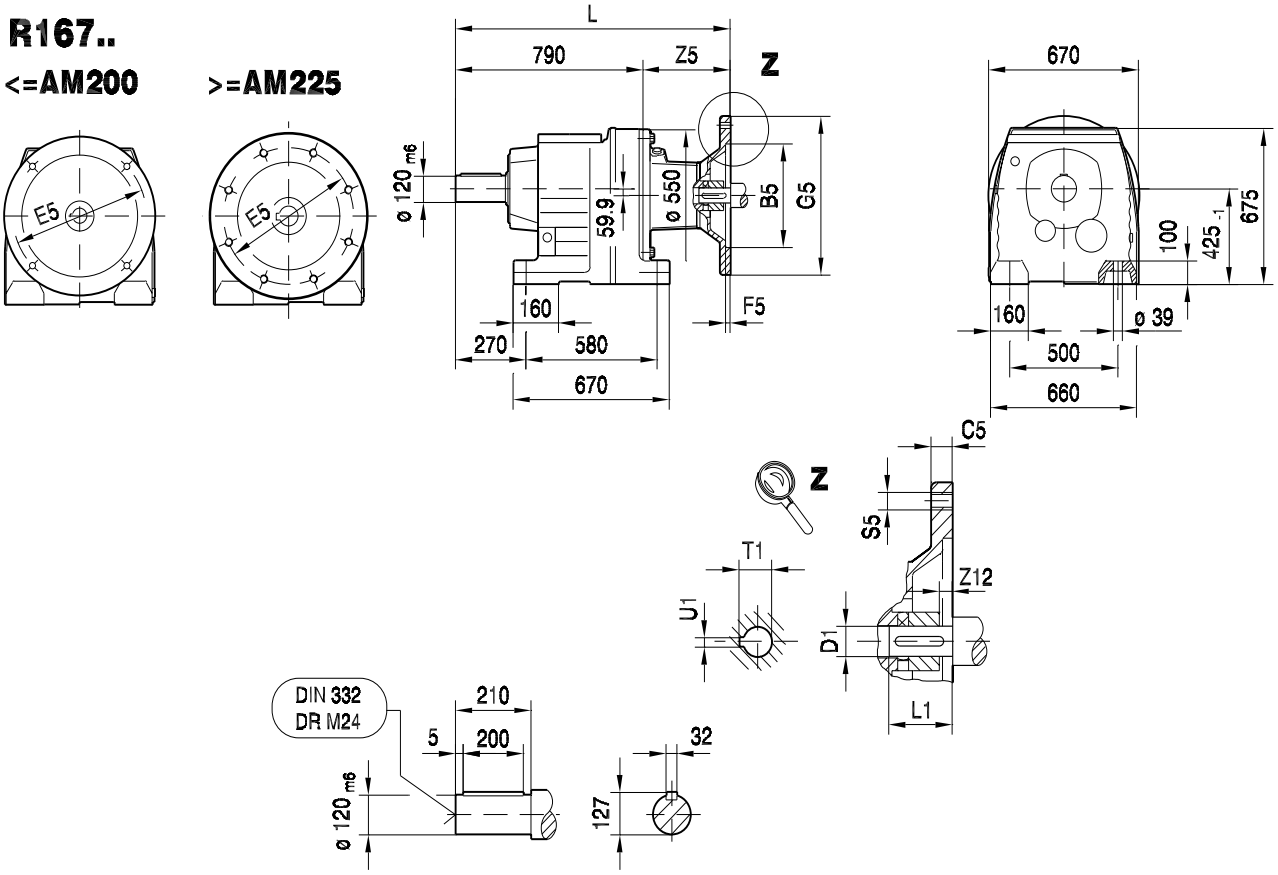


RM147..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132ML	230	16	265	5.0	300	843	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	901	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	901	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	942	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	957	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1031	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1031	M16	336	19	75	140	79.9	20

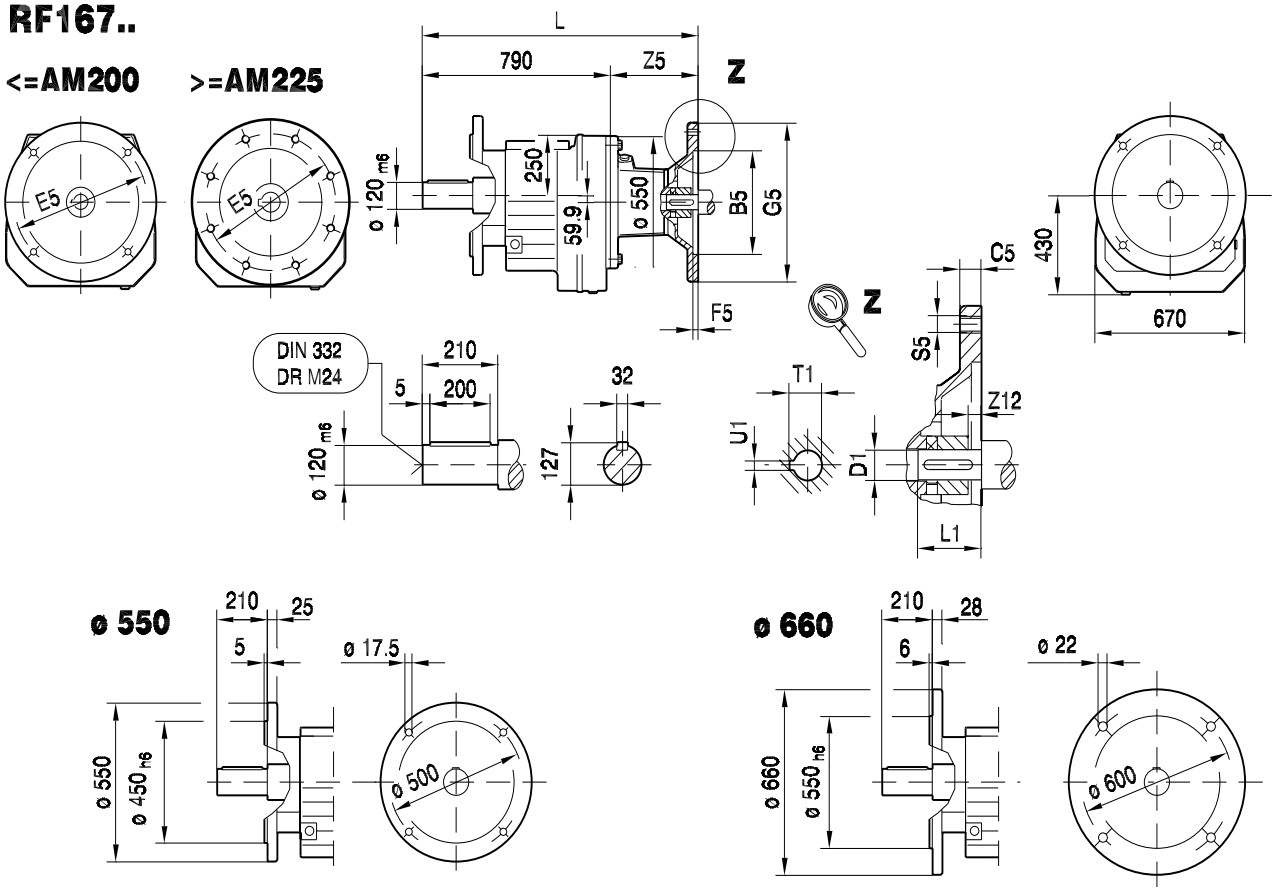
01 044 01 01



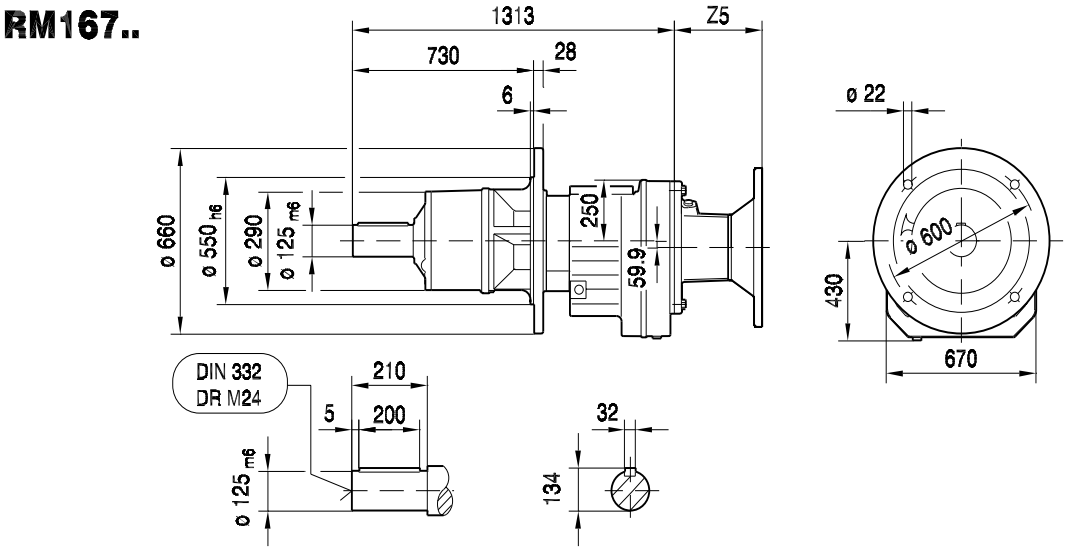
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	988	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	988	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	1029	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	1044	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1118	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1118	M16	328	19	75	140	79.9	20

01 045 01 01

RF167..

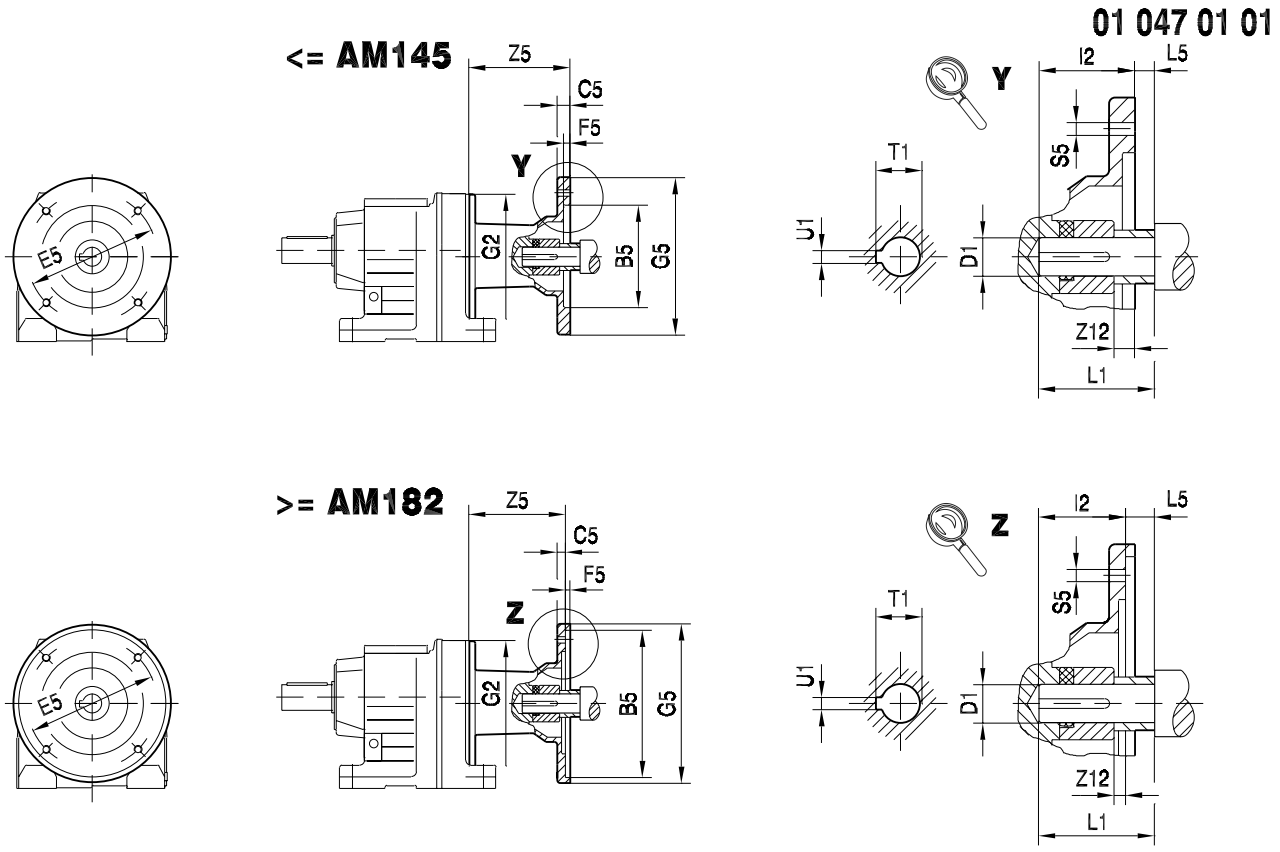


RM167..



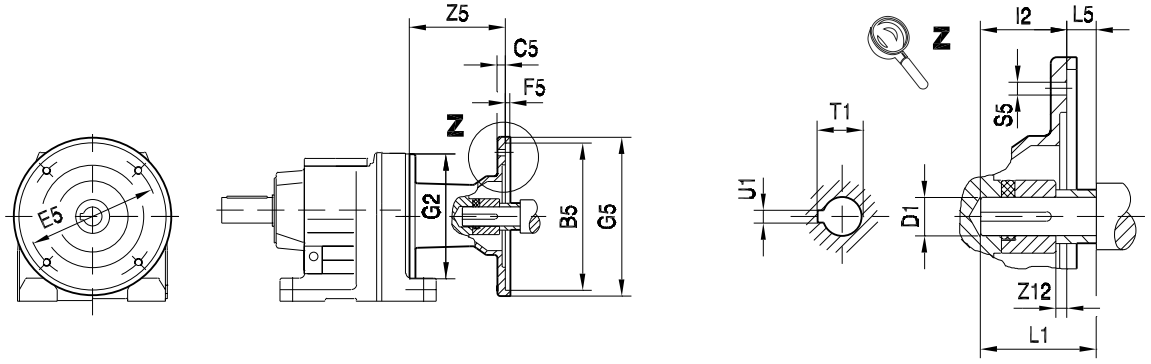
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	988	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	988	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	1029	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	1044	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1118	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1118	M16	328	19	75	140	79.9	20

10.6 R.. AM.. (NEMA) [mm]



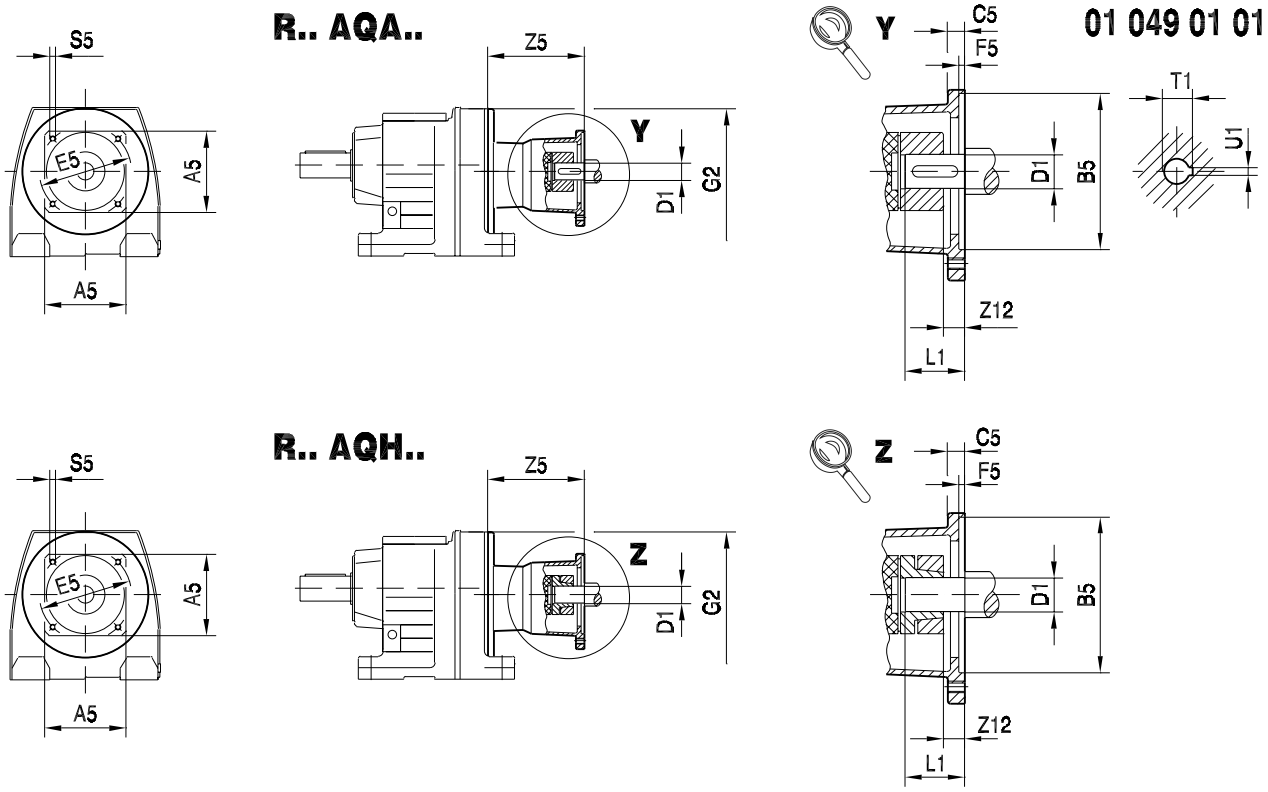
		B5	C5	E5	F5	G2	G5	L5	S5	Z5	Z12	D1	L1	T1	U1
R..27 R..37	**AM56**	114.3	11	149.2	4.5	120	170	-4.8	10.5	93.5	16.5	15.875	47	18.1	4.76
	AM143		12					3		117	14.5	22.225	57	24.7	
	AM145														
R..47 R..57 R..67	**AM56**	114.3	11	149.2	4.5	160	170	-4.8	10.5	87	16.5	15.875	47	18.1	4.76
	AM143		12					3		110.5	14.5	22.225	57	24.7	
	AM145														
	AM182	215.9	10	184	5		228	3	15	147.5	16.5	28.575	69	31.7	6.35
	AM184														
R..77	**AM56**	114.3	11	149.2	4.5	200	170	-4.8	10.5	81	16.5	15.875	47	18.1	4.76
	AM143		12					3		103.5	14.5	22.225	57	24.7	
	AM145														
	AM182	215.9	10	184	5		228	3	15	139.5	16.5	28.575	69	31.7	6.35
	AM184														
	AM213/215		11					6.3		188.5	15.8	34.925	85	38.7	7.94
R..87	**AM143**	114.3	12	149.2	4.5	250	170	3	10.5	98.5	14.5	22.225	57	24.7	4.76
	AM145														
	AM182	215.9	10	184	5		228	3	15	134.5	16.5	28.575	69	31.7	6.35
	AM184														
	AM213/215		11					6.3		183.5	15.8	34.925	85	38.7	7.94
	AM254/256		12					6.3		234	8.8	41.275	101	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	6.3	15	241	15.8	47.625	117	53.4	12.7
R..97	**AM182**	215.9	10	184	5	300	228	3	15	129.5	16.5	28.575	69	31.7	6.35
	AM184														
	AM213/215		11					6.3		178.5	15.8	34.925	85	38.7	7.94
	AM254/256		12					6.3		229	8.8	41.275	101	45.8	9.53
	AM284/286	266.7	20	228.6	5		286	6.3	15	236	15.8	47.625	117	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	6.3	17.5	296	34.8	53.975	133	60	12.7
	AM364/365											60.325	149	67.6	15.875

01 048 01 01

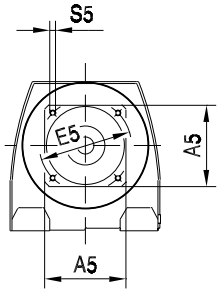


		B5	C5	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1
R..107	AM182	215.9	10	184	5	350	228	66,85	3	15	123.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		172.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		223	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	230	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	290	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875
R..137	AM213/215	215.9	11	184	5	400	228	79.55	6.3	15	165.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		216	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	223	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	283	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875
R..147	AM213/215	215.9	11	184	5	450	228	79.55	6.3	15	157.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		208	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	215	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	275	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875
R..167	AM254/256	215.9	12	184	5	550	228	95.3	6.3	15	200	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	207	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	267	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875

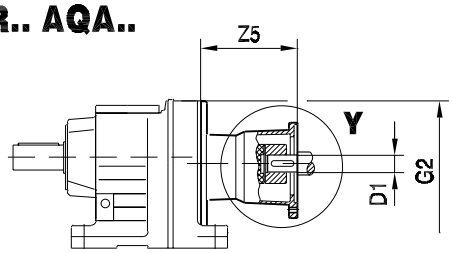
10.7 R.. AQ.. [mm]

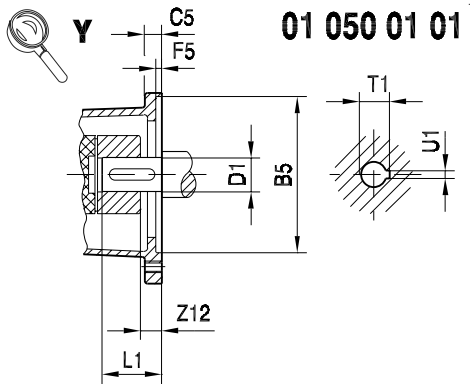


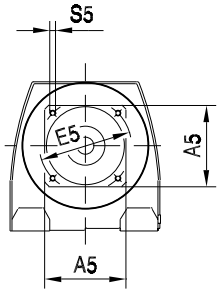
		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
R..27 R..37	AQ..80/1	82	60	8	75	3.5	120	M5	104.5	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	129.5	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	143.5	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	152.5	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
R..47 R..57 R..67	AQ..80/1	82	60	8	75	3.5	160	M5	98	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	123	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	137	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	146	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	175	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								188	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	237.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								261.5	39	34	38	80	41.3	10



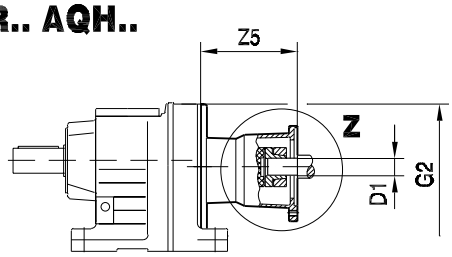
R.. AQA..

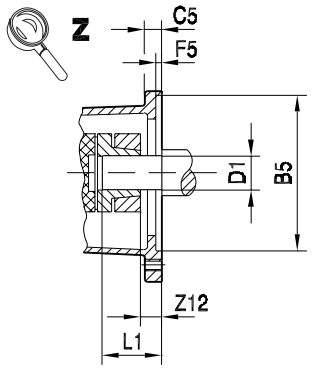






R.. AQH..





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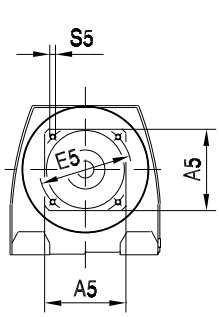
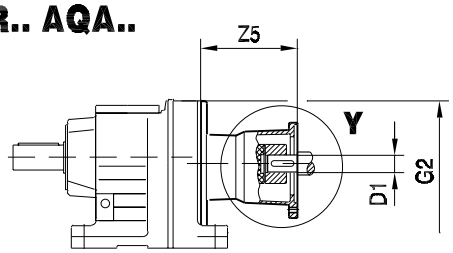
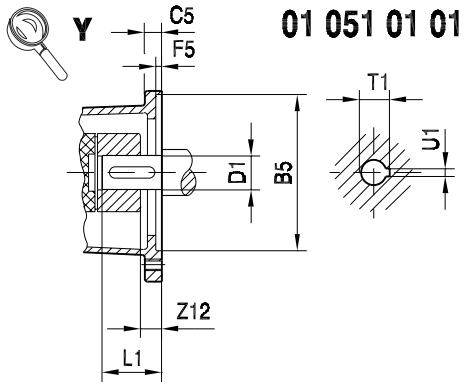
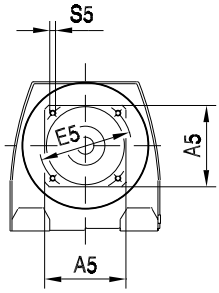
R..77	AQ..80/1	82	60	8	75	3.5	200	M5	92	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	116	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	130	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	139	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	167	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								180	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	225.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								249.5	39	34	38	80	41.3	10
R..87	AQ..100/1	100	80	10	100	4	250	M6	111	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	125	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	134	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	162	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								175	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	220.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								244.5	39	34	38	80	41.3	10



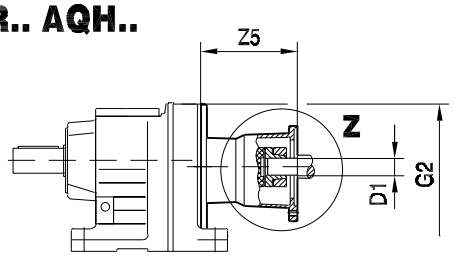
R.. AQA..

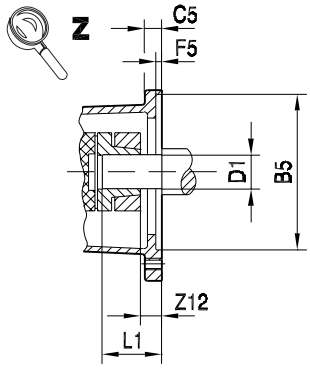






R.. AQH..





		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
R..97	AQ..140/1	140	110	15	165	5	300	M10	157	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								170	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	215.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								239.5	39	34	38	80	41.3	10
R..107	AQ..140/1	140	110	15	165	5	350	M10	151	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								164	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	209.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								233.5	39	34	38	80	41.3	10
R..137	AQ..190/1	190	130	16	215	5	400	M12	202.5	0	25	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								226.5	39	34	38	80	41.3	10
R..147	AQ..190/1	190	130	16	215	5	450	M12	194.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								218.5	39	34	38	80	41.3	10

10.8 R.. AR.. [mm]

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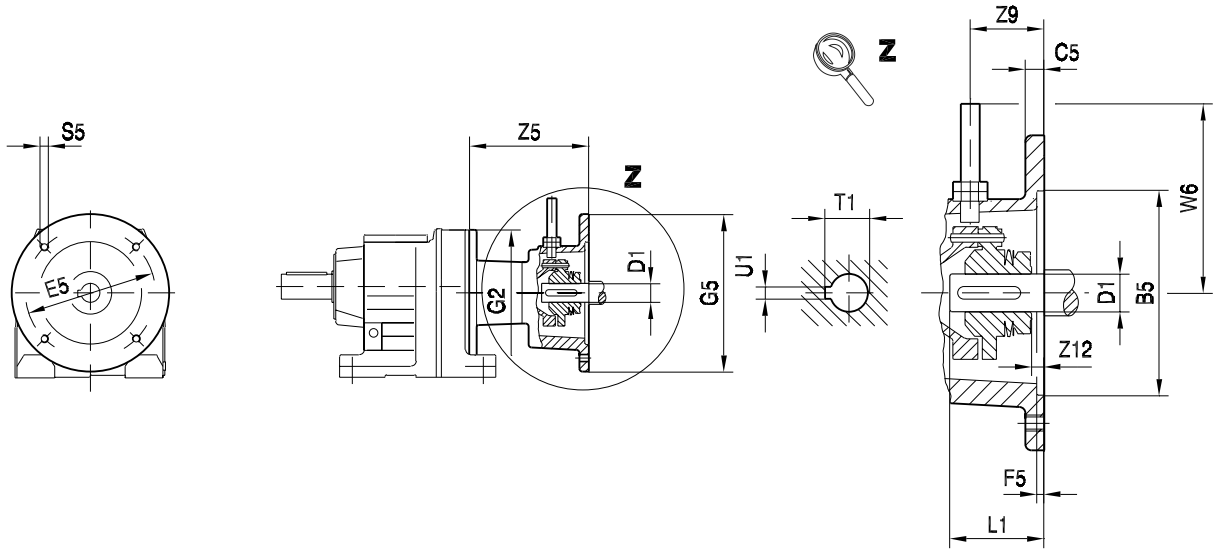
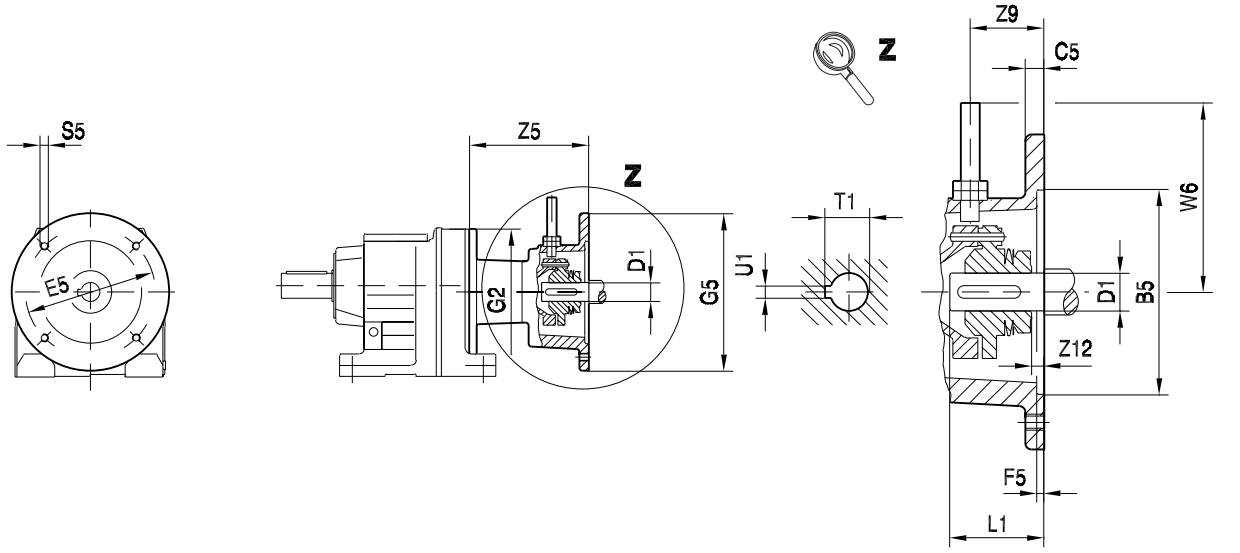


		B5	C5	E5	F5	G2	G5	S5	W6	Z5	Z9	Z12	D1	L1	T1	U1
R..27 R..37	**AR71**	110	10	130	4	120	160	M8	120	104	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		140.5			19	40	21.8	6
	AR90												24	50	27.3	8
R..47 R..57 R..67	**AR71**	110	10	130	4	160	160	M8	120	97.5	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		134			19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	174.5	52	5.5	28	60	31.3	8
	AR112															
R..77	**AR71**	110	10	130	4	200	160	M8	120	91.5	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		127			19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	166.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	234	72	5	38	80	41.3	10
	AR132ML															
R..87	**AR80**	130	12	165	4.5	250	200	M10	120	122	37	0	19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	161.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	229	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	306.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14

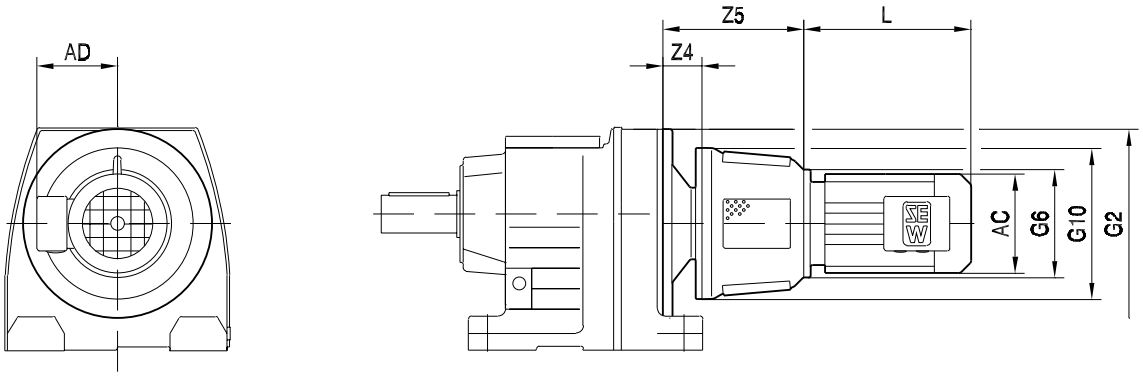
01 053 01 01



		B5	C5	E5	F5	G2	G5	S5	W6	Z5	Z9	Z12	D1	L1	T1	U1
R..97	**AR100**	180	15	215	5	300	250	M12	130	156.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	224	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	301.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
R..107	**AR100**	180	15	215	5	350	250	M12	130	150.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	218	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	295.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
R..137	**AR132S/M**	230	16	265	5	400	300	M12	145	211	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	288.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
R..147	**AR132S/M**	230	16	265	5	450	300	M12	145	203	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	280.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
R..167	**AR160**	250	18	300	6	550	350	M16	165	272.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14

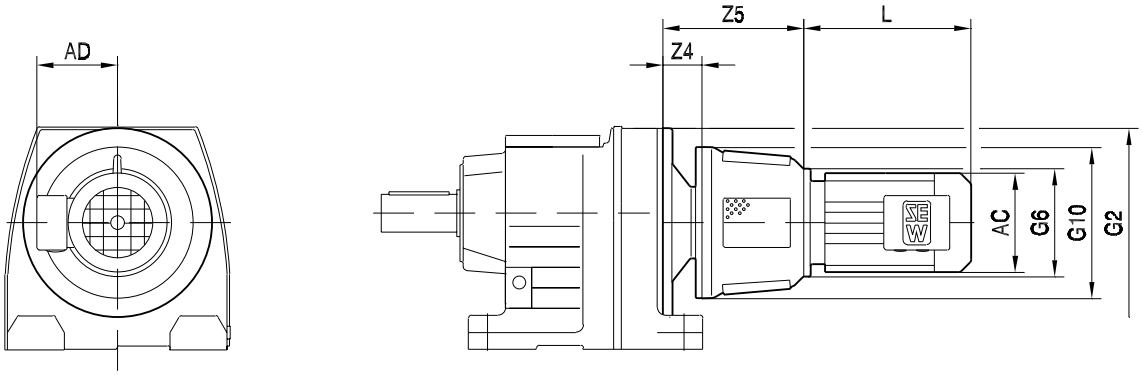
10.9 R.. AT.. [mm]

25 001 01 01



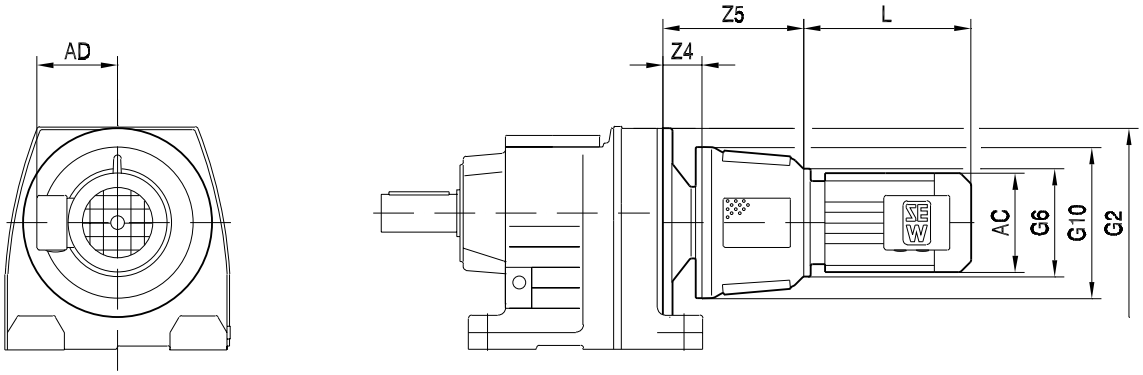
			AC	AD	G6	G10	L	Z4	Z5	G2
R..67	AT311 AT312	DT71D	145	122	200	280	202	97	286	160
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT321 AT322	DT90..	197	154	250	350	257	97	333	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
R..77	AT311 AT312	DT71D	145	122	200	280	202	89	278	200
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	133	368	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			

25 002 01 01



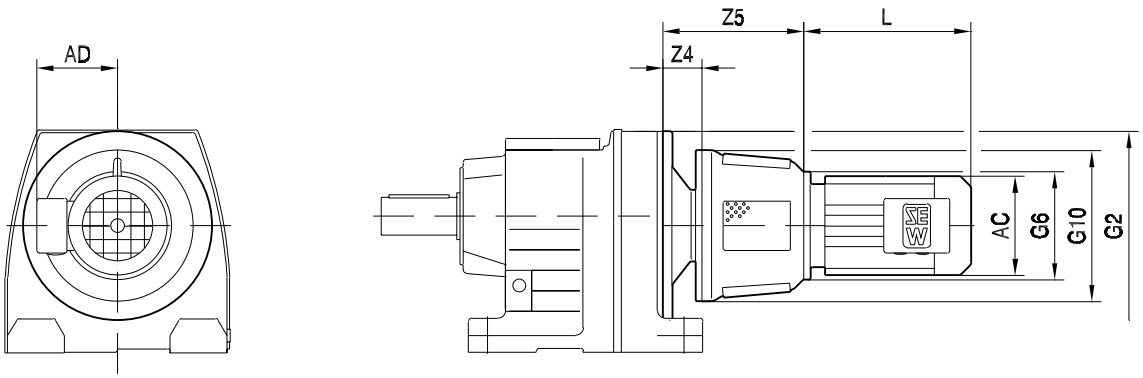
			AC	AD	G6	G10	L	Z4	Z5	G2
R..87	AT311 AT312	DT90..	197	154	200	280	273	84	273	250
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	128	363	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	159	478	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
R..97	AT311 AT312	DT90..	197	154	200	280	273	79	268	300
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	123	358	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	154	473	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

25 003 01 01



			AC	AD	G6	G10	L	Z4	Z5	G2
R..107	AT311 AT312	DT90..	197	154	200	280	273	73	262	350
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	117	352	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	148	467	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			
R..137	AT421 AT422	DV100M	197	166	250	350	311	110	345	400
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	141	460	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

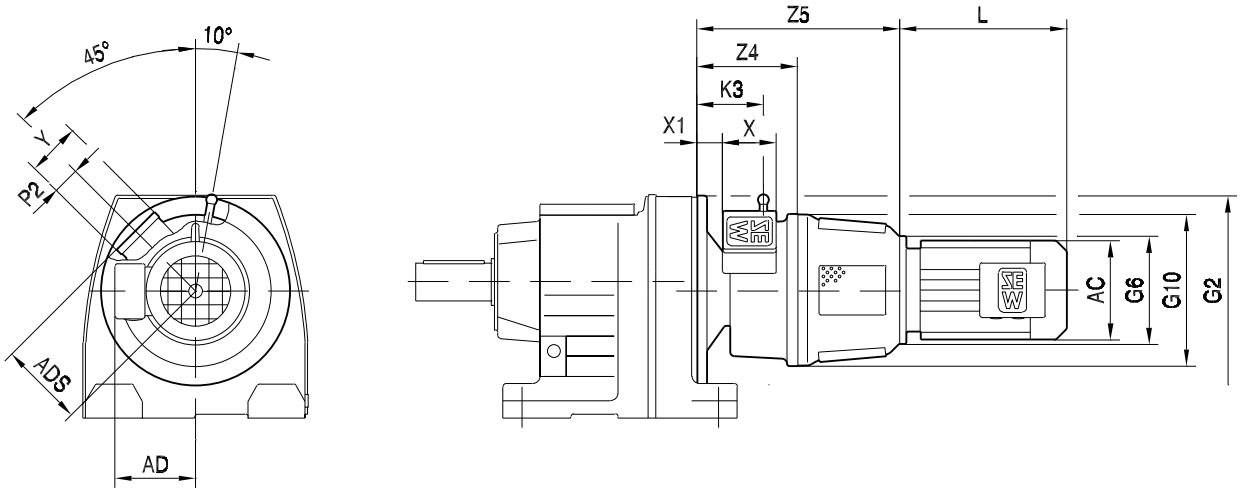
25 004 01 01



			AC	AD	G6	G10	L	Z4	Z5	G2
R..147	AT421 AT422	DV132M	275	230	250	350	407	102	337	450
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	133	452	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			
R..167	AT522 AT541 AT542	DV132S	221	176	350	470	374	125	444	550
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

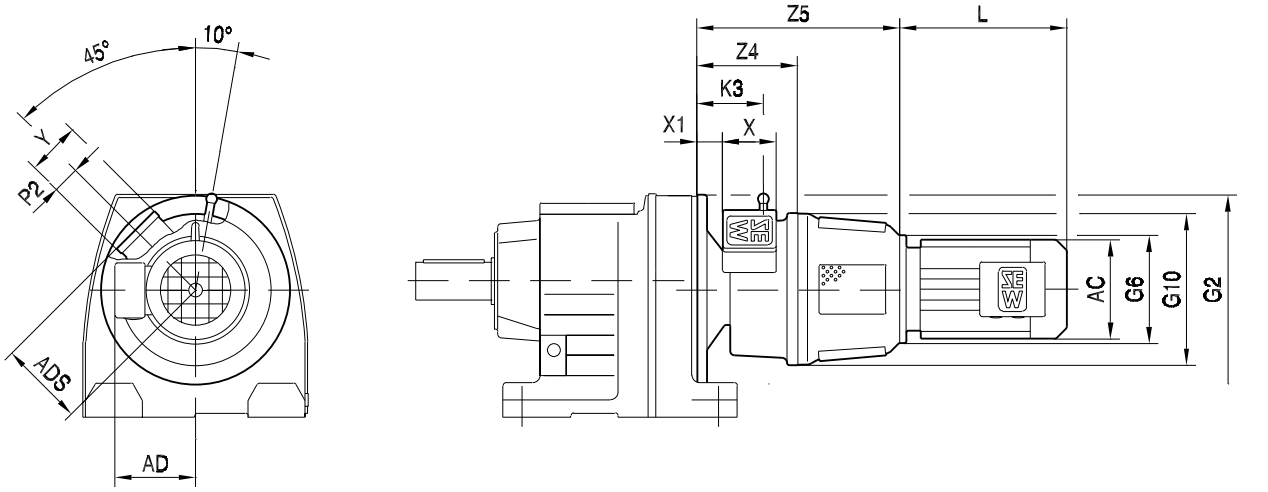
10.10 R.. AT../BMG [mm]

25 005 01 01



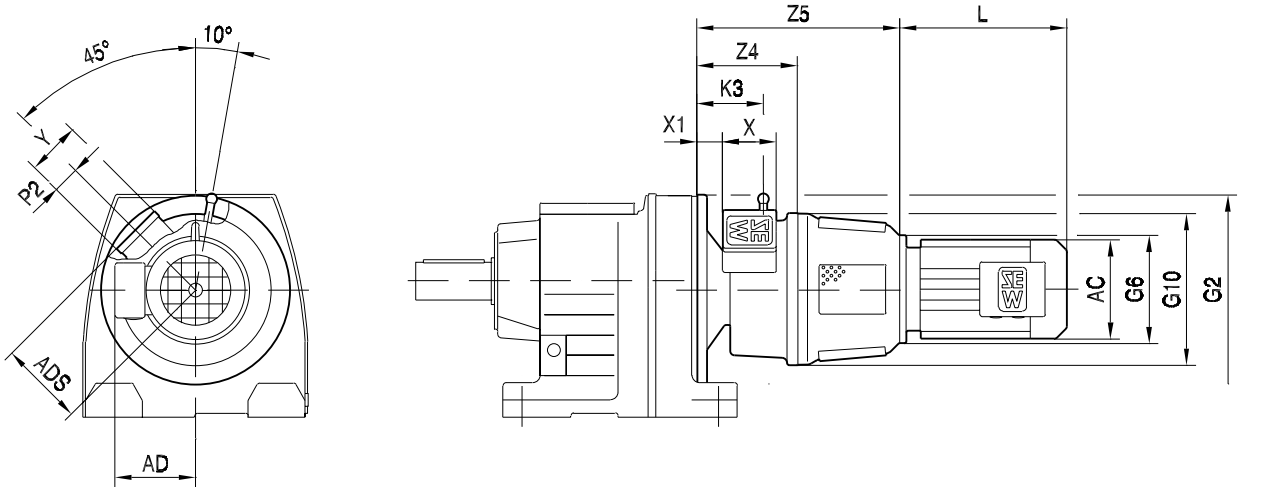
			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
R..67	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	153	84	97	89	127	223	411	160
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT321/BMG AT322/BMG	DT90..	197	154	215	250	352	257							458	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
R..77	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	145	84	97	81	127	215	403	200
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	183	84	97	119	127	252	488	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								

25 006 01 01



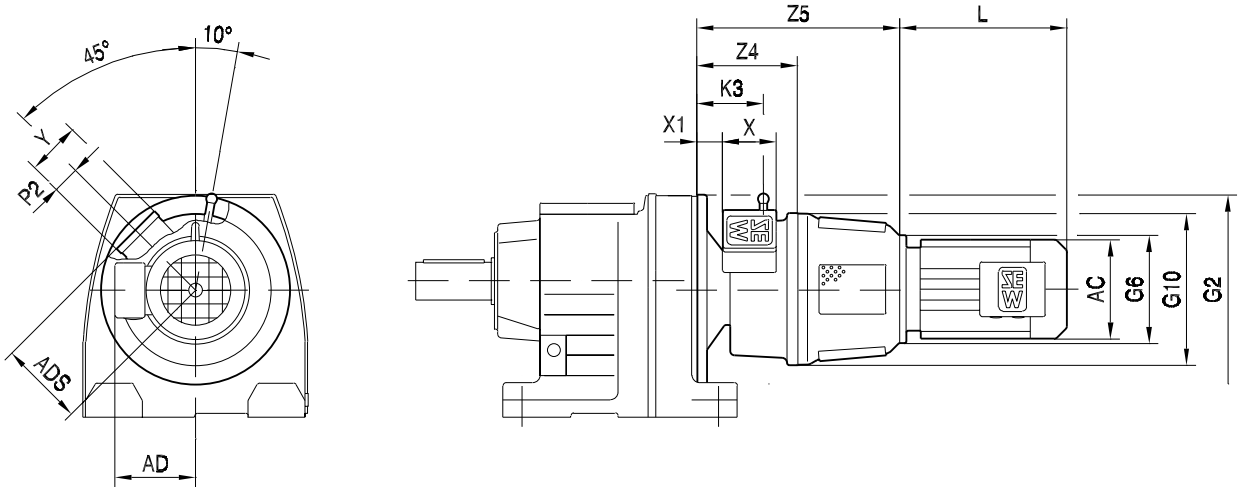
			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
R..87	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	140	84	97	76	127	210	398	250
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	178	84	97	114	127	247	483	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	244	84	97	148	127	331	650	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
R..97	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	135	84	97	71	127	205	393	300
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	173	84	97	109	127	242	478	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	239	84	97	143	127	326	645	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

25 007 01 01



			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
R..107	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	129	84	97	65	127	199	387	350
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	167	84	97	103	127	236	472	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	233	84	97	137	127	320	639	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								
R..137	AT421/BMG AT422/BMG	DV100M	197	166	215	250	352	311	160	84	97	96	127	229	465	400
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	226	84	97	130	127	313	632	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

25 008 01 01

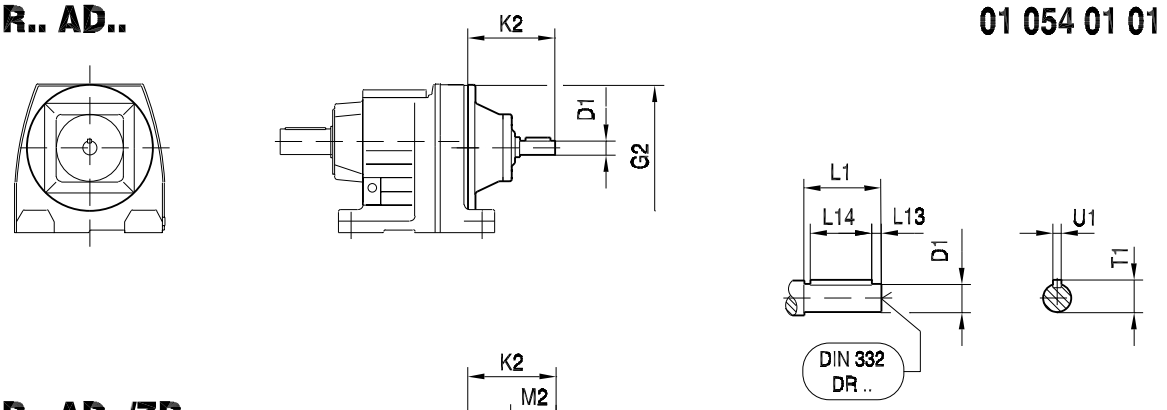


			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
R..147	AT421/BMG AT422/BMG	DV132M	275	230	215	250	352	407	152	84	97	88	127	221	457	
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	218	84	97	122	127	305	624	450
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								
R..167	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	210	84	97	114	127	297	616	550
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

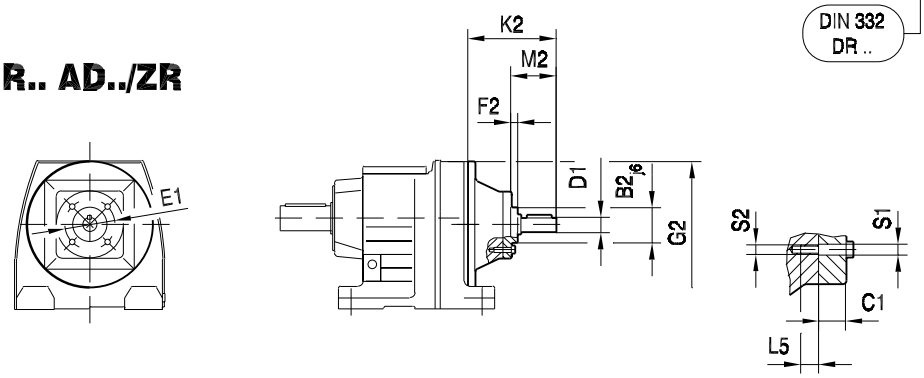
10.11 R.. AD.. [mm]

R.. AD..

01 054 01 01



R.. AD../ZR



		B2	C1	E1	F2	G2	K2	L5	M2	S1	S2	D1	L1	L13	L14	T1	U1
R..27	**AD1**	-	-	-	-	120	102	-	-	-	-	16	40	4	32	18	5
R..37	**AD2 , AD2/ZR**	55	13.5	80	8		130	12	50	9	M8	19	40	4	32	21.5	6
R..47 ,R..57	**AD2 , AD2/ZR**	55	13.5	80	8	160	123	12	50	9	M8	19	40	4	32	21.5	6
R..67	**AD3 , AD3/ZR**	70	15.5	105	8		159	16	60	11	M10	24	50	5	40	27	8
	AD2 , AD2/ZR	55	13.5	80	8		116	12	50	9	M8	19	40	4	32	21.5	6
R..77	**AD3 , AD3/ZR**	70	15.5	105	8	200	151	16	60	11	M10	24	50	5	40	27	8
	AD4 , AD4/ZR	100	16	130	13		224	20	95.5	13.5	M12	38	80	5	70	41	10
	AD2 , AD2/ZR	55	13.5	80	8		111	12	50	9	M8	19	40	4	32	21.5	6
R..87	**AD3 , AD3/ZR**	70	15.5	105	8	250	156	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		219	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		292	20	126	13.5	M12	42	110	10	70	45	12
	AD3 , AD3/ZR	70	15.5	105	8		151	16	70	11	M10	28	60	5	50	31	8
R..97	**AD4 , AD4/ZR**	100	16	130	13	300	214	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		287	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		327	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD3 , AD3/ZR	70	15.5	105	8		145	16	70	11	M10	28	60	5	50	31	8
R..107	**AD4 , AD4/ZR**	100	16	130	13	350	208	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		281	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		321	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD4 , AD4/ZR	100	16	130	13		201	20	95.5	13.5	M12	38	80	5	70	41	10
R..137	**AD5 , AD5/ZR**	120	24	180	11	400	274	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		314	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD7 , AD7/ZR	125	19	190	13		308	30	133	22	M20	55	110	10	90	59	16
	AD4 , AD4/ZR	100	16	130	13		193	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		266	20	126	13.5	M12	42	110	10	70	45	12
R..147	**AD6 , AD6/ZR**	130	22.5	200	11	450	306	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD7 , AD7/ZR	125	19	190	13		300	30	133	22	M20	55	110	10	90	59	16
	AD8 , AD8/ZR	120	22.5	210	5		383	19.5	155	13.5	M12	70	140	15	110	74.5	20
	AD5 , AD5/ZR	120	24	180	11		258	20	126	13.5	M12	42	110	10	70	45	12
R..167	**AD6 , AD6/ZR**	130	22.5	200	11	550	298	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD7 , AD7/ZR	125	19	190	13		292	30	133	22	M20	55	110	10	90	59	16
	AD8 , AD8/ZR	120	22.5	210	5		374	19.5	155	13.5	M12	70	140	15	110	74.5	20

10.12 R.. AD../P [mm]

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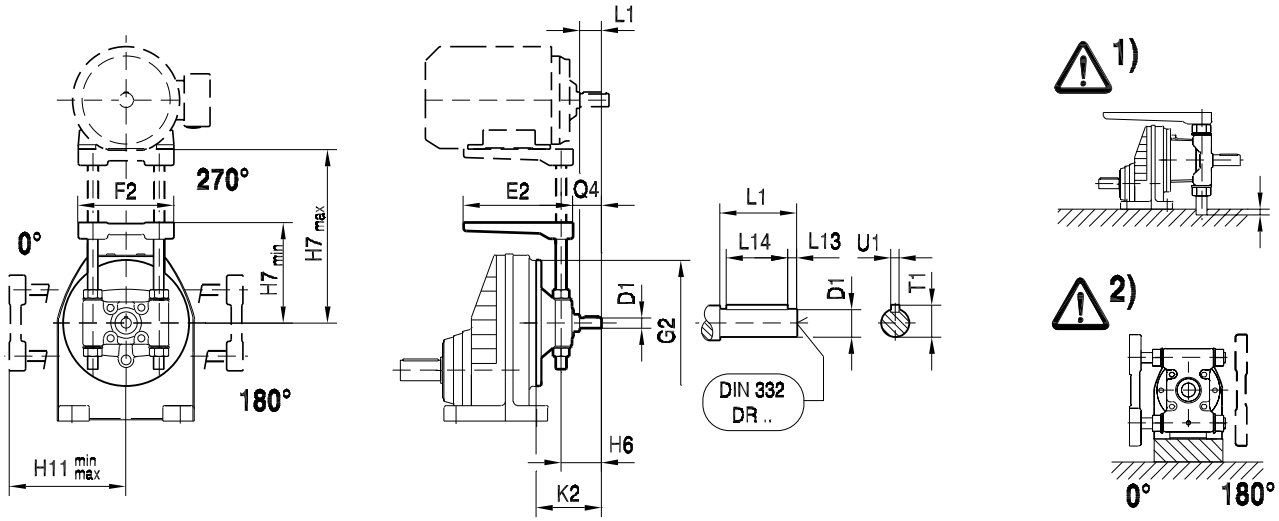
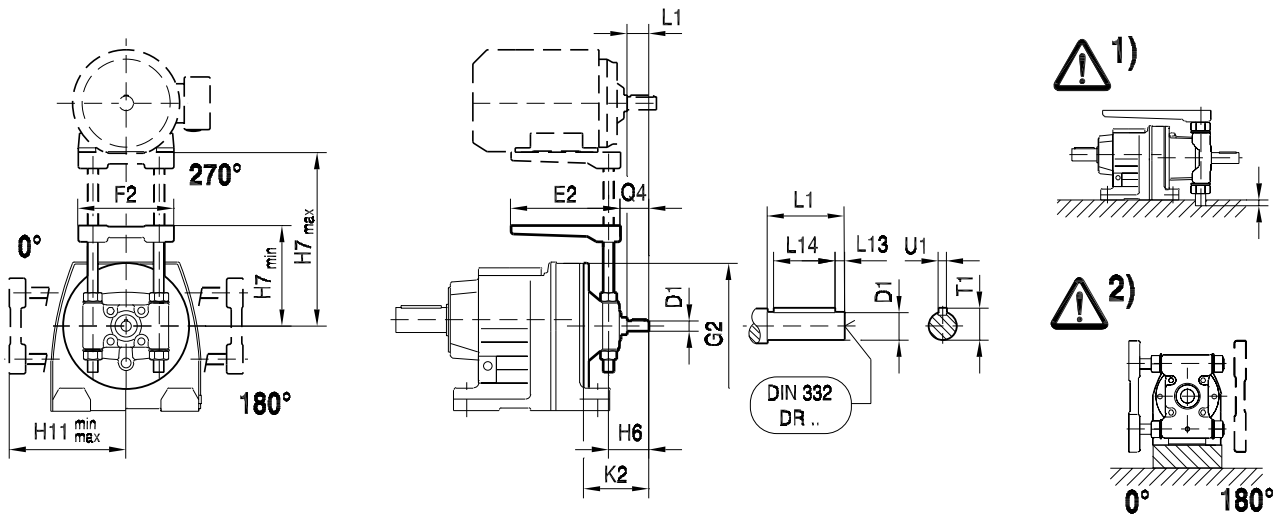
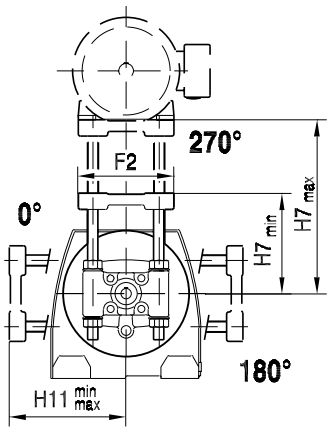


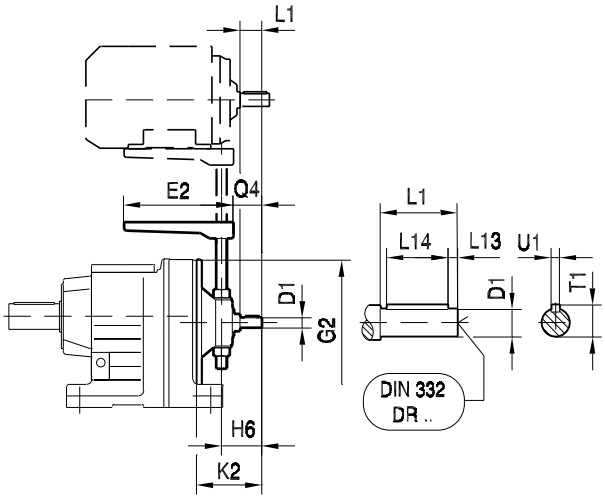
			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118
RX..57	AD2/P	DT71D DT80.. DT90..	195	180	160	65	110	165	115	165	123	43	19	40	4	32	21.5	6	
	AD3/P	DV100.. DV112..	230	240		80	110	175	120	175	159	54	24	50	5	40	27	8	1), 2)
RX..67	AD2/P	DT71D DT80.. DT90..	195	180	160	65	110	165	125	165	123	43	19	40	4	32	21.5	6	
	AD3/P	DV100.. DV112..	230	240		80	110	175	130	175	159	54	24	50	5	40	27	8	1)
RX..77	AD2/P	DT71D DT80.. DT90..	195	180	200	65	130	165	140	200	116	43	19	40	4	32	21.5	6	
	AD3/P	DV100.. DV112..	230	240		80	135	175	145	175	151	54	24	50	5	40	27	8	
	AD4/P	DV132..	345	291		114	145	210	160	210	224	83	38	80	5	70	41	10	1), 2)
RX..87	AD2/P	DT71D DT80.. DT90..	195	180	250	65	160	200	170	200	111	43	19	40	4	32	21.5	6	
	AD3/P	DV100.. DV112..	230	240		90	165	230	175	230	156	64	28	60	5	50	31	8	
	AD4/P	DV132..	345	291		114	170	210	195	280	219	83	38	80	5	70	41	10	
	AD5/P	DV160.. DV180..	430	355		153	175	250	200	250	292	113	42	110	10	70	45	12	1), 2)
RX..97	AD3/P	DT90.. DV100.. DV112..	230	240	300	90	185	230	205	320	151	64	28	60	5	50	31	8	
	AD4/P	DV132..	345	291		114	195	280	220	280	214	83	38	80	5	70	41	10	
	AD5/P	DV160.. DV180..	430	355		153	195	250	225	325	287	113	42	110	10	70	45	12	
RX..107	AD3/P	DV100.. DV112..	230	240	350	90	210	320	225	320	145	64	28	60	5	50	31	8	
	AD4/P	DV132..	345	291		114	220	280	270	360	208	83	38	80	5	70	41	10	
	AD5/P	DV160.. DV180..	430	355		153	220	325	275	325	281	113	42	110	10	70	45	12	
	AD6/P	DV200.. DV225..	495	457		163	245	310	250	310	321	114	48	110	10	80	51.5	14	

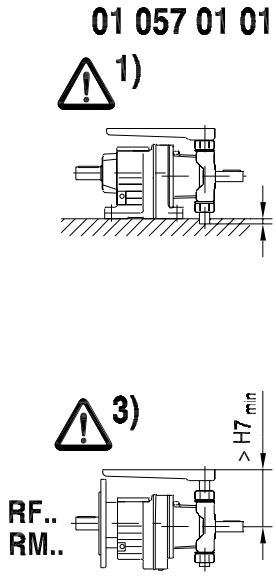
01 056 01 01



			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118
R..27	**AD2/P**	**DT71D**	195	180	120	65	100	165	120	165	130	43	19	40	4	32	21.5	6	1), 2)
		DT80..																	
		DT90..																	
R..37	**AD2/P**	**DT71D**	195	180	120	65	110	165	120	165	130	43	19	40	4	32	21.5	6	1), 2)
		DT80..																	
		DT90..																	
R..47	**AD2/P**	**DT71D**	195	180	160	65	125	165	135	165	123	43	19	40	4	32	21.5	6	
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	130	175	140	175	159	54	24	50	5	40	27	8	1), 2)
		DV112..																	
R..57	**AD2/P**	**DT71D**	195	180	160	65	125	165	145	200	123	43	19	40	4	32	21.5	6	
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	130	175	155	230	159	54	24	50	5	40	27	8	1), 2)
		DV112..																	
R..67	**AD2/P**	**DT71D**	195	180	160	65	125	165	155	200	123	43	19	40	4	32	21.5	6	
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	130	175	160	230	159	54	24	50	5	40	27	8	1), 2)
		DV112..																	
R..77	**AD2/P**	**DT71D**	195	180	200	65	135	200	165	200	116	43	19	40	4	32	21.5	6	1)
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	145	175	170	230	151	54	24	50	5	40	27	8	
		DV112..																	
	AD4/P	**DV132..**	345	291		114	150	210	175	210	224	83	38	80	5	70	41	10	1), 2)
R..87	**AD2/P**	**DT71D**	195	180	250	65	155	200	195	260	111	43	19	40	4	32	21.5	6	
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		90	165	230	185	230	156	64	28	60	5	50	31	8	
		DV112..																	
	AD4/P	**DV132..**	345	291		114	165	210	205	280	219	83	38	80	5	70	41	10	
	AD5/P	**DV160..**	430	355		153	210	250	215	250	292	113	42	110	10	70	45	12	1), 2)
		DV180..																	



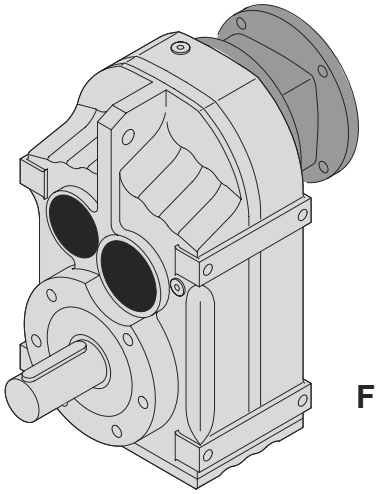




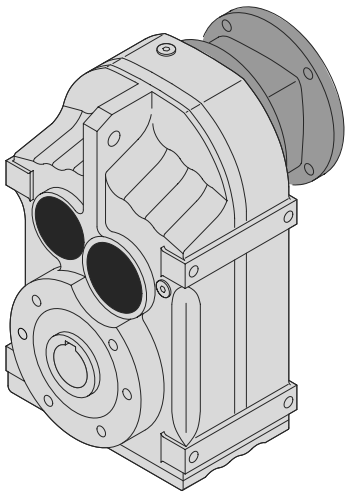
			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118
R..97	AD3/P	DT90..	230	240	300	90	180	230	235	320	151	64	28	60	5	50	31	8	
		DV100..																	
		DV112..																	
	AD4/P	DV132..	345	291		114	190	280	240	280	214	83	38	80	5	70	41	10	
	AD5/P	DV160..	430	355		153	190	250	245	325	287	113	42	110	10	70	45	12	
		DV180..																	
R..107	AD3/P	DV100..	230	240	350	90	230	320	230	320	145	64	28	60	5	50	31	8	
		DV112..																	
	AD4/P	DV132..	345	291		114	230	280	265	360	208	83	38	80	5	70	41	10	
	AD5/P	DV160..	430	355		153	225	325	270	325	281	113	42	110	10	70	45	12	1)
		DV180..																	
	AD6/P	DV200..	495	457		163	245	310	250	310	321	114	48	110	10	80	51.5	14	
		DV225..																	
R..137	AD4/P	DV132..	345	291	400	114	245	280	280	360	201	83	38	80	5	70	41	10	
	AD5/P	DV160..	430	355		153	245	325	285	325	274	113	42	110	10	70	45	12	1)
		DV180..																	
	AD6/P	DV200..	495	457		163	270	335	275	335	314	114	48	110	10	80	51.5	14	
		DV225..																	
R..147	AD4/P	DV132..	345	291	450	114	270	360	315	360	193	83	38	80	5	70	41	10	
	AD5/P	DV160..	430	355		153	275	325	330	405	266	113	42	110	10	70	45	12	
		DV180..																	
	AD6/P	DV200..	495	457		163	295	360	310	360	306	114	48	110	10	80	51.5	14	
		DV225..																	
	AD7/P	D250..	650	570		170	300	365	300	365	300	112	55	110	10	90	59	16	3)
		D280..																	
R..167	AD5/P	DV160..	430	355	550	153	345	405	385	495	258	113	42	110	10	70	45	12	
		DV180..																	
	AD6/P	DV200..	495	457		163	375	475	375	475	298	114	48	110	10	80	51.5	14	
		DV225..																	
	AD7/P	D250..	650	570		170	375	475	380	475	292	112	55	110	10	90	59	16	
		D280..																	

11 F..

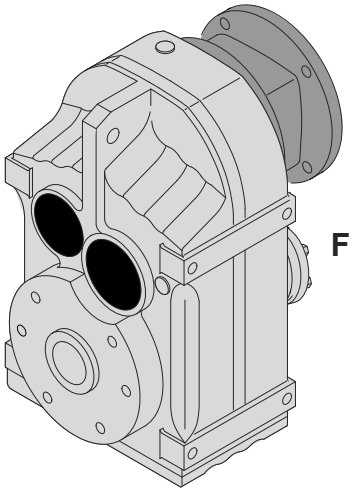
11.1 F.. AM.. [Nm]



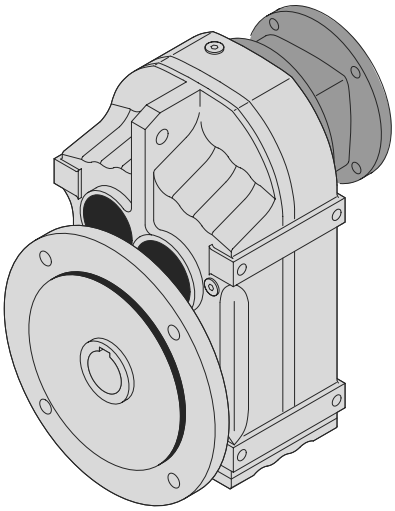
F.. AM..



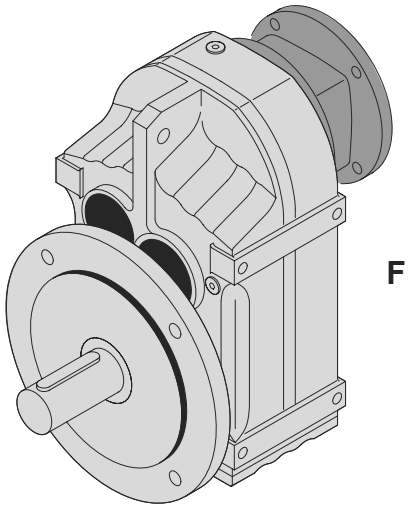
FA..B AM..
FV..B AM..



FH..B AM..

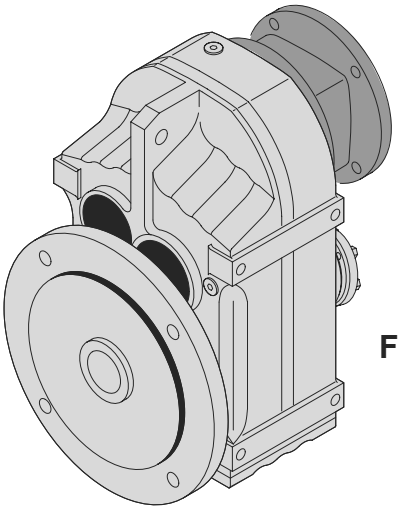


FAF.. AM..
FVF.. AM ..

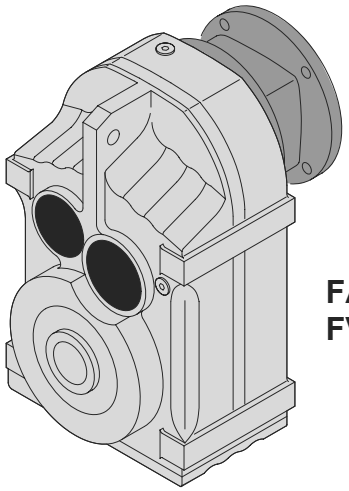


FF.. AM..

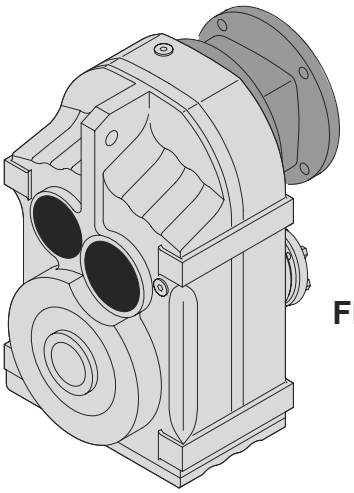
50397AXX



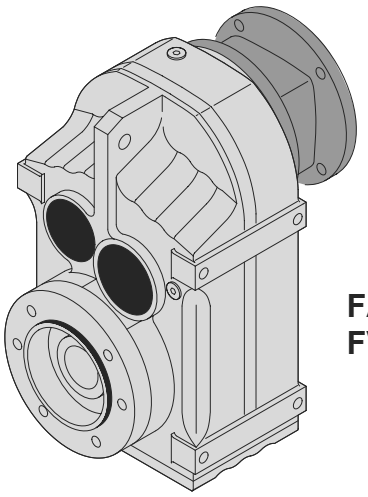
FHF .. AM..



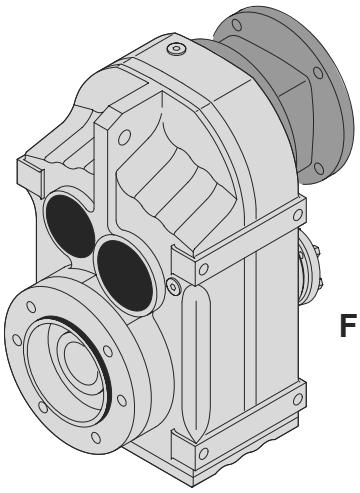
FA.. AM..
FV.. AM..



FH.. AM..



FAZ.. AM..
FVZ.. AM..



FHZ.. AM..

50398AXX

F27, n_e = 1400 1/min															130 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
				3												
140.74	9.9	130	4500	-												
129.09	11	130	4500	-												
109.90	13	130	4500	-												
94.76	15	130	4500	-												
88.32	16	130	4500	-												
77.21	18	130	4500	-												
72.37	19	130	4500	-		FA	8.1 kg		FA	8.4 kg		FA	11 kg		FA	11 kg
63.86	22	130	4400	-		FAF	8.8 kg		FAF	9.1 kg		FAF	11 kg		FAF	11 kg
56.62	25	130	4190	-		F	8.6 kg		F	8.9 kg		F	11 kg		F	11 kg
50.19	28	130	3980	-		FF	9.4 kg		FF	9.7 kg		FF	12 kg		FF	12 kg
46.78	30	130	3860	-												
40.89	34	130	3640	-												
38.33	37	130	3530	-												
33.83	41	130	3340	-												
				2												
29.56	47	130	3150	-												
27.18	52	130	3030	-												
23.25	60	130	2820	-												
20.15	69	130	2630	-												
18.84	74	130	2550	-												
16.28	86	130	2370	-												
13.84	101	130	2180	-												
12.35	113	130	2060	-		FA	7.9 kg		FA	8.1 kg		FA	11 kg		FA	11 kg
10.55	133	130	1900	-		FAF	8.6 kg		FAF	8.8 kg		FAF	11 kg		FAF	11 kg
9.88	142	130	1830	-		F	8.4 kg		F	8.6 kg		F	11 kg		F	11 kg
9.40	149	130	1660	-		FF	9.2 kg		FF	9.4 kg		FF	12 kg		FF	12 kg
8.13	172	123	1590	-												
6.91	203	114	1530	-												
6.17	227	109	1480	-												
5.27	266	100	1440	-												
4.93	284	96	1420	-												
4.16	337	87	1380	-												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

11

	IEC	**FA**	309	**NEMA**	**FA**	358
		FAF	308		**FAF**	358
		F	307		**F**	358
		FF	308		**FF**	358

F37, n_e = 1400 1/min												**200 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**		**AM71**		**AM80**		**AM90**	
					3							
128.51	11	200	4290	7								
117.88	12	200	4290	7								
100.36	14	200	4290	7								
86.53	16	200	4290	7								
80.65	17	200	4290	7								
70.50	20	200	4290	7								
66.09	21	200	4290	7								
58.32	24	200	4290	7		FA 14 kg		FA 14 kg		FA 17 kg		FA 17 kg
54.54	26	200	4290	8		FAF 16 kg		FAF 16 kg		FAF 18 kg		FAF 18 kg
51.70	27	200	4290	7		F 15 kg		F 15 kg		F 17 kg		F 17 kg
47.02	30	200	4290	8		FF 17 kg		FF 17 kg		FF 19 kg		FF 19 kg
43.83	32	200	4290	8								
38.31	37	200	4290	8								
35.91	39	200	4290	8								
31.69	44	200	4290	8								
28.09	50	200	4060	8								
23.88	59	200	3760	8								
					2							
23.63	59	200	3740	6								
20.57	68	200	3500	6								
19.27	73	200	3390	6								
17.03	82	200	3180	6								
15.81	89	200	3070	6								
14.33	98	200	2910	7								
12.87	109	200	2750	7								
11.08	126	190	2620	7								
10.42	134	185	2580	7		FA 14 kg		FA 14 kg		FA 17 kg		FA 17 kg
8.97	156	175	2460	7		FAF 16 kg		FAF 16 kg		FAF 18 kg		FAF 18 kg
8.01	175	170	2360	7		F 15 kg		F 15 kg		F 17 kg		F 17 kg
7.44	188	145	2350	10		FF 16 kg		FF 17 kg		FF 19 kg		FF 19 kg
6.74	208	140	2270	10								
6.05	231	135	2190	10								
5.21	269	125	2120	10								
4.90	286	120	2100	11								
4.22	332	110	2030	11								
3.77	371	105	1970	12								

		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC		**NEMA**	
FA	313	**FA**	358
FAF	312	**FAF**	358
F	311	**F**	358
FF	312	**FF**	358

F47, n_e = 1400 1/min													400 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63		AM71		AM80		AM90		
				3									
190.76	7.3	400	5920	6									
175.38	8.0	400	5920	6									
150.06	9.3	400	5920	6									
130.07	11	400	5920	6									
121.57	12	400	5920	6									
105.09	13	400	5920	6									
89.29	16	400	5920	6									
79.72	18	400	5920	6		FA 19 kg		FA 19 kg		FA 22 kg		FA 22 kg	
68.09	21	400	5920	6		FAF 22 kg		FAF 22 kg		FAF 24 kg		FAF 24 kg	
65.36	21	400	5920	7		F 20 kg		F 20 kg		F 22 kg		F 23 kg	
56.49	25	400	5920	7		FF 23 kg		FF 23 kg		FF 26 kg		FF 26 kg	
48.00*	29	400	5920	7									
42.86	33	400	5920	7									
36.61	38	400	5920	7									
34.29	41	400	5920	7									
28.88	48	400	5790	7									
				2									
30.86	45	400	5920	6									
29.32	48	400	5830	6									
25.72	54	400	5470	6									
21.82	64	400	5030	6									
19.70	71	400	4770	6									
17.33	81	400	4450	6									
16.36	86	400	4320	6									
13.93	101	400	3950	6		FA 18 kg		FA 19 kg		FA 21 kg		FA 21 kg	
12.66	111	400	3740	6		FAF 21 kg		FAF 21 kg		FAF 24 kg		FAF 24 kg	
10.97	128	400	3440	6		F 19 kg		F 19 kg		F 22 kg		F 22 kg	
8.96	156	330	3250	8		FF 22 kg		FF 23 kg		FF 25 kg		FF 25 kg	
7.88	178	380	2630	8									
7.44*	188	380	2530	8									
6.34	221	350	2470	8									
5.76	243	340	2390	9									
4.99	281	320	2310	9									

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

	IEC	**FA**	318	**NEMA**	**FA**	358
		FAF	317		**FAF**	358
		F	316		**F**	358
		FF	317		**FF**	358

F57, n_e = 1400 1/min													**600 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**		**AM71**		**AM80**		**AM90**		
					3								
199.70	7.0	600	9200	6									
183.60	7.6	600	9200	6									
157.09	8.9	600	9200	6									
136.16	10	600	9200	6									
127.27	11	600	9200	6									
110.01	13	600	9200	6									
93.47	15	600	9200	6									
83.46	17	600	9200	6		FA 27 kg		FA 27 kg		FA 29 kg		FA 29 kg	
72.98	19	600	9200	6		FAF 32 kg		FAF 33 kg		FAF 35 kg		FAF 35 kg	
68.22	21	600	9200	6		F 27 kg		F 27 kg		F 29 kg		F 29 kg	
58.97	24	600	9200	7		FF 33 kg		FF 34 kg		FF 36 kg		FF 36 kg	
50.10	28	600	9200	7									
44.73	31	600	9160	7									
38.21	37	600	8510	7									
35.79	39	600	8250	7									
30.15	46	590	7650	7									
					2								
40.13	35	290	10500	6									
34.24	41	500	8670	6									
29.94	47	545	7890	6									
28.45	49	535	7760	6									
24.96	56	575	7060	6									
21.17	66	600	6350	6									
19.11	73	600	6020	6									
16.81	83	600	5620	6									
15.88	88	600	5450	6		FA 26 kg		FA 26 kg		FA 29 kg		FA 29 kg	
13.52	104	600	4980	6		FAF 32 kg		FAF 32 kg		FAF 34 kg		FAF 34 kg	
12.29	114	600	4710	6		F 26 kg		F 27 kg		F 29 kg		F 29 kg	
10.64	132	600	4320	6		FF 33 kg		FF 33 kg		FF 35 kg		FF 35 kg	
9.31	150	420	4760	8									
8.19	171	420	4450	8									
7.73	181	420	4310	8									
6.58	213	420	3940	8									
5.98	234	420	3730	9									
5.18	270	415	3460	9									

		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC

FA	323
FAF	322
F	321
FF	322

NEMA

FA	358
FAF	358
F	358
FF	358

F57, n_e = 1400 1/min								600 Nm			
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100		AM112		AM132S/M		
				3							
199.70	7.0	600	9200	6							
183.60	7.6	600	9200	6							
157.09	8.9	600	9200	6							
136.16	10	600	9200	6							
127.27	11	600	9200	6							
110.01	13	600	9200	6							
93.47	15	600	9200	6							
83.46	17	600	9200	6	FA	34 kg	FA	34 kg	FA	41 kg	
72.98	19	600	9200	6	FAF	40 kg	FAF	40 kg	FAF	47 kg	
68.22	21	600	9200	6	F	34 kg	F	34 kg	F	41 kg	
58.97	24	600	9200	7	FF	41 kg	FF	41 kg	FF	48 kg	
50.10	28	600	9200	7							
44.73	31	600	9160	7							
38.21	37	600	8510	7							
35.79	39	600	8250	7							
30.15	46	590	7650	7							
				2							
40.13	35	290	10500	6							
34.24	41	500	8670	6							
29.94	47	545	7890	6							
28.45	49	535	7760	6							
24.96	56	575	7060	6							
21.17	66	600	6350	6							
19.11	73	600	6020	6							
16.81	83	600	5620	6							
15.88	88	600	5450	6	FA	33 kg	FA	33 kg	FA	40 kg	
13.52	104	600	4980	6	FAF	39 kg	FAF	39 kg	FAF	46 kg	
12.29	114	600	4710	6	F	34 kg	F	34 kg	F	41 kg	
10.64	132	600	4320	6	FF	40 kg	FF	40 kg	FF	47 kg	
9.31	150	420	4760	8							
8.19	171	420	4450	8							
7.73	181	420	4310	8							
6.58	213	420	3940	8							
5.98	234	420	3730	9							
5.18	270	415	3460	9							

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

IEC

FA	323
FAF	322
F	321
FF	322

NEMA

FA	358
FAF	358
F	358
FF	358

F..
F.. AM.. [Nm]

F67, n_e = 1400 1/min													820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63		AM71		AM80		AM90	
				3								
228.99	6.1	820	10300	6								
195.39	7.2	820	10300	6								
170.85	8.2	820	10300	6								
162.31	8.6	820	10300	6								
142.40	9.8	820	10300	6								
120.79	12	820	10300	6								
109.04	13	820	10300	6								
95.94	15	820	10300	6		FA 31 kg		FA 31 kg		FA 33 kg		FA 33 kg
90.59	15	820	10300	6		FAF 37 kg		FAF 37 kg		FAF 39 kg		FAF 40 kg
79.76	18	820	10300	6		F 33 kg		F 34 kg		F 36 kg		F 36 kg
67.65	21	820	10300	6		FF 40 kg		FF 40 kg		FF 42 kg		FF 42 kg
61.07	23	820	10300	6								
53.73	26	820	10300	6								
50.74	28	820	10300	6								
43.20	32	820	10300	6								
39.26	36	780	10700	6								
34.01	41	740	11000	6								
				2								
36.30	39	820	10300	5								
32.08	44	820	10300	5								
27.41	51	820	10300	5								
25.13	56	820	10300	5								
22.05	63	820	10300	5								
20.90*	67	820	10300	5								
18.29	77	820	10300	6								
16.48	85	820	10300	6								
14.46	97	820	10300	6								
12.76	110	820	10300	6		FA 30 kg		FA 30 kg		FA 32 kg		FA 32 kg
11.31	124	820	10300	6		FAF 36 kg		FAF 36 kg		FAF 38 kg		FAF 38 kg
9.66	145	820	10300	6		F 32 kg		F 33 kg		F 35 kg		F 35 kg
9.08	154	530	11400	8		FF 38 kg		FF 39 kg		FF 41 kg		FF 41 kg
8.60	163	570	10900	8								
7.53	186	610	10100	8								
6.78	206	620	9660	9								
5.95	235	610	9200	9								
5.25	267	590	8850	9								
4.66	300	560	8590	9								
3.97	353	500	8390	10								

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

	IEC	**FA**	328	**NEMA**	**FA**	358
		FAF	327		**FAF**	358
		F	326		**F**	358
		FF	327		**FF**	358

F67, n_e = 1400 1/min									820 Nm		
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100		AM112		AM132S/M		
				3							
228.99	6.1	820	10300	6							
195.39	7.2	820	10300	6							
170.85	8.2	820	10300	6							
162.31	8.6	820	10300	6							
142.40	9.8	820	10300	6							
120.79	12	820	10300	6							
109.04	13	820	10300	6							
95.94	15	820	10300	6	FA	38 kg	FA	38 kg	FA	45 kg	
90.59	15	820	10300	6	FAF	44 kg	FAF	44 kg	FAF	51 kg	
79.76	18	820	10300	6	F	41 kg	F	41 kg	F	48 kg	
67.65	21	820	10300	6	FF	47 kg	FF	47 kg	FF	54 kg	
61.07	23	820	10300	6							
53.73	26	820	10300	6							
50.74	28	820	10300	6							
43.20	32	820	10300	6							
39.26	36	780	10700	6							
34.01	41	740	11000	6							
				2							
36.30	39	820	10300	5							
32.08	44	820	10300	5							
27.41	51	820	10300	5							
25.13	56	820	10300	5							
22.05	63	820	10300	5							
20.90*	67	820	10300	5							
18.29	77	820	10300	6							
16.48	85	820	10300	6							
14.46	97	820	10300	6							
12.76	110	820	10300	6	FA	37 kg	FA	37 kg	FA	44 kg	
11.31	124	820	10300	6	FAF	43 kg	FAF	43 kg	FAF	50 kg	
9.66	145	820	10300	6	F	40 kg	F	40 kg	F	47 kg	
9.08	154	530	11400	8	FF	46 kg	FF	46 kg	FF	53 kg	
8.60	163	570	10900	8							
7.53	186	610	10100	8							
6.78	206	620	9660	9							
5.95	235	610	9200	9							
5.25	267	590	8850	9							
4.66	300	560	8590	9							
3.97	353	500	8390	10							

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

IEC	**FA**	328	**NEMA**	**FA**	358
	FAF	327		**FAF**	358
	F	326		**F**	358
	FF	327		**FF**	358

F77, n_e = 1400 1/min															1500 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
				3												
281.71	5.0	1500	15700	5												
262.93	5.3	1500	15700	5												
225.79	6.2	1500	15700	5												
198.31	7.1	1500	15700	5												
188.40	7.4	1500	15700	5												
166.47	8.4	1500	15700	5												
142.27	9.8	1500	15700	5												
130.42	11	1500	15700	5												
114.45	12	1500	15700	5												
108.46*	13	1500	15700	5												
94.93	15	1500	15700	5		FA	53 kg		FA	54 kg		FA	56 kg		FA	56 kg
85.52	16	1500	15700	6		FAF	60 kg		FAF	60 kg		FAF	62 kg		FAF	63 kg
75.02	19	1500	15700	6		F	57 kg		F	57 kg		F	60 kg		F	60 kg
72.50	19	1500	15700	6		FF	68 kg		FF	68 kg		FF	70 kg		FF	70 kg
66.46	21	1500	15700	6												
58.32	24	1500	15700	6												
55.27	25	1500	15700	6												
48.37	29	1500	15700	6												
43.58	32	1500	15700	6												
38.23	37	1500	15700	6												
33.74	41	1500	15700	6												
29.91	47	1500	15700	6												
25.54	55	1450	16100	6												
				2												
36.58	38	1110	17900	5												
31.51	44	1380	16500	5												
28.75	49	1430	16200	5												
25.50*	55	1500	15700	5												
21.43	65	1500	15700	5												
19.70	71	1500	15700	5												
17.49	80	1500	15700	5												
15.64*	90	1500	15700	5												
14.06	100	1500	15700	5		FA	52 kg		FA	52 kg		FA	55 kg		FA	55 kg
12.20	115	1500	14900	5		FAF	59 kg		FAF	59 kg		FAF	61 kg		FAF	61 kg
10.93	128	1500	14200	6		F	56 kg		F	56 kg		F	58 kg		F	58 kg
9.30	151	1080	13800	7		FF	67 kg		FF	67 kg		FF	69 kg		FF	69 kg
8.26	169	1080	13100	7												
7.39	189	1080	12500	7												
6.64	211	1080	12000	8												
5.76	243	1080	11300	8												
5.16	271	1080	10700	8												
4.28	327	1010	10200	8												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC	**FA**	333	**NEMA**	**FA**	358
	FAF	332		**FAF**	358
	F	331		**F**	358
	FF	332		**FF**	358

F77, n_e = 1400 1/min															1500 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100			AM112			AM132S/M			AM132ML		
				3												
281.71	5.0	1500	15700	5												
262.93	5.3	1500	15700	5												
225.79	6.2	1500	15700	5												
198.31	7.1	1500	15700	5												
188.40	7.4	1500	15700	5												
166.47	8.4	1500	15700	5												
142.27	9.8	1500	15700	5												
130.42	11	1500	15700	5												
114.45	12	1500	15700	5												
108.46*	13	1500	15700	5												
94.93	15	1500	15700	5		FA	60 kg		FA	60 kg		FA	67 kg		FA	68 kg
85.52	16	1500	15700	6		FAF	67 kg		FAF	67 kg		FAF	74 kg		FAF	74 kg
75.02	19	1500	15700	6		F	64 kg		F	64 kg		F	71 kg		F	71 kg
72.50	19	1500	15700	6		FF	75 kg		FF	75 kg		FF	82 kg		FF	82 kg
66.46	21	1500	15700	6												
58.32	24	1500	15700	6												
55.27	25	1500	15700	6												
48.37	29	1500	15700	6												
43.58	32	1500	15700	6												
38.23	37	1500	15700	6												
33.74	41	1500	15700	6												
29.91	47	1500	15700	6												
25.54	55	1450	16100	6												
				2												
36.58	38	1110	17900	5												
31.51	44	1380	16500	5												
28.75	49	1430	16200	5												
25.50*	55	1500	15700	5												
21.43	65	1500	15700	5												
19.70	71	1500	15700	5												
17.49	80	1500	15700	5												
15.64*	90	1500	15700	5												
14.06	100	1500	15700	5		FA	59 kg		FA	59 kg		FA	66 kg		FA	66 kg
12.20	115	1500	14900	5		FAF	66 kg		FAF	66 kg		FAF	73 kg		FAF	73 kg
10.93	128	1500	14200	6		F	63 kg		F	63 kg		F	70 kg		F	70 kg
9.30	151	1080	13800	7		FF	73 kg		FF	73 kg		FF	81 kg		FF	81 kg
8.26	169	1080	13100	7												
7.39	189	1080	12500	7												
6.64	211	1080	12000	8												
5.76	243	1080	11300	8												
5.16	271	1080	10700	8												
4.28	327	1010	10200	8												

	AM182	AM184	AM213/215	-
NEMA + kg	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC			NEMA		
FA	333		**FA**	358	
FAF	332		**FAF**	358	
F	331		**F**	358	
FF	332		**FF**	358	

F87, n_e = 1400 1/min															3000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM80			AM90			AM100			AM112		
				3												
270.68	5.2	3000	19800	7												
255.37	5.5	3000	19800	7												
228.93	6.1	3000	19800	7												
197.20	7.1	3000	19800	7												
179.97	7.8	3000	19800	7												
159.61	8.8	3000	19800	7												
134.16	10	3000	19800	7												
123.29	11	3000	19800	7												
109.49	13	3000	19800	7	FA	95 kg		FA	95 kg		FA	100 kg		FA	100 kg	
97.89	14	3000	19800	7	FAF	110 kg		FAF	110 kg		FAF	115 kg		FAF	115 kg	
88.01	16	3000	19800	7	F	100 kg		F	100 kg		F	105 kg		F	105 kg	
76.39	18	3000	19800	7	FF	115 kg		FF	115 kg		FF	120 kg		FF	120 kg	
68.40	20	3000	19600	7												
56.75	25	3000	17700	7												
50.36	28	2940	16800	7												
45.28	31	2820	16200	8												
39.30	36	2720	15400	8												
35.19	40	2610	14900	8												
29.20	48	2510	13800	8												
				2												
33.92	41	2610	14600	7												
28.78	49	2450	13900	7												
26.50	53	3000	11100	7												
23.68	59	3000	10300	7												
21.32*	66	3000	9530	7												
19.31	73	3000	8840	7												
17.12	82	3000	8040	7												
15.48	90	3000	7390	7	FA	92 kg		FA	92 kg		FA	97 kg		FA	97 kg	
13.12*	107	3000	6370	7	FAF	105 kg		FAF	105 kg		FAF	110 kg		FAF	110 kg	
11.46	122	3000	5580	7	F	98 kg		F	98 kg		F	105 kg		F	105 kg	
9.58	146	2880	5050	7	FF	115 kg		FF	115 kg		FF	120 kg		FF	120 kg	
8.29	169	1530	8890	7												
7.35	190	1530	8280	7												
6.65	211	1530	7790	7												
5.63	249	1530	7020	7												
4.92	285	1530	6430	7												
4.12	340	1460	5980	7												

	AM143	AM145	AM182	AM184
NEMA **+ kg**	-- kg	-- kg	- 1.0 kg	- 1.0 kg

IEC	**FA**	338	**NEMA**	**FA**	358
	FAF	337		**FAF**	358
	F	336		**F**	358
	FF	337		**FF**	358

F87, n_e = 1400 1/min															3000 Nm	
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM132S/M			AM132ML			AM160			AM180		
					3											
270.68	5.2	3000	19800	7												
255.37	5.5	3000	19800	7												
228.93	6.1	3000	19800	7												
197.20	7.1	3000	19800	7												
179.97	7.8	3000	19800	7												
159.61	8.8	3000	19800	7												
134.16	10	3000	19800	7												
123.29	11	3000	19800	7												
109.49	13	3000	19800	7		FA	105 kg		FA	105 kg		FA	125 kg		FA	125 kg
97.89	14	3000	19800	7		FAF	120 kg		FAF	120 kg		FAF	135 kg		FAF	135 kg
88.01	16	3000	19800	7		F	115 kg		F	115 kg		F	130 kg		F	130 kg
76.39	18	3000	19800	7		FF	130 kg		FF	130 kg		FF	145 kg		FF	145 kg
68.40	20	3000	19600	7												
56.75	25	3000	17700	7												
50.36	28	2940	16800	7												
45.28	31	2820	16200	8												
39.30	36	2720	15400	8												
35.19	40	2610	14900	8												
29.20	48	2510	13800	8												
					2											
33.92	41	2610	14600	7												
28.78	49	2450	13900	7												
26.50	53	3000	11100	7												
23.68	59	3000	10300	7												
21.32*	66	3000	9530	7												
19.31	73	3000	8840	7												
17.12	82	3000	8040	7												
15.48	90	3000	7390	7		FA	105 kg		FA	105 kg		FA	120 kg		FA	120 kg
13.12*	107	3000	6370	7		FAF	115 kg		FAF	115 kg		FAF	135 kg		FAF	135 kg
11.46	122	3000	5580	7		F	110 kg		F	110 kg		F	125 kg		F	125 kg
9.58	146	2880	5050	7		FF	125 kg		FF	125 kg		FF	140 kg		FF	140 kg
8.29	169	1530	8890	7												
7.35	190	1530	8280	7												
6.65	211	1530	7790	7												
5.63	249	1530	7020	7												
4.92	285	1530	6430	7												
4.12	340	1460	5980	7												

		AM213/215	-	AM254/256	AM284/286
NEMA	**+ kg**	- 2.0 kg	-	- 5.0 kg	- 3.0 kg

	IEC	**FA**	338	**NEMA**	**FA**	358
		FAF	337		**FAF**	358
		F	336		**F**	358
		FF	337		**FF**	358

F97, n_e = 1400 1/min																4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100			AM112			AM132S/M			AM132ML		
				3												
276.77	5.1	4300	29900	6												
253.41	5.5	4300	29900	6												
223.88	6.3	4300	29900	6												
189.92	7.4	4300	29900	6												
174.87	8.0	4300	29900	6												
156.30	9.0	4300	29900	6												
140.71	9.9	4300	29900	6												
127.42	11	4300	29900	6												
112.99	12	4300	29900	6												
102.16	14	4300	29900	6												
97.58	14	4300	29900	6		FA	165 kg		FA	165 kg		FA	170 kg		FA	170 kg
89.85	16	4300	29900	6		FAF	185 kg		FAF	185 kg		FAF	195 kg		FAF	195 kg
86.59	16	4300	29900	6		F	170 kg		F	170 kg		F	180 kg		F	180 kg
80.31	17	4300	29900	6		FF	205 kg		FF	205 kg		FF	210 kg		FF	210 kg
75.63	19	4300	29900	6												
72.29	19	4300	29900	6												
65.47	21	4300	29000	6												
58.06	24	4300	27200	6												
52.49	27	4300	25800	6												
44.49	31	4300	23600	6												
38.86	36	4300	21900	6												
32.50	43	4300	19800	6												
				2												
43.28	32	3070	27600	6												
36.64	38	3070	25500	6												
33.91	41	4300	20300	6												
30.39	46	4300	19000	6												
27.44*	51	4300	17900	6												
24.92	56	4300	16800	6												
22.11	63	4300	15600	6												
20.07	70	4300	14600	6												
17.25*	81	4300	13200	6		FA	160 kg		FA	160 kg		FA	165 kg		FA	165 kg
15.06	93	4300	11900	6		FAF	180 kg		FAF	180 kg		FAF	185 kg		FAF	185 kg
12.77	110	4300	10500	6		F	165 kg		F	165 kg		F	175 kg		F	175 kg
11.16	125	4100	10000	6		FF	200 kg		FF	200 kg		FF	205 kg		FF	205 kg
9.06	155	2360	13400	9												
8.22	170	2360	12600	9												
7.07	198	2360	11500	9												
6.17	227	2250	11100	9												
5.23	268	2150	10400	9												
4.57	306	2050	9950	9												
3.87	362	1800	0	-												

	AM182	AM184	AM213/215	-
NEMA **+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC	**FA**	343	**NEMA**	**FA**	358
	FAF	342		**FAF**	358
	F	341		**F**	358
	FF	342		**FF**	358

F97, n_e = 1400 1/min								4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160	AM180	AM200
				3			
276.77	5.1	4300	29900	6			
253.41	5.5	4300	29900	6			
223.88	6.3	4300	29900	6			
189.92	7.4	4300	29900	6			
174.87	8.0	4300	29900	6			
156.30	9.0	4300	29900	6			
140.71	9.9	4300	29900	6			
127.42	11	4300	29900	6			
112.99	12	4300	29900	6			
102.16	14	4300	29900	6			
97.58	14	4300	29900	6	FA 190 kg FAF 210 kg	FA 190 kg FAF 210 kg	FA 205 kg FAF 225 kg
89.85	16	4300	29900	6	F 195 kg	F 195 kg	F 215 kg
86.59	16	4300	29900	6	FF 230 kg	FF 230 kg	FF 245 kg
80.31	17	4300	29900	6			
75.63	19	4300	29900	6			
72.29	19	4300	29900	6			
65.47	21	4300	29000	6			
58.06	24	4300	27200	6			
52.49	27	4300	25800	6			
44.49	31	4300	23600	6			
38.86	36	4300	21900	6			
32.50	43	4300	19800	6			
				2			
43.28	32	3070	27600	6			
36.64	38	3070	25500	6			
33.91	41	4300	20300	6			
30.39	46	4300	19000	6			
27.44*	51	4300	17900	6			
24.92	56	4300	16800	6			
22.11	63	4300	15600	6			
20.07	70	4300	14600	6			
17.25*	81	4300	13200	6	FA 185 kg FAF 205 kg	FA 185 kg FAF 205 kg	FA 200 kg FAF 220 kg
15.06	93	4300	11900	6	F 190 kg	F 190 kg	F 205 kg
12.77	110	4300	10500	6	FF 225 kg	FF 225 kg	FF 240 kg
11.16	125	4100	10000	6			
9.06	155	2360	13400	9			
8.22	170	2360	12600	9			
7.07	198	2360	11500	9			
6.17	227	2250	11100	9			
5.23	268	2150	10400	9			
4.57	306	2050	9950	9			
3.87	362	1800	0	-			

		AM254/256	AM284/286	AM324/326
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

IEC	**FA**	343	**NEMA**	**FA**	358
	FAF	342		**FAF**	358
	F	341		**F**	358
	FF	342		**FF**	358

F..
F.. AM.. [Nm]

F107, n_e = 1400 1/min															7840 Nm		
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100			AM112			AM132S/M			AM132ML		
				3												
254.40*	5.5	7680	49800	5												
215.37	6.5	7680	49800	5												
199.31	7.0	7680	49800	5												
178.64	7.8	7680	49800	5												
161.28*	8.7	7680	49800	5												
146.49	9.6	7680	49800	5												
129.97	11	7680	49800	5												
117.94	12	7680	49800	5												
101.38*	14	7680	49800	5		FA	240 kg		FA	240 kg		FA	245 kg		FA	245 kg
92.47*	15	7680	49800	6		FAF	260 kg		FAF	260 kg		FAF	265 kg		FAF	265 kg
88.49	16	7680	49800	5		F	255 kg		F	255 kg		F	260 kg		F	260 kg
83.99	17	7680	49800	6		FF	285 kg		FF	285 kg		FF	285 kg		FF	285 kg
74.52	19	7680	49800	6												
67.62	21	7680	49800	6												
58.12*	24	7680	47800	6												
50.73	28	7680	45100	6												
43.03	33	7680	42000	6												
37.61	37	7680	39500	6												
31.80	44	7680	36500	6												
				2												
33.79*	41	7400	38300	5												
27.57	51	7840	33700	5												
25.14	56	7840	32200	5												
21.76*	64	7840	30000	5												
19.20*	73	7840	28100	5												
16.58	84	7840	26000	5												
14.67	95	7680	24700	5		FA	230 kg		FA	230 kg		FA	235 kg		FA	235 kg
12.33	114	7000	24300	5		FAF	250 kg		FAF	250 kg		FAF	255 kg		FAF	255 kg
9.96	141	6500	22900	5		F	245 kg		F	245 kg		F	250 kg		F	250 kg
9.69	144	4910	25400	7		FF	275 kg		FF	275 kg		FF	275 kg		FF	275 kg
8.37	167	4800	24000	7												
7.40	189	4600	23200	7												
6.22	225	4600	21100	7												
5.03	278	4600	0	-												

	AM182	AM184	AM213/215	-
NEMA + kg	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC

FA	348
FAF	347
F	346
FF	347

NEMA

FA	359
FAF	359
F	359
FF	359

F107, n_e = 1400 1/min															7840 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160			AM180			AM200			AM225		
				3												
254.40*	5.5	7680	49800	5												
215.37	6.5	7680	49800	5												
199.31	7.0	7680	49800	5												
178.64	7.8	7680	49800	5												
161.28*	8.7	7680	49800	5												
146.49	9.6	7680	49800	5												
129.97	11	7680	49800	5												
117.94	12	7680	49800	5												
101.38*	14	7680	49800	5		FA	260 kg		FA	265 kg		FA	280 kg		FA	285 kg
92.47*	15	7680	49800	6		FAF	285 kg		FAF	285 kg		FAF	300 kg		FAF	305 kg
88.49	16	7680	49800	5		F	280 kg		F	280 kg		F	295 kg		F	300 kg
83.99	17	7680	49800	6		FF	305 kg		FF	305 kg		FF	325 kg		FF	330 kg
74.52	19	7680	49800	6												
67.62	21	7680	49800	6												
58.12*	24	7680	47800	6												
50.73	28	7680	45100	6												
43.03	33	7680	42000	6												
37.61	37	7680	39500	6												
31.80	44	7680	36500	6												
				2												
33.79*	41	7400	38300	5												
27.57	51	7840	33700	5												
25.14	56	7840	32200	5												
21.76*	64	7840	30000	5												
19.20*	73	7840	28100	5												
16.58	84	7840	26000	5												
14.67	95	7680	24700	5		FA	255 kg		FA	255 kg		FA	270 kg		FA	275 kg
12.33	114	7000	24300	5		FAF	275 kg		FAF	275 kg		FAF	290 kg		FAF	295 kg
9.96	141	6500	22900	5		F	270 kg		F	270 kg		F	285 kg		F	290 kg
9.69	144	4910	25400	7		FF	295 kg		FF	295 kg		FF	315 kg		FF	320 kg
8.37	167	4800	24000	7												
7.40	189	4600	23200	7												
6.22	225	4600	21100	7												
5.03	278	4600	0	-												

	AM254/256	AM284/286	AM324/326	AM364/365
NEMA **+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg	- 7.0 kg

IEC			NEMA		
FA	348		**FA**	359	
FAF	347		**FAF**	359	
F	346		**F**	359	
FF	347		**FF**	359	

F127, n_e = 1400 1/min													**12000 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM132S/M**		**AM132ML**		**AM160**		**AM180**		
					3								
170.83	8.2	12000	90000	5									
153.67*	9.1	12000	90000	5									
125.37	11	12000	90000	5									
114.34	12	12000	88000	5									
98.95	14	12000	83000	5									
87.31*	16	12000	78900	5									
75.41*	19	12000	74300	5		FA 395 kg		FA 395 kg		FA 410 kg		FA 410 kg	
70.07	20	12000	72100	5		FAF 435 kg		FAF 435 kg		FAF 445 kg		FAF 445 kg	
63.91	22	12000	69400	5		F 435 kg		F 435 kg		F 445 kg		F 445 kg	
55.31	25	12000	65300	5		FF 480 kg		FF 480 kg		FF 490 kg		FF 490 kg	
48.80	29	12000	61800	5									
42.15	33	12000	57900	5									
37.28	38	12000	54800	5									
31.33	45	12000	50600	5									
25.30	55	12000	45700	5									
					2								
26.86	52	8500	55300	5									
24.57	57	8500	53300	5									
21.38	65	12000	42000	5									
18.87	74	11000	41900	5									
16.36	86	11000	39000	5									
14.55	96	11000	36200	5		FA 385 kg		FA 385 kg		FA 400 kg		FA 400 kg	
12.54	112	10000	36400	5		FAF 420 kg		FAF 420 kg		FAF 435 kg		FAF 435 kg	
10.19	137	9500	34000	5		F 420 kg		F 420 kg		F 435 kg		F 435 kg	
8.86	158	7000	36400	6		FF 465 kg		FF 465 kg		FF 480 kg		FF 480 kg	
7.88	178	6000	37000	6									
6.80	206	7000	32200	7									
5.52	254	6000	31700	7									
4.68	299	6000	29500	7									

	AM213/215	**-**	**AM254/256**	**AM284/286**
NEMA **+ kg**	- 2.0 kg	-	- 5.0 kg	- 3.0 kg

IEC		**NEMA**	
FA	352	**FA**	359
FAF	351	**FAF**	359
F	350	**F**	359
FF	351	**FF**	359

F127, n_e = 1400 1/min															12000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM200			AM225			AM250			AM280		
				3												
170.83	8.2	12000	90000	5												
153.67*	9.1	12000	90000	5												
125.37	11	12000	90000	5												
114.34	12	12000	88000	5												
98.95	14	12000	83000	5												
87.31*	16	12000	78900	5												
75.41*	19	12000	74300	5		FA	425 kg		FA	430 kg		FA	460 kg		FA	460 kg
70.07	20	12000	72100	5		FAF	460 kg		FAF	465 kg		FAF	500 kg		FAF	500 kg
63.91	22	12000	69400	5		F	460 kg		F	465 kg		F	500 kg		F	500 kg
55.31	25	12000	65300	5		FF	510 kg		FF	510 kg		FF	540 kg		FF	540 kg
48.80	29	12000	61800	5												
42.15	33	12000	57900	5												
37.28	38	12000	54800	5												
31.33	45	12000	50600	5												
25.30	55	12000	45700	5												
				2												
26.86	52	8500	55300	5												
24.57	57	8500	53300	5												
21.38	65	12000	42000	5												
18.87	74	11000	41900	5												
16.36	86	11000	39000	5												
14.55	96	11000	36200	5		FA	410 kg		FA	415 kg		FA	450 kg		FA	450 kg
12.54	112	10000	36400	5		FAF	450 kg		FAF	455 kg		FAF	485 kg		FAF	485 kg
10.19	137	9500	34000	5		F	450 kg		F	455 kg		F	485 kg		F	485 kg
8.86	158	7000	36400	6		FF	495 kg		FF	500 kg		FF	530 kg		FF	530 kg
7.88	178	6000	37000	6												
6.80	206	7000	32200	7												
5.52	254	6000	31700	7												
4.68	299	6000	29500	7												

		AM324/326	AM364/365	-	-
NEMA	**+ kg**	- 2.0 kg	- 7.0 kg	-	-

11

	IEC	**FA**	352	**NEMA**	**FA**	359
		FAF	351		**FAF**	359
		F	350		**F**	359
		FF	351		**FF**	359

F157, n_e = 1400 1/min									**18000 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM160**		**AM180**		**AM200**	
				3						
267.43	5.2	18000	100300	5						
217.62*	6.4	18000	100300	5						
178.20*	7.9	18000	100300	5						
162.96	8.6	18000	100300	5						
141.80*	9.9	18000	100300	5						
125.14	11	18000	100300	5						
108.49	13	18000	100300	5						
96.53*	15	18000	100300	5		FA 670 kg		FA 670 kg		FA 690 kg
85.80*	16	18000	95700	5		FAF 730 kg		FAF 730 kg		FAF 740 kg
78.46	18	18000	92300	5		F 690 kg		F 690 kg		F 710 kg
68.28*	21	18000	87000	5		FF 790 kg		FF 790 kg		FF 810 kg
60.25	23	18000	82500	5						
52.24	27	18000	77500	5						
46.48*	30	18000	73600	5						
40.06	35	18000	68900	5						
32.55	43	18000	62500	5						
27.60	51	18000	57800	5						
				2						
53.55	26	8000	98300	4						
43.94*	32	10000	87800	4						
35.75*	39	11000	79300	4						
28.60*	49	17000	60800	4						
25.43	55	15000	61500	4		FA 660 kg		FA 660 kg		FA 680 kg
22.16	63	18000	51800	4		FAF 720 kg		FAF 720 kg		FAF 740 kg
19.77	71	17000	50900	4		F 680 kg		F 680 kg		F 700 kg
16.85	83	18000	44900	5		FF 790 kg		FF 790 kg		FF 810 kg
13.96	100	17000	42500	5						
11.92	117	16000	40900	5						

		AM254/256	**AM284/286**	**AM324/326**
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

	IEC	**FA**	356	**NEMA**	**FA**	359
		FAF	355		**FAF**	359
		F	354		**F**	359
		FF	355		**FF**	359

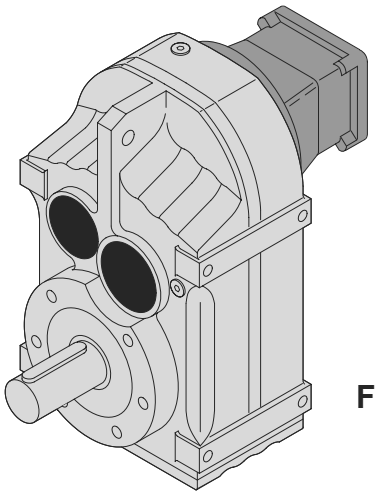
F157, n_e = 1400 1/min								18000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM225	AM250	AM280	
				3				
267.43	5.2	18000	100300	5				
217.62*	6.4	18000	100300	5				
178.20*	7.9	18000	100300	5				
162.96	8.6	18000	100300	5				
141.80*	9.9	18000	100300	5				
125.14	11	18000	100300	5				
108.49	13	18000	100300	5				
96.53*	15	18000	100300	5	FA 690 kg	FA 720 kg	FA 720 kg	
85.80*	16	18000	95700	5	FAF 750 kg	FAF 780 kg	FAF 780 kg	
78.46	18	18000	92300	5	F 710 kg	F 740 kg	F 740 kg	
68.28*	21	18000	87000	5	FF 820 kg	FF 840 kg	FF 840 kg	
60.25	23	18000	82500	5				
52.24	27	18000	77500	5				
46.48*	30	18000	73600	5				
40.06	35	18000	68900	5				
32.55	43	18000	62500	5				
27.60	51	18000	57800	5				
				2				
53.55	26	8000	98300	4				
43.94*	32	10000	87800	4				
35.75*	39	11000	79300	4				
28.60*	49	17000	60800	4				
25.43	55	15000	61500	4	FA 680 kg	FA 710 kg	FA 710 kg	
22.16	63	18000	51800	4	FAF 740 kg	FAF 770 kg	FAF 770 kg	
19.77	71	17000	50900	4	F 710 kg	F 730 kg	F 730 kg	
16.85	83	18000	44900	5	FF 810 kg	FF 840 kg	FF 840 kg	
13.96	100	17000	42500	5				
11.92	117	16000	40900	5				

	AM364/365	-	-
NEMA + kg	- 7.0 kg	-	-

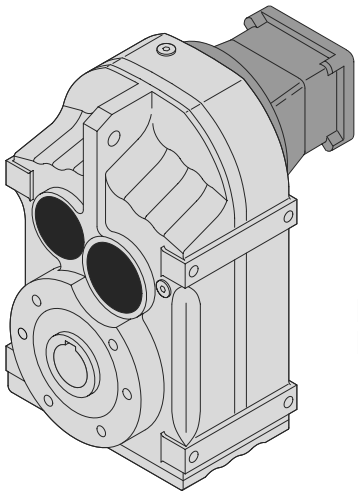
11

	IEC	**FA**	356	**NEMA**	**FA**	359
		FAF	355		**FAF**	359
		F	354		**F**	359
		FF	355		**FF**	359

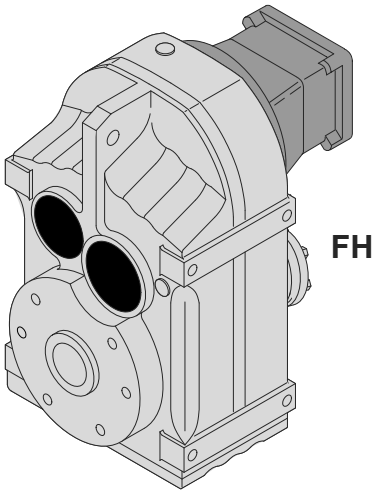
11.2 F.. AQ.. [Nm]



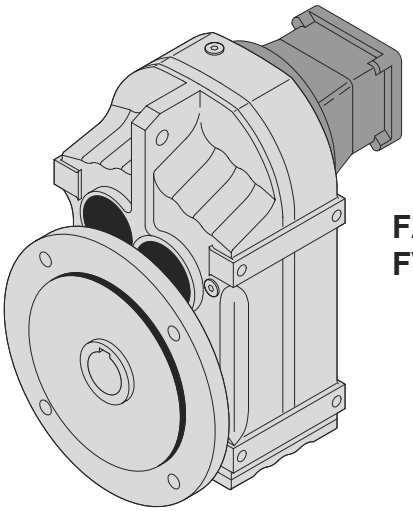
F.. AQ..



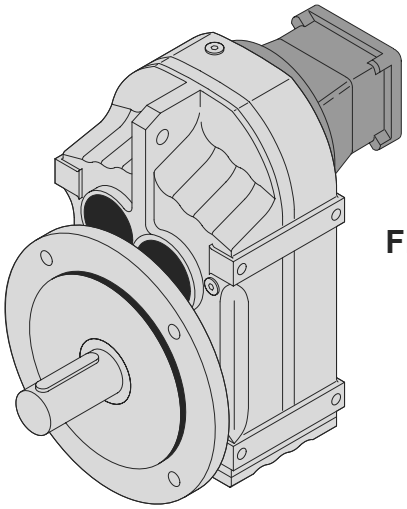
FA..B AQ..
FV..B AQ..



FH..B AQ..

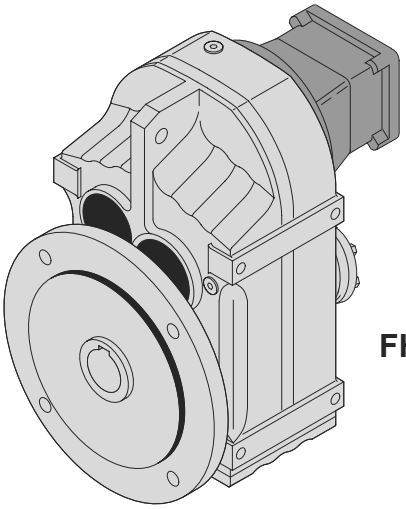


FAF.. AQ..
FVF.. AQ ..

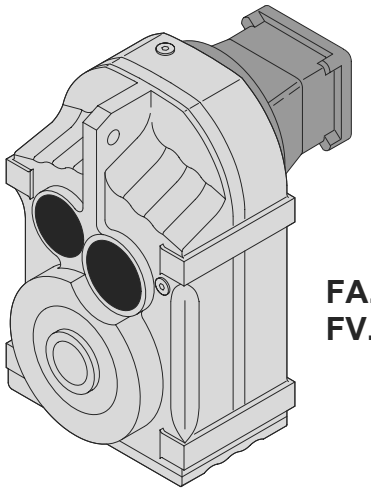


FF.. AQ..

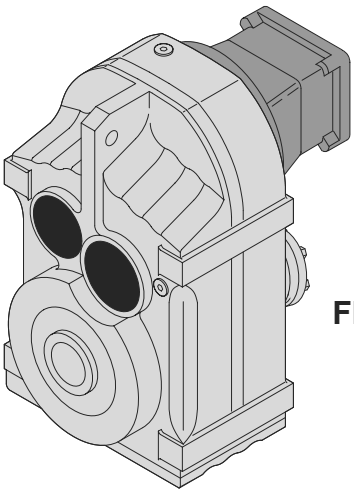
50399AXX



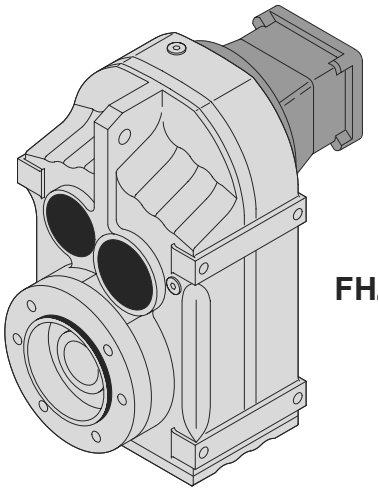
FHF .. AQ..



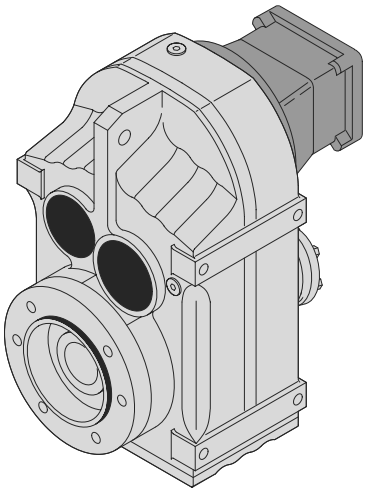
FA.. AQ..
FV.. AQ..



FH.. AQ..



FHZ.. AQ..



FAZ.. AQ..
FVZ.. AQ..

50400AXX

F27, n_e = 1400 1/min												130 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3		AQ..100/1-4		AQ..115/1-3			
				3								
140.74	9.9	130	4500	-								
129.09	11	130	4500	-								
109.90	13	130	4500	-								
94.76	15	130	4500	-								
88.32	16	130	4500	-								
77.21	18	130	4500	-								
72.37	19	130	4500	-		FA 9.2 kg		FA 9.9 kg		FA 10 kg		
63.86	22	130	4400	-		FAF 9.9 kg		FAF 11 kg		FAF 11 kg		
56.62	25	130	4190	-		F 9.7 kg		F 10 kg		F 11 kg		
50.19	28	130	3980	-		FF 11 kg		FF 11 kg		FF 12 kg		
46.78	30	130	3860	-								
40.89	34	130	3640	-								
38.33	37	130	3530	-								
33.83	41	130	3340	-								
				2								
29.56	47	130	3150	-								
27.18	52	130	3030	-								
23.25	60	130	2820	-								
20.15	69	130	2630	-								
18.84	74	130	2550	-								
16.28	86	130	2370	-								
13.84	101	130	2180	-								
12.35	113	130	2060	-		FA 9.0 kg		FA 9.7 kg		FA 10 kg		
10.55	133	130	1900	-		FAF 9.7 kg		FAF 10 kg		FAF 11 kg		
9.88	142	130	1830	-		F 9.5 kg		F 10 kg		F 11 kg		
9.40	149	130	1660	-		FF 10 kg		FF 11 kg		FF 11 kg		
8.13	172	123	1590	-								
6.91	203	114	1530	-								
6.17	227	109	1480	-								
5.27	266	100	1440	-								
4.93	284	96	1420	-								
4.16	337	87	1380	-								

FA	360
FAF	360
F	360
FF	360

F37, n_e = 1400 1/min												200 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
				3									
128.51	11	200	4290	7									
117.88	12	200	4290	7									
100.36	14	200	4290	7									
86.53	16	200	4290	7									
80.65	17	200	4290	7									
70.50	20	200	4290	7									
66.09	21	200	4290	7									
58.32	24	200	4290	7		FA	15 kg		FA	16 kg		FA	17 kg
54.54	26	200	4290	8		FAF	17 kg		FAF	18 kg		FAF	18 kg
51.70	27	200	4290	7		F	16 kg		F	17 kg		F	17 kg
47.02	30	200	4290	8		FF	18 kg		FF	18 kg		FF	19 kg
43.83	32	200	4290	8									
38.31	37	200	4290	8									
35.91	39	200	4290	8									
31.69	44	200	4290	8									
28.09	50	200	4060	8									
23.88	59	200	3760	8									
				2									
23.63	59	200	3740	6									
20.57	68	200	3500	6									
19.27	73	200	3390	6									
17.03	82	200	3180	6									
15.81	89	200	3070	6									
14.33	98	200	2910	7									
12.87	109	200	2750	7									
11.08	126	190	2620	7									
10.42	134	185	2580	7		FA	15 kg		FA	16 kg		FA	16 kg
8.97	156	175	2460	7		FAF	17 kg		FAF	17 kg		FAF	18 kg
8.01	175	170	2360	7		F	16 kg		F	16 kg		F	17 kg
7.44	188	145	2350	10		FF	17 kg		FF	18 kg		FF	19 kg
6.74	208	140	2270	10									
6.05	231	135	2190	10									
5.21	269	125	2120	10									
4.90	286	120	2100	11									
4.22	332	110	2030	11									
3.77	371	105	1970	12									

FA	360
FAF	360
F	360
FF	360

F47, n_e = 1400 1/min												400 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3		AQ..100/1-4		AQ..115/1-3			
				3								
190.76	7.3	400	5920	6								
175.38	8.0	400	5920	6								
150.06	9.3	400	5920	6								
130.07	11	400	5920	6								
121.57	12	400	5920	6								
105.09	13	400	5920	6								
89.29	16	400	5920	6								
79.72	18	400	5920	6		FA 20 kg		FA 21 kg		FA 21 kg		
68.09	21	400	5920	6		FAF 23 kg		FAF 24 kg		FAF 24 kg		
65.36	21	400	5920	7		F 21 kg		F 22 kg		F 22 kg		
56.49	25	400	5920	7		FF 24 kg		FF 25 kg		FF 25 kg		
48.00*	29	400	5920	7								
42.86	33	400	5920	7								
36.61	38	400	5920	7								
34.29	41	400	5920	7								
28.88	48	400	5790	7								
				2								
30.86	45	400	5920	6								
29.32	48	400	5830	6								
25.72	54	400	5470	6								
21.82	64	400	5030	6								
19.70	71	400	4770	6								
17.33	81	400	4450	6								
16.36	86	400	4320	6								
13.93	101	400	3950	6		FA 19 kg		FA 20 kg		FA 21 kg		
12.66	111	400	3740	6		FAF 22 kg		FAF 23 kg		FAF 23 kg		
10.97	128	400	3440	6		F 20 kg		F 21 kg		F 21 kg		
8.96	156	330	3250	8		FF 23 kg		FF 24 kg		FF 25 kg		
7.88	178	380	2630	8								
7.44*	188	380	2530	8								
6.34	221	350	2470	8								
5.76	243	340	2390	9								
4.99	281	320	2310	9								

	FA	360
	FAF	360
	F	360
	FF	360

F57, n_e = 1400 1/min												600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
				3									
199.70	7.0	600	9200	6									
183.60	7.6	600	9200	6									
157.09	8.9	600	9200	6									
136.16	10	600	9200	6									
127.27	11	600	9200	6									
110.01	13	600	9200	6									
93.47	15	600	9200	6									
83.46	17	600	9200	6		FA	28 kg		FA	28 kg		FA	29 kg
72.98	19	600	9200	6		FAF	33 kg		FAF	34 kg		FAF	34 kg
68.22	21	600	9200	6		F	28 kg		F	29 kg		F	29 kg
58.97	24	600	9200	7		FF	35 kg		FF	35 kg		FF	36 kg
50.10	28	600	9200	7									
44.73	31	600	9160	7									
38.21	37	600	8510	7									
35.79	39	600	8250	7									
30.15	46	590	7650	7									
				2									
40.13	35	290	10500	6									
34.24	41	500	8670	6									
29.94	47	545	7890	6									
28.45	49	535	7760	6									
24.96	56	575	7060	6									
21.17	66	600	6350	6									
19.11	73	600	6020	6									
16.81	83	600	5620	6									
15.88	88	600	5450	6		FA	27 kg		FA	28 kg		FA	28 kg
13.52	104	600	4980	6		FAF	33 kg		FAF	33 kg		FAF	34 kg
12.29	114	600	4710	6		F	27 kg		F	28 kg		F	28 kg
10.64	132	600	4320	6		FF	34 kg		FF	34 kg		FF	35 kg
9.31	150	420	4760	8									
8.19	171	420	4450	8									
7.73	181	420	4310	8									
6.58	213	420	3940	8									
5.98	234	420	3730	9									
5.18	270	415	3460	9									

	FA	360
	FAF	360
	F	360
	FF	360

F57, n_e = 1400 1/min								600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
				3				
199.70	7.0	600	9200	6				
183.60	7.6	600	9200	6				
157.09	8.9	600	9200	6				
136.16	10	600	9200	6				
127.27	11	600	9200	6				
110.01	13	600	9200	6				
93.47	15	600	9200	6				
83.46	17	600	9200	6	FA 34 kg	FA 34 kg	FA 43 kg	
72.98	19	600	9200	6	FAF 39 kg	FAF 39 kg	FAF 48 kg	
68.22	21	600	9200	6	F 34 kg	F 34 kg	F 43 kg	
58.97	24	600	9200	7	FF 40 kg	FF 40 kg	FF 49 kg	
50.10	28	600	9200	7				
44.73	31	600	9160	7				
38.21	37	600	8510	7				
35.79	39	600	8250	7				
30.15	46	590	7650	7				
				2				
40.13	35	290	10500	6				
34.24	41	500	8670	6				
29.94	47	545	7890	6				
28.45	49	535	7760	6				
24.96	56	575	7060	6				
21.17	66	600	6350	6				
19.11	73	600	6020	6				
16.81	83	600	5620	6				
15.88	88	600	5450	6	FA 33 kg	FA 33 kg	FA 42 kg	
13.52	104	600	4980	6	FAF 39 kg	FAF 39 kg	FAF 47 kg	
12.29	114	600	4710	6	F 33 kg	F 33 kg	F 42 kg	
10.64	132	600	4320	6	FF 40 kg	FF 40 kg	FF 49 kg	
9.31	150	420	4760	8				
8.19	171	420	4450	8				
7.73	181	420	4310	8				
6.58	213	420	3940	8				
5.98	234	420	3730	9				
5.18	270	415	3460	9				

FA	360
FAF	360
F	360
FF	360

F67, n_e = 1400 1/min												820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
				3									
228.99	6.1	820	10300	6									
195.39	7.2	820	10300	6									
170.85	8.2	820	10300	6									
162.31	8.6	820	10300	6									
142.40	9.8	820	10300	6									
120.79	12	820	10300	6									
109.04	13	820	10300	6									
95.94	15	820	10300	6		FA	32 kg		FA	32 kg		FA	33 kg
90.59	15	820	10300	6		FAF	38 kg		FAF	39 kg		FAF	39 kg
79.76	18	820	10300	6		F	35 kg		F	35 kg		F	36 kg
67.65	21	820	10300	6		FF	41 kg		FF	41 kg		FF	42 kg
61.07	23	820	10300	6									
53.73	26	820	10300	6									
50.74	28	820	10300	6									
43.20	32	820	10300	6									
39.26	36	780	10700	6									
34.01	41	740	11000	6									
				2									
36.30	39	820	10300	5									
32.08	44	820	10300	5									
27.41	51	820	10300	5									
25.13	56	820	10300	5									
22.05	63	820	10300	5									
20.90*	67	820	10300	5									
18.29	77	820	10300	6									
16.48	85	820	10300	6									
14.46	97	820	10300	6									
12.76	110	820	10300	6		FA	31 kg		FA	31 kg		FA	32 kg
11.31	124	820	10300	6		FAF	37 kg		FAF	37 kg		FAF	38 kg
9.66	145	820	10300	6		F	33 kg		F	34 kg		F	34 kg
9.08	154	530	11400	8		FF	40 kg		FF	40 kg		FF	41 kg
8.60	163	570	10900	8									
7.53	186	610	10100	8									
6.78	206	620	9660	9									
5.95	235	610	9200	9									
5.25	267	590	8850	9									
4.66	300	560	8590	9									
3.97	353	500	8390	10									

FA	360
FAF	360
F	360
FF	360

F67, n_e = 1400 1/min								820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
				3				
228.99	6.1	820	10300	6				
195.39	7.2	820	10300	6				
170.85	8.2	820	10300	6				
162.31	8.6	820	10300	6				
142.40	9.8	820	10300	6				
120.79	12	820	10300	6				
109.04	13	820	10300	6				
95.94	15	820	10300	6	FA 38 kg	FA 38 kg	FA 46 kg	
90.59	15	820	10300	6	FAF 44 kg	FAF 44 kg	FAF 53 kg	
79.76	18	820	10300	6	F 41 kg	F 41 kg	F 49 kg	
67.65	21	820	10300	6	FF 47 kg	FF 47 kg	FF 55 kg	
61.07	23	820	10300	6				
53.73	26	820	10300	6				
50.74	28	820	10300	6				
43.20	32	820	10300	6				
39.26	36	780	10700	6				
34.01	41	740	11000	6				
				2				
36.30	39	820	10300	5				
32.08	44	820	10300	5				
27.41	51	820	10300	5				
25.13	56	820	10300	5				
22.05	63	820	10300	5				
20.90*	67	820	10300	5				
18.29	77	820	10300	6				
16.48	85	820	10300	6				
14.46	97	820	10300	6	FA 37 kg	FA 37 kg	FA 45 kg	
12.76	110	820	10300	6	FAF 43 kg	FAF 43 kg	FAF 52 kg	
11.31	124	820	10300	6	F 39 kg	F 39 kg	F 48 kg	
9.66	145	820	10300	6	FF 45 kg	FF 45 kg	FF 54 kg	
9.08	154	530	11400	8				
8.60	163	570	10900	8				
7.53	186	610	10100	8				
6.78	206	620	9660	9				
5.95	235	610	9200	9				
5.25	267	590	8850	9				
4.66	300	560	8590	9				
3.97	353	500	8390	10				

FA	360
FAF	360
F	360
FF	360

F77, n_e = 1400 1/min												1500 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
				3									
281.71	5.0	1500	15700	5									
262.93	5.3	1500	15700	5									
225.79	6.2	1500	15700	5									
198.31	7.1	1500	15700	5									
188.40	7.4	1500	15700	5									
166.47	8.4	1500	15700	5									
142.27	9.8	1500	15700	5									
130.42	11	1500	15700	5									
114.45	12	1500	15700	5									
108.46*	13	1500	15700	5									
94.93	15	1500	15700	5		FA	55 kg		FA	55 kg		FA	56 kg
85.52	16	1500	15700	6		FAF	61 kg		FAF	62 kg		FAF	62 kg
75.02	19	1500	15700	6		F	58 kg		F	59 kg		F	59 kg
72.50	19	1500	15700	6		FF	69 kg		FF	70 kg		FF	70 kg
66.46	21	1500	15700	6									
58.32	24	1500	15700	6									
55.27	25	1500	15700	6									
48.37	29	1500	15700	6									
43.58	32	1500	15700	6									
38.23	37	1500	15700	6									
33.74	41	1500	15700	6									
29.91	47	1500	15700	6									
25.54	55	1450	16100	6									
				2									
36.58	38	1110	17900	5									
31.51	44	1380	16500	5									
28.75	49	1430	16200	5									
25.50*	55	1500	15700	5									
21.43	65	1500	15700	5									
19.70	71	1500	15700	5									
17.49	80	1500	15700	5									
15.64*	90	1500	15700	5									
14.06	100	1500	15700	5		FA	53 kg		FA	54 kg		FA	54 kg
12.20	115	1500	14900	5		FAF	60 kg		FAF	60 kg		FAF	61 kg
10.93	128	1500	14200	6		F	57 kg		F	58 kg		F	58 kg
9.30	151	1080	13800	7		FF	68 kg		FF	68 kg		FF	69 kg
8.26	169	1080	13100	7									
7.39	189	1080	12500	7									
6.64	211	1080	12000	8									
5.76	243	1080	11300	8									
5.16	271	1080	10700	8									
4.28	327	1010	10200	8									

FA 361
FAF 361
F 361
FF 361

F77, n_e = 1400 1/min												1500 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2		AQ..140/3		AQ..190/1-3			
				3								
281.71	5.0	1500	15700	5								
262.93	5.3	1500	15700	5								
225.79	6.2	1500	15700	5								
198.31	7.1	1500	15700	5								
188.40	7.4	1500	15700	5								
166.47	8.4	1500	15700	5								
142.27	9.8	1500	15700	5								
130.42	11	1500	15700	5								
114.45	12	1500	15700	5								
108.46*	13	1500	15700	5								
94.93	15	1500	15700	5		FA 60 kg		FA 60 kg		FA 69 kg		
85.52	16	1500	15700	6		FAF 67 kg		FAF 67 kg		FAF 76 kg		
75.02	19	1500	15700	6		F 64 kg		F 64 kg		F 73 kg		
72.50	19	1500	15700	6		FF 75 kg		FF 75 kg		FF 83 kg		
66.46	21	1500	15700	6								
58.32	24	1500	15700	6								
55.27	25	1500	15700	6								
48.37	29	1500	15700	6								
43.58	32	1500	15700	6								
38.23	37	1500	15700	6								
33.74	41	1500	15700	6								
29.91	47	1500	15700	6								
25.54	55	1450	16100	6								
				2								
36.58	38	1110	17900	5								
31.51	44	1380	16500	5								
28.75	49	1430	16200	5								
25.50*	55	1500	15700	5								
21.43	65	1500	15700	5								
19.70	71	1500	15700	5								
17.49	80	1500	15700	5								
15.64*	90	1500	15700	5								
14.06	100	1500	15700	5		FA 59 kg		FA 59 kg		FA 68 kg		
12.20	115	1500	14900	5		FAF 65 kg		FAF 65 kg		FAF 74 kg		
10.93	128	1500	14200	6		F 63 kg		F 63 kg		F 71 kg		
9.30	151	1080	13800	7		FF 73 kg		FF 73 kg		FF 82 kg		
8.26	169	1080	13100	7								
7.39	189	1080	12500	7								
6.64	211	1080	12000	8								
5.76	243	1080	11300	8								
5.16	271	1080	10700	8								
4.28	327	1010	10200	8								

FA 361
FAF 361
F 361
FF 361

F87, n_e = 1400 1/min												3000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..100/1-4			AQ..115/1-3			AQ..140/1-2		
				3									
270.68	5.2	3000	19800	7									
255.37	5.5	3000	19800	7									
228.93	6.1	3000	19800	7									
197.20	7.1	3000	19800	7									
179.97	7.8	3000	19800	7									
159.61	8.8	3000	19800	7									
134.16	10	3000	19800	7									
123.29	11	3000	19800	7									
109.49	13	3000	19800	7		FA	94 kg		FA	95 kg		FA	100 kg
97.89	14	3000	19800	7		FAF	105 kg		FAF	105 kg		FAF	115 kg
88.01	16	3000	19800	7		F	100 kg		F	100 kg		F	105 kg
76.39	18	3000	19800	7		FF	115 kg		FF	115 kg		FF	120 kg
68.40	20	3000	19600	7									
56.75	25	3000	17700	7									
50.36	28	2940	16800	7									
45.28	31	2820	16200	8									
39.30	36	2720	15400	8									
35.19	40	2610	14900	8									
29.20	48	2510	13800	8									
				2									
33.92	41	2610	14600	7									
28.78	49	2450	13900	7									
26.50	53	3000	11100	7									
23.68	59	3000	10300	7									
21.32*	66	3000	9530	7									
19.31	73	3000	8840	7									
17.12	82	3000	8040	7									
15.48	90	3000	7390	7		FA	91 kg		FA	92 kg		FA	97 kg
13.12*	107	3000	6370	7		FAF	105 kg		FAF	105 kg		FAF	110 kg
11.46	122	3000	5580	7		F	97 kg		F	97 kg		F	105 kg
9.58	146	2880	5050	7		FF	110 kg		FF	115 kg		FF	120 kg
8.29	169	1530	8890	7									
7.35	190	1530	8280	7									
6.65	211	1530	7790	7									
5.63	249	1530	7020	7									
4.92	285	1530	6430	7									
4.12	340	1460	5980	7									

FA 361
FAF 361
F 361
FF 361

F87, n_e = 1400 1/min							3000 Nm	
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/3		AQ..190/1-3	
				3				
270.68	5.2	3000	19800	7				
255.37	5.5	3000	19800	7				
228.93	6.1	3000	19800	7				
197.20	7.1	3000	19800	7				
179.97	7.8	3000	19800	7				
159.61	8.8	3000	19800	7				
134.16	10	3000	19800	7				
123.29	11	3000	19800	7				
109.49	13	3000	19800	7	FA	100 kg	FA	110 kg
97.89	14	3000	19800	7	FAF	115 kg	FAF	120 kg
88.01	16	3000	19800	7	F	105 kg	F	115 kg
76.39	18	3000	19800	7	FF	120 kg	FF	130 kg
68.40	20	3000	19600	7				
56.75	25	3000	17700	7				
50.36	28	2940	16800	7				
45.28	31	2820	16200	8				
39.30	36	2720	15400	8				
35.19	40	2610	14900	8				
29.20	48	2510	13800	8				
				2				
33.92	41	2610	14600	7				
28.78	49	2450	13900	7				
26.50	53	3000	11100	7				
23.68	59	3000	10300	7				
21.32*	66	3000	9530	7				
19.31	73	3000	8840	7				
17.12	82	3000	8040	7				
15.48	90	3000	7390	7	FA	97 kg	FA	105 kg
13.12*	107	3000	6370	7	FAF	110 kg	FAF	120 kg
11.46	122	3000	5580	7	F	105 kg	F	110 kg
9.58	146	2880	5050	7	FF	120 kg	FF	125 kg
8.29	169	1530	8890	7				
7.35	190	1530	8280	7				
6.65	211	1530	7790	7				
5.63	249	1530	7020	7				
4.92	285	1530	6430	7				
4.12	340	1460	5980	7				

FA 361
FAF 361
F 361
FF 361

F97, n_e = 1400 1/min													4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2			AQ..140/3			AQ..190/1-3		
				3									
276.77	5.1	4300	29900	6									
253.41	5.5	4300	29900	6									
223.88	6.3	4300	29900	6									
189.92	7.4	4300	29900	6									
174.87	8.0	4300	29900	6									
156.30	9.0	4300	29900	6									
140.71	9.9	4300	29900	6									
127.42	11	4300	29900	6									
112.99	12	4300	29900	6									
102.16	14	4300	29900	6									
97.58	14	4300	29900	6		FA	165 kg		FA	165 kg		FA	175 kg
89.85	16	4300	29900	6		FAF	185 kg		FAF	185 kg		FAF	195 kg
86.59	16	4300	29900	6		F	170 kg		F	170 kg		F	180 kg
80.31	17	4300	29900	6		FF	205 kg		FF	205 kg		FF	215 kg
75.63	19	4300	29900	6									
72.29	19	4300	29900	6									
65.47	21	4300	29000	6									
58.06	24	4300	27200	6									
52.49	27	4300	25800	6									
44.49	31	4300	23600	6									
38.86	36	4300	21900	6									
32.50	43	4300	19800	6									
				2									
43.28	32	3070	27600	6									
36.64	38	3070	25500	6									
33.91	41	4300	20300	6									
30.39	46	4300	19000	6									
27.44*	51	4300	17900	6									
24.92	56	4300	16800	6									
22.11	63	4300	15600	6									
20.07	70	4300	14600	6									
17.25*	81	4300	13200	6		FA	160 kg		FA	160 kg		FA	165 kg
15.06	93	4300	11900	6		FAF	180 kg		FAF	180 kg		FAF	190 kg
12.77	110	4300	10500	6		F	165 kg		F	165 kg		F	175 kg
11.16	125	4100	10000	6		FF	200 kg		FF	200 kg		FF	205 kg
9.06	155	2360	13400	9									
8.22	170	2360	12600	9									
7.07	198	2360	11500	9									
6.17	227	2250	11100	9									
5.23	268	2150	10400	9									
4.57	306	2050	9950	9									
3.87	362	1800	0	-									

FA 362
FAF 362
F 362
FF 362

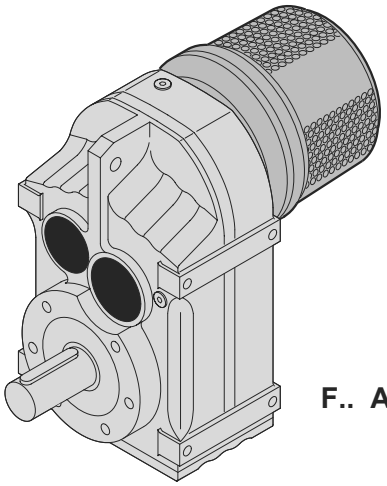
F107, n_e = 1400 1/min												7840 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2			AQ..140/3			AQ..190/1-3		
				3									
254.40*	5.5	7680	49800	5									
215.37	6.5	7680	49800	5									
199.31	7.0	7680	49800	5									
178.64	7.8	7680	49800	5									
161.28*	8.7	7680	49800	5									
146.49	9.6	7680	49800	5									
129.97	11	7680	49800	5									
117.94	12	7680	49800	5									
101.38*	14	7680	49800	5		FA	240 kg		FA	240 kg		FA	250 kg
92.47*	15	7680	49800	6		FAF	260 kg		FAF	260 kg		FAF	270 kg
88.49	16	7680	49800	5		F	255 kg		F	255 kg		F	265 kg
83.99	17	7680	49800	6		FF	285 kg		FF	285 kg		FF	295 kg
74.52	19	7680	49800	6									
67.62	21	7680	49800	6									
58.12*	24	7680	47800	6									
50.73	28	7680	45100	6									
43.03	33	7680	42000	6									
37.61	37	7680	39500	6									
31.80	44	7680	36500	6									
				2									
33.79*	41	7400	38300	5									
27.57	51	7840	33700	5									
25.14	56	7840	32200	5									
21.76*	64	7840	30000	5									
19.20*	73	7840	28100	5									
16.58	84	7840	26000	5									
14.67	95	7680	24700	5		FA	230 kg		FA	230 kg		FA	240 kg
12.33	114	7000	24300	5		FAF	250 kg		FAF	250 kg		FAF	260 kg
9.96	141	6500	22900	5		F	245 kg		F	245 kg		F	255 kg
9.69	144	4910	25400	7		FF	275 kg		FF	275 kg		FF	285 kg
8.37	167	4800	24000	7									
7.40	189	4600	23200	7									
6.22	225	4600	21100	7									
5.03	278	4600	0	-									

FA 362
FAF 362
F 362
FF 362

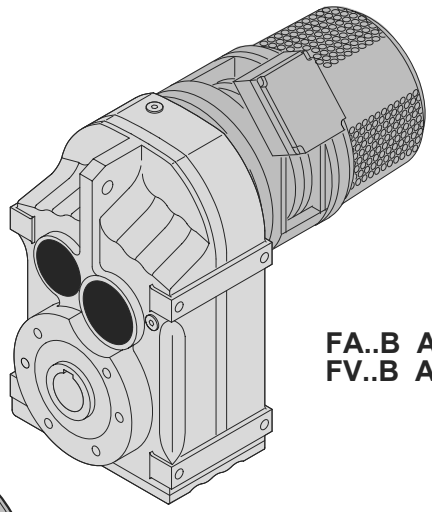
F127, n_e = 1400 1/min					12000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..190/1-3
				3	
170.83	8.2	12000	90000	5	
153.67*	9.1	12000	90000	5	
125.37	11	12000	90000	5	
114.34	12	12000	88000	5	
98.95	14	12000	83000	5	
87.31*	16	12000	78900	5	
75.41*	19	12000	74300	5	FA 400 kg FAF 435 kg F 435 kg FF 480 kg
70.07	20	12000	72100	5	
63.91	22	12000	69400	5	
55.31	25	12000	65300	5	
48.80	29	12000	61800	5	
42.15	33	12000	57900	5	
37.28	38	12000	54800	5	
31.33	45	12000	50600	5	
25.30	55	12000	45700	5	
				2	
26.86	52	8500	55300	5	
24.57	57	8500	53300	5	
21.38	65	12000	42000	5	
18.87	74	11000	41900	5	
16.36	86	11000	39000	5	
14.55	96	11000	36200	5	FA 385 kg FAF 425 kg F 420 kg FF 465 kg
12.54	112	10000	36400	5	
10.19	137	9500	34000	5	
8.86	158	7000	36400	6	
7.88	178	6000	37000	6	
6.80	206	7000	32200	7	
5.52	254	6000	31700	7	
4.68	299	6000	29500	7	

FA 362
FAF 362
F 362
FF 362

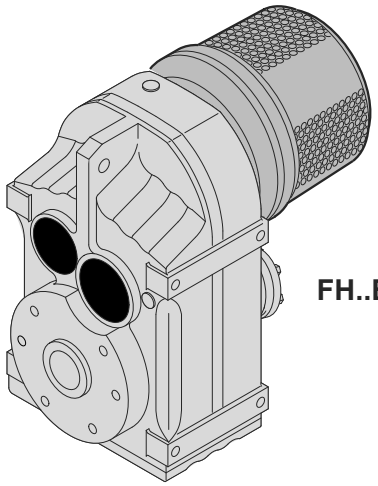
11.3 F.. AT..



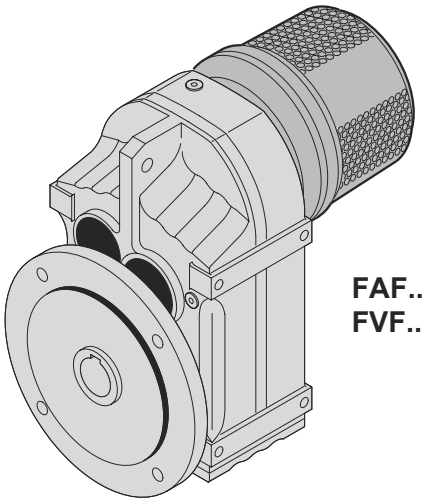
F.. AT..



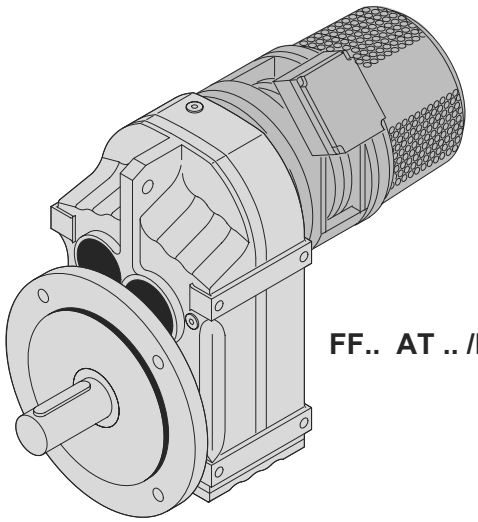
FA..B AT.. /BM(G)
FV..B AT.. /BM(G)



FH..B AT..

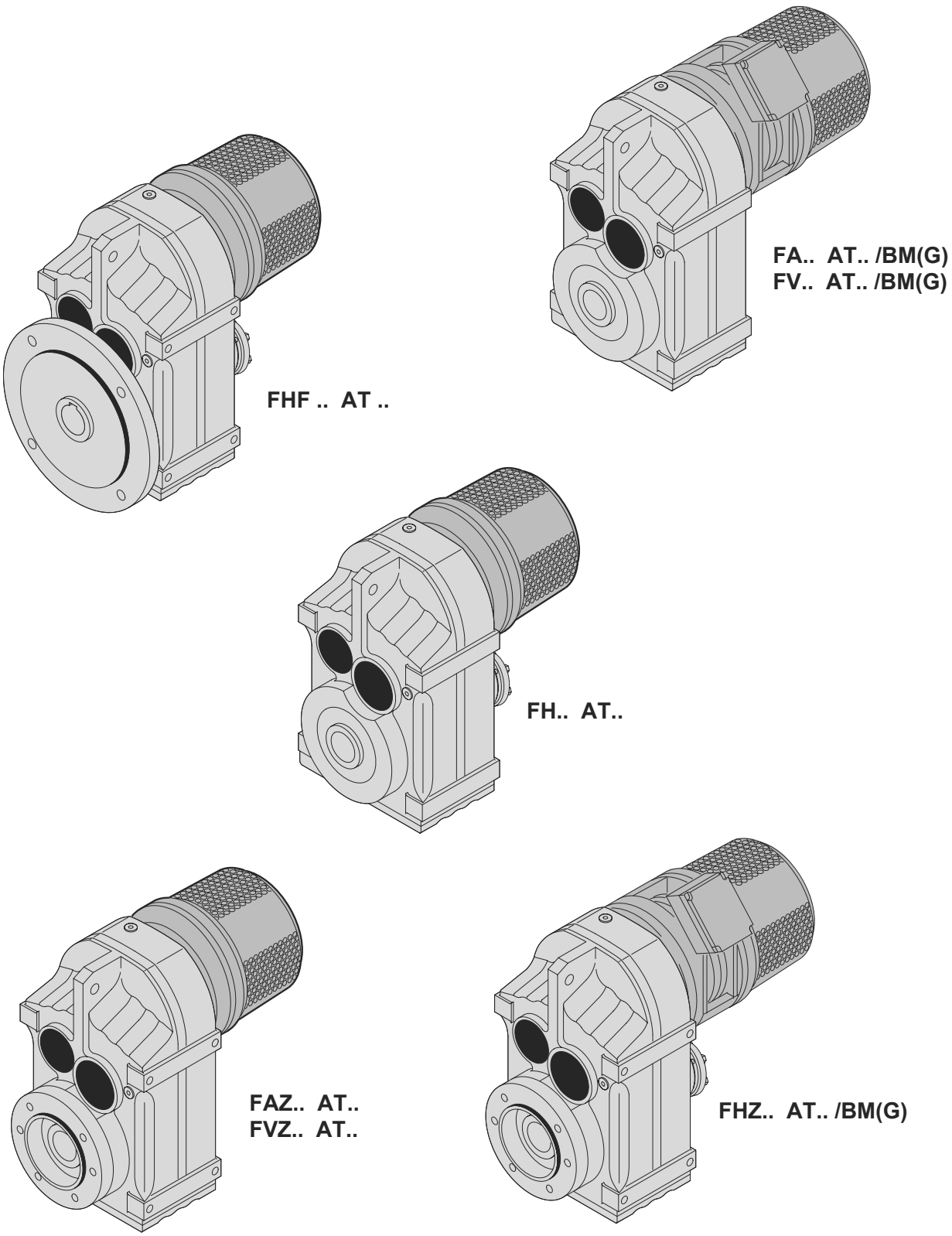


FAF.. AT..
FVF.. AT ..



FF.. AT .. /BM(G)

50403AXX


FA.. AT.. /BM(G)
FV.. AT.. /BM(G)
FHF .. AT ..
FH.. AT..
FAZ.. AT..
FVZ.. AT..
FHZ.. AT.. /BM(G)
50404AXX

n_e = 1400 1/min:

		P_m [kW]				S_n [%]	
F67	DT71D4	0.37	AT311	T11	0.42	12	365 368
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT321	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT322	T21D	1.53	11	
	DV112M4	4			1.6	12	
F77	DT71D4	0.37	AT311	T11	0.42	12	365 368
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
F87	DT90S4	1.1	AT312	T11D	0.72	15	366 369
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
F97	DT90S4	1.1	AT312	T11D	0.72	15	366 369
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	

n_e = 1400 1/min:

		P_m [kW]				S_n [%]	
F107	DV100M4	2.2	AT421	T21	0.9	13	367 370
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	
F127	DV132M4	7.5	AT541	T41	2.4	8	367 370
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	
F157	DV160M4	11	AT541	T41	2.5	13	367 370
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	

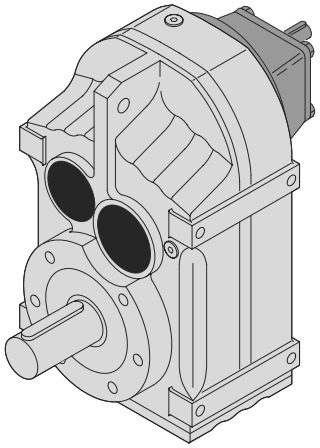
ne = 2800 1/min:

		P_m [kW]				S_n [%]	
F67	DT71D2	0.55	AT311	T11	0.19	3	365 368
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
F77	DT71D2	0.55	AT311	T11	0.19	3	365 368
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
F87	DT90S2	1.5	AT311	T11	0.29	8.5	366 369
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
F97	DT90S2	1.5	AT311	T11	0.29	8.5	366 369
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	

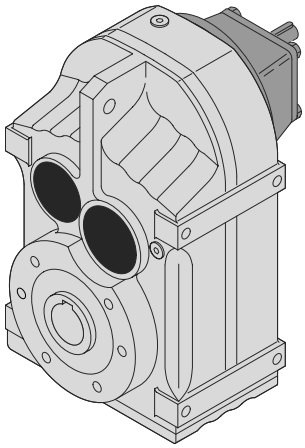
ne = 2800 1/min:

		P_m [kW]				S_n [%]	
	DV100M2	3	AT311	T11	0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
F107	DV132ML2	9.2			0.65	8.5	367 370
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	367 370
F127	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	
	DV160L2	15	AT522	T21D	1.15	7.5	
F157	DV180M2	18.5	AT541	T41	1.4	4.5	367 370
	DV180L2	22			1.4	5.5	

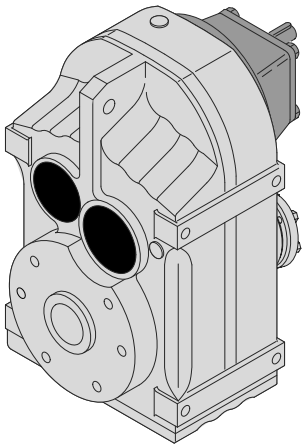
11.4 F.. AD.. [Nm]



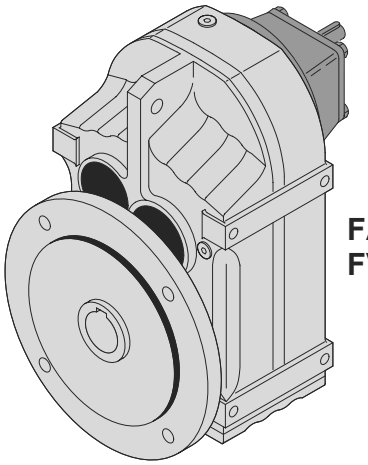
F.. AD..



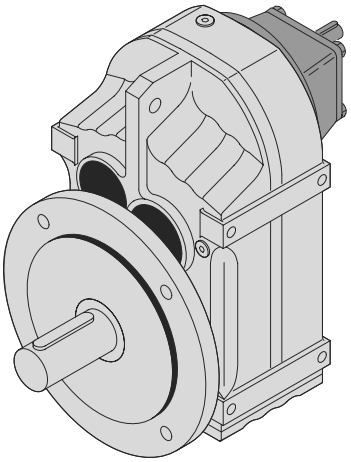
FA..B AD..
FV..B AD..



FH..B AD..



FAF.. AD..
FVF.. AD ..



FF.. AD..

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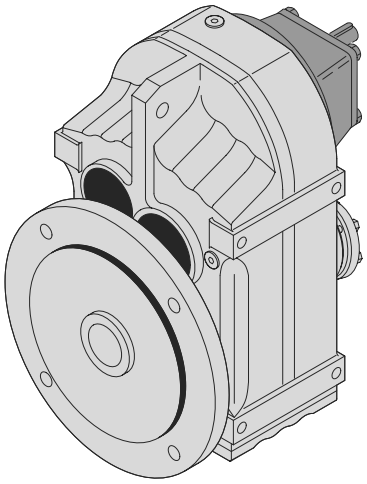
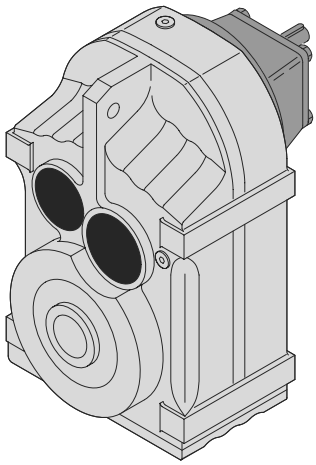
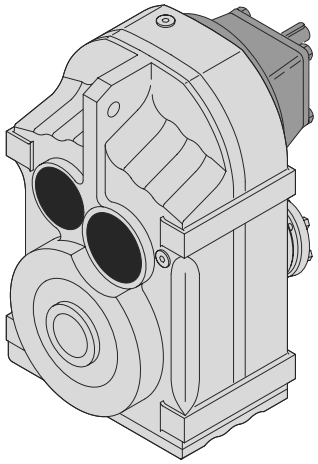


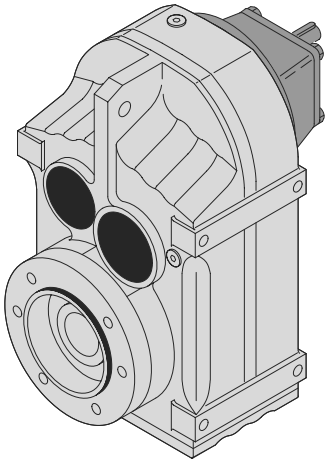
FHF .. AD ..



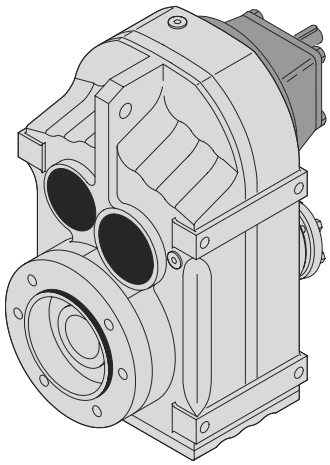
FA.. AD..
FV.. AD..



FH.. AD..



FAZ.. AD..
FVZ.. AD..



FHZ.. AD..

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F27 AD... , n_e = 1400 1/min													130 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
140.74	10	130	0.16	4500	760	-	-						
129.09	11	130	0.18	4500	760	-	-						
109.90	13	130	0.20	4500	755	-	-						
94.76	15	130	0.23	4500	750	-	-						
88.32	16	130	0.25	4500	750	-	-						
77.21	18	130	0.28	4500	745	-	-	**FA**	**27**	**AD1**		7.6	371
72.37	19	130	0.30	4500	740	-	-	**FAF**	**27**	**AD1**		8.3	371
63.86	22	130	0.34	4400	740	-	-	**F**	**27**	**AD1**		8.1	371
56.62	25	130	0.38	4190	735	-	-	**FF**	**27**	**AD1**		8.9	371
50.19	28	130	0.42	3980	580	-	-						
46.78	30	130	0.45	3860	570	-	-						
40.89	34	130	0.51	3640	550	-	-						
38.33	37	130	0.55	3530	540	-	-						
33.83	41	130	0.62	3340	520	-	-						
29.56	47	130	0.70	3150	1150	-	-						
27.18	52	130	0.76	3030	1130	-	-						
23.25	60	130	0.88	2820	1090	-	-						
20.15	69	130	1.0	2630	1040	-	-						
18.84	74	130	1.1	2550	1570	-	-						
16.28	86	130	1.2	2370	1550	-	-						
13.84	101	130	1.5	2180	1530	-	-						
12.35	113	130	1.6	2060	1510	-	-	**FA**	**27**	**AD2**		8.5	371
10.55	133	130	1.9	1900	1490	-	-	**FAF**	**27**	**AD2**		9.2	371
9.88	142	130	2.0	1830	1480	-	-	**F**	**27**	**AD2**		9.0	371
9.40	149	130	2.1	1660	1230	-	-	**FF**	**27**	**AD2**		9.8	371
8.13	172	123	2.3	1590	1220	-	-						
6.91	203	114	2.5	1530	1250	-	-						
6.17	227	109	2.7	1480	1250	-	-						
5.27	266	100	2.9	1440	1260	-	-						
4.93	284	96	3.0	1420	1270	-	-						
4.16	337	87	3.2	1380	1280	-	-						

F37 AD... , n_e = 1400 1/min													200 Nm
128.51	11	200	0.26	4290	660	7	-						
117.88	12	200	0.28	4290	655	7	-						
100.36	14	200	0.33	4290	640	7	-						
86.53	16	200	0.38	4290	625	7	-	**FA**	**37**	**AD1**		14	371
80.65	17	200	0.40	4290	615	7	-	**FAF**	**37**	**AD1**		15	371
70.50	20	200	0.46	4290	600	7	-	**F**	**37**	**AD1**		14	371
66.09	21	200	0.49	4290	590	7	-	**FF**	**37**	**AD1**		16	371
58.32	24	200	0.55	4290	570	7	-						
54.54	26	200	0.58	4290	335	8	-						
51.70	27	200	0.62	4290	550	7	-						
47.02	30	200	0.69	4290	1490	8	-						
43.83	32	200	0.74	4290	1470	8	-						
38.31	37	200	0.84	4290	1430	8	-	**FA**	**37**	**AD2**		15	371
35.91	39	200	0.90	4290	1410	8	-	**FAF**	**37**	**AD2**		16	371
31.69	44	200	1.0	4290	1370	8	-	**F**	**37**	**AD2**		15	371
28.09	50	200	1.1	4060	1640	8	-	**FF**	**37**	**AD2**		17	371
23.88	59	200	1.3	3760	1620	8	-						

F37 AD... , n_e = 1400 1/min													200 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
23.63	59	200	1.3	3740	1420	6	-						
20.57	68	200	1.5	3500	1400	6	-						
19.27	73	200	1.6	3390	1390	6	-						
17.03	82	200	1.8	3180	1370	6	-						
15.81	89	200	2.0	3070	1350	6	-						
14.33	98	200	2.2	2910	1340	7	-						
12.87	109	200	2.4	2750	1320	7	-						
11.08	126	190	2.6	2620	1320	7	-	**FA**	**37**	**AD2**		15	371
10.42	134	185	2.7	2580	1320	7	-	**FAF**	**37**	**AD2**		16	371
8.97	156	175	3.0	2460	1320	7	-	**F**	**37**	**AD2**		15	371
8.01	175	170	3.2	2360	1300	7	-	**FF**	**37**	**AD2**		17	371
7.44	188	121	2.5	2560	1190	10	-						
6.74	208	140	3.2	2270	1070	10	-						
6.05	231	135	3.4	2190	1060	10	-						
5.21	269	125	3.7	2120	1080	10	-						
4.90	286	120	3.7	2100	1100	11	-						
4.22	332	110	4.0	2030	1120	11	-						
3.77	372	105	4.3	1970	1110	12	-						

F47 AD... , n_e = 1400 1/min													400 Nm
190.76	7.3	400	0.35	5920	555	6	-						
175.38	8.0	400	0.37	5920	545	6	-						
150.06	9.3	400	0.43	5920	530	6	-						
130.07	11	400	0.50	5920	510	6	-	**FA**	**47**	**AD1**		19	371
121.57	12	400	0.53	5920	500	6	-	**FAF**	**47**	**AD1**		21	371
105.09	13	400	0.61	5920	475	6	-	**F**	**47**	**AD1**		19	371
89.29	16	400	0.71	5920	450	6	-	**FF**	**47**	**AD1**		23	371
79.72	18	400	0.80	5920	430	6	-						
68.09	21	400	0.94	5920	395	6	-						
65.36	21	400	0.98	5920	1180	7	-						
56.49	25	400	1.1	5920	1600	7	-						
48.00*	29	400	1.3	5920	1580	7	-	**FA**	**47**	**AD2**		20	371
42.86	33	400	1.5	5920	1570	7	-	**FAF**	**47**	**AD2**		22	371
36.61	38	400	1.7	5920	1550	7	-	**F**	**47**	**AD2**		21	371
34.29	41	400	1.8	5920	1540	7	-	**FF**	**47**	**AD2**		24	371
28.88	48	400	2.2	5790	1500	7	-						
30.86	45	400	2.0	5920	1230	6	-						
29.32	48	400	2.1	5830	1220	6	-						
25.72	54	400	2.4	5470	1200	6	-						
21.82	64	400	2.8	5030	1170	6	-						
19.70	71	400	3.1	4770	1140	6	-						
17.33	81	400	3.5	4450	1120	6	-						
16.36	86	400	3.7	4320	1100	6	-	**FA**	**47**	**AD2**		19	371
13.93	100	400	4.4	3950	1040	6	-	**FAF**	**47**	**AD2**		22	371
12.66	111	400	4.8	3740	1010	6	-	**F**	**47**	**AD2**		20	371
10.97	128	380	5.3	3580	990	6	-	**FF**	**47**	**AD2**		23	371
8.96	156	250	4.3	3860	860	8	-						
7.88	178	230	4.5	3770	910	8	-						
7.44*	188	225	4.6	3710	910	8	-						
6.34	221	200	4.8	3610	950	8	-						
5.76	243	191	5.1	3520	960	9	-						
4.99	281	173	5.3	3430	990	9	-						

F57 AD... , n_e = 1400 1/min												600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	📖
199.70	7.0	600	0.49	9200	1530	6	-					
183.60	7.6	600	0.54	9200	1520	6	-					
157.09	8.9	600	0.62	9200	1480	6	-					
136.16	10	600	0.72	9200	1450	6	-					
127.27	11	600	0.76	9200	1440	6	-					
110.01	13	600	0.88	9200	1380	6	-					
93.47	15	600	1.0	9200	1340	6	-	**FA**	**57**	**AD2**	27	371
83.46	17	600	1.1	9200	1630	6	-	**FAF**	**57**	**AD2**	33	371
72.98	19	600	1.3	9200	1480	6	-	**F**	**57**	**AD2**	27	371
68.22	21	600	1.4	9200	1470	6	-	**FF**	**57**	**AD2**	34	371
58.97	24	600	1.6	9200	1440	7	-					
50.10	28	600	1.9	9200	1420	7	-					
44.73	31	600	2.1	9160	1400	7	-					
38.21	37	600	2.4	8510	1370	7	-					
35.79	39	600	2.6	8250	1350	7	-					
30.15	46	590	3.1	7650	1310	7	-					
40.13	35	265	1.0	10700	620	6	-					
34.24	41	440	2.0	9030	1140	6	-	**FA**	**57**	**AD2**	27	371
29.94	47	415	2.1	8660	1170	6	-	**FAF**	**57**	**AD2**	32	371
28.45	49	410	2.2	8510	1170	6	-	**F**	**57**	**AD2**	27	371
24.96	56	575	3.5	7060	820	6	-	**FF**	**57**	**AD2**	33	371
21.17	66	600	4.4	6350	1760	6	-					
19.11	73	600	4.8	6020	1720	6	-					
16.81	83	600	5.4	5620	1690	6	-					
15.88	88	600	5.8	5450	1660	6	-					
13.52	104	600	6.8	4980	1570	6	-					
12.29	114	600	7.5	4710	1520	6	-	**FA**	**57**	**AD3**	30	371
10.64	132	600	8.6	4320	1430	6	-	**FAF**	**57**	**AD3**	35	371
9.31	150	310	5.1	5490	1650	8	-	**F**	**57**	**AD3**	30	371
8.19	171	400	7.5	4580	1240	8	-	**FF**	**57**	**AD3**	36	371
7.73	181	390	7.7	4510	1250	8	-					
6.58	213	355	8.2	4370	1290	8	-					
5.98	234	335	8.5	4290	1320	9	-					
5.18	270	305	9.0	4190	1370	9	-					

F67 AD... , n_e = 1400 1/min												820 Nm
228.99	6.1	820	0.59	10300	1440	6	-					
195.39	7.2	820	0.68	10300	1400	6	-					
170.85	8.2	820	0.77	10300	1380	6	-					
162.31	8.6	820	0.81	10300	1380	6	-					
142.40	9.8	820	0.93	10300	1330	6	-					
120.79	12	820	1.1	10300	1630	6	-					
109.04	13	820	1.2	10300	1620	6	-					
95.94	15	820	1.4	10300	1610	6	-	**FA**	**67**	**AD2**	31	371
90.59	15	820	1.4	10300	1610	6	-	**FAF**	**67**	**AD2**	37	371
79.76	18	820	1.6	10300	1440	6	-	**F**	**67**	**AD2**	34	371
67.65	21	820	1.9	10300	1420	6	-	**FF**	**67**	**AD2**	40	371
61.07	23	820	2.1	10300	1400	6	-					
53.73	26	820	2.4	10300	1390	6	-					
50.74	28	820	2.5	10300	1380	6	-					
43.20	32	820	3.0	10300	1340	6	-					
39.26	36	780	3.1	10700	1340	6	-					
34.01	41	740	3.4	11000	1330	6	-					
36.30	39	590	2.5	12000	1110	5	-	**FA**	**67**	**AD2**	30	371
								FAF	**67**	**AD2**	36	371
								F	**67**	**AD2**	33	371
								FF	**67**	**AD2**	39	371

F67 AD... , n_e = 1400 1/min													820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	
32.08	44	820	3.9	10300	1760	5	-						
27.41	51	820	4.6	10300	1720	5	-						
25.13	56	820	5.0	10300	1700	5	-						
22.05	63	820	5.7	10300	1660	5	-						
20.90*	67	820	6.0	10300	1640	5	-						
18.29	77	820	6.8	10300	1580	6	-						
16.48	85	820	7.6	10300	1520	6	-						
14.46	97	820	8.7	10300	1450	6	-						
12.76	110	800	9.6	10500	1410	6	-	**FA**	**67**	**AD3**		33	371
11.31	124	745	10.1	10900	1440	6	-	**FAF**	**67**	**AD3**		40	371
9.66	145	670	10.6	11500	1480	6	-	**F**	**67**	**AD3**		36	371
9.08	154	450	7.6	11800	1210	8	-	**FF**	**67**	**AD3**		42	371
8.60	163	440	7.8	11700	1240	8	-						
7.53	186	410	8.3	11300	1300	8	-						
6.78	206	385	8.7	11000	1320	9	-						
5.95	235	355	9.1	10700	1370	9	-						
5.25	267	330	9.6	10300	1410	9	-						
4.66	301	305	10.0	10100	1440	9	-						
3.97	352	275	10.6	9680	1490	10	-						

F77 AD... , n_e = 1400 1/min													1500 Nm
281.71	5.0	1500	0.86	15700	920	5	-						
262.93	5.3	1500	0.91	15700	920	5	-						
225.79	6.2	1500	1.1	15700	1550	5	-						
198.31	7.1	1500	1.2	15700	1540	5	-						
188.40	7.4	1500	1.3	15700	1540	5	-						
166.47	8.4	1500	1.4	15700	1520	5	-						
142.27	9.8	1500	1.7	15700	1500	5	-						
130.42	11	1500	1.8	15700	1490	5	-	**FA**	**77**	**AD2**		54	371
114.45	12	1500	2.1	15700	1480	5	-	**FAF**	**77**	**AD2**		61	371
108.46*	13	1500	2.2	15700	1470	5	-	**F**	**77**	**AD2**		58	371
94.93	15	1500	2.5	15700	1450	5	-	**FF**	**77**	**AD2**		68	371
85.52	16	1500	2.7	15700	1430	6	-						
75.02	19	1500	3.1	15700	1400	6	-						
72.50	19	1500	3.2	15700	1110	6	-						
66.46	21	1500	3.5	15700	1100	6	-						
58.32	24	1500	4.0	15700	1070	6	-						
55.27	25	1500	4.2	15700	1050	6	-						
48.37	29	1500	4.8	15700	1010	6	-						
43.58	32	1500	5.4	15700	2010	6	-						
38.23	37	1500	6.1	15700	1960	6	-	**FA**	**77**	**AD3**		57	371
33.74	42	1500	6.9	15700	1910	6	-	**FAF**	**77**	**AD3**		64	371
29.91	47	1500	7.8	15700	1850	6	-	**F**	**77**	**AD3**		61	371
25.54	55	1450	8.9	16100	1810	6	-	**FF**	**77**	**AD3**		72	371
36.58	38	1110	4.7	17900	1580	5	-	**FA**	**77**	**AD3**		56	371
31.51	44	1110	5.4	17900	1540	5	-	**FAF**	**77**	**AD3**		63	371
28.75	49	1200	6.4	17400	1400	5	-	**F**	**77**	**AD3**		60	371
								FF	**77**	**AD3**		70	371
25.50*	55	1500	9.1	15700	3010	5	-						
21.43	65	1500	10.7	15700	2940	5	-						
19.70	71	1500	11.6	15700	2890	5	-						
17.49	80	1500	13.1	15700	2830	5	-						
15.64*	90	1500	14.6	15700	2760	5	-						
14.06	100	1420	15.4	16100	2790	5	-						
12.20	115	1280	16.0	15700	2880	5	-	**FA**	**77**	**AD4**		62	371
10.93	128	1180	16.5	15400	2950	6	-	**FAF**	**77**	**AD4**		69	371
9.30	151	810	13.3	15000	2630	7	-	**F**	**77**	**AD4**		66	371
8.26	170	765	14.1	14600	2680	7	-	**FF**	**77**	**AD4**		76	371
7.39	190	720	14.9	14200	2730	7	-						
6.64	211	670	15.4	13900	2800	8	-						
5.76	243	605	16.0	13500	2880	8	-						
5.16	271	555	16.4	13200	2950	8	-						
4.28	327	470	16.8	12700	3080	8	-						

F87 AD... , n_e = 1400 1/min												3000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	📖
270.68	5.2	3000	1.7	19800	1360	7	-					
255.37	5.5	3000	1.8	19800	1360	7	-					
228.93	6.1	3000	2.0	19800	1340	7	-					
197.20	7.1	3000	2.4	19800	1320	7	-					
179.97	7.8	3000	2.6	19800	1310	7	-	**FA**	**87**	**AD2**	93	371
159.61	8.8	3000	2.9	19800	1290	7	-	**FAF**	**87**	**AD2**	105	371
134.16	10	3000	3.5	19800	1260	7	-	**F**	**87**	**AD2**	99	371
123.29	11	3000	3.8	19800	1240	7	-	**FF**	**87**	**AD2**	115	371
109.49	13	3000	4.3	19800	1210	7	-					
97.89	14	3000	4.8	19800	1180	7	-					
88.01	16	3000	5.3	19800	1150	7	-					
76.39	18	3000	6.1	19800	1100	7	-					
68.40	20	3000	6.8	19600	2020	7	-					
56.75	25	3000	8.2	17700	1940	7	-	**FA**	**87**	**AD3**	97	371
50.36	28	2940	9.1	16800	1530	7	-	**FAF**	**87**	**AD3**	110	371
45.28	31	2820	9.7	16200	1530	8	-	**F**	**87**	**AD3**	105	371
39.30	36	2720	10.7	15400	1500	8	-	**FF**	**87**	**AD3**	120	371
35.19	40	2610	11.6	14900	3520	8	-	**FA**	**87**	**AD4**	105	371
29.20	48	2510	13.4	13800	3460	8	-	**FAF**	**87**	**AD4**	115	371
								F	**87**	**AD4**	110	371
								FF	**87**	**AD4**	125	371
33.92	41	2560	11.5	14800	2530	7	-	**FA**	**87**	**AD4**	100	371
28.78	49	2390	12.7	14100	2600	7	-	**FAF**	**87**	**AD4**	115	371
								F	**87**	**AD4**	105	371
								FF	**87**	**AD4**	120	371
26.50	53	3000	17.5	11100	5200	7	-					
23.68	59	3000	19	10300	5120	7	-					
21.32*	66	3000	21	9530	5050	7	-					
19.31	73	3000	24	8840	4970	7	-					
17.12	82	3000	27	8040	4880	7	-					
15.48	90	3000	30	7390	4780	7	-	**FA**	**87**	**AD5**	115	371
13.12*	107	3000	35	6370	4570	7	-	**FAF**	**87**	**AD5**	130	371
11.46	122	3000	40	5580	4410	7	-	**F**	**87**	**AD5**	120	371
9.58	146	2880	46	5050	4260	7	-	**FF**	**87**	**AD5**	135	371
8.29	169	1530	28	8890	4430	7	-					
7.35	190	1530	32	8280	4320	7	-					
6.65	211	1530	35	7790	4200	7	-					
5.63	248	1530	41	7020	3950	7	-					
4.92	285	1510	47	6510	3710	7	-					
4.12	340	1260	47	6830	4190	7	-					

F97 AD... , n_e = 1400 1/min												4300 Nm
276.77	5.1	4300	2.5	29900	2190	6	-					
253.41	5.5	4300	2.7	29900	2180	6	-					
223.88	6.2	4300	3.0	29900	2160	6	-					
189.92	7.4	4300	3.6	29900	2130	6	-					
174.87	8.0	4300	3.9	29900	2120	6	-					
156.30	9.0	4300	4.3	29900	2090	6	-					
140.71	10	4300	4.8	29900	2070	6	-	**FA**	**97**	**AD3**	160	371
127.42	11	4300	5.3	29900	2050	6	-	**FAF**	**97**	**AD3**	185	371
112.99	12	4300	5.9	29900	2020	6	-	**F**	**97**	**AD3**	170	371
102.16	14	4300	6.6	29900	1990	6	-	**FF**	**97**	**AD3**	200	371
97.58	14	4300	6.9	29900	1520	6	-					
89.85	16	4300	7.5	29900	1480	6	-					
86.59	16	4300	7.7	29900	1930	6	-					
80.31	17	4300	8.3	29900	1440	6	-					
75.63	19	4300	8.9	29900	1880	6	-					
72.29	19	4300	9.3	29900	1400	6	-					
65.47	21	4300	10.2	29000	3400	6	-					
58.06	24	4300	11.5	27200	3360	6	-	**FA**	**97**	**AD4**	165	371
52.49	27	4300	12.8	25800	3310	6	-	**FAF**	**97**	**AD4**	190	371
44.49	31	4300	15.1	23600	3210	6	-	**F**	**97**	**AD4**	175	371
38.86	36	4300	17.3	21900	3130	6	-	**FF**	**97**	**AD4**	205	371
32.50	43	4300	21	19800	2990	6	-					
43.28	32	3070	10.8	27600	2700	6	-	**FA**	**97**	**AD4**	160	371
36.64	38	3070	12.8	25500	2620	6	-	**FAF**	**97**	**AD4**	185	371
								F	**97**	**AD4**	170	371
								FF	**97**	**AD4**	200	371

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
F97 AD... , n_e = 1400 1/min													**4300 Nm**
33.91	41	4300	19	20300	4930	6	-						
30.39	46	4300	22	19000	4860	6	-						
27.44*	51	4300	24	17900	4730	6	-	**FA**	**97**	**AD5**		180	371
24.92	56	4300	26	16800	4650	6	-	**FAF**	**97**	**AD5**		200	371
22.11	63	4300	30	15600	4550	6	-	**F**	**97**	**AD5**		185	371
20.07	70	4300	33	14600	4450	6	-	**FF**	**97**	**AD5**		220	371
17.25*	81	4300	38	13200	4270	6	-						
15.06	93	4300	44	11900	4090	6	-						
12.77	110	4300	51	10500	6830	6	-						
11.16	125	4100	56	10000	6780	6	-						
9.06	154	2360	40	13400	6450	9	-	**FA**	**97**	**AD6**		190	371
8.22	170	2360	44	12600	6330	9	-	**FAF**	**97**	**AD6**		215	371
7.07	198	2360	51	11500	6080	9	-	**F**	**97**	**AD6**		200	371
6.17	227	2250	56	11100	6110	9	-	**FF**	**97**	**AD6**		230	371
5.23	268	1930	56	11300	6470	9	-						
4.57	306	1690	56	11400	6760	9	-						
F107 AD... , n_e = 1400 1/min													**7840 Nm**
254.40*	5.5	7680	4.7	49800	1860	5	-						
215.37	6.5	7680	5.6	49800	1830	5	-						
199.31	7.0	7680	6.0	49800	1810	5	-	**FA**	**107**	**AD3**		235	371
178.64	7.8	7680	6.7	49800	1780	5	-	**FAF**	**107**	**AD3**		260	371
161.28*	8.7	7680	7.4	49800	1720	5	-	**F**	**107**	**AD3**		255	371
146.49	9.6	7680	8.2	49800	1690	5	-	**FF**	**107**	**AD3**		280	371
129.97	11	7680	9.2	49800	1650	5	-						
117.94	12	7680	10.2	49800	1610	5	-						
101.38*	14	7680	11.8	49800	3570	5	-						
92.47*	15	7680	13.0	49800	3020	6	-						
88.49	16	7680	13.5	49800	3510	5	-	**FA**	**107**	**AD4**		245	371
83.99	17	7680	14.3	49800	2970	6	-	**FAF**	**107**	**AD4**		265	371
74.52	19	7680	16.1	49800	2910	6	-	**F**	**107**	**AD4**		260	371
67.62	21	7680	17.7	49800	2860	6	-	**FF**	**107**	**AD4**		290	371
58.12*	24	7680	20	47800	2750	6	-						
50.73	28	7680	23	45100	2650	6	-						
43.03	33	7680	28	42000	5730	6	-	**FA**	**107**	**AD5**		255	371
37.61	37	7680	32	39500	5600	6	-	**FAF**	**107**	**AD5**		280	371
31.80	44	7680	38	36500	5440	6	M4	**F**	**107**	**AD5**		275	371
								FF	**107**	**AD5**		300	371
33.79*	41	7400	33	38300	6560	5	-						
27.57	51	7840	43	33700	5890	5	-						
25.14	56	7840	48	32200	5660	5	-						
21.76*	64	7840	55	30000	5220	5	-						
19.20*	73	7090	56	30100	6010	5	-						
16.58	84	6120	56	30600	6470	5	-	**FA**	**107**	**AD6**		260	371
14.67	95	5410	56	30800	6760	5	-	**FAF**	**107**	**AD6**		280	371
12.33	114	4540	56	30800	7130	5	M4	**F**	**107**	**AD6**		275	371
9.96	141	4000	61	29600	7210	5	M2,4-6	**FF**	**107**	**AD6**		305	371
9.69	144	3580	56	29300	6000	7	-						
8.37	167	3090	56	29100	6460	7	-						
7.40	189	2730	56	28800	6770	7	-						
6.22	225	2290	56	28200	7130	7	M4						
F127 AD... , n_e = 1400 1/min													**12000 Nm**
170.83	8.2	12000	11.0	90000	3170	5	-						
153.67*	9.1	12000	12.2	90000	3120	5	-						
125.37	11	12000	14.9	90000	2990	5	-	**FA**	**127**	**AD4**		395	371
114.34	12	12000	16.4	88000	2950	5	-	**FAF**	**127**	**AD4**		430	371
98.95	14	12000	19	83000	2860	5	-	**F**	**127**	**AD4**		430	371
87.31*	16	12000	21	78900	2780	5	-	**FF**	**127**	**AD4**		475	371
75.41*	19	12000	25	74300	2680	5	-						
70.07	20	12000	27	72100	4910	5	-						
63.91	22	12000	29	69400	4840	5	-	**FA**	**127**	**AD5**		405	371
55.31	25	12000	33	65300	4700	5	-	**FAF**	**127**	**AD5**		440	371
48.80	29	12000	38	61800	4580	5	-	**F**	**127**	**AD5**		440	371
42.15	33	12000	44	57900	4410	5	-	**FF**	**127**	**AD5**		485	371

F127 AD... , n_e = 1400 1/min												12000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	
37.28	38	12000	50	54800	7210	5	-	**FA**	**127**	**AD6**	415	371
								FAF	**127**	**AD6**	455	371
								F	**127**	**AD6**	455	371
								FF	**127**	**AD6**	495	371
31.33	45	12000	59	50600	17000	5	M2	**FA**	**127**	**AD7**	415	371
25.30	55	12000	73	45700	16600	5	M2-6	**FAF**	**127**	**AD7**	455	371
								F	**127**	**AD7**	450	371
								FF	**127**	**AD7**	495	371
26.86	52	8500	48	55300	4940	5	-	**FA**	**127**	**AD6**	405	371
24.57	57	8500	53	53300	4730	5	-	**FAF**	**127**	**AD6**	440	371
								F	**127**	**AD6**	440	371
								FF	**127**	**AD6**	485	371
21.38	65	12000	86	42000	23800	5	-					
18.87	74	10800	87	42300	24200	5	-					
16.36	86	11000	103	39000	23800	5	-					
14.55	96	11000	115	36200	23600	5	M2					
12.54	112	10000	122	36400	23900	5	M2-6	**FA**	**127**	**AD8**	425	371
10.19	137	9040	135	35000	23900	5	M1-6	**FAF**	**127**	**AD8**	465	371
8.86	158	7000	121	36400	22700	6	M2,4-6	**F**	**127**	**AD8**	460	371
7.88	178	6000	116	37000	23500	6	M2,5,6	**FF**	**127**	**AD8**	510	371
6.80	206	6030	136	34700	23200	7	M1-6					
5.52	254	4900	136	34500	23900	7	M1-6					
4.68	299	4150	135	34100	24400	7	M1-6					

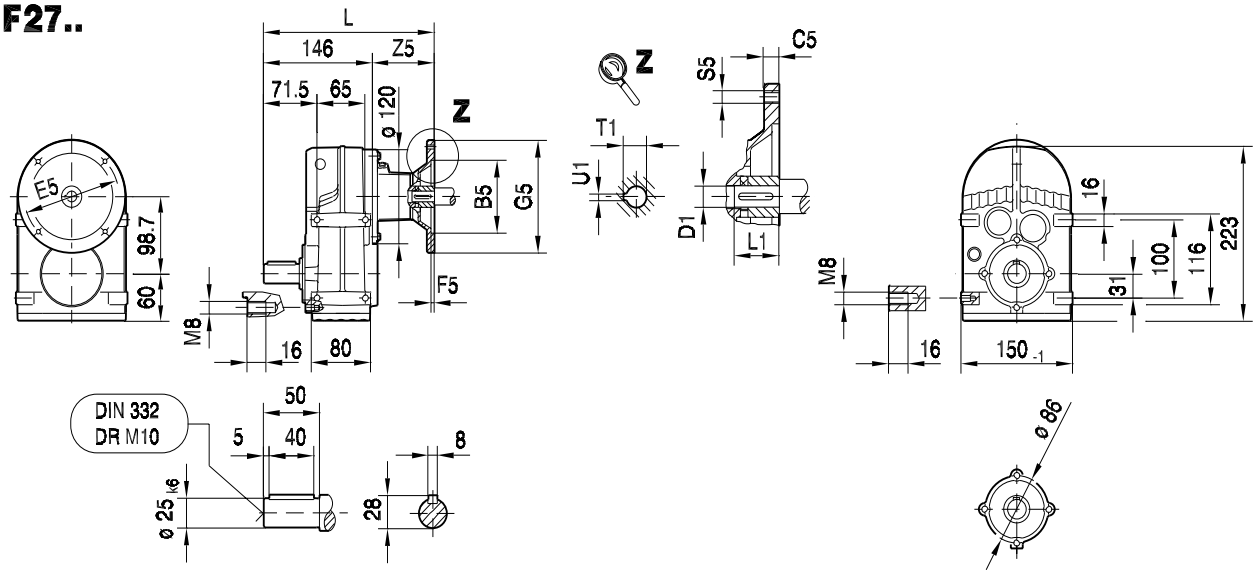
F157 AD... , n_e = 1400 1/min												18000 Nm
267.43	5.2	18000	10.6	100300	6320	5	-					
217.62*	6.4	18000	13.0	100300	6250	5	-					
178.20*	7.9	18000	15.8	100300	6140	5	-					
162.96	8.6	18000	17.2	100300	6100	5	-					
141.80*	9.9	18000	20	100300	6030	5	-	**FA**	**157**	**AD5**	660	371
125.14	11	18000	22	100300	5960	5	-	**FAF**	**157**	**AD5**	720	371
108.49	13	18000	26	100300	5870	5	-	**F**	**157**	**AD5**	680	371
96.53*	15	18000	29	100300	5780	5	-	**FF**	**157**	**AD5**	790	371
85.80*	16	18000	32	95700	4340	5	-					
78.46	18	18000	35	92300	4260	5	-					
68.28*	21	18000	41	87000	4110	5	-					
60.25	23	18000	46	82500	3910	5	-					
52.24	27	18000	53	77500	6770	5	-	**FA**	**157**	**AD6**	680	371
								FAF	**157**	**AD6**	740	371
								F	**157**	**AD6**	700	371
								FF	**157**	**AD6**	810	371
46.48*	30	18000	60	73600	16700	5	-	**FA**	**157**	**AD7**	670	371
40.06	35	18000	69	68900	16500	5	-	**FAF**	**157**	**AD7**	730	371
32.55	43	18000	85	62500	15700	5	M2	**F**	**157**	**AD7**	690	371
								FF	**157**	**AD7**	800	371
27.60	51	18000	101	57800	25800	5	M2-6	**FA**	**157**	**AD8**	700	371
								FAF	**157**	**AD8**	750	371
								F	**157**	**AD8**	720	371
								FF	**157**	**AD8**	820	371
53.55	26	8000	23	98300	4570	4	-	**FA**	**157**	**AD5**	650	371
								FAF	**157**	**AD5**	710	371
								F	**157**	**AD5**	680	371
								FF	**157**	**AD5**	780	371
43.94*	32	10000	35	87800	6580	4	-	**FA**	**157**	**AD6**	670	371
35.75*	39	11000	47	79300	5160	4	-	**FAF**	**157**	**AD6**	730	371
								F	**157**	**AD6**	690	371
								FF	**157**	**AD6**	800	371

F157 AD... , n_e = 1400 1/min												**18000 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**P_e [kW]**	**F_{Ra} [N]**	**F_{Re} [N]**	**φ (/R) [']**	⚠				**m [kg]**	
28.60*	49	17000	91	60800	23300	4	-					
25.43	55	15000	90	61500	24000	4	-					
22.16	63	18000	124	51800	22400	4	-	**FA**	**157**	**AD8**	690	371
19.77	71	17000	131	50900	22600	4	-	**FAF**	**157**	**AD8**	750	371
16.85	83	18000	161	44900	21700	5	M2,4-6	**F**	**157**	**AD8**	710	371
13.96	100	17000	184	42500	21500	5	M1-6	**FF**	**157**	**AD8**	820	371
11.92	117	16000	203	40900	21400	5	M1-6					

11.5 F.. AM.. (IEC) [mm]

42 040 01 01

F27..



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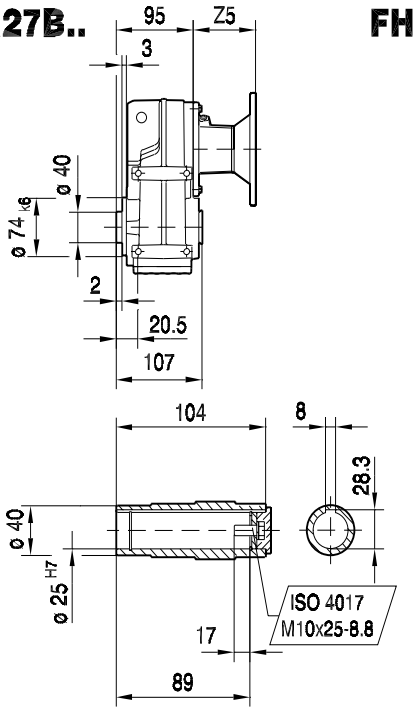

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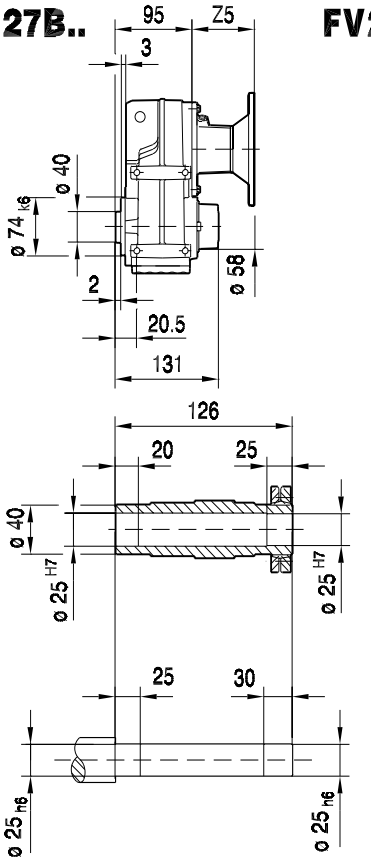

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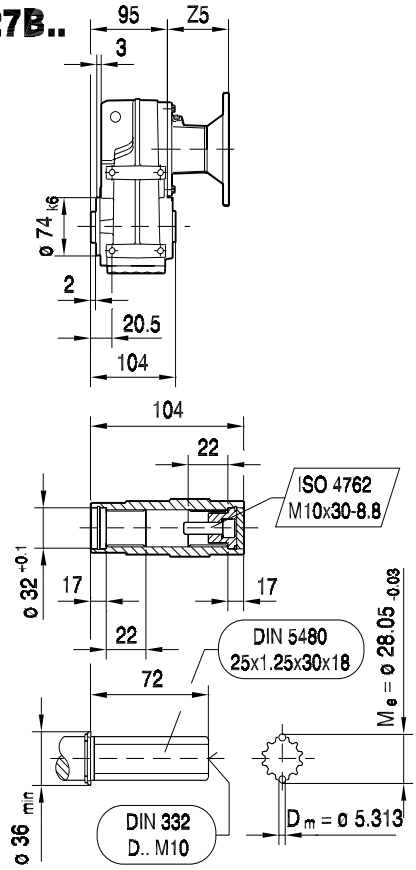
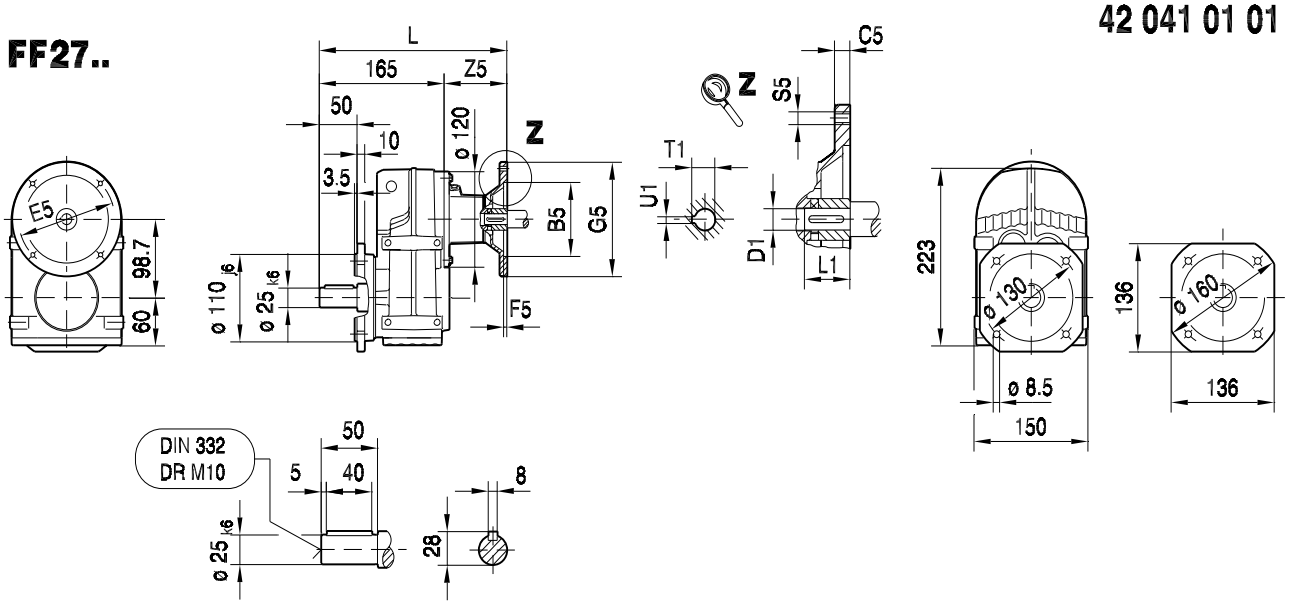


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	218	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	218	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	252	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	252	M10	106	24	50	27.3	8	

42 041 01 01

FF27..



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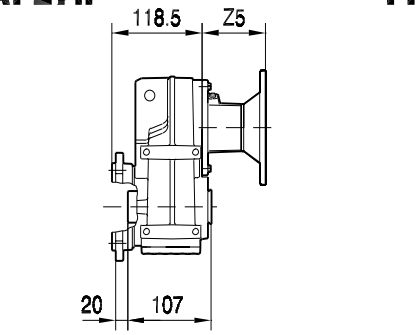

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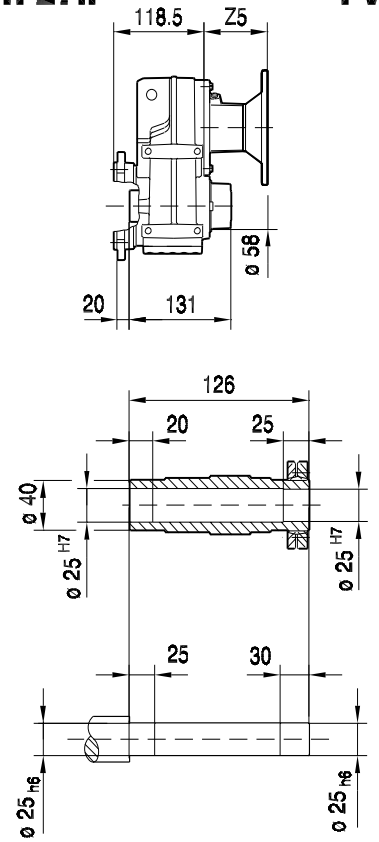

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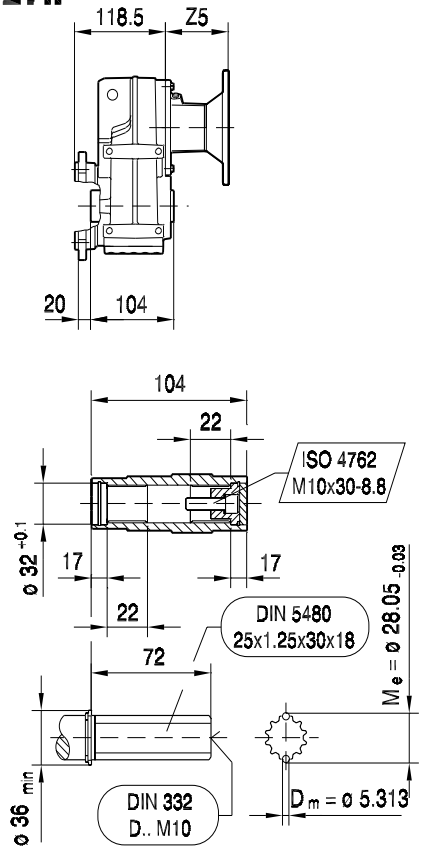
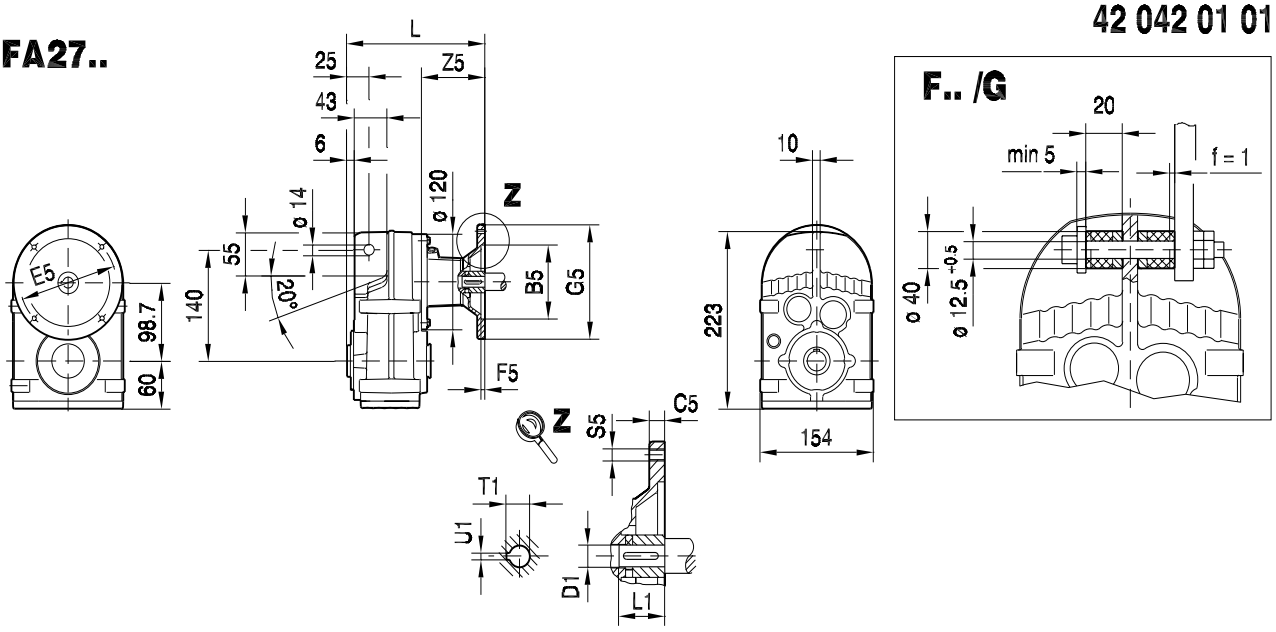


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	237	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	237	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	271	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	271	M10	106	24	50	27.3	8	

42 042 01 01

FA27..



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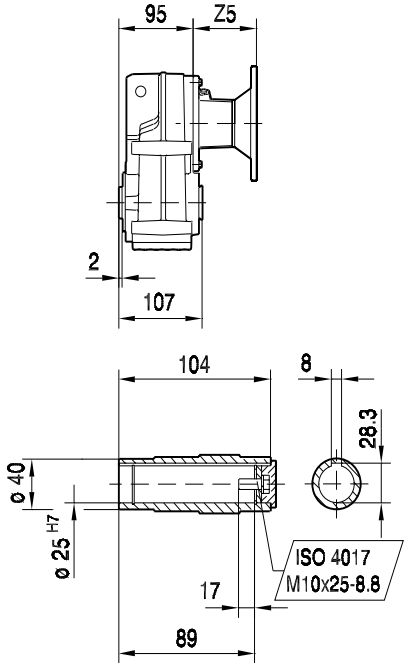

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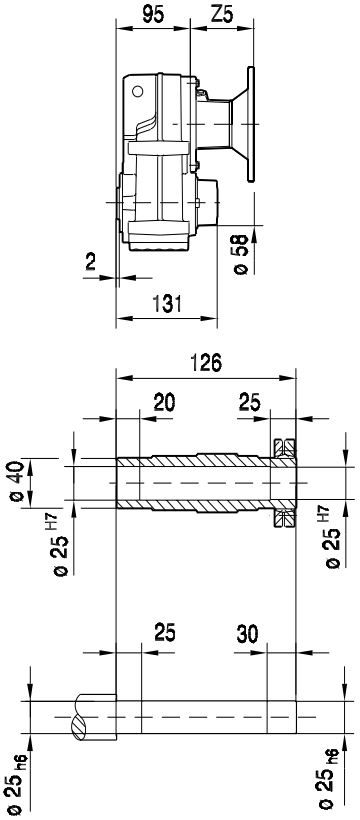

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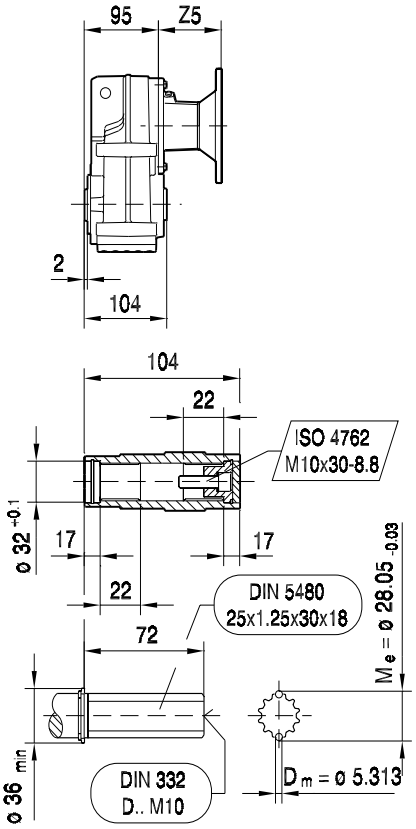
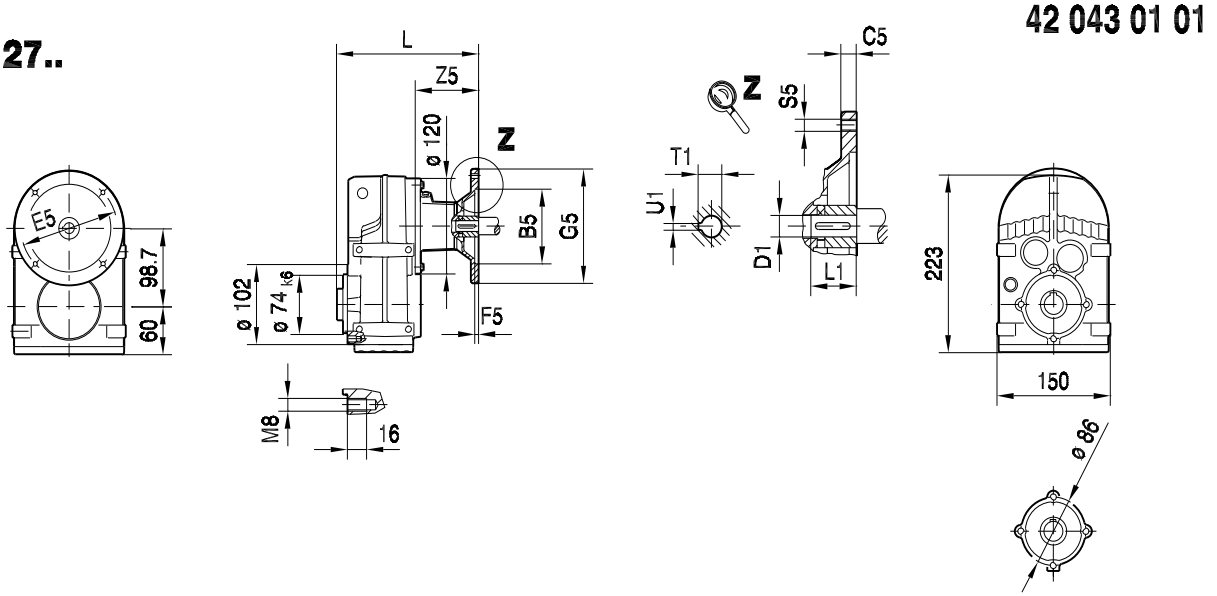


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	167	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	167	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	201	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	201	M10	106	24	50	27.3	8	

42 043 01 01

FAZ27..



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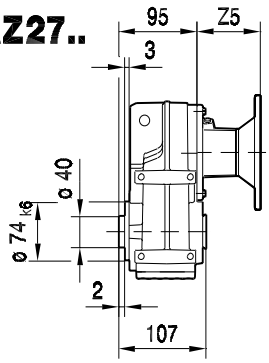

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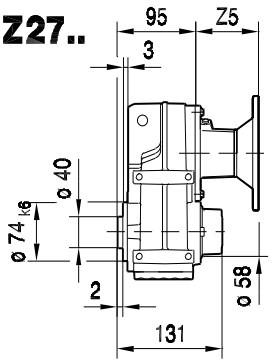
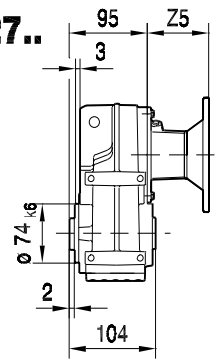
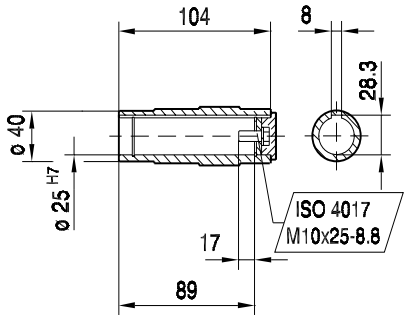
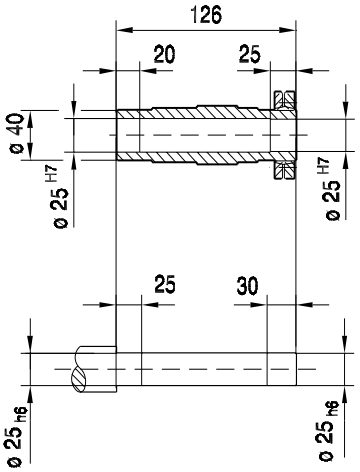
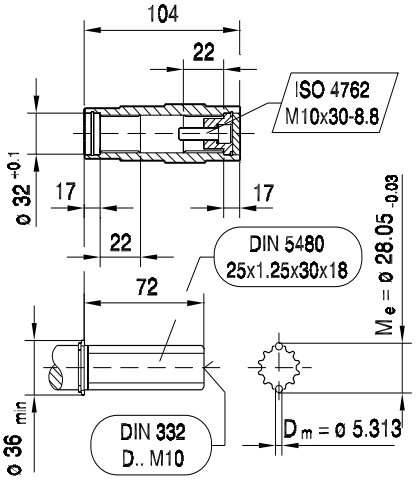


FVZ27..





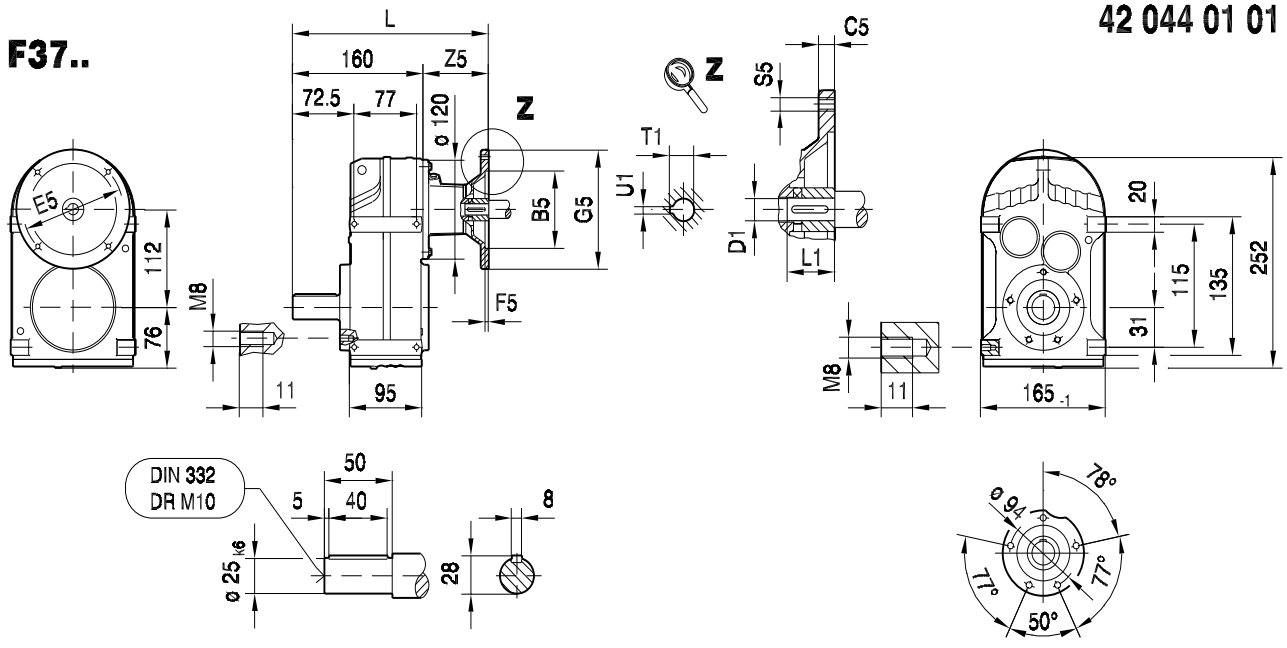




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	167	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	167	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	201	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	201	M10	106	24	50	27.3	8	

42 044 01 01

F37..



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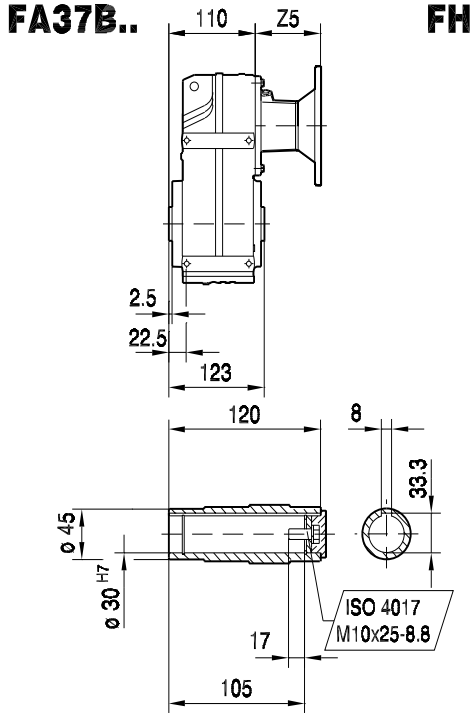

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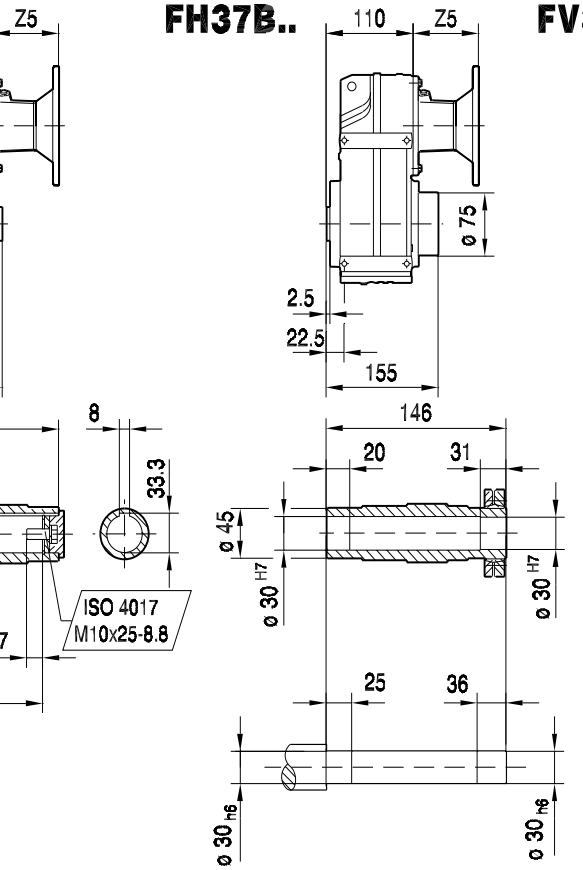

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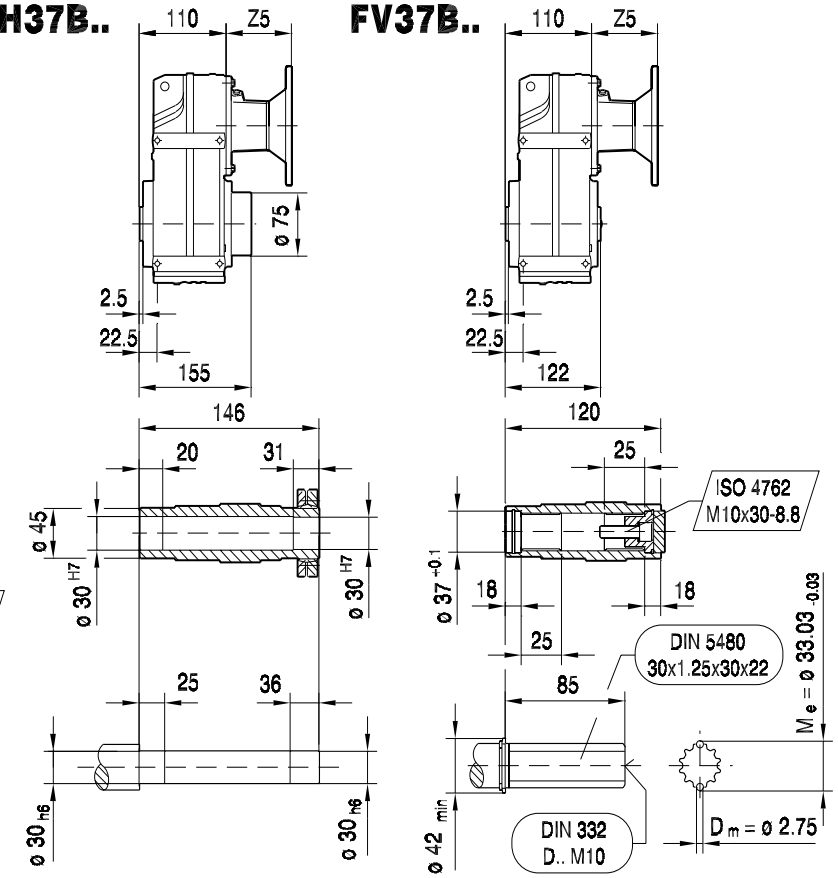

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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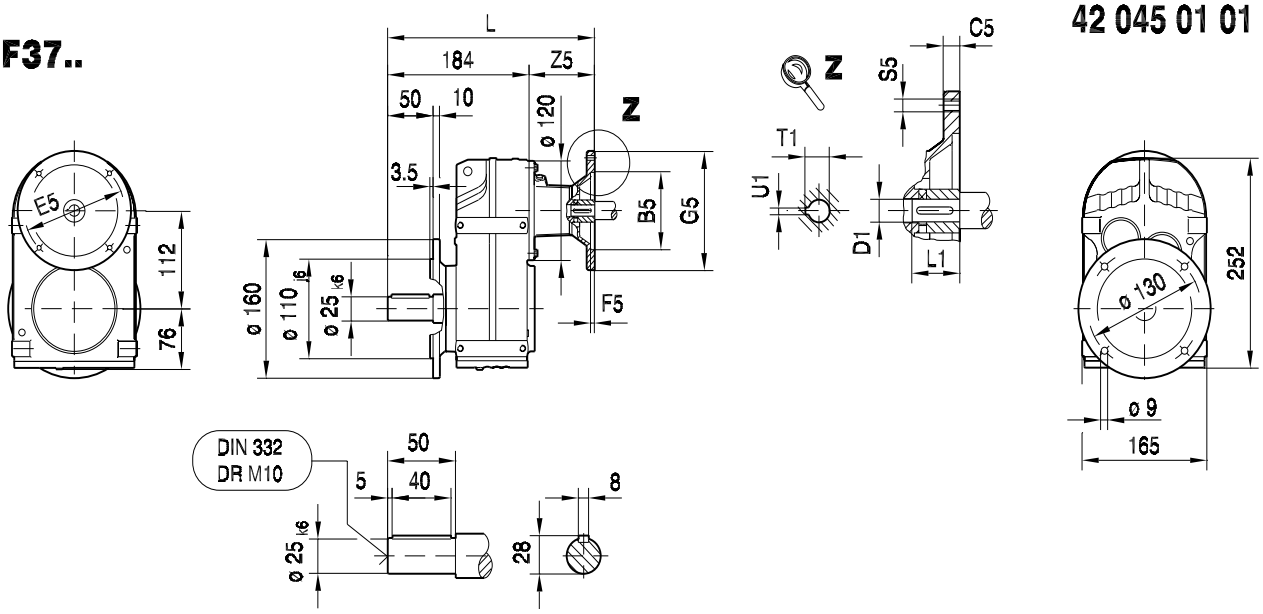
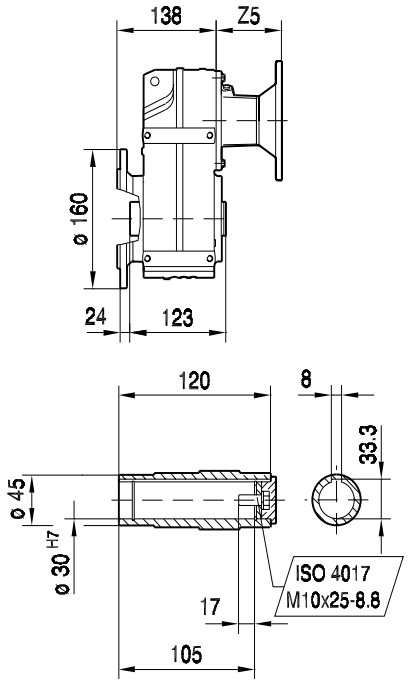
AM71	110	10	130	4.0	160	232	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	266	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	266	M10	106	24	50	27.3	8	

42 045 01 01

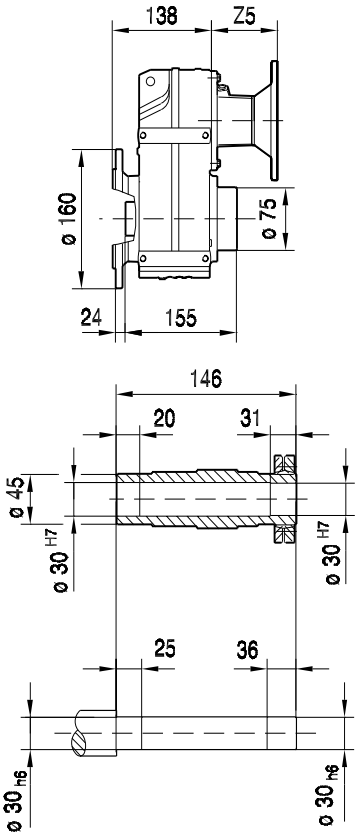
FF37..



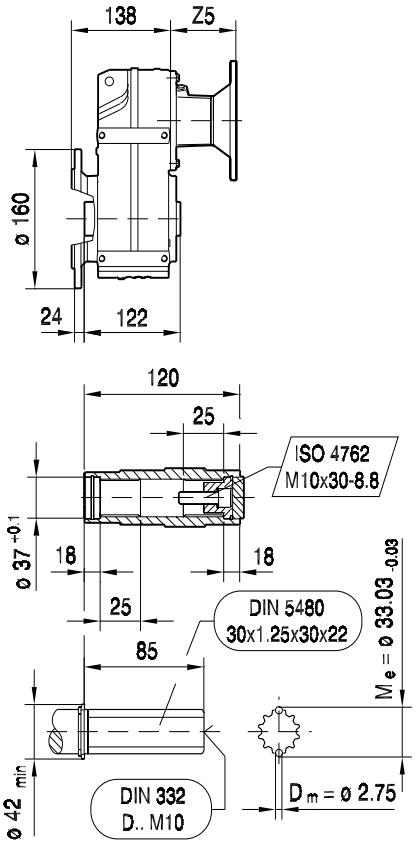
FAF37..



FHF37..



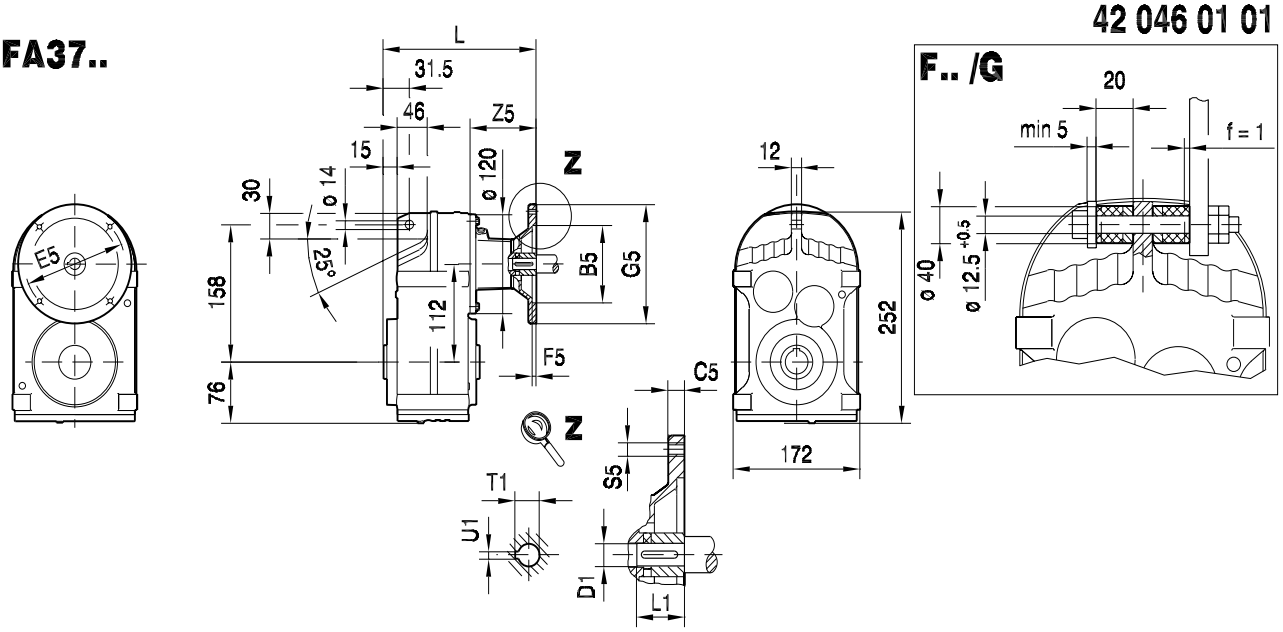
FVF37..



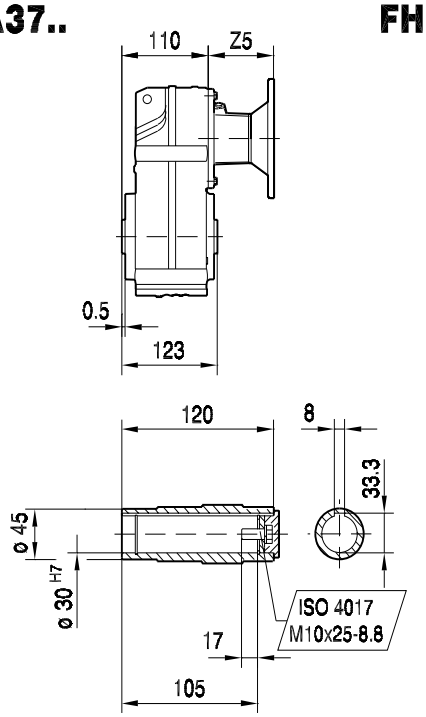
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	256	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	256	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	290	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	290	M10	106	24	50	27.3	8	

42 046 01 01

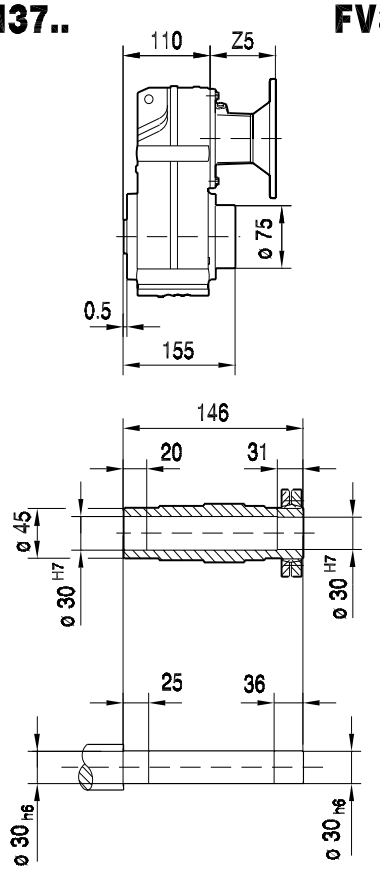
FA37..



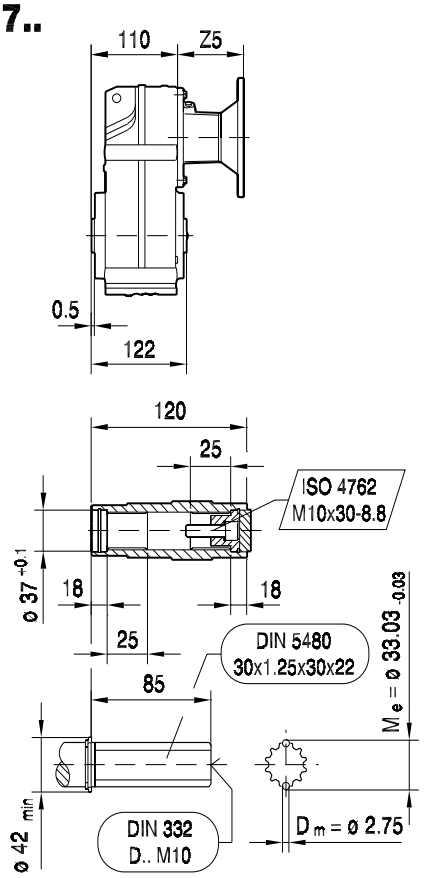
FA37..



FH37..

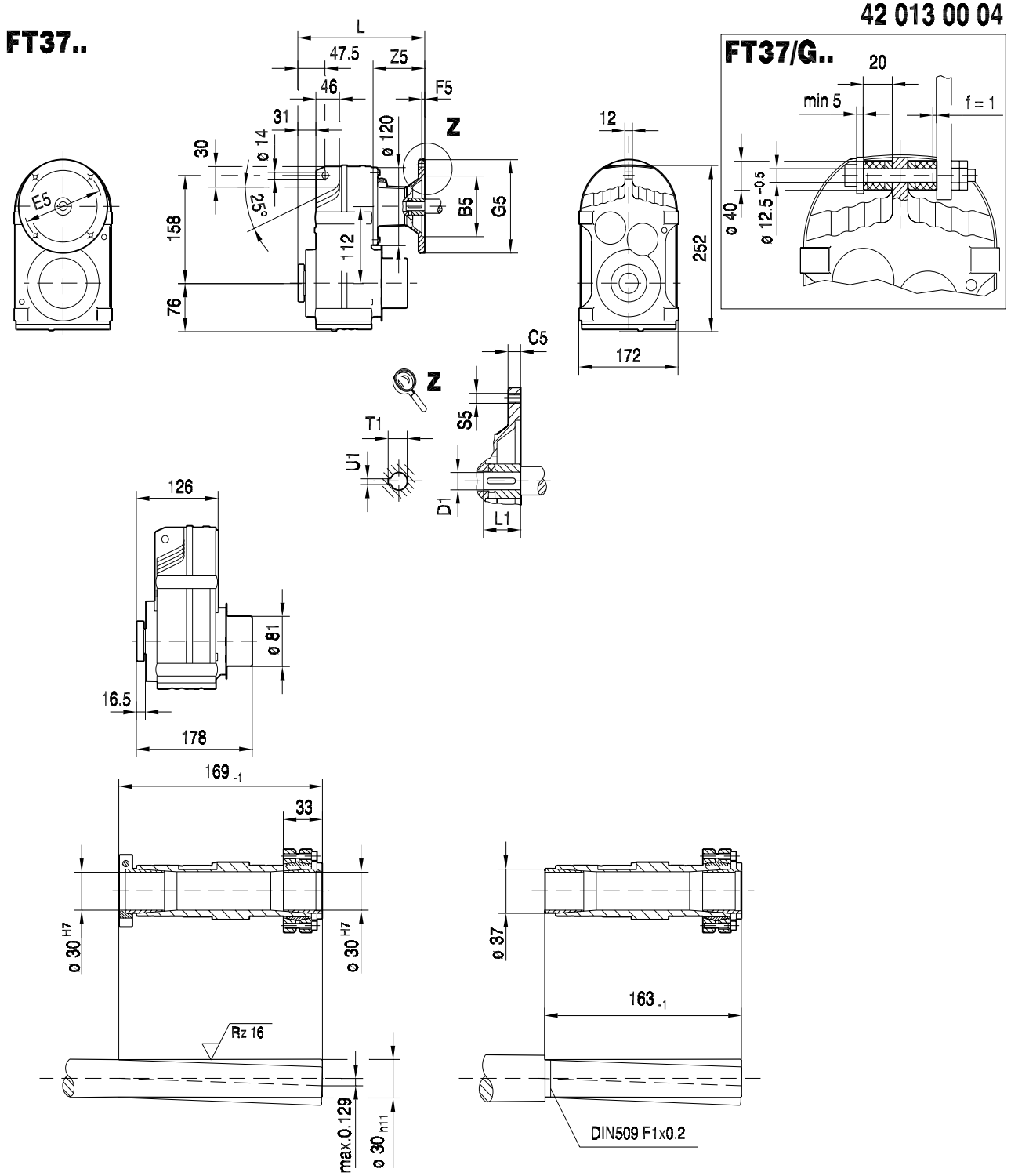


FV37..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	182	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	182	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	216	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	216	M10	106	24	50	27.3	8	

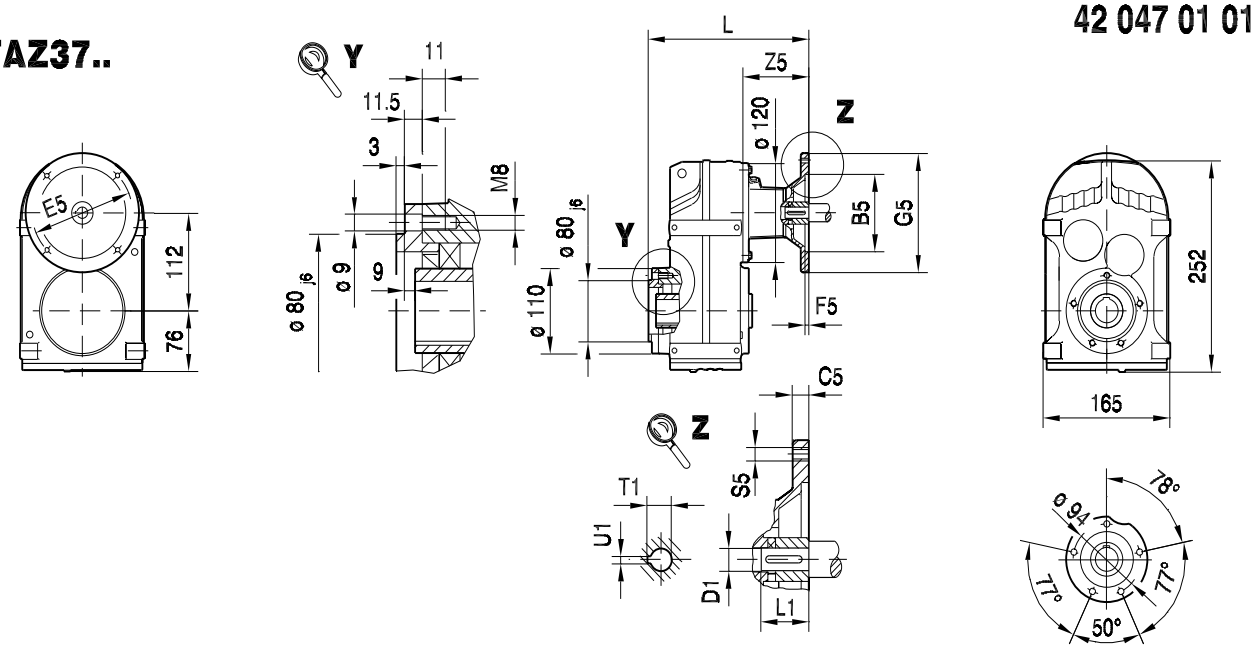
42 013 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	198	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	198	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	232	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	232	M10	106	24	50	27.3	8	

42 047 01 01

FAZ37..



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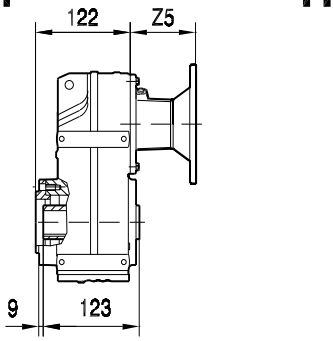
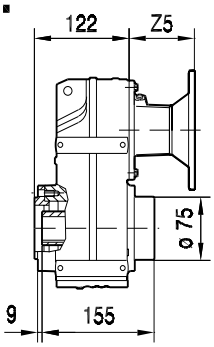
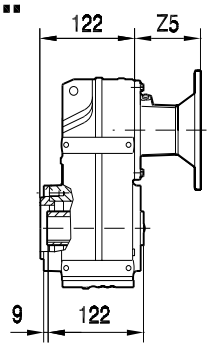
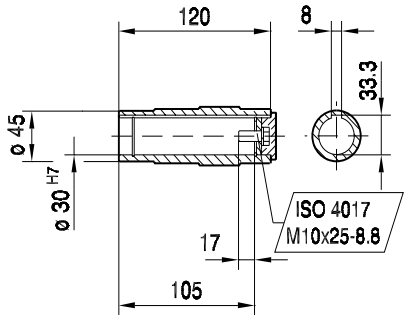


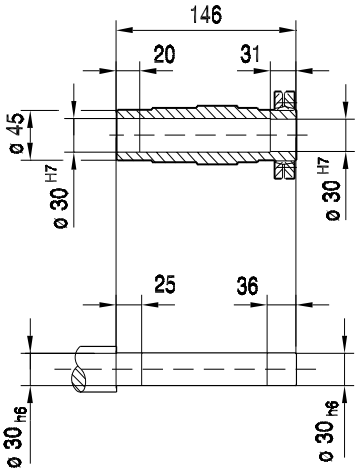
FHZ37..

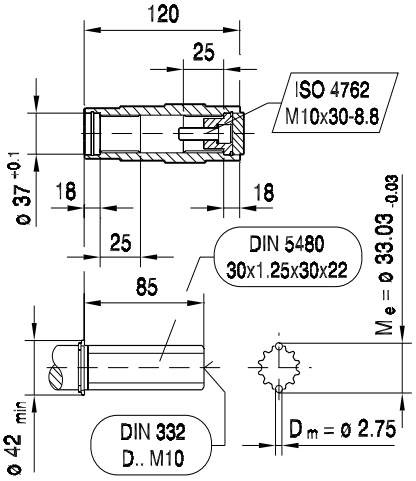


FVZ37..





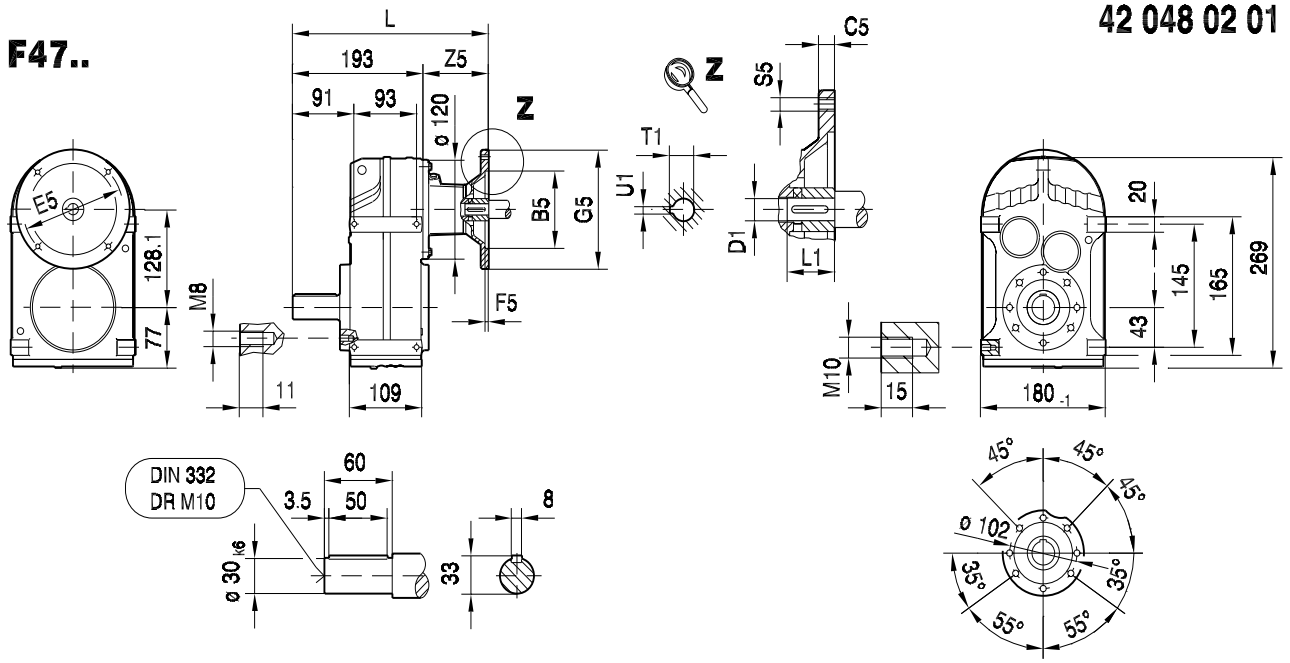




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	194	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	194	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	228	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	228	M10	106	24	50	27.3	8	

42 048 02 01

F47..



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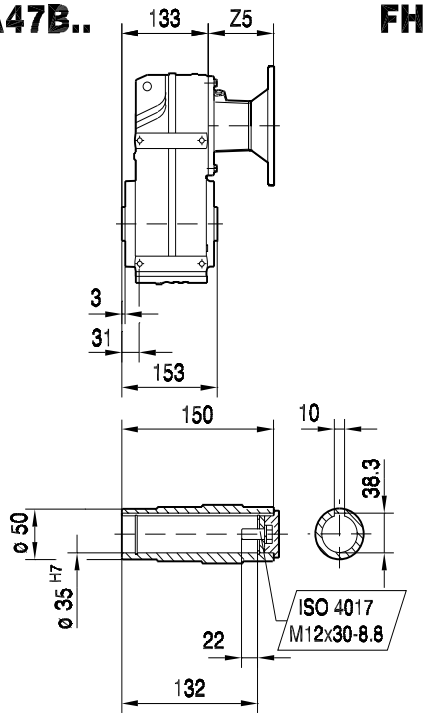

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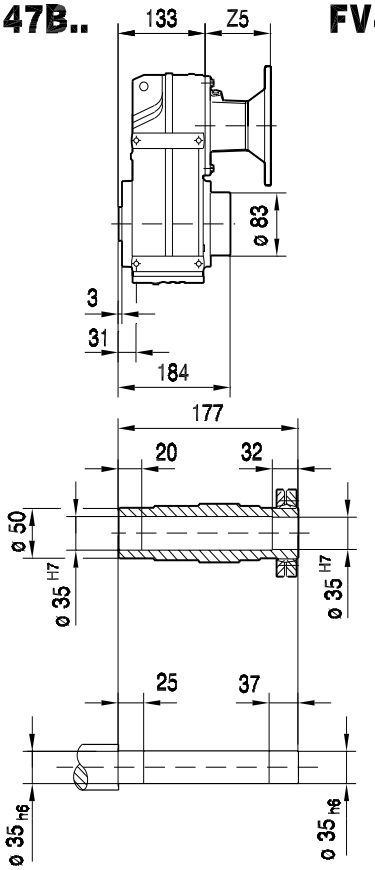

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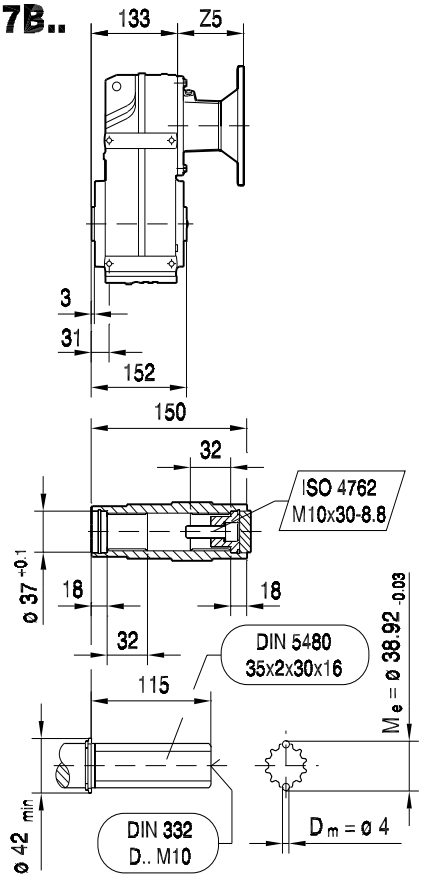
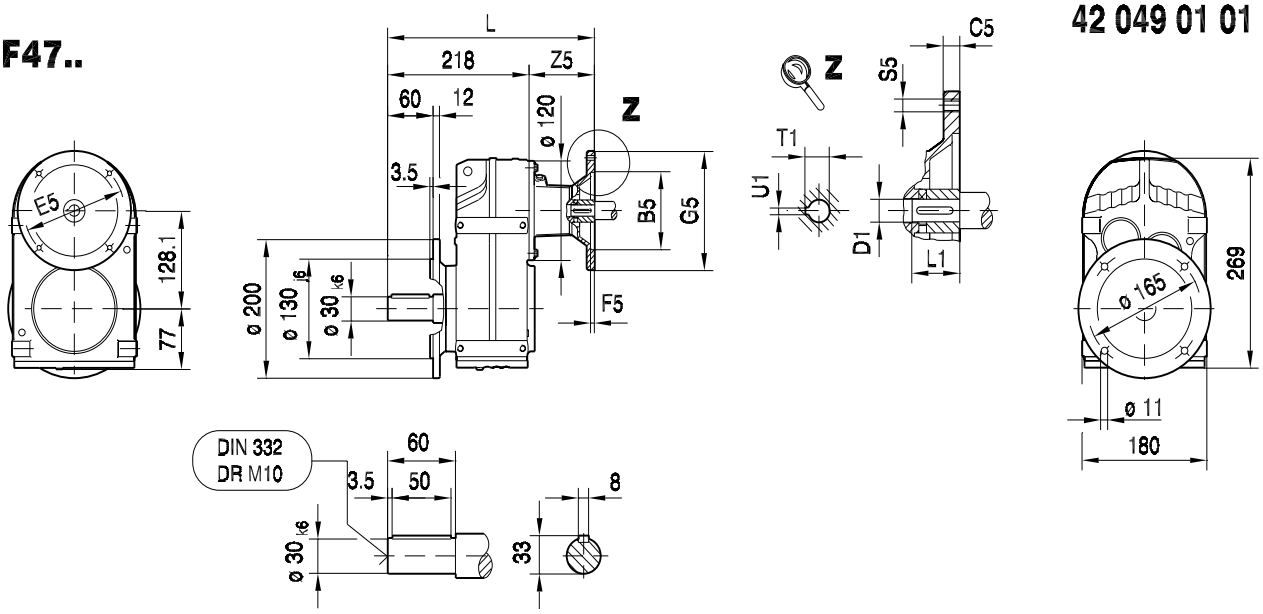


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	265	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	265	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	299	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	299	M10	106	24	50	27.3	8	

42 049 01 01

FF47..



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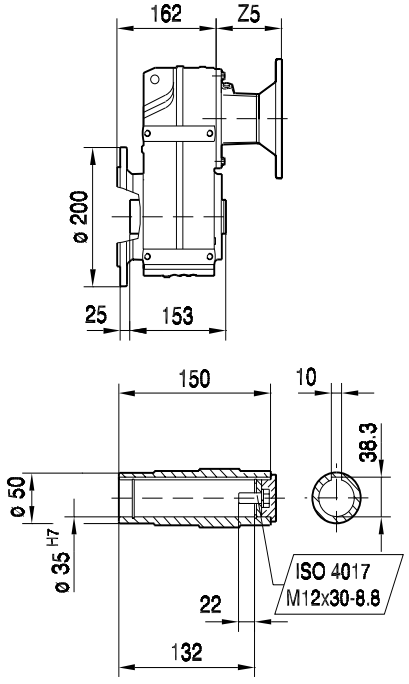

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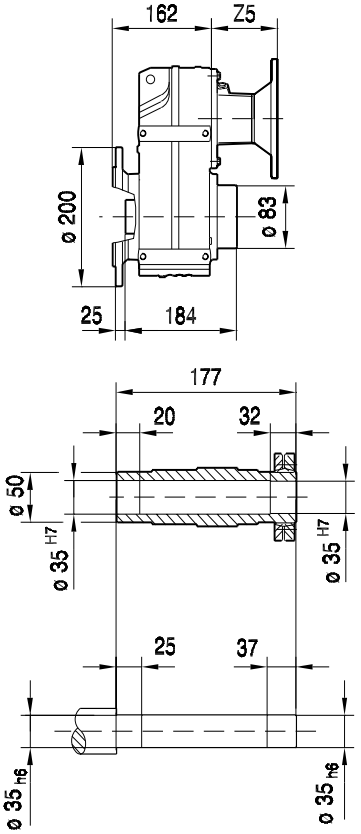

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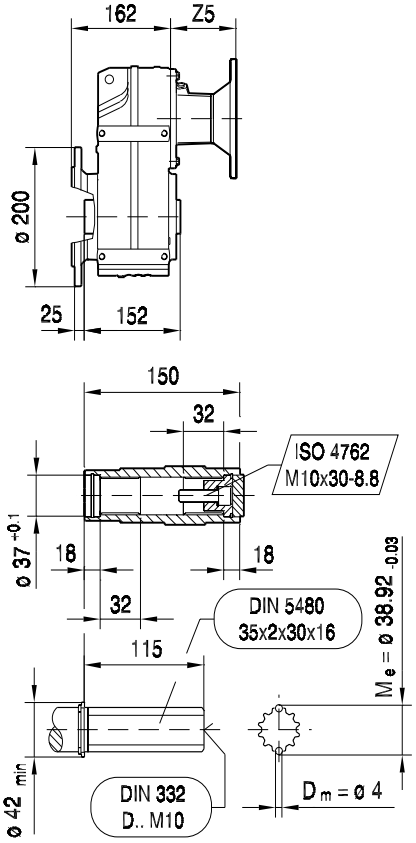
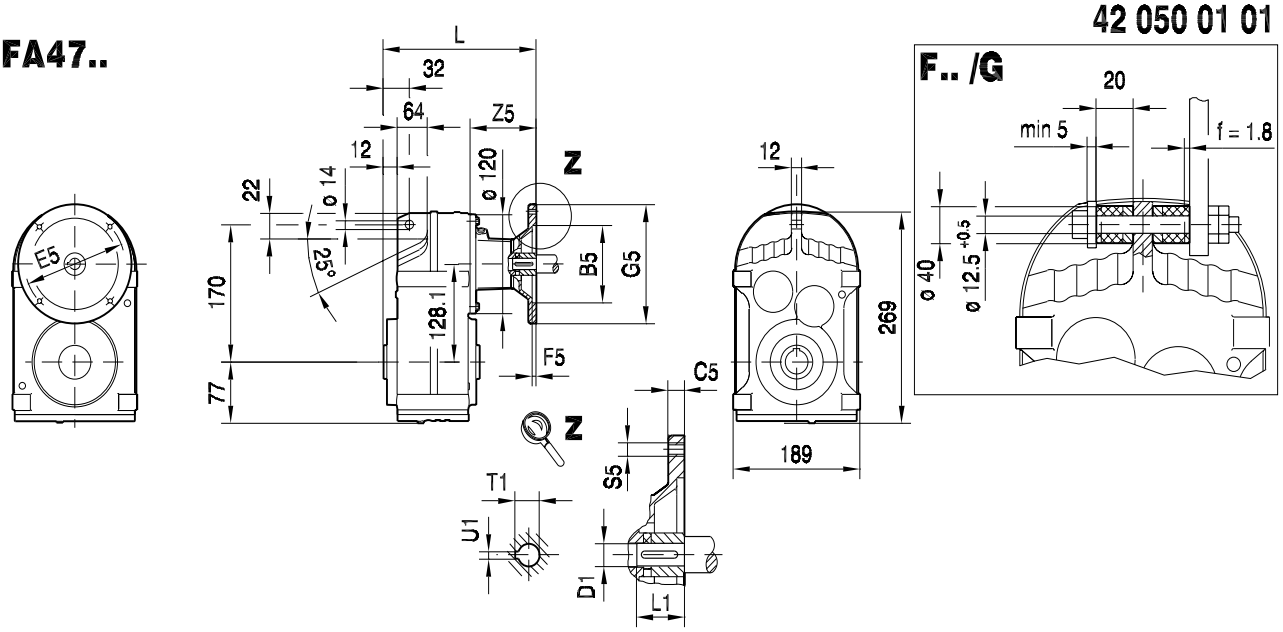


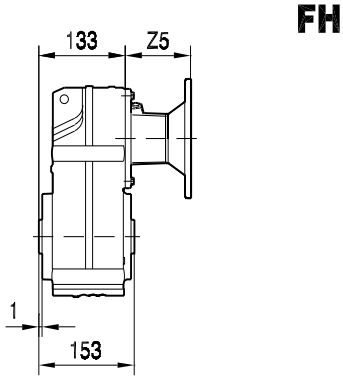
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	290	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	290	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	324	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	324	M10	106	24	50	27.3	8	

42 050 01 01

FA47..



FA47..



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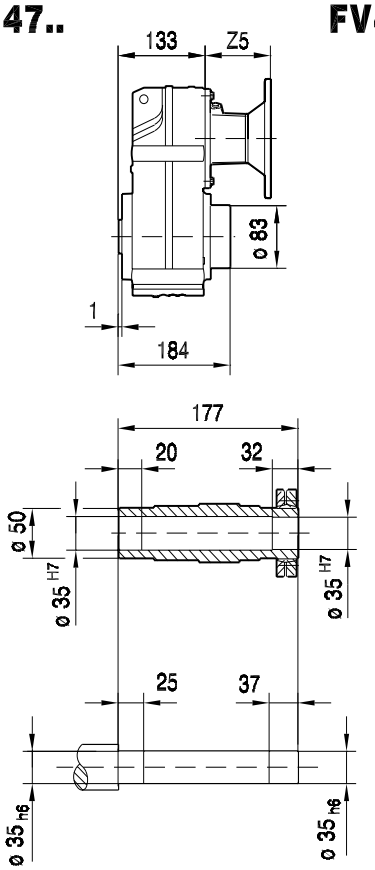
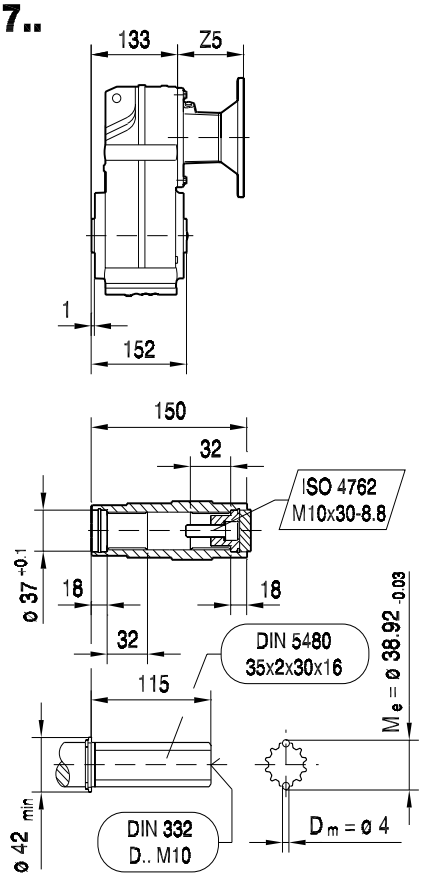


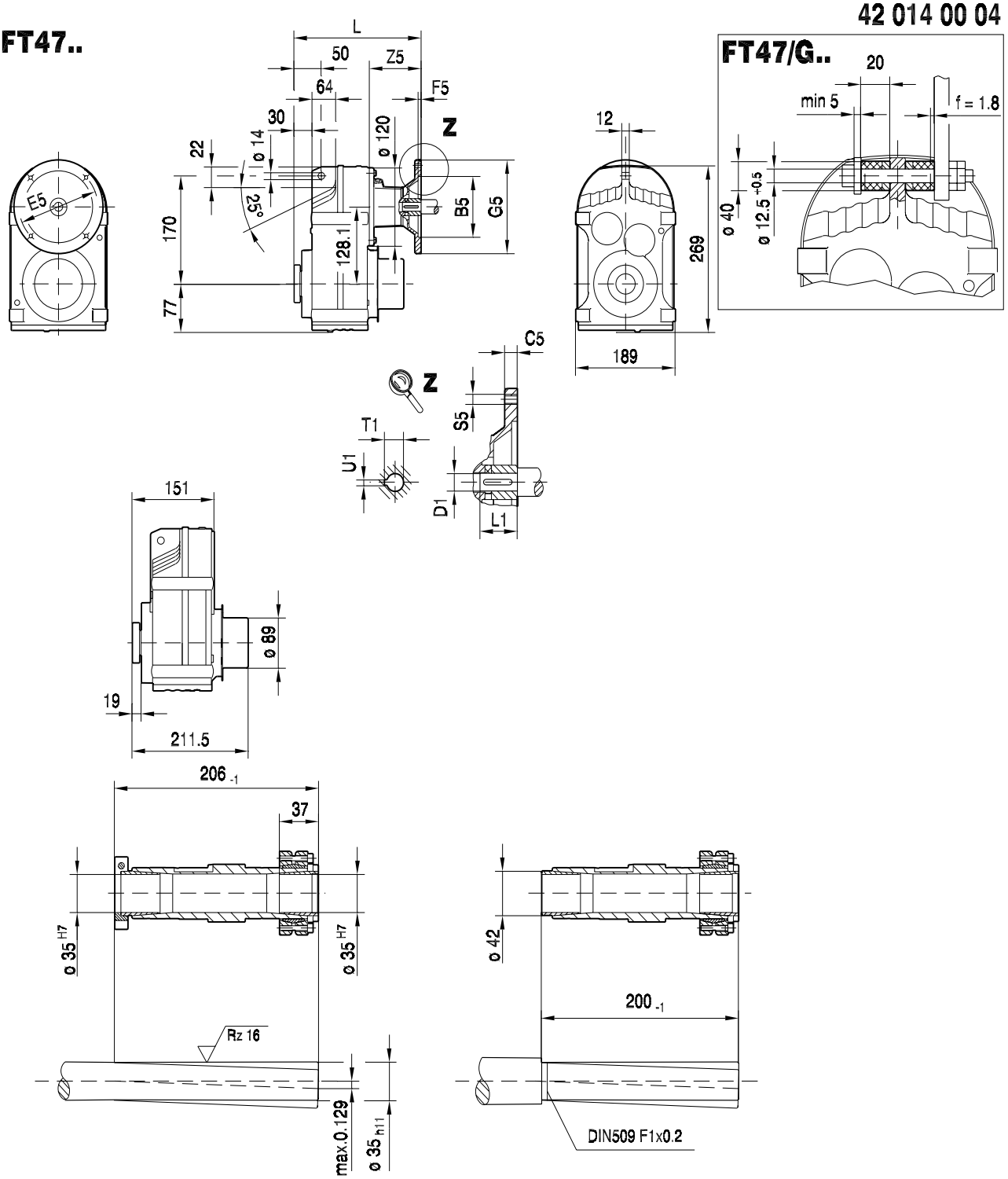
FV47..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	205	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	205	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	239	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	239	M10	106	24	50	27.3	8	

42 014 00 04

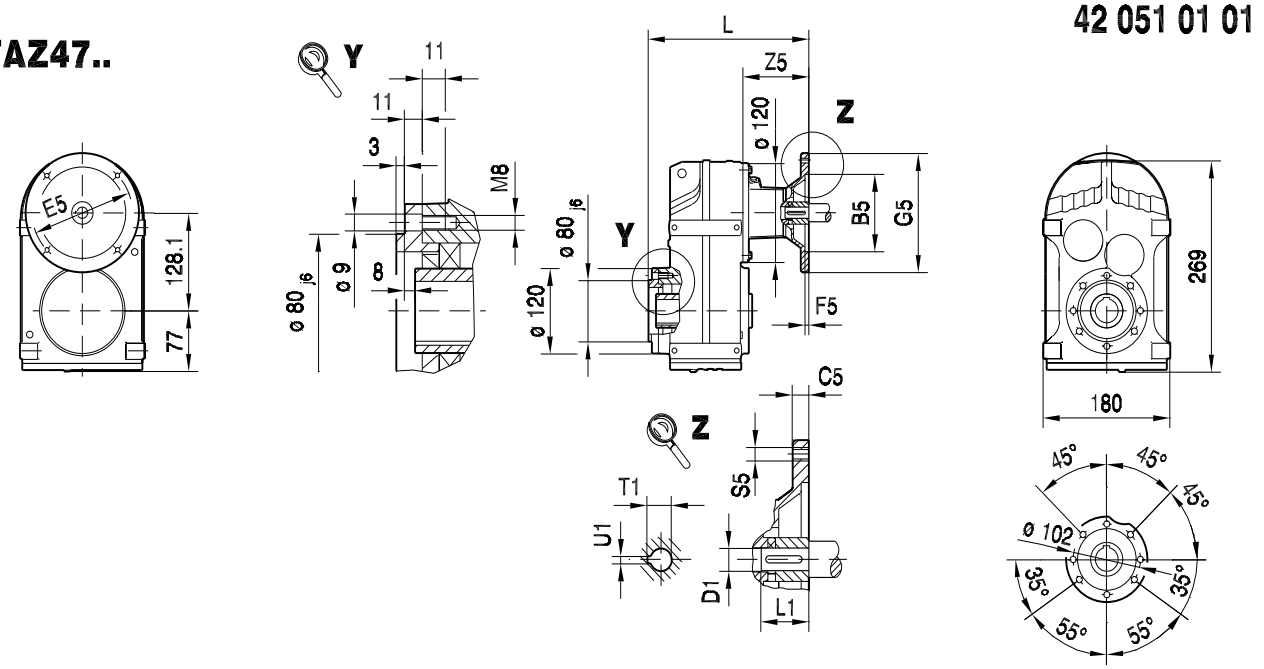
FT47..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	223	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	223	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	257	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	257	M10	106	24	50	27.3	8	

42 051 01 01

FAZ47..



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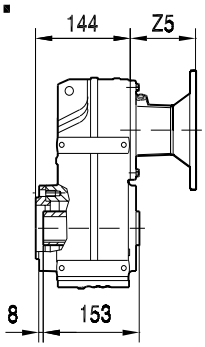

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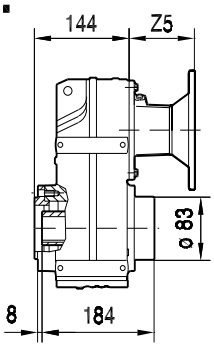
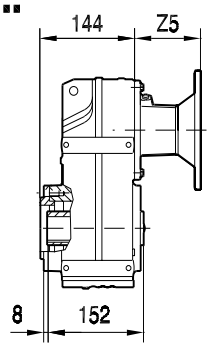
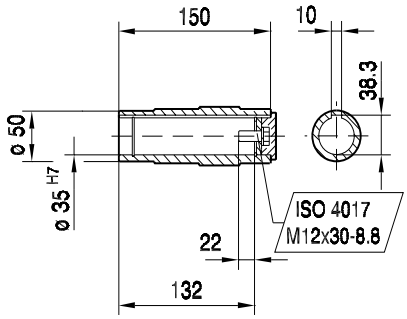
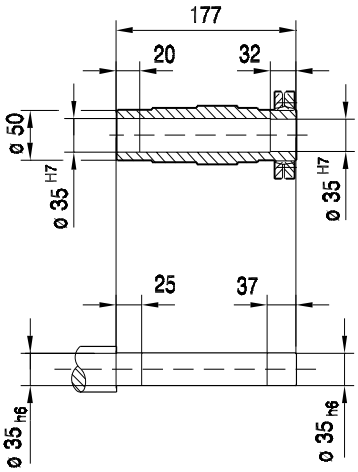
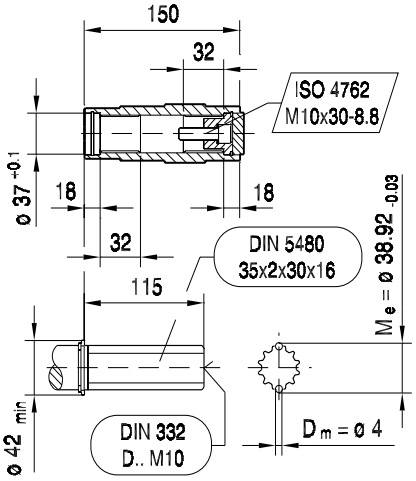


FVZ47..





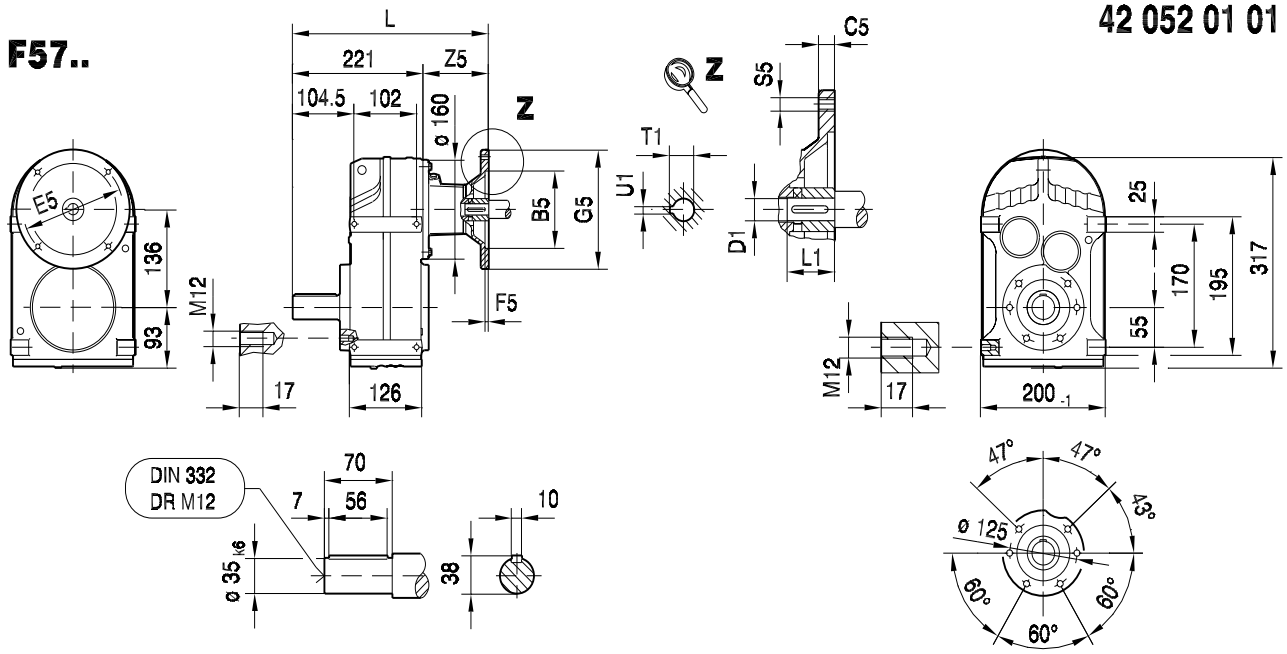




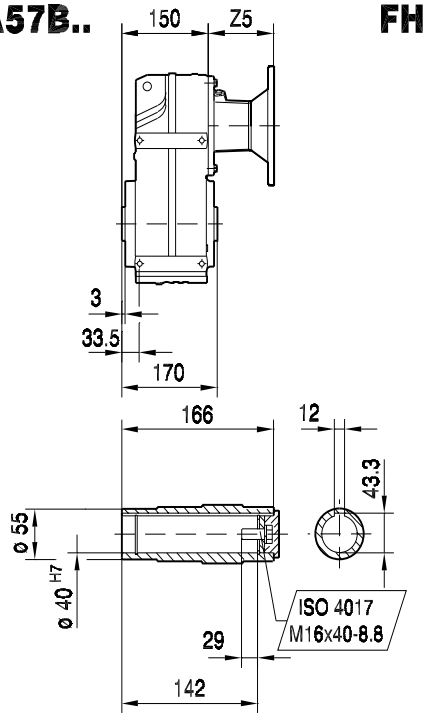
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	216	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	216	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	250	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	250	M10	106	24	50	27.3	8	

42 052 01 01

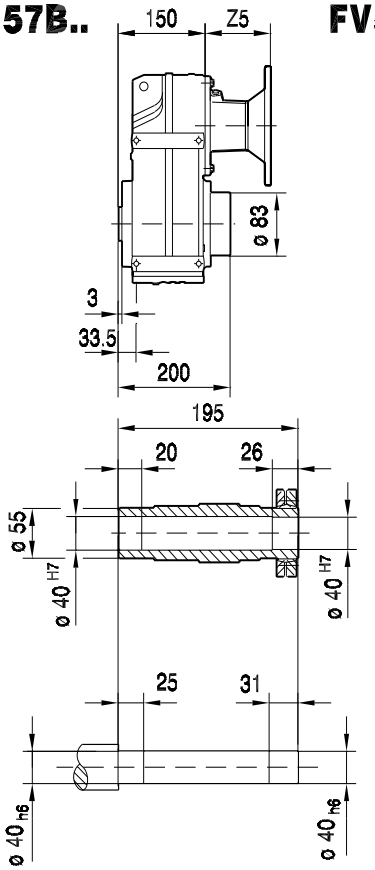
F57..



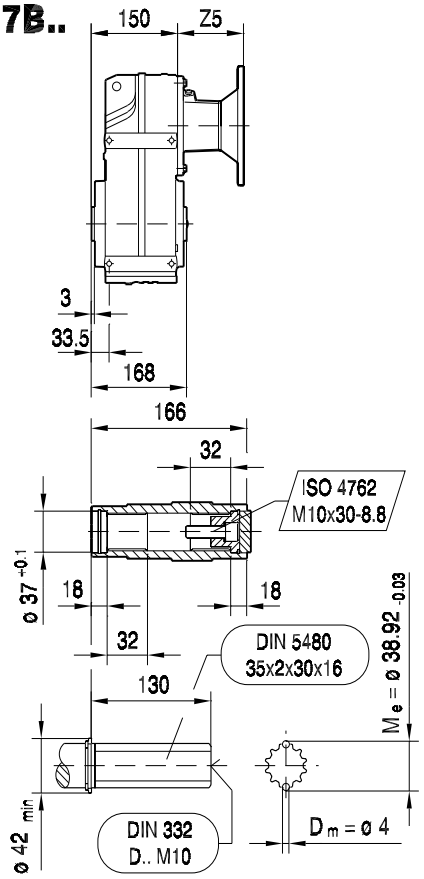
FA57B..



FH57B..



FV57B..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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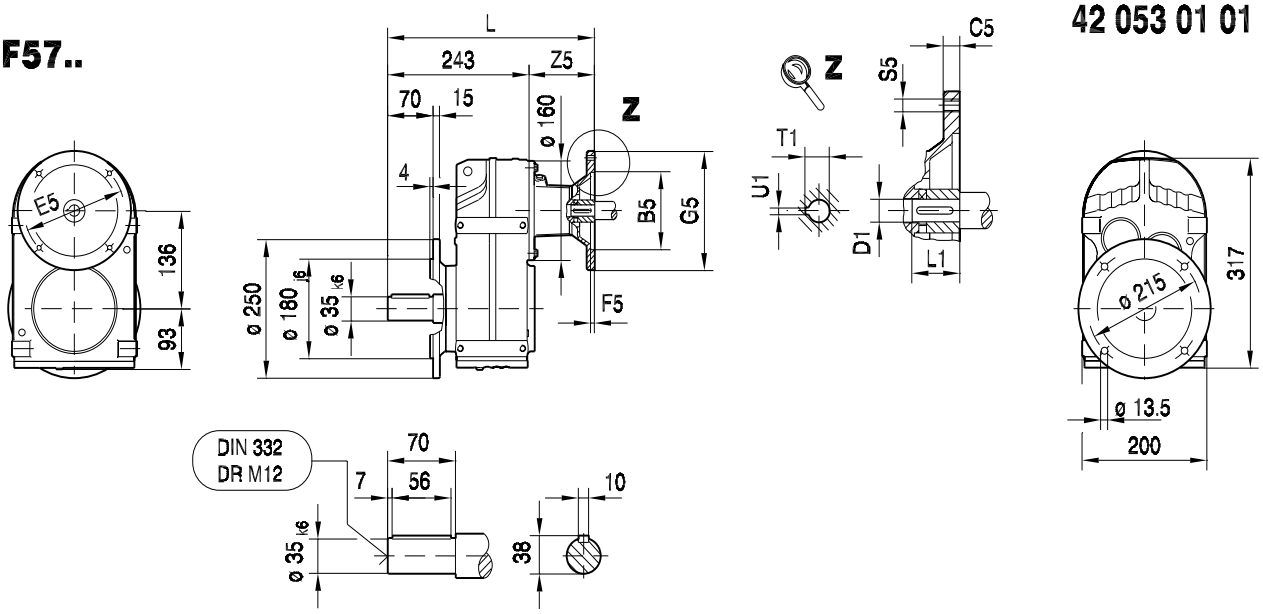
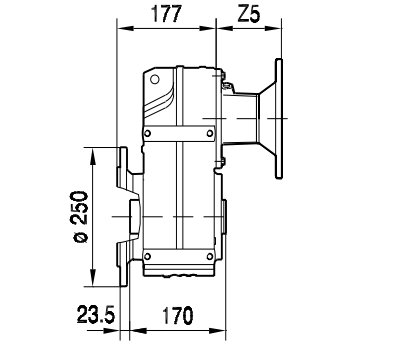
AM71	110	10	130	4.0	160	287	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	320	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	320	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	355	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	355	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	412	M12	191	38	80	41.3	10	

FF57..

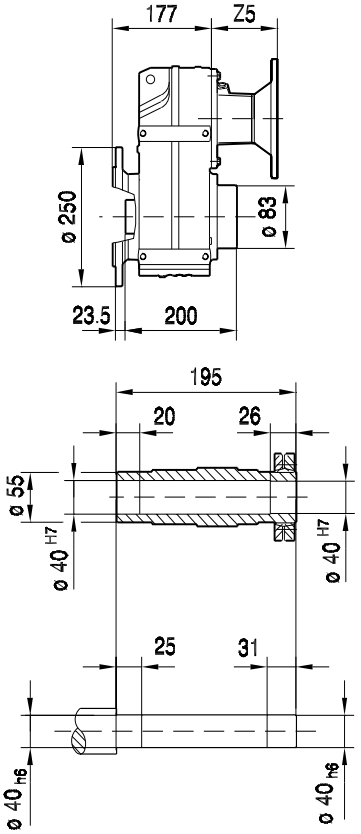
42 053 01 01



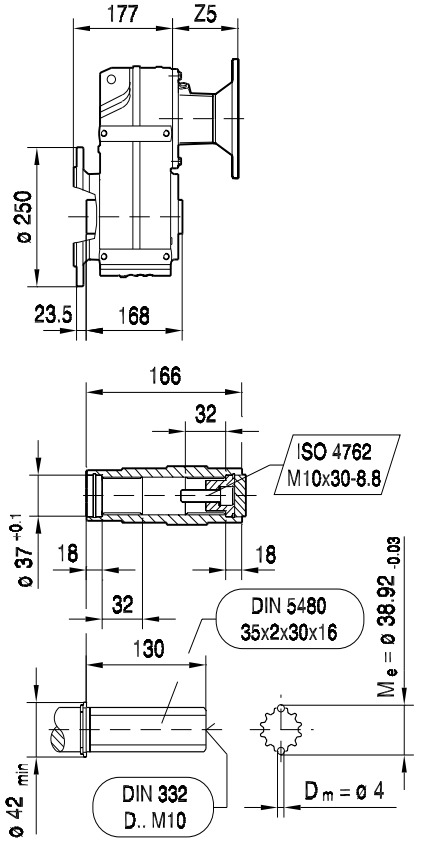
FAF57..



FHF57..



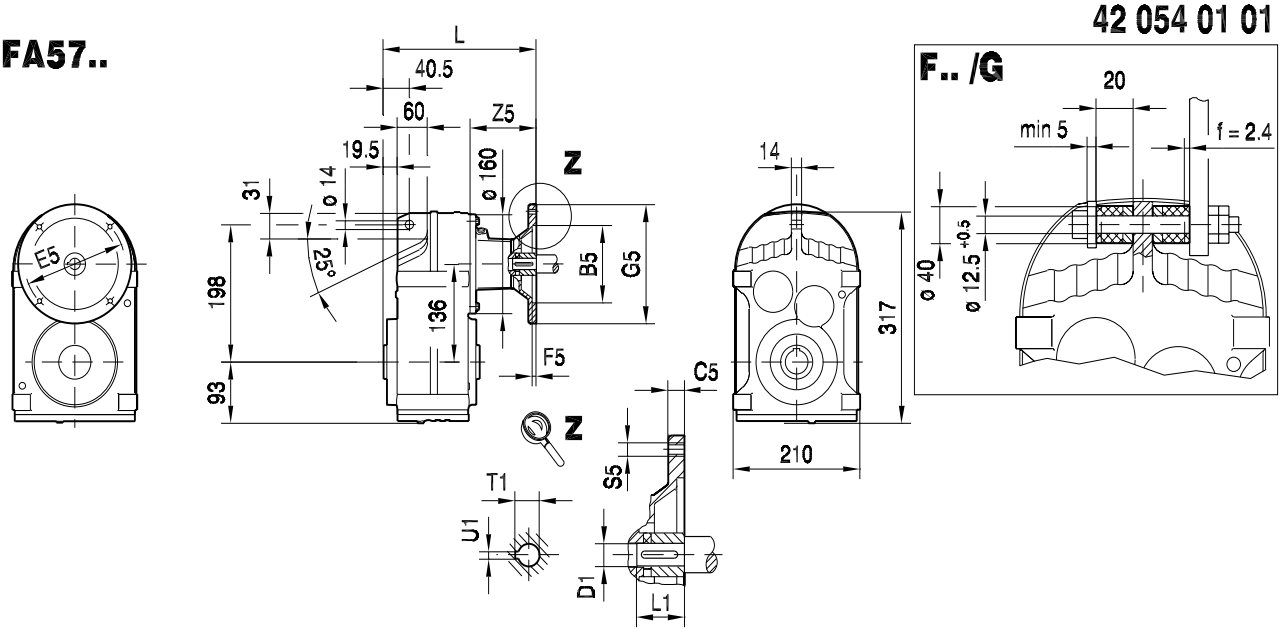
FVF57..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	309	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	309	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	342	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	342	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	434	M12	191	38	80	41.3	10	

42 054 01 01

FA57..



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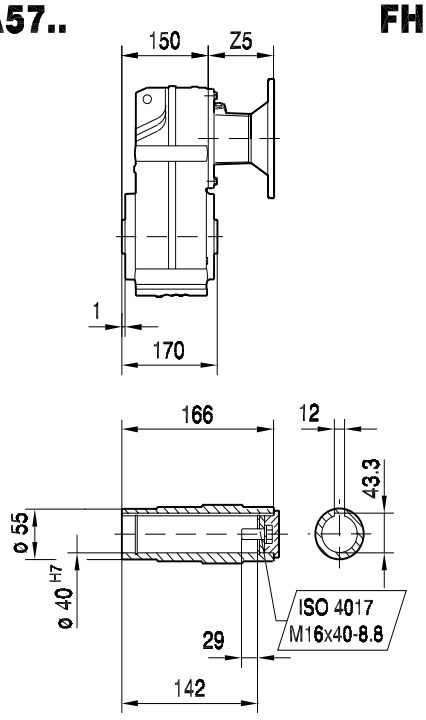

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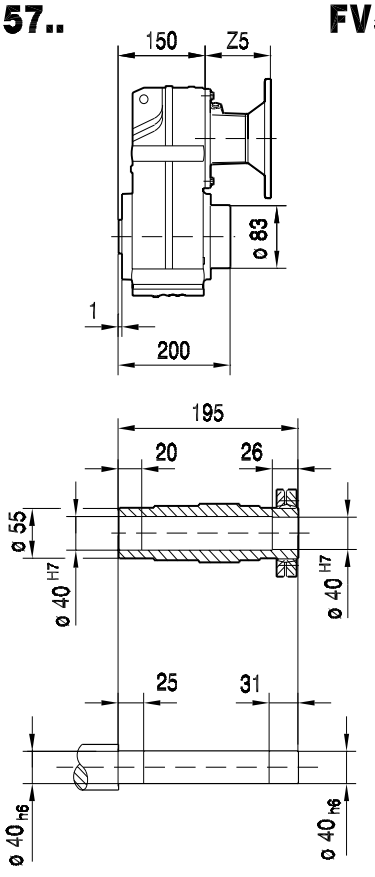

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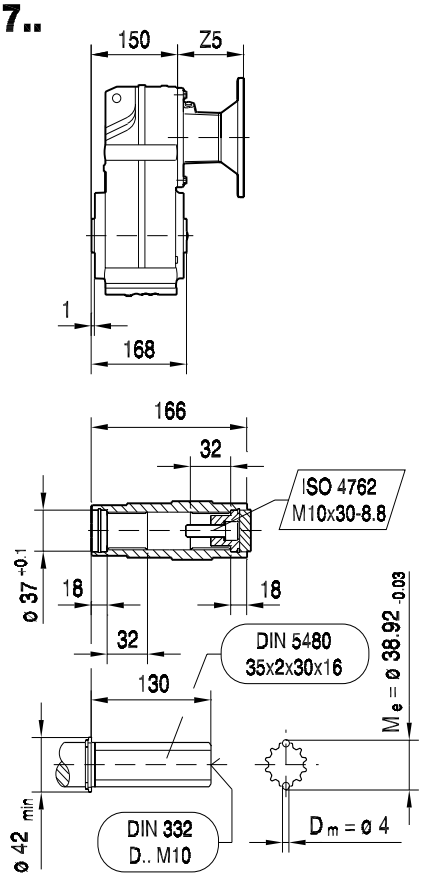
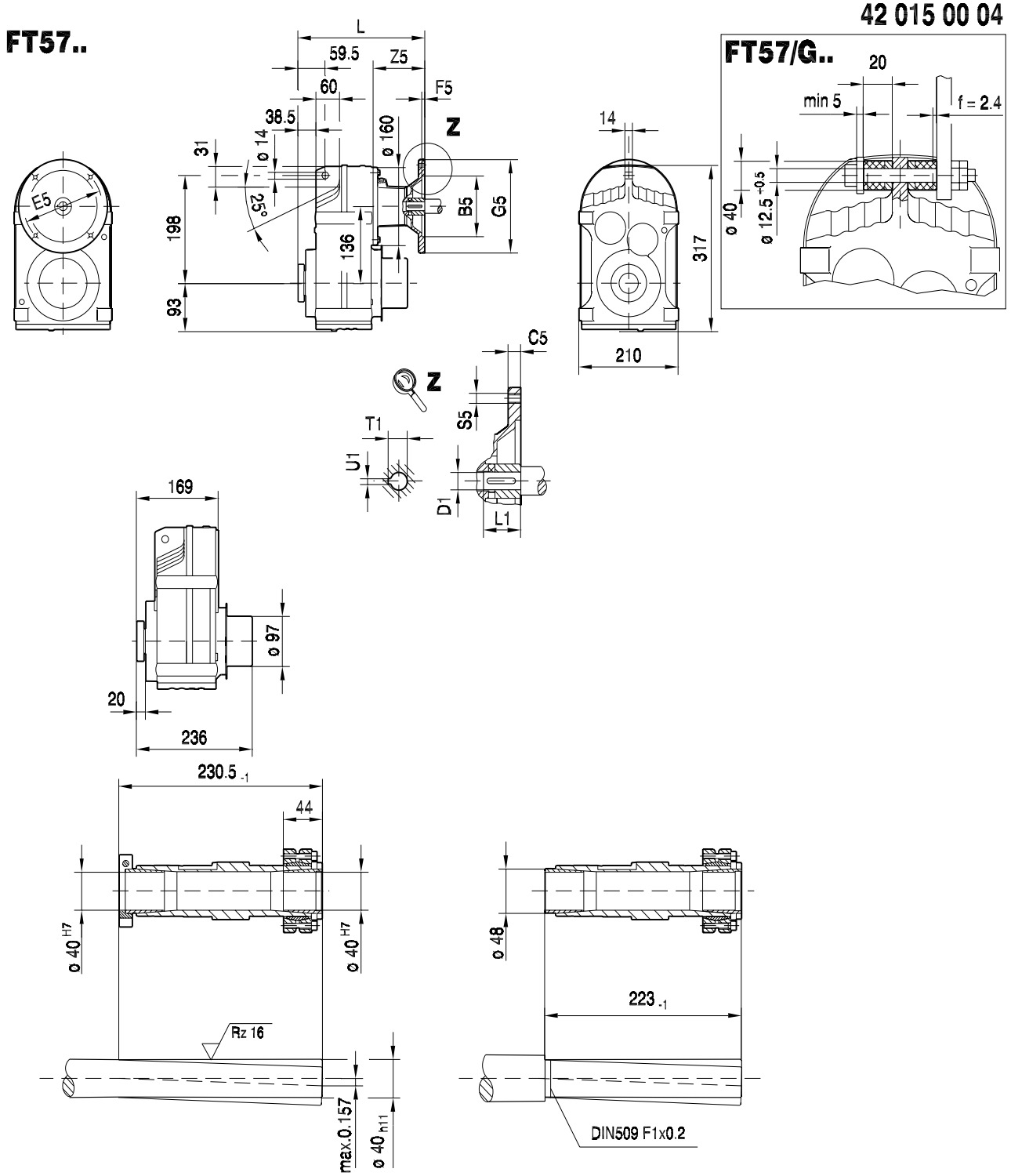


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	216	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	216	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	249	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	249	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	284	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	284	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	341	M12	191	38	80	41.3	10	

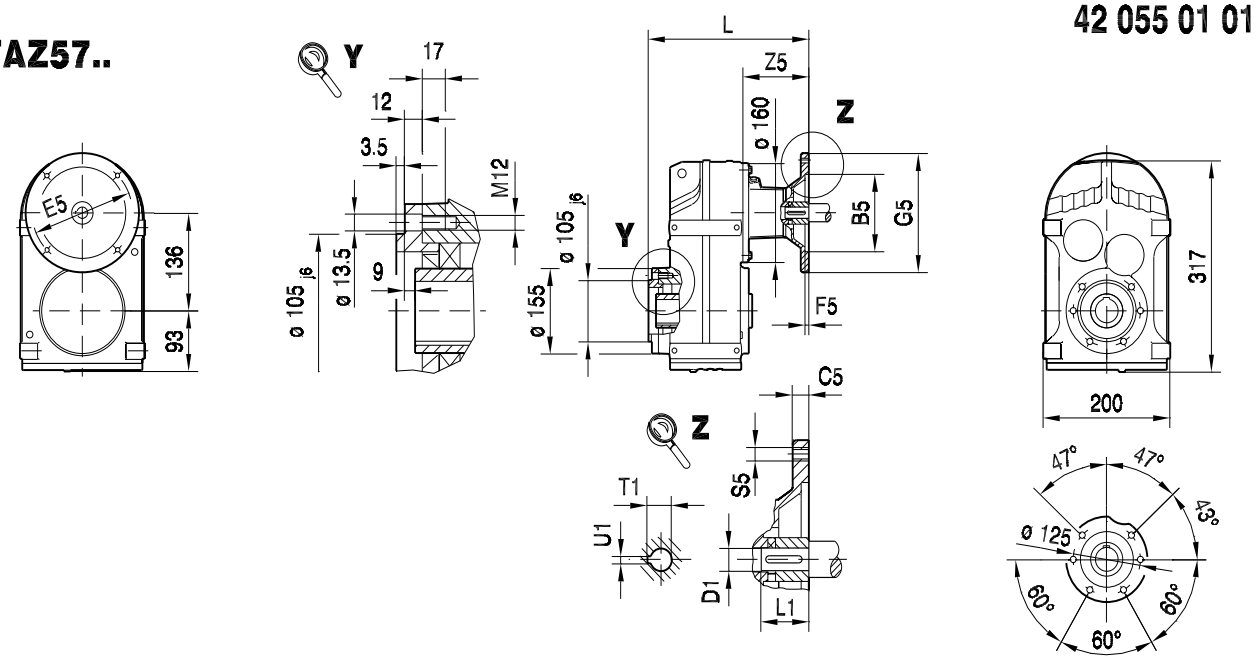
42 015 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	235	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	235	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	268	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	268	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	303	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	303	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	360	M12	191	38	80	41.3	10	

42 055 01 01

FAZ57..



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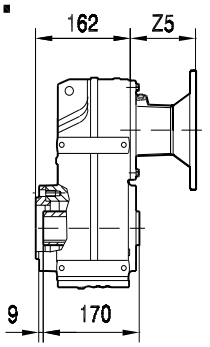

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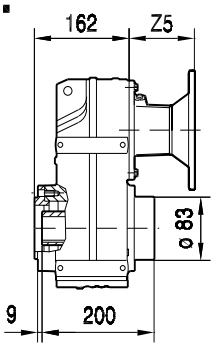

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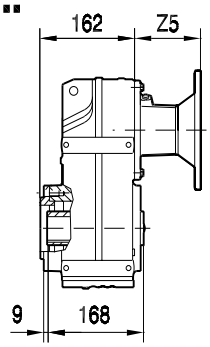
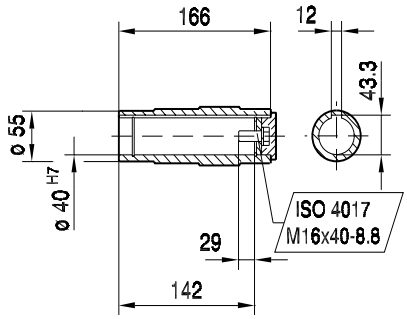
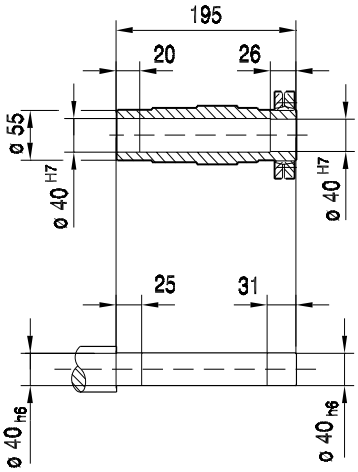
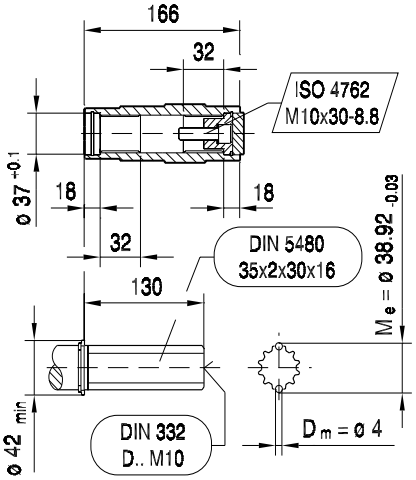




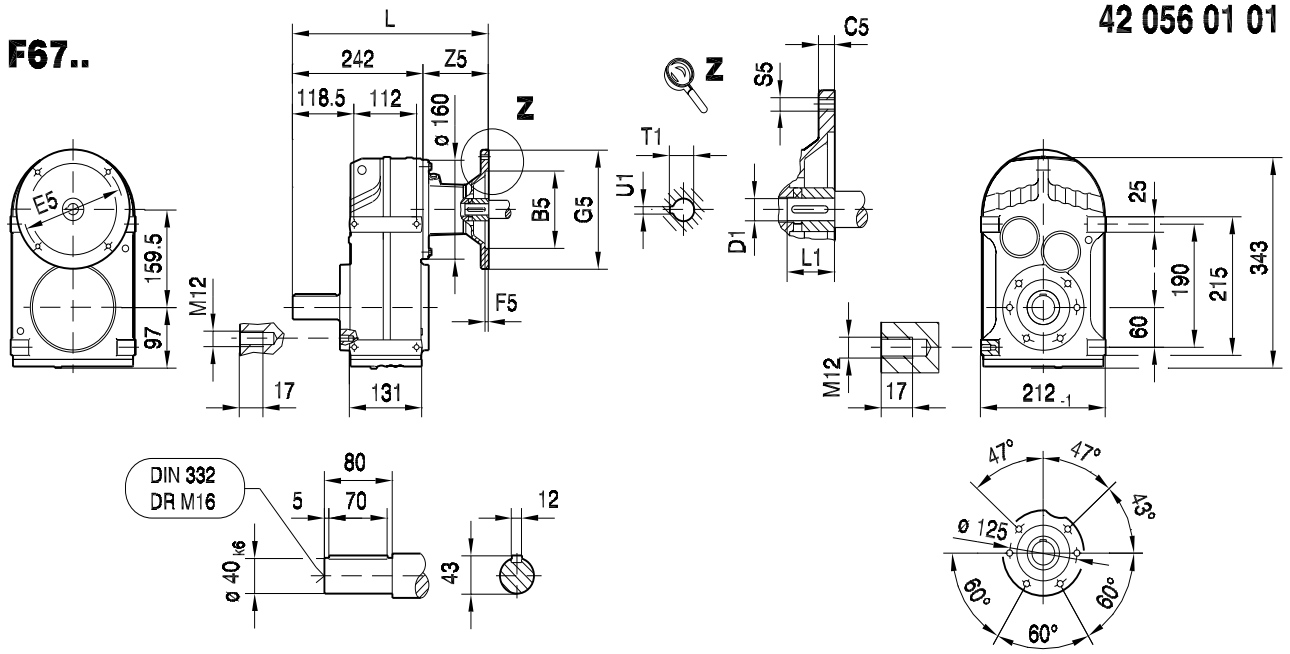




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	228	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	228	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	261	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	261	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	296	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	296	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	353	M12	191	38	80	41.3	10	

42 056 01 01

F67..



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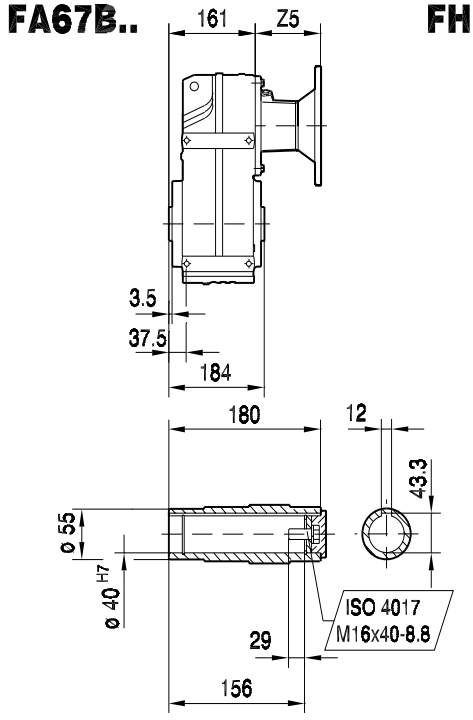

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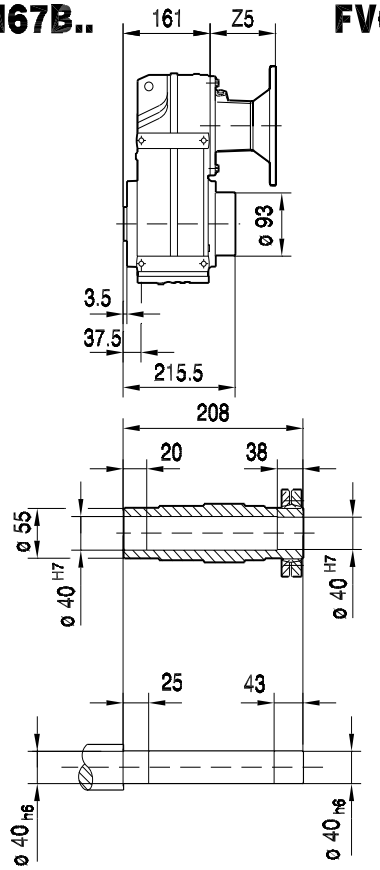

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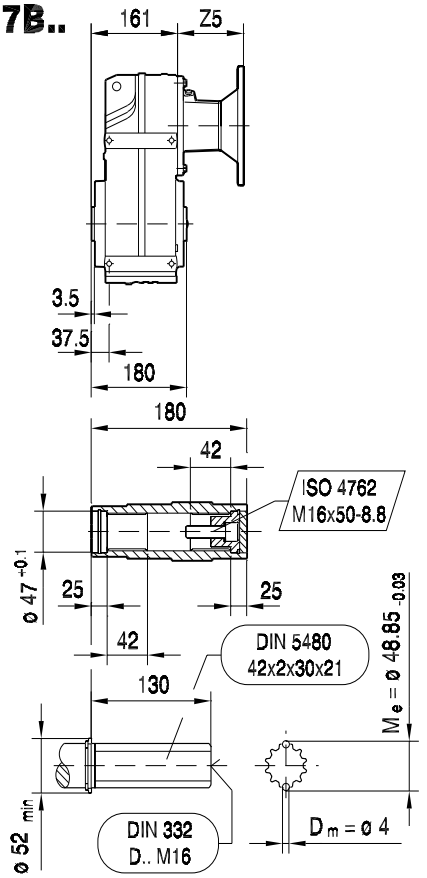
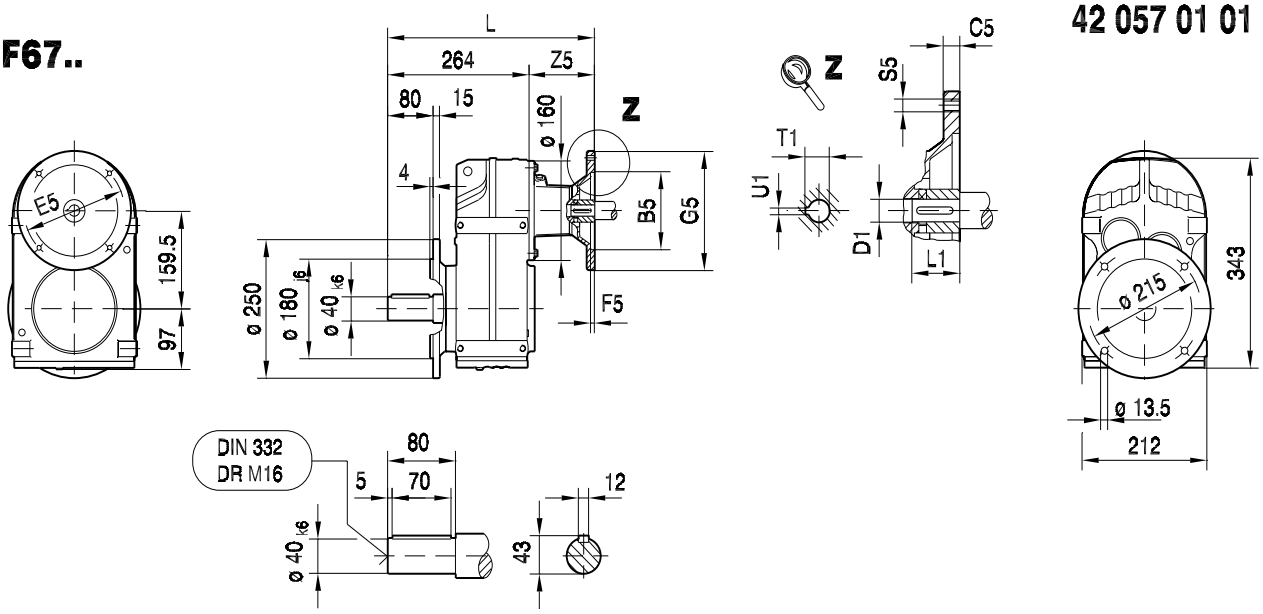


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	308	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	308	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	341	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	341	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	433	M12	191	38	80	41.3	10	

FF67..

42 057 01 01



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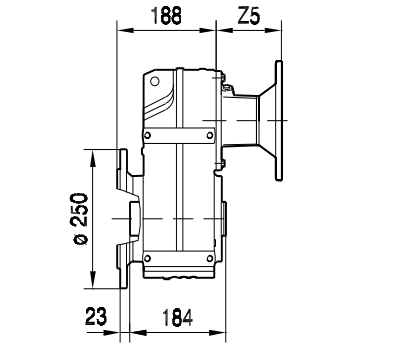

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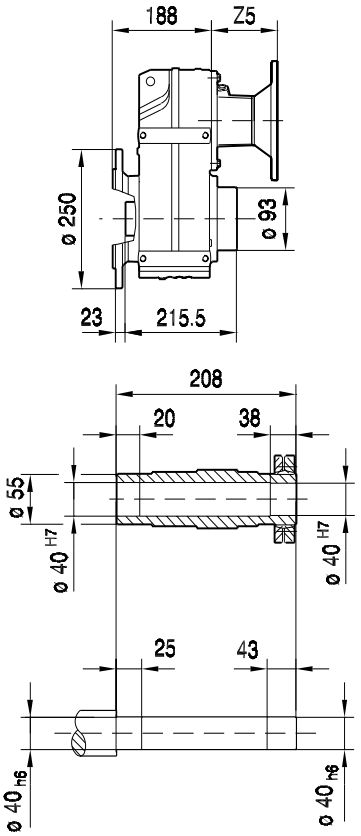

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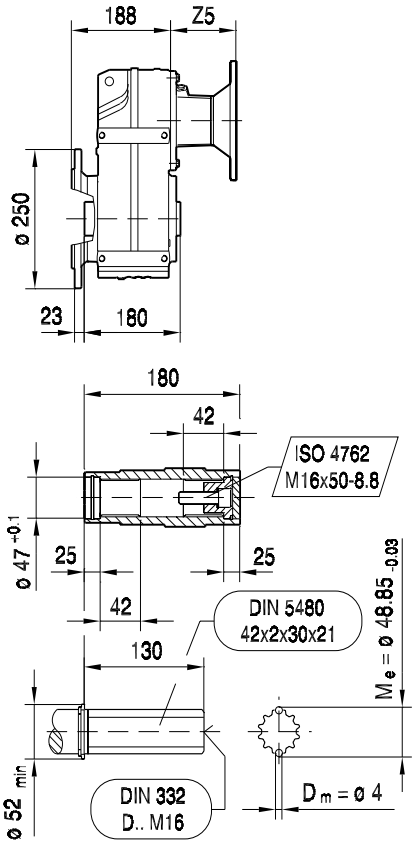
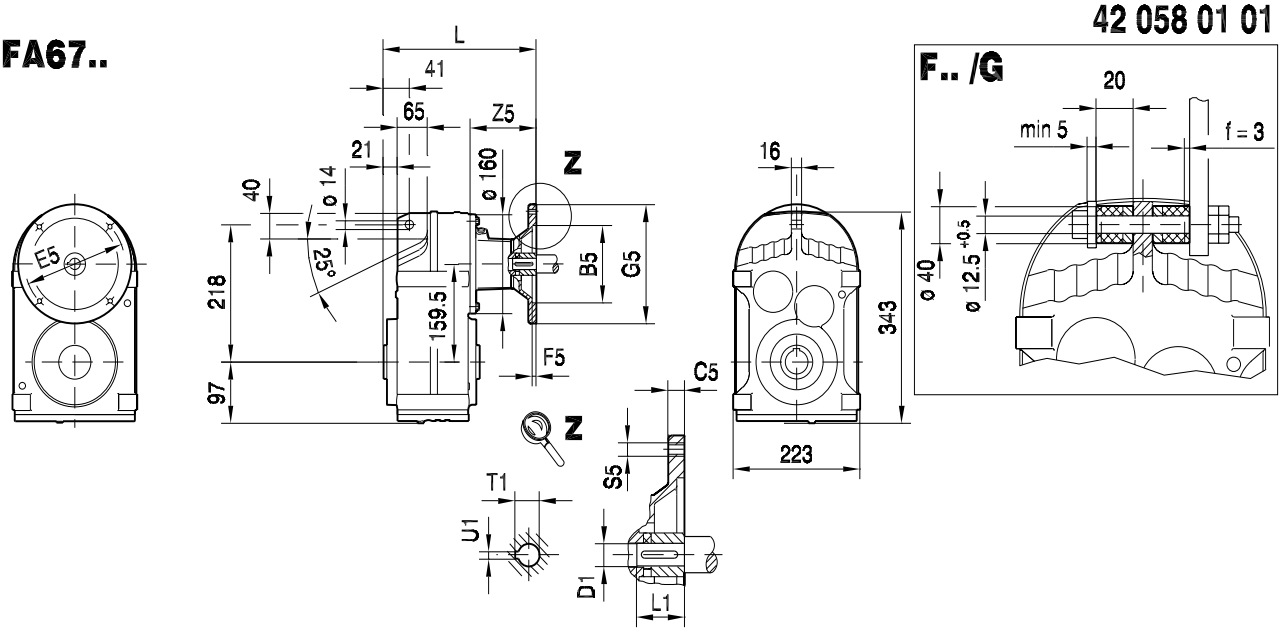


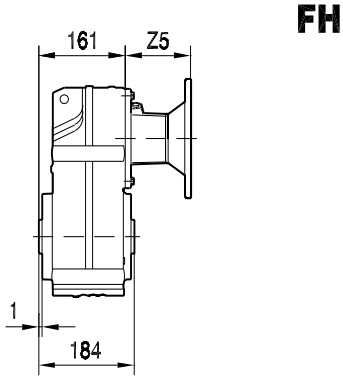
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	330	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	330	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	363	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	363	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	398	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	398	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	455	M12	191	38	80	41.3	10	

42 058 01 01

FA67..



FA67..



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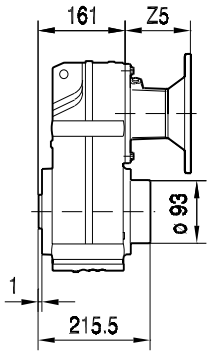

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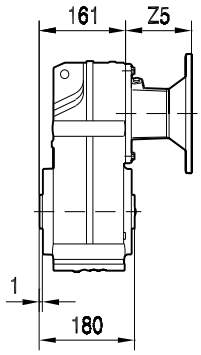
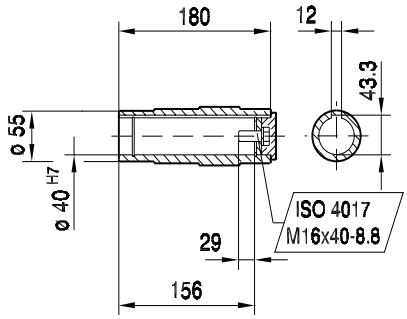
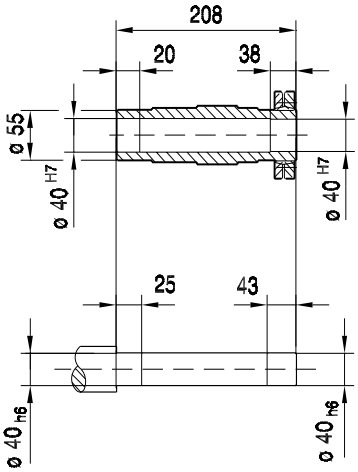
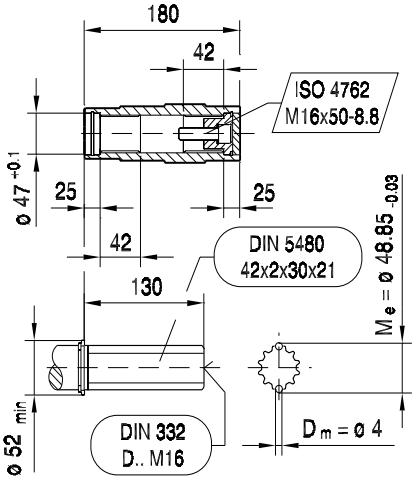




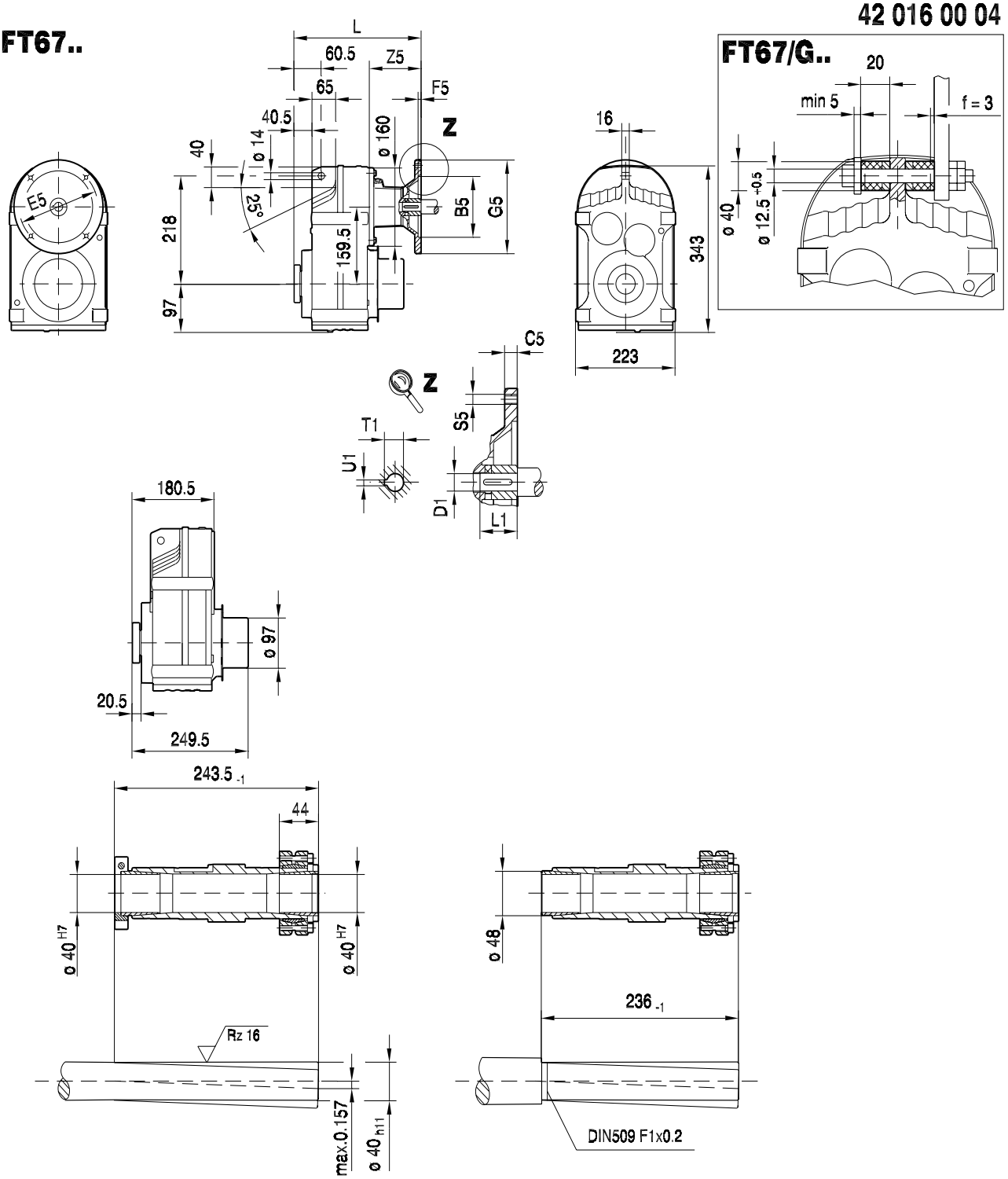




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	227	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	227	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	260	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	260	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	295	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	295	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	352	M12	191	38	80	41.3	10	

42 016 00 04

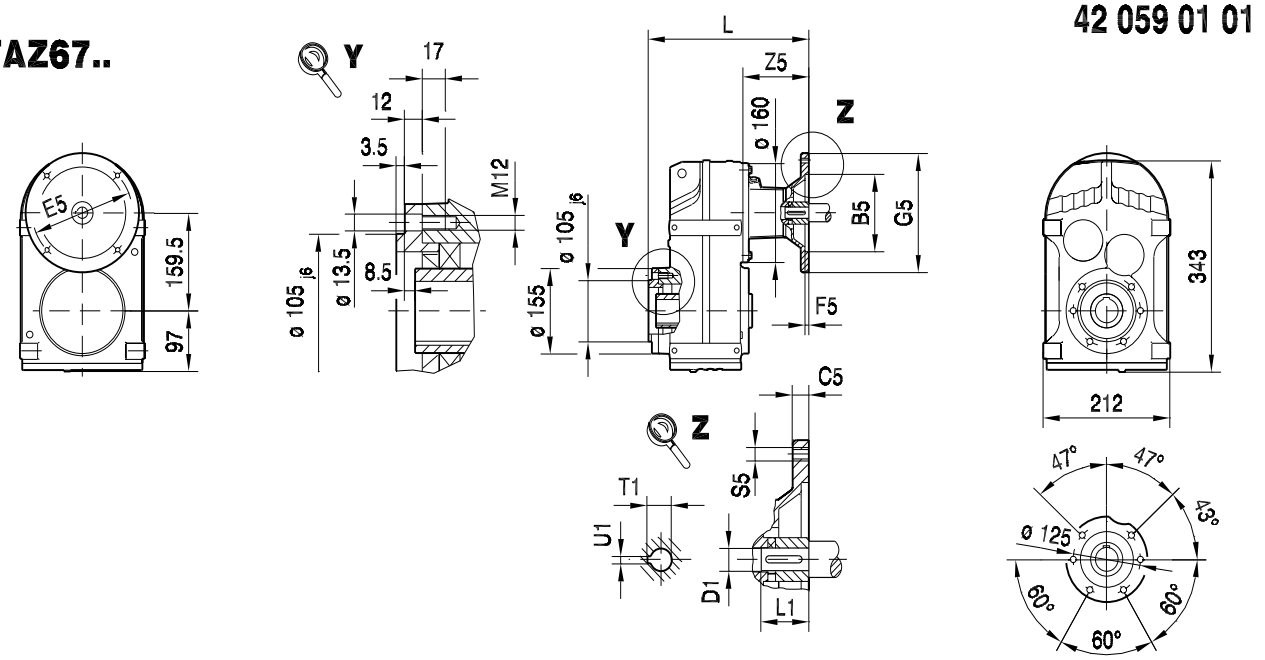
FT67..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	247	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	247	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	280	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	280	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	315	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	315	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	372	M12	191	38	80	41.3	10	

42 059 01 01

FAZ67..



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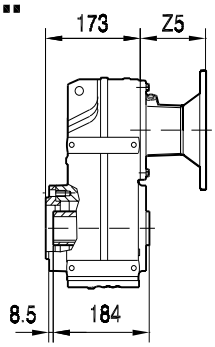

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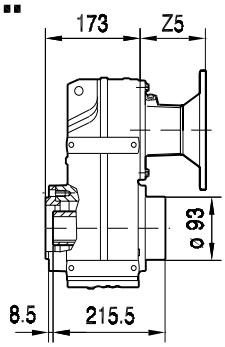
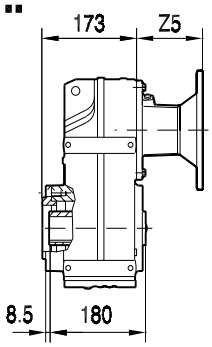
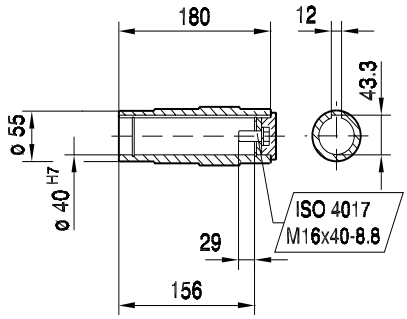
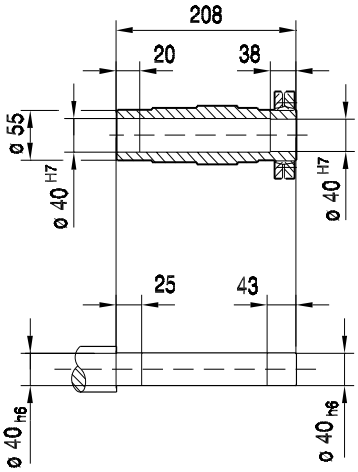
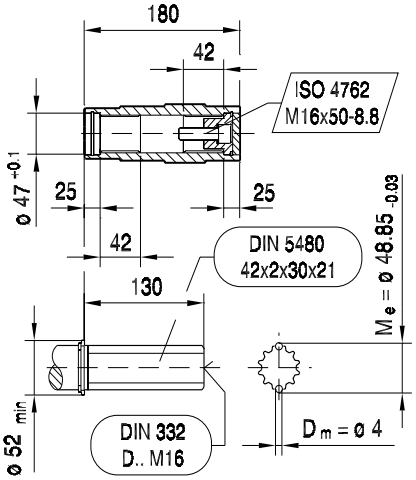


FVZ67..





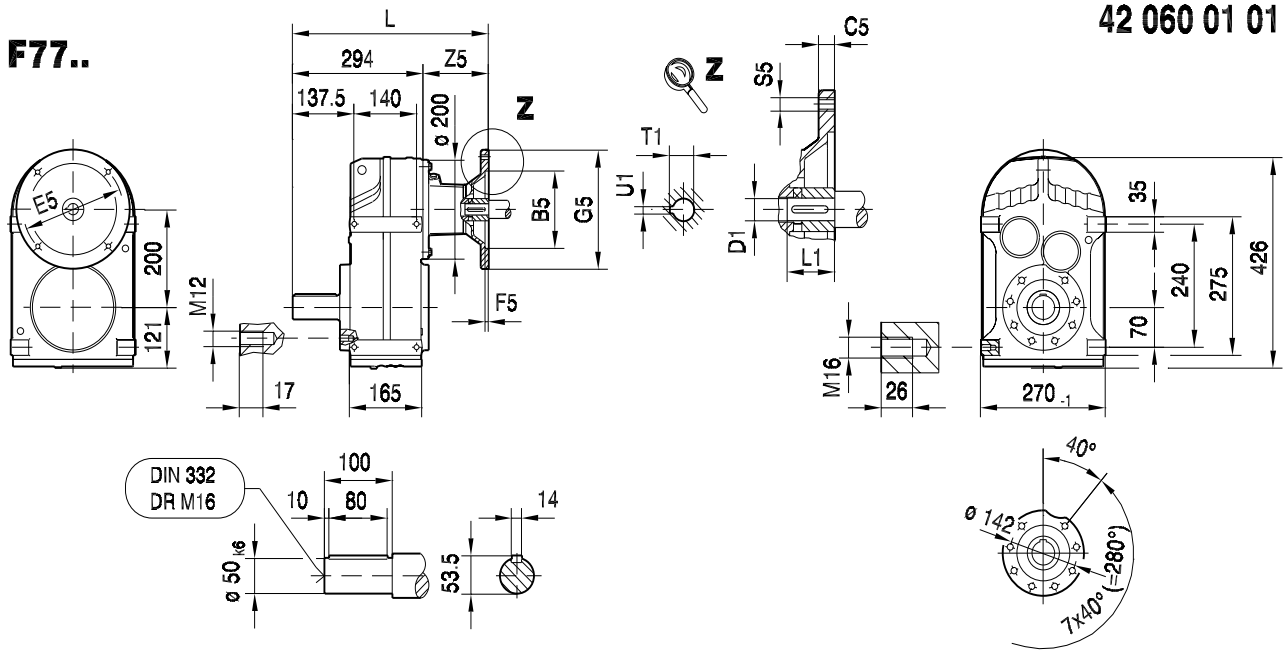




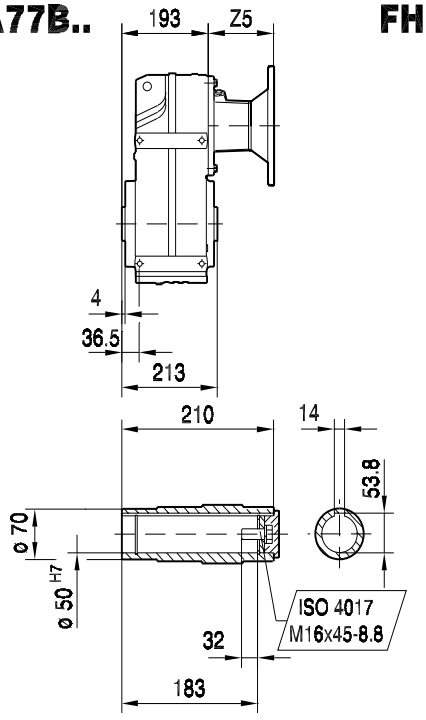
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	239	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	239	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	272	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	272	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	307	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	307	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	364	M12	191	38	80	41.3	10	

42 060 01 01

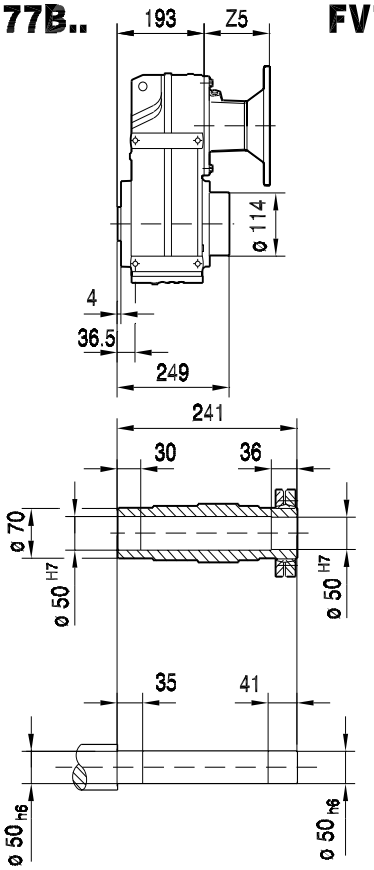
F77..



FA77B..



FH77B..



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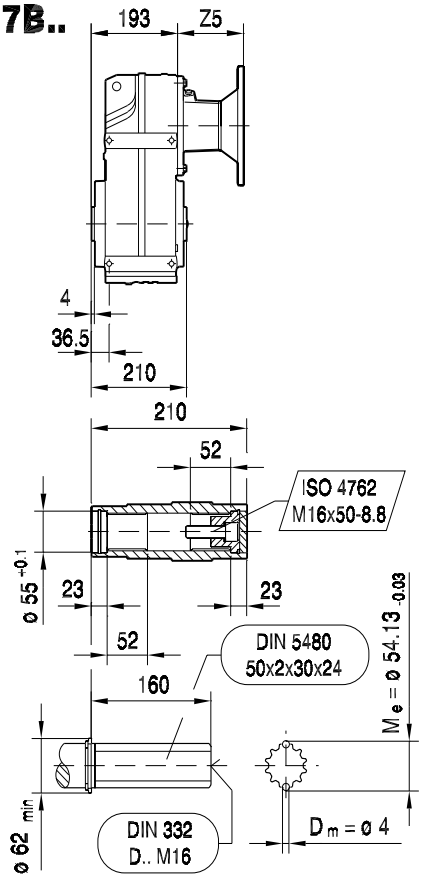
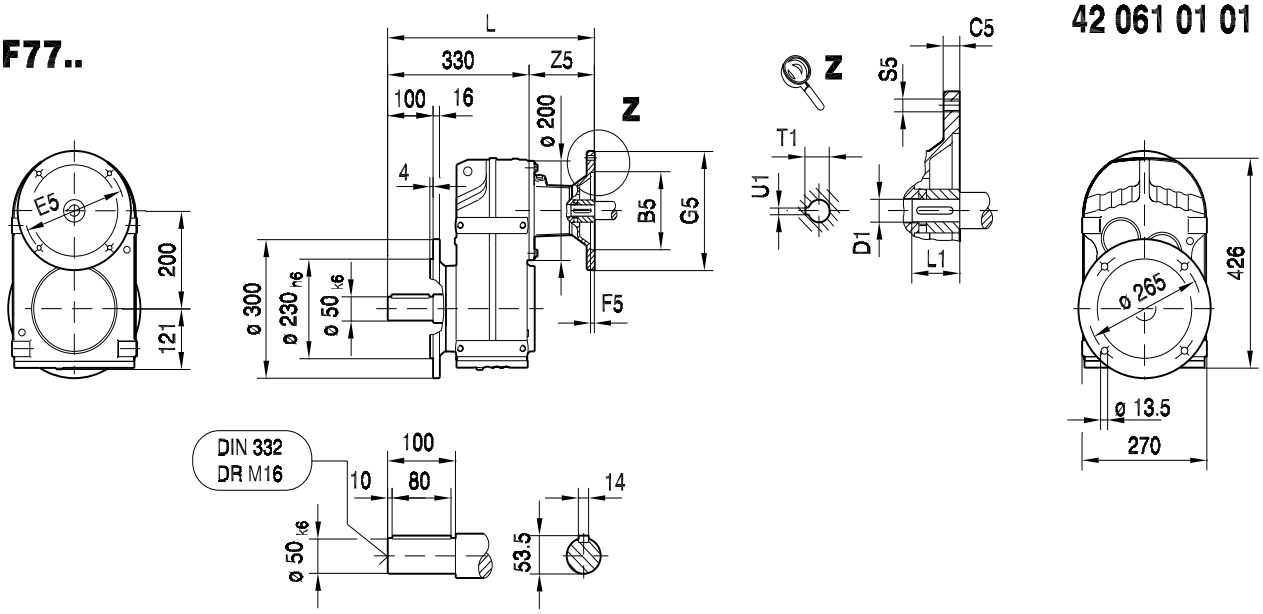


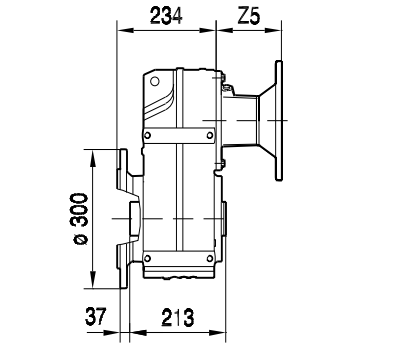
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	354	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	354	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	386	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	386	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	420	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	420	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	473	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	473	M12	179	38	80	41.3	10	

42 061 01 01

FF77..



FAF77..



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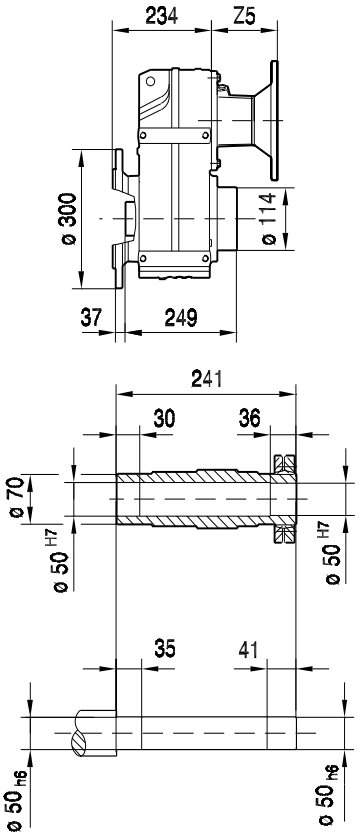
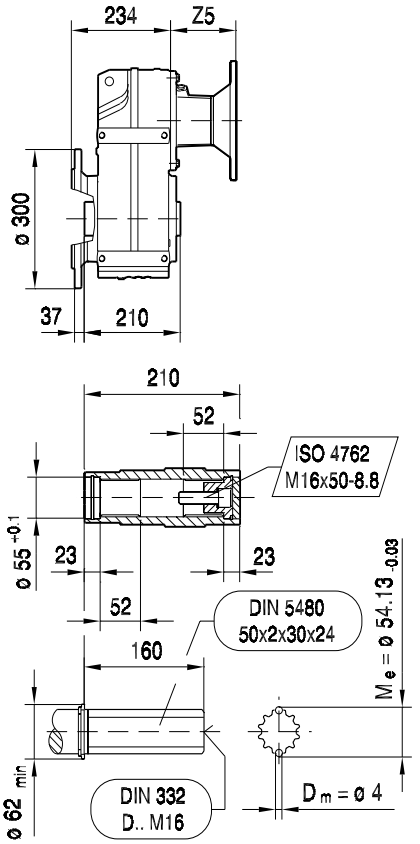


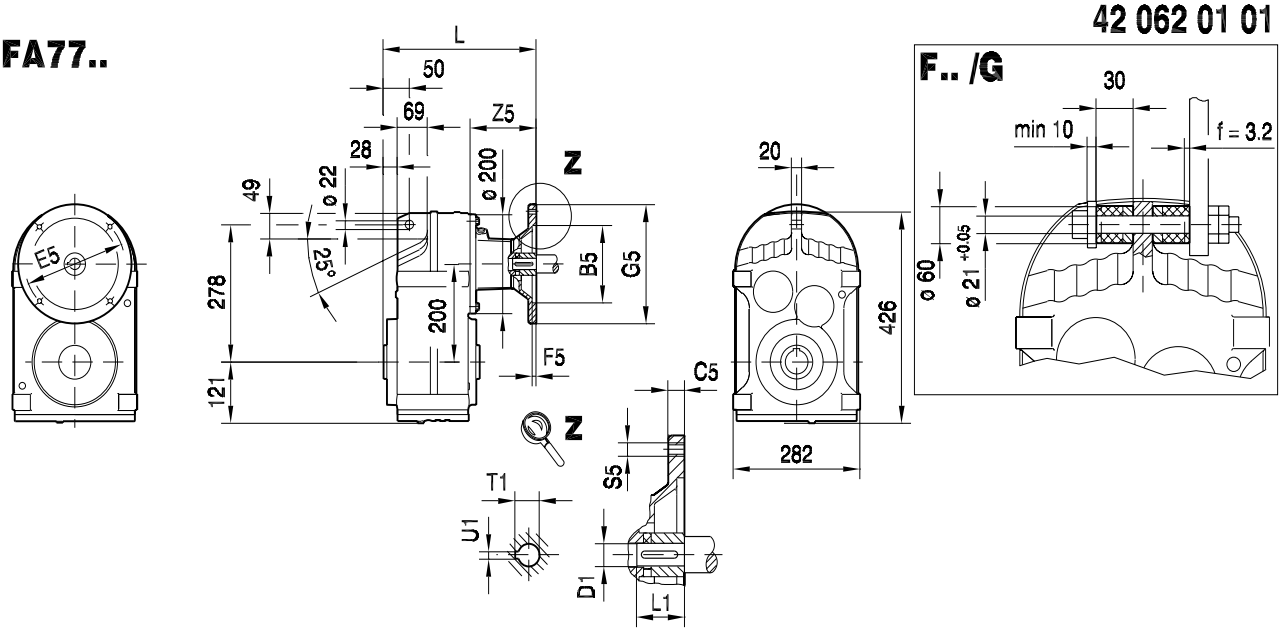
FVF77..



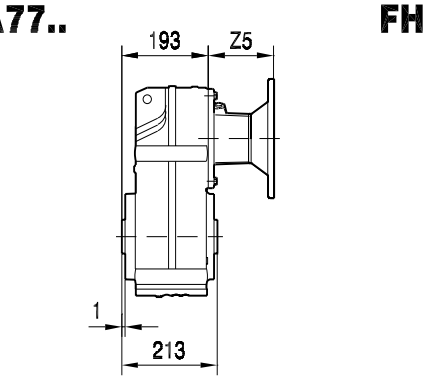
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	390	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	390	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	422	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	422	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	456	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	456	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	509	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	509	M12	179	38	80	41.3	10	

42 062 01 01

FA77..



FA77..



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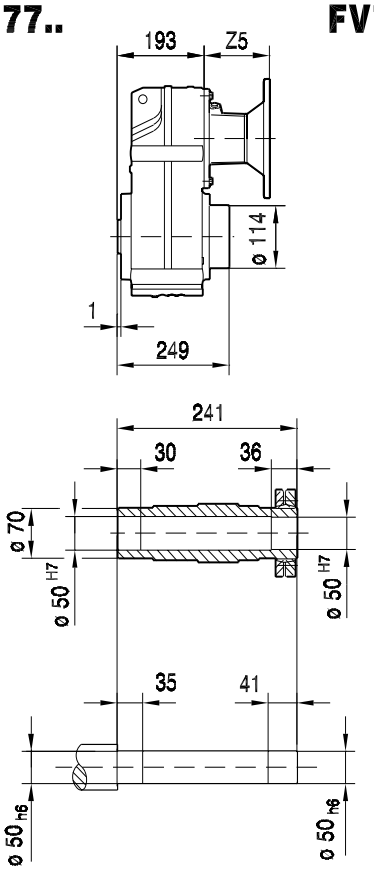

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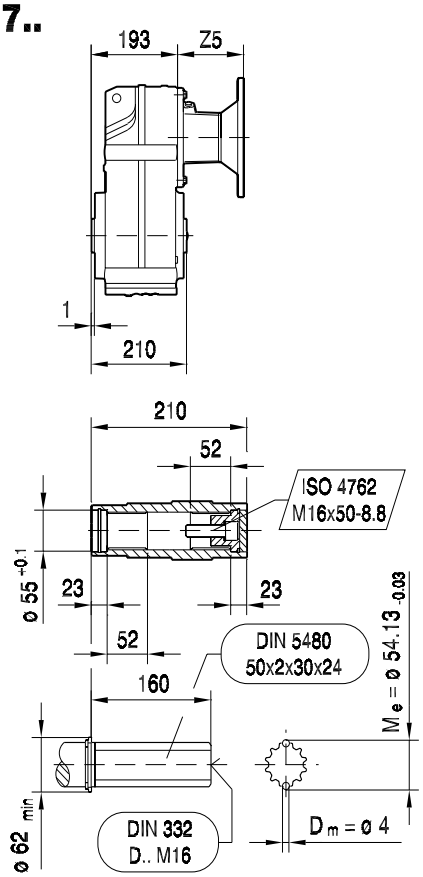
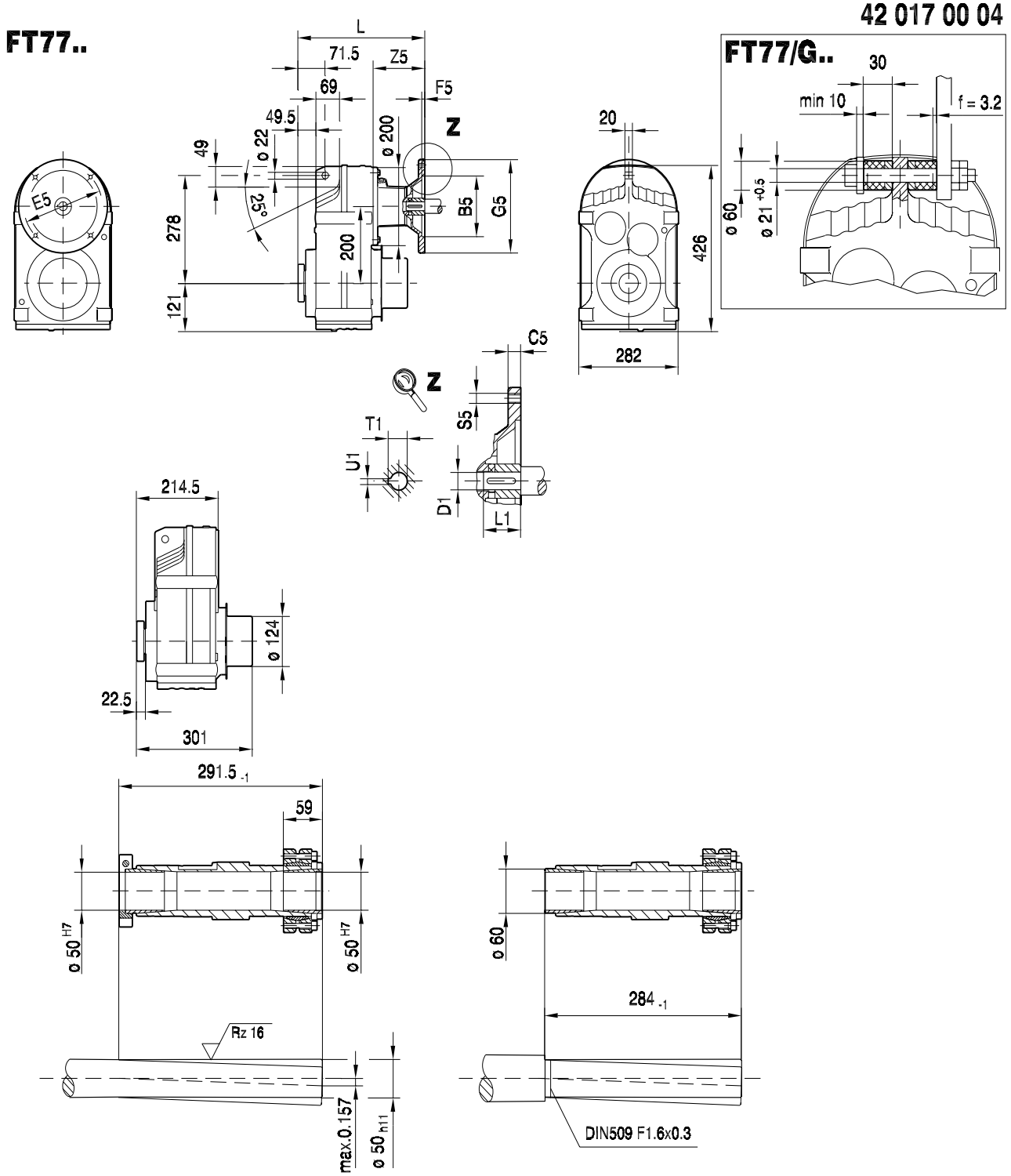


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	253	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	253	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	285	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	285	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	319	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	319	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	372	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	372	M12	179	38	80	41.3	10	

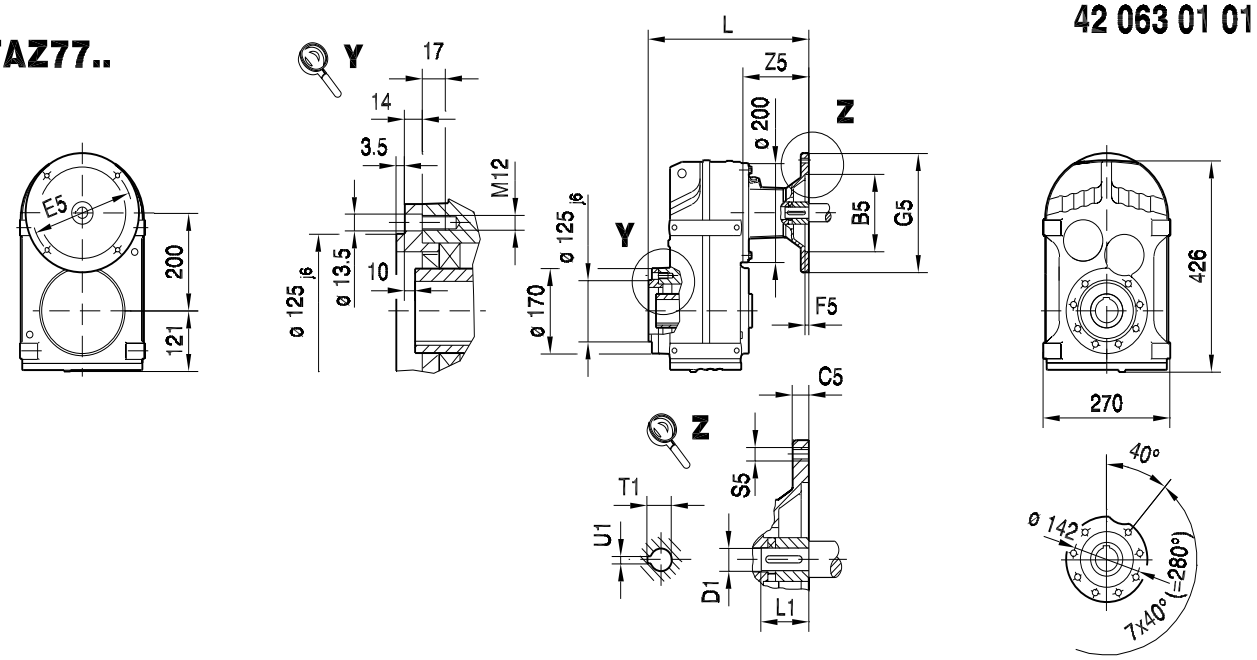
42 017 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	275	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	275	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	307	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	307	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	341	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	341	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	394	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	394	M12	179	38	80	41.3	10	

42 063 01 01

FAZ77..



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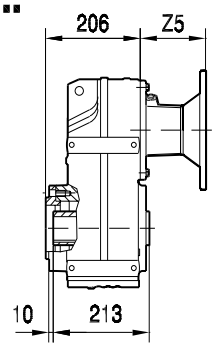

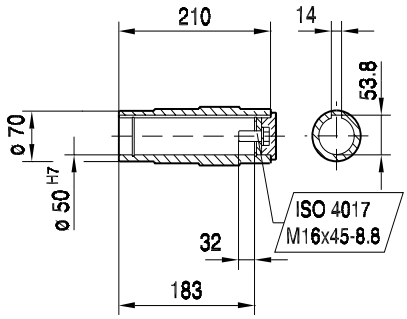

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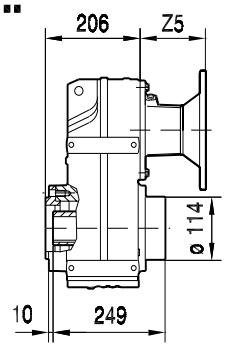

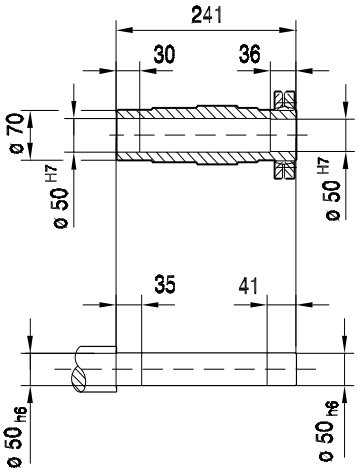

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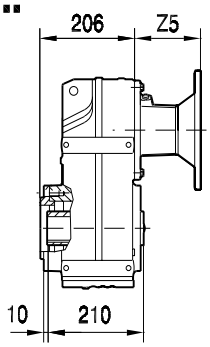
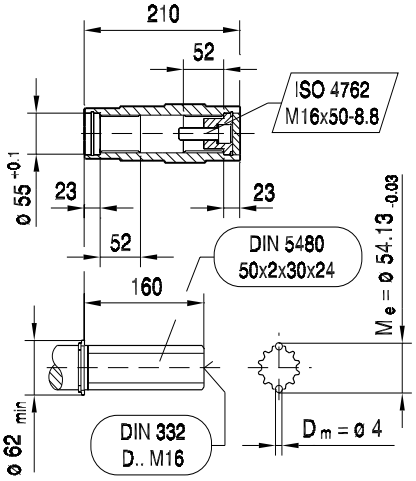
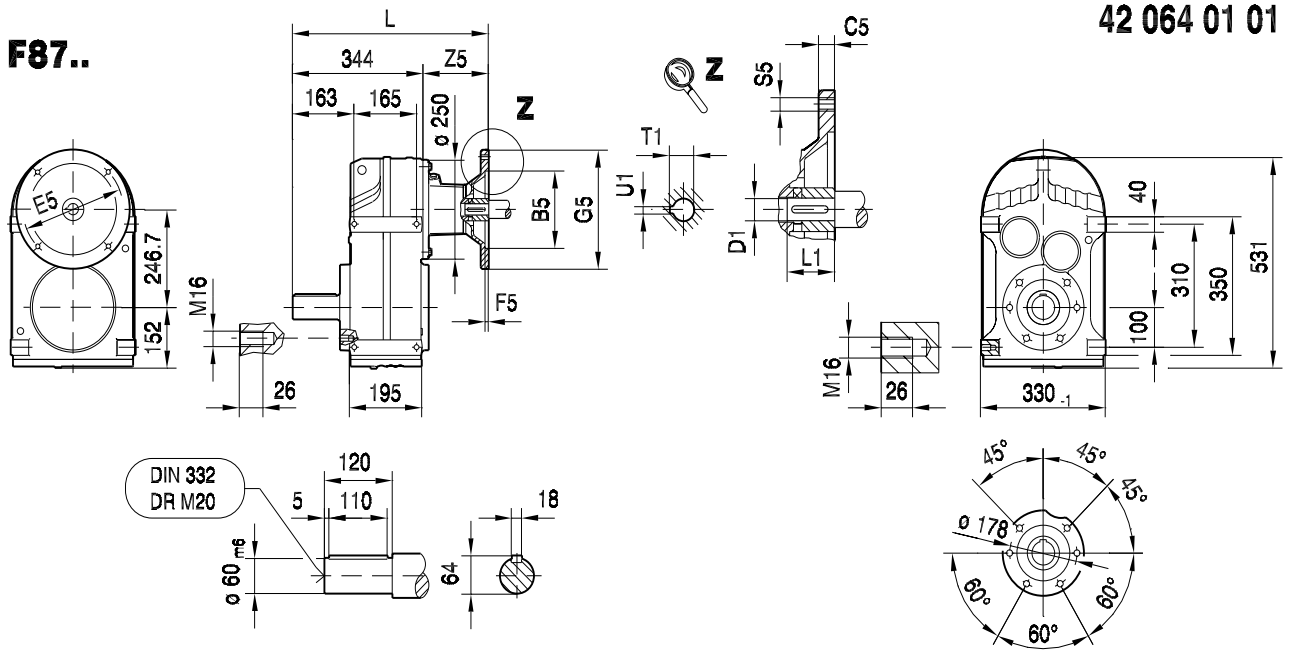




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	266	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	266	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	298	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	298	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	332	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	332	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	385	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	385	M12	179	38	80	41.3	10	

42 064 01 01

F87..



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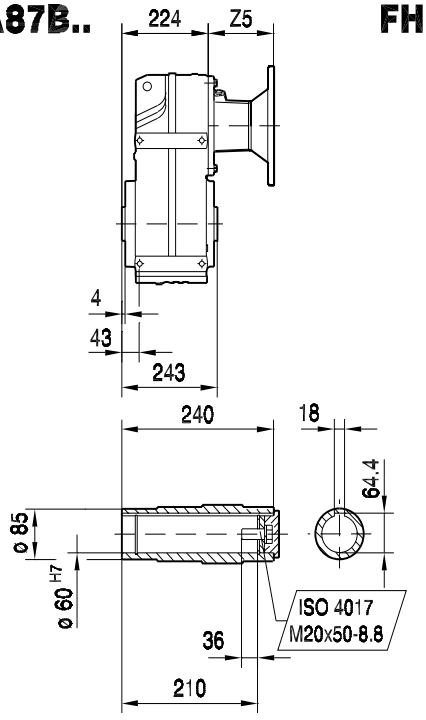

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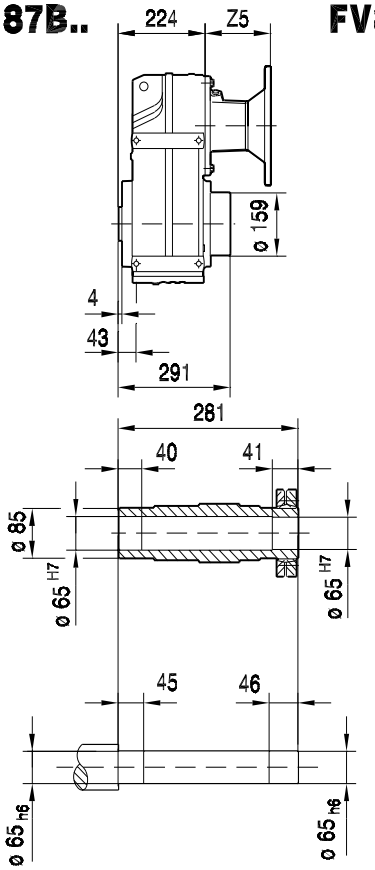

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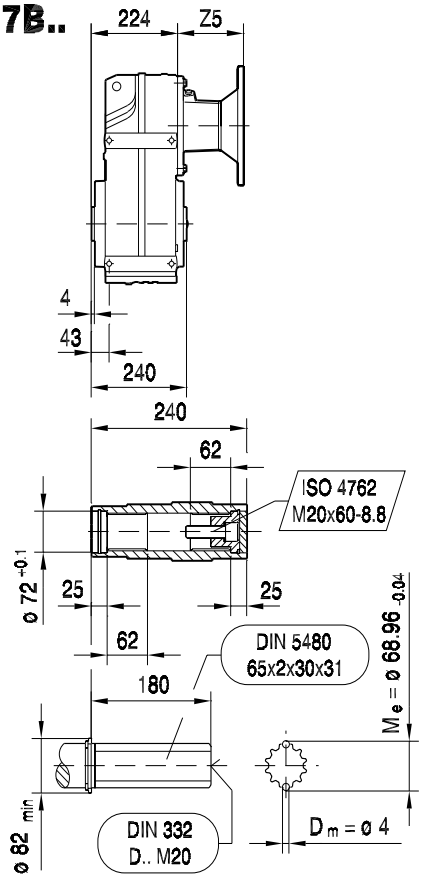
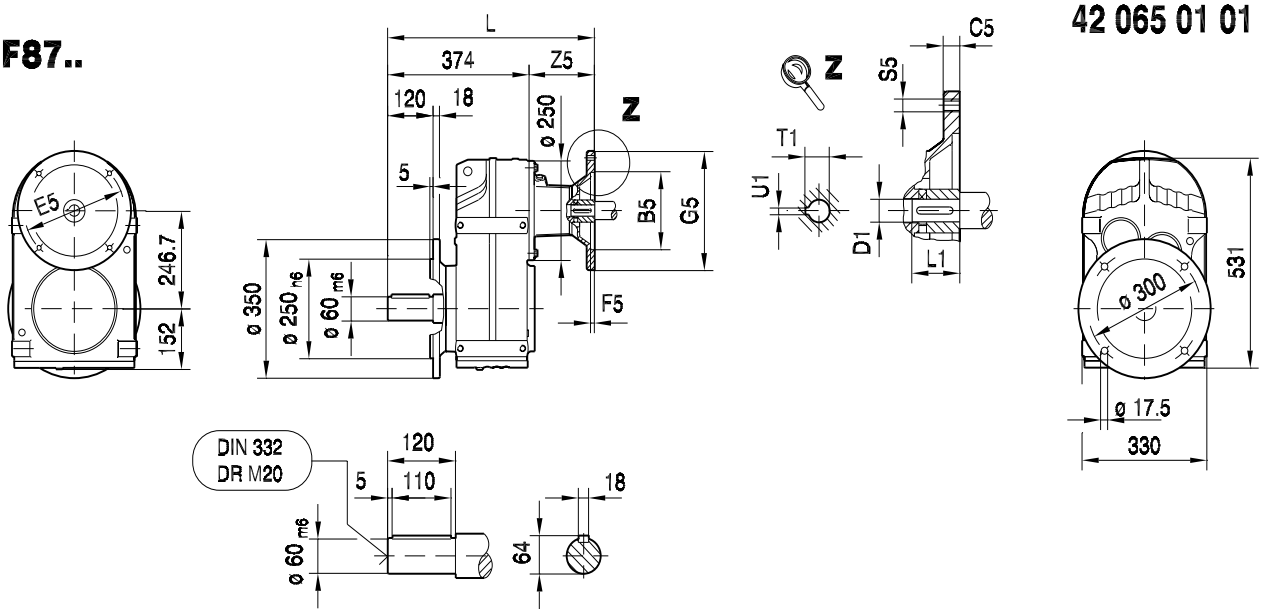


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	431	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	431	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	465	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	465	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	518	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	518	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	576	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	576	M16	232	48	110	51.8	14	

42 065 01 01

FF87..



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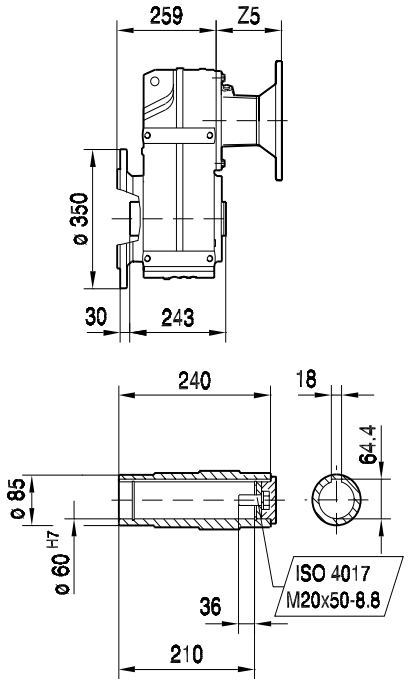

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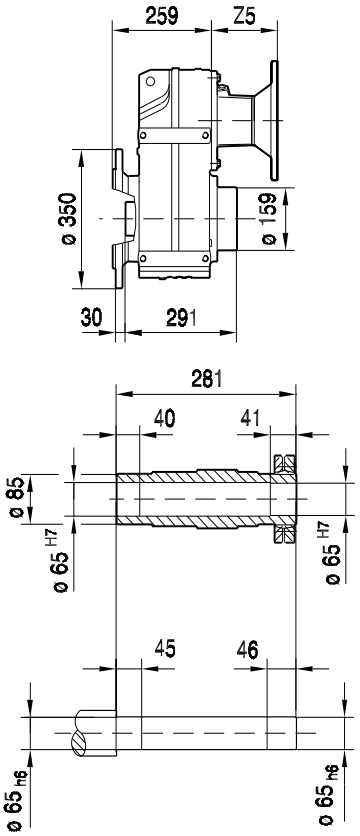
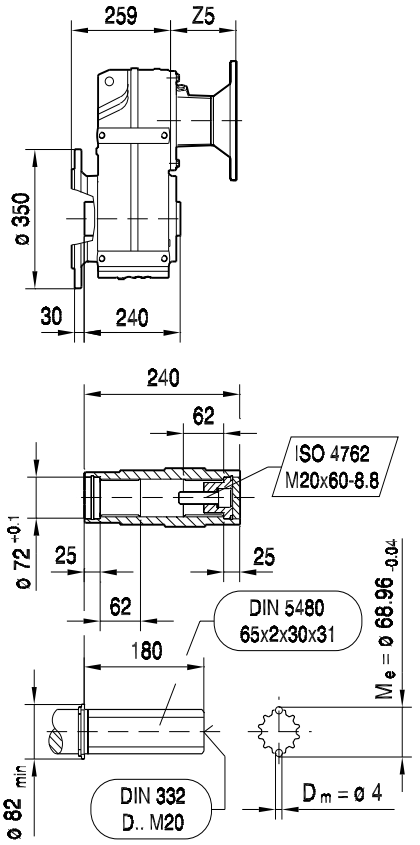


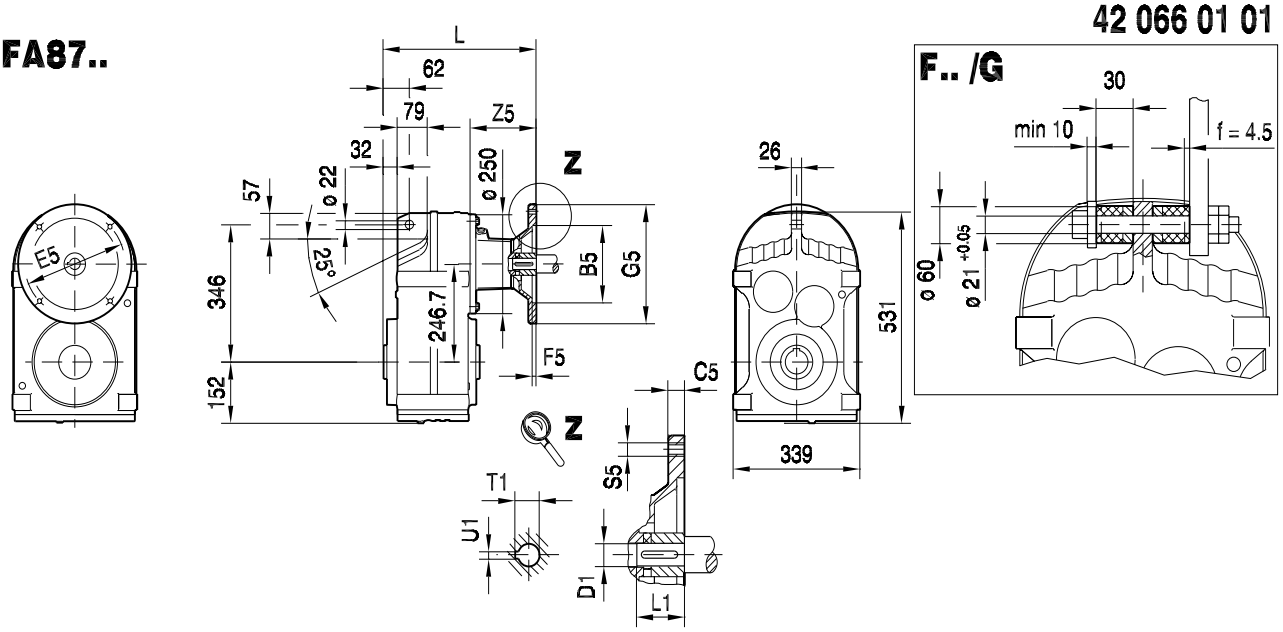
FVF87..



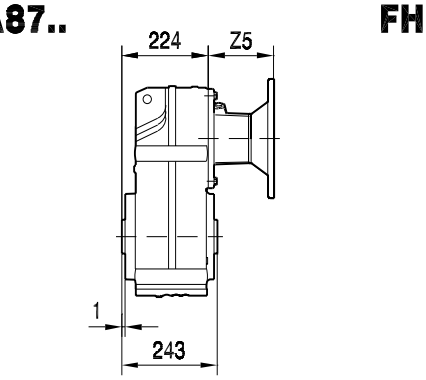
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	461	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	461	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	495	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	495	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	548	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	548	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	606	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	606	M16	232	48	110	51.8	14	

42 066 01 01

FA87..



FA87..



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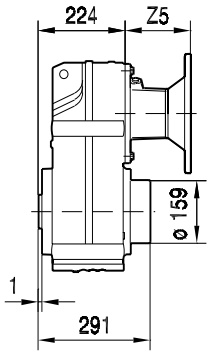

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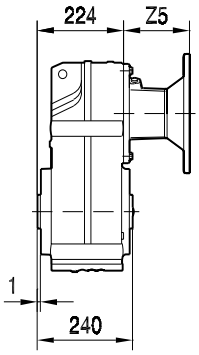
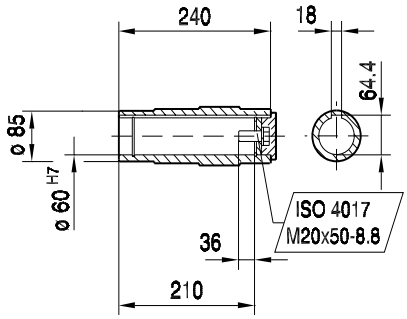
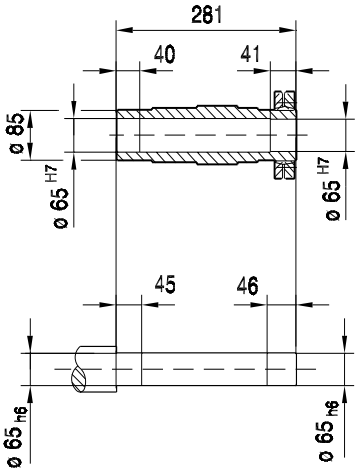
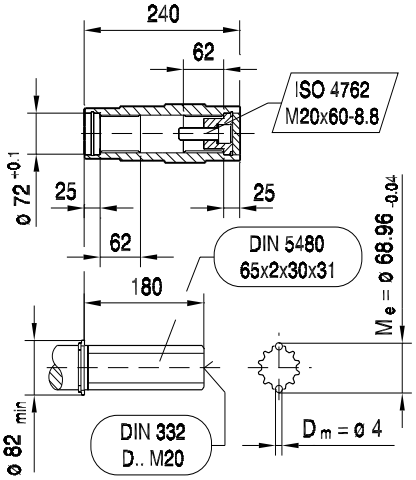




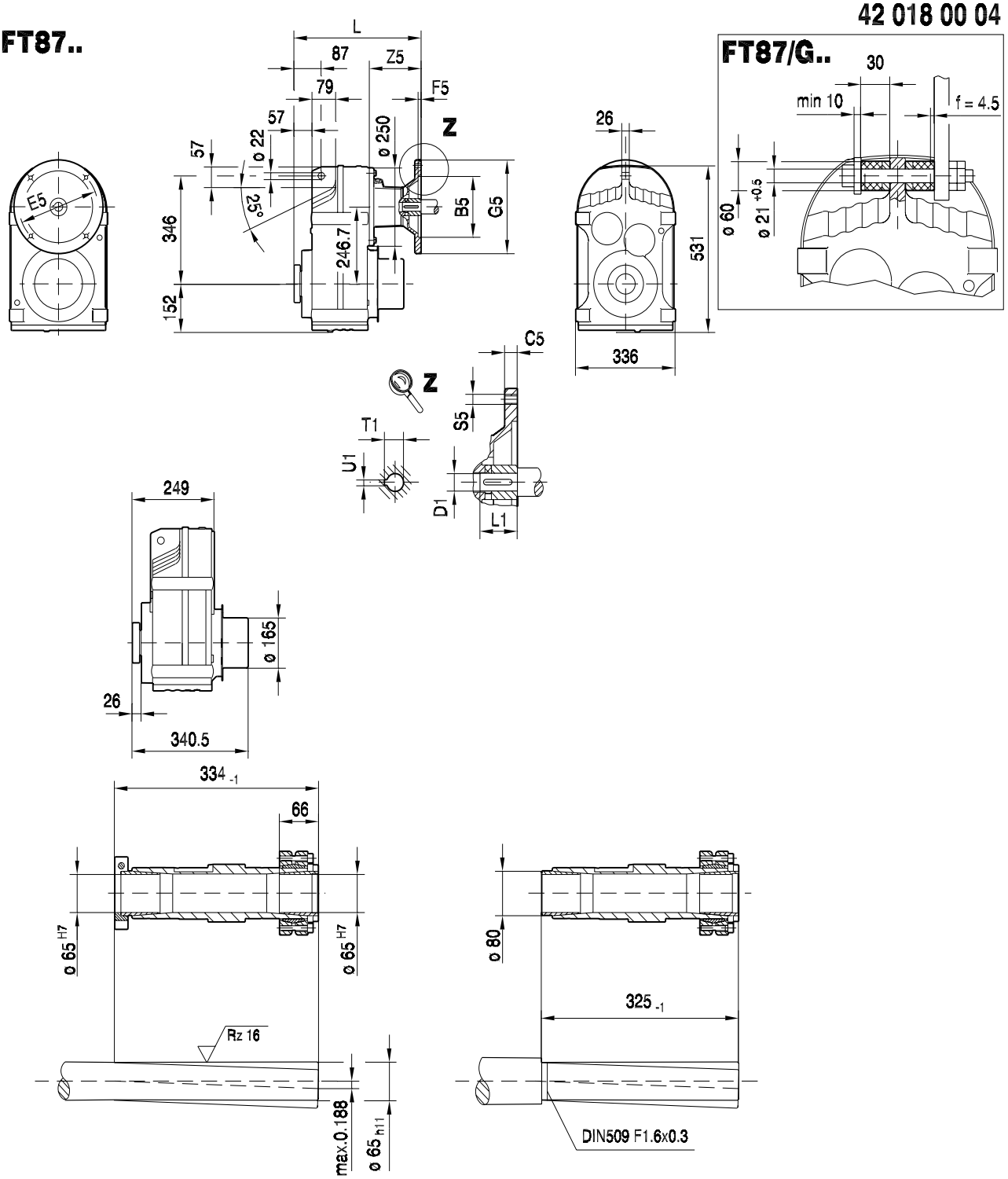




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	311	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	311	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	345	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	345	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	398	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	398	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	456	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	456	M16	232	48	110	51.8	14	

42 018 00 04

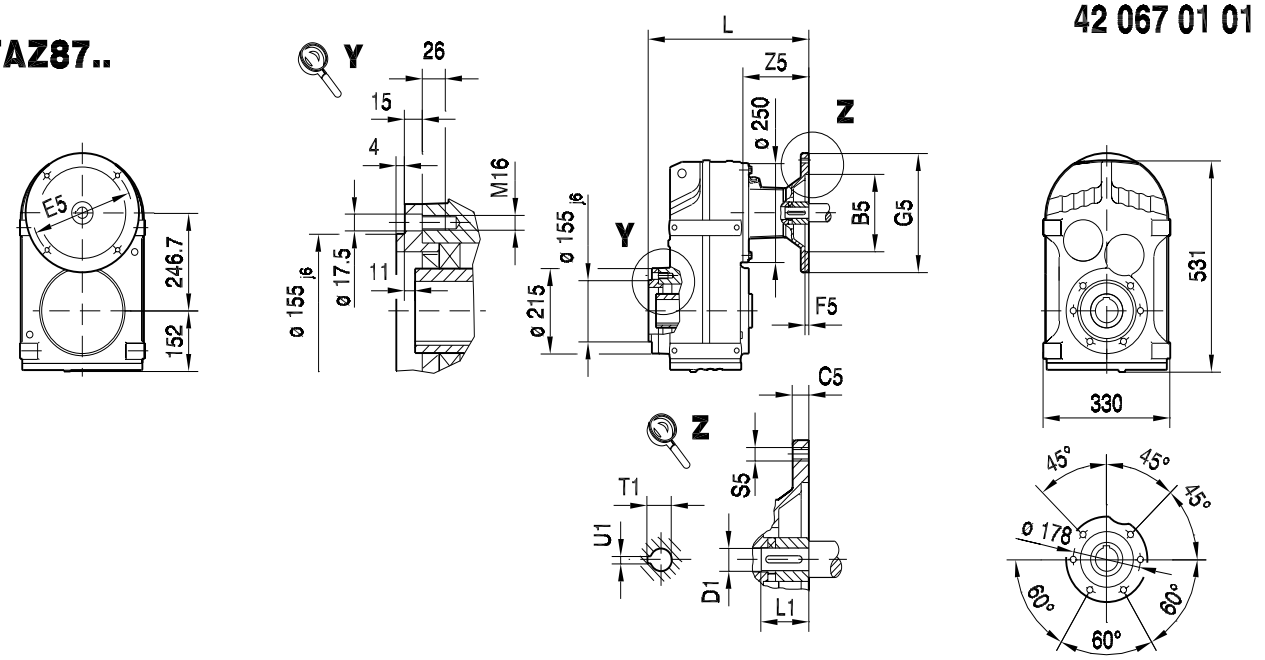
FT87..



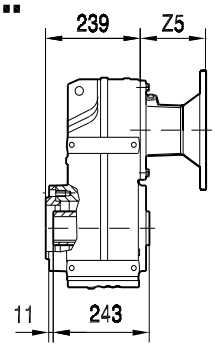
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	336	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	336	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	370	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	370	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	423	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	423	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	481	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	481	M16	232	48	110	51.8	14	

42 067 01 01

FAZ87..



FAZ87..



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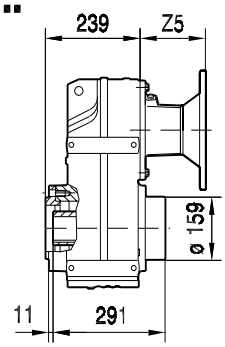
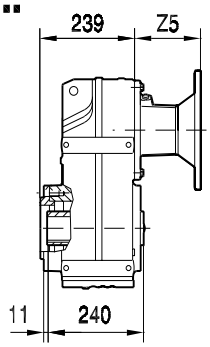
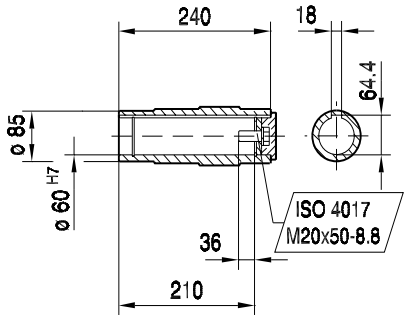
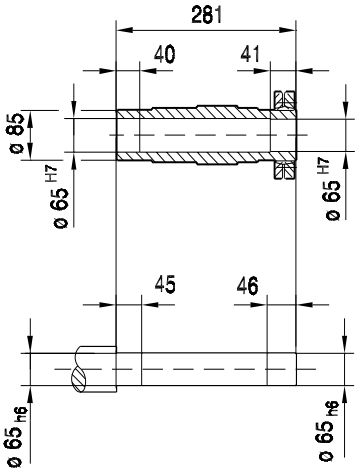
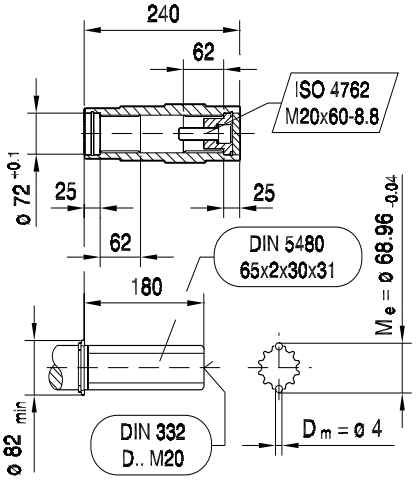


FVZ87..







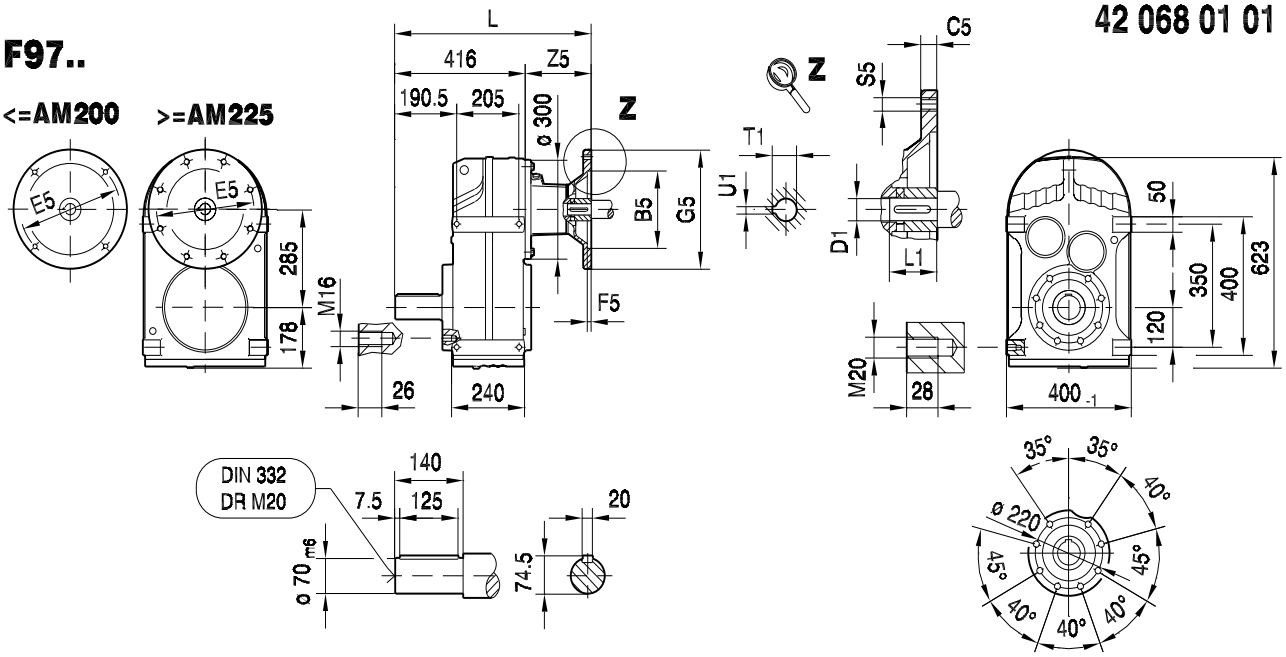


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	326	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	326	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	360	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	360	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	413	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	413	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	471	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	471	M16	232	48	110	51.8	14	

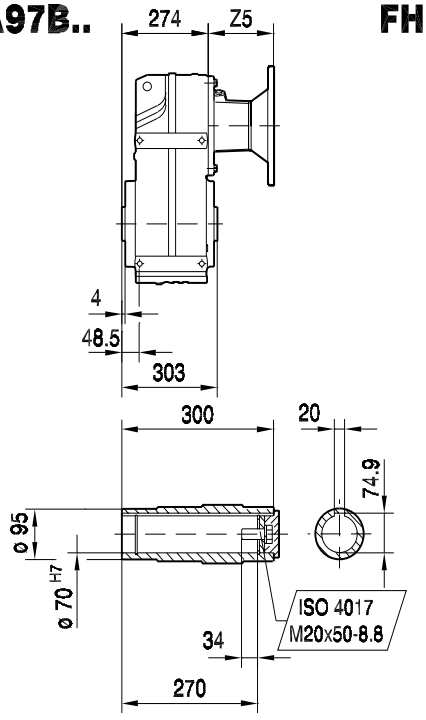
42 068 01 01

F97..

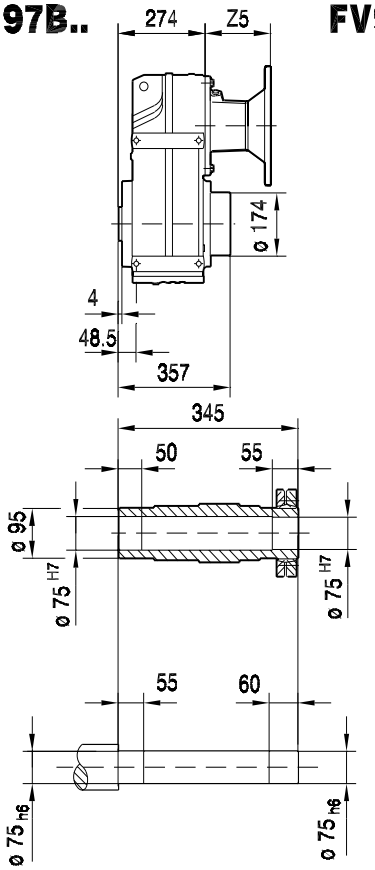
<=AM200 >=AM225



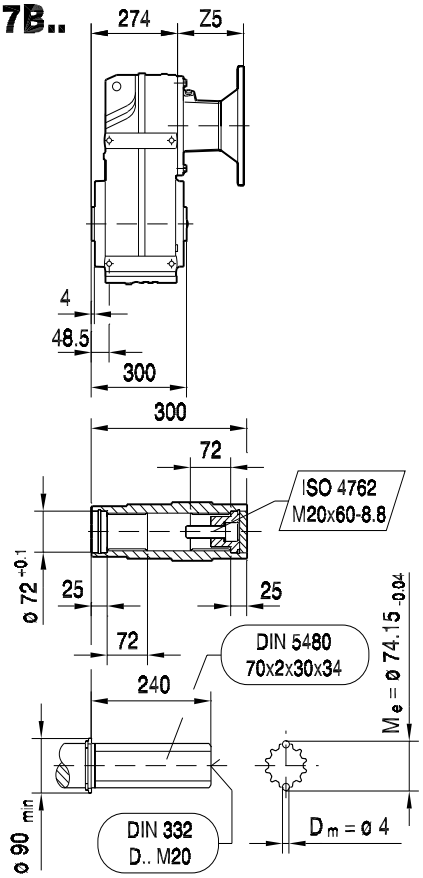
FA97B..



FH97B..

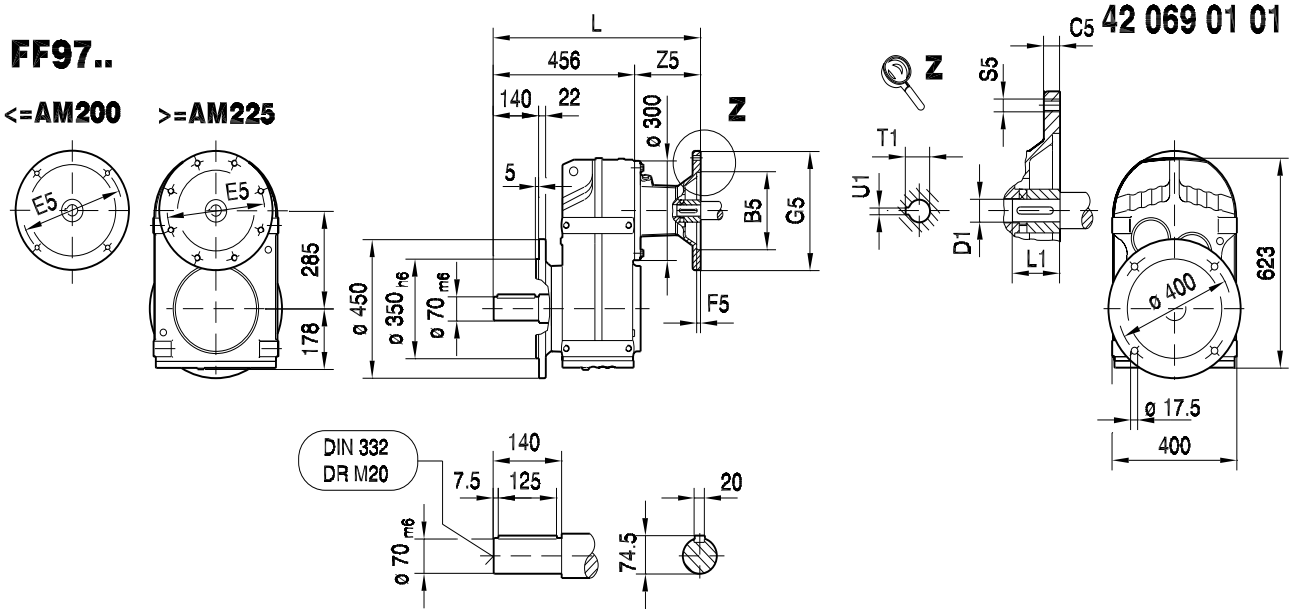


FV97B..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	532	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	532	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	585	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	585	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	643	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	643	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	684	M16	268	55	110	59.3	16	

FF97..



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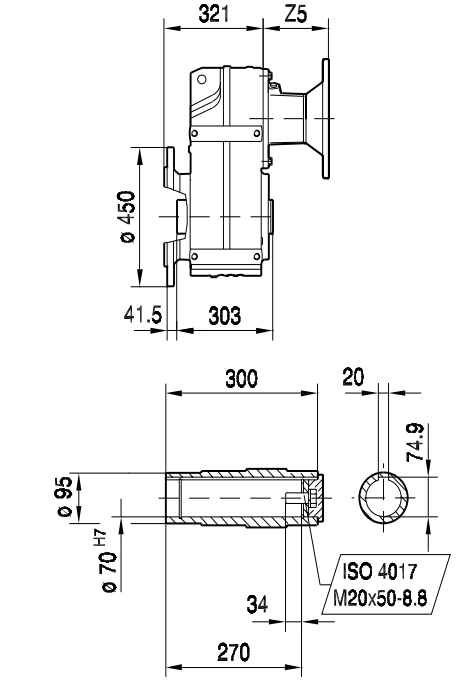

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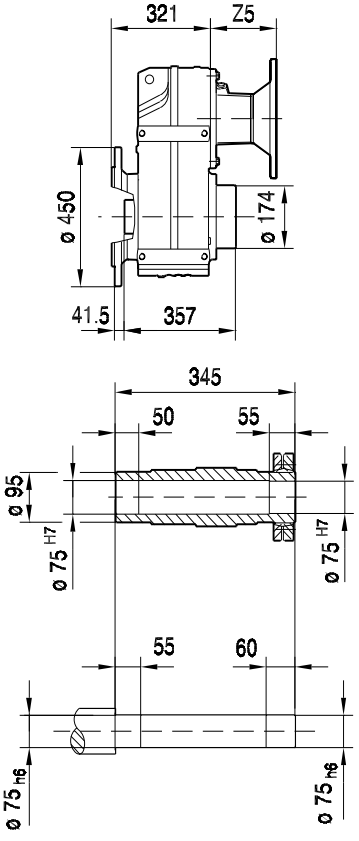
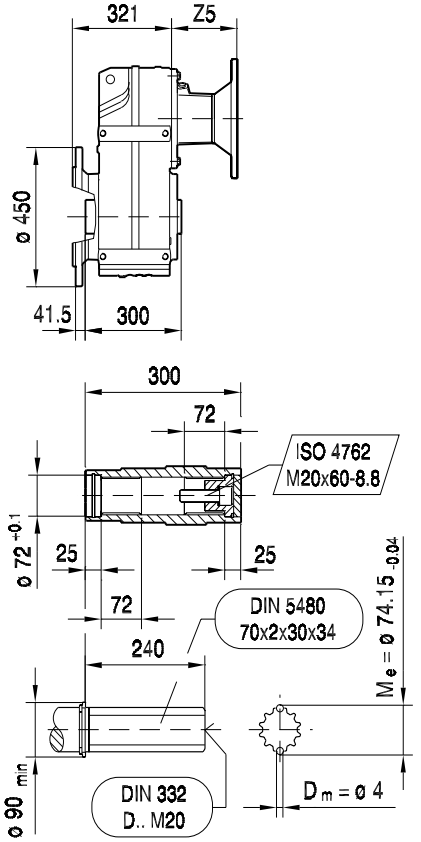


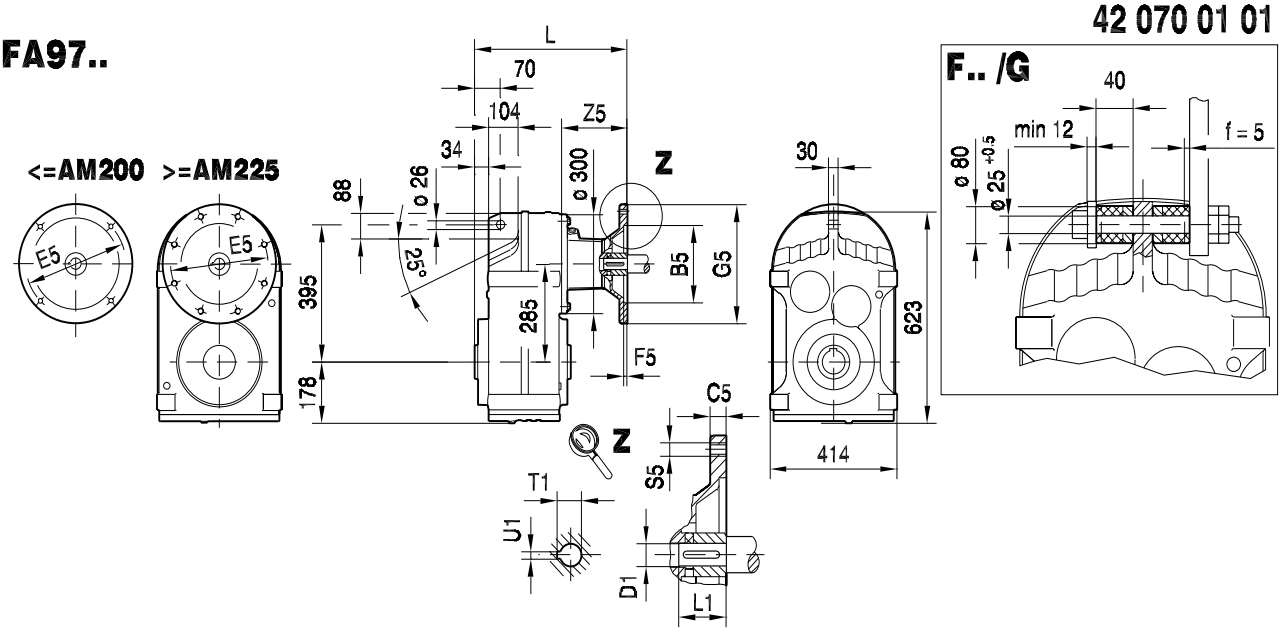
FVF97..



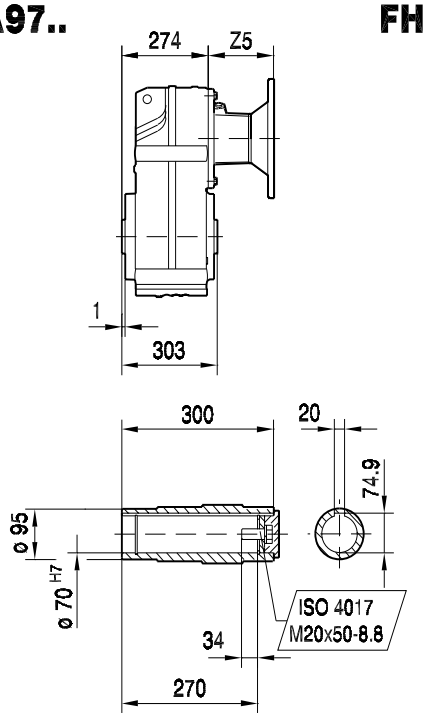
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	572	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	572	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	625	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	625	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	683	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	683	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	724	M16	268	55	110	59.3	16	

42 070 01 01

FA97..



FA97..



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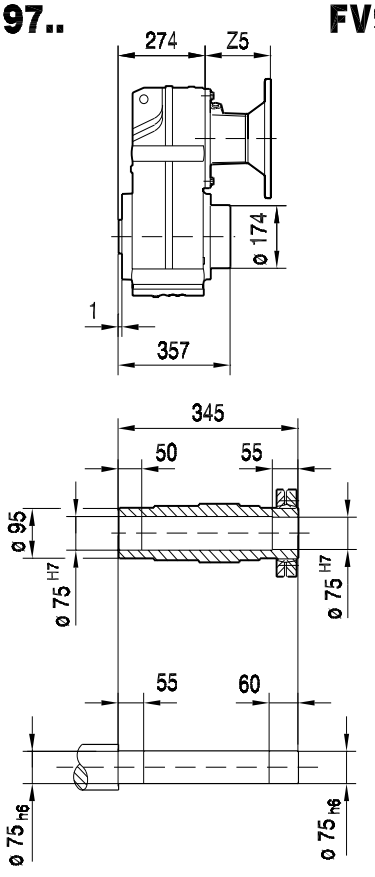
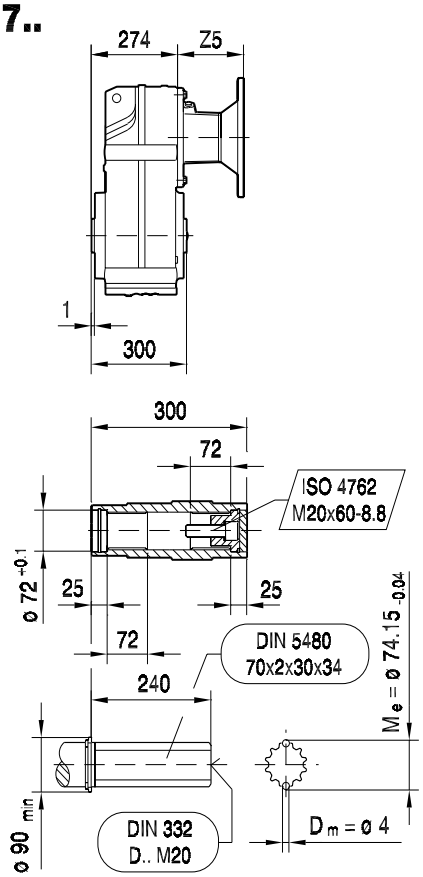
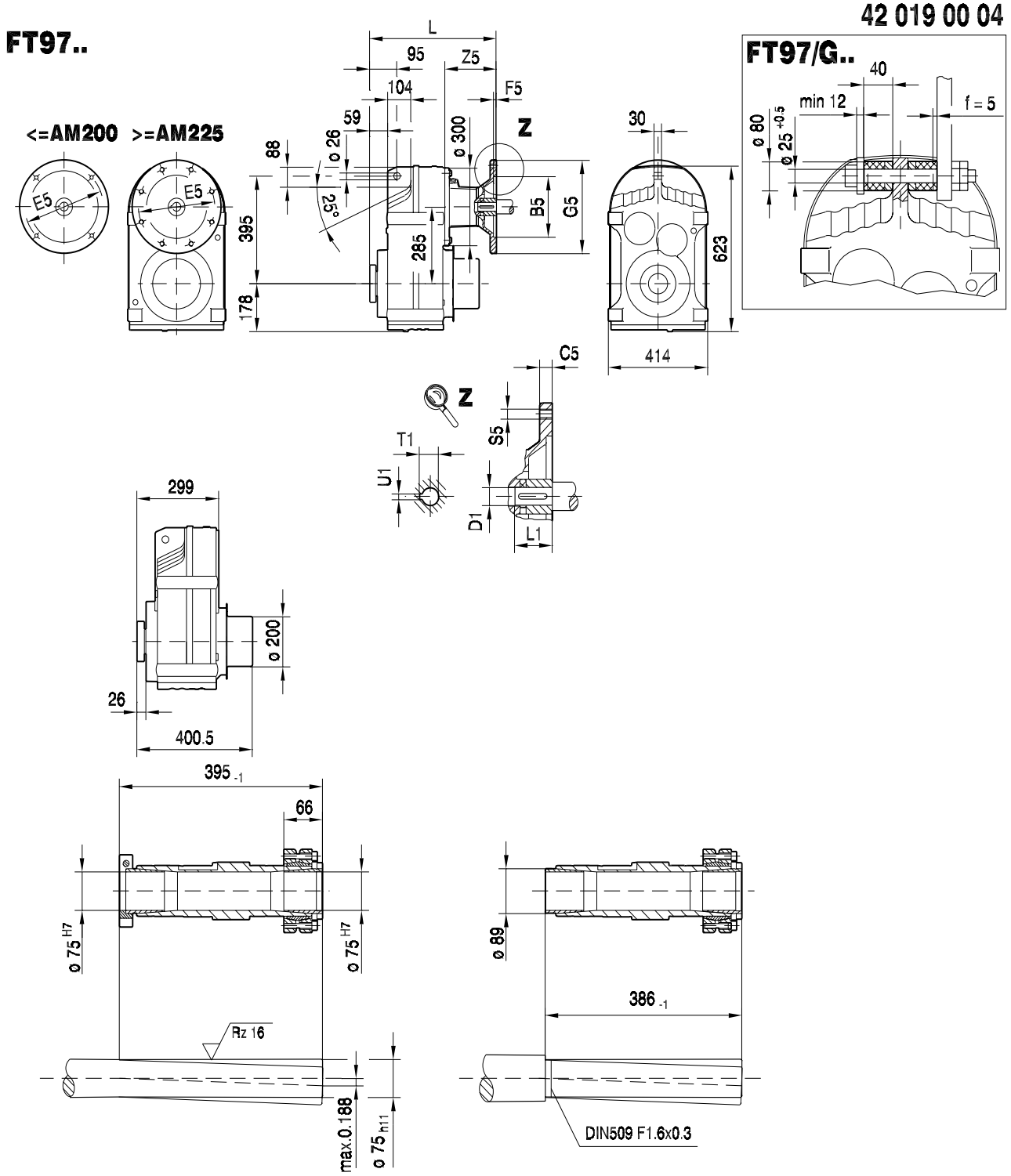


FV97..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	390	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	390	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	443	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	443	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	501	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	501	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	542	M16	268	55	110	59.3	16	

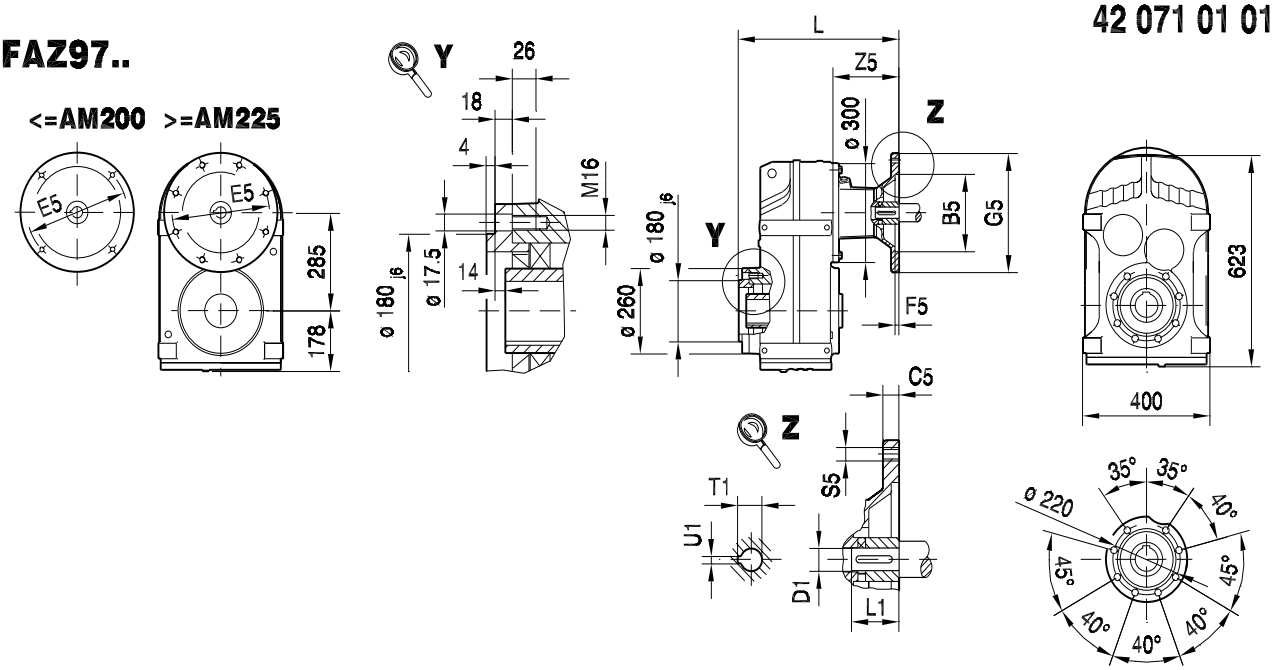
42 019 00 04



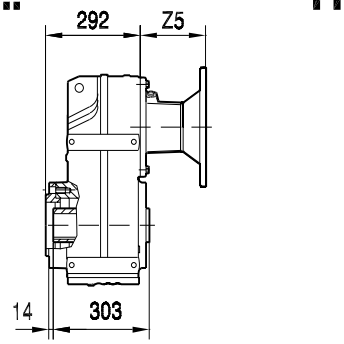
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	415	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	415	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	468	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	468	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	526	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	526	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	567	M16	268	55	110	59.3	16	

42 071 01 01

FAZ97..



FAZ97..



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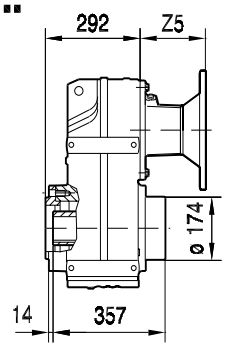
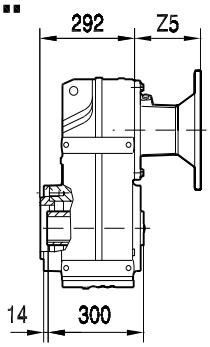
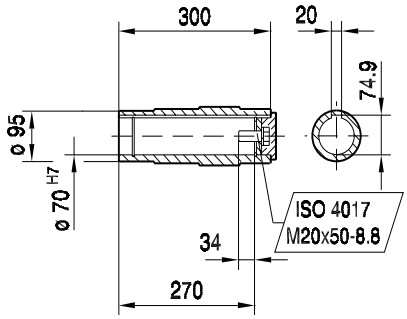
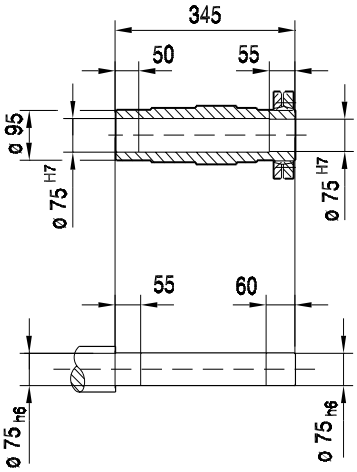
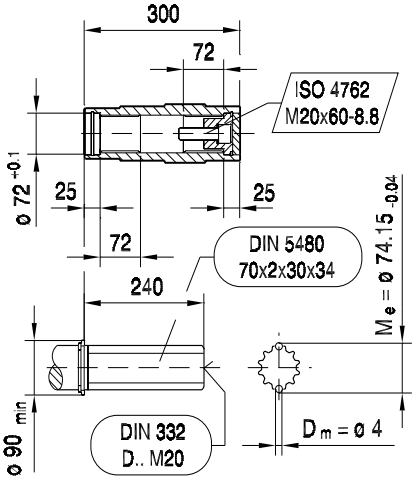


FVZ97..







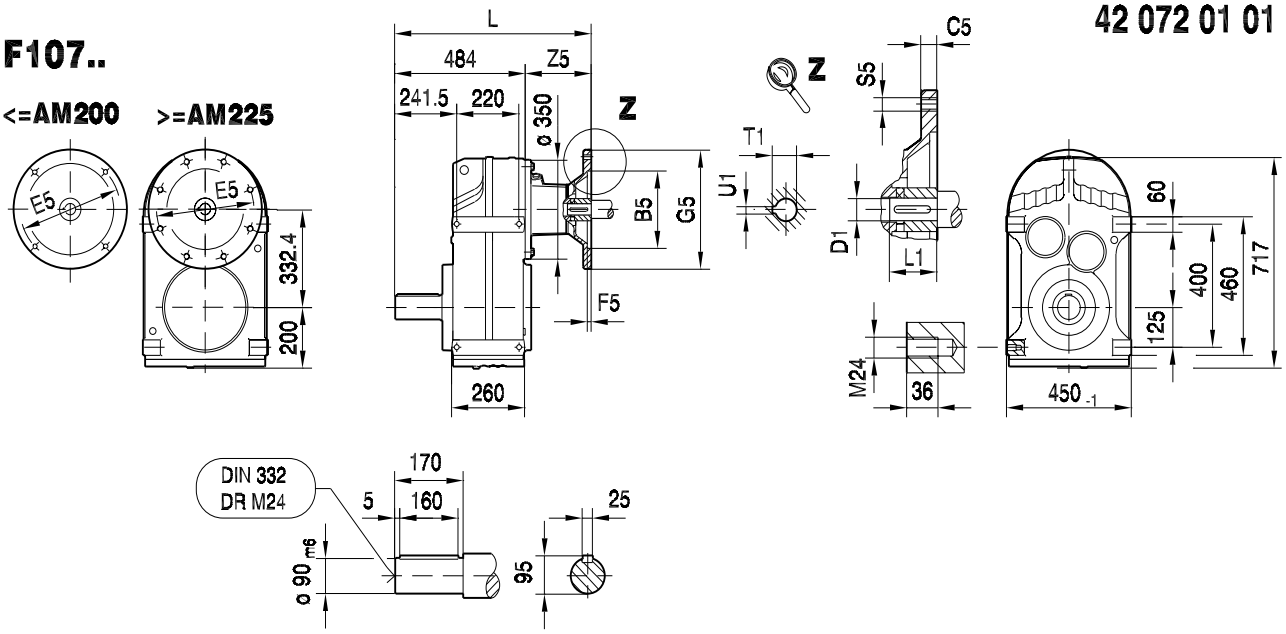


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	408	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	408	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	461	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	461	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	519	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	519	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	560	M16	268	55	110	59.3	16	

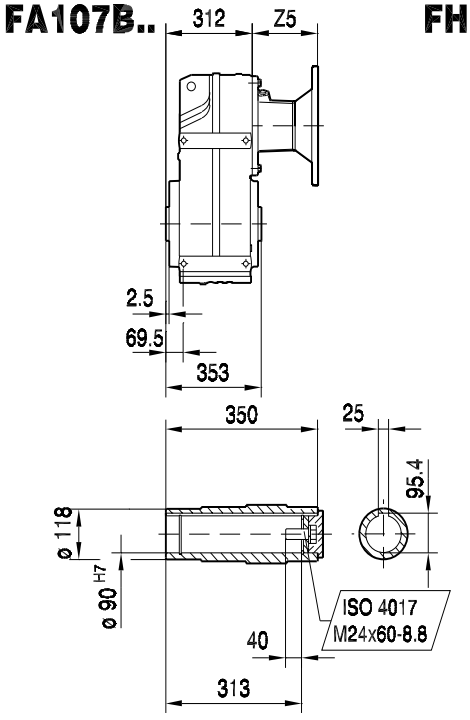
42 072 01 01

F107..

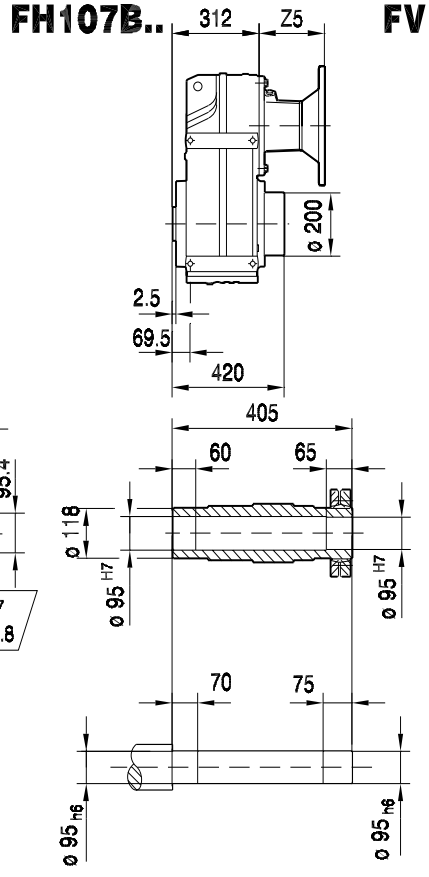
<=AM200 >=AM225



FA107B..



FH107B..



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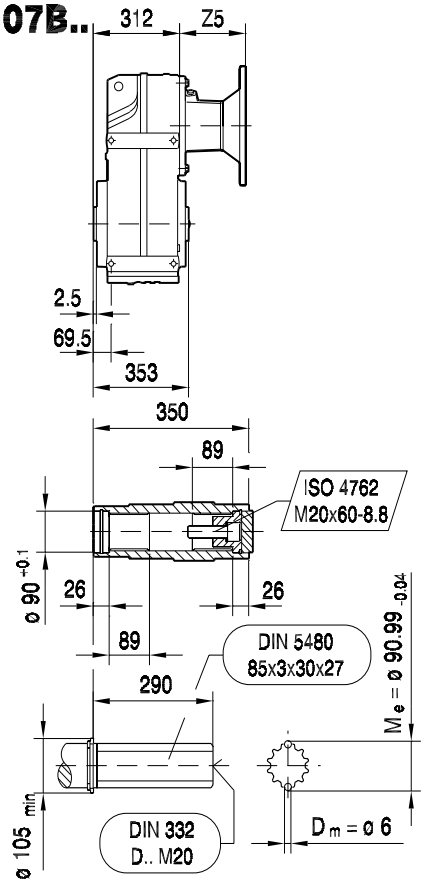
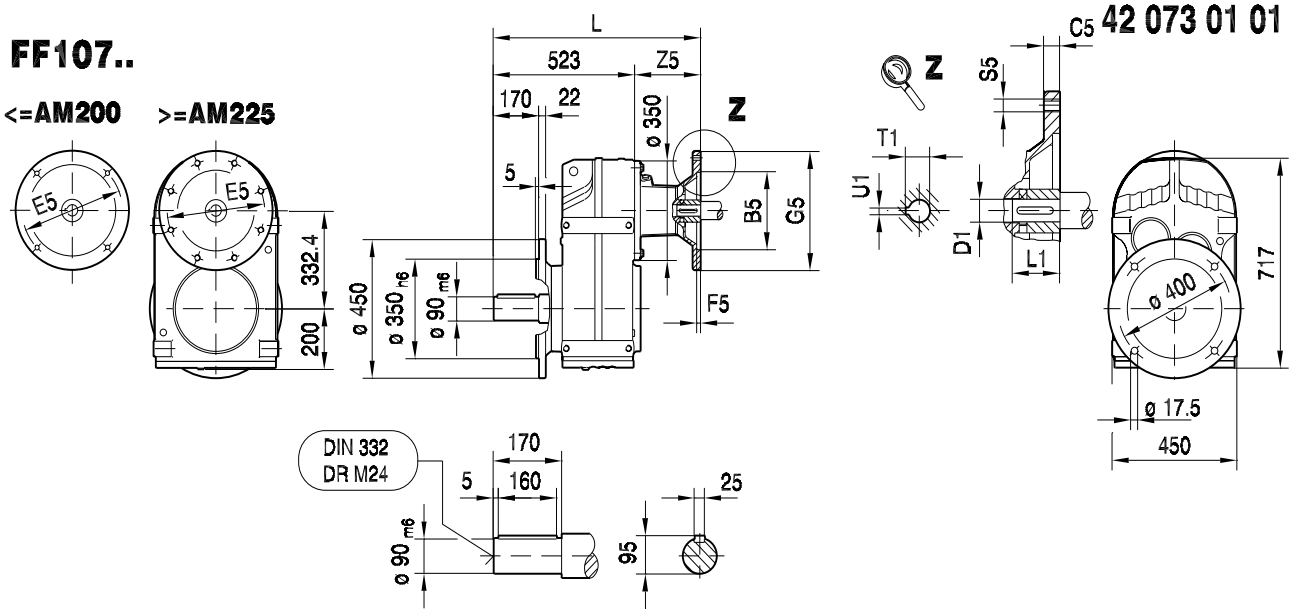


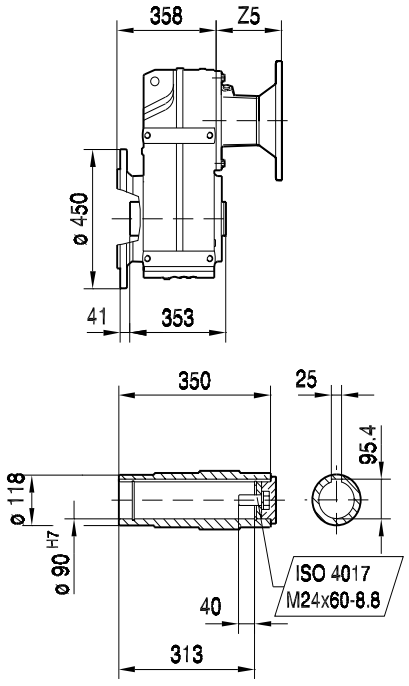
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	594	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	594	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	647	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	647	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	705	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	705	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	746	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	761	M16	277	60	140	64.4	18	

FF107..

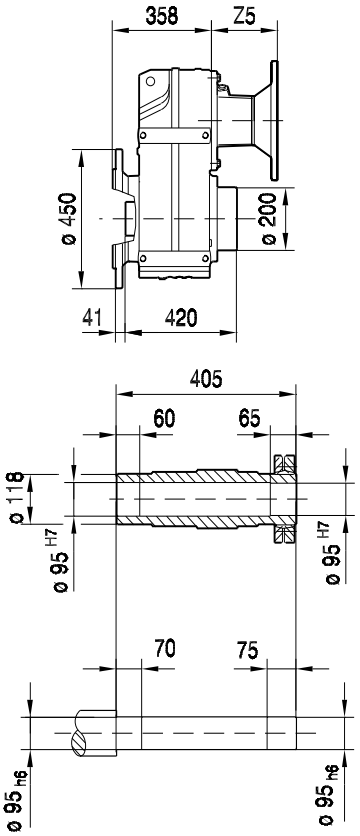
<=AM200 >=AM225



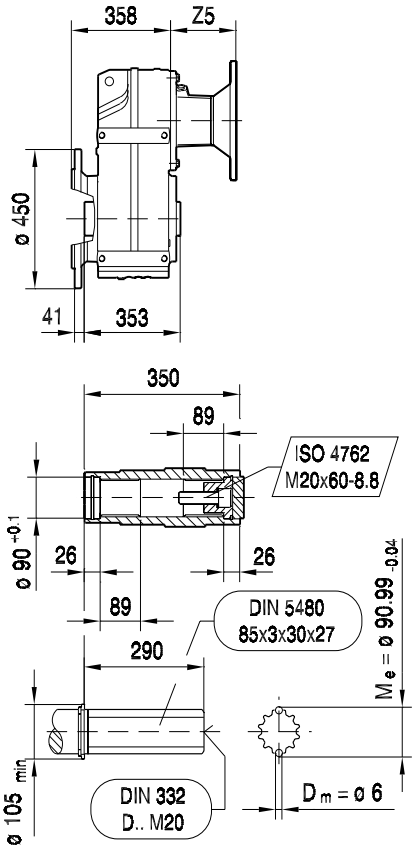
FAF107..



FHF107..



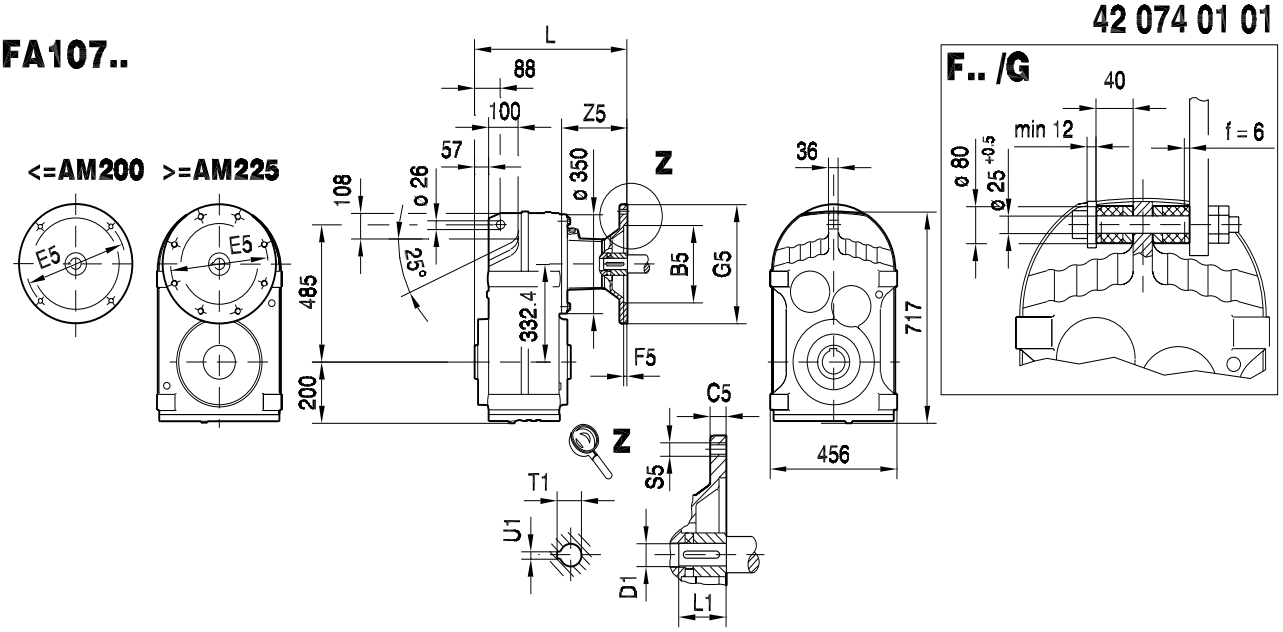
FVF107..



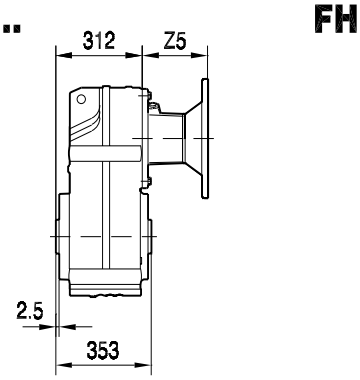
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	633	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	633	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	686	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	686	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	744	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	744	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	785	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	800	M16	277	60	140	64.4	18	

42 074 01 01

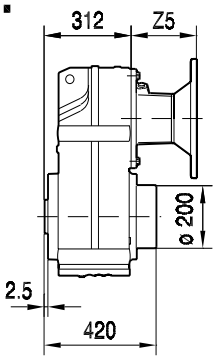
FA107..



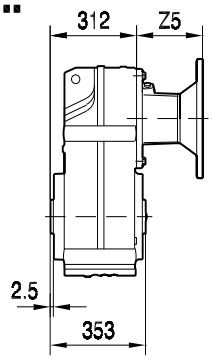
FA107..

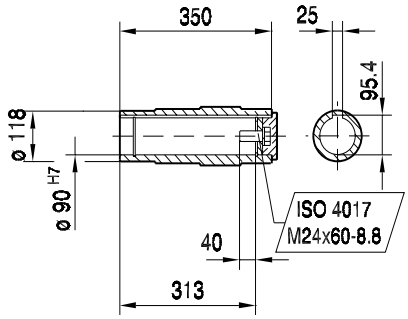


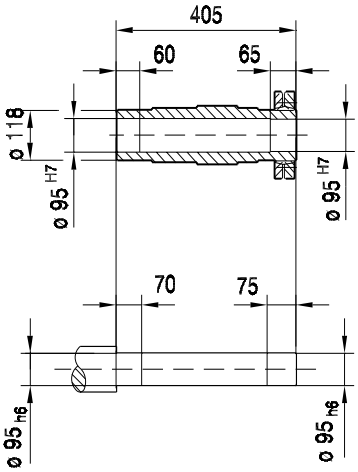
FH107..

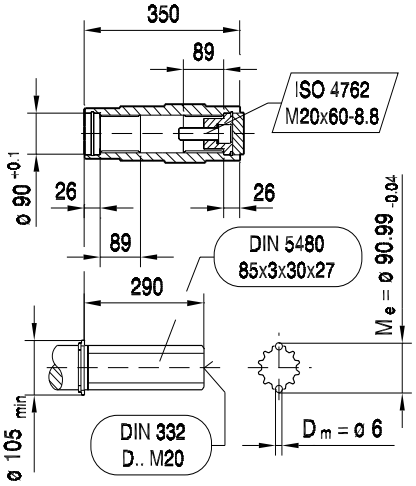


FV107..





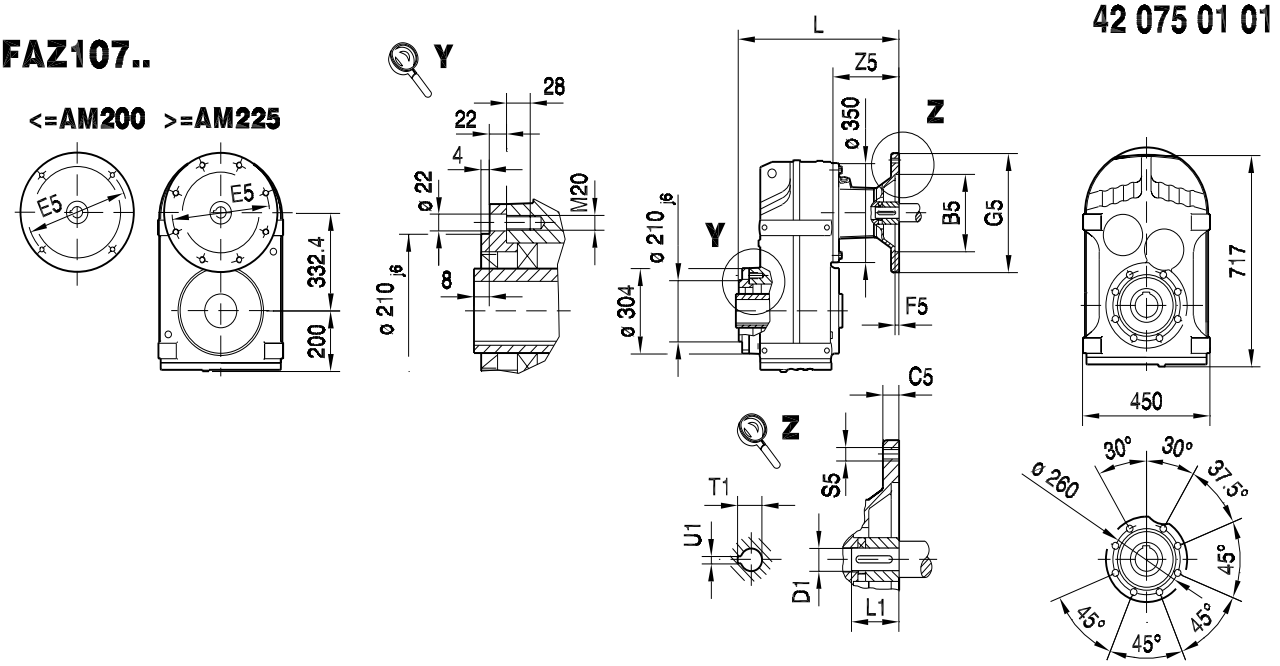




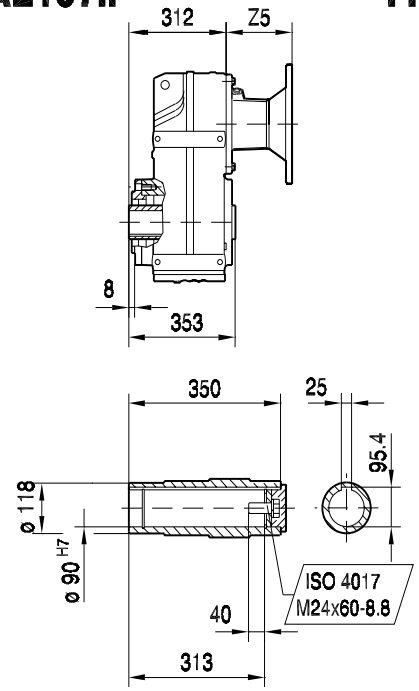
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	422	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	422	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	475	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	475	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	533	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	533	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	574	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	589	M16	277	60	140	64.4	18	

42 075 01 01

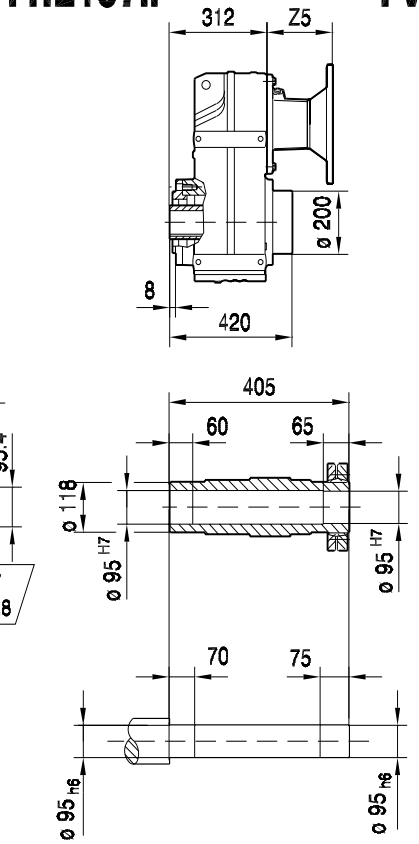
FAZ107..



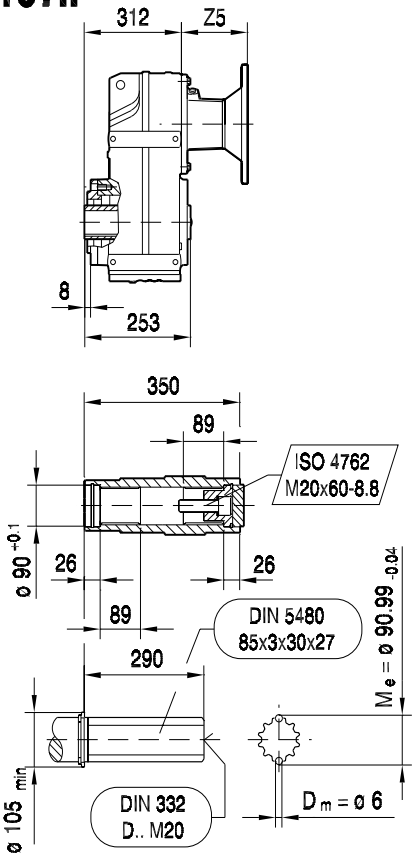
FAZ107..



FHZ107..



FVZ107..

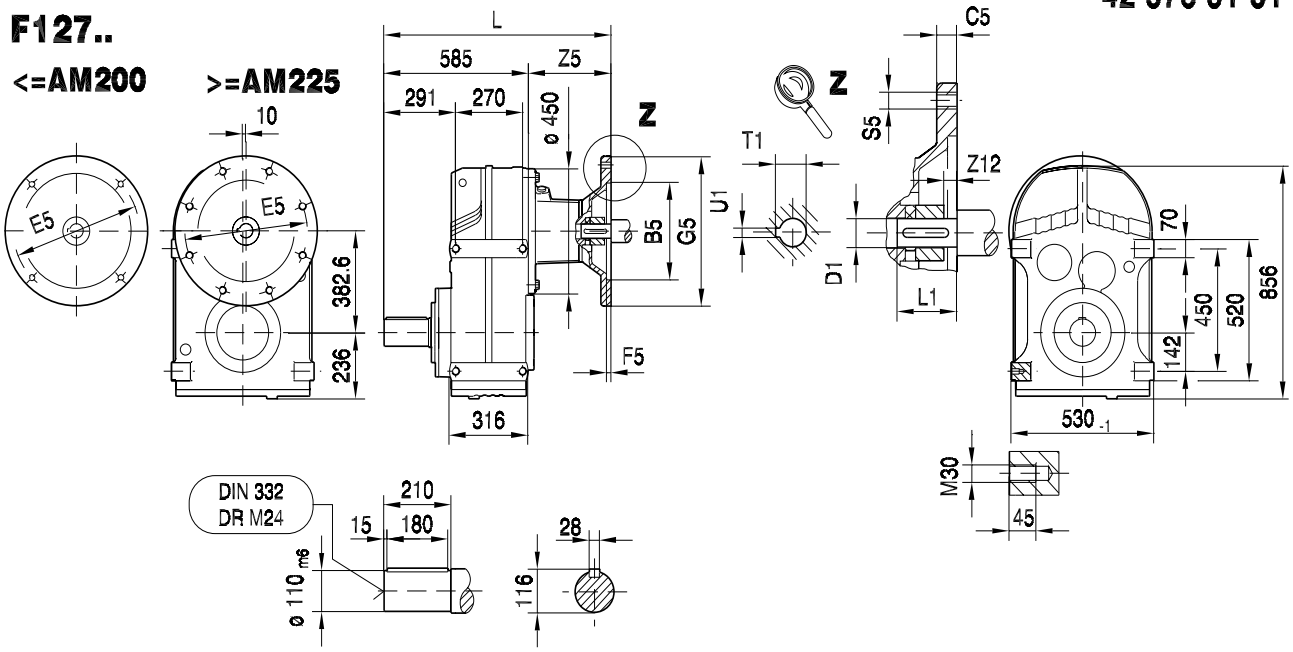


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	422	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	422	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	475	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	475	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	533	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	533	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	574	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	589	M16	277	60	140	64.4	18	

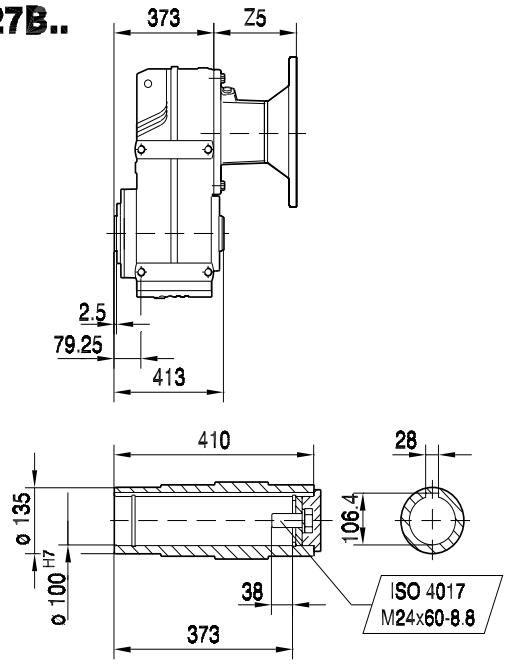
42 076 01 01

F127..

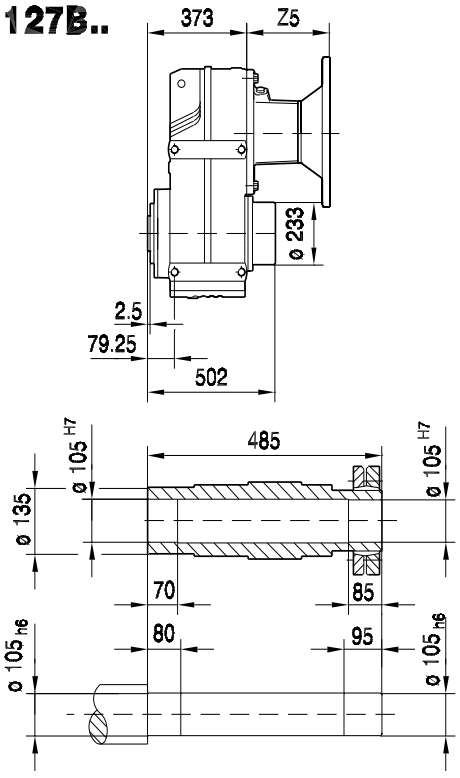
<=AM200 **>=AM225**



FA127B..



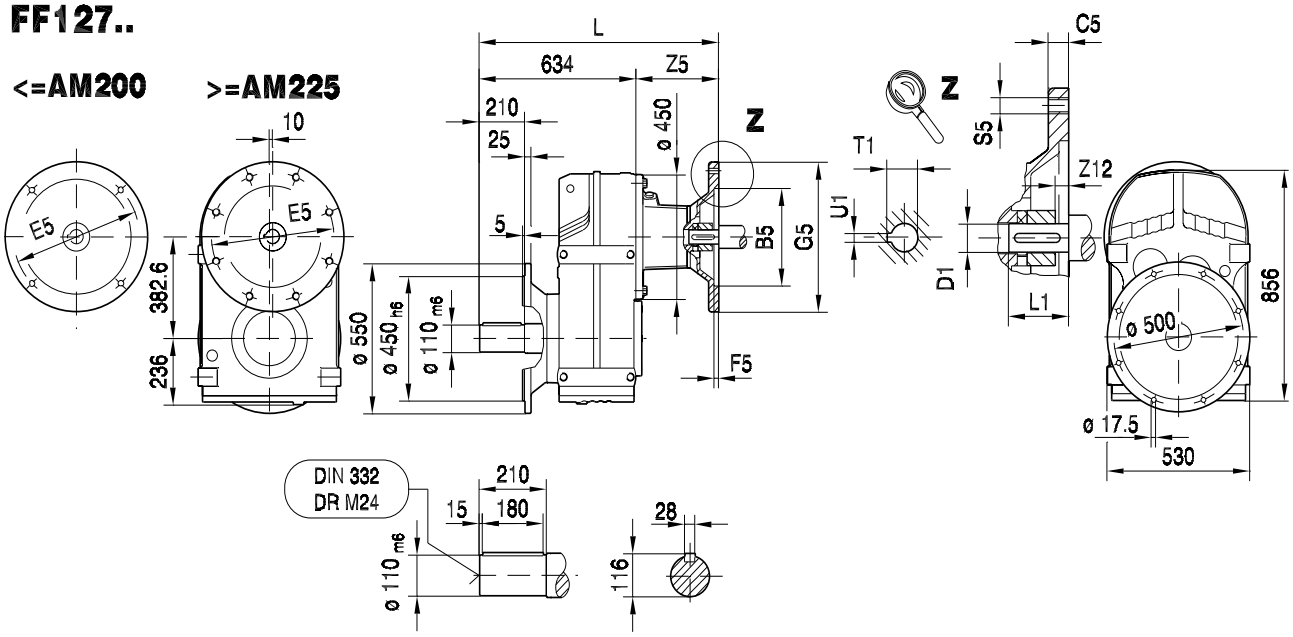
FH127B..



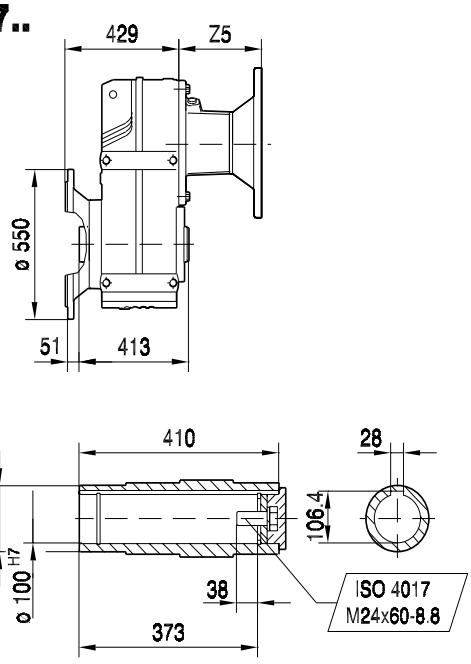
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	733	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	733	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	791	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	791	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	832	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	847	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	921	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	921	M16	336	19	75	140	79.9	20

42 077 01 01

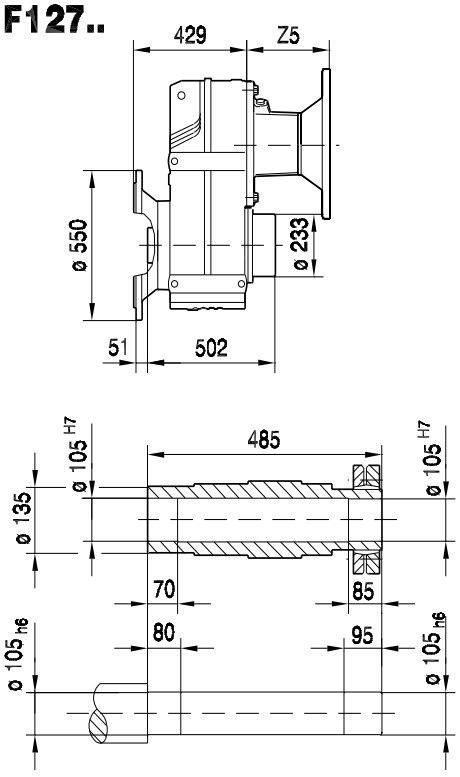
FF127..



FAF127..



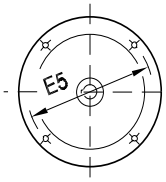
FHF127..



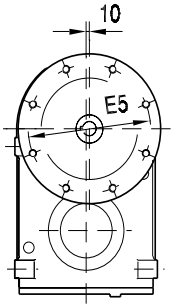
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	782	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	782	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	840	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	840	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	881	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	896	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	970	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	970	M16	336	19	75	140	79.9	20

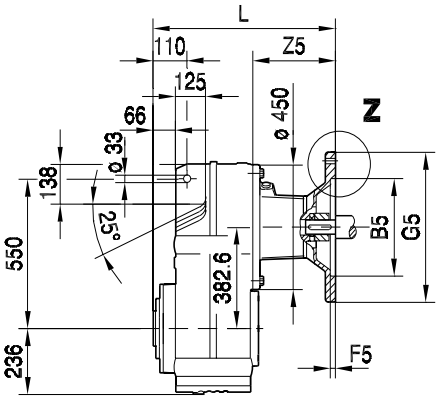
42 078 01 01

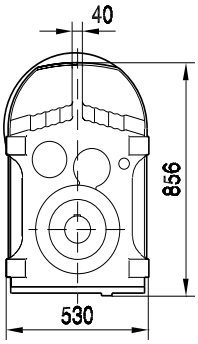
FA127..
<=AM200

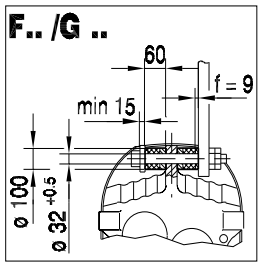


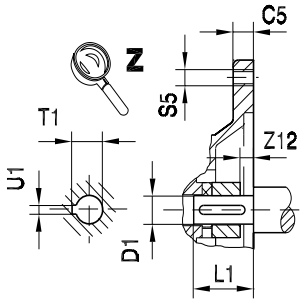
>=AM225



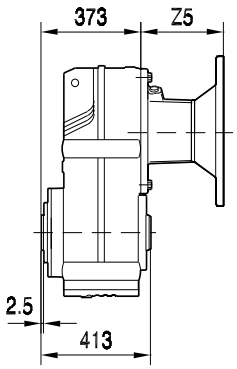




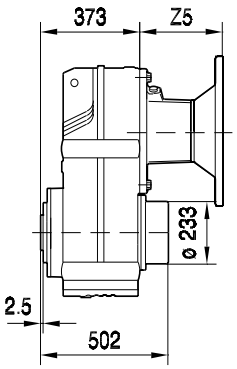


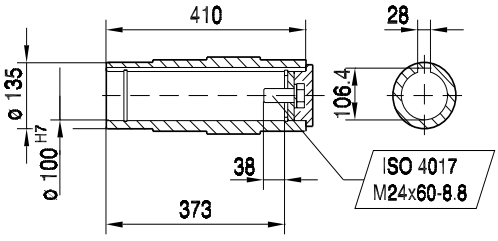


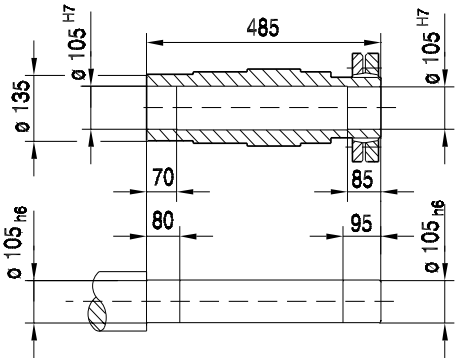
FA127..



FH127..



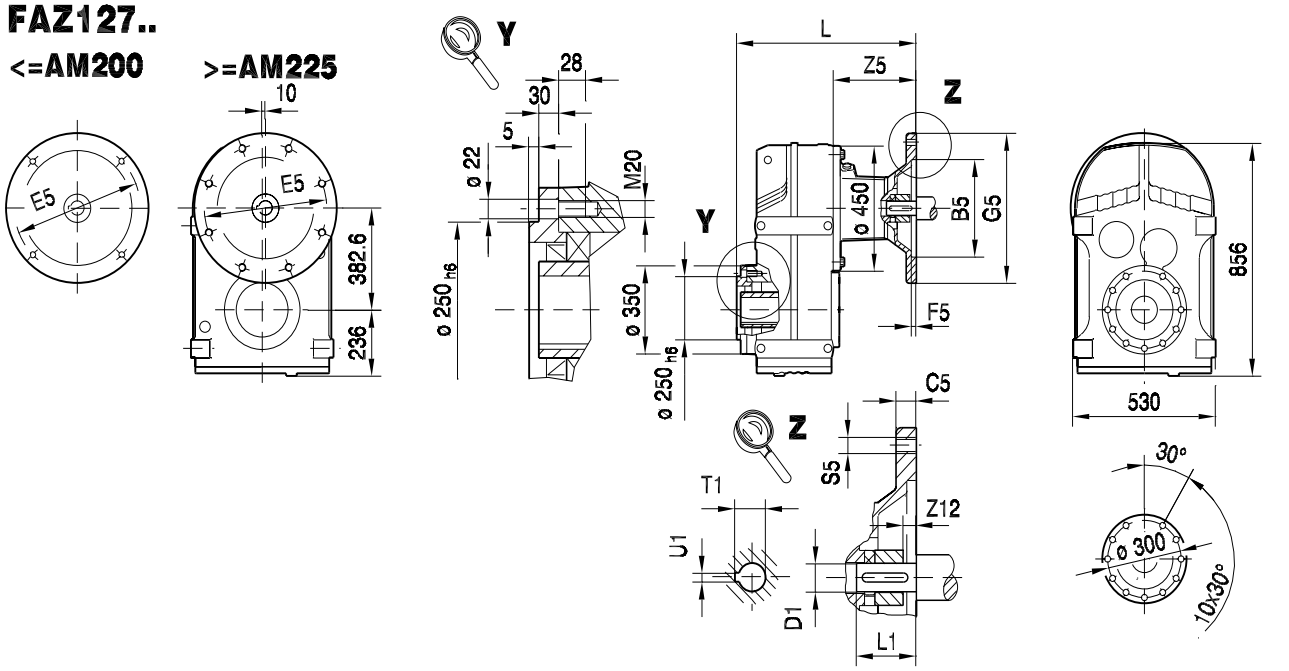




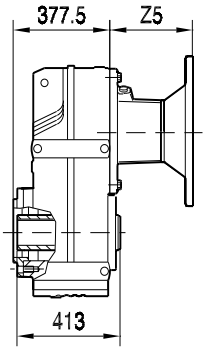
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	521	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	521	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	579	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	579	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	620	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	635	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	709	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	709	M16	336	19	75	140	79.9	20

42 079 01 01

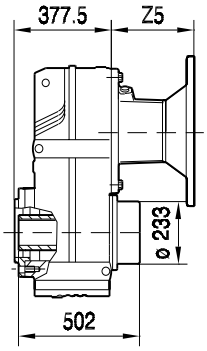
FAZ127..

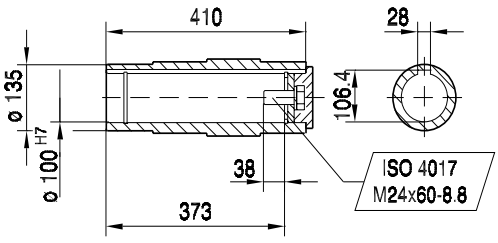


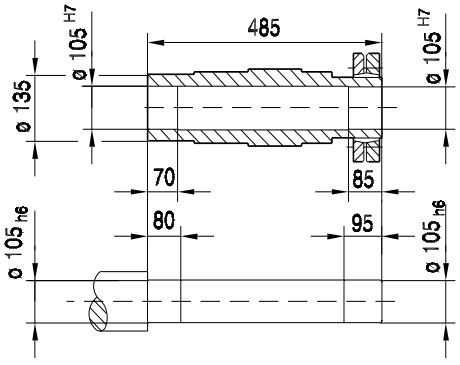
FAZ127..



FHZ127..





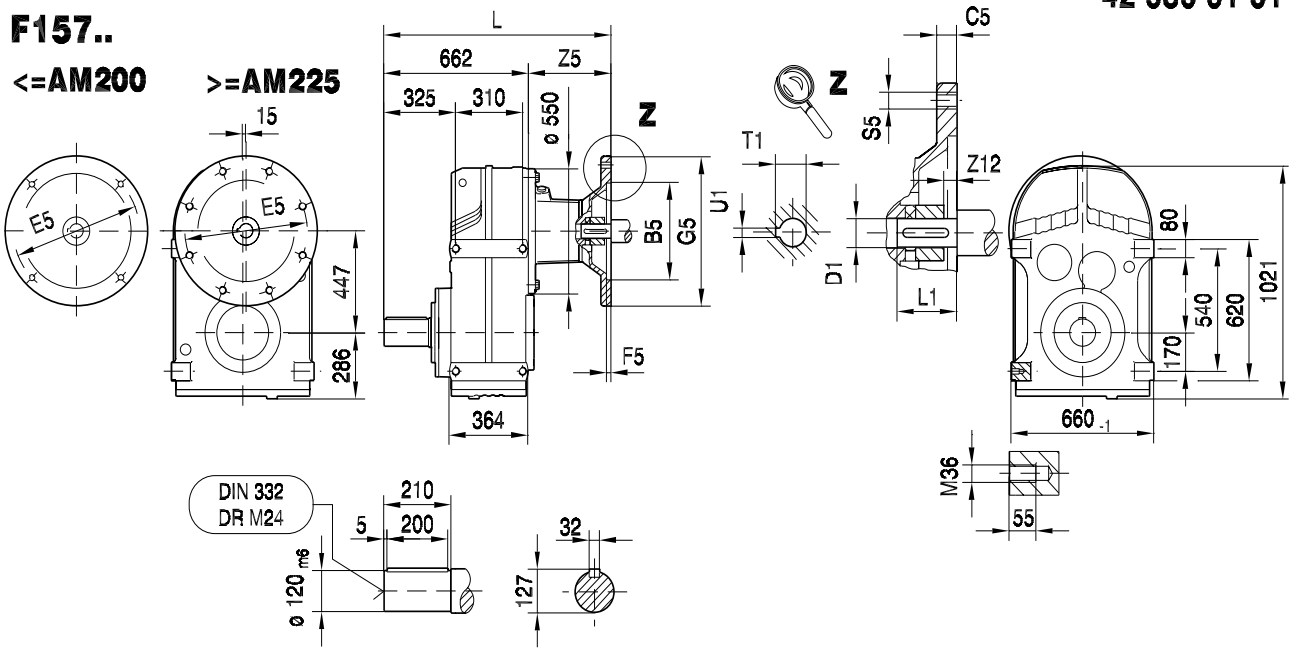


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	526	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	526	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	584	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	584	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	625	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	640	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	714	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	714	M16	336	19	75	140	79.9	20

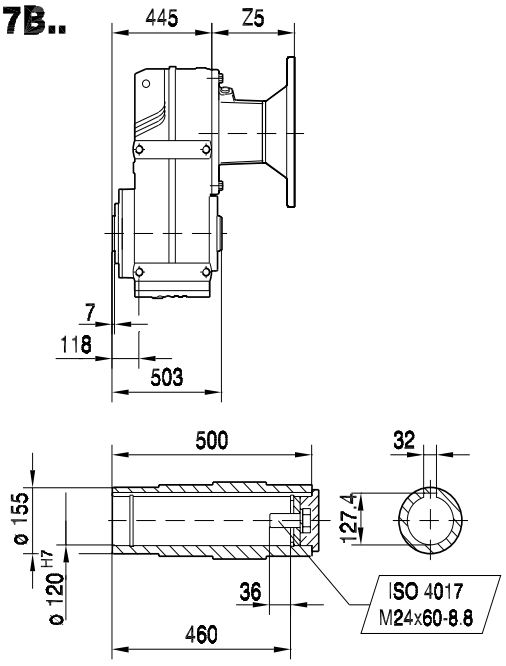
42 080 01 01

F157..

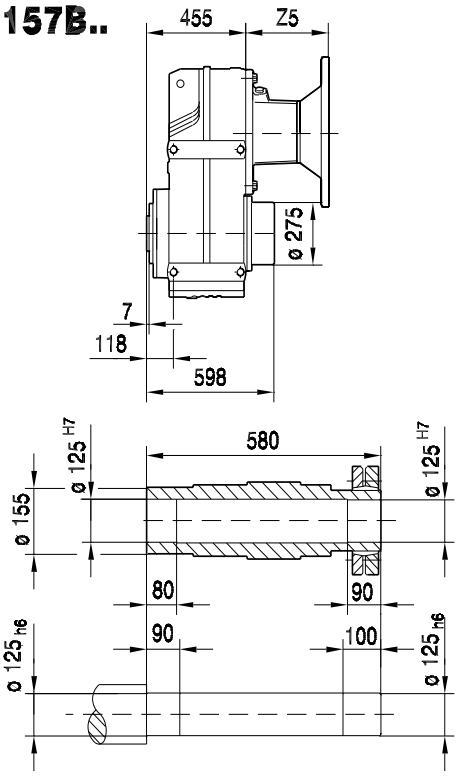
<=AM200 **>=AM225**



FA157B..



FH157B..

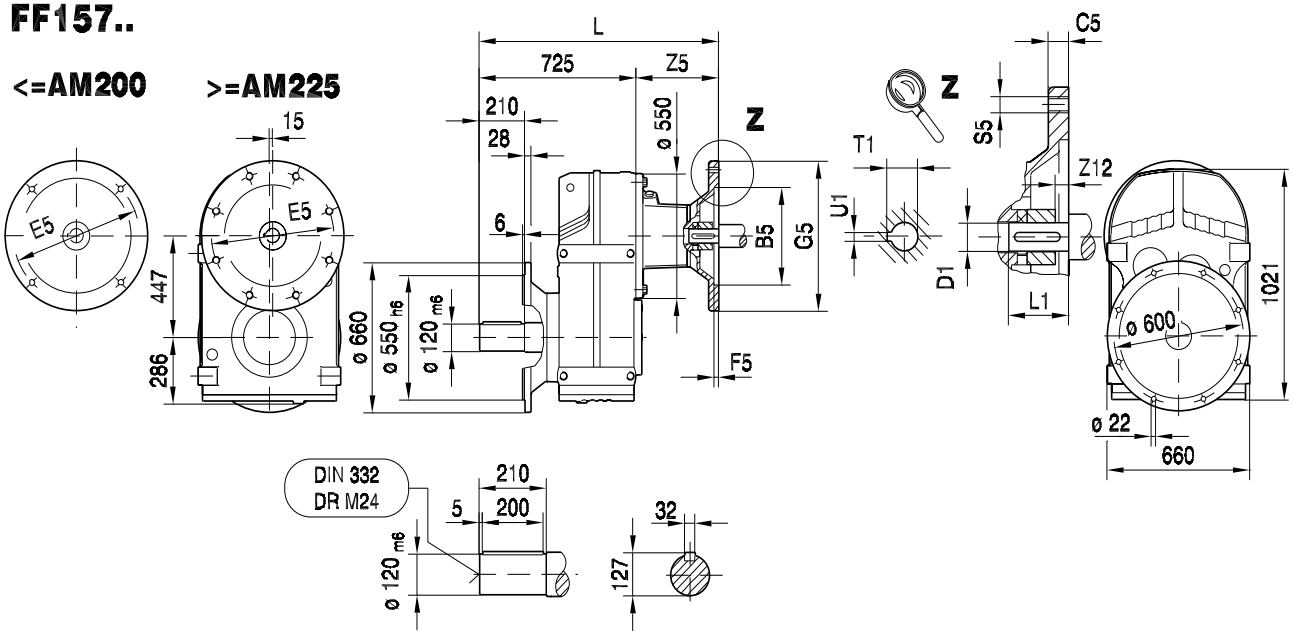


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	860	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	860	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	901	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	916	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	990	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	990	M16	328	19	75	140	79.9	20

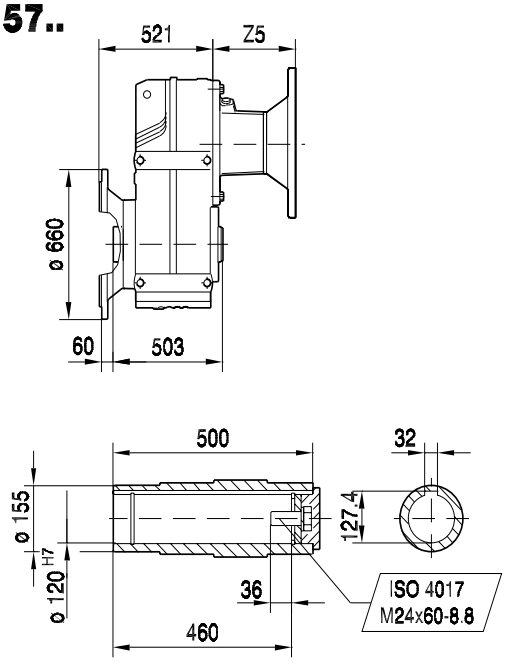
42 081 01 01

FF157..

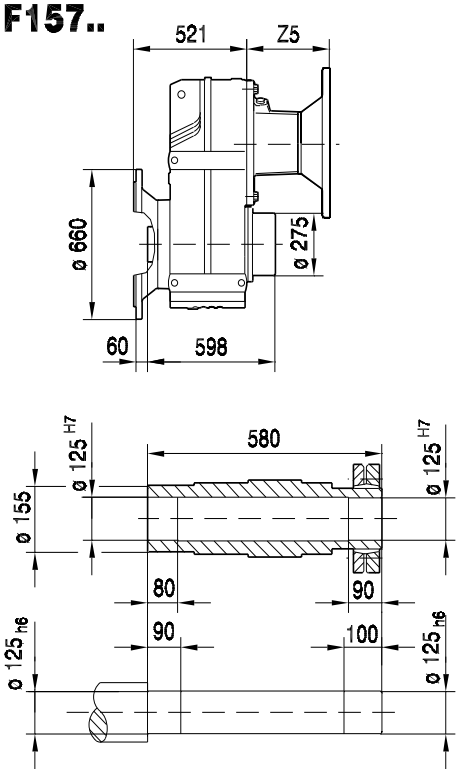
<=AM200 >=AM225



FAF157..



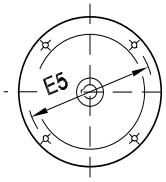
FHF157..



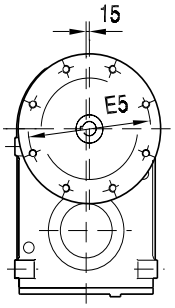
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	923	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	923	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	964	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	979	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1053	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1053	M16	328	19	75	140	79.9	20

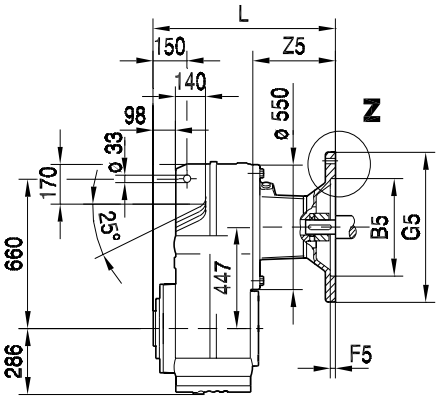
42 082 01 01

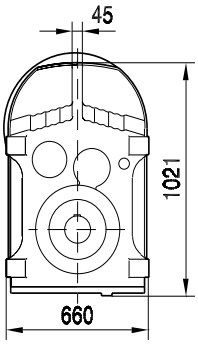
FA157..
<=AM200

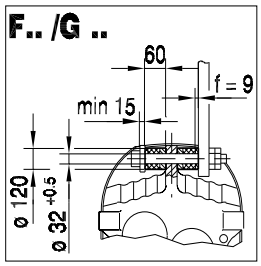


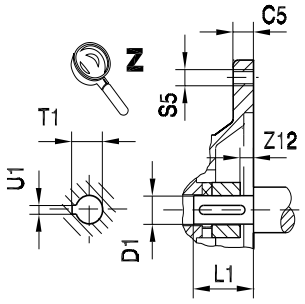
>=AM225



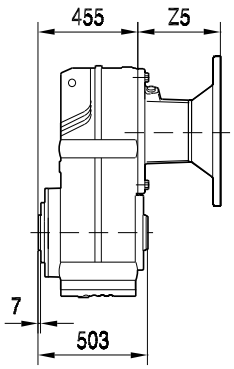




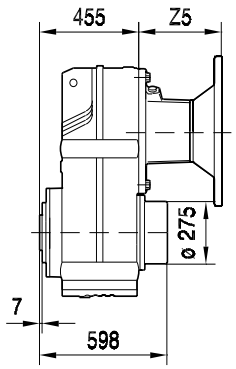


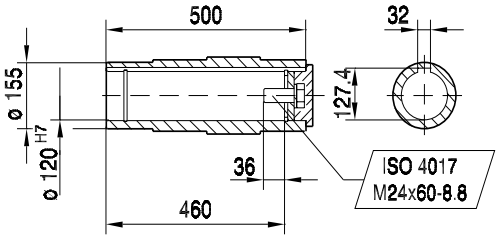


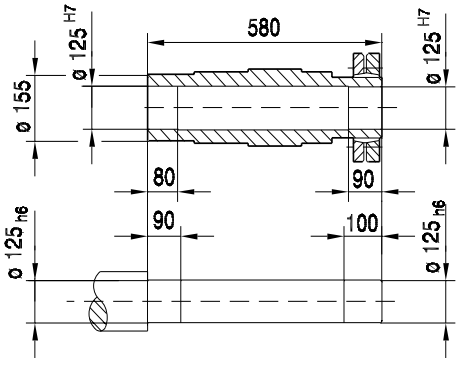
FA157..



FH157..





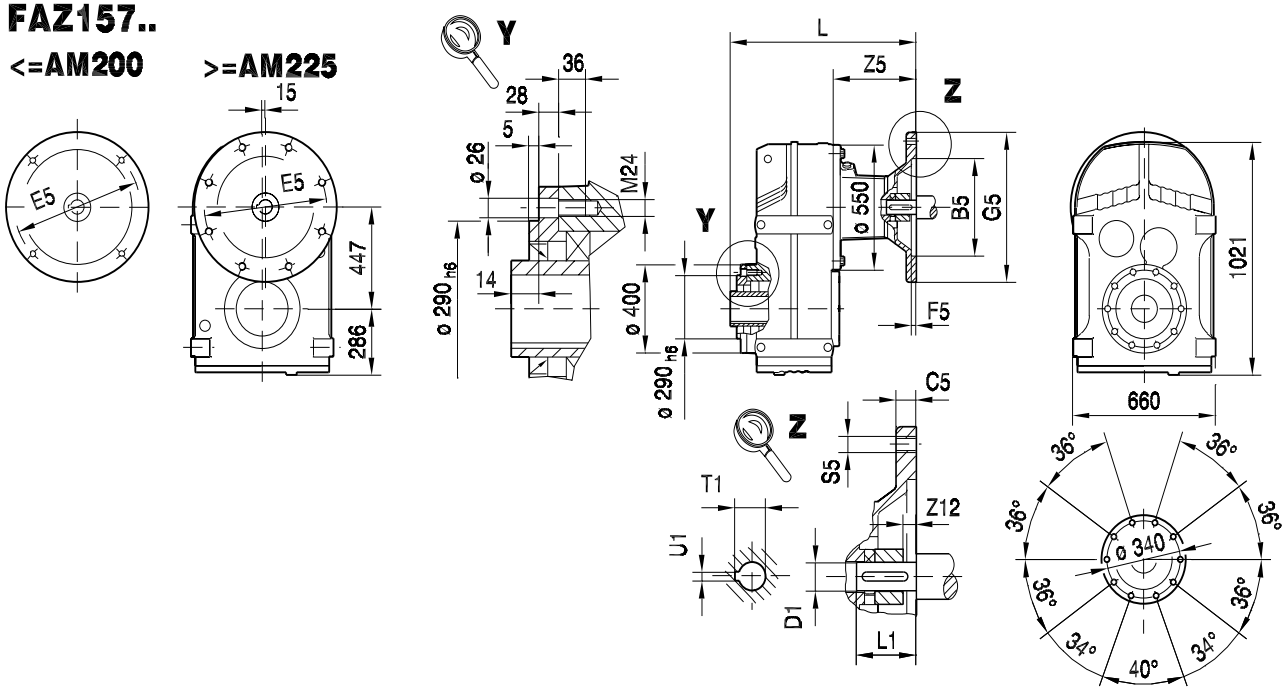


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	653	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	653	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	694	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	709	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	783	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	783	M16	328	19	75	140	79.9	20

42 083 01 01

FAZ157..

<=AM200 **>=AM225**



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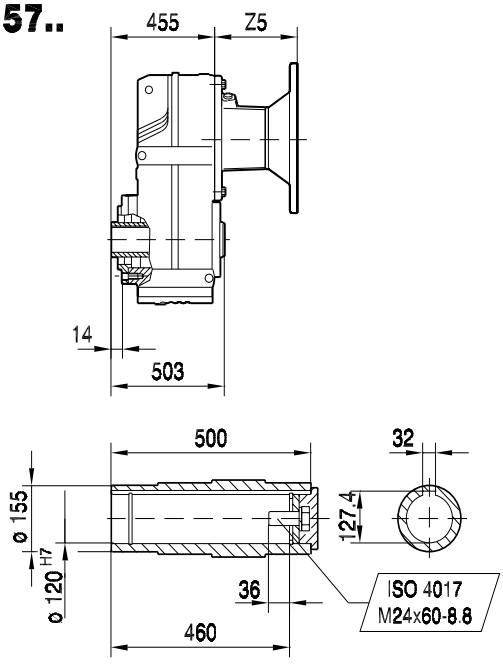
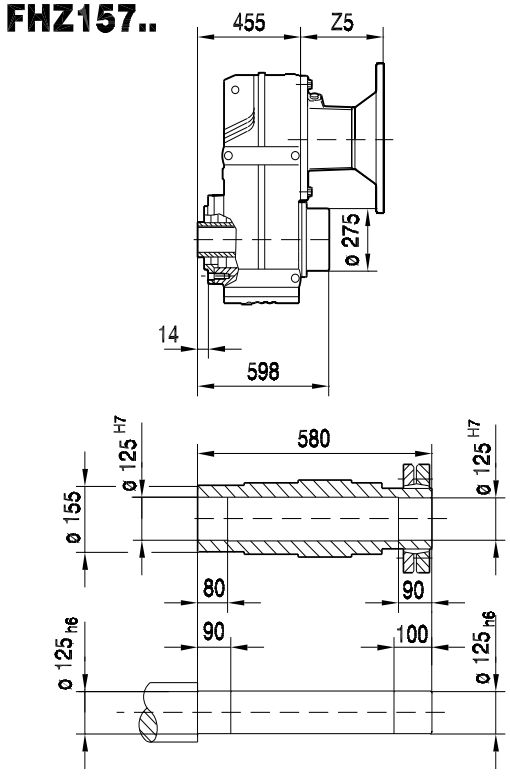
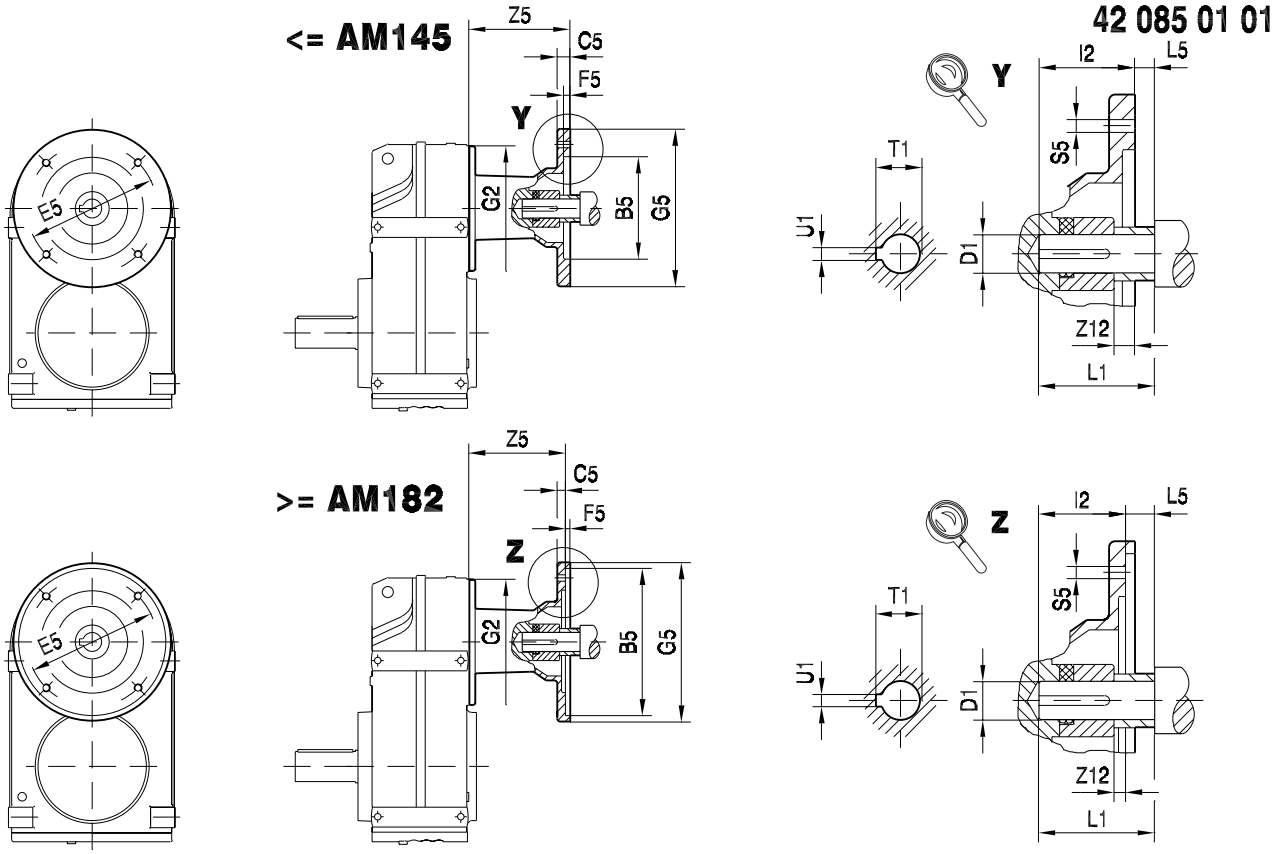


FHZ157..



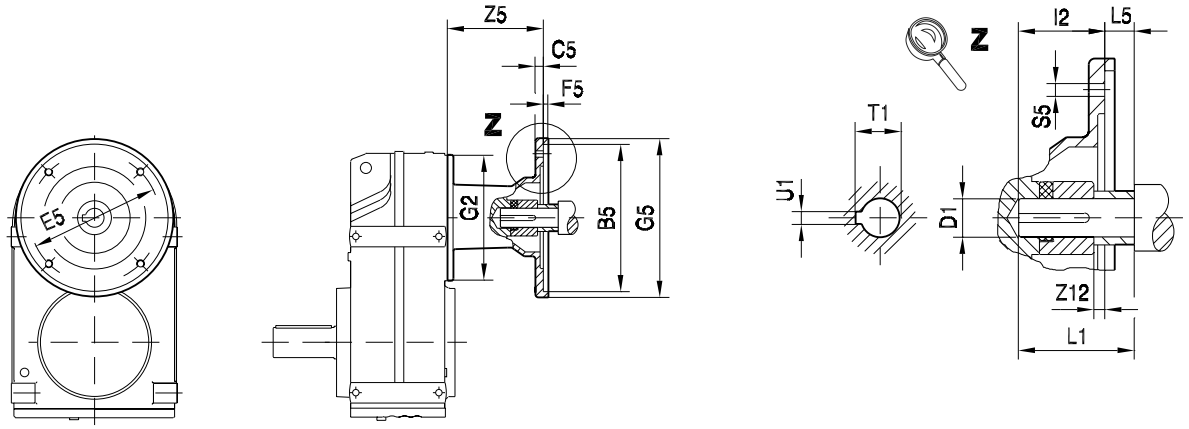
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	653	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	653	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	694	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	709	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	783	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	783	M16	328	19	75	140	79.9	20

11.6 F.. AM.. (NEMA) [mm]



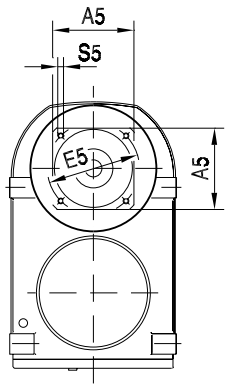
		B5	C5	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1
F..27	**AM56**	114.3	11	149.2	4.5	120	170	52.55	-4.8	10.5	93.5	16.5	15.875	47.75	18.1	4.76
F..37	**AM143**		12					54.1	3.05		117	11.45	22.225	57.15	24.7	
F..47	**AM145**															
F..57	**AM56**	114.3	11	149.2	4.5	160	170	52.55	-4.8	10.5	87	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		110.5	11.45	22.225	57.15	24.7	
F..67	**AM145**															
	AM182	215.9	10	184	5		228	66,85	3	15	147.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		200.5	9.5	34.925	85.85	38.7	7.94
F..77	**AM56**	114.3	11	149.2	4.5	200	170	52.55	-4.8	10.5	81	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		103.5	11.45	22.225	57.15	24.7	
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	139.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		188.5	9.5	34.925	85.85	38.7	7.94
F..87	**AM143**	114.3	12	149.2	4.5	250	170	54.1	3.05	10.5	98.5	11.45	22.225	57.15	24.7	4.76
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	134.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		183.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		234	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	241	9.5	47.625	117.35	53.4	12.7
F..97	**AM182**	215.9	10	184	5	300	228	66,85	3	15	129.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		178.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		229	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	20	228.6	5		286	111.05	6.3	15	236	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	296	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875

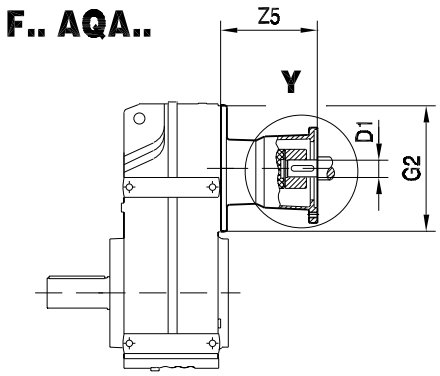
42 086 01 01

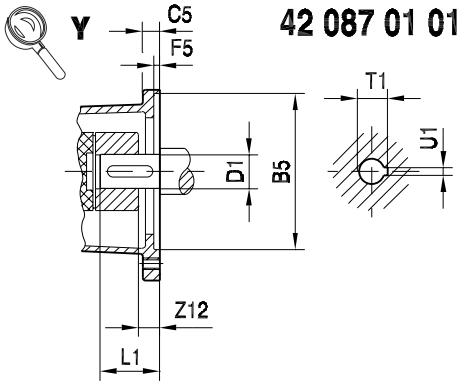


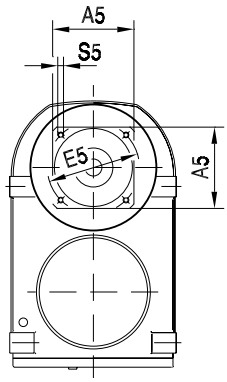
		B5	C5	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1
F..107	AM182	215.9	10	184	5	350	228	66,85	3	15	123.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		172.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		223	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	230	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	290	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875
F..127	AM213/215	215.9	11	184	5	450	228	79.55	6.3	15	157.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		208	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	215	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	275	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875
F..157	AM254/256	215.9	12	184	5	550	228	95.3	6.3	15	200	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	207	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	267	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875

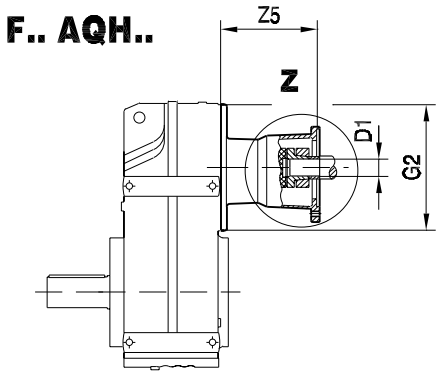
11.7 F.. AQ.. [mm]

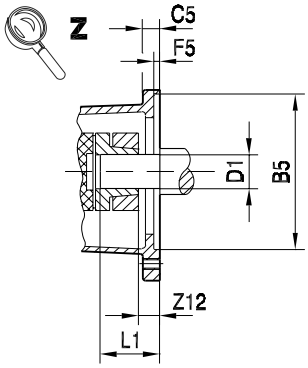




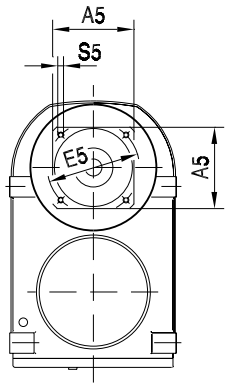




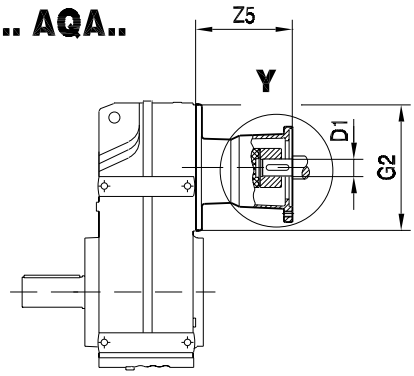


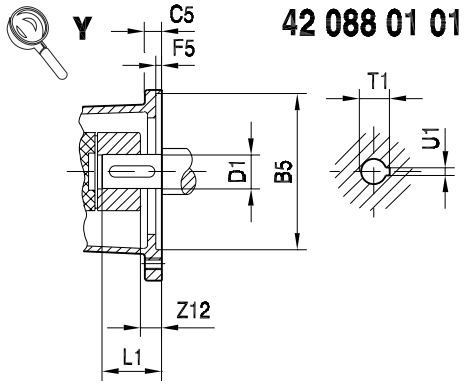


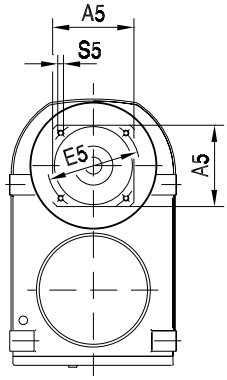
		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
F..27 F..37 F..47	AQ..80/1	82	60	8	75	3.5	120	M5	104.5	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	129.5	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	143.5	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	152.5	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
F..57 F..67	AQ..80/1	82	60	8	75	3.5	160	M5	98	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	123	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	137	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	146	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	175	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								188	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	237.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								261.5	39	34	38	80	41.3	10



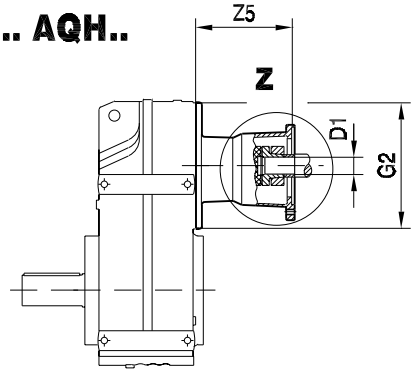
F.. AQA..

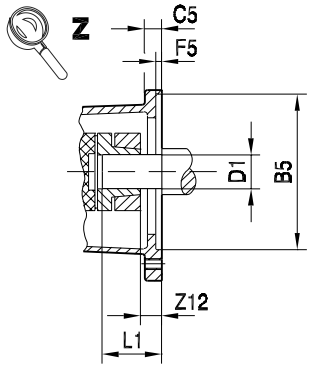




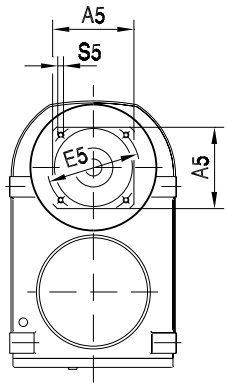


F.. AQH..

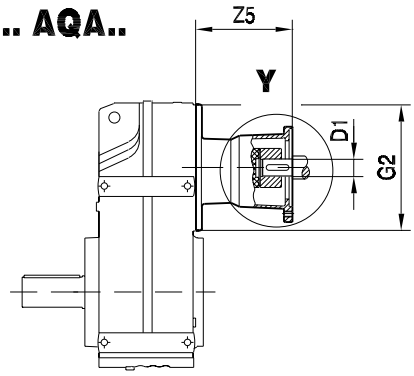


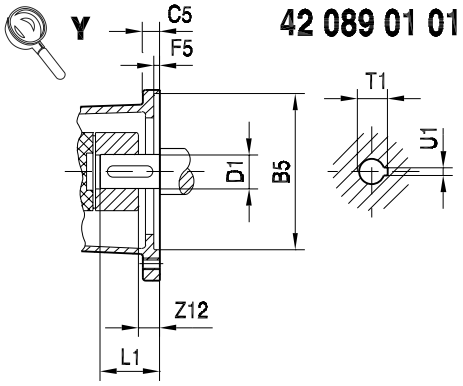


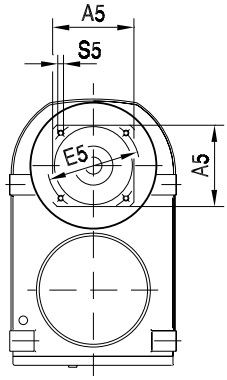
		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
F..77	AQ..80/1	82	60	8	75	3.5	200	M5	92	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	116	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	130	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	139	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	167	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								180	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	225.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								249.5	39	34	38	80	41.3	10
F..87	AQ..100/1	100	80	10	100	4	250	M6	111	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	125	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	134	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	162	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								175	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	220.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								244.5	39	34	38	80	41.3	10



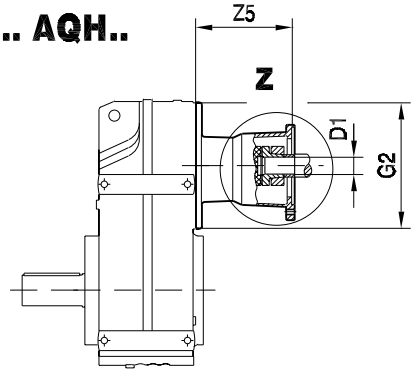
F.. AQA..

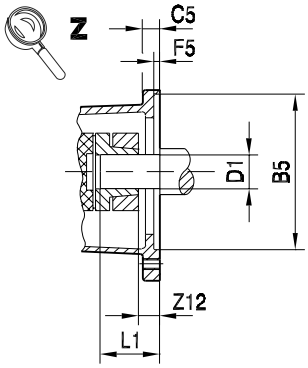






F.. AQH..

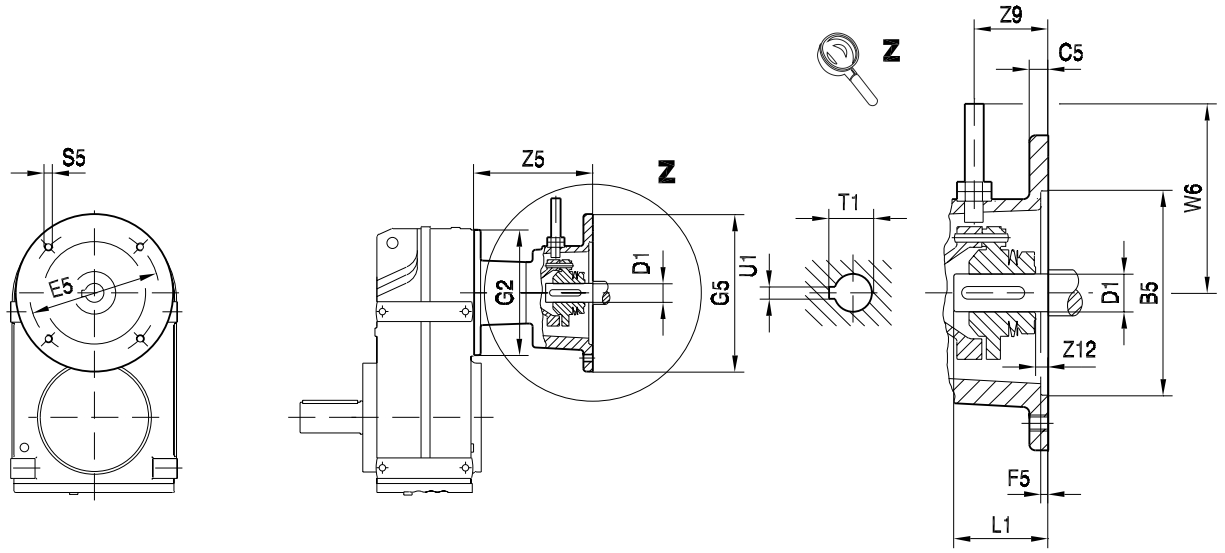




		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
F..97	**AQ..140/1**	140	110	15	165	5	300	M10	157	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								170	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	215.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								239.5	39	34	38	80	41.3	10
F..107	**AQ..140/1**	140	110	15	165	5	350	M10	151	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								164	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	209.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								233.5	39	34	38	80	41.3	10
F..127	**AQ..190/1**	190	130	16	215	5	450	M12	194.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								218.5	39	34	38	80	41.3	10

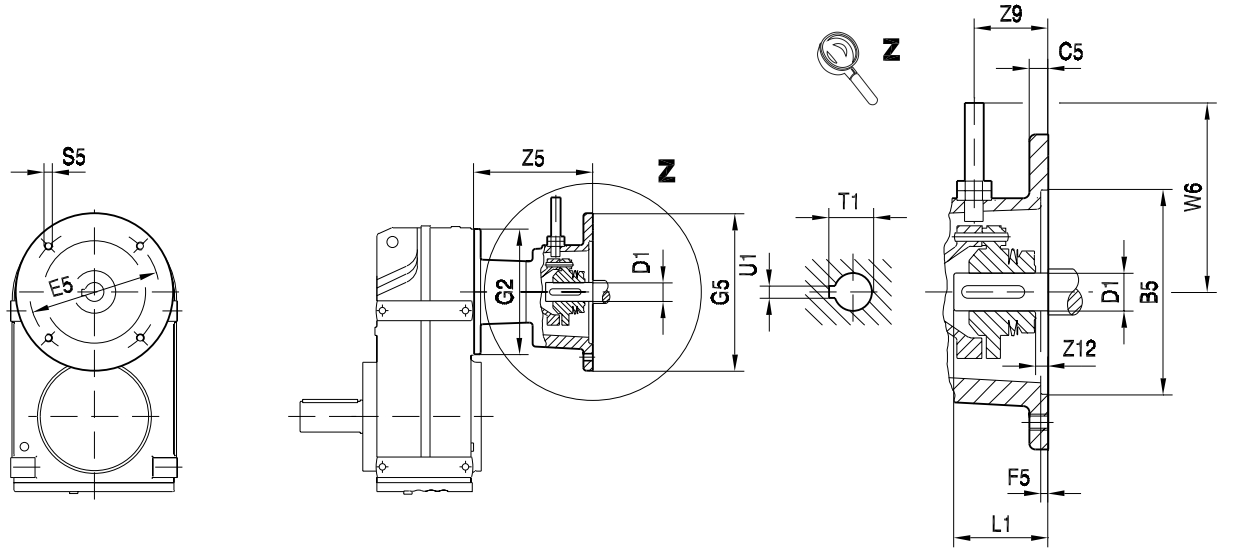
11.8 F.. AR.. [mm]

42 090 01 01



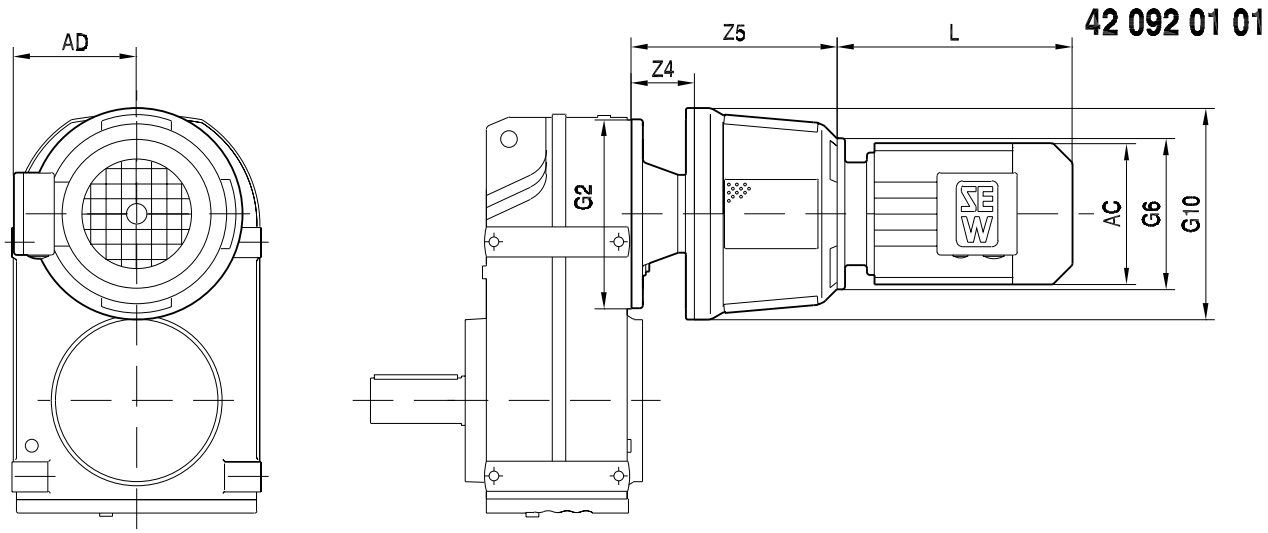
		B5	C5	E5	F5	G2	G5	S5	W6	Z5	Z9	Z12	D1	L1	T1	U1
F..27	**AR71**	110	10	130	4	120	160	M8	120	104	37	0	14	30	16.3	5
F..37	**AR80**	130	12	165	4.5		200	M10		140.5			19	40	21.8	6
F..47	**AR90**												24	50	27.3	8
	AR71	110	10	130	4	160	160	M8	120	97.5	37	0	14	30	16.3	5
F..57	**AR80**	130	12	165	4.5		200	M10		134			19	40	21.8	6
F..67	**AR90**												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	174.5	52	5.5	28	60	31.3	8
	AR112															
	AR71	110	10	130	4	200	160	M8	120	91.5	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		127			19	40	21.8	6
	AR90												24	50	27.3	8
F..77	**AR100**	180	15	215	5		250	M12	130	166.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	234	72	5	38	80	41.3	10
	AR132ML															
	AR80	130	12	165	4.5	250	200	M10	120	122	37	0	19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	161.5	52	5.5	28	60	31.3	8
F..87	**AR112**															
	AR132S/M	230	16	265	5		300	M12	145	229	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	306.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14

42 091 01 01



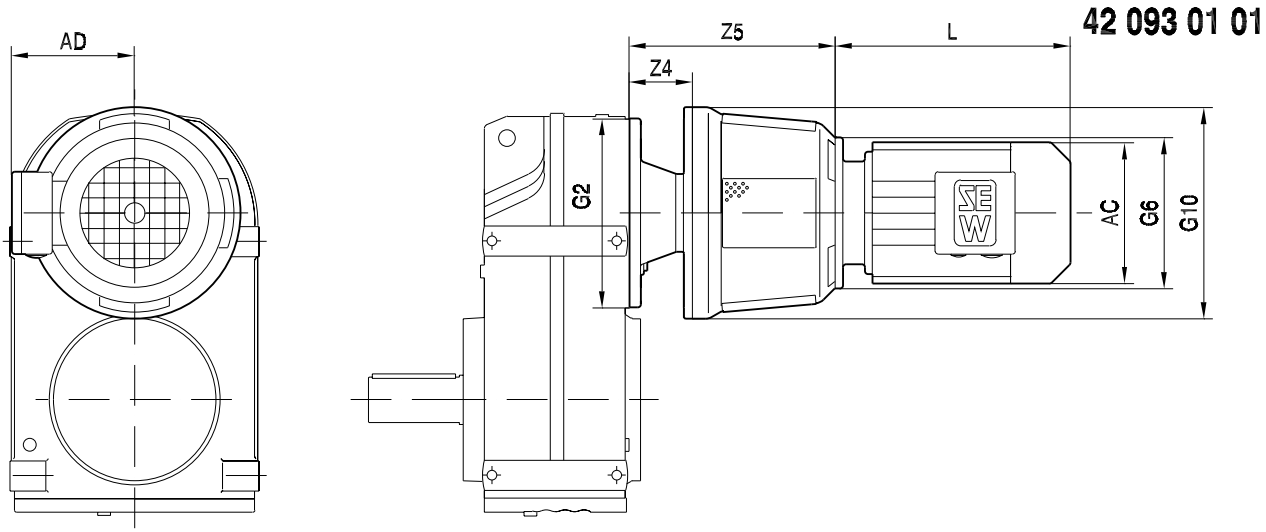
		B5	C5	E5	F5	G2	G5	S5	W6	Z5	Z9	Z12	D1	L1	T1	U1
F..97	**AR100**	180	15	215	5	300	250	M12	130	156.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	224	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	301.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
F..107	**AR100**	180	15	215	5	350	250	M12	130	150.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	218	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	295.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
F..147	**AR132S/M**	230	16	265	5	450	300	M12	145	203	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	280.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
F..167	**AR160**	250	18	300	6	550	350	M16	165	272.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14

11.9 F.. AT.. [mm]

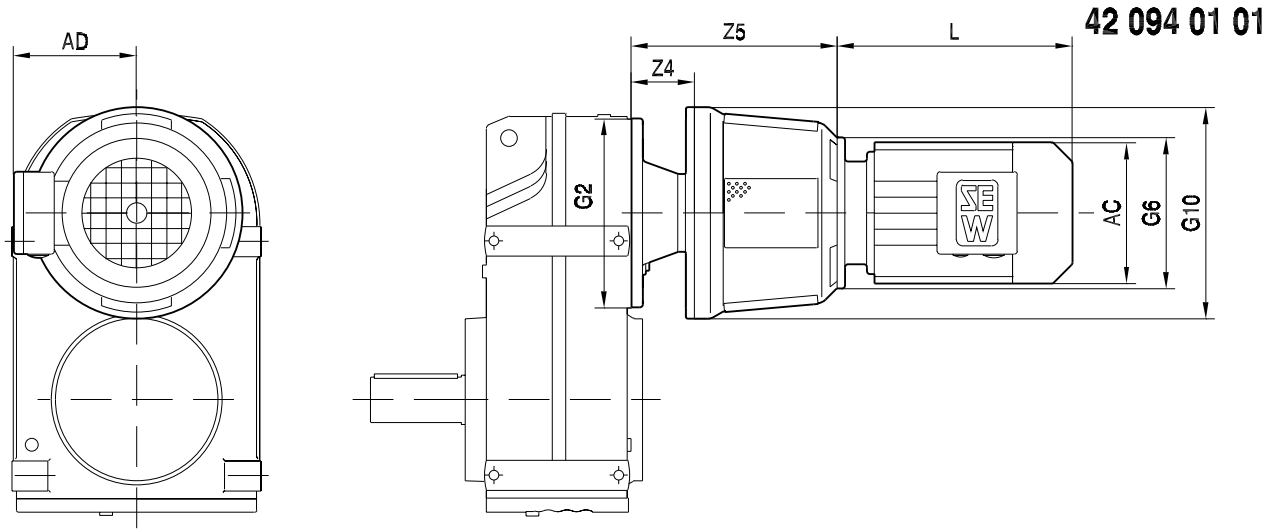


			AC	AD	G6	G10	L	Z4	Z5	G2
F..67	AT311 AT312	DT71D	145	122	200	280	202	97	286	160
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT321 AT322	DT90..	197	154	250	350	257	97	333	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
F..77	AT311 AT312	DT71D	145	122	200	280	202	89	278	200
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	133	368	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			

F..
F.. AT.. [mm]

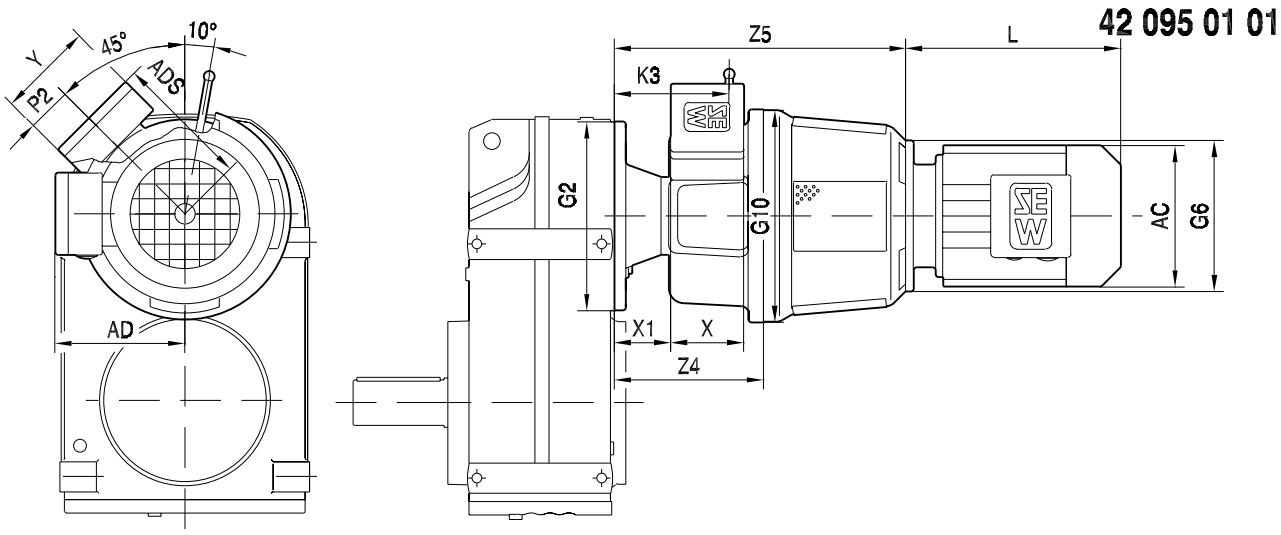


			AC	AD	G6	G10	L	Z4	Z5	G2
F..87	AT311 AT312	DT90..	197	154	200	280	273	84	273	250
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	128	363	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	159	478	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
F..97	AT311 AT312	DT90..	197	154	200	280	273	79	268	300
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	123	358	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	154	473	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

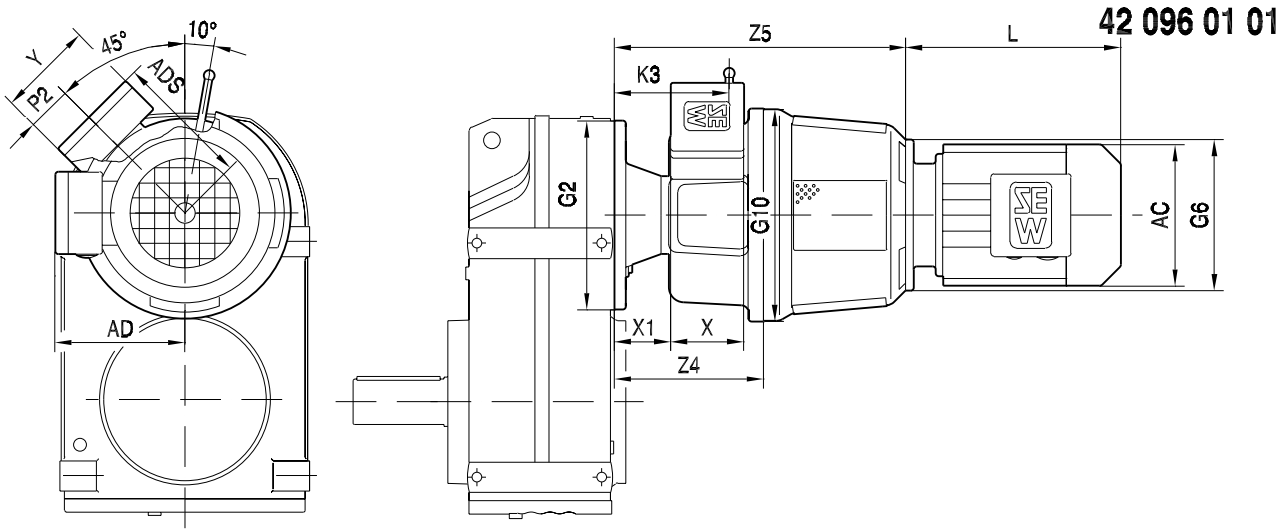


			AC	AD	G6	G10	L	Z4	Z5	G2
F..107	AT311 AT312	DT90..	197	154	200	280	273	73	262	350
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	117	352	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	148	467	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			
F..127	AT421 AT422	DV132M	275	230	250	350	407	102	337	450
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	133	452	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			
F..157	AT522 AT541 AT542	DV132S	221	176	350	470	374	125	444	550
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

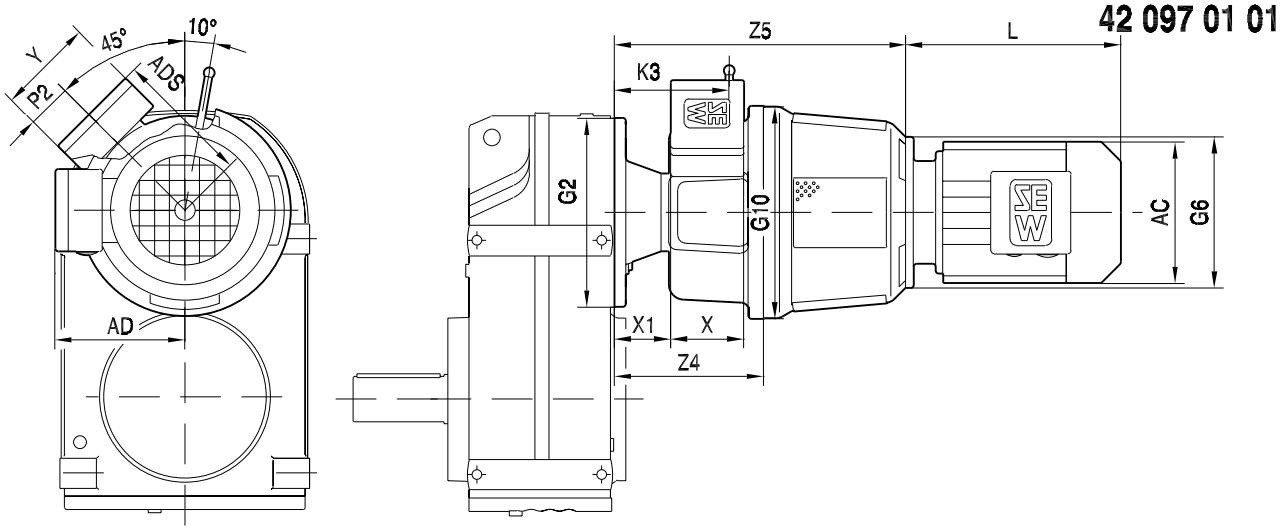
11.10 F.. AT../BMG [mm]



			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
F..67	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	153	84	97	89	127	223	411	160
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT321/BMG AT322/BMG	DT90..	197	154	215	250	352	257							458	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
F..77	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	145	84	97	81	127	215	403	200
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	183	84	97	119	127	252	488	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						**467**								



			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
F..87	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	140	84	97	76	127	210	398	250
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	178	84	97	114	127	247	483	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	244	84	97	148	127	331	650	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
F..97	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	135	84	97	71	127	205	393	300
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	173	84	97	109	127	242	478	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	239	84	97	143	127	326	645	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

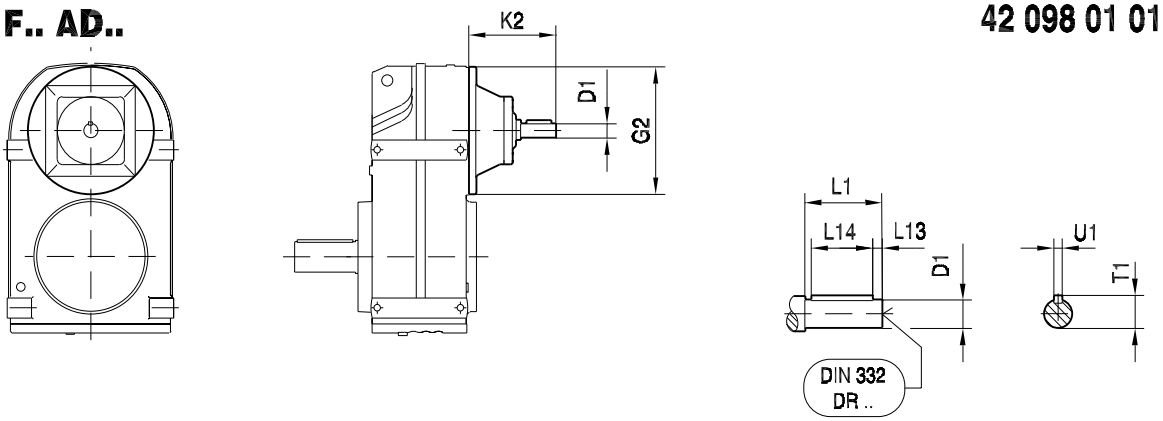


			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
F..107	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	129	84	97	65	127	199	387	350
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	167	84	97	103	127	236	472	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	233	84	97	137	127	320	639	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								
F..127	AT421/BMG AT422/BMG	DV132M	275	230	215	250	352	407	152	84	97	88	127	221	457	450
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	218	84	97	122	127	305	624	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								
F..157	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	210	84	97	114	127	297	616	550
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

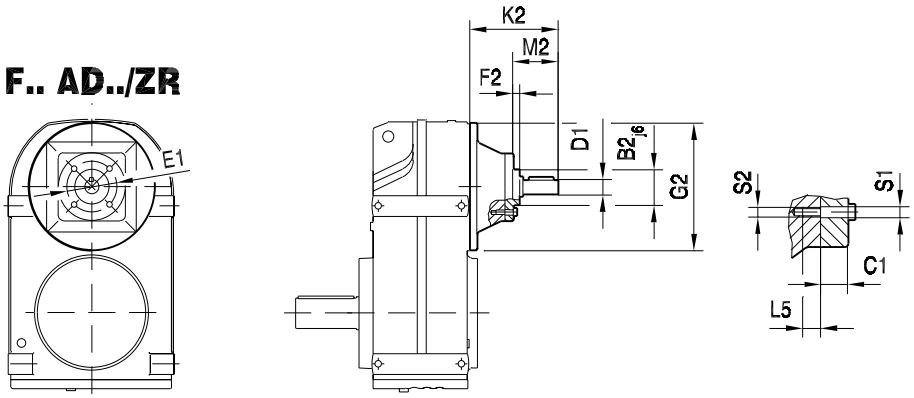
11.11 F.. AD.. [mm]

F.. AD..

42 098 01 01



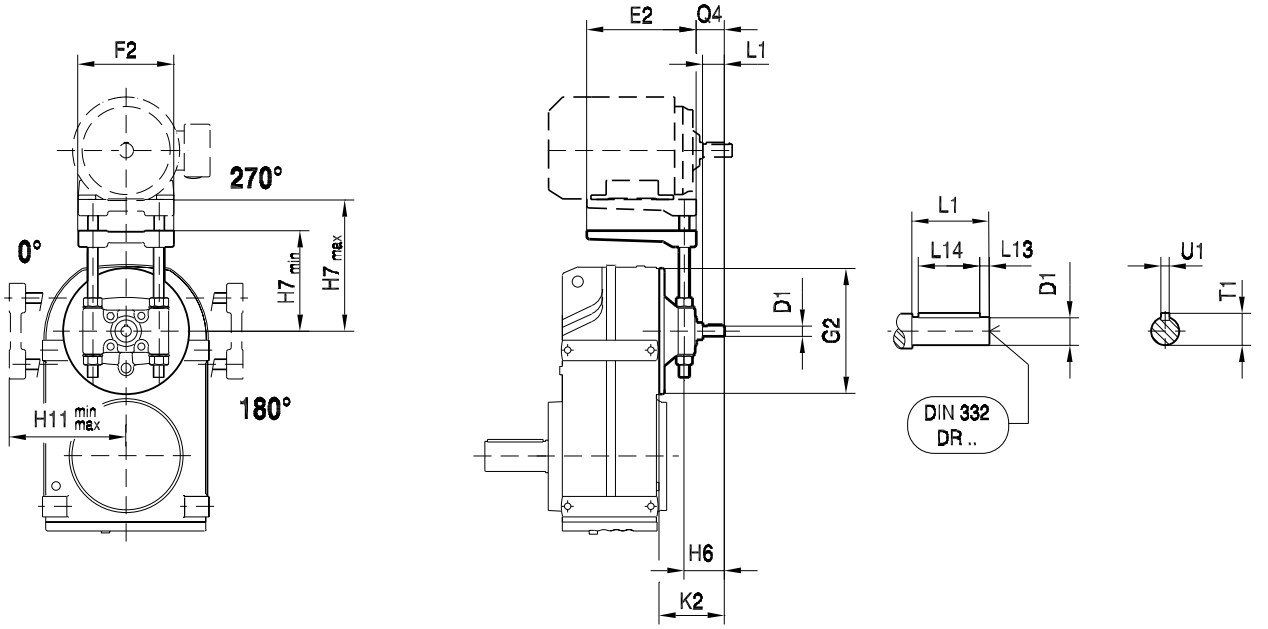
F.. AD../ZR



		B2	C1	E1	F2	G2	K2	L5	M2	S1	S2	D1	L1	L13	L14	T1	U1
F..27 , F..37	**AD1**	-	-	-	-	120	102	-	-	-	-	16	40	4	32	18	5
F..47	**AD2 , AD2/ZR**	55	13.5	80	8		130	12	50	9	M8	19	40	4	32	21.5	6
F..57	**AD2 , AD2/ZR**	55	13.5	80	8	160	123	12	50	9	M8	19	40	4	32	21.5	6
F..67	**AD3 , AD3/ZR**	70	15.5	105	8		159	16	60	11	M10	24	50	5	40	27	8
F..77	**AD2 , AD2/ZR**	55	13.5	80	8	200	116	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		151	16	60	11	M10	24	50	5	40	27	8
	AD4 , AD4/ZR	100	16	130	13		224	20	95.5	13.5	M12	38	80	5	70	41	10
F..87	**AD2 , AD2/ZR**	55	13.5	80	8	250	111	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		156	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		219	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		292	20	126	13.5	M12	42	110	10	70	45	12
F..97	**AD3 , AD3/ZR**	70	15.5	105	8	300	151	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		214	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		287	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		327	26	130.5	17.5	M16	48	110	10	80	51.5	14
F..107	**AD3 , AD3/ZR**	70	15.5	105	8	350	145	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		208	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		281	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		321	26	130.5	17.5	M16	48	110	10	80	51.5	14
F..127	**AD4 , AD4/ZR**	100	16	130	13	450	193	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		266	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		306	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD7 , AD7/ZR	125	19	190	13		300	30	133	22	M20	55	110	10	90	59	16
	AD8 , AD8/ZR	120	22.5	210	5		383	19.5	155	13.5	M12	70	140	15	110	74.5	20
F..157	**AD5 , AD5/ZR**	120	24	180	11	550	258	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		298	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD7 , AD7/ZR	125	19	190	13		292	30	133	22	M20	55	110	10	90	59	16
	AD8 , AD8/ZR	120	22.5	210	5		374	19.5	155	13.5	M12	70	140	15	110	74.5	20

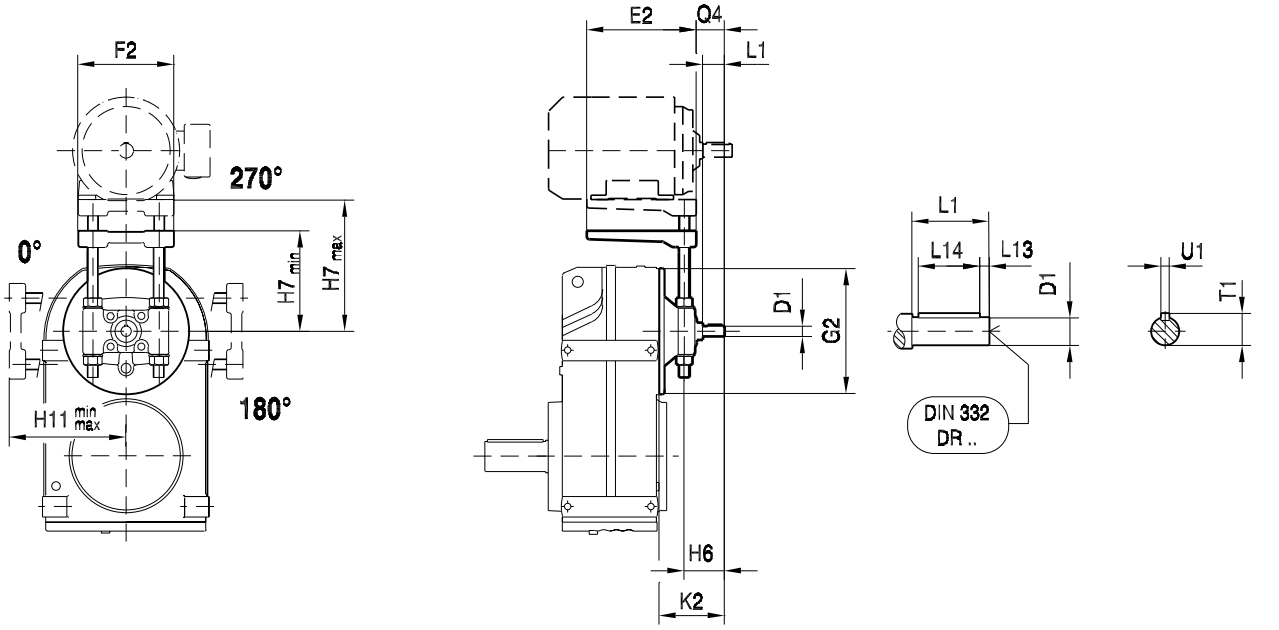
11.12 F.. AD../P [mm]

42 099 01 01



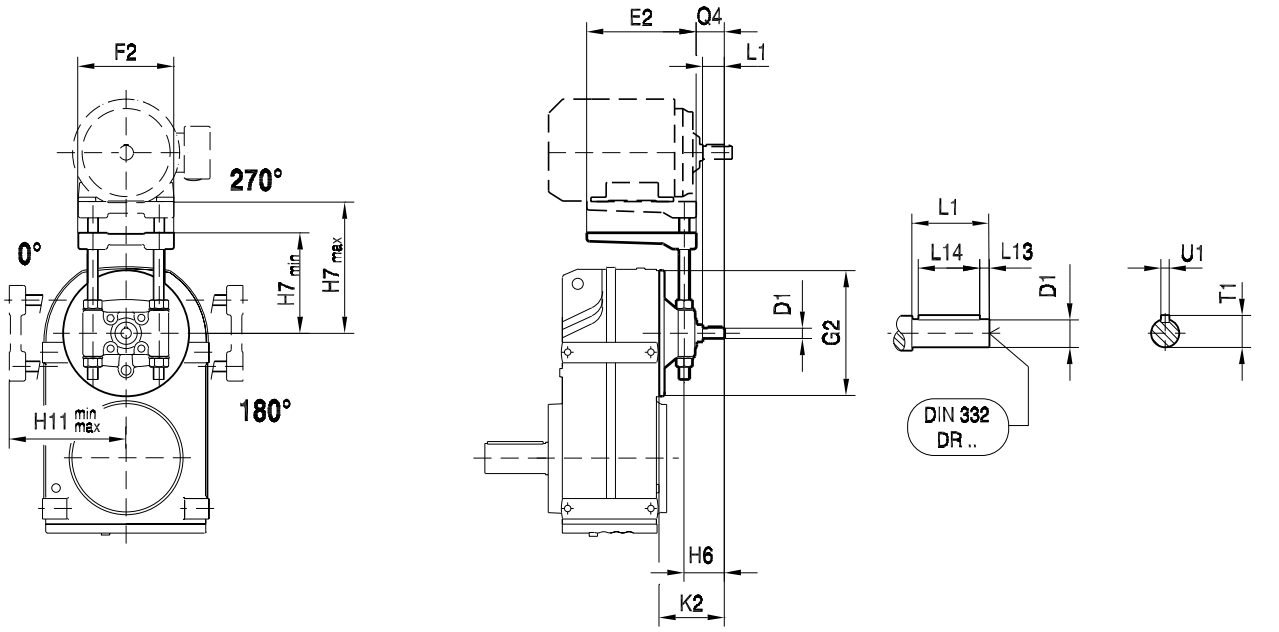
			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1
F..27	AD2/P	DT71D DT80.. DT90..	195	180	120	65	100	165	125	165	130	43	19	40	4	32	21.5	6
F..37	AD2/P	DT71D DT80.. DT90..	195	180	120	65	100	165	125	165	130	43	19	40	4	32	21.5	6
F..47	AD2/P	DT71D DT80.. DT90..	195	180	120	65	105	165	125	165	130	43	19	40	4	32	21.5	6
F..57	AD2/P	DT71D DT80.. DT90..	195	180	160	65	125	165	140	200	123	43	19	40	4	32	21.5	6
	AD3/P	DV100.. DV112..	230	240		80	130	175	150	230	159	54	24	50	5	40	27	8
F..67	AD2/P	DT71D DT80.. DT90..	195	180	160	65	125	165	145	200	123	43	19	40	4	32	21.5	6
	AD3/P	DV100.. DV112..	230	240		80	130	175	155	230	159	54	24	50	5	40	27	8
F..77	AD2/P	DT71D DT80.. DT90..	195	180	200	65	145	200	170	200	116	43	19	40	4	32	21.5	6
	AD3/P	DV100.. DV112..	230	240		80	150	230	175	230	151	54	24	50	5	40	27	8
	AD4/P	DV132..	345	291		114	155	210	185	210	224	83	38	80	5	70	41	10

42 100 01 01



			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1
F..87	AD2/P	DT71D	195	180	250	65	170	260	205	260	111	43	19	40	4	32	21.5	6
		DT80..																
		DT90..																
	AD3/P	DV100..	230	240		90	175	230	210	320	156	64	28	60	5	50	31	8
		DV112..																
	AD4/P	DV132..	345	291		114	180	280	215	280	219	83	38	80	5	70	41	10
	AD5/P	DV160..	430	355		153	185	250	225	325	292	113	42	110	10	70	45	12
		DV180..																
F..97	AD3/P	DV100..	230	240	300	90	205	320	240	320	151	64	28	60	5	50	31	8
		DV112..																
	AD4/P	DV132..	345	291		114	210	280	245	280	214	83	38	80	5	70	41	10
	AD5/P	DV160..	430	355		153	215	325	250	325	287	113	42	110	10	70	45	12
		DV180..																
F..107	AD3/P	DV100..	230	240	350	90	230	320	270	320	145	64	28	60	5	50	31	8
		DV112..																
	AD4/P	DV132..	345	291		114	240	280	275	360	208	83	38	80	5	70	41	10
	AD5/P	DV160..	430	355		153	240	325	280	325	281	113	42	110	10	70	45	12
		DV180..																
	AD6/P	DV200..	495	457		163	245	310	250	310	321	114	48	110	10	80	51.5	14
		DV225..																

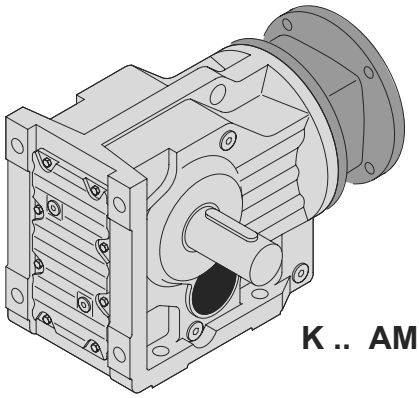
42 101 01 01



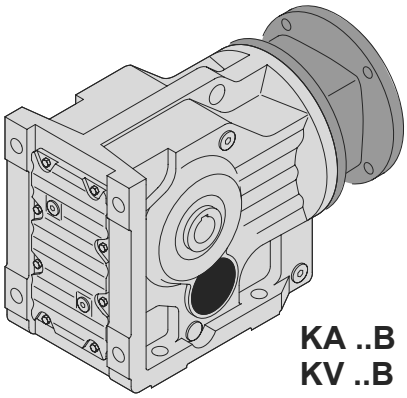
			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1
F..127	AD4/P	DV132..	345	291	450	114	240	280	310	360	193	83	38	80	5	70	41	10
	AD5/P	DV160..	430	355		153	295	405	320	405	266	113	42	110	10	70	45	12
		DV180..																
	AD6/P	DV200..	495	457		163	295	360	310	360	306	114	48	110	10	80	51.5	14
		DV225..																
	AD7/P	D250..	650	570		170	300	365	310	365	300	112	55	110	10	90	59	16
		D280..																
F..157	AD5/P	DV160..	430	355	550	153	345	405	370	405	258	113	42	110	10	70	45	12
		DV180..																
	AD6/P	DV200..	495	457		163	375	475	380	475	298	114	48	110	10	80	51.5	14
		DV225..																
	AD7/P	D250..	650	570		170	375	475	385	475	292	112	55	110	10	90	59	16
		D280..																

12 K..

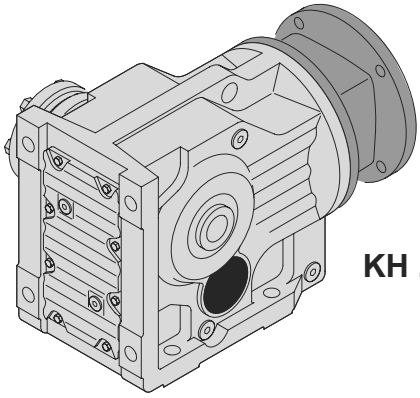
12.1 K.. AM.. [Nm]



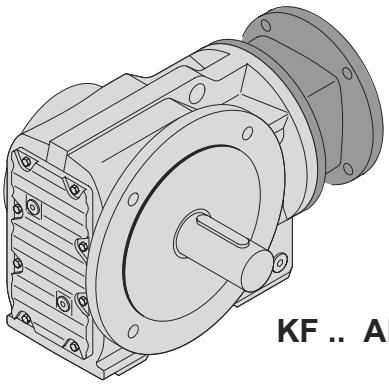
K .. AM..



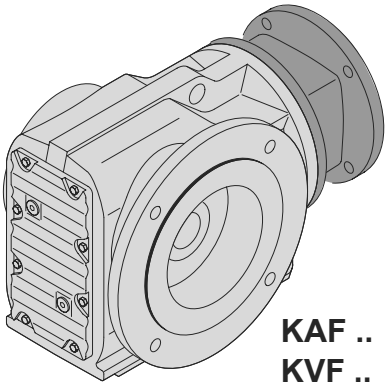
KA ..B AM..
KV ..B AM..



KH ..B AM..

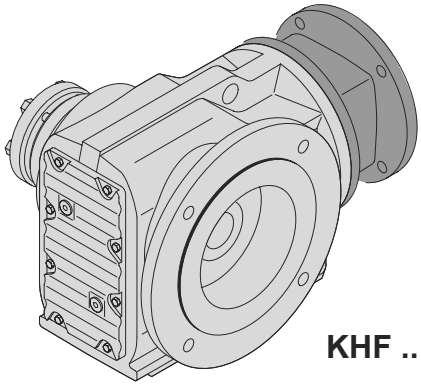


KF .. AM..

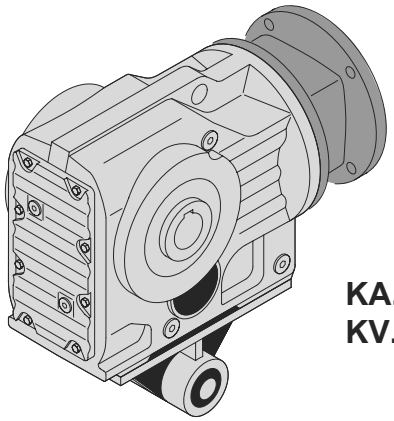


KAF .. AM..
KVF .. AM ..

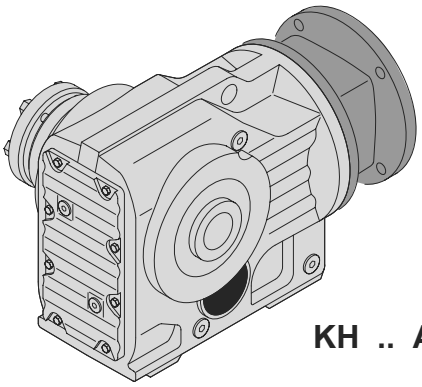
50405AXX



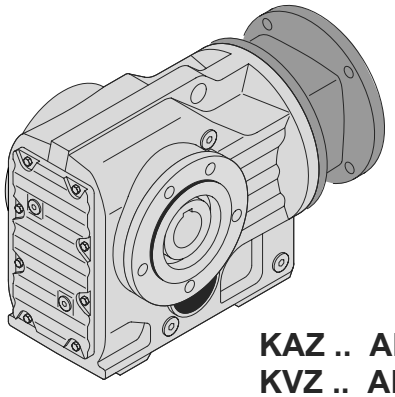
KHF .. AM..



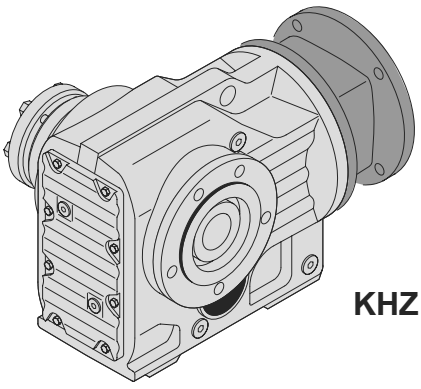
KA../T AM..
KV../T AM..



KH .. AM..



KAZ .. AM..
KVZ .. AM..



KHZ .. AM..

50406AXX

K37, n_e = 1400 1/min															200 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
106.38	13	200	5640	7												
97.81	14	200	5640	7												
83.69	17	200	5640	7												
72.54	19	200	5520	7												
67.80	21	200	5360	7												
58.60	24	200	5020	7												
49.79	28	200	4660	7												
44.46	31	200	4420	7												
37.97	37	200	4100	7												
35.57	39	200	3970	7												
29.96	47	200	3650	7												
28.83	49	200	3580	8												
24.99	56	200	3330	8		K	14 kg		K	14 kg		K	17 kg		K	17 kg
23.36	60	195	3260	8		KF	16 kg		KF	17 kg		KF	19 kg		KF	19 kg
20.19	69	185	3110	8		KA	14 kg		KA	14 kg		KA	17 kg		KA	17 kg
17.15	82	180	2900	8		KAF	16 kg		KAF	16 kg		KAF	18 kg		KAF	18 kg
15.31	91	175	2780	9												
13.08	107	165	2650	9												
12.14	115	160	2600	12												
10.49	133	160	2410	12												
8.91	157	160	2200	12												
7.96	176	155	2110	13												
6.80	206	150	1980	13												
6.37	220	145	1950	13												
5.36	261	140	1810	13												
3.98	352	125	1660	13												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

	IEC	**K**	431	**NEMA**	**K**	482
		KF	432		**KF**	482
		KA	433		**KA**	482
		KAF	432		**KAF**	482

K47, n_e = 1400 1/min												400 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM63		AM71		AM80		
131.87*	11	400	5920	6							
121.48*	12	400	5920	6							
104.37	13	400	5920	6							
90.86	15	400	5920	6							
85.12*	16	400	5920	6							
75.20*	19	400	5920	6							
69.84	20	400	5920	6							
63.30*	22	400	5920	7							
56.83	25	400	5920	7							
48.95*	29	400	5920	7							
46.03*	30	400	5920	7							
39.61	35	400	5920	7							
35.39	40	400	5920	7							
31.30	45	400	5700	7							
29.32	48	400	5520	8		K 21 kg		K 21 kg		K 23 kg	
25.91	54	400	5170	8		KF 24 kg		KF 24 kg		KF 27 kg	
24.06	58	400	4970	8		KA 20 kg		KA 20 kg		KA 23 kg	
21.81	64	400	4710	8		KAF 23 kg		KAF 23 kg		KAF 25 kg	
19.58	72	400	4440	8							
16.86	83	380	4230	8							
15.86	88	380	4080	8							
13.65	103	360	3890	8							
12.19	115	350	3720	8							
11.77	119	280	4060	10							
10.56	133	280	3830	11							
9.10	154	280	3540	11							
8.56	164	270	3500	11							
7.36	190	250	3390	11							
6.58	213	240	3270	12							
5.81	241	230	3140	12							
4.64	302	205	2980	12							

		AM56	AM56	AM143
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg

IEC	**K**	436	**NEMA**	**K**	482
	KF	437		**KF**	482
	KA	438		**KA**	482
	KAF	437		**KAF**	482

K47, n_e = 1400 1/min								400 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM90	AM100	AM112	
131.87*	11	400	5920	6				
121.48*	12	400	5920	6				
104.37	13	400	5920	6				
90.86	15	400	5920	6				
85.12*	16	400	5920	6				
75.20*	19	400	5920	6				
69.84	20	400	5920	6				
63.30*	22	400	5920	7				
56.83	25	400	5920	7				
48.95*	29	400	5920	7				
46.03*	30	400	5920	7				
39.61	35	400	5920	7				
35.39	40	400	5920	7				
31.30	45	400	5700	7				
29.32	48	400	5520	8	K 24 kg	K 28 kg	K 28 kg	
25.91	54	400	5170	8	KF 27 kg	KF 31 kg	KF 31 kg	
24.06	58	400	4970	8	KA 23 kg	KA 27 kg	KA 27 kg	
21.81	64	400	4710	8	KAF 26 kg	KAF 30 kg	KAF 30 kg	
19.58	72	400	4440	8				
16.86	83	380	4230	8				
15.86	88	380	4080	8				
13.65	103	360	3890	8				
12.19	115	350	3720	8				
11.77	119	280	4060	10				
10.56	133	280	3830	11				
9.10	154	280	3540	11				
8.56	164	270	3500	11				
7.36	190	250	3390	11				
6.58	213	240	3270	12				
5.81	241	230	3140	12				
4.64	302	205	2980	12				

	AM145	AM182	AM184
NEMA **+ kg**	-- kg	- 1.0 kg	- 1.0 kg

IEC		NEMA	
K	436	**K**	482
KF	437	**KF**	482
KA	438	**KA**	482
KAF	437	**KAF**	482

K57, n_e = 1400 1/min													600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63		AM71		AM80		AM90	
145.14*	9.6	600	7630	6								
123.85	11	600	7630	6								
108.29	13	600	7630	6								
102.88*	14	600	7630	6								
90.26*	16	600	7630	6								
76.56*	18	600	7630	6								
69.12	20	600	7630	6								
60.81*	23	600	7630	6								
57.42*	24	600	7630	6								
48.89	29	600	7630	6								
44.43	32	600	7630	6								
38.49	36	600	7630	6								
35.70	39	600	7630	7								
30.28	46	600	7310	7		K 27 kg KF 32 kg		K 27 kg KF 32 kg		K 29 kg KF 34 kg		K 29 kg KF 34 kg
27.34	51	600	6930	7		KA 25 kg		KA 25 kg		KA 27 kg		KA 27 kg
24.05	58	600	6480	7		KAF 30 kg		KAF 31 kg		KAF 33 kg		KAF 33 kg
22.71	62	600	6280	7								
19.34	72	575	5910	7								
17.57	80	555	5740	7								
15.22	92	535	5430	7								
13.25	106	510	5190	7								
11.92	117	415	5150	9								
11.26	124	415	4990	9								
9.59	146	405	4650	10								
8.71	161	390	4520	10								
7.55	185	365	4360	10								
6.57	213	345	4190	10								
4.69	299	300	3800	11								

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC

K	441
KF	442
KA	443
KAF	442

NEMA

K	482
KF	482
KA	482
KAF	482

K57, n_e = 1400 1/min								600 Nm			
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100		AM112		AM132S/M		
145.14*	9.6	600	7630	6							
123.85	11	600	7630	6							
108.29	13	600	7630	6							
102.88*	14	600	7630	6							
90.26*	16	600	7630	6							
76.56*	18	600	7630	6							
69.12	20	600	7630	6							
60.81*	23	600	7630	6							
57.42*	24	600	7630	6							
48.89	29	600	7630	6							
44.43	32	600	7630	6							
38.49	36	600	7630	6							
35.70	39	600	7630	7							
30.28	46	600	7310	7	K	34 kg	K	34 kg	K	41 kg	
27.34	51	600	6930	7	KF	39 kg	KF	39 kg	KF	46 kg	
24.05	58	600	6480	7	KA	32 kg	KA	32 kg	KA	39 kg	
22.71	62	600	6280	7	KAF	38 kg	KAF	38 kg	KAF	45 kg	
19.34	72	575	5910	7							
17.57	80	555	5740	7							
15.22	92	535	5430	7							
13.25	106	510	5190	7							
11.92	117	415	5150	9							
11.26	124	415	4990	9							
9.59	146	405	4650	10							
8.71	161	390	4520	10							
7.55	185	365	4360	10							
6.57	213	345	4190	10							
4.69	299	300	3800	11							

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

IEC	**K**	441	**NEMA**	**K**	482
	KF	442		**KF**	482
	KA	443		**KA**	482
	KAF	442		**KAF**	482

K67, n_e = 1400 1/min													820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63		AM71		AM80		AM90	
144.79*	9.7	820	10300	6								
123.54	11	820	10300	6								
108.03	13	820	10300	6								
102.62	14	820	10300	6								
90.04	16	820	10300	6								
76.37	18	820	10300	6								
68.95	20	820	10300	6								
60.66	23	820	10300	6								
57.28	24	820	10300	6								
48.77	29	820	10300	6								
44.32	32	820	10300	6								
38.39	36	800	10500	6								
35.62	39	820	10300	7		K 33 kg		K 33 kg		K 35 kg		K 35 kg
30.22	46	820	10300	7		KF 38 kg		KF 39 kg		KF 41 kg		KF 41 kg
27.28	51	820	10300	7		KA 30 kg		KA 30 kg		KA 33 kg		KA 33 kg
24.00	58	800	10500	7		KAF 36 kg		KAF 36 kg		KAF 38 kg		KAF 38 kg
22.66	62	780	10700	7								
19.30	73	760	10800	7								
17.54	80	740	11000	7								
15.19	92	700	11300	8								
13.22	106	670	11500	8								
12.48	112	530	12300	9								
10.63	132	500	11800	9								
9.66	145	480	11500	9								
8.37	167	440	11100	9								
7.28	192	420	10700	9								
5.20	269	350	9870	10								

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC

K	446
KF	447
KA	448
KAF	447

NEMA

K	482
KF	482
KA	482
KAF	482

K67, n_e = 1400 1/min												820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100			AM112			AM132S/M		
144.79*	9.7	820	10300	6									
123.54	11	820	10300	6									
108.03	13	820	10300	6									
102.62	14	820	10300	6									
90.04	16	820	10300	6									
76.37	18	820	10300	6									
68.95	20	820	10300	6									
60.66	23	820	10300	6									
57.28	24	820	10300	6									
48.77	29	820	10300	6									
44.32	32	820	10300	6									
38.39	36	800	10500	6									
35.62	39	820	10300	7		K	40 kg		K	40 kg		K	47 kg
30.22	46	820	10300	7		KF	46 kg		KF	46 kg		KF	53 kg
27.28	51	820	10300	7		KA	37 kg		KA	37 kg		KA	44 kg
24.00	58	800	10500	7		KAF	43 kg		KAF	43 kg		KAF	50 kg
22.66	62	780	10700	7									
19.30	73	760	10800	7									
17.54	80	740	11000	7									
15.19	92	700	11300	8									
13.22	106	670	11500	8									
12.48	112	530	12300	9									
10.63	132	500	11800	9									
9.66	145	480	11500	9									
8.37	167	440	11100	9									
7.28	192	420	10700	9									
5.20	269	350	9870	10									

	AM182	AM184	AM213/215
NEMA **+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

	IEC	**K**	446	**NEMA**	**K**	482
		KF	447		**KF**	482
		KA	448		**KA**	482
		KAF	447		**KAF**	482

K77, n_e = 1400 1/min															1550 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM63			AM71			AM80			AM90		
192.18	7.3	1450	16100	5												
179.37	7.8	1450	16100	5												
154.02	9.1	1550	15400	5												
135.28	10	1550	15400	5												
128.52	11	1550	15400	5												
113.56	12	1550	15400	5												
97.05	14	1550	15400	5												
88.97	16	1550	15400	5												
78.07	18	1550	15400	5												
73.99	19	1550	15400	5												
64.75	22	1550	15400	5												
58.34	24	1550	15400	6												
51.18	27	1550	15400	6												
45.16	31	1550	15400	6												
40.04	35	1550	15400	6		K	57 kg		K	58 kg		K	60 kg		K	60 kg
38.39	36	1500	15700	6		KF	66 kg		KF	66 kg		KF	68 kg		KF	68 kg
35.20	40	1550	15400	6		KA	50 kg		KA	50 kg		KA	52 kg		KA	52 kg
30.89	45	1550	15400	6		KAF	58 kg		KAF	58 kg		KAF	60 kg		KAF	60 kg
29.27	48	1550	15400	6												
25.62	55	1550	15400	6												
23.08	61	1550	15400	6												
20.25	69	1500	15700	6												
17.87	78	1450	16100	6												
15.84	88	1400	15500	6												
13.52	104	1340	14800	7												
12.36	113	1000	15100	8												
10.84	129	990	14400	8												
9.56	146	940	13900	8												
8.48	165	890	13500	8												
7.24	193	820	13100	8												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

	IEC	**K**	451	**NEMA**	**K**	482
		KF	452		**KF**	482
		KA	453		**KA**	482
		KAF	452		**KAF**	482

K77, n_e = 1400 1/min															1550 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100			AM112			AM132S/M			AM132ML		
192.18	7.3	1450	16100	5												
179.37	7.8	1450	16100	5												
154.02	9.1	1550	15400	5												
135.28	10	1550	15400	5												
128.52	11	1550	15400	5												
113.56	12	1550	15400	5												
97.05	14	1550	15400	5												
88.97	16	1550	15400	5												
78.07	18	1550	15400	5												
73.99	19	1550	15400	5												
64.75	22	1550	15400	5												
58.34	24	1550	15400	6												
51.18	27	1550	15400	6												
45.16	31	1550	15400	6												
40.04	35	1550	15400	6		K	64 kg		K	64 kg		K	71 kg		K	71 kg
38.39	36	1500	15700	6		KF	73 kg		KF	73 kg		KF	80 kg		KF	80 kg
35.20	40	1550	15400	6		KA	57 kg		KA	57 kg		KA	64 kg		KA	64 kg
30.89	45	1550	15400	6		KAF	65 kg		KAF	65 kg		KAF	72 kg		KAF	72 kg
29.27	48	1550	15400	6												
25.62	55	1550	15400	6												
23.08	61	1550	15400	6												
20.25	69	1500	15700	6												
17.87	78	1450	16100	6												
15.84	88	1400	15500	6												
13.52	104	1340	14800	7												
12.36	113	1000	15100	8												
10.84	129	990	14400	8												
9.56	146	940	13900	8												
8.48	165	890	13500	8												
7.24	193	820	13100	8												

		AM182	AM184	AM213/215	-
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC

K	451
KF	452
KA	453
KAF	452

NEMA

K	482
KF	482
KA	482
KAF	482

K87, n_e = 1400 1/min															2700 Nm	
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM80		AM90		AM100		AM112	
197.37	7.1	2700	27300	5								
174.19	8.0	2700	27300	5								
164.34*	8.5	2700	27300	5								
147.32*	9.5	2700	27300	5								
126.91*	11	2700	27300	5								
115.82	12	2700	27300	5								
102.71*	14	2700	27300	5								
86.34	16	2700	27300	5								
79.34	18	2700	27300	5								
70.46	20	2700	27300	5								
63.00*	22	2700	26200	5								
56.64	25	2700	25000	5								
49.16	28	2700	23500	5								
44.02	32	2600	22800	6	K	95 kg	K	95 kg	K	100 kg	K	100 kg
36.52*	38	2500	21400	6	KF	105 kg	KF	105 kg	KF	110 kg	KF	110 kg
31.39	45	2700	19200	6	KA	83 kg	KA	83 kg	KA	89 kg	KA	89 kg
27.88	50	2600	18500	6	KAF	96 kg	KAF	97 kg	KAF	100 kg	KAF	100 kg
24.92	56	2500	18000	6								
22.41	62	2300	17900	6								
19.45	72	2300	16800	6								
17.42	80	2200	16300	6								
16.00	88	1800	16000	6								
14.45	97	2100	15300	6								
12.56	111	2000	14800	6								
11.17	125	1500	14900	7								
10.00	140	1500	14200	7								
8.29	169	1400	13500	7								
7.21	194	1300	13200	7								

		AM143	AM145	AM182	AM184
NEMA	**+ kg**	-- kg	-- kg	- 1.0 kg	- 1.0 kg

IEC	**K**	456	**NEMA**	**K**	482
	KF	457		**KF**	482
	KA	458		**KA**	482
	KAF	457		**KAF**	482

K87, n_e = 1400 1/min															2700 Nm	
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM132S/M			AM132ML			AM160			AM180		
197.37	7.1	2700	27300	5												
174.19	8.0	2700	27300	5												
164.34*	8.5	2700	27300	5												
147.32*	9.5	2700	27300	5												
126.91*	11	2700	27300	5												
115.82	12	2700	27300	5												
102.71*	14	2700	27300	5												
86.34	16	2700	27300	5												
79.34	18	2700	27300	5												
70.46	20	2700	27300	5												
63.00*	22	2700	26200	5												
56.64	25	2700	25000	5												
49.16	28	2700	23500	5												
44.02	32	2600	22800	6	K	110 kg		K	110 kg		K	125 kg		K	125 kg	
36.52*	38	2500	21400	6	KF	115 kg		KF	115 kg		KF	135 kg		KF	135 kg	
31.39	45	2700	19200	6	KA	96 kg		KA	96 kg		KA	110 kg		KA	110 kg	
27.88	50	2600	18500	6	KAF	110 kg		KAF	110 kg		KAF	125 kg		KAF	125 kg	
24.92	56	2500	18000	6												
22.41	62	2300	17900	6												
19.45	72	2300	16800	6												
17.42	80	2200	16300	6												
16.00	88	1800	16000	6												
14.45	97	2100	15300	6												
12.56	111	2000	14800	6												
11.17	125	1500	14900	7												
10.00	140	1500	14200	7												
8.29	169	1400	13500	7												
7.21	194	1300	13200	7												

		AM213/215	-	AM254/256	AM284/286
NEMA	**+ kg**	- 2.0 kg	-	- 5.0 kg	- 3.0 kg

IEC	**K**	456	**NEMA**	**K**	482
	KF	457		**KF**	482
	KA	458		**KA**	482
	KAF	457		**KAF**	482

K97, n_e = 1400 1/min													**4300 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM100**		**AM112**		**AM132S/M**		**AM132ML**		
176.05*	8.0	4300	40000	7									
153.21*	9.1	4300	40000	7									
140.28	10	4300	40000	7									
123.93*	11	4300	40000	7									
105.13	13	4300	40000	7									
96.80	14	4300	40000	7									
86.52	16	4300	38800	7									
77.89*	18	4300	37100	7									
70.54	20	4300	35600	7									
62.55	22	4300	33800	7									
56.55	25	4300	32300	7									
47.93*	29	4300	30000	7									
41.87	33	4300	28300	7		K 160 kg		K 160 kg		K 165 kg		K 165 kg	
38.30	37	4300	27100	7		KF 180 kg		KF 180 kg		KF 185 kg		KF 185 kg	
34.23	41	4300	25700	7		KA 140 kg		KA 140 kg		KA 150 kg		KA 150 kg	
30.82	45	4300	24500	7		KAF 165 kg		KAF 165 kg		KAF 175 kg		KAF 175 kg	
27.91	50	4300	23300	8									
24.75	57	4300	22000	8									
22.37	63	4300	20900	8									
18.96	74	4300	19100	8									
16.56	85	4300	17800	8									
13.85	101	4300	16100	8									
11.99	117	3890	16200	8									
10.41	134	2870	16400	10									
8.71	161	2660	15800	10									
7.54	186	2400	0	-									

		AM182	**AM184**	**AM213/215**	**-**
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC

K	461
KF	462
KA	463
KAF	462

NEMA

K	483
KF	483
KA	483
KAF	483

K97, n_e = 1400 1/min								4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160	AM180	AM200	
176.05*	8.0	4300	40000	7				
153.21*	9.1	4300	40000	7				
140.28	10	4300	40000	7				
123.93*	11	4300	40000	7				
105.13	13	4300	40000	7				
96.80	14	4300	40000	7				
86.52	16	4300	38800	7				
77.89*	18	4300	37100	7				
70.54	20	4300	35600	7				
62.55	22	4300	33800	7				
56.55	25	4300	32300	7				
47.93*	29	4300	30000	7				
41.87	33	4300	28300	7	K 185 kg KF 205 kg	K 185 kg KF 205 kg	K 200 kg KF 220 kg	
38.30	37	4300	27100	7	KA 165 kg	KA 165 kg	KA 185 kg	
34.23	41	4300	25700	7	KAF 190 kg	KAF 190 kg	KAF 210 kg	
30.82	45	4300	24500	7				
27.91	50	4300	23300	8				
24.75	57	4300	22000	8				
22.37	63	4300	20900	8				
18.96	74	4300	19100	8				
16.56	85	4300	17800	8				
13.85	101	4300	16100	8				
11.99	117	3890	16200	8				
10.41	134	2870	16400	10				
8.71	161	2660	15800	10				
7.54	186	2400	0	-				

		AM254/256	AM284/286	AM324/326
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

IEC

K	461
KF	462
KA	463
KAF	462

NEMA

K	483
KF	483
KA	483
KAF	483

K107, n_e = 1400 1/min														**8000 Nm**	
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM100**		**AM112**		**AM132S/M**		**AM132ML**				
143.47*	9.8	8000	65000	6											
121.46	12	8000	61700	6											
112.41*	12	8000	59700	6											
100.75	14	8000	57000	6											
90.96*	15	8000	54600	6											
82.61	17	8000	52400	6											
73.30	19	8000	49700	6											
66.52*	21	8000	47600	6											
57.17*	24	8000	44400	6											
49.90	28	7840	42200	6											
42.33*	33	7360	40500	6											
37.00*	38	7200	38500	6		K 275 kg		K 275 kg		K 280 kg		K 280 kg			
32.69	43	7200	36300	6		KF 285 kg		KF 285 kg		KF 290 kg		KF 290 kg			
31.28*	45	6800	36700	6		KA 250 kg		KA 250 kg		KA 250 kg		KA 250 kg			
29.00	48	7200	34000	6		KAF 270 kg		KAF 270 kg		KAF 275 kg		KAF 275 kg			
26.32	53	7200	32000	6											
22.62	62	7200	28900	6											
19.74	71	7200	26100	6											
16.75	84	7050	23600	7											
14.64	96	6890	21900	7											
13.43	104	4300	29200	9											
11.73	119	4300	27500	9											
9.94	141	4190	25800	9											
8.69	161	4070	24600	9											
7.35	190	3600	0	-											

	AM182	**AM184**	**AM213/215**	**-**
NEMA **+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC			**NEMA**	
K	466		**K**	483
KF	467		**KF**	483
KA	468		**KA**	483
KAF	467		**KAF**	483

K107, n_e = 1400 1/min															8000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM160			AM180			AM200			AM225		
143.47*	9.8	8000	65000	6												
121.46	12	8000	61700	6												
112.41*	12	8000	59700	6												
100.75	14	8000	57000	6												
90.96*	15	8000	54600	6												
82.61	17	8000	52400	6												
73.30	19	8000	49700	6												
66.52*	21	8000	47600	6												
57.17*	24	8000	44400	6												
49.90	28	7840	42200	6												
42.33*	33	7360	40500	6												
37.00*	38	7200	38500	6		K	295 kg		K	295 kg		K	315 kg		K	320 kg
32.69	43	7200	36300	6		KF	310 kg		KF	310 kg		KF	325 kg		KF	330 kg
31.28*	45	6800	36700	6		KA	270 kg		KA	270 kg		KA	285 kg		KA	290 kg
29.00	48	7200	34000	6		KAF	295 kg		KAF	295 kg		KAF	310 kg		KAF	315 kg
26.32	53	7200	32000	6												
22.62	62	7200	28900	6												
19.74	71	7200	26100	6												
16.75	84	7050	23600	7												
14.64	96	6890	21900	7												
13.43	104	4300	29200	9												
11.73	119	4300	27500	9												
9.94	141	4190	25800	9												
8.69	161	4070	24600	9												
7.35	190	3600	0	-												

	AM254/256	AM284/286	AM324/326	AM364/365
NEMA **+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg	- 7.0 kg

IEC	**K**	466	**NEMA**	**K**	483
	KF	467		**KF**	483
	KA	468		**KA**	483
	KAF	467		**KAF**	483

K127, n_e = 1400 1/min													**13000 Nm**	
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM132S/M**		**AM132ML**		**AM160**		**AM180**			
146.07	9.6	13000	79200	5										
136.14	10	13000	79200	5										
122.48	11	13000	79200	5										
110.18	13	13000	79200	5										
89.89	16	13000	75100	5										
81.98	17	13000	72100	5										
70.95*	20	13000	67700	5										
62.60	22	13000	64000	5										
54.07	26	13000	59900	5										
47.82	29	13000	56500	5		K 440 kg		K 440 kg		K 455 kg		K 455 kg		
40.19	35	13000	52000	5		KF 485 kg		KF 485 kg		KF 495 kg		KF 495 kg		
36.25	39	13000	49400	6		KA 415 kg		KA 415 kg		KA 425 kg		KA 425 kg		
31.37	45	13000	45900	6		KAF 450 kg		KAF 450 kg		KAF 465 kg		KAF 465 kg		
27.68	51	13000	43000	6										
23.91	59	13000	39800	6										
21.15	66	13000	37200	6										
17.77	79	13000	33600	6										
14.35	98	12100	31800	6										
12.79	109	8530	35400	8										
10.74	130	8000	33900	8										
8.68	161	7230	32500	8										

	AM213/215	**-**	**AM254/256**	**AM284/286**
NEMA + kg	- 2.0 kg	-	- 5.0 kg	- 3.0 kg

IEC	**K**	470	**NEMA**	**K**	483
	KF	471		**KF**	483
	KA	472		**KA**	483
	KAF	471		**KAF**	483

K127, n_e = 1400 1/min													13000 Nm	
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM200			AM225			AM250			AM280		
146.07	9.6	13000	79200	5												
136.14	10	13000	79200	5												
122.48	11	13000	79200	5												
110.18	13	13000	79200	5												
89.89	16	13000	75100	5												
81.98	17	13000	72100	5												
70.95*	20	13000	67700	5												
62.60	22	13000	64000	5												
54.07	26	13000	59900	5												
47.82	29	13000	56500	5		K	470 kg		K	475 kg		K	510 kg		K	510 kg
40.19	35	13000	52000	5		KF	510 kg		KF	520 kg		KF	550 kg		KF	550 kg
36.25	39	13000	49400	6		KA	440 kg		KA	445 kg		KA	475 kg		KA	475 kg
31.37	45	13000	45900	6		KAF	480 kg		KAF	485 kg		KAF	510 kg		KAF	510 kg
27.68	51	13000	43000	6												
23.91	59	13000	39800	6												
21.15	66	13000	37200	6												
17.77	79	13000	33600	6												
14.35	98	12100	31800	6												
12.79	109	8530	35400	8												
10.74	130	8000	33900	8												
8.68	161	7230	32500	8												

	AM324/326	AM364/365	-	-
NEMA + kg	- 2.0 kg	- 7.0 kg	-	-

IEC	**K**	470	**NEMA**	**K**	483
	KF	471		**KF**	483
	KA	472		**KA**	483
	KAF	471		**KAF**	483

K157, n_e = 1400 1/min												18000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160		AM180		AM200			
150.41	9.3	18000	112200	5								
122.39	11	18000	106500	5								
100.22	14	18000	98000	5								
91.65	15	18000	94400	5								
79.75	18	18000	88900	5								
70.38	20	18000	84200	5								
61.02	23	18000	79000	5								
54.29	26	18000	74900	5		K 690 kg		K 690 kg		K 710 kg		
46.79	30	18000	70000	5		KF 770 kg		KF 770 kg		KF 790 kg		
38.02	37	18000	63300	5		KA 650 kg		KA 650 kg		KA 670 kg		
31.30	45	18000	57500	6		KAF 710 kg		KAF 710 kg		KAF 730 kg		
27.62	51	18000	54000	6								
23.95	58	18000	50000	6								
21.31	66	18000	47000	6								
18.37	76	18000	43200	6								
14.92	94	18000	38200	6								
12.65	111	17000	36700	6								

	AM254/256	AM284/286	AM324/326
NEMA **+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

IEC	**K** 474 **KF** 475 **KA** 476 **KAF** 475	**NEMA**	**K** 483 **KF** 483 **KA** 483 **KAF** 483

K157, n_e = 1400 1/min												18000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM225			AM250			AM280		
150.41	9.3	18000	112200	5									
122.39	11	18000	106500	5									
100.22	14	18000	98000	5									
91.65	15	18000	94400	5									
79.75	18	18000	88900	5									
70.38	20	18000	84200	5									
61.02	23	18000	79000	5									
54.29	26	18000	74900	5		K	710 kg		K	740 kg		K	740 kg
46.79	30	18000	70000	5		KF	790 kg		KF	820 kg		KF	820 kg
38.02	37	18000	63300	5		KA	680 kg		KA	700 kg		KA	700 kg
31.30	45	18000	57500	6		KAF	740 kg		KAF	760 kg		KAF	760 kg
27.62	51	18000	54000	6									
23.95	58	18000	50000	6									
21.31	66	18000	47000	6									
18.37	76	18000	43200	6									
14.92	94	18000	38200	6									
12.65	111	17000	36700	6									

		AM364/365	-	-
NEMA	**+ kg**	- 7.0 kg	-	-

	IEC	**K**	474	**NEMA**	**K**	483
		KF	475		**KF**	483
		KA	476		**KA**	483
		KAF	475		**KAF**	483

K167, n_e = 1400 1/min												32000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM160			AM180			AM200		
164.50	8.5	32000	150000	4									
134.99	10	32000	150000	5									
109.83	13	32000	150000	5									
87.86	16	32000	147200	5									
78.14	18	32000	140100	5									
68.07	21	32000	132000	5									
60.74	23	32000	125600	5									
51.77	27	32000	117000	5		K	1080 kg		K	1080 kg		K	1100 kg
42.89	33	32000	107400	5		KH	1050 kg		KH	1050 kg		KH	1070 kg
36.61	38	32000	99700	5									
32.25	43	32000	93700	5									
28.77	49	32000	88600	5									
24.52	57	32000	81700	5									
20.32	69	32000	74000	5									
17.34	81	32000	67900	5									

		AM254/256	AM284/286	AM324/326
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

IEC **K** 478 **KH** 479 **NEMA** **K** 483 **KH** 483

K167, n_e = 1400 1/min												32000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM225			AM250			AM280		
164.50	8.5	32000	150000	4									
134.99	10	32000	150000	5									
109.83	13	32000	150000	5									
87.86	16	32000	147200	5									
78.14	18	32000	140100	5									
68.07	21	32000	132000	5									
60.74	23	32000	125600	5									
51.77	27	32000	117000	5		K	1110 kg		K	1130 kg		K	1130 kg
42.89	33	32000	107400	5		KH	1070 kg		KH	1100 kg		KH	1100 kg
36.61	38	32000	99700	5									
32.25	43	32000	93700	5									
28.77	49	32000	88600	5									
24.52	57	32000	81700	5									
20.32	69	32000	74000	5									
17.34	81	32000	67900	5									

		AM364/365	-	-
NEMA	**+ kg**	- 7.0 kg	-	-

	IEC	**K**	478	**NEMA**	**K**	483
		KH	479		**KH**	483

K187, n_e = 1400 1/min												50000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM160			AM180			AM200		
179.86	7.8	50000	189900	4									
165.21	8.5	50000	189900	4									
144.59	9.7	50000	189900	4									
129.69	11	50000	188200	4									
112.60	12	50000	177200	4									
102.16	14	50000	169900	4		K	1670 kg		K	1670 kg		K	1690 kg
88.00	16	50000	159000	4		KH	1600 kg		KH	1600 kg		KH	1620 kg
73.96	19	50000	147000	4									
64.04	22	50000	137500	4									
53.36	26	50000	126100	4									
45.50*	31	50000	116600	4									
42.51	33	50000	112700	4									
38.57	36	50000	107200	4									
33.23	42	50000	99100	4									
27.92	50	50000	90200	4		K	1670 kg		K	1670 kg		K	1690 kg
24.18	58	47600	86800	4		KH	1600 kg		KH	1600 kg		KH	1620 kg
20.15	69	43900	84000	4									
17.18	81	41400	80800	4									

		AM254/256	AM284/286	AM324/326
NEMA	**+ kg**	- 5.0 kg	- 3.0 kg	- 2.0 kg

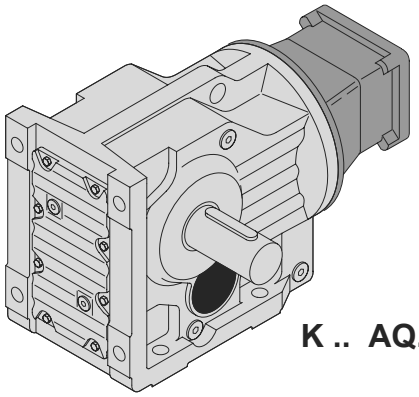
IEC **K** 480 **KH** 481 **NEMA** **K** 483 **KH** 483

K187, n_e = 1400 1/min												50000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM225			AM250			AM280		
179.86	7.8	50000	189900	4									
165.21	8.5	50000	189900	4									
144.59	9.7	50000	189900	4									
129.69	11	50000	188200	4									
112.60	12	50000	177200	4									
102.16	14	50000	169900	4		K	1690 kg		K	1720 kg		K	1720 kg
88.00	16	50000	159000	4		KH	1620 kg		KH	1650 kg		KH	1650 kg
73.96	19	50000	147000	4									
64.04	22	50000	137500	4									
53.36	26	50000	126100	4									
45.50*	31	50000	116600	4									
42.51	33	50000	112700	4									
38.57	36	50000	107200	4									
33.23	42	50000	99100	4									
27.92	50	50000	90200	4		K	1690 kg		K	1720 kg		K	1720 kg
24.18	58	47600	86800	4		KH	1620 kg		KH	1650 kg		KH	1650 kg
20.15	69	43900	84000	4									
17.18	81	41400	80800	4									

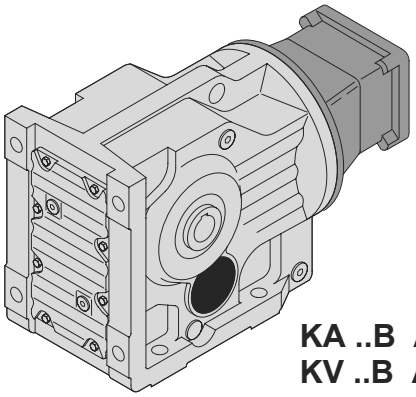
		AM364/365	-	-
NEMA	**+ kg**	- 7.0 kg	-	-

	IEC	**K**	480	**NEMA**	**K**	483
		KH	481		**KH**	483

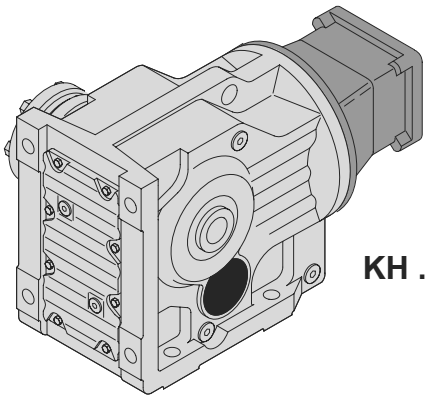
12.2 K.. AQ.. [Nm]



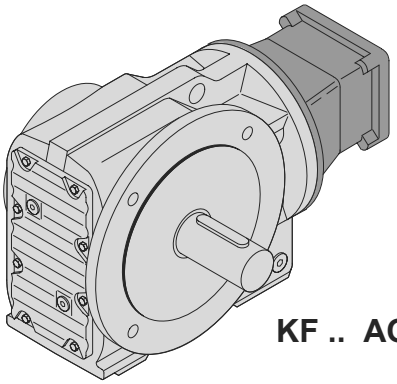
K .. AQ..



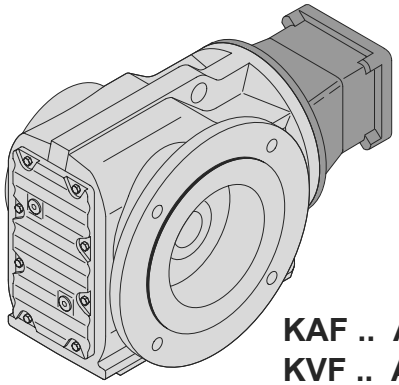
KA ..B AQ..
KV ..B AQ..



KH ..B AQ..

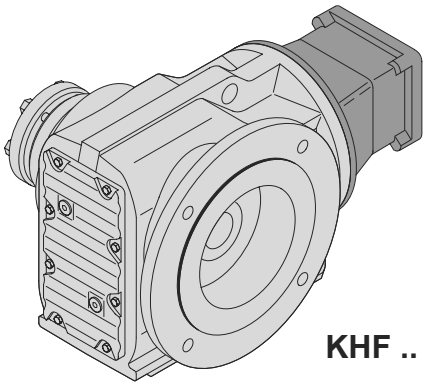


KF .. AQ..

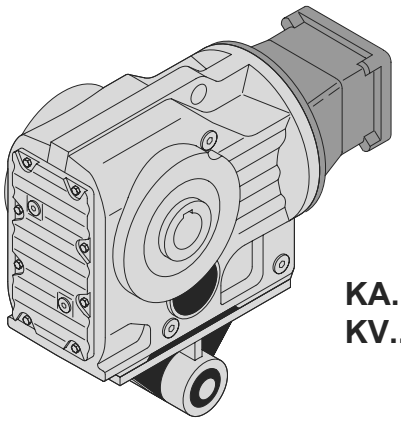


KAF .. AQ..
KVF .. AQ..

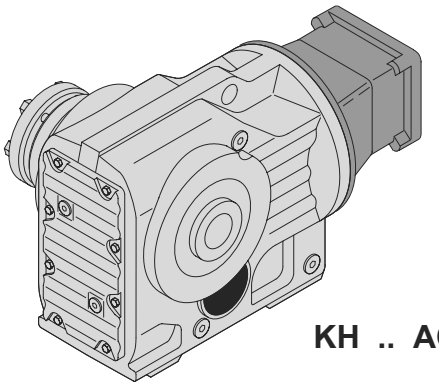
50407AXX



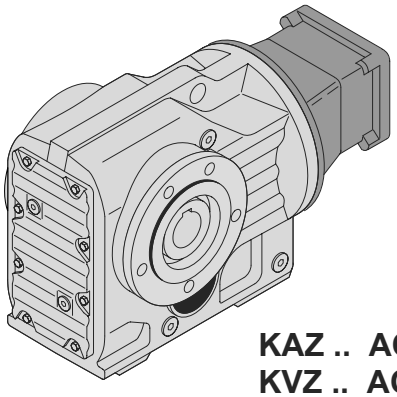
KHF .. AQ..



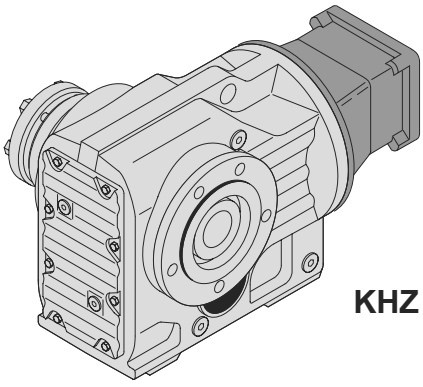
KA../T AQ..
KV../T AQ..



KH .. AQ..



KAZ .. AQ..
KVZ .. AQ..



KHZ .. AQ..

50408AXX

K37, n_e = 1400 1/min												200 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
106.38	13	200	5640	7									
97.81	14	200	5640	7									
83.69	17	200	5640	7									
72.54	19	200	5520	7									
67.80	21	200	5360	7									
58.60	24	200	5020	7									
49.79	28	200	4660	7									
44.46	31	200	4420	7									
37.97	37	200	4100	7									
35.57	39	200	3970	7									
29.96	47	200	3650	7									
28.83	49	200	3580	8									
24.99	56	200	3330	8		K	15 kg		K	16 kg		K	16 kg
23.36	60	195	3260	8		KF	18 kg		KF	18 kg		KF	19 kg
20.19	69	185	3110	8		KA	15 kg		KA	16 kg		KA	16 kg
17.15	82	180	2900	8		KAF	17 kg		KAF	17 kg		KAF	18 kg
15.31	91	175	2780	9									
13.08	107	165	2650	9									
12.14	115	160	2600	12									
10.49	133	160	2410	12									
8.91	157	160	2200	12									
7.96	176	155	2110	13									
6.80	206	150	1980	13									
6.37	220	145	1950	13									
5.36	261	140	1810	13									
3.98	352	125	1660	13									

K 484
KF 484
KA 484
KAF 484

K47, n_e = 1400 1/min												400 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
131.87*	11	400	5920	6									
121.48*	12	400	5920	6									
104.37	13	400	5920	6									
90.86	15	400	5920	6									
85.12*	16	400	5920	6									
75.20*	19	400	5920	6									
69.84	20	400	5920	6									
63.30*	22	400	5920	7									
56.83	25	400	5920	7									
48.95*	29	400	5920	7									
46.03*	30	400	5920	7									
39.61	35	400	5920	7									
35.39	40	400	5920	7									
31.30	45	400	5700	7									
29.32	48	400	5520	8		K	22 kg		K	23 kg		K	23 kg
25.91	54	400	5170	8		KF	25 kg		KF	26 kg		KF	26 kg
24.06	58	400	4970	8		KA	21 kg		KA	22 kg		KA	22 kg
21.81	64	400	4710	8		KAF	24 kg		KAF	25 kg		KAF	25 kg
19.58	72	400	4440	8									
16.86	83	380	4230	8									
15.86	88	380	4080	8									
13.65	103	360	3890	8									
12.19	115	350	3720	8									
11.77	119	280	4060	10									
10.56	133	280	3830	11									
9.10	154	280	3540	11									
8.56	164	270	3500	11									
7.36	190	250	3390	11									
6.58	213	240	3270	12									
5.81	241	230	3140	12									
4.64	302	205	2980	12									

K 484
KF 484
KA 484
KAF 484

K47, n_e = 1400 1/min						400 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3
131.87*	11	400	5920	6		
121.48*	12	400	5920	6		
104.37	13	400	5920	6		
90.86	15	400	5920	6		
85.12*	16	400	5920	6		
75.20*	19	400	5920	6		
69.84	20	400	5920	6		
63.30*	22	400	5920	7		
56.83	25	400	5920	7		
48.95*	29	400	5920	7		
46.03*	30	400	5920	7		
39.61	35	400	5920	7		
35.39	40	400	5920	7		
31.30	45	400	5700	7		
29.32	48	400	5520	8	K 28 kg	K 28 kg
25.91	54	400	5170	8	KF 31 kg	KF 31 kg
24.06	58	400	4970	8	KA 27 kg	KA 27 kg
21.81	64	400	4710	8	KAF 30 kg	KAF 30 kg
19.58	72	400	4440	8		
16.86	83	380	4230	8		
15.86	88	380	4080	8		
13.65	103	360	3890	8		
12.19	115	350	3720	8		
11.77	119	280	4060	10		
10.56	133	280	3830	11		
9.10	154	280	3540	11		
8.56	164	270	3500	11		
7.36	190	250	3390	11		
6.58	213	240	3270	12		
5.81	241	230	3140	12		
4.64	302	205	2980	12		

K 484
KF 484
KA 484
KAF 484

K57, n_e = 1400 1/min												600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
145.14*	9.6	600	7630	6									
123.85	11	600	7630	6									
108.29	13	600	7630	6									
102.88*	14	600	7630	6									
90.26*	16	600	7630	6									
76.56*	18	600	7630	6									
69.12	20	600	7630	6									
60.81*	23	600	7630	6									
57.42*	24	600	7630	6									
48.89	29	600	7630	6									
44.43	32	600	7630	6									
38.49	36	600	7630	6									
35.70	39	600	7630	7									
30.28	46	600	7310	7		K	28 kg		K	28 kg		K	29 kg
27.34	51	600	6930	7		KF	33 kg		KF	33 kg		KF	34 kg
24.05	58	600	6480	7		KA	26 kg		KA	26 kg		KA	27 kg
22.71	62	600	6280	7		KAF	32 kg		KAF	32 kg		KAF	33 kg
19.34	72	575	5910	7									
17.57	80	555	5740	7									
15.22	92	535	5430	7									
13.25	106	510	5190	7									
11.92	117	415	5150	9									
11.26	124	415	4990	9									
9.59	146	405	4650	10									
8.71	161	390	4520	10									
7.55	185	365	4360	10									
6.57	213	345	4190	10									
4.69	299	300	3800	11									

K 485
KF 485
KA 485
KAF 485

K57, n_e = 1400 1/min								600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
145.14*	9.6	600	7630	6				
123.85	11	600	7630	6				
108.29	13	600	7630	6				
102.88*	14	600	7630	6				
90.26*	16	600	7630	6				
76.56*	18	600	7630	6				
69.12	20	600	7630	6				
60.81*	23	600	7630	6				
57.42*	24	600	7630	6				
48.89	29	600	7630	6				
44.43	32	600	7630	6				
38.49	36	600	7630	6				
35.70	39	600	7630	7				
30.28	46	600	7310	7	K 34 kg KF 39 kg	K 34 kg KF 39 kg	K 43 kg KF 47 kg	
27.34	51	600	6930	7	KA 32 kg	KA 32 kg	KA 41 kg	
24.05	58	600	6480	7	KAF 37 kg	KAF 37 kg	KAF 46 kg	
22.71	62	600	6280	7				
19.34	72	575	5910	7				
17.57	80	555	5740	7				
15.22	92	535	5430	7				
13.25	106	510	5190	7				
11.92	117	415	5150	9				
11.26	124	415	4990	9				
9.59	146	405	4650	10				
8.71	161	390	4520	10				
7.55	185	365	4360	10				
6.57	213	345	4190	10				
4.69	299	300	3800	11				

K 485
KF 485
KA 485
KAF 485

K67, n_e = 1400 1/min												820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
144.79*	9.7	820	10300	6									
123.54	11	820	10300	6									
108.03	13	820	10300	6									
102.62	14	820	10300	6									
90.04	16	820	10300	6									
76.37	18	820	10300	6									
68.95	20	820	10300	6									
60.66	23	820	10300	6									
57.28	24	820	10300	6									
48.77	29	820	10300	6									
44.32	32	820	10300	6									
38.39	36	800	10500	6									
35.62	39	820	10300	7		K	34 kg		K	34 kg		K	35 kg
30.22	46	820	10300	7		KF	39 kg		KF	40 kg		KF	40 kg
27.28	51	820	10300	7		KA	31 kg		KA	32 kg		KA	32 kg
24.00	58	800	10500	7		KAF	37 kg		KAF	37 kg		KAF	38 kg
22.66	62	780	10700	7									
19.30	73	760	10800	7									
17.54	80	740	11000	7									
15.19	92	700	11300	8									
13.22	106	670	11500	8									
12.48	112	530	12300	9									
10.63	132	500	11800	9									
9.66	145	480	11500	9									
8.37	167	440	11100	9									
7.28	192	420	10700	9									
5.20	269	350	9870	10									

K 485
KF 485
KA 485
KAF 485

K67, n_e = 1400 1/min								820 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
144.79*	9.7	820	10300	6				
123.54	11	820	10300	6				
108.03	13	820	10300	6				
102.62	14	820	10300	6				
90.04	16	820	10300	6				
76.37	18	820	10300	6				
68.95	20	820	10300	6				
60.66	23	820	10300	6				
57.28	24	820	10300	6				
48.77	29	820	10300	6				
44.32	32	820	10300	6				
38.39	36	800	10500	6				
35.62	39	820	10300	7	K 40 kg	K 40 kg	K 48 kg	
30.22	46	820	10300	7	KF 45 kg	KF 45 kg	KF 54 kg	
27.28	51	820	10300	7	KA 37 kg	KA 37 kg	KA 46 kg	
24.00	58	800	10500	7	KAF 43 kg	KAF 43 kg	KAF 51 kg	
22.66	62	780	10700	7				
19.30	73	760	10800	7				
17.54	80	740	11000	7				
15.19	92	700	11300	8				
13.22	106	670	11500	8				
12.48	112	530	12300	9				
10.63	132	500	11800	9				
9.66	145	480	11500	9				
8.37	167	440	11100	9				
7.28	192	420	10700	9				
5.20	269	350	9870	10				

K 485
KF 485
KA 485
KAF 485

K77, n_e = 1400 1/min												1550 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3	
192.18	7.3	1450	16100	5								
179.37	7.8	1450	16100	5								
154.02	9.1	1550	15400	5								
135.28	10	1550	15400	5								
128.52	11	1550	15400	5								
113.56	12	1550	15400	5								
97.05	14	1550	15400	5								
88.97	16	1550	15400	5								
78.07	18	1550	15400	5								
73.99	19	1550	15400	5								
64.75	22	1550	15400	5								
58.34	24	1550	15400	6								
51.18	27	1550	15400	6								
45.16	31	1550	15400	6								
40.04	35	1550	15400	6		K	58 kg		K	59 kg		K 60 kg
38.39	36	1500	15700	6		KF	67 kg		KF	67 kg		KF 68 kg
35.20	40	1550	15400	6		KA	51 kg		KA	52 kg		KA 52 kg
30.89	45	1550	15400	6		KAF	59 kg		KAF	59 kg		KAF 60 kg
29.27	48	1550	15400	6								
25.62	55	1550	15400	6								
23.08	61	1550	15400	6								
20.25	69	1500	15700	6								
17.87	78	1450	16100	6								
15.84	88	1400	15500	6								
13.52	104	1340	14800	7								
12.36	113	1000	15100	8								
10.84	129	990	14400	8								
9.56	146	940	13900	8								
8.48	165	890	13500	8								
7.24	193	820	13100	8								

K 486
KF 486
KA 486
KAF 486

K77, n_e = 1400 1/min								1550 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
192.18	7.3	1450	16100	5				
179.37	7.8	1450	16100	5				
154.02	9.1	1550	15400	5				
135.28	10	1550	15400	5				
128.52	11	1550	15400	5				
113.56	12	1550	15400	5				
97.05	14	1550	15400	5				
88.97	16	1550	15400	5				
78.07	18	1550	15400	5				
73.99	19	1550	15400	5				
64.75	22	1550	15400	5				
58.34	24	1550	15400	6				
51.18	27	1550	15400	6				
45.16	31	1550	15400	6				
40.04	35	1550	15400	6	K 64 kg KF 72 kg	K 64 kg KF 72 kg	K 73 kg KF 81 kg	
38.39	36	1500	15700	6	KA 57 kg	KA 57 kg	KA 65 kg	
35.20	40	1550	15400	6	KAF 65 kg	KAF 65 kg	KAF 73 kg	
30.89	45	1550	15400	6				
29.27	48	1550	15400	6				
25.62	55	1550	15400	6				
23.08	61	1550	15400	6				
20.25	69	1500	15700	6				
17.87	78	1450	16100	6				
15.84	88	1400	15500	6				
13.52	104	1340	14800	7				
12.36	113	1000	15100	8				
10.84	129	990	14400	8				
9.56	146	940	13900	8				
8.48	165	890	13500	8				
7.24	193	820	13100	8				

K 486
KF 486
KA 486
KAF 486

K87, n_e = 1400 1/min								2700 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..100/1-4	AQ..115/1-3	AQ..140/1-2	
197.37	7.1	2700	27300	5				
174.19	8.0	2700	27300	5				
164.34*	8.5	2700	27300	5				
147.32*	9.5	2700	27300	5				
126.91*	11	2700	27300	5				
115.82	12	2700	27300	5				
102.71*	14	2700	27300	5				
86.34	16	2700	27300	5				
79.34	18	2700	27300	5				
70.46	20	2700	27300	5				
63.00*	22	2700	26200	5				
56.64	25	2700	25000	5				
49.16	28	2700	23500	5				
44.02	32	2600	22800	6	K 95 kg KF 105 kg KA 83 kg KAF 96 kg	K 95 kg KF 105 kg KA 83 kg KAF 96 kg	K 100 kg KF 110 kg KA 88 kg KAF 100 kg	
36.52*	38	2500	21400	6				
31.39	45	2700	19200	6				
27.88	50	2600	18500	6				
24.92	56	2500	18000	6				
22.41	62	2300	17900	6				
19.45	72	2300	16800	6				
17.42	80	2200	16300	6				
16.00	88	1800	16000	6				
14.45	97	2100	15300	6				
12.56	111	2000	14800	6				
11.17	125	1500	14900	7				
10.00	140	1500	14200	7				
8.29	169	1400	13500	7				
7.21	194	1300	13200	7				

K 486
KF 486
KA 486
KAF 486

K87, n_e = 1400 1/min						2700 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/3	AQ..190/1-3
197.37	7.1	2700	27300	5		
174.19	8.0	2700	27300	5		
164.34*	8.5	2700	27300	5		
147.32*	9.5	2700	27300	5		
126.91*	11	2700	27300	5		
115.82	12	2700	27300	5		
102.71*	14	2700	27300	5		
86.34	16	2700	27300	5		
79.34	18	2700	27300	5		
70.46	20	2700	27300	5		
63.00*	22	2700	26200	5		
56.64	25	2700	25000	5		
49.16	28	2700	23500	5		
44.02	32	2600	22800	6	K 100 kg KF 110 kg KA 88 kg KAF 100 kg	K 110 kg KF 120 kg KA 97 kg KAF 110 kg
36.52*	38	2500	21400	6		
31.39	45	2700	19200	6		
27.88	50	2600	18500	6		
24.92	56	2500	18000	6		
22.41	62	2300	17900	6		
19.45	72	2300	16800	6		
17.42	80	2200	16300	6		
16.00	88	1800	16000	6		
14.45	97	2100	15300	6		
12.56	111	2000	14800	6		
11.17	125	1500	14900	7		
10.00	140	1500	14200	7		
8.29	169	1400	13500	7		
7.21	194	1300	13200	7		

K 486
KF 486
KA 486
KAF 486

K97, n_e = 1400 1/min								4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3
176.05*	8.0	4300	40000	7			
153.21*	9.1	4300	40000	7			
140.28	10	4300	40000	7			
123.93*	11	4300	40000	7			
105.13	13	4300	40000	7			
96.80	14	4300	40000	7			
86.52	16	4300	38800	7			
77.89*	18	4300	37100	7			
70.54	20	4300	35600	7			
62.55	22	4300	33800	7			
56.55	25	4300	32300	7			
47.93*	29	4300	30000	7			
41.87	33	4300	28300	7	K 160 kg KF 180 kg	K 160 kg KF 180 kg	K 170 kg KF 190 kg
38.30	37	4300	27100	7	KA 140 kg	KA 140 kg	KA 150 kg
34.23	41	4300	25700	7	KAF 165 kg	KAF 165 kg	KAF 175 kg
30.82	45	4300	24500	7			
27.91	50	4300	23300	8			
24.75	57	4300	22000	8			
22.37	63	4300	20900	8			
18.96	74	4300	19100	8			
16.56	85	4300	17800	8			
13.85	101	4300	16100	8			
11.99	117	3890	16200	8			
10.41	134	2870	16400	10			
8.71	161	2660	15800	10			
7.54	186	2400	0	-			

K 487
KF 487
KA 487
KAF 487

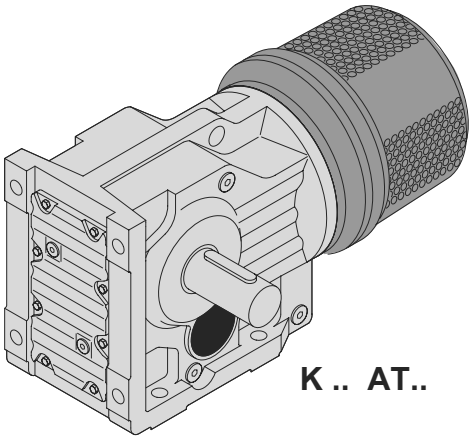
K107, n_e = 1400 1/min												8000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2			AQ..140/3			AQ..190/1-3		
143.47*	9.8	8000	65000	6									
121.46	12	8000	61700	6									
112.41*	12	8000	59700	6									
100.75	14	8000	57000	6									
90.96*	15	8000	54600	6									
82.61	17	8000	52400	6									
73.30	19	8000	49700	6									
66.52*	21	8000	47600	6									
57.17*	24	8000	44400	6									
49.90	28	7840	42200	6									
42.33*	33	7360	40500	6									
37.00*	38	7200	38500	6		K	275 kg		K	275 kg		K	285 kg
32.69	43	7200	36300	6		KF	285 kg		KF	285 kg		KF	295 kg
31.28*	45	6800	36700	6		KA	250 kg		KA	250 kg		KA	255 kg
29.00	48	7200	34000	6		KAF	270 kg		KAF	270 kg		KAF	280 kg
26.32	53	7200	32000	6									
22.62	62	7200	28900	6									
19.74	71	7200	26100	6									
16.75	84	7050	23600	7									
14.64	96	6890	21900	7									
13.43	104	4300	29200	9									
11.73	119	4300	27500	9									
9.94	141	4190	25800	9									
8.69	161	4070	24600	9									
7.35	190	3600	0	-									

K 487
KF 487
KA 487
KAF 487

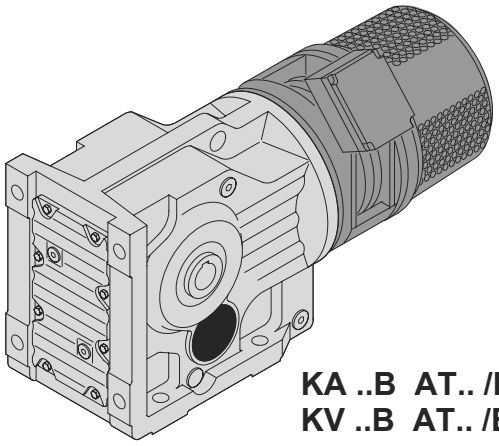
K127, n_e = 1400 1/min					13000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..190/1-3
146.07	9.6	13000	79200	5	
136.14	10	13000	79200	5	
122.48	11	13000	79200	5	
110.18	13	13000	79200	5	
89.89	16	13000	75100	5	
81.98	17	13000	72100	5	
70.95*	20	13000	67700	5	
62.60	22	13000	64000	5	
54.07	26	13000	59900	5	
47.82	29	13000	56500	5	K 440 kg
40.19	35	13000	52000	5	KF 485 kg
36.25	39	13000	49400	6	KA 415 kg
31.37	45	13000	45900	6	KAF 450 kg
27.68	51	13000	43000	6	
23.91	59	13000	39800	6	
21.15	66	13000	37200	6	
17.77	79	13000	33600	6	
14.35	98	12100	31800	6	
12.79	109	8530	35400	8	
10.74	130	8000	33900	8	
8.68	161	7230	32500	8	

K 487
KF 487
KA 487
KAF 487

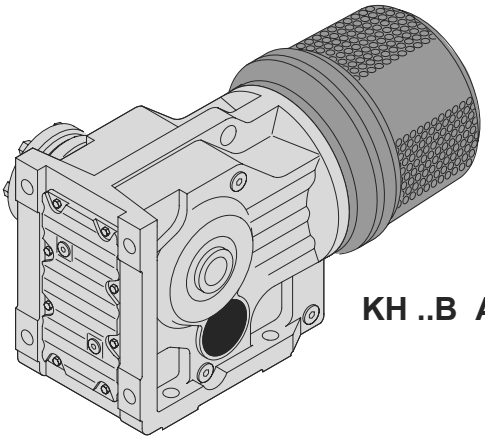
12.3 K.. AT..



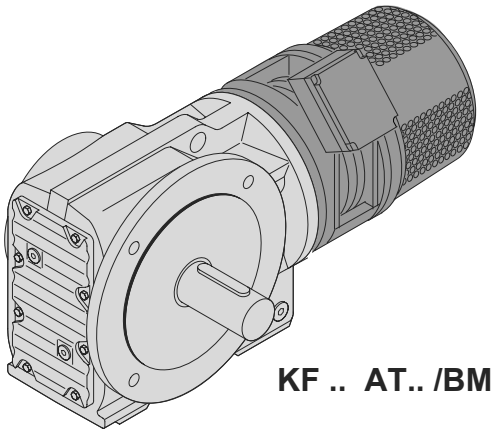
K .. AT..



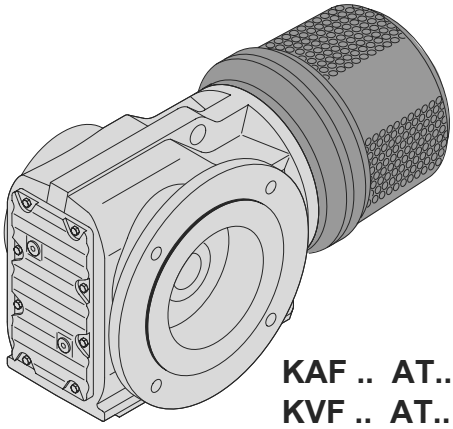
KA ..B AT.. /BM(G)
KV ..B AT.. /BM(G)



KH ..B AT..

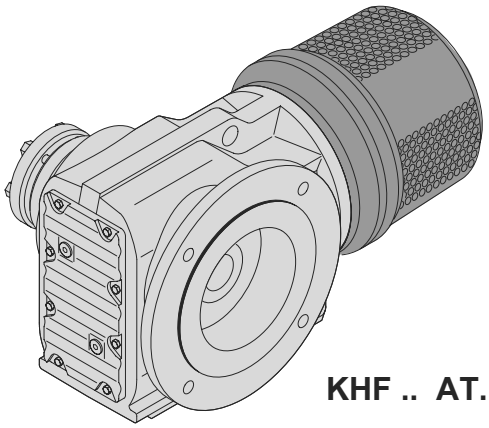


KF .. AT.. /BM(G)

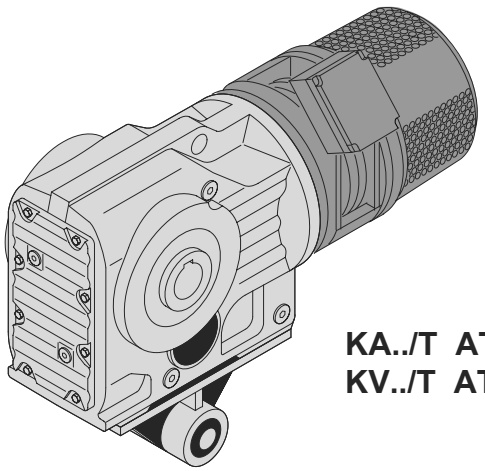


KAF .. AT..
KVF .. AT..

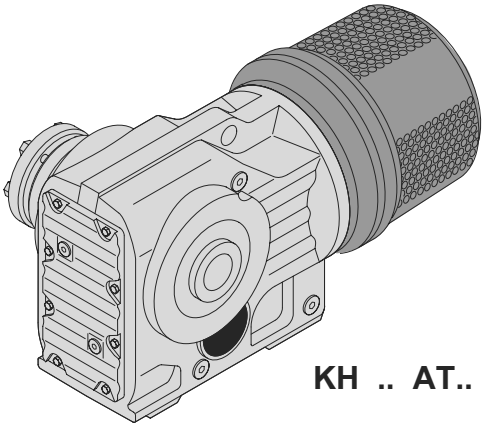
50411AXX



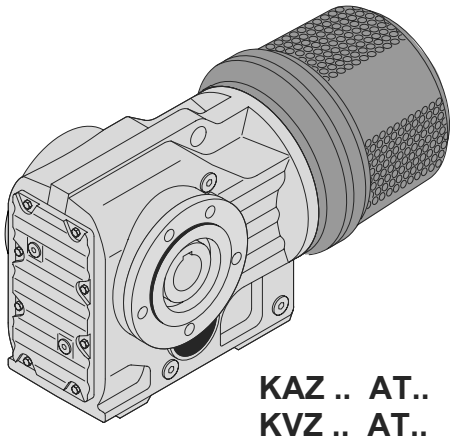
KHF .. AT..



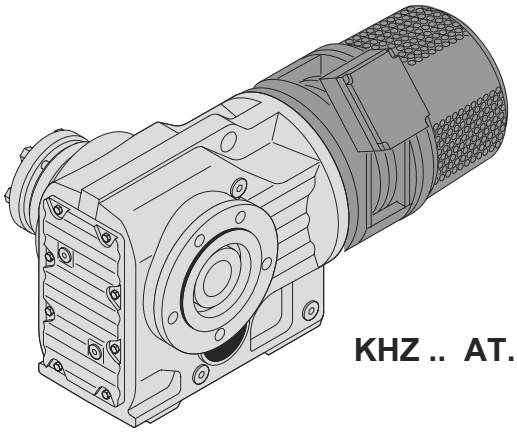
KA../T AT.. /BM(G)
KV../T AT.. /BM(G)



KH .. AT..



KAZ .. AT..
KVZ .. AT..



KHZ .. AT.. /BM(G)

50412AXX

n_e = 1400 1/min:

		P_m [kW]				S_n [%]	
K67	DT71D4	0.37	AT311	T11	0.42	12	490 493
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT321	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT322	T21D	1.53	11	
	DV112M4	4			1.6	12	
K77	DT71D4	0.37	AT311	T11	0.42	12	490 493
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
K87	DT90S4	1.1	AT312	T11D	0.72	15	491 494
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
K97	DT90S4	1.1	AT312	T11D	0.72	15	491 494
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	

n_e = 1400 1/min:

		P_m [kW]				S_n [%]	
K107	DV100M4	2.2	AT421	T21	0.9	13	492 495
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	
K127	DV132M4	7.5	AT541	T41	2.4	8	492 495
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	
K157 **K167** **K187**	DV160M4	11	AT541	T41	2.5	13	492 495
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	

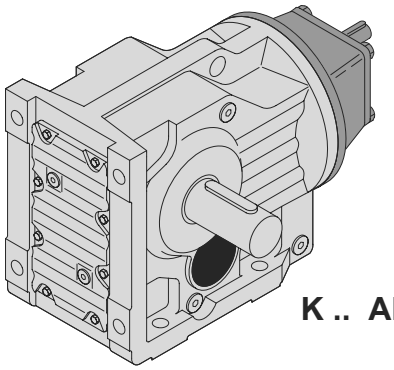
n_e = 2800 1/min:

		P_m [kW]				S_n [%]	
K67	DT71D2	0.55	AT311	T11	0.19	3	466 469
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
K77	DT71D2	0.55	AT311	T11	0.19	3	466 469
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
K87	DT90S2	1.5	AT311	T11	0.29	8.5	467 470
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
K97	DT90S2	1.5	AT311	T11	0.29	8.5	467 470
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	

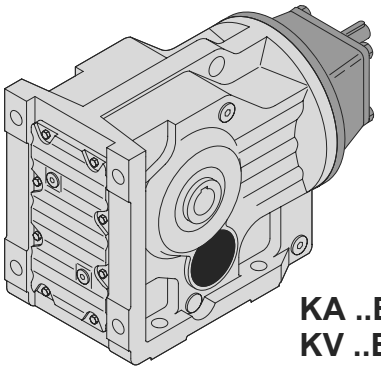
n_e = 2800 1/min:

		P_m [kW]				S_n [%]	
K107	DV100M2	3	AT311	T11	0.4	12	468 471
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	
K127	DT132M2	7.5	AT421	T21	0.6	8	468 471
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	
K157 **K167** **K187**	DV160L2	15	AT522	T21D	1.15	7.5	468 471
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	

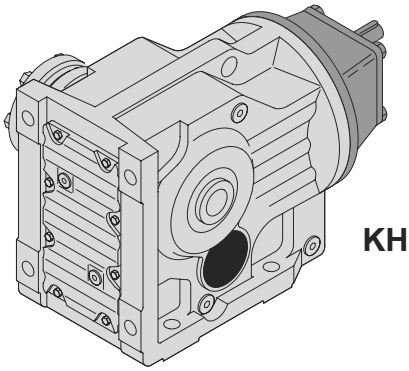
12.4 K.. AD.. [Nm]



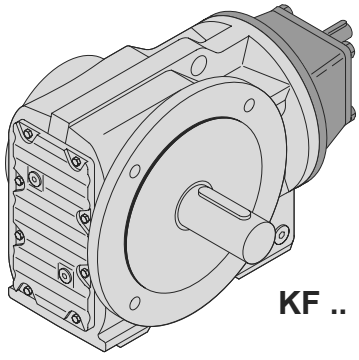
K .. AD..



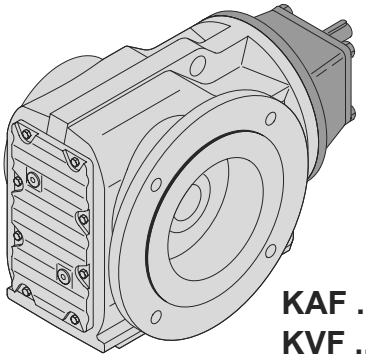
KA ..B AD..
KV ..B AD..



KH ..B AD..

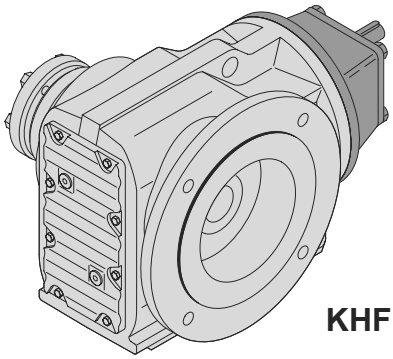


KF .. AD..

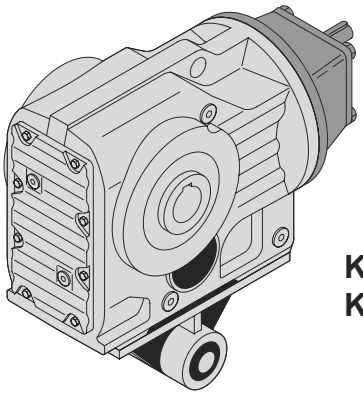


KAF .. AD..
KVF .. AD..

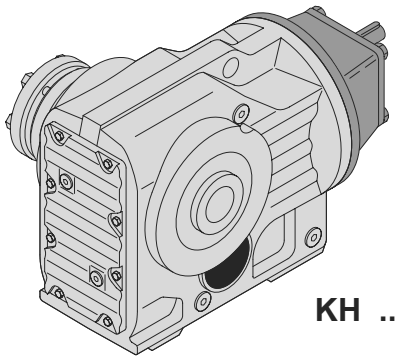
50409AXX



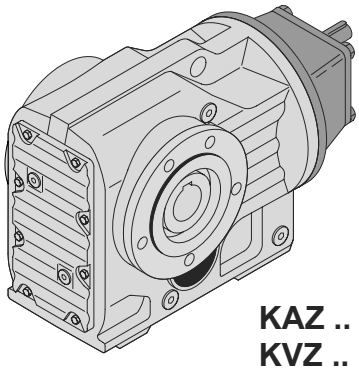
KHF .. AD..



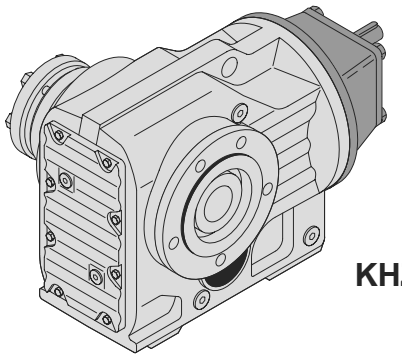
KA../T AD..
KV../T AD..



KH .. AD..



KAZ .. AD..
KVZ .. AD..



KHZ .. AD..

50410AXX

K37 AD... , n_e = 1400 1/min													200 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
106.38	13	200	0.32	5640	580	7	-						
97.81	14	200	0.35	5640	575	7	-						
83.69	17	200	0.41	5640	560	7	-						
72.54	19	200	0.46	5520	545	7	-	**K**	**37**		**AD1**	14	496
67.80	21	200	0.50	5360	535	7	-	**KF**	**37**		**AD1**	16	496
58.60	24	200	0.57	5020	510	7	-	**KA**	**37**		**AD1**	14	496
49.79	28	200	0.66	4660	495	7	-	**KAF**	**37**		**AD1**	15	496
44.46	31	200	0.74	4420	470	7	-						
37.97	37	200	0.86	4100	440	7	-						
35.57	39	200	0.92	3970	425	7	-						
29.96	47	200	1.1	3650	1710	7	-						
28.83	49	200	1.1	3580	1510	8	-						
24.99	56	200	1.3	3330	1500	8	-						
23.36	60	195	1.3	3260	1500	8	-						
20.19	69	185	1.5	3110	1500	8	-						
17.15	82	180	1.7	2900	1490	8	-						
15.31	91	175	1.8	2780	1490	9	-	**K**	**37**		**AD2**	15	496
13.08	107	165	2.0	2650	1490	9	-	**KF**	**37**		**AD2**	17	496
12.14	115	160	2.1	2600	1270	12	-	**KA**	**37**		**AD2**	15	496
10.49	133	160	2.4	2410	1230	12	-	**KAF**	**37**		**AD2**	16	496
8.91	157	160	2.8	2200	1200	12	-						
7.96	176	155	3.0	2110	1190	13	-						
6.80	206	150	3.4	1980	1170	13	-						
6.37	220	145	3.6	1950	1180	13	-						
5.36	261	140	4.1	1810	1140	13	-						
3.98	352	125	4.8	1660	1110	13	-						

K47 AD... , n_e = 1400 1/min													400 Nm
131.87*	11	400	0.52	5920	1530	6	-						
121.48*	12	400	0.55	5920	1520	6	-						
104.37	13	400	0.65	5920	1500	6	-						
90.86	15	400	0.73	5920	1470	6	-						
85.12*	16	400	0.78	5920	1460	6	-						
75.20*	19	400	0.88	5920	1430	6	-						
69.84	20	400	0.94	5920	1400	6	-						
63.30*	22	400	1.0	5920	1380	7	-						
56.83	25	400	1.1	5920	1660	7	-						
48.95*	29	400	1.3	5920	1640	7	-						
46.03*	30	400	1.4	5920	1640	7	-						
39.61	35	400	1.6	5920	1620	7	-	**K**	**47**		**AD2**	22	496
35.39	40	400	1.8	5920	1600	7	-	**KF**	**47**		**AD2**	25	496
31.30	45	400	2.0	5700	1290	7	-	**KA**	**47**		**AD2**	21	496
29.32	48	400	2.2	5520	1280	8	-	**KAF**	**47**		**AD2**	24	496
25.91	54	400	2.4	5170	1250	8	-						
24.06	58	400	2.6	4970	1230	8	-						
21.81	64	400	2.9	4710	1220	8	-						
19.58	72	400	3.2	4440	1190	8	-						
16.86	83	380	3.5	4230	1190	8	-						
15.86	88	380	3.7	4080	1170	8	-						
13.65	103	360	4.1	3890	1170	8	-						
12.19	115	350	4.5	3720	1140	8	-						
11.77	119	280	3.7	4060	1020	10	-						
10.56	133	280	4.1	3830	980	11	-						
9.10	154	280	4.8	3540	930	11	-						
8.56	164	270	4.9	3500	1960	11	-						
7.36	190	250	5.3	3390	1970	11	-	**K**	**47**		**AD3**	25	496
6.58	213	240	5.7	3270	1960	12	-	**KF**	**47**		**AD3**	28	496
5.81	241	230	6.2	3140	1960	12	-	**KA**	**47**		**AD3**	24	496
4.64	302	205	6.8	2980	1920	12	-	**KAF**	**47**		**AD3**	27	496

K57 AD... , n_e = 1400 1/min												600 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	📖
145.14*	9.7	600	0.69	7630	1270	6	-					
123.85	11	600	0.80	7630	1230	6	-					
108.29	13	600	0.91	7630	1200	6	-					
102.88*	14	600	0.96	7630	1200	6	-					
90.26*	16	600	1.1	7630	1600	6	-					
76.56*	18	600	1.3	7630	1590	6	-					
69.12	20	600	1.4	7630	1580	6	-					
60.81*	23	600	1.6	7630	1570	6	-					
57.42*	24	600	1.7	7630	1560	6	-	**K**	**57**	**AD2**	27	496
48.89	29	600	2.0	7630	1530	6	-	**KF**	**57**	**AD2**	32	496
44.43	32	600	2.2	7630	1520	6	-	**KA**	**57**	**AD2**	25	496
38.49	36	600	2.5	7630	1490	6	-	**KAF**	**57**	**AD2**	31	496
35.70	39	600	2.6	7630	1150	7	-					
30.28	46	600	3.1	7310	1110	7	-					
27.34	51	600	3.4	6930	1090	7	-					
24.05	58	600	3.9	6480	1060	7	-					
22.71	62	600	4.1	6280	1040	7	-					
19.34	72	575	4.6	5910	1010	7	-					
17.57	80	555	4.9	5740	1010	7	-					
15.22	92	535	5.5	5430	2020	7	-					
13.25	106	510	6.0	5190	2000	7	-					
11.92	117	415	5.4	5150	1760	9	-					
11.26	124	415	5.7	4990	1730	9	-	**K**	**57**	**AD3**	31	496
9.59	146	405	6.6	4650	1680	10	-	**KF**	**57**	**AD3**	35	496
8.71	161	390	7.0	4520	1680	10	-	**KA**	**57**	**AD3**	28	496
7.55	186	365	7.5	4360	1680	10	-	**KAF**	**57**	**AD3**	34	496
6.57	213	345	8.2	4190	1670	10	-					
4.69	298	300	9.8	3800	1630	11	-					

K67 AD... , n_e = 1400 1/min												820 Nm
144.79*	9.7	820	0.92	10300	870	6	-					
123.54	11	820	1.1	10300	1530	6	-					
108.03	13	820	1.2	10300	1510	6	-					
102.62	14	820	1.3	10300	1510	6	-					
90.04	16	820	1.5	10300	1490	6	-					
76.37	18	820	1.7	10300	1470	6	-	**K**	**67**	**AD2**	33	496
68.95	20	820	1.9	10300	1460	6	-	**KF**	**67**	**AD2**	39	496
60.66	23	820	2.2	10300	1440	6	-	**KA**	**67**	**AD2**	31	496
57.28	24	820	2.3	10300	1430	6	-	**KAF**	**67**	**AD2**	36	496
48.77	29	820	2.7	10300	1400	6	-					
44.32	32	820	2.9	10300	1380	6	-					
38.39	36	800	3.3	10500	1360	6	-					
35.62	39	820	3.6	10300	870	7	-					
30.22	46	820	4.3	10300	1840	7	-					
27.28	51	820	4.7	10300	1810	7	-					
24.00	58	800	5.2	10500	1800	7	-					
22.66	62	780	5.4	10700	1810	7	-					
19.30	73	760	6.1	10800	1760	7	-					
17.54	80	740	6.6	11000	1750	7	-	**K**	**67**	**AD3**	36	496
15.19	92	700	7.2	11300	1740	8	-	**KF**	**67**	**AD3**	42	496
13.22	106	670	7.9	11500	1710	8	-	**KA**	**67**	**AD3**	34	496
12.48	112	530	6.6	12300	1550	9	-	**KAF**	**67**	**AD3**	39	496
10.63	132	500	7.3	11800	1540	9	-					
9.66	145	480	7.8	11500	1540	9	-					
8.37	167	440	8.2	11100	1570	9	-					
7.28	192	420	9.0	10700	1550	9	-					
5.20	269	350	10.3	9870	1560	10	-					

K77 AD... , n_e = 1400 1/min												1550 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	📖
192.18	7.3	1240	1.1	17200	575	5	-					
179.37	7.8	1160	1.1	17600	690	5	-					
154.02	9.1	1550	1.6	15400	1360	5	-					
135.28	10	1550	1.8	15400	1350	5	-					
128.52	11	1550	1.9	15400	1350	5	-					
113.56	12	1550	2.2	15400	1310	5	-	**K**	**77**	**AD2**	58	496
97.05	14	1550	2.5	15400	1280	5	-	**KF**	**77**	**AD2**	66	496
88.97	16	1550	2.7	15400	1270	5	-	**KA**	**77**	**AD2**	50	496
78.07	18	1550	3.1	15400	1250	5	-	**KAF**	**77**	**AD2**	58	496
73.99	19	1550	3.3	15400	1240	5	-					
64.75	22	1550	3.8	15400	1210	5	-					
58.34	24	1550	4.2	15400	1170	6	-					
51.18	27	1550	4.7	15400	1140	6	-					
45.16	31	1550	5.4	15400	1090	6	-					
40.04	35	1550	6.1	15400	2090	6	-	**K**	**77**	**AD3**	61	496
38.39	36	1490	6.1	15800	1450	6	-	**KF**	**77**	**AD3**	70	496
35.20	40	1410	6.2	16300	1510	6	-	**KA**	**77**	**AD3**	54	496
30.89	45	1550	7.8	15400	1230	6	-	**KAF**	**77**	**AD3**	62	496
29.27	48	1550	8.3	15400	3290	6	-					
25.62	55	1550	9.4	15400	3240	6	-					
23.08	61	1550	10.5	15400	3170	6	-					
20.25	69	1500	11.6	15700	3140	6	-					
17.87	78	1450	12.7	16100	3120	6	-	**K**	**77**	**AD4**	67	496
15.84	88	1400	13.8	15500	3090	6	-	**KF**	**77**	**AD4**	76	496
13.52	104	1340	15.5	14800	3050	7	-	**KA**	**77**	**AD4**	60	496
12.36	113	1000	12.6	15100	2860	8	-	**KAF**	**77**	**AD4**	68	496
10.84	129	990	14.2	14400	2790	8	-					
9.56	146	940	15.3	13900	2790	8	-					
8.48	165	890	16.4	13500	2800	8	-					
7.24	193	785	16.9	13200	2890	8	-					

K87 AD... , n_e = 1400 1/min												2700 Nm
197.37	7.1	2700	2.2	28100	1170	5	-					
174.19	8.0	2700	2.4	28100	1150	5	-					
164.34*	8.5	2700	2.6	28100	1140	5	-	**K**	**87**	**AD2**	93	496
147.32*	9.5	2700	2.9	28100	1120	5	-	**KF**	**87**	**AD2**	105	496
126.91*	11	2700	3.4	28100	1090	5	-	**KA**	**87**	**AD2**	81	496
115.82	12	2700	3.7	28100	1080	5	-	**KAF**	**87**	**AD2**	95	496
102.71*	14	2700	4.1	28100	1060	5	-					
86.34	16	2700	4.9	28100	1010	5	-					
79.34	18	2700	5.4	28100	1940	5	-					
70.46	20	2700	6.0	27400	1900	5	-					
63.00*	22	2700	6.8	26200	1870	5	-	**K**	**87**	**AD3**	98	496
56.64	25	2700	7.5	25000	1830	5	-	**KF**	**87**	**AD3**	105	496
49.16	28	2700	8.6	23500	1770	5	-	**KA**	**87**	**AD3**	86	496
44.02	32	2600	9.2	22800	1760	6	-	**KAF**	**87**	**AD3**	99	496
36.52*	38	2500	10.7	21400	1700	6	-					
31.39	45	2700	13.4	19200	2750	6	-					
27.88	50	2600	14.5	18500	2750	6	-					
24.92	56	2500	15.6	18000	2750	6	-					
22.41	62	2300	16.0	17900	2840	6	-	**K**	**87**	**AD4**	105	496
19.45	72	2300	18.4	16800	2730	6	-	**KF**	**87**	**AD4**	115	496
17.42	80	2200	20	16300	2730	6	-	**KA**	**87**	**AD4**	92	496
16.00	88	1800	17.5	16000	2020	6	-	**KAF**	**87**	**AD4**	105	496
14.45	97	2100	23	15300	2640	6	-					
12.56	111	2000	25	14800	2620	6	-					
11.17	125	1500	21	14900	2370	7	-					
10.00	140	1500	23	14200	5570	7	-	**K**	**87**	**AD5**	120	496
8.29	169	1400	26	13500	5520	7	-	**KF**	**87**	**AD5**	130	496
7.21	194	1300	28	13200	5570	7	-	**KA**	**87**	**AD5**	105	496
								KAF	**87**	**AD5**	120	496

K97 AD... , n_e = 1400 1/min													4300 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	
176.05*	8.0	4300	3.8	40000	1780	7	-						
153.21*	9.1	4300	4.4	40000	1760	7	-						
140.28	10	4300	4.8	40000	1740	7	-						
123.93*	11	4300	5.5	40000	1720	7	-	**K**	**97**	**AD3**		160	496
105.13	13	4300	6.4	40000	1680	7	-	**KF**	**97**	**AD3**		180	496
96.80	14	4300	7.0	40000	1650	7	-	**KA**	**97**	**AD3**		140	496
86.52	16	4300	7.8	38800	1610	7	-	**KAF**	**97**	**AD3**		165	496
77.89*	18	4300	8.6	37100	1570	7	-						
70.54	20	4300	9.5	35600	1530	7	-						
62.55	22	4300	10.8	33800	3520	7	-	**K**	**97**	**AD4**		165	496
56.55	25	4300	12.0	32300	3470	7	-	**KF**	**97**	**AD4**		185	496
47.93*	29	4300	14.0	30000	3390	7	-	**KA**	**97**	**AD4**		145	496
41.87	33	4300	16.0	28300	3320	7	-	**KAF**	**97**	**AD4**		170	496
38.30	37	4300	17.5	27100	5270	7	-						
34.23	41	4300	20	25700	5200	7	-						
30.82	45	4300	22	24500	5130	7	-	**K**	**97**	**AD5**		180	496
27.91	50	4300	24	23300	5050	8	-	**KF**	**97**	**AD5**		200	496
24.75	57	4300	27	22000	4960	8	-	**KA**	**97**	**AD5**		160	496
22.37	63	4300	30	20900	4860	8	-	**KAF**	**97**	**AD5**		185	496
18.96	74	4300	35	19100	4660	8	-						
16.56	85	4300	40	17800	4500	8	-						
13.85	101	4300	48	16100	7180	8	-	**K**	**97**	**AD6**		195	496
11.99	117	3890	50	16200	7280	8	M2,4-6	**KF**	**97**	**AD6**		215	496
								KA	**97**	**AD6**		175	496
								KAF	**97**	**AD6**		200	496
10.41	134	2870	43	16400	4300	10	-	**K**	**97**	**AD5**		180	496
								KF	**97**	**AD5**		200	496
								KA	**97**	**AD5**		160	496
								KAF	**97**	**AD5**		185	496
8.71	161	2660	48	15800	7230	10	-	**K**	**97**	**AD6**		195	496
								KF	**97**	**AD6**		215	496
								KA	**97**	**AD6**		175	496
								KAF	**97**	**AD6**		200	496

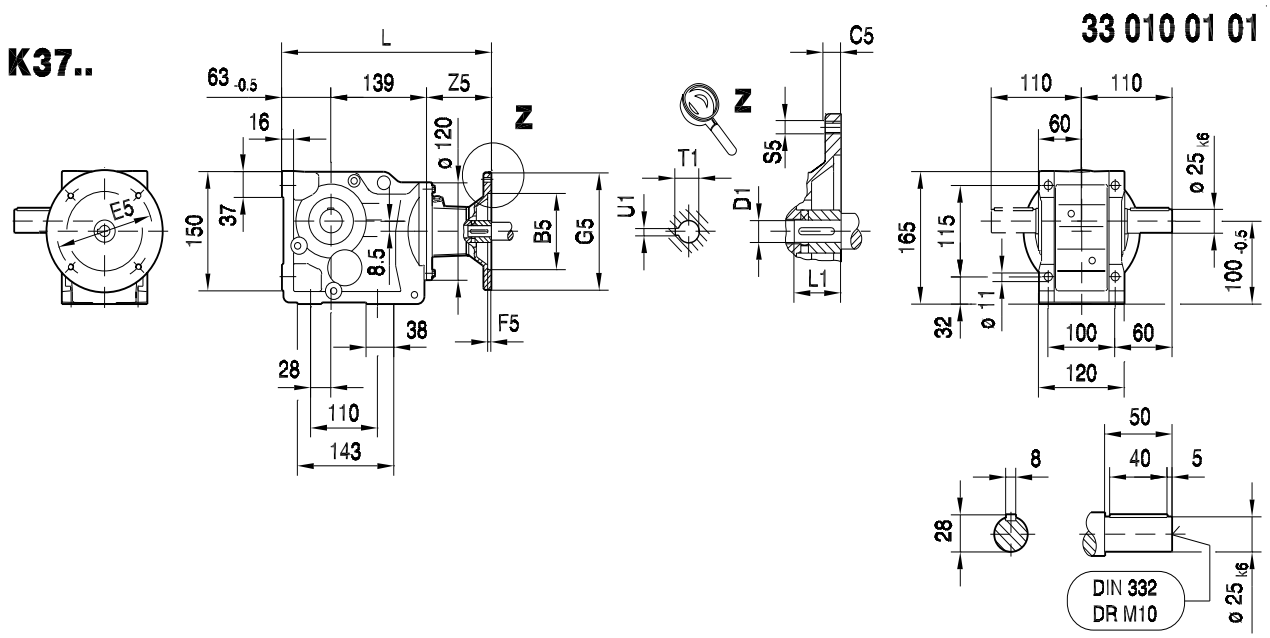
K107 AD... , n_e = 1400 1/min													8000 Nm
143.47*	9.8	8000	8.8	65000	3090	6	-						
121.46	12	8000	10.3	61700	3030	6	-						
112.41*	12	8000	11.1	59700	2980	6	-						
100.75	14	8000	12.4	57000	2940	6	-	**K**	**107**	**AD4**		280	496
90.96*	15	8000	13.7	54600	2850	6	-	**KF**	**107**	**AD4**		290	496
82.61	17	8000	15.1	52400	2810	6	-	**KA**	**107**	**AD4**		250	496
73.30	19	8000	17.0	49700	2740	6	-	**KAF**	**107**	**AD4**		275	496
66.52*	21	8000	19	47600	2680	6	-						
57.17*	24	8000	22	44400	2560	6	-						
49.90	28	7840	24	42200	2500	6	-						
42.33*	33	7360	27	40500	5720	6	-	**K**	**107**	**AD5**		290	496
37.00*	38	7200	30	38500	5640	6	-	**KF**	**107**	**AD5**		305	496
32.69	43	7200	34	36300	3290	6	-	**KA**	**107**	**AD5**		265	496
31.28*	45	6800	34	36700	5620	6	-	**KAF**	**107**	**AD5**		290	496
29.00	48	7200	39	34000	6580	6	-						
26.32	53	7200	43	32000	6460	6	-						
22.62	62	7200	49	28900	6250	6	-						
19.74	71	7170	56	26300	6010	6	-	**K**	**107**	**AD6**		305	496
16.75	84	6080	56	29000	6470	7	-	**KF**	**107**	**AD6**		320	496
14.64	96	5310	56	29500	6770	7	-	**KA**	**107**	**AD6**		280	496
13.43	104	4300	49	29200	6220	9	-	**KAF**	**107**	**AD6**		300	496
11.73	119	4260	56	27600	6010	9	-						
9.94	141	3610	56	27800	6470	9	-						
8.69	161	3150	56	27800	6780	9	-						

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
K127 AD... , n_e = 1400 1/min													**13000 Nm**
146.07	9.6	13000	13.9	81300	2410	5	-	**K**	**127**	**AD4**		435	496
136.14	10	13000	14.9	81300	2340	5	-	**KF**	**127**	**AD4**		480	496
122.48	11	13000	16.6	81300	2250	5	-	**KA**	**127**	**AD4**		410	496
110.18	13	13000	18.4	81300	2110	5	-	**KAF**	**127**	**AD4**		445	496
89.89	16	13000	23	75100	5380	5	-						
81.98	17	13000	25	72100	5320	5	-	**K**	**127**	**AD5**		450	496
70.95*	20	13000	29	67700	5200	5	-	**KF**	**127**	**AD5**		490	496
62.60	22	13000	32	64000	5100	5	-	**KA**	**127**	**AD5**		420	496
54.07	26	13000	37	59900	4960	5	-	**KAF**	**127**	**AD5**		460	496
47.82	29	13000	42	56500	4820	5	-						
40.19	35	13000	50	52000	7530	5	-	**K**	**127**	**AD6**		460	496
								KF	**127**	**AD6**		500	496
								KA	**127**	**AD6**		430	496
								KAF	**127**	**AD6**		470	496
36.25	39	13000	55	49400	11300	6	-	**K**	**127**	**AD7**		460	496
31.37	45	13000	64	45900	10300	6	-	**KF**	**127**	**AD7**		500	496
27.68	51	13000	72	43000	9460	6	-	**KA**	**127**	**AD7**		430	496
23.91	59	13000	84	39800	8300	6	-	**KAF**	**127**	**AD7**		470	496
21.15	66	13000	95	37200	24500	6	M2,4-6						
17.77	79	13000	113	33600	24100	6	M1-6	**K**	**127**	**AD8**		480	496
14.35	98	12100	130	31800	23900	6	M1-6	**KF**	**127**	**AD8**		520	496
12.79	110	8530	103	35400	24000	8	M2-6	**KA**	**127**	**AD8**		455	496
10.74	130	8000	115	33900	24000	8	M1-6	**KAF**	**127**	**AD8**		490	496
8.68	161	7230	129	32500	24000	8	M1-6						
K157 AD... , n_e = 1400 1/min													**18000 Nm**
150.41	9.3	18000	19	115200	5200	5	-						
122.39	11	18000	23	106500	5080	5	-						
100.22	14	18000	28	98000	4890	5	-	**K**	**157**	**AD5**		680	496
91.65	15	18000	31	94400	4820	5	-	**KF**	**157**	**AD5**		760	496
79.75	18	18000	35	88900	4700	5	-	**KA**	**157**	**AD5**		650	496
70.38	20	18000	40	84200	4580	5	-	**KAF**	**157**	**AD5**		710	496
61.02	23	18000	46	79000	4420	5	-						
54.29	26	18000	52	74900	7230	5	-	**K**	**157**	**AD6**		700	496
								KF	**157**	**AD6**		780	496
								KA	**157**	**AD6**		660	496
								KAF	**157**	**AD6**		720	496
46.79	30	18000	60	70000	17100	5	-	**K**	**157**	**AD7**		690	496
38.02	37	18000	73	63300	16800	5	-	**KF**	**157**	**AD7**		770	496
								KA	**157**	**AD7**		660	496
								KAF	**157**	**AD7**		720	496
31.30	45	17700	87	58200	23600	6	-						
27.62	51	16000	89	58300	24000	6	-						
23.95	58	18000	116	50000	23000	6	-	**K**	**157**	**AD8**		720	496
21.31	66	18000	130	47000	22700	6	-	**KF**	**157**	**AD8**		800	496
18.37	76	18000	151	43200	22300	6	M1-6	**KA**	**157**	**AD8**		680	496
14.92	94	18000	186	38200	21500	6	M1-6	**KAF**	**157**	**AD8**		740	496
12.65	111	17000	207	36700	21300	6	M1-6						
K167 AD... , n_e = 1400 1/min													**32000 Nm**
164.50	8.5	29500	28	150000	2980	4	-	**K**	**167**	**AD5**		1080	496
								KH	**167**	**AD5**		1040	496
134.99	10	32000	37	150000	5910	5	-	**K**	**167**	**AD6**		1100	496
109.83	13	32000	45	150000	5450	5	-	**KH**	**167**	**AD6**		1060	496
87.86	16	32000	56	147200	13300	5	-						
78.14	18	32000	63	140100	12800	5	-	**K**	**167**	**AD7**		1090	496
68.07	21	32000	73	132000	12000	5	-	**KH**	**167**	**AD7**		1050	496
60.74	23	32000	81	125600	11200	5	-						

K167 AD... , n_e = 1400 1/min													32000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
51.77	27	32000	95	117000	25000	5	-						
42.89	33	32000	115	107400	24600	5	M2,4,6						
36.61	38	32000	135	99700	24200	5	M1-6						
32.25	43	28100	134	100900	21400	5	-	**K**	**167**	**AD8**		1110	496
28.77	49	25100	135	101300	22100	5	-	**KH**	**167**	**AD8**		1070	496
24.52	57	32000	201	81700	19200	5	M1-6						
20.32	69	31000	235	75900	18800	5	M1-6						
17.34	81	28100	250	75000	19100	5	M1-6						

K187 AD... , n_e = 1400 1/min													50000 Nm
179.86	7.8	50000	43	189900	6070	4	-						
165.21	8.5	50000	47	189900	5930	4	-	**K**	**187**	**AD6**		1680	496
144.59	9.7	50000	54	189900	5620	4	-	**KH**	**187**	**AD6**		1610	496
129.69	11	50000	60	188200	14400	4	-						
112.60	12	50000	69	177200	13600	4	-	**K**	**187**	**AD7**		1670	496
102.16	14	50000	76	169900	13200	4	-	**KH**	**187**	**AD7**		1600	496
88.00	16	50000	89	159000	25500	4	-						
73.96	19	50000	105	147000	25200	4	M2						
64.04	22	50000	120	137500	24900	4	M2-6	**K**	**187**	**AD8**		1690	496
53.36	26	50000	145	126100	24400	4	M1-6	**KH**	**187**	**AD8**		1630	496
45.50*	31	50000	170	116600	23900	4	M1-6						
42.51	33	40000	145	128200	20900	4	-						
38.57	36	40000	160	122700	20700	4	-						
33.23	42	46400	216	104700	18700	4	M1-6						
27.92	50	43300	239	100500	18800	4	M1-6	**K**	**187**	**AD8**		1690	496
24.18	58	39100	250	99900	19300	4	M1-6	**KH**	**187**	**AD8**		1630	496
20.15	69	32600	250	101500	20200	4	M1-6						
17.18	82	32000	287	95300	19600	4	M1-6						

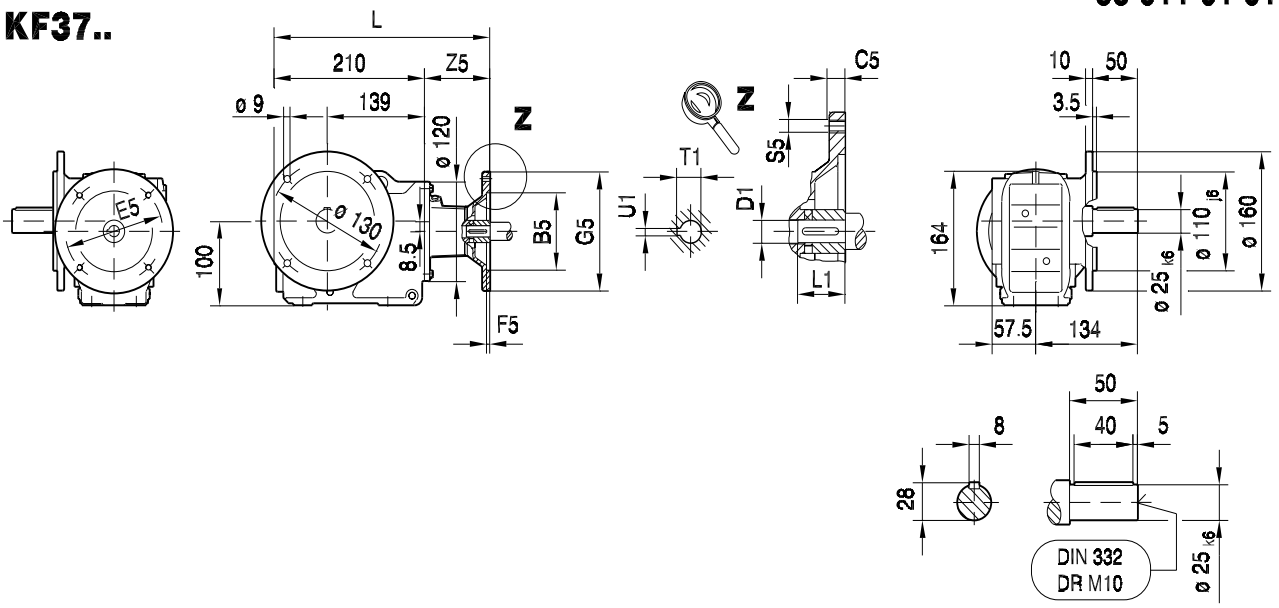
12.5 K..AM.. (IEC) [mm]



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	274	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	274	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	308	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	308	M10	106	24	50	27.3	8	

33 011 01 01

KF37..



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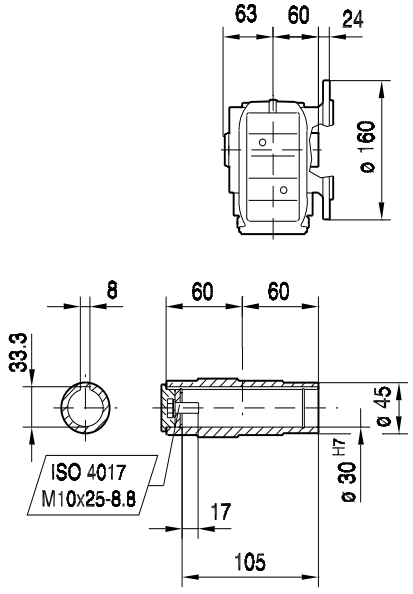

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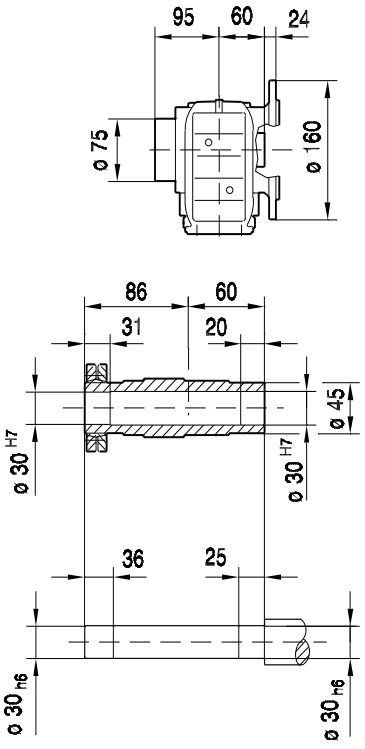

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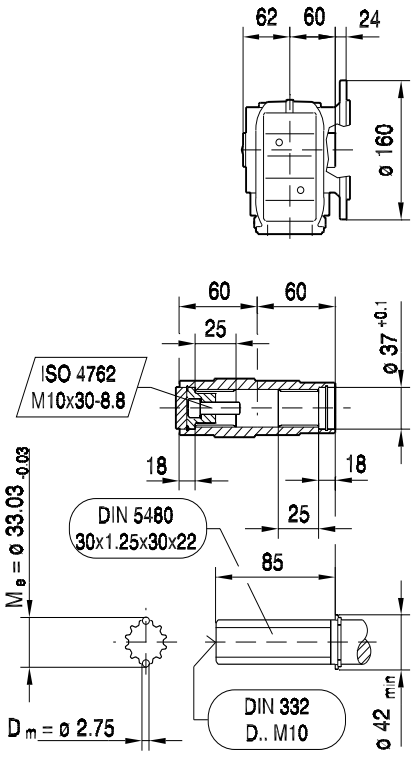
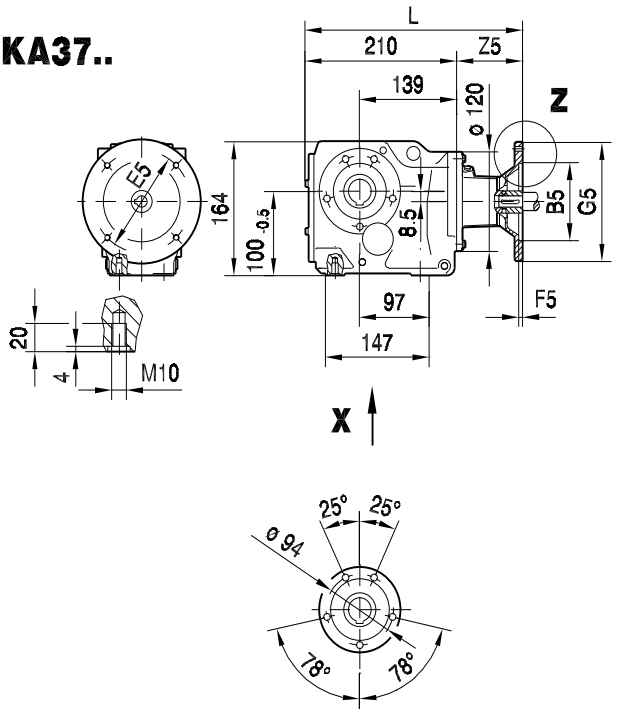
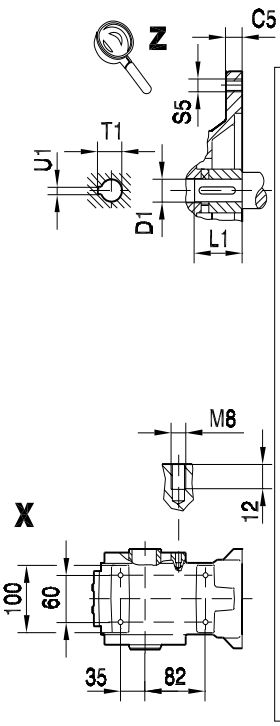


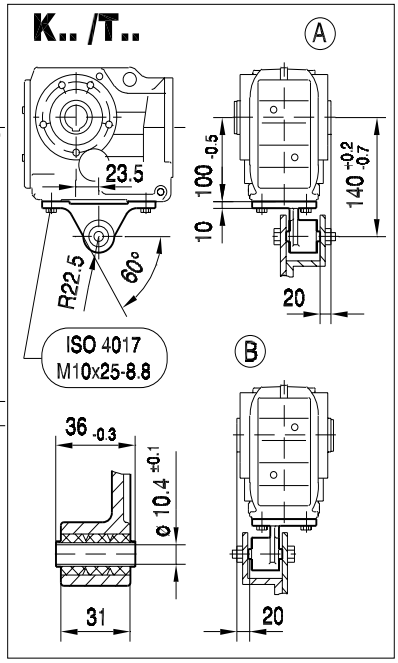
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	282	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	282	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	316	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	316	M10	106	24	50	27.3	8	

38 010 01 01

KA37..







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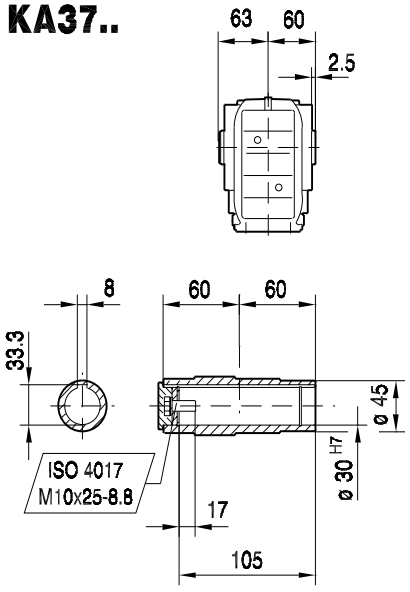

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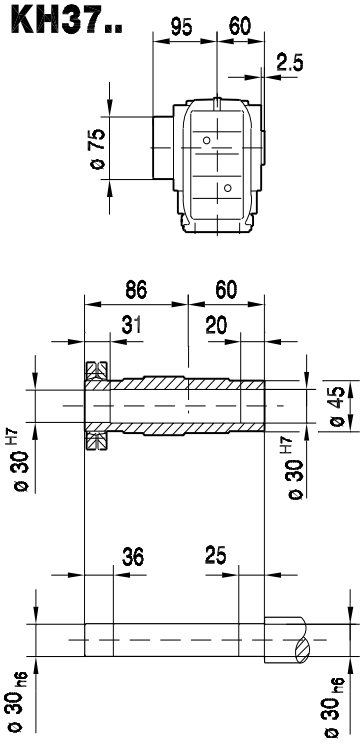

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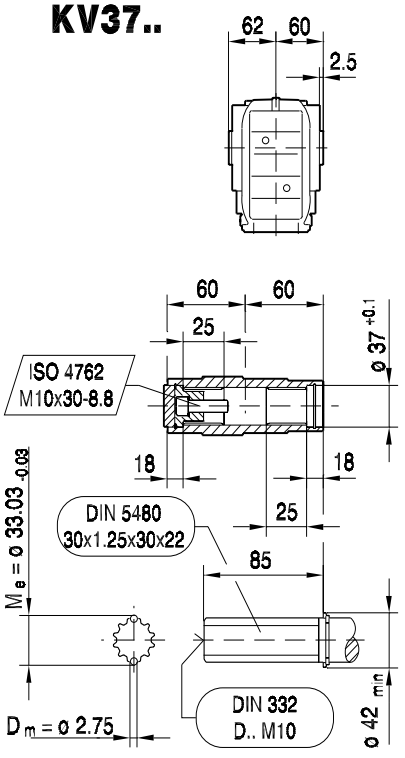
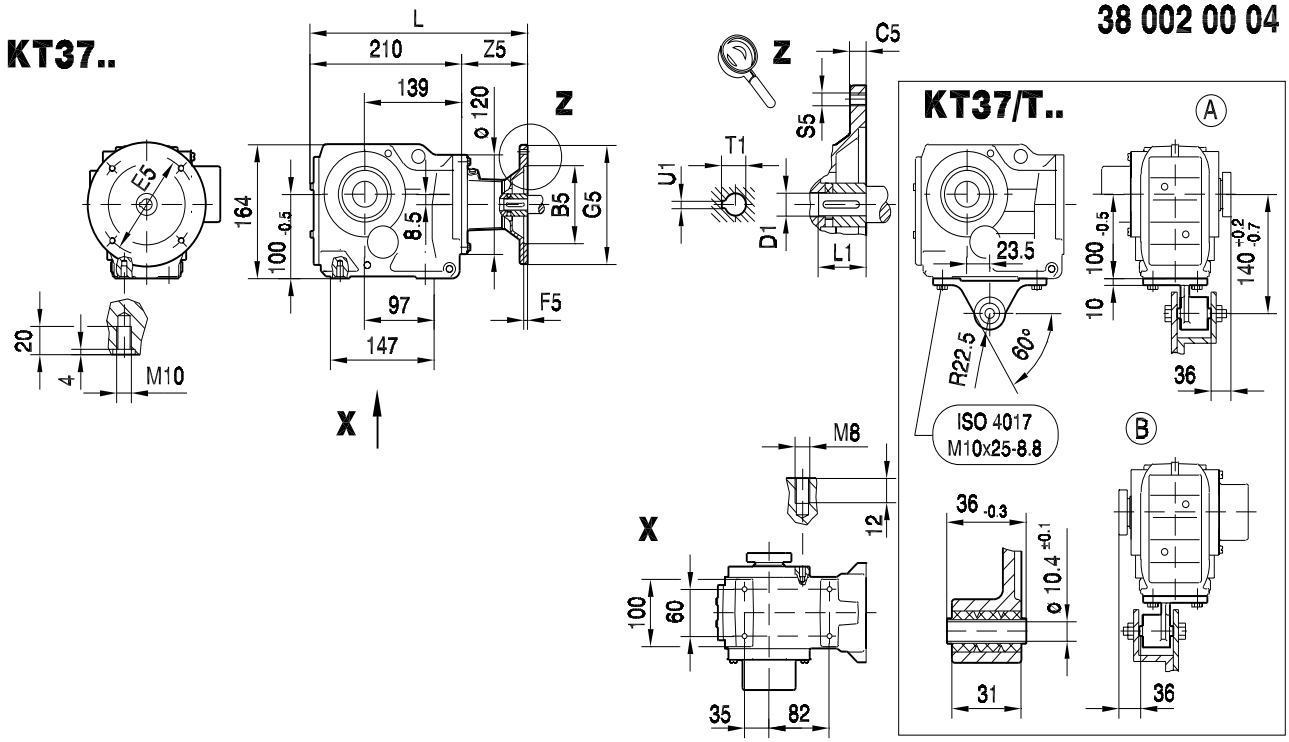
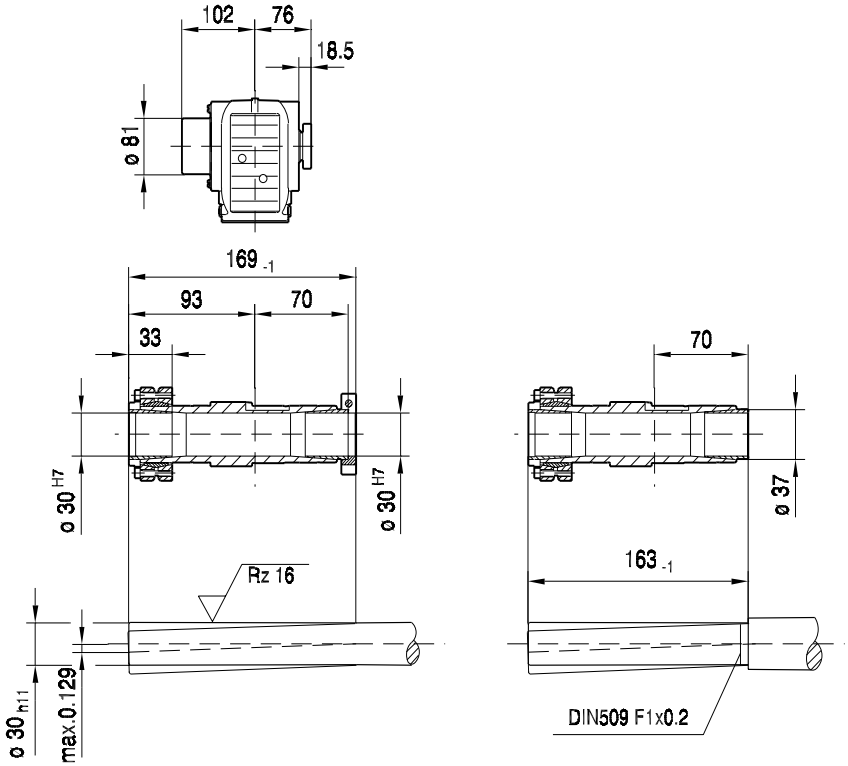


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	282	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	282	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	316	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	316	M10	106	24	50	27.3	8	

38 002 00 04

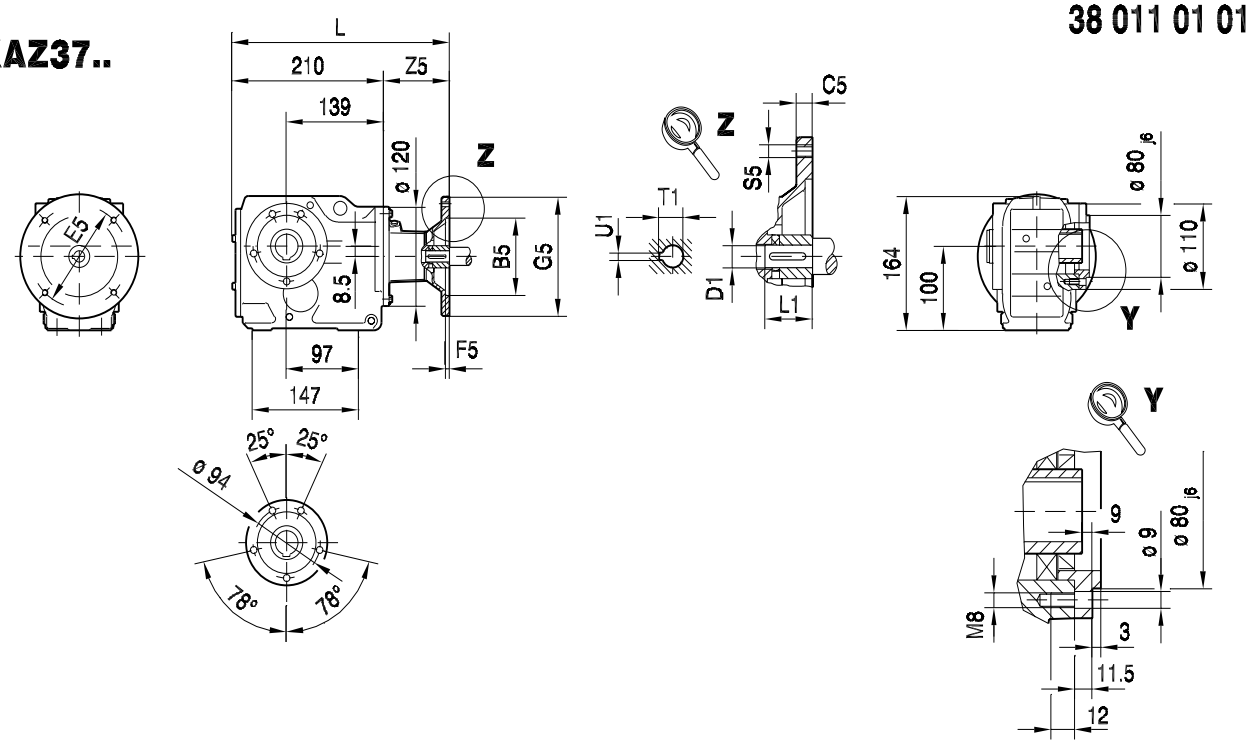




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	282	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	282	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	316	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	316	M10	106	24	50	27.3	8	

38 011 01 01

KAZ37..



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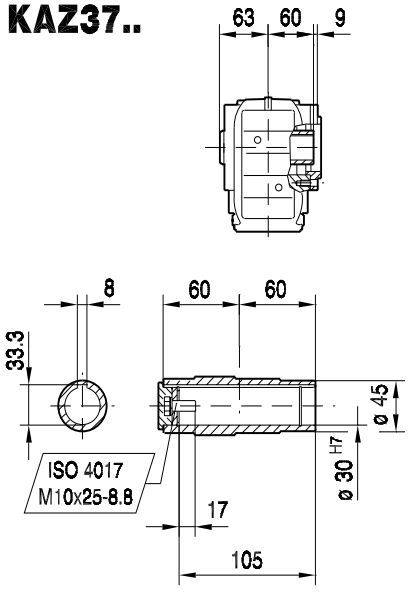

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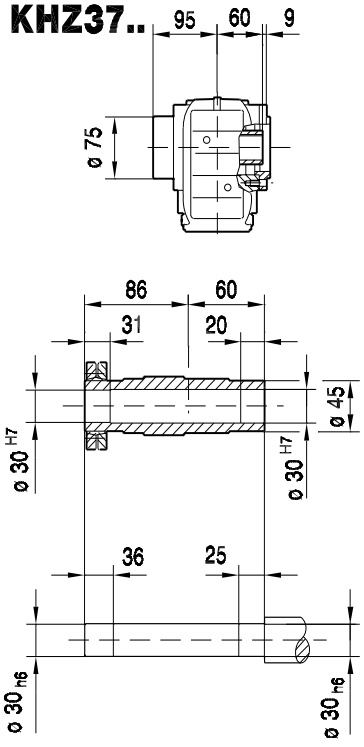

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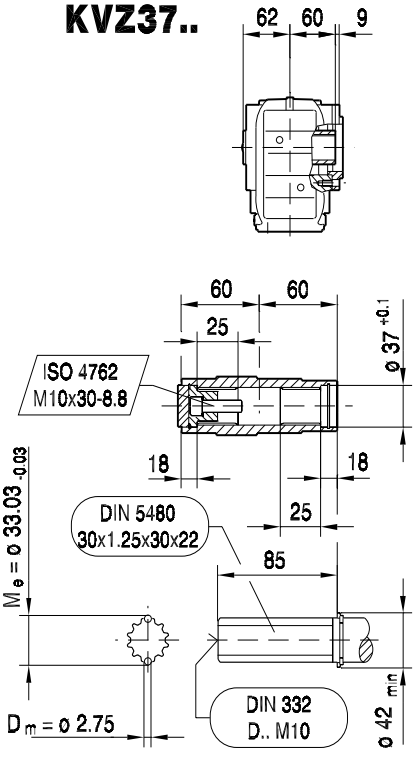
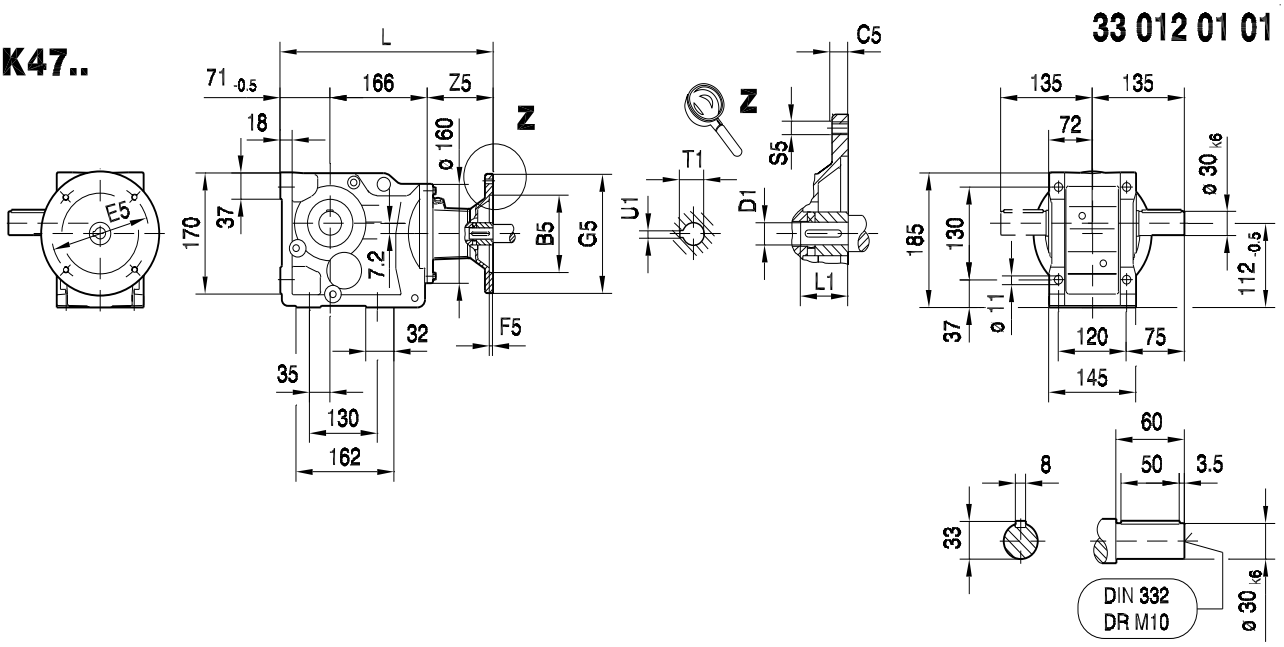
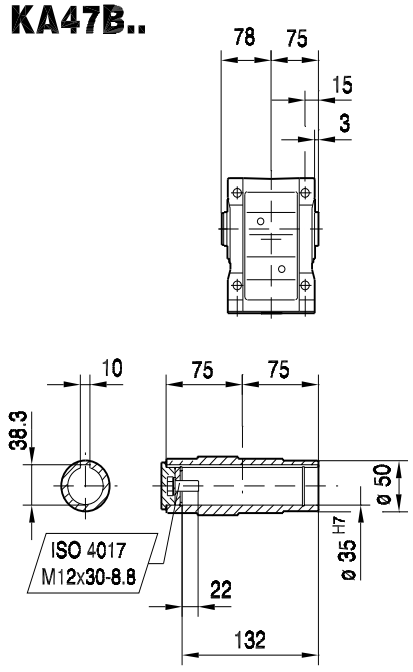


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	282	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	282	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	316	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	316	M10	106	24	50	27.3	8	

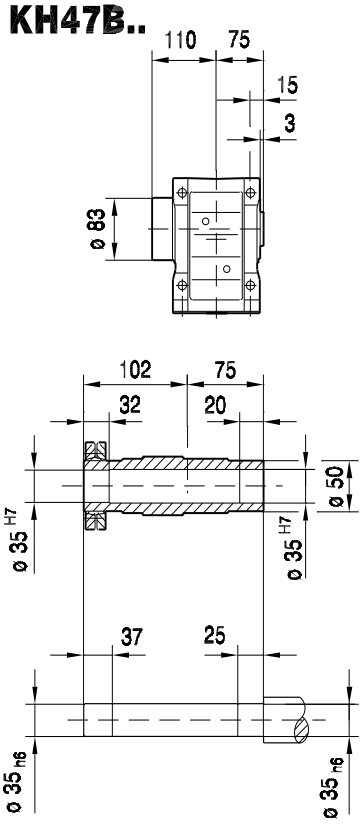
K47..



KA47B..



KH47B..



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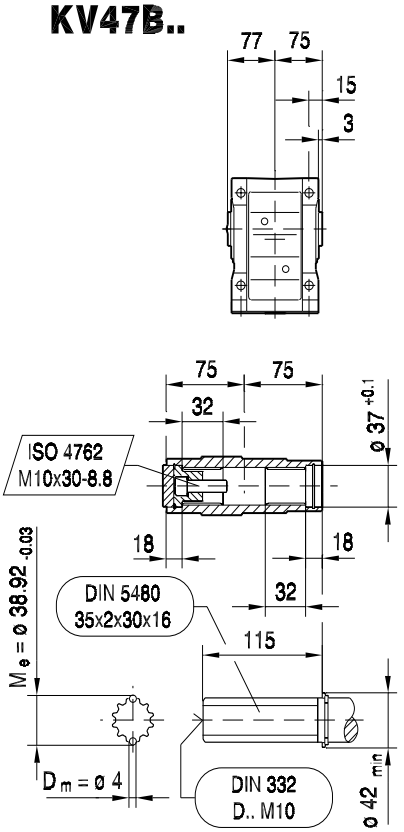

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	303	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	303	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	336	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	336	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	371	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	371	M12	134	28	60	31.3	8	

33 013 01 01

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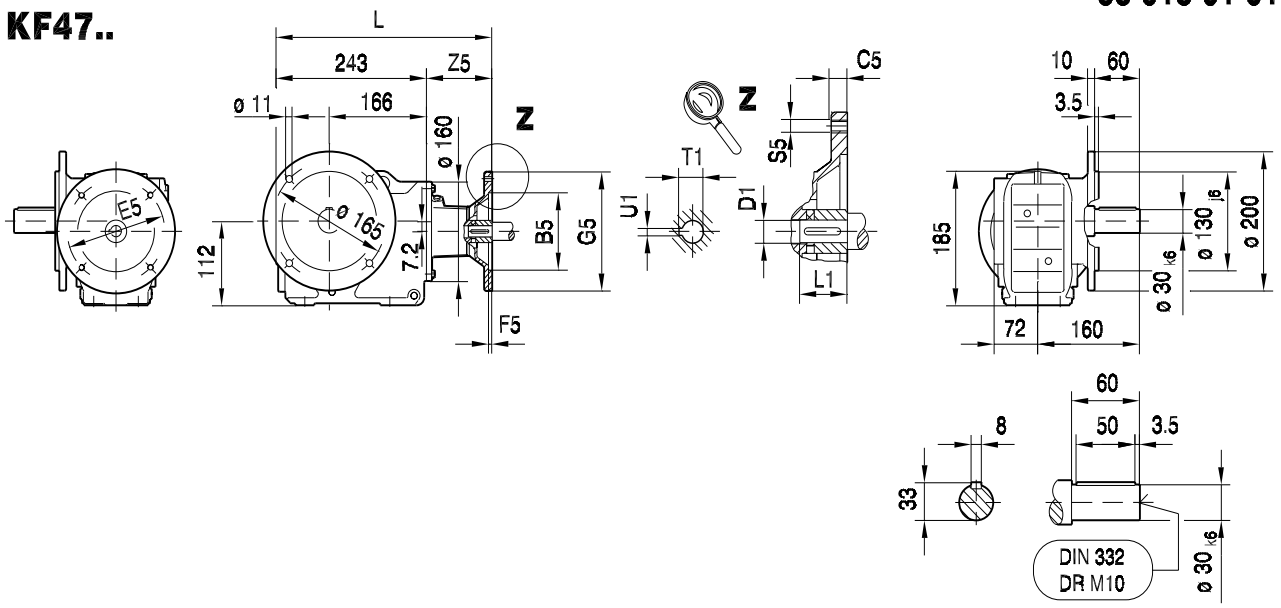

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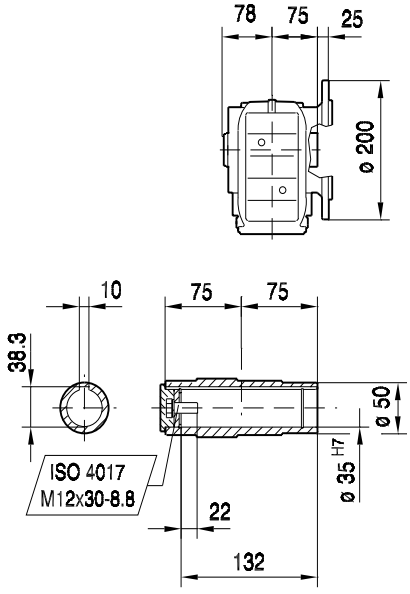

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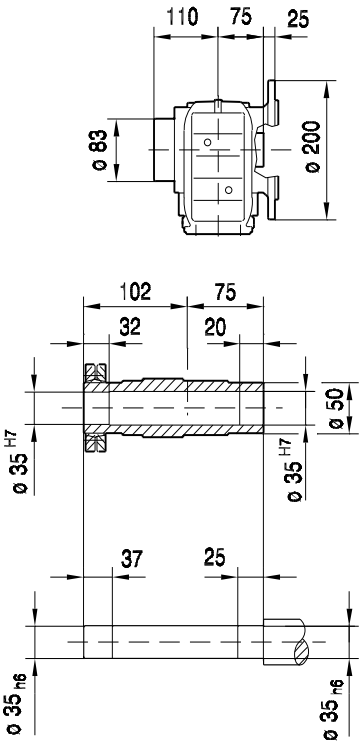

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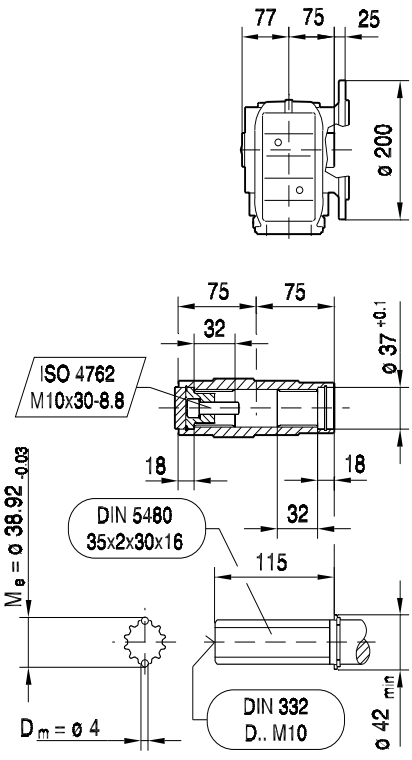

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AM71	110	10	130	4.0	160	309	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	342	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	342	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	

38 012 01 01

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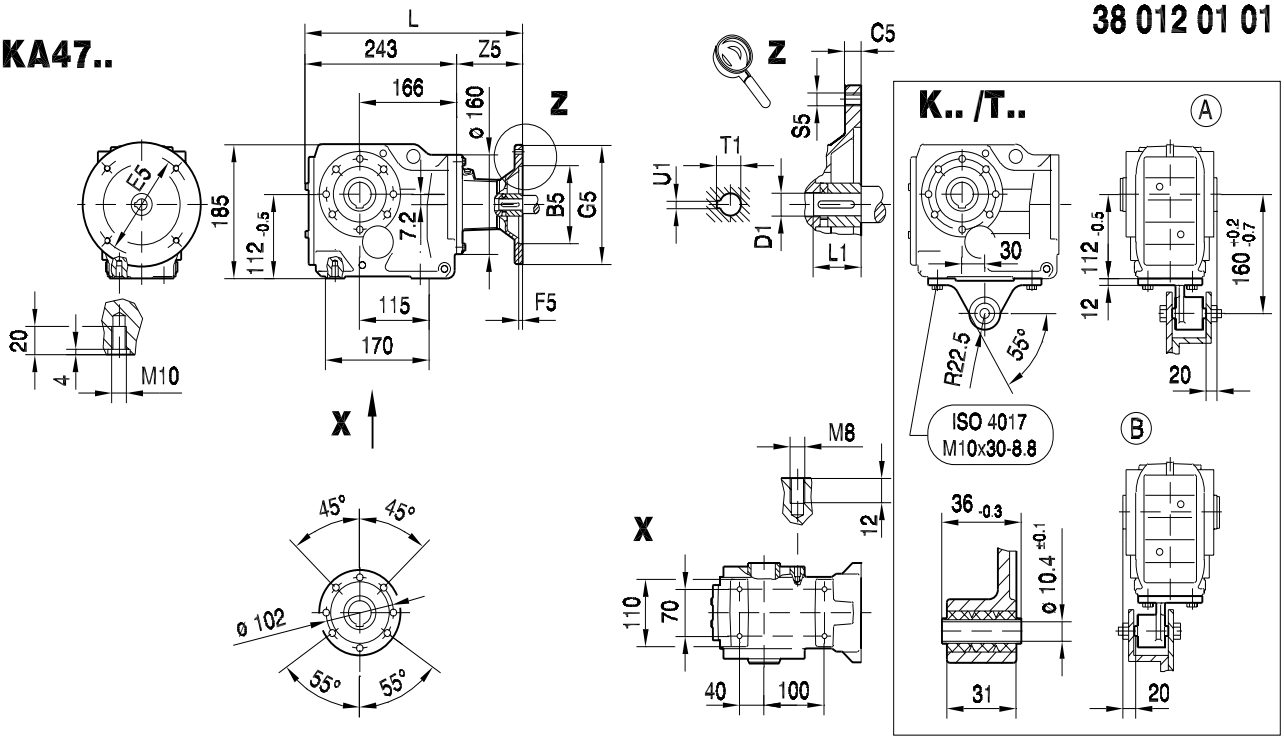

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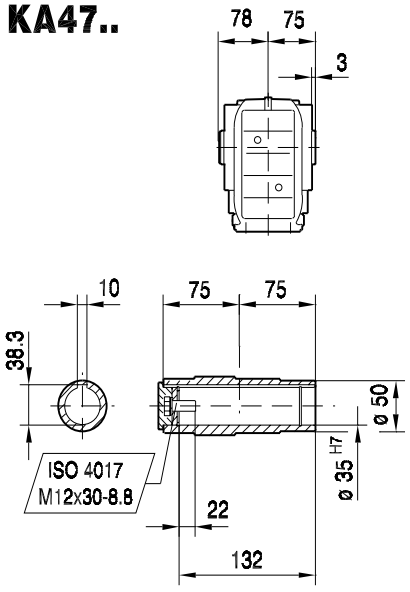

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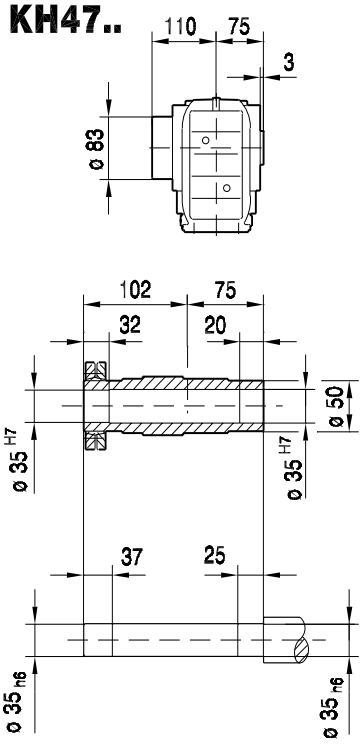

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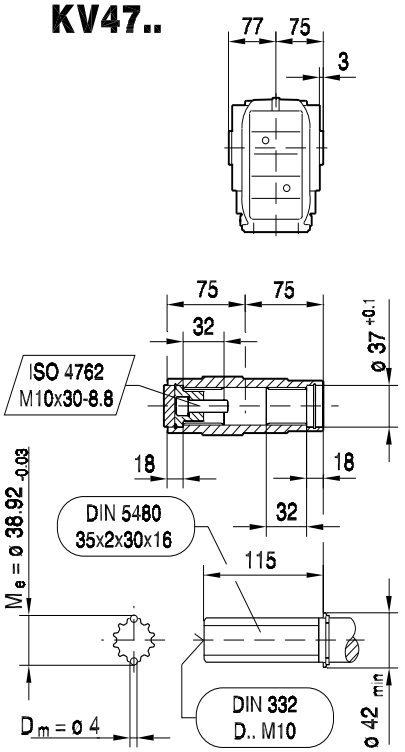

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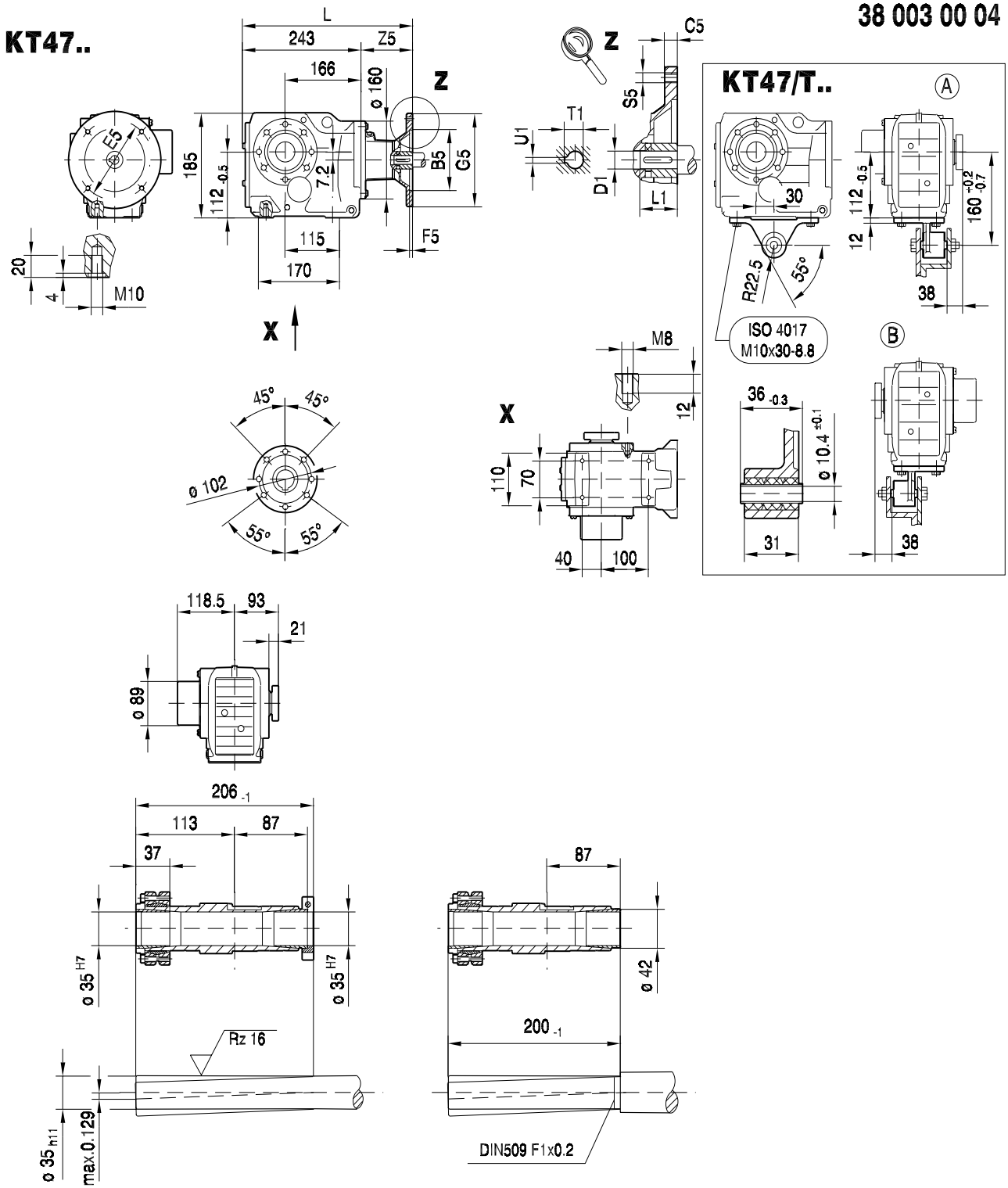
AM71	110	10	130	4.0	160	309	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	342	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	342	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	

38 003 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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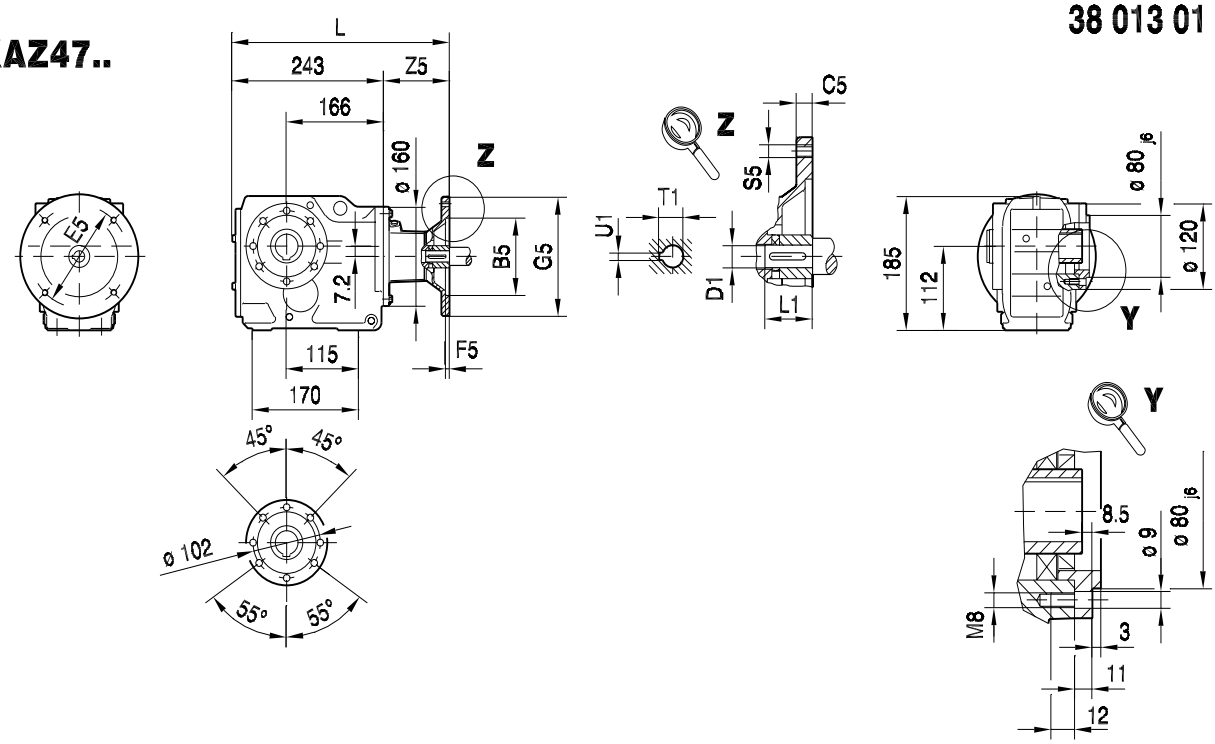
AM71	110	10	130	4.0	160	309	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	342	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	342	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	

38 013 01 01

KAZ47..



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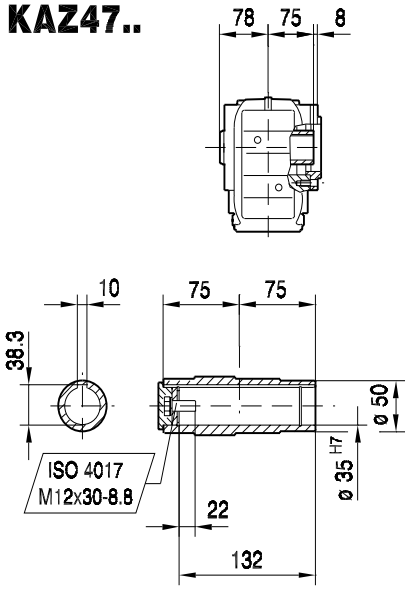

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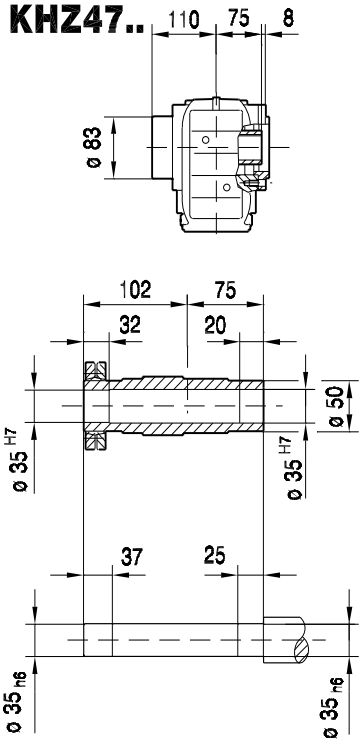

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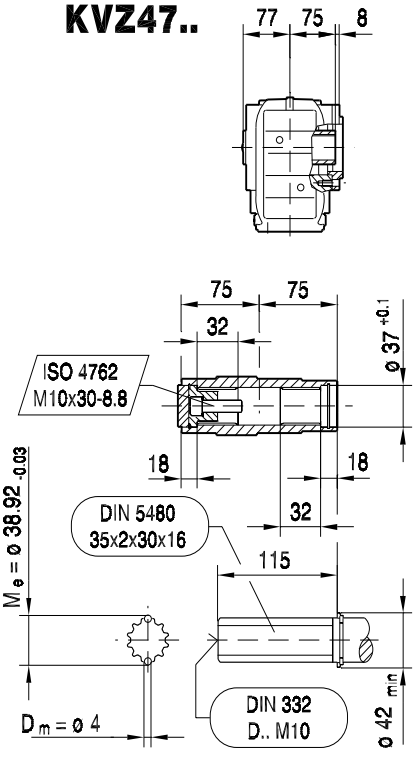

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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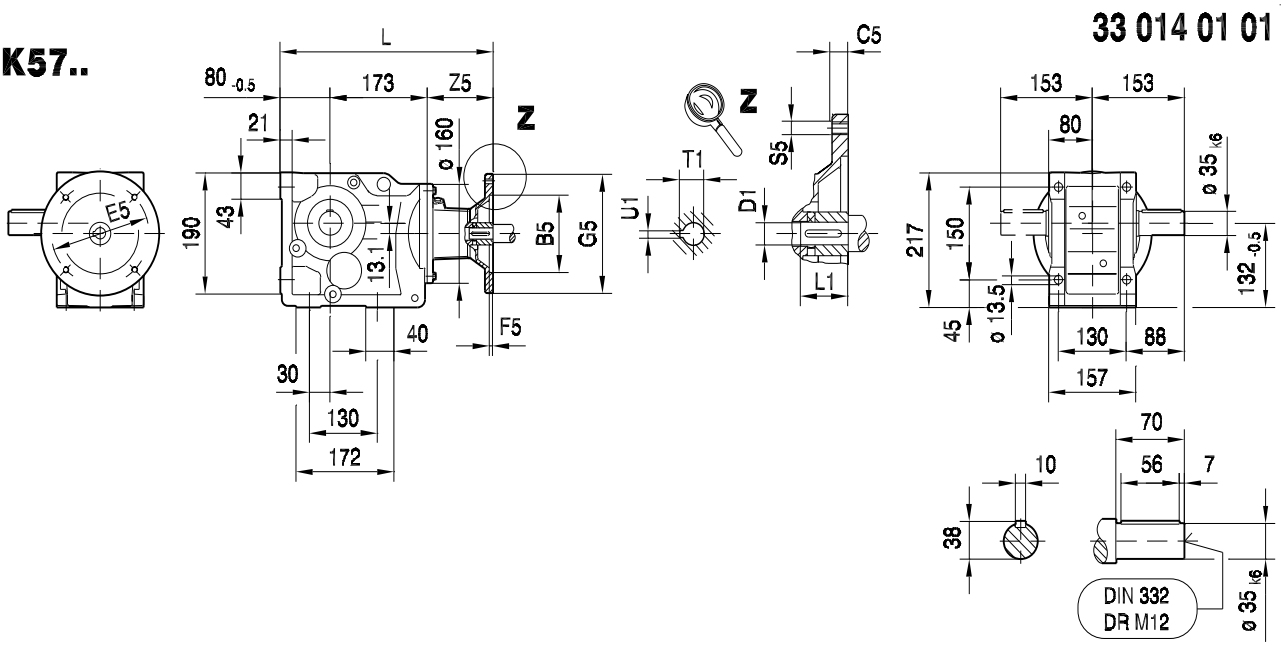
AM71	110	10	130	4.0	160	309	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	342	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	342	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	377	M12	134	28	60	31.3	8	

K57..



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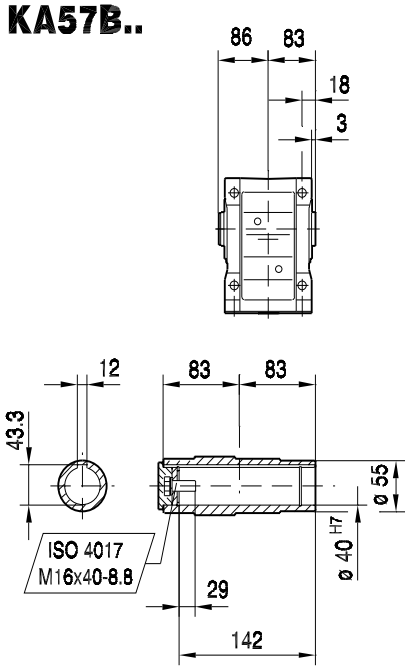

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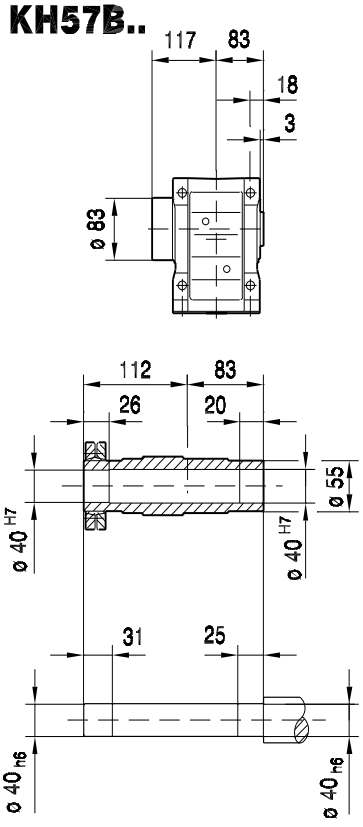

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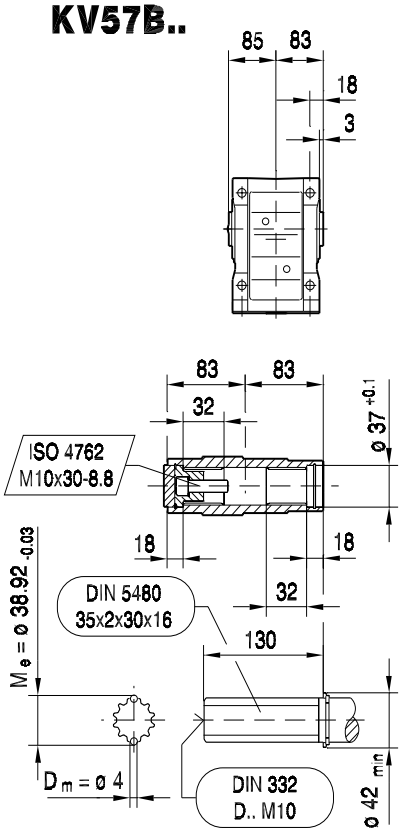

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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AM71	110	10	130	4.0	160	319	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	352	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	352	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	387	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	387	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	444	M12	191	38	80	41.3	10	

33 015 01 01

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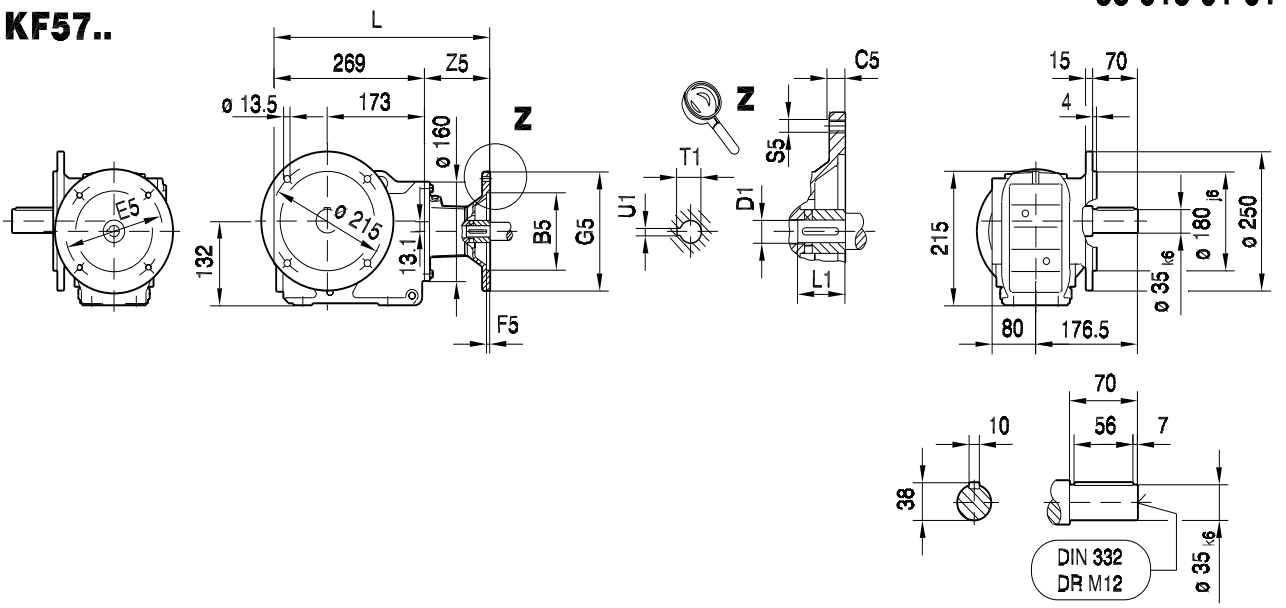

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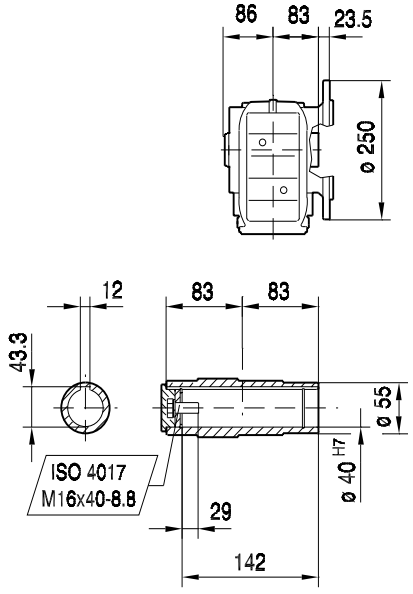

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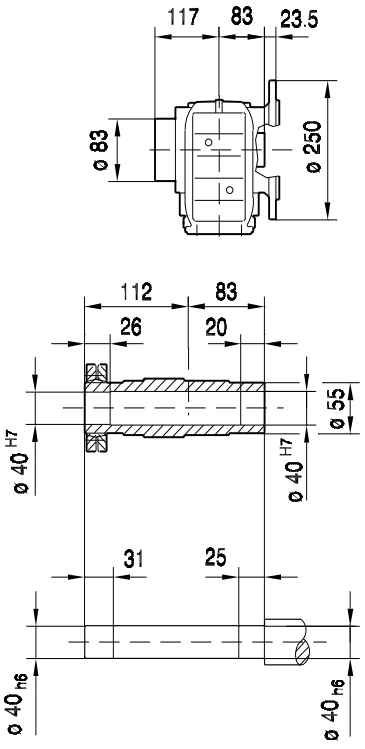

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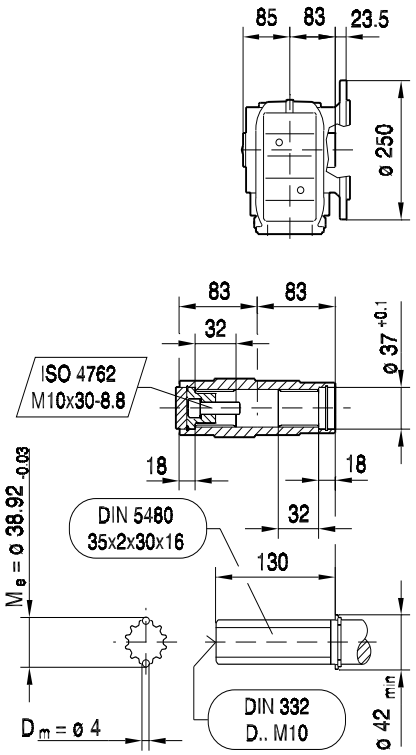

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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AM71	110	10	130	4.0	160	335	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	368	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	368	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	460	M12	191	38	80	41.3	10	

38 014 01 01

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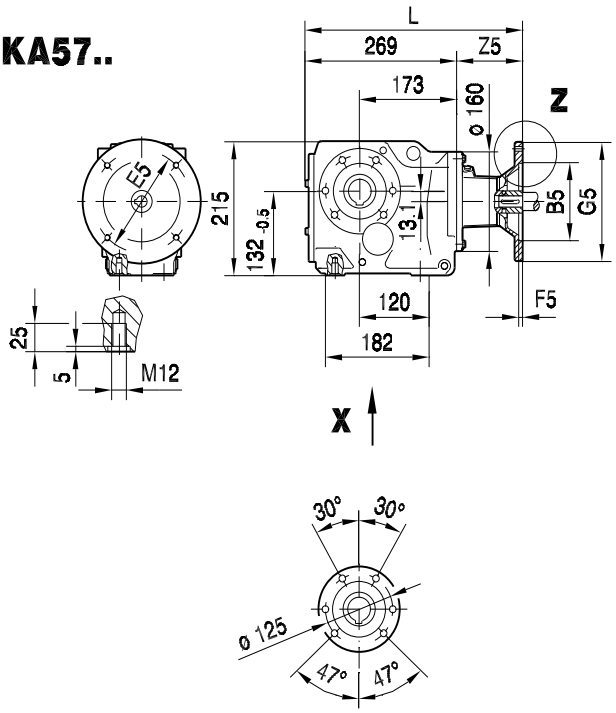

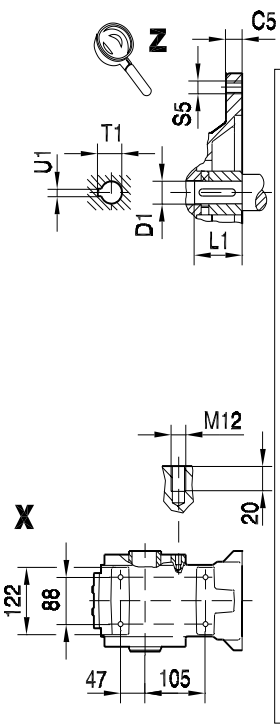

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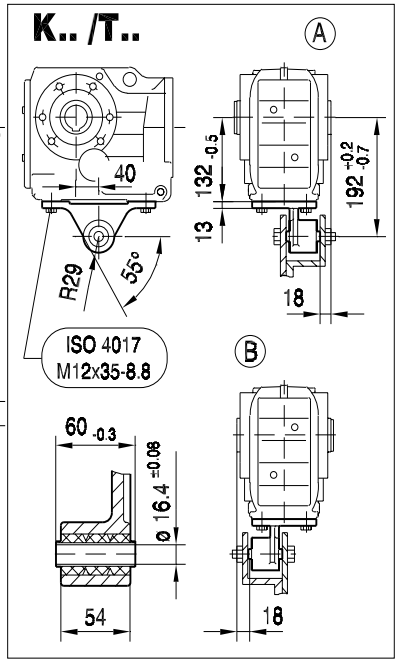

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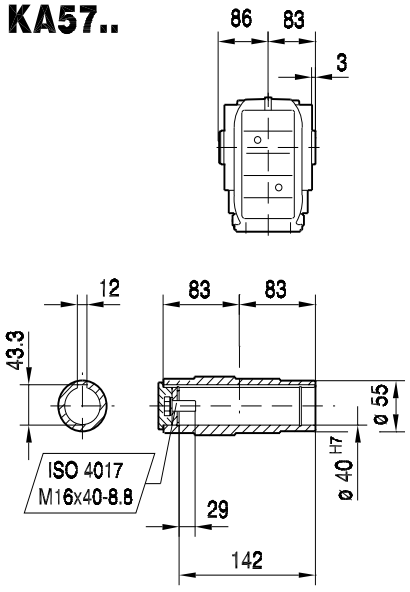

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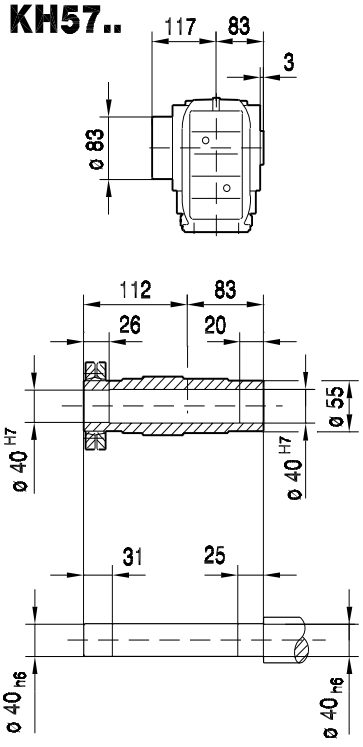

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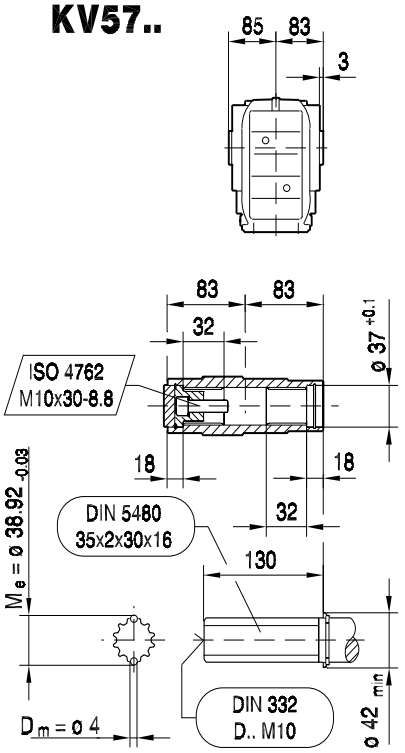

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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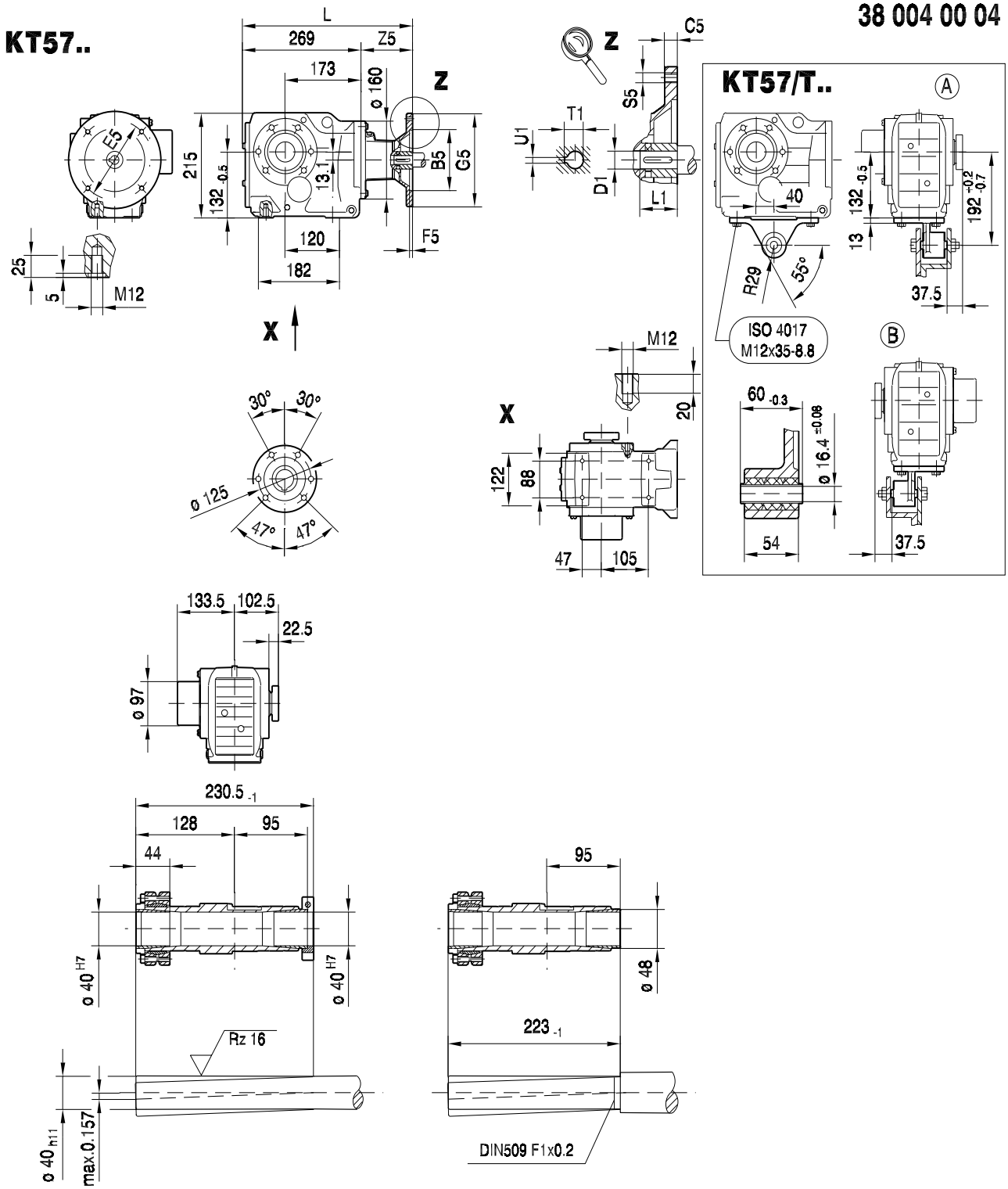
AM71	110	10	130	4.0	160	335	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	368	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	368	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	460	M12	191	38	80	41.3	10	

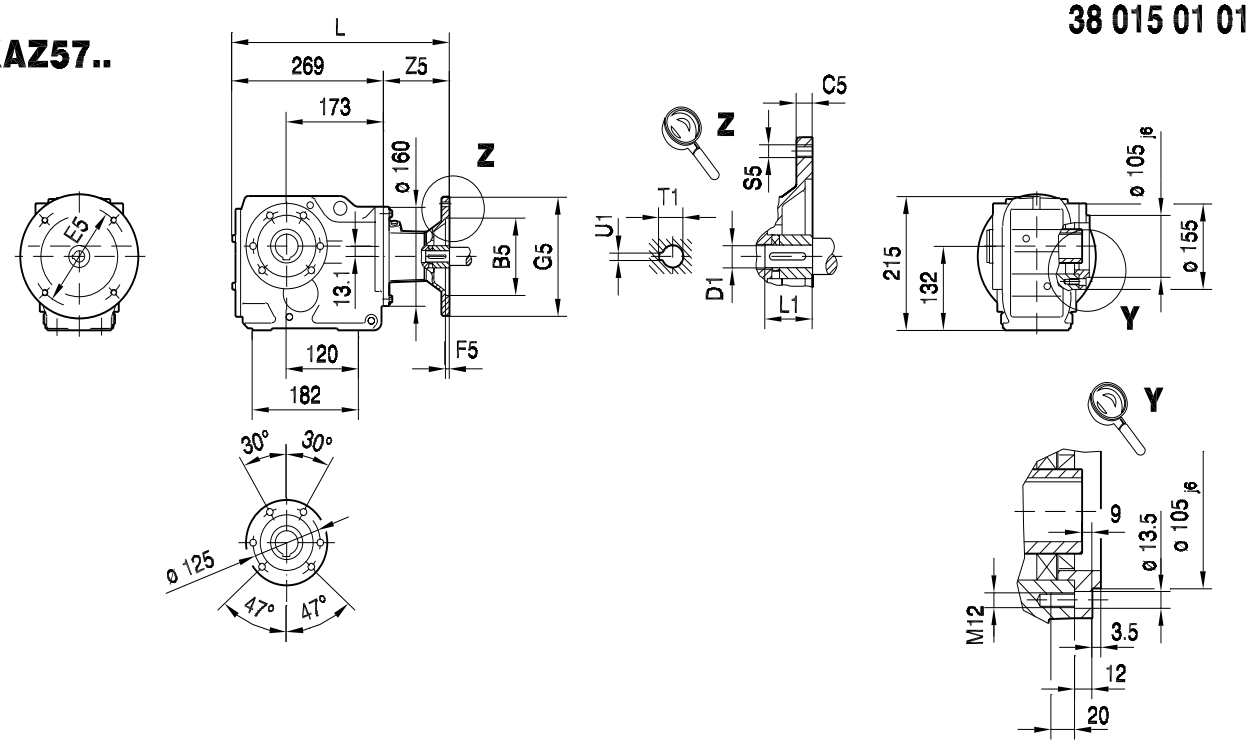
38 004 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	335	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	335	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	368	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	368	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	460	M12	191	38	80	41.3	10	

38 015 01 01

KAZ57..



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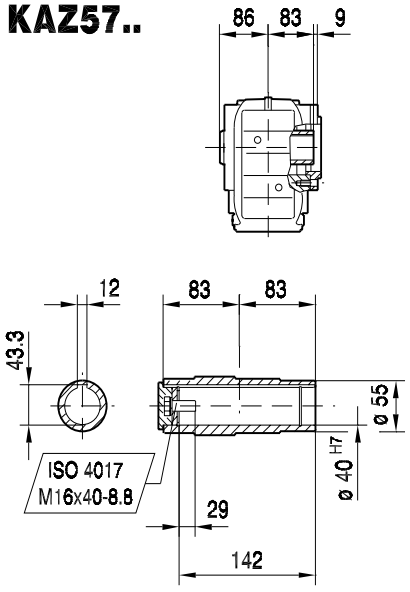

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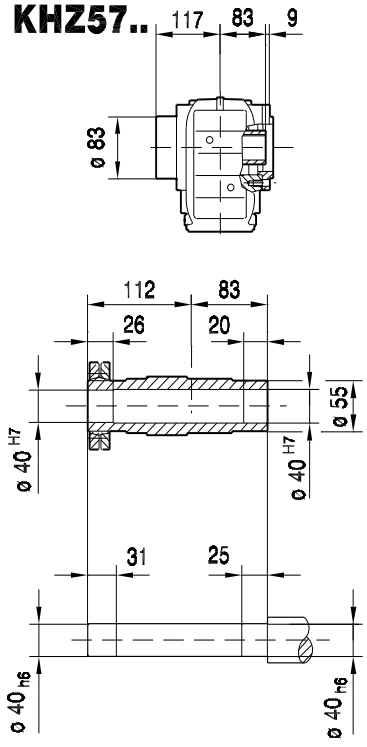

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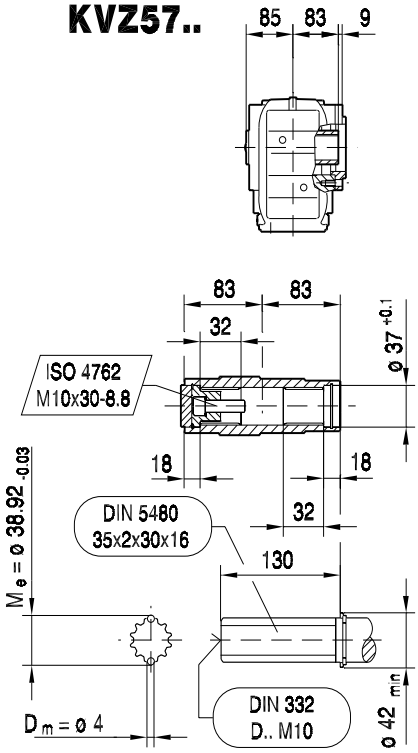

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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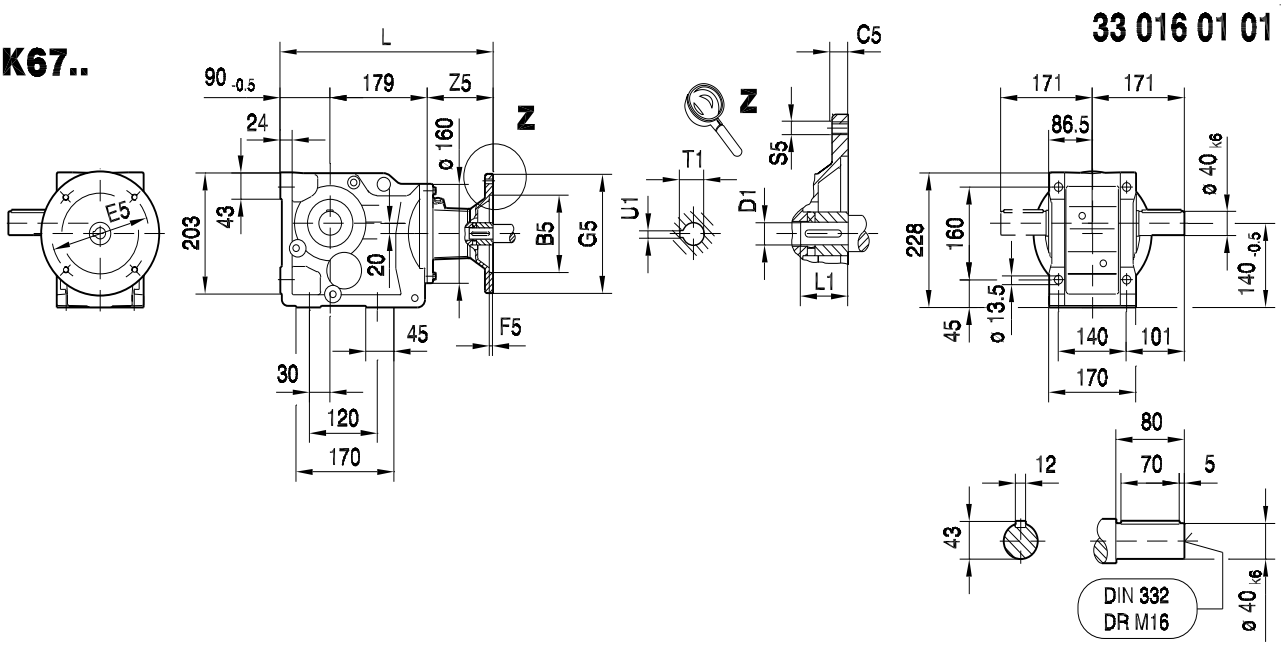
AM71	110	10	130	4.0	160	335	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	368	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	368	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	460	M12	191	38	80	41.3	10	

K67..



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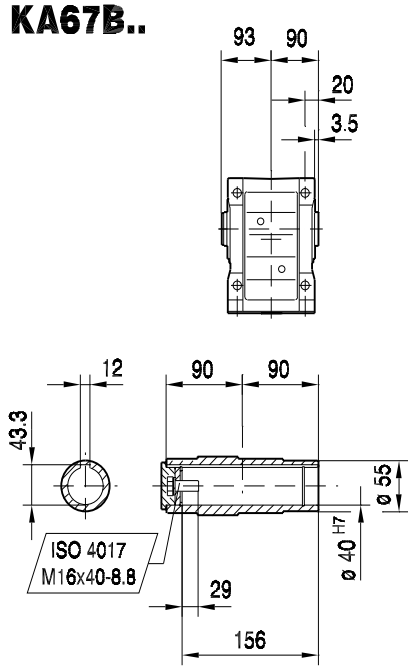

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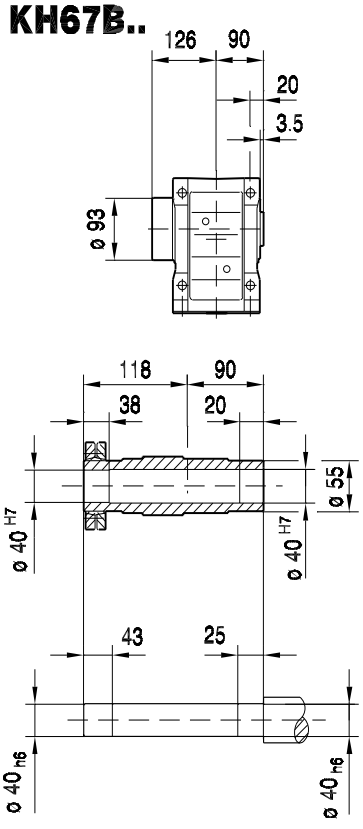
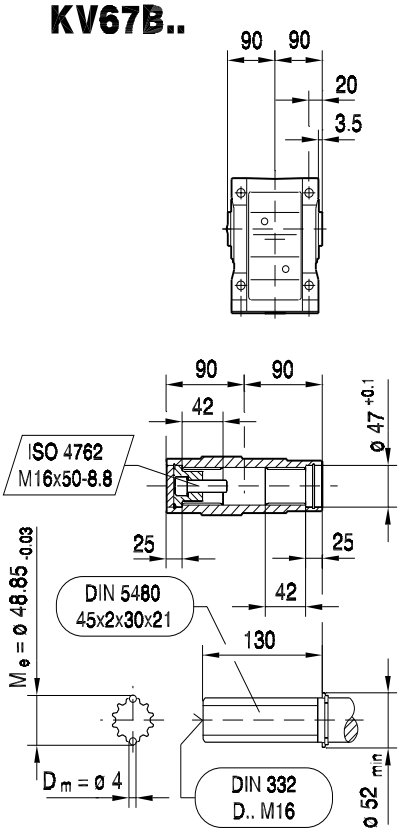


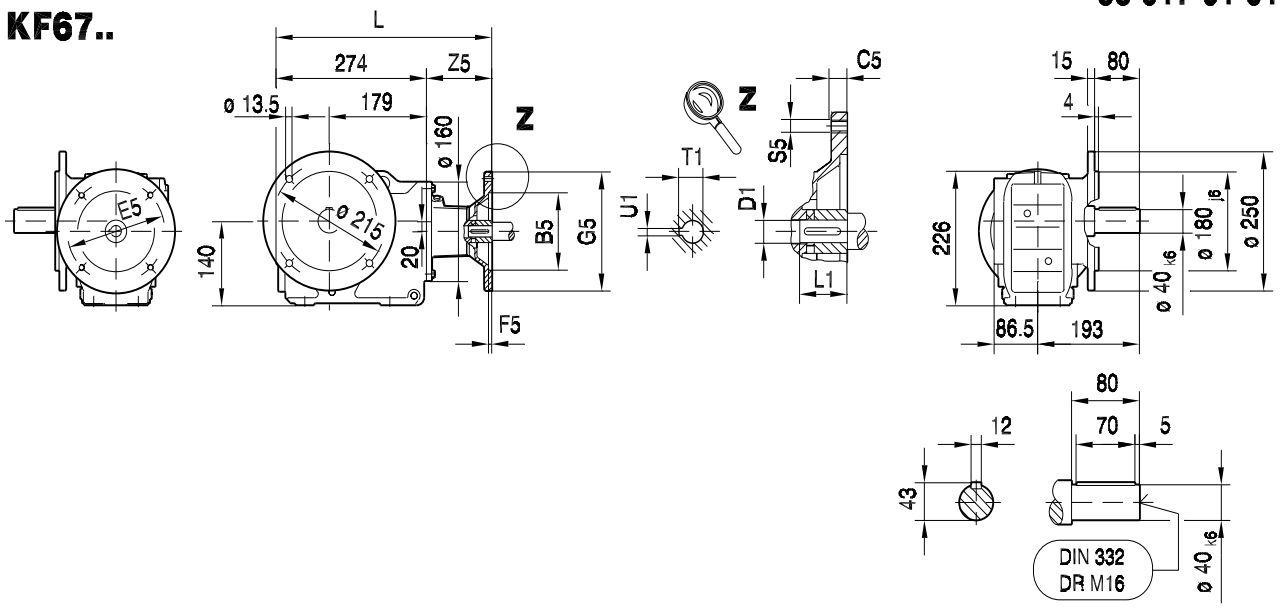
KV67B..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	335	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	335	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	368	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	368	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	403	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	460	M12	191	38	80	41.3	10	

33 017 01 01

KF67..



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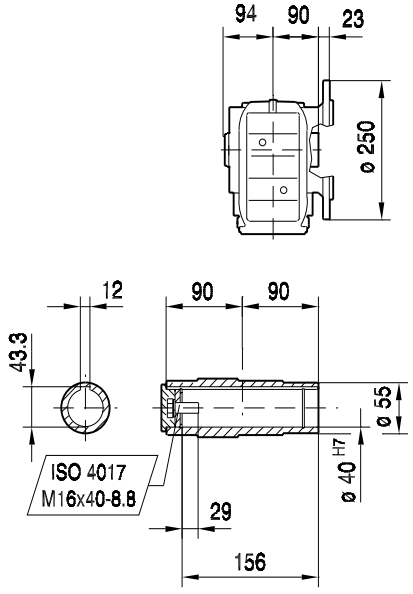

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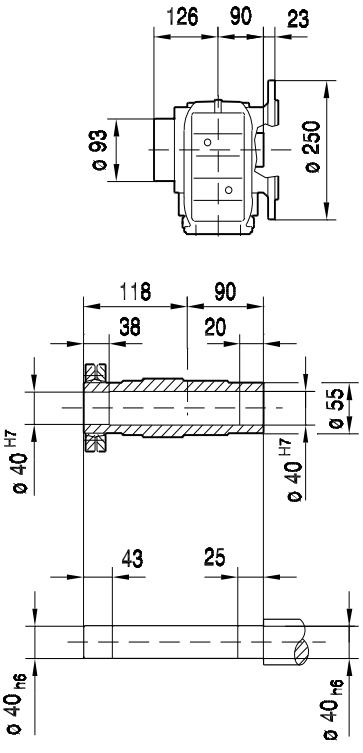

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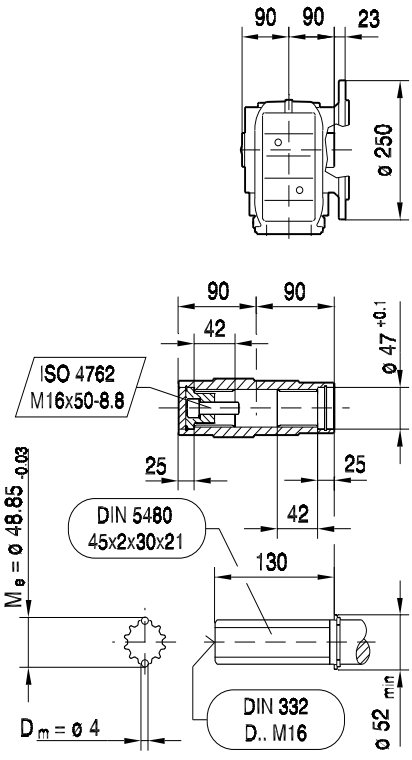

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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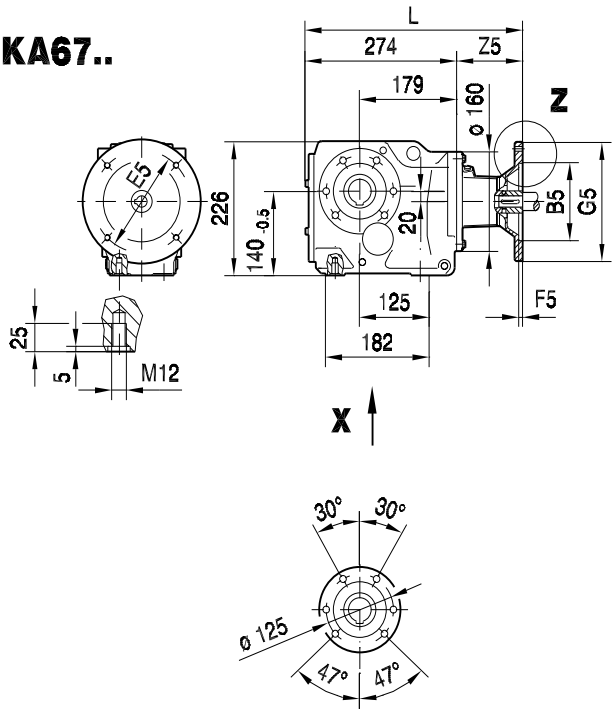
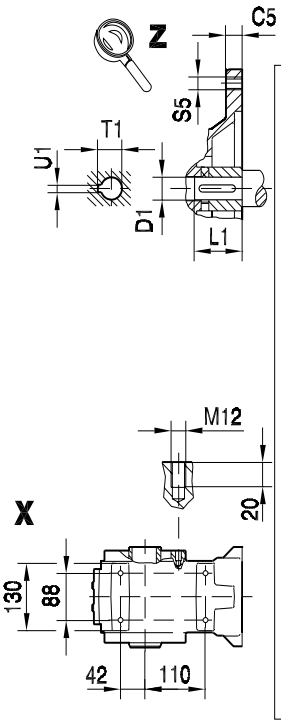
AM71	110	10	130	4.0	160	340	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	373	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	373	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	465	M12	191	38	80	41.3	10	

38 016 01 01

KA67..





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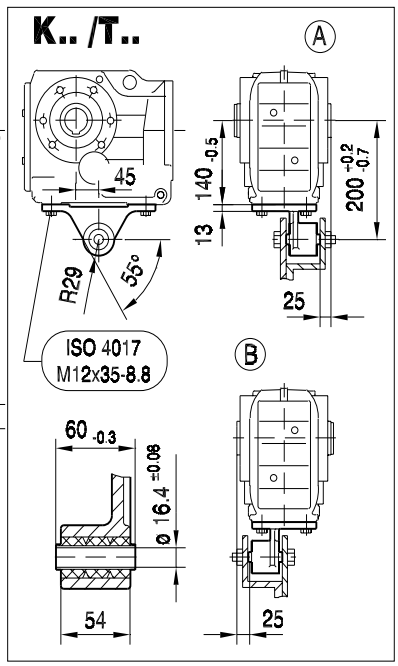

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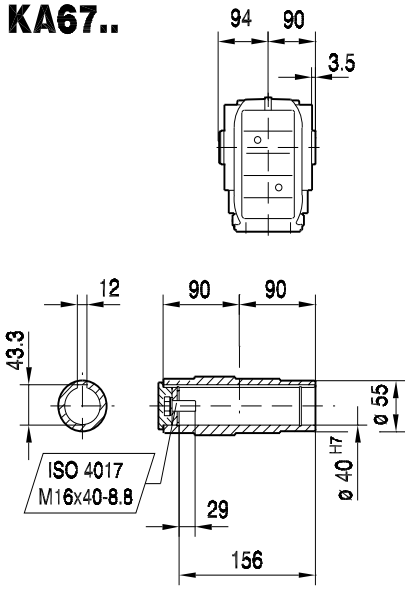

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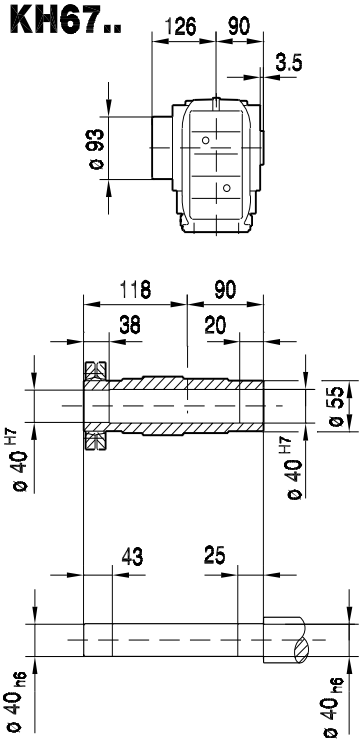

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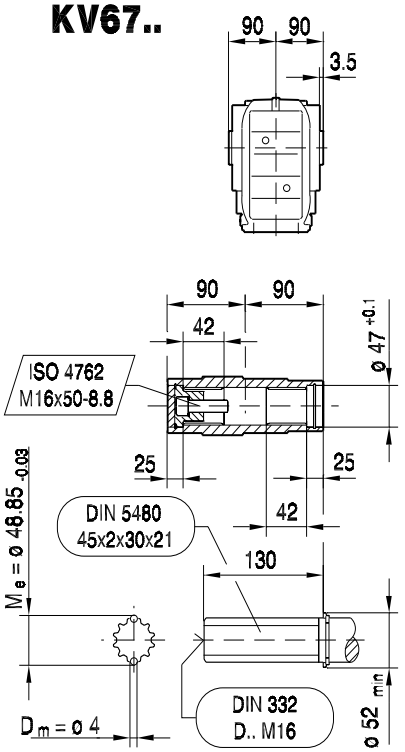

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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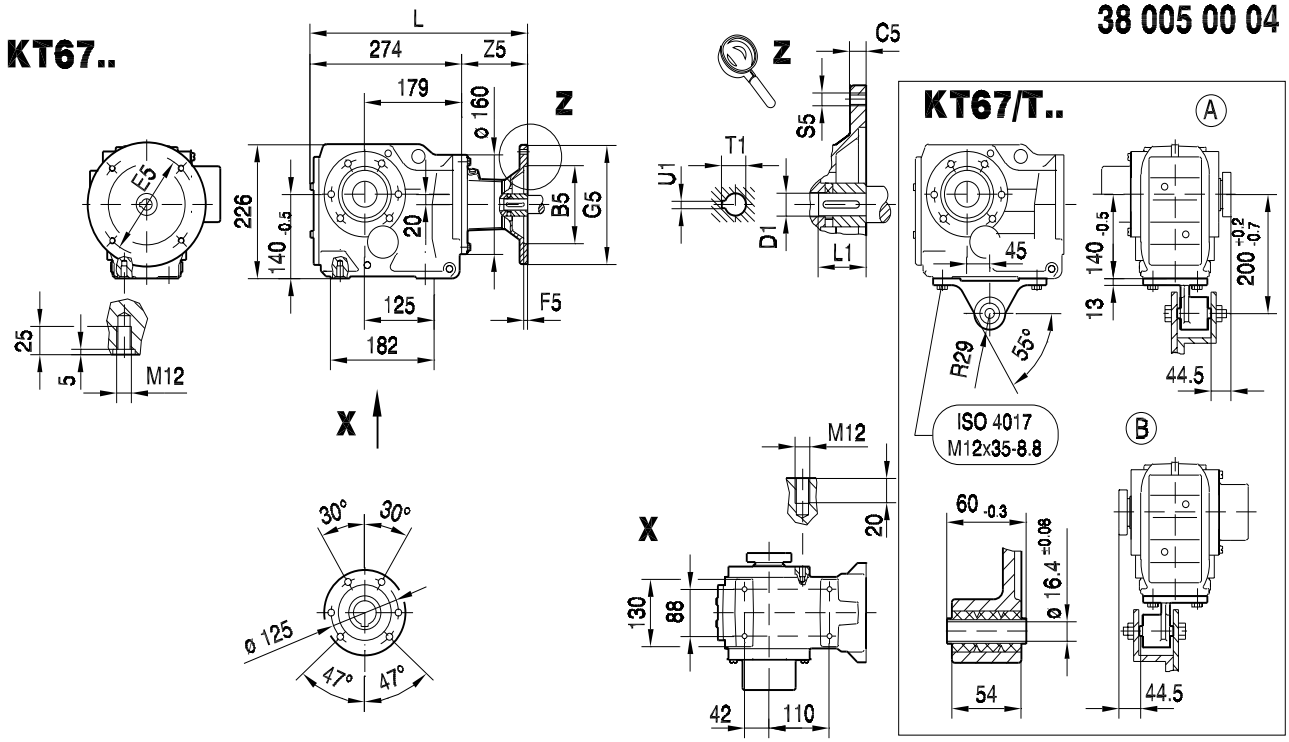
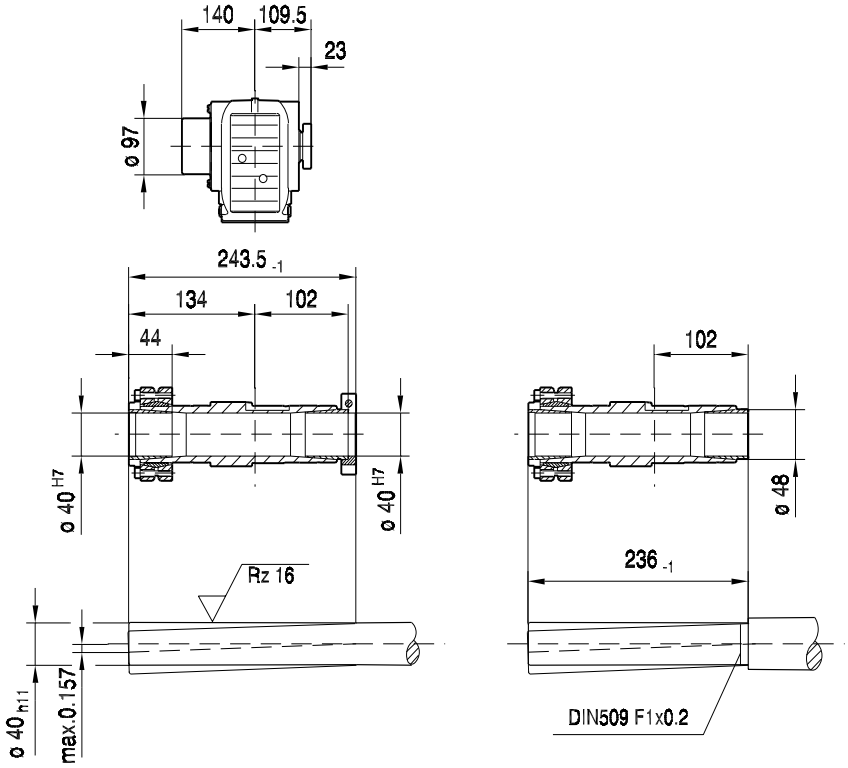
AM71	110	10	130	4.0	160	340	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	373	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	373	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	465	M12	191	38	80	41.3	10	

38 005 00 04





(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	340	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	340	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	373	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	373	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	465	M12	191	38	80	41.3	10	

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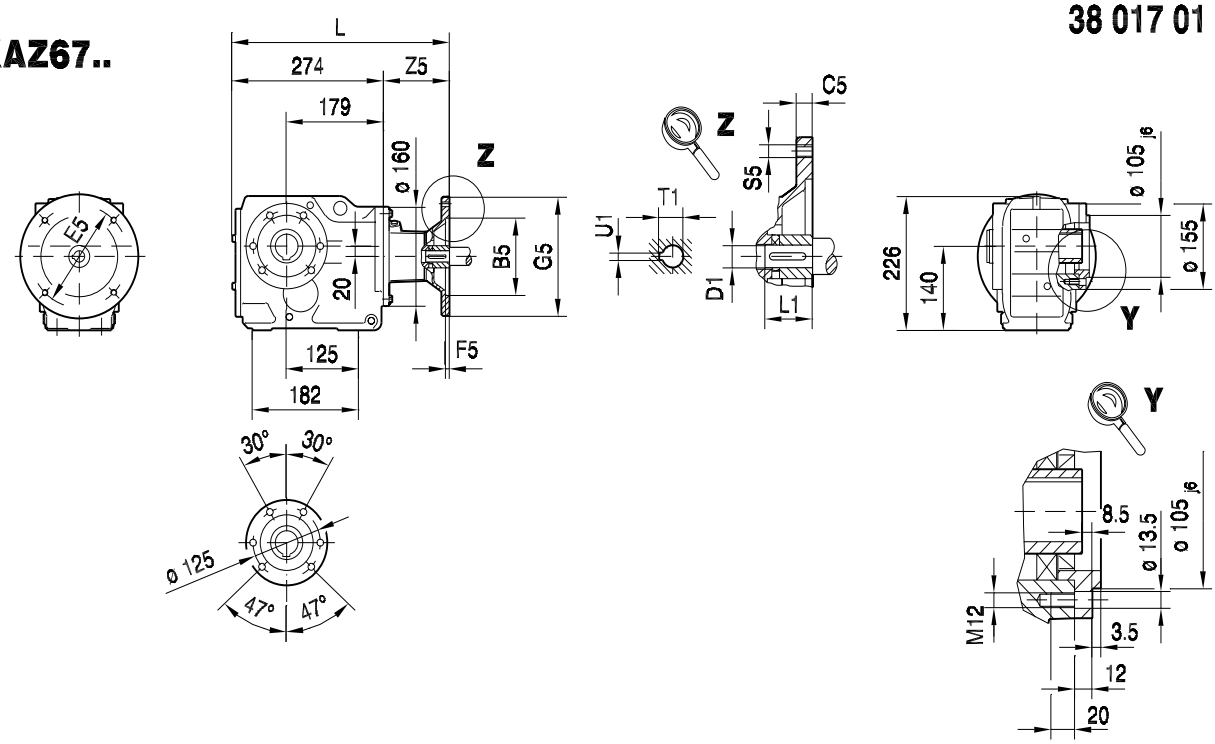

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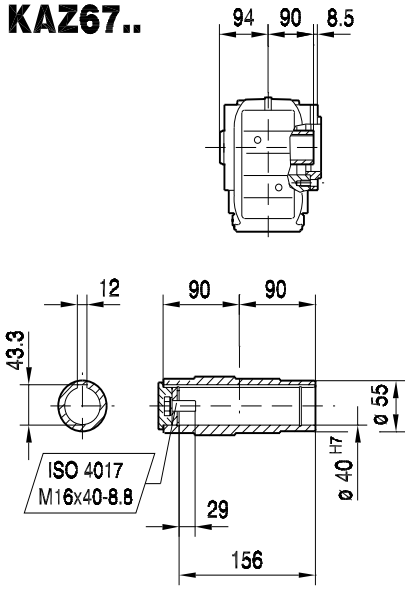

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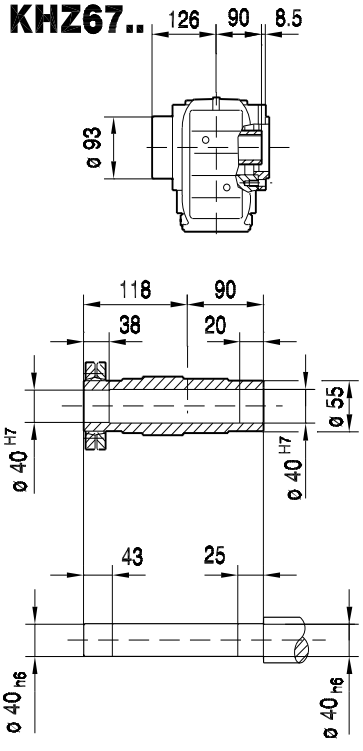

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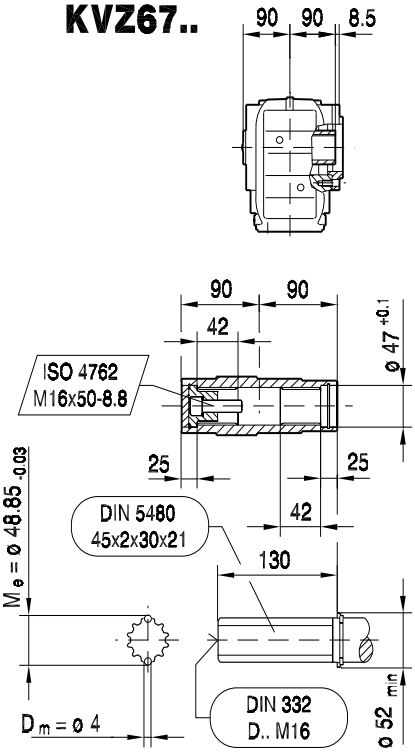
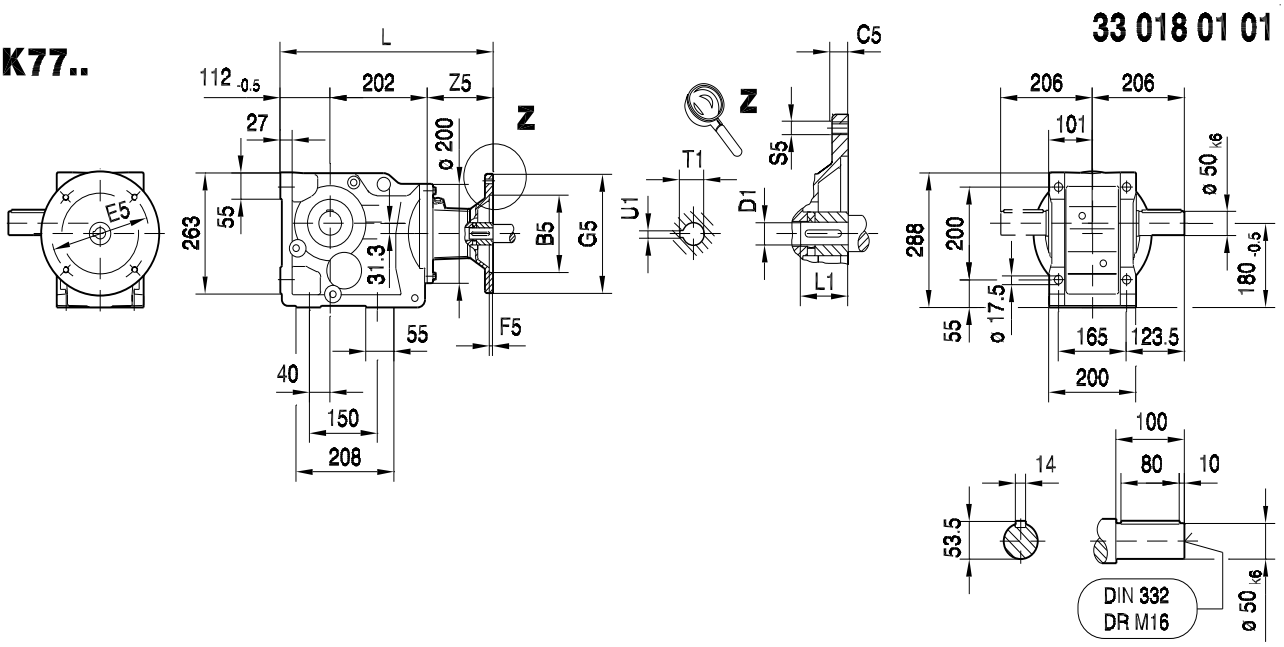


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	340	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	340	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	373	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	373	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	408	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	465	M12	191	38	80	41.3	10	

K77..



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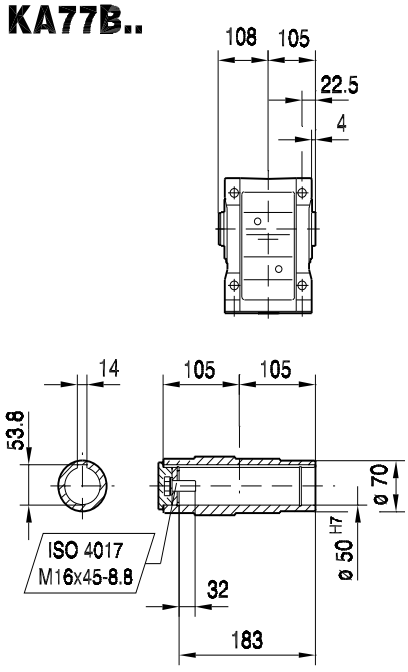

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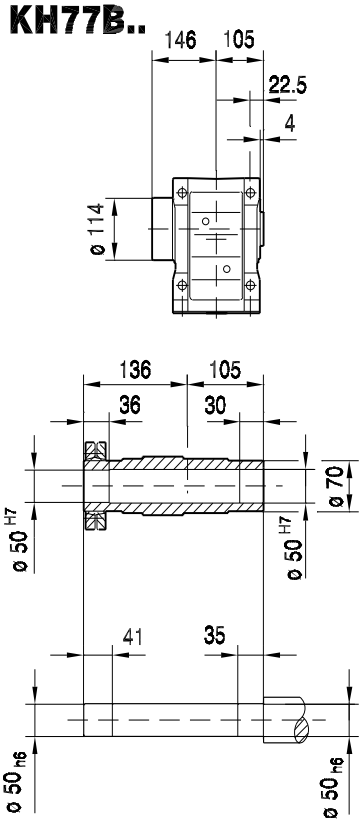

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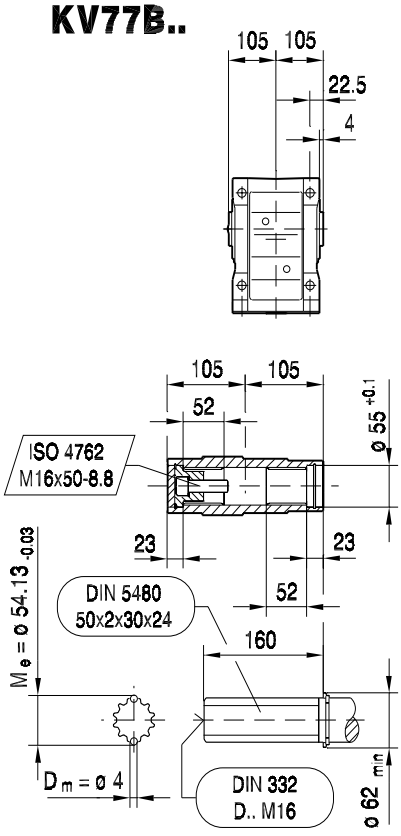

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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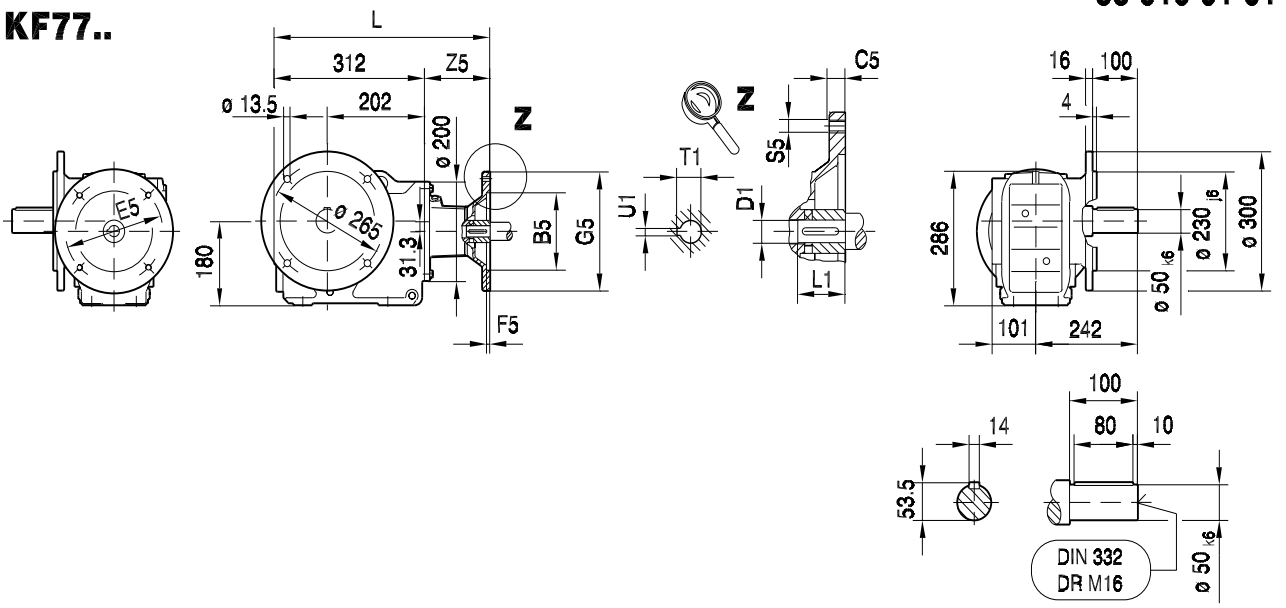
AM71	110	10	130	4.0	160	374	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	406	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	406	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	440	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	440	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	493	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	493	M12	179	38	80	41.3	10	

33 019 01 01

KF77..



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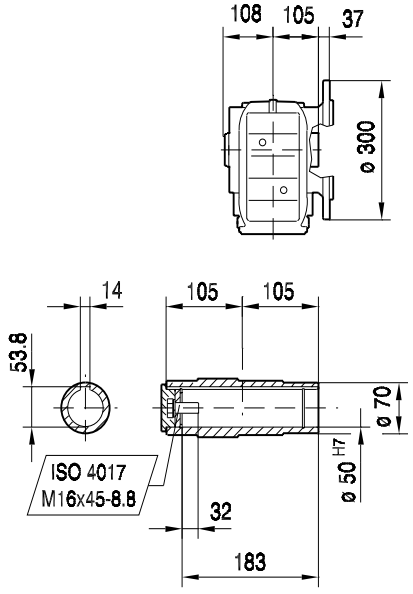

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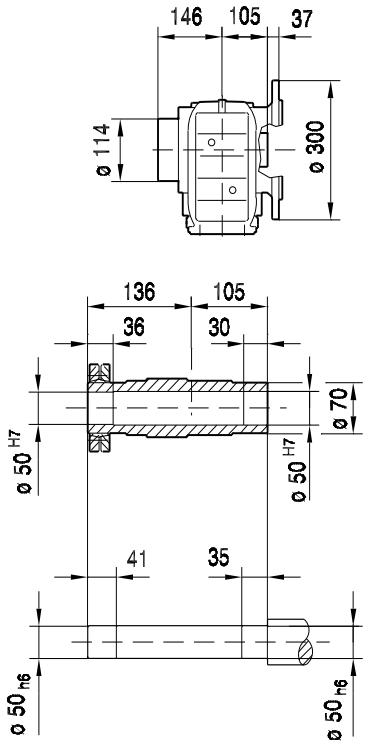

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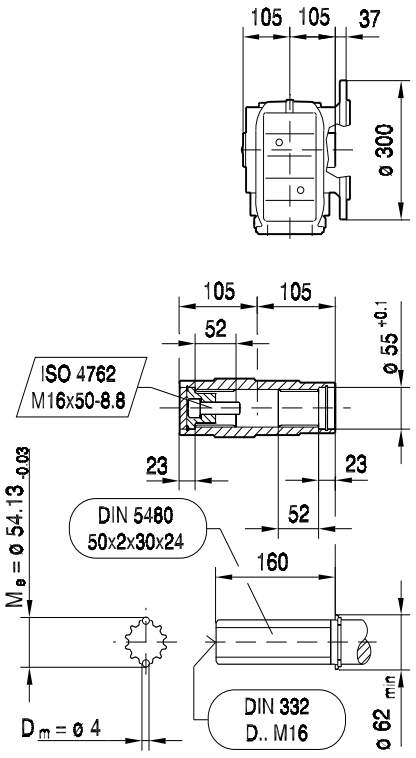

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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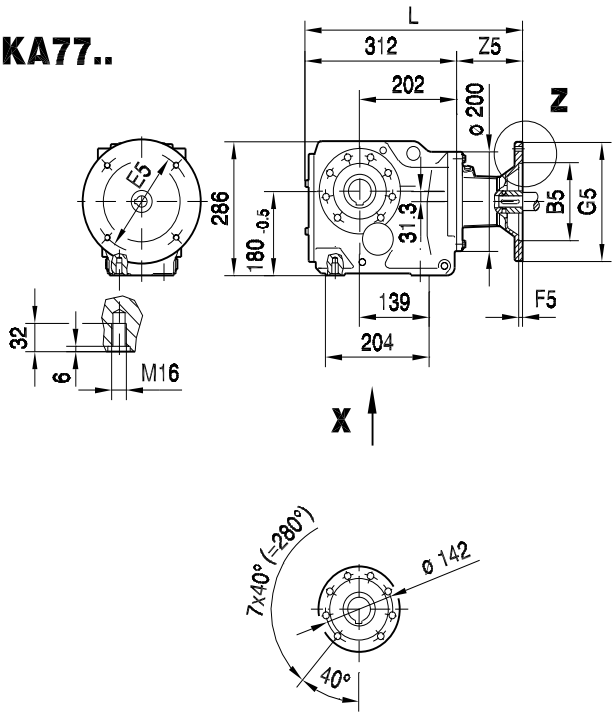
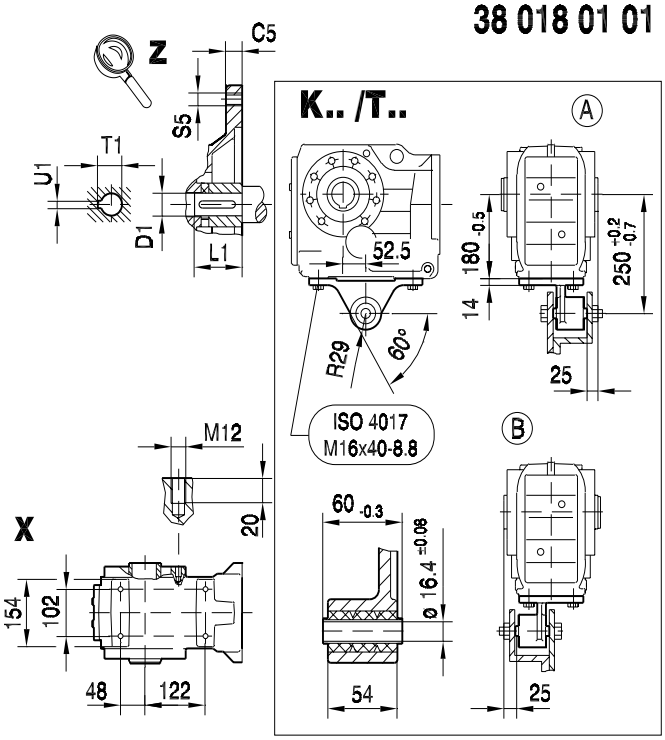
AM71	110	10	130	4.0	160	372	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	404	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	404	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	491	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	491	M12	179	38	80	41.3	10	

38 018 01 01

KA77..





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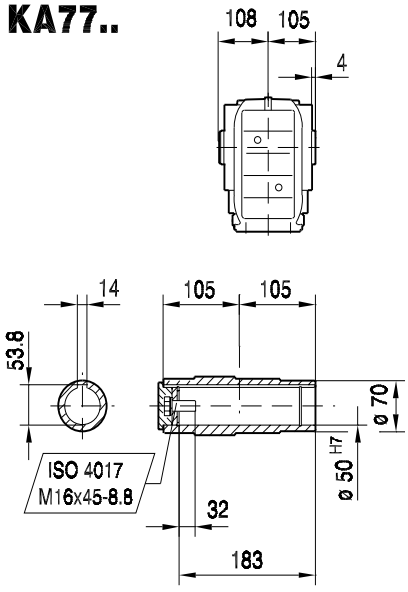

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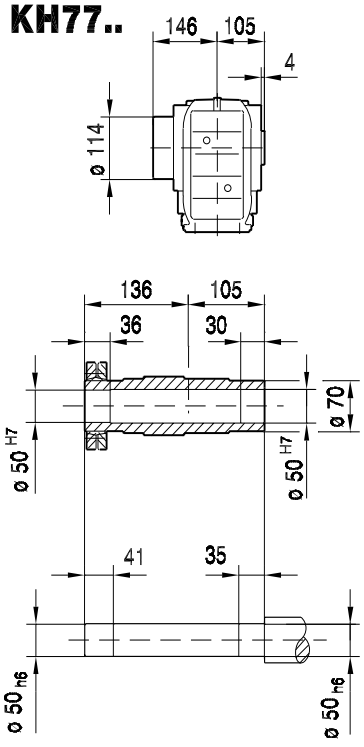

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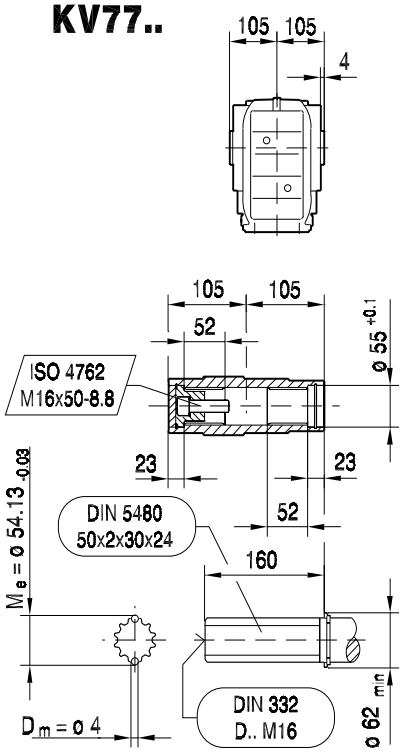

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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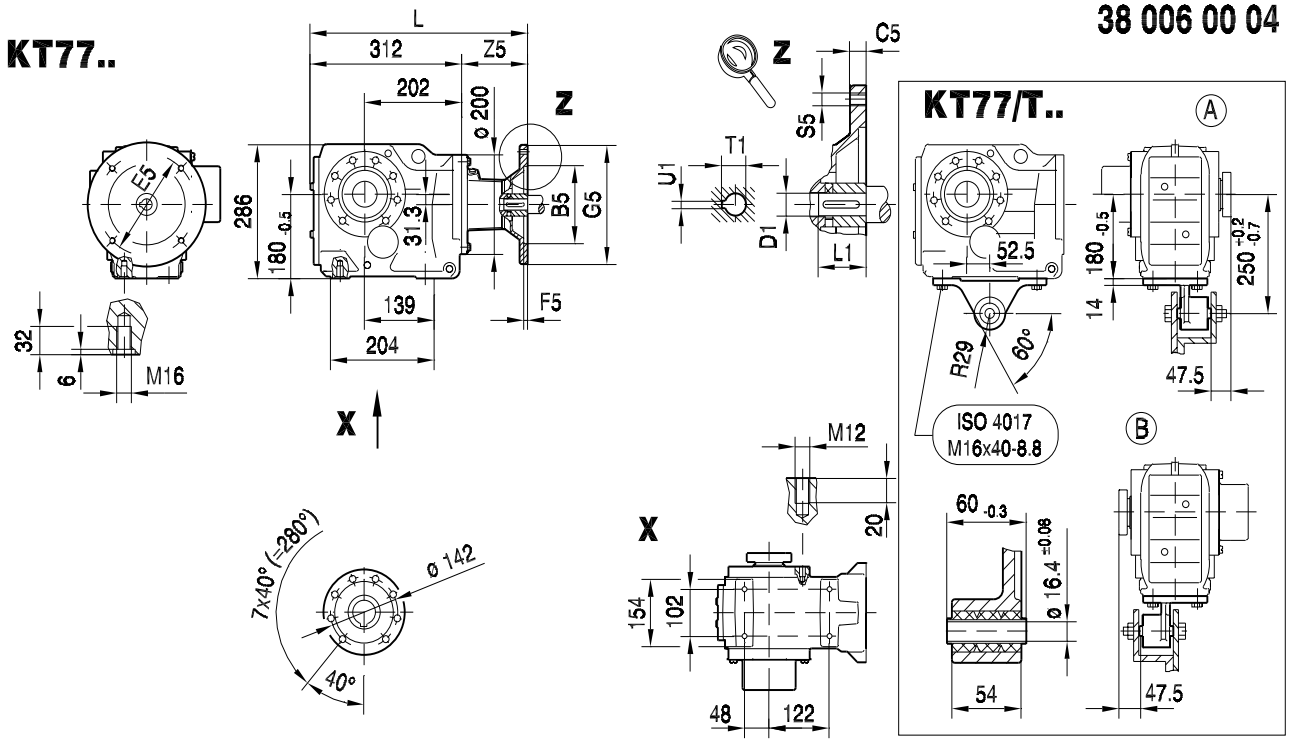
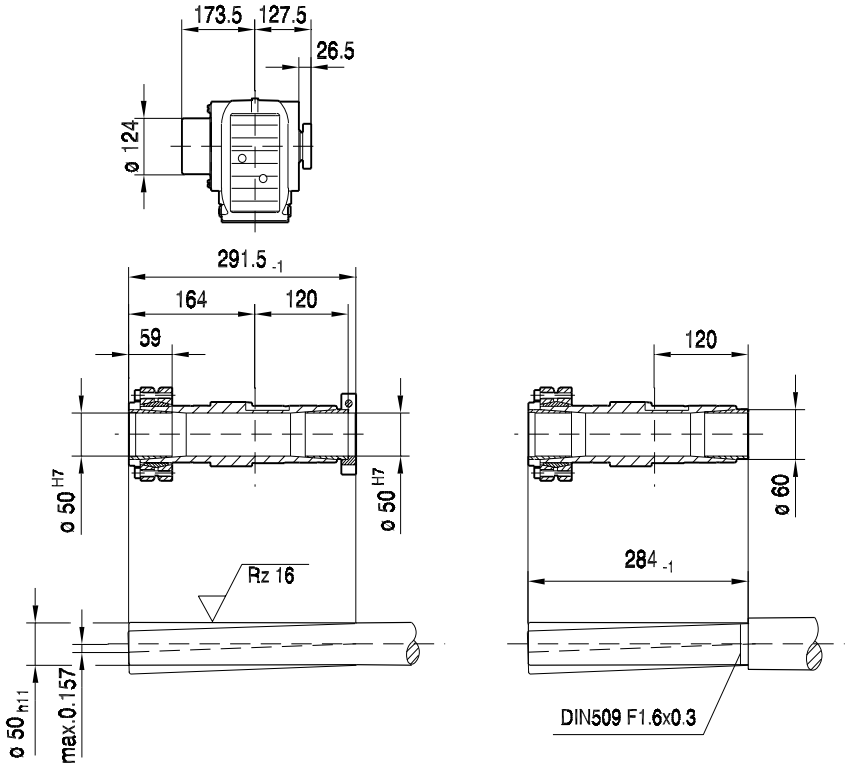
AM71	110	10	130	4.0	160	372	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	404	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	404	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	491	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	491	M12	179	38	80	41.3	10	

38 006 00 04





(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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AM71	110	10	130	4.0	160	372	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	404	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	404	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	491	M12	179	38	80	41.3	10	
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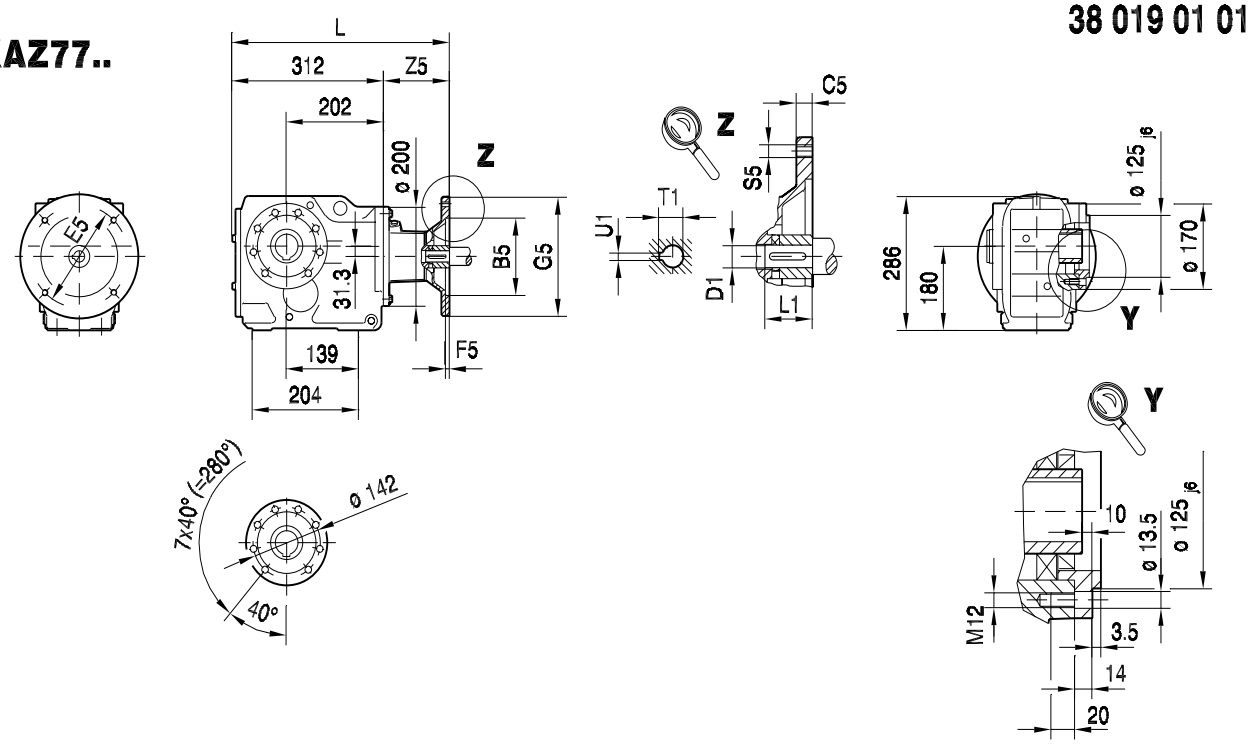
38 019 01 01

KAZ77..



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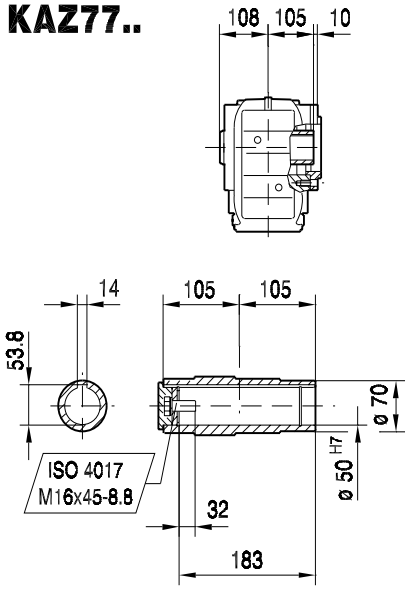

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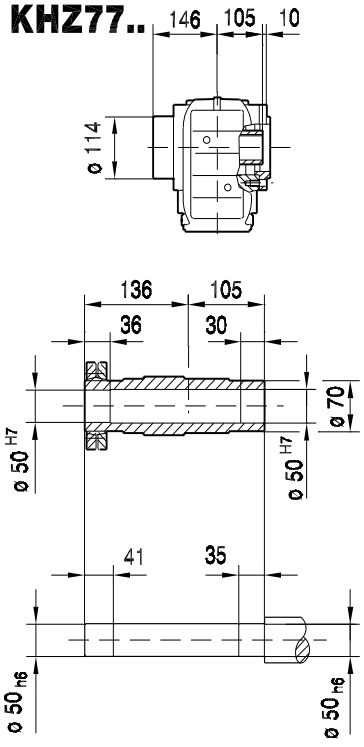

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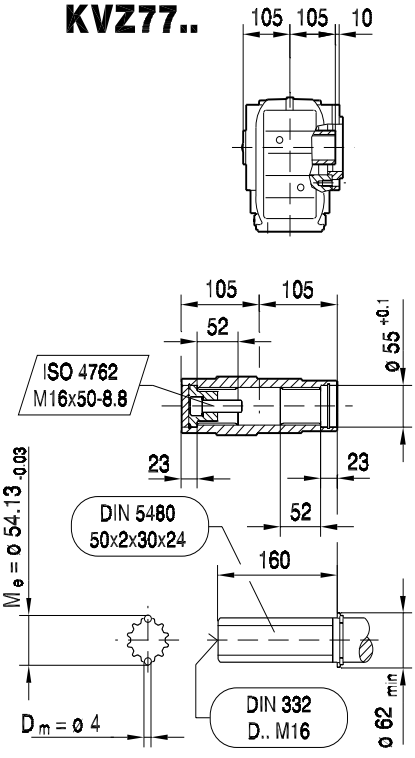
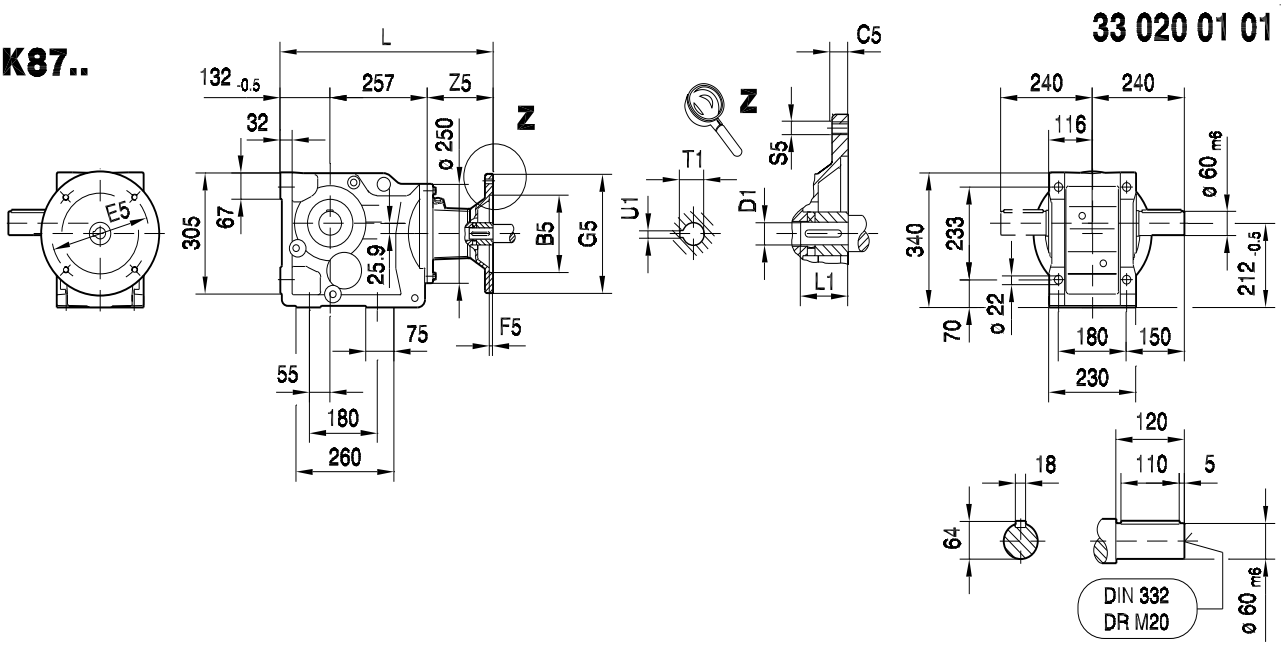


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	372	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	372	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	404	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	404	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	438	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	491	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	491	M12	179	38	80	41.3	10	

K87..



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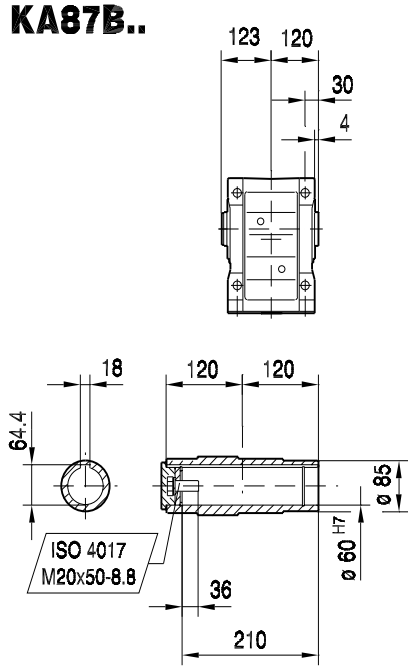

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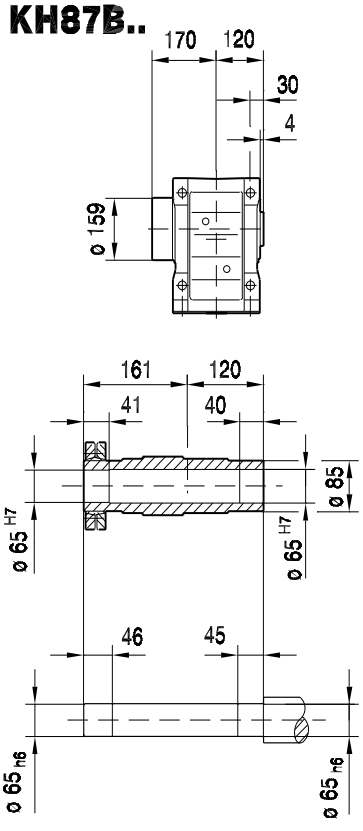

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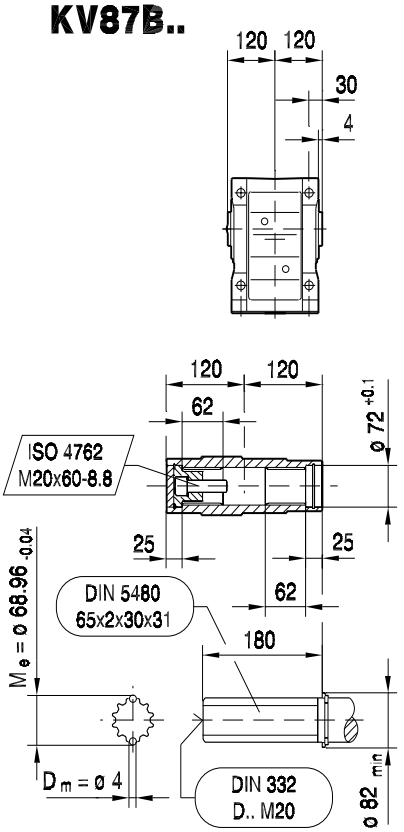
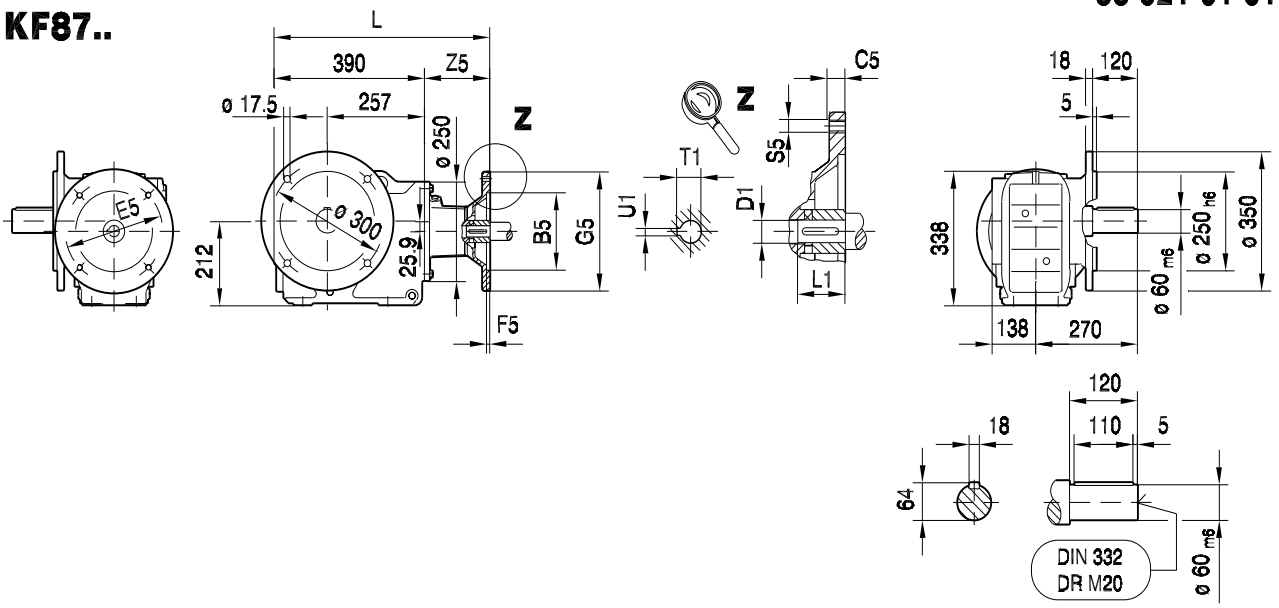


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	476	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	476	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	510	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	510	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	563	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	563	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	621	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	621	M16	232	48	110	51.8	14	

33 021 01 01

KF87..



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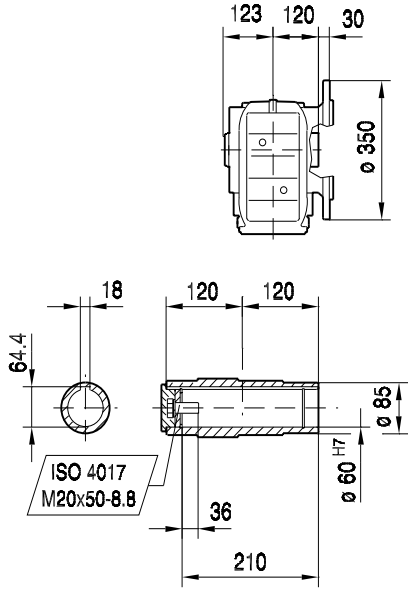

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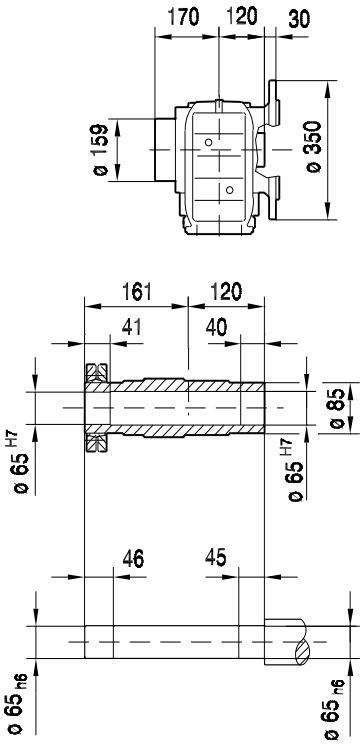

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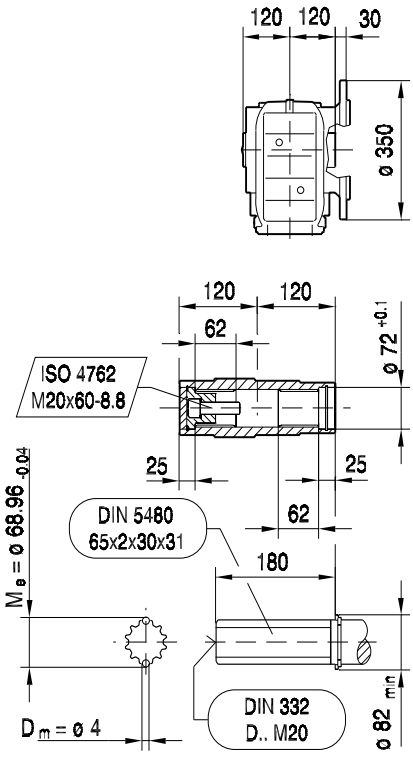

(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	477	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	477	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	622	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	622	M16	232	48	110	51.8	14	

38 020 01 01

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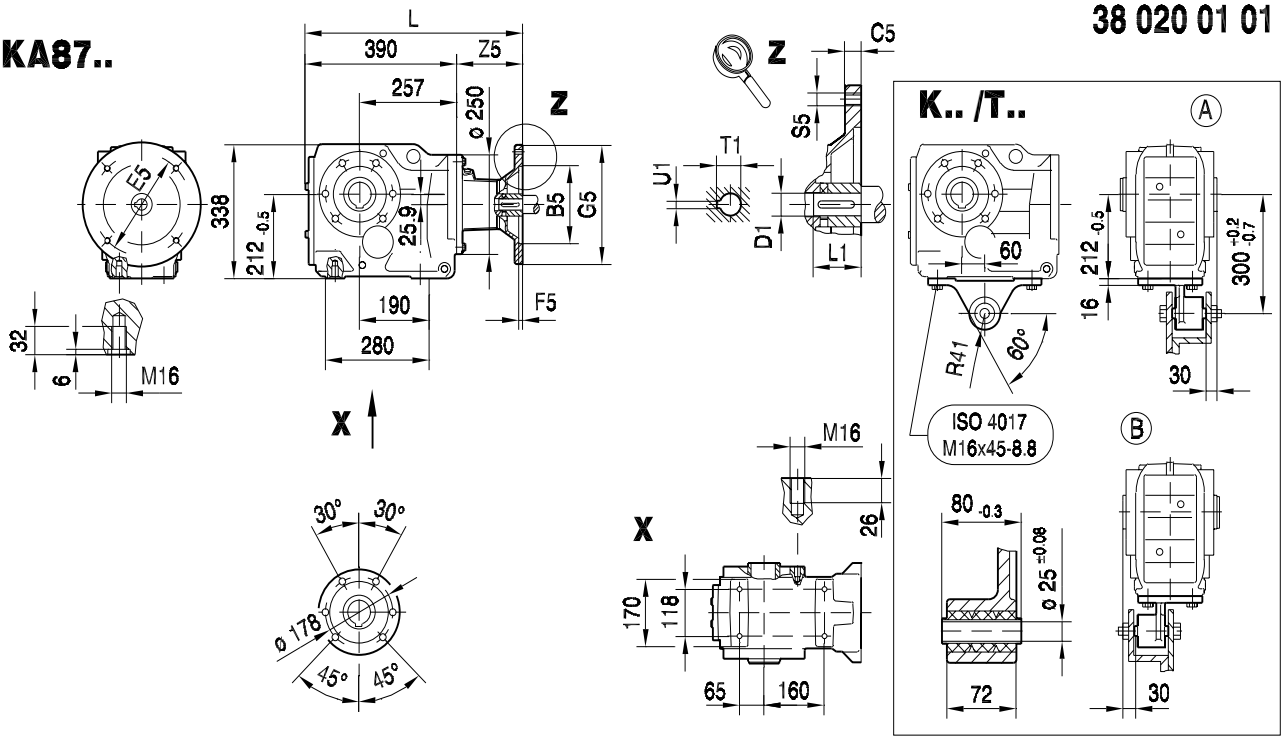

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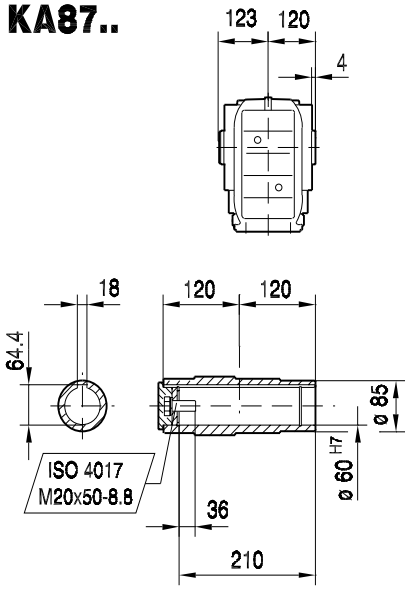

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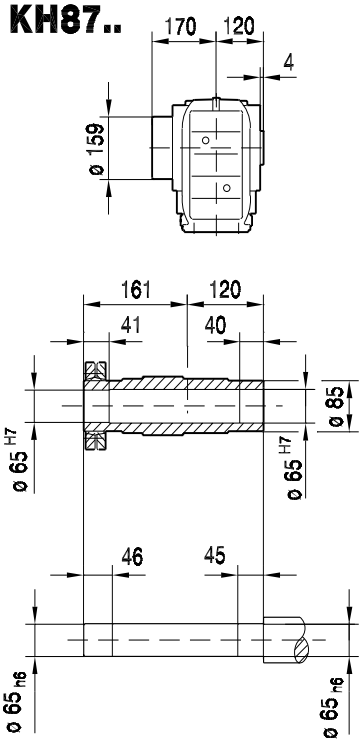

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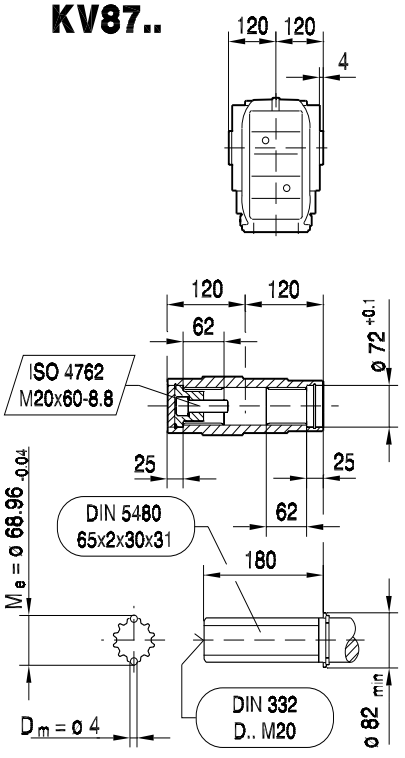
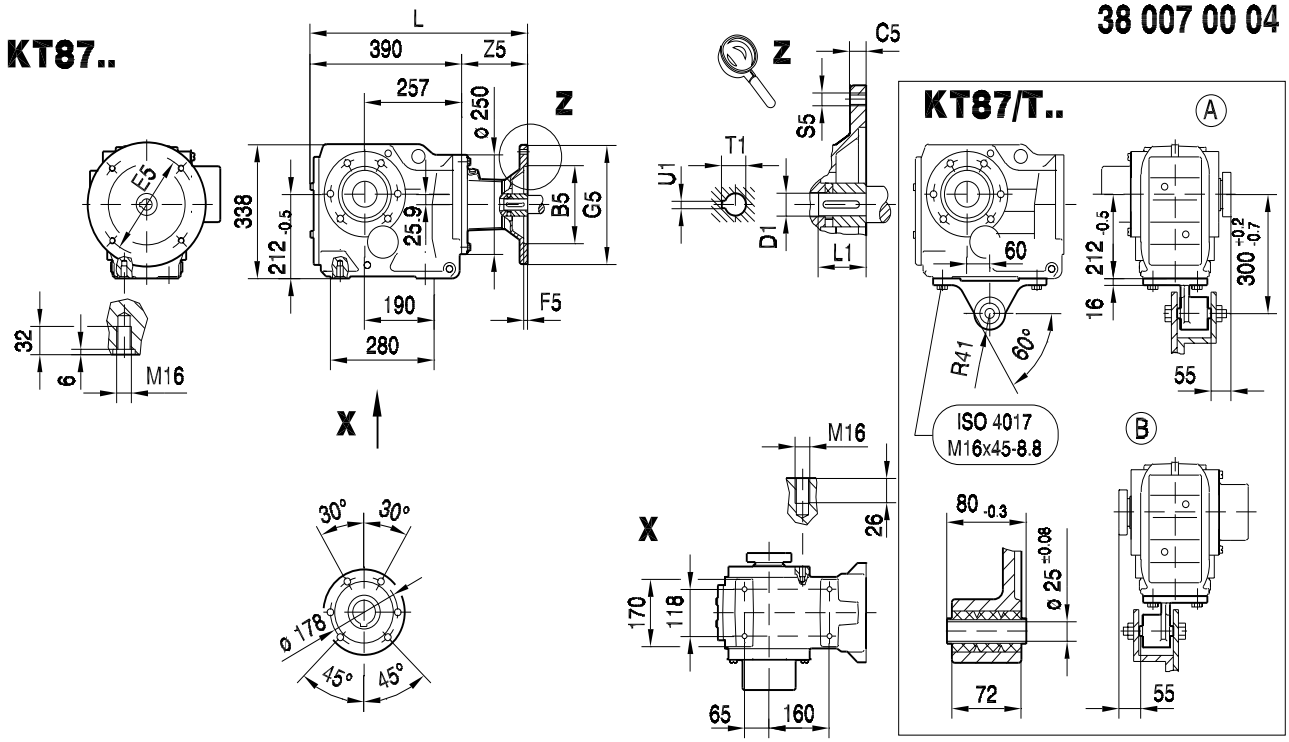
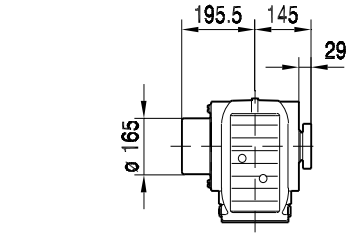
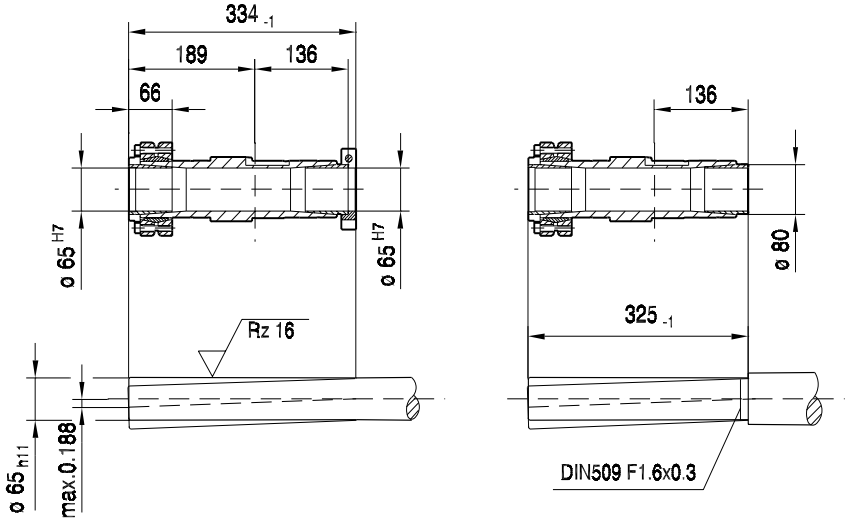


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	477	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	477	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	622	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	622	M16	232	48	110	51.8	14	

38 007 00 04







(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	477	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	477	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	622	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	622	M16	232	48	110	51.8	14	

38 021 01 01

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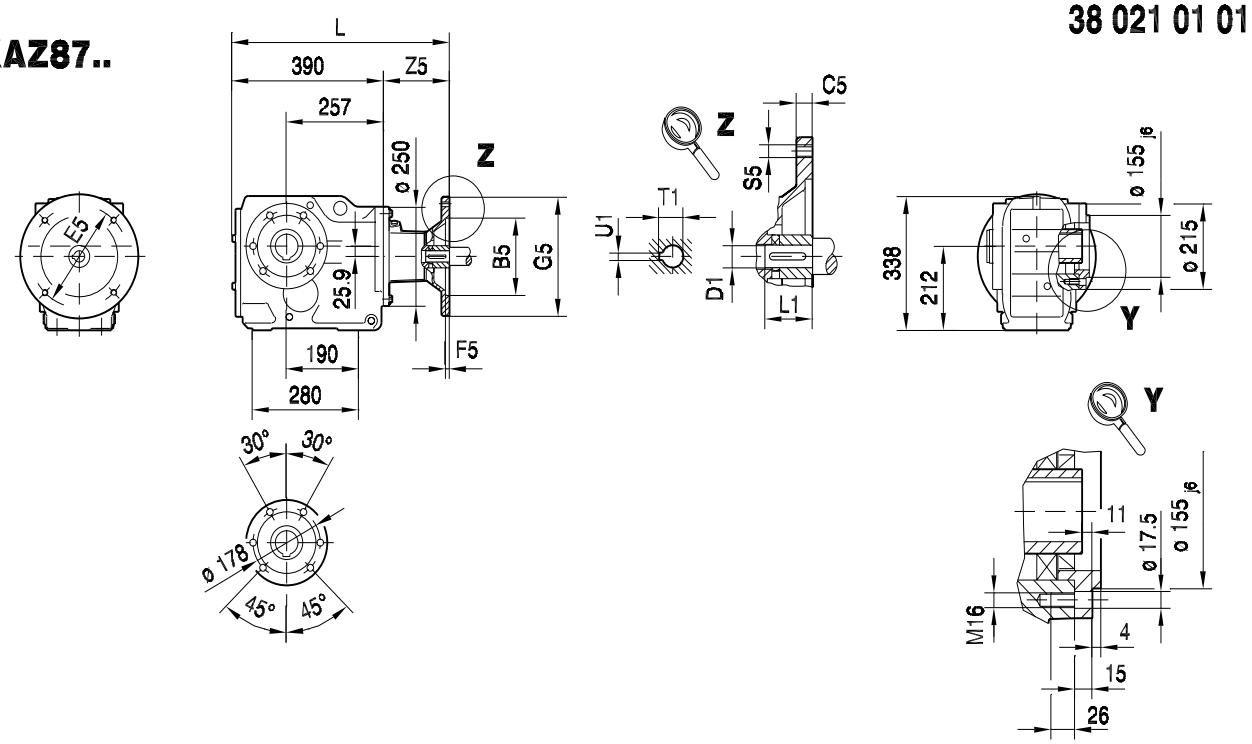

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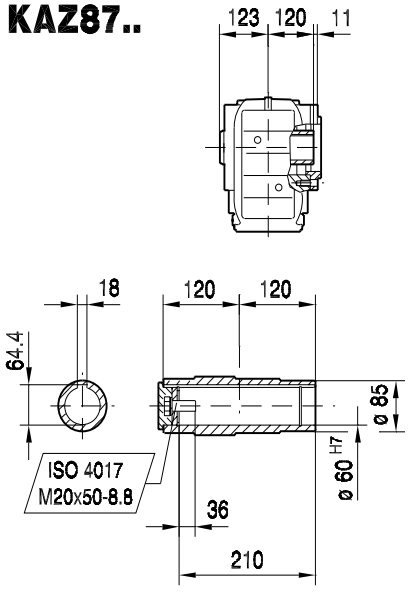

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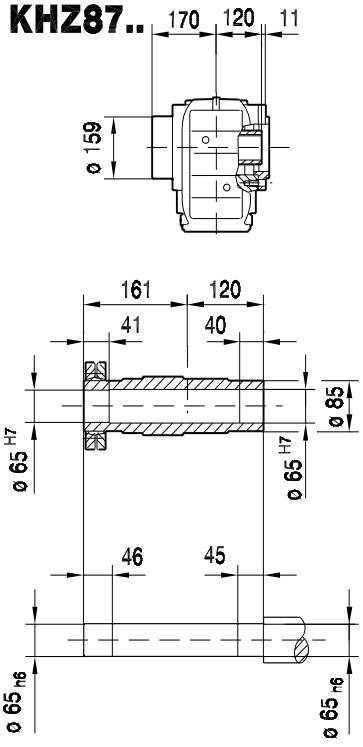

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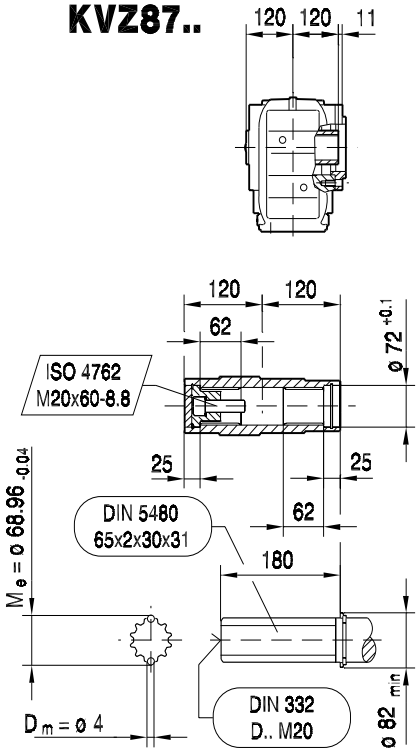
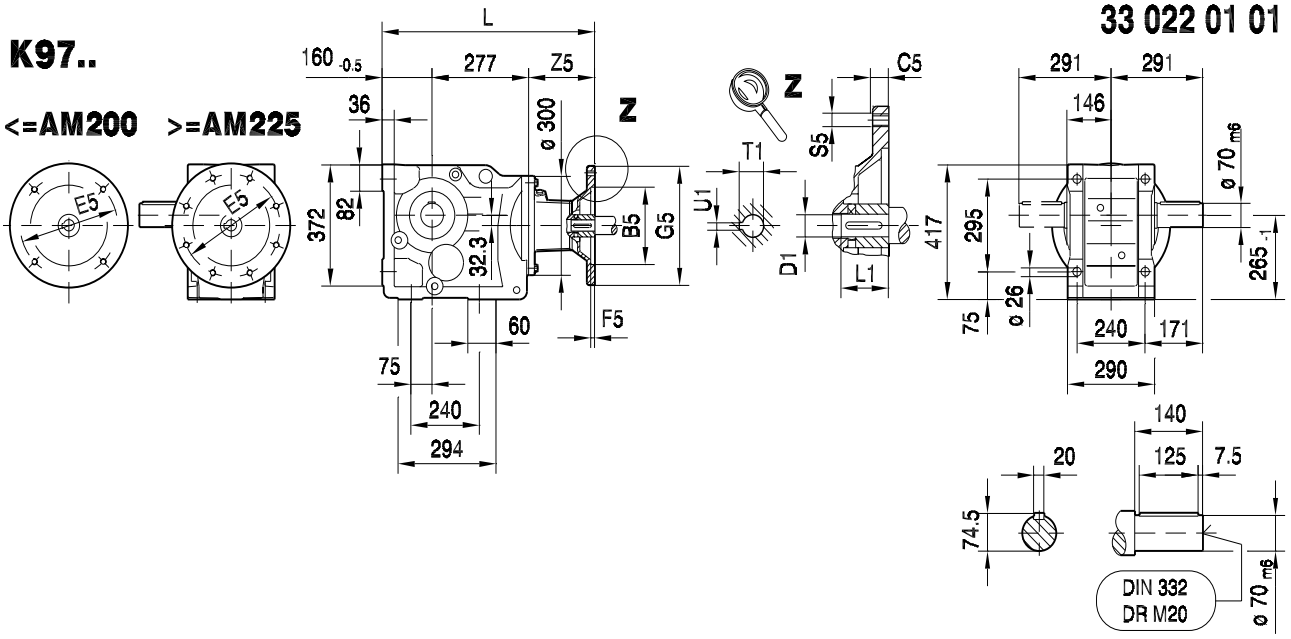


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	477	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	477	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	511	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	564	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	622	M16	232	42	110	45.3	12	
AM180	250	18	300	6.0	350	622	M16	232	48	110	51.8	14	

33 022 01 01

K97..

<=AM200 >=AM225



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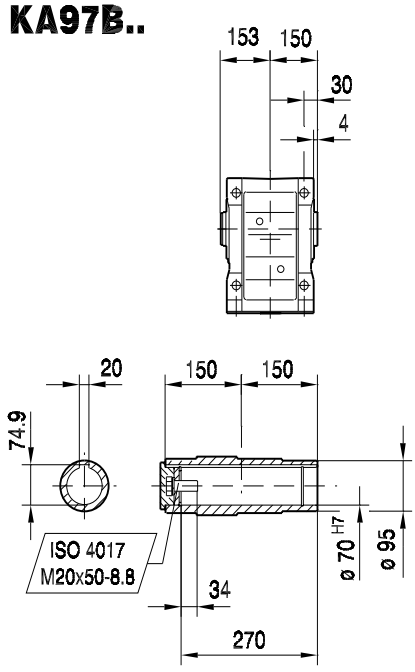

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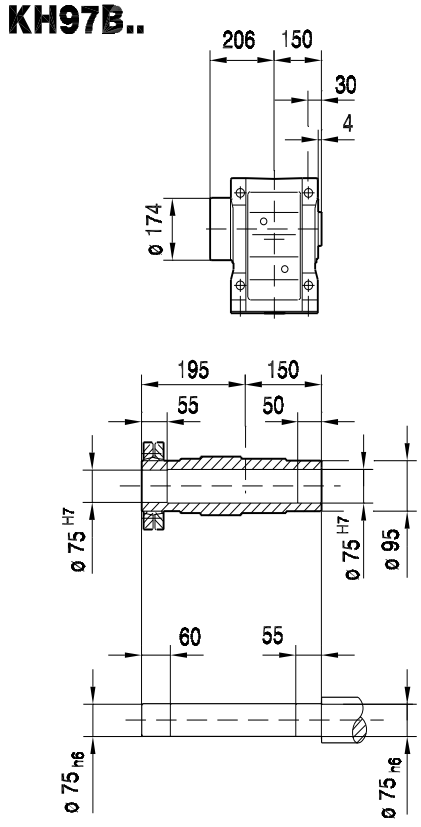

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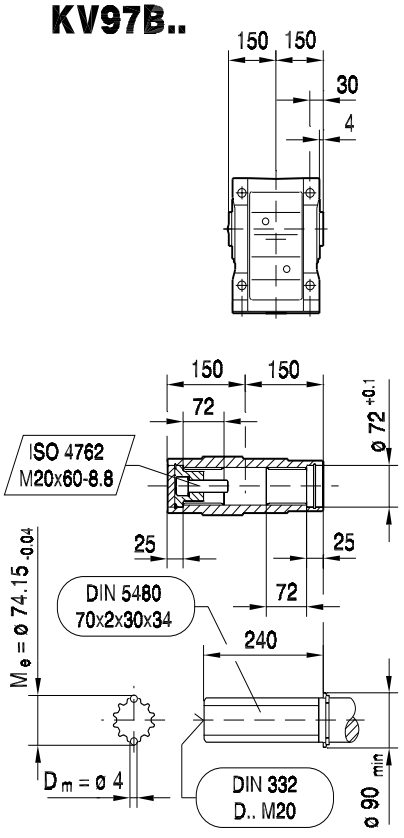
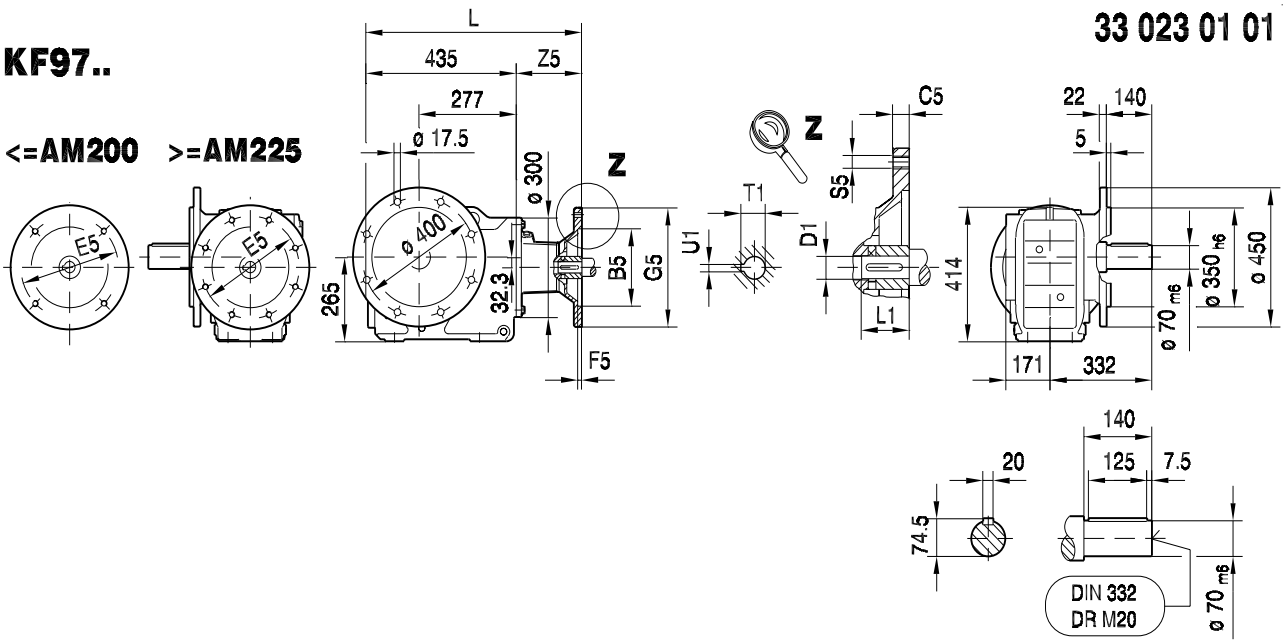


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	553	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	553	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	606	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	606	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	664	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	664	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	705	M16	268	55	110	59.3	16	

33 023 01 01

KF97..

<=AM200 >=AM225



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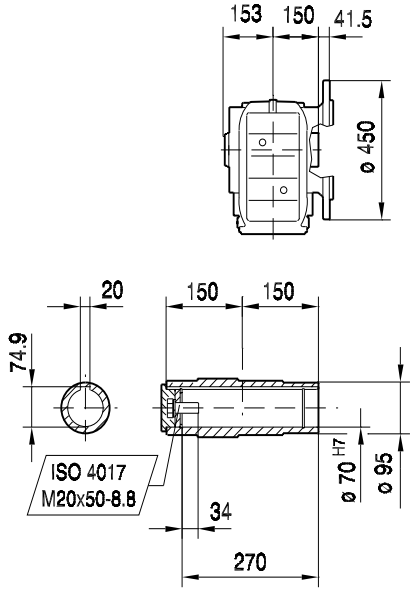

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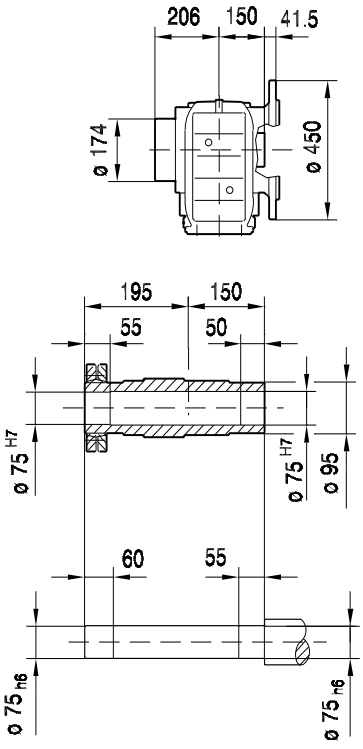

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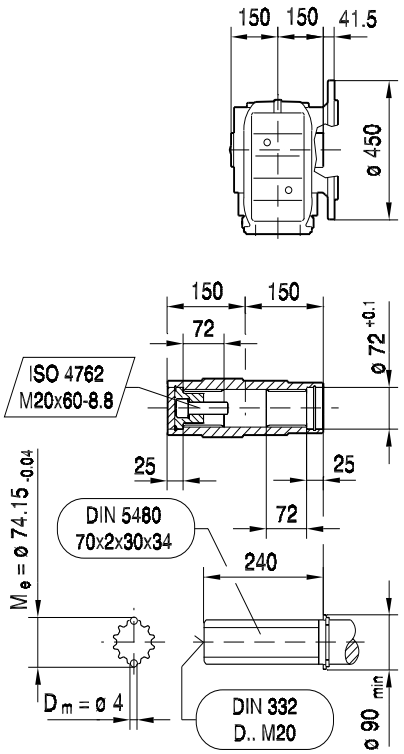
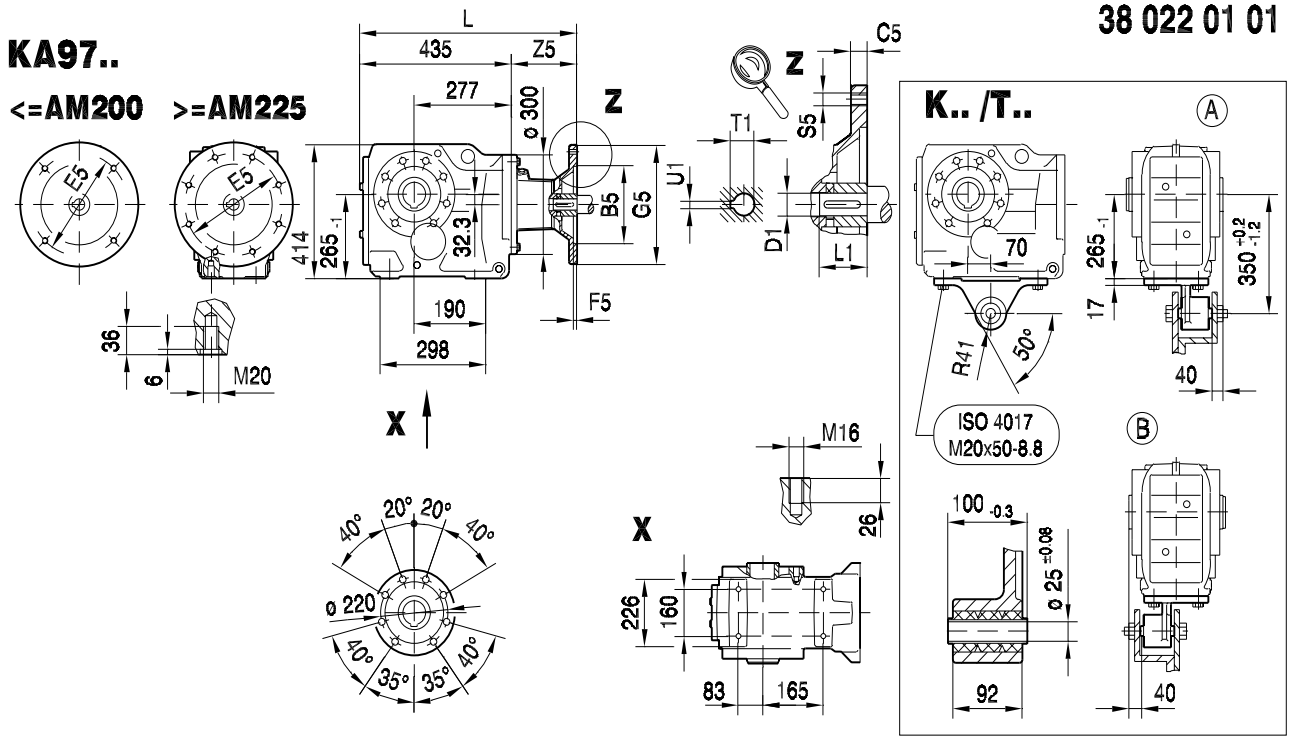
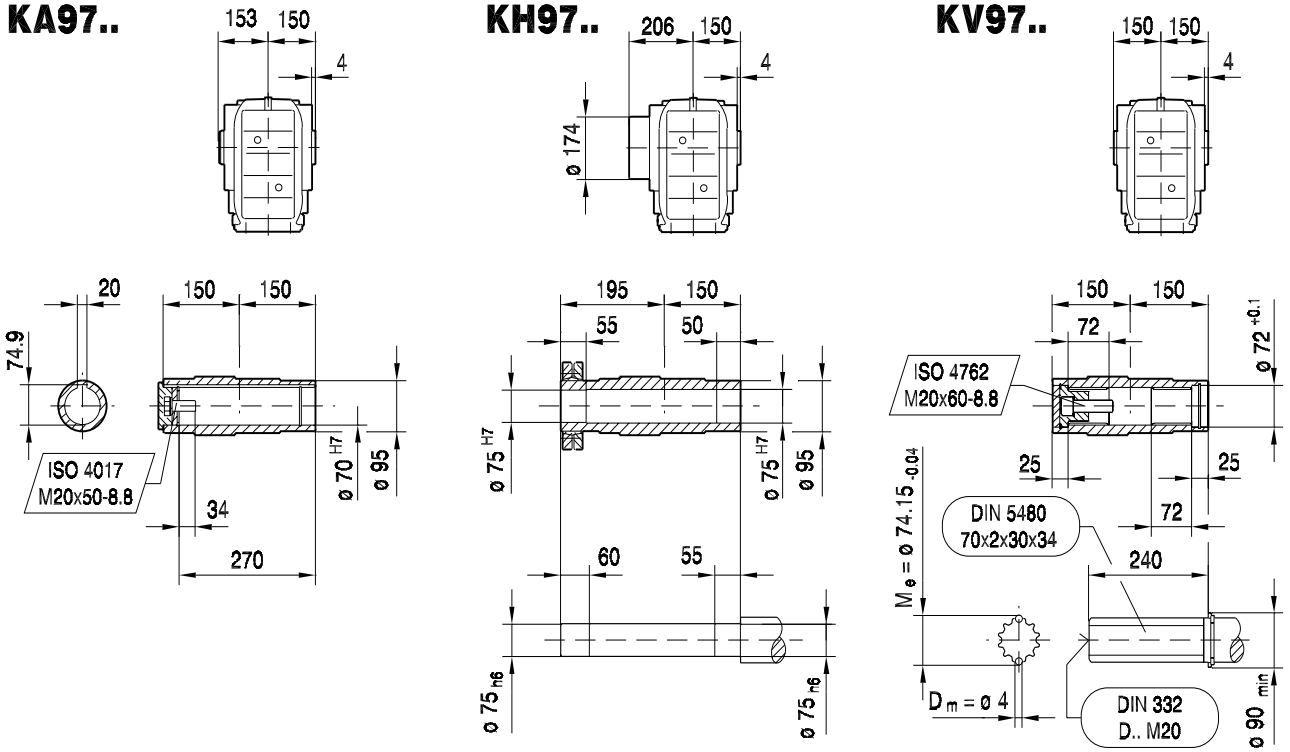


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	662	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	662	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	703	M16	268	55	110	59.3	16	

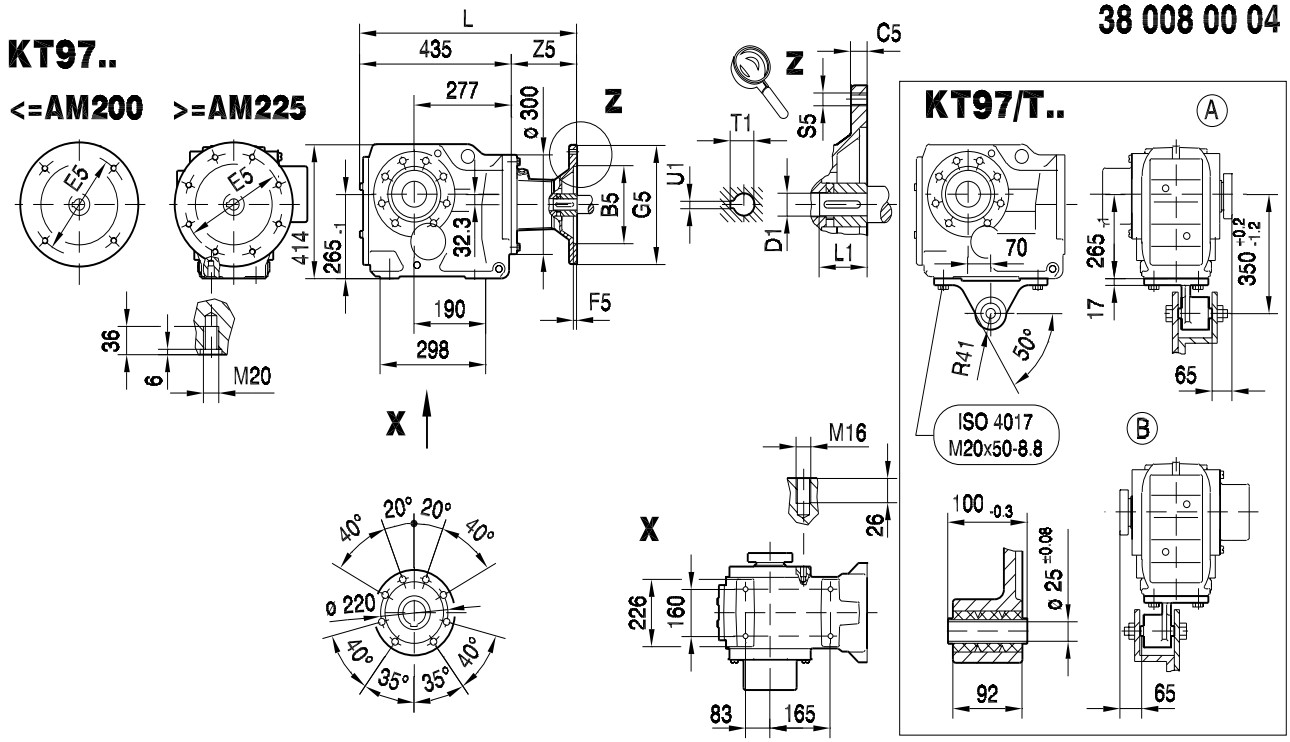
38 022 01 01

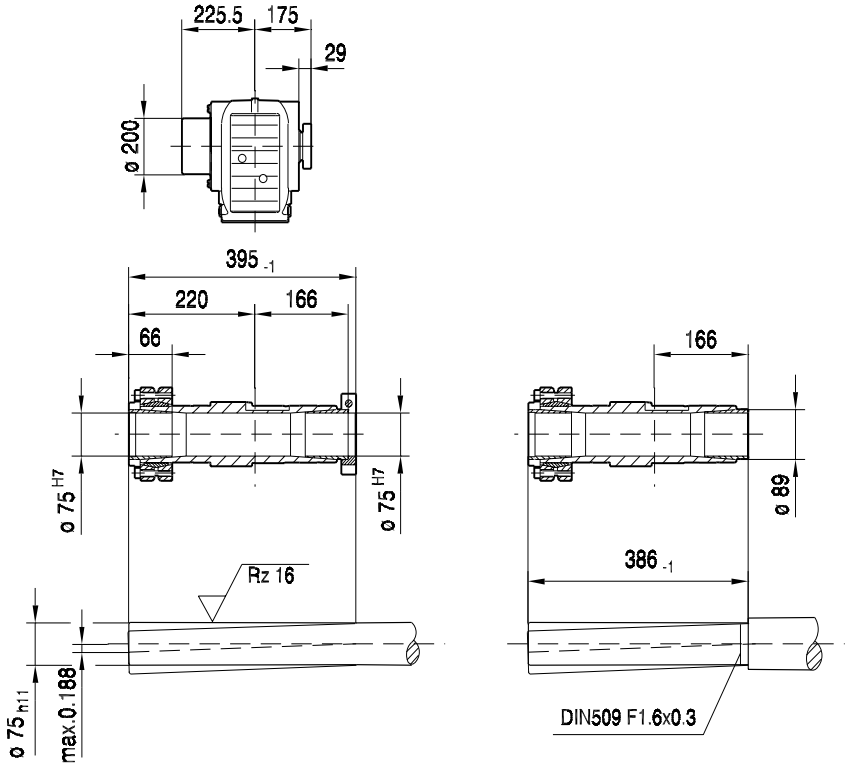




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	662	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	662	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	703	M16	268	55	110	59.3	16	

38 008 00 04



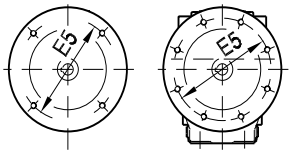


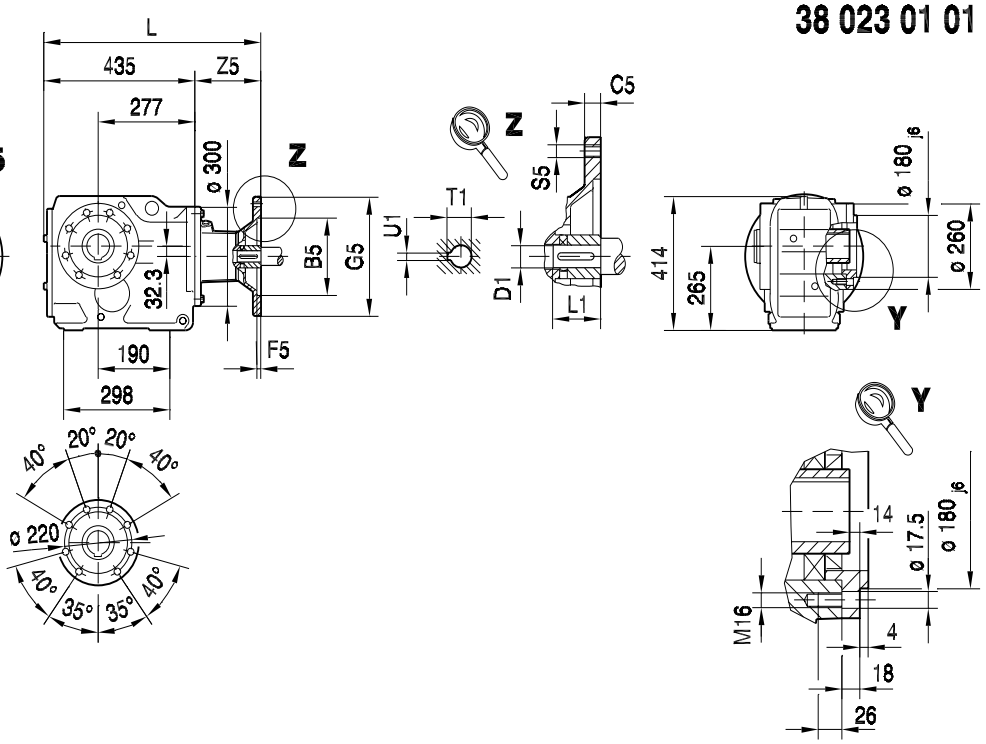
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	662	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	662	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	703	M16	268	55	110	59.3	16	

38 023 01 01

KAZ97..

<=AM200 >=AM225





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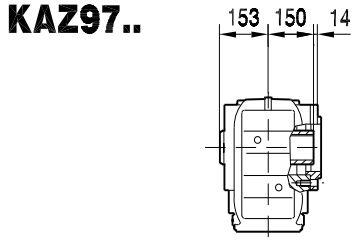

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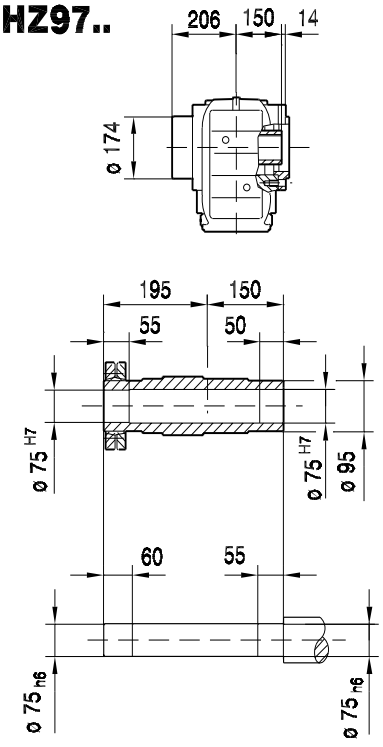
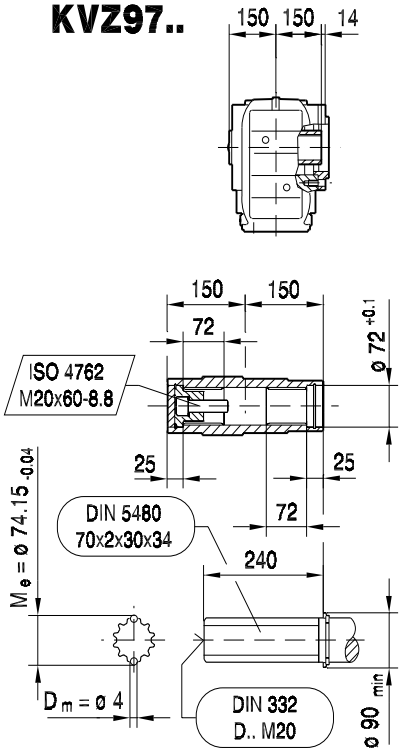


KVZ97..

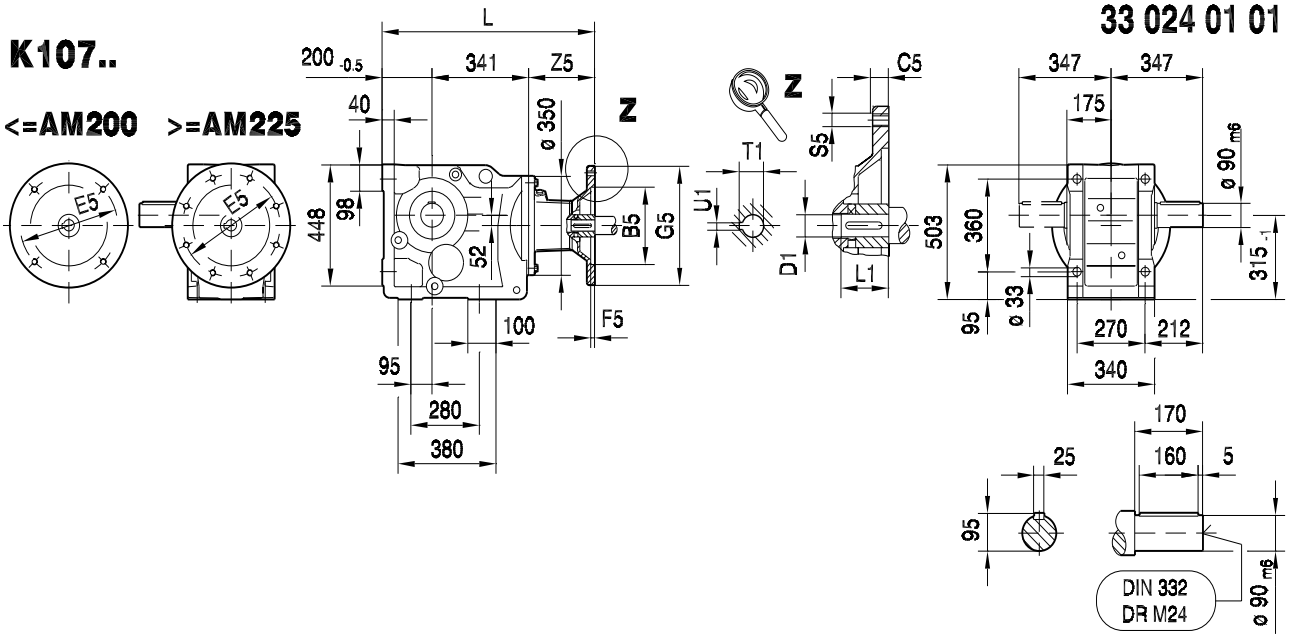


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	551	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	604	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	662	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	662	M16	227	48	110	51.8	14	
AM200	300	20	350	7.0	400	703	M16	268	55	110	59.3	16	

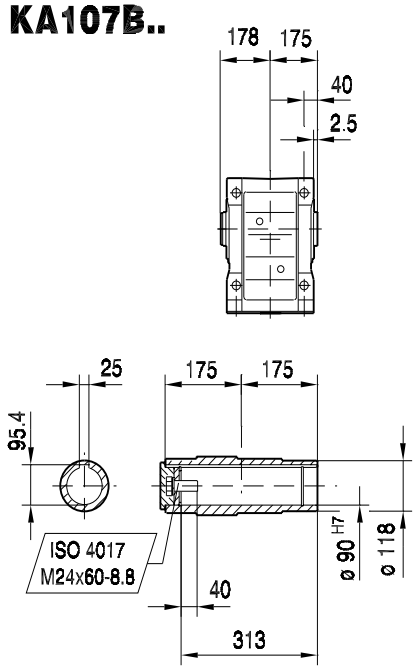
33 024 01 01

K107..

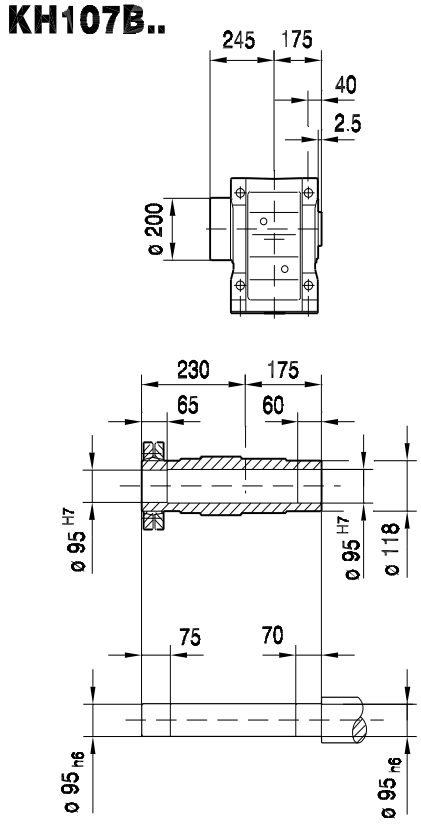
<=AM200 >=AM225



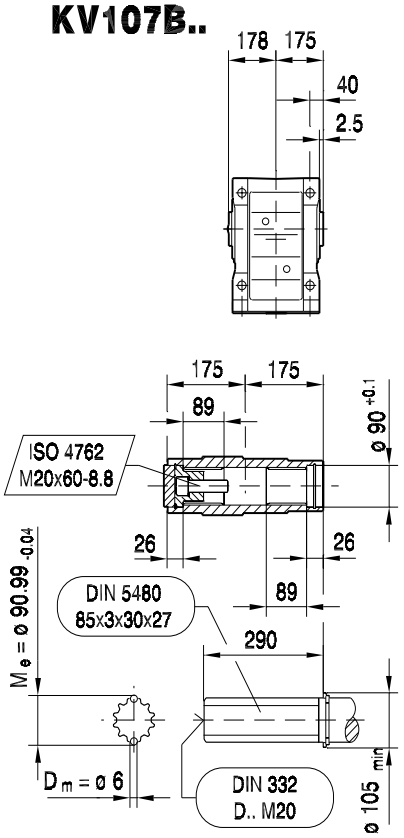
KA107B..



KH107B..



KV107B..

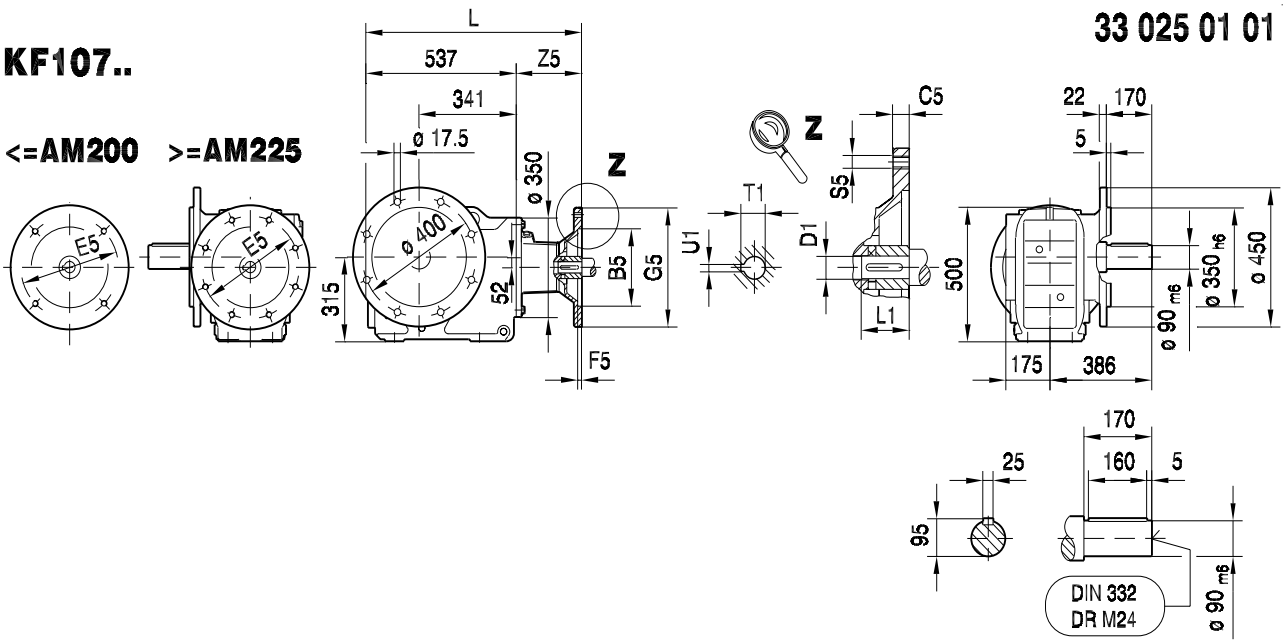


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	651	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	651	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	704	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	704	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	762	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	762	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	803	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	818	M16	277	60	140	64.4	18	

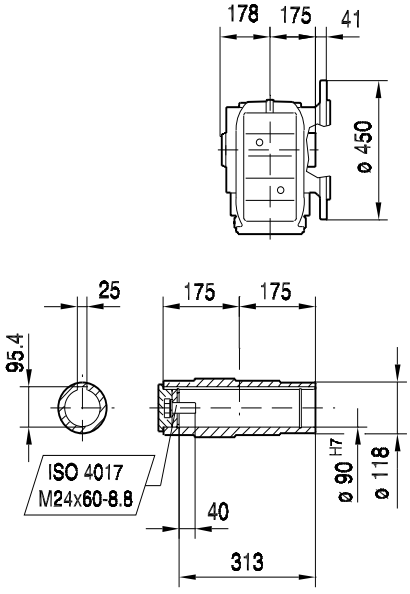
KF107..

33 025 01 01

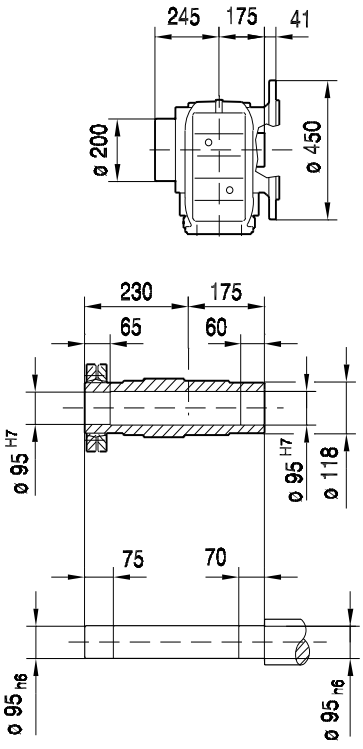
<=AM200 >=AM225



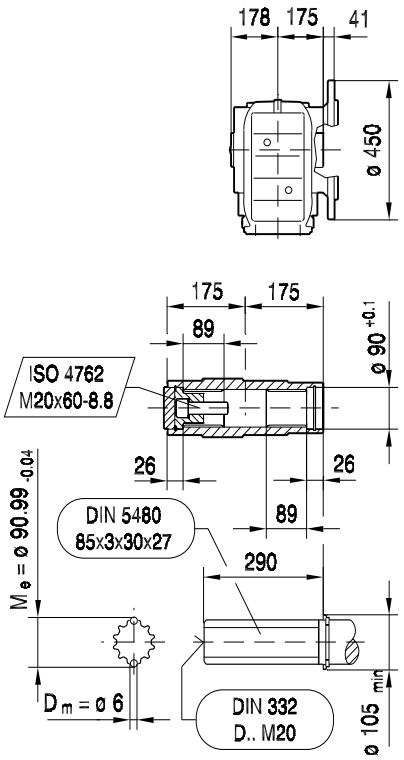
KAF107..



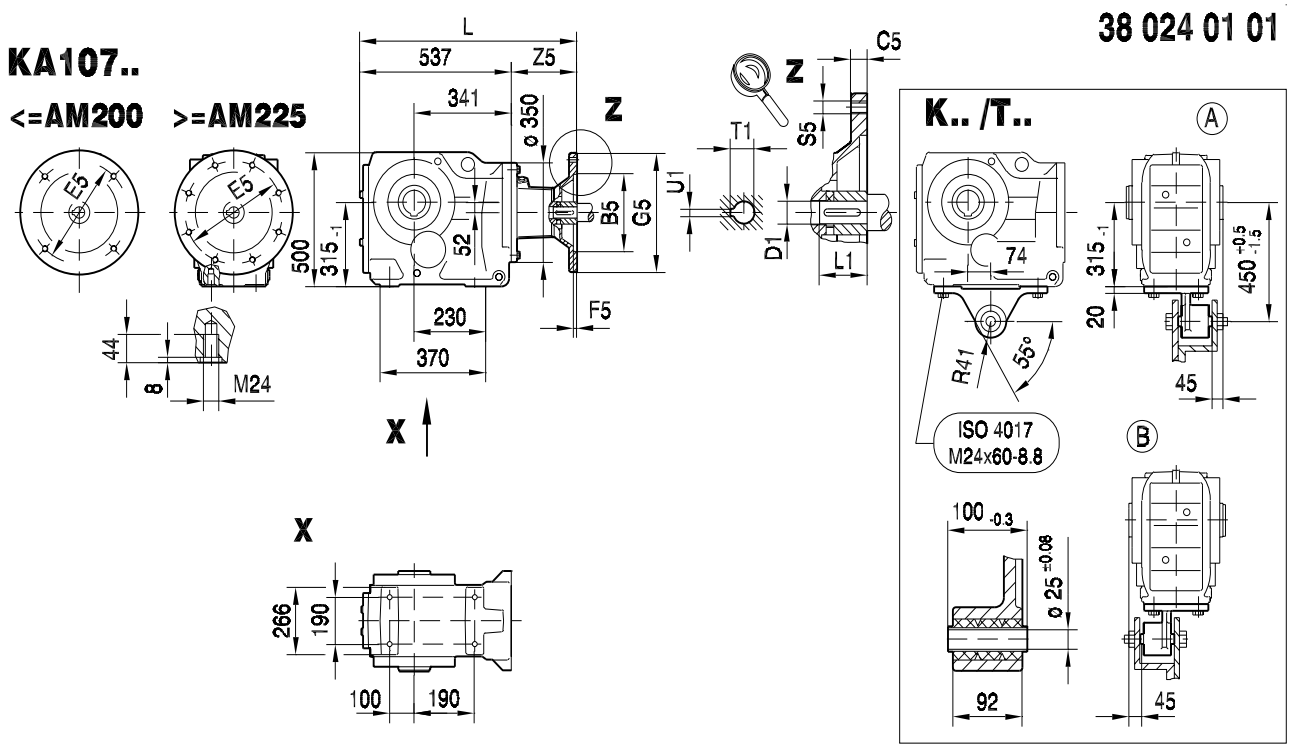
KHF107..

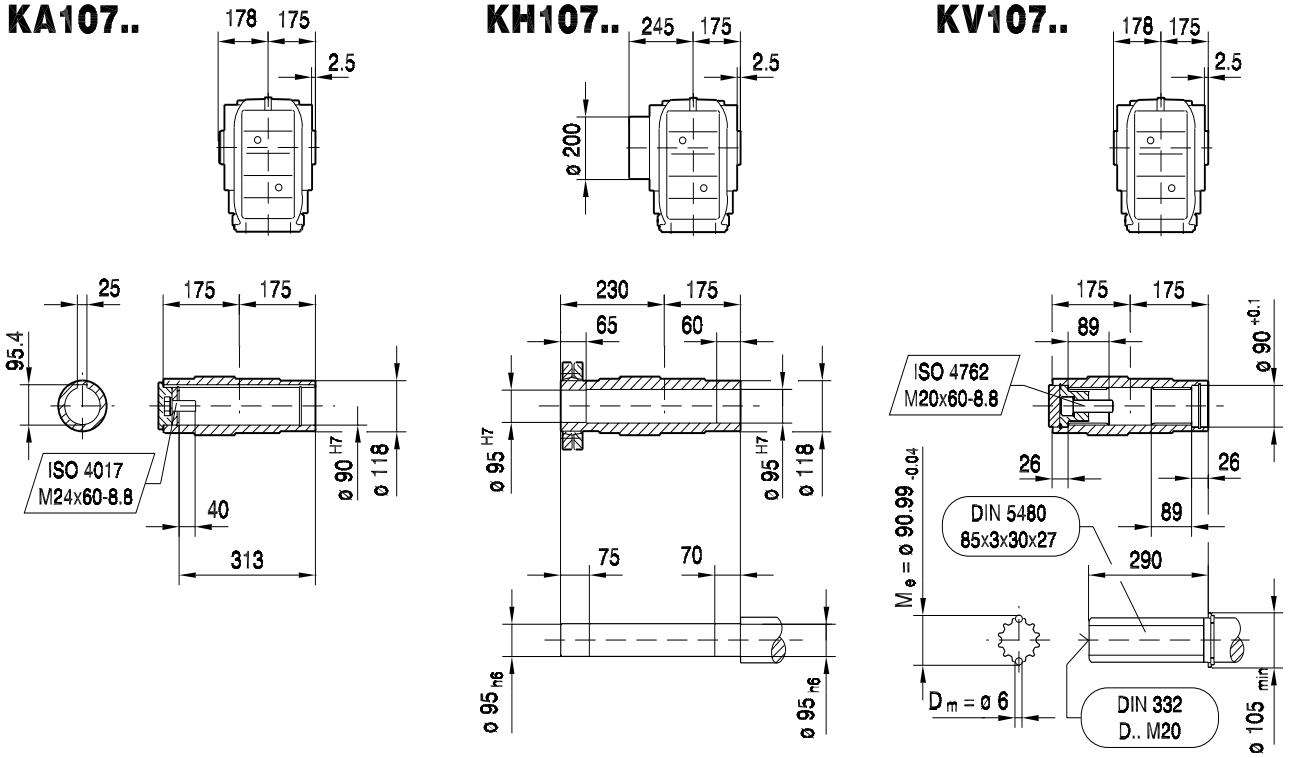


KVF107..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	647	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	647	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	700	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	700	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	758	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	758	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	799	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	814	M16	277	60	140	64.4	18	

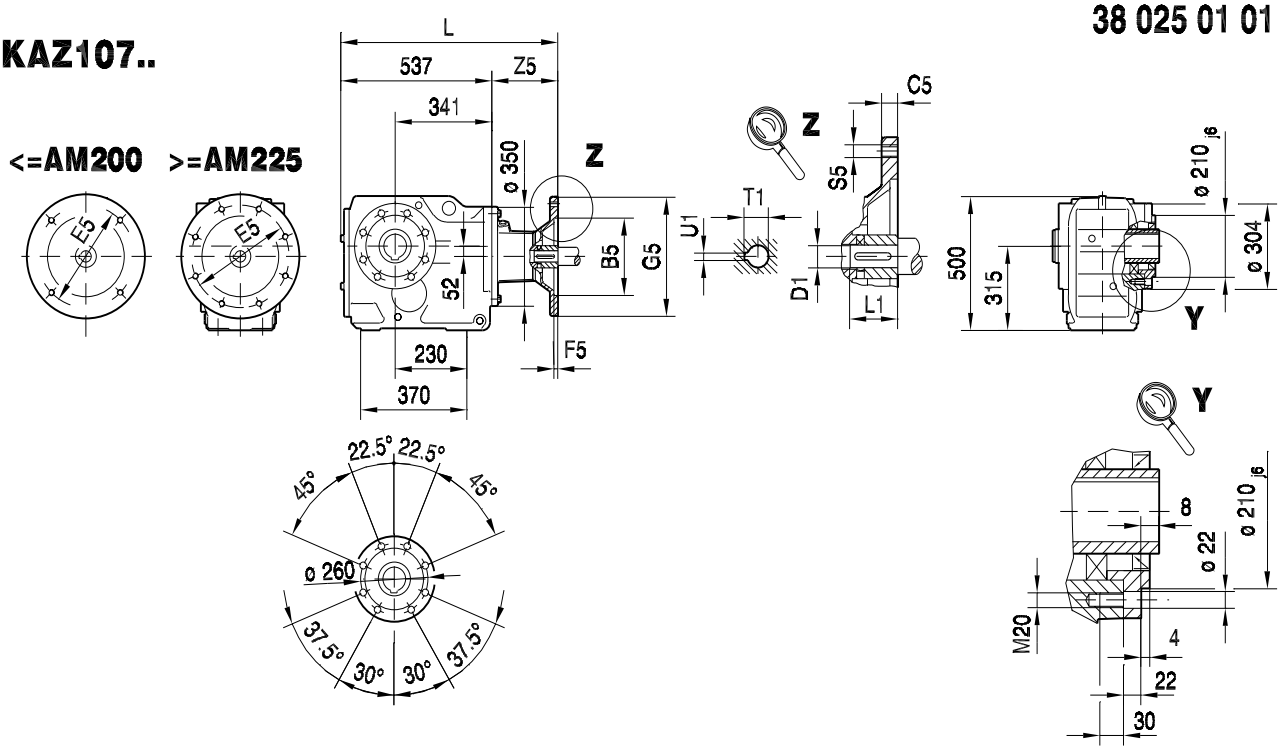




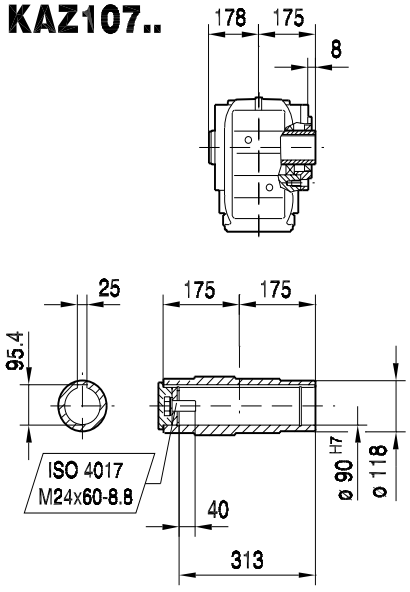
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	647	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	647	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	700	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	700	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	758	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	758	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	799	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	814	M16	277	60	140	64.4	18	

38 025 01 01

KAZ107..



KAZ107..



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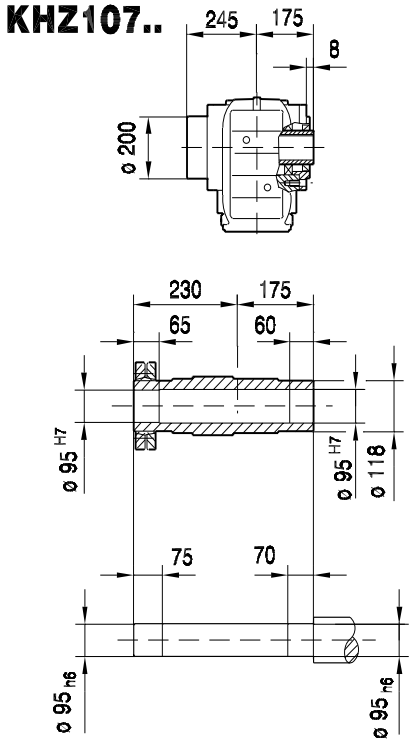

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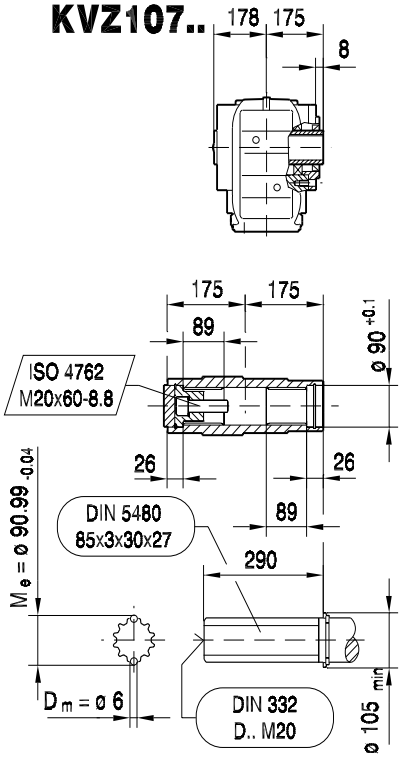
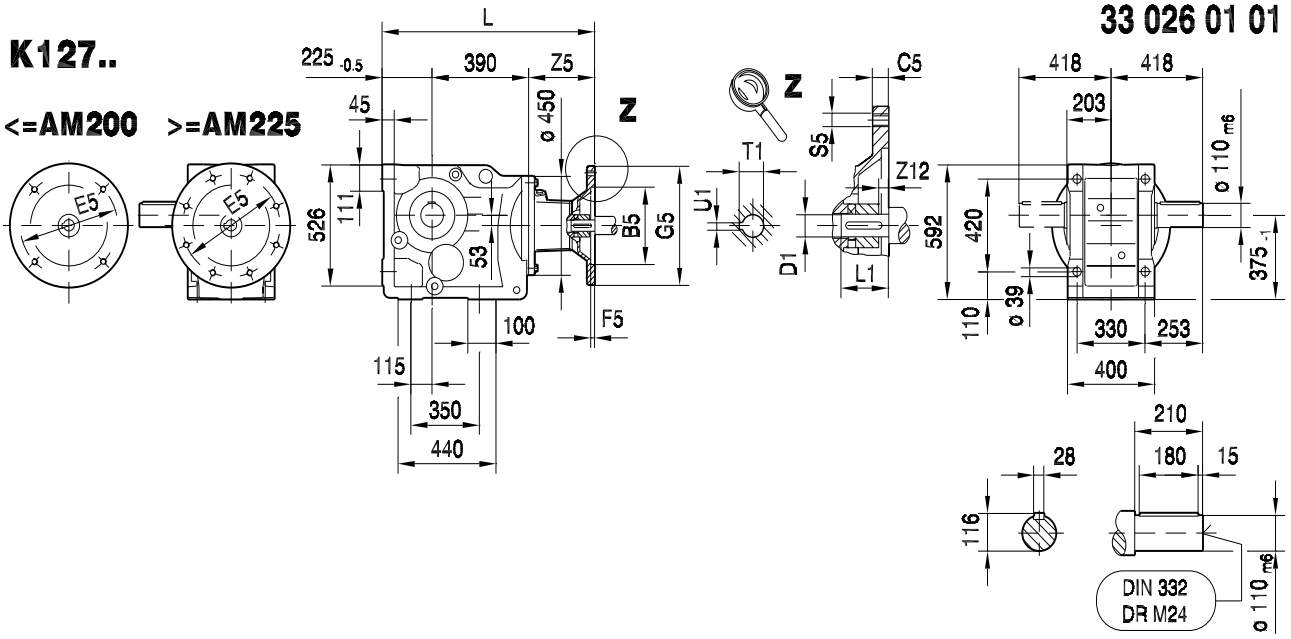


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	647	M12	110	28	60	31.3	8	
AM112	180	15	215	5.0	250	647	M12	110	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	700	M12	163	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	700	M12	163	38	80	41.3	10	
AM160	250	18	300	6.0	350	758	M16	221	42	110	45.3	12	
AM180	250	18	300	6.0	350	758	M16	221	48	110	51.8	14	
AM200	300	20	350	7.0	400	799	M16	262	55	110	59.3	16	
AM225	350	22	400	7.0	450	814	M16	277	60	140	64.4	18	

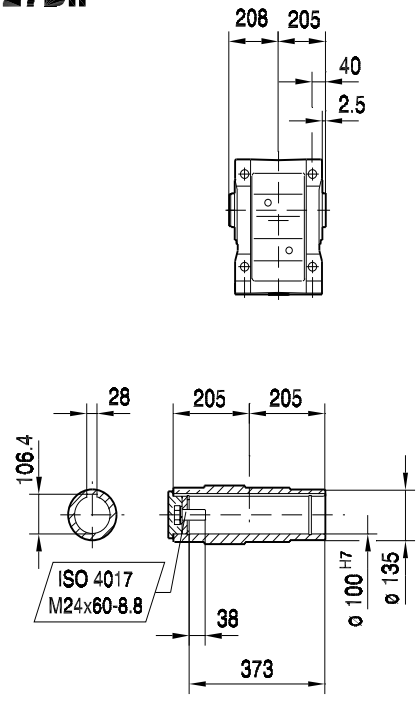
33 026 01 01

K127..

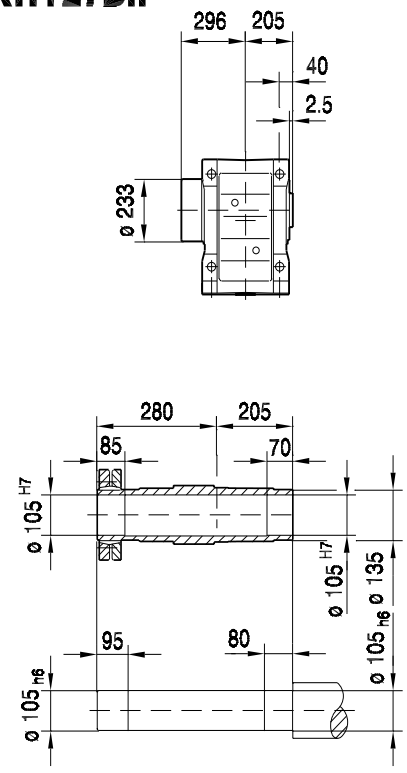
<=AM200 >=AM225



KA127B..



KH127B..

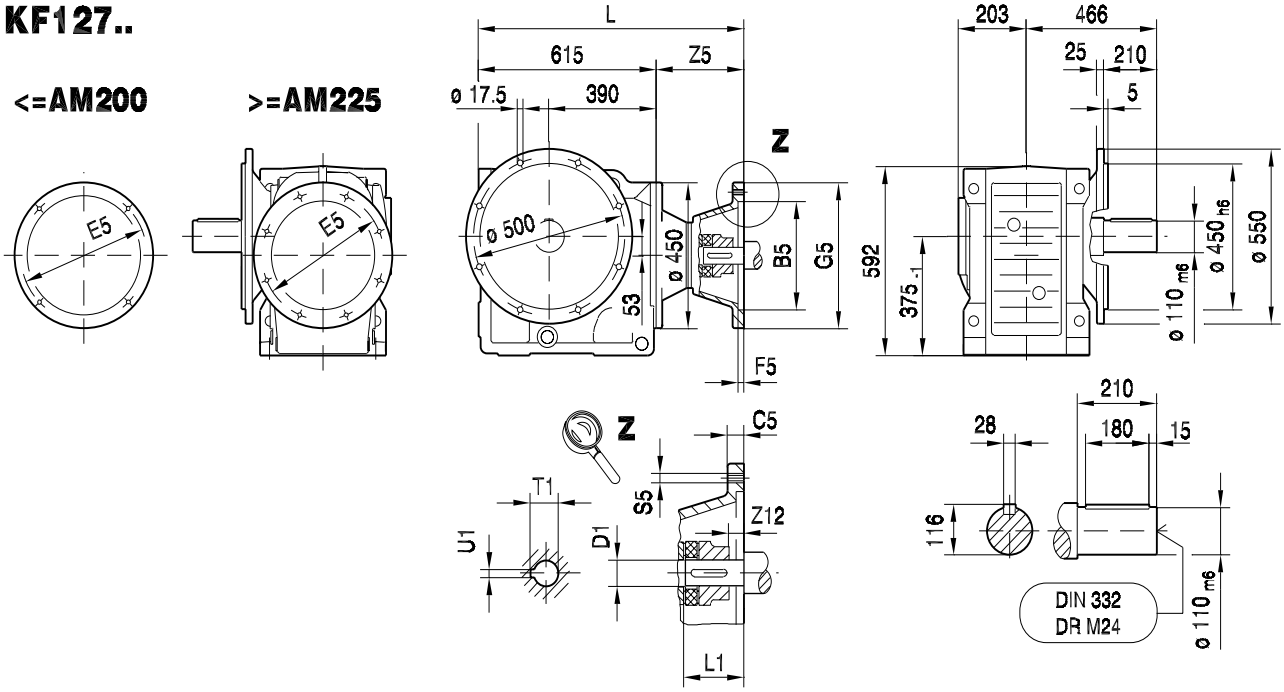


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	821	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	821	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	862	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	877	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	951	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	951	M16	336	19	75	140	79.9	20

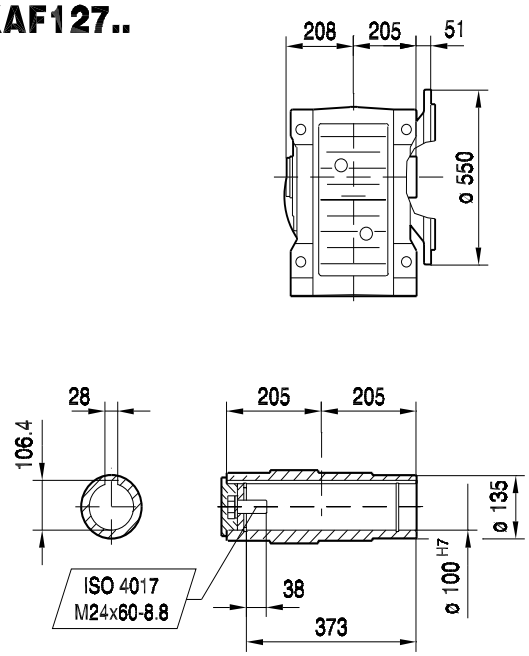
33 027 01 01

KF127..

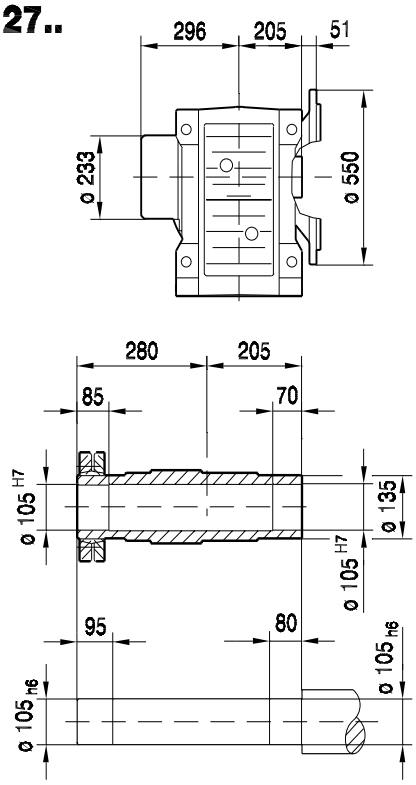
<=AM200 >=AM225



KAF127..



KHF127..

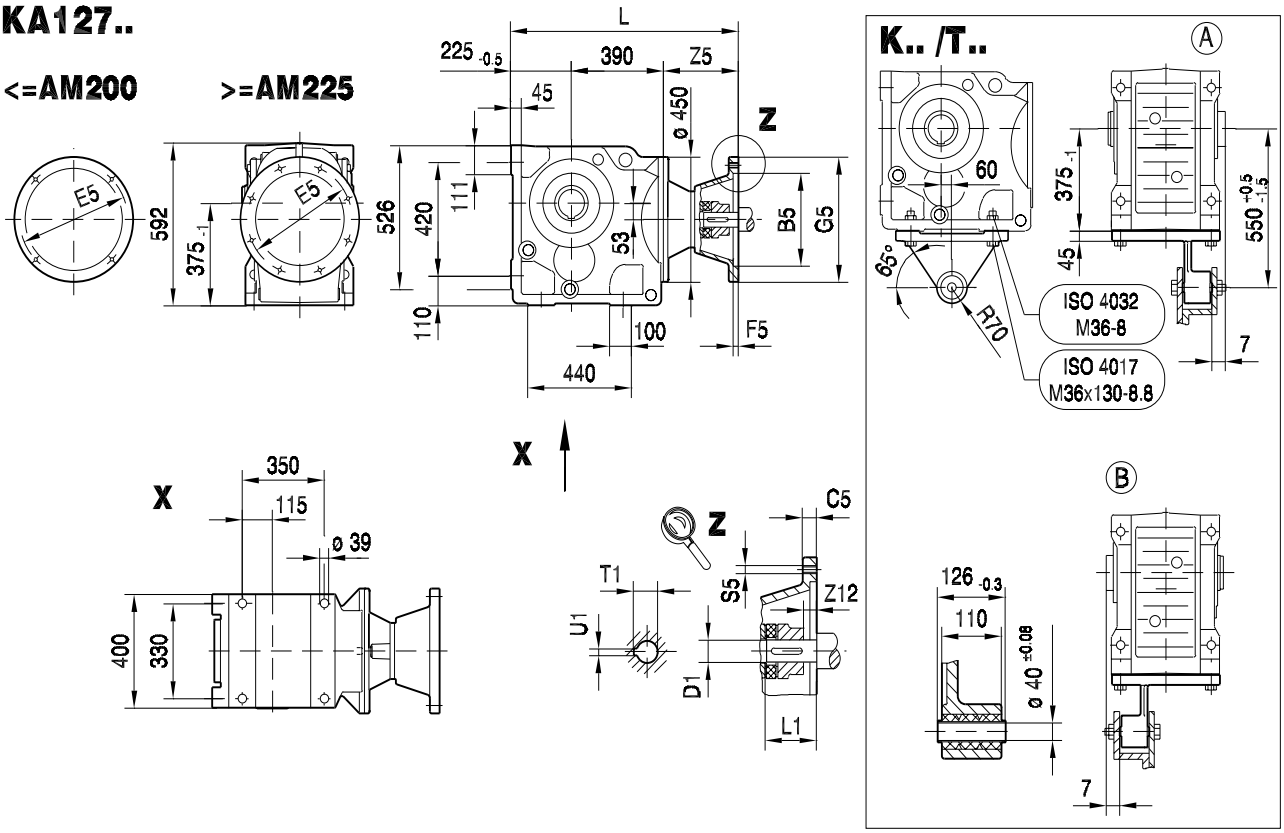


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	821	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	821	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	862	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	877	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	951	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	951	M16	336	19	75	140	79.9	20

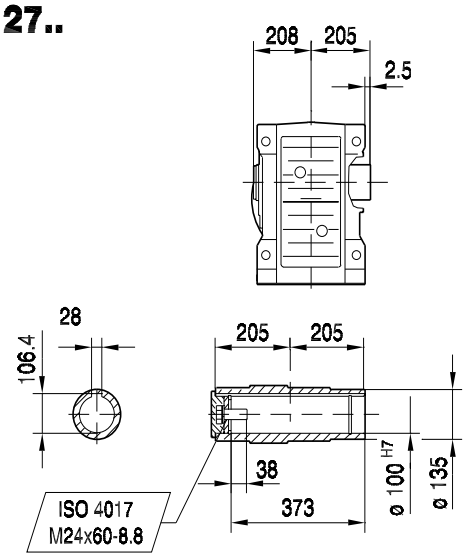
38 026 01 01

KA127..

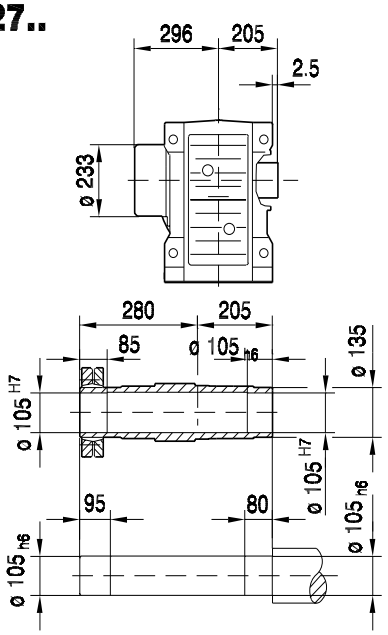
<=AM200 >=AM225



KA127..



KH127..

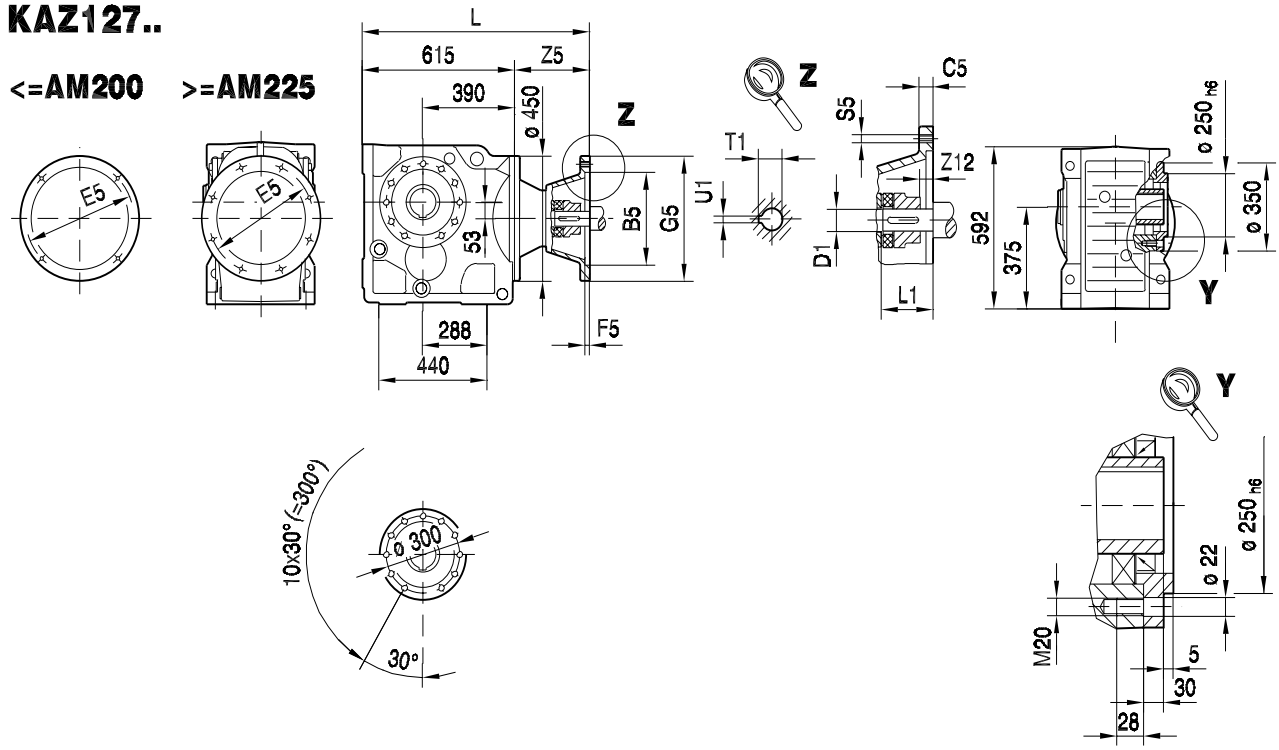


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	821	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	821	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	862	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	877	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	951	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	951	M16	336	19	75	140	79.9	20

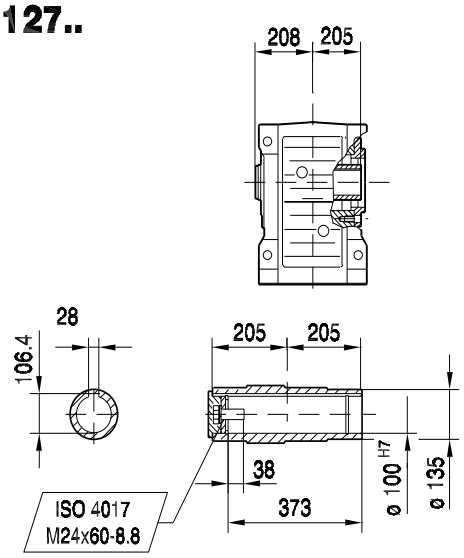
38 027 01 01

KAZ127..

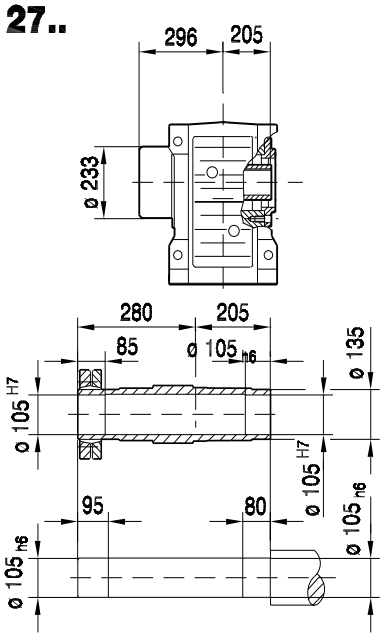
<=AM200 >=AM225



KAZ127..



KHZ127..

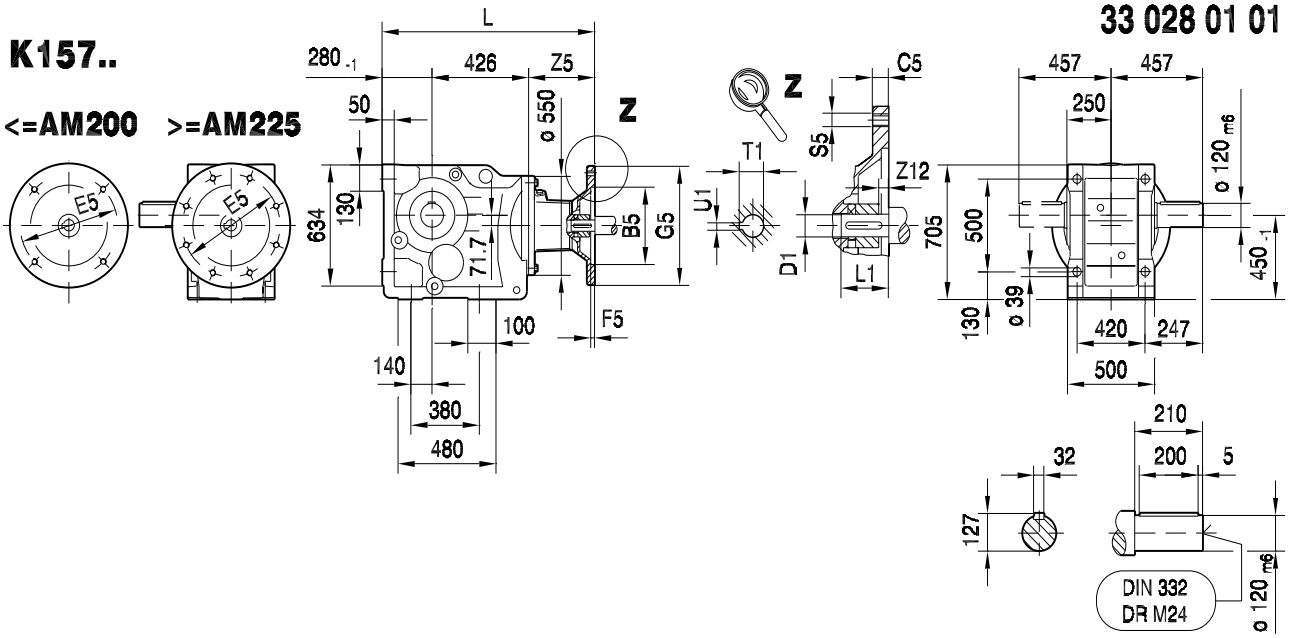


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM132S/M	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM132ML	230	16	265	5.0	300	763	M12	148	0	38	80	41.3	10
AM160	250	18	300	6.0	350	821	M16	206	0	42	110	45.3	12
AM180	250	18	300	6.0	350	821	M16	206	0	48	110	51.8	14
AM200	300	20	350	7.0	400	862	M16	247	0	55	110	59.3	16
AM225	350	22	400	7.0	450	877	M16	262	0	60	140	64.4	18
AM250	450	25	500	7.0	550	951	M16	336	19	65	140	69.4	18
AM280	450	25	500	7.0	550	951	M16	336	19	75	140	79.9	20

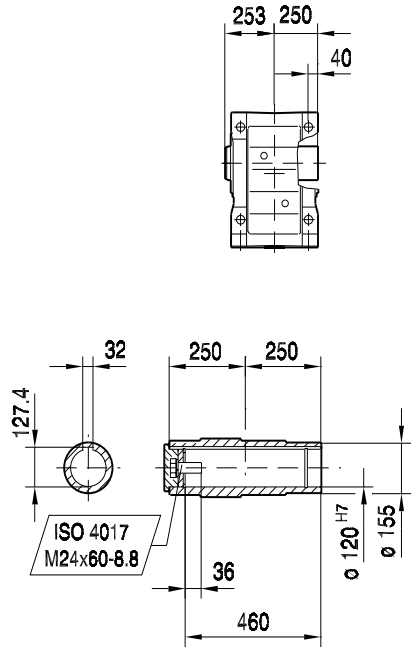
33 028 01 01

K157..

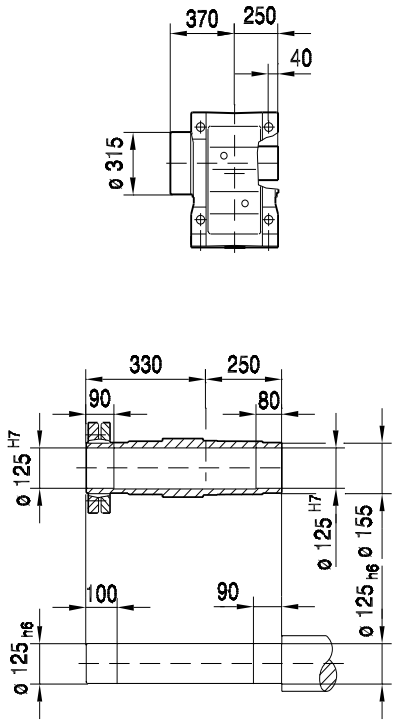
<=AM200 >=AM225



KA157B..



KH157B..

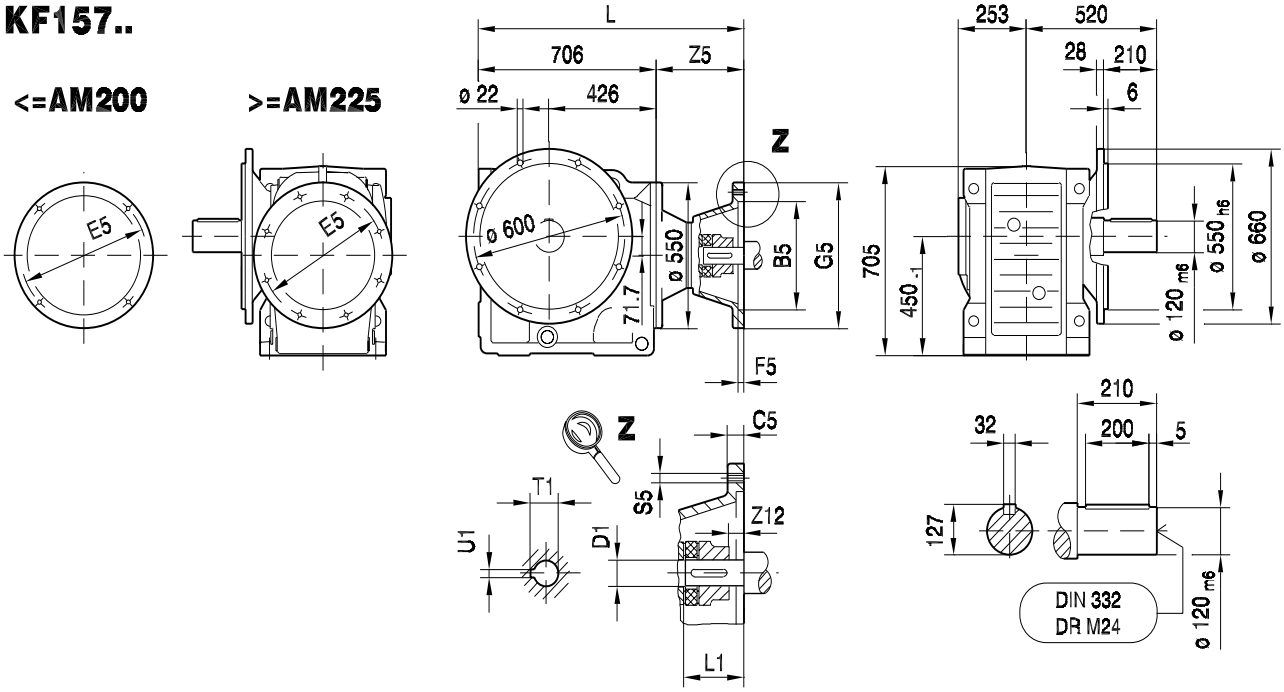


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	904	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	904	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	945	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	960	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1034	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1034	M16	328	19	75	140	79.9	20

33 029 01 01

KF157..

<=AM200 >=AM225



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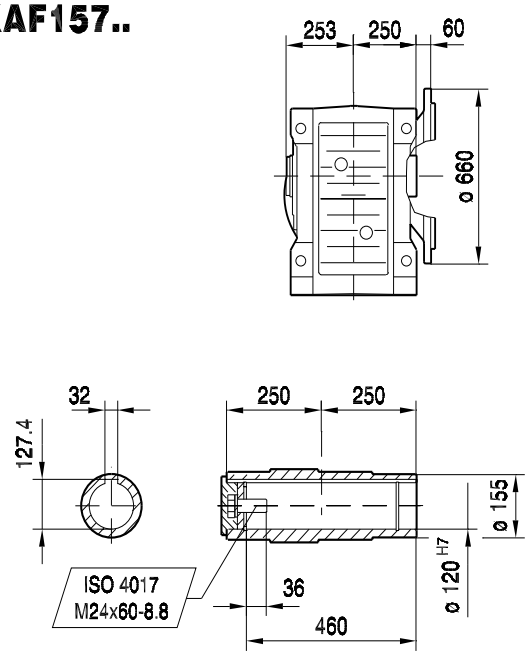
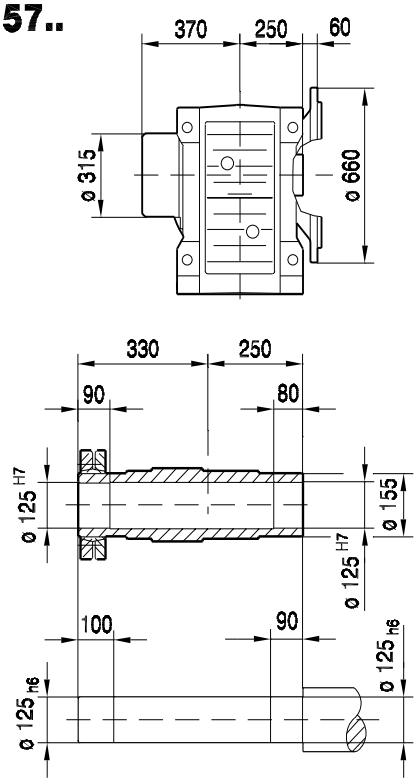


KHF157..

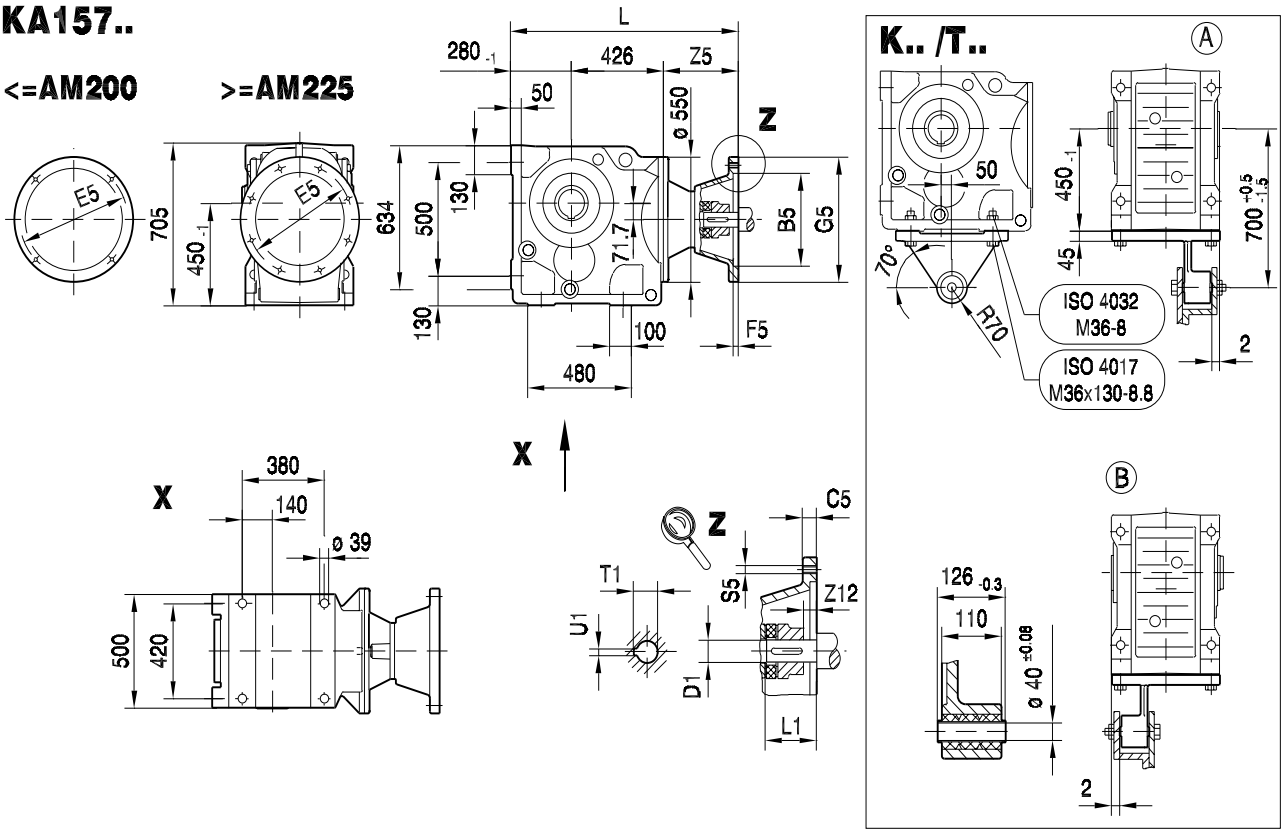


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	904	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	904	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	945	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	960	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1034	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1034	M16	328	19	75	140	79.9	20

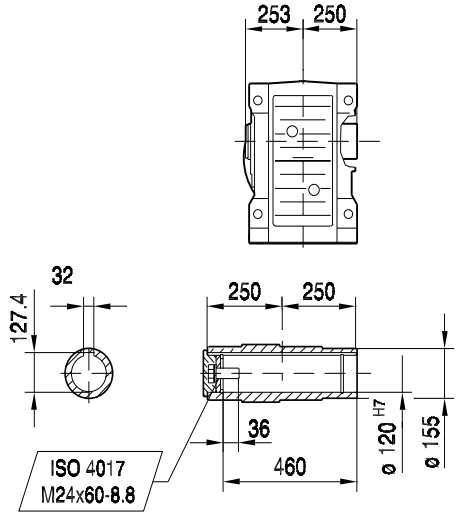
38 028 01 01

KA157..

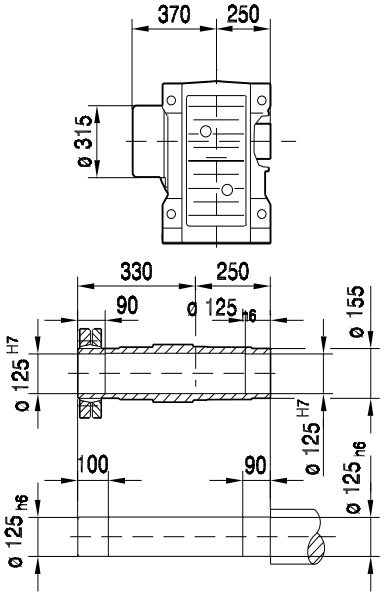
<=AM200 >=AM225



KA157..



KH157..

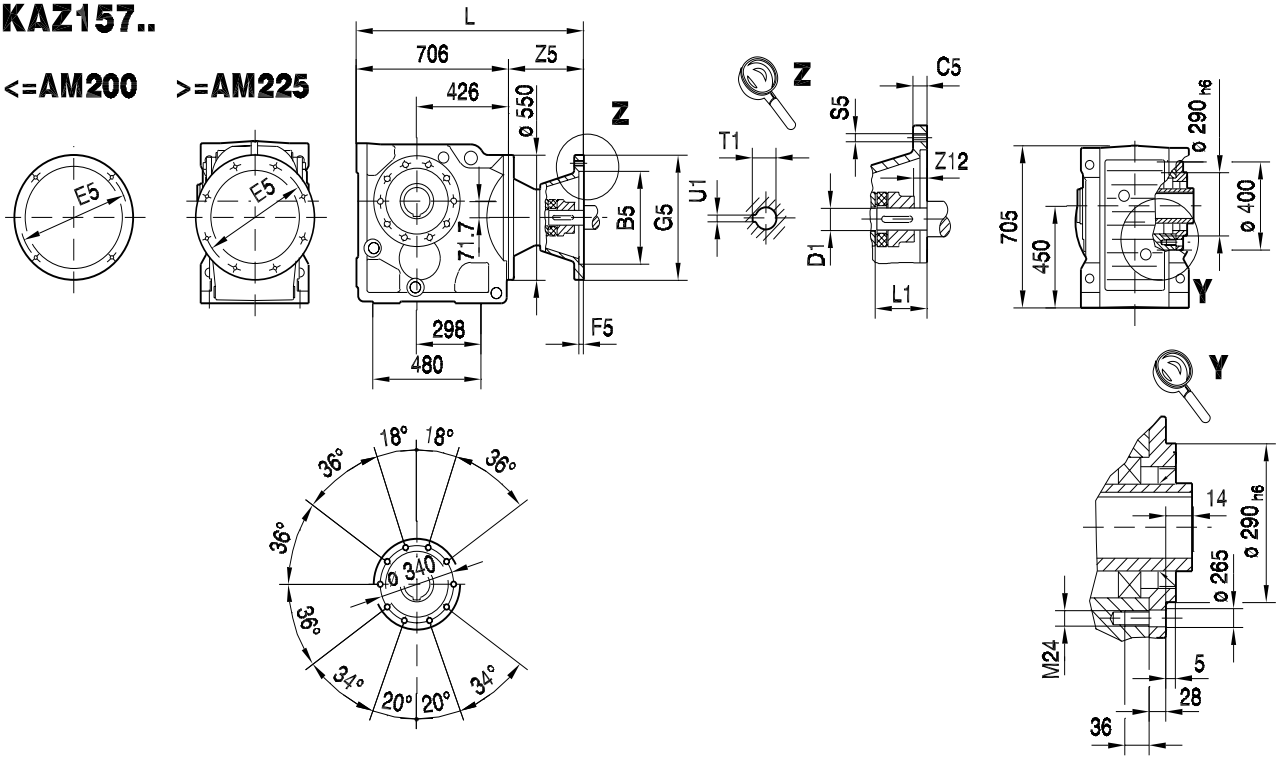


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	904	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	904	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	945	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	960	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1034	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1034	M16	328	19	75	140	79.9	20

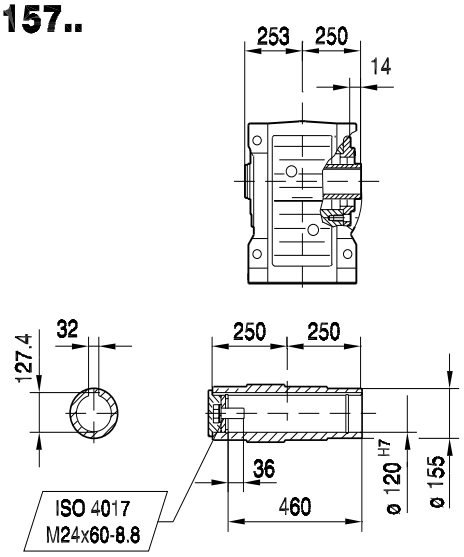
38 029 01 01

KAZ157..

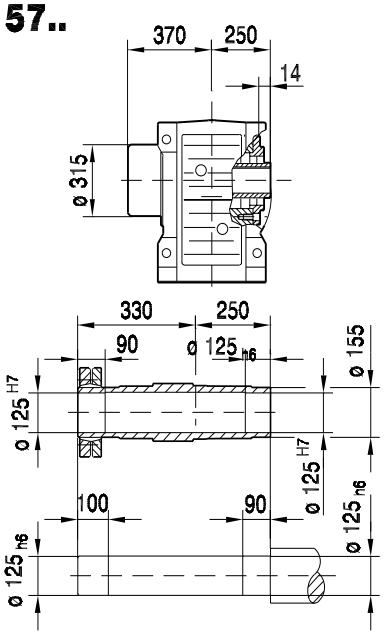
<=AM200 >=AM225



KAZ157..



KHZ157..

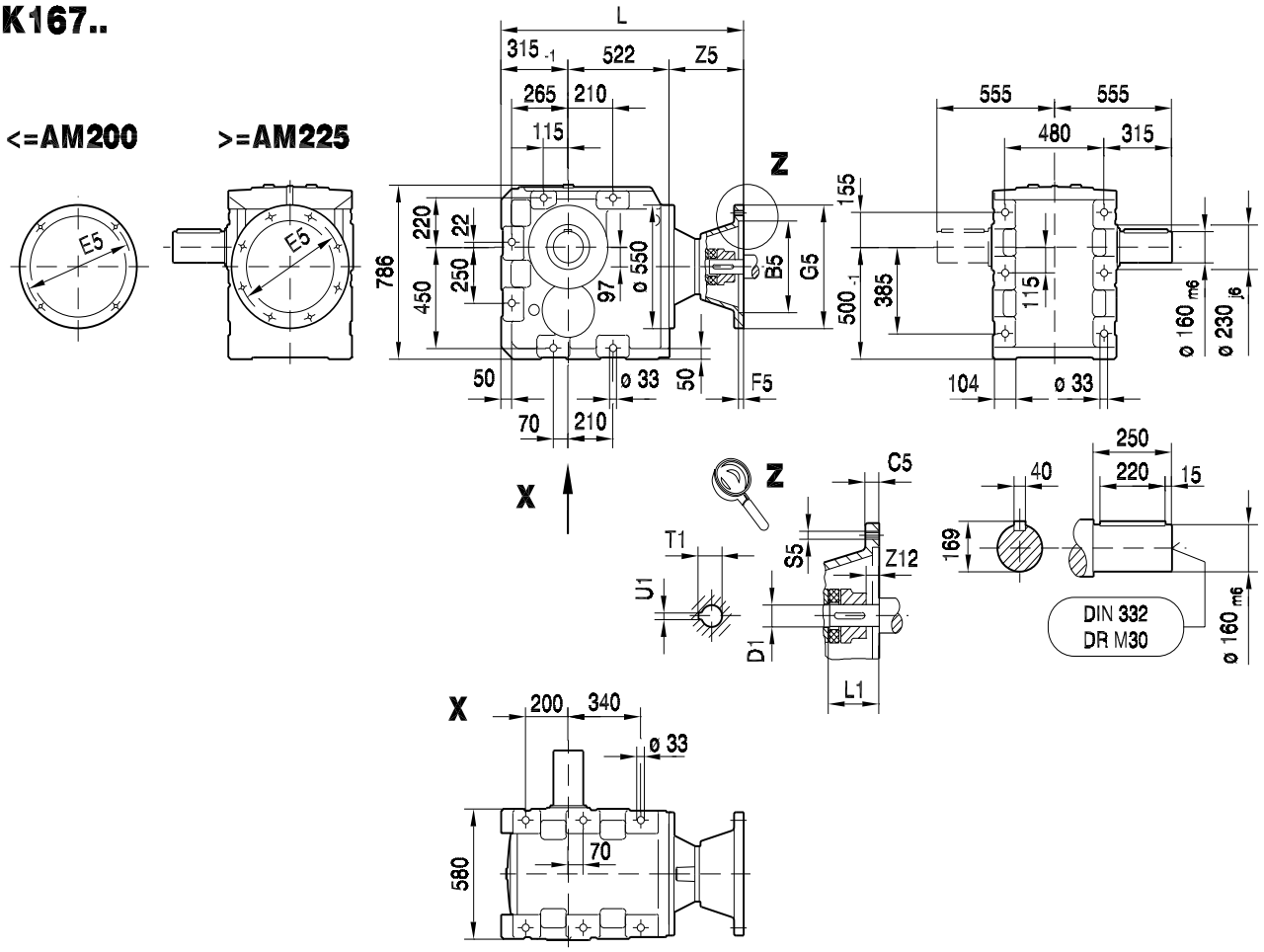


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	904	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	904	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	945	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	960	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1034	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1034	M16	328	19	75	140	79.9	20

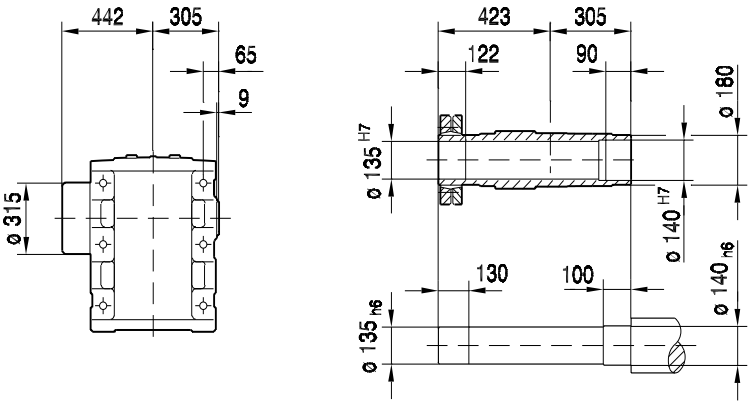
33 030 01 01

K167..

<=AM200 >=AM225



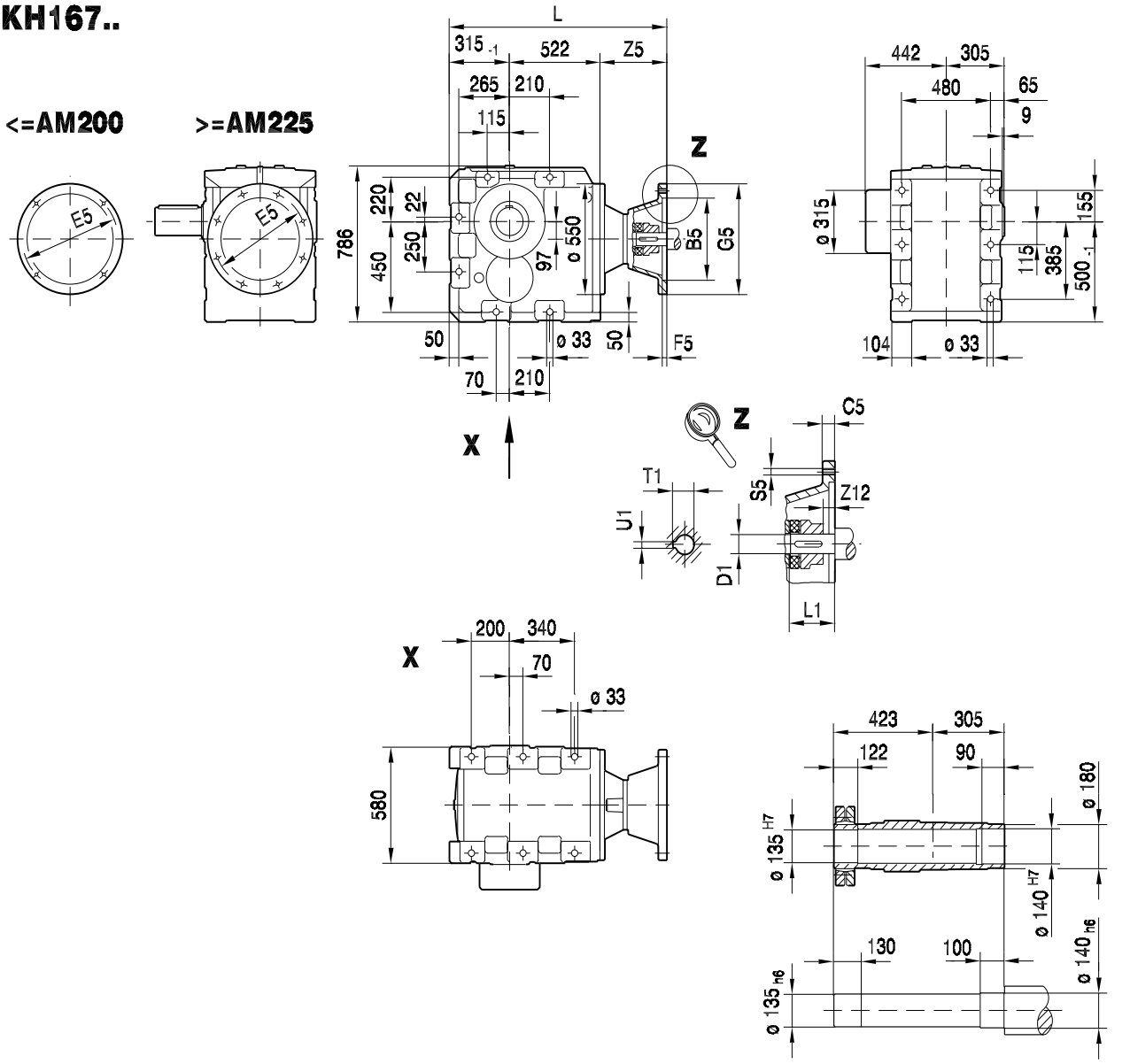
KH167B..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	1035	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	1035	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	1076	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	1091	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1165	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1165	M16	328	19	75	140	79.9	20

38 030 01 01

KH167..

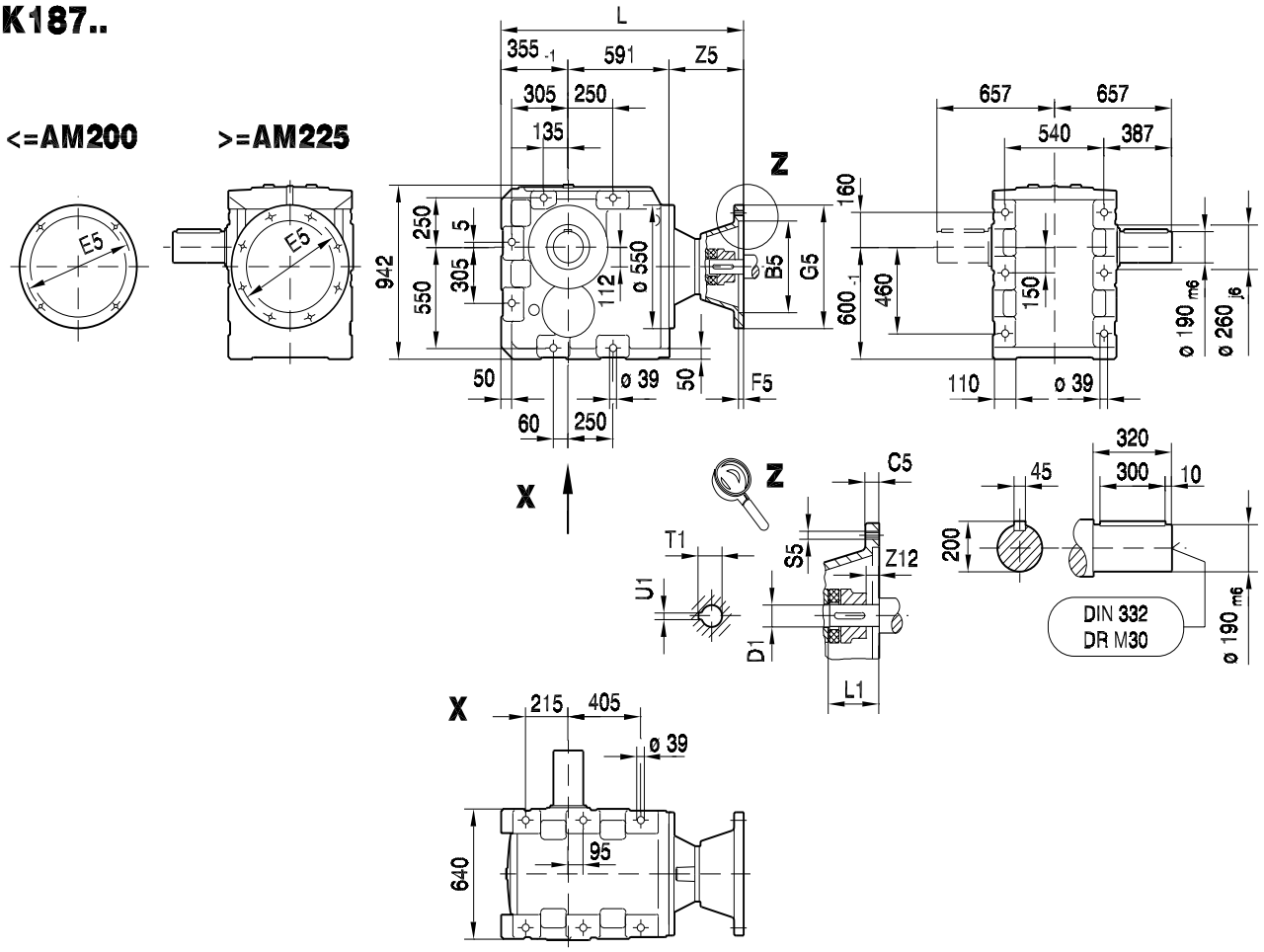


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	1035	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	1035	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	1076	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	1091	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1165	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1165	M16	328	19	75	140	79.9	20

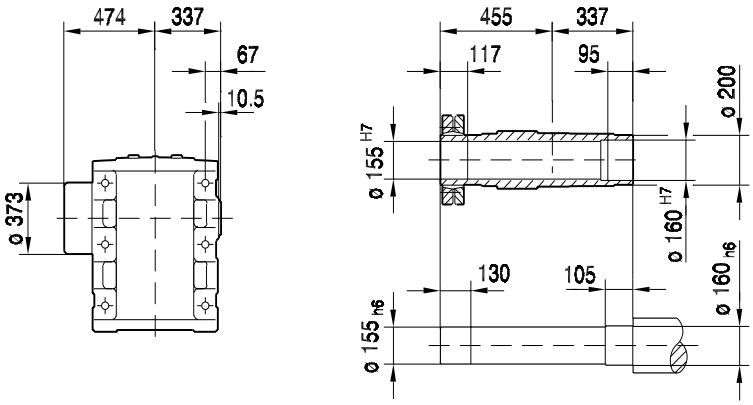
33 031 01 01

K187..

<=AM200 >=AM225



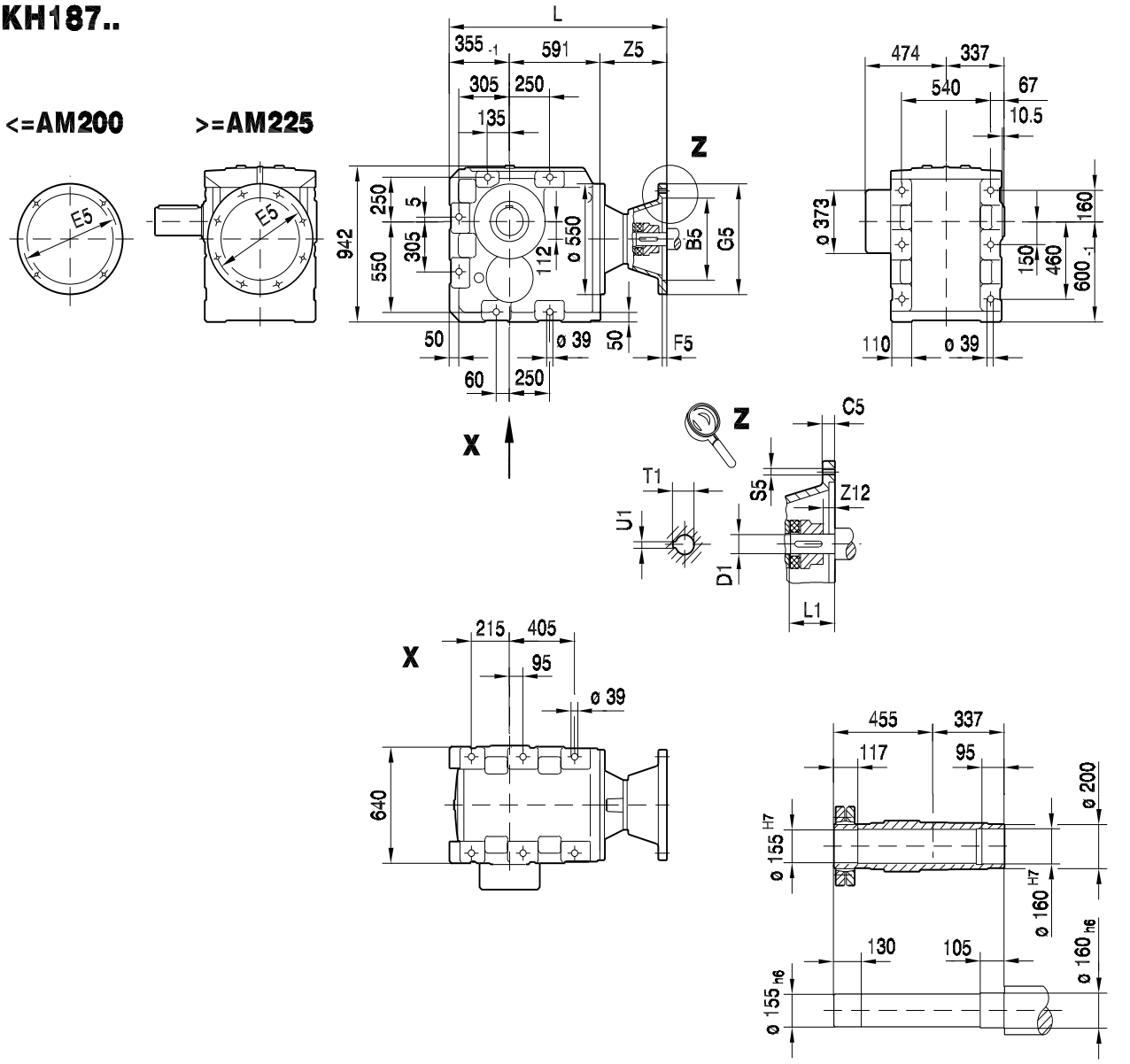
KH187B..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	1144	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	1144	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	1185	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	1200	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1274	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1274	M16	328	19	75	140	79.9	20

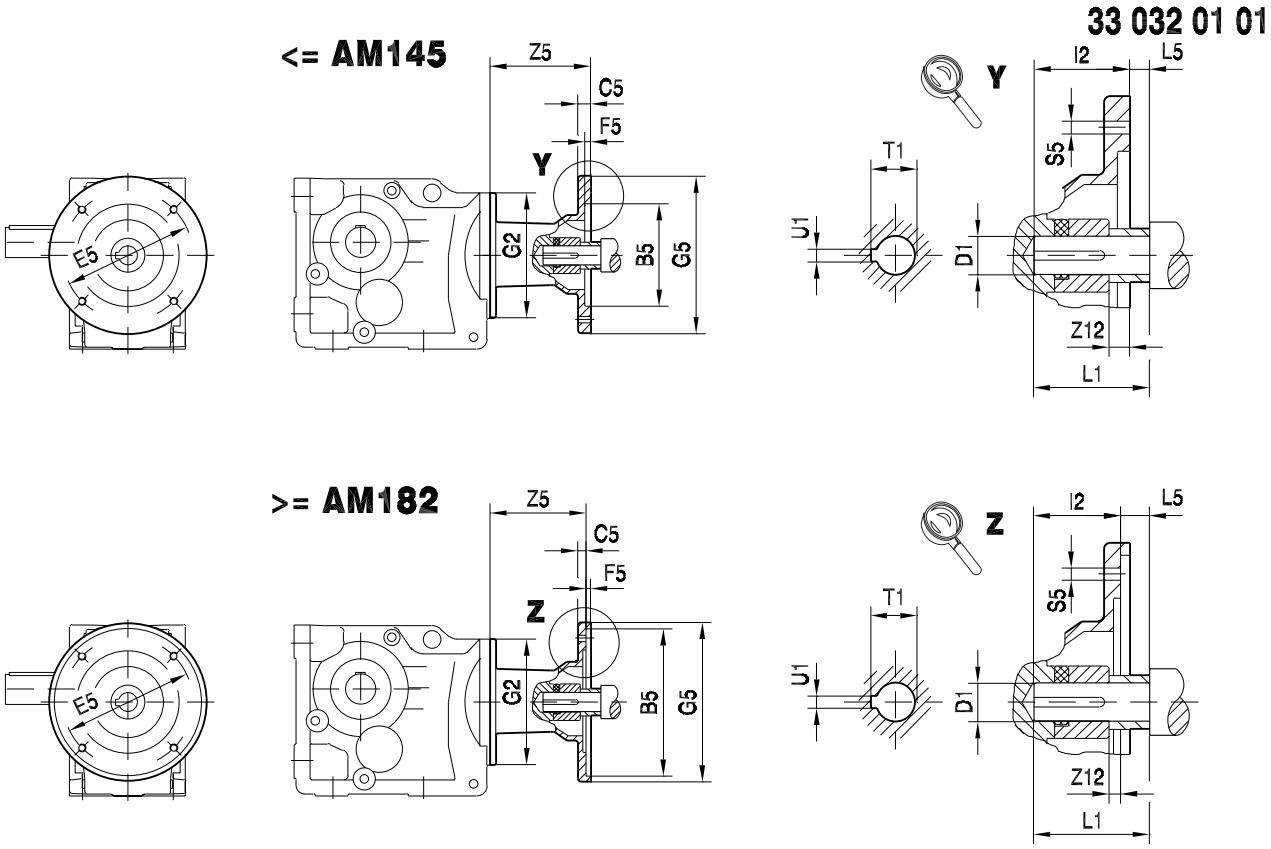
38 031 01 01

KH187..



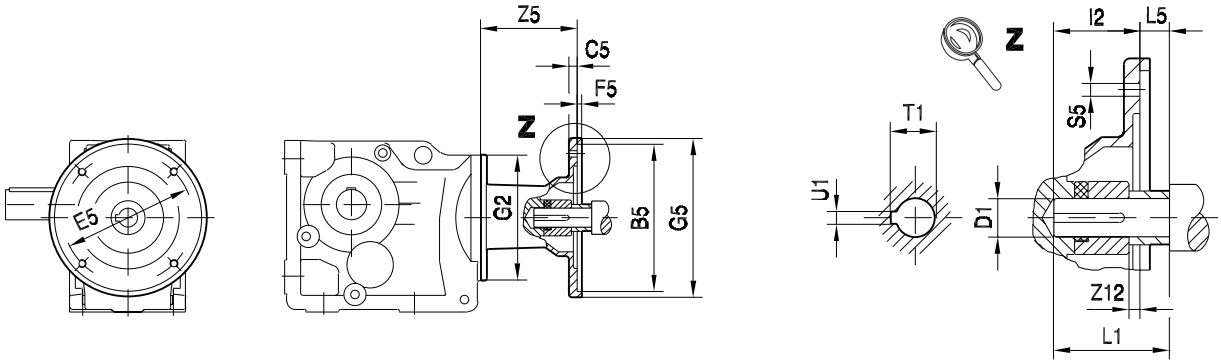
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	Z12	D1	L1	T1	U1
AM160	250	18	300	6.0	350	1144	M16	198	0	42	110	45.3	12
AM180	250	18	300	6.0	350	1144	M16	198	0	48	110	51.8	14
AM200	300	20	350	7.0	400	1185	M16	239	0	55	110	59.3	16
AM225	350	22	400	7.0	450	1200	M16	254	0	60	140	64.4	18
AM250	450	25	500	7.0	550	1274	M16	328	19	65	140	69.4	18
AM280	450	25	500	7.0	550	1274	M16	328	19	75	140	79.9	20

12.6 K.. AM.. (NEMA) [mm]



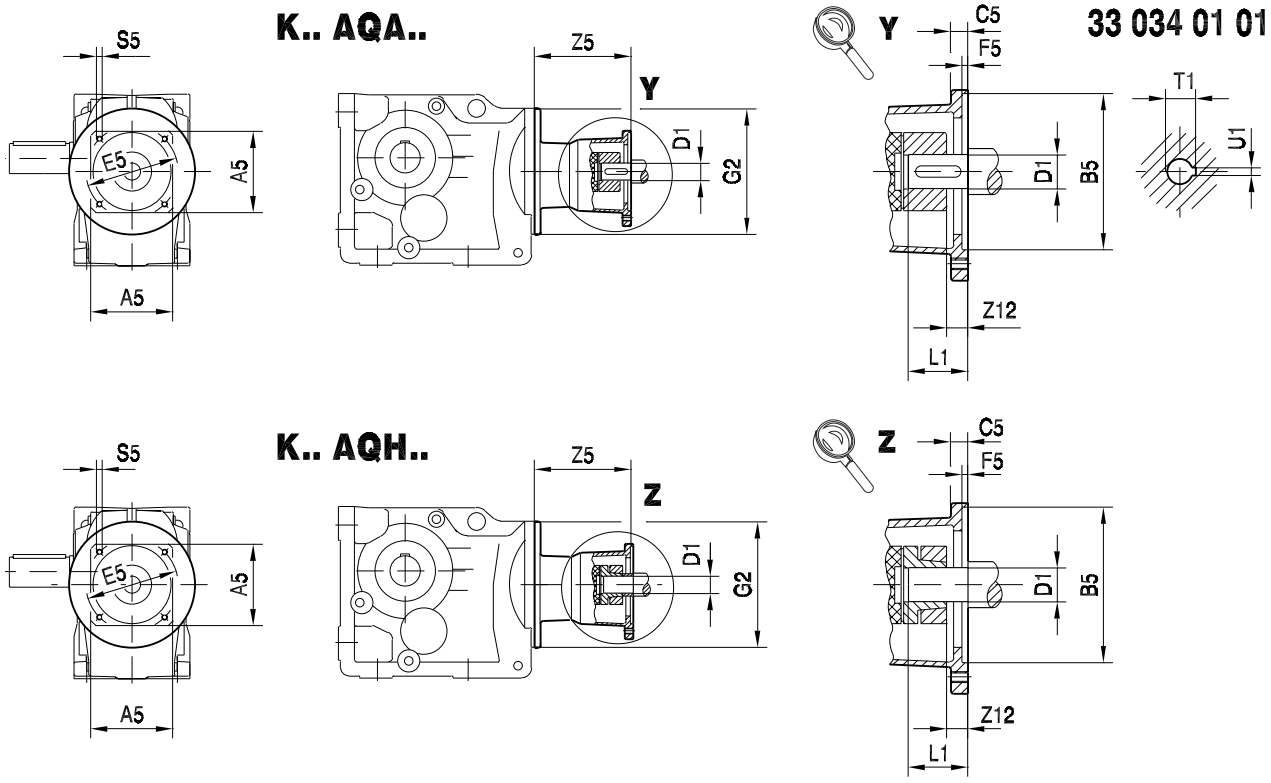
		B5	C5	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1
K..37	AM56	114.3	11	149.2	4.5	120	170	52.55	-4.8	10.5	93.5	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		117	11.45	22.225	57.15	24.7	
	AM145															
K..47	AM56	114.3	11	149.2	4.5	160	170	52.55	-4.8	10.5	87	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		110.5	11.45	22.225	57.15	24.7	
	AM145															
	AM182	215.9	10	184	5		228	66.85	3	15	147.5	13.5	28.575	69.85	31.7	6.35
	AM184															
K..57 K..67	AM56	114.3	11	149.2	4.5	160	170	52.55	-4.8	10.5	87	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		110.5	11.45	22.225	57.15	24.7	
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	147.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		200.5	9.5	34.925	85.85	38.7	7.94
K..77	AM56	114.3	11	149.2	4.5	200	170	52.55	-4.8	10.5	81	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		103.5	11.45	22.225	57.15	24.7	
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	139.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		188.5	9.5	34.925	85.85	38.7	7.94
K..87	AM143	114.3	12	149.2	4.5	250	170	54.1	3.05	10.5	98.5	11.45	22.225	57.15	24.7	4.76
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	134.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		183.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		234	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	241	9.5	47.625	117.35	53.4	12.7

33 033 01 01

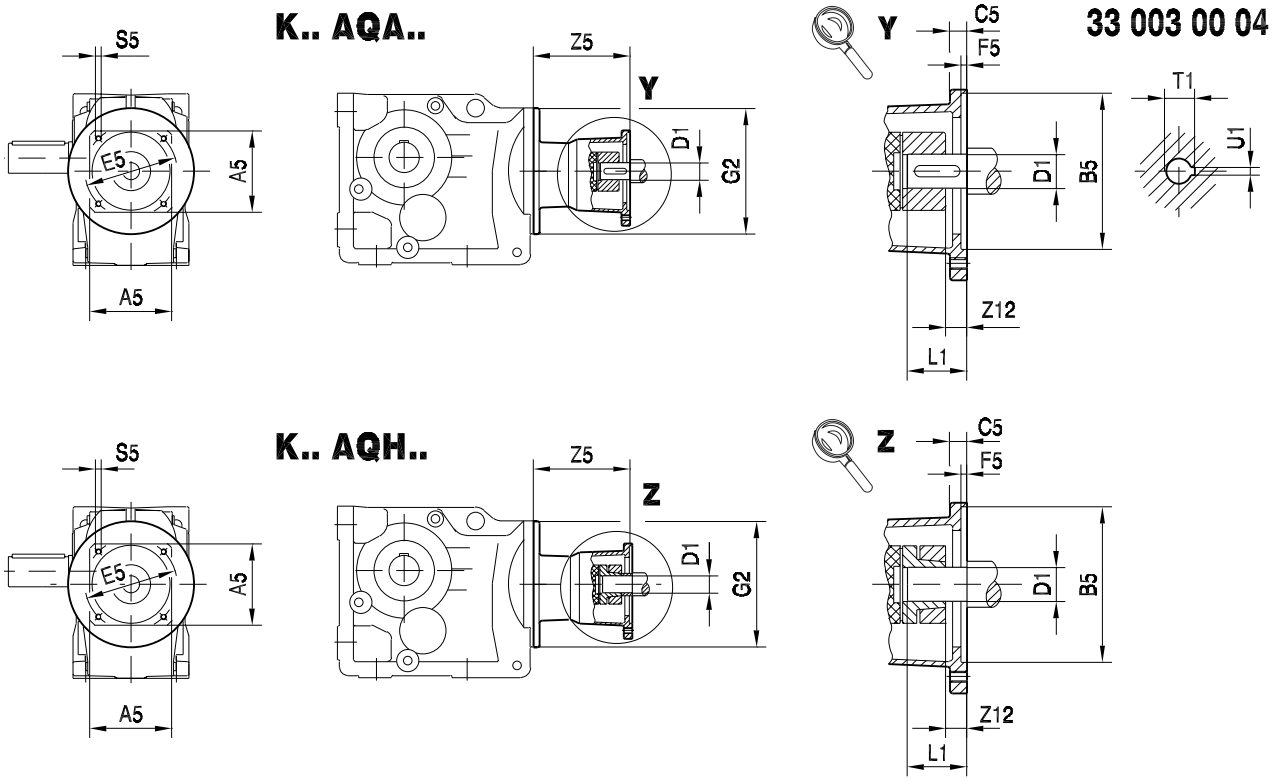


		B5	C5	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1
K..97	AM182	215.9	10	184	5	300	228	66,85	3	15	129.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		178.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		229	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	20	228.6	5		286	111.05	6.3	15	236	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	296	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875
K..107	AM182	215.9	10	184	5	350	228	66,85	3	15	123.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		172.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		223	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	230	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	290	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875
K..157 K..167 K..187	AM254/256	215.9	12	184	5	550	228	95.3	6.3	15	200	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	207	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	267	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875

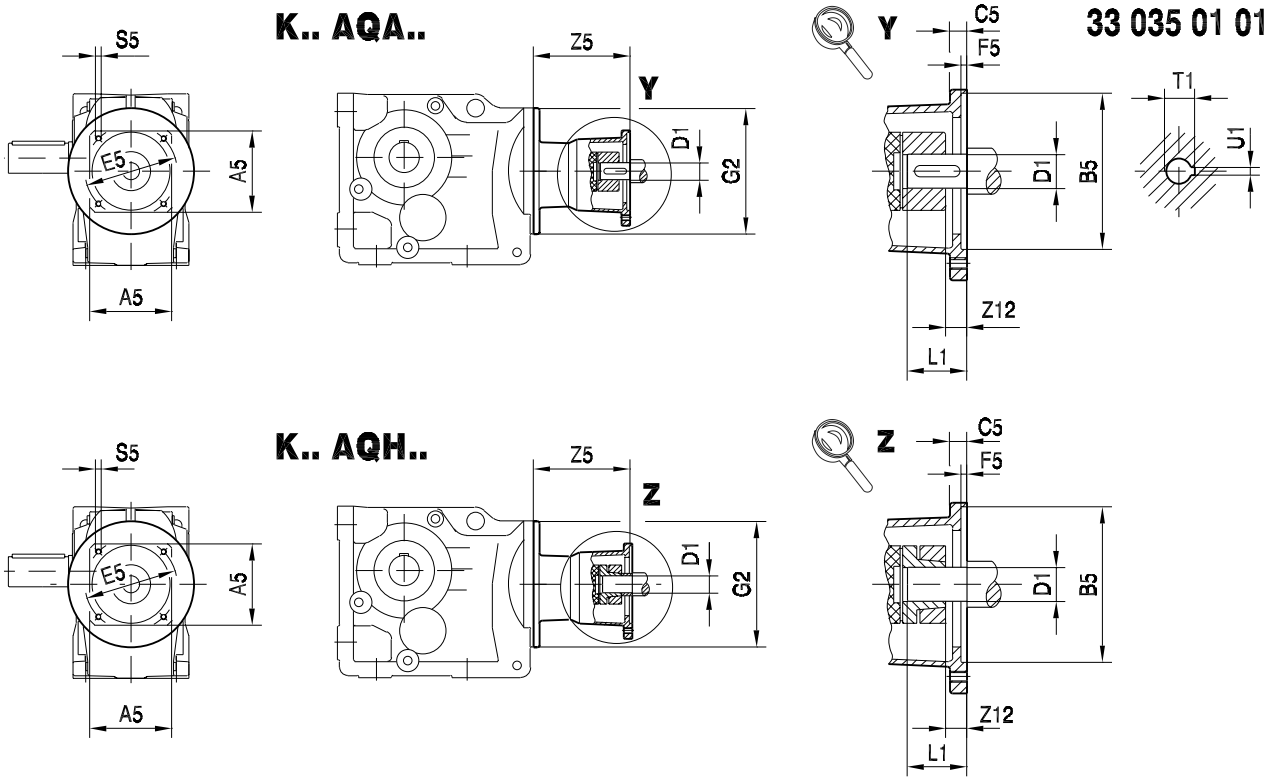
12.7 K.. AQ.. [mm]



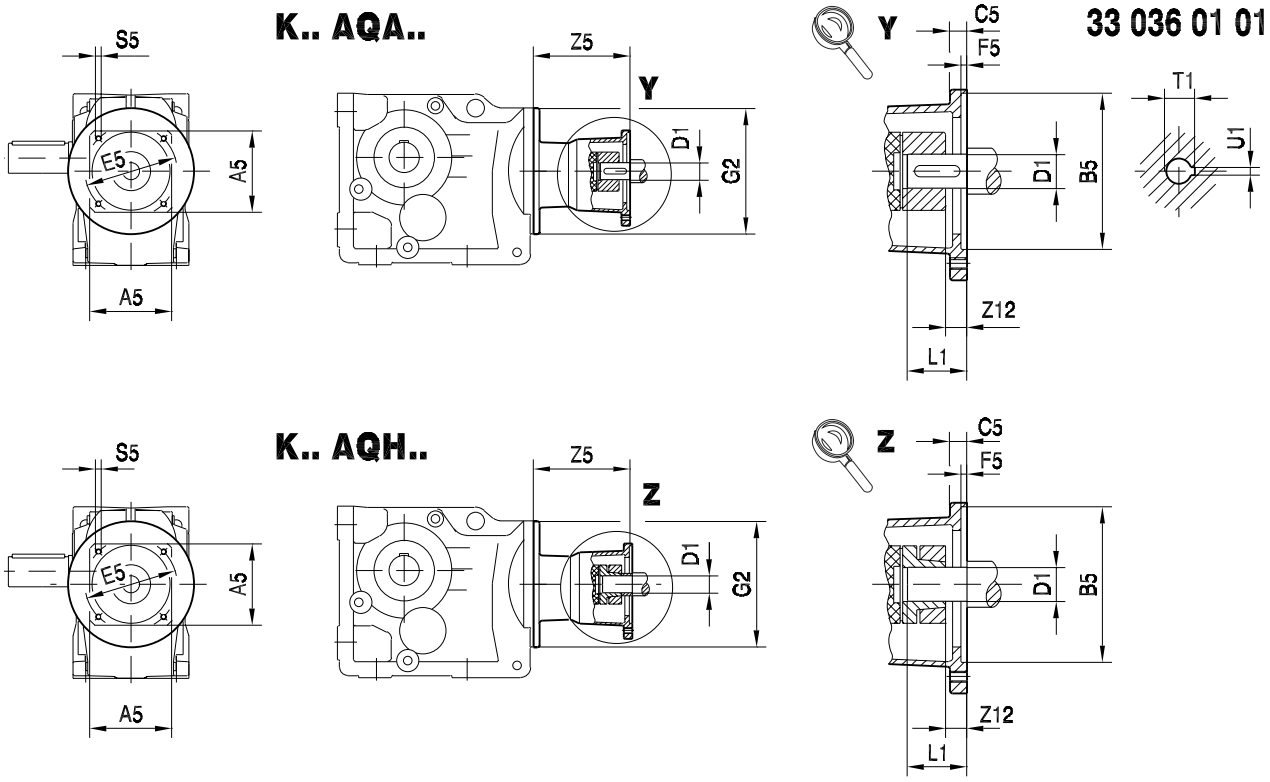
		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
K..37	AQ..80/1	82	60	8	75	3.5	120	M5	104.5	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	129.5	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	143.5	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	152.5	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
K..47	AQ..80/1	82	60	8	75	3.5	160	M5	98	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	123	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	137	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	146	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	175	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								188	24	22	32	60	35.3	10



		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
K..57 K..67	**AQ..80/1**	82	60	8	75	3.5	160	M5	98	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	123	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	137	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	146	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	175	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								188	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	237.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								261.5	39	34	38	80	41.3	10



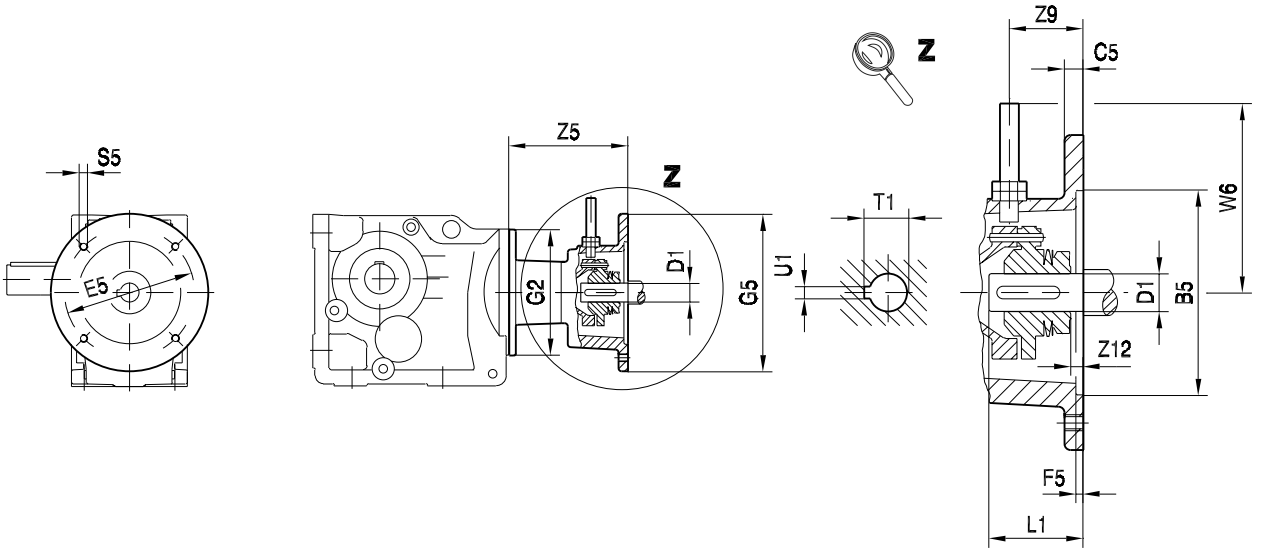
		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
K..77	AQ..80/1	82	60	8	75	3.5	200	M5	92	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	116	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	130	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	139	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	167	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								180	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	225.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								249.5	39	34	38	80	41.3	10
K..87	AQ..100/1	100	80	10	100	4	250	M6	111	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	125	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	134	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	162	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								175	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	220.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								244.5	39	34	38	80	41.3	10



		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
K..97	AQ..140/1	140	110	15	165	5	300	M10	157	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								170	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	215.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								239.5	39	34	38	80	41.3	10
K..107	AQ..140/1	140	110	15	165	5	350	M10	151	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								164	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	209.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								233.5	39	34	38	80	41.3	10
K..127	AQ..190/1	190	130	16	215	5	450	M12	194.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								218.5	39	34	38	80	41.3	10

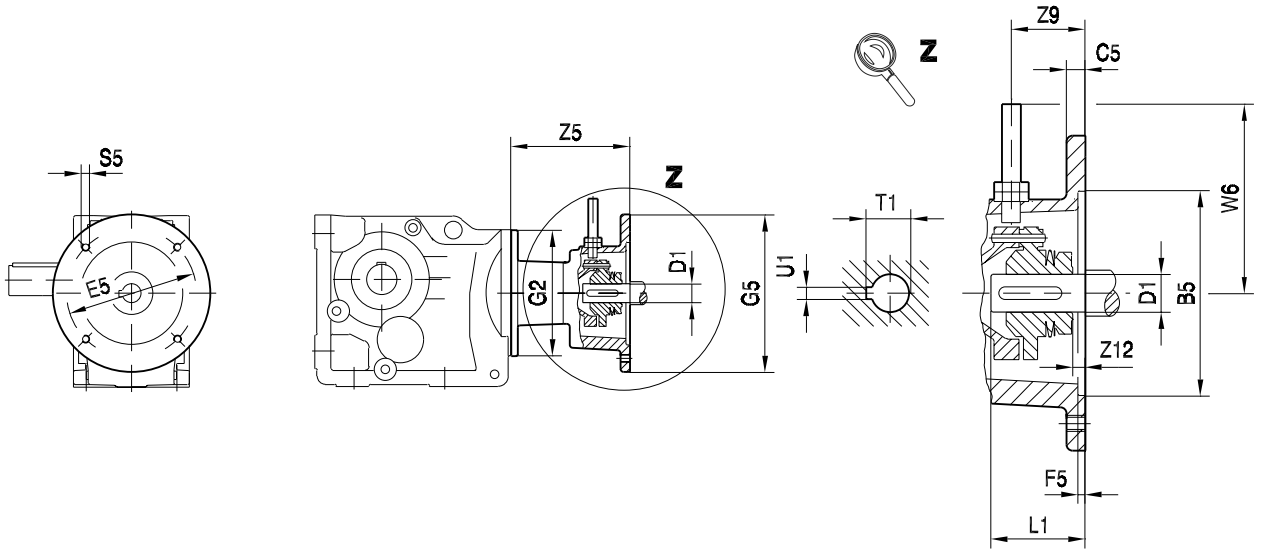
12.8 K.. AR.. [mm]

33 037 01 01



		B5	C5	E5	F5	G2	G5	S5	W6	Z5	Z9	Z12	D1	L1	T1	U1
K..37	**AR71**	110	10	130	4	120	160	M8	120	104	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		140.5			19	40	21.8	6
	AR90												24	50	27.3	8
K..47 K..57 K..67	**AR71**	110	10	130	4	160	160	M8	120	97.5	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		134			19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	174.5	52	5.5	28	60	31.3	8
	AR112															
K..77	**AR71**	110	10	130	4	200	160	M8	120	91.5	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		127			19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	166.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	234	72	5	38	80	41.3	10
	AR132ML															
K..87	**AR80**	130	12	165	4.5	250	200	M10	120	122	37	0	19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	161.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	229	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	306.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14

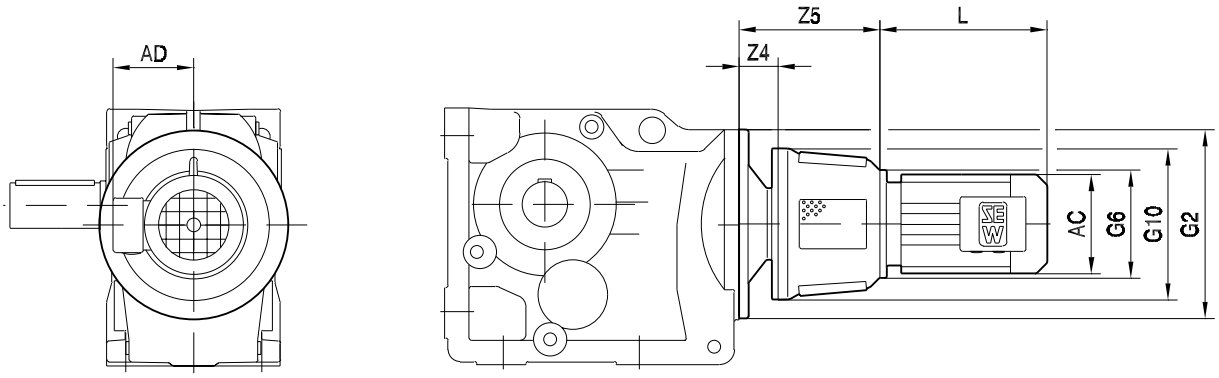
33 038 01 01



		B5	C5	E5	F5	G2	G5	S5	W6	Z5	Z9	Z12	D1	L1	T1	U1
K..97	**AR100**	180	15	215	5	300	250	M12	130	156.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	224	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	301.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
K..107	**AR100**	180	15	215	5	350	250	M12	130	150.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	218	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	295.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
K..127	**AR132S/M**	230	16	265	5	450	300	M12	145	203	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	280.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
K..157 **K..167** **K..187**	**AR160**	250	18	300	6	550	350	M16	165	272.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14

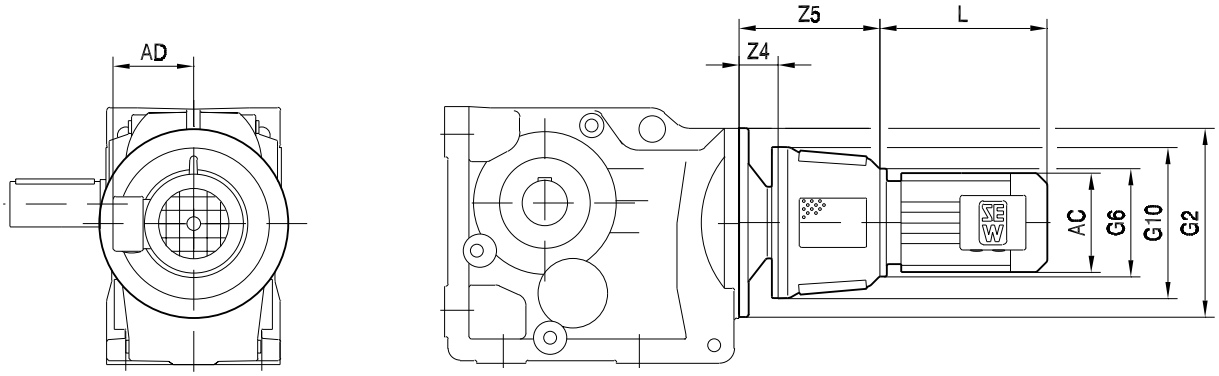
12.9 K.. AT.. [mm]

36 001 01 01



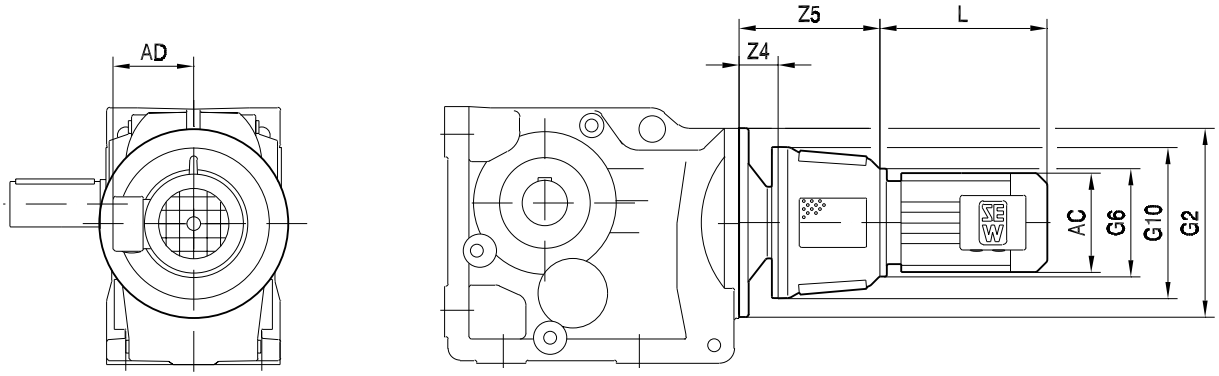
			AC	AD	G6	G10	L	Z4	Z5	G2
K..67	AT311 AT312	DT71D	145	122	200	280	202	97	286	160
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT321 AT322	DT90..	197	154	250	350	257	97	333	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
K..77	AT311 AT312	DT71D	145	122	200	280	202	89	278	200
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	133	368	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			

36 002 01 01



			AC	AD	G6	G10	L	Z4	Z5	G2
K..87	AT311 AT312	DT90..	197	154	200	280	273	84	273	250
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	128	363	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	159	478	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
K..97	AT311 AT312	DT90..	197	154	200	280	273	79	268	300
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	123	358	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	154	473	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

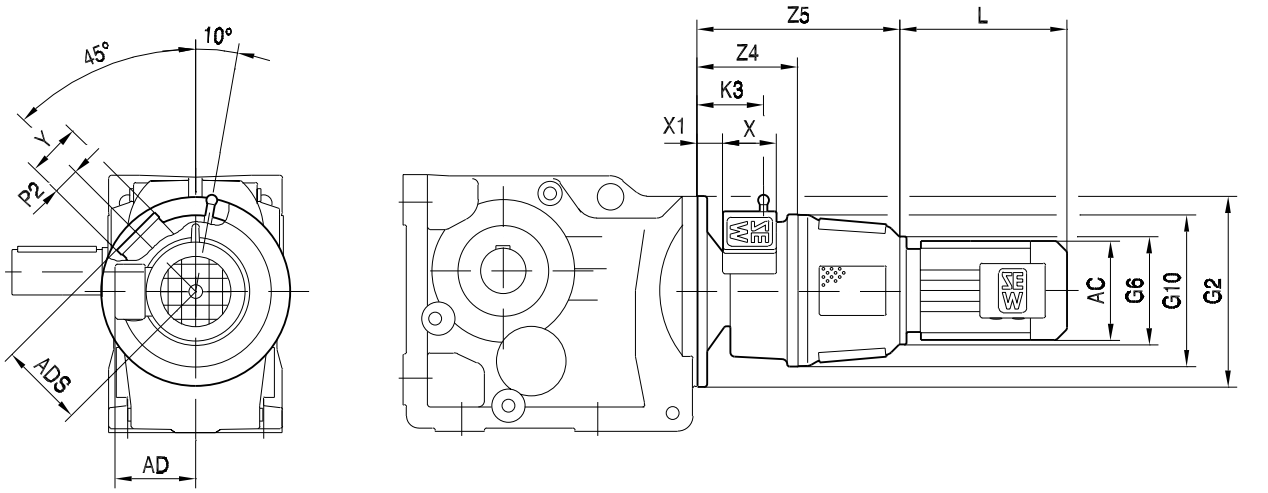
36 003 01 01



			AC	AD	G6	G10	L	Z4	Z5	G2
K..107	AT311 AT312	DT90..	197	154	200	280	273	73	262	350
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	117	352	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	148	467	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			
K..127	AT421 AT422	DV132M	275	230	250	350	407	102	337	450
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	133	452	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			
K..157 K..167 K..187	AT522 AT541 AT542	DV132S	221	176	350	470	374	125	444	550
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

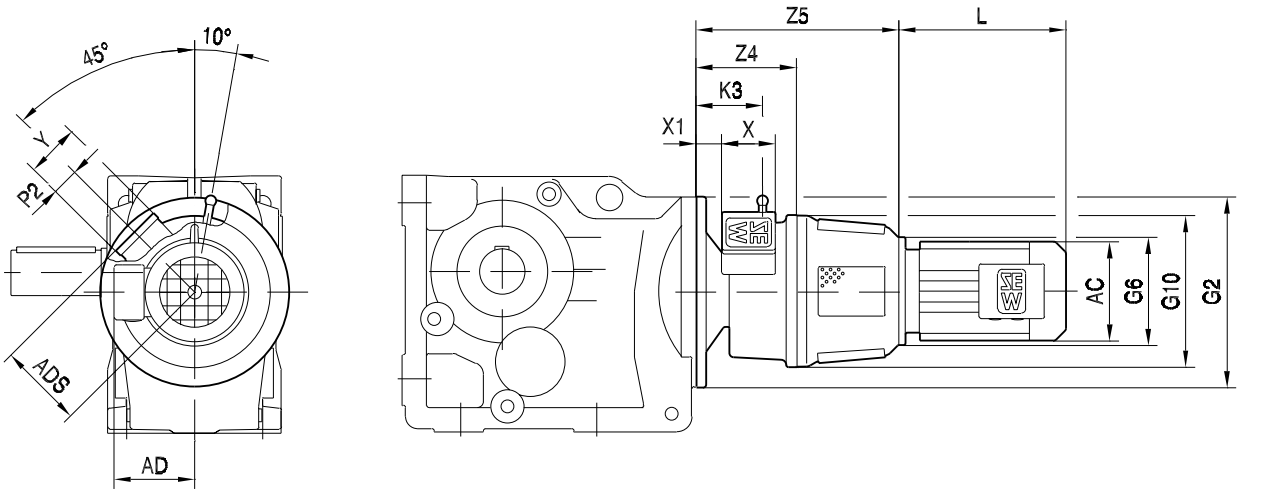
12.10 K.. AT../BM(G) [mm]

36 004 01 01



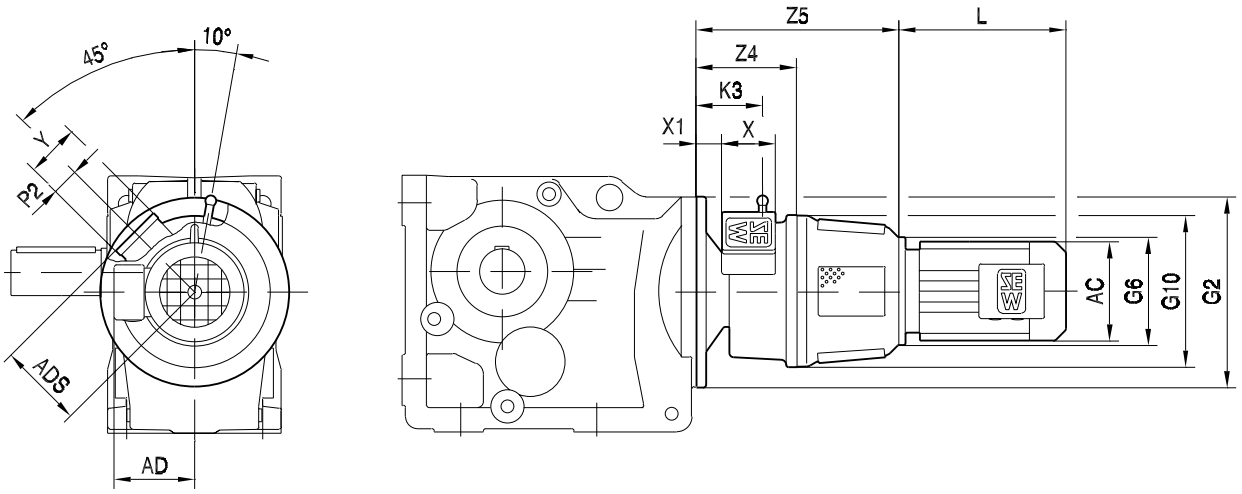
			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
K..67	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	153	84	97	89	127	223	411	160
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT321/BMG AT322/BMG	DT90..	197	154	215	250	352	257							458	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
K..77	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	145	84	97	81	127	215	403	200
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	183	84	97	119	127	252	488	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								

36 005 01 01



			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
K..87	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	140	84	97	76	127	210	398	250
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	178	84	97	114	127	247	483	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	244	84	97	148	127	331	650	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
K..97	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	135	84	97	71	127	205	393	300
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	173	84	97	109	127	242	478	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	239	84	97	143	127	326	645	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

36 006 01 01

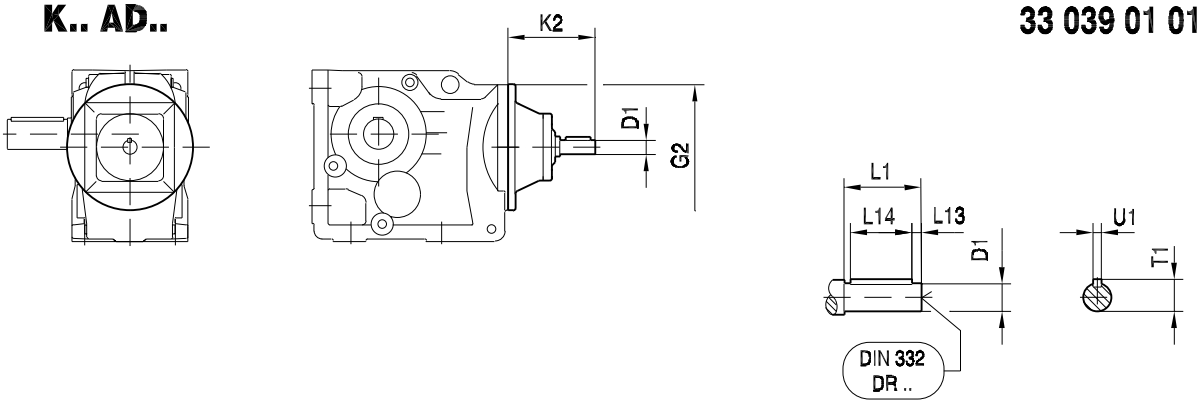


			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
K..107	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	129	84	97	65	127	199	387	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	167	84	97	103	127	236	472	350
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	233	84	97	137	127	320	639	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								
K..127	AT421/BMG AT422/BMG	DV132M	275	230	215	250	352	407	152	84	97	88	127	221	457	450
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	218	84	97	122	127	305	624	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								
K..157 K..167 K..187	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	210	84	97	114	127	297	616	550
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

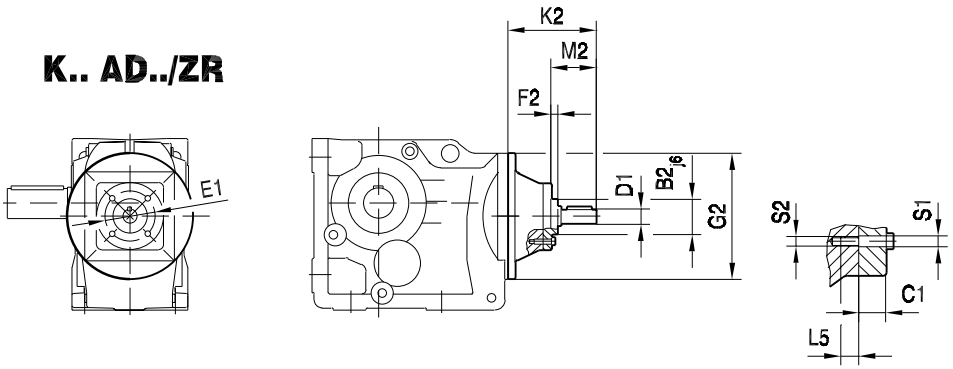
12.11 K.. AD.. [mm]

K.. AD..

33 039 01 01

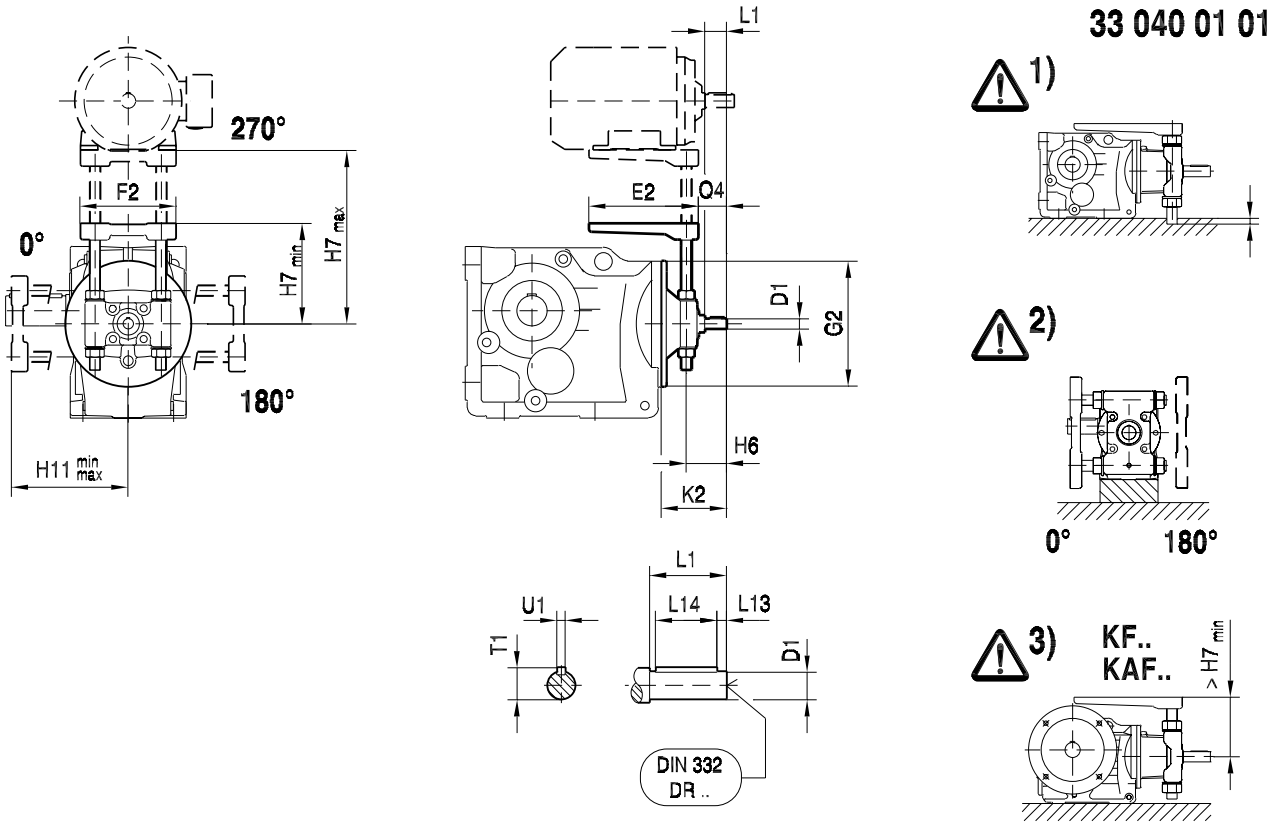


K.. AD../ZR

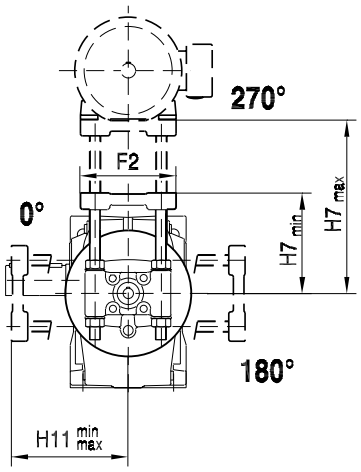


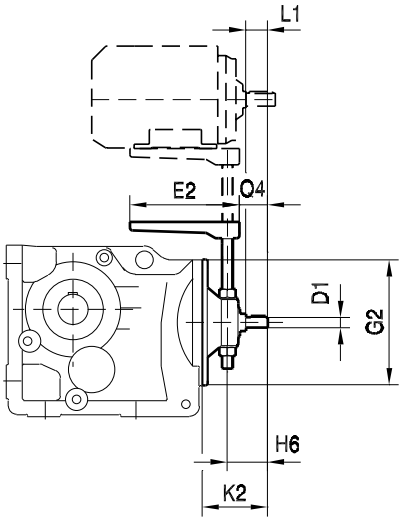
		B2	C1	E1	F2	G2	K2	L5	M2	S1	S2	D1	L1	L13	L14	T1	U1
K..37	**AD1**	-	-	-	-	120	102	-	-	-	-	16	40	4	32	18	5
	AD2 , AD2/ZR	55	13.5	80	8		130	12	50	9	M8	19	40	4	32	21.5	6
K..47 , K..57 K..67	**AD2 , AD2/ZR**	55	13.5	80	8	160	123	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		159	16	60	11	M10	24	50	5	40	27	8
K..77	**AD2 , AD2/ZR**	55	13.5	80	8	200	116	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		151	16	60	11	M10	24	50	5	40	27	8
	AD4 , AD4/ZR	100	16	130	13		224	20	95.5	13.5	M12	38	80	5	70	41	10
K..87	**AD2 , AD2/ZR**	55	13.5	80	8	250	111	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		156	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		219	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		292	20	126	13.5	M12	42	110	10	70	45	12
K..97	**AD3 , AD3/ZR**	70	15.5	105	8	300	151	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		214	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		287	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		327	26	130.5	17.5	M16	48	110	10	80	51.5	14
K..107	**AD3 , AD3/ZR**	70	15.5	105	8	350	145	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		208	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		281	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		321	26	130.5	17.5	M16	48	110	10	80	51.5	14
K..127	**AD4 , AD4/ZR**	100	16	130	13	450	193	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		266	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		306	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD7 , AD7/ZR	125	19	190	13		300	30	133	22	M20	55	110	10	90	59	16
	AD8 , AD8/ZR	120	22.5	210	5		383	19.5	155	13.5	M12	70	140	15	110	74.5	20
K..157 K..167 K..187	**AD5 , AD5/ZR**	120	24	180	11	550	258	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		298	26	130.5	17.5	M16	48	110	10	80	51.5	14
	AD7 , AD7/ZR	125	19	190	13		292	30	133	22	M20	55	110	10	90	59	16
	AD8 , AD8/ZR	120	22.5	210	5		374	19.5	155	13.5	M12	70	140	15	110	74.5	20

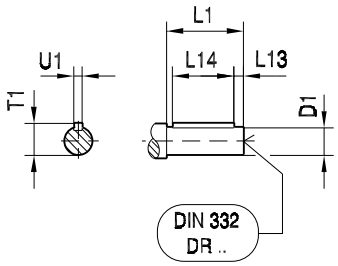
12.12 K.. AD../P [mm

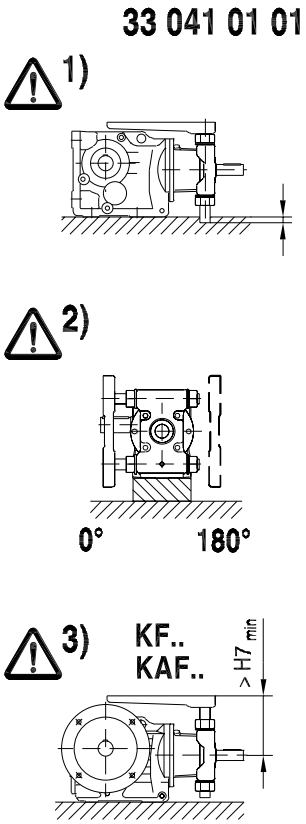


			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118
K..37	**AD2/P**	**DT71D**	195	180	120	65	100	165	95	165	130	43	19	40	4	32	21.5	6	1)
		DT80..																	
		DT90..																	
K..47	**AD2/P**	**DT71D**	195	180	160	65	110	165	110	165	123	43	19	40	4	32	21.5	6	1)
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	125	175	125	175	159	54	24	50	5	40	27	8	1), 2)
		DV112..																	
K..57	**AD2/P**	**DT71D**	195	180	160	65	120	165	120	165	123	43	19	40	4	32	21.5	6	
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	130	175	130	175	159	54	24	50	5	40	27	8	1), 2), 3)
		DV112..																	
K..67	**AD2/P**	**DT71D**	195	180	160	65	130	200	125	165	123	43	19	40	4	32	21.5	6	1)
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	135	175	130	175	159	54	24	50	5	40	27	8	3)
		DV112..																	
K..77	**AD2/P**	**DT71D**	195	180	200	65	160	260	140	260	116	43	19	40	4	32	21.5	6	1)
		DT80..																	
		DT90..																	
	AD3/P	**DV100..**	230	240		80	160	230	145	175	151	54	24	50	5	40	27	8	1)
		DV112..																	
	AD4/P	**DV132..**	345	291		114	170	210	150	210	224	83	38	80	5	70	41	10	3)

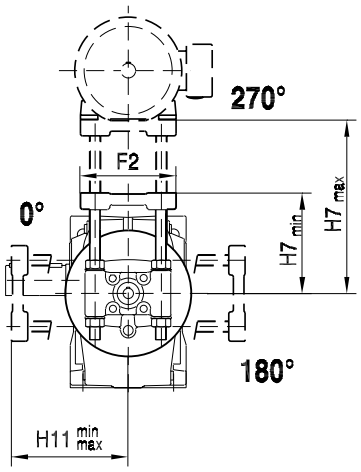


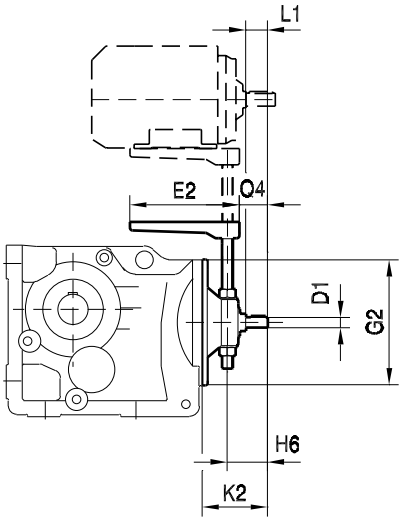


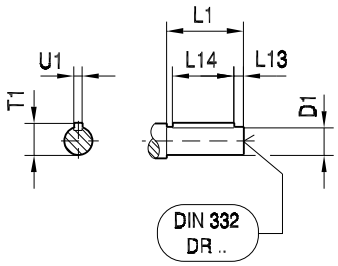


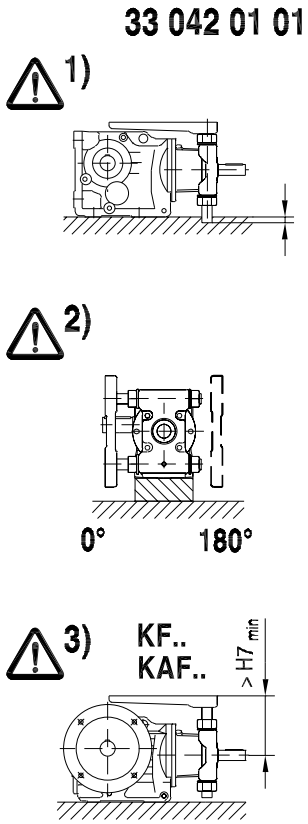


			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118
K..87	AD2/P	DT71D DT80.. DT90..	195	180	250	65	180	260	170	200	111	43	19	40	4	32	21.5	6	
	AD3/P	DV100.. DV112..	230	240		90	180	230	175	230	156	64	28	60	5	50	31	8	
	AD4/P	DV132..	345	291		114	190	280	180	210	219	83	38	80	5	70	41	10	1)
	AD5/P	DV160.. DV180..	430	355		153	190	250	185	250	292	113	42	110	10	70	45	12	1), 3)
K..97	AD3/P	DT90.. DV100.. DV112..	230	240	300	90	210	320	210	320	151	64	28	60	5	50	31	8	
	AD4/P	DV132..	345	291		114	215	280	215	280	214	83	38	80	5	70	41	10	
	AD5/P	DV160.. DV180..	430	355		153	225	325	215	250	287	113	42	110	10	70	45	12	1), 3)
K..107	AD3/P	DV100.. DV112..	230	240	350	90	260	320	220	320	145	64	28	60	5	50	31	8	
	AD4/P	DV132..	345	291		114	265	360	220	280	208	83	38	80	5	70	41	10	
	AD5/P	DV160.. DV180..	430	355		153	270	325	225	325	281	113	42	110	10	70	45	12	
	AD6/P	DV200.. DV225..	495	457		163	270	310	250	310	321	114	48	110	10	80	51.5	14	3)
K..127	AD4/P	DV132..	345	291	450	114	305	360	245	280	193	83	38	80	5	70	41	10	
	AD5/P	DV160.. DV180..	430	355		153	310	405	255	325	266	113	42	110	10	70	45	12	
	AD6/P	DV200.. DV225..	495	457		163	305	360	300	360	306	114	48	110	10	80	51.5	14	3)
	AD7/P	D250.. D280..	650	570		170	305	365	305	365	300	112	55	110	10	90	59	16	3)





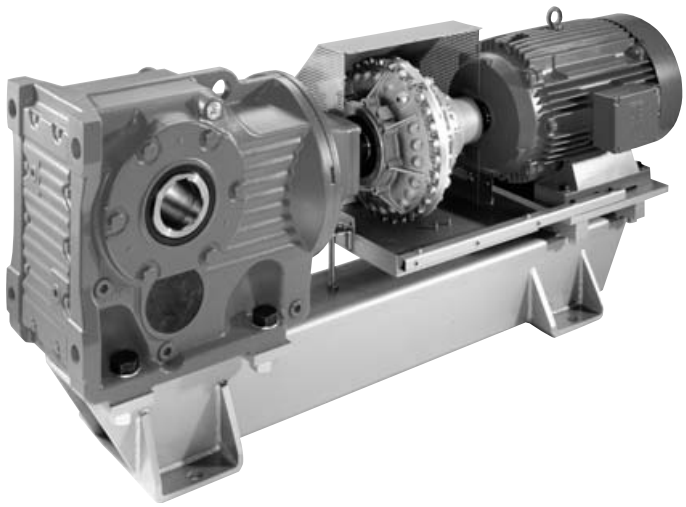




			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118
K..157	AD5/P	DV160..	430	355	550	153	360	405	295	325	258	113	42	110	10	70	45	12	
		DV180..																	
	AD6/P	DV200..	495	457		163	375	475	375	475	298	114	48	110	10	80	51.5	14	3)
		DV225..																	
	AD7/P	D250..	650	570		170	375	475	375	475	292	112	55	110	10	90	59	16	3)
		D280..																	
K..167	AD5/P	DV160..	430	355	550	153	415	495	350	405	258	113	42	110	10	70	45	12	
		DV180..																	
	AD6/P	DV200..	495	457		163	420	475	375	475	298	114	48	110	10	80	51.5	14	
		DV225..																	
	AD7/P	D250..	650	570		170	420	475	375	475	292	112	55	110	10	90	59	16	
		D280..																	
K..187	AD5/P	DV160..	430	355	550	153	480	545	380	495	258	113	42	110	10	70	45	12	
		DV180..																	
	AD6/P	DV200..	495	457		163	485	525	380	475	298	114	48	110	10	80	51.5	14	
		DV225..																	
	AD7/P	D250..	650	570		170	485	525	380	475	292	112	55	110	10	90	59	16	
		D280..																	

13 MK..

13.1 K.. AD.. MK..



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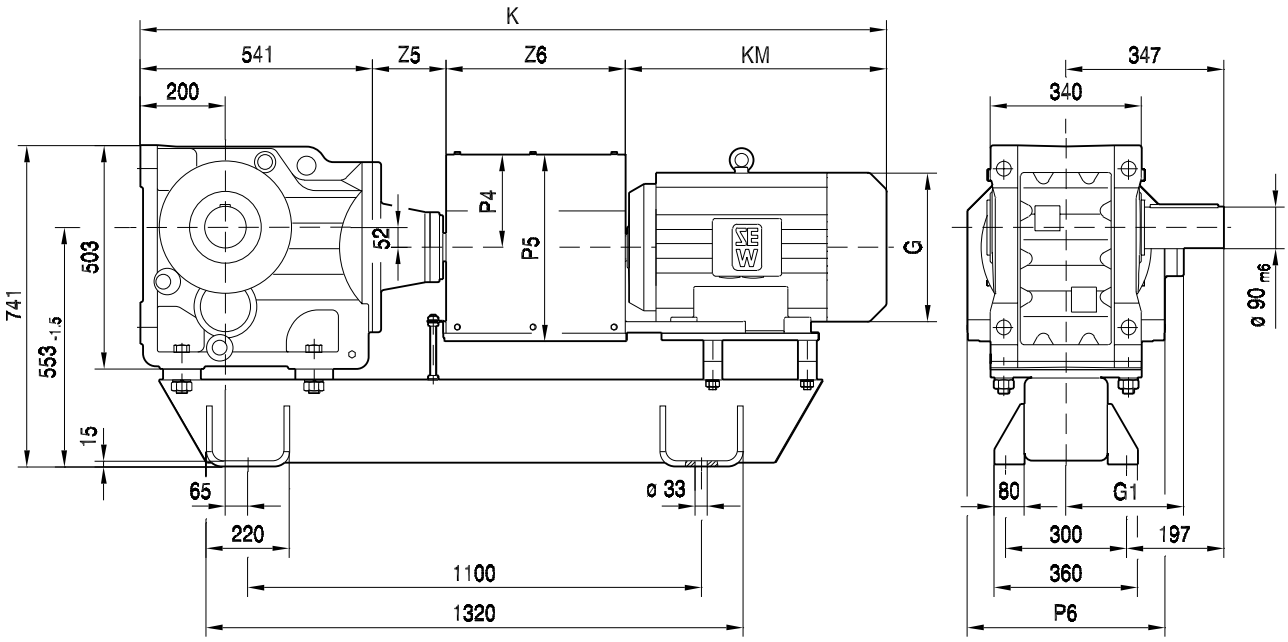
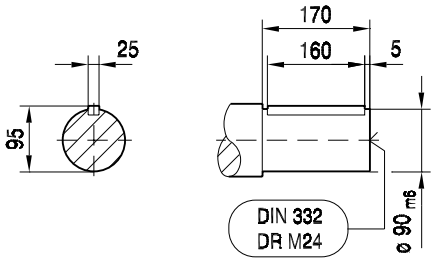
		P_m [kW]	..AD.. MK..			S_n [%]
K..107	**DV200L4**	30	**..AD6 MK107/51**	T51V	5.3	6.3
	DV225S4	37			6.0	6.5
	DV225M4	45			6.6	7.4
K..127	**DV200L4**	30	**..AD6 MK127/51**	T51V	5.3	6.3
	DV225S4	37			6.0	6.5
	DV225M4	45			6.6	7.4
	D250M4	55	**..AD7 MK127/61**	T61V	8.0	5.1
	D280S4	75			9.0	5.8
	D280M4	90			10.7	5.9
K..157	**DV200L4**	30	**..AD6 MK157/51**	T51V	5.3	6.3
	DV225S4	37			6.0	6.5
	DV225M4	45			6.6	7.4
	D250M4	55	**..AD7 MK157/61**	T61V	8.0	5.1
	D280S4	75			9.0	5.8
	D280M4	90			10.7	5.9
K..167	**DV200L4**	30	**..AD6 MK167/51**	T51V	5.3	6.3
	DV225S4	37			6.0	6.5
	DV225M4	45			6.6	7.4
	D250M4	55	**..AD7 MK167/61**	T61V	8.0	5.1
	D280S4	75			9.0	5.8
	D280M4	90			10.7	5.9
K..187	**DV200L4**	30	**..AD6 MK187/51**	T51V	5.3	6.3
	DV225S4	37			6.0	6.5
	DV225M4	45			6.6	7.4
	D250M4	55	**..AD7 MK187/61**	T61V	8.0	5.1
	D280S4	75			9.0	5.8
	D280M4	90			10.7	5.9

13.2 K.. AD.. MK.. [mm]

K107..

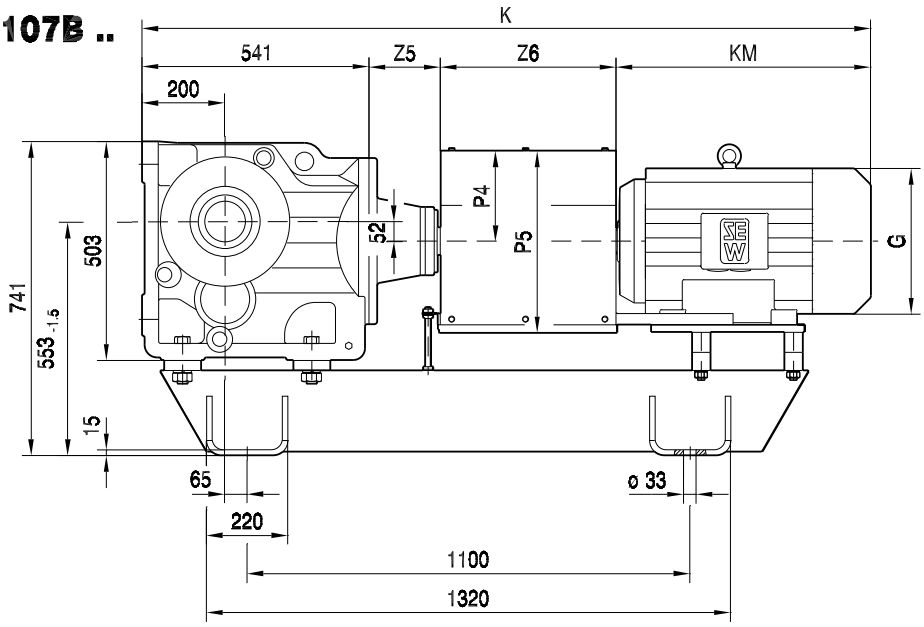
23 008 01 00



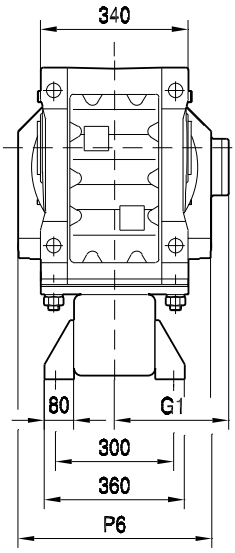


(→ 116)	K107 AD6 MK107/51 DV200L	DV225S	DV225M								
G	394	394	394								
G1	285	289	289								
K	1842	1916	1916								
KM	617	691	691								
P4	270	245	245								
P5	494	494	494								
P6	537	537	537								
Z5	209	209	209								
Z6	475	475	475								

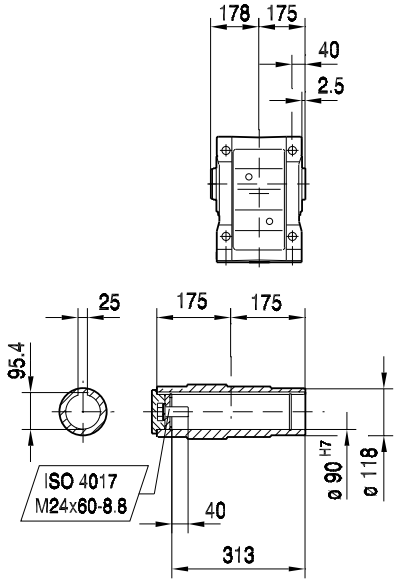
KA107B ..



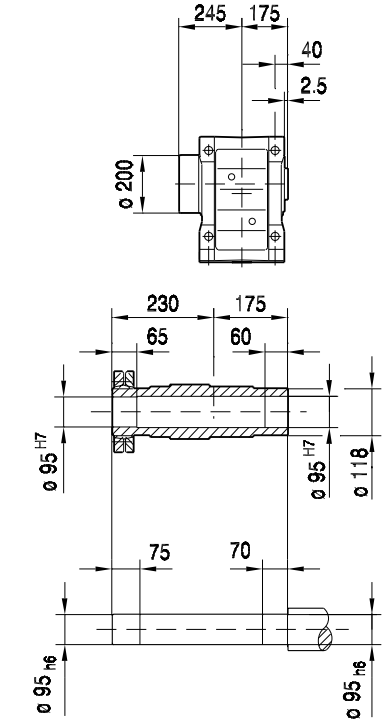
23 014 01 00



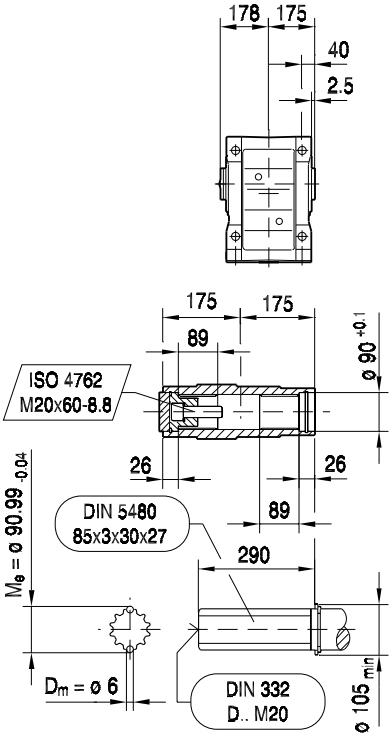
KA107B ..



KH107B ..



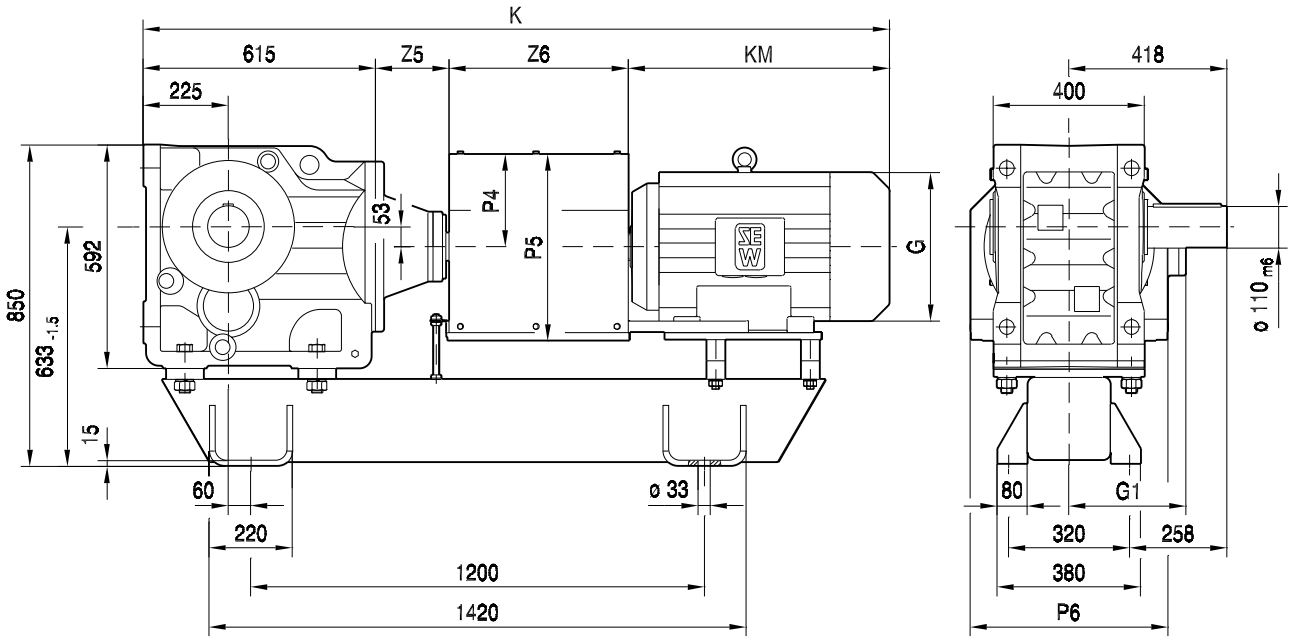
KV107B ..

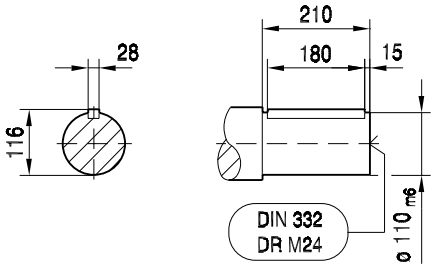


(→ 116)	K..107B AD6 MK107/51										
	DV200L	DV225S	DV225M								
G	394	394	394								
G1	285	289	289								
K	1842	1916	1916								
KM	617	691	691								
P4	270	245	245								
P5	494	494	494								
P6	537	537	537								
Z5	209	209	209								
Z6	475	475	475								

K127..

23 009 01 00

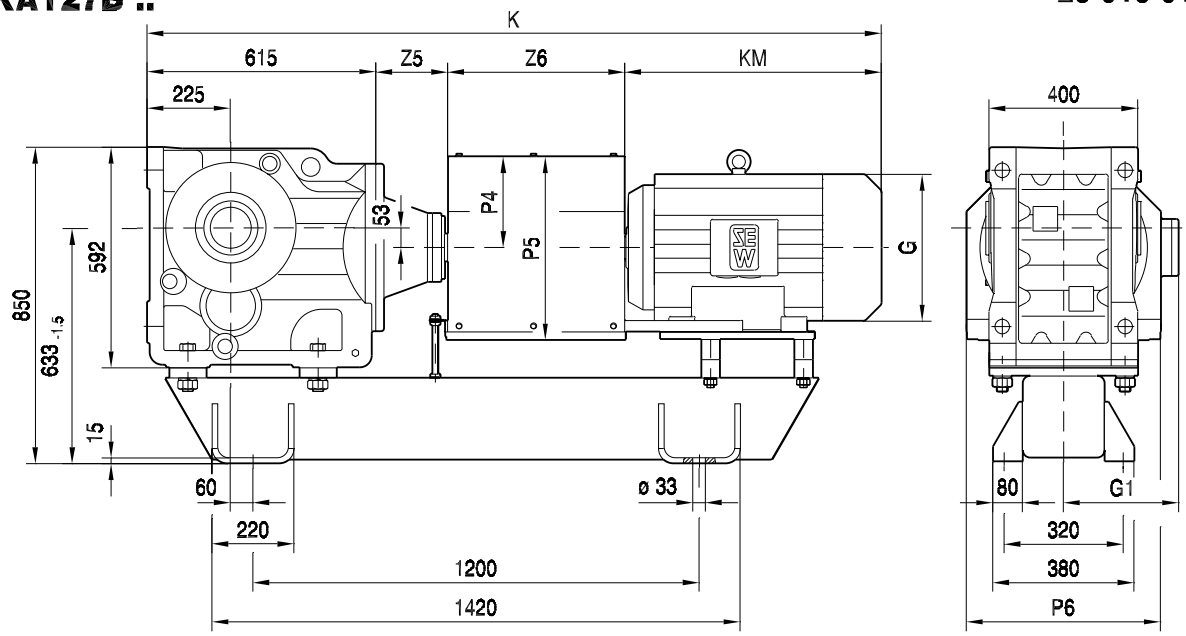




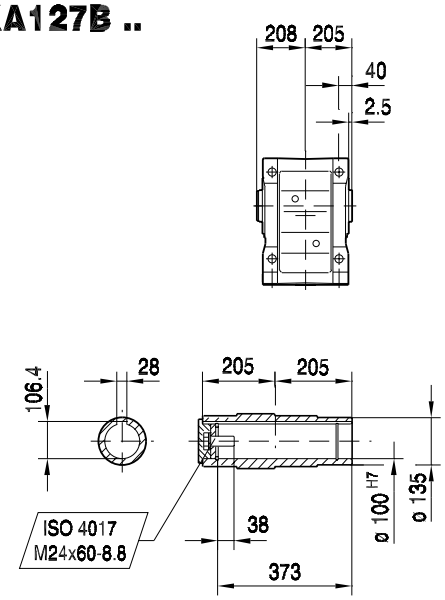
(→ 116)	K127 AD6 MK127/51			K127 AD7 MK127/61							
	DV200L	**DV225S**	**DV225M**	**D250M**	**D280S**	**D280M**					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	1901	1975	1975	2074	2155	2206					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	194	194	194	188	188	188					
Z6	475	475	475	520	520	520					

KA127B ..

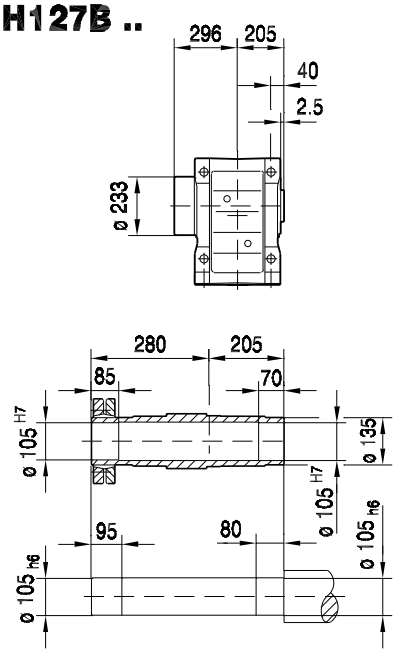
23 015 01 00



KA127B ..



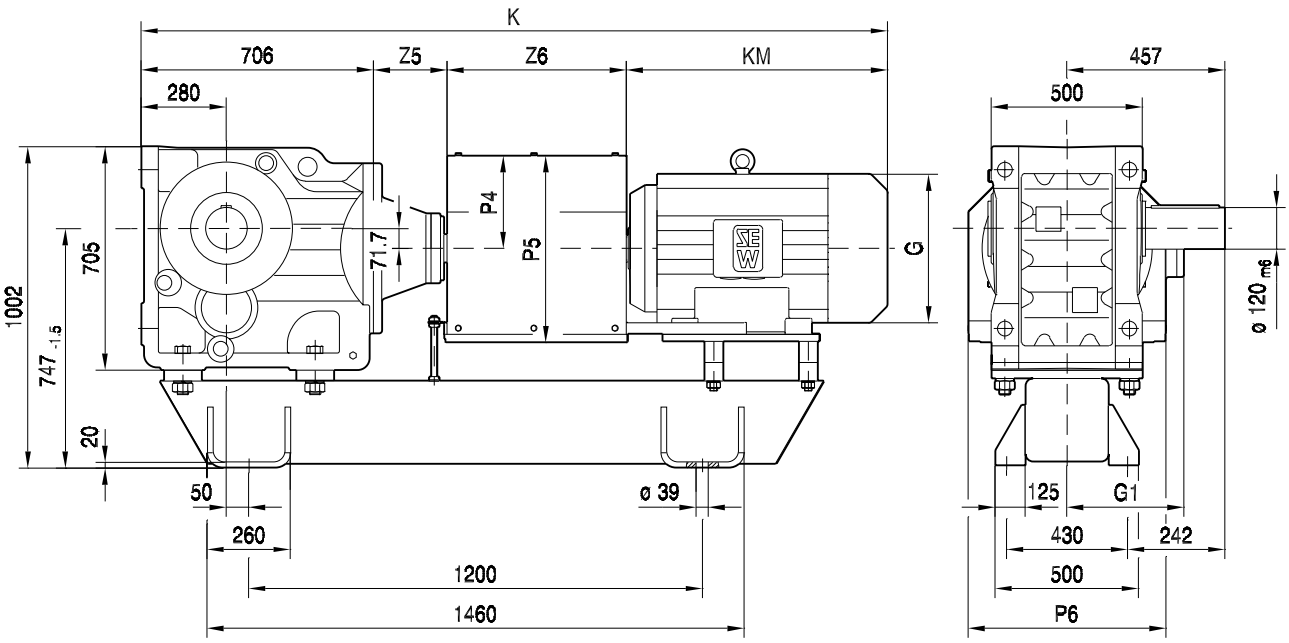
KH127B ..

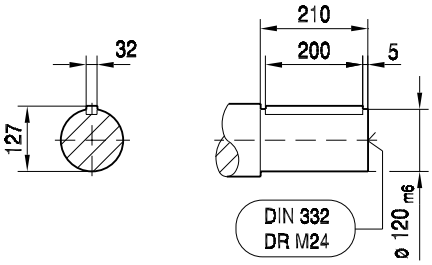


(→ 116)	K..127B AD6 MK127/51			K..127B AD7 MK127/61							
	DV200L	DV225S	DV225M	D250M	D280S	D280M					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	1901	1975	1975	2074	2155	2206					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	194	194	194	188	188	188					
Z6	475	475	475	520	520	520					

K157..

23 010 02 00

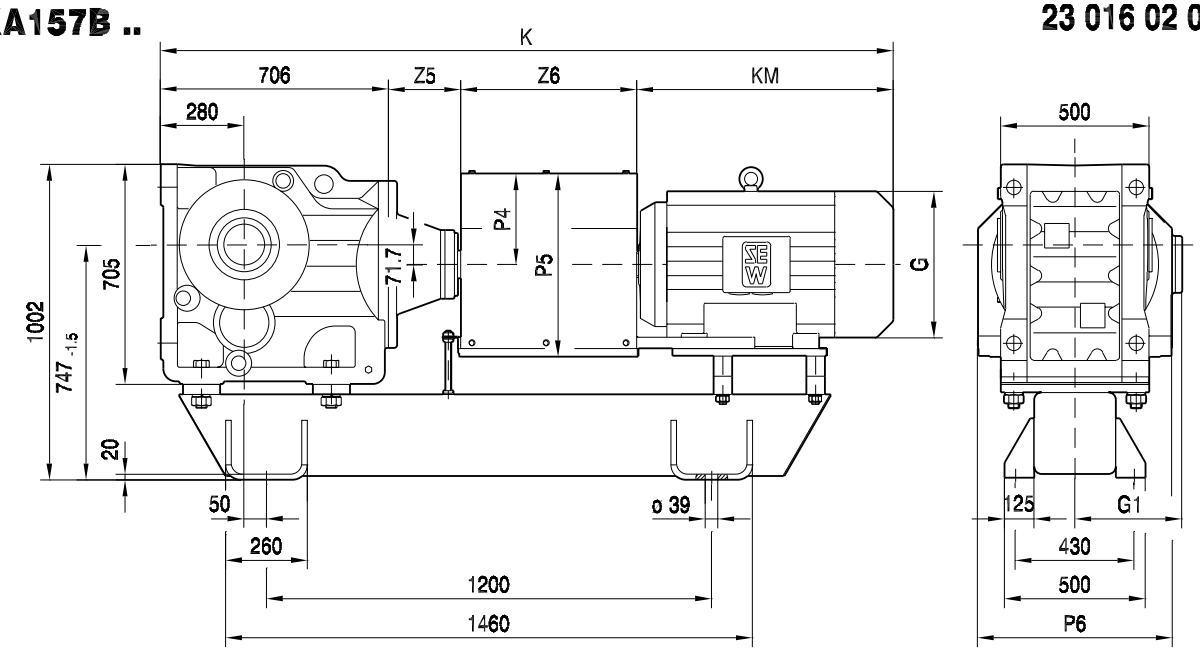




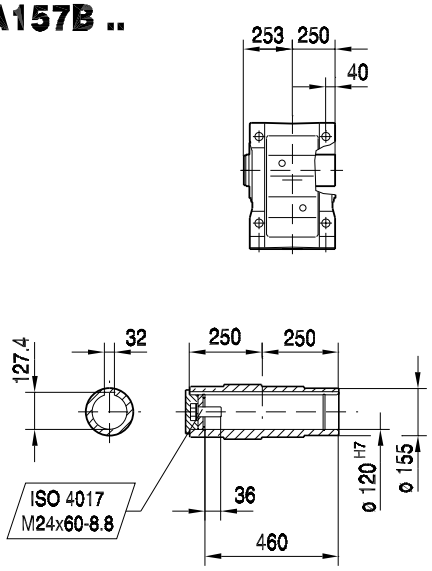
(→ 116)	K157 AD6 MK157/51			K157 AD7 MK157/61							
	DV200L	DV225S	DV225M	D250M	D280S	D280M					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	1984	2058	2058	2157	2238	2289					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	186	186	186	180	180	180					
Z6	475	475	475	520	520	520					

KA157B ..

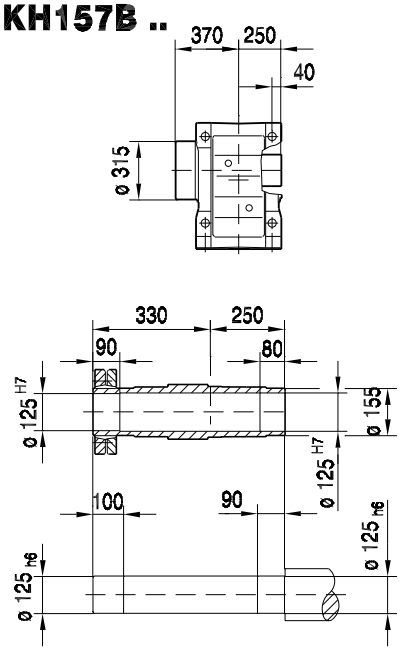
23 016 02 00



KA157B ..



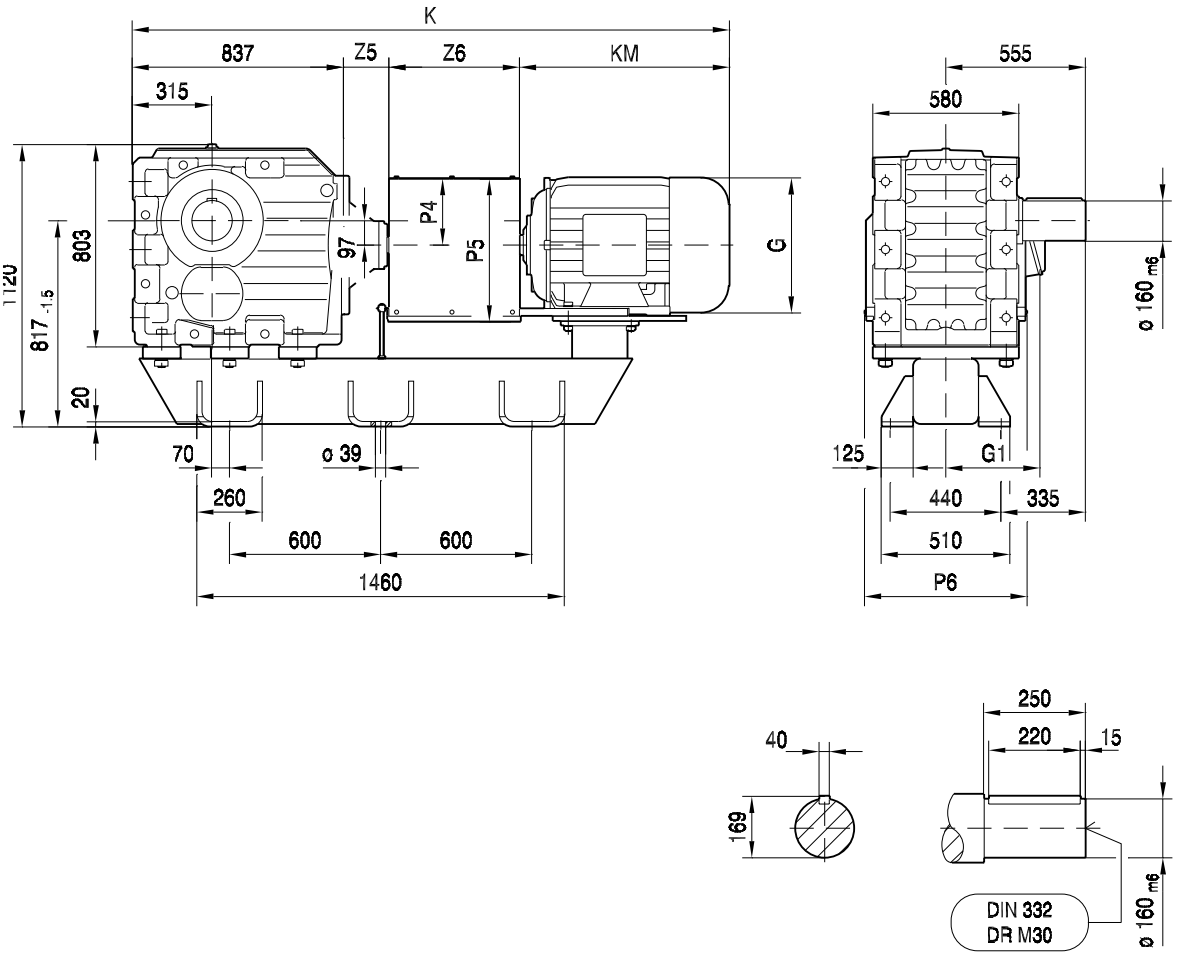
KH157B ..



(→ 116)	K..157B AD6 MK157/51			K..157B AD7 MK157/61							
	DV200L	DV225S	DV225M	D250M	D280S	D280M					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	1984	2058	2058	2157	2238	2289					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	186	186	186	180	180	180					
Z6	475	475	475	520	520	520					

K167..

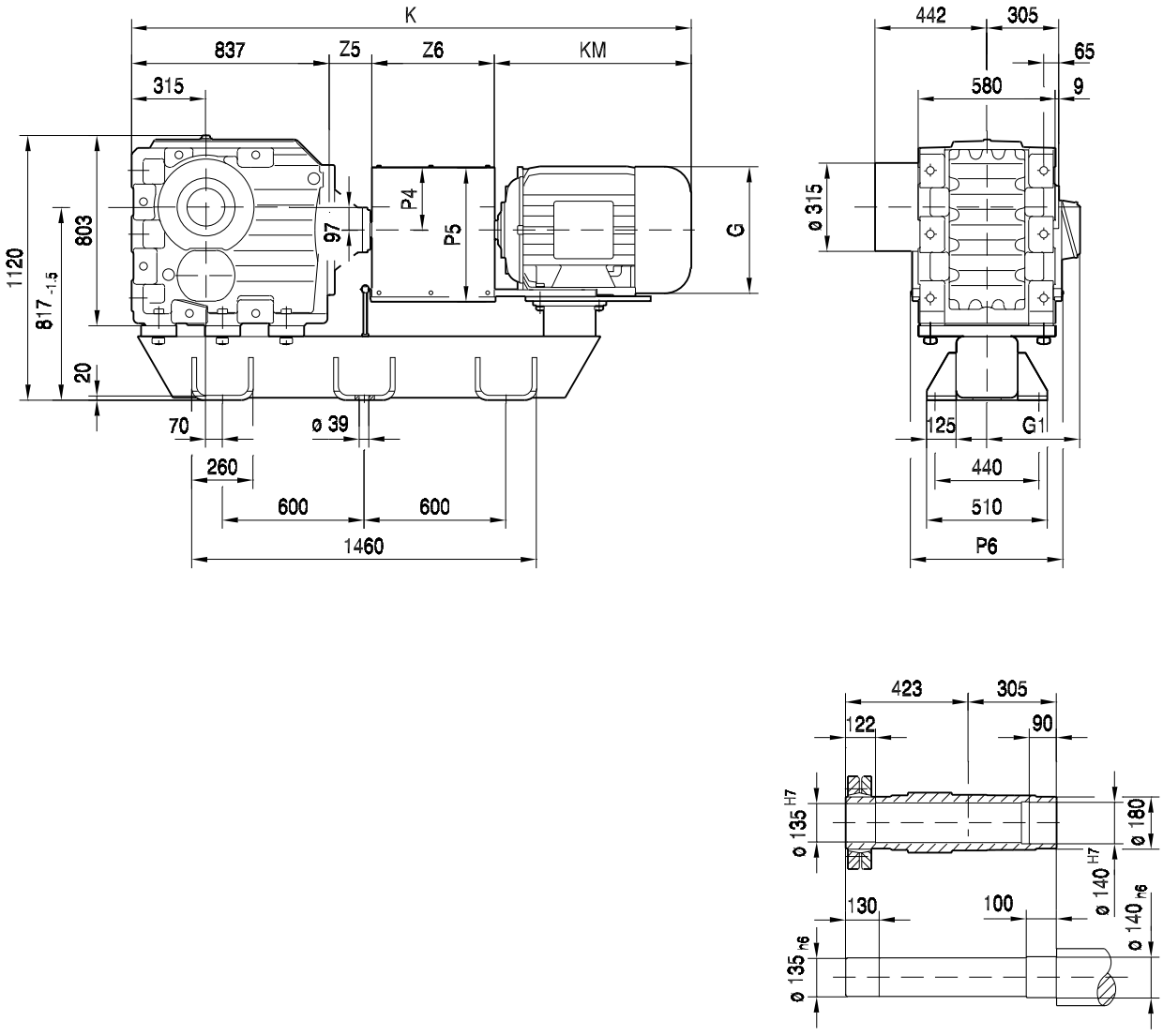
23 011 02 00



(→ 116)	K167 AD6 MK167/51			K167 AD7 MK167/61							
	DV200L	**DV225S**	**DV225M**	**D250M**	**D280S**	**D280M**					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	2115	2189	2189	2288	2369	2420					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	186	186	186	180	180	180					
Z6	475	475	475	520	520	520					

KH167B ..

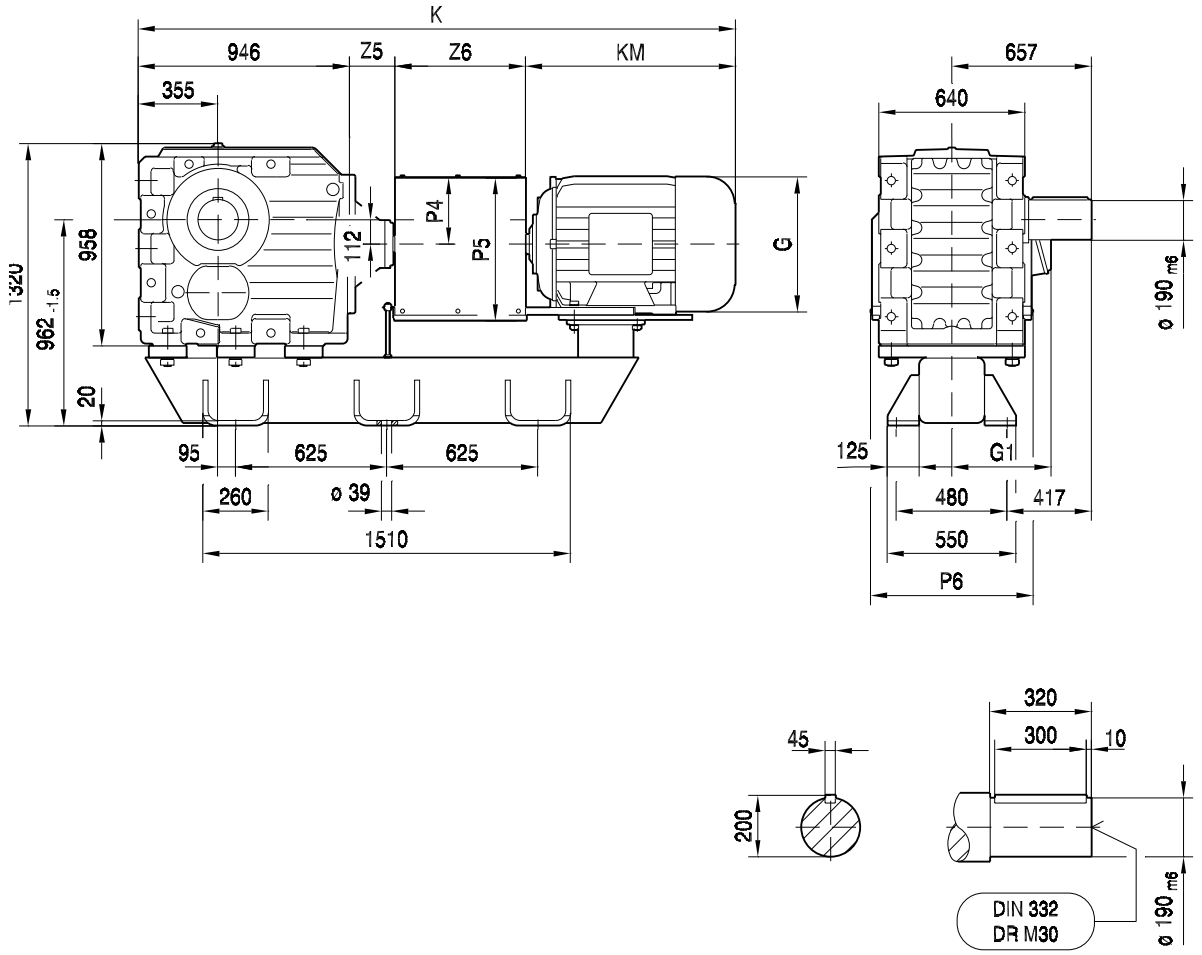
23 017 01 00



(→ 116)	KH167B AD6 MK167/51			KH167B AD7 MK167/61							
	DV200L	DV225S	DV225M	D250M	D280S	D280M					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	2115	2189	2189	2288	2369	2420					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	186	186	186	180	180	180					
Z6	475	475	475	520	520	520					

K187..

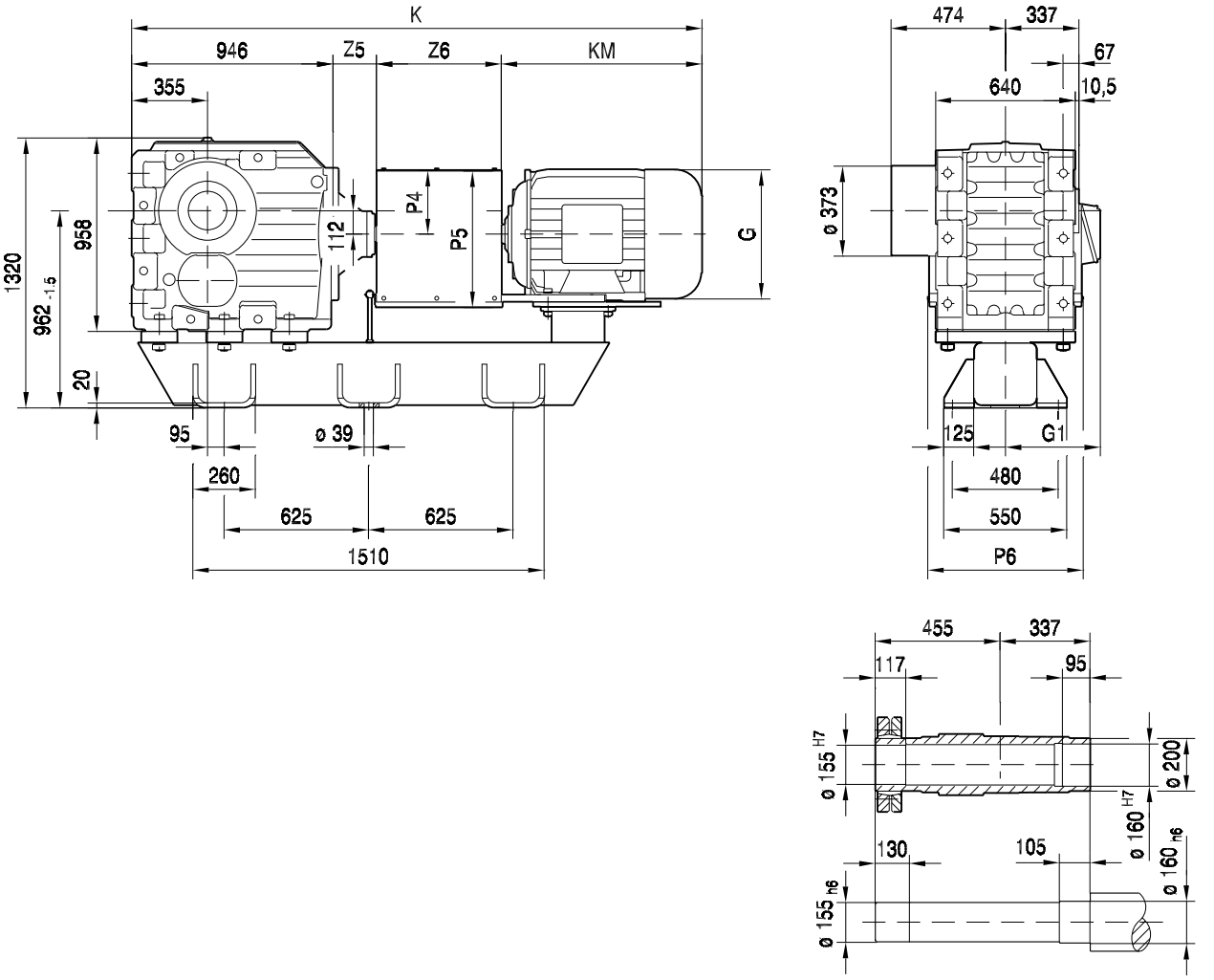
23 012 02 00



(→ 116)	K187 AD6 MK187/51			K187 AD7 MK187/61							
	DV200L	**DV225S**	**DV225M**	**D250M**	**D280S**	**D280M**					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	2215	2289	2289	2388	2469	2520					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	177	177	177	171	171	171					
Z6	475	475	475	520	520	520					

KH187B ..

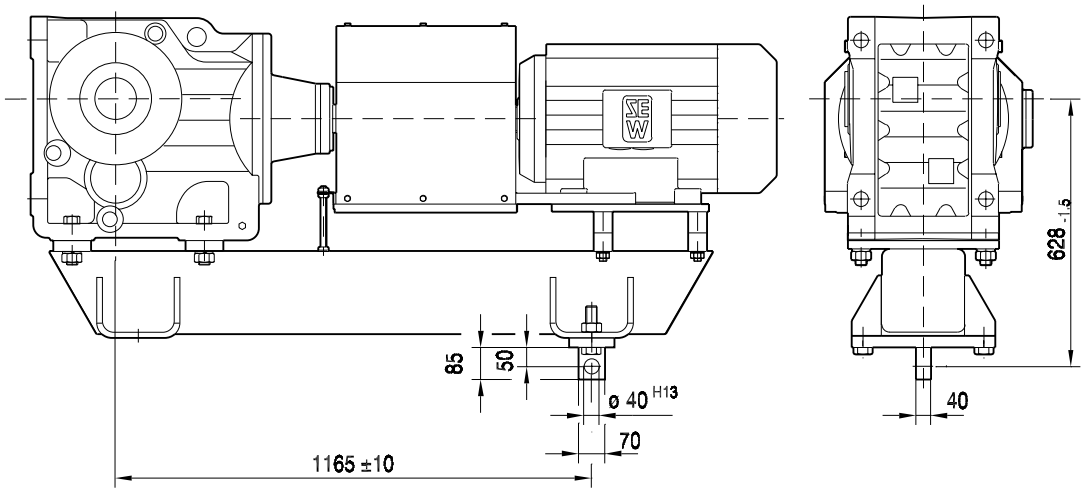
23 018 02 00



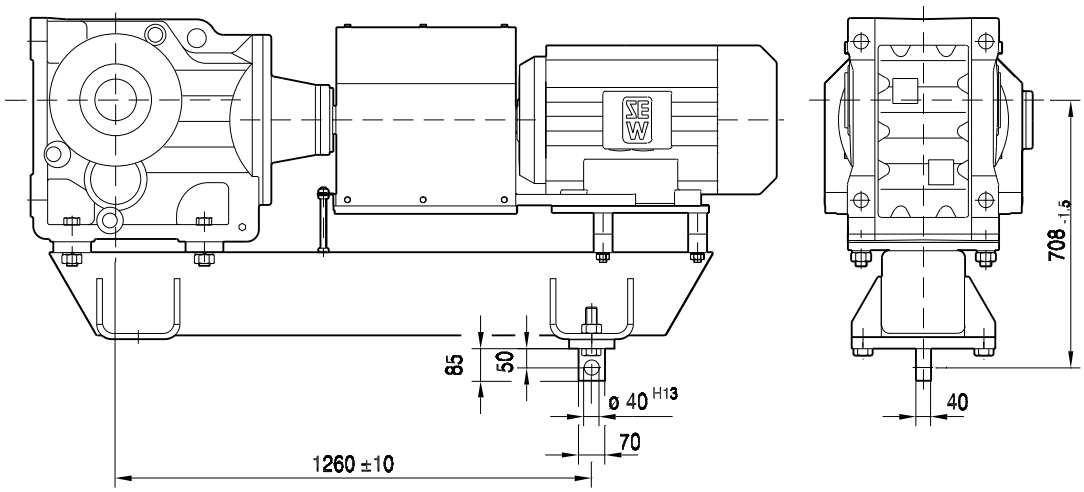
(→ 116)	KH187B AD6 MK187/51			KH187B AD7 MK187/61							
	DV200L	DV225S	DV225M	D250M	D280S	D280M					
G	394	394	394	480	537	537					
G1	285	289	289	350	382	382					
K	2215	2289	2289	2388	2469	2520					
KM	617	691	691	751	832	883					
P4	270	245	245	296	266	266					
P5	494	494	494	569	569	569					
P6	537	537	537	649	649	649					
Z5	177	177	177	171	171	171					
Z6	475	475	475	520	520	520					

KA,KH,KV107B AD.. MK107/../T

23 019 02 00

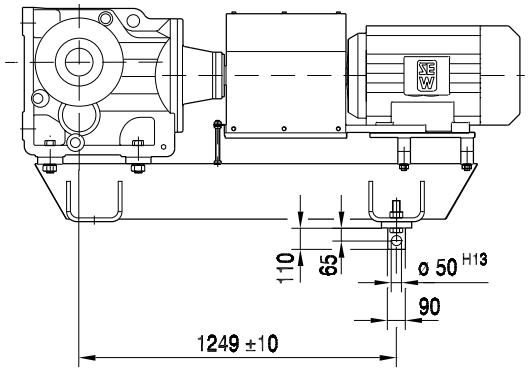


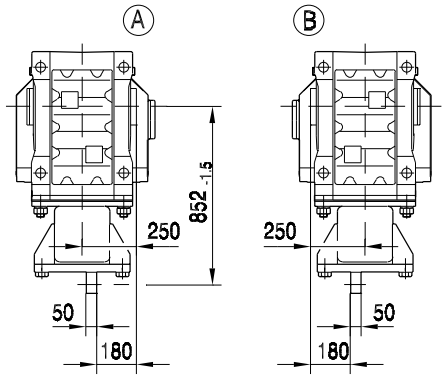
KA,KH,KV127B AD.. MK127/../T



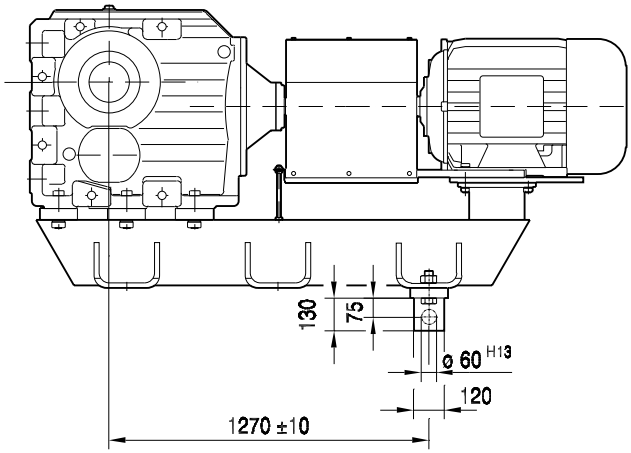
23 020 02 00

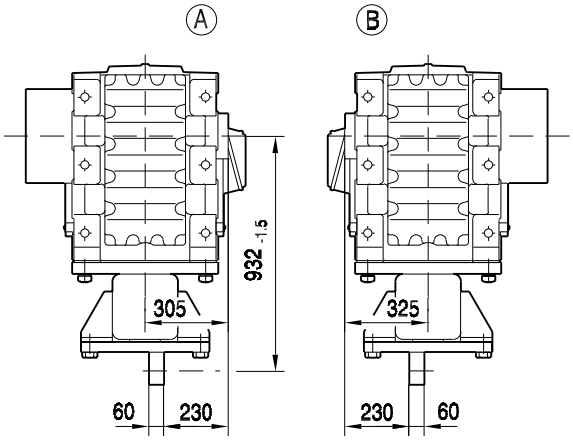
KA,KH,KV157B AD.. MK157../T



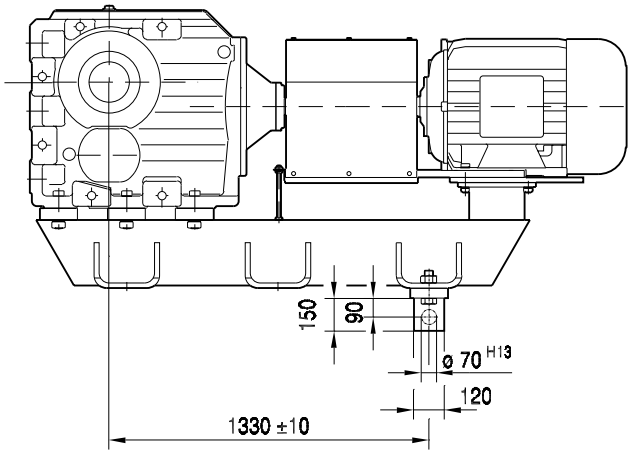


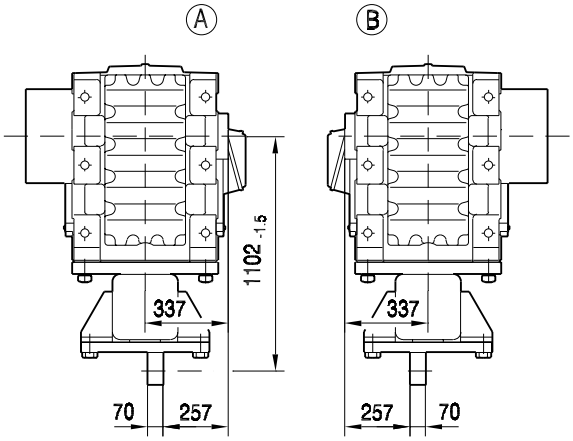
KH167B AD.. MK167../T



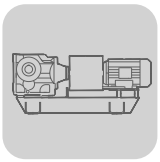


KH187B AD.. MK187../T



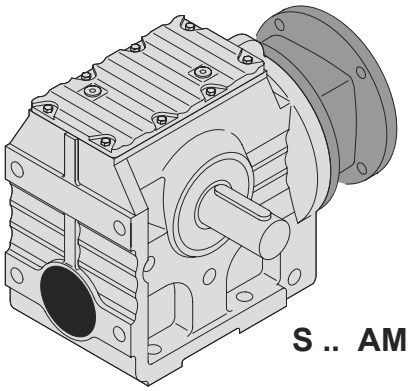


13

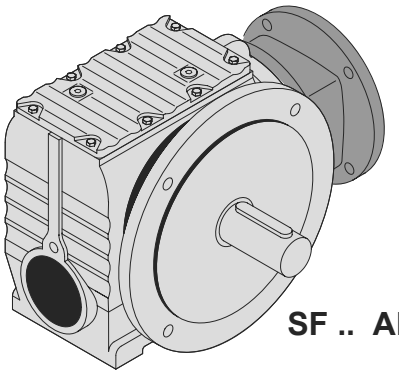


14 S..

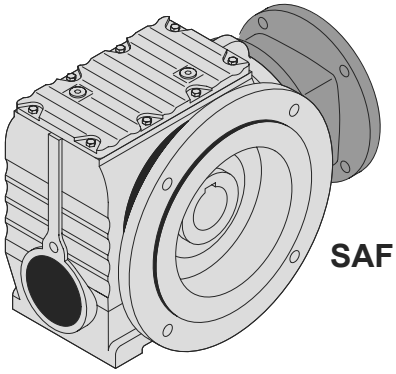
14.1 S.. AM.. [Nm]



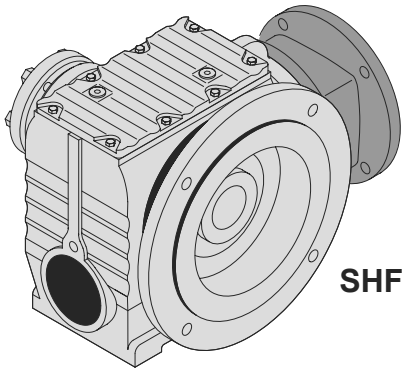
S .. AM..



SF .. AM..

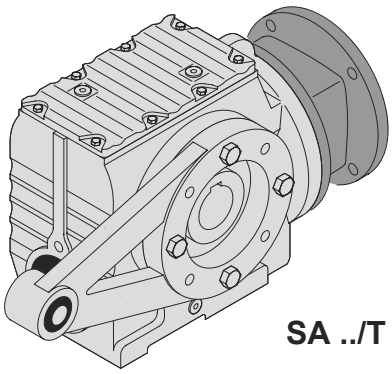


SAF .. AM..

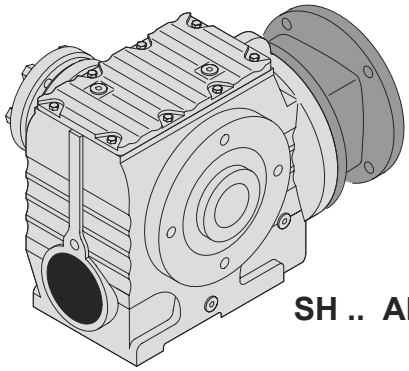


SHF .. AM..

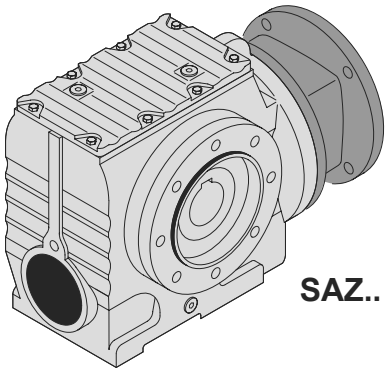
50413AXX



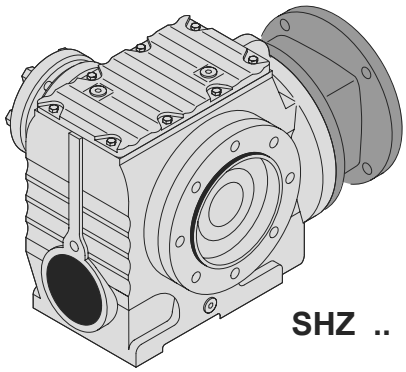
SA ../T AM..



SH .. AM..

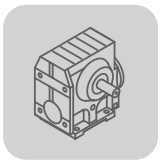


SAZ.. AM..



SHZ .. AM..

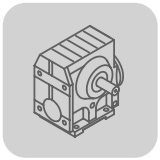
50414AXX



S37, n_e = 1400 1/min																92 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
157.43	8.9	92	3000	-												
144.40*	9.7	92	3000	-												
122.94	11	91	3000	-												
106.00*	13	88	3000	-	S	8.8 kg		S	9.0 kg		S	11 kg		S	11 kg	
98.80*	14	87	3000	-	SF	10 kg		SF	10 kg		SF	13 kg		SF	13 kg	
86.36	16	86	3000	-	SA	8.5 kg		SA	8.7 kg		SA	11 kg		SA	11 kg	
80.96	17	85	3000	-	SAF	10 kg		SAF	10 kg		SAF	13 kg		SAF	13 kg	
71.44*	20	84	3000	-												
63.33	22	82	3000	-												
55.93	25	81	3000	-												
53.83	26	80	3000	-												
51.30*	27	81	3000	-												
43.68	32	81	3000	-												
37.66	37	79	3000	-												
35.10*	40	78	3000	-												
30.68	46	76	2870	-												
28.76	49	75	2800	-												
25.38*	55	74	2660	-												
22.50*	62	73	2530	-	S	8.8 kg		S	9.0 kg		S	11 kg		S	11 kg	
19.89	70	52	2470	-	SF	10 kg		SF	10 kg		SF	13 kg		SF	13 kg	
19.13*	73	71	2380	-	SA	8.5 kg		SA	8.7 kg		SA	11 kg		SA	11 kg	
18.24*	77	52	2380	-	SAF	10 kg		SAF	10 kg		SAF	13 kg		SAF	13 kg	
15.53	90	50	2240	-												
13.39	105	49	2110	-												
12.48*	112	48	2060	-												
10.91	128	48	1940	-												
10.23	137	47	1900	-												
9.02*	155	46	1810	-												
8.00*	175	45	1730	-												
6.80*	206	43	1630	-												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC	**S**	552	**NEMA**	**S**	586
	SF	553		**SF**	586
	SA	554		**SA**	586
	SAF	553		**SAF**	586



S..
S.. AM.. [Nm]

S47, n_e = 1400 1/min													170 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**		**AM71**		**AM80**		**AM90**	
201.00*	7.0	170	5340	-								
184.80*	7.6	170	5340	-								
158.12	8.9	170	5340	-								
137.05	10	168	5350	-								
128.10*	11	168	5350	-								
110.73	13	168	5350	-								
94.08*	15	168	5350	-								
84.00*	17	167	5360	-								
71.75*	20	167	5360	-								
69.39	20	155	5370	-								
67.20*	21	167	5360	-								
63.80*	22	155	5370	-								
56.61	25	165	5320	-								
54.59	26	155	5150	-								
47.32	30	155	4850	-		S 12 kg		S 12 kg		S 14 kg		S 14 kg
44.22*	32	155	4710	-		SF 15 kg		SF 16 kg		SF 18 kg		SF 18 kg
38.23	37	155	4430	-		SA 13 kg		SA 13 kg		SA 16 kg		SA 16 kg
32.48*	43	155	4120	-		SAF 15 kg		SAF 15 kg		SAF 17 kg		SAF 17 kg
29.00*	48	155	3920	-								
24.77	57	155	3650	-								
23.20*	60	152	3570	-								
20.33	69	110	3370	-								
19.54	72	144	3370	-								
17.62	79	110	3160	-								
16.47*	85	110	3060	-								
14.24	98	110	2850	-								
12.10*	116	109	2650	-								
10.80*	130	109	2500	-								
9.23*	152	109	2310	-								
8.64*	162	109	2230	-								
7.28	192	103	2110	-								

		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC

S	556
SF	557
SA	558
SAF	557

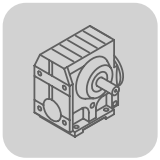
NEMA

S	586
SF	586
SA	586
SAF	586

S57, n_e = 1400 1/min															295 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM63			AM71			AM80			AM90		
201.00*	7.0	295	7130	-												
184.80*	7.6	295	7130	-												
158.12	8.9	295	7130	-												
137.05	10	295	7130	-												
128.10*	11	295	7130	-												
110.73	13	295	7130	-												
94.08*	15	295	7130	-												
84.00*	17	295	7130	-												
71.75*	20	290	7170	-												
69.39	20	245	7520	-												
67.20*	21	285	7220	-												
63.80*	22	245	7520	-												
56.61	25	265	7370	-												
54.59	26	245	7520	-												
47.32	30	245	7520	-		S	16 kg		S	16 kg		S	18 kg		S	18 kg
44.22*	32	245	7520	-		SF	19 kg		SF	20 kg		SF	22 kg		SF	22 kg
38.23	37	245	7320	-		SA	15 kg		SA	16 kg		SA	18 kg		SA	18 kg
32.48*	43	245	6840	-		SAF	18 kg		SAF	18 kg		SAF	21 kg		SAF	21 kg
29.00*	48	245	6520	-												
24.77	57	245	6100	-												
23.20*	60	245	5930	-												
20.33	69	168	5690	-												
19.54	72	215	5720	-												
17.62	79	168	5350	-												
16.47*	85	168	5200	-												
14.24	98	169	4860	-												
12.10*	116	169	4520	-												
10.80*	130	169	4290	-												
9.23*	152	169	3990	-												
8.64*	162	166	3900	-												
7.28	192	146	3790	-												

		AM56	AM56	AM143	AM145
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC	**S**	562	**NEMA**	**S**	586
	SF	561		**SF**	586
	SA	563		**SA**	586
	SAF	561		**SAF**	586



S..
S.. AM.. [Nm]

S67, n_e = 1400 1/min															520 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**			**AM71**			**AM80**			**AM90**		
217.41	6.4	520	8680	-												
190.11	7.4	520	8680	-												
180.60*	7.8	520	8680	-												
158.45	8.8	520	8680	-												
134.40*	10	520	8680	-												
121.33	12	520	8680	-												
106.75*	13	520	8680	-												
100.80*	14	520	8680	-												
85.83	16	520	8680	-												
78.00*	18	520	8680	-												
75.06	19	480	9020	-												
67.57	21	520	8680	-												
65.63	21	480	9020	-												
62.35*	22	480	9020	-												
58.80*	24	500	8850	-												
54.70	26	480	8670	-												
46.40*	30	480	8060	-		S	27 kg		S	27 kg		S	29 kg		S	29 kg
41.89	33	480	7690	-		SF	33 kg		SF	34 kg		SF	36 kg		SF	36 kg
36.85	38	480	7250	-		SA	28 kg		SA	28 kg		SA	30 kg		SA	30 kg
34.80*	40	480	7060	-		SAF	32 kg		SAF	33 kg		SAF	35 kg		SAF	35 kg
29.63	47	480	6540	-												
26.93	52	480	6240	-												
24.44	57	340	6040	-												
23.33	60	480	5810	-												
23.22*	60	340	5890	-												
20.37	69	340	5520	-												
20.30*	69	425	5760	-												
17.28*	81	340	5080	-												
15.60*	90	340	4820	-												
13.73*	102	340	4510	-												
12.96*	108	340	4310	-												
11.03	127	340	3660	-												
10.03	140	340	3290	-												
8.69	161	335	2860	-												
7.56*	185	295	3220	-												

		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC

S	566
SF	567
SA	568
SAF	567

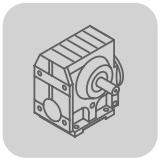
NEMA

S	586
SF	586
SA	586
SAF	586

S67, n_e = 1400 1/min								520 Nm			
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100		AM112		AM132S/M		
217.41	6.4	520	8680	-							
190.11	7.4	520	8680	-							
180.60*	7.8	520	8680	-							
158.45	8.8	520	8680	-							
134.40*	10	520	8680	-							
121.33	12	520	8680	-							
106.75*	13	520	8680	-							
100.80*	14	520	8680	-							
85.83	16	520	8680	-							
78.00*	18	520	8680	-							
75.06	19	480	9020	-							
67.57	21	520	8680	-							
65.63	21	480	9020	-							
62.35*	22	480	9020	-							
58.80*	24	500	8850	-							
54.70	26	480	8670	-							
46.40*	30	480	8060	-		S 34 kg		S 34 kg		S 41 kg	
41.89	33	480	7690	-		SF 41 kg		SF 41 kg		SF 48 kg	
36.85	38	480	7250	-		SA 35 kg		SA 35 kg		SA 42 kg	
34.80*	40	480	7060	-		SAF 40 kg		SAF 40 kg		SAF 47 kg	
29.63	47	480	6540	-							
26.93	52	480	6240	-							
24.44	57	340	6040	-							
23.33	60	480	5810	-							
23.22*	60	340	5890	-							
20.37	69	340	5520	-							
20.30*	69	425	5760	-							
17.28*	81	340	5080	-							
15.60*	90	340	4820	-							
13.73*	102	340	4510	-							
12.96*	108	340	4310	-							
11.03	127	340	3660	-							
10.03	140	340	3290	-							
8.69	161	335	2860	-							
7.56*	185	295	3220	-							

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.4 kg

	IEC		NEMA	
	S	566	**S**	586
	SF	567	**SF**	586
	SA	568	**SA**	586
	SAF	567	**SAF**	586



S..
S.. AM.. [Nm]

S77, n_e = 1400 1/min															1270 Nm
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AM63**			**AM71**			**AM80**			**AM90**		
256.47	5.5	1270	11700	-												
225.26	6.2	1270	11700	-												
214.00*	6.5	1270	11700	-												
189.09	7.4	1270	11700	-												
161.60*	8.7	1260	11800	-												
148.15	9.4	1240	12000	-												
130.00*	11	1210	12200	-												
123.20*	11	1200	12300	-												
107.83	13	1170	12600	-												
97.14	14	1140	12800	-												
85.22	16	1100	13100	-												
75.20*	19	1070	12800	-												
75.09	19	1100	11900	-												
71.33	20	1100	11600	-												
66.67	21	1040	12300	-												
63.03	22	1100	10900	-												
56.92	25	990	11600	-												
53.87	26	1100	10100	-		S	47 kg		S	47 kg		S	49 kg		S	49 kg
49.38	28	1100	9650	-		SF	56 kg		SF	57 kg		SF	59 kg		SF	59 kg
43.33	32	1100	9010	-		SA	46 kg		SA	46 kg		SA	49 kg		SA	49 kg
41.07	34	1100	8750	-		SAF	53 kg		SAF	53 kg		SAF	55 kg		SAF	55 kg
35.94	39	1100	8140	-												
32.38	43	1090	7730	-												
28.41	49	1050	7370	-												
25.07	56	1020	7010	-												
22.89	61	705	5970	-												
22.22	63	980	6740	-												
20.99	67	705	5390	-												
18.97	74	930	6390	-												
18.42	76	705	4550	-												
17.45	80	710	4130	-												
15.28	92	710	3320	-												
13.76	102	710	2710	-												
12.07	116	720	1800	-												
10.65	131	720	1130	-												
9.44	148	725	420	-												
8.06	174	680	445	-												

		AM56	**AM56**	**AM143**	**AM145**
NEMA	**+ kg**	+ 0.60 kg	-- kg	-- kg	-- kg

IEC		**NEMA**	
S	571	**S**	586
SF	572	**SF**	586
SA	573	**SA**	586
SAF	572	**SAF**	586

S77, n_e = 1400 1/min													1270 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AM100		AM112		AM132S/M		AM132ML	
256.47	5.5	1270	11700	-								
225.26	6.2	1270	11700	-								
214.00*	6.5	1270	11700	-								
189.09	7.4	1270	11700	-								
161.60*	8.7	1260	11800	-								
148.15	9.4	1240	12000	-								
130.00*	11	1210	12200	-								
123.20*	11	1200	12300	-								
107.83	13	1170	12600	-								
97.14	14	1140	12800	-								
85.22	16	1100	13100	-								
75.20*	19	1070	12800	-								
75.09	19	1100	11900	-								
71.33	20	1100	11600	-								
66.67	21	1040	12300	-								
63.03	22	1100	10900	-								
56.92	25	990	11600	-								
53.87	26	1100	10100	-	S	54 kg	S	54 kg	S	61 kg	S	61 kg
49.38	28	1100	9650	-	SF	63 kg	SF	63 kg	SF	70 kg	SF	70 kg
43.33	32	1100	9010	-	SA	53 kg	SA	53 kg	SA	60 kg	SA	60 kg
41.07	34	1100	8750	-	SAF	60 kg	SAF	60 kg	SAF	67 kg	SAF	67 kg
35.94	39	1100	8140	-								
32.38	43	1090	7730	-								
28.41	49	1050	7370	-								
25.07	56	1020	7010	-								
22.89	61	705	5970	-								
22.22	63	980	6740	-								
20.99	67	705	5390	-								
18.97	74	930	6390	-								
18.42	76	705	4550	-								
17.45	80	710	4130	-								
15.28	92	710	3320	-								
13.76	102	710	2710	-								
12.07	116	720	1800	-								
10.65	131	720	1130	-								
9.44	148	725	420	-								
8.06	174	680	445	-								

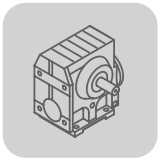
	AM182	AM184	AM213/215	-
NEMA **+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg	-

IEC

S	571
SF	572
SA	573
SAF	572

NEMA

S	586
SF	586
SA	586
SAF	586



S..
S.. AM.. [Nm]

S87, n_e = 1400 1/min															2280 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	**AM80**			**AM90**			**AM100**			**AM112**		
288.00*	4.9	2280	27900	-												
258.18	5.4	2280	27900	-												
222.40*	6.3	2280	27900	-												
202.96	6.9	2260	28000	-												
180.00*	7.8	2210	28100	-												
151.30	9.3	2150	28200	-												
139.05	10	2100	28300	-												
123.48	11	2060	28300	-												
110.40*	13	2000	28400	-												
99.26	14	1960	28500	-												
91.20*	15	1510	29100	-												
86.15	16	1880	28600	-												
81.76	17	1600	29000	-												
77.14	18	1820	28700	-												
70.43	20	1600	29000	-												
64.27	22	1600	29000	-												
64.00*	22	1700	28900	-												
57.00*	25	1600	29000	-		S	85 kg		S	85 kg		S	90 kg		S	90 kg
47.91	29	1600	29000	-		SF	105 kg		SF	105 kg		SF	110 kg		SF	110 kg
44.03	32	1600	29000	-		SA	82 kg		SA	82 kg		SA	88 kg		SA	88 kg
39.10	36	1600	28200	-		SAF	99 kg		SAF	99 kg		SAF	105 kg		SAF	105 kg
34.96*	40	1600	27100	-												
31.43	45	1600	26000	-												
27.28	51	1600	24700	-												
25.50*	55	1240	23400	-												
24.43	57	1600	23700	-												
21.43	65	1240	21800	-												
20.27	69	1600	22100	-												
19.70	71	1240	21100	-												
17.49	80	1240	20200	-												
15.64*	90	1240	19300	-												
14.06	100	1240	18500	-												
12.21	115	1240	17400	-												
10.93	128	1240	16600	-												
9.07	154	1140	15900	-												
7.88	178	1010	15700	-												

		AM143	**AM145**	**AM182**	**AM184**
NEMA	**+ kg**	-- kg	-- kg	- 1.0 kg	- 1.0 kg

IEC

S	576
SF	577
SA	578
SAF	577

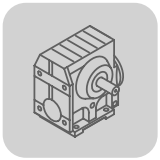
NEMA

S	586
SF	586
SA	586
SAF	586

S87, n_e = 1400 1/min								2280 Nm					
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM132S/M			AM132ML			AM160		
288.00*	4.9	2280	27900	-									
258.18	5.4	2280	27900	-									
222.40*	6.3	2280	27900	-									
202.96	6.9	2260	28000	-									
180.00*	7.8	2210	28100	-									
151.30	9.3	2150	28200	-									
139.05	10	2100	28300	-									
123.48	11	2060	28300	-									
110.40*	13	2000	28400	-									
99.26	14	1960	28500	-									
91.20*	15	1510	29100	-									
86.15	16	1880	28600	-									
81.76	17	1600	29000	-									
77.14	18	1820	28700	-									
70.43	20	1600	29000	-									
64.27	22	1600	29000	-									
64.00*	22	1700	28900	-									
57.00*	25	1600	29000	-	S	97 kg		S	97 kg		S	115 kg	
47.91	29	1600	29000	-	SF	120 kg		SF	120 kg		SF	135 kg	
44.03	32	1600	29000	-	SA	95 kg		SA	95 kg		SA	110 kg	
39.10	36	1600	28200	-	SAF	110 kg		SAF	110 kg		SAF	125 kg	
34.96*	40	1600	27100	-									
31.43	45	1600	26000	-									
27.28	51	1600	24700	-									
25.50*	55	1240	23400	-									
24.43	57	1600	23700	-									
21.43	65	1240	21800	-									
20.27	69	1600	22100	-									
19.70	71	1240	21100	-									
17.49	80	1240	20200	-									
15.64*	90	1240	19300	-									
14.06	100	1240	18500	-									
12.21	115	1240	17400	-									
10.93	128	1240	16600	-									
9.07	154	1140	15900	-									
7.88	178	1010	15700	-									

	AM213/215	-	AM254/256
NEMA **+ kg**	- 2.0 kg	-	- 5.0 kg

	IEC			NEMA		
	S	576		**S**	586
	SF	577		**SF**	586
	SA	578		**SA**	586
	SAF	577		**SAF**	586



S..
S.. AM.. [Nm]

S97, n_e = 1400 1/min												4000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM100			AM112			AM132S/M		
286.40*	4.9	4000	33200	-									
262.22	5.3	4000	33200	-									
231.67	6.0	4000	33200	-									
196.52	7.1	4000	33200	-									
180.95	7.7	3920	33400	-									
161.74	8.7	3840	33500	-									
145.60*	9.6	3730	33700	-									
131.85	11	3650	33900	-									
116.92	12	3510	34100	-									
105.71	13	3440	34300	-									
89.60*	16	3240	34600	-									
80.85	17	3230	34600	-									
78.26	18	3080	34800	-									
71.43	20	3300	34500	-									
65.45	21	2900	35100	-									
60.59	23	3300	34500	-									
55.79	25	3300	34500	-		S	150 kg		S	150 kg		S	155 kg
49.87	28	3300	34500	-		SF	180 kg		SF	180 kg		SF	190 kg
44.89	31	3300	34100	-		SA	145 kg		SA	145 kg		SA	150 kg
40.65	34	3300	32800	-		SAF	170 kg		SAF	170 kg		SAF	175 kg
36.05	39	3300	31300	-									
32.60	43	3200	30400	-									
27.63	51	3010	29000	-									
26.39	53	2600	26100	-									
24.13	58	2870	28000	-									
23.59	59	2600	24900	-									
21.23	66	2600	23700	-									
19.23	73	2600	22700	-									
17.05	82	2570	21100	-									
15.42	91	2470	20800	-									
13.07	107	2330	20100	-									
11.41	123	2210	19500	-									
9.55	147	2040	18800	-									
8.26	169	1770	18800	-									

		AM182	AM184	AM213/215
NEMA	**+ kg**	- 1.0 kg	- 1.0 kg	- 2.0 kg

IEC

S	582
SF	581
SA	583
SAF	581

NEMA

S	586
SF	586
SA	586
SAF	586

S97, n_e = 1400 1/min												4000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AM132ML			AM160			AM180		
286.40*	4.9	4000	33200	-									
262.22	5.3	4000	33200	-									
231.67	6.0	4000	33200	-									
196.52	7.1	4000	33200	-									
180.95	7.7	3920	33400	-									
161.74	8.7	3840	33500	-									
145.60*	9.6	3730	33700	-									
131.85	11	3650	33900	-									
116.92	12	3510	34100	-									
105.71	13	3440	34300	-									
89.60*	16	3240	34600	-									
80.85	17	3230	34600	-									
78.26	18	3080	34800	-									
71.43	20	3300	34500	-									
65.45	21	2900	35100	-									
60.59	23	3300	34500	-									
55.79	25	3300	34500	-		S	155 kg		S	175 kg		S	175 kg
49.87	28	3300	34500	-		SF	190 kg		SF	205 kg		SF	205 kg
44.89	31	3300	34100	-		SA	150 kg		SA	170 kg		SA	170 kg
40.65	34	3300	32800	-		SAF	175 kg		SAF	195 kg		SAF	195 kg
36.05	39	3300	31300	-									
32.60	43	3200	30400	-									
27.63	51	3010	29000	-									
26.39	53	2600	26100	-									
24.13	58	2870	28000	-									
23.59	59	2600	24900	-									
21.23	66	2600	23700	-									
19.23	73	2600	22700	-									
17.05	82	2570	21100	-									
15.42	91	2470	20800	-									
13.07	107	2330	20100	-									
11.41	123	2210	19500	-									
9.55	147	2040	18800	-									
8.26	169	1770	18800	-									

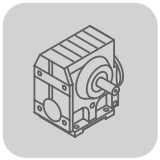
		-	AM254/256	AM284/286
NEMA	**+ kg**	-	- 5.0 kg	- 3.0 kg

IEC

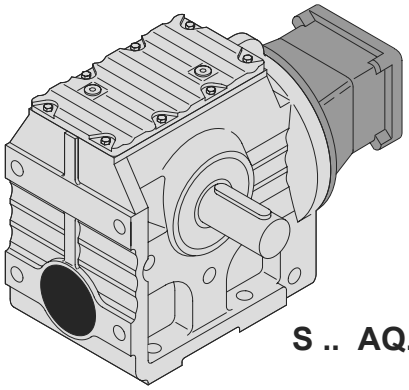
S	582
SF	581
SA	583
SAF	581

NEMA

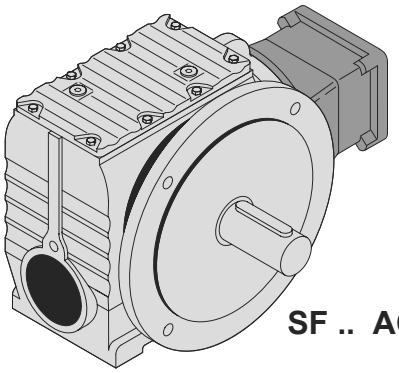
S	586
SF	586
SA	586
SAF	586



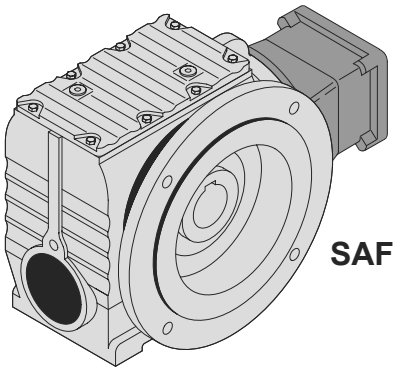
14.2 S.. AQ.. [Nm]



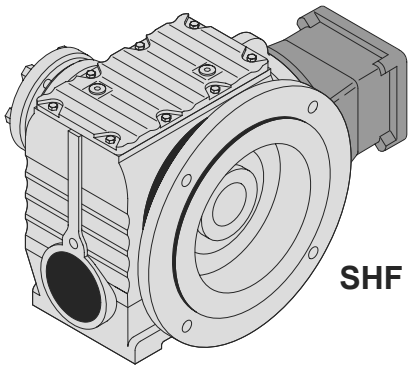
S .. AQ..



SF .. AQ..

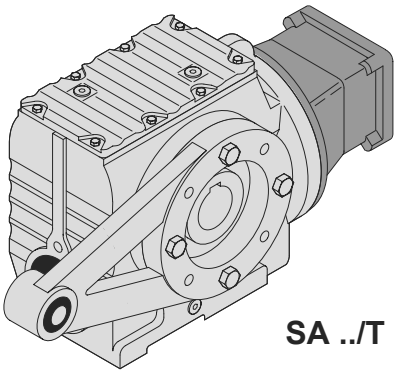


SAF .. AQ..

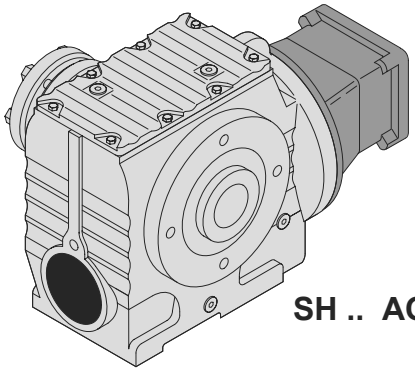


SHF .. AQ..

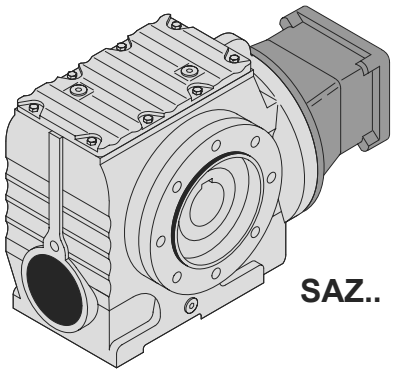
50415AXX



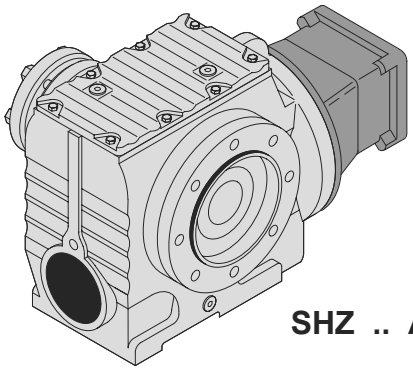
SA ../T AQ..



SH .. AQ..



SAZ.. AQ..

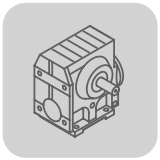


SHZ .. AQ..

50416AXX

S37, n_e = 1400 1/min												92 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3		AQ..100/1-4		AQ..115/1-3			
157.43	8.9	92	3000	-								
144.40*	9.7	92	3000	-								
122.94	11	91	3000	-								
106.00*	13	88	3000	-		S 9.8 kg		S 11 kg		S 11 kg		
98.80*	14	87	3000	-		SF 11 kg		SF 12 kg		SF 12 kg		
86.36	16	86	3000	-		SA 9.6 kg		SA 10 kg		SA 11 kg		
80.96	17	85	3000	-		SAF 11 kg		SAF 12 kg		SAF 12 kg		
71.44*	20	84	3000	-								
63.33	22	82	3000	-								
55.93	25	81	3000	-								
53.83	26	80	3000	-								
51.30*	27	81	3000	-								
43.68	32	81	3000	-								
37.66	37	79	3000	-								
35.10*	40	78	3000	-								
30.68	46	76	2870	-								
28.76	49	75	2800	-								
25.38*	55	74	2660	-								
22.50*	62	73	2530	-		S 9.8 kg		S 11 kg		S 11 kg		
19.89	70	52	2470	-		SF 11 kg		SF 12 kg		SF 12 kg		
19.13*	73	71	2380	-		SA 9.6 kg		SA 10 kg		SA 11 kg		
18.24*	77	52	2380	-		SAF 11 kg		SAF 12 kg		SAF 12 kg		
15.53	90	50	2240	-								
13.39	105	49	2110	-								
12.48*	112	48	2060	-								
10.91	128	48	1940	-								
10.23	137	47	1900	-								
9.02*	155	46	1810	-								
8.00*	175	45	1730	-								
6.80*	206	43	1630	-								

S 587
SF 587
SA 587
SAF 587

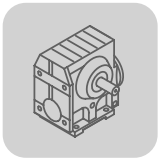


S47, n_e = 1400 1/min												**170 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AQ..80/1-3**			**AQ..100/1-4**			**AQ..115/1-3**		
201.00*	7.0	170	5340	-									
184.80*	7.6	170	5340	-									
158.12	8.9	170	5340	-									
137.05	10	168	5350	-									
128.10*	11	168	5350	-									
110.73	13	168	5350	-									
94.08*	15	168	5350	-									
84.00*	17	167	5360	-									
71.75*	20	167	5360	-									
69.39	20	155	5370	-									
67.20*	21	167	5360	-									
63.80*	22	155	5370	-									
56.61	25	165	5320	-									
54.59	26	155	5150	-									
47.32	30	155	4850	-		S	13 kg		S	14 kg		S	14 kg
44.22*	32	155	4710	-		SF	16 kg		SF	17 kg		SF	18 kg
38.23	37	155	4430	-		SA	14 kg		SA	15 kg		SA	15 kg
32.48*	43	155	4120	-		SAF	16 kg		SAF	16 kg		SAF	17 kg
29.00*	48	155	3920	-									
24.77	57	155	3650	-									
23.20*	60	152	3570	-									
20.33	69	110	3370	-									
19.54	72	144	3370	-									
17.62	79	110	3160	-									
16.47*	85	110	3060	-									
14.24	98	110	2850	-									
12.10*	116	109	2650	-									
10.80*	130	109	2500	-									
9.23*	152	109	2310	-									
8.64*	162	109	2230	-									
7.28	192	103	2110	-									

S 587
SF 587
SA 587
SAF 587

S57, n_e = 1400 1/min												295 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
201.00*	7.0	295	7130	-									
184.80*	7.6	295	7130	-									
158.12	8.9	295	7130	-									
137.05	10	295	7130	-									
128.10*	11	295	7130	-									
110.73	13	295	7130	-									
94.08*	15	295	7130	-									
84.00*	17	295	7130	-									
71.75*	20	290	7170	-									
69.39	20	245	7520	-									
67.20*	21	285	7220	-									
63.80*	22	245	7520	-									
56.61	25	265	7370	-									
54.59	26	245	7520	-									
47.32	30	245	7520	-		S	17 kg		S	17 kg		S	18 kg
44.22*	32	245	7520	-		SF	20 kg		SF	21 kg		SF	22 kg
38.23	37	245	7320	-		SA	16 kg		SA	17 kg		SA	18 kg
32.48*	43	245	6840	-		SAF	19 kg		SAF	20 kg		SAF	20 kg
29.00*	48	245	6520	-									
24.77	57	245	6100	-									
23.20*	60	245	5930	-									
20.33	69	168	5690	-									
19.54	72	215	5720	-									
17.62	79	168	5350	-									
16.47*	85	168	5200	-									
14.24	98	169	4860	-									
12.10*	116	169	4520	-									
10.80*	130	169	4290	-									
9.23*	152	169	3990	-									
8.64*	162	166	3900	-									
7.28	192	146	3790	-									

S 587
SF 587
SA 587
SAF 587

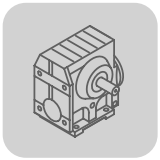


S67, n_e = 1400 1/min												**520 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AQ..80/1-3**		**AQ..100/1-4**		**AQ..115/1-3**			
217.41	6.4	520	8680	-								
190.11	7.4	520	8680	-								
180.60*	7.8	520	8680	-								
158.45	8.8	520	8680	-								
134.40*	10	520	8680	-								
121.33	12	520	8680	-								
106.75*	13	520	8680	-								
100.80*	14	520	8680	-								
85.83	16	520	8680	-								
78.00*	18	520	8680	-								
75.06	19	480	9020	-								
67.57	21	520	8680	-								
65.63	21	480	9020	-								
62.35*	22	480	9020	-								
58.80*	24	500	8850	-								
54.70	26	480	8670	-								
46.40*	30	480	8060	-		S 28 kg		S 29 kg		S 29 kg		
41.89	33	480	7690	-		SF 35 kg		SF 35 kg		SF 36 kg		
36.85	38	480	7250	-		SA 29 kg		SA 30 kg		SA 30 kg		
34.80*	40	480	7060	-		SAF 33 kg		SAF 34 kg		SAF 34 kg		
29.63	47	480	6540	-								
26.93	52	480	6240	-								
24.44	57	340	6040	-								
23.33	60	480	5810	-								
23.22*	60	340	5890	-								
20.37	69	340	5520	-								
20.30*	69	425	5760	-								
17.28*	81	340	5080	-								
15.60*	90	340	4820	-								
13.73*	102	340	4510	-								
12.96*	108	340	4310	-								
11.03	127	340	3660	-								
10.03	140	340	3290	-								
8.69	161	335	2860	-								
7.56*	185	295	3220	-								

S 587
SF 587
SA 587
SAF 587

S67, n_e = 1400 1/min												520 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2			AQ..140/3			AQ..190/1-3		
217.41	6.4	520	8680	-									
190.11	7.4	520	8680	-									
180.60*	7.8	520	8680	-									
158.45	8.8	520	8680	-									
134.40*	10	520	8680	-									
121.33	12	520	8680	-									
106.75*	13	520	8680	-									
100.80*	14	520	8680	-									
85.83	16	520	8680	-									
78.00*	18	520	8680	-									
75.06	19	480	9020	-									
67.57	21	520	8680	-									
65.63	21	480	9020	-									
62.35*	22	480	9020	-									
58.80*	24	500	8850	-									
54.70	26	480	8670	-									
46.40*	30	480	8060	-		S	34 kg		S	34 kg		S	43 kg
41.89	33	480	7690	-		SF	40 kg		SF	40 kg		SF	49 kg
36.85	38	480	7250	-		SA	35 kg		SA	35 kg		SA	44 kg
34.80*	40	480	7060	-		SAF	39 kg		SAF	39 kg		SAF	48 kg
29.63	47	480	6540	-									
26.93	52	480	6240	-									
24.44	57	340	6040	-									
23.33	60	480	5810	-									
23.22*	60	340	5890	-									
20.37	69	340	5520	-									
20.30*	69	425	5760	-									
17.28*	81	340	5080	-									
15.60*	90	340	4820	-									
13.73*	102	340	4310	-									
12.96*	108	340	4310	-									
11.03	127	340	3660	-									
10.03	140	340	3290	-									
8.69	161	335	2860	-									
7.56*	185	295	3220	-									

S 587
SF 587
SA 587
SAF 587



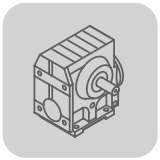
S..
S.. AQ.. [Nm]

S77, n_e = 1400 1/min												1270 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..80/1-3			AQ..100/1-4			AQ..115/1-3		
256.47	5.5	1270	11700	-									
225.26	6.2	1270	11700	-									
214.00*	6.5	1270	11700	-									
189.09	7.4	1270	11700	-									
161.60*	8.7	1260	11800	-									
148.15	9.4	1240	12000	-									
130.00*	11	1210	12200	-									
123.20*	11	1200	12300	-									
107.83	13	1170	12600	-									
97.14	14	1140	12800	-									
85.22	16	1100	13100	-									
75.20*	19	1070	12800	-									
75.09	19	1100	11900	-									
71.33	20	1100	11600	-									
66.67	21	1040	12300	-									
63.03	22	1100	10900	-									
56.92	25	990	11600	-									
53.87	26	1100	10100	-		S	48 kg		S	48 kg		S	49 kg
49.38	28	1100	9650	-		SF	57 kg		SF	58 kg		SF	59 kg
43.33	32	1100	9010	-		SA	47 kg		SA	48 kg		SA	48 kg
41.07	34	1100	8750	-		SAF	54 kg		SAF	54 kg		SAF	55 kg
35.94	39	1100	8140	-									
32.38	43	1090	7730	-									
28.41	49	1050	7370	-									
25.07	56	1020	7010	-									
22.89	61	705	5970	-									
22.22	63	980	6740	-									
20.99	67	705	5390	-									
18.97	74	930	6390	-									
18.42	76	705	4550	-									
17.45	80	710	4130	-									
15.28	92	710	3320	-									
13.76	102	710	2710	-									
12.07	116	720	1800	-									
10.65	131	720	1130	-									
9.44	148	725	420	-									
8.06	174	680	445	-									

S 588
SF 588
SA 588
SAF 588

S77, n_e = 1400 1/min								1270 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/1-2	AQ..140/3	AQ..190/1-3	
256.47	5.5	1270	11700	-				
225.26	6.2	1270	11700	-				
214.00*	6.5	1270	11700	-				
189.09	7.4	1270	11700	-				
161.60*	8.7	1260	11800	-				
148.15	9.4	1240	12000	-				
130.00*	11	1210	12200	-				
123.20*	11	1200	12300	-				
107.83	13	1170	12600	-				
97.14	14	1140	12800	-				
85.22	16	1100	13100	-				
75.20*	19	1070	12800	-				
75.09	19	1100	11900	-				
71.33	20	1100	11600	-				
66.67	21	1040	12300	-				
63.03	22	1100	10900	-				
56.92	25	990	11600	-				
53.87	26	1100	10100	-	S 53 kg	S 53 kg	S 62 kg	
49.38	28	1100	9650	-	SF 63 kg	SF 63 kg	SF 72 kg	
43.33	32	1100	9010	-	SA 53 kg	SA 53 kg	SA 62 kg	
41.07	34	1100	8750	-	SAF 60 kg	SAF 60 kg	SAF 68 kg	
35.94	39	1100	8140	-				
32.38	43	1090	7730	-				
28.41	49	1050	7370	-				
25.07	56	1020	7010	-				
22.89	61	705	5970	-				
22.22	63	980	6740	-				
20.99	67	705	5390	-				
18.97	74	930	6390	-				
18.42	76	705	4550	-				
17.45	80	710	4130	-				
15.28	92	710	3320	-				
13.76	102	710	2710	-				
12.07	116	720	1800	-				
10.65	131	720	1130	-				
9.44	148	725	420	-				
8.06	174	680	445	-				

S 588
SF 588
SA 588
SAF 588



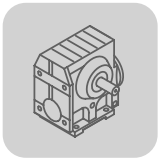
S..
S.. AQ.. [Nm]

S87, n_e = 1400 1/min												2280 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	$\varphi_{(/R)}$ [']	AQ..100/1-4			AQ..115/1-3			AQ..140/1-2	
288.00*	4.9	2280	27900	-								
258.18	5.4	2280	27900	-								
222.40*	6.3	2280	27900	-								
202.96	6.9	2260	28000	-								
180.00*	7.8	2210	28100	-								
151.30	9.3	2150	28200	-								
139.05	10	2100	28300	-								
123.48	11	2060	28300	-								
110.40*	13	2000	28400	-								
99.26	14	1960	28500	-								
91.20*	15	1510	29100	-								
86.15	16	1880	28600	-								
81.76	17	1600	29000	-								
77.14	18	1820	28700	-								
70.43	20	1600	29000	-								
64.27	22	1600	29000	-								
64.00*	22	1700	28900	-								
57.00*	25	1600	29000	-		S	84 kg		S	85 kg		S 90 kg
47.91	29	1600	29000	-		SF	105 kg		SF	105 kg		SF 110 kg
44.03	32	1600	29000	-		SA	82 kg		SA	82 kg		SA 87 kg
39.10	36	1600	28200	-		SAF	98 kg		SAF	98 kg		SAF 105 kg
34.96*	40	1600	27100	-								
31.43	45	1600	26000	-								
27.28	51	1600	24700	-								
25.50*	55	1240	23400	-								
24.43	57	1600	23700	-								
21.43	65	1240	21800	-								
20.27	69	1600	22100	-								
19.70	71	1240	21100	-								
17.49	80	1240	20200	-								
15.64*	90	1240	19300	-								
14.06	100	1240	18500	-								
12.21	115	1240	17400	-								
10.93	128	1240	16600	-								
9.07	154	1140	15900	-								
7.88	178	1010	15700	-								

S 589
SF 589
SA 589
SAF 589

S87, n_e = 1400 1/min										2280 Nm	
i	n_a [1/min]	$M_{a\,max}$ [Nm]	F_{Ra} [N]	φ (/R) [']	AQ..140/3			AQ..190/1-3			
288.00*	4.9	2280	27900	-							
258.18	5.4	2280	27900	-							
222.40*	6.3	2280	27900	-							
202.96	6.9	2260	28000	-							
180.00*	7.8	2210	28100	-							
151.30	9.3	2150	28200	-							
139.05	10	2100	28300	-							
123.48	11	2060	28300	-							
110.40*	13	2000	28400	-							
99.26	14	1960	28500	-							
91.20*	15	1510	29100	-							
86.15	16	1880	28600	-							
81.76	17	1600	29000	-							
77.14	18	1820	28700	-							
70.43	20	1600	29000	-							
64.27	22	1600	29000	-							
64.00*	22	1700	28900	-							
57.00*	25	1600	29000	-		S	90 kg			S	99 kg
47.91	29	1600	29000	-		SF	110 kg			SF	120 kg
44.03	32	1600	29000	-		SA	87 kg			SA	96 kg
39.10	36	1600	28200	-		SAF	105 kg			SAF	115 kg
34.96*	40	1600	27100	-							
31.43	45	1600	26000	-							
27.28	51	1600	24700	-							
25.50*	55	1240	23400	-							
24.43	57	1600	23700	-							
21.43	65	1240	21800	-							
20.27	69	1600	22100	-							
19.70	71	1240	21100	-							
17.49	80	1240	20200	-							
15.64*	90	1240	19300	-							
14.06	100	1240	18500	-							
12.21	115	1240	17400	-							
10.93	128	1240	16600	-							
9.07	154	1140	15900	-							
7.88	178	1010	15700	-							

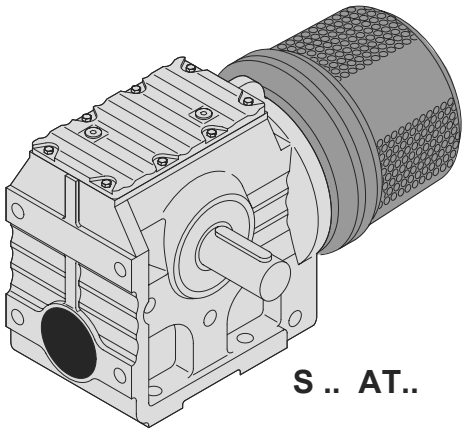
S 589
SF 589
SA 589
SAF 589



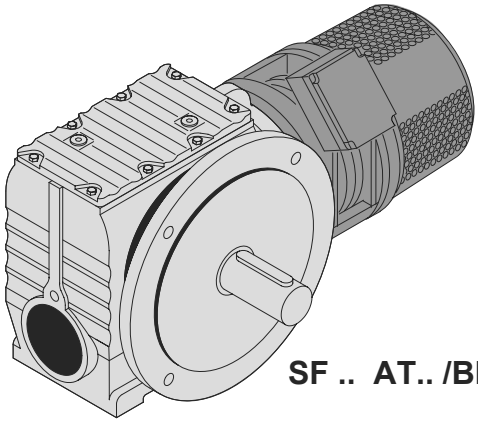
S97, n_e = 1400 1/min												**4000 Nm**
i	**n_a [1/min]**	**$M_{a\,max}$ [Nm]**	**F_{Ra} [N]**	**φ (/R) [']**	**AQ..140/1-2**			**AQ..140/3**			**AQ..190/1-3**	
286.40*	4.9	4000	33200	-								
262.22	5.3	4000	33200	-								
231.67	6.0	4000	33200	-								
196.52	7.1	4000	33200	-								
180.95	7.7	3920	33400	-								
161.74	8.7	3840	33500	-								
145.60*	9.6	3730	33700	-								
131.85	11	3650	33900	-								
116.92	12	3510	34100	-								
105.71	13	3440	34300	-								
89.60*	16	3240	34600	-								
80.85	17	3230	34600	-								
78.26	18	3080	34800	-								
71.43	20	3300	34500	-								
65.45	21	2900	35100	-								
60.59	23	3300	34500	-								
55.79	25	3300	34500	-		S	150 kg		S	150 kg		S 155 kg
49.87	28	3300	34500	-		SF	180 kg		SF	180 kg		SF 190 kg
44.89	31	3300	34100	-		SA	145 kg		SA	145 kg		SA 150 kg
40.65	34	3300	32800	-		SAF	170 kg		SAF	170 kg		SAF 180 kg
36.05	39	3300	31300	-								
32.60	43	3200	30400	-								
27.63	51	3010	29000	-								
26.39	53	2600	26100	-								
24.13	58	2870	28000	-								
23.59	59	2600	24900	-								
21.23	66	2600	23700	-								
19.23	73	2600	22700	-								
17.05	82	2570	21100	-								
15.42	91	2470	20800	-								
13.07	107	2330	20100	-								
11.41	123	2210	19500	-								
9.55	147	2040	18800	-								
8.26	169	1770	18800	-								

S 589
SF 589
SA 589
SAF 589

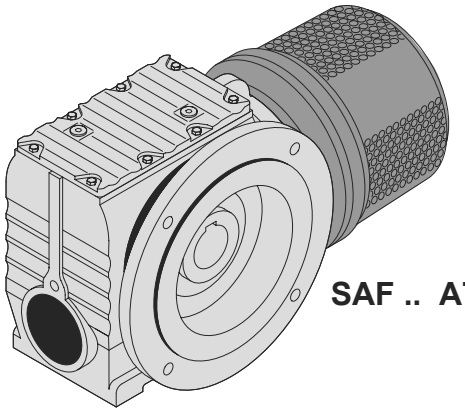
14.3 S.. AT..



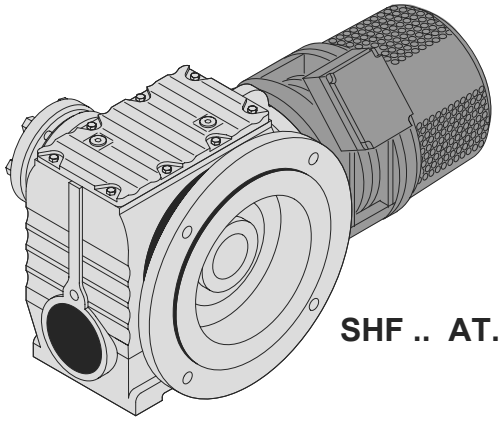
S .. AT..



SF .. AT.. /BM(G)



SAF .. AT..



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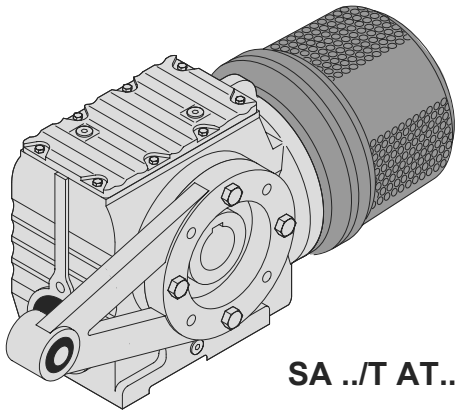
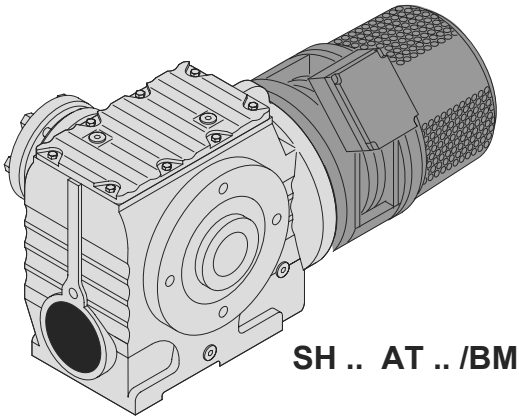
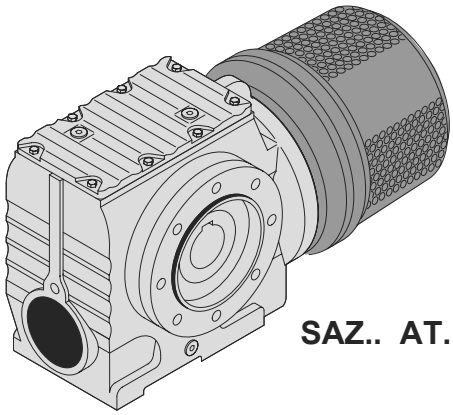


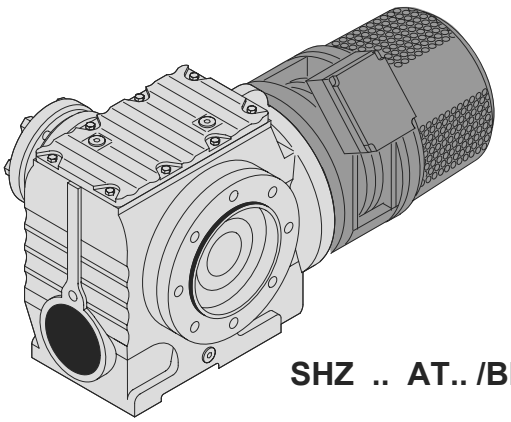
SA ../T AT..



SH .. AT .. /BM(G)



SAZ.. AT..



SHZ .. AT.. /BM(G)

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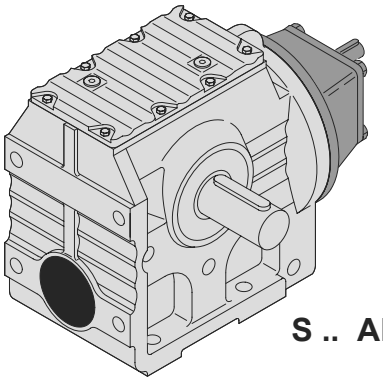
n_M = 1400 1/min:

		P_m [kW]				S_n [%]	
S67	DT71D4	0.37	AT311	T11	0.42	12	591 593
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT321	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT322	T21D	1.53	11	
	DV112M4	4			1.6	12	
S77	DT71D4	0.37	AT311	T11	0.42	12	591 593
	DT80K4	0.55	AT312	T11D	0.55	11	
	DT80N4	0.75			0.7	11	
	DT90S4	1.1			0.72	15	
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
S87	DT90S4	1.1	AT312	T11D	0.72	15	592 594
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
S97	DT90S4	1.1	AT312	T11D	0.72	15	592 594
	DT90L4	1.5	AT421	T21	0.85	9	
	DV100M4	2.2			0.9	13	
	DV100L4	3	AT422	T21D	1.53	11	
	DV112M4	4			1.6	12	
	DV132S4	5.5	AT541	T41	2	6	
	DV132M4	7.5			2.4	8	
	DV132ML4	9.2			2.5	10	
	DV160M4	11			2.5	13	
	DV160L4	15	AT542	T41D	4.2	8	
	DV180M4	18.5			4.3	10	
	DV180L4	22			4.3	14	

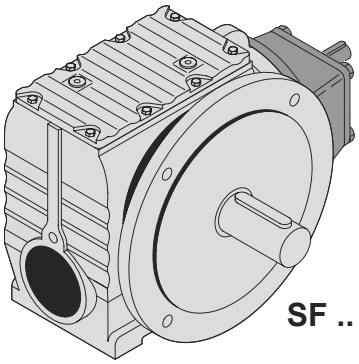
n_M = 2800 1/min:

		P_m [kW]				S_n [%]	
S67	DT71D2	0.55	AT311	T11	0.19	3	560 532
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
S77	DT71D2	0.55	AT311	T11	0.19	3	560 562
	DT80K2	0.75			0.22	4.5	
	DT80N2	1.1			0.27	6	
	DT90S2	1.5			0.29	8.5	
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
S87	DT90S2	1.5	AT311	T11	0.29	8.5	561 563
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
S97	DT90S2	1.5	AT311	T11	0.29	8.5	561 563
	DT90L2	2.2			0.31	11.5	
	DV100M2	3			0.4	12	
	DV112M2	4	AT312	T11D	0.52	10	
	DV132S2	5.5			0.58	12	
	DT132M2	7.5	AT421	T21	0.6	8	
	DV132ML2	9.2			0.65	8.5	
	DV160M2	11			0.72	9	
	DV160L2	15	AT522	T21D	1.15	7.5	
	DV180M2	18.5	AT541	T41	1.4	4.5	
	DV180L2	22			1.4	5.5	

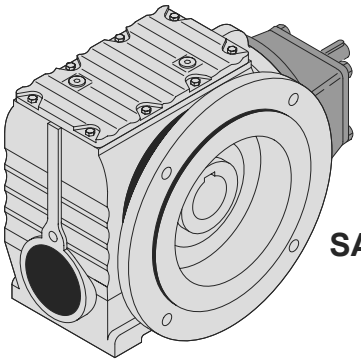
14.4 S.. AD.. [Nm]



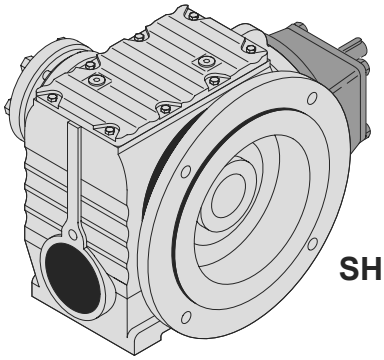
S .. AD..



SF .. AD..



SAF .. AD..



SHF .. AD..

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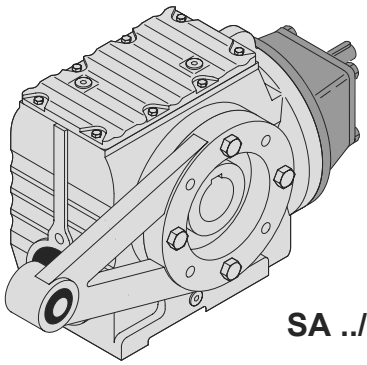
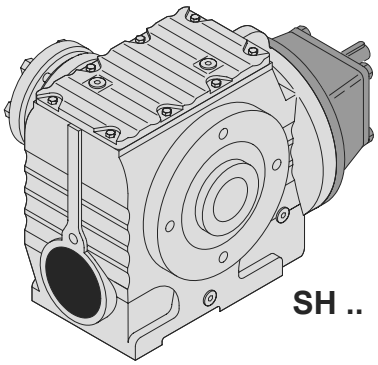
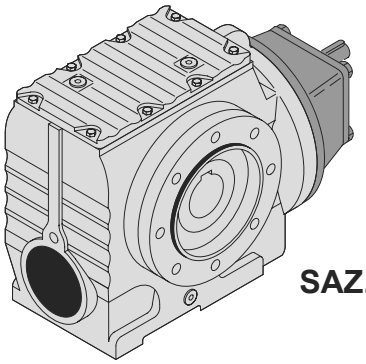


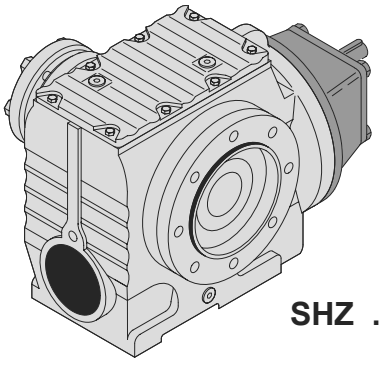
SA ../T AD..



SH .. AD..



SAZ.. AD..



SHZ .. AD..

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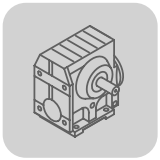
S37 AD... , n_e = 1400 1/min													92 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	
144.40*	9.7	92	0.19	3000	745	-	-	**S**	**37**	**AD1**		8.3	595
122.94	11	91	0.22	3000	745	-	-	**SF**	**37**	**AD1**		9.6	595
106.00*	13	88	0.23	3000	745	-	-	**SA**	**37**	**AD1**		8.0	595
98.80*	14	87	0.25	3000	745	-	-	**SAF**	**37**	**AD1**		9.5	595
86.36	16	86	0.27	3000	745	-	-						
80.96	17	85	0.29	3000	745	-	-	**S**	**37**	**AD1**		8.3	595
71.44*	20	84	0.31	3000	740	-	-	**SF**	**37**	**AD1**		9.6	595
63.33	22	82	0.34	3000	740	-	-	**SA**	**37**	**AD1**		8.0	595
55.93	25	81	0.31	3000	580	-	-	**SAF**	**37**	**AD1**		9.5	595
53.83	26	80	0.39	3000	1830	-	-	**S**	**37**	**AD2**		9.4	595
								SF	**37**	**AD2**		11	595
								SA	**37**	**AD2**		9.1	595
								SAF	**37**	**AD2**		11	595
51.30*	27	81	0.33	3000	575	-	-						
43.68	32	81	0.38	3000	560	-	-						
37.66	37	79	0.43	3000	560	-	-						
35.10*	40	78	0.45	3000	555	-	-	**S**	**37**	**AD1**		8.3	595
30.68	46	76	0.49	2870	555	-	-	**SF**	**37**	**AD1**		9.6	595
28.76	49	75	0.52	2800	550	-	-	**SA**	**37**	**AD1**		8.0	595
25.38*	55	74	0.57	2660	540	-	-	**SAF**	**37**	**AD1**		9.5	595
22.50*	62	73	0.63	2530	530	-	-						
19.89	70	52	0.47	2470	335	-	-						
19.13*	73	71	0.72	2380	1750	-	-	**S**	**37**	**AD2**		9.4	595
								SF	**37**	**AD2**		11	595
								SA	**37**	**AD2**		9.1	595
								SAF	**37**	**AD2**		11	595
18.24*	77	52	0.52	2380	320	-	-	**S**	**37**	**AD1**		8.3	595
15.53	90	50	0.58	2240	325	-	-	**SF**	**37**	**AD1**		9.6	595
								SA	**37**	**AD1**		8.0	595
								SAF	**37**	**AD1**		9.5	595
13.39	105	49	0.66	2110	1510	-	-						
12.48*	112	48	0.69	2060	1510	-	-						
10.91	128	48	0.78	1940	1480	-	-	**S**	**37**	**AD2**		9.4	595
10.23	137	47	0.81	1900	1480	-	-	**SF**	**37**	**AD2**		11	595
9.02*	155	46	0.90	1810	1460	-	-	**SA**	**37**	**AD2**		9.1	595
8.00*	175	45	0.98	1730	1440	-	-	**SAF**	**37**	**AD2**		11	595
6.80*	206	43	1.1	1630	1660	-	-						

S47 AD... , n_e = 1400 1/min													170 Nm
201.00*	7.0	170	0.24	5340	695	-	-						
184.80*	7.6	170	0.26	5340	690	-	-						
158.12	8.8	170	0.30	5340	685	-	-						
137.05	10	168	0.33	5350	685	-	-						
128.10*	11	168	0.35	5350	680	-	-	**S**	**47**	**AD1**		11	595
110.73	13	168	0.39	5350	670	-	-	**SF**	**47**	**AD1**		15	595
94.08*	15	168	0.45	5350	660	-	-	**SA**	**47**	**AD1**		12	595
84.00*	17	167	0.49	5360	655	-	-	**SAF**	**47**	**AD1**		14	595
71.75*	20	167	0.57	5360	640	-	-						
69.39	20	155	0.45	5370	395	-	-						
67.20*	21	167	0.60	5360	630	-	-						
63.80*	22	155	0.49	5370	390	-	-						
56.61	25	165	0.70	5320	1780	-	-	**S**	**47**	**AD2**		12	595
								SF	**47**	**AD2**		16	595
								SA	**47**	**AD2**		14	595
								SAF	**47**	**AD2**		15	595
54.59	26	155	0.56	5150	375	-	-	**S**	**47**	**AD1**		11	595
47.32	30	155	0.64	4850	360	-	-	**SF**	**47**	**AD1**		15	595
44.22*	32	155	0.69	4710	350	-	-	**SA**	**47**	**AD1**		12	595
								SAF	**47**	**AD1**		14	595

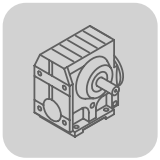


S..
S.. AD.. [Nm]

i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	
S47 AD... , n_e = 1400 1/min												**170 Nm**
38.23	37	155	0.79	4430	1500	-	-					
32.48*	43	155	0.92	4120	1480	-	-					
29.00*	48	155	1.0	3920	1450	-	-					
24.77	57	155	1.2	3650	1660	-	-					
23.20*	60	152	1.2	3570	1660	-	-					
20.33	69	110	0.96	3370	1000	-	-					
19.54	72	144	1.4	3370	1660	-	-	**S**	**47**	**AD2**	12	595
17.62	79	110	1.1	3160	1560	-	-	**SF**	**47**	**AD2**	16	595
16.47*	85	110	1.2	3060	1560	-	-	**SA**	**47**	**AD2**	14	595
14.24	98	110	1.3	2850	1540	-	-	**SAF**	**47**	**AD2**	15	595
12.10*	116	109	1.5	2650	1530	-	M1-6					
10.80*	130	109	1.7	2500	1510	-	M1-6					
9.23*	152	109	2.0	2310	1490	-	M1-6					
8.64*	162	109	2.1	2230	1480	-	M1-6					
7.28	192	103	2.4	2110	1470	-	M1-6					
S57 AD... , n_e = 1400 1/min												**295 Nm**
201.00*	7.0	295	0.39	7130	475	-	-					
184.80*	7.6	295	0.42	7130	475	-	-					
158.12	8.8	295	0.48	7130	465	-	-	**S**	**57**	**AD1**	15	595
137.05	10	295	0.54	7130	455	-	-	**SF**	**57**	**AD1**	19	595
128.10*	11	295	0.57	7130	450	-	-	**SA**	**57**	**AD1**	15	595
110.73	13	295	0.64	7130	430	-	-	**SAF**	**57**	**AD1**	18	595
94.08*	15	295	0.74	7130	415	-	-					
84.00*	17	295	0.82	7130	400	-	-					
71.75*	20	290	0.94	7170	1590	-	-					
69.39	20	245	0.71	7520	1140	-	-					
67.20*	21	285	0.99	7220	1590	-	-	**S**	**57**	**AD2**	16	595
63.80*	22	245	0.76	7520	1130	-	-	**SF**	**57**	**AD2**	20	595
56.61	25	265	1.1	7370	1710	-	-	**SA**	**57**	**AD2**	16	595
54.59	26	245	0.88	7520	1100	-	-	**SAF**	**57**	**AD2**	19	595
47.32	30	245	1.0	7520	1070	-	-					
44.22*	32	245	1.1	7520	1580	-	-					
38.23	37	245	1.2	7320	1560	-	-					
32.48*	43	245	1.4	6840	1550	-	-					
29.00*	48	245	1.6	6520	1530	-	-					
24.77	57	245	1.8	6100	1510	-	-					
23.20*	60	245	1.9	5930	1500	-	-					
20.33	69	168	1.4	5690	1380	-	-	**S**	**57**	**AD2**	16	595
19.54	72	215	2.0	5720	1530	-	-	**SF**	**57**	**AD2**	20	595
17.62	79	168	1.6	5350	1370	-	-	**SA**	**57**	**AD2**	16	595
16.47*	85	168	1.7	5200	1360	-	-	**SAF**	**57**	**AD2**	19	595
14.24	98	169	2.0	4860	1320	-	-					
12.10*	116	169	2.4	4520	1300	-	-					
10.80*	130	169	2.6	4290	1280	-	-					
9.23*	152	169	3.1	3990	1240	-	M1-6					
8.64*	162	166	3.2	3900	1230	-	M1-6					
7.28	192	146	3.3	3790	1260	-	M1-6					
S67 AD... , n_e = 1400 1/min												**520 Nm**
217.41	6.4	520	0.60	8680	1520	-	-					
190.11	7.4	520	0.68	8680	1510	-	-	**S**	**67**	**AD2**	27	595
180.60*	7.8	520	0.72	8680	1510	-	-	**SF**	**67**	**AD2**	34	595
158.45	8.8	520	0.79	8680	1490	-	-	**SA**	**67**	**AD2**	28	595
134.40*	10	520	0.92	8680	1460	-	-	**SAF**	**67**	**AD2**	33	595
121.33	12	520	1.0	8680	1450	-	-					
106.75*	13	520	1.1	8680	1670	-	-					
100.80*	14	520	1.2	8680	1660	-	-					
85.83	16	520	1.3	8680	1650	-	-	**S**	**67**	**AD2**	27	595
78.00*	18	520	1.5	8680	1640	-	-	**SF**	**67**	**AD2**	34	595
75.06	19	480	1.2	9020	1470	-	-	**SA**	**67**	**AD2**	28	595
67.57	21	520	1.7	8680	1630	-	-	**SAF**	**67**	**AD2**	33	595
65.63	21	480	1.4	9020	1460	-	-					
62.35*	22	480	1.4	9020	1460	-	-					
58.80*	24	500	1.9	8850	2630	-	-	**S**	**67**	**AD3**	31	595
								SF	**67**	**AD3**	37	595
								SA	**67**	**AD3**	32	595
								SAF	**67**	**AD3**	36	595

S67 AD... , n_e = 1400 1/min												520 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	📖
54.70	26	480	1.6	8670	1440	-	-					
46.40*	30	480	1.9	8060	1420	-	-					
41.89	33	480	2.1	7690	1400	-	-					
36.85	38	480	2.4	7250	1390	-	-					
34.80*	40	480	2.5	7060	1380	-	-	**S**	**67**	**AD2**	27	595
29.63	47	480	2.9	6540	1350	-	-	**SF**	**67**	**AD2**	34	595
26.93	52	480	3.2	6240	1330	-	-	**SA**	**67**	**AD2**	28	595
24.44	57	340	2.3	6040	1130	-	-	**SAF**	**67**	**AD2**	33	595
23.33	60	480	3.6	5810	1290	-	-					
23.22*	60	340	2.5	5890	1130	-	-					
20.37	69	340	2.8	5520	1090	-	-					
20.30*	69	425	3.7	5760	2350	-	-	**S**	**67**	**AD3**	31	595
								SF	**67**	**AD3**	37	595
								SA	**67**	**AD3**	32	595
								SAF	**67**	**AD3**	36	595
17.28*	81	340	3.3	5080	1060	-	-	**S**	**67**	**AD2**	27	595
15.60*	90	340	3.6	4820	1030	-	-	**SF**	**67**	**AD2**	34	595
13.73*	102	340	4.1	4510	1010	-	-	**SA**	**67**	**AD2**	28	595
12.96*	108	340	4.3	4310	990	-	-	**SAF**	**67**	**AD2**	33	595
11.03	127	340	5.1	3660	1950	-	-	**S**	**67**	**AD3**	31	595
10.03	140	340	5.6	3290	1920	-	M1-6	**SF**	**67**	**AD3**	37	595
8.69	161	335	6.4	2860	1870	-	M1-6	**SA**	**67**	**AD3**	32	595
7.56*	185	295	6.4	3220	1940	-	M1-6	**SAF**	**67**	**AD3**	36	595

S77 AD... , n_e = 1400 1/min												1270 Nm
256.47	5.5	1270	1.1	11700	1530	-	-					
225.26	6.2	1270	1.3	11700	1520	-	-					
214.00*	6.5	1270	1.3	11700	1520	-	-					
189.09	7.4	1270	1.5	11700	1500	-	-					
161.60*	8.7	1260	1.7	11800	1490	-	-					
148.15	9.5	1240	1.8	12000	1490	-	-					
130.00*	11	1210	2.0	12200	1490	-	-					
123.20*	11	1200	2.1	12300	1490	-	-					
107.83	13	1170	2.3	12600	1490	-	-					
97.14	14	1140	2.4	12800	1480	-	-	**S**	**77**	**AD2**	47	595
85.22	16	1100	2.7	13100	1480	-	-	**SF**	**77**	**AD2**	57	595
75.20*	19	1070	2.9	12800	1470	-	-	**SA**	**77**	**AD2**	47	595
75.09	19	1100	2.6	11900	1100	-	-	**SAF**	**77**	**AD2**	53	595
71.33	20	1100	2.7	11600	1100	-	-					
66.67	21	1040	3.1	12300	1460	-	-					
63.03	22	1100	3.1	10900	1050	-	-					
56.92	25	990	3.4	11600	1450	-	-					
53.87	26	1100	3.6	10100	1020	-	-					
49.38	28	1100	3.8	9650	1010	-	-					
43.33	32	1100	4.4	9010	980	-	-					
41.07	34	1100	4.6	8750	970	-	-					
35.94	39	1100	5.3	8140	1970	-	-					
32.38	43	1090	5.7	7730	1940	-	-					
28.41	49	1050	6.3	7370	1930	-	-					
25.07	56	1020	6.9	7010	1910	-	-					
22.89	61	705	5.1	5970	1690	-	-					
22.22	63	980	7.4	6740	1900	-	-	**S**	**77**	**AD3**	51	595
20.99	67	705	5.5	5390	1670	-	-	**SF**	**77**	**AD3**	60	595
18.97	74	930	8.3	6390	1880	-	-	**SA**	**77**	**AD3**	50	595
18.42	76	705	6.2	4550	1640	-	-	**SAF**	**77**	**AD3**	57	595
17.45	80	710	6.6	4130	1610	-	-					
15.28	92	710	7.6	3320	1550	-	-					
13.76	102	710	8.4	2710	1490	-	-					
12.07	116	720	9.6	1800	1400	-	M1-6					
10.65	131	720	11.0	1130	3330	-	M1-6	**S**	**77**	**AD4**	57	595
9.44	148	725	12.4	420	3250	-	M1-6	**SF**	**77**	**AD4**	66	595
8.06	174	680	13.6	445	3240	-	M1-6	**SA**	**77**	**AD4**	56	595
								SAF	**77**	**AD4**	63	595



S..
S.. AD.. [Nm]

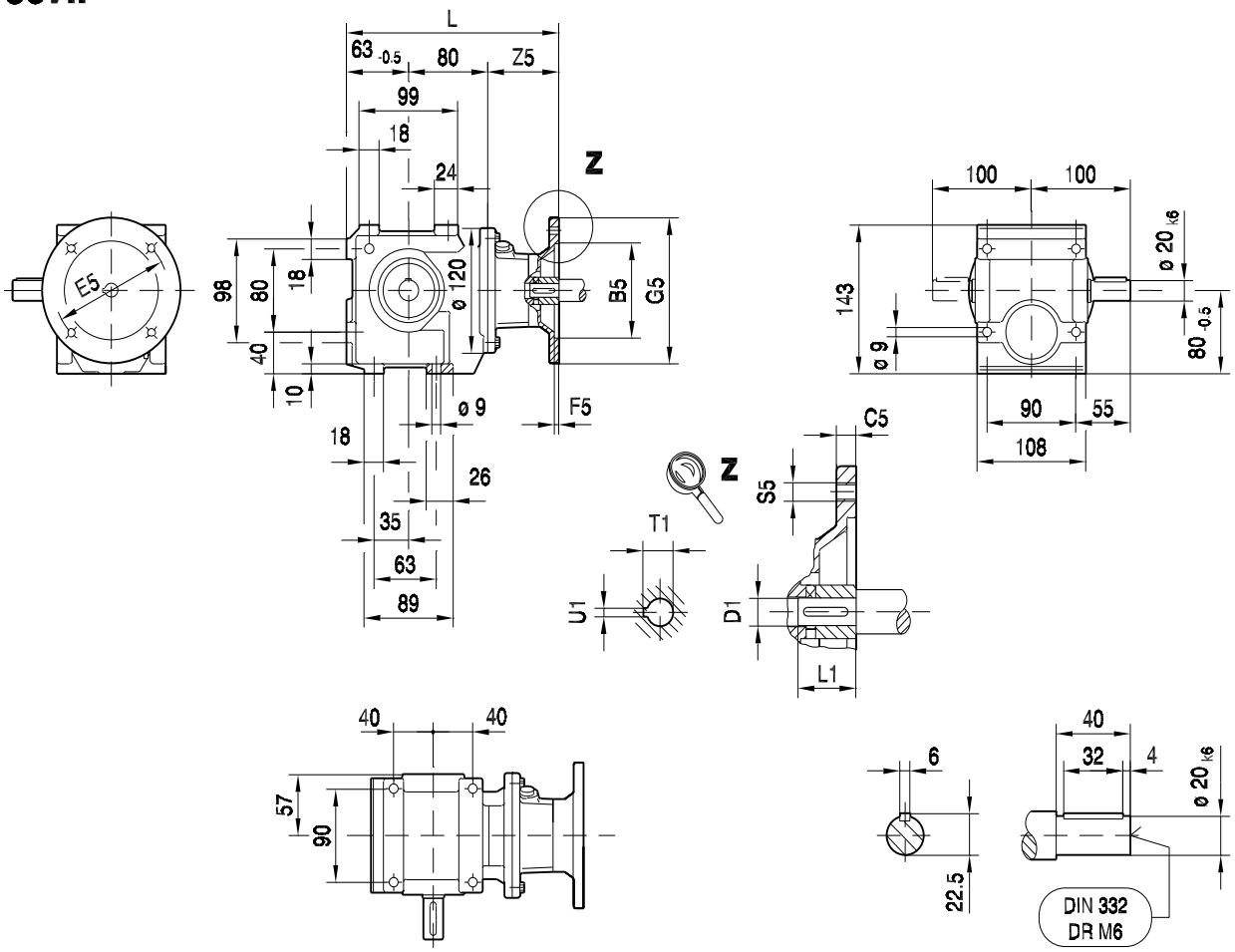
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠				m [kg]	
S87 AD... , n_e = 1400 1/min												**2280 Nm**
288.00*	4.9	2280	1.7	27900	1410	-	-					
258.18	5.4	2280	1.9	27900	1400	-	-					
222.40*	6.3	2280	2.2	27900	1390	-	-					
202.96	6.9	2260	2.3	28000	1390	-	-					
180.00*	7.8	2210	2.5	28100	1390	-	-					
151.30	9.2	2150	2.9	28200	1390	-	-					
139.05	10	2100	3.1	28300	1390	-	-	**S**	**87**	**AD2**	83	595
123.48	11	2060	3.4	28300	1380	-	-	**SF**	**87**	**AD2**	105	595
110.40*	13	2000	3.6	28400	1380	-	-	**SA**	**87**	**AD2**	80	595
99.26	14	1960	3.9	28500	1370	-	-	**SAF**	**87**	**AD2**	97	595
91.20*	15	1510	2.9	29100	1060	-	-					
86.15	16	1880	4.3	28600	1360	-	-					
81.76	17	1600	3.4	29000	990	-	-					
77.14	18	1820	4.6	28700	1350	-	-					
70.43	20	1600	3.9	29000	960	-	-					
64.27	22	1600	4.2	29000	950	-	-					
64.00*	22	1700	5.2	28900	2270	-	-	**S**	**87**	**AD3**	87	595
								SF	**87**	**AD3**	110	595
								SA	**87**	**AD3**	85	595
								SAF	**87**	**AD3**	100	595
57.00*	25	1600	4.8	29000	930	-	-	**S**	**87**	**AD2**	83	595
								SF	**87**	**AD2**	105	595
								SA	**87**	**AD2**	80	595
								SAF	**87**	**AD2**	97	595
47.91	29	1600	5.7	29000	1840	-	-					
44.03	32	1600	6.1	29000	1810	-	-	**S**	**87**	**AD3**	87	595
39.10	36	1600	6.9	28200	1780	-	-	**SF**	**87**	**AD3**	110	595
34.96*	40	1600	7.7	27100	1740	-	-	**SA**	**87**	**AD3**	85	595
31.43	45	1600	8.5	26000	1700	-	-	**SAF**	**87**	**AD3**	100	595
27.28	51	1600	9.8	24700	1640	-	-					
25.50*	55	1240	7.9	23400	3330	-	-					
24.43	57	1600	10.9	23700	3610	-	-					
21.43	65	1240	9.4	21800	3270	-	-					
20.27	69	1600	13.2	22100	3510	-	-					
19.70	71	1240	10.3	21100	3220	-	-	**S**	**87**	**AD4**	93	595
17.49	80	1240	11.4	20200	3170	-	-	**SF**	**87**	**AD4**	115	595
15.64*	90	1240	12.8	19300	3110	-	-	**SA**	**87**	**AD4**	91	595
14.06	100	1240	14.2	18500	3060	-	-	**SAF**	**87**	**AD4**	105	595
12.21	115	1240	16.2	17400	2970	-	M1-6					
10.93	128	1240	18.1	16600	2890	-	M1-6					
9.07	154	1140	20	15900	2880	-	M1-6					
7.88	178	1010	20	15700	2990	-	M1-6					
S97 AD... , n_e = 1400 1/min												**4000 Nm**
286.40*	4.9	4000	2.9	33200	2120	-	-					
262.22	5.3	4000	3.2	33200	2120	-	-					
231.67	6.0	4000	3.5	33200	2110	-	-					
196.52	7.1	4000	4.1	33200	2090	-	-					
180.95	7.7	3920	4.4	33400	2090	-	-					
161.74	8.7	3840	4.7	33500	2090	-	-	**S**	**97**	**AD3**	145	595
145.60*	9.6	3730	5.1	33700	2090	-	-	**SF**	**97**	**AD3**	180	595
131.85	11	3650	5.4	33900	2090	-	-	**SA**	**97**	**AD3**	140	595
116.92	12	3510	5.9	34100	2090	-	-	**SAF**	**97**	**AD3**	165	595
105.71	13	3440	6.3	34300	2080	-	-					
89.60*	16	3240	7.0	34600	2070	-	-					
80.85	17	3230	6.7	34600	1330	-	-					
78.26	18	3080	7.5	34800	2070	-	-					
71.43	20	3300	7.8	34500	3320	-	-	**S**	**97**	**AD4**	150	595
								SF	**97**	**AD4**	185	595
								SA	**97**	**AD4**	145	595
								SAF	**97**	**AD4**	170	595
65.45	21	2900	8.4	35100	2050	-	-	**S**	**97**	**AD3**	145	595
								SF	**97**	**AD3**	180	595
								SA	**97**	**AD3**	140	595
								SAF	**97**	**AD3**	165	595

S97 AD... , n_e = 1400 1/min													4000 Nm
i	n_a [1/min]	$M_{a\,max}$ [Nm]	P_e [kW]	F_{Ra} [N]	F_{Re} [N]	φ (/R) [']	⚠					m [kg]	📖
60.59	23	3300	9.2	34500	3280	-	-						
55.79	25	3300	10.0	34500	3230	-	-						
49.87	28	3300	11.0	34500	3190	-	-	**S**	**97**	**AD4**		150	595
44.89	31	3300	12.2	34100	3150	-	-	**SF**	**97**	**AD4**		185	595
40.65	34	3300	13.5	32800	3110	-	-	**SA**	**97**	**AD4**		145	595
36.05	39	3300	15.1	31300	3060	-	-	**SAF**	**97**	**AD4**		170	595
32.60	43	3200	16.2	30400	3050	-	-						
27.63	51	3010	17.9	29000	6240	-	-	**S**	**97**	**AD5**		170	595
								SF	**97**	**AD5**		200	595
								SA	**97**	**AD5**		165	595
								SAF	**97**	**AD5**		190	595
26.39	53	2600	15.7	26100	2080	-	-	**S**	**97**	**AD4**		150	595
								SF	**97**	**AD4**		185	595
								SA	**97**	**AD4**		145	595
								SAF	**97**	**AD4**		170	595
24.13	58	2870	20	28000	6240	-	-						
23.59	59	2600	17.8	24900	5490	-	-						
21.23	66	2600	20	23700	5430	-	-						
19.23	73	2600	22	22700	5360	-	-	**S**	**97**	**AD5**		170	595
17.05	82	2570	24	21100	5320	-	M1-6	**SF**	**97**	**AD5**		200	595
15.42	91	2470	26	20800	5330	-	M1-6	**SA**	**97**	**AD5**		165	595
13.07	107	2330	28	20100	5320	-	M1-6	**SAF**	**97**	**AD5**		190	595
11.41	123	2210	31	19500	5330	-	M1-6						
9.55	147	2040	34	18800	5320	-	M1-6						
8.26	169	1770	34	18800	5500	-	M1-6						

14.5 S.. AM.. (IEC) [mm]

02 010 01 01

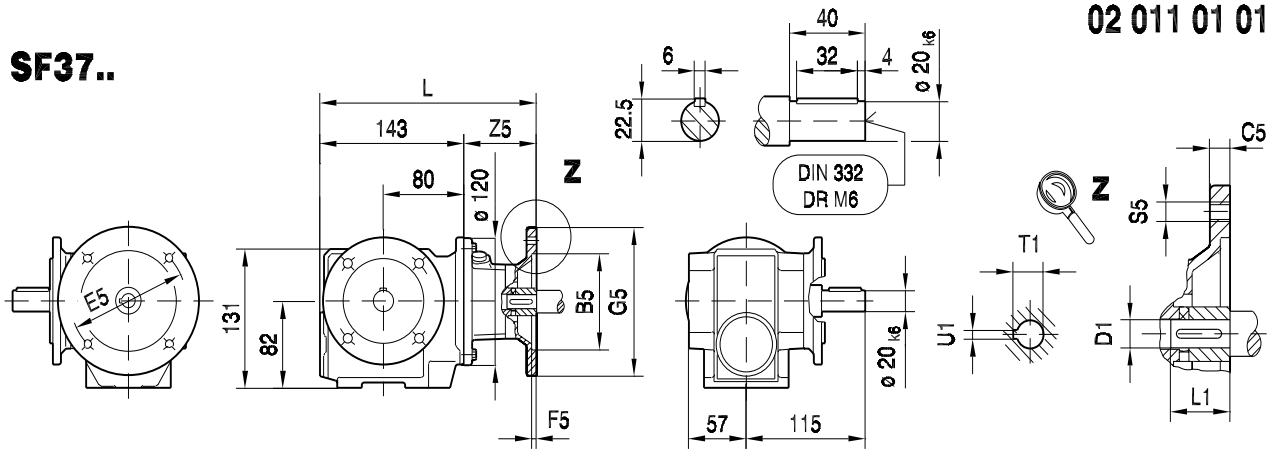
S37..



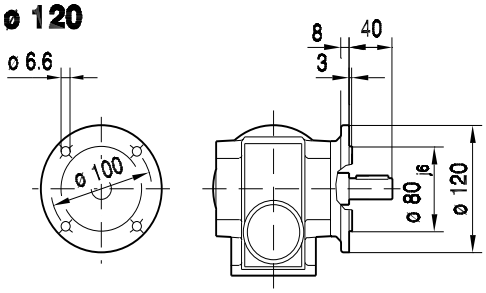
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	215	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	215	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	249	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	249	M10	106	24	50	27.3	8	

02 011 01 01

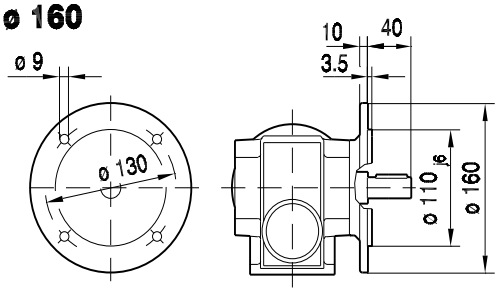
SF37..



ø 120



ø 160



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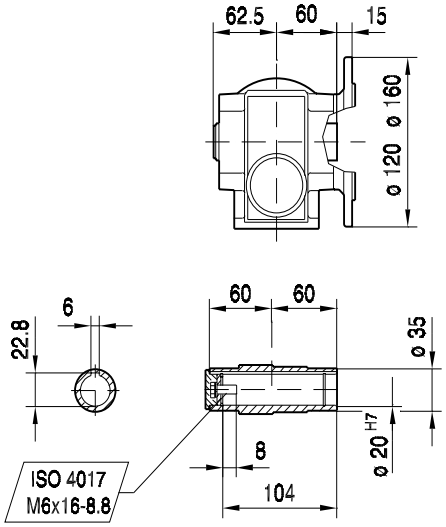
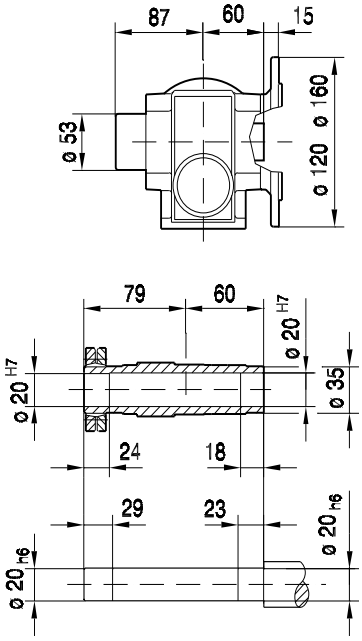


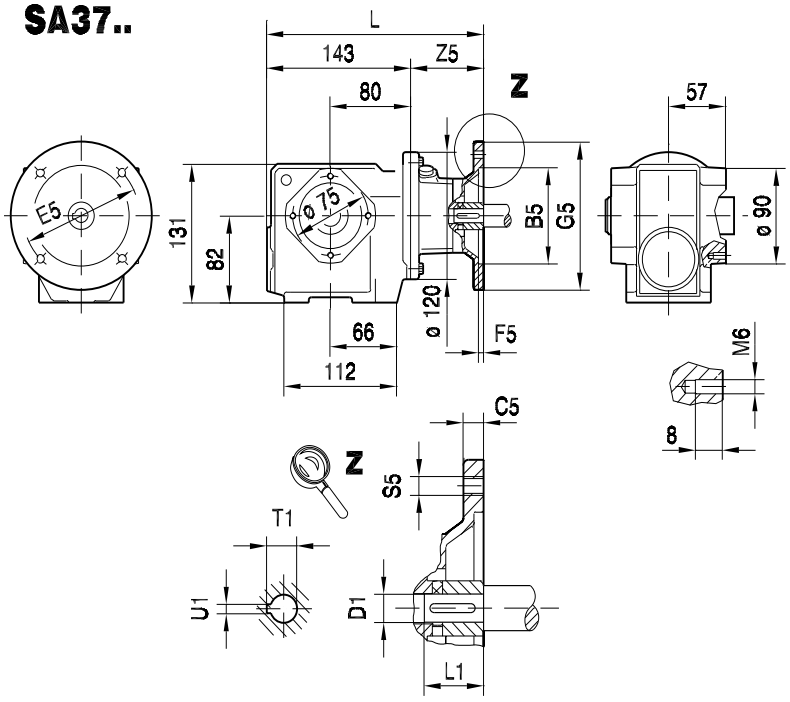
SHF37..



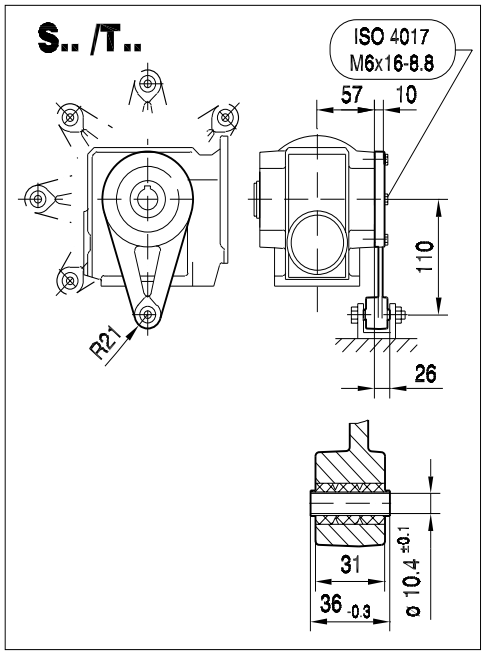
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	215	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	215	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	249	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	249	M10	106	24	50	27.3	8	

27 001 01 01

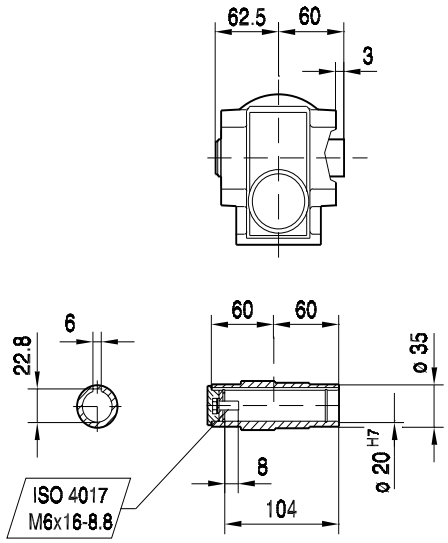
SA37..



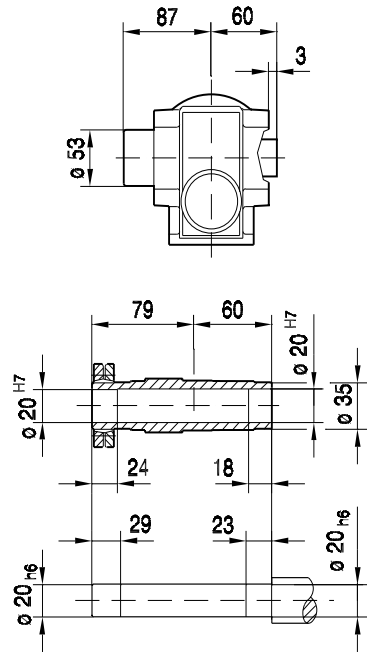
S.. /T..



SA37..

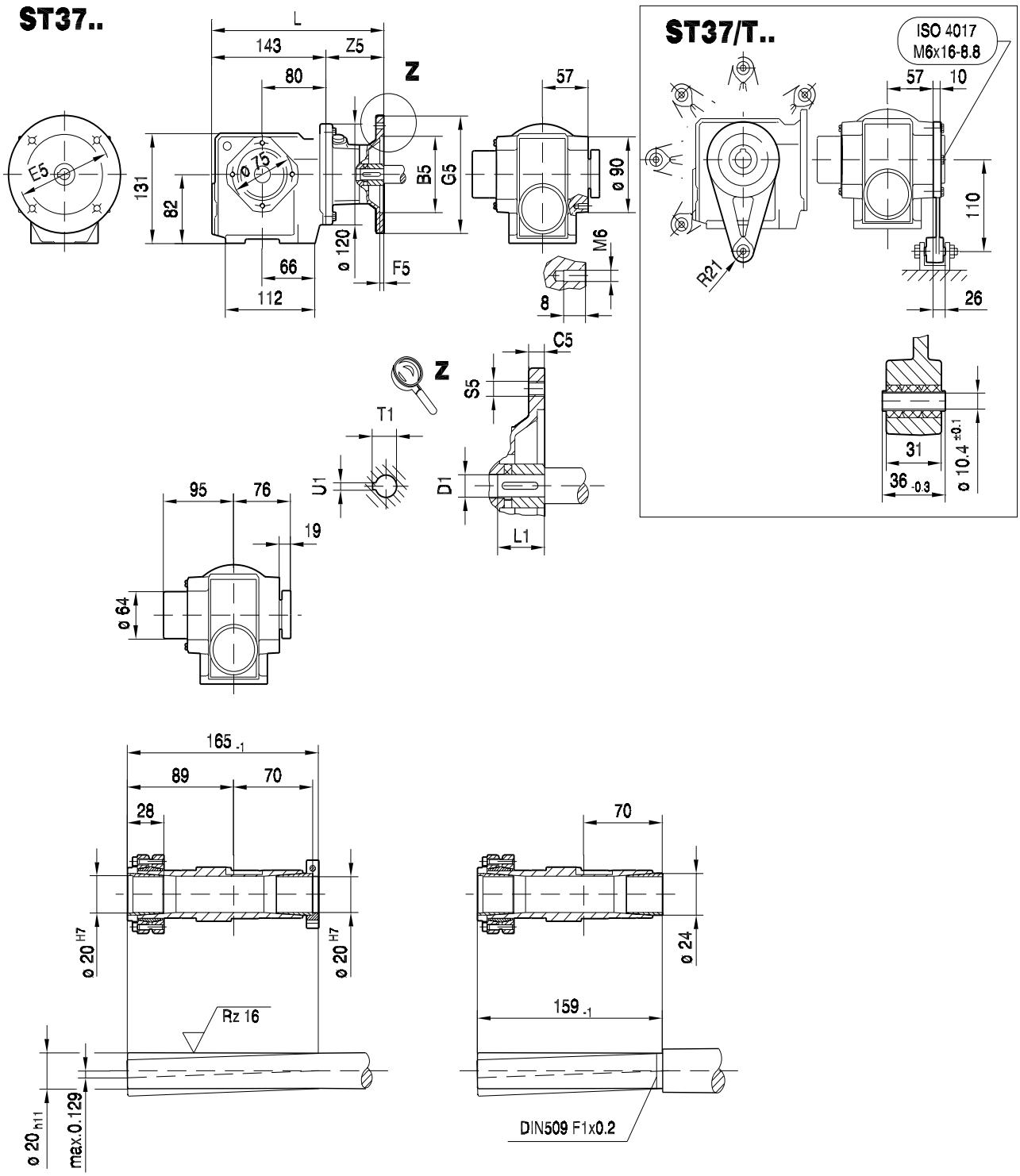


SH37..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	215	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	215	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	249	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	249	M10	106	24	50	27.3	8	

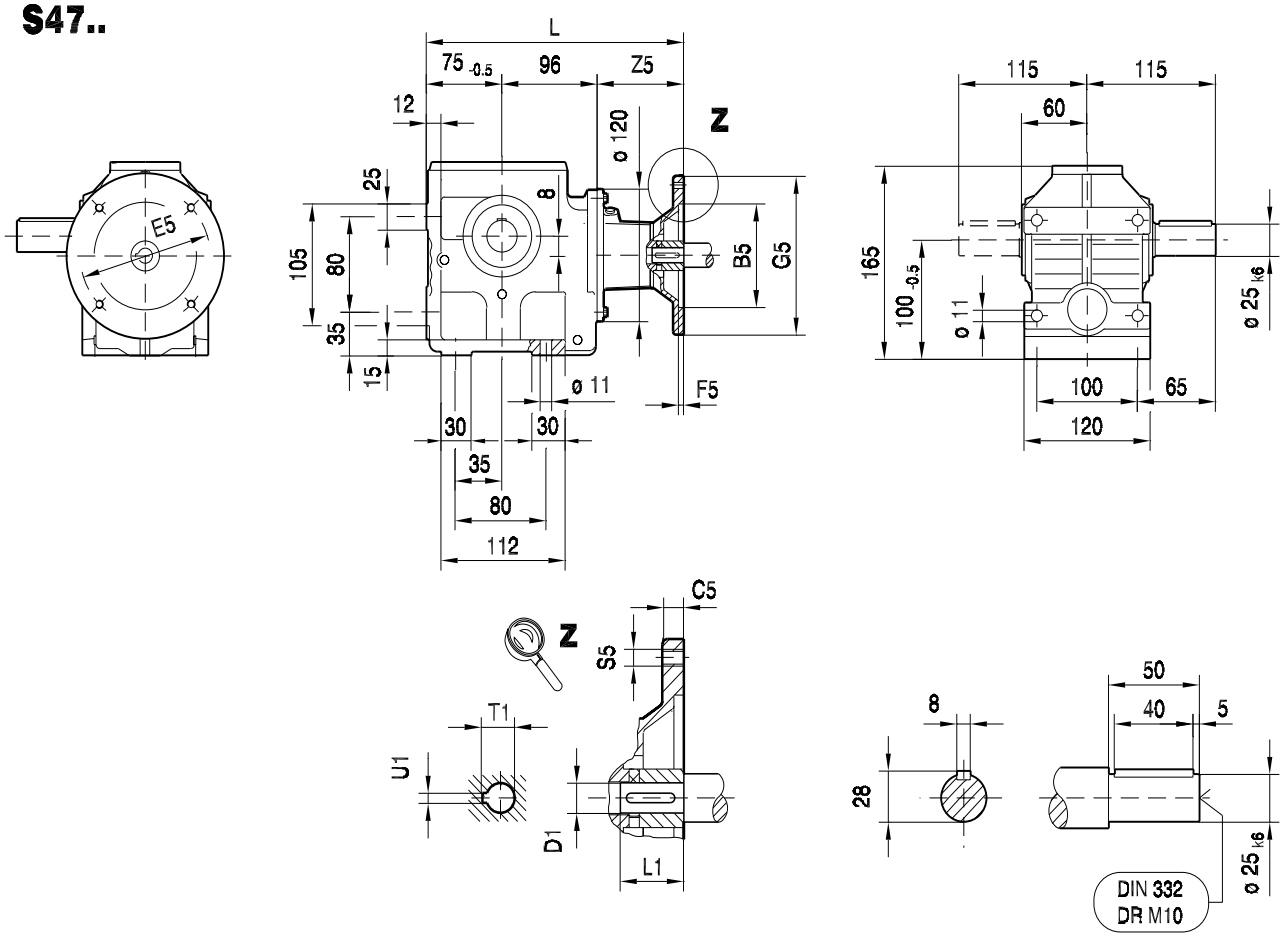
27 002 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	215	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	215	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	249	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	249	M10	106	24	50	27.3	8	

02 012 01 01

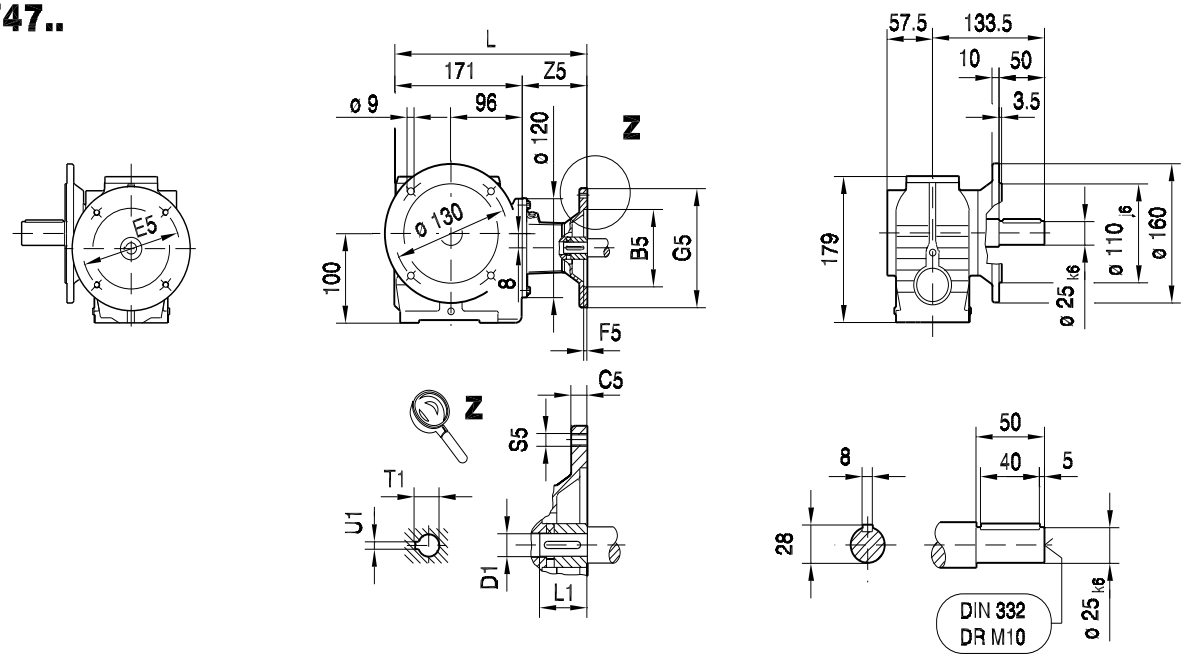
S47..



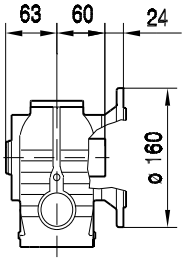
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	243	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	243	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	277	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	277	M10	106	24	50	27.3	8	

02 013 01 01

SF47..



SAF47..



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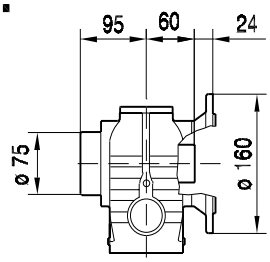
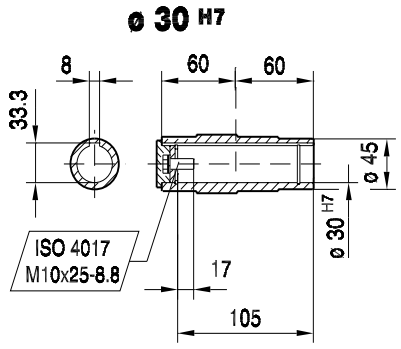
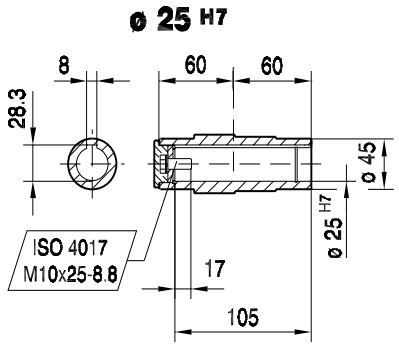
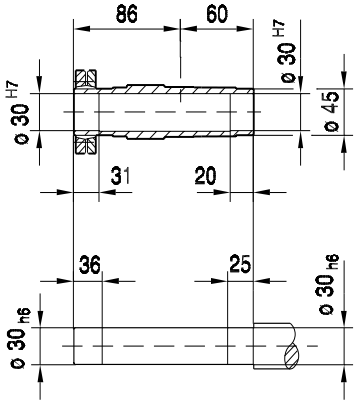


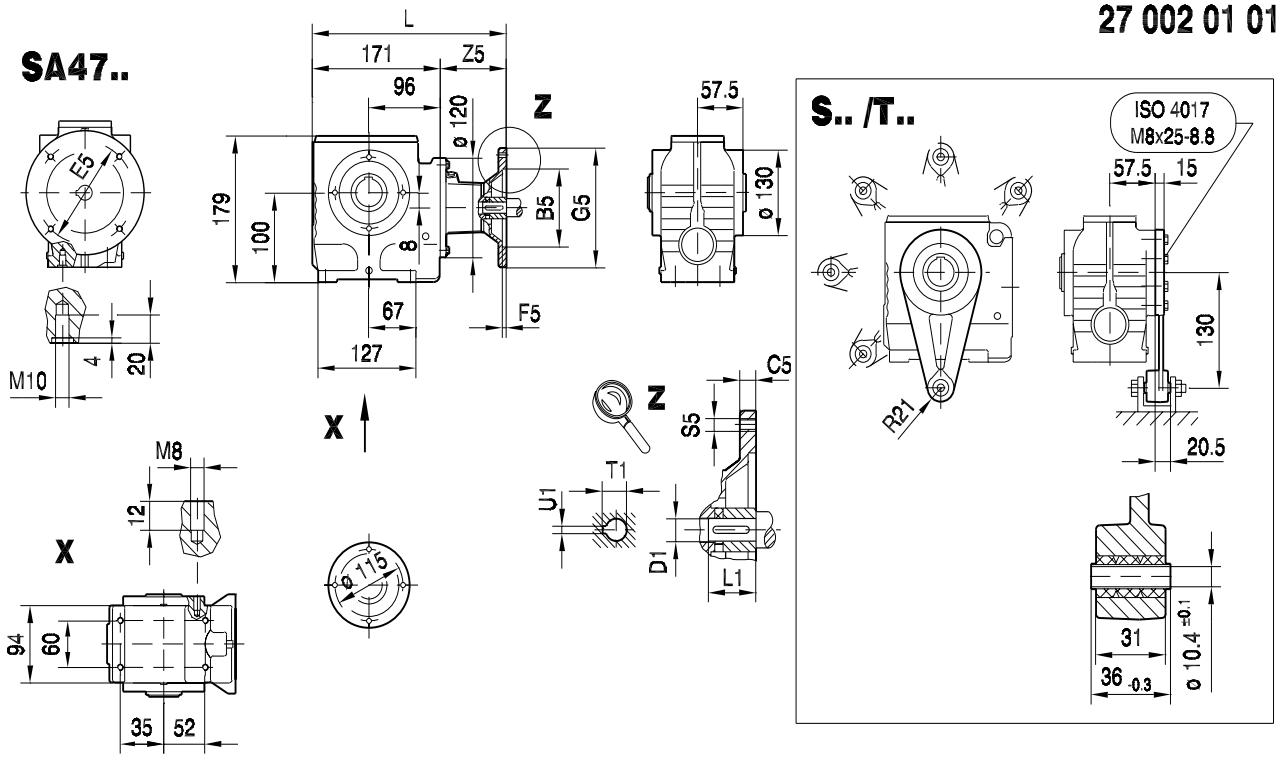


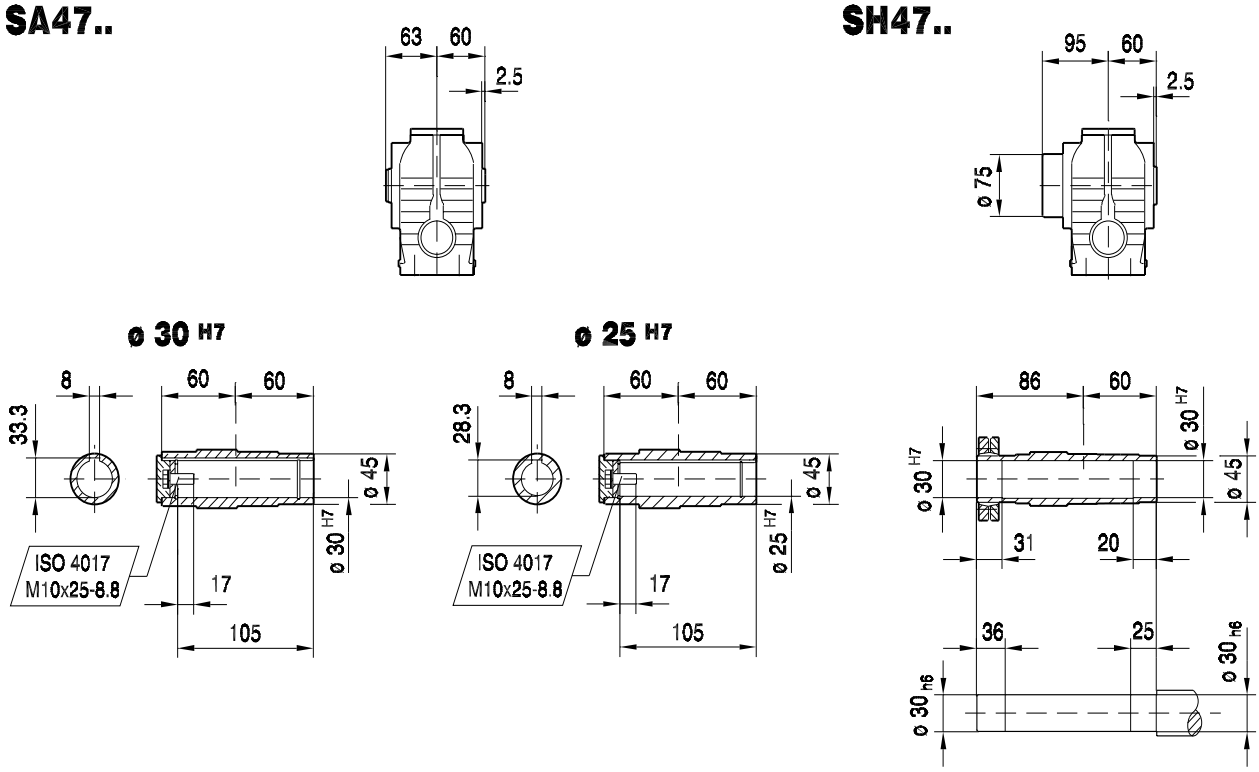




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	243	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	243	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	277	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	277	M10	106	24	50	27.3	8	

27 002 01 01

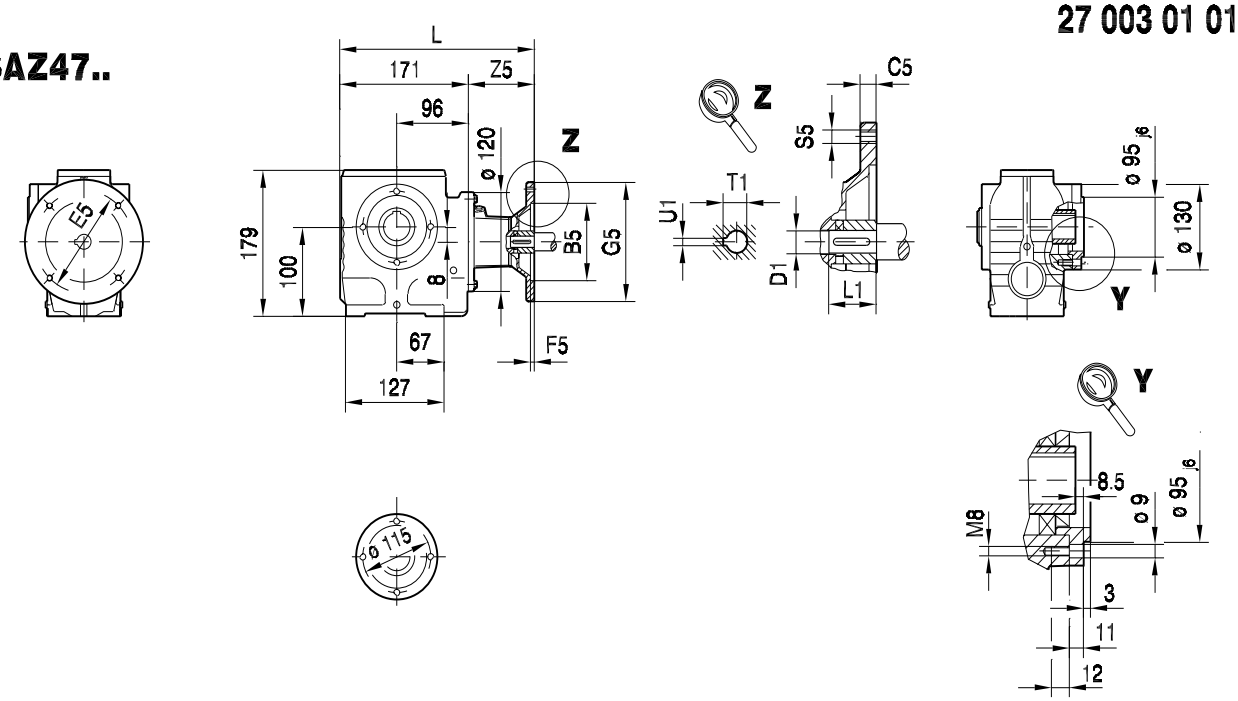




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	243	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	243	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	277	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	277	M10	106	24	50	27.3	8	

27 003 01 01

SAZ47..



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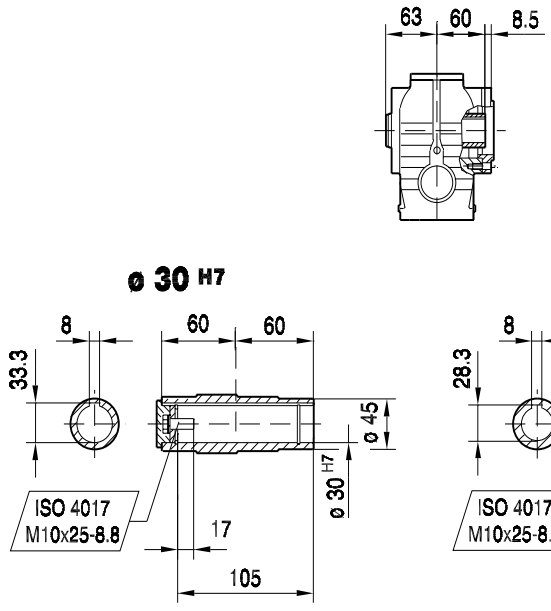
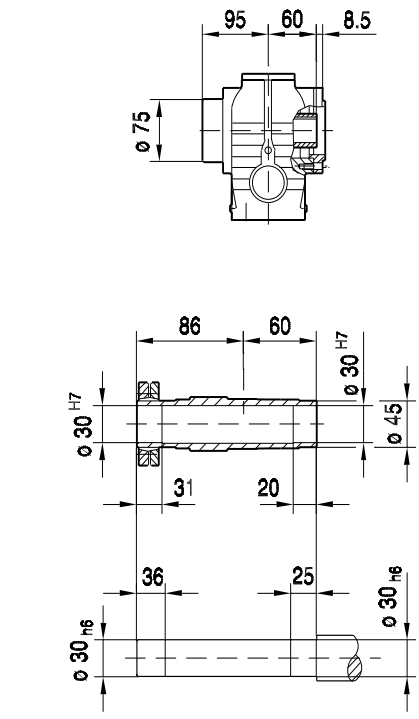
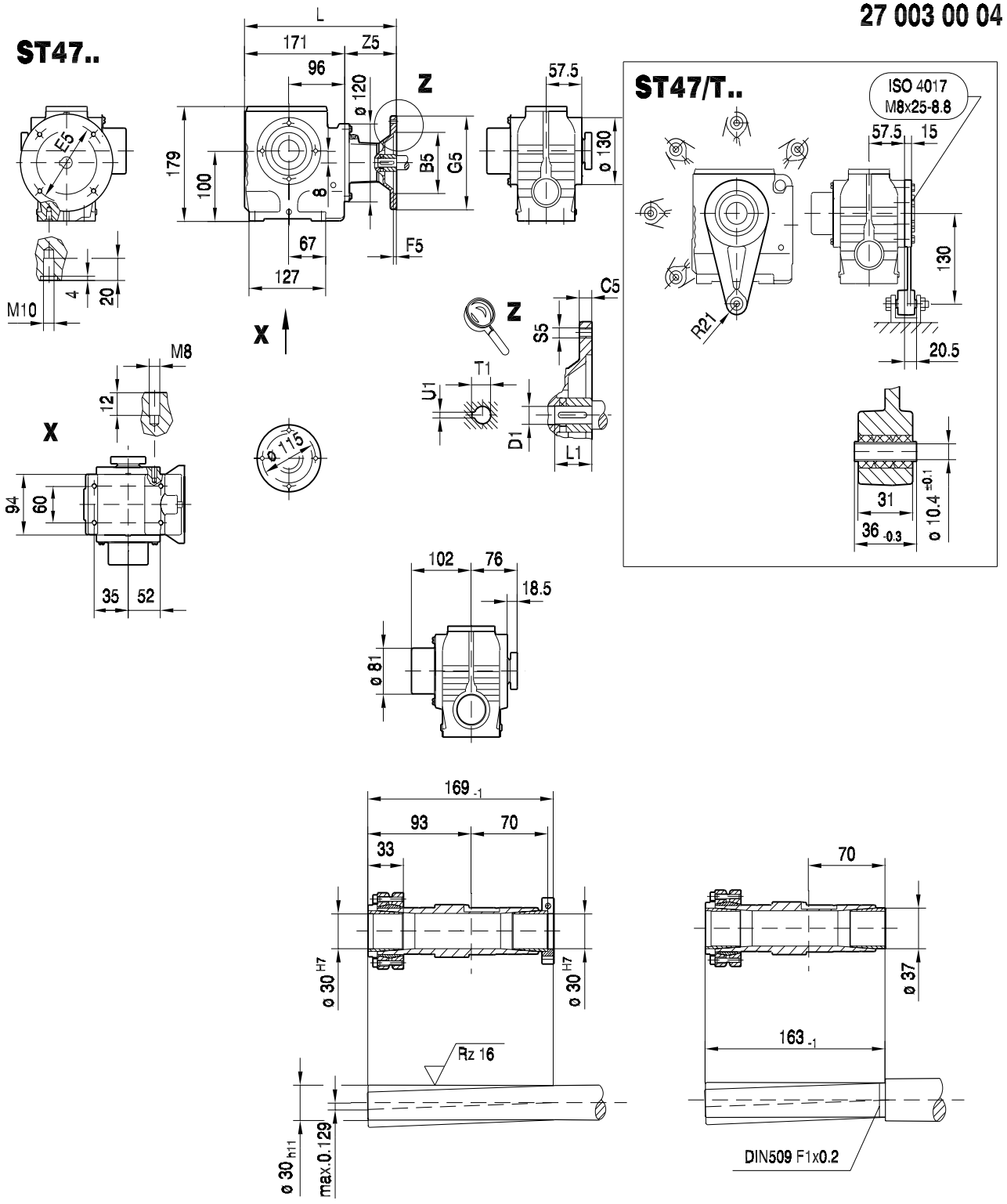


SHZ47..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	243	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	243	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	277	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	277	M10	106	24	50	27.3	8	

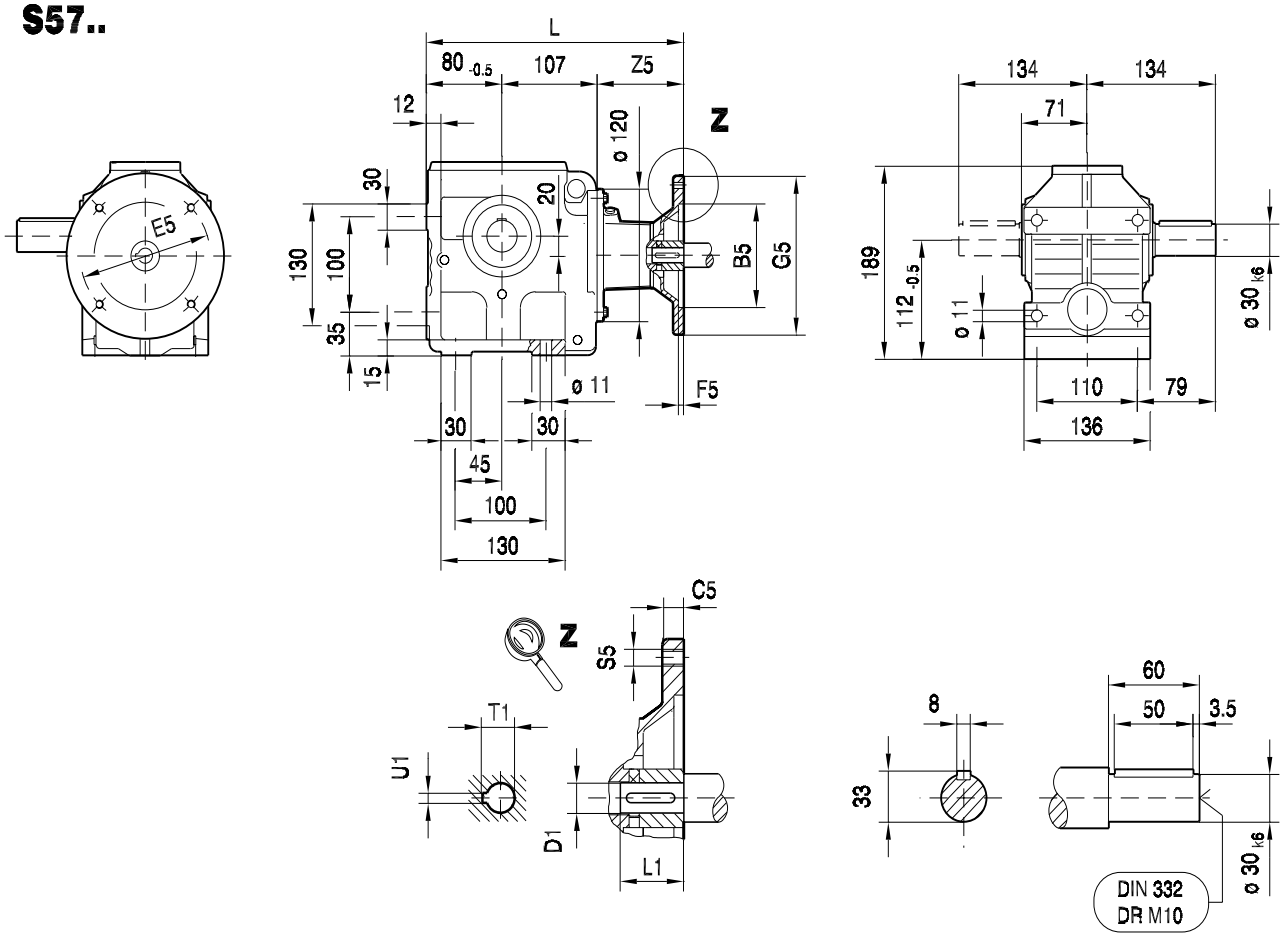
27 003 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	243	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	243	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	277	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	277	M10	106	24	50	27.3	8	

02 014 01 01

S57..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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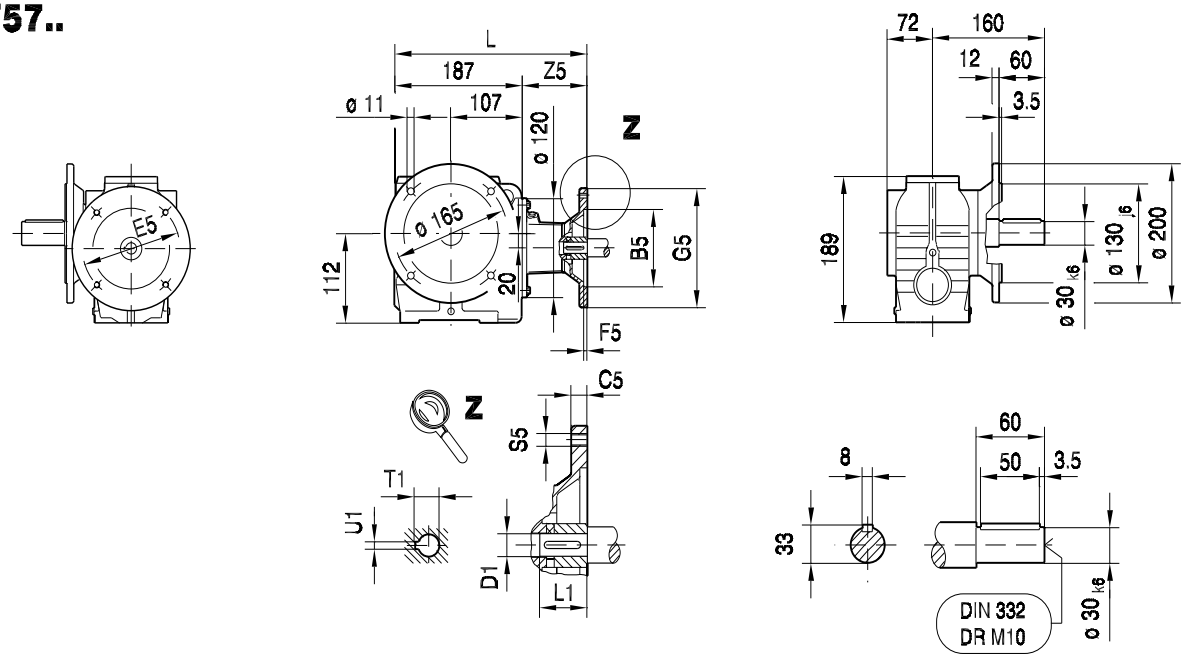
AM71	110	10	130	4.0	160	259	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	293	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	293	M10	106	24	50	27.3	8	

02 015 01 01

SF57..



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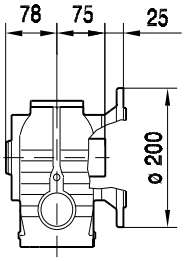
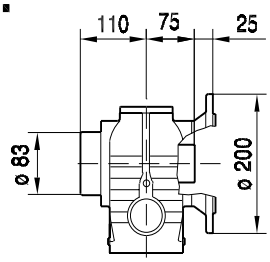
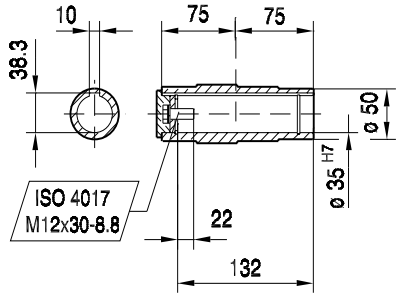


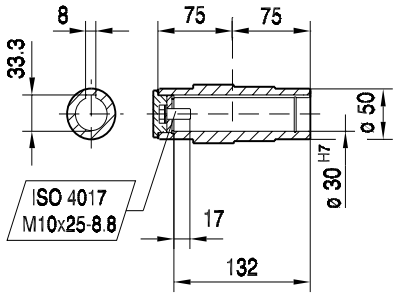
SHF57..

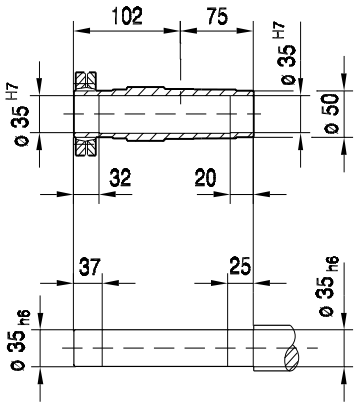


ø 35 H7



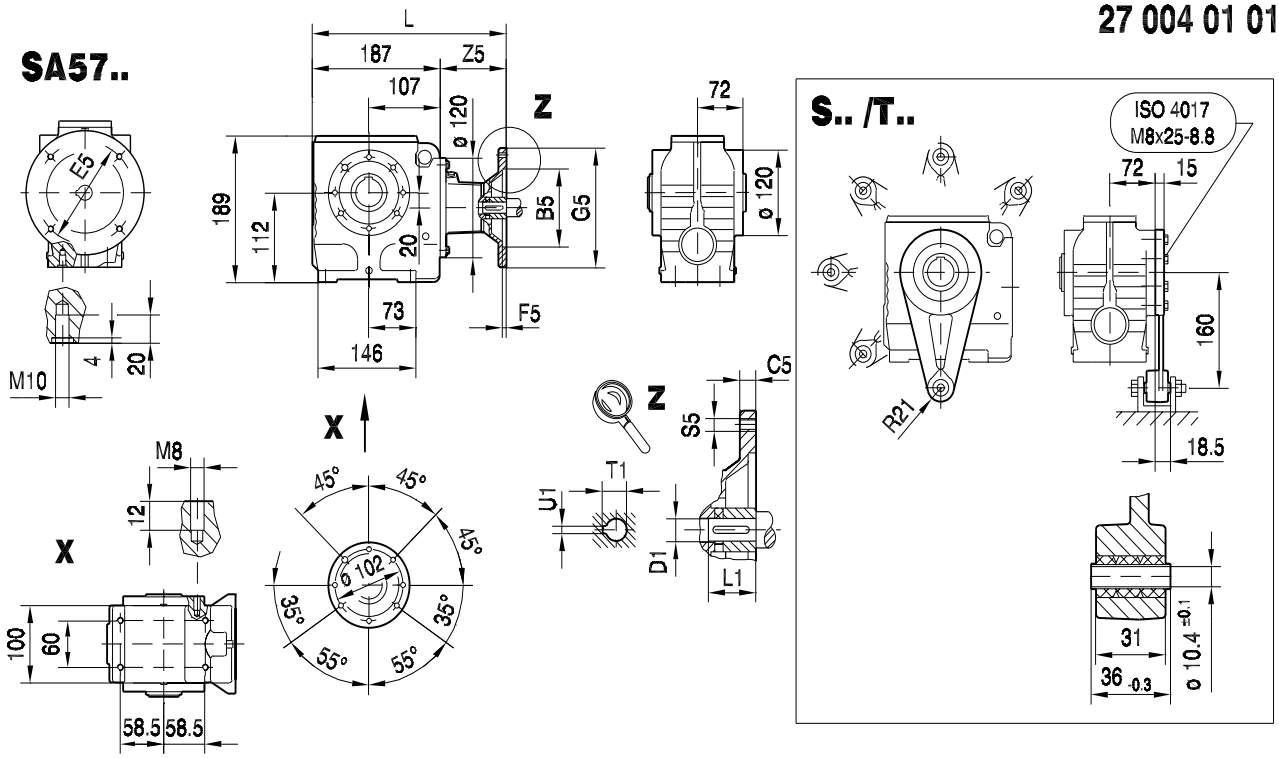
ø 30 H7

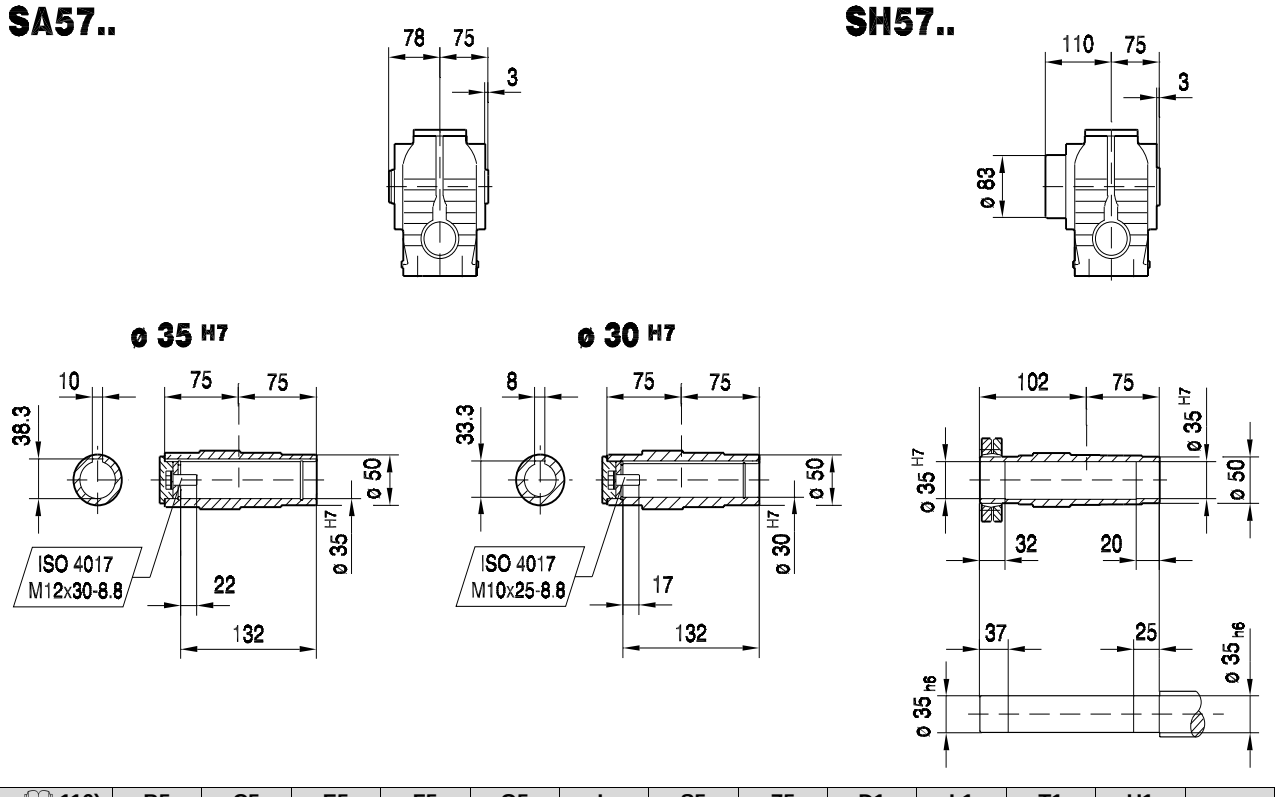




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	259	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	259	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	293	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	293	M10	106	24	50	27.3	8	

27 004 01 01





(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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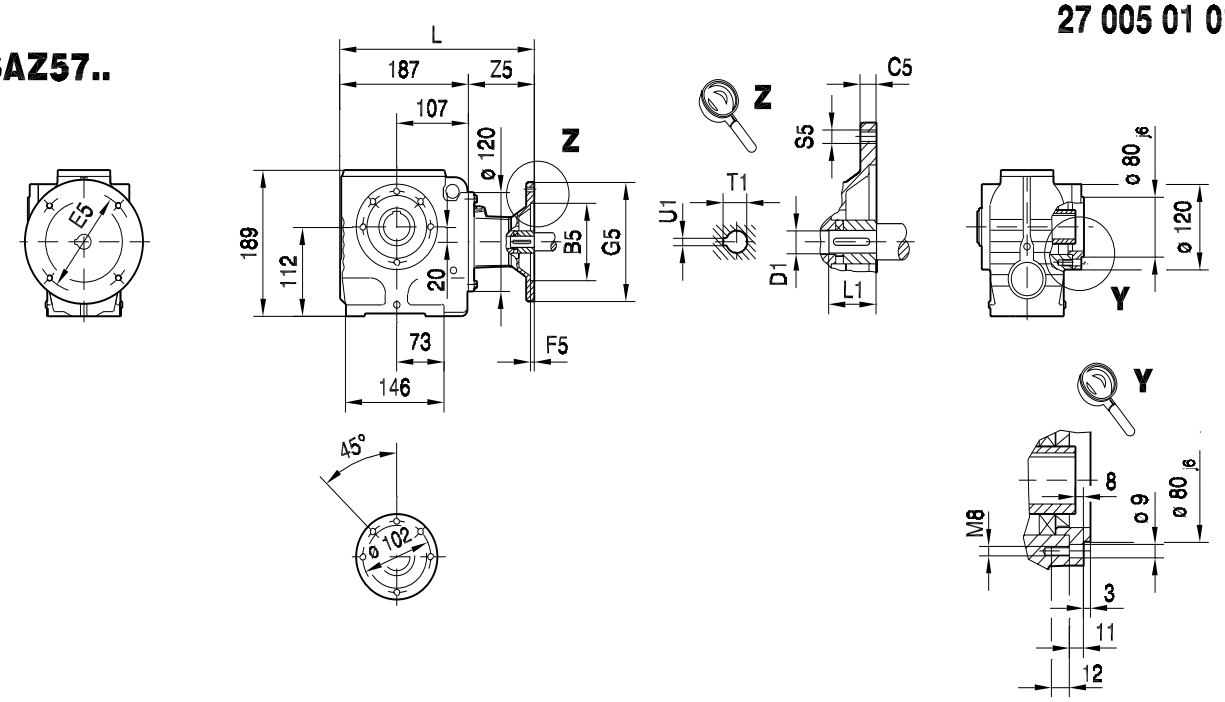
AM71	110	10	130	4.0	160	259	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	293	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	293	M10	106	24	50	27.3	8	

27 005 01 01

SAZ57..



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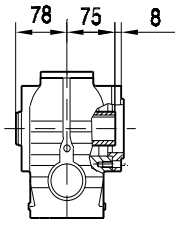

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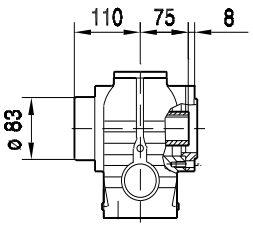
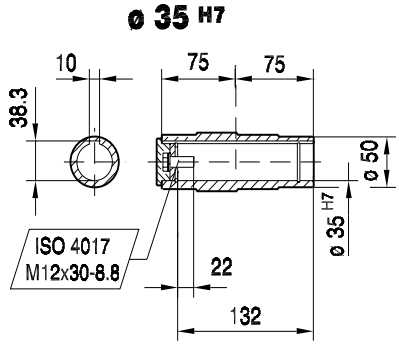
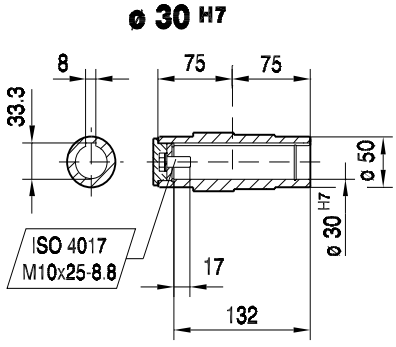
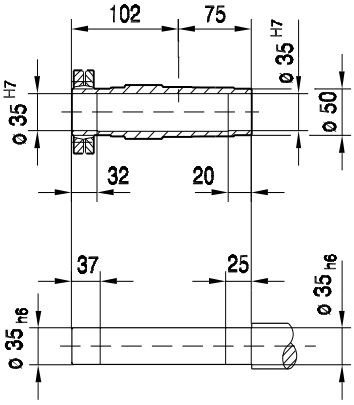


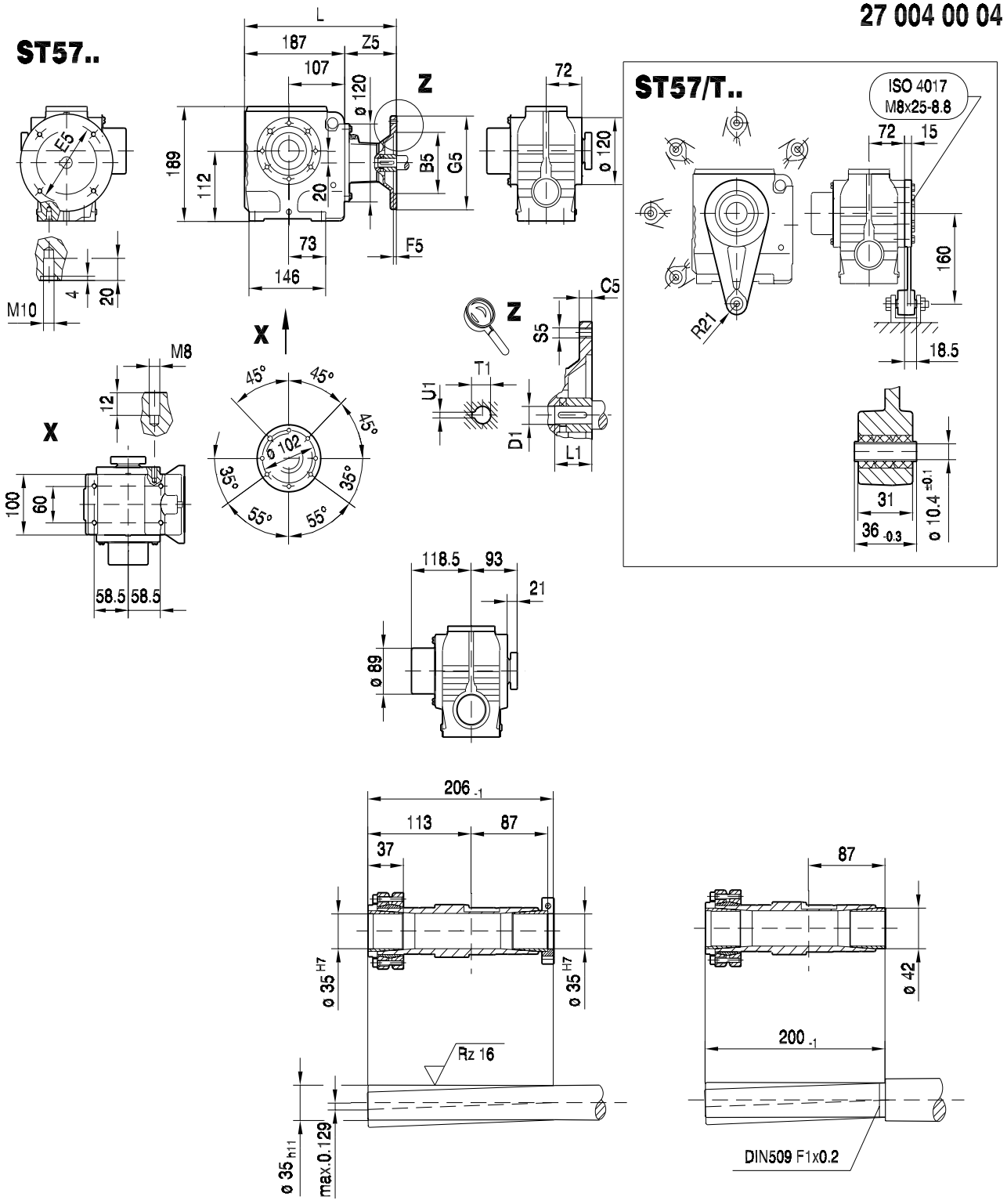






(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	259	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	259	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	293	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	293	M10	106	24	50	27.3	8	

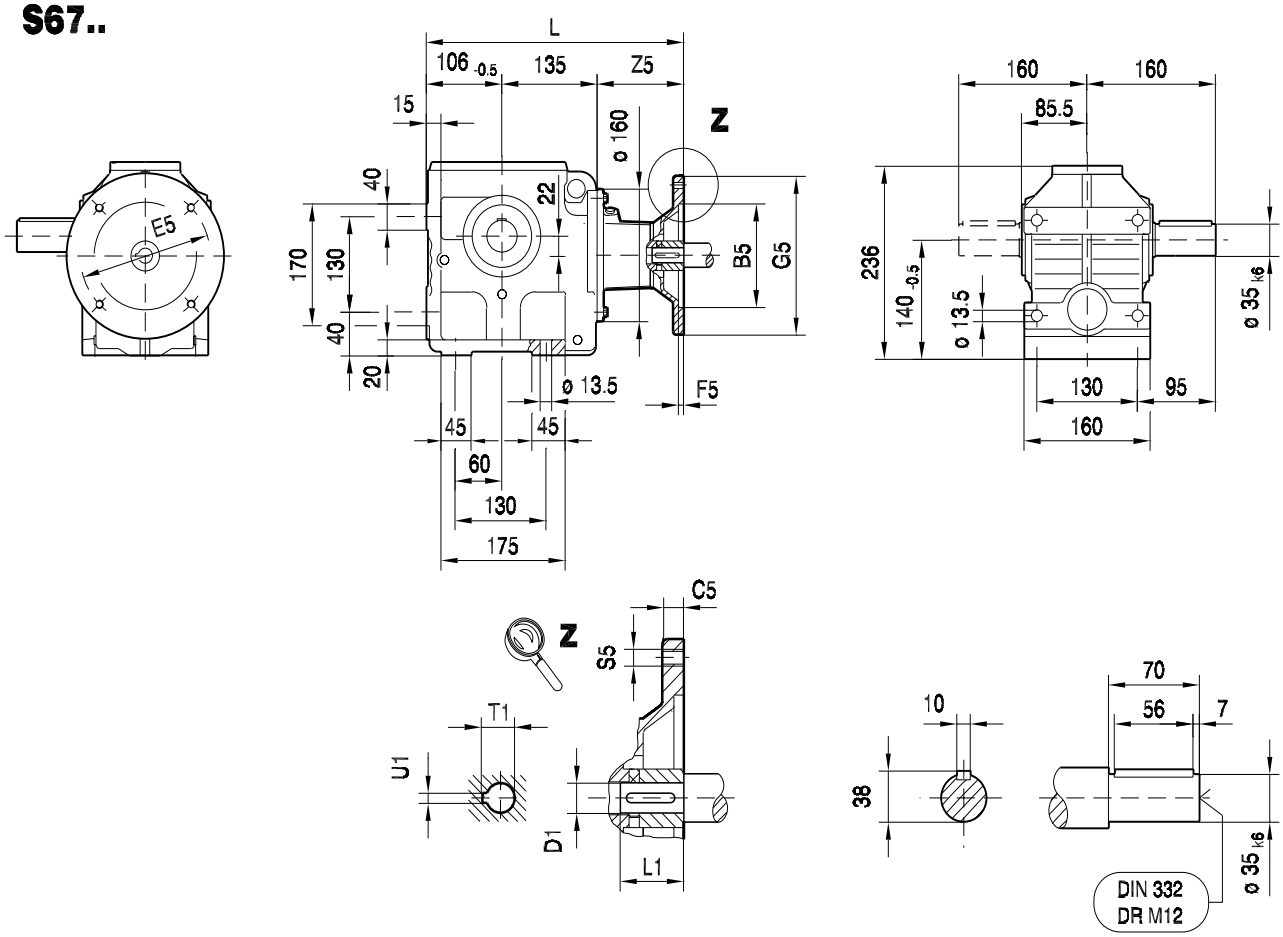
27 004 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	259	M8	72	11	23	12.8	4	
AM71	110	10	130	4.0	160	259	M8	72	14	30	16.3	5	
AM80	130	12	165	4.5	200	293	M10	106	19	40	21.8	6	
AM90	130	12	165	4.5	200	293	M10	106	24	50	27.3	8	

02 016 01 01

S67..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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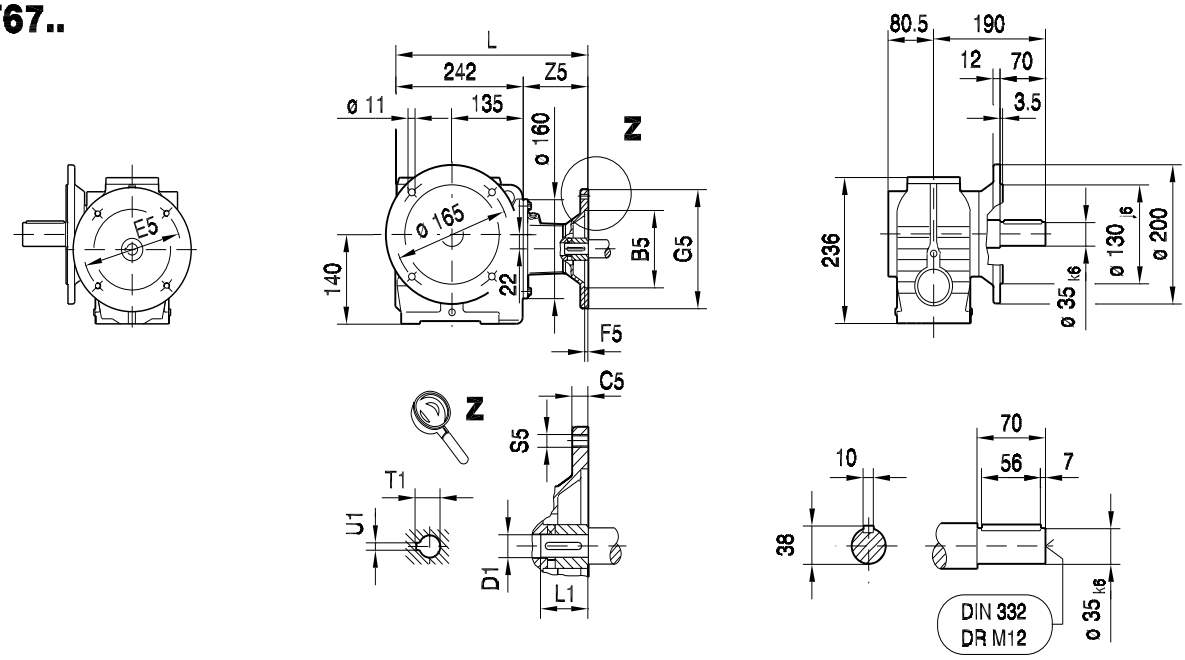
AM71	110	10	130	4.0	160	307	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	340	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	340	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	375	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	375	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	432	M12	191	38	80	41.3	10	

02 017 01 01

SF67..



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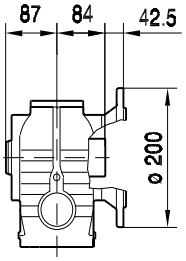
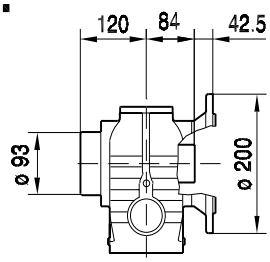
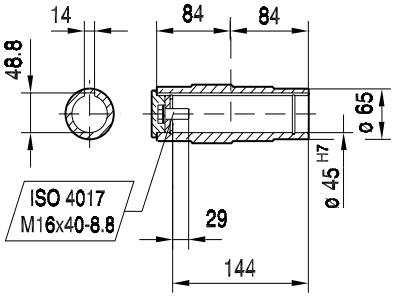


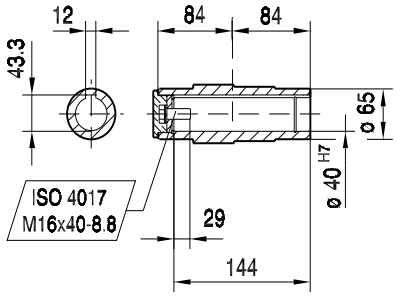
SHF67..

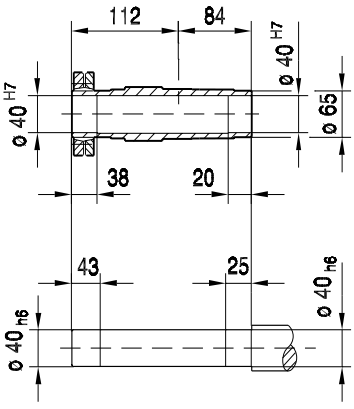


ø 45 H7



ø 40 H7





(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
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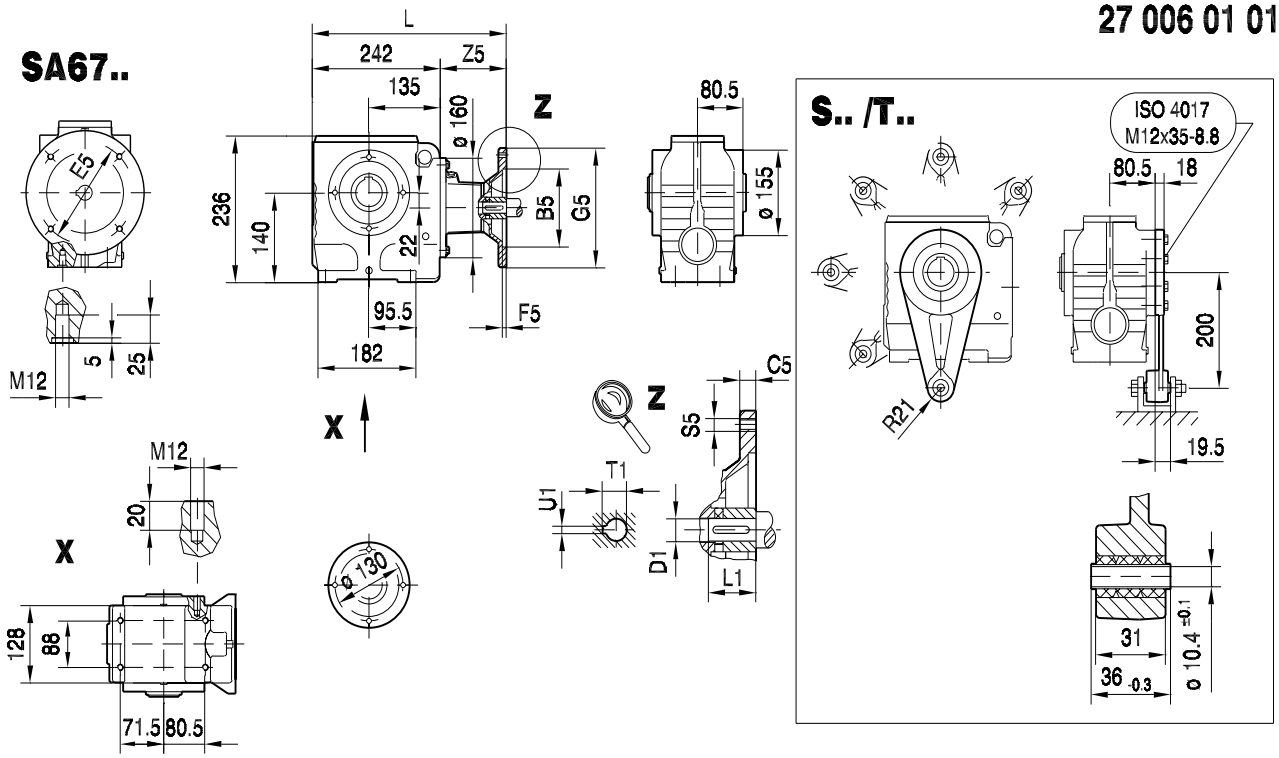
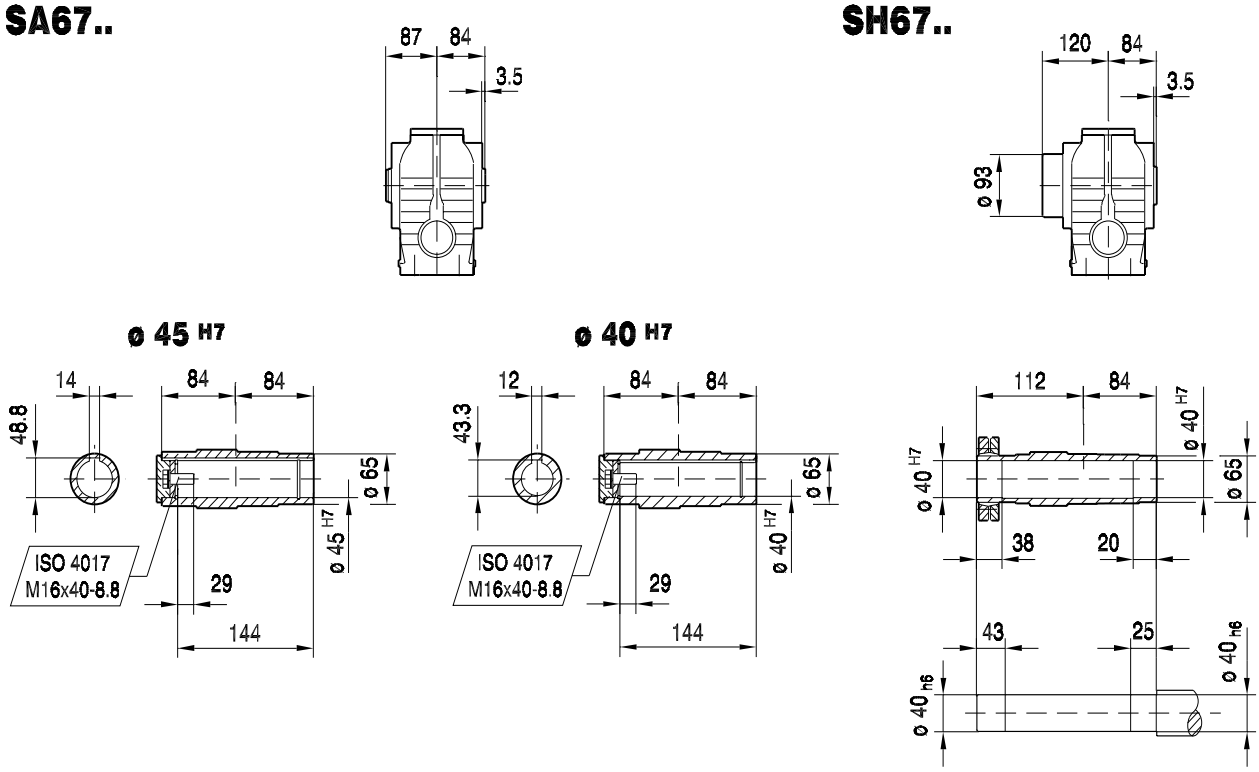
AM71	110	10	130	4.0	160	308	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	341	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	341	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	433	M12	191	38	80	41.3	10	

27 006 01 01

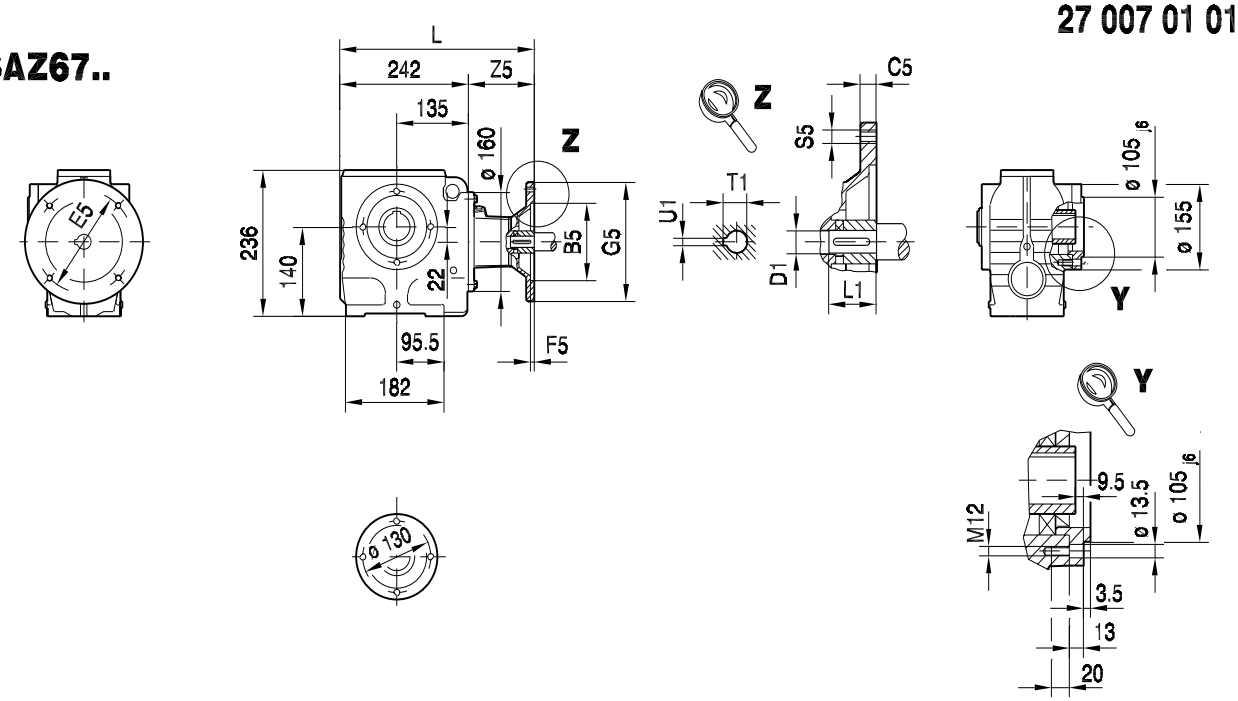




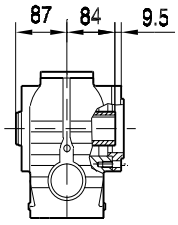
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	308	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	308	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	341	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	341	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	433	M12	191	38	80	41.3	10	

27 007 01 01

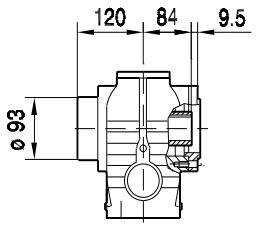
SAZ67..

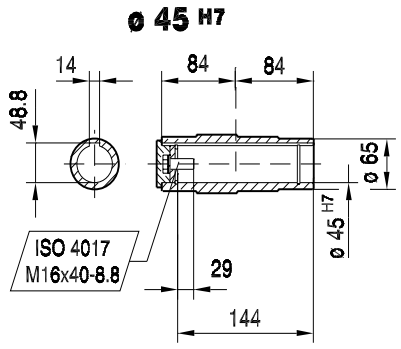


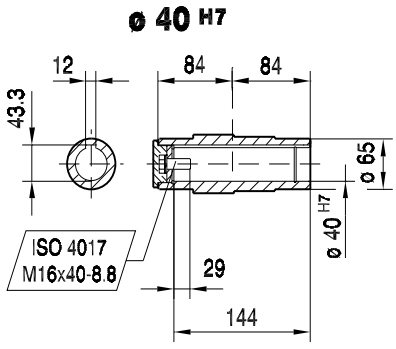
SAZ67..

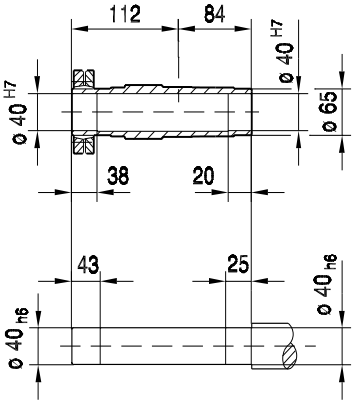


SHZ67..



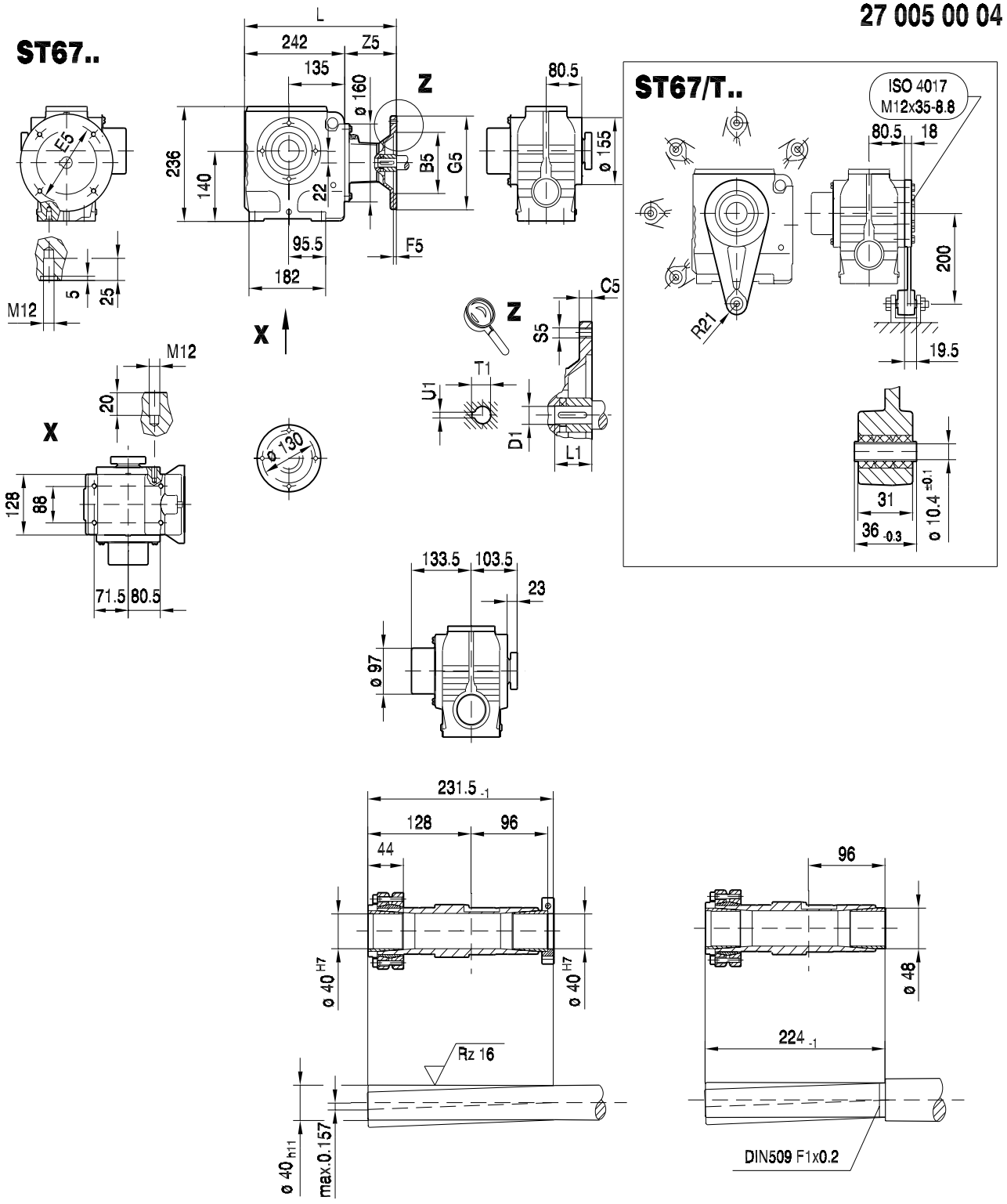






(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	308	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	308	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	341	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	341	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	433	M12	191	38	80	41.3	10	

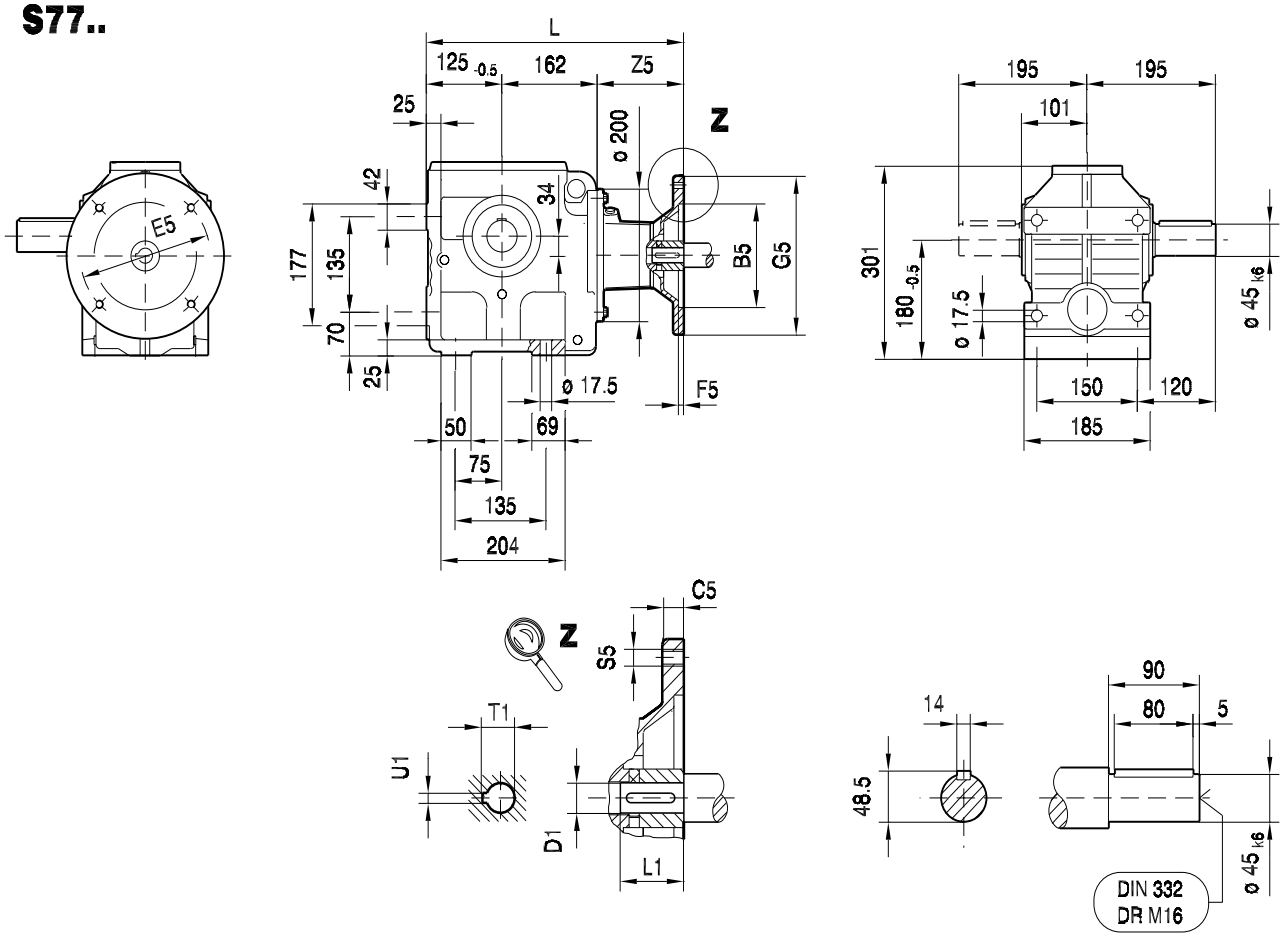
27 005 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	308	M8	66	11	23	12.8	4	
AM71	110	10	130	4.0	160	308	M8	66	14	30	16.3	5	
AM80	130	12	165	4.5	200	341	M10	99	19	40	21.8	6	
AM90	130	12	165	4.5	200	341	M10	99	24	50	27.3	8	
AM100	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM112	180	15	215	5.0	250	376	M12	134	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	433	M12	191	38	80	41.3	10	

02 018 01 01

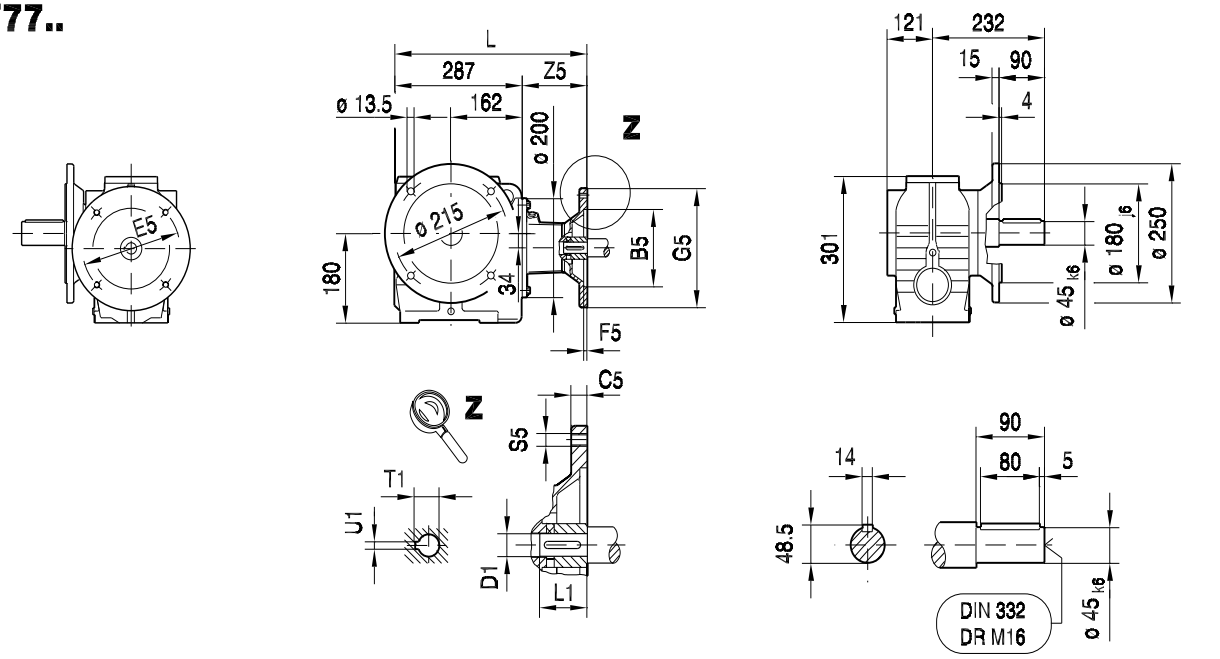
S77..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	347	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	347	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	379	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	379	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	

02 019 01 01

SF77..



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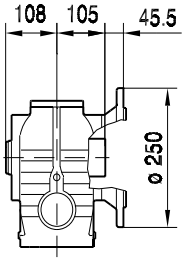
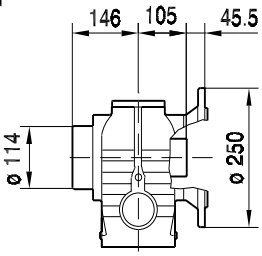
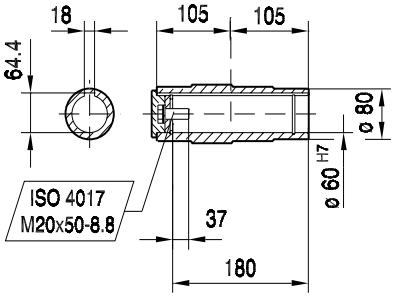


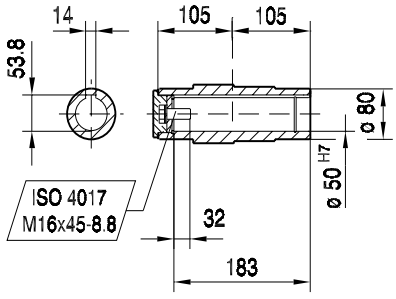
SHF77..

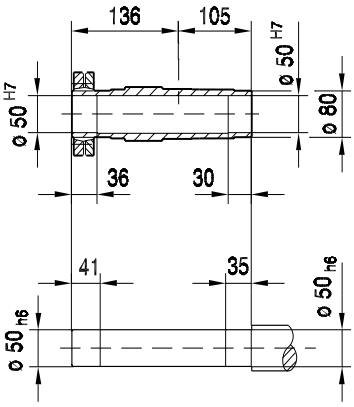


ø 60 H7



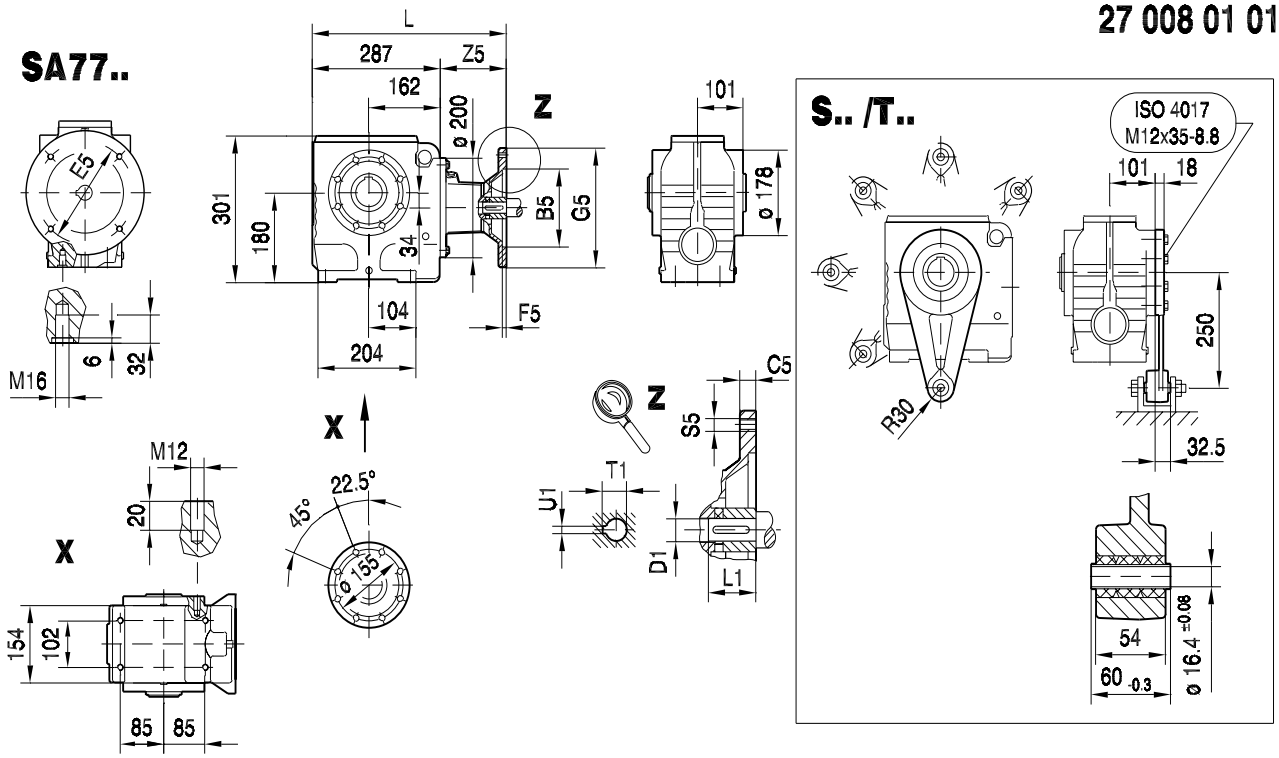
ø 50 H7

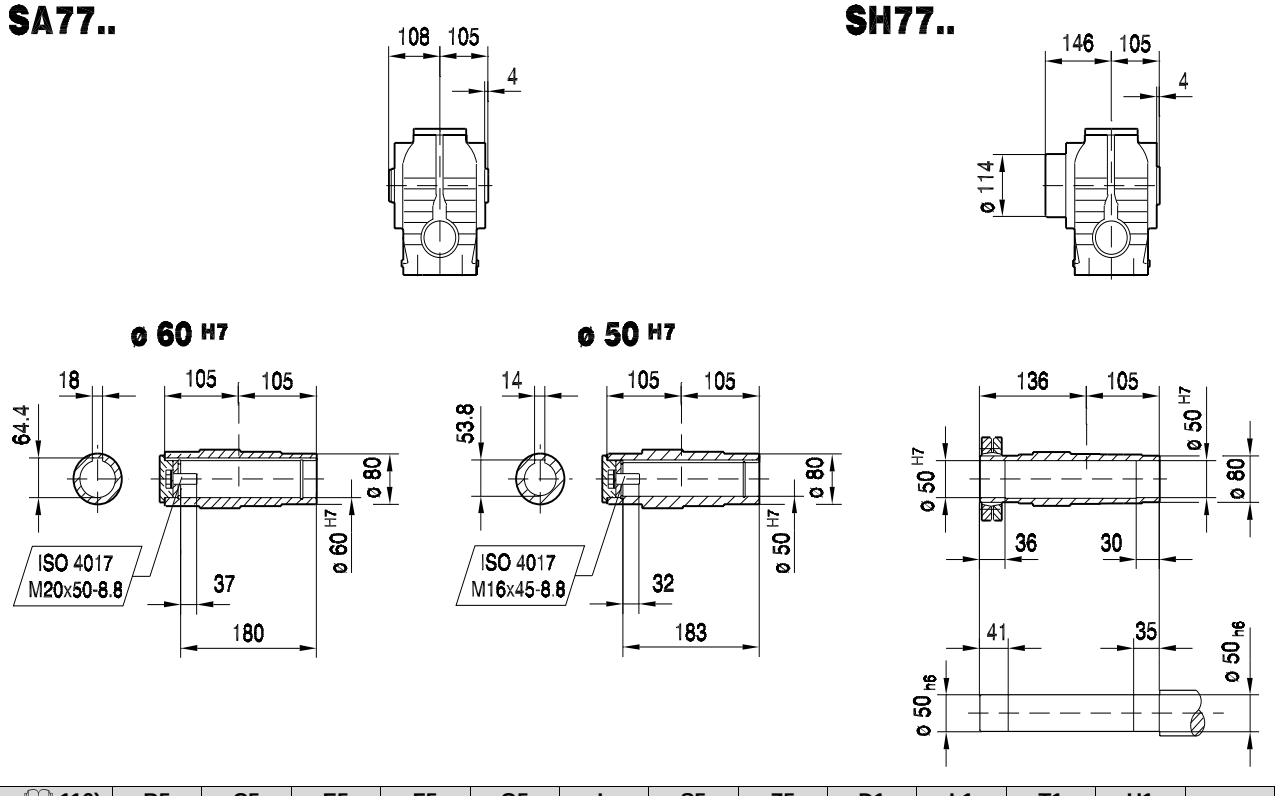




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	347	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	347	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	379	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	379	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	

27 008 01 01

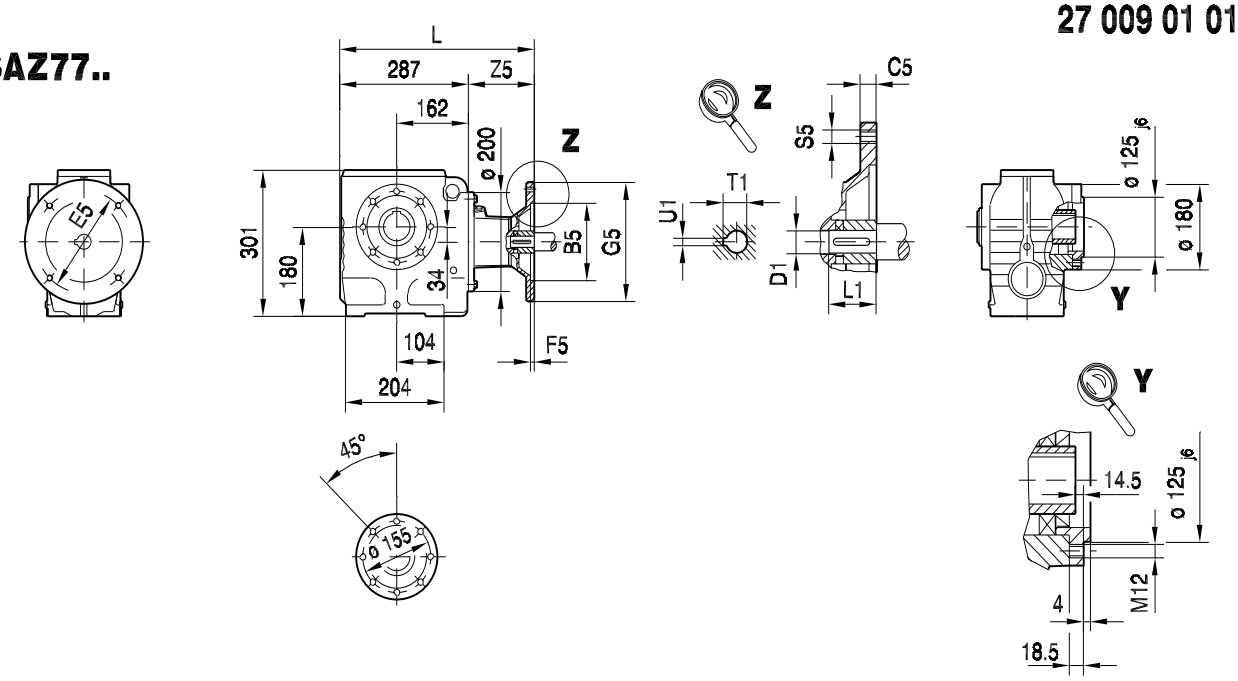




(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	347	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	347	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	379	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	379	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	

27 009 01 01

SAZ77..



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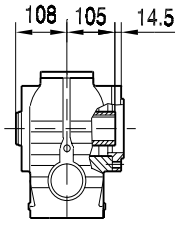
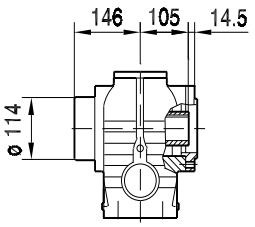
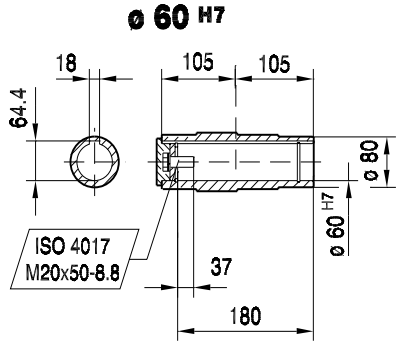
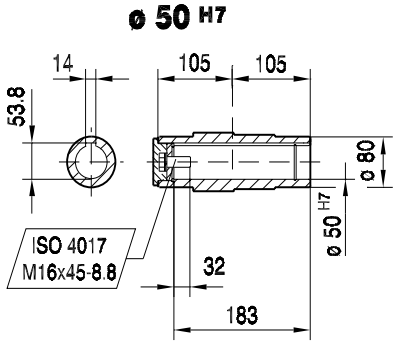
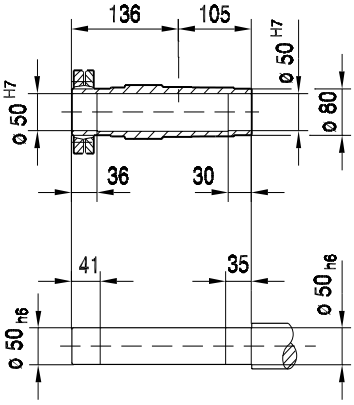


SHZ77..



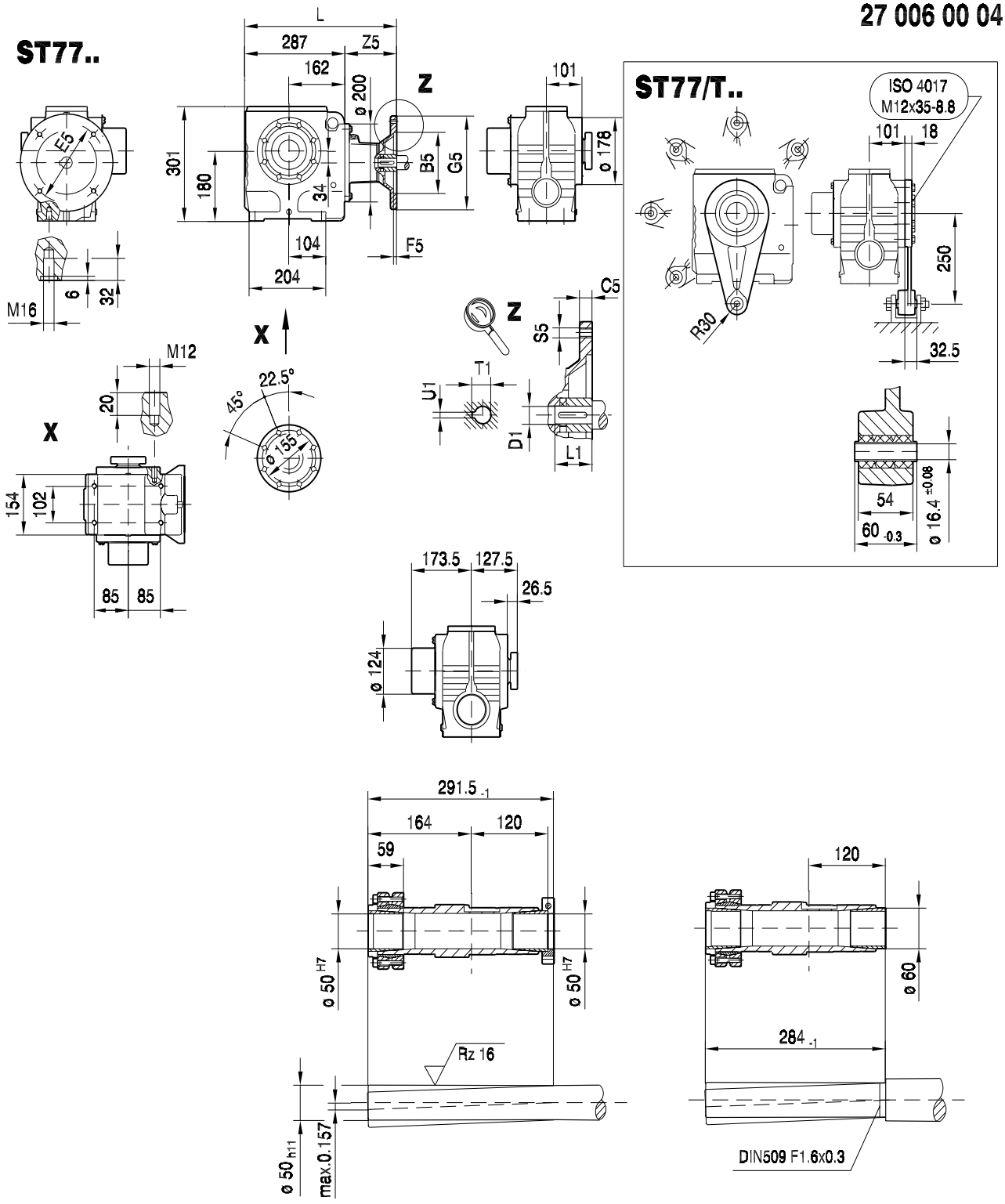






(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	347	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	347	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	379	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	379	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	

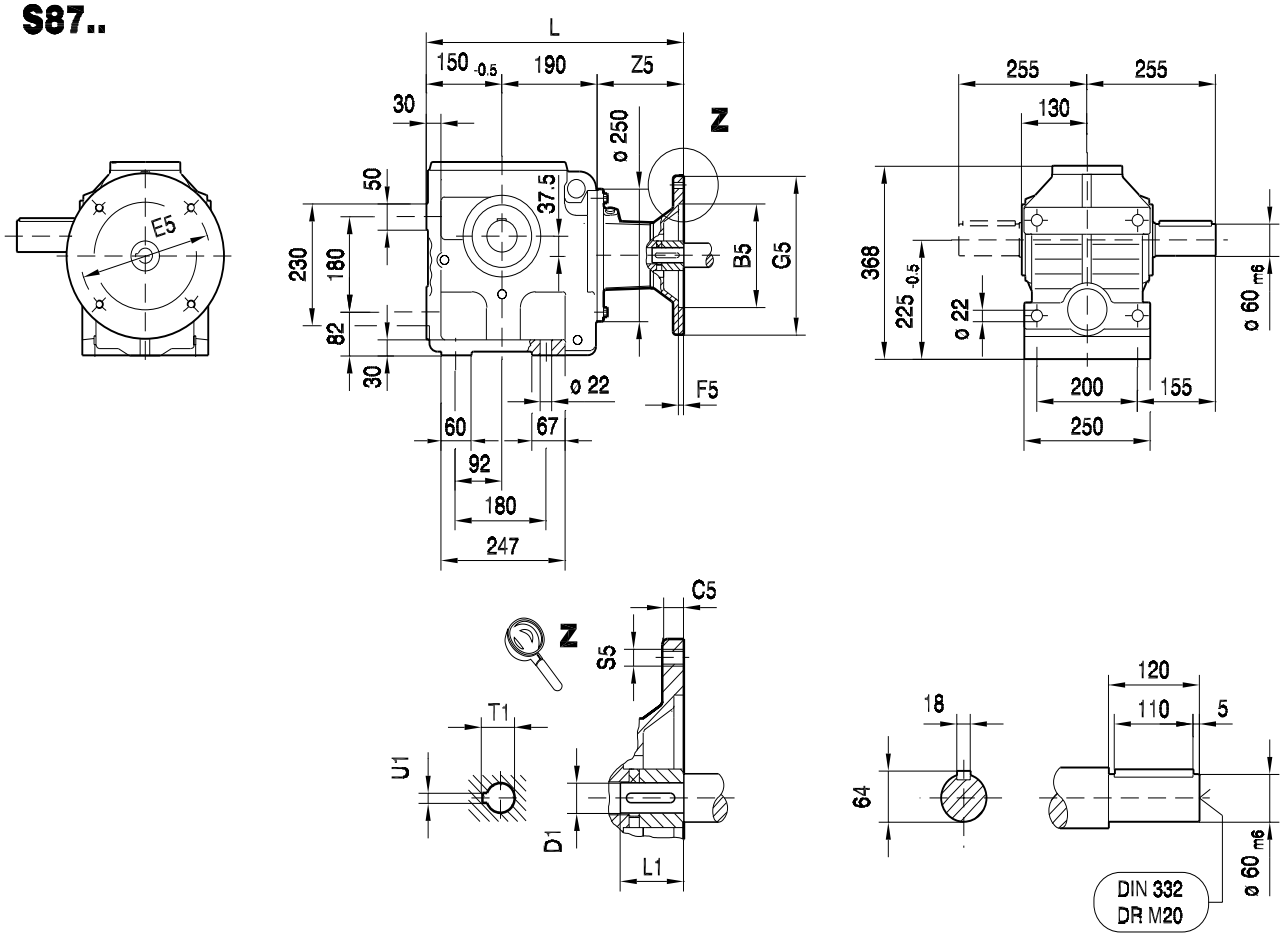
27 006 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM63	95	10	115	3.5	140	347	M8	60	11	23	12.8	4	
AM71	110	10	130	4.0	160	347	M8	60	14	30	16.3	5	
AM80	130	12	165	4.5	200	379	M10	92	19	40	21.8	6	
AM90	130	12	165	4.5	200	379	M10	92	24	50	27.3	8	
AM100	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM112	180	15	215	5.0	250	413	M12	126	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	466	M12	179	38	80	41.3	10	

02 020 01 01

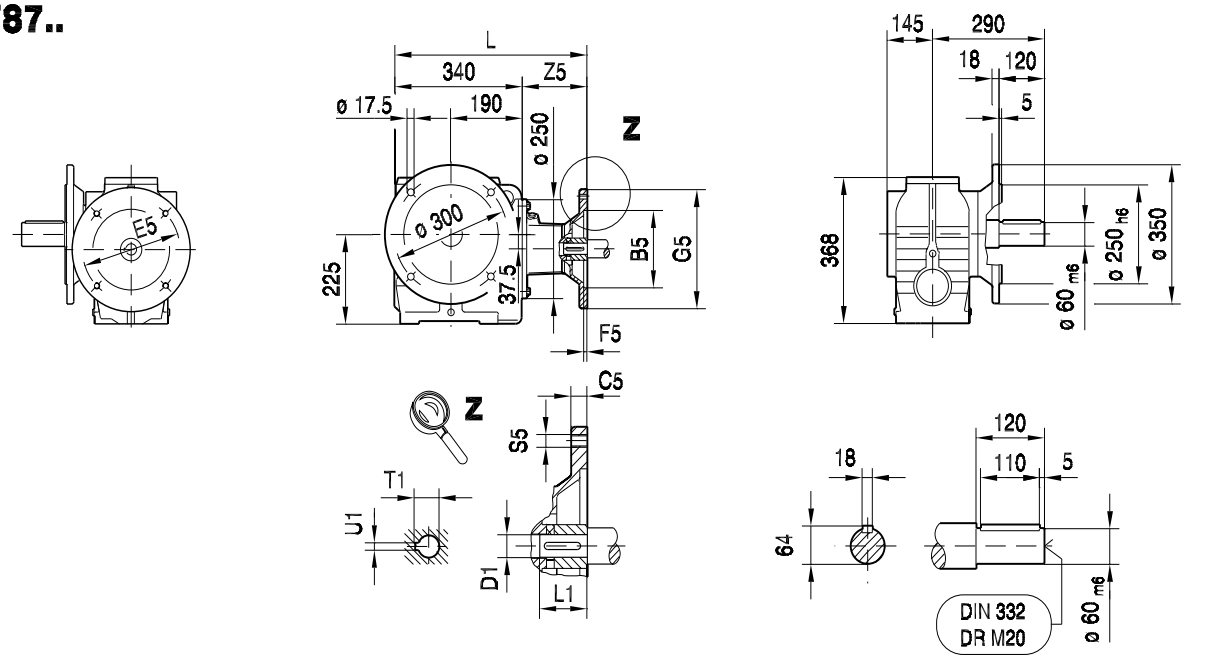
S87..



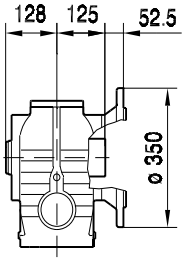
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	427	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	427	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	572	M16	232	42	110	45.3	12	

02 021 01 01

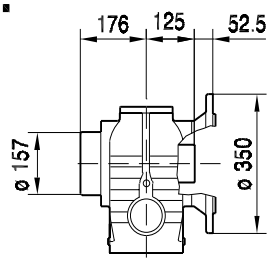
SF87..



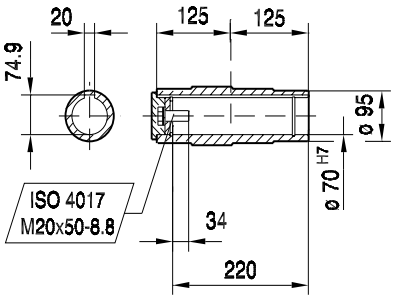
SAF87..



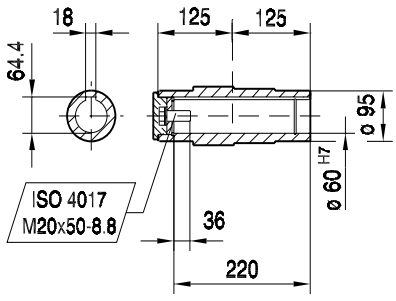
SHF87..

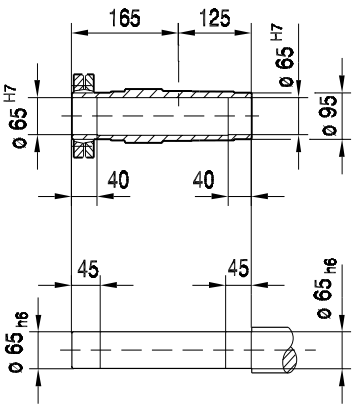


ø 70 H7



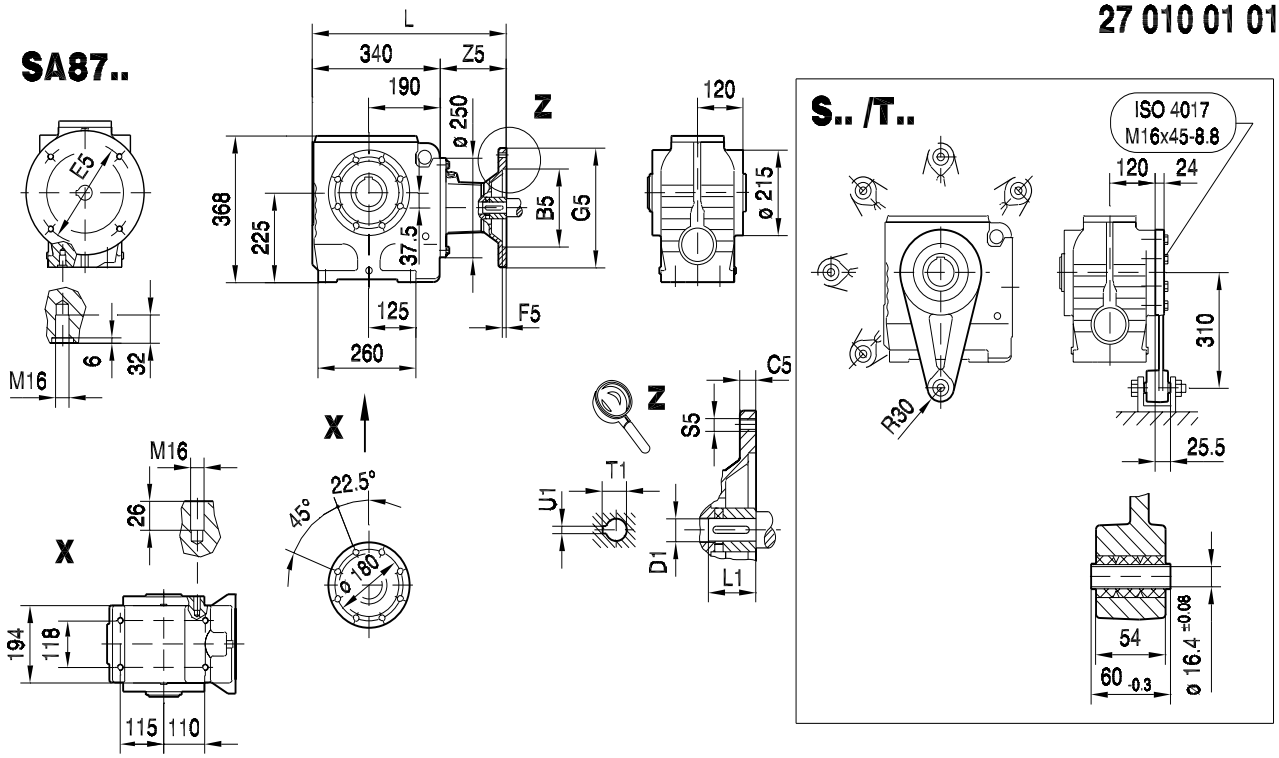
ø 60 H7

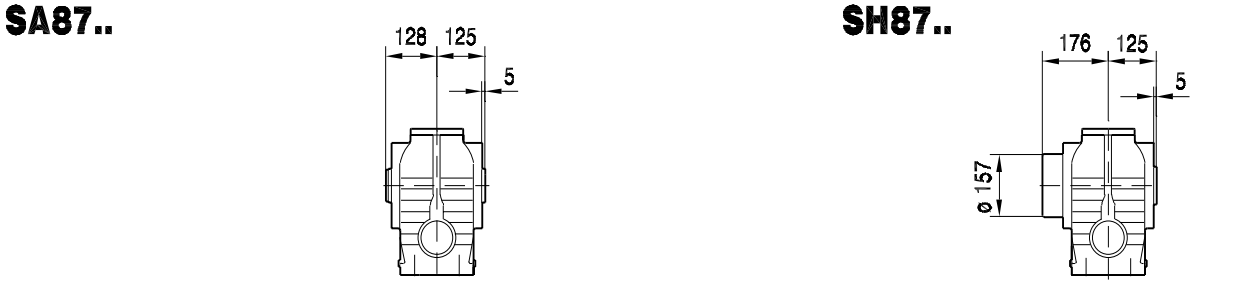


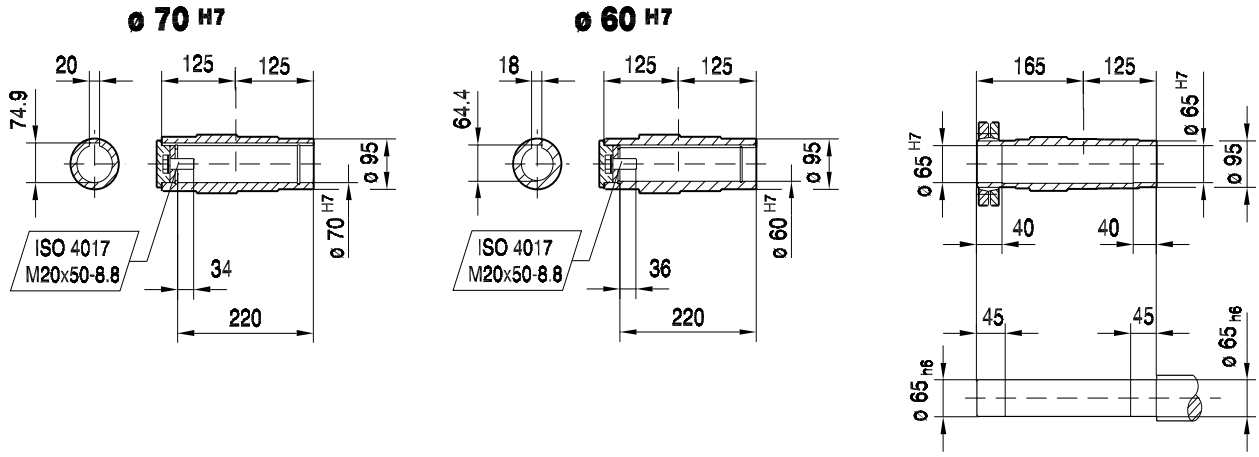


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	427	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	427	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	572	M16	232	42	110	45.3	12	

27 010 01 01



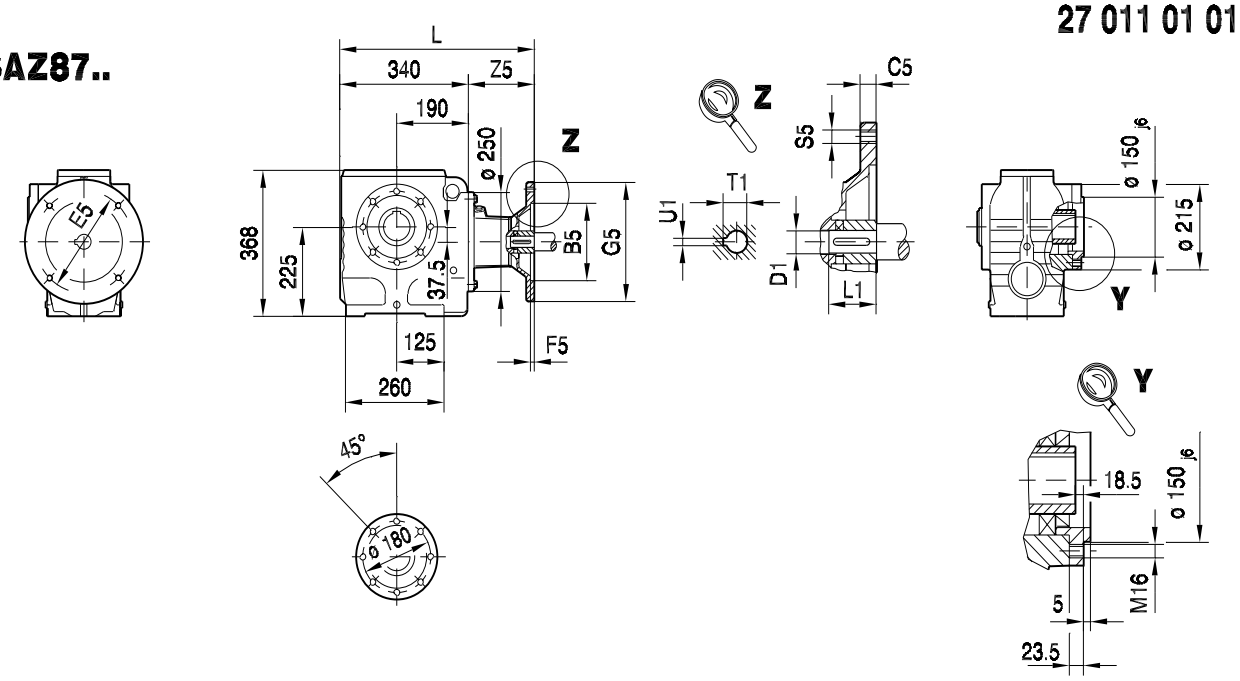




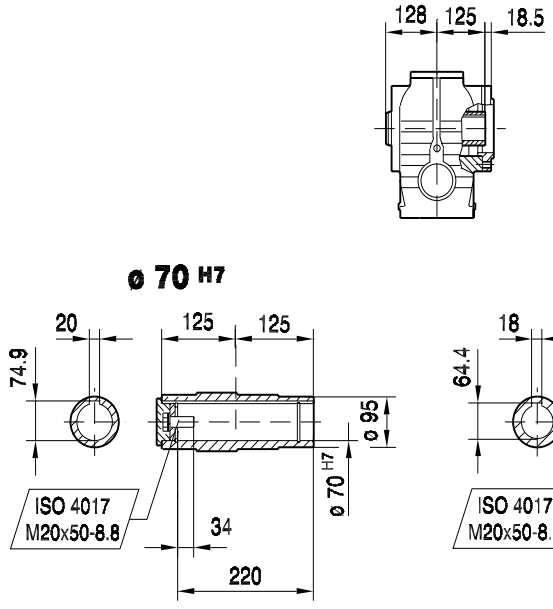
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	427	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	427	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	572	M16	232	42	110	45.3	12	

27 011 01 01

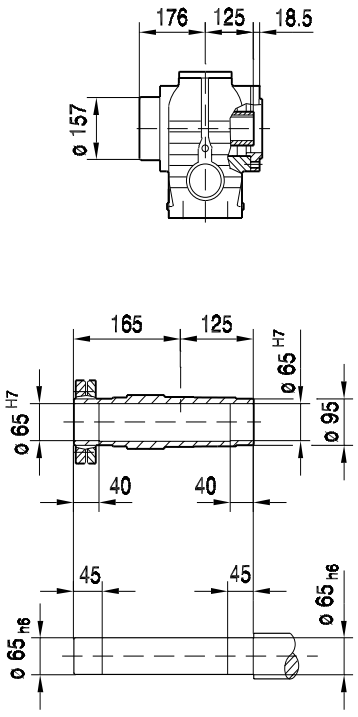
SAZ87..



SAZ87..

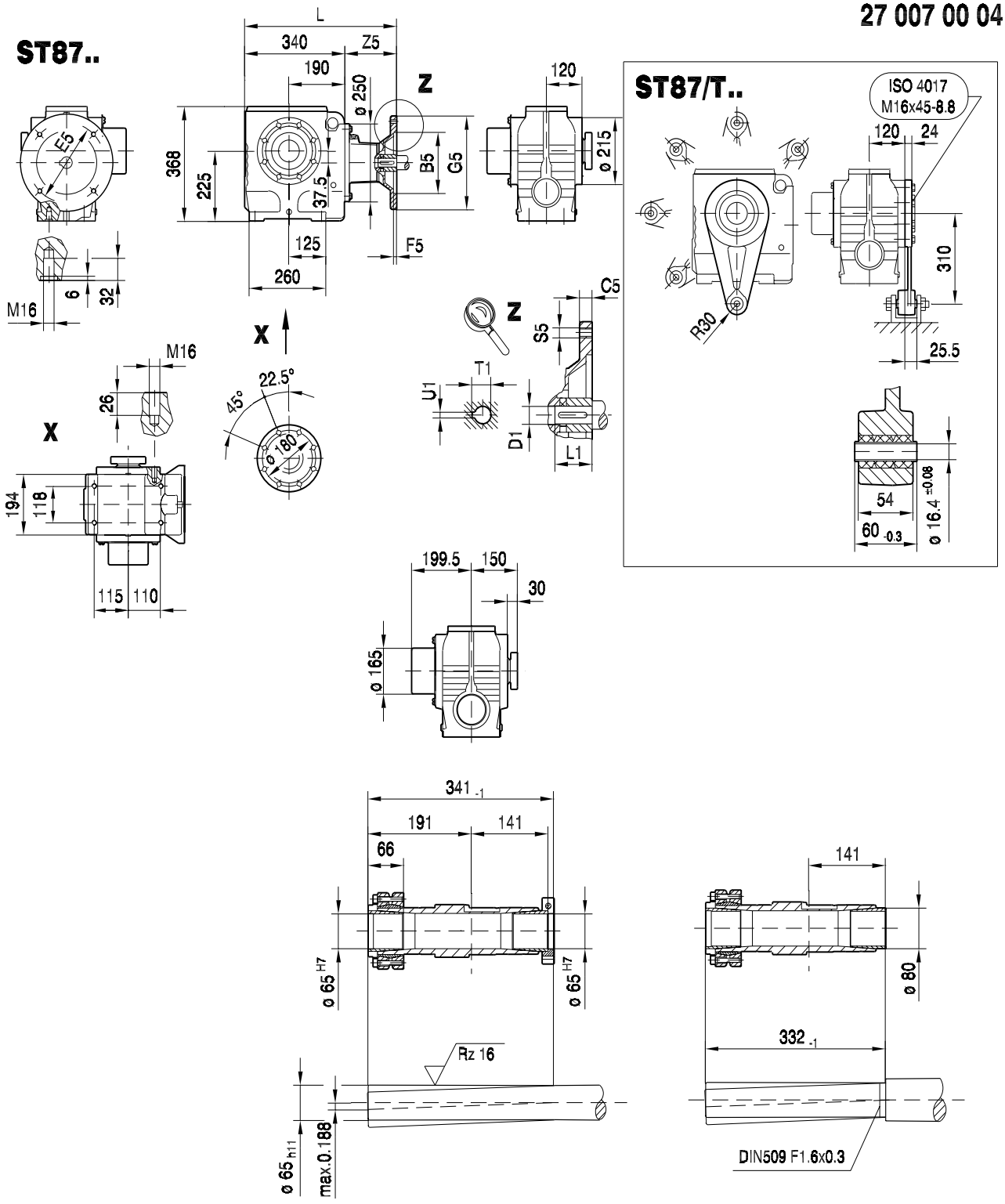


SHZ87..



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	427	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	427	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	572	M16	232	42	110	45.3	12	

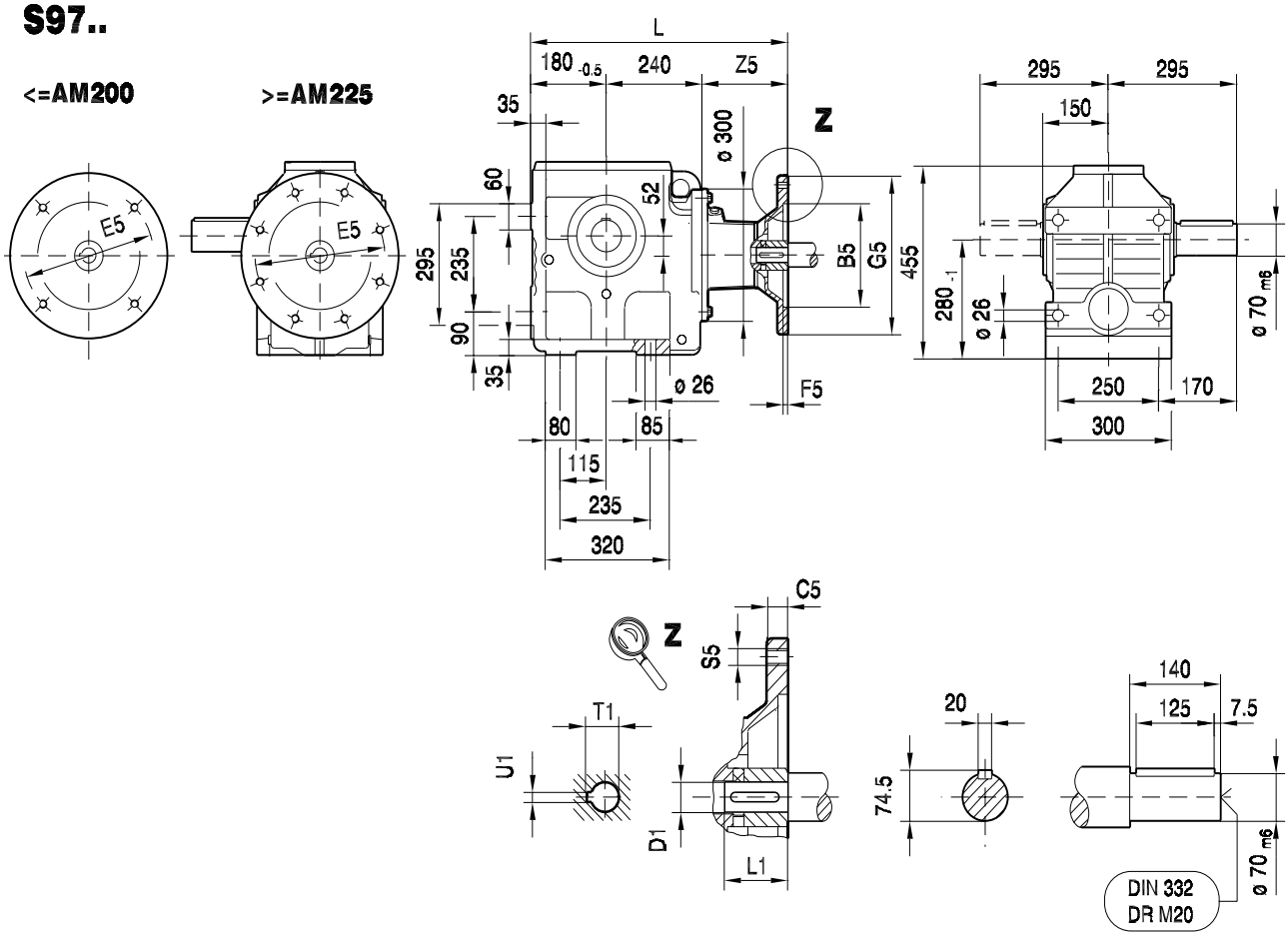
27 007 00 04



(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM80	130	12	165	4.5	200	427	M10	87	19	40	21.8	6	
AM90	130	12	165	4.5	200	427	M10	87	24	50	27.3	8	
AM100	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM112	180	15	215	5.0	250	461	M12	121	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	514	M12	174	38	80	41.3	10	
AM160	250	18	300	6.0	350	572	M16	232	42	110	45.3	12	

02 022 01 01

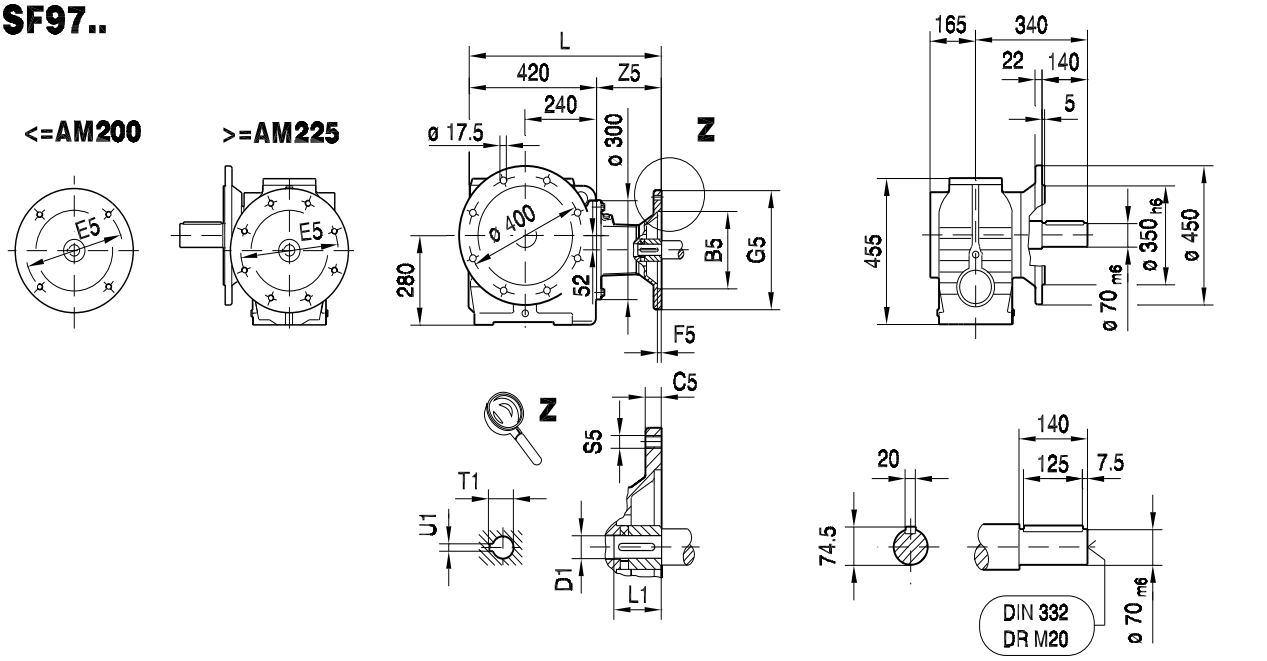
S97..



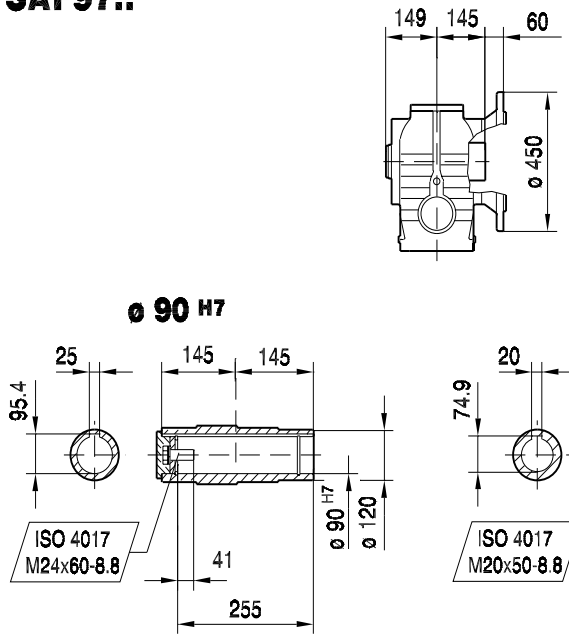
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	647	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	647	M16	227	48	110	51.8	14	

02 023 01 01

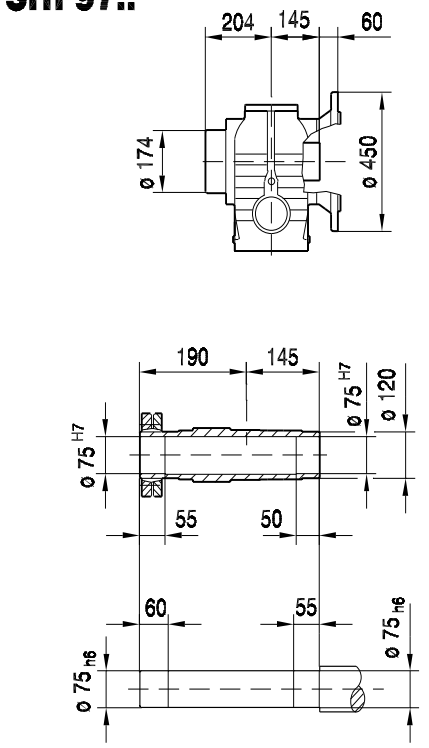
SF97..



SAF97..

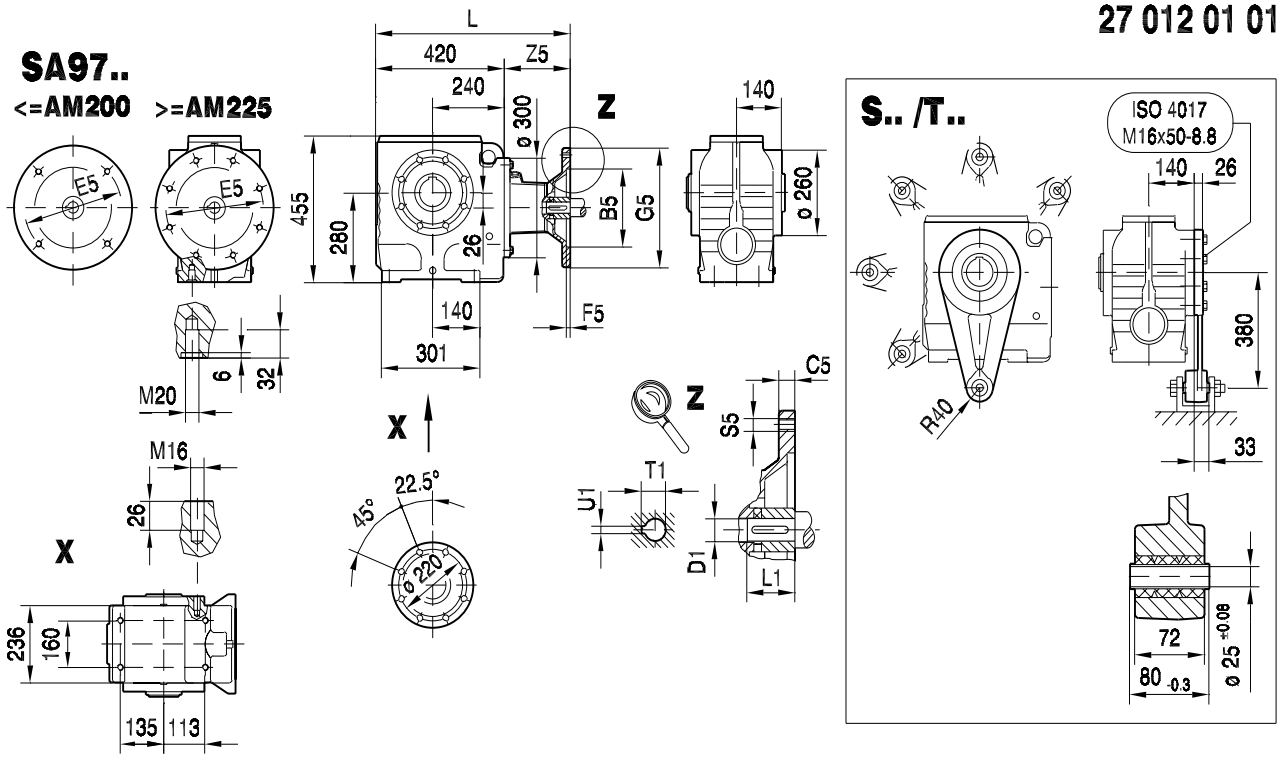


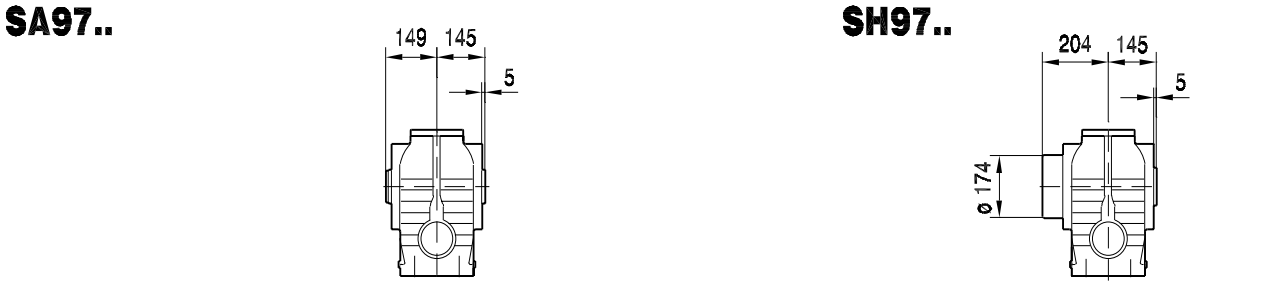
SHF97..

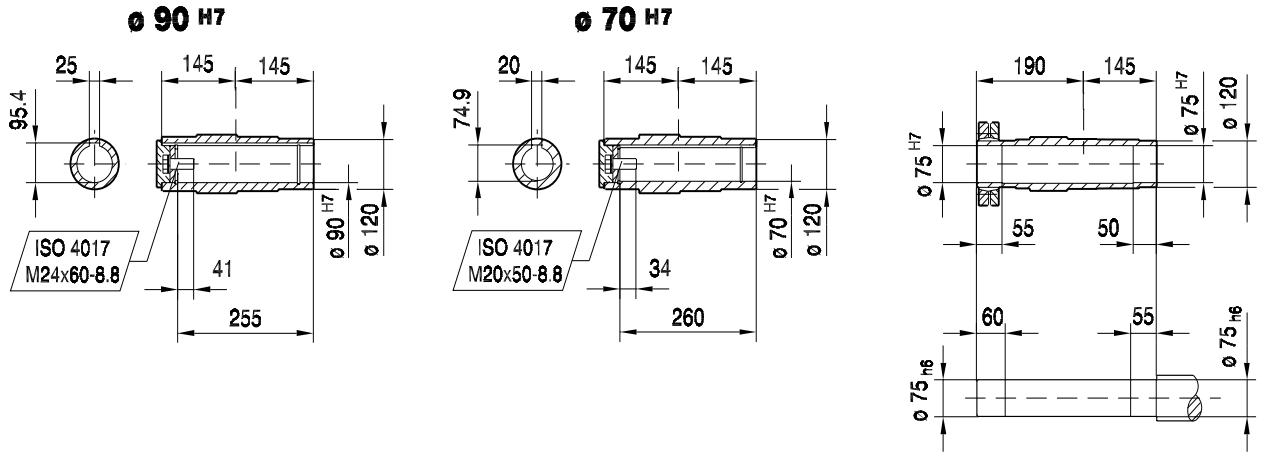


(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	647	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	647	M16	227	48	110	51.8	14	

27 012 01 01



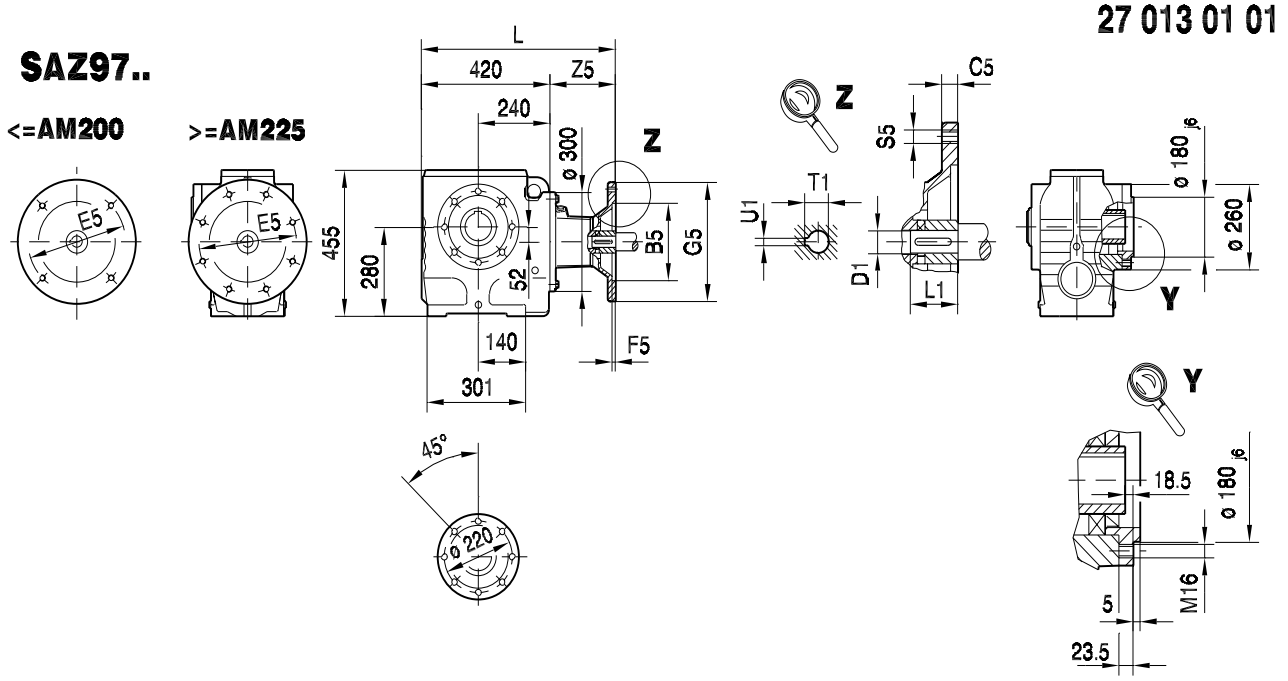




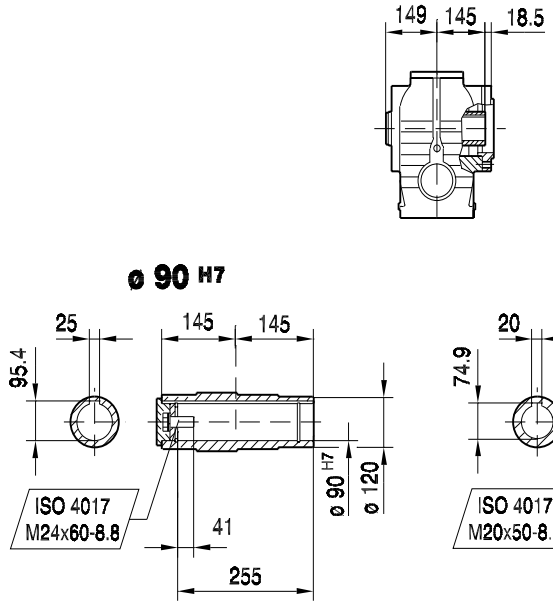
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	647	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	647	M16	227	48	110	51.8	14	

27 013 01 01

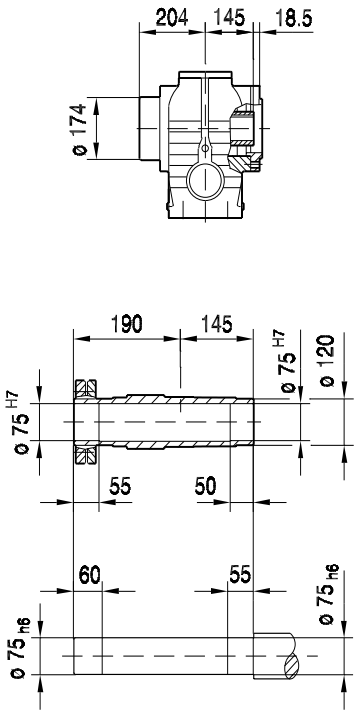
SAZ97..



SAZ97..

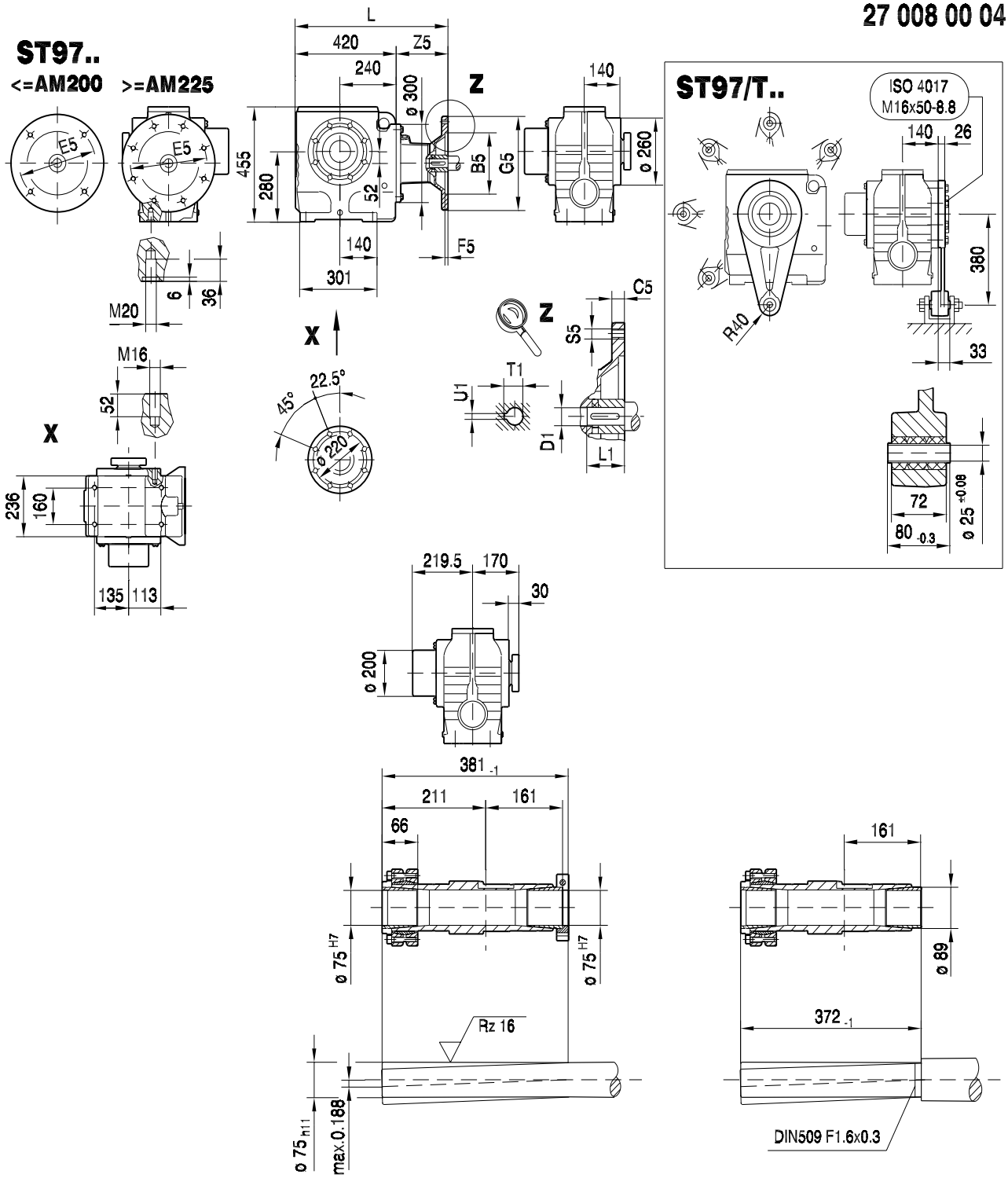


SHZ97..



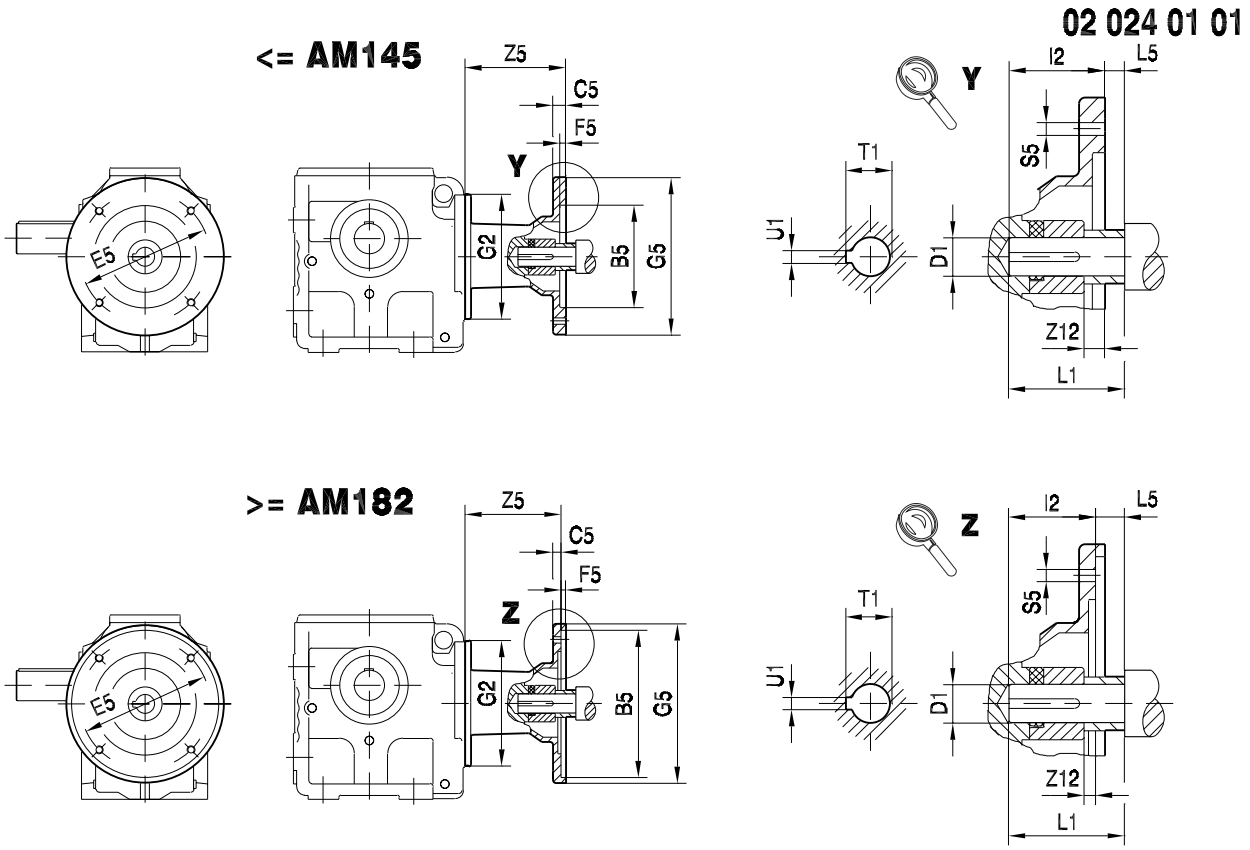
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	647	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	647	M16	227	48	110	51.8	14	

27 008 00 04



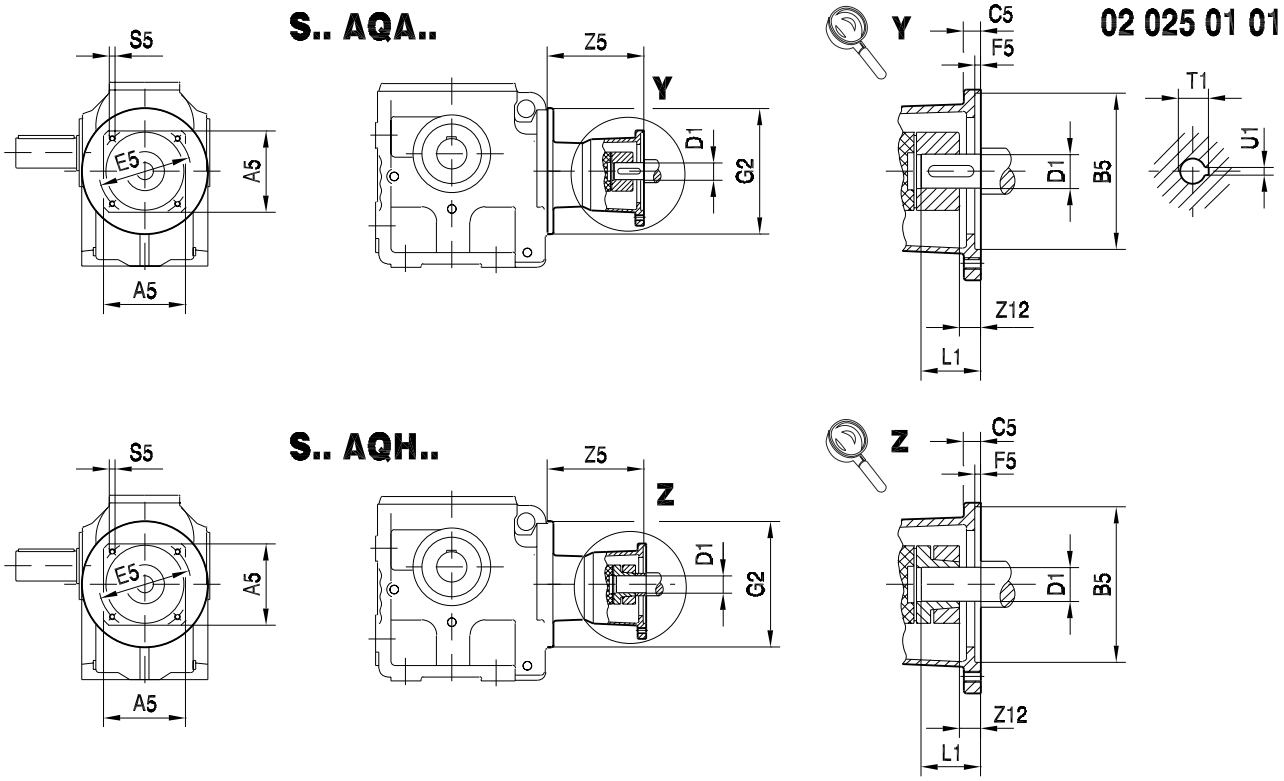
(→ 116)	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1	
AM100	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM112	180	15	215	5.0	250	536	M12	116	28	60	31.3	8	
AM132S/M	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM132ML	230	16	265	5.0	300	589	M12	169	38	80	41.3	10	
AM160	250	18	300	6.0	350	647	M16	227	42	110	45.3	12	
AM180	250	18	300	6.0	350	647	M16	227	48	110	51.8	14	

14.6 S.. AM.. (NEMA) [mm]

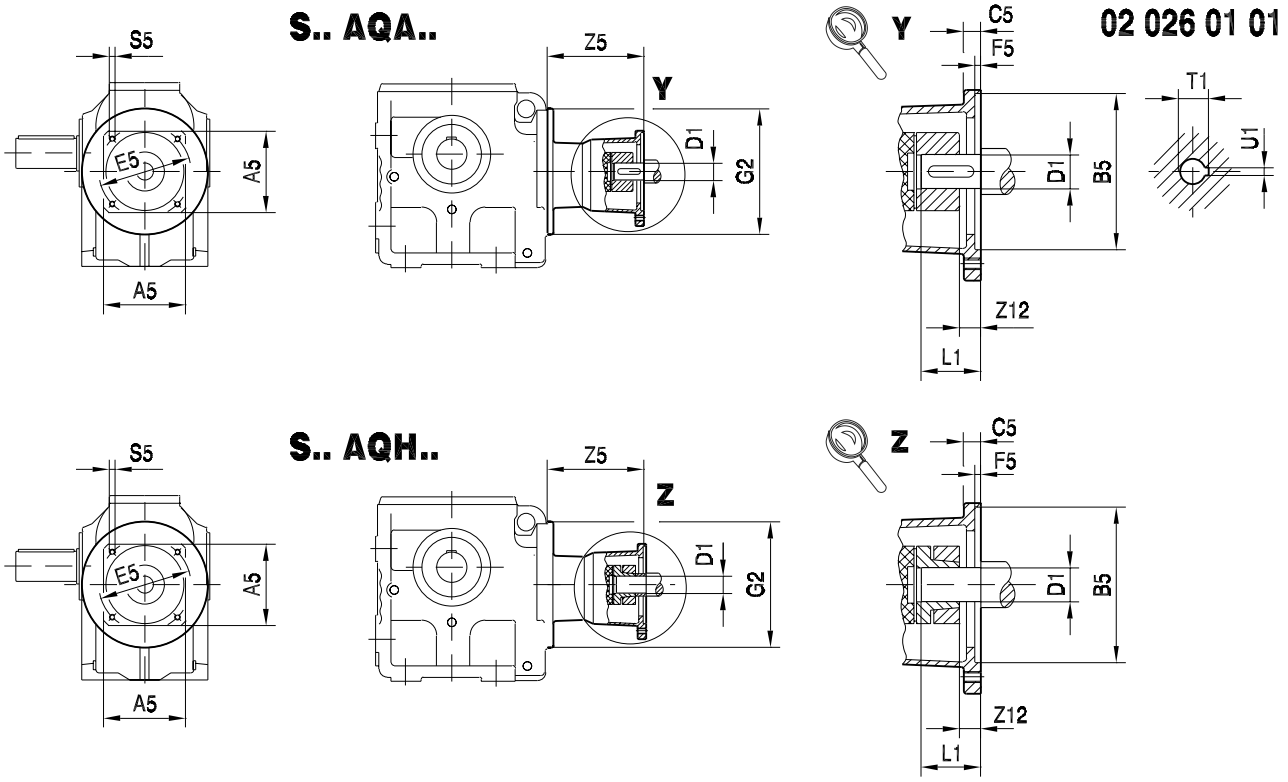


		B5	C5	E5	F5	G2	G5	I2	L5	S5	Z5	Z12	D1	L1	T1	U1
S..37	**AM56**	114.3	11	149.2	4.5	120	170	52.55	-4.8	10.5	93.5	16.5	15.875	47.75	18.1	4.76
S..47	**AM143**		12					54.1	3.05		117	11.45	22.225	57.15	24.7	
S..57	**AM145**															
S..67	**AM56**	114.3	11	149.2	4.5	160	170	52.55	-4.8	10.5	87	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		110.5	11.45	22.225	57.15	24.7	
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	147.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		200.5	9.5	34.925	85.85	38.7	7.94
S..77	**AM56**	114.3	11	149.2	4.5	200	170	52.55	-4.8	10.5	81	16.5	15.875	47.75	18.1	4.76
	AM143		12					54.1	3.05		103.5	11.45	22.225	57.15	24.7	
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	139.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		188.5	9.5	34.925	85.85	38.7	7.94
S..87	**AM143**	114.3	12	149.2	4.5	250	170	54.1	3.05	10.5	98.5	11.45	22.225	57.15	24.7	4.76
	AM145															
	AM182	215.9	10	184	5		228	66,85	3	15	134.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		183.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		234	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	15	228.6	5		286	111.05	6.3	15	241	9.5	47.625	117.35	53.4	12.7
S..97	**AM182**	215.9	10	184	5	300	228	66,85	3	15	129.5	13.5	28.575	69.85	31.7	6.35
	AM184															
	AM213/215		11					79.55	6.3		178.5	9.5	34.925	85.85	38.7	7.94
	AM254/256		12					95.3	6.3		229	2.5	41.275	101.6	45.8	9.53
	AM284/286	266.7	20	228.6	5		286	111.05	6.3	15	236	9.5	47.625	117.35	53.4	12.7
	AM324/326	317.5	17	279.4	5		356	127.05	6.3	17.5	296	28.5	53.975	133.35	60	12.7
	AM364/365							143.05					60.325	149.35	67.6	15.875

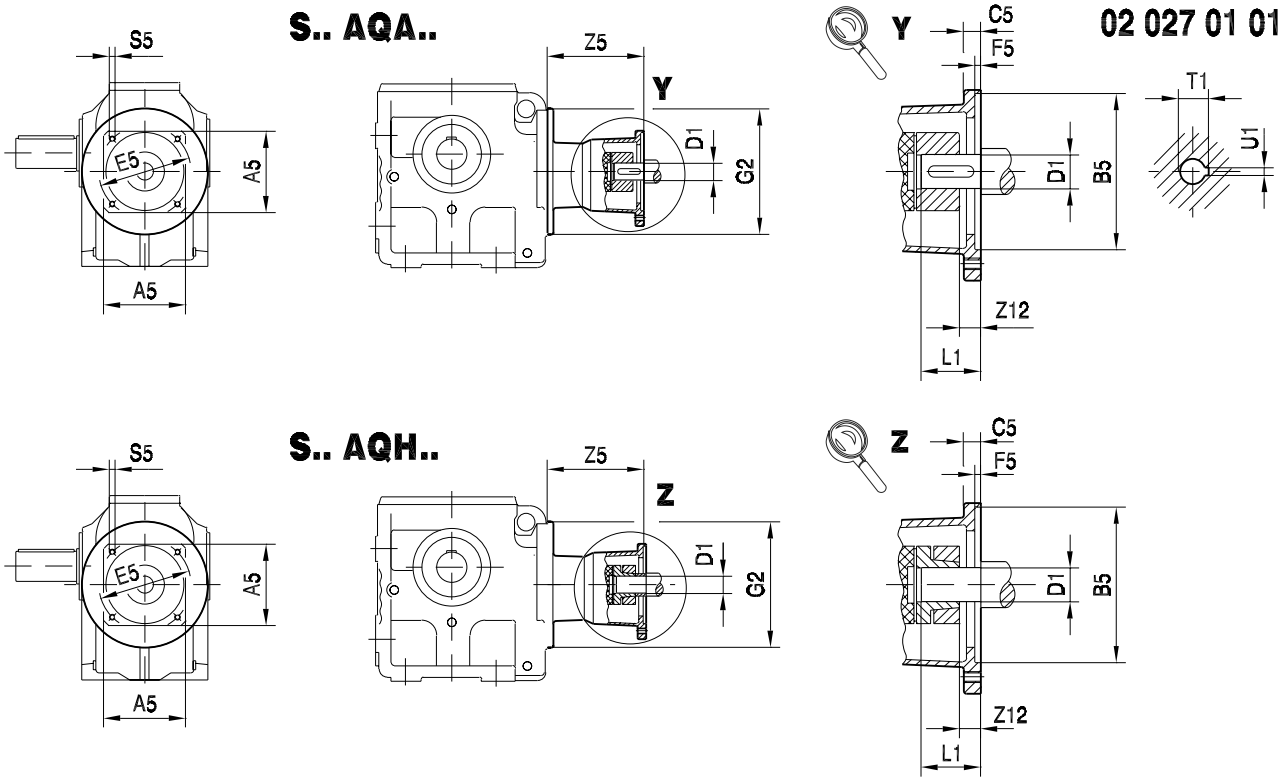
14.7 S.. AQ.. [mm]



		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
S..37 S..47 S..57	AQ..80/1	82	60	8	75	3.5	120	M5	104.5	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	129.5	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	143.5	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	152.5	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
S..67	AQ..80/1	82	60	8	75	3.5	160	M5	98	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	123	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	137	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	146	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	175	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								188	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	237.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								261.5	39	34	38	80	41.3	10



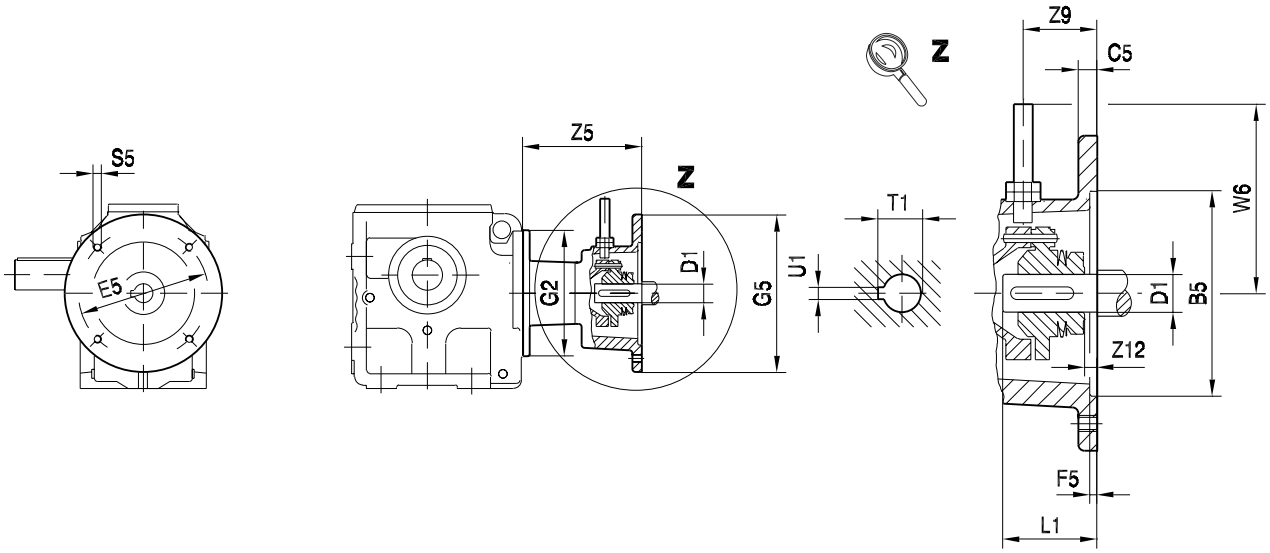
		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
S..77	**AQ..80/1**	82	60	8	75	3.5	200	M5	92	5.5	5.5	11	23	12.8	4
	AQ..80/2											14	30	16.3	5
	AQ..80/3		50		95	3		M6							
	AQ..100/1	100	80	10	100	4		M6	116	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	130	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	139	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	167	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								180	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	225.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								249.5	39	34	38	80	41.3	10



		A5	B5	C5	E5	F5	G2	S5	Z5	AQA Z12	AQH Z12	D1	L1	AQA T1	AQA U1
S..87	AQ..100/1	100	80	10	100	4	250	M6	111	0	0	14	30	16.3	5
	AQ..100/2		95	12	115			M8							
	AQ..100/3		80	10	100			M6	125	7	14	19	40	21.8	6
	AQ..100/4		95	12	115			M8							
	AQ..115/1	115	95	12	130	5		M8	134	16	23	19	40	21.8	6
	AQ..115/2		110												
	AQ..115/3									21	16	24	50	27.3	8
	AQ..140/1	140	110	15	165	5		M10	162	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								175	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	220.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								244.5	39	34	38	80	41.3	10
S..97	AQ..140/1	140	110	15	165	5	300	M10	157	21	16	24	50	27.3	8
	AQ..140/2		130												
	AQ..140/3								170	24	22	32	60	35.3	10
	AQ..190/1	190	130	16	215	5		M12	215.5	26	24	32	60	35.3	10
	AQ..190/2		180												
	AQ..190/3								239.5	39	34	38	80	41.3	10

14.8 S.. AR.. [mm]

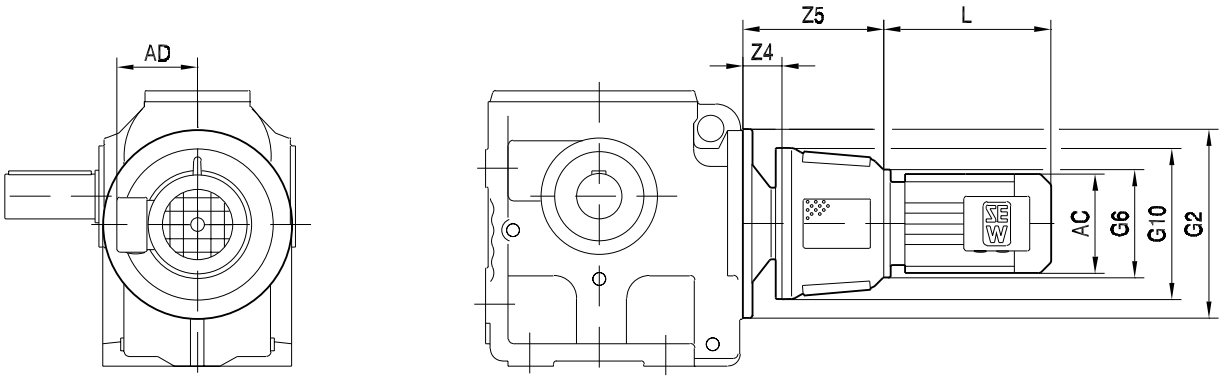
02 028 01 01



		B5	C5	E5	F5	G2	G5	S5	W6	Z5	Z9	Z12	D1	L1	T1	U1
S..37	**AR71**	110	10	130	4	120	160	M8	120	104	37	0	14	30	16.3	5
S..47	**AR80**	130	12	165	4.5		200	M10		140.5			19	40	21.8	6
S..57	**AR90**												24	50	27.3	8
	AR71	110	10	130	4	160	160	M8	120	97.5	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		134			19	40	21.8	6
S..67	**AR90**												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	174.5	52	5.5	28	60	31.3	8
	AR112															
	AR71	110	10	130	4	200	160	M8	120	91.5	37	0	14	30	16.3	5
	AR80	130	12	165	4.5		200	M10		127			19	40	21.8	6
	AR90												24	50	27.3	8
S..77	**AR100**	180	15	215	5		250	M12	130	166.5	52	5.5	28	60	31.3	8
	AR112															
	AR132S/M	230	16	265	5		300	M12	145	234	72	5	38	80	41.3	10
	AR132ML															
	AR80	130	12	165	4.5	250	200	M10	120	122	37	0	19	40	21.8	6
	AR90												24	50	27.3	8
	AR100	180	15	215	5		250	M12	130	161.5	52	5.5	28	60	31.3	8
S..87	**AR112**															
	AR132S/M	230	16	265	5		300	M12	145	229	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	306.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14
	AR100	180	15	215	5	300	250	M12	130	156.5	52	5.5	28	60	31.3	8
	AR112															
S..97	**AR132S/M**	230	16	265	5		300	M12	145	224	72	5	38	80	41.3	10
	AR132ML															
	AR160	250	18	300	6		350	M16	165	301.5	105	35	42	110	45.3	12
	AR180												48	110	51.8	14

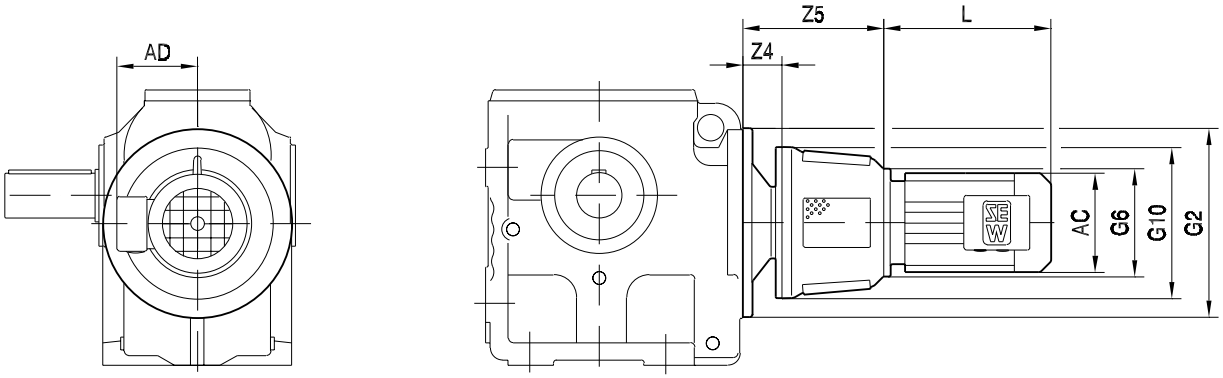
14.9 S.. AT.. [mm]

26 001 01 01



			AC	AD	G6	G10	L	Z4	Z5	G2
S..67	AT311 AT312	DT71D	145	122	200	280	202	97	286	160
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT321 AT322	DT90..	197	154	250	350	257	97	333	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
S..77	AT311 AT312	DT71D	145	122	200	280	202	89	278	200
		DT80..					252			
		DT90..	197	154			273			
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	133	368	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			

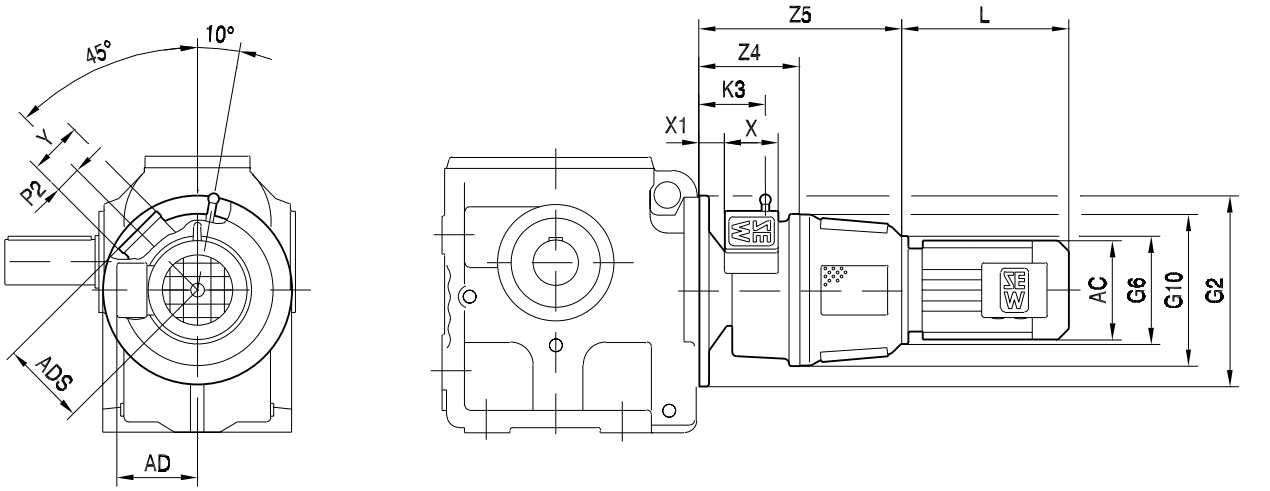
26 002 01 01



			AC	AD	G6	G10	L	Z4	Z5	G2
S..87	AT311 AT312	DT90..	197	154	200	280	273	84	273	250
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	128	363	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	159	478	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
S..97	AT311 AT312	DT90..	197	154	200	280	273	79	268	300
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			345			
		DV132S					390			
	AT421 AT422	DT90..	197	154	250	350	257	123	358	
		DV100M		166			311			
		DV100L					341			
		DV112M	221	176			349			
		DV132S					394			
		DV132M	275	230			407			
		DV132ML					467			
		DV160M					467			
	AT522 AT541 AT542	DV132S	221	176	350	470	374	154	473	
		DV132M	275	230			402			
		DV132ML					462			
		DV160M					462			
		DV160L	331	259			503			
		DV180..					575			

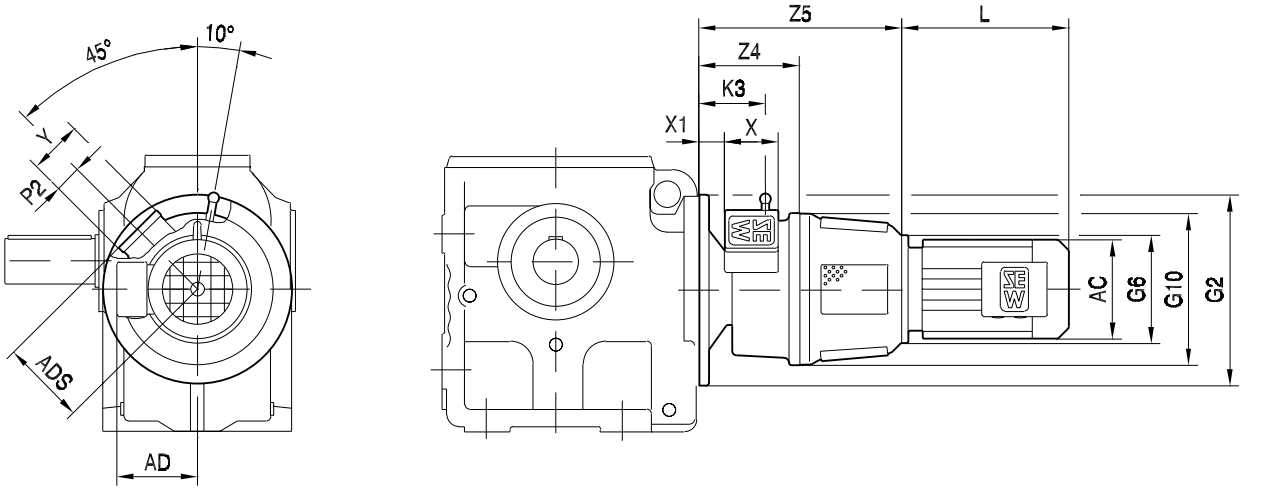
14.10 S.. AT../BM(G) [mm]

26 003 01 01



			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
S..67	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	153	84	97	89	127	223	411	160
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT321/BMG AT322/BMG	DT90..	197	154	215	250	352	257							458	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
S..77	AT311/BMG AT312/BMG	DT71D	145	122	184	200	282	202	145	84	97	81	127	215	403	200
		DT80..						252								
		DT90..	197	154				273								
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	183	84	97	119	127	252	488	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								

26 004 01 01

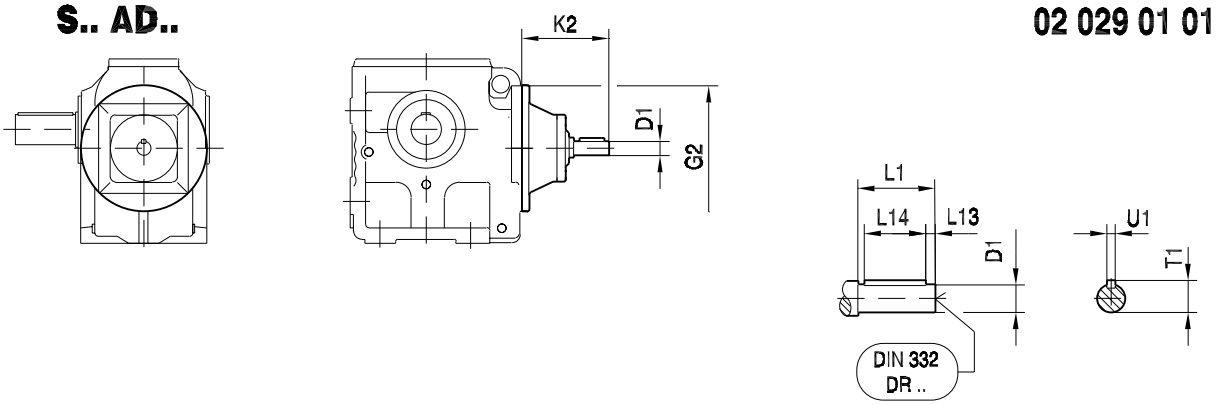


			AC	AD	ADS	G6	G10	L	K3	P2	X	X1	Y	Z4	Z5	G2
S..87	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	140	84	97	76	127	210	398	250
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	178	84	97	114	127	247	483	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	244	84	97	148	127	331	650	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
S..97	AT311/BMG AT312/BMG	DT90..	197	154	184	200	282	273	135	84	97	71	127	205	393	300
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				345								
		DV132S						390								
	AT421/BMG AT422/BMG	DT90..	197	154	215	250	352	257	173	84	97	109	127	242	478	
		DV100M		166				311								
		DV100L						341								
		DV112M	221	176				349								
		DV132S						394								
		DV132M	275	230				407								
		DV132ML						467								
		DV160M						467								
	AT522/BM AT541/BM AT542/BM	DV132S	221	176	275	350	472	374	239	84	97	143	127	326	645	
		DV132M	275	230				402								
		DV132ML						462								
		DV160M						462								
		DV160L	331	259				503								
		DV180..						575								

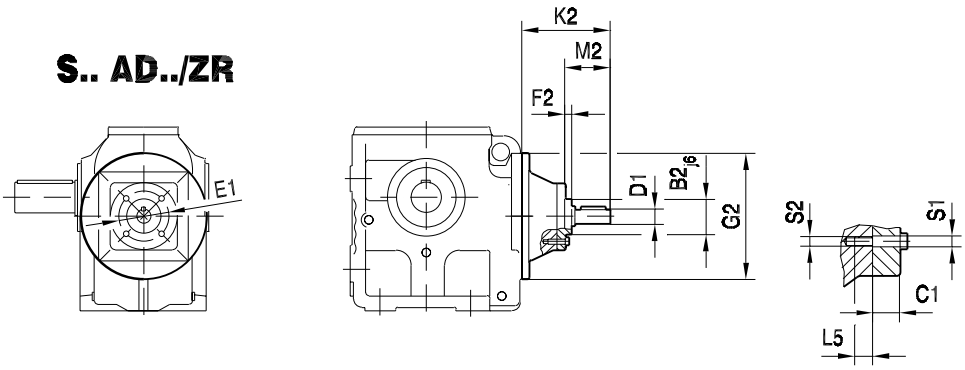
14.11 S.. AD.. [mm]

S.. AD..

02 029 01 01



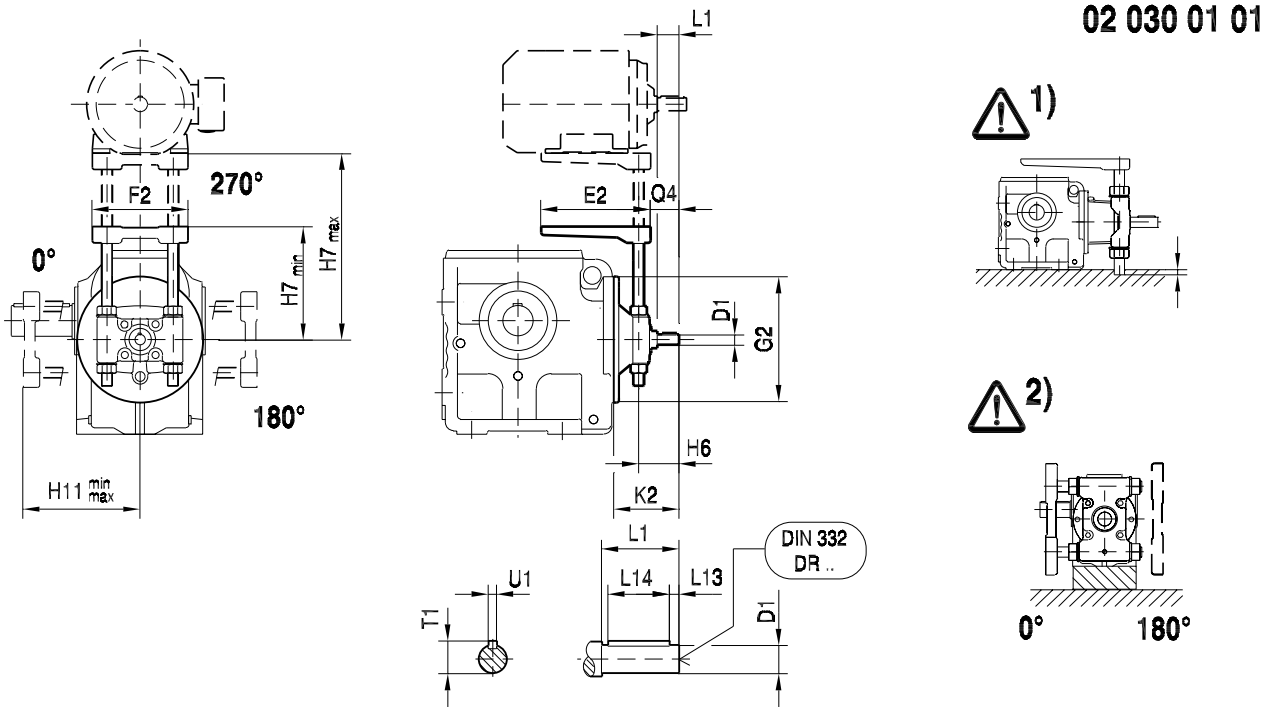
S.. AD../ZR



		B2	C1	E1	F2	G2	K2	L5	M2	S1	S2	D1	L1	L13	L14	T1	U1
S..37 , S..47 S..57	**AD1**	-	-	-	-	120	102	-	-	-	-	16	40	4	32	18	5
	AD2 , AD2/ZR	55	13.5	80	8		130	12	50	9	M8	19	40	4	32	21.5	6
S..67	**AD2 , AD2/ZR**	55	13.5	80	8	160	123	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		159	16	60	11	M10	24	50	5	40	27	8
S..77	**AD2 , AD2/ZR**	55	13.5	80	8	200	116	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		151	16	60	11	M10	24	50	5	40	27	8
	AD4 , AD4/ZR	100	16	130	13		224	20	95.5	13.5	M12	38	80	5	70	41	10
S..87	**AD2 , AD2/ZR**	55	13.5	80	8	250	111	12	50	9	M8	19	40	4	32	21.5	6
	AD3 , AD3/ZR	70	15.5	105	8		156	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		219	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		292	20	126	13.5	M12	42	110	10	70	45	12
S..97	**AD3 , AD3/ZR**	70	15.5	105	8	300	151	16	70	11	M10	28	60	5	50	31	8
	AD4 , AD4/ZR	100	16	130	13		214	20	95.5	13.5	M12	38	80	5	70	41	10
	AD5 , AD5/ZR	120	24	180	11		287	20	126	13.5	M12	42	110	10	70	45	12
	AD6 , AD6/ZR	130	22.5	200	11		327	26	130.5	17.5	M16	48	110	10	80	51.5	14

14.12 S.. AD../P [mm]

02 030 01 01



			E2	F2	G2	H6	H7 min	H7 max	H11 min	H11 max	K2	Q4	D1	L1	L13	L14	T1	U1	⚠ →118
S..37 S..47	**AD2/P**	**DT71D DT80.. DT90..**	195	180	120	65	110	165	95	165	130	43	19	40	4	32	21.5	6	1), 2)
S..57	**AD2/P**	**DT71D DT80.. DT90..**	195	180	120	65	140	200	110	165	130	43	19	40	4	32	21.5	6	1)
S..67	**AD2/P**	**DT71D DT80.. DT90..**	195	180	160	65	140	200	125	165	123	43	19	40	4	32	21.5	6	1)
	AD3/P	**DV100.. DV112..**	230	240		80	145	175	130	175	159	54	24	50	5	40	27	8	2)
S..77	**AD2/P**	**DT71D DT80.. DT90..**	195	180	200	65	175	260	145	200	116	43	19	40	4	32	21.5	6	
	AD3/P	**DV100.. DV112..**	230	240		80	180	230	150	230	151	54	24	50	5	40	27	8	
	AD4/P	**DV132..**	345	291		114	190	280	150	210	224	83	38	80	5	70	41	10	1)
S..87	**AD2/P**	**DT71D DT80.. DT90..**	195	180	250	65	215	260	165	200	111	43	19	40	4	32	21.5	6	
	AD3/P	**DV100.. DV112..**	230	240		90	230	320	170	230	156	64	28	60	5	50	31	8	
	AD4/P	**DV132..**	345	291		114	250	360	170	210	219	83	38	80	5	70	41	10	1)
	AD5/P	**DV160.. DV180..**	430	355		153	260	325	185	250	292	113	42	110	10	70	45	12	1), 2)
S..97	**AD3/P**	**DT90.. DV100.. DV112..**	230	240	300	90	275	320	190	230	151	64	28	60	5	50	31	8	
	AD4/P	**DV132..**	345	291		114	305	360	190	280	214	83	38	80	5	70	41	10	
	AD5/P	**DV160.. DV180..**	430	355		153	315	405	200	250	287	113	42	110	10	70	45	12	

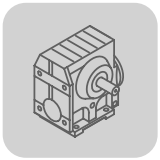
14.13 S, SF, SA, SAF 37

3400 - 2800 1/min

02 955 097

i_{ges}	i_{sch}	n_e = 3400 1/min				n_e = 3200 1/min				n_e = 2800 1/min			
		n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
157.43	38/1	**22**	78	0.31	57	**20**	80	0.30	57	**18**	82	0.27	57
144.40		**24**	76	0.33	58	**22**	78	0.31	58	**19**	80	0.28	57
122.94		**28**	74	0.37	58	**26**	75	0.35	58	**23**	78	0.32	58
106.00		**32**	71	0.41	59	**30**	72	0.39	59	**26**	76	0.36	59
98.80		**34**	70	0.43	59	**32**	72	0.41	59	**28**	75	0.38	59
86.36		**39**	68	0.47	60	**37**	69	0.45	60	**32**	72	0.41	60
80.96		**42**	66	0.49	60	**40**	68	0.47	60	**35**	72	0.43	60
71.44		**48**	55	0.47	58	**45**	64	0.50	60	**39**	70	0.47	61
63.33		**54**	37	0.41	51	**51**	51	0.47	57	**44**	67	0.51	61
53.83		**63**	29	0.39	49	**59**	32	0.40	50	**52**	53	0.49	59
55.93	27/2	**61**	70	0.58	77	**57**	71	0.56	76	**50**	72	0.50	76
51.30		**66**	68	0.61	77	**62**	70	0.60	77	**55**	72	0.54	76
43.68		**78**	66	0.70	77	**73**	67	0.67	77	**64**	70	0.61	77
37.66		**90**	64	0.78	78	**85**	65	0.74	78	**74**	68	0.68	78
35.10		**97**	62	0.81	78	**91**	64	0.78	78	**80**	66	0.71	78
30.68		**111**	61	0.90	78	**104**	62	0.87	78	**91**	64	0.78	78
28.76		**118**	58	0.92	78	**111**	61	0.91	78	**97**	64	0.83	78
25.38		**134**	47	0.86	77	**126**	53	0.90	78	**110**	62	0.91	79
22.50		**151**	31	0.69	71	**142**	43	0.84	76	**124**	57	0.94	79
19.13		**178**	24	0.65	69	**167**	27	0.67	70	**146**	44	0.87	77
19.89	24/5	**171**	42	0.88	86	**161**	43	0.85	86	**141**	44	0.76	86
18.24		**186**	41	0.93	86	**175**	42	0.90	86	**154**	44	0.83	86
15.53		**219**	39	1.0	86	**206**	40	1.0	86	**180**	42	0.92	86
13.39		**254**	37	1.1	86	**239**	39	1.1	86	**209**	41	1.0	86
12.48		**272**	37	1.2 *	86	**256**	38	1.2 *	86	**224**	40	1.1	86
10.91		**312**	35	1.3 *	86	**293**	36	1.3 *	86	**257**	39	1.2 *	87
10.23		**332**	35	1.4 *	87	**313**	36	1.4 *	87	**274**	38	1.3 *	87
9.02		**377**	31	1.4 *	86	**355**	34	1.5 *	87	**310**	36	1.3 *	87
8.00		**425**	20	1.1	82	**400**	29	1.4 *	86	**350**	35	1.5 *	87
6.80		**500**	16	1.0	81	**471**	18	1.1	82	**412**	29	1.4 *	86

* P_{emax} = 1.1 kW



2200 - 1400 1/min

02 955 097

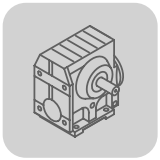
		n_e = 2200 1/min				n_e = 1700 1/min				n_e = 1400 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
157.43		**14**	87	0.23	56	**11**	91	0.19	54	**8.9**	92	0.16	53
144.40		**15**	86	0.24	56	**12**	90	0.20	55	**9.7**	92	0.17	54
122.94		**18**	83	0.27	57	**14**	87	0.22	56	**11**	91	0.20	55
106.00		**21**	81	0.30	58	**16**	86	0.25	57	**13**	88	0.22	56
98.80		**22**	80	0.32	58	**17**	85	0.27	57	**14**	87	0.23	56
86.36	38/1	**25**	78	0.35	59	**20**	82	0.29	58	**16**	86	0.25	57
80.96		**27**	77	0.37	60	**21**	82	0.31	59	**17**	85	0.27	58
71.44		**31**	75	0.40	60	**24**	80	0.33	60	**20**	84	0.29	59
63.33		**35**	73	0.44	61	**27**	79	0.37	60	**22**	82	0.32	60
53.83		**41**	69	0.48	62	**32**	76	0.41	61	**26**	80	0.36	61
55.93		**39**	77	0.42	75	**30**	81	0.35	74	**25**	81	0.29	73
51.30		**43**	76	0.45	76	**33**	80	0.37	75	**27**	81	0.31	74
43.68		**50**	74	0.51	76	**39**	78	0.42	76	**32**	81	0.36	75
37.66		**58**	72	0.57	77	**45**	76	0.47	76	**37**	79	0.41	76
35.10	27/2	**63**	71	0.60	77	**48**	75	0.50	77	**40**	78	0.43	76
30.68		**72**	70	0.67	78	**55**	73	0.55	77	**46**	76	0.47	76
28.76		**76**	68	0.70	78	**59**	73	0.58	77	**49**	75	0.50	77
25.38		**87**	67	0.77	79	**67**	71	0.64	78	**55**	74	0.55	77
22.50		**98**	66	0.85	79	**76**	70	0.70	79	**62**	73	0.61	78
19.13		**115**	63	0.95	80	**89**	68	0.80	79	**73**	71	0.69	79
19.89		**111**	48	0.65	85	**85**	50	0.53	85	**70**	52	0.46	84
18.24		**121**	47	0.70	85	**93**	49	0.56	85	**77**	52	0.50	84
15.53		**142**	45	0.78	86	**109**	48	0.64	85	**90**	50	0.56	85
13.39		**164**	44	0.88	86	**127**	47	0.73	86	**105**	49	0.63	85
12.48		**176**	43	0.92	86	**136**	46	0.76	86	**112**	48	0.66	86
10.91	24/5	**202**	42	1.0	87	**156**	45	0.85	86	**128**	48	0.75	86
10.23		**215**	41	1.1	87	**166**	45	0.90	87	**137**	47	0.78	86
9.02		**244**	40	1.2 *	87	**188**	43	0.98	87	**155**	46	0.86	87
8.00		**275**	39	1.3 *	87	**213**	43	1.1	87	**175**	45	0.95	87
6.80		**324**	37	1.4 *	88	**250**	41	1.2 *	88	**206**	43	1.1	87

* P_{emax} = 1.1 kW

1100 - 700 1/min

02 956 097

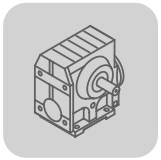
i_{ges}	i_{sch}	n_e = 1100 1/min				n_e = 900 1/min				n_e = 700 1/min			
		n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
157.43	38/1	**7.0**	92	0.13	52	**5.7**	92	0.11	50	**4.4**	92	0.09	49
144.40		**7.6**	92	0.14	52	**6.2**	92	0.12	51	**4.8**	92	0.09	50
122.94		**8.9**	92	0.16	54	**7.3**	92	0.14	52	**5.7**	92	0.11	51
106.00		**10**	92	0.18	55	**8.5**	92	0.15	53	**6.6**	92	0.12	52
98.80		**11**	92	0.19	55	**9.1**	92	0.16	54	**7.1**	92	0.13	52
86.36		**13**	90	0.21	56	**10**	92	0.18	55	**8.1**	92	0.15	53
80.96		**14**	89	0.22	57	**11**	92	0.19	55	**8.6**	92	0.16	54
71.44		**15**	87	0.24	57	**13**	91	0.21	56	**9.8**	92	0.17	55
63.33		**17**	86	0.27	58	**14**	89	0.23	57	**11**	92	0.19	56
53.83		**20**	84	0.30	60	**17**	87	0.26	58	**13**	91	0.22	57
55.93	27/2	**20**	87	0.25	72	**16**	91	0.21	71	**13**	92	0.17	70
51.30		**21**	87	0.27	73	**18**	90	0.23	72	**14**	92	0.19	71
43.68		**25**	84	0.30	74	**21**	87	0.26	73	**16**	92	0.22	71
37.66		**29**	82	0.34	75	**24**	86	0.29	74	**19**	89	0.24	72
35.10		**31**	82	0.36	75	**26**	84	0.31	74	**20**	88	0.25	73
30.68		**36**	80	0.40	76	**29**	82	0.34	75	**23**	87	0.28	74
28.76		**38**	79	0.42	76	**31**	82	0.36	75	**24**	86	0.30	74
25.38		**43**	78	0.46	77	**35**	81	0.40	76	**28**	84	0.33	75
22.50		**49**	77	0.51	77	**40**	79	0.43	76	**31**	82	0.36	75
19.13		**58**	75	0.58	78	**47**	78	0.50	77	**37**	81	0.41	76
19.89	24/5	**55**	55	0.38	83	**45**	58	0.33	83	**35**	60	0.27	82
18.24		**60**	54	0.41	84	**49**	56	0.35	83	**38**	60	0.29	82
15.53		**71**	53	0.47	84	**58**	55	0.40	84	**45**	58	0.33	83
13.39		**82**	52	0.53	85	**67**	54	0.45	84	**52**	56	0.37	83
12.48		**88**	51	0.55	85	**72**	53	0.47	84	**56**	55	0.39	84
10.91		**101**	50	0.62	86	**82**	52	0.53	85	**64**	54	0.43	84
10.23		**108**	49	0.64	86	**88**	51	0.55	85	**68**	54	0.46	84
9.02		**122**	48	0.71	86	**100**	50	0.61	86	**78**	53	0.51	85
8.00		**138**	47	0.78	87	**113**	49	0.67	86	**88**	52	0.56	85
6.80		**162**	46	0.90	87	**132**	48	0.77	87	**103**	51	0.64	86



500 - 10 1/min

02 956 097

		n_e = 500 1/min				n_e = 250 1/min				n_e = 10 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
157.43	38/1	**3.2**	92	0.06	47	**1.6**	92	0.033	46	**0.06**	92	< 0.05	26
144.40		**3.5**	92	0.07	48	**1.7**	92	0.036	46	**0.07**	92	< 0.05	27
122.94		**4.1**	92	0.08	49	**2.0**	92	0.042	46	**0.08**	92	< 0.05	29
106.00		**4.7**	92	0.09	50	**2.4**	92	0.049	47	**0.09**	92	< 0.05	30
98.80		**5.1**	92	0.10	50	**2.5**	92	0.05	47	**0.10**	92	< 0.05	31
86.36		**5.8**	92	0.11	51	**2.9**	92	0.06	47	**0.12**	92	< 0.05	32
80.96		**6.2**	92	0.12	51	**3.1**	92	0.06	47	**0.12**	92	< 0.05	33
71.44		**7.0**	92	0.13	52	**3.5**	92	0.07	48	**0.14**	92	< 0.05	35
63.33		**7.9**	92	0.14	53	**3.9**	92	0.08	49	**0.16**	92	< 0.05	37
53.83		**9.3**	92	0.16	55	**4.6**	92	0.09	50	**0.19**	92	< 0.05	39
55.93	27/2	**8.9**	92	0.13	69	**4.5**	92	0.06	67	**0.18**	92	< 0.05	48
51.30		**9.7**	92	0.14	69	**4.9**	92	0.07	67	**0.19**	92	< 0.05	49
43.68		**11**	92	0.16	70	**5.7**	92	0.08	67	**0.23**	92	< 0.05	51
37.66		**13**	92	0.18	71	**6.6**	92	0.10	67	**0.27**	92	< 0.05	53
35.10		**14**	92	0.19	71	**7.1**	92	0.10	68	**0.28**	92	< 0.05	54
30.68		**16**	92	0.22	72	**8.1**	92	0.11	68	**0.33**	92	< 0.05	56
28.76		**17**	91	0.23	72	**8.7**	92	0.12	69	**0.35**	92	< 0.05	57
25.38		**20**	89	0.25	73	**9.9**	92	0.14	69	**0.39**	92	< 0.05	59
22.50		**22**	87	0.28	74	**11**	92	0.15	70	**0.44**	92	< 0.05	61
19.13		**26**	85	0.31	75	**13**	92	0.18	71	**0.52**	92	< 0.05	62
19.89	24/5	**25**	68	0.22	81	**13**	72	0.12	79	**0.50**	72	< 0.05	65
18.24		**27**	66	0.23	81	**14**	72	0.13	79	**0.55**	72	< 0.05	66
15.53		**32**	63	0.26	82	**16**	72	0.15	79	**0.64**	72	< 0.05	68
13.39		**37**	61	0.29	82	**19**	72	0.18	80	**0.75**	72	< 0.05	71
12.48		**40**	59	0.30	82	**20**	72	0.19	80	**0.80**	72	< 0.05	72
10.91		**46**	58	0.34	83	**23**	71	0.21	81	**0.92**	71	< 0.05	73
10.23		**49**	57	0.35	83	**24**	70	0.22	81	**0.98**	70	< 0.05	73
9.02		**55**	56	0.39	84	**28**	66	0.24	81	**1.1**	66	< 0.05	74
8.00		**63**	55	0.43	84	**31**	63	0.25	82	**1.2**	63	< 0.05	74
6.80		**74**	54	0.49	85	**37**	61	0.29	82	**1.5**	61	< 0.05	75



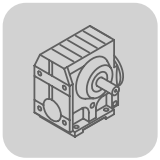
14.14 S, SF, SA, SAF 47

3400 - 2800 1/min

02 957 097

		n_e = 3400 1/min				n_e = 3200 1/min				n_e = 2800 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**17**	150	0.44	60	**16**	150	0.42	60	**14**	150	0.37	59
184.80		**18**	150	0.48	60	**17**	150	0.45	60	**15**	150	0.40	59
158.12		**22**	150	0.55	61	**20**	150	0.52	61	**18**	150	0.46	60
137.05		**25**	150	0.63	62	**23**	150	0.59	62	**20**	150	0.52	61
128.10		**27**	150	0.67	63	**25**	150	0.63	62	**22**	150	0.56	62
110.73	42/1	**31**	138	0.70	63	**29**	148	0.71	63	**25**	150	0.63	63
94.08		**36**	113	0.69	62	**34**	123	0.70	63	**30**	146	0.72	63
84.00		**40**	95	0.66	61	**38**	107	0.69	62	**33**	130	0.71	63
71.75		**47**	58	0.55	53	**45**	82	0.64	60	**39**	107	0.70	63
67.20		**51**	53	0.54	52	**48**	68	0.60	57	**42**	99	0.69	62
56.61		**60**	40	0.51	49	**57**	46	0.53	51	**49**	75	0.65	60
69.39		**49**	140	0.91	79	**46**	140	0.86	78	**40**	140	0.76	78
63.80		**53**	140	0.99	79	**50**	140	0.93	79	**44**	140	0.82	78
54.59		**62**	140	1.1	80	**59**	140	1.1	79	**51**	140	0.95	79
47.32		**72**	139	1.3	80	**68**	140	1.2	80	**59**	140	1.1	80
44.22		**77**	129	1.3	80	**72**	139	1.3	80	**63**	140	1.2	80
38.23	29/2	**89**	112	1.3	80	**84**	120	1.3	80	**73**	139	1.3	80
32.48		**105**	91	1.3	79	**99**	100	1.3	80	**86**	117	1.3	80
29.00		**117**	76	1.2	78	**110**	86	1.3	79	**97**	104	1.3	80
24.77		**137**	47	0.94	72	**129**	66	1.2	77	**113**	87	1.3	80
23.20		**147**	42	0.90	71	**138**	54	1.0	75	**121**	79	1.3	79
19.54		**174**	32	0.84	69	**164**	37	0.89	71	**143**	59	1.1	77
20.33		**167**	100	2.0 *	88	**157**	100	1.9 *	88	**138**	100	1.6 *	88
17.62		**193**	97	2.2 *	88	**182**	100	2.2 *	88	**159**	100	1.9 *	88
16.47		**206**	90	2.2 *	88	**194**	97	2.2 *	88	**170**	100	2.0 *	88
14.24		**239**	78	2.2 *	88	**225**	83	2.2 *	88	**197**	97	2.3 *	88
12.10	27/5	**281**	63	2.1 *	88	**264**	69	2.2 *	88	**231**	82	2.2 *	88
10.80		**315**	53	2.0 *	87	**296**	60	2.1 *	88	**259**	72	2.2 *	88
9.23		**368**	32	1.5	83	**347**	45	1.9 *	86	**303**	60	2.2 *	88
8.64		**394**	29	1.5	82	**370**	37	1.7 *	85	**324**	55	2.1 *	88
7.28		**467**	22	1.3	81	**440**	25	1.4	82	**385**	41	1.9 *	86

* P_{emax} = 1.5 kW



2200 - 1400 1/min

02 957 097

		n_e = 2200 1/min				n_e = 1700 1/min				n_e = 1400 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**11**	167	0.33	58	**8.5**	170	0.27	56	**7.0**	170	0.23	55
184.80		**12**	167	0.36	58	**9.2**	168	0.29	57	**7.6**	170	0.24	56
158.12		**14**	167	0.41	60	**11**	168	0.33	58	**8.9**	170	0.28	57
137.05		**16**	165	0.46	60	**12**	167	0.37	59	**10**	168	0.31	58
128.10		**17**	165	0.49	61	**13**	167	0.39	59	**11**	168	0.33	58
110.73	42/1	**20**	165	0.55	62	**15**	167	0.44	61	**13**	168	0.38	59
94.08		**23**	165	0.64	63	**18**	167	0.51	62	**15**	168	0.43	60
84.00		**26**	162	0.70	64	**20**	167	0.57	62	**17**	167	0.48	61
71.75		**31**	145	0.73	64	**24**	167	0.65	63	**20**	167	0.55	62
67.20		**33**	137	0.73	64	**25**	164	0.68	64	**21**	167	0.58	63
56.61		**39**	115	0.73	64	**30**	152	0.74	65	**25**	165	0.67	64
69.39		**32**	155	0.67	77	**24**	155	0.52	76	**20**	155	0.44	75
63.80		**34**	155	0.72	77	**27**	155	0.57	76	**22**	155	0.47	75
54.59		**40**	155	0.84	78	**31**	155	0.66	77	**26**	155	0.55	76
47.32		**46**	155	0.96	79	**36**	155	0.75	78	**30**	155	0.63	77
44.22		**50**	155	1.0	79	**38**	155	0.80	78	**32**	155	0.67	77
38.23	29/2	**58**	154	1.2	80	**44**	155	0.92	79	**37**	155	0.76	78
32.48		**68**	146	1.3	80	**52**	155	1.1	80	**43**	155	0.89	79
29.00		**76**	137	1.3	81	**59**	154	1.2	80	**48**	155	0.99	79
24.77		**89**	117	1.3	81	**69**	145	1.3	81	**57**	155	1.1	80
23.20		**95**	111	1.4	81	**73**	142	1.3	81	**60**	152	1.2	80
19.54		**113**	92	1.3	81	**87**	123	1.4	81	**72**	144	1.3	81
20.33		**108**	109	1.4	87	**84**	110	1.1	87	**69**	110	0.92	86
17.62		**125**	108	1.6 *	88	**96**	109	1.3	87	**79**	110	1.1	86
16.47		**134**	108	1.7 *	88	**103**	109	1.4	87	**85**	110	1.1	87
14.24		**154**	108	2.0 *	88	**119**	109	1.6 *	88	**98**	110	1.3	87
12.10	27/5	**182**	105	2.3 *	89	**140**	109	1.8 *	88	**116**	109	1.5	88
10.80		**204**	95	2.3 *	89	**157**	108	2.0 *	88	**130**	109	1.7 *	88
9.23		**238**	82	2.3 *	89	**184**	105	2.3 *	89	**152**	109	2.0 *	88
8.64		**255**	77	2.3 *	89	**197**	100	2.3 *	89	**162**	109	2.1 *	88
7.28		**302**	64	2.3 *	89	**234**	86	2.4 *	89	**192**	103	2.3 *	89

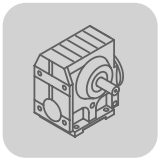
* P_{emax} = 1.5 kW

1100 - 700 1/min

02 958 097

		n_e = 1100 1/min				n_e = 900 1/min				n_e = 700 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**5.5**	176	0.19	53	**4.5**	180	0.16	52	**3.5**	185	0.13	51
184.80		**6.0**	174	0.20	54	**4.9**	178	0.17	53	**3.8**	183	0.14	51
158.12		**7.0**	172	0.23	55	**5.7**	176	0.20	54	**4.4**	180	0.16	52
137.05		**8.0**	171	0.26	56	**6.6**	172	0.22	55	**5.1**	178	0.18	53
128.10		**8.6**	171	0.27	57	**7.0**	172	0.23	55	**5.5**	176	0.19	54
110.73	42/1	**9.9**	169	0.30	58	**8.1**	171	0.26	56	**6.3**	174	0.21	55
94.08		**12**	169	0.35	59	**9.6**	171	0.30	57	**7.4**	172	0.24	56
84.00		**13**	169	0.39	60	**11**	169	0.32	58	**8.3**	171	0.26	57
71.75		**15**	169	0.45	61	**13**	169	0.37	60	**9.8**	171	0.30	58
67.20		**16**	169	0.47	61	**13**	169	0.40	60	**10**	171	0.32	58
56.61		**19**	169	0.55	63	**16**	169	0.46	61	**12**	171	0.37	60
69.39		**16**	173	0.39	74	**13**	176	0.33	73	**10**	180	0.27	71
63.80		**17**	173	0.42	74	**14**	175	0.35	73	**11**	180	0.29	72
54.59		**20**	171	0.48	75	**16**	173	0.40	74	**13**	176	0.33	73
47.32		**23**	171	0.55	76	**19**	173	0.46	75	**15**	175	0.37	73
44.22		**25**	171	0.58	76	**20**	171	0.49	75	**16**	175	0.39	74
38.23	29/2	**29**	169	0.66	77	**24**	171	0.56	76	**18**	173	0.44	75
32.48		**34**	169	0.77	78	**28**	171	0.65	77	**22**	171	0.51	75
29.00		**38**	170	0.86	78	**31**	171	0.72	77	**24**	171	0.57	76
24.77		**44**	169	0.99	79	**36**	170	0.83	78	**28**	171	0.66	77
23.20		**47**	164	1.0	79	**39**	170	0.88	79	**30**	171	0.70	77
19.54		**56**	154	1.1	80	**46**	165	1.0	79	**36**	170	0.81	78
20.33		**54**	112	0.75	85	**44**	114	0.63	84	**34**	116	0.50	83
17.62		**62**	112	0.86	86	**51**	113	0.71	85	**40**	115	0.57	84
16.47		**67**	112	0.91	86	**55**	113	0.76	85	**43**	114	0.60	84
14.24		**77**	111	1.0	86	**63**	112	0.86	86	**49**	113	0.69	85
12.10	27/5	**91**	111	1.2	87	**74**	111	1.0	86	**58**	113	0.80	85
10.80		**102**	111	1.4	87	**83**	111	1.1	87	**65**	112	0.88	86
9.23		**119**	110	1.6 *	88	**98**	111	1.3	87	**76**	112	1.0	86
8.64		**127**	109	1.7 *	88	**104**	111	1.4	87	**81**	112	1.1	87
7.28		**151**	109	2.0 *	88	**124**	111	1.6 *	88	**96**	111	1.3	87

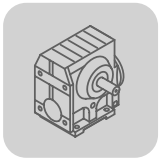
* P_{emax} = 1.5 kW



500 - 10 1/min

02 958 097

		n_e = 500 1/min				n_e = 250 1/min				n_e = 10 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**2.5**	185	0.10	49	**1.2**	185	0.05	48	**0.05**	185	< 0.05	32
184.80		**2.7**	185	0.11	49	**1.4**	185	0.05	48	**0.05**	185	< 0.05	32
158.12		**3.2**	185	0.12	50	**1.6**	185	0.06	48	**0.06**	185	< 0.05	35
137.05		**3.6**	185	0.14	51	**1.8**	185	0.07	48	**0.07**	185	< 0.05	37
128.10		**3.9**	183	0.15	51	**2.0**	185	0.08	48	**0.08**	185	< 0.05	38
110.73	42/1	**4.5**	181	0.16	52	**2.3**	185	0.09	49	**0.09**	185	< 0.05	40
94.08		**5.3**	178	0.19	54	**2.7**	185	0.10	49	**0.11**	185	< 0.05	42
84.00		**6.0**	176	0.20	54	**3.0**	185	0.12	50	**0.12**	185	< 0.05	43
71.75		**7.0**	174	0.23	56	**3.5**	185	0.13	51	**0.14**	185	< 0.05	44
67.20		**7.4**	172	0.24	56	**3.7**	185	0.14	51	**0.15**	185	< 0.05	44
56.61		**8.8**	172	0.28	57	**4.4**	181	0.16	53	**0.18**	181	< 0.05	45
69.39		**7.2**	185	0.20	70	**3.6**	185	0.10	68	**0.14**	185	< 0.05	56
63.80		**7.8**	185	0.22	70	**3.9**	185	0.11	68	**0.16**	185	< 0.05	57
54.59		**9.2**	185	0.25	71	**4.6**	185	0.13	68	**0.18**	185	< 0.05	60
47.32		**11**	181	0.28	72	**5.3**	185	0.15	68	**0.21**	185	< 0.05	61
44.22		**11**	180	0.30	72	**5.7**	185	0.16	69	**0.23**	185	< 0.05	62
38.23	29/2	**13**	178	0.33	73	**6.5**	185	0.18	69	**0.26**	185	< 0.05	63
32.48		**15**	174	0.38	74	**7.7**	185	0.21	70	**0.31**	185	< 0.05	64
29.00		**17**	174	0.42	74	**8.6**	185	0.24	71	**0.34**	185	< 0.05	65
24.77		**20**	172	0.48	75	**10**	183	0.27	71	**0.40**	183	< 0.05	66
23.20		**22**	172	0.51	76	**11**	181	0.28	72	**0.43**	181	< 0.05	66
19.54		**26**	172	0.60	77	**13**	178	0.33	73	**0.51**	178	< 0.05	67
20.33		**25**	124	0.39	82	**12**	157	0.25	80	**0.49**	157	< 0.05	75
17.62		**28**	120	0.43	83	**14**	149	0.28	80	**0.57**	149	< 0.05	76
16.47		**30**	118	0.45	83	**15**	145	0.29	81	**0.61**	145	< 0.05	76
14.24		**35**	116	0.51	84	**18**	138	0.31	81	**0.70**	138	< 0.05	77
12.10	27/5	**41**	115	0.59	84	**21**	131	0.35	82	**0.83**	131	< 0.05	77
10.80		**46**	114	0.65	85	**23**	127	0.37	82	**0.93**	127	< 0.05	77
9.23		**54**	113	0.75	85	**27**	121	0.41	83	**1.1**	121	< 0.05	78
8.64		**58**	113	0.80	86	**29**	120	0.44	83	**1.2**	120	< 0.05	78
7.28		**69**	112	0.93	86	**34**	117	0.50	84	**1.4**	117	< 0.05	78



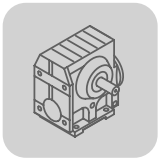
14.15 S, SF, SA, SAF 57

3400 - 2800 1/min

02 959 097

		n_e = 3400 1/min				n_e = 3200 1/min				n_e = 2800 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**17**	270	0.75	64	**16**	270	0.71	63	**14**	270	0.63	62
184.80		**18**	270	0.81	64	**17**	270	0.77	64	**15**	270	0.68	63
158.12		**22**	270	0.93	65	**20**	270	0.88	65	**18**	270	0.78	64
137.05		**25**	255	1.0	66	**23**	270	1.0	66	**20**	270	0.89	65
128.10		**27**	245	1.0	66	**25**	255	1.0	66	**22**	270	0.94	65
110.73	42/1	**31**	215	1.0	67	**29**	230	1.0	67	**25**	255	1.0	66
94.08		**36**	184	1.0	67	**34**	196	1.0	67	**30**	225	1.1	67
84.00		**40**	165	1.0	67	**38**	175	1.0	67	**33**	200	1.0	67
71.75		**47**	139	1.0	67	**45**	149	1.0	67	**39**	174	1.1	67
67.20		**51**	128	1.0	66	**48**	139	1.0	67	**42**	164	1.1	67
56.61		**60**	103	1.0	65	**57**	114	1.0	66	**49**	138	1.1	67
69.39		**49**	220	1.4	81	**46**	220	1.3	80	**40**	220	1.2	80
63.80		**53**	220	1.5	81	**50**	220	1.4	81	**44**	220	1.3	80
54.59		**62**	220	1.8	81	**59**	220	1.7	81	**51**	220	1.5	81
47.32		**72**	210	1.9	82	**68**	220	1.9	82	**59**	220	1.7	81
44.22		**77**	197	1.9	82	**72**	205	1.9	82	**63**	220	1.8	81
38.23	29/2	**89**	174	2.0	82	**84**	184	2.0	82	**73**	205	1.9	82
32.48		**105**	148	2.0	82	**99**	157	2.0	82	**86**	180	2.0	82
29.00		**117**	131	2.0	82	**110**	141	2.0	82	**97**	162	2.0	82
24.77		**137**	111	1.9	82	**129**	120	2.0	82	**113**	139	2.0	82
23.20		**147**	102	1.9	82	**138**	111	2.0	82	**121**	131	2.0	82
19.54		**174**	81	1.8	81	**164**	90	1.9	82	**143**	109	2.0	82
20.33		**167**	160	3.2 *	89	**157**	160	3.0	89	**138**	160	2.6	88
17.62		**193**	140	3.2 *	89	**182**	149	3.2 *	89	**159**	160	3.0	89
16.47		**206**	132	3.2 *	89	**194**	140	3.2 *	89	**170**	158	3.2 *	89
14.24		**239**	116	3.2 *	89	**225**	123	3.2 *	89	**197**	139	3.2 *	89
12.10	27/5	**281**	99	3.3 *	89	**264**	105	3.3 *	89	**231**	121	3.3 *	89
10.80		**315**	88	3.3 *	89	**296**	94	3.3 *	89	**259**	108	3.3 *	89
9.23		**368**	73	3.2 *	89	**347**	79	3.2 *	89	**303**	93	3.3 *	89
8.64		**394**	68	3.2 *	89	**370**	74	3.2 *	89	**324**	87	3.3 *	89
7.28		**467**	54	3.0	88	**440**	60	3.1 *	89	**385**	72	3.2 *	89

* P_{emax} = 3.0 kW



2200 - 1400 1/min

02 959 097

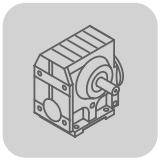
		n_e = 2200 1/min				n_e = 1700 1/min				n_e = 1400 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**11**	295	0.55	61	**8.5**	295	0.44	59	**7.0**	295	0.37	58
184.80		**12**	295	0.60	62	**9.2**	295	0.48	60	**7.6**	295	0.40	58
158.12		**14**	295	0.69	63	**11**	295	0.55	61	**8.9**	295	0.46	60
137.05		**16**	295	0.78	64	**12**	295	0.62	62	**10**	295	0.52	61
128.10		**17**	295	0.83	64	**13**	295	0.66	62	**11**	295	0.55	61
110.73	42/1	**20**	290	0.93	65	**15**	295	0.75	63	**13**	295	0.63	62
94.08		**23**	275	1.0	66	**18**	300	0.88	65	**15**	295	0.73	63
84.00		**26**	250	1.0	67	**20**	285	0.93	65	**17**	295	0.80	64
71.75		**31**	220	1.1	67	**24**	275	1.0	66	**20**	290	0.91	65
67.20		**33**	210	1.1	67	**25**	260	1.0	67	**21**	285	0.95	65
56.61		**39**	179	1.1	68	**30**	225	1.1	67	**25**	265	1.0	67
69.39		**32**	245	1.0	79	**24**	245	0.81	77	**20**	245	0.68	76
63.80		**34**	245	1.1	79	**27**	245	0.88	78	**22**	245	0.73	77
54.59		**40**	245	1.3	80	**31**	245	1.0	79	**26**	245	0.85	78
47.32		**46**	245	1.5	81	**36**	245	1.2	79	**30**	245	0.97	79
44.22		**50**	245	1.6	81	**38**	245	1.2	80	**32**	245	1.0	79
38.23	29/2	**58**	245	1.8	81	**44**	245	1.4	80	**37**	245	1.2	80
32.48		**68**	225	1.9	82	**52**	245	1.7	81	**43**	245	1.4	80
29.00		**76**	200	1.9	82	**59**	245	1.8	81	**48**	245	1.5	81
24.77		**89**	177	2.0	82	**69**	220	1.9	82	**57**	245	1.8	81
23.20		**95**	167	2.0	83	**73**	210	2.0	82	**60**	245	1.9	82
19.54		**113**	143	2.0	83	**87**	183	2.0	83	**72**	215	2.0	82
20.33		**108**	168	2.2	88	**84**	168	1.7	87	**69**	168	1.4	87
17.62		**125**	168	2.5	88	**96**	168	1.9	88	**79**	168	1.6	87
16.47		**134**	169	2.7	88	**103**	168	2.1	88	**85**	168	1.7	87
14.24		**154**	169	3.1 *	89	**119**	169	2.4	88	**98**	169	2.0	88
12.10	27/5	**182**	150	3.2 *	89	**140**	169	2.8	89	**116**	169	2.3	88
10.80		**204**	136	3.2 *	89	**157**	169	3.1 *	89	**130**	169	2.6	88
9.23		**238**	119	3.3 *	89	**184**	149	3.2 *	89	**152**	169	3.0	89
8.64		**255**	112	3.3 *	89	**197**	141	3.3 *	89	**162**	166	3.2 *	89
7.28		**302**	96	3.4 *	90	**234**	122	3.3 *	90	**192**	146	3.3 *	89

* P_{emax} = 3.0 kW

1100 - 700 1/min

02 960 097

		n_e = 1100 1/min				n_e = 900 1/min				n_e = 700 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**5.5**	295	0.30	56	**4.5**	300	0.26	55	**3.5**	310	0.21	53
184.80		**6.0**	295	0.32	57	**4.9**	300	0.28	55	**3.8**	305	0.23	54
158.12		**7.0**	295	0.37	58	**5.7**	295	0.31	56	**4.4**	300	0.25	55
137.05		**8.0**	295	0.42	59	**6.6**	295	0.35	57	**5.1**	300	0.29	56
128.10		**8.6**	295	0.45	59	**7.0**	295	0.37	58	**5.5**	295	0.30	56
110.73	42/1	**9.9**	295	0.51	61	**8.1**	295	0.43	59	**6.3**	295	0.34	57
94.08		**12**	295	0.59	62	**9.6**	295	0.49	60	**7.4**	295	0.39	58
84.00		**13**	295	0.65	63	**11**	295	0.54	61	**8.3**	295	0.43	59
71.75		**15**	295	0.74	64	**13**	295	0.62	62	**9.8**	295	0.50	61
67.20		**16**	300	0.80	64	**13**	295	0.66	63	**10**	295	0.53	61
56.61		**19**	290	0.91	65	**16**	300	0.78	64	**12**	295	0.61	62
69.39		**16**	270	0.60	75	**13**	270	0.49	74	**10**	270	0.39	73
63.80		**17**	270	0.64	76	**14**	270	0.53	75	**11**	270	0.42	73
54.59		**20**	270	0.74	77	**16**	270	0.62	75	**13**	270	0.49	74
47.32		**23**	270	0.85	77	**19**	270	0.70	76	**15**	270	0.56	75
44.22		**25**	270	0.91	78	**20**	270	0.75	77	**16**	270	0.59	75
38.23	29/2	**29**	270	1.0	79	**24**	270	0.86	77	**18**	270	0.68	76
32.48		**34**	270	1.2	79	**28**	270	1.0	78	**22**	270	0.79	77
29.00		**38**	270	1.3	80	**31**	270	1.1	79	**24**	270	0.88	78
24.77		**44**	270	1.6	81	**36**	270	1.3	80	**28**	270	1.0	78
23.20		**47**	270	1.7	81	**39**	270	1.4	80	**30**	270	1.1	79
19.54		**56**	250	1.8	81	**46**	270	1.6	81	**36**	270	1.3	80
20.33		**54**	168	1.1	86	**44**	170	0.93	85	**34**	172	0.74	84
17.62		**62**	169	1.3	86	**51**	169	1.1	86	**40**	170	0.83	85
16.47		**67**	168	1.4	87	**55**	168	1.1	86	**43**	170	0.89	85
14.24		**77**	168	1.6	87	**63**	168	1.3	86	**49**	170	1.0	86
12.10	27/5	**91**	169	1.8	88	**74**	169	1.5	87	**58**	169	1.2	86
10.80		**102**	169	2.1	88	**83**	169	1.7	87	**65**	169	1.3	87
9.23		**119**	170	2.4	88	**98**	168	2.0	88	**76**	168	1.5	87
8.64		**127**	170	2.6	88	**104**	169	2.1	88	**81**	168	1.6	87
7.28		**151**	170	3.0	89	**124**	170	2.5	88	**96**	170	1.9	88



500 - 10 1/min

02 960 097

		n_e = 500 1/min				n_e = 250 1/min				n_e = 10 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
201.00		**2.5**	330	0.17	51	**1.2**	330	0.09	49	**0.05**	330	< 0.05	42
184.80		**2.7**	330	0.18	51	**1.4**	330	0.10	49	**0.05**	330	< 0.05	43
158.12		**3.2**	315	0.20	52	**1.6**	330	0.11	49	**0.06**	330	< 0.05	44
137.05		**3.6**	310	0.22	53	**1.8**	330	0.13	50	**0.07**	330	< 0.05	45
128.10		**3.9**	305	0.23	54	**2.0**	330	0.14	50	**0.08**	330	< 0.05	46
110.73	42/1	**4.5**	300	0.26	55	**2.3**	330	0.15	51	**0.09**	330	< 0.05	46
94.08		**5.3**	300	0.30	56	**2.7**	330	0.18	51	**0.11**	330	< 0.05	47
84.00		**6.0**	295	0.32	57	**3.0**	325	0.19	52	**0.12**	325	< 0.05	47
71.75		**7.0**	295	0.37	58	**3.5**	310	0.21	53	**0.14**	310	< 0.05	48
67.20		**7.4**	295	0.39	58	**3.7**	310	0.23	54	**0.15**	310	< 0.05	48
56.61		**8.8**	295	0.46	60	**4.4**	300	0.25	55	**0.18**	300	< 0.05	48
69.39		**7.2**	300	0.32	71	**3.6**	300	0.17	68	**0.14**	300	< 0.05	63
63.80		**7.8**	300	0.34	71	**3.9**	300	0.18	68	**0.16**	300	< 0.05	64
54.59		**9.2**	300	0.40	72	**4.6**	300	0.21	69	**0.18**	300	< 0.05	65
47.32		**11**	300	0.45	73	**5.3**	300	0.24	70	**0.21**	300	< 0.05	66
44.22		**11**	300	0.48	74	**5.7**	300	0.25	70	**0.23**	300	< 0.05	66
38.23	29/2	**13**	295	0.54	74	**6.5**	300	0.29	71	**0.26**	300	< 0.05	67
32.48		**15**	295	0.63	75	**7.7**	300	0.34	71	**0.31**	300	< 0.05	67
29.00		**17**	295	0.70	76	**8.6**	300	0.38	72	**0.34**	300	< 0.05	67
24.77		**20**	295	0.81	77	**10**	300	0.43	73	**0.40**	300	< 0.05	68
23.20		**22**	295	0.86	77	**11**	300	0.46	73	**0.43**	300	< 0.05	68
19.54		**26**	295	1.0	78	**13**	295	0.53	74	**0.51**	295	< 0.05	68
20.33		**25**	181	0.56	83	**12**	215	0.35	80	**0.49**	215	< 0.05	77
17.62		**28**	175	0.62	83	**14**	210	0.39	81	**0.57**	210	< 0.05	77
16.47		**30**	174	0.66	84	**15**	205	0.40	81	**0.61**	205	< 0.05	78
14.24		**35**	172	0.75	84	**18**	198	0.45	81	**0.70**	198	< 0.05	78
12.10	27/5	**41**	170	0.87	85	**21**	188	0.49	82	**0.83**	188	< 0.05	78
10.80		**46**	170	0.97	85	**23**	184	0.54	83	**0.93**	184	< 0.05	78
9.23		**54**	170	1.1	86	**27**	177	0.60	83	**1.1**	177	< 0.05	79
8.64		**58**	170	1.2	86	**29**	175	0.64	83	**1.2**	175	< 0.05	79
7.28		**69**	170	1.4	87	**34**	172	0.73	84	**1.4**	172	< 0.05	79

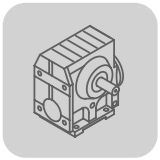
14.16 S, SF, SA, SAF 67

3400 - 2800 1/min

02 961 097

i_{ges}	i_{sch}	n_e = 3400 1/min				n_e = 3200 1/min				n_e = 2800 1/min			
		n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
217.41		**16**	465	1.2	66	**15**	465	1.1	66	**13**	465	0.96	65
190.11		**18**	465	1.3	67	**17**	465	1.2	67	**15**	465	1.1	66
180.60		**19**	465	1.4	67	**18**	465	1.3	67	**16**	465	1.1	66
158.45		**21**	465	1.5	68	**20**	465	1.5	68	**18**	465	1.3	67
134.40		**25**	465	1.8	69	**24**	465	1.7	68	**21**	465	1.5	68
121.33		**28**	455	1.9	69	**26**	465	1.9	69	**23**	465	1.6	68
106.75	42/1	**32**	405	2.0	69	**30**	430	2.0	69	**26**	465	1.9	69
100.80		**34**	380	1.9	69	**32**	410	2.0	69	**28**	465	2.0	69
85.83		**40**	320	1.9	69	**37**	345	1.9	69	**33**	400	2.0	70
78.00		**44**	285	1.9	69	**41**	310	1.9	69	**36**	365	2.0	70
67.57		**50**	235	1.8	67	**47**	260	1.9	68	**41**	315	2.0	69
58.80		**58**	184	1.7	65	**54**	215	1.8	67	**48**	270	1.9	69
75.06		**45**	435	2.5	82	**43**	435	2.4	82	**37**	435	2.1	81
65.63		**52**	435	2.9	82	**49**	435	2.7	82	**43**	435	2.4	82
62.35		**55**	435	3.0	83	**51**	435	2.8	82	**45**	435	2.5	82
54.70		**62**	435	3.4	83	**59**	435	3.2	83	**51**	435	2.8	83
46.40		**73**	395	3.6	83	**69**	415	3.6	83	**60**	435	3.3	83
41.89	29/2	**81**	355	3.6	83	**76**	380	3.6	83	**67**	430	3.6	83
36.85		**92**	310	3.6	83	**87**	335	3.6	84	**76**	380	3.6	84
34.80		**98**	295	3.6	83	**92**	315	3.6	84	**80**	365	3.7	84
29.63		**115**	250	3.6	83	**108**	270	3.7	83	**94**	310	3.7	84
26.93		**126**	220	3.5	83	**119**	240	3.6	83	**104**	280	3.6	84
23.33		**146**	182	3.4	82	**137**	200	3.5	83	**120**	245	3.7	84
20.30		**167**	141	3.1	81	**158**	164	3.3	82	**138**	205	3.6	83
24.44		**139**	315	5.1	90	**131**	315	4.8	90	**115**	315	4.2	89
23.22		**146**	315	5.4	90	**138**	315	5.1	90	**121**	315	4.4	90
20.37		**167**	315	6.1 *	90	**157**	315	5.8 *	90	**137**	315	5.0	90
17.28		**197**	270	6.2 *	90	**185**	290	6.2 *	90	**162**	315	5.9 *	90
15.60		**218**	245	6.2 *	90	**205**	260	6.2 *	90	**179**	295	6.1 *	90
13.73	27/5	**248**	215	6.2 *	90	**233**	230	6.2 *	90	**204**	265	6.3 *	90
12.96		**262**	200	6.1 *	90	**247**	215	6.1 *	90	**216**	250	6.3 *	90
11.03		**308**	169	6.1 *	90	**290**	183	6.2 *	90	**254**	215	6.3 *	90
10.03		**339**	151	6.0 *	90	**319**	164	6.1 *	90	**279**	194	6.3 *	90
8.69		**391**	124	5.7 *	89	**368**	137	5.9 *	90	**322**	166	6.2 *	90
7.56		**450**	95	5.1 *	88	**423**	112	5.6 *	89	**370**	141	6.1 *	90

* P_{emax} = 5.5 kW



2200 - 1400 1/min

02 961 097

		n_e = 2200 1/min				n_e = 1700 1/min				n_e = 1400 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
217.41		**10**	520	0.86	64	**7.8**	520	0.69	62	**6.4**	520	0.58	61
190.11		**12**	520	0.97	65	**8.9**	520	0.77	63	**7.4**	520	0.65	62
180.60		**12**	520	1.0	65	**9.4**	520	0.81	63	**7.8**	520	0.68	62
158.45		**14**	520	1.1	66	**11**	520	0.91	64	**8.8**	520	0.76	63
134.40		**16**	520	1.3	67	**13**	520	1.1	65	**10**	520	0.88	64
121.33		**18**	520	1.5	68	**14**	520	1.2	66	**12**	520	0.97	65
106.75	42/1	**21**	520	1.6	68	**16**	520	1.3	67	**13**	520	1.1	66
100.80		**22**	510	1.7	69	**17**	520	1.4	67	**14**	520	1.1	66
85.83		**26**	490	1.9	69	**20**	520	1.6	68	**16**	520	1.3	67
78.00		**28**	465	2.0	70	**22**	510	1.7	69	**18**	520	1.4	68
67.57		**33**	410	2.0	70	**25**	495	1.9	69	**21**	520	1.6	69
58.80		**37**	360	2.0	70	**29**	460	2.0	70	**24**	500	1.8	69
75.06		**29**	480	1.8	81	**23**	480	1.4	79	**19**	480	1.2	79
65.63		**34**	480	2.1	81	**26**	480	1.6	80	**21**	480	1.4	79
62.35		**35**	480	2.2	81	**27**	480	1.7	80	**22**	480	1.4	79
54.70		**40**	480	2.5	82	**31**	480	1.9	81	**26**	480	1.6	80
46.40		**47**	480	2.9	82	**37**	480	2.3	82	**30**	480	1.9	81
41.89		**53**	480	3.2	83	**41**	480	2.5	82	**33**	480	2.1	81
36.85	29/2	**60**	475	3.6	83	**46**	480	2.8	82	**38**	480	2.3	82
34.80		**63**	450	3.6	83	**49**	480	3.0	83	**40**	480	2.5	82
29.63		**74**	395	3.7	84	**57**	480	3.5	83	**47**	480	2.9	83
26.93		**82**	360	3.7	84	**63**	455	3.6	83	**52**	480	3.2	83
23.33		**94**	320	3.8	84	**73**	405	3.7	84	**60**	480	3.6	83
20.30		**108**	280	3.8	84	**84**	360	3.8	84	**69**	425	3.7	84
24.44		**90**	340	3.6	89	**70**	340	2.8	88	**57**	340	2.3	88
23.22		**95**	340	3.8	89	**73**	340	2.9	89	**60**	340	2.4	88
20.37		**108**	340	4.3	89	**83**	340	3.3	89	**69**	340	2.8	88
17.28		**127**	340	5.0	90	**98**	340	3.9	89	**81**	340	3.2	89
15.60		**141**	340	5.6 *	90	**109**	340	4.3	89	**90**	340	3.6	89
13.73	27/5	**160**	330	6.1 *	90	**124**	340	4.9	90	**102**	340	4.1	89
12.96		**170**	315	6.2 *	90	**131**	340	5.2	90	**108**	340	4.3	89
11.03		**199**	275	6.3 *	90	**154**	340	6.1 *	90	**127**	340	5.0	90
10.03		**219**	250	6.3 *	91	**169**	315	6.2 *	90	**140**	340	5.5	90
8.69		**253**	220	6.4 *	91	**196**	280	6.3 *	91	**161**	335	6.3 *	90
7.56		**291**	192	6.5 *	91	**225**	250	6.5 *	91	**185**	295	6.3 *	91

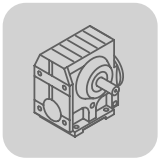
* P_{emax} = 5.5 kW

1100 - 700 1/min

02 962 097

		n_e = 1100 1/min				n_e = 900 1/min				n_e = 700 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
217.41		**5.1**	555	0.50	59	**4.1**	560	0.42	58	**3.2**	570	0.34	56
190.11		**5.8**	555	0.56	60	**4.7**	560	0.47	59	**3.7**	565	0.38	57
180.60		**6.1**	555	0.59	61	**5.0**	555	0.49	59	**3.9**	565	0.40	57
158.45		**6.9**	550	0.65	62	**5.7**	555	0.55	60	**4.4**	560	0.44	58
134.40		**8.2**	550	0.75	63	**6.7**	550	0.63	61	**5.2**	555	0.51	60
121.33		**9.1**	550	0.82	63	**7.4**	550	0.69	62	**5.8**	555	0.56	60
106.75	42/1	**10**	550	0.92	64	**8.4**	550	0.77	63	**6.6**	555	0.62	61
100.80		**11**	550	0.97	65	**8.9**	550	0.81	63	**6.9**	555	0.66	62
85.83		**13**	550	1.1	66	**10**	550	0.94	64	**8.2**	550	0.75	63
78.00		**14**	550	1.2	66	**12**	550	1.0	65	**9.0**	550	0.82	63
67.57		**16**	550	1.4	67	**13**	550	1.2	66	**10**	550	0.93	64
58.80		**19**	530	1.5	68	**15**	550	1.3	67	**12**	550	1.0	65
75.06		**15**	525	1.0	77	**12**	525	0.86	76	**9.3**	525	0.68	75
65.63		**17**	525	1.2	78	**14**	525	0.98	77	**11**	525	0.77	76
62.35		**18**	525	1.2	78	**14**	525	1.0	77	**11**	525	0.81	76
54.70		**20**	525	1.4	79	**16**	525	1.2	78	**13**	525	0.92	77
46.40		**24**	525	1.6	80	**19**	525	1.4	79	**15**	525	1.1	78
41.89		**26**	525	1.8	80	**21**	525	1.5	79	**17**	525	1.2	78
36.85	29/2	**30**	525	2.0	81	**24**	525	1.7	80	**19**	525	1.3	79
34.80		**32**	525	2.1	81	**26**	525	1.8	80	**20**	525	1.4	79
29.63		**37**	525	2.5	82	**30**	525	2.1	81	**24**	525	1.6	80
26.93		**41**	525	2.7	82	**33**	525	2.3	81	**26**	525	1.8	80
23.33		**47**	525	3.1	83	**39**	525	2.6	82	**30**	525	2.0	81
20.30		**54**	520	3.5	83	**44**	525	3.0	82	**34**	525	2.3	81
24.44		**45**	355	1.9	87	**37**	360	1.6	87	**29**	365	1.3	86
23.22		**47**	355	2.0	87	**39**	360	1.7	87	**30**	365	1.3	86
20.37		**54**	355	2.3	88	**44**	355	1.9	87	**34**	365	1.5	86
17.28		**64**	355	2.7	88	**52**	355	2.2	88	**41**	360	1.8	87
15.60		**71**	350	2.9	88	**58**	355	2.4	88	**45**	355	1.9	87
13.73	27/5	**80**	350	3.3	89	**66**	355	2.8	88	**51**	355	2.2	88
12.96		**85**	350	3.5	89	**69**	350	2.9	88	**54**	355	2.3	88
11.03		**100**	350	4.1	89	**82**	350	3.4	89	**63**	355	2.7	88
10.03		**110**	345	4.4	90	**90**	350	3.7	89	**70**	355	2.9	88
8.69		**127**	345	5.1	90	**104**	350	4.2	89	**81**	350	3.3	89
7.56		**146**	345	5.8 *	90	**119**	345	4.8	90	**93**	350	3.8	89

* P_{emax} = 5.5 kW



500 - 10 1/min

02 962 097

		n_e = 500 1/min				n_e = 250 1/min				n_e = 10 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
217.41		**2.3**	570	0.25	54	**1.1**	570	0.13	51	**0.05**	570	< 0.05	47
190.11		**2.6**	570	0.29	55	**1.3**	570	0.15	51	**0.05**	570	< 0.05	48
180.60		**2.8**	570	0.30	55	**1.4**	570	0.16	51	**0.06**	570	< 0.05	48
158.45		**3.2**	570	0.34	56	**1.6**	570	0.18	52	**0.06**	570	< 0.05	49
134.40		**3.7**	565	0.38	57	**1.9**	570	0.21	53	**0.07**	570	< 0.05	50
121.33		**4.1**	560	0.42	58	**2.1**	570	0.23	53	**0.08**	570	< 0.05	50
106.75	42/1	**4.7**	560	0.47	59	**2.3**	570	0.26	54	**0.09**	570	< 0.05	50
100.80		**5.0**	560	0.49	59	**2.5**	570	0.27	55	**0.10**	570	< 0.05	50
85.83		**5.8**	555	0.56	60	**2.9**	570	0.31	56	**0.12**	570	< 0.05	51
78.00		**6.4**	555	0.61	61	**3.2**	570	0.34	56	**0.13**	570	< 0.05	51
67.57		**7.4**	555	0.69	62	**3.7**	565	0.38	57	**0.15**	565	< 0.05	51
58.80		**8.5**	550	0.78	63	**4.3**	560	0.43	58	**0.17**	560	< 0.05	51
75.06		**6.7**	570	0.54	73	**3.3**	570	0.28	70	**0.13**	570	< 0.05	68
65.63		**7.6**	570	0.61	74	**3.8**	570	0.32	71	**0.15**	570	< 0.05	68
62.35		**8.0**	570	0.64	74	**4.0**	570	0.34	71	**0.16**	570	< 0.05	69
54.70		**9.1**	570	0.73	75	**4.6**	570	0.38	71	**0.18**	570	< 0.05	69
46.40		**11**	570	0.85	76	**5.4**	570	0.44	72	**0.22**	570	< 0.05	69
41.89		**12**	570	0.93	76	**6.0**	570	0.49	73	**0.24**	570	< 0.05	69
36.85	29/2	**14**	570	1.1	77	**6.8**	570	0.55	73	**0.27**	570	< 0.05	69
34.80		**14**	570	1.1	77	**7.2**	570	0.58	74	**0.29**	570	< 0.05	69
29.63		**17**	565	1.3	78	**8.4**	570	0.68	75	**0.34**	570	< 0.05	70
26.93		**19**	565	1.4	79	**9.3**	570	0.74	75	**0.37**	570	< 0.05	70
23.33		**21**	565	1.6	79	**11**	570	0.84	76	**0.43**	570	< 0.05	70
20.30		**25**	565	1.8	80	**12**	570	0.96	77	**0.49**	570	< 0.05	70
24.44		**20**	365	0.93	85	**10**	355	0.46	82	**0.41**	355	0.019	80
23.22		**22**	365	0.97	85	**11**	355	0.49	82	**0.43**	355	< 0.05	80
20.37		**25**	380	1.1	85	**12**	365	0.57	83	**0.49**	365	< 0.05	80
17.28		**29**	365	1.3	86	**14**	435	0.79	83	**0.58**	435	< 0.05	81
15.60		**32**	365	1.4	86	**16**	430	0.86	84	**0.64**	430	< 0.05	81
13.73	27/5	**36**	365	1.6	87	**18**	415	0.94	84	**0.73**	415	< 0.05	81
12.96		**39**	360	1.7	87	**19**	410	0.98	84	**0.77**	410	< 0.05	81
11.03		**45**	355	1.9	87	**23**	390	1.1	85	**0.91**	390	< 0.05	81
10.03		**50**	355	2.1	88	**25**	380	1.2	85	**1.0**	380	< 0.05	81
8.69		**58**	355	2.4	88	**29**	370	1.3	86	**1.2**	370	0.06	81
7.56		**66**	355	2.8	88	**33**	365	1.5	86	**1.3**	365	0.06	81

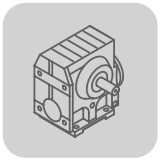
14.17 S, SF, SA, SAF 77

3400 - 2800 1/min

02 963 097

i_{ges}	i_{sch}	n_e = 3400 1/min				n_e = 3200 1/min				n_e = 2800 1/min			
		n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
256.47		**13**	1160	2.3	71	**12**	1160	2.1	71	**11**	1160	1.9	70
225.26		**15**	1130	2.5	72	**14**	1150	2.4	71	**12**	1160	2.1	71
214.00		**16**	1110	2.6	72	**15**	1140	2.5	71	**13**	1160	2.2	71
189.09		**18**	1080	2.8	72	**17**	1100	2.7	72	**15**	1140	2.5	71
161.60		**21**	1040	3.1	73	**20**	1050	3.0	73	**17**	1090	2.7	72
148.15		**23**	1010	3.3	73	**22**	1030	3.2	73	**19**	1070	2.9	73
130.00		**26**	970	3.6	74	**25**	990	3.5	74	**22**	1030	3.2	73
123.20	40/1	**28**	950	3.7	74	**26**	970	3.6	74	**23**	1010	3.3	73
107.83		**32**	900	4.0	74	**30**	920	3.9	74	**26**	970	3.6	74
97.14		**35**	860	4.2	75	**33**	880	4.1	74	**29**	930	3.8	74
85.22		**40**	770	4.3	75	**38**	820	4.3	75	**33**	880	4.1	75
75.20		**45**	675	4.3	74	**43**	725	4.3	75	**37**	830	4.3	75
66.67		**51**	585	4.2	74	**48**	635	4.3	75	**42**	745	4.4	75
56.92		**60**	485	4.1	73	**56**	530	4.2	74	**49**	635	4.4	75
75.09		**45**	1020	5.6	86	**43**	1020	5.3	86	**37**	1020	4.6	86
71.33		**48**	1020	5.9	87	**45**	1020	5.5	86	**39**	1020	4.9	86
63.03		**54**	1020	6.6	87	**51**	1020	6.2	87	**44**	1020	5.5	86
53.87		**63**	980	7.4	87	**59**	1000	7.1	87	**52**	1020	6.4	87
49.38		**69**	950	7.8	87	**65**	970	7.5	87	**57**	1010	6.9	87
43.33		**78**	910	8.5	88	**74**	930	8.2	88	**65**	970	7.5	87
41.07	40/3	**83**	900	8.9	88	**78**	910	8.5	88	**68**	950	7.8	87
35.94		**95**	800	9.0	88	**89**	850	9.0	88	**78**	910	8.5	88
32.38		**105**	725	9.1	88	**99**	770	9.1	88	**86**	880	9.1	88
28.41		**120**	635	9.1	88	**113**	680	9.1	88	**99**	780	9.1	88
25.07		**136**	560	9.1	88	**128**	600	9.1	88	**112**	695	9.2	88
22.22		**153**	485	8.9	88	**144**	525	9.0	88	**126**	615	9.2	88
18.97		**179**	395	8.5	87	**169**	440	8.9	88	**148**	520	9.1	88
22.89		**149**	590	10.0 *	91	**140**	590	9.5	91	**122**	590	8.3	91
20.99		**162**	590	10.9 *	92	**152**	590	10.3 *	92	**133**	590	9.0	91
18.42		**185**	590	12.4 *	92	**174**	590	11.7 *	92	**152**	590	10.3 *	92
17.45		**195**	590	13.1 *	92	**183**	590	12.4 *	92	**160**	590	10.8 *	92
15.28		**223**	530	13.5 *	92	**209**	560	13.4 *	92	**183**	590	12.3 *	92
13.76	34/6	**247**	480	13.5 *	92	**233**	505	13.4 *	92	**203**	585	13.6 *	92
12.07		**282**	415	13.3 *	92	**265**	445	13.4 *	92	**232**	515	13.6 *	92
10.65		**319**	365	13.3 *	92	**300**	390	13.4 *	92	**263**	455	13.6 *	92
9.44		**360**	315	13.0 *	92	**339**	345	13.3 *	92	**297**	405	13.7 *	92
8.06		**422**	260	12.6 *	91	**397**	285	12.9 *	92	**347**	340	13.5 *	92

* P_{emax} = 9.2 kW



2200 - 1400 1/min

02 963 097

		n_e = 2200 1/min				n_e = 1700 1/min				n_e = 1400 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
256.47		**8.6**	1260	1.6	69	**6.6**	1270	1.3	67	**5.5**	1270	1.1	66
225.26		**9.8**	1230	1.8	69	**7.5**	1270	1.5	68	**6.2**	1270	1.2	67
214.00		**10**	1220	1.9	70	**7.9**	1270	1.6	68	**6.5**	1270	1.3	67
189.09		**12**	1200	2.1	70	**9.0**	1240	1.7	69	**7.4**	1270	1.5	68
161.60		**14**	1160	2.3	71	**11**	1220	1.9	70	**8.7**	1260	1.7	69
148.15		**15**	1140	2.5	72	**11**	1200	2.1	70	**9.4**	1240	1.8	69
130.00		**17**	1100	2.7	72	**13**	1170	2.3	71	**11**	1210	1.9	70
123.20	40/1	**18**	1080	2.8	73	**14**	1150	2.3	71	**11**	1200	2.0	70
107.83		**20**	1040	3.0	73	**16**	1110	2.5	72	**13**	1170	2.2	71
97.14		**23**	1010	3.3	74	**18**	1090	2.8	73	**14**	1140	2.4	72
85.22		**26**	970	3.5	74	**20**	1050	3.0	73	**16**	1100	2.6	72
75.20		**29**	920	3.8	74	**23**	1010	3.2	74	**19**	1070	2.9	73
66.67		**33**	880	4.1	75	**25**	970	3.5	74	**21**	1040	3.1	73
56.92		**39**	830	4.5	75	**30**	920	3.9	75	**25**	990	3.4	74
75.09		**29**	1100	4.0	85	**23**	1100	3.1	84	**19**	1100	2.6	83
71.33		**31**	1100	4.2	85	**24**	1100	3.2	85	**20**	1100	2.7	84
63.03		**35**	1100	4.7	86	**27**	1100	3.7	85	**22**	1100	3.0	84
53.87		**41**	1100	5.5	86	**32**	1100	4.3	86	**26**	1100	3.5	85
49.38		**45**	1080	5.8	87	**34**	1100	4.6	86	**28**	1100	3.8	85
43.33		**51**	1050	6.4	87	**39**	1100	5.2	86	**32**	1100	4.3	86
41.07	40/3	**54**	1030	6.6	87	**41**	1100	5.5	86	**34**	1100	4.6	86
35.94		**61**	980	7.2	87	**47**	1060	6.1	87	**39**	1100	5.2	86
32.38		**68**	960	7.8	88	**53**	1040	6.6	87	**43**	1090	5.7	87
28.41		**77**	920	8.5	88	**60**	990	7.1	87	**49**	1050	6.2	87
25.07		**88**	870	9.1	88	**68**	960	7.8	88	**56**	1020	6.8	87
22.22		**99**	790	9.3	88	**77**	920	8.4	88	**63**	980	7.4	87
18.97		**116**	680	9.4	88	**90**	860	9.2	88	**74**	930	8.2	88
22.89		**96**	710	7.9	91	**74**	705	6.1	90	**61**	705	5.0	90
20.99		**105**	710	8.6	91	**81**	705	6.6	91	**67**	705	5.5	90
18.42		**119**	720	9.9	91	**92**	710	7.6	91	**76**	705	6.2	90
17.45		**126**	720	10.4 *	91	**97**	710	8.0	91	**80**	710	6.6	91
15.28		**144**	720	11.9 *	92	**111**	720	9.2	91	**92**	710	7.5	91
13.76	34/6	**160**	725	13.2 *	92	**124**	720	10.2 *	91	**102**	710	8.3	91
12.07		**182**	650	13.5 *	92	**141**	725	11.7 *	92	**116**	720	9.6 *	91
10.65		**207**	580	13.6 *	92	**160**	725	13.2 *	92	**131**	720	10.8 *	92
9.44		**233**	520	13.8 *	92	**180**	655	13.4 *	92	**148**	725	12.3 *	92
8.06		**273**	445	13.8 *	92	**211**	575	13.8 *	92	**174**	680	13.5 *	92

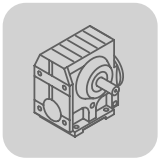
* P_{emax} = 9.2 kW

1100 - 700 1/min

02 964 097

i_{ges}	i_{sch}	n_e = 1100 1/min				n_e = 900 1/min				n_e = 700 1/min			
		n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
256.47		**4.3**	1270	0.89	64	**3.5**	1270	0.75	63	**2.7**	1270	0.60	61
225.26		**4.9**	1270	1.0	65	**4.0**	1270	0.84	63	**3.1**	1270	0.67	62
214.00		**5.1**	1270	1.0	65	**4.2**	1270	0.88	64	**3.3**	1270	0.70	62
189.09		**5.8**	1270	1.2	66	**4.8**	1270	0.98	65	**3.7**	1270	0.78	63
161.60		**6.8**	1270	1.3	67	**5.6**	1270	1.1	66	**4.3**	1270	0.90	64
148.15		**7.4**	1270	1.5	68	**6.1**	1270	1.2	66	**4.7**	1270	0.97	65
130.00	40/1	**8.5**	1260	1.6	69	**6.9**	1270	1.4	67	**5.4**	1270	1.1	66
123.20		**8.9**	1250	1.7	69	**7.3**	1270	1.4	68	**5.7**	1270	1.1	66
107.83		**10**	1220	1.9	70	**8.3**	1260	1.6	69	**6.5**	1270	1.3	67
97.14		**11**	1200	2.0	70	**9.3**	1250	1.8	69	**7.2**	1270	1.4	68
85.22		**13**	1170	2.2	71	**11**	1220	1.9	70	**8.2**	1270	1.6	69
75.20		**15**	1140	2.4	72	**12**	1190	2.1	71	**9.3**	1250	1.8	69
66.67		**16**	1110	2.6	72	**13**	1160	2.3	71	**10**	1220	1.9	70
56.92		**19**	1060	2.9	73	**16**	1120	2.6	72	**12**	1190	2.2	71
75.09		**15**	1120	2.1	83	**12**	1130	1.7	82	**9.3**	1170	1.4	81
71.33		**15**	1120	2.2	83	**13**	1130	1.8	82	**9.8**	1120	1.4	81
63.03		**17**	1120	2.5	83	**14**	1120	2.0	82	**11**	1130	1.6	81
53.87		**20**	1120	2.9	84	**17**	1120	2.4	83	**13**	1120	1.9	82
49.38		**22**	1120	3.1	84	**18**	1120	2.6	83	**14**	1120	2.0	82
43.33		**25**	1130	3.5	85	**21**	1120	2.9	84	**16**	1120	2.3	83
41.07	40/3	**27**	1130	3.7	85	**22**	1120	3.1	84	**17**	1120	2.4	83
35.94		**31**	1150	4.3	85	**25**	1130	3.5	85	**19**	1120	2.7	84
32.38		**34**	1130	4.7	86	**28**	1130	3.9	85	**22**	1120	3.0	84
28.41		**39**	1110	5.2	86	**32**	1150	4.5	86	**25**	1130	3.4	85
25.07		**44**	1080	5.7	87	**36**	1120	4.9	86	**28**	1130	3.9	85
22.22		**50**	1050	6.3	87	**41**	1100	5.4	86	**32**	1150	4.4	86
18.97		**58**	1010	7.0	87	**47**	1060	6.1	87	**37**	1120	5.0	86
22.89		**48**	695	3.9	89	**39**	695	3.2	89	**31**	705	2.6	88
20.99		**52**	705	4.3	90	**43**	695	3.5	89	**33**	705	2.8	88
18.42		**60**	700	4.9	90	**49**	700	4.0	89	**38**	700	3.1	89
17.45		**63**	700	5.1	90	**52**	700	4.2	90	**40**	700	3.3	89
15.28		**72**	710	5.9	90	**59**	700	4.8	90	**46**	700	3.8	89
13.76	34/6	**80**	710	6.6	91	**65**	700	5.3	90	**51**	700	4.2	90
12.07		**91**	710	7.5	91	**75**	710	6.1	90	**58**	700	4.7	90
10.65		**103**	715	8.5	91	**85**	710	6.9	91	**66**	710	5.4	90
9.44		**117**	720	9.6 *	91	**95**	715	7.8	91	**74**	710	6.1	90
8.06		**136**	725	11.3 *	92	**112**	720	9.2	91	**87**	710	7.1	91

* P_{emax} = 9.2 kW



500 - 10 1/min

02 964 097

		n_e = 500 1/min				n_e = 250 1/min				n_e = 10 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
256.47		**1.9**	1270	0.44	59	**0.97**	1270	0.23	56	**0.04**	1270	< 0.05	54
225.26		**2.2**	1270	0.49	60	**1.1**	1270	0.26	56	**0.04**	1270	< 0.05	55
214.00		**2.3**	1270	0.52	60	**1.2**	1270	0.28	56	**0.05**	1270	< 0.05	55
189.09		**2.6**	1270	0.58	61	**1.3**	1270	0.31	57	**0.05**	1270	< 0.05	55
161.60		**3.1**	1270	0.67	62	**1.5**	1270	0.36	58	**0.06**	1270	< 0.05	55
148.15		**3.4**	1270	0.72	62	**1.7**	1270	0.39	58	**0.07**	1270	< 0.05	55
130.00		**3.8**	1270	0.81	63	**1.9**	1270	0.43	59	**0.08**	1270	< 0.05	55
123.20	40/1	**4.1**	1270	0.85	64	**2.0**	1270	0.46	59	**0.08**	1270	< 0.05	55
107.83		**4.6**	1270	0.95	65	**2.3**	1270	0.51	60	**0.09**	1270	< 0.05	56
97.14		**5.1**	1270	1.0	65	**2.6**	1270	0.56	61	**0.10**	1270	< 0.05	56
85.22		**5.9**	1270	1.2	66	**2.9**	1270	0.63	62	**0.12**	1270	< 0.05	56
75.20		**6.6**	1270	1.3	67	**3.3**	1270	0.71	62	**0.13**	1270	< 0.05	56
66.67		**7.5**	1270	1.5	68	**3.7**	1270	0.79	63	**0.15**	1270	< 0.05	56
56.92		**8.8**	1260	1.7	69	**4.4**	1270	0.91	64	**0.18**	1270	< 0.05	56
75.09		**6.7**	1160	1.0	79	**3.3**	1120	0.51	76	**0.13**	1120	< 0.05	75
71.33		**7.0**	1110	1.0	79	**3.5**	1060	0.51	77	**0.14**	1060	< 0.05	75
63.03		**7.9**	1230	1.3	80	**4.0**	1200	0.65	77	**0.16**	1200	< 0.05	76
53.87		**9.3**	1180	1.4	81	**4.6**	1240	0.77	78	**0.19**	1240	< 0.05	76
49.38		**10**	1160	1.5	81	**5.1**	1240	0.84	78	**0.20**	1240	< 0.05	76
43.33		**12**	1120	1.7	82	**5.8**	1240	0.95	79	**0.23**	1240	< 0.05	76
41.07	40/3	**12**	1120	1.7	82	**6.1**	1240	1.0	79	**0.24**	1240	< 0.05	76
35.94		**14**	1120	2.0	82	**7.0**	1240	1.1	79	**0.28**	1240	< 0.05	76
32.38		**15**	1120	2.2	83	**7.7**	1240	1.3	80	**0.31**	1240	0.05	76
28.41		**18**	1120	2.5	83	**8.8**	1190	1.4	80	**0.35**	1190	0.06	76
25.07		**20**	1120	2.8	84	**10**	1170	1.5	81	**0.40**	1170	0.06	76
22.22		**23**	1130	3.2	84	**11**	1130	1.6	81	**0.45**	1130	0.07	76
18.97		**26**	1130	3.7	85	**13**	1120	1.9	82	**0.53**	1120	0.08	76
22.89		**22**	690	1.8	87	**11**	675	0.91	85	**0.44**	675	< 0.05	83
20.99		**24**	725	2.1	87	**12**	740	1.1	85	**0.48**	740	< 0.05	83
18.42		**27**	705	2.3	88	**14**	830	1.4	86	**0.54**	830	0.06	83
17.45		**29**	705	2.4	88	**14**	810	1.4	86	**0.57**	810	0.06	83
15.28		**33**	705	2.7	88	**16**	785	1.6	86	**0.65**	785	0.06	83
13.76	34/6	**36**	695	3.0	89	**18**	770	1.7	87	**0.73**	770	0.07	83
12.07		**41**	695	3.4	89	**21**	750	1.9	87	**0.83**	750	0.08	83
10.65		**47**	695	3.8	89	**23**	725	2.0	87	**0.94**	725	0.09	83
9.44		**53**	705	4.4	90	**26**	705	2.2	88	**1.1**	705	0.09	83
8.06		**62**	705	5.1	90	**31**	705	2.6	88	**1.2**	705	0.11	83

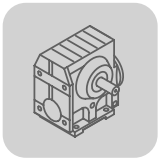
14.18 S, SF, SA, SAF 87

3400 - 2800 1/min

02 965 097

i_{ges}	i_{sch}	n_e = 3400 1/min				n_e = 3200 1/min				n_e = 2800 1/min			
		n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
288.00		12	2030	3.4	74	11	2070	3.3	73	9.7	2070	2.9	73
258.18		13	1990	3.7	74	12	2010	3.5	74	11	2070	3.2	73
222.40		15	1910	4.1	75	14	1950	4.0	74	13	2010	3.6	74
202.96		17	1850	4.3	75	16	1890	4.2	75	14	1970	3.8	74
180.00		19	1800	4.7	75	18	1830	4.5	75	16	1910	4.2	75
151.30		22	1690	5.3	75	21	1730	5.1	75	19	1800	4.6	75
139.05	40/1	24	1630	5.5	76	23	1680	5.4	76	20	1760	4.9	75
123.48		28	1570	6.0	76	26	1600	5.7	76	23	1690	5.3	76
110.40		31	1430	6.1	76	29	1540	6.2	76	25	1620	5.7	76
99.26		34	1260	6.0	75	32	1380	6.2	76	28	1550	6.0	76
86.15		39	1030	5.8	74	37	1150	6.0	75	33	1390	6.2	76
77.14		44	830	5.3	72	41	970	5.7	74	36	1220	6.1	76
64.00		53	500	4.3	65	50	620	4.7	68	44	960	5.9	75
91.20		37	1470	6.6	88	35	1470	6.2	87	31	1470	5.4	87
81.76		42	1470	7.3	88	39	1470	6.9	88	34	1470	6.0	87
70.43		48	1470	8.4	88	45	1470	7.9	88	40	1470	7.0	88
64.27		53	1470	9.2	88	50	1470	8.7	88	44	1470	7.6	88
57.00		60	1470	10.4	88	56	1470	9.8	88	49	1470	8.6	88
47.91		71	1470	12.3	89	67	1470	11.6	89	58	1470	10.2	88
44.03	38/3	77	1470	13.4	89	73	1470	12.6	89	64	1470	11.0	89
39.10		87	1300	13.3	89	82	1400	13.5	89	72	1470	12.4	89
34.96		97	1140	13.1	89	92	1240	13.4	89	80	1440	13.6	89
31.43		108	1000	12.8	88	102	1090	13.1	89	89	1290	13.5	89
27.28		125	810	12.1	88	117	910	12.7	88	103	1110	13.4	89
24.43		139	660	11.1	87	131	775	12.1	88	115	960	13.0	89
20.27		168	395	8.4	82	158	490	9.6	84	138	755	12.4	88
25.50		133	990	15.0	92	125	990	14.1	92	110	990	12.4	92
21.43		159	990	17.8 *	92	149	990	16.8 *	92	131	990	14.7	92
19.70		173	990	19 *	92	162	990	18.3 *	92	142	990	16.0 *	92
17.49		194	870	19 *	92	183	930	19 *	92	160	990	18.0 *	92
15.64		217	760	19 *	92	205	830	19 *	92	179	960	19 *	92
14.06	34/6	242	660	18.2 *	92	228	725	19 *	92	199	860	19 *	92
12.21		278	540	17.2 *	91	262	605	18.1 *	92	229	730	19 *	92
10.93		311	440	15. *8	90	293	510	17.1 *	91	256	645	19 *	92
9.07		375	255	11.5	87	353	325	13.5	89	309	500	17.7 *	92
7.88		431	200	10.5	86	406	230	11.3	87	355	375	15.5 *	90

* P_{emax} = 15 kW



2200 - 1400 1/min

02 965 097

		n_e = 2200 1/min				n_e = 1700 1/min				n_e = 1400 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
288.00		**7.6**	2210	2.5	71	**5.9**	2280	2.0	70	**4.9**	2280	1.7	69
258.18		**8.5**	2170	2.7	72	**6.6**	2260	2.2	71	**5.4**	2280	1.9	69
222.40		**9.9**	2130	3.0	73	**7.6**	2210	2.5	71	**6.3**	2280	2.1	70
202.96		**11**	2080	3.2	73	**8.4**	2190	2.7	72	**6.9**	2260	2.3	71
180.00		**12**	2020	3.5	74	**9.4**	2130	2.9	73	**7.8**	2210	2.5	72
151.30		**15**	1940	4.0	75	**11**	2060	3.3	74	**9.3**	2150	2.9	73
139.05	40/1	**16**	1880	4.2	75	**12**	2020	3.5	74	**10**	2100	3.0	73
123.48		**18**	1820	4.5	75	**14**	1960	3.8	74	**11**	2060	3.3	74
110.40		**20**	1770	4.9	76	**15**	1900	4.1	75	**13**	2000	3.6	74
99.26		**22**	1700	5.2	76	**17**	1840	4.4	75	**14**	1960	3.9	75
86.15		**26**	1620	5.7	76	**20**	1770	4.8	76	**16**	1880	4.3	75
77.14		**29**	1540	6.0	76	**22**	1700	5.2	76	**18**	1820	4.6	76
64.00		**34**	1360	6.4	77	**27**	1580	5.7	77	**22**	1700	5.1	76
91.20		**24**	1540	4.5	87	**19**	1520	3.5	86	**15**	1510	2.9	85
81.76		**27**	1600	5.2	87	**21**	1600	4.0	86	**17**	1600	3.4	86
70.43		**31**	1600	6.0	87	**24**	1600	4.7	87	**20**	1600	3.9	86
64.27		**34**	1600	6.6	88	**26**	1600	5.1	87	**22**	1600	4.2	86
57.00		**39**	1600	7.4	88	**30**	1600	5.7	87	**25**	1600	4.8	87
47.91		**46**	1600	8.7	88	**35**	1600	6.8	88	**29**	1600	5.6	87
44.03	38/3	**50**	1600	9.5	88	**39**	1600	7.4	88	**32**	1600	6.1	87
39.10		**56**	1600	10.6	89	**43**	1600	8.3	88	**36**	1600	6.8	88
34.96		**63**	1600	11.9	89	**49**	1600	9.2	88	**40**	1600	7.6	88
31.43		**70**	1600	13.2	89	**54**	1600	10.2	89	**45**	1600	8.5	88
27.28		**81**	1450	13.7	89	**62**	1600	11.7	89	**51**	1600	9.7	89
24.43		**90**	1310	13.8	89	**70**	1600	13.1	89	**57**	1600	10.8	89
20.27		**109**	1080	13.8	89	**84**	1420	14.0	89	**69**	1600	13.0	89
25.50		**86**	1240	12.2	92	**67**	1240	9.5	91	**55**	1240	7.8	91
21.43		**103**	1240	14.5	92	**79**	1240	11.2	92	**65**	1240	9.3	91
19.70		**112**	1240	15.7 *	92	**86**	1240	12.2	92	**71**	1240	10.1	91
17.49		**126**	1240	17.7 *	92	**97**	1240	13.7	92	**80**	1240	11.3	92
15.64		**141**	1230	20 *	92	**109**	1240	15.3 *	92	**90**	1240	12.7	92
14.06	34/6	**156**	1110	20 *	92	**121**	1240	17.0 *	92	**100**	1240	14.1	92
12.21		**180**	970	20 *	93	**139**	1240	20 *	92	**115**	1240	16.1 *	92
10.93		**201**	870	20 *	93	**156**	1130	20 *	93	**128**	1240	18.0 *	92
9.07		**243**	720	20 *	92	**187**	950	20 *	93	**154**	1140	20 *	93
7.88		**279**	605	19 *	92	**216**	830	20 *	93	**178**	1010	20 *	93

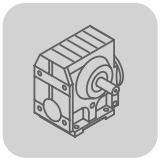
* P_{emax} = 15 kW

1100 - 700 1/min

02 966 097

i_{ges}	i_{sch}	n_e = 1100 1/min				n_e = 900 1/min				n_e = 700 1/min			
		n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
288.00		**3.8**	2400	1.4	67	**3.1**	2450	1.2	66	**2.4**	2480	0.98	64
258.18		**4.3**	2380	1.6	68	**3.5**	2430	1.3	67	**2.7**	2470	1.1	65
222.40		**4.9**	2350	1.8	69	**4.0**	2400	1.5	68	**3.1**	2450	1.2	66
202.96		**5.4**	2330	1.9	70	**4.4**	2380	1.6	68	**3.4**	2430	1.3	67
180.00		**6.1**	2280	2.1	70	**5.0**	2350	1.8	69	**3.9**	2400	1.4	68
151.30		**7.3**	2240	2.4	71	**5.9**	2310	2.0	70	**4.6**	2350	1.7	69
139.05	40/1	**7.9**	2190	2.5	72	**6.5**	2260	2.2	71	**5.0**	2330	1.8	69
123.48		**8.9**	2150	2.8	73	**7.3**	2240	2.4	71	**5.7**	2310	2.0	70
110.40		**10**	2110	3.0	73	**8.2**	2190	2.6	72	**6.3**	2280	2.1	71
99.26		**11**	2070	3.3	74	**9.1**	2150	2.8	73	**7.1**	2240	2.3	71
86.15		**13**	2000	3.6	74	**10**	2090	3.1	73	**8.1**	2190	2.6	72
77.14		**14**	1940	3.9	75	**12**	2040	3.4	74	**9.1**	2150	2.8	73
64.00		**17**	1840	4.4	76	**14**	1960	3.9	75	**11**	2070	3.2	74
91.20		**12**	1490	2.2	84	**9.9**	1480	1.8	83	**7.7**	1460	1.4	82
81.76		**13**	1760	2.9	85	**11**	1760	2.4	84	**8.6**	1760	1.9	83
70.43		**16**	1760	3.4	85	**13**	1760	2.8	85	**9.9**	1760	2.2	83
64.27		**17**	1760	3.7	86	**14**	1760	3.0	85	**11**	1760	2.4	84
57.00		**19**	1760	4.1	86	**16**	1760	3.4	85	**12**	1760	2.7	84
47.91		**23**	1760	4.9	87	**19**	1760	4.0	86	**15**	1760	3.2	85
44.03	38/3	**25**	1760	5.3	87	**20**	1760	4.4	86	**16**	1760	3.4	85
39.10		**28**	1760	6.0	87	**23**	1760	4.9	87	**18**	1760	3.9	86
34.96		**31**	1760	6.6	88	**26**	1760	5.5	87	**20**	1760	4.3	86
31.43		**35**	1760	7.4	88	**29**	1760	6.1	87	**22**	1760	4.7	87
27.28		**40**	1760	8.4	88	**33**	1760	6.9	88	**26**	1760	5.4	87
24.43		**45**	1760	9.4	88	**37**	1760	7.7	88	**29**	1760	6.0	87
20.27		**54**	1760	11.3	89	**44**	1760	9.3	88	**35**	1760	7.2	88
25.50		**43**	1340	6.7	90	**35**	1340	5.5	90	**27**	1340	4.3	89
21.43		**51**	1340	7.9	91	**42**	1340	6.5	90	**33**	1340	5.1	90
19.70		**56**	1340	8.6	91	**46**	1340	7.1	91	**36**	1340	5.5	90
17.49		**63**	1340	9.7	91	**51**	1340	7.9	91	**40**	1340	6.2	90
15.64	34/6	**70**	1340	10.8	92	**58**	1340	8.9	91	**45**	1340	6.9	91
14.06		**78**	1340	12.0	92	**64**	1340	9.8	91	**50**	1340	7.7	91
12.21		**90**	1340	13.8	92	**74**	1340	11.3	92	**57**	1340	8.8	91
10.93		**101**	1340	15.3 *	92	**82**	1340	12.6	92	**64**	1340	9.8	91
9.07		**121**	1340	18.4 *	92	**99**	1340	15.1 *	92	**77**	1340	11.8	92
7.88		**140**	1260	20 *	93	**114**	1340	17.4 *	92	**89**	1340	13.6	92

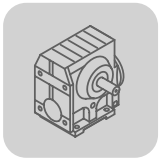
* P_{emax} = 15 kW



500 - 10 1/min

02 966 097

		n_e = 500 1/min				n_e = 250 1/min				n_e = 10 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
288.00		**1.7**	2500	0.73	62	**0.87**	2500	0.38	59	**0.03**	2500	< 0.05	58
258.18		**1.9**	2500	0.80	63	**0.97**	2500	0.43	59	**0.04**	2500	< 0.05	58
222.40		**2.2**	2500	0.92	64	**1.1**	2500	0.49	60	**0.04**	2500	< 0.05	59
202.96		**2.5**	2480	0.99	64	**1.2**	2500	0.53	61	**0.05**	2500	< 0.05	59
180.00		**2.8**	2480	1.1	65	**1.4**	2500	0.60	61	**0.06**	2500	< 0.05	59
151.30		**3.3**	2430	1.3	67	**1.7**	2500	0.70	62	**0.07**	2500	< 0.05	59
139.05	40/1	**3.6**	2430	1.4	67	**1.8**	2500	0.75	63	**0.07**	2500	< 0.05	59
123.48		**4.0**	2400	1.5	68	**2.0**	2500	0.84	63	**0.08**	2500	< 0.05	59
110.40		**4.5**	2380	1.6	69	**2.3**	2500	0.93	64	**0.09**	2500	< 0.05	59
99.26		**5.0**	2330	1.8	69	**2.5**	2470	1.0	65	**0.10**	2470	< 0.05	59
86.15		**5.8**	2310	2.0	70	**2.9**	2450	1.1	66	**0.12**	2450	0.05	59
77.14		**6.5**	2260	2.2	71	**3.2**	2430	1.2	66	**0.13**	2430	0.06	59
64.00		**7.8**	2220	2.5	72	**3.9**	2400	1.5	68	**0.16**	2400	0.07	59
91.20		**5.5**	1450	1.0	81	**2.7**	1390	0.51	79	**0.11**	1390	< 0.05	78
81.76		**6.1**	1960	1.5	82	**3.1**	1880	0.76	79	**0.12**	1880	< 0.05	78
70.43		**7.1**	1980	1.8	82	**3.5**	1980	0.92	80	**0.14**	1980	< 0.05	79
64.27		**7.8**	1980	2.0	83	**3.9**	1980	1.0	80	**0.16**	1980	< 0.05	79
57.00		**8.8**	1980	2.2	83	**4.4**	1980	1.1	80	**0.18**	1980	< 0.05	79
47.91		**10**	1980	2.6	84	**5.2**	1980	1.3	81	**0.21**	1980	0.06	79
44.03	38/3	**11**	1980	2.8	84	**5.7**	1980	1.4	81	**0.23**	1980	0.06	79
39.10		**13**	1980	3.1	85	**6.4**	1980	1.6	82	**0.26**	1980	0.07	79
34.96		**14**	1980	3.5	85	**7.2**	1980	1.8	82	**0.29**	1980	0.08	79
31.43		**16**	1980	3.9	85	**8.0**	1980	2.0	83	**0.32**	1980	0.08	79
27.28		**18**	1980	4.4	86	**9.2**	1980	2.3	83	**0.37**	1980	0.10	79
24.43		**20**	1980	4.9	86	**10**	1980	2.5	84	**0.41**	1980	0.11	79
20.27		**25**	1980	5.9	87	**12**	1980	3.0	85	**0.49**	1980	0.13	79
25.50		**20**	1430	3.3	88	**9.8**	1390	1.6	87	**0.39**	1390	0.07	85
21.43		**23**	1420	3.9	89	**12**	1510	2.1	87	**0.47**	1510	0.09	85
19.70		**25**	1410	4.2	89	**13**	1570	2.4	87	**0.51**	1570	0.10	85
17.49		**29**	1390	4.6	89	**14**	1570	2.7	88	**0.57**	1570	0.11	85
15.64	34/6	**32**	1390	5.2	90	**16**	1540	2.9	88	**0.64**	1540	0.12	85
14.06		**36**	1390	5.7	90	**18**	1510	3.2	88	**0.71**	1510	0.13	85
12.21		**41**	1390	6.6	90	**20**	1460	3.5	89	**0.82**	1460	0.15	85
10.93		**46**	1390	7.3	91	**23**	1430	3.9	89	**0.91**	1430	0.16	85
9.07		**55**	1410	8.9	91	**28**	1390	4.5	89	**1.1**	1390	0.19	85
7.88		**63**	1410	10.3	91	**32**	1390	5.1	90	**1.3**	1390	0.22	85



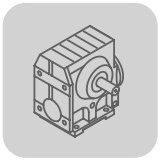
14.19 S, SF, SA, SAF 97

3400 - 2800 1/min

02 967 097

		n_e = 3400 1/min				n_e = 3200 1/min				n_e = 2800 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
286.40		**12**	3520	5.8	76	**11**	3590	5.6	76	**9.8**	3700	5.0	75
262.22		**13**	3450	6.2	76	**12**	3520	5.9	76	**11**	3630	5.4	75
231.67		**15**	3310	6.7	76	**14**	3380	6.4	76	**12**	3520	5.9	76
196.52		**17**	3120	7.4	77	**16**	3210	7.2	76	**14**	3350	6.6	76
180.95		**19**	3030	7.8	77	**18**	3120	7.5	77	**15**	3250	6.9	76
161.74		**21**	2910	8.3	77	**20**	2970	8.0	77	**17**	3120	7.4	77
145.60	40/1	**23**	2760	8.8	77	**22**	2850	8.5	77	**19**	3000	7.9	77
131.85		**26**	2660	9.4	77	**24**	2740	9.1	77	**21**	2880	8.3	77
116.92		**29**	2320	9.3	76	**27**	2550	9.5	77	**24**	2740	8.9	77
105.71		**32**	1980	8.9	75	**30**	2210	9.2	76	**26**	2630	9.5	77
89.60		**38**	1280	7.3	70	**36**	1670	8.5	74	**31**	2210	9.4	77
78.26		**43**	920	6.4	65	**41**	1040	6.7	67	**36**	1770	8.8	75
65.45		**52**	675	5.9	63	**49**	775	6.2	64	**43**	1030	6.8	68
80.85		**42**	3150	15.5	89	**40**	3150	14.6	89	**35**	3150	12.8	89
71.43		**48**	3090	17.2	90	**45**	3150	16.5	89	**39**	3150	14.5	89
60.59		**56**	2910	19	90	**53**	2970	18.3	90	**46**	3120	16.9	90
55.79		**61**	2820	20	90	**57**	2880	19	90	**50**	3030	17.8	90
49.87		**68**	2710	22	90	**64**	2760	21	90	**56**	2910	19	90
44.89	37/3	**76**	2430	21	90	**71**	2630	22	90	**62**	2790	20	90
40.65		**84**	2170	21	90	**79**	2350	22	90	**69**	2680	21	90
36.05		**94**	1830	20	89	**89**	2020	21	89	**78**	2400	22	90
32.60		**104**	1560	19	89	**98**	1760	20	89	**86**	2150	22	90
27.63		**123**	1010	15.2	86	**116**	1320	18.2	88	**101**	1740	21	89
24.13		**141**	725	12.9	83	**133**	820	13.6	84	**116**	1390	19	88
26.39		**129**	1750	25 *	93	**121**	1750	24 *	93	**106**	1750	21	93
23.59		**144**	1750	28 *	93	**136**	1750	27 *	93	**119**	1750	23 *	93
21.23		**160**	1750	32 *	93	**151**	1750	30 *	93	**132**	1750	26 *	93
19.23		**177**	1550	31 *	93	**166**	1680	31 *	93	**146**	1750	29 *	93
17.05	35/6	**199**	1320	30 *	93	**188**	1450	31 *	93	**164**	1730	32 *	93
15.42		**220**	1110	28 *	92	**208**	1260	30 *	93	**182**	1540	31 *	93
13.07		**260**	725	22	90	**245**	940	26 *	92	**214**	1240	30 *	93
11.41		**298**	515	18.3	88	**280**	585	19	89	**245**	1000	28 *	92
9.55		**356**	375	16.2	87	**335**	435	17.5	87	**293**	580	20	89
8.26		**412**	290	14.7	85	**387**	335	15.8	86	**339**	455	18.4	88

* P_{emax} = 22 kW



2200 - 1400 1/min

02 967 097

		n_e = 2200 1/min				n_e = 1700 1/min				n_e = 1400 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
286.40		**7.7**	3920	4.2	74	**5.9**	4000	3.4	73	**4.9**	4000	2.9	72
262.22		**8.4**	3840	4.5	75	**6.5**	4000	3.7	73	**5.3**	4000	3.1	72
231.67		**9.5**	3770	5.0	75	**7.3**	3960	4.1	74	**6.0**	4000	3.5	73
196.52		**11**	3580	5.5	76	**8.7**	3840	4.7	75	**7.1**	4000	4.0	74
180.95		**12**	3510	5.9	76	**9.4**	3770	4.9	75	**7.7**	3920	4.3	74
161.74		**14**	3410	6.4	76	**11**	3650	5.3	76	**8.7**	3840	4.7	75
145.60	40/1	**15**	3270	6.8	77	**12**	3550	5.7	76	**9.6**	3730	5.0	75
131.85		**17**	3170	7.2	77	**13**	3440	6.1	76	**11**	3650	5.4	76
116.92		**19**	3020	7.7	77	**15**	3340	6.6	77	**12**	3510	5.8	76
105.71		**21**	2930	8.3	77	**16**	3210	7.0	77	**13**	3440	6.2	76
89.60		**25**	2730	9.1	77	**19**	3020	7.8	77	**16**	3240	6.9	77
78.26		**28**	2540	9.6	78	**22**	2870	8.4	78	**18**	3080	7.5	77
65.45		**34**	2120	9.7	77	**26**	2650	9.2	78	**21**	2900	8.3	78
80.85		**27**	3300	10.6	89	**21**	3270	8.2	88	**17**	3230	6.7	88
71.43		**31**	3300	12.0	89	**24**	3300	9.3	88	**20**	3300	7.7	88
60.59		**36**	3300	14.1	89	**28**	3300	10.9	89	**23**	3300	9.0	88
55.79		**39**	3270	15.1	89	**30**	3300	11.8	89	**25**	3300	9.8	88
49.87		**44**	3170	16.3	90	**34**	3300	13.2	89	**28**	3300	10.9	89
44.89	37/3	**49**	3050	17.5	90	**38**	3300	14.6	89	**31**	3300	12.1	89
40.65		**54**	2950	19	90	**42**	3230	15.8	90	**34**	3300	13.3	89
36.05		**61**	2810	20	90	**47**	3110	17.1	90	**39**	3300	15.0	89
32.60		**67**	2700	21	90	**52**	2980	18.1	90	**43**	3200	16.0	90
27.63		**80**	2390	22	90	**62**	2810	20	90	**51**	3010	17.8	90
24.13		**91**	2060	22	90	**70**	2670	22	90	**58**	2870	19	90
26.39		**83**	2550	24 *	93	**64**	2600	19	93	**53**	2600	15.6	92
23.59		**93**	2450	26 *	93	**72**	2600	21	93	**59**	2600	17.5	93
21.23		**104**	2380	28 *	93	**80**	2570	23 *	93	**66**	2600	19	93
19.23		**114**	2280	29 *	93	**88**	2500	25 *	93	**73**	2600	21	93
17.05		**129**	2170	31 *	93	**100**	2400	27 *	93	**82**	2570	24 *	93
15.42	35/6	**143**	2040	33 *	93	**110**	2300	28 *	93	**91**	2470	25 *	93
13.07		**168**	1720	32 *	93	**130**	2170	32 *	93	**107**	2330	28 *	93
11.41		**193**	1480	32 *	93	**149**	2000	33 *	93	**123**	2210	30 *	93
9.55		**230**	1200	31 *	93	**178**	1670	33 *	93	**147**	2040	33 *	94
8.26		**266**	980	30 *	93	**206**	1440	33 *	93	**169**	1770	34 *	94

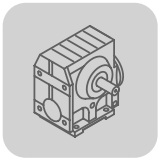
* P_{emax} = 22 kW

1100 - 700 1/min

02 968 097

		n_e = 1100 1/min				n_e = 900 1/min				n_e = 700 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
286.40		**3.8**	4200	2.4	70	**3.1**	4200	2.0	69	**2.4**	4200	1.6	68
262.22		**4.2**	4200	2.6	71	**3.4**	4200	2.2	70	**2.7**	4200	1.7	68
231.67		**4.7**	4200	2.9	72	**3.9**	4200	2.4	70	**3.0**	4200	1.9	69
196.52		**5.6**	4160	3.4	73	**4.6**	4200	2.8	71	**3.6**	4200	2.2	70
180.95		**6.1**	4120	3.6	73	**5.0**	4200	3.0	72	**3.9**	4200	2.4	70
161.74		**6.8**	4030	3.9	74	**5.6**	4160	3.3	73	**4.3**	4200	2.7	71
145.60	40/1	**7.6**	3950	4.2	74	**6.2**	4080	3.6	73	**4.8**	4200	2.9	72
131.85		**8.3**	3880	4.5	75	**6.8**	4030	3.9	74	**5.3**	4200	3.2	72
116.92		**9.4**	3760	4.9	75	**7.7**	3910	4.2	74	**6.0**	4120	3.5	73
105.71		**10**	3650	5.3	76	**8.5**	3840	4.6	75	**6.6**	4030	3.8	74
89.60		**12**	3500	5.9	76	**10**	3690	5.1	76	**7.8**	3910	4.3	75
78.26		**14**	3370	6.5	77	**12**	3580	5.7	76	**8.9**	3800	4.7	75
65.45		**17**	3170	7.2	77	**14**	3400	6.4	77	**11**	3650	5.4	76
80.85		**14**	3230	5.3	87	**11**	3200	4.3	86	**8.7**	3170	3.4	85
71.43		**15**	3600	6.7	87	**13**	3600	5.5	87	**9.8**	3600	4.3	86
60.59		**18**	3600	7.8	88	**15**	3600	6.4	87	**12**	3600	5.0	86
55.79		**20**	3600	8.5	88	**16**	3600	7.0	87	**13**	3600	5.5	87
49.87		**22**	3600	9.4	88	**18**	3600	7.8	88	**14**	3600	6.1	87
44.89	37/3	**25**	3600	10.4	88	**20**	3600	8.6	88	**16**	3600	6.7	87
40.65		**27**	3600	11.5	89	**22**	3600	9.5	88	**17**	3600	7.4	88
36.05		**31**	3530	12.7	89	**25**	3600	10.6	89	**19**	3600	8.3	88
32.60		**34**	3420	13.5	89	**28**	3600	11.7	89	**21**	3600	9.2	88
27.63		**40**	3260	15.2	90	**33**	3460	13.2	89	**25**	3600	10.8	89
24.13		**46**	3130	16.6	90	**37**	3320	14.5	89	**29**	3560	12.2	89
26.39		**42**	2650	12.6	92	**34**	2620	10.2	92	**27**	2620	8.0	91
23.59		**47**	2650	14.0	92	**38**	2650	11.5	92	**30**	2620	8.9	91
21.23		**52**	2650	15.6	92	**42**	2650	12.8	92	**33**	2620	9.9	92
19.23		**57**	2650	17.2	93	**47**	2650	14.1	92	**36**	2620	10.9	92
17.05		**65**	2670	19	93	**53**	2650	15.9	92	**41**	2650	12.4	92
15.42	35/6	**71**	2670	21	93	**58**	2650	17.5	93	**45**	2650	13.7	92
13.07		**84**	2540	24 *	93	**69**	2670	21	93	**54**	2650	16.1	92
11.41		**96**	2420	26 *	93	**79**	2590	23 *	93	**61**	2650	18.4	93
9.55		**115**	2280	29 *	93	**94**	2440	26 *	93	**73**	2650	22	93
8.26		**133**	2140	32 *	94	**109**	2320	28 *	93	**85**	2540	24 *	93

* P_{emax} = 22 kW



500 - 10 1/min

02 968 097

		n_e = 500 1/min				n_e = 250 1/min				n_e = 10 1/min			
i_{ges}	i_{sch}	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]	n_a [1/min]	M_{amax} [Nm]	P_e [kW]	η [%]
286.40		**1.7**	4200	1.2	65	**0.87**	4200	0.62	62	**0.03**	4200	< 0.05	60
262.22		**1.9**	4200	1.3	66	**0.95**	4200	0.68	62	**0.04**	4200	< 0.05	60
231.67		**2.2**	4200	1.4	67	**1.1**	4200	0.76	63	**0.04**	4200	< 0.05	60
196.52		**2.5**	4200	1.6	68	**1.3**	4200	0.88	64	**0.05**	4200	< 0.05	60
180.95		**2.8**	4200	1.8	68	**1.4**	4200	0.95	64	**0.06**	4200	< 0.05	60
161.74		**3.1**	4200	2.0	69	**1.5**	4200	1.1	65	**0.06**	4200	< 0.05	60
145.60	40/1	**3.4**	4200	2.2	70	**1.7**	4200	1.2	65	**0.07**	4200	0.05	60
131.85		**3.8**	4200	2.4	70	**1.9**	4200	1.3	66	**0.08**	4200	0.06	60
116.92		**4.3**	4200	2.6	71	**2.1**	4200	1.4	67	**0.09**	4200	0.06	60
105.71		**4.7**	4200	2.9	72	**2.4**	4200	1.5	67	**0.09**	4200	0.07	60
89.60		**5.6**	4160	3.3	73	**2.8**	4200	1.8	69	**0.11**	4200	0.08	60
78.26		**6.4**	4080	3.7	74	**3.2**	4200	2.0	69	**0.13**	4200	0.09	60
65.45		**7.6**	3910	4.2	75	**3.8**	4200	2.4	70	**0.15**	4200	0.11	60
80.85		**6.2**	3110	2.4	84	**3.1**	3010	1.2	82	**0.12**	3010	< 0.05	80
71.43		**7.0**	4200	3.6	85	**3.5**	4160	1.9	82	**0.14**	4160	0.08	81
60.59		**8.3**	4200	4.3	85	**4.1**	4080	2.1	83	**0.17**	4080	0.09	81
55.79		**9.0**	4200	4.6	86	**4.5**	4200	2.4	83	**0.18**	4200	0.10	81
49.87		**10**	4200	5.1	86	**5.0**	4200	2.6	83	**0.20**	4200	0.11	81
44.89	37/3	**11**	4160	5.6	86	**5.6**	4200	2.9	84	**0.22**	4200	0.12	81
40.65		**12**	4120	6.1	87	**6.2**	4200	3.2	84	**0.25**	4200	0.13	81
36.05		**14**	4080	6.8	87	**6.9**	4200	3.6	85	**0.28**	4200	0.15	81
32.60		**15**	3990	7.3	87	**7.7**	4200	4.0	85	**0.31**	4200	0.17	81
27.63		**18**	3910	8.4	88	**9.0**	4200	4.7	86	**0.36**	4200	0.20	81
24.13		**21**	3800	9.3	88	**10**	4200	5.3	86	**0.41**	4200	0.23	81
26.39		**19**	2590	5.7	90	**9.5**	2540	2.8	89	**0.38**	2540	0.12	87
23.59		**21**	2590	6.3	91	**11**	2540	3.2	89	**0.42**	2540	0.13	87
21.23		**24**	2590	7.0	91	**12**	2570	3.6	89	**0.47**	2570	0.15	87
19.23		**26**	2620	7.8	91	**13**	2570	3.9	89	**0.52**	2570	0.16	87
17.05	35/6	**29**	2620	8.8	91	**15**	2570	4.4	90	**0.59**	2570	0.18	87
15.42		**32**	2620	9.7	92	**16**	2570	4.8	90	**0.65**	2570	0.20	87
13.07		**38**	2650	11.6	92	**19**	2590	5.7	90	**0.77**	2590	0.24	87
11.41		**44**	2650	13.2	92	**22**	2590	6.6	91	**0.88**	2590	0.27	87
9.55		**52**	2650	15.7	92	**26**	2620	7.9	91	**1.0**	2620	0.33	87
8.26		**61**	2650	18.1	93	**30**	2620	9.1	91	**1.2**	2620	0.38	87

15 Lijst van toegepaste afkortingen en index

15.1 Lijst van toegepaste afkortingen

a, b, f	Constanten voor het omrekenen van de radiale kracht	[mm]
c	Constante voor het omrekenen van de radiale kracht	[Nmm]
d_{RZ}	Rondsel-astapdiameter	[mm]
ID	Inschakelduur	%
F_A	Axiale kracht	[N]
F_{Aa}	Axiale kracht op de uitgaande as van de reductor	[N]
F_{Ae}	Axiale kracht aan de ingaande as van de reductor	[N]
f_B	Bedrijfsfactor = $M_{a\ max}/M_a$	–
F_R	Radiale kracht	[N]
F_{Ra}	Toelaatbare radiale kracht (N) aan uitgaande as, krachtaangrijping in het midden van aseind	[N]
F_{Re}	Toelaatbare radiale kracht (N) aan ingaande as, krachtaangrijping in het midden van aseind	[N]
f_Z	Toeslagfactor bij het bepalen van de radiale kracht	–
H	Opstellingshoogte	[m ü. NN]
i	Reductoroverbrengingsverhouding	–
i_{tot}	Totale reductoroverbrengingsverhouding	–
IP..	Beschermingsgraad	–
i_{worm}	Overbrengingsverhouding van de wormoverbrengingstrap	–
J	Massatraagheidsmoment	[10^{-4} kgm^2]
$J_{adapter}$	Massatraagheidsmoment aan ingande zijde van de adapter	[10^{-4} kgm^2]
J_{last}	Massatraagheidsmoment aandrijvende zijde	[10^{-4} kgm^2]
ϑ_{omg}	Omgevingstemperatuur	[° C]
m	Massa zonder smeermiddel, zonder rem	[kg]
M_a	Koppel uitgaande as	[Nm]
$M_{a\ max}$	Max. toelaatbaar koppel aan uitgaande as	[Nm]
M_B	Remkoppel	[Nm]
$M_{B\ max}$	Max. remkoppel	[Nm]
$M_{e\ max}$	Max. toelaatbaar koppel aan ingaande as	[Nm]
M_R	Slipkoppel	[Nm]
MS	Aanhaalmoment	[Nm]
n_a	Toerental uitgaande as	[1/min]
n_e	Toerental ingaande as	[1/min]
n_n	Nominaal toerental	[1/min]
P_a	Vermogen aan uitgaande as	[kW]
P_e 1)	Rekentechnisch ingaand vermogen aan de reductor	[kW]
P_m	Nominaal vermogen van de aandrijfmotor	[kW]
S..	Bedrijfssoort	–
S_N	Nominale slip	[%]
U_{rem}	Bedrijfsspanning van de rem (AT met rem)	[V]
Z	Schakelfrequentie	[1/h], [c/h]
η	Rendement bij het aandrijven van de last	–
η'	Rendement bij het aandrijven door de last	–
φ **(/R)**	Hoekspeling	[']

1) P_e blijkt uit $M_{a\ max}$, waarbij rekening gehouden moet worden met de reductorrendemtenbij standaard-voorwaarden (zie hoofdstuk Selecteren van reductoren). Attentie: als $M_{a\ max}$ wordt overschreden leidt dit tot beschadiging van de reductor!

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SEW EURODRIVE

NIEUWE CATALOGUS REDUCTOREN

(geldig vanaf juli 2004)

Vector Aandrijftechniek biedt u nu de nieuwe catalogus **Reductoren 2004** aan. Wij hebben de inhoud weer geoptimaliseerd om u nog meer informatie te kunnen geven en om het werken met deze catalogus te vergemakkelijken.

En u vindt dat onder het trefwoord "Nieuwe producten":

- **De nieuwe TorqLOC®-klemverbinding voor reductoren met holle as.**
- **De volgende adaptesr zijn nieuw beschikbaar:**
  adapter AM132S/M, AM213/215, AQ..190/1 - /3
  voor de aanbouw aan R..47, R..57, R..67, F..57, F..67, K..57, K..67, S..67.
- **Nieuw zijn de hoofdstukken corrosiewering en oppervlaktebescherming, en langdurige opslag.**
- **Nieuwe kleinere overbrengingsverhoudingen bij de kegelwielreductoren K..47, K..57, K..67.**

Daarom... laat u zich overtuigen: *Made by* **SEW-EURODRIVE** staat wereldwijd voor competentie in de aandrijftechniek, want

ontwikkeling, productie, advies, verkoop en service

komen bij SEW-EURODRIVE uit één hand.

Rotterdam, juli 2004

Vector Aandrijftechniek B.V.

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	Perth	SEW-EURODRIVE PTY. LTD. 105 Robinson Avenue Belmont, W.A. 6104	Tel. +61 8 9478-2688 Fax +61 8 9277-7572 enquires@sew-eurodrive.com.au
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	Roma	Elettromec Via Castel Rosso, 10 I-00144 Roma	Tel. +39 6 592 45-30 Fax +39 6 592 45-30
	Torino	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Filiale Torino c.so Unione Sovietica 612/15 - int. C I-11035 Torino	Tel. +39 11 3473780 Fax +39 11 3473783
	Verona	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via P. Sgulmero, 27/A I-37132 Verona	Tel. +39 45 97-7722 Fax +39 45 97-6079

Ivoorkust			
Verkoop	**Abidjan**	SICA Ste industrielle et commerciale pour l'Afrique 165, Bld de Marseille B.P. 2323, Abidjan 08	Tel. +225 2579-44 Fax +225 2584-36

Japan			
Assemblage **Verkoop** **Service**	**Toyoda-cho**	SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Toyoda-cho, Iwata gun Shizuoka prefecture, 438-0818	Tel. +81 538 373811 Fax +81 538 373814 sewjapan@sew-eurodrive.co.jp
Verkooppunten	**Fukuoka**	SEW-EURODRIVE JAPAN CO., LTD. C-go, 5th-floor, Yakuin-Hiruzu-Bldg. 1-5-11, Yakuin, Chuo-ku Fukuoka, 810-0022	Tel. +81 92 713-6955 Fax +81 92 713-6860 sewkyushu@jasmine.ocn.ne.jp
	Osaka	SEW-EURODRIVE JAPAN CO., LTD. B-Space EIRAI Bldg., 3rd Floor 1-6-9 Kyoumachibori, Nishi-ku, Osaka, 550-0003	Tel. +81 6 6444--8330 Fax +81 6 6444--8338 sewosaka@crocus.ocn.ne.jp
	Tokyo	SEW-EURODRIVE JAPAN CO., LTD. Izumi-Bldg. 5 F 3-2-15 Misaki-cho Chiyoda-ku, Tokyo 101-0061	Tel. +81 3 3239-0469 Fax +81 3 3239-0943 sewtokyo@basil.ocn.ne.jp

Kameroen			
Verkoop	**Douala**	Electro-Services Rue Drouot Akwa B.P. 2024 Douala	Tel. +237 4322-99 Fax +237 4277-03

Korea			
Assemblage **Verkoop** **Service**	**Ansan-City**	SEW-EURODRIVE KOREA CO., LTD. B 601-4, Banweol Industrial Estate Unit 1048-4, Shingil-Dong Ansan 425-120	Tel. +82 31 492-8051 Fax +82 31 492-8056 master@sew-korea.co.kr
	Busan	SEW-EURODRIVE KOREA Co., Ltd. No. 1720 - 11, Songjeong - dong Gangseo-ku Busan 618-270	Tel. +82 51 832-0204 Fax +82 51 832-0230 master@sew-korea.co.kr

Korea			
Verkooppunten	**Daegu**	SEW-EURODRIVE KOREA Co., Ltd. No.1108 Sungan officete l 87-36, Duryu 2-dong, Dalseo-ku Daegu 704-712	Tel. +82 53 650-7111 Fax +82 53 650-7112 sewdaegu@netsgo.com
	DaeJeon	SEW-EURODRIVE KOREA Co., Ltd. No. 2017, Hongin offictel 536-9, Bongmyung-dong, Yusung-ku Daejeon 305-301	Tel. +82 42 828-6461 Fax +82 42 828-6463 sewdaejeon@netsgo.com
	Kwangju	SEW-EURODRIVE KOREA Co., Ltd. 4fl., Shinhyun B/D 96-16 Unam-dong, Buk-ku Kwangju 500-170	Tel. +82 62 511-9172 Fax +82 62 511-9174 sewkwangju@netsgo.com
	Seoul	SEW-EURODRIVE KOREA Co., Ltd. No.1104 Sunkyung officetel 106-4 Kuro 6-dong, Kuro-ku Seoul 152-054	Tel. +82 2 862-8051 Fax +82 2 862-8199 sewseoul@netsgo.com

Kroatië			
Verkoop **Service**	**Zagreb**	KOMPEKS d. o. o. PIT Erdödy 4 II HR 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@net.hr

Libanon			
Verkoop	**Beirut**	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 4947-86 +961 1 4982-72 +961 3 2745-39 Fax +961 1 4949-71 gacar@beirut.com

Litouwen			
Verkoop	**Alytus**	UAB Irseva Merkines g. 2A LT-4580 Alytus	Tel. +370 315 79204 Fax +370 315 79688 irmantas.irseva@one.lt

Luxemburg			
Assemblage **Verkoop** **Service**	**Brussel**	CARON-VECTOR S.A. Avenue Eiffel 5 B-1300 Wavre	Tel. +32 10 231-311 Fax +32 10 231-336 http://www.caron-vector.be info@caron-vector.be

Maleisië			
Assemblage **Verkoop** **Service**	**Johore**	SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia	Tel. +60 7 3549409 Fax +60 7 3541404 kchtan@pd.jaring.my
Verkooppunten	**Kota Kinabalu**	SEW-EURODRIVE Sdn Bhd (Kota Kinabalu Branch) Lot No. 2,1st Floor, Inanam Baru Phase III, Miles 5.1 /2, Jalan Tuaran, Inanam 89350 Kota Kinabalu Sabah, Malaysia	Tel. +60 88 424792 Fax +60 88 424807
	Kuala Lumpur	SEW-EURODRIVE Sdn. Bhd. No. 2, Jalan Anggerik Mokara 31/46 Kota Kemuning Seksyen 31 40460 Shah Alam Selangor Darul Ehsan	Tel. +60 3 5229633 Fax +60 3 5229622 sewpjy@po.jaring.my
	Kuching	SEW-EURODRIVE Sdn. Bhd. Lot 268, Section 9 KTLD Lorong 9, Jalan Satok 93400 Kuching, Sarawak East Malaysia	Tel. +60 82 232380 Fax +60 82 242380
	Penang	SEW-EURODRIVE Sdn. Bhd. No. 38, Jalan Bawal Kimsar Garden 13700 Prai, Penang	Tel. +60 4 3999349 Fax +60 4 3999348 seweurodrive@po.jaring.my

Marokko			
Verkoop	**Casablanca**	S. R. M. Société de Réalisations Mécaniques 5, rue Emir Abdelkader 05 Casablanca	Tel. +212 2 6186-69 + 6186-70 + 6186-71 Fax +212 2 6215-88 srm@marocnet.net.ma

Mexico			
	Queretaro	SEW-EURODRIVE, Sales and Distribution, S. A. de C. V. Privada Tequisquiapan No. 102 Parque Ind. Queretaro C. P. 76220 Queretaro, Mexico	Tel. +52 442 1030-300 Fax +52 442 1030-301 scmexico@seweurodrive.com.mx

Nederland			
Assemblage **Verkoop** **Service**	**Rotterdam**	VECTOR Aandrijftechniek B.V. Industrieweg 175 NL-3044 AS Rotterdam Postbus 10085 NL-3004 AB Rotterdam	Tel. +31 10 4463-700 Fax +31 10 4155-552 http://www.vector.nu info@vector.nu

Nieuw-Zeeland			
Assemblage **Verkoop** **Service**	**Auckland**	SEW-EURODRIVE NEW ZEALAND LTD. P.O. Box 58-428 82 Greenmount drive East Tamaki Auckland	Tel. +64 9 2745627 Fax +64 9 2740165 sales@sew-eurodrive.co.nz
	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 10 Settlers Crescent, Ferrymead Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 sales@sew-eurodrive.co.nz
Verkooppunt	**Palmerston North**	SEW-EURODRIVE NEW ZEALAND LTD. C/-Grant Shearman, RD 5, Aronui Road Palmerston North	Tel. +64 6 355-2165 Fax +64 6 355-2316 sales@sew-eurodrive.co.nz

Noorwegen			
Assemblage **Verkoop** **Service**	**Moss**	SEW-EURODRIVE A/S Solgaard skog 71 N-1599 Moss	Tel. +47 69 241-020 Fax +47 69 241-040 sew@sew-eurodrive.no

Oostenrijk			
Assemblage **Verkoop** **Service**	**Wien**	SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Strasse 24 A-1230 Wien	Tel. +43 1 617 55 00-0 Fax +43 1 617 55 00-30 http://sew-eurodrive.at sew@sew-eurodrive.at
Verkooppunten	**Linz**	SEW-EURODRIVE Ges.m.b.H. Reuchlinstr. 6/3 A-4020 Linz	Tel. +43 732 655 109-0 Fax +43 732 655 109-20 tb-linz@sew-eurodrive.at
	Graz	SEW-EURODRIVE Ges.m.b.H. Grabenstraße 231 A-8045 Graz	Tel. +43 316 685 756-0 Fax +43 316 685 755 tb-graz@sew-eurodrive.at
	Dornbirn	SEW-EURODRIVE Ges.m.b.H. Lustenauerstraße 27/1 A-6850 Dornbirn	Tel. +43 5572 3725 99-0 Fax +43 5572 3725 99-20 tb-dornbirn@sew-eurodrive.at

Pakistan			
Verkooppunt	**Karachi**	SEW-EURODRIVE Pte. Ltd. Karachi Liaison Office A/3, 1st Floor, Central Commercial Area Sultan Ahmed Shah Road Block 7/8, K.C.H.S. Union Ltd., Karachi	Tel. +92 21 4529369 Fax +92 21 4547365 seweurodrive@cyber.net.pk

Paraguay			
	Asunción	EQUIS S. R. L. Avda. Madame Lynchy y Sucre Asunción	Tel. +595 21 6721-48 Fax +595 21 6721-50 equisa@uninet.com.py

Peru			
Assemblage **Verkoop** **Service**	**Lima**	SEW DEL PERU MOTORES REDUCTORES S.A.C. Los Calderos <FmSdata>[Idot] 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. +51 1 3495280 Fax +51 1 3493002 sewperu@sew-eurodrive.com.pe

Polen			
Assemblage **Verkoop** **Service**	**Lodz**	SEW-EURODRIVE Polska Sp.z.o.o. ul. Techniczna 5 PL-92-518 Lodz	Tel. +48 42 67710-90 Fax +48 42 67710-99 http://www.sew-eurodrive.pl sew@sew-eurodrive.pl
Verkooppunten	**Katowice**	SEW-EURODRIVE Polska Sp.z.o.o. ul. Nad Jeziorem 87 PL-43-100 Tychy	Tel. +48 32 2175026 + 32 2175027 Fax +48 32 2277910
	Bydgoszcz	SEW-EURODRIVE Polska Sp.z.o.o. ul. Fordonska 246 PL-85-959 Bydgoszcz	Tel. +48 52 3606590 Fax +48 52 3606591
	Szczecinek	SEW-EURODRIVE Polska Sp.z.o.o. ul. Mickiewicza 2 pok. 36 PL-78-400 Szczecinek	Tel. +48 94 3728820 Fax +48 94 3728821

Portugal			
Assemblage **Verkoop** **Service**	**Coimbra**	SEW-EURODRIVE, LDA. Apartado 15 P-3050-901 Mealhada	Tel. +351 231 20 9670 Fax +351 231 20 3685 http://www.sew-eurodrive.pt infosew@sew-eurodrive.pt
Verkooppunten	**Lisboa**	Tertir Edificio Lisboa Gabinete 119 P-2615 Alverca do Ribatejo	Tel. +351 21 958-0198 Fax +351 21 958-0245 esc.lisboa@sew-eurodrive.pt
	Porto	AV. D. AFONSO HENRIQUES, 1196-9° Sala 909 - Edificio Acia P- 4450 Matosinhos	Tel. +351 22 935038-3 Fax +351 22 935038-4 MobilTel. +351 9 332559110 esc.porto@sew-eurodrive.pt

Roemenië			
Verkoop **Service**	**Bucuresti**	Sialco Trading SRL str. Madrid nr.4 011785 Bucuresti	Tel. +40 21 230-1328 Fax +40 21 230-7170 sialco@sialco.ro

Rusland			
Verkoop	**St. Petersburg**	ZAO SEW-EURODRIVE P.O. Box 263 RUS-195220 St. Petersburg	Tel. +7 812 5357142 +812 5350430 Fax +7 812 5352287 http://www.sew-eurodrive.ru sew@sew-eurodrive.ru
Verkooppunt	**Moskau**	ZAO SEW-EURODRIVE RUS-119180 Moskau	Tel. +7 095 9337090 Fax +7 095 9337094 mso@sew-eurodrive.ru
	Novosibirsk	ZAO SEW-EURODRIVE pr. K Marksa, d.30 RUS-630087 Novosibirsk	Tel. +7 3832 350200 Fax +7 3832 462544 nso@sew-eurodrive.ru

Senegal			
Verkoop	**Dakar**	SENEMECA Mécanique Générale Km 8, Route de Rufisque B.P. 3251, Dakar	Tel. +221 849 47-70 Fax +221 849 47-71 senemeca@sentoo.sn

Servië en Montenegro			
Verkoop	**Beograd**	DIPAR d.o.o. Kajmakcalanska 54 SCG-11000 Beograd	Tel. +381 11 3046677 Fax +381 11 3809380 dipar@yubc.net

Singapore			
Assemblage **Verkoop** **Service**	**Singapore**	SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. +65 68621701 ... 1705 Fax +65 68612827 Telex 38 659 sales@sew-eurodrive.com.sg

Slowakije			
Verkoop	**Sered**	SEW-Eurodrive SK s.r.o. Trnavska 920 SK-926 01 Sered	Tel. +421 31 7891311 Fax +421 31 7891312 sew@sew-eurodrive.sk

Slovenië			
Verkoop **Service**	**Celje**	Pakman - Pogonska Tehnika d.o.o. UI. XIV. divizije 14 SLO – 3000 Celje	Tel. +386 3 490 83-20 Fax +386 3 490 83-21 pakman@siol.net

Spanje			
Assemblage **Verkoop** **Service**	**Bilbao**	SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 E-48170 Zamudio (Vizcaya)	Tel. +34 9 4431 84-70 Fax +34 9 4431 84-71 sew.spain@sew-eurodrive.es
Verkooppunten	**Barcelona**	Delegación Barcelona Avenida Francesc Maciá 40-44 Oficina 3.1 E-08206 Sabadell (Barcelona)	Tel. +34 9 37 162200 Fax +34 9 37 233007
	Lugo	Delegación Noroeste Apartado, 1003 E-27080 Lugo	Tel. +34 6 3940 3348 Fax +34 9 8220 2934
	Madrid	Delegación Madrid Gran Via. 48-2° A-D E-28220 Majadahonda (Madrid)	Tel. +34 9 1634 2250 Fax +34 9 1634 0899

Sri Lanka			
	Colombo 4	SM International (Pte) Ltd 254, Galle Raod Colombo 4, Sri Lanka	Tel. +94 1 2584887 Fax +94 1 2582981

Taiwan (R.O.C.)			
	Nan Tou	Ting Shou Trading Co., Ltd. No. 55 Kung Yeh N. Road Industrial District Nan Tou 540	Tel. +886 49 255353 Fax +886 49 257878
	Taipei	Ting Shou Trading Co., Ltd. 6F-3, No. 267, Sec. 2 Tung Hwa South Road, Taipei	Tel. +886 2 27383535 Fax +886 2 27368268 Telex 27 245 nestnet@ms6.hinet.net

Thailand			
Assemblage **Verkoop** **Service**	**Chon Buri**	SEW-EURODRIVE (Thailand) Ltd. Bangpakong Industrial Park 2 700/456, Moo.7, Tambol Donhuaroh Muang District Chon Buri 20000	Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.co.th

Thailand			
Verkooppunten	**Bangkok**	SEW-EURODRIVE PTE LTD Bangkok Liaison Office 6th floor, TPS Building 1023, Phattanakarn Road Klongtan, Phrakanong, Bangkok,10110	Tel. +66 2 7178149 Fax +66 2 7178152 sewthailand@sew-eurodrive.co.th
	Hadyai	SEW-EURODRIVE (Thailand) Ltd. Hadyai Country Home Condominium 59/101 Soi.17/1 Rachas-Utid Road. Hadyai, Songkhla 90110	Tel. +66 74 359441 Fax +66 74 359442 sewhdy@ksc.th.com
	Khonkaen	SEW-EURODRIVE (Thailand) Ltd. 4th Floor, Kaow-U-HA MOTOR Bldg, 359/2, Mitraphab Road. Muang District Khonkaen 40000	Tel. +66 43 225745 Fax +66 43 324871 sewkk@cscoms.com
	Lampang	SEW-EURODRIVE (Thailand) Ltd. 264 Chatchai Road, sob-tuy, Muang, Lampang 52100	Tel. +66 54 310241 Fax +66 54 310242 sewthailand@sew-eurodrive.co.th

Tjechische Republiek			
Verkoop	**Praag**	SEW-EURODRIVE CZ S.R.O. Business Centrum Praha Luná 591 CZ-16000 Praha 6 - Vokovice	Tel. +420 220121234 + 220121236 Fax +420 220121237 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz
Verkooppunten	**Brno**	SEW-EURODRIVE CZ S.R.O. Krenova 52 CZ -60200 Brno	Tel. +420 543256151 + 543256163 Fax +420 543256845
	Hradec Kralove	SEW-EURODRIVE CZ S.R.O. Technicka Kancelar - vychodni Cechy Svermova CZ-53374 Horni Jeleni	Tel. +420 466673711 Fax +420 466673634
	Klatovy	SEW-EURODRIVE CZ S.R.O. Technical Office Klatovy Kollarova 528 CZ-33901 Klatovy 3	Tel. +420 376310729 Fax +420 376310725

Tunesië			
Verkoop	**Tunis**	T. M.S. Technic Marketing Service 7, rue Ibn EI Heithem Z.I. SMMT 2014 Mégrine Erriadh	Tel. +216 1 4340-64 + 1 4320-29 Fax +216 1 4329-76

Turkije			
Assemblage **Verkoop** **Service**	**Istanbul**	SEW-EURODRIVE Hareket Sistemleri Sirketi Bagdat Cad. Koruma Cikmazi No. 3 TR-34846 Maltepe ISTANBUL	Tel. +90 216 4419163 + 216 4419164 + 216 3838014 Fax +90 216 3055867 sew@sew-eurodrive.com.tr
Verkooppunten	**Ankara**	SEW-EURODRIVE Hareket Sistemleri Ticaret Ltd. Sirketi Özcelik Is Merkezi, 14. Sok, No. 4/42 TR-06370 Ostim/Ankara	Tel. +90 312 2868014 Fax +90 312 2868015
	Izmir	SEW-EURODRIVE Hareket Sistemleri Ticaret Ltd. Sirketi 1203/11 Sok. No. 4/613 Hasan Atli Is Merkezi TR-35110 Yenisehir-Izmir	Tel. +90 232 4696264 Fax +90 232 4336105

Uruguay			
	Montevideo	SEW-EURODRIVE Argentina S. A. Sucursal Uruguay German Barbato 1526 CP 11200 Montevideo	Tel. +598 2 90181-89 Fax +598 2 90181-88 sewuy@sew-eurodrive.com.uy

Venezuela			
Assemblage **Verkoop** **Service**	**Valencia**	SEW-EURODRIVE Venezuela S.A. Av. Norte Sur No. 3, Galpon 84-319 Zona Industrial Municipal Norte Valencia, Estado Carabobo	Tel. +58 241 832-9804 Fax +58 241 838-6275 sewventas@cantv.net sewfinanzas@cantv.net

Verenigde Staten			
Fabriek **Assemblage** **Verkoop** **Service**	**Greenville**	SEW-EURODRIVE INC. 1295 Old Spartanburg Highway P.O. Box 518 Lyman, S.C. 29365	Tel. +1 864 439-7537 Fax Sales +1 864 439-7830 Fax Manuf. +1 864 439-9948 Fax Ass. +1 864 439-0566 Telex 805 550 http://www.seweurodrive.com cslyman@seweurodrive.com
Assemblage **Verkoop** **Service**	**San Francisco**	SEW-EURODRIVE INC. 30599 San Antonio St. Hayward, California 94544-7101	Tel. +1 510 487-3560 Fax +1 510 487-6381 cshayward@seweurodrive.com
	Philadelphia/PA	SEW-EURODRIVE INC. Pureland Ind. Complex 2107 High Hill Road, P.O. Box 481 Bridgeport, New Jersey 08014	Tel. +1 856 467-2277 Fax +1 856 845-3179 csbridgeport@seweurodrive.com
	Dayton	SEW-EURODRIVE INC. 2001 West Main Street Troy, Ohio 45373	Tel. +1 937 335-0036 Fax +1 937 440-3799 cstroy@seweurodrive.com
	Dallas	SEW-EURODRIVE INC. 3950 Platinum Way Dallas, Texas 75237	Tel. +1 214 330-4824 Fax +1 214 330-4724 csdallas@seweurodrive.com
	Andere adressen van service-werkplaatsen in de Verenigde Staten op aanvraag.		

Zuid-Afrika			
Assemblage **Verkoop** **Service**	**Johannesburg**	SEW-EURODRIVE (PROPRIETARY) LIMITED Eurodrive House Cnr. Adcock Ingram and Aerodrome Roads Aeroton Ext. 2 Johannesburg 2013 P.O.Box 90004 Bertsham 2013	Tel. +27 11 248-7000 Fax +27 11 494-3104 dross@sew.co.za
	Capetown	SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442 Cape Town	Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 dswanepoel@sew.co.za
	Durban	SEW-EURODRIVE (PROPRIETARY) LIMITED 2 Monaceo Place Pinetown Durban P.O. Box 10433, Ashwood 3605	Tel. +27 31 700-3451 Fax +27 31 700-3847 dtait@sew.co.za
	Nelspruit	SEW-EURODRIVE (PTY) LTD. 7 Christie Crescent Vintonia P.O.Box 1942 Nelspruit 1200	Tel. +27 13 752-8007 Fax +27 13 752-8008 robermeyer@sew.co.za
Verkooppunten	**Port Elizabeth**	SEW-EURODRIVE PTY LTD. 5 b Linsay Road Neave Township 6000 Port Elizabeth	Tel. +27 41 453-0303 Fax +27 41 453-0305 dswanepoel@sew.co.za
	Richards Bay	SEW-EURODRIVE PTY LTD. 25 Eagle Industrial Park Alton Richards Bay P.O. Box 458 Richards Bay 3900	Tel. +27 35 797-3805 Fax +27 35 797-3819 dtait@sew.co.za

Zweden			
Assemblage **Verkoop** **Service**	**Jönköping**	SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping	Tel. +46 36 3442-00 Fax +46 36 3442-80 http://www.sew-eurodrive.se info@sew-eurodrive.se
Verkooppunten	**Göteborg**	SEW-EURODRIVE AB Gustaf Werners gata 8 S-42131 Västra Frölunda	Tel. +46 31 70968-80 Fax +46 31 70968-93
	Malmö	SEW-EURODRIVE AB Borrgatan 5 S-21124 Malmö	Tel. +46 40 68064-80 Fax +46 40 68064-93
	Stockholm	SEW-EURODRIVE AB Björkholmsvägen 10 S-14125 Huddinge	Tel. +46 8 44986-80 Fax +46 8 44986-93
	Skellefteå	SEW-EURODRIVE AB Trädgårdsgatan 8 S-93131 Skellefteå	Tel. +46 910 7153-80 Fax +46 910 7153-93

Zwitserland			
Assemblage **Verkoop** **Service**	**Basel**	Alfred Imhof A.G. Jurastrasse 10 CH-4142 Münchenstein bei Basel	Tel. +41 61 41717-17 Fax +41 61 41717-00 http://www.imhof-sew.ch info@imhof-sew.ch
Verkooppunten	**Suisse romande**	André Gerber Es Perreyres 1436 Chamblon	Tel. +41 2 444538-50 Fax +41 2 444548-87
	Bern	Rudolf Bühler Allerheiligenstraße 97d 2540 Grenchen	Tel. +41 3 265223-39 Fax +41 3 265223-31
	Luzern	Beat Lütolf Baumacher 11 6244 Nebikon	Tel. +41 6 275647-80 Fax +41 6 275647-86
	Zürich	René Rothenbühler Nörgelbach 7 8493 Saland	Tel. +41 5 238631-50 Fax +41 5 238632-13

LEVERINGS- EN BETALINGSVOORWAARDEN VAN VECTOR AANDRIJFTECHNIEK B.V. TE ROTTERDAM GEDEPONEERD BIJ DE ARRONDISSEMENTSRECHTBANK TE ROTTERDAM EN DEN HAAG.

Op alle aanbiedingen en overeenkomsten met betrekking tot door ons te verrichten leveringen en/of diensten zijn van toepassing de Algemene verkoop- en leveringsvoorwaarden voor de metaal- en de elektrotechnische industrie, door de Vereniging FME-CWM op 19.10.1998 gedeponeerd ter griffie van de Arrondissementsrechtbank te Den Haag onder nummer 119/1998, met inachtneming van onderstaande afwijkende en aanvullende bepalingen. Een afschrift van de FME-CWM voorwaarden wordt u op aanvraag toegezonden.

Uitdrukkelijk worden andersluidende voorwaarden afgewezen.

AFWIJKENDE EN AANVULLENDE BEPALINGEN.

PRIJS
(Art. IV)
In de plaats van artikel IV.1 van de FME-CWM voorwaarden geldt het navolgende:
Prijzen zijn gebaseerd op levering franco plaats van bestemming in Nederland inclusief transportverzekering met een vervoer naar onze keuze, mits het netto-orderbedrag een door ons jaarlijks vast te stellen limiet overschrijdt.
Voor orders met een waarde lager dan in voorafgaande alinea bedoelde limiet wordt een bijdrage in de behandelings- en de verzendkosten (porto, vracht e.d.) in rekening gebracht.

RISICO- EN EIGENDOMSOVERGANG
In aanvulling op het vermelde in de regeling van art. IX van de FME-CWM voorwaarden geldt het onderstaande:

(Artikel IX lid 4)
Onverminderd het gestelde in de voorgaande leden verplicht de opdrachtgever zich om na de vervaldag van de factuur zijn medewerking te verlenen aan het vestigen van een bezitloos pandrecht ten aanzien van het geleverde, dan wel het object waarin het geleverde is verwerkt en/of waarvan het bestanddeel is geworden.

(Artikel IX lid 5)
Op alle goederen die zich van of namens de opdrachtgever onder de opdrachtnemer bevinden, heeft de opdrachtnemer het recht van terughouding zolang de opdrachtgever niet aan al zijn verplichtingen jegens de opdrachtnemer heeft voldaan.

BETALING
(Artikel X)
In plaats van artikel X lid 1 van de FME-CWM voorwaarden geldt:

A. Betaling van opdrachten met een waarde tot € 25.000,- netto exclusief omzetbelasting dient te geschieden binnen 30 dagen na levering.
B. Voor opdrachten van € 25.000,- netto, exclusief omzetbelasting en hoger, dan wel een lager bedrag indien dit naar het oordeel van de opdrachtnemer wenselijk is, gelden de volgende betalingscondities, tenzij schriftelijk anders is overeengekomen:
   – 1/3 van het orderbedrag binnen 10 dagen na het verstrekken van de opdracht.
   – 1/3 van het orderbedrag bij levering.
   – 1/3 van het orderbedrag binnen 30 dagen na levering.
C. Bij betaling binnen 10 dagen na factuurdatum kan 2% betalingskorting op het factuurbedrag in mindering worden gebracht, mits er geen facturen waarvan de betalingstermijn is overschreden, onbetaald zijn gebleven.
D. Iedere betaling van of namens opdrachtgever strekt primair ter voldoening van de door hem verschuldigde intrest, alsmede van de door opdrachtnemer gemaakte invorderings- en/of administratiekosten. Het excedent wordt geacht in mindering te worden gebracht op de oudste openstaande vordering.
E. Opdrachtnemer behoudt zich het recht voor vorderingen te verpanden.
F. Opdrachtnemer is gerechtigd bij of na het aangaan van de overeenkomst alvorens verder te presteren, van de opdrachtgever zekerheid te eisen, dat zowel aan de betalingsverplichtingen als aan de overige verplichtingen voldaan zal worden.

GARANTIE
(Artikel XI lid 1)
In afwijking van de in artikel XI lid 1 van de FME-CWM voorwaarden genoemde termijn van 6 maanden geldt een garantietermijn van 1 jaar, gebaseerd op maximaal 8-urig bedrijf per etmaal.
Betreffende de door opdrachtnemer uitgevoerde reparatie- of revisiewerkzaamheden geldt uitdrukkelijk het bepaalde in artikel XI lid 8 van de FME-CWM voorwaarden.

(Artikel XI lid 4)
Aan artikel XI lid 4 wordt een nieuw lid i toegevoegd, luidende:
Onjuistheden en/of onvolkomenheden in door opdrachtgever verstrekte gegevens, met name ook indien bij het in opdracht nemen van installatiewerkzaamheden werking is gegarandeerd.

AANSPRAKELIJKHEID
(Artikel XII lid 1)
Artikel XII lid1 komt, in afwijking van de bestaande FME-CWM tekst te luiden:
Onverminderd het bepaalde in artikel 6.185 BW is de aansprakelijkheid van de opdrachtnemer beperkt tot nakoming van de in artikel XI van deze voorwaarden omschreven garantieverplichtingen.
Het in de volgende leden van artikel XII bepaalde geldt eveneens onverminderd het bepaalde in artikel 6.185 BW.

(Artikel XII lid 5)
Artikel XII lid 5 luidt als volgt:
De aansprakelijkheid van de opdrachtnemer is in elk geval beperkt tot het bedrag dat opdrachtnemer uitgekeerd wordt op grond van de door hem afgesloten aansprakelijkheidsverzekering.
De verzekeringscondities worden door opdrachtnemer op eerste verzoek ter hand gesteld.

OPSCHORTING EN ONTBINDING
(Artikel XIV)
Artikel XII lid 5 van de FME-CWM voorwaarden wordt omgenummerd in artikel XII lid 6.

Toegevoegd wordt het volgende lid:
Artikel XIV lid 6.
Alle door ontbinding door opdrachtnemer geleden schade is voor rekening van opdrachtgever.

GESCHILLEN
(Artikel XV)
In plaats van de geschillenregeling verwoord in artikel XV van de FME-CWM voorwaarden geldt het volgende:
Voor zover geschillen die mochten ontstaan naar aanleiding van een overeenkomst waarop deze voorwaarden geheel of gedeeltelijk van toepassing zijn, in verband met hun aard, dan wel het gevorderde bedrag door de Arrondissementsrechtbank beslecht dienen te worden, is de Rechtbank van het arrondissement waarbinnen de opdrachtnemer is gevestigd bevoegd, tenzij opdrachtnemer en opdrachtgever overeenkomen het geschil te onderwerpen aan arbitrage.
Opdrachtnemer behoudt zich overigens het recht voor om zich te wenden tot de op grond van de wettelijke procesregels bevoegde rechter.

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