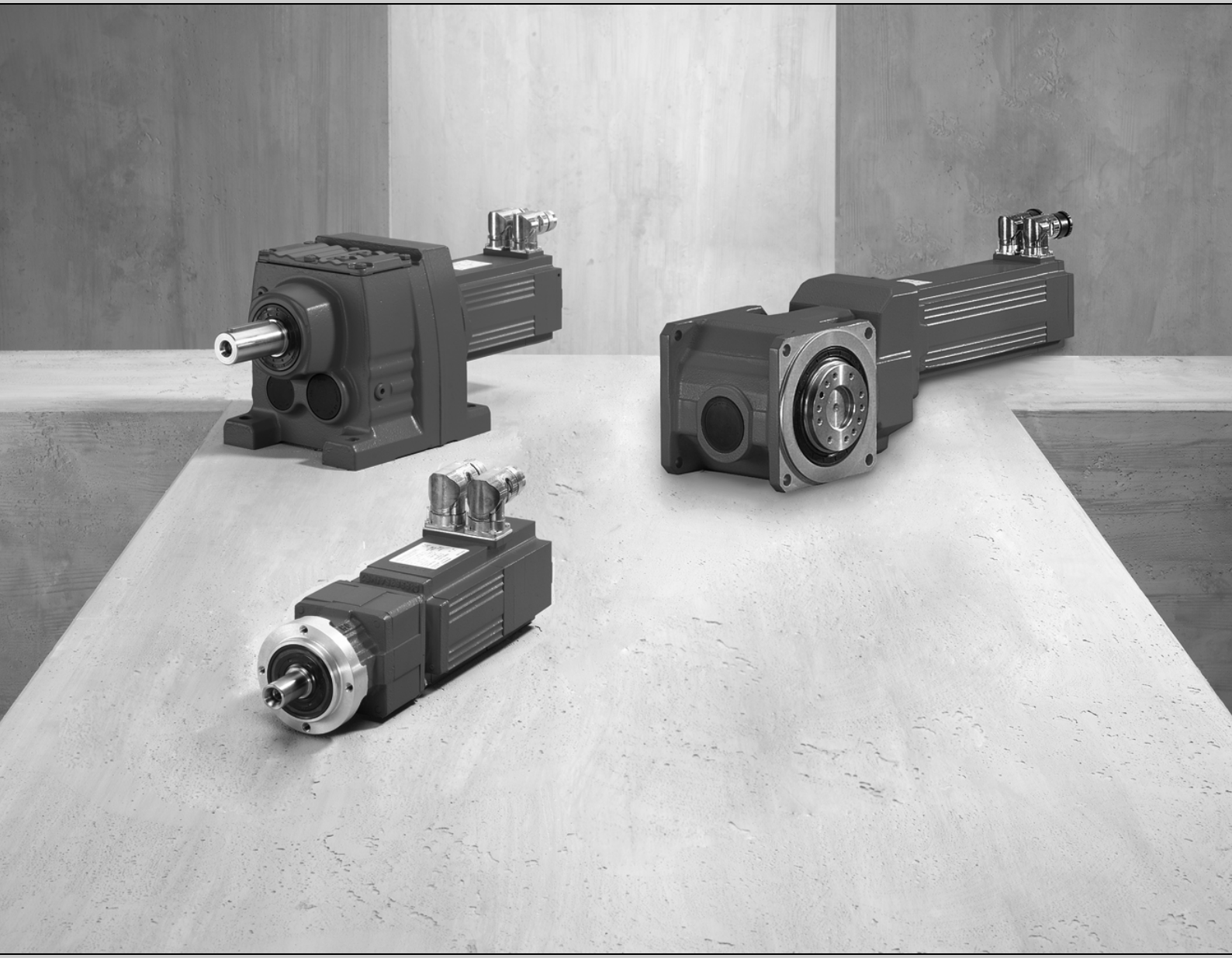
SEW EURODRIVE

Zusatz zum Katalog



Synchrone Servo-Getriebemotoren

CMP50L, CMP80S und CMP80M mit reduziertem Ritzelzapfen
mit F-, K-, S-, W- und BS.F-Getrieben

Ausgabe 04/2011

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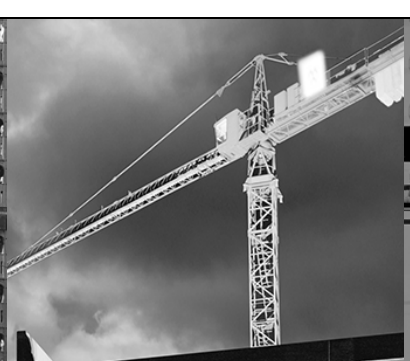


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1 Einleitung

1.1 Inhalt dieser Druckschrift

In diesem Zusatz zum Preiskatalog / Katalog "Synchrone Servo-Getriebemotoren" werden folgende neue Inhalte dargestellt:

- Die Motor-Getriebekombinationen der CMP50L-, CMP80S- und CMP80M-Motoren mit reduziertem Ritzelzapfen
- Die Kombinatorik des R17-Getriebes wird um die Motoren CMP50M und CMP63S erweitert.

Alle weiteren Angaben zu synchronen Servo-Getriebemotoren entnehmen Sie bitte dem Preiskatalog / Katalog "Synchrone Servo-Getriebemotoren".

1.2 Urheberrechtsvermerk

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Jegliche – auch auszugsweise – Vervielfältigung, Bearbeitung, Verbreitung und sonstige Verwertung verboten.

2 Wichtige Hinweise zu Auswahltabellen und Maßblättern

2.1 Hinweise zu den Auswahltabellen

M_{aDyn} in Nm		CMP							
	i	50S	50M	50L	63S	63M	63L	71S	71M
PSF321 1	3.00		31	46	33	64	90	57	91
	4.00	21	41	61	44	85	120	76	122
	5.00	26	51	76	55	106	150	95	152
	7.00	36	71	107	77	148	>168	133	>168
	10.00	51	102	>121	110				

Dynamisches Abtriebsmoment des Antriebs M_{aDyn}

Getriebeübersetzung

Getriebegröße mit Angabe der Getriebestufenanzahl

	Die dunkelgrau hinterlegten Felder stellen die Vorzugskombinationen dar
	Bei hellgrau hinterlegten Feldern halten Sie bitte Rücksprache mit SEW-EURODRIVE
	Weiße Felder bedeuten: Kombination nicht möglich

HINWEIS

Bei den mit ">..." gekennzeichneten Feldern ist M_{aDyn} auf das maximal zulässige Drehmoment im Kurzzeitbetrieb M_{apk} gesetzt, da der Motor das Getriebe überlasten kann. Bei der Inbetriebnahme muss der Motorstrom I_{max} begrenzt werden.

m in kg		CMP							
	s	50S	50M	50L	63S	63M	63L	71S	71M
PSF321	1	6.7	7.6	8.5	8.0	9.5	11	12	13
PSF322	2	8.2	9.1	10.0	9.5	11	12	14	15

m Masse des Antriebs

s Anzahl der Getriebestufen

CMP..				M1;M3;M5-6			M2			M4			φ		
	i	n_{epk} 1/min	η %	a_0	a_1	a_2	a_0	a_1	a_2	a_0	a_1	a_2	'	/R '	/M '
PSF321 1	3.00	7000	99	205	-0.222	0	234	-0.327	0	288	-0.595	0	6	3	1
	4.00	7000	99	276	-0.316	0	312	-0.455	0	387	-0.833	0	6	3	1
	5.00	7000	99	290	-0.355	0	328	-0.501	0	414	-0.930	0	6	3	1
	7.00	7000	99	296	-0.418	0	335	-0.581	0	422	-1.036	0	6	3	1
	10.00	7000	99	269	-0.477	0	302	-0.617	0	374	-1.016	0	6	3	1

i Getriebeübersetzung

$\mathbf{n_{epk}}$ Maximal zulässige eintreibende Drehzahl bei Kurzzeitbetrieb

η Wirkungsgrad des Getriebes (bei M_{apk}, n_e=1500 1/min, Raumlage M1, S1-Betrieb)

φ Verdrehspiel

$\mathbf{a_0, a_1, a_2}$ Getriebekonstanten bez. Getriebeerwärmung

CMP.. n_e = 1500	i	M_{amax} Nm	M_{apk} Nm	$M_{aNotaus}$ Nm	n_{ak} 1/min	J_{GA} 10^{-4} kgm^2	c_T PSF Nm/'	F_{Ramax} PSF N	F_{Rapk} PSF N
PSF321 1	3.00	85	125	188	2333	0.69	11	4380	5280
	4.00	110	170	255	1750	0.35	12	4770	4420
	5.00	110	169	250	1400	0.22	12	5100	4450
	7.00	110	168	250	1000	0.12	10	5480	4470
	10.00	110	121	182	700	0.059	7.6	5480	5330

i	Getriebeübersetzung
M_{amax}	Maximal zulässiges abtreibendes Drehmoment bei Dauerbetrieb
M_{apk}	Maximal zulässiges abtreibendes Drehmoment bei Kurzzeitbetrieb
$M_{aNotaus}$	Maximal zulässiges abtreibendes Not-Aus-Moment, maximal 1000 Not-Aus-Schaltungen
n_{ak}	Knickdrehzahl (abtreibend)
J_{GA}	Massenträgheitsmoment des Getriebes bezogen auf eintreibende Welle
c_T	Verdrehsteifigkeit des Getriebes
F_{Ramax}	Maximal zulässige Querkraft an der abtreibenden Welle bei Dauerbetrieb, Lastangriffspunkt Mitte Wellenende
F_{Rapk}	Maximal zulässige Querkraft an der abtreibenden Welle bei Kurzzeitbetrieb, Lastangriffspunkt Mitte Wellenende

2.2 Hinweise zu den Maßblättern

Lieferumfang

= Normteile werden von SEW-EURODRIVE mitgeliefert.

= Normteile werden von SEW-EURODRIVE nicht mitgeliefert.

Toleranzen

Achshöhen

Für die angegebenen Maße gelten folgende Toleranzen:

h ≤ 250 mm → -0,5 mm
h > 250 mm → -1 mm

Fußgetriebe: Der angebaute Motor kann unter die Befestigungsfläche ragen, bitte überprüfen.

Wellenenden

Durchmessertoleranz:

∅ ≤ 50 mm → ISO k6
∅ > 50 mm → ISO m6

Zentrierbohrungen nach DIN 332 Form DR:

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

Passfedern: nach DIN 6885 (hohe Form)

Hohlwellen

Durchmessertoleranz:

∅ → ISO H7 mit Lehrdorn gemessen

Passfedern: nach DIN 6885 (hohe Form)

Ausnahme: Passfeder bei WA37 mit Wellen-∅ 25 mm nach DIN 6885-3 (niedrige Form)

Vielkeilwellen

Dm = Messrollendurchmesser
Me = Prüfmaß

Flansche

Zentrierrand-Toleranz:

∅ ≤ 230 mm (Flanschgrößen A120 – A300) → ISO j6
∅ > 230 mm (Flanschgrößen A350 – A660) → ISO h6

Bei Stirnradgetrieben, SPIROPLAN®-Getrieben, Drehstrom(brems)motoren und explosionsgeschützten Drehstrom(brems)motoren stehen bis zu drei verschiedene Flanschabmessungen je Baugröße zur Verfügung. In den jeweiligen Maßblättern werden die möglichen Flansche je Baugröße gezeigt.

Ringschrauben, Tragösen

Stirnradgetriebe R07 – R27 und die SPIROPLAN®-Getriebemotoren W..10 – W..30 werden ohne besondere Transportvorrichtung geliefert. Ansonsten haben die Getriebe und Motoren entweder angegossene Tragösen, abschraubbare Tragösen oder abschraubbare Ringschrauben.

Getriebe-/Motortyp	abschraubbare		angegossene Tragösen
	Ringschrauben	Tragösen	
R..37 – R..57	-	•	-
R..67 – R..167	•	-	-
RX57 – RX67	-	•	-
RX77 – RX107	•	-	-
F..27 – F..157	-	-	•
K..37 – K..157	-	-	•
K..167 – K..187	•	-	-
W..37, W..47	-	•	-
S..37 – S..47	-	•	-
S..57 – S..97	-	-	•
BS.F502 – 802	-	•	-
PS.F621 – 921	-	•	-
PS.F622 – 922	-	•	-

Entlüftungsventile

Die Getriebemaßbilder sind immer mit Verschluss-Schrauben dargestellt. In Abhängigkeit von der bestellten Raumlage M1 – M6 wird die entsprechende Verschluss-Schrauben werkseitig durch ein aktiviertes Entlüftungsventil ersetzt. Dadurch kann sich das Konturmaß geringfügig ändern.

Schrumpfscheibenverbindung

Hohlwellengetriebe mit Schrumpfscheibenverbindung: Bitte fordern Sie bei Bedarf ein ausführliches Datenblatt zur Schrumpfscheibe, Datenblatt-Nr. 33 753 ..95, an.

Vielkeilverzahnung

Die Hohlwellengetriebe FV.. der Größen 27 – 107 und KV.. der Größen 37 – 107 werden mit einer Vielkeilverzahnung gemäß DIN 5480 geliefert.

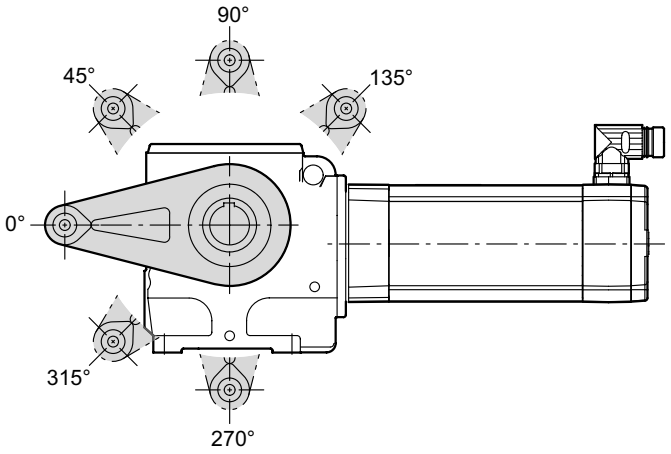
Gummipuffer bei FA/FH/FV/FT

Gummipuffer um den angegebenen Wert △L vorspannen. Die Federkennlinie der Gummipuffer erhalten Sie auf Anfrage von SEW-EURODRIVE.

Position der Drehmomentstütze

Das folgende Bild zeigt die möglichen Positionen der Drehmomentstütze bei den Schneckengetrieben, SPIROPLAN®-Getrieben und BS.F-Getriebe sowie die zugehörigen Winkelangaben:

Position der Drehmomentstütze bei S- und W-Getrieben:



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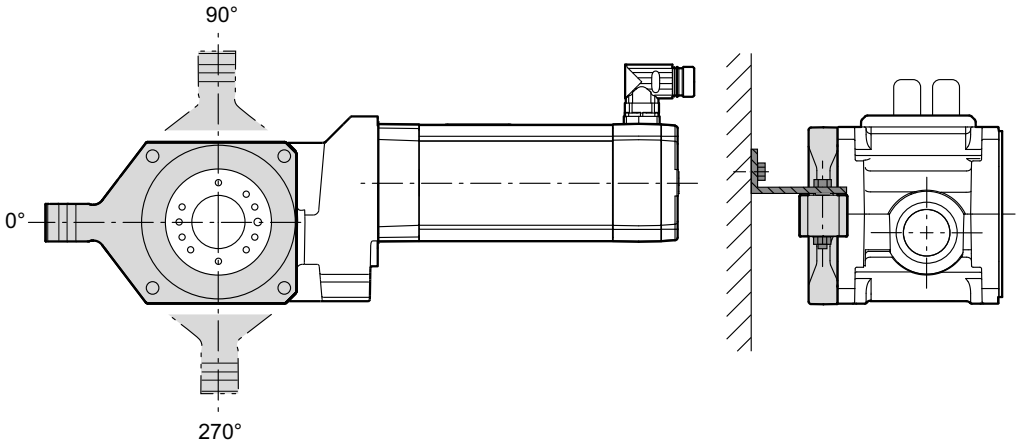
Angaben zu den Drehmomentstützen der Schneckengetriebemotoren finden Sie in den Maßblättern, Angaben zu den Drehmomentstützen der SPIROPLAN®-Getriebemotoren finden Sie im Katalog "Synchrone Servo--Getriebemotoren".

Position der Drehmomentstütze bei BS.F-Getrieben:



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Angaben zu den Drehmomentstützen der Kegelrad-Getriebemotoren finden Sie im Katalog "Synchrone Servo--Getriebemotoren"

Toleranzen und Fasen bei Flanschblockgetrieben

Innenzentrierung	→ ISO H7
Außenzentrierung	→ ISO h7

Weitere Angaben hierzu finden Sie im Katalog "Synchrone Servo--Getriebemotoren".

Stirn- und fußseitige Befestigung der BS.F..B-Getriebe

Angaben hierzu finden Sie im Katalog "Synchrone Servo--Getriebemotoren"

2.3 Maßangaben zu Getriebemotoren

Motoroptionen

Durch Motoroptionen können sich die Motormaße ändern. Beachten Sie die Maßbilder zu den Motoroptionen.

Sonderauslegungen

Bei Sonderauslegungen können die Klemmenkastenmaße vom Standard abweichen.

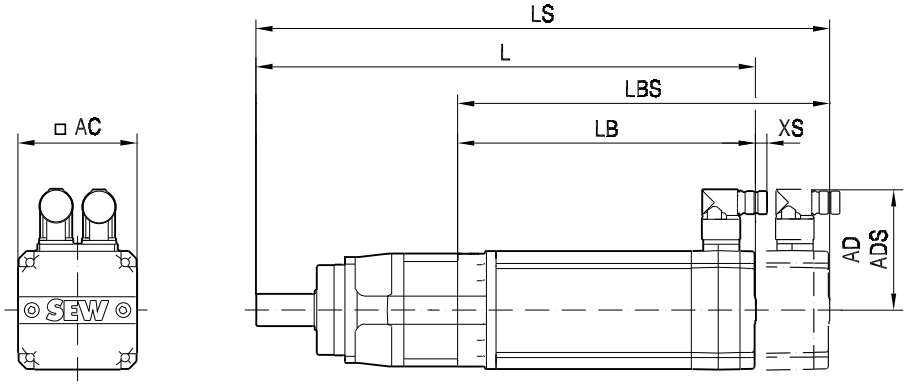
EN 50347

Seit August 2001 ist die europäische Norm EN 50347 in Kraft. In dieser Norm werden für dreiphasige Drehstrommotoren der Baugrößen 56 bis 315M und der Flanschgrößen 65 bis 740 die Maßbezeichnungen aus der Norm IEC 72-1 übernommen.

In den Maßtabellen der Maßblätter werden bei den betroffenen Maßen die neuen Maßbezeichnungen gemäß EN 50347 / IEC 72-1 verwendet.

Maßbezeichnungen der Getriebemotoren

Nachfolgend werden die Maßbezeichnungen der Getriebemotoren erläutert:



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L	Gesamtlänge des Getriebemotors	AC	Durchmesser des Motors
LS	Gesamtlänge des Getriebemotors einschließlich Bremse	AD	Mitte Welle des Motors bis Oberkante Klemmenkasten
LB	Länge des Motors	ADS	Mitte Welle des Bremsmotors bis Oberkante Klemmenkasten
LBS	Länge des Bremsmotors	XS	Überstand des Steckverbinders über das Motorgehäuse

HINWEIS

Bei Motoren mit anderen Feedback-Systemen als Resolvern sind mögliche Mehrlängen zu berücksichtigen.

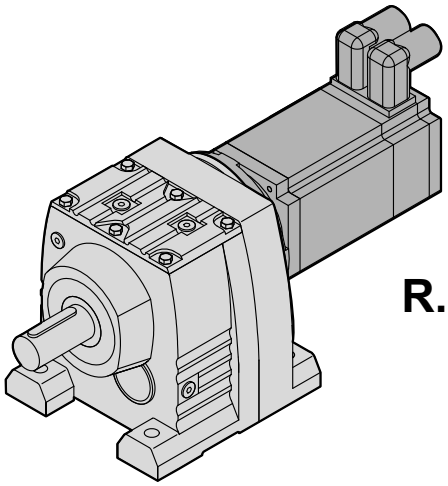
2.4 Maßangaben zu den CMPZ-Motoren

CMPZ-Motoren unterscheiden sich von den CMP-Motoren durch eine zusätzlich angebrachte Rotormasse. Diese zusätzliche Rotormasse erzeugt eine Mehrlänge zum entsprechenden CMP-Motor.

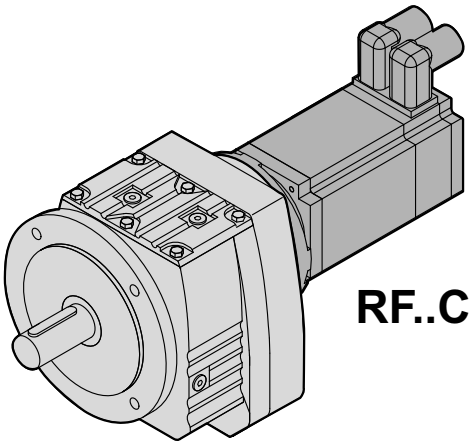
Die Mehrlängen der CMPZ-Motoren finden Sie in den Tabellen im Kapitel "Technische Daten der CMPZ-Motoren" auf Seite 99 ff.

3 R..CMP

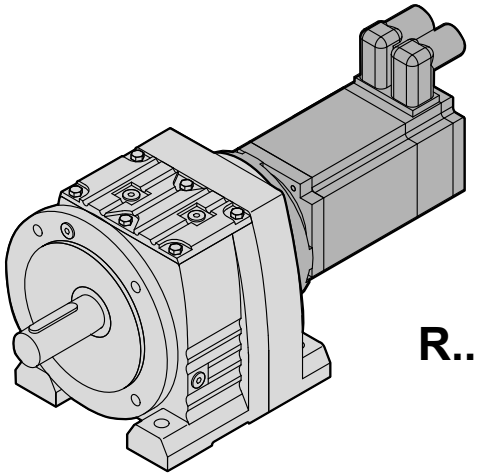
3.1 R, RF, R..F, RX, RXF..CMP



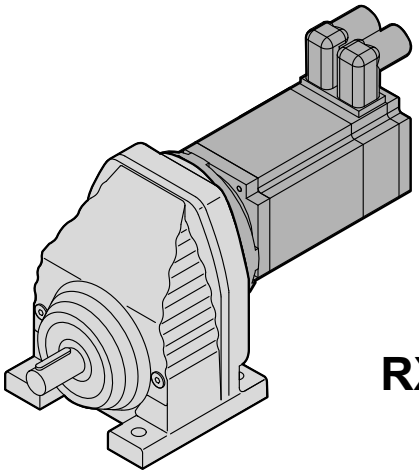
R..CMP..



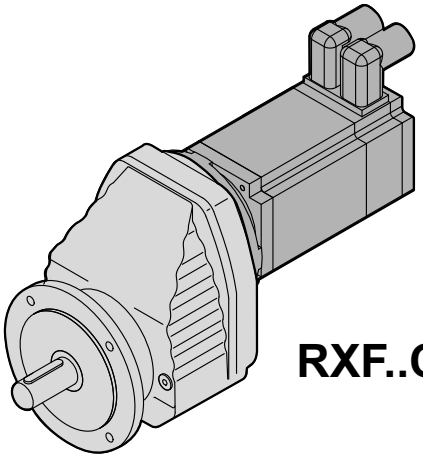
RF..CMP..



R..F CMP..



RX..CMP..



RXF..CMP..

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3.2 R..[mm]

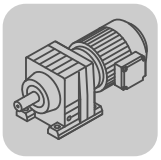
3.2.1 R 17

M_{aDyn} [Nm]		CMP		
	i	**50S**	**50M**	**63S**
R17  **2**	3.83	19	38	41
	4.51	23	45	49
	5.09	26	51	55
	5.76	29	58	>59
	6.15	31	>57	>57
	7.04	36	>58	>58
	7.55	38	>59	>59
	8.63	43	85	>86
	10.15	51	>86	>86
	11.45	57	>86	>86
	12.98	65	>86	>86
	13.84	69	>86	>86
	15.84	79	>86	>86
	16.99	85	>86	>86
	19.71	>86	>86	>86
	23.15	>86		
	25.23	>86		
R17  **3**	24.07	>86	>86	>86
	28.32	>86	>86	>86
	31.94	>86	>86	>86
	36.20	>86	>86	>86
	38.61	>86	>86	>86
	44.18	>86	>86	>86
	47.44	>86	>86	>86
	53.76	>86	>86	>86
	57.35	>86	>86	>86
	65.61	>86	>86	>86
	70.39	>86	>86	>86
	81.64	>86	>86	>86

m [kg]		CMP		
	s	**50S**	**50M**	**63S**
R17	 **2**	6.8	8.2	9.2
R17	 **3**	7.1	8.5	9.5
RF: + -0.1 kg				

CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} R [Nm/']	c_{TG} RF [Nm/']
R17 2	3.83	4500	97	3.0	3.0
	4.51	4500	97	3.0	3.0
	5.09	4500	97	3.0	3.0
	5.76	4500	97	3.0	3.0
	6.15	4500	97	3.0	3.0
	7.04	4500	97	3.0	3.0
	7.55	4500	97	3.0	3.0
	8.63	4500	96	4.4	4.3
	10.15	4500	96	4.4	4.3
	11.45	4500	96	4.4	4.3
	12.98	4500	96	4.4	4.3
	13.84	4500	96	4.4	4.3
	15.84	4500	96	4.4	4.3
	16.99	4500	96	4.4	4.3
	19.71	4500	96	4.4	4.3
	23.15	4500	96	4.4	4.3
	25.23	4500	96	4.4	4.3
R17 3	24.07	4500	93	4.6	4.4
	28.32	4500	93	4.6	4.4
	31.94	4500	93	4.6	4.4
	36.20	4500	93	4.6	4.4
	38.61	4500	93	4.6	4.4
	44.18	4500	93	4.6	4.4
	47.44	4500	92	4.6	4.4
	53.76	4500	92	4.6	4.4
	57.35	4500	92	4.6	4.4
	65.61	4500	92	4.6	4.4
	70.39	4500	91	4.6	4.4
	81.64	4500	91	4.6	4.4

CMP..							F_{Ramax}		F_{Rapk}	
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	R [N]	RF [N]	R [N]	RF [N]
R17 2	3.83	45	52	77	366	0.46	820	755	2500	2200
	4.51	48	54	82	310	0.35	870	795	2500	2200
	5.09	51	55	87	275	0.29	890	820	2500	2190
	5.76	53	59	90	243	0.24	930	860	2500	2180
	6.15	54	57	92	228	0.22	950	880	2500	2190
	7.04	55	58	94	227	0.18	1010	930	2500	2180
	7.55	56	59	95	225	0.16	1040	950	2500	2180
	8.63	72	86	122	162	0.39	1090	1000	1700	1510
	10.15	77	86	131	138	0.30	1140	1050	1700	1510
	11.45	81	86	138	122	0.26	1180	1080	1700	1510
	12.98	85	86	145	108	0.21	1230	1130	1700	1510
	13.84	85	86	145	108	0.20	1270	1160	1700	1510
	15.84	85	86	145	114	0.16	1350	1240	1700	1510
	16.99	85	86	145	112	0.15	1400	1280	1700	1510
	19.71	85	86	145	117	0.12	1500	1380	1700	1510
	23.15	85	86	145	117	0.090	1620	1480	1700	1510
	25.23	85	86	145	119	0.080	1680	1540	1700	1510

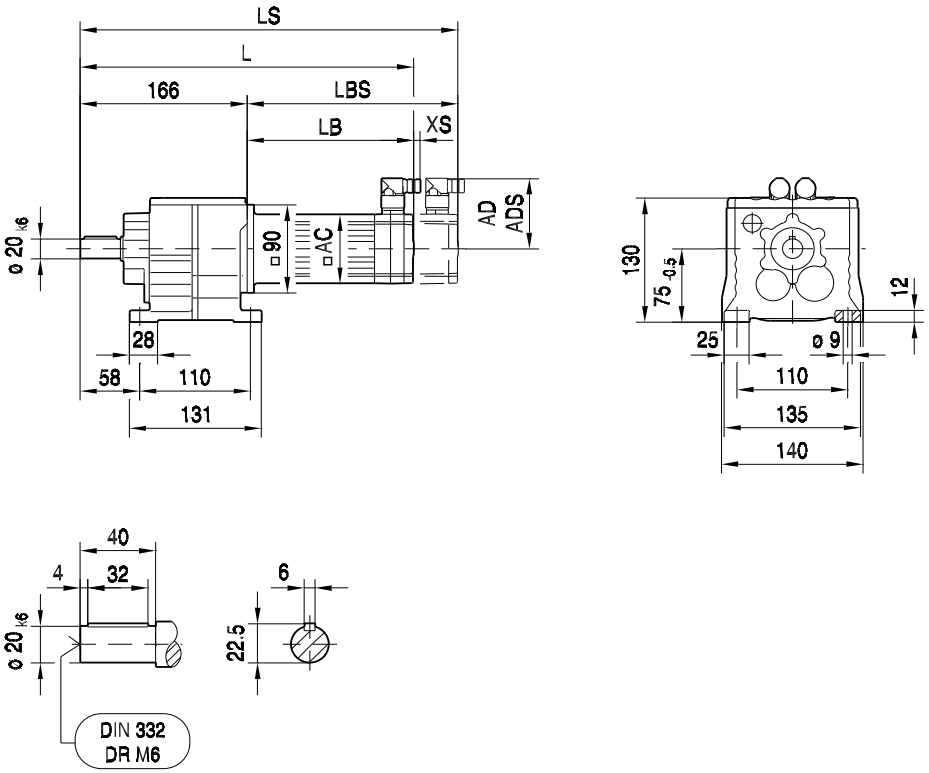


R..CMP
R..[mm]

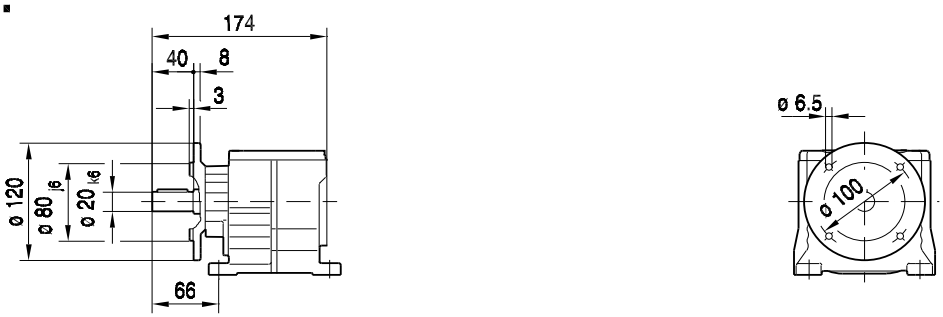
CMP..							F_{Ramax}		F_{Rapk}	
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	R [N]	RF [N]	R [N]	RF [N]
R17 3	24.07	85	86	145	104	0.41	1650	1510	1700	1510
	28.32	85	86	145	106	0.32	1770	1560	1700	1510
	31.94	85	86	145	103	0.27	1770	1560	1700	1510
	36.20	85	86	145	105	0.22	1770	1560	1700	1510
	38.61	85	86	145	104	0.20	1770	1560	1700	1510
	44.18	85	86	145	104	0.17	1770	1560	1700	1510
	47.44	85	86	145	110	0.25	1770	1560	1700	1510
	53.76	85	86	145	108	0.21	1770	1560	1700	1510
	57.35	85	86	145	108	0.19	1770	1560	1700	1510
	65.61	85	86	145	107	0.16	1770	1560	1700	1510
	70.39	85	86	145	99	0.14	1770	1560	1700	1510
	81.64	85	86	145	86	0.11	1770	1560	1700	1510

01 028 00 07

R17..



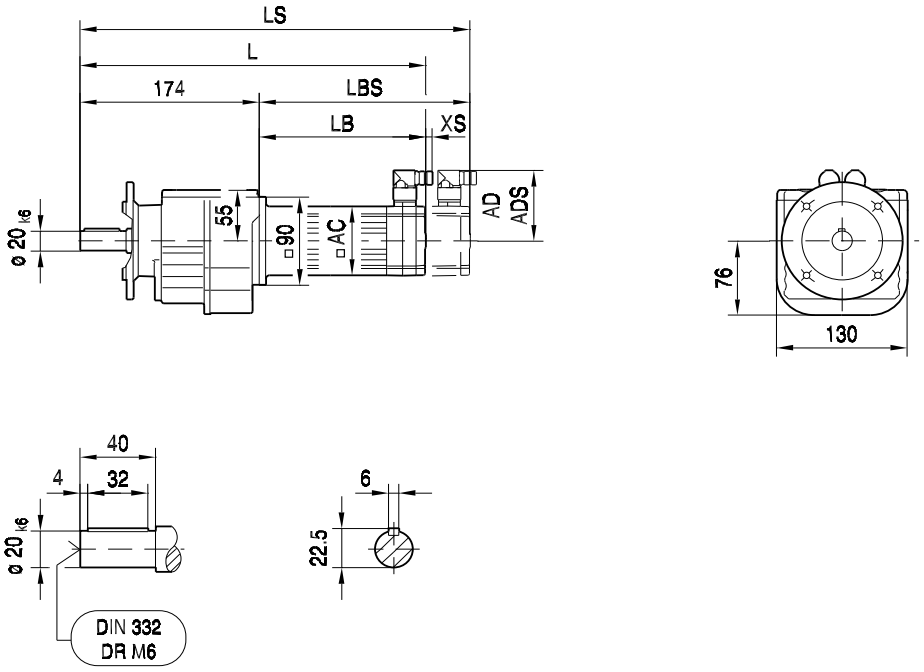
R17F..



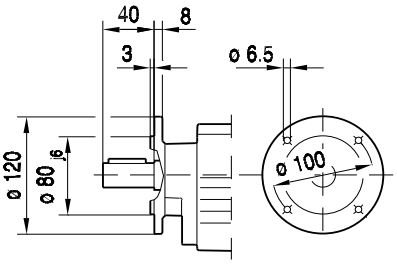
(→ 📖 9)	CMP50S	CMP50M	CMP63S					
AC	73	73	88					
AD	86	86	92					
ADS	86	86	92					
L	312	351	347					
LS	341	380	376					
LB	146	185	181					
LBS	175	214	210					
XS	18	18	14					

01 029 00 07

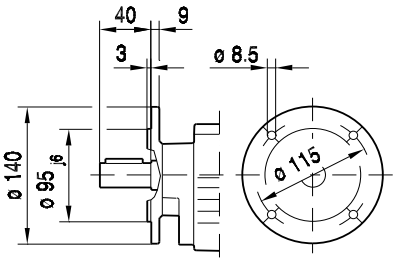
RF17..



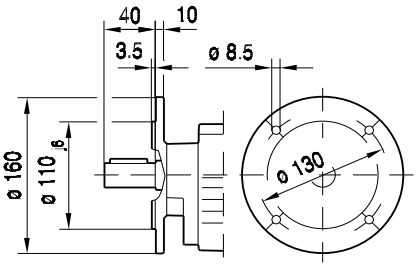
ø 120



ø 140



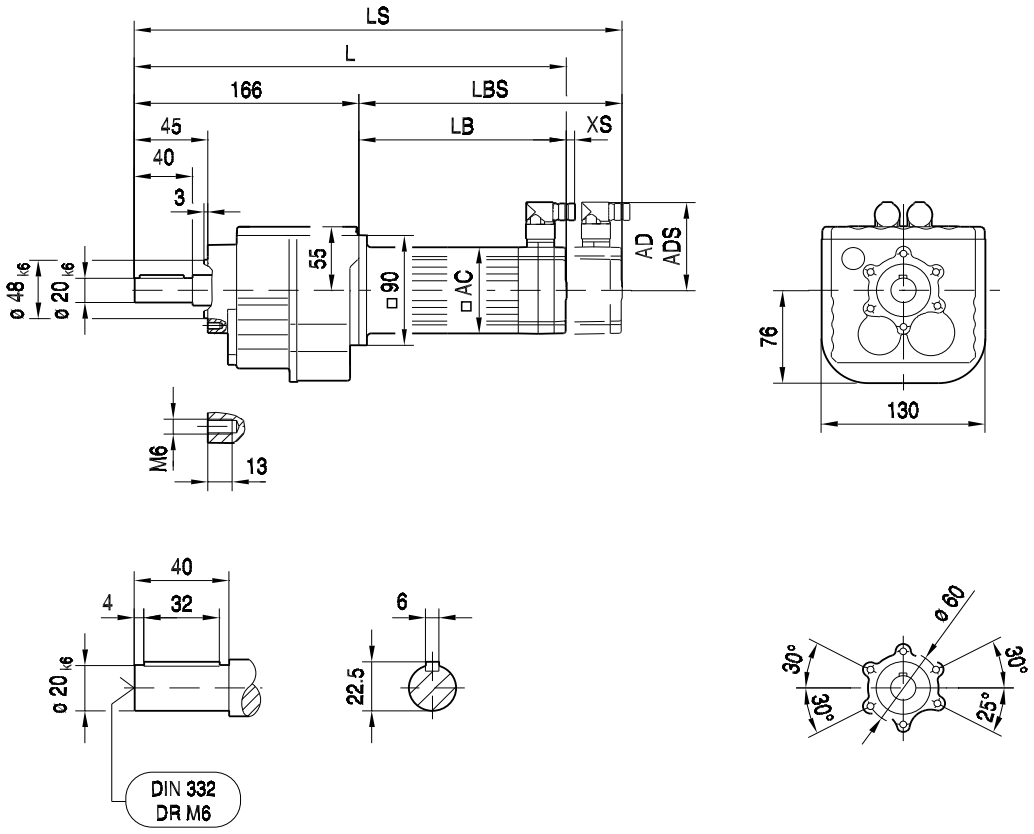
ø 160



(→ 📖 9)	CMP50S	CMP50M	CMP63S					
AC	73	73	88					
AD	86	86	92					
ADS	86	86	92					
L	320	359	355					
LS	349	388	384					
LB	146	185	181					
LBS	175	214	210					
XS	18	18	14					

01 030 00 07

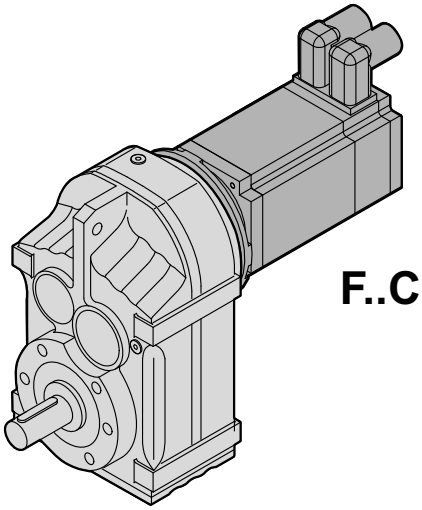
RZ17..



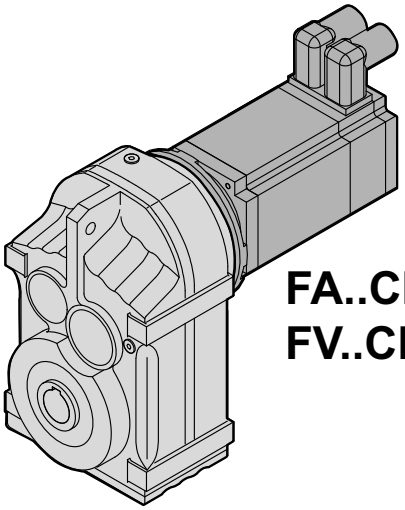
(→ 📖 9)	CMP50S	CMP50M	CMP63S					
AC	73	73	88					
AD	86	86	92					
ADS	86	86	92					
L	312	351	347					
LS	341	380	376					
LB	146	185	181					
LBS	175	214	210					
XS	18	18	14					

4 F..CMP

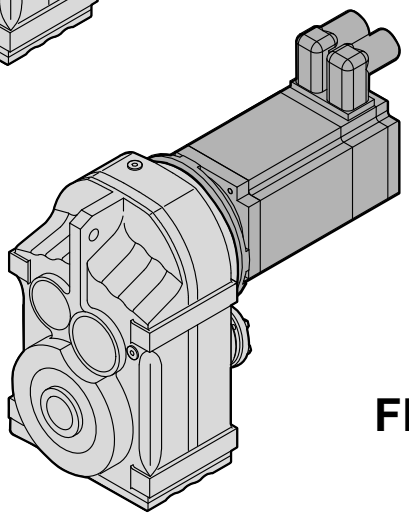
4.1 F, FA, FV, FH, FF, FAF, FVF, FHF, FA..B, FV..B, FH..B, FAZ, FVZ, FAF, FVF..CMP



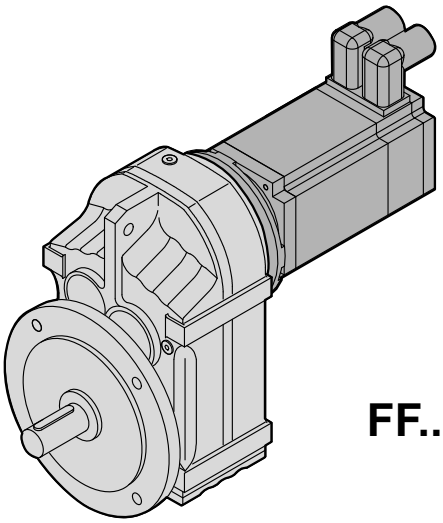
F..CMP..



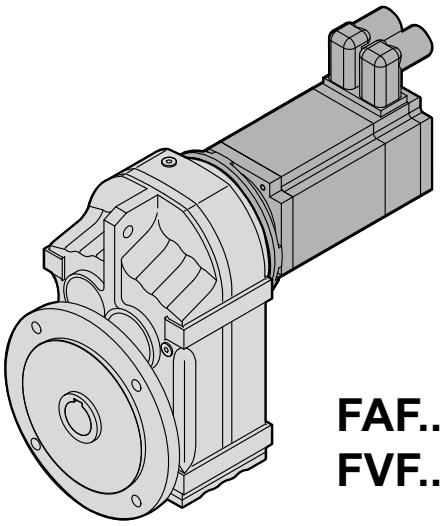
FA..CMP..
FV..CMP..



FH..CMP..

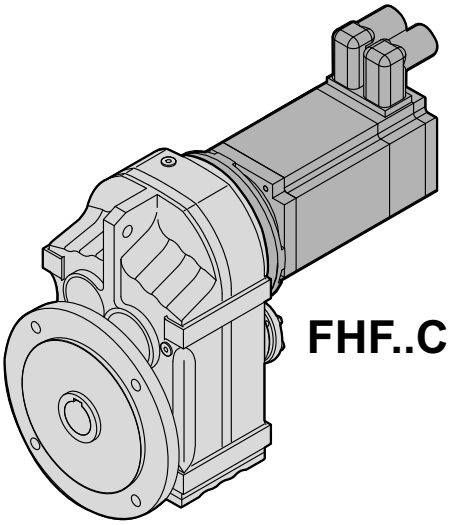


FF..CMP..

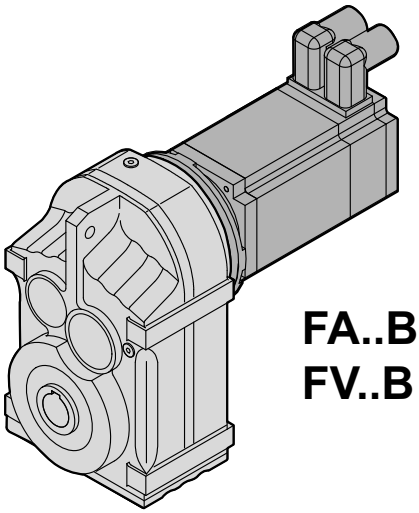


FAF..CMP..
FVF..CMP..

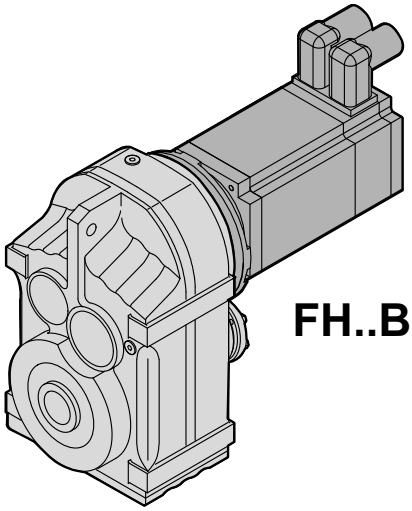
65961axx



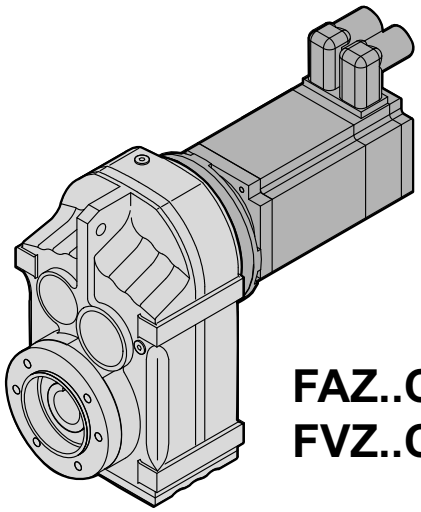
FHF..CMP..



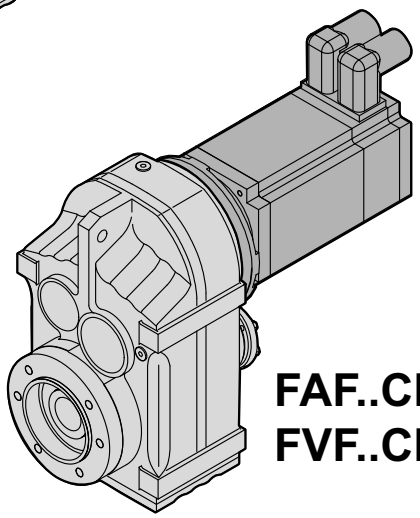
FA..B CMP..
FV..B CMP..



FH..B CMP..



FAZ..CMP..
FVZ..CMP..



FAF..CMP..
FVF..CMP..

65962axx

4.2 F..[mm]

4.2.1 F 27

M_{aDyn} [Nm]		CMP									
	i	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S
FA27 2	4.16	15	21	42	62	45	86	123	77	124	111
	4.93	18	25	49	74	53	102	>144	92	>144	132
	5.27	19	27	53	79	57	109	>150	98	>150	141
	6.17	23	31	62	92	66	128	>163	115	>163	>163
	6.91	25	35	69	103	74	143	>163	129	>163	>163
	8.13	30	41	81	121	88	>163	>163	151	>163	>163
	9.40	35	47	94	140	101	>163		>163		
	9.88	36	50	99	148	106	>157	>157	>157	>157	>157
	10.55	39	53	105	>157	114	>157	>157	>157	>157	>157
	12.35	46	62	123	>157	133	>157	>157	>157	>157	>157
	13.84	51	70	138	>157	149	>157	>157	>157	>157	>157
	16.28	60	82	>157	>157	>157	>157	>157	>157	>157	>157
	18.84	69	95	>157	>157	>157	>157		>157		
	20.15	74	102	>157	>157	>157	>157		>157		
	23.25	86	117	>157		>157					
	27.18	99	136								
	29.56	108	148								
FA27 3	33.83	122	>157	>157	>157	>157	>157	>157	>157	>157	>157
	38.33	138	>157	>157	>157	>157	>157		>157		
	40.89	148	>157	>157	>157	>157	>157	>157	>157	>157	>157
	46.78	>157	>157	>157	>157	>157	>157		>157		
	50.19	>157	>157	>157	>157	>157	>157		>157		
	56.62	>157	>157	>157	>157	>157	>157	>157	>157	>157	>157
	63.86	>157	>157	>157	>157	>157	>157	>157	>157	>157	>157
	72.37	>157	>157	>157	>157	>157	>157		>157		
	77.21	>157	>157	>157	>157	>157	>157	>157	>157	>157	>157
	88.32	>157	>157	>157	>157	>157	>157		>157		
	94.76	>157	>157	>157	>157	>157	>157		>157		
	109.90	>157	>157	>157		>157					
	129.09	>157	>157								
	140.74	>157	>157								

m [kg]		CMP									
	s	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S
FA27	2	7.1	8.8	9.7	11	11	12	14	14	15	21
FA27	3	7.4	9.1	10.0	11	11	13	14	14	15	22
FAF: + 0.7 kg / F: + 0.5 kg / FF: + 1.3 kg											

CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} FA [Nm/°]	FAF [Nm/°]	F [Nm/°]	FF [Nm/°]
	4.16	4120	97	46	46	21	18
	4.93	4500	97	46	46	21	18
	5.27	4500	97	46	46	21	18
	6.17	4500	97	46	46	21	18
	6.91	4500	97	46	46	21	18
	8.13	4500	97	46	46	21	18
	9.40	4500	97	46	46	21	18
FA27	9.88	4500	97	83	83	26	22
2	10.55	4500	97	83	83	26	22
	12.35	4500	97	83	83	26	22
	13.84	4500	97	83	83	26	22
	16.28	4500	97	83	83	26	22
	18.84	4500	97	83	83	26	22
	20.15	4500	97	83	83	26	22
	23.25	4500	97	83	83	26	22
	27.18	4500	96	83	83	26	22
	29.56	4500	96	83	83	26	22
	33.83	4500	95	95	95	27	23
	38.33	4500	95	95	95	27	23
	40.89	4500	95	95	95	27	23
	46.78	4500	94	95	95	27	23
	50.19	4500	94	95	95	27	23
	56.62	4500	94	99	99	27	23
FA27	63.86	4500	94	99	99	27	23
3	72.37	4500	93	99	99	27	23
	77.21	4500	93	99	99	27	23
	88.32	4500	93	99	99	27	23
	94.76	4500	92	99	99	27	23
	109.90	4500	92	99	99	27	23
	129.09	4500	91	99	99	27	23
	140.74	4500	90	99	99	27	23

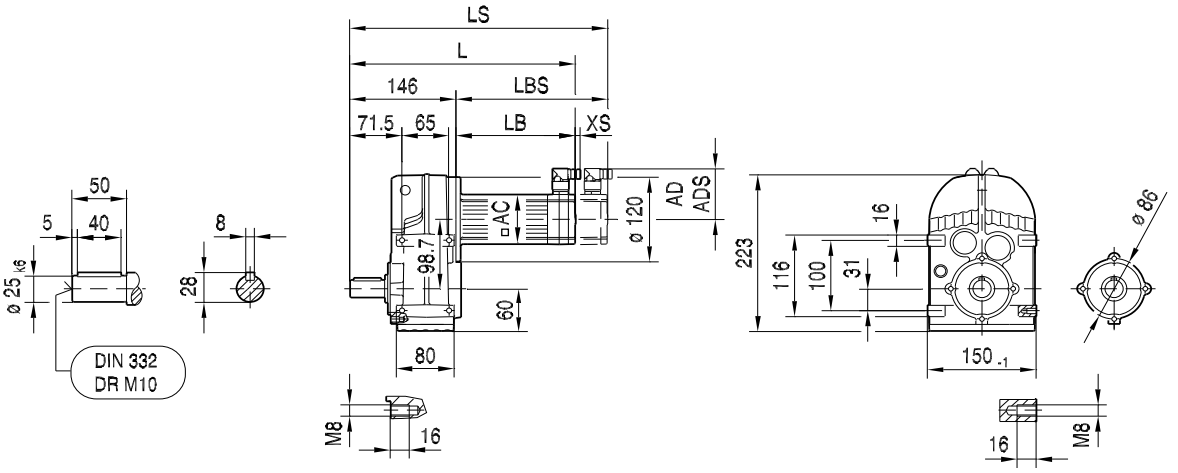
CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	FA [N]	FAF [N]	F [N]	FF [N]	FA [N]	FAF [N]	F [N]	FF [N]
	4.16	87	130	148	361	1.4	1810	1810	1380	1180	4500	4500	4500	4500
	4.93	96	144	163	304	1.0	1860	1860	1420	1210	4500	4500	4500	4500
	5.27	100	150	170	266	0.90	1880	1880	1440	1220	4500	4500	4500	4500
	6.17	109	163	185	227	0.68	1940	1940	1480	1260	4500	4500	4500	4500
	6.91	114	163	194	217	0.56	2000	2000	1530	1300	4500	4500	4500	4500
	8.13	123	163	209	172	0.42	2080	2080	1580	1350	4500	4500	4500	4500
	9.40	130	163	221	160	0.33	2170	2170	1660	1410	4500	4500	4500	4500
FA27	9.88	130	157	221	202	0.74	2400	2400	1830	1560	4500	4500	4500	4500
2	10.55	130	157	221	209	0.67	2490	2490	1900	1620	4500	4500	4500	4500
	12.35	130	157	221	211	0.51	2700	2700	2060	1760	4500	4500	4500	4500
	13.84	130	157	221	210	0.43	2860	2860	2180	1860	4500	4500	4500	4500
	16.28	130	157	221	209	0.32	3110	3110	2370	2020	4500	4500	4500	4500
	18.84	130	157	221	212	0.26	3340	3340	2550	2170	4500	4500	4500	4500
	20.15	130	157	221	213	0.23	3450	3450	2630	2240	4500	4500	4500	4500
	23.25	130	157	221	215	0.19	3690	3690	2820	2400	4500	4500	4500	4500
	27.18	130	157	221	217	0.15	3970	3970	3030	2580	4500	4500	4500	4500
	29.56	130	157	221	220	0.13	4120	4120	3140	2680	4500	4500	4500	4500

F..CMP
F..[mm]

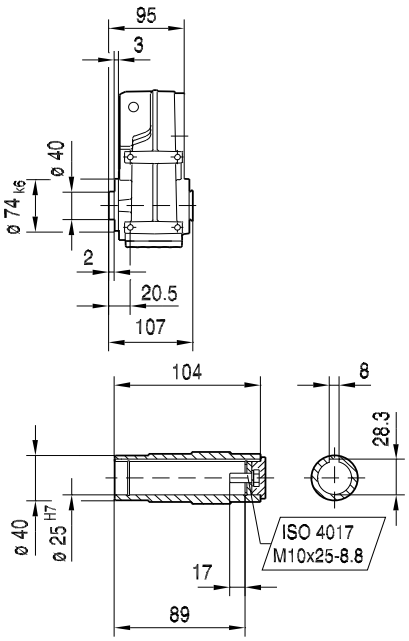
CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	FA [N]	FAF [N]	F [N]	FF [N]	FA [N]	FAF [N]	F [N]	FF [N]
FA27 3	33.83	130	157	221	166	0.31	4380	4380	3340	2850	4500	4500	4500	4500
	38.33	130	157	221	167	0.26	4500	4500	3530	3010	4500	4500	4500	4500
	40.89	130	157	221	166	0.23	4500	4500	3640	3100	4500	4500	4500	4500
	46.78	130	157	221	150	0.18	4500	4500	3860	3290	4500	4500	4500	4500
	50.19	130	157	221	139	0.17	4500	4500	3980	3390	4500	4500	4500	4500
	56.62	130	157	221	124	0.31	4500	4500	4180	3570	4500	4500	4500	4500
	63.86	130	157	221	110	0.26	4500	4500	4400	3750	4500	4500	4500	4500
	72.37	130	157	221	97	0.22	4500	4500	4500	3960	4500	4500	4500	4500
	77.21	130	157	221	91	0.20	4500	4500	4500	4060	4500	4500	4500	4500
	88.32	130	157	221	79	0.16	4500	4500	4500	4290	4500	4500	4500	4500
	94.76	130	157	221	74	0.15	4500	4500	4500	4420	4500	4500	4500	4500
	109.90	130	157	221	64	0.12	4500	4500	4500	4500	4500	4500	4500	4500
	129.09	130	157	221	54	0.090	4500	4500	4500	4500	4500	4500	4500	4500
	140.74	130	157	221	50	0.080	4500	4500	4500	4500	4500	4500	4500	4500

42 008 00 07

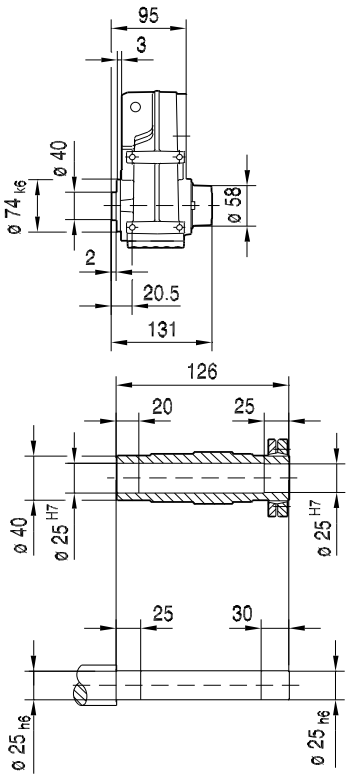
F27..



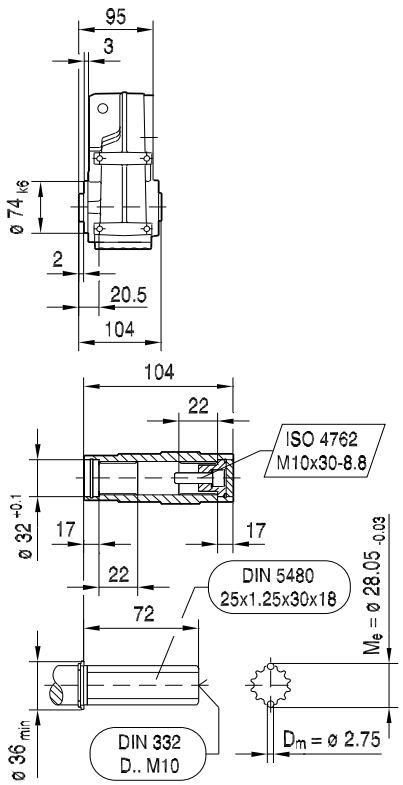
FA27B..



FH27B..



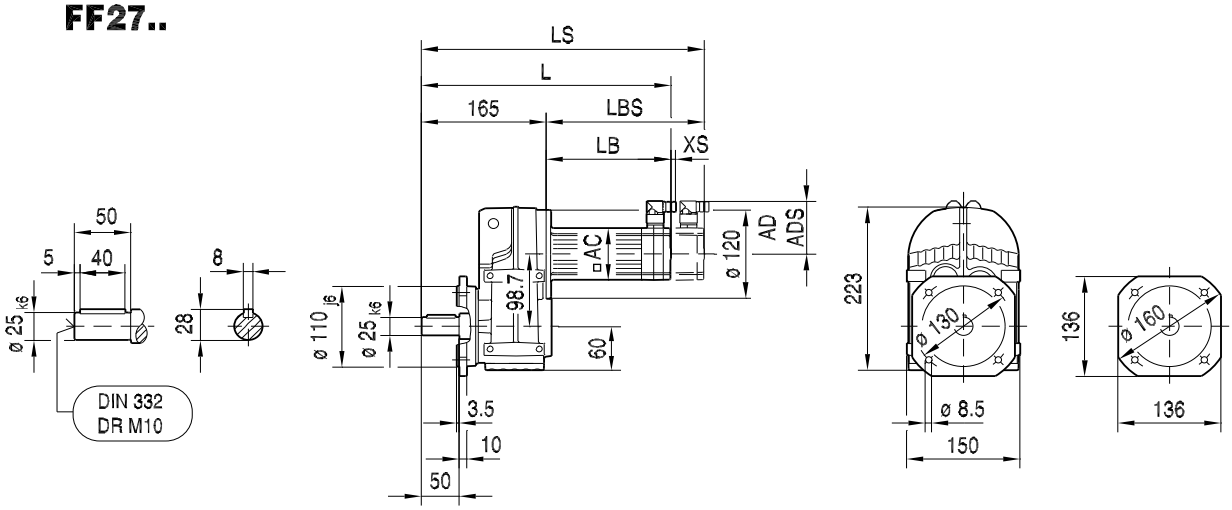
FV27B..



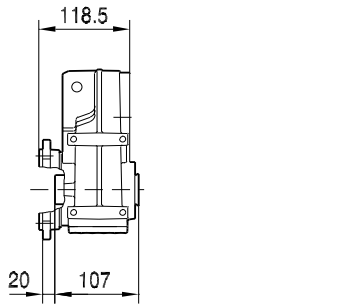
(→ 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	289	291	330	369	326	376	429	318	346	358
LS	319	320	359	398	354	404	458	383	411	436
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

42 009 00 07

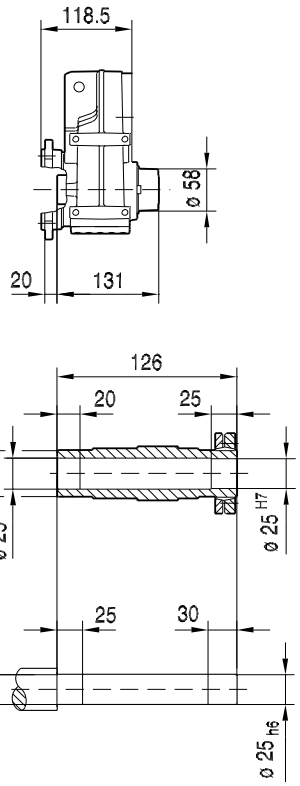
FF27..



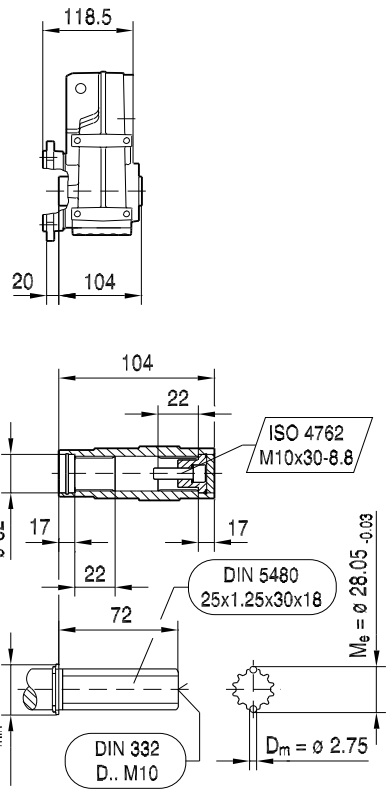
FAF27..



FHF27..



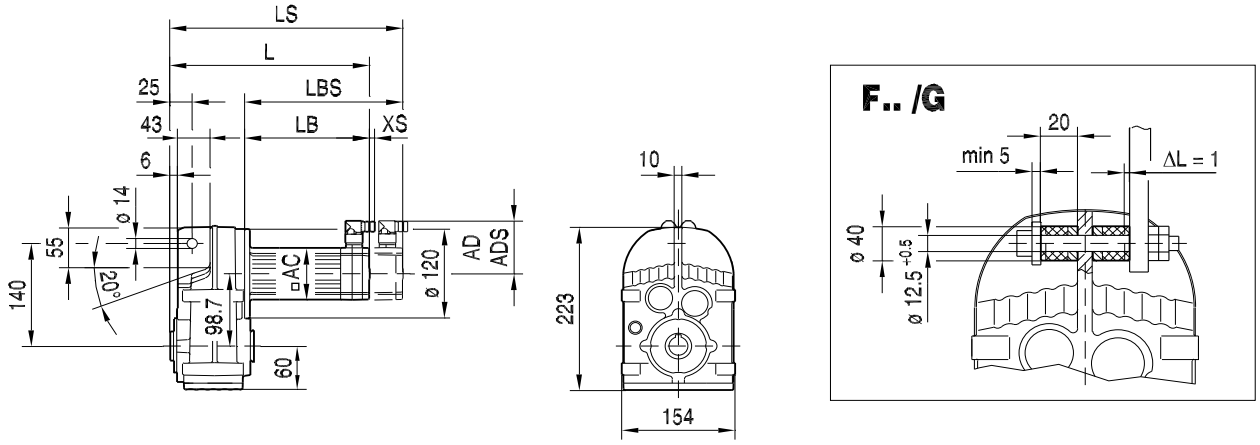
FVF27..



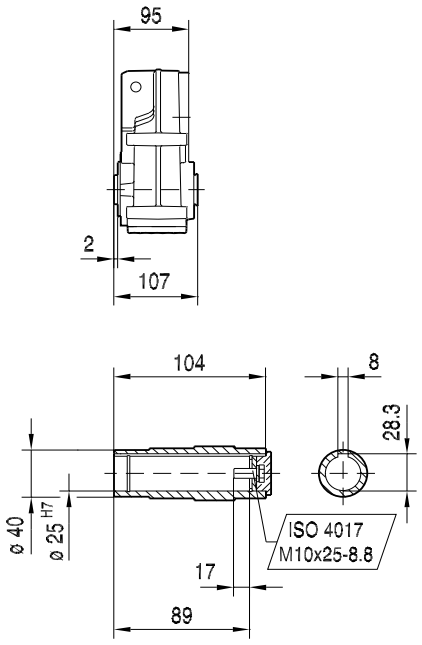
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	308	310	349	388	345	395	448	337	365	377
LS	338	339	378	417	373	423	477	402	430	455
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

42 010 00 07

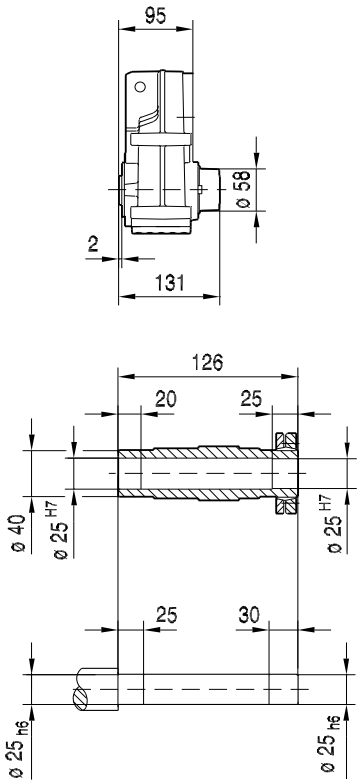
FA27..



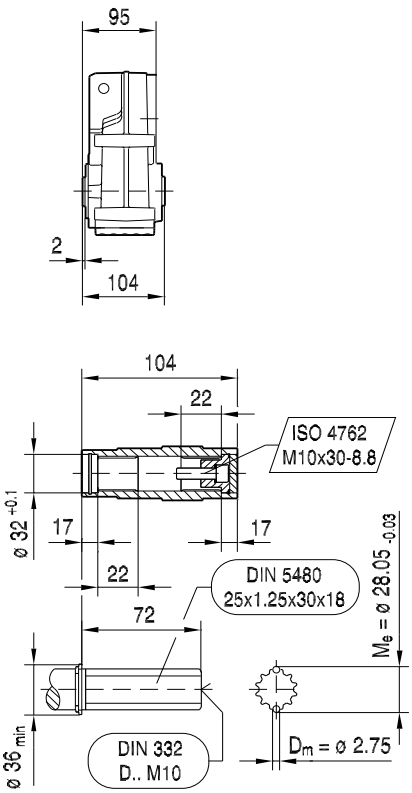
FA27..



FH27..



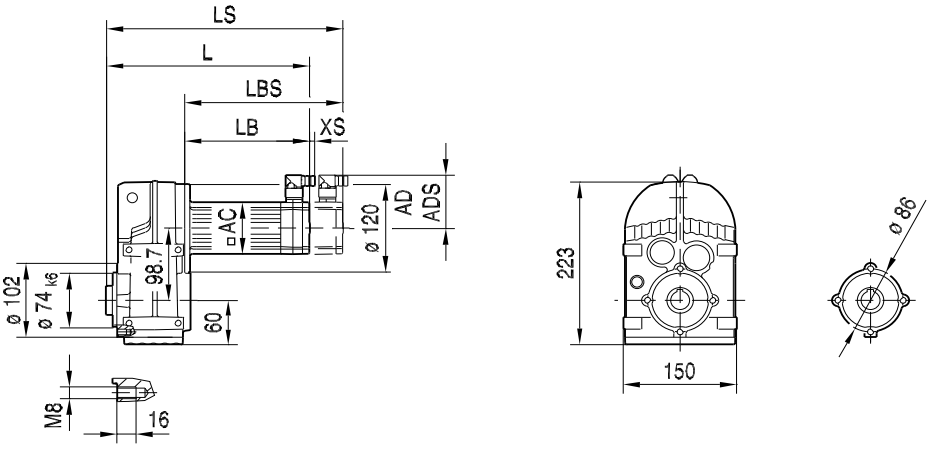
FV27..



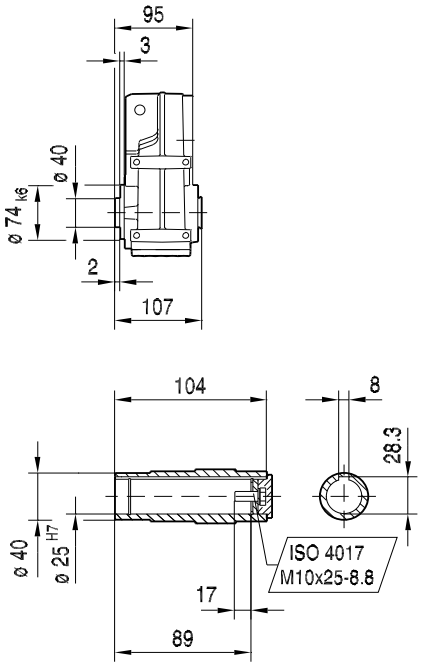
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	238	240	279	318	275	325	378	267	295	307
LS	268	269	308	347	303	353	407	332	360	385
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

FAZ27..

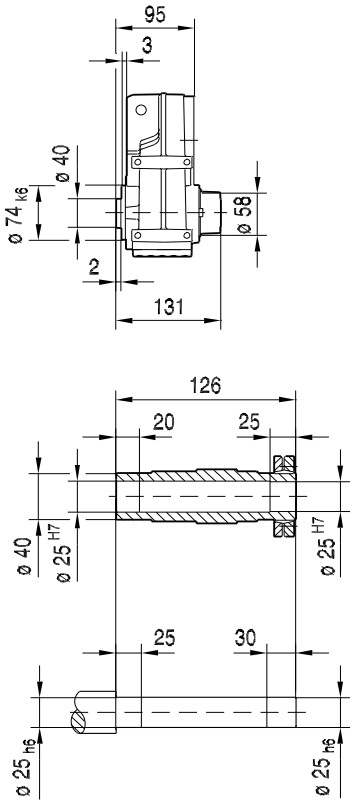
42 011 00 07



FAZ27..



FHZ27..



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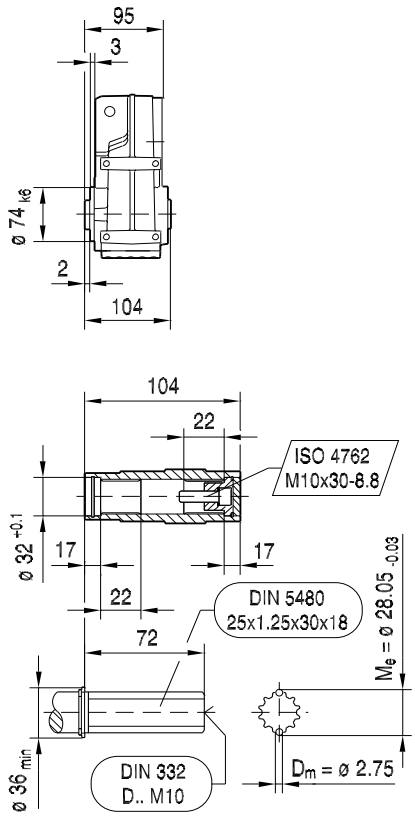


(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	238	240	279	318	275	325	378	267	295	307
LS	268	269	308	347	303	353	407	332	360	385
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

4.2.2 F 37

M_{aDyn} [Nm]		CMP									
	i	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S
FA37 2	3.77	14	19	38	56	41	78	111	70	113	101
	4.22	16	21	42	63	45	88	124	79	126	113
	4.90	18	25	49	73	53	102	144	91	146	131
	5.21	19	26	52	78	56	108	154	97	156	139
	6.05	22	31	60	90	65	126	178	113	181	161
	6.74	25	34	67	101	73	140	>188	126	>188	180
	7.44	27	38	74	111	80	154		139		
	8.01	30	40	80	120	86	166	235	149	235	210
	8.97	33	45	90	134	97	186	>240	167	>240	235
	10.42	38	53	104	156	112	215	>240	194	>240	>240
	11.08	41	56	111	166	119	225	>240	205	>240	>240
	12.87	47	65	129	192	139	>240	>240	235	>240	>240
	14.33	53	72	143	210	154	>240	>240	>240	>240	>240
	15.81	58	80	158	235	170	>240		>240		
	17.03	63	86	170	>240	183	>240	>240	>240	>240	>240
	19.27	71	97	193	>240	205	>240		>240		
	20.57	76	104	205	>240	220	>240		>240		
	23.63	87	119	235		>240					
FA37 3	23.88	87	119	235	>240	>240	>240	>240	>240	>240	>240
	28.09	102	140	>240	>240	>240	>240	>240	>240	>240	>240
	31.69	116	158	>240	>240	>240	>240	>240	>240	>240	>240
	35.91	130	177	>240	>240	>240	>240		>240		
	38.31	138	189	>240	>240	>240	>240	>240	>240	>240	>240
	43.83	158	215	>240	>240	>240	>240		>240		
	47.02	170	230	>240	>240	>240	>240		>240		
	51.70	187	>240	>240	>240	>240	>240	>240	>240	>240	>240
	54.54	197	>240	>240		>240					
	58.32	210	>240	>240	>240	>240	>240	>240	>240	>240	>240
	66.09	235	>240	>240	>240	>240	>240		>240		
	70.50	>240	>240	>240	>240	>240	>240	>240	>240	>240	>240
	80.65	>240	>240	>240	>240	>240	>240		>240		
	86.53	>240	>240	>240	>240	>240	>240		>240		
	100.36	>240	>240	>240		>240					
	117.88	>240	>240								
	128.51	>240	>240								

m [kg]		CMP									
	s	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S
FA37	2	13	15	16	17	17	19	20	20	21	28
FA37	3	13	15	16	17	17	19	20	20	22	28
FAF: + 1.5 kg / F: + 0.5 kg / FF: + 2.3 kg											

F..CMP
F..[mm]

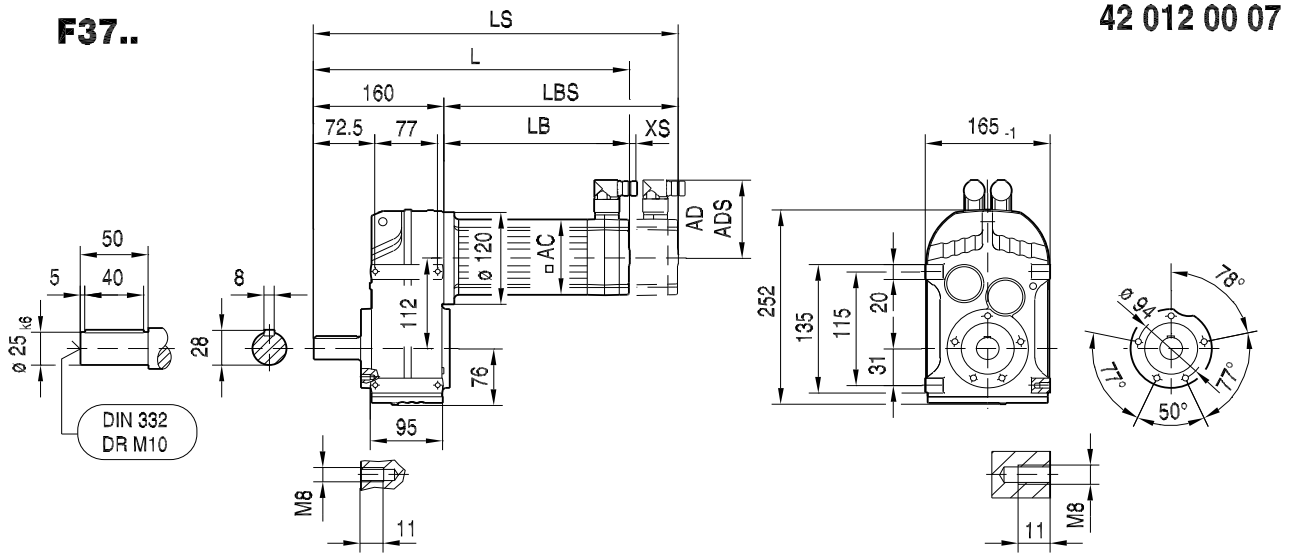
CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} FA [Nm/']	FAF [Nm/']	F [Nm/']	FF [Nm/']	φ /R [']
FA37 2	3.77	4500	97	41	41	20	15	12
	4.22	4500	97	41	41	20	15	11
	4.90	4500	97	41	41	20	15	11
	5.21	4500	97	41	41	20	15	10
	6.05	4500	97	41	41	20	15	10
	6.74	4500	97	41	41	20	15	10
	7.44	4500	97	41	41	20	15	10
	8.01	4500	97	84	84	26	19	7
	8.97	4500	97	84	84	26	19	7
	10.42	4500	97	84	84	26	19	7
	11.08	4500	97	84	84	26	19	7
	12.87	4500	97	84	84	26	19	7
	14.33	4500	97	84	84	26	19	7
	15.81	4500	97	84	84	26	19	6
	17.03	4500	97	84	84	26	19	6
	19.27	4500	97	84	84	26	19	6
	20.57	4500	97	84	84	26	19	6
	23.63	4500	97	84	84	26	19	6
FA37 3	23.88	4500	96	94	94	27	19	8
	28.09	4500	96	94	94	27	19	8
	31.69	4500	96	94	94	27	19	8
	35.91	4500	95	94	94	27	19	8
	38.31	4500	95	94	94	27	19	8
	43.83	4500	95	94	94	27	19	8
	47.02	4500	95	94	94	27	19	8
	51.70	4500	95	97	97	27	19	7
	54.54	4500	95	94	94	27	19	8
	58.32	4500	95	97	97	27	19	7
	66.09	4500	95	97	97	27	19	7
	70.50	4500	94	97	97	27	19	7
	80.65	4500	94	97	97	27	19	7
	86.53	4500	94	97	97	27	19	7
	100.36	4500	94	97	97	27	19	7
	117.88	4500	93	97	97	27	19	7
	128.51	4500	93	97	97	27	19	7

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	FA [N]	FAF [N]	F [N]	FF [N]	FA [N]	FAF [N]	F [N]	FF [N]
FA37 2	3.77	105	157	179	451	2.8	2470	2470	1970	2220	7000	7000	4810	5860
	4.22	110	165	187	427	2.3	2550	2550	2030	2300	7000	7000	4730	5820
	4.90	120	180	204	367	1.8	2630	2630	2100	2380	7000	7000	4560	5740
	5.21	125	187	213	326	1.6	2660	2660	2120	2410	7000	7000	4470	5700
	6.05	135	188	230	281	1.2	2750	2750	2190	2510	7000	7000	4460	5700
	6.74	140	188	238	267	1.0	2850	2850	2270	2600	7000	7000	4460	5700
	7.44	145	188	247	242	0.83	2940	2940	2350	2680	7000	7000	4460	5700
	8.01	170	240	289	200	1.5	2960	2960	2360	2710	7000	7000	3610	4100
	8.97	175	240	298	190	1.3	3080	3080	2460	2820	7000	7000	3610	4100
	10.42	185	240	315	163	1.0	3230	3230	2580	2960	7000	7000	3610	4100
	11.08	190	240	323	144	0.94	3290	3290	2620	3020	7000	7000	3610	4100
	12.87	200	240	340	124	0.74	3450	3450	2750	3170	7000	7000	3610	4100
	14.33	200	240	340	126	0.63	3650	3650	2910	3330	7000	7000	3610	4100
	15.81	200	240	340	127	0.52	3840	3840	3070	3490	7000	7000	3610	4100
	17.03	200	240	340	129	0.48	3990	3990	3180	3610	7000	7000	3610	4100
	19.27	200	240	340	130	0.40	4250	4250	3390	3820	7000	7000	3610	4100
	20.57	200	240	340	131	0.36	4390	4390	3500	3940	7000	7000	3610	4100
	23.63	200	240	340	135	0.29	4690	4690	3740	4190	7000	7000	3610	4100

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	FA [N]	FAF [N]	F [N]	FF [N]	FA [N]	FAF [N]	F [N]	FF [N]
FA37 3	23.88	200	240	340	96	0.60	4720	4720	3760	4210	7000	7000	3610	4100
	28.09	200	240	340	96	0.45	5090	5090	4060	4520	7000	7000	3610	4100
	31.69	200	240	340	95	0.35	5380	5380	4290	4760	7000	7000	3610	4100
	35.91	200	240	340	97	0.29	5700	5700	4290	5020	7000	7000	3610	4100
	38.31	200	240	340	97	0.26	5870	5870	4290	5160	7000	7000	3610	4100
	43.83	200	240	340	96	0.21	6240	6240	4290	5460	7000	7000	3610	4100
	47.02	200	240	340	96	0.19	6430	6430	4290	5620	7000	7000	3610	4100
	51.70	200	240	340	95	0.34	6710	6710	4290	5670	7000	7000	3610	4100
	54.54	200	240	340	97	0.15	6860	6860	4290	5670	7000	7000	3610	4100
	58.32	200	240	340	96	0.27	7000	7000	4290	5670	7000	7000	3610	4100
	66.09	200	240	340	95	0.23	7000	7000	4290	5670	7000	7000	3610	4100
	70.50	200	240	340	95	0.21	7000	7000	4290	5670	7000	7000	3610	4100
	80.65	200	240	340	87	0.17	7000	7000	4290	5670	7000	7000	3610	4100
	86.53	200	240	340	81	0.15	7000	7000	4290	5670	7000	7000	3610	4100
	100.36	200	240	340	70	0.12	7000	7000	4290	5670	7000	7000	3610	4100
	117.88	200	240	340	59	0.10	7000	7000	4290	5670	7000	7000	3610	4100
	128.51	200	240	340	54	0.080	7000	7000	4290	5670	7000	7000	3610	4100

F37..

42 012 00 07



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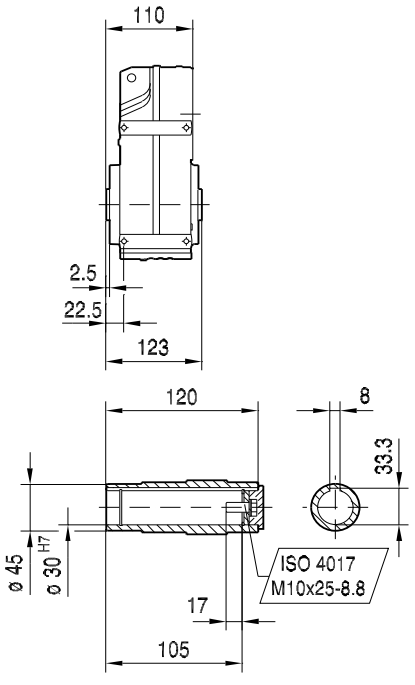

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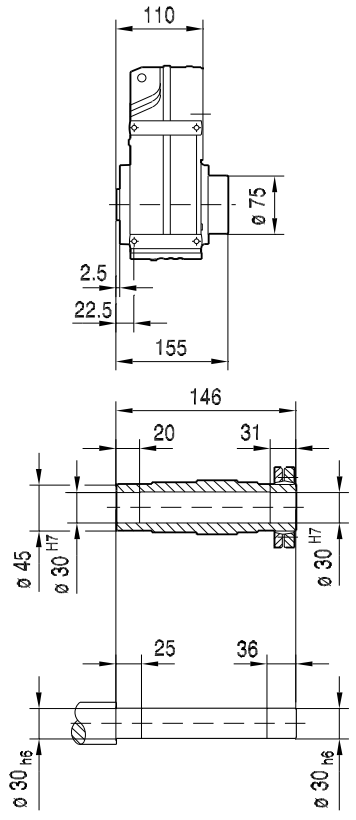

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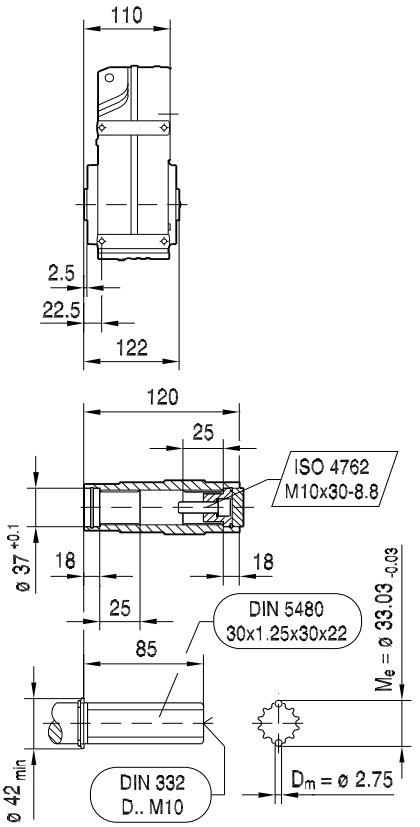
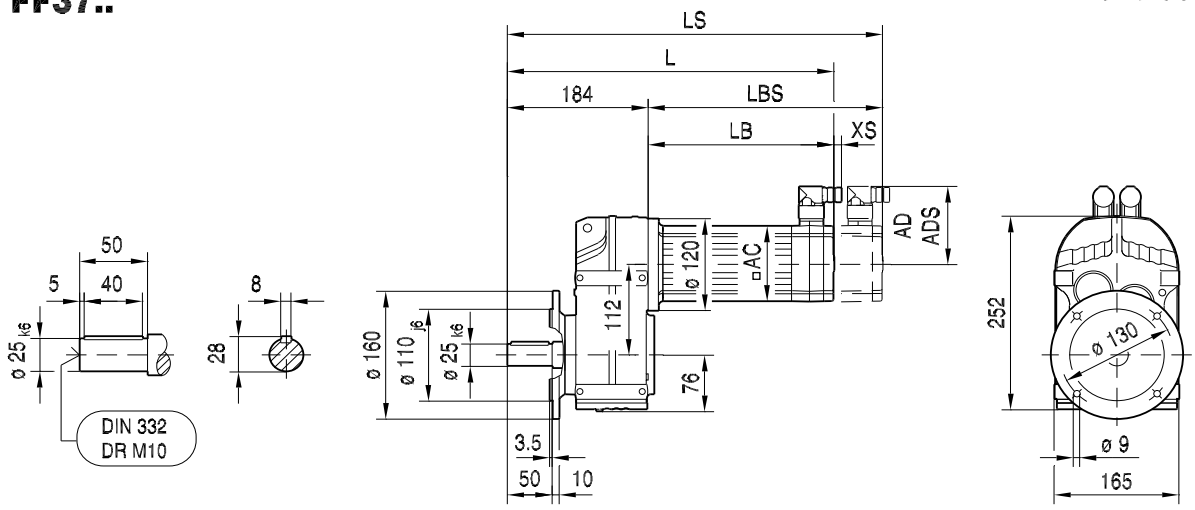


(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	303	305	344	383	340	390	443	332	360	372
LS	333	334	373	412	368	418	472	397	425	450
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

42 013 00 07

FF37..



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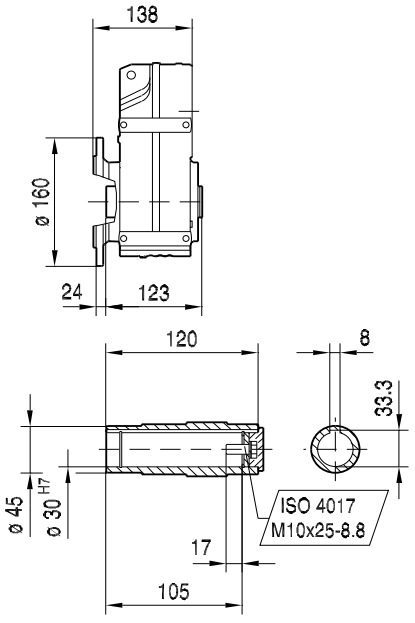

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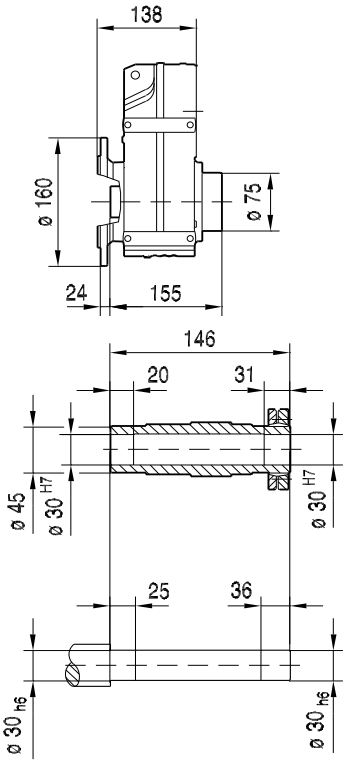

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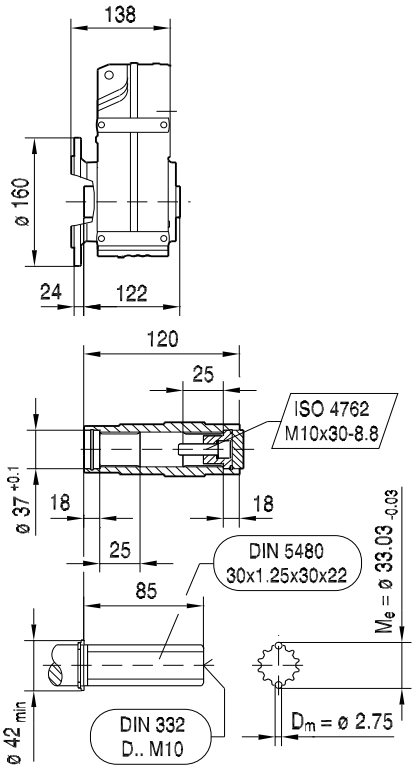
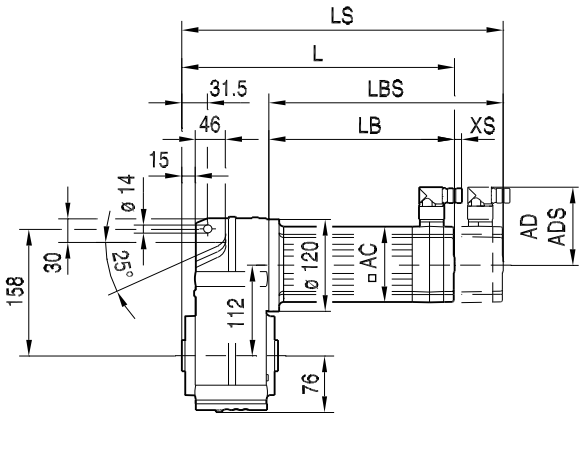
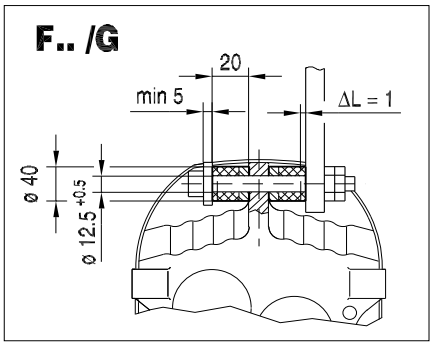


(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	327	329	368	407	364	414	467	356	384	396
LS	357	358	397	436	392	442	496	421	449	474
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

42 014 00 07

FA37..





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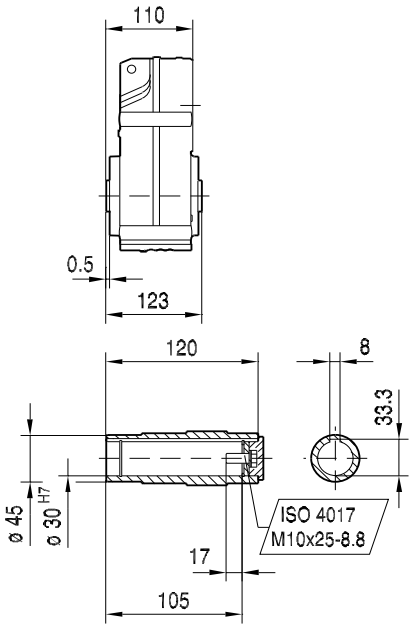

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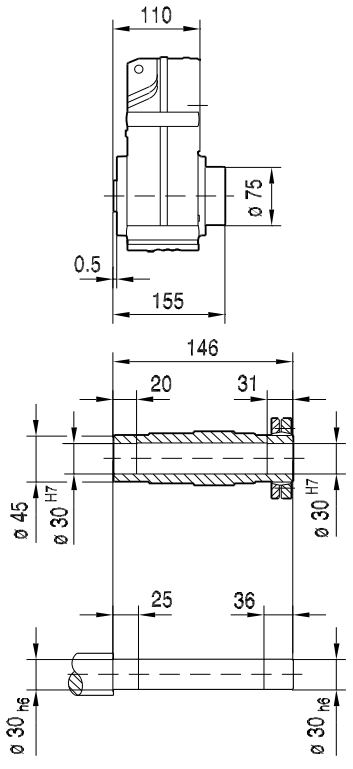

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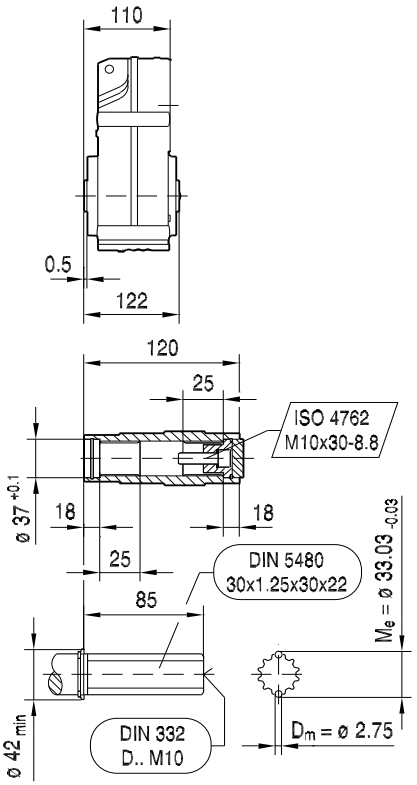
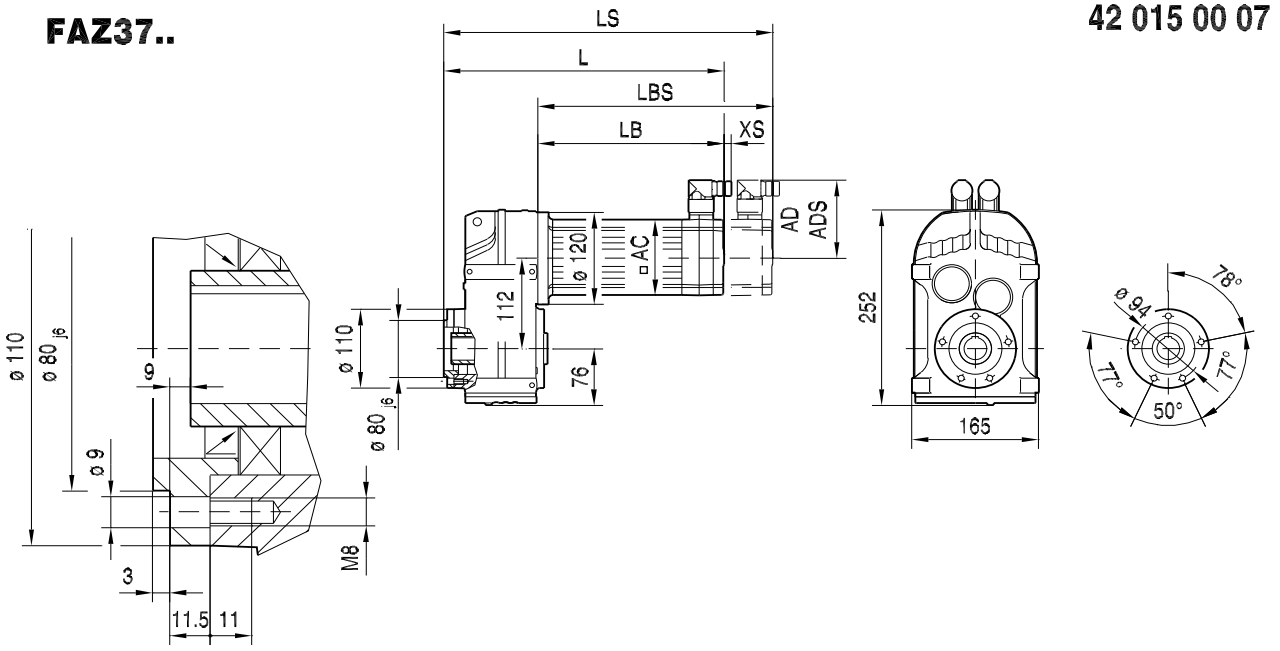


(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	253	255	294	333	290	340	393	282	310	322
LS	283	284	323	362	318	368	422	347	375	400
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

FAZ37..

42 015 00 07



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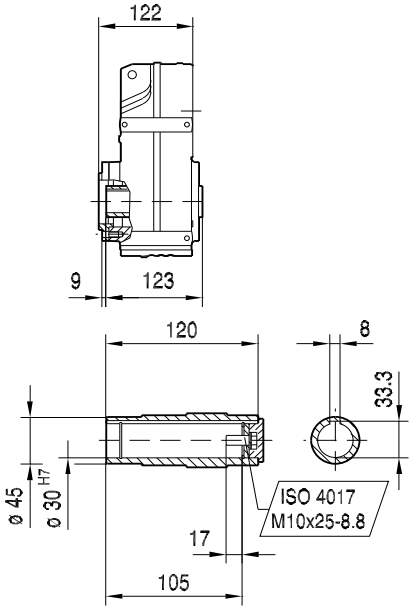

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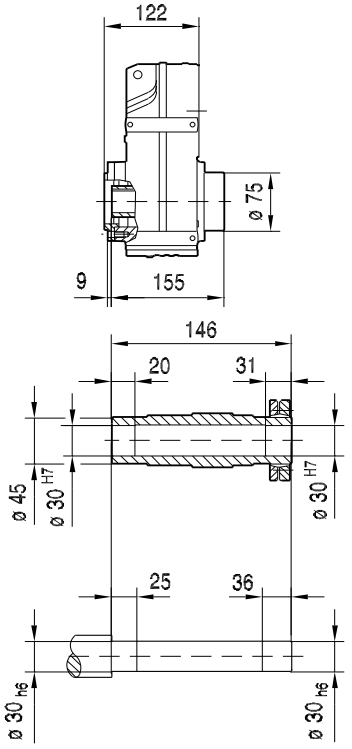

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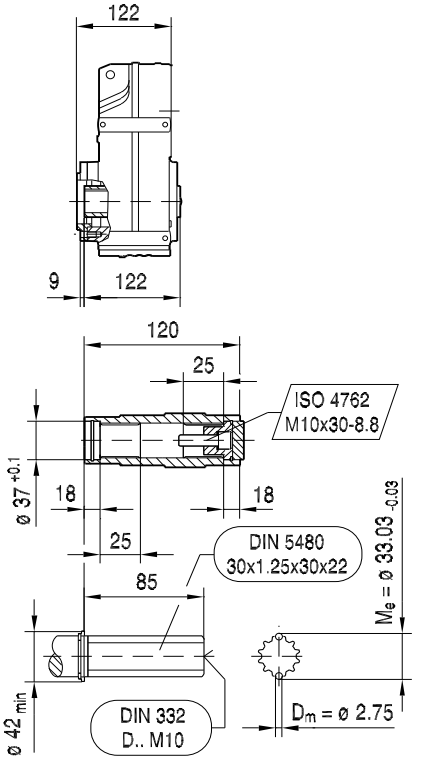
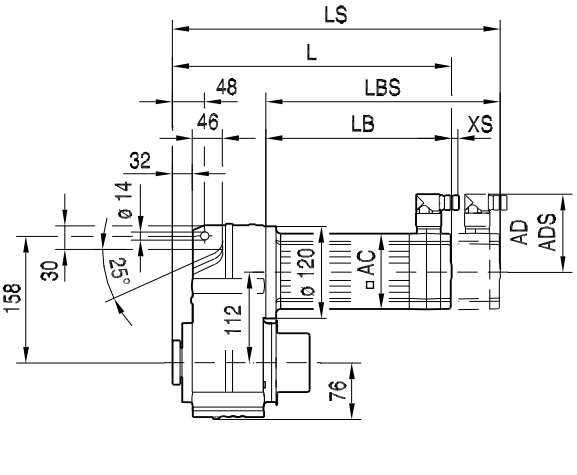


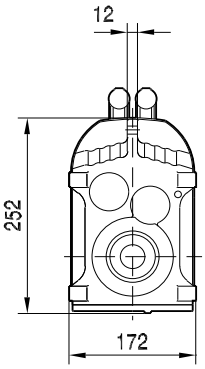
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	265	267	306	345	302	352	405	294	322	334
LS	295	296	335	374	330	380	434	359	387	412
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

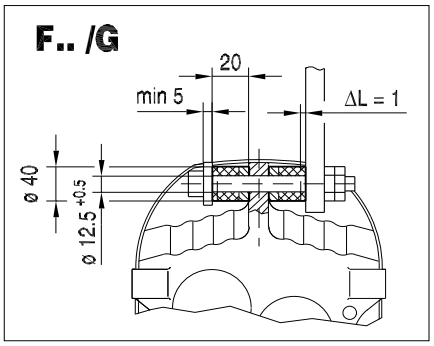
F..CMP
F..[mm]

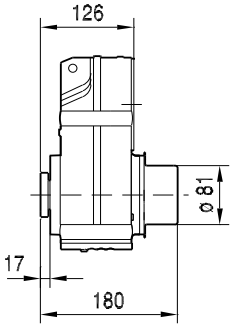
FT37..

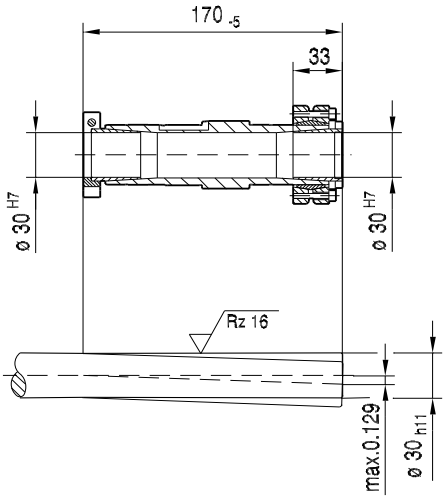
42 016 00 07

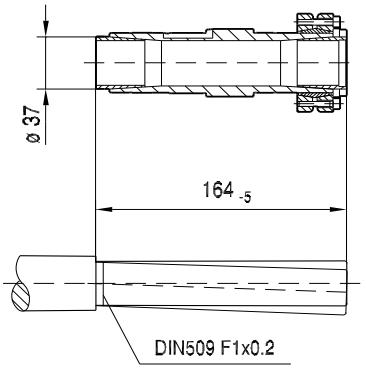












(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	269	271	310	349	306	356	409	298	326	338
LS	299	300	339	378	334	384	438	363	391	416
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

4.2.3 F 47

M_{aDyn} [Nm]		CMP										
	i	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S	80M
FA47 2	4.99	18	25	50	75	54	104	147	93	149	200	205
	5.76	21	29	58	86	62	120	170	107	172	235	235
	6.34	23	32	63	95	68	132	187	118	189	255	260
	7.44	27	38	74	111	80	154	215	139	220	300	305
	7.88	29	40	79	118	85	164	230	147	235	320	320
	8.96	33	45	90	134	96	186	260	167	265	365	365
	10.97	40	55	110	164	118	225	320	200	325	>435	>435
	12.66	47	64	126	189	136	260	370	235	375	>435	>435
	13.93	51	70	139	205	150	285	410	255	415	>435	>435
	16.36	60	83	163	240	176	335	>435	300	>435	>435	>435
	17.33	64	87	173	255	187	355	>435	320	>435	>435	>435
	19.70	73	99	197	290	210	405	>435	365	>435	>435	>435
	21.82	80	110	215	325	230	>435	>435	405	>435	>435	>435
	25.72	95	130	255	380	275	>435	>435	>435	>435		
	29.32	108	148	290	>435	315	>435		>435			
	30.86	114	156	305	>435	330	>435		>435			
FA47 3	28.88	105	144	285	425	305	>435	>435	>435	>435	>435	>435
	34.29	125	171	335	>435	365	>435	>435	>435	>435	>435	>435
	36.61	134	183	360	>435	390	>435	>435	>435	>435	>435	>435
	42.86	156	210	420	>435	>435	>435	>435	>435	>435	>435	>435
	48.00	173	235	>435	>435	>435	>435	>435	>435	>435	>435	>435
	56.49	200	275	>435	>435	>435	>435	>435	>435	>435		
	65.36	235	320	>435	>435	>435	>435		>435			
	68.09	245	335	>435	>435	>435	>435	>435	>435	>435		
	79.72	285	390	>435	>435	>435	>435	>435	>435	>435		
	89.29	320	>435	>435	>435	>435	>435	>435	>435	>435		
	105.09	375	>435	>435	>435	>435	>435	>435	>435	>435		
	121.57	430	>435	>435	>435	>435	>435		>435			
	130.07	>435	>435	>435	>435	>435	>435		>435			
	150.06	>435	>435	>435		>435						
	175.38	>435	>435									
	190.76	>435	>435									

m [kg]		CMP										
	s	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S	80M
FA47	2	18	19	20	21	21	23	24	24	26	32	34
FA47	3	18	20	21	22	22	24	25	25	26	33	35
FAF: + 2.7 kg / F: + 0.8 kg / FF: + 3.9 kg												

F..CMP
F..[mm]

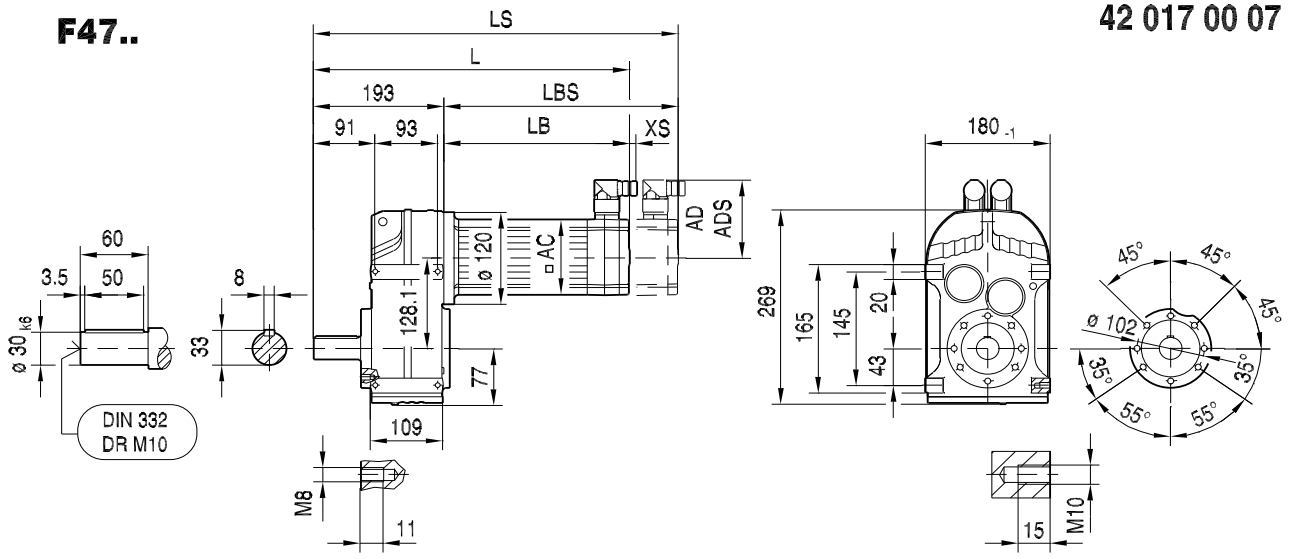
CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} FA [Nm/']	FAF [Nm/']	F [Nm/']	FF [Nm/']	φ /R [']
FA47 2	4.99	4500	97	99	99	34	30	9
	5.76	4500	97	99	99	34	30	9
	6.34	4500	97	99	99	34	30	8
	7.44	4500	97	99	99	34	30	8
	7.88	4500	97	99	99	34	30	8
	8.96	4500	97	99	99	34	30	8
	10.97	4500	97	125	125	37	32	6
	12.66	4500	97	125	125	37	32	6
	13.93	4500	97	125	125	37	32	6
	16.36	4500	97	125	125	37	32	6
	17.33	4500	97	125	125	37	32	6
	19.70	4500	97	125	125	37	32	6
	21.82	4500	97	125	125	37	32	6
	25.72	4500	97	125	125	37	32	6
	29.32	4500	97	125	125	37	32	6
	30.86	4500	97	125	125	37	32	6
FA47 3	28.88	4500	96	136	136	38	33	7
	34.29	4500	96	136	136	38	33	7
	36.61	4500	96	136	136	38	33	7
	42.86	4500	96	136	136	38	33	7
	48.00	4500	95	136	136	38	33	7
	56.49	4500	95	136	136	38	33	7
	65.36	4500	95	136	136	38	33	7
	68.09	4500	95	138	138	38	33	6
	79.72	4500	95	138	138	38	33	6
	89.29	4500	95	138	138	38	33	6
	105.09	4500	94	138	138	38	33	6
	121.57	4500	94	138	138	38	33	6
	130.07	4500	94	138	138	38	33	6
	150.06	4500	93	138	138	38	33	6
	175.38	4500	93	138	138	38	33	6
	190.76	4500	92	138	138	38	33	6

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	FA [N]	FAF [N]	F [N]	FF [N]	FA [N]	FAF [N]	F [N]	FF [N]
FA47 2	4.99	320	435	544	341	4.4	1160	1160	2310	2410	10000	10000	900	900
	5.76	340	435	578	295	3.4	1180	1180	2390	2500	10000	10000	900	900
	6.34	350	435	595	284	2.9	1230	1230	2470	2580	10000	10000	900	900
	7.44	380	435	646	242	2.3	1190	1190	2530	2660	10000	10000	900	900
	7.88	380	435	646	254	2.1	1280	1280	2630	2750	10000	10000	900	900
	8.96	330	435	561	424	1.6	1970	1970	3250	3310	10000	10000	900	900
	10.97	400	435	680	346	2.6	2060	2060	3440	3510	10000	10000	900	900
	12.66	400	435	680	371	2.1	2320	2320	3740	3790	10000	10000	900	900
	13.93	400	435	680	388	1.8	2510	2510	3950	3990	10000	10000	900	900
	16.36	400	435	680	403	1.5	2840	2840	4320	4340	10000	10000	900	900
	17.33	400	435	680	398	1.4	2960	2960	4450	4470	10000	10000	900	900
	19.70	400	435	680	355	1.1	3230	3230	4770	4770	10000	10000	900	900
	21.82	400	435	680	321	0.96	3460	3460	5030	5020	10000	10000	900	900
	25.72	400	435	680	272	0.75	3850	3850	5460	5430	10000	10000	900	900
	29.32	400	435	680	239	0.52	4170	4170	5830	5780	10000	10000	900	900
	30.86	400	435	680	227	0.46	4300	4300	5920	5920	10000	10000	900	900

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	FA [N]	FAF [N]	F [N]	FF [N]	FA [N]	FAF [N]	F [N]	FF [N]
FA47 3	28.88	400	435	680	111	1.1	4130	4130	5790	5740	10000	10000	900	900
	34.29	400	435	680	111	0.85	4580	4580	5920	5920	10000	10000	900	900
	36.61	400	435	680	112	0.76	4750	4750	5920	5920	10000	10000	900	900
	42.86	400	435	680	112	0.58	5190	5190	5920	5920	10000	10000	900	900
	48.00	400	435	680	113	0.48	5520	5520	5920	5920	10000	10000	900	900
	56.49	400	435	680	113	0.36	6020	6020	5920	5920	10000	10000	900	900
	65.36	400	435	680	107	0.29	6490	6490	5920	5920	10000	10000	900	900
	68.09	400	435	680	103	0.61	6620	6620	5920	5920	10000	10000	900	900
	79.72	400	435	680	88	0.48	7160	7160	5920	5920	10000	10000	900	900
	89.29	400	435	680	78	0.40	7570	7570	5920	5920	10000	10000	900	900
	105.09	400	435	680	67	0.30	8180	8180	5920	5920	10000	10000	900	900
	121.57	400	435	680	58	0.25	8760	8760	5920	5920	10000	10000	900	900
	130.07	400	435	680	54	0.23	9040	9040	5920	5920	10000	10000	900	900
	150.06	400	435	680	47	0.18	9640	9640	5920	5920	10000	10000	900	900
	175.38	400	435	680	40	0.14	10000	10000	5920	5920	10000	10000	900	900
	190.76	400	435	680	37	0.13	10000	10000	5920	5920	10000	10000	900	900

F47..

42 017 00 07



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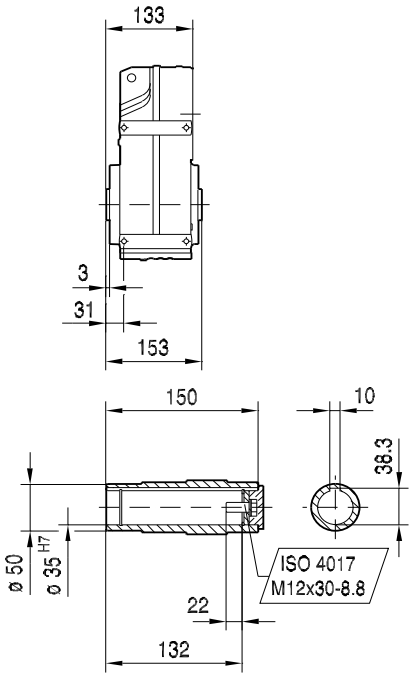

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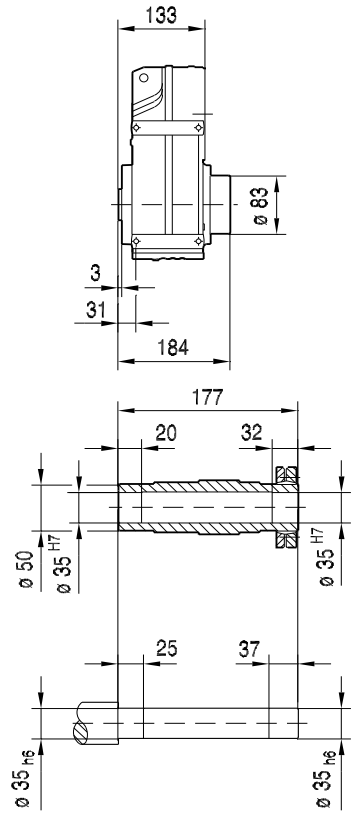

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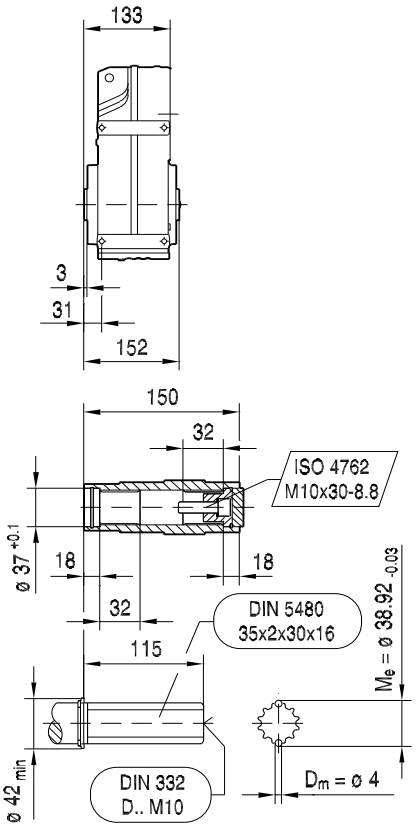
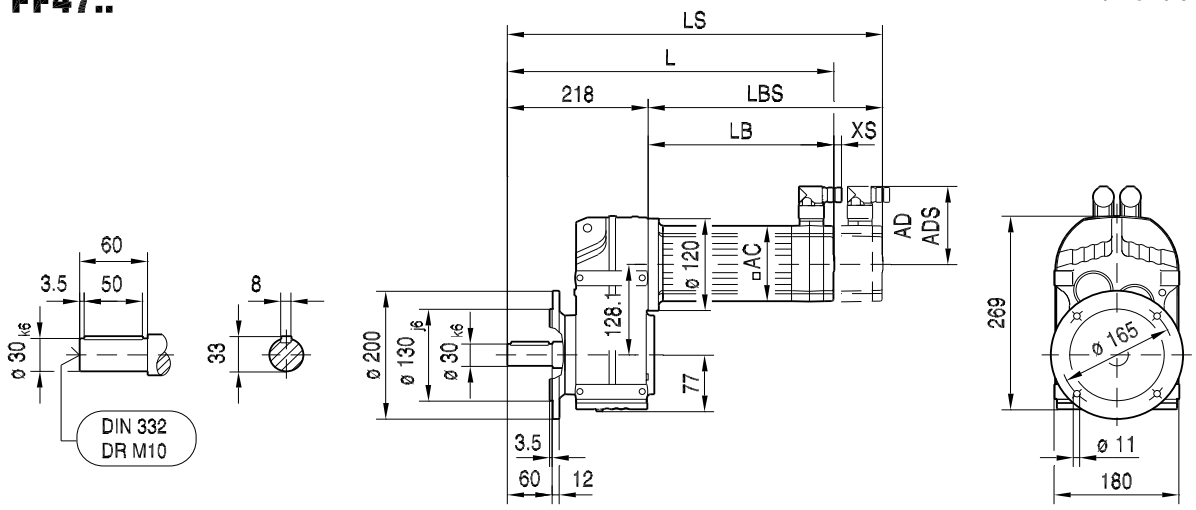


(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	57	73	73	73	88	88	88	115	115	115	137	137
AD	78	86	86	86	92	92	92	102	102	102	134	134
ADS	78	86	86	86	92	92	92	104	104	104	137	137
L	336	338	377	416	373	423	476	365	393	440	405	442
LS	366	367	406	445	401	451	505	430	458	505	483	520
LB	143	145	184	223	180	230	283	172	200	247	212	249
LBS	173	174	213	252	208	258	312	237	265	312	290	327
XS	19	18	18	18	14	14	14	11	11	11	37	37

42 018 00 07

FF47..



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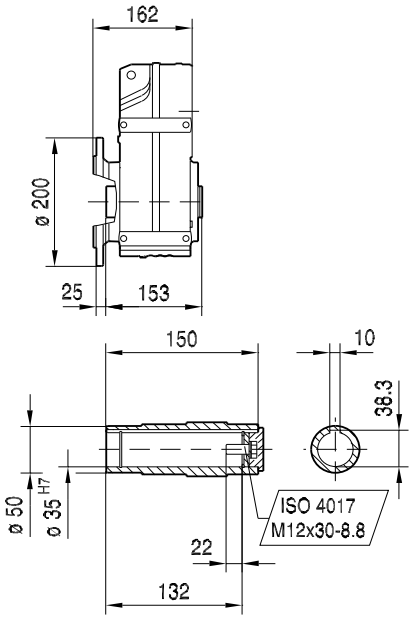

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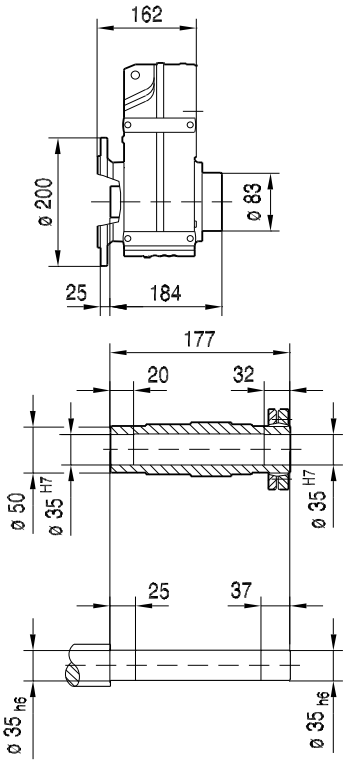

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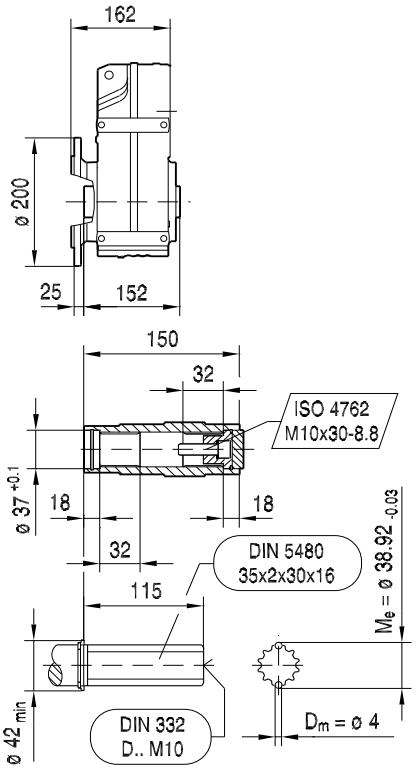
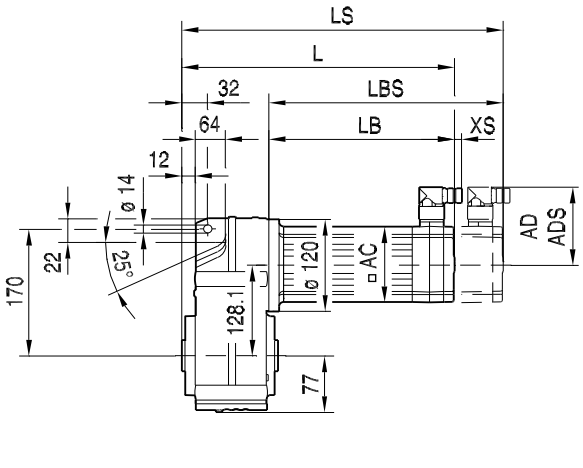


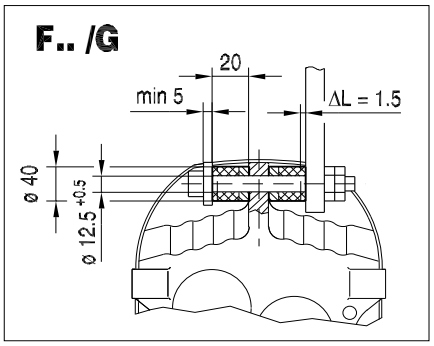
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	57	73	73	73	88	88	88	115	115	115	137	137
AD	78	86	86	86	92	92	92	102	102	102	134	134
ADS	78	86	86	86	92	92	92	104	104	104	137	137
L	361	363	402	441	398	448	501	390	418	465	430	467
LS	391	392	431	470	426	476	530	455	483	530	508	545
LB	143	145	184	223	180	230	283	172	200	247	212	249
LBS	173	174	213	252	208	258	312	237	265	312	290	327
XS	19	18	18	18	14	14	14	11	11	11	37	37

F..CMP
F..[mm]

42 019 00 07

FA47..





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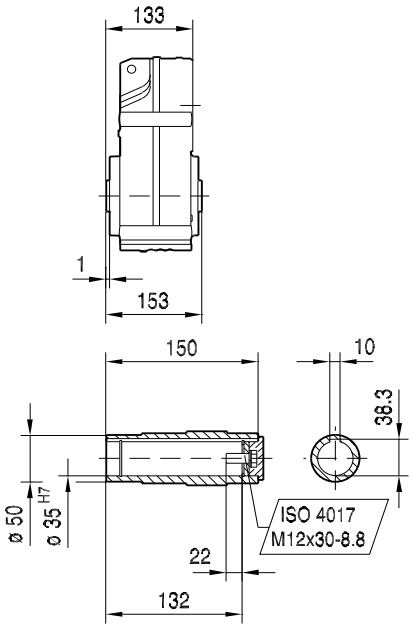
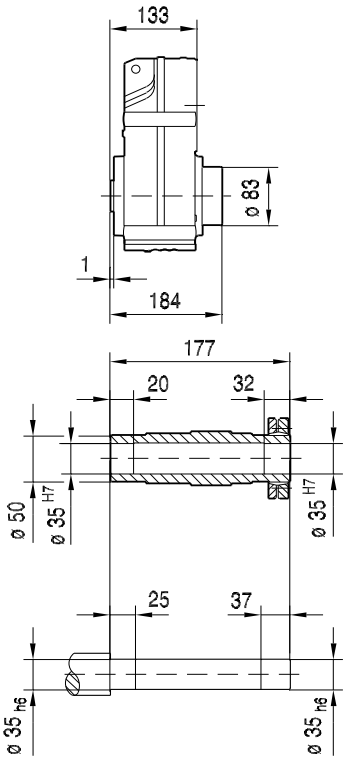
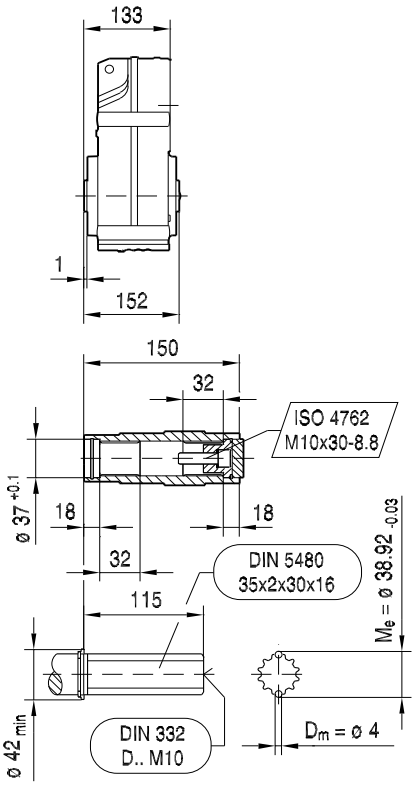


FH47..



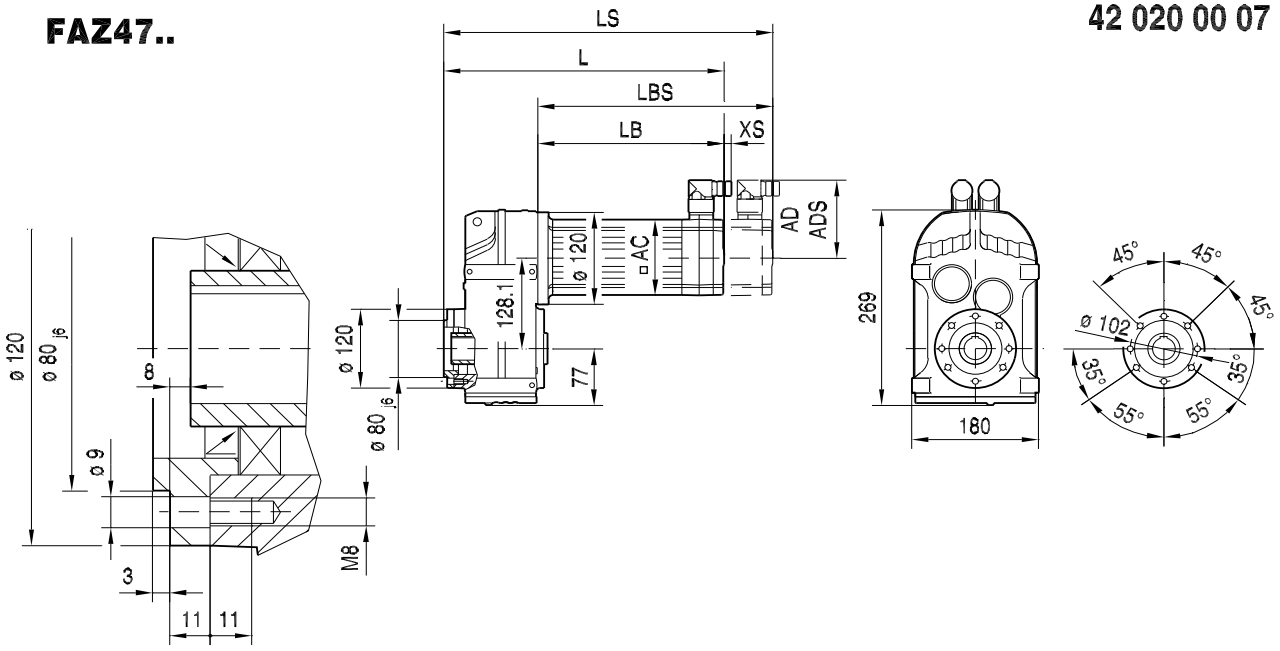
FV47..



(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	57	73	73	73	88	88	88	115	115	115	137	137
AD	78	86	86	86	92	92	92	102	102	102	134	134
ADS	78	86	86	86	92	92	92	104	104	104	137	137
L	276	278	317	356	313	363	416	305	333	380	345	382
LS	306	307	346	385	341	391	445	370	398	445	423	460
LB	143	145	184	223	180	230	283	172	200	247	212	249
LBS	173	174	213	252	208	258	312	237	265	312	290	327
XS	19	18	18	18	14	14	14	11	11	11	37	37

FAZ47..

42 020 00 07



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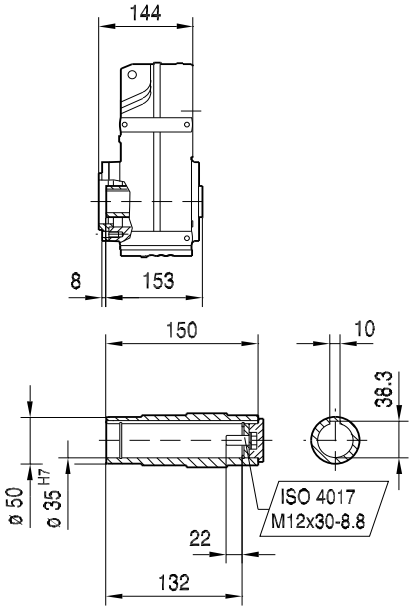

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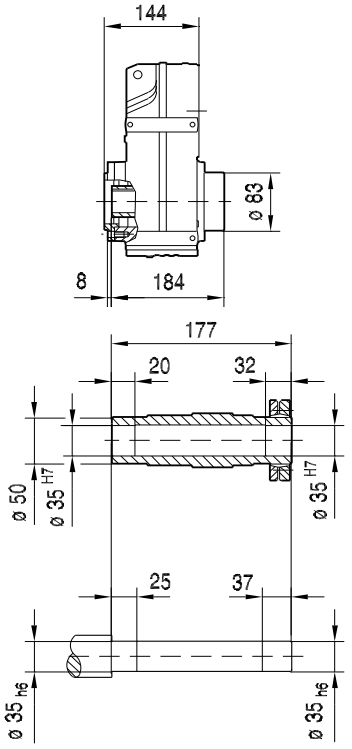

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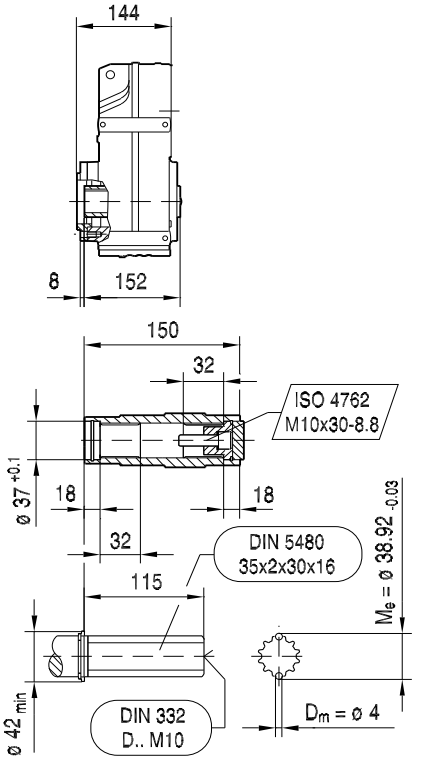
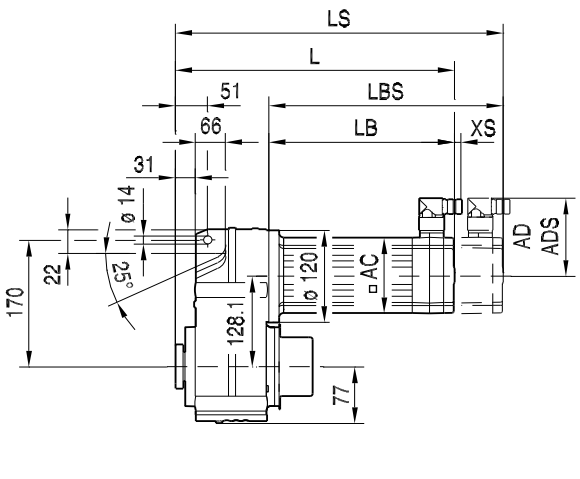
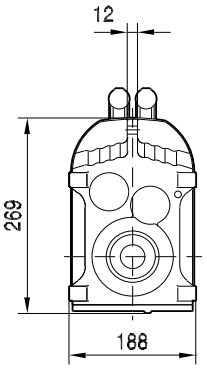


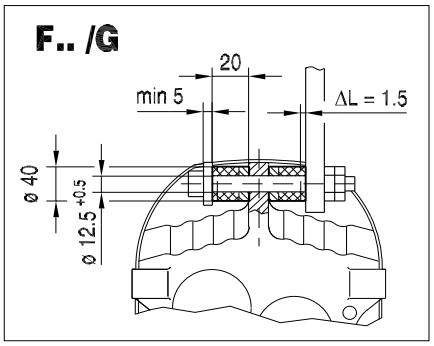
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	57	73	73	73	88	88	88	115	115	115	137	137
AD	78	86	86	86	92	92	92	102	102	102	134	134
ADS	78	86	86	86	92	92	92	104	104	104	137	137
L	287	289	328	367	324	374	427	316	344	391	356	393
LS	317	318	357	396	352	402	456	381	409	456	434	471
LB	143	145	184	223	180	230	283	172	200	247	212	249
LBS	173	174	213	252	208	258	312	237	265	312	290	327
XS	19	18	18	18	14	14	14	11	11	11	37	37

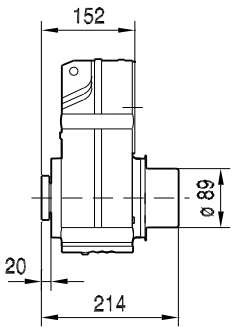
FT47..

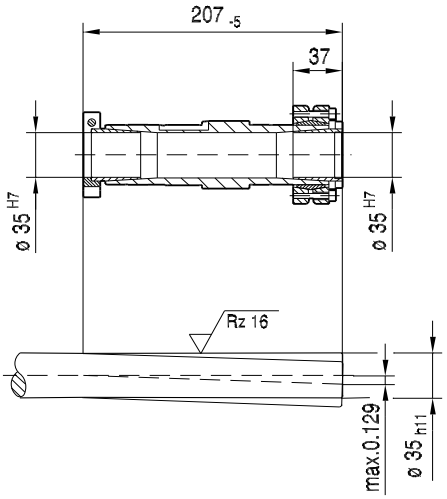
42 021 00 07

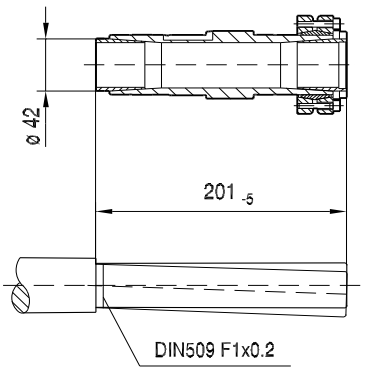








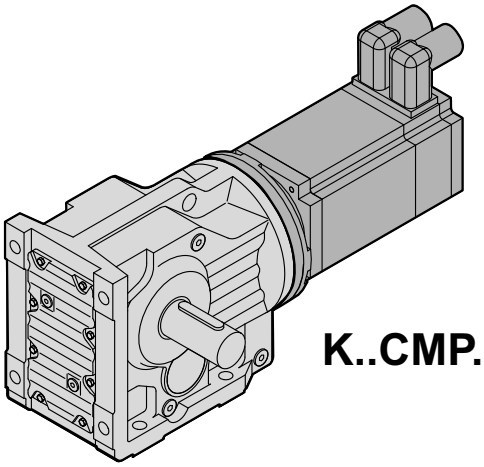




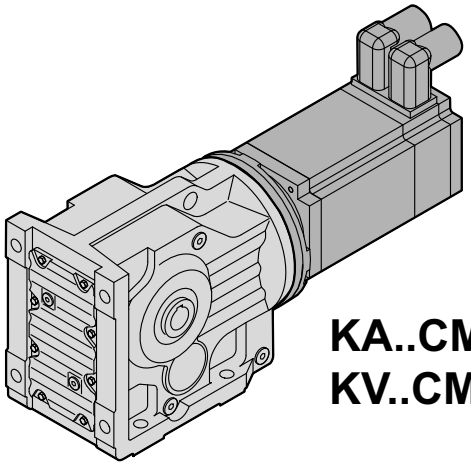
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	57	73	73	73	88	88	88	115	115	115	137	137
AD	78	86	86	86	92	92	92	102	102	102	134	134
ADS	78	86	86	86	92	92	92	104	104	104	137	137
L	295	297	336	375	332	382	435	324	352	399	364	401
LS	325	326	365	404	360	410	464	389	417	464	442	479
LB	143	145	184	223	180	230	283	172	200	247	212	249
LBS	173	174	213	252	208	258	312	237	265	312	290	327
XS	19	18	18	18	14	14	14	11	11	11	37	37

5 K..CMP

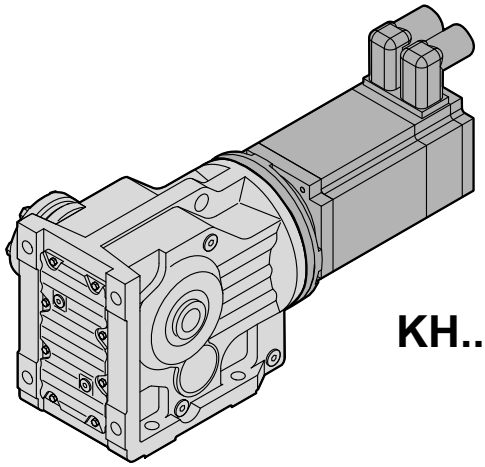
5.1 K, KA, KV, KH, KF, KAF, KAV, KHF, KA../T, KV../T, KH../T, KAZ, KVZ, KHZ..CMP



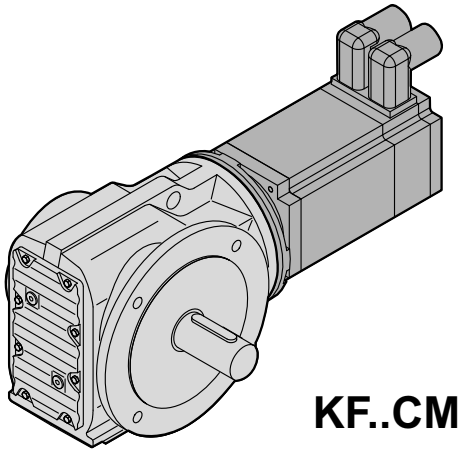
K..CMP..



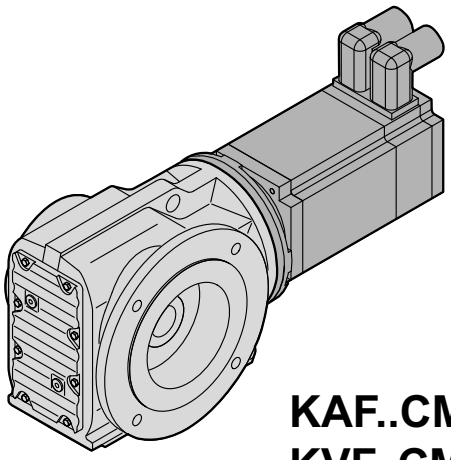
KA..CMP..
KV..CMP..



KH..CMP..

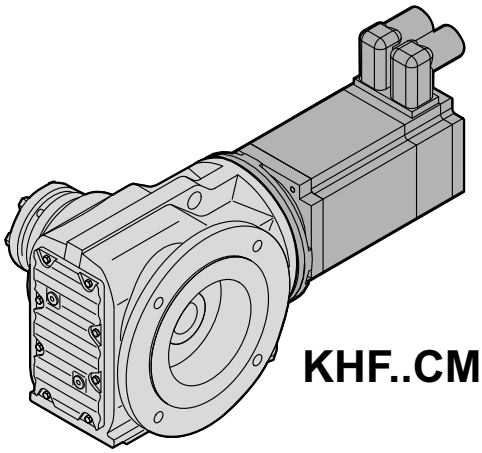


KF..CMP..

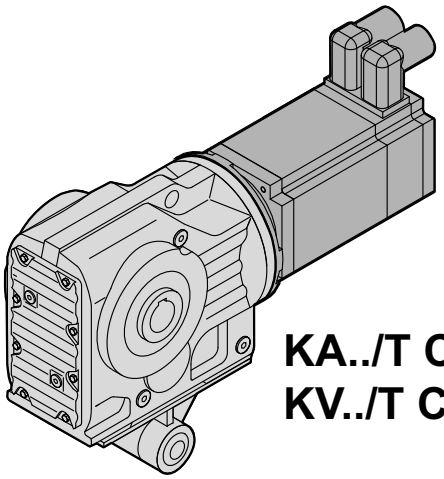


KAF..CMP..
KVF..CMP..

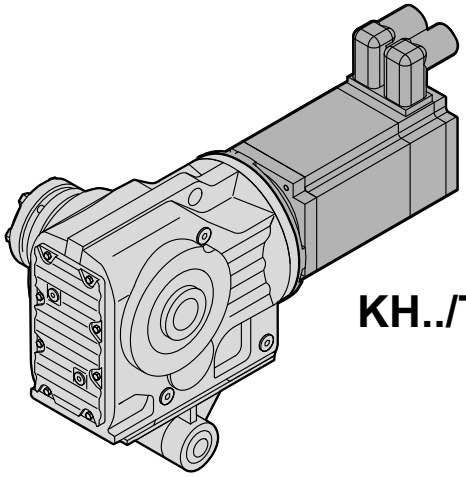
65963axx



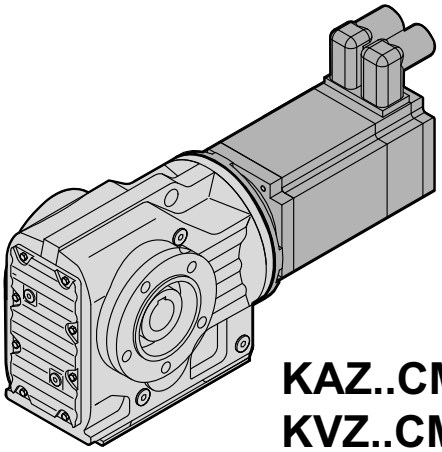
KHF..CMP..



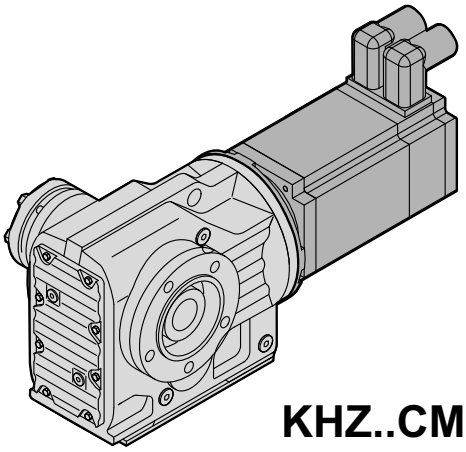
KA../T CMP..
KV../T CMP..



KH../T CMP..



KAZ..CMP..
KVZ..CMP..



KHZ..CMP..

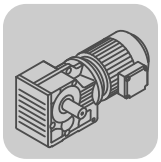
65964axx

5.2 K..[mm]

5.2.1 K 37

M_{aDyn} [Nm]		CMP									
	i	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S
K37 3	3.98	15	20	39	59	42	82	116	73	118	105
	5.36	20	27	53	79	57	110	156	99	158	142
	6.37	23	32	63	94	68	131	186	117	188	168
	6.80	25	34	67	101	72	140	198	125	>199	180
	7.96	29	40	79	118	85	164	>199	147	>199	>199
	8.91	33	44	88	132	95	183	>199	164	>199	>199
	10.49	38	52	104	155	112	>199	>199	193	>199	>199
	12.14	44	61	120	179	129	>199		>199		
	13.08	48	65	129	193	139	>240	>240	>240	>240	>240
	15.31	56	76	151	225	163	>240	>240	>240	>240	>240
	17.15	63	86	170	>240	183	>240	>240	>240	>240	>240
	20.19	74	101	200	>240	215	>240	>240	>240	>240	>240
	23.36	85	117	230	>240	>240	>240		>240		
	24.99	91	125	>240	>240	>240	>240		>240		
	28.83	105	144	>240		>240					
	29.96	107	146	>230	>230	>230	>230	>230	>230	>230	>230
	35.57	127	174	>230	>230	>230	>230	>230	>230	>230	>230
	37.97	136	186	>230	>230	>230	>230	>230	>230	>230	>230
	44.46	159	215	>230	>230	>230	>230	>230	>230	>230	>230
	49.79	178	>230	>230	>230	>230	>230	>230	>230	>230	>230
	58.60	205	>230	>230	>230	>230	>230	>230	>230	>230	>230
	67.80	>230	>230	>230	>230	>230	>230		>230		
	72.54	>230	>230	>230	>230	>230	>230		>230		
	83.69	>230	>230	>230		>230					
	97.81	>230	>230								
	106.38	>230	>230								

m [kg]		CMP									
	s	40M	50S	50M	50L	63S	63M	63L	71S	71M	80S
K37	3	13	15	16	17	17	19	20	20	22	28
KF: + 2.3 kg / KA: + -0.2 kg / KAF: + 1.5 kg											



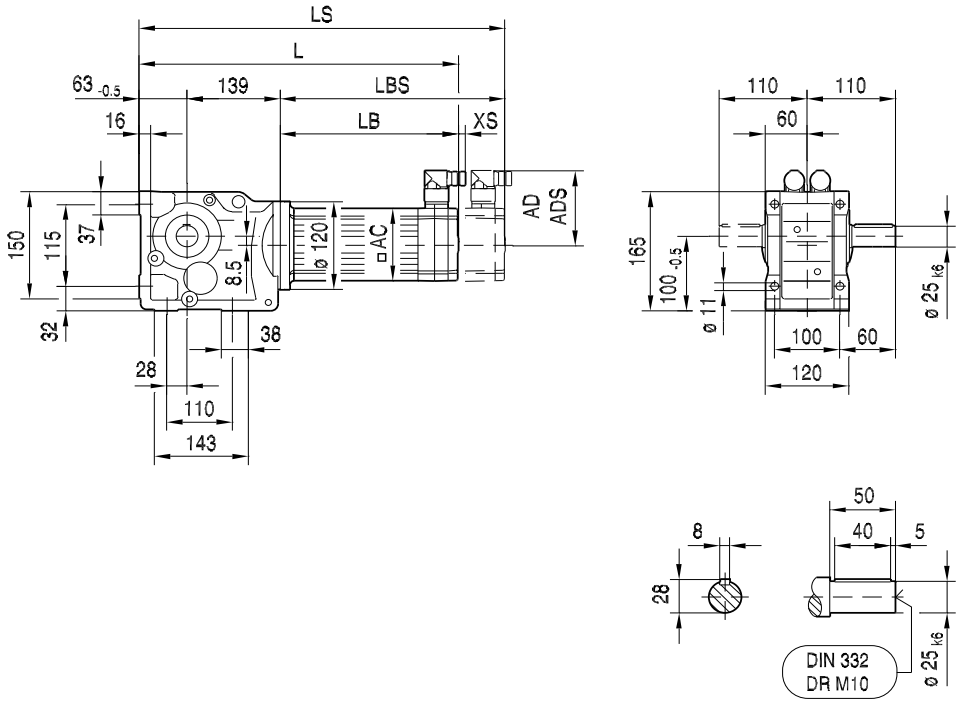
K..CMP
K..[mm]

CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} K [Nm/']	KF [Nm/']	KA [Nm/']	KAF [Nm/']	φ /R [']
K37 3	3.98	4500	96	13	13	29	29	13
	5.36	4500	96	13	13	29	29	13
	6.37	4500	96	13	13	29	29	13
	6.80	4500	96	13	13	29	29	13
	7.96	4500	96	13	13	29	29	13
	8.91	4500	96	13	13	29	29	12
	10.49	4500	96	13	13	29	29	12
	12.14	4500	96	13	13	29	29	12
	13.08	4500	96	17	17	63	63	9
	15.31	4500	96	17	17	63	63	9
	17.15	4500	96	17	17	63	63	8
	20.19	4500	96	17	17	63	63	8
	23.36	4500	96	17	17	63	63	8
	24.99	4500	96	17	17	63	63	8
	28.83	4500	96	17	17	63	63	8
	29.96	4500	94	18	19	85	85	7
	35.57	4500	94	18	19	85	85	7
	37.97	4500	94	18	19	85	85	7
	44.46	4500	94	18	19	85	85	7
	49.79	4500	94	18	19	85	85	7
	58.60	4500	94	18	19	85	85	7
	67.80	4500	94	18	19	85	85	7
	72.54	4500	94	18	19	85	85	7
	83.69	4500	93	18	19	85	85	7
	97.81	4500	93	18	19	85	85	7
	106.38	4500	93	18	19	85	85	7

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	K [N]	KF [N]	KA [N]	KAF [N]	K [N]	KF [N]	KA [N]	KAF [N]
K37 3	3.98	125	187	213	377	2.6	1660	2130	2310	2310	5780	5710	7000	7000
	5.36	140	199	238	317	1.7	1810	2340	2530	2530	5650	5640	7000	7000
	6.37	145	199	247	314	1.3	1950	2500	2720	2720	5650	5640	7000	7000
	6.80	150	199	255	294	1.1	1980	2540	2760	2760	5650	5640	7000	7000
	7.96	155	199	264	276	0.85	2110	2700	2940	2940	5650	5640	7000	7000
	8.91	160	199	272	258	0.70	2200	2810	3070	3070	5650	5640	7000	7000
	10.49	160	199	272	276	0.51	2410	3030	3340	3340	5650	5640	7000	7000
	12.14	160	199	272	297	0.40	2600	3240	3600	3600	5650	5640	7000	7000
	13.08	165	240	281	420	1.0	2650	3310	3660	3660	4100	4100	7000	7000
	15.31	175	240	298	346	0.76	2780	3480	3850	3850	4100	4100	7000	7000
	17.15	180	240	306	315	0.62	2900	3630	4020	4020	4100	4100	7000	7000
	20.19	185	240	315	287	0.46	3110	3870	4300	4300	4100	4100	7000	7000
	23.36	195	240	332	240	0.37	3260	4060	4510	4510	4100	4100	7000	7000
	24.99	200	240	340	220	0.33	3330	4150	4600	4600	4100	4100	7000	7000
	28.83	200	240	340	222	0.26	3580	4420	4940	4940	4100	4100	7000	7000
	29.96	200	230	340	157	0.76	3650	4500	5030	5030	5140	5140	7000	7000
	35.57	200	230	340	157	0.60	3970	4860	5460	5460	5140	5140	7000	7000
	37.97	200	230	340	158	0.54	4100	5000	5630	5630	5140	5140	7000	7000
	44.46	200	230	340	157	0.42	4420	5350	6060	6060	5140	5140	7000	7000
	49.79	200	230	340	141	0.36	4660	5610	6380	6380	5140	5140	7000	7000
	58.60	200	230	340	119	0.27	5020	5630	6860	6860	5140	5140	7000	7000
	67.80	200	230	340	103	0.23	5360	5630	7000	7000	5140	5140	7000	7000
	72.54	200	230	340	96	0.21	5520	5630	7000	7000	5140	5140	7000	7000
	83.69	200	230	340	84	0.17	5640	5630	7000	7000	5140	5140	7000	7000
	97.81	200	230	340	72	0.13	5640	5630	7000	7000	5140	5140	7000	7000
	106.38	200	230	340	66	0.12	5640	5630	7000	7000	5140	5140	7000	7000

33 009 00 07

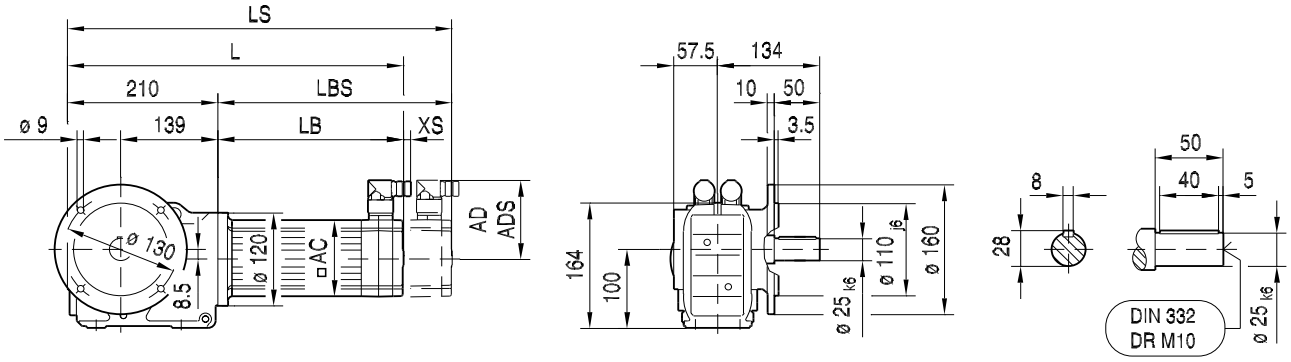
K37..



(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	345	347	386	425	382	432	485	374	402	414
LS	375	376	415	454	410	460	514	439	467	492
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

33 010 00 07

KF37..



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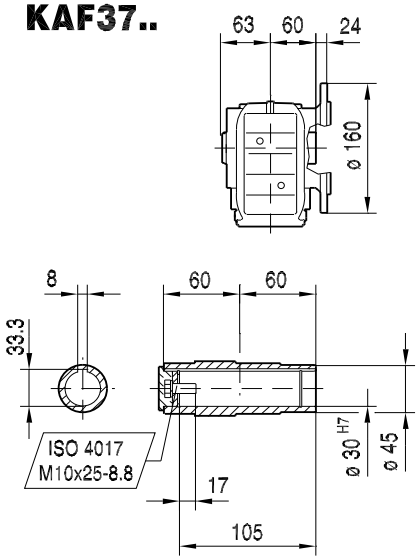

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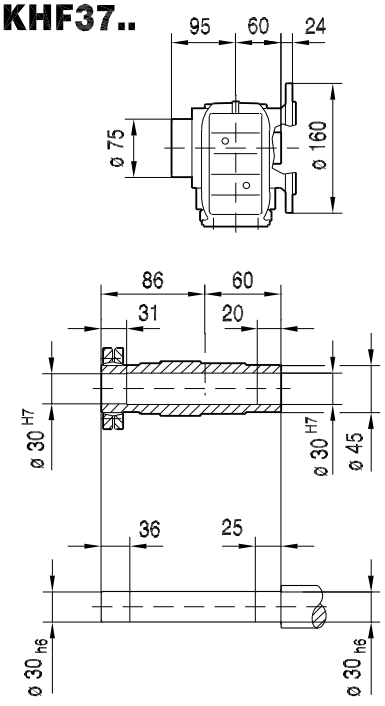

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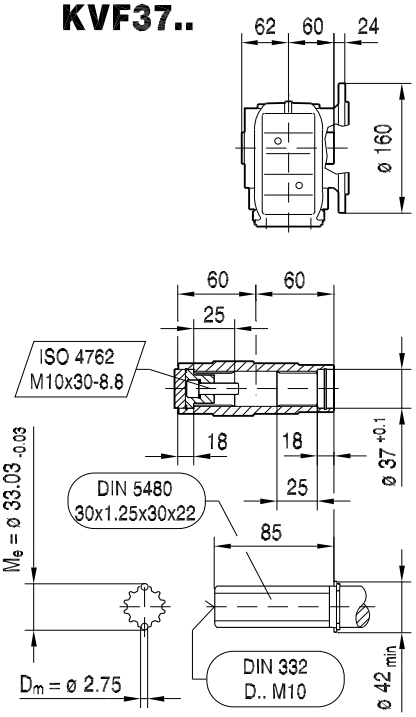
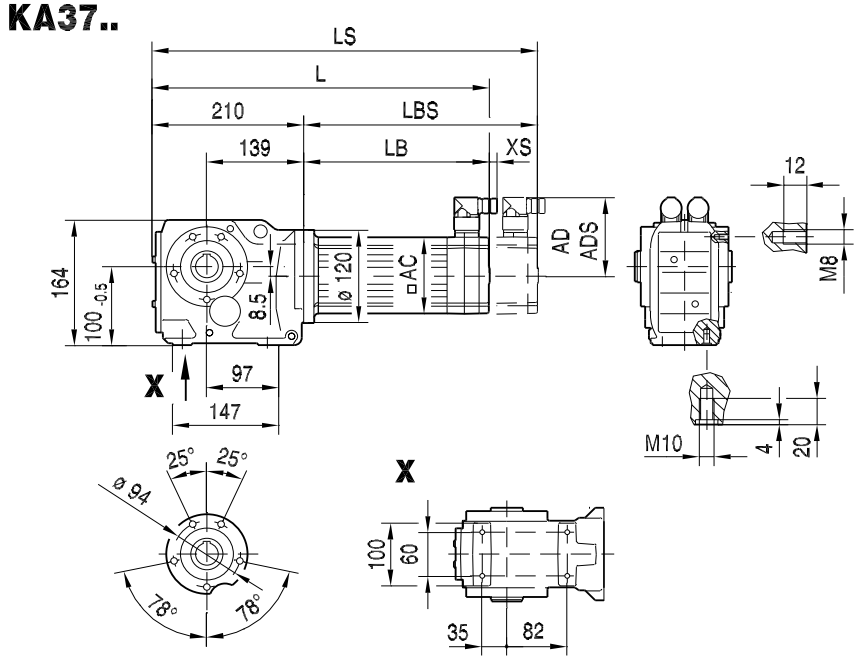
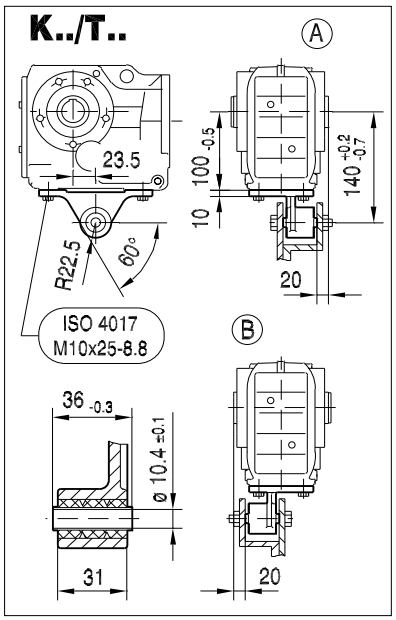


(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	353	355	394	433	390	440	493	382	410	422
LS	383	384	423	462	418	468	522	447	475	500
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

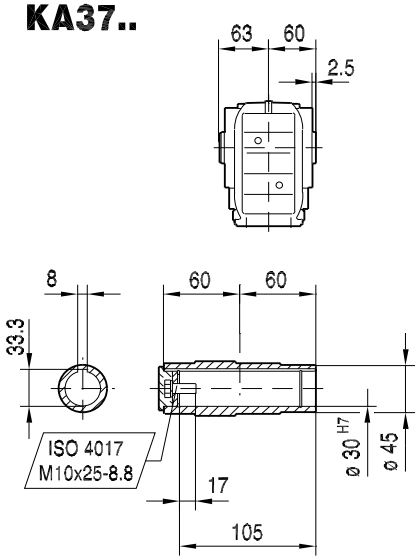
KA37..

33 011 00 07

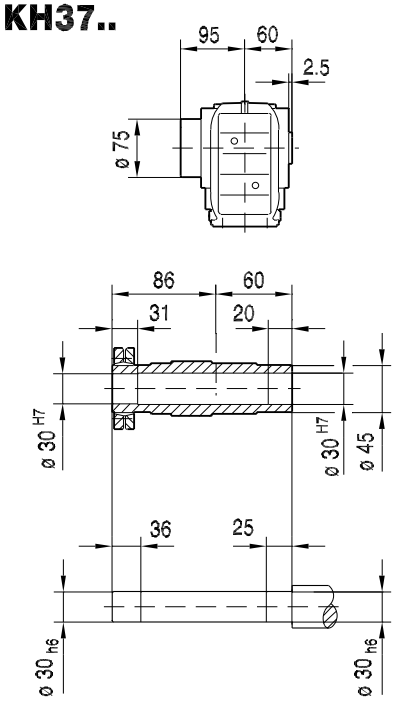




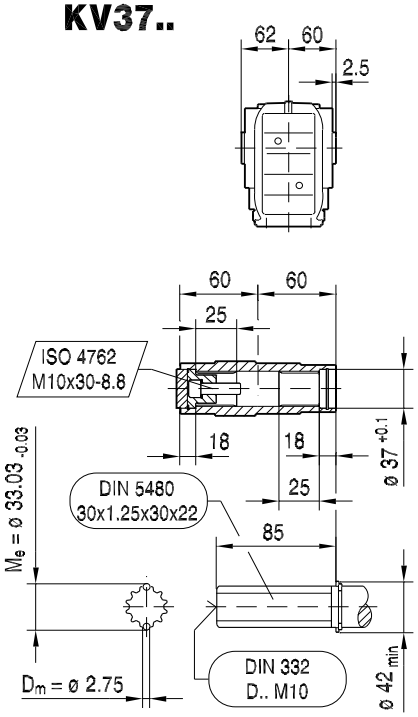
KA37..



KH37..



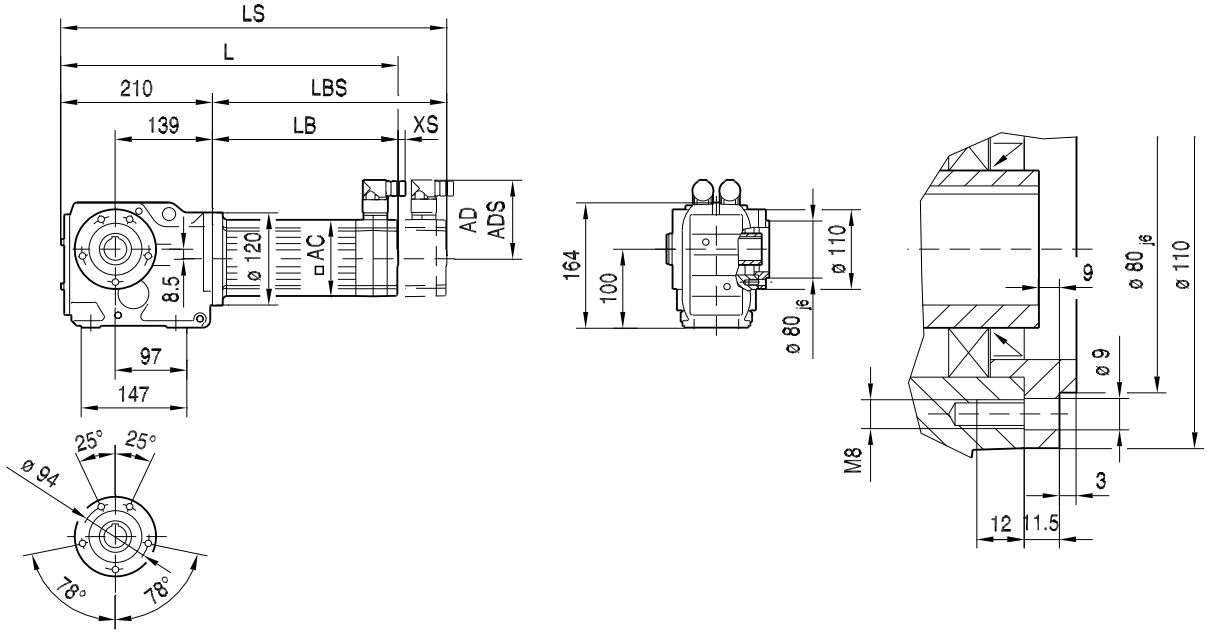
KV37..



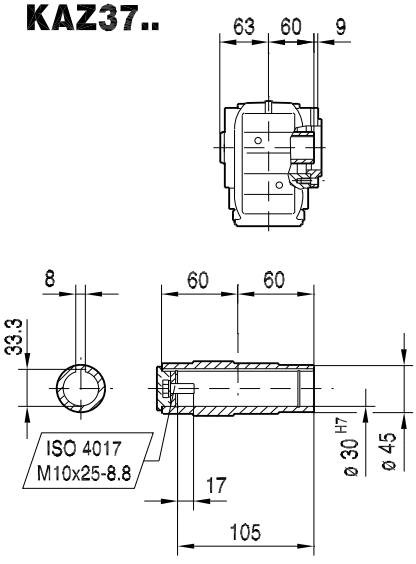
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	353	355	394	433	390	440	493	382	410	422
LS	383	384	423	462	418	468	522	447	475	500
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

KAZ37..

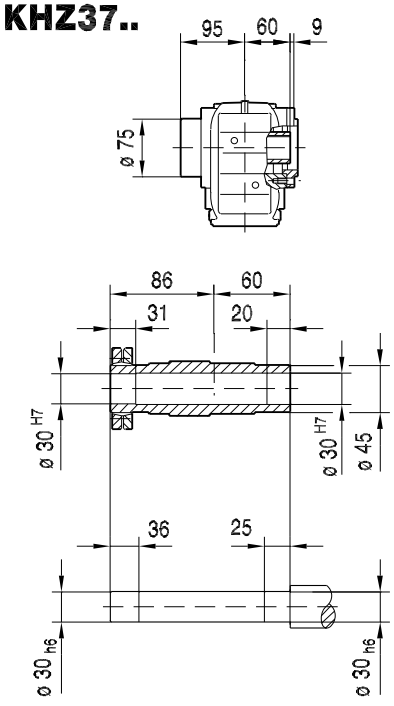
33 012 00 07



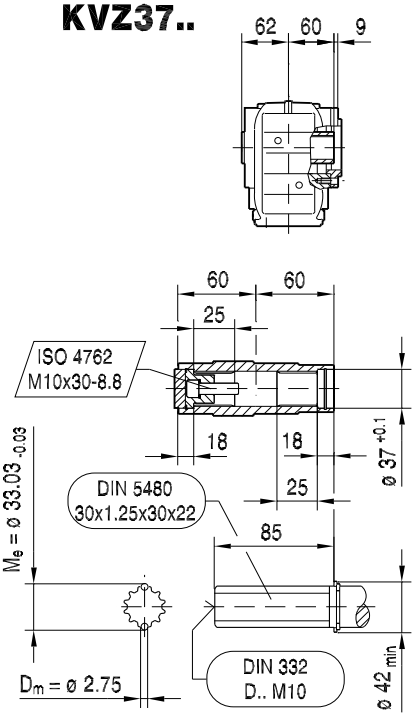
KAZ37..



KHZ37..



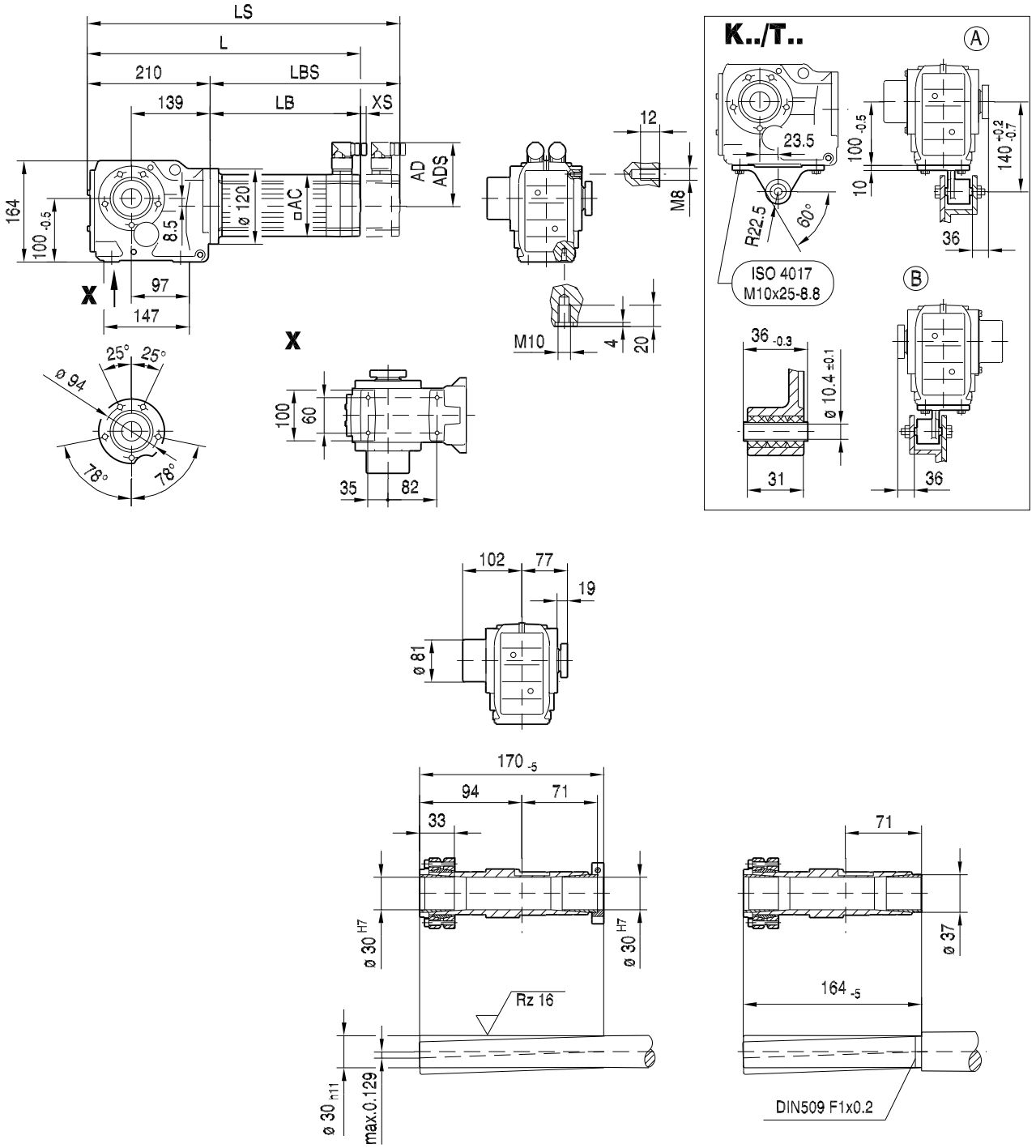
KVZ37..



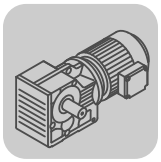
(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	353	355	394	433	390	440	493	382	410	422
LS	383	384	423	462	418	468	522	447	475	500
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

KT37..

33 013 00 07



(→ 📖 9)	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	57	73	73	73	88	88	88	115	115	137
AD	78	86	86	86	92	92	92	102	102	134
ADS	78	86	86	86	92	92	92	104	104	137
L	353	355	394	433	390	440	493	382	410	422
LS	383	384	423	462	418	468	522	447	475	500
LB	143	145	184	223	180	230	283	172	200	212
LBS	173	174	213	252	208	258	312	237	265	290
XS	19	18	18	18	14	14	14	11	11	37

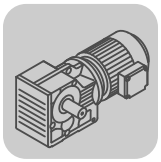


5.2.2 K 47

M_{aDyn} [Nm]		CMP										
	i	50S	50M	50L	63S	63M	63L	71S	71M	71L	80S	80M
K47 3	4.64		46	69	49	95	135	86	137	205	188	189
	5.81	29	57	86	62	119	170	107	172	260	230	235
	6.58	33	65	97	70	135	192	121	195	295	265	265
	7.36	37	73	109	78	151	210	136	215	>310	295	300
	8.56	43	85	127	91	176	245	158	250	>310	>310	>310
	9.10	45	90	135	97	187	265	168	265	>310	>310	>310
	10.56	53	104	156	113	215	305	195	310	>315	>315	>315
	11.77	59	116	174	125	240	>315	215	>315	>315	>315	>315
	12.19	61	121	180	130	250	355	220	360	>435	>435	>435
	13.65	68	135	200	145	280	395	250	400	>435	>435	>435
	15.86	79	157	230	169	325	>435	290	>435	>435	>435	>435
	16.86	84	167	245	180	345	>435	310	>435	>435	>435	>435
	19.58	98	194	285	205	400	>435	360	>435	>435	>435	>435
	21.81	109	215	320	230	>435	>435	400	>435	>435	>435	>435
	24.06	120	235	355	255	>435		>435				
	25.91	129	255	380	275	>435	>435	>435	>435			
	29.32	146	285	430	310	>435		>435				
	31.30	156	305	>435	330	>435		>435				
	35.39	173	340	>435	365	>435	>435	>435	>435	>435	>435	>435
	39.61	194	380	>435	410	>435	>435	>435	>435	>435	>435	>435
	46.03	220	>435	>435	>435	>435	>435	>435	>435	>435	>435	>435
	48.95	235	>435	>435	>435	>435	>435	>435	>435	>435	>435	>435
	56.83	275	>435	>435	>435	>435	>435	>435	>435	>435	>435	>435
	63.30	305	>435	>435	>435	>435	>435	>435	>435	>435	>435	>435
	69.84	340	>435	>435	>435	>435		>435				
	75.20	365	>435	>435	>435	>435	>435	>435	>435			
	85.12	415	>435	>435	>435	>435		>435				
	90.86	>435	>435	>435	>435	>435		>435				
	104.37	>435	>435		>435							
	121.48	>435										
	131.87	>435										

m [kg]		CMP										
	s	50S	50M	50L	63S	63M	63L	71S	71M	71L	80S	80M
K47	3	21	22	23	23	25	26	27	28	30	33	35
KF: + 3.2 kg / KA: + -0.9 kg / KAF: + 2.0 kg												

CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} K [Nm/']	KF [Nm/']	KA [Nm/']	KAF [Nm/']	φ /R [']
K47 3	4.64	4500	96	26	23	50	50	12
	5.81	4500	96	26	23	50	50	12
	6.58	4500	96	26	23	50	50	12
	7.36	4500	96	26	23	50	50	11
	8.56	4500	96	26	23	50	50	11
	9.10	4500	96	26	23	50	50	11
	10.56	4500	96	26	23	50	50	11
	11.77	4500	96	26	23	50	50	10
	12.19	4500	96	33	29	90	90	8
	13.65	4500	96	33	29	90	90	8
	15.86	4500	96	33	29	90	90	8
	16.86	4500	96	33	29	90	90	8
	19.58	4500	96	33	29	90	90	8
	21.81	4500	96	33	29	90	90	8
	24.06	4500	96	33	29	90	90	8
	25.91	4500	96	33	29	90	90	8
	29.32	4500	96	33	29	90	90	8
	31.30	4500	96	33	29	90	90	7
	35.39	4500	94	36	32	117	117	7
	39.61	4500	94	36	32	117	117	7
	46.03	4500	94	36	32	117	117	7
	48.95	4500	94	36	32	117	117	7
	56.83	4500	94	36	32	117	117	7
	63.30	4500	94	36	32	117	117	7
	69.84	4500	94	36	32	117	117	6
	75.20	4500	94	36	32	117	117	6
	85.12	4500	94	36	32	117	117	6
	90.86	4500	94	36	32	117	117	6
	104.37	4500	93	36	32	117	117	6
	121.48	4500	93	36	32	117	117	6
	131.87	4500	93	36	32	117	117	6

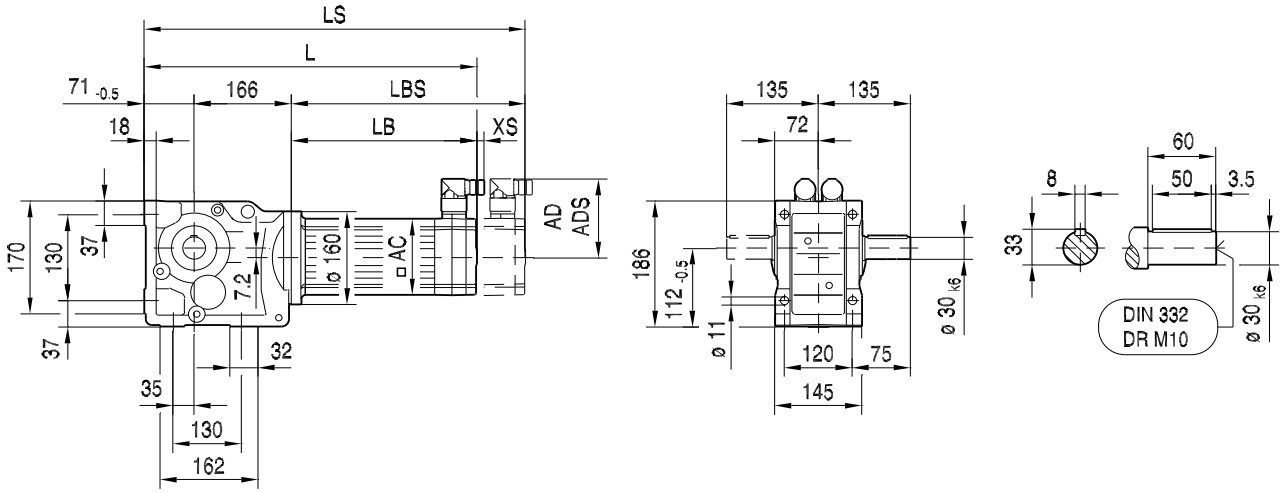


K..CMP
K..[mm]

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	K [N]	KF [N]	KA [N]	KAF [N]	K [N]	KF [N]	KA [N]	KAF [N]
	4.64	205	300	349	302	4.4	2980	2970	2040	2040	7060	7060	10000	10000
	5.81	230	305	391	258	3.6	3140	3140	2100	2100	7020	7020	10000	10000
	6.58	240	310	408	228	2.8	3270	3270	2190	2190	6970	6970	10000	10000
	7.36	250	310	425	217	2.3	3380	3390	2270	2270	6970	6970	10000	10000
	8.56	270	310	459	175	1.8	3500	3520	2310	2310	6970	6970	10000	10000
	9.10	280	310	476	165	1.6	3540	3560	2310	2310	6970	6970	10000	10000
	10.56	280	315	476	170	1.2	3830	3840	2580	2580	6920	6920	10000	10000
	11.77	280	315	476	178	1.0	4060	4050	2770	2770	6920	6920	10000	10000
	12.19	350	435	595	279	2.4	3720	3770	2330	2330	900	900	10000	10000
	13.65	360	435	612	249	2.0	3890	3940	2450	2450	900	900	10000	10000
	15.86	380	435	646	208	1.6	4080	4130	2570	2570	900	900	10000	10000
	16.86	380	435	646	214	1.4	4220	4270	2690	2690	900	900	10000	10000
	19.58	400	435	680	179	1.1	4440	4480	2820	2820	900	900	10000	10000
	21.81	400	435	680	179	0.91	4710	4740	3070	3070	900	900	10000	10000
K47	24.06	400	435	680	179	0.75	4970	4990	3300	3300	900	900	10000	10000
3	25.91	400	435	680	178	0.68	5170	5180	3470	3470	900	900	10000	10000
	29.32	400	435	680	177	0.55	5520	5500	3780	3780	900	900	10000	10000
	31.30	400	435	680	179	0.50	5700	5680	3940	3940	900	900	10000	10000
	35.39	400	435	680	93	1.3	5920	5920	4270	4270	900	900	10000	10000
	39.61	400	435	680	96	1.1	5920	5920	4580	4580	900	900	10000	10000
	46.03	400	435	680	100	0.88	5920	5920	5000	5000	900	900	10000	10000
	48.95	400	435	680	100	0.80	5920	5920	5190	5190	900	900	10000	10000
	56.83	400	435	680	104	0.64	5920	5920	5640	5640	900	900	10000	10000
	63.30	400	435	680	104	0.54	5920	5920	5990	5990	900	900	10000	10000
	69.84	400	435	680	100	0.45	5920	5920	6320	6320	900	900	10000	10000
	75.20	400	435	680	93	0.42	5920	5920	6570	6570	900	900	10000	10000
	85.12	400	435	680	82	0.35	5920	5920	7000	7000	900	900	10000	10000
	90.86	400	435	680	77	0.32	5920	5920	7240	7240	900	900	10000	10000
	104.37	400	435	680	67	0.26	5920	5920	7760	7760	900	900	10000	10000
	121.48	400	435	680	58	0.21	5920	5920	8360	8360	900	900	10000	10000
	131.87	400	435	680	53	0.18	5920	5920	8700	8700	900	900	10000	10000

33 014 00 07

K47..



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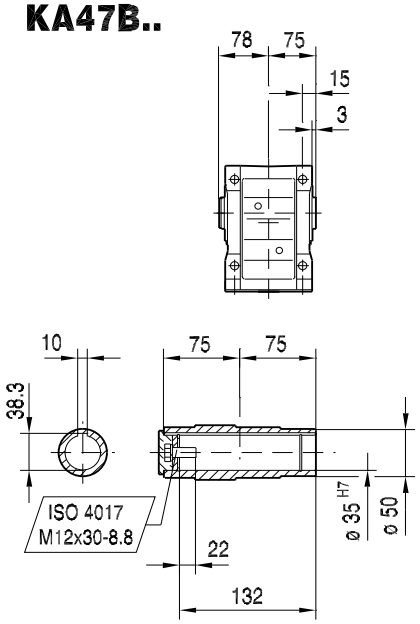

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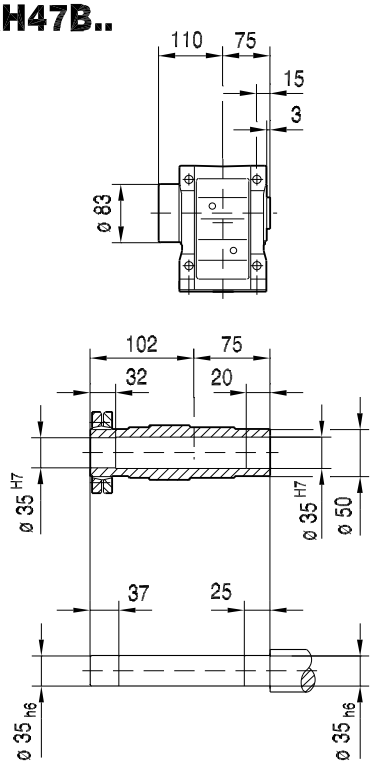

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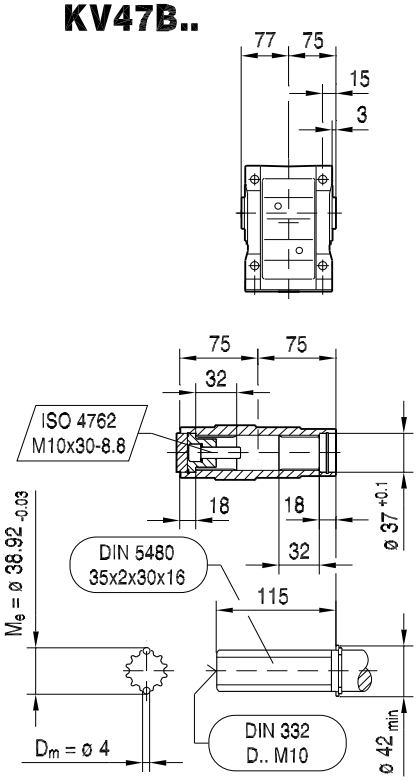
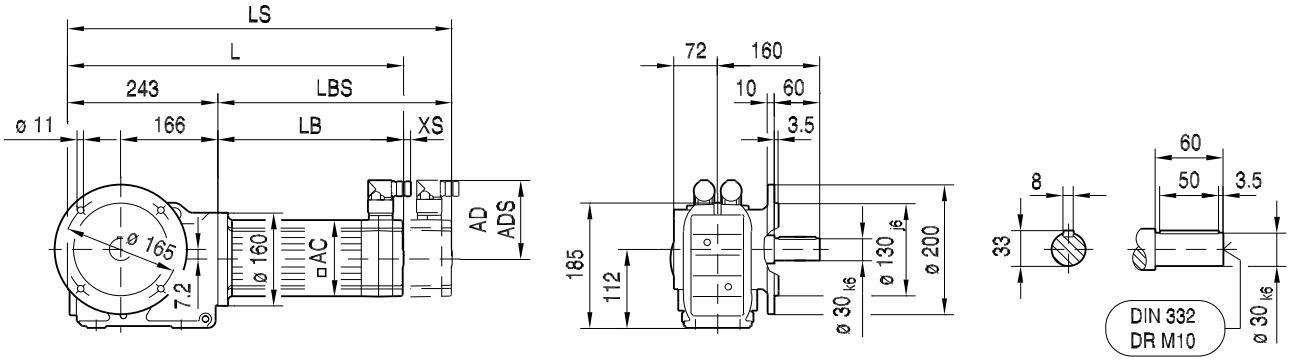


(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	376	415	454	410	460	510	403	428	478	443	481
LS	405	444	483	439	489	539	468	493	543	521	559
LB	139	178	217	173	223	273	166	191	241	206	244
LBS	168	207	246	202	252	302	231	256	306	284	322
XS	18	18	18	14	14	14	11	11	11	37	37

33 015 00 07

KF47..



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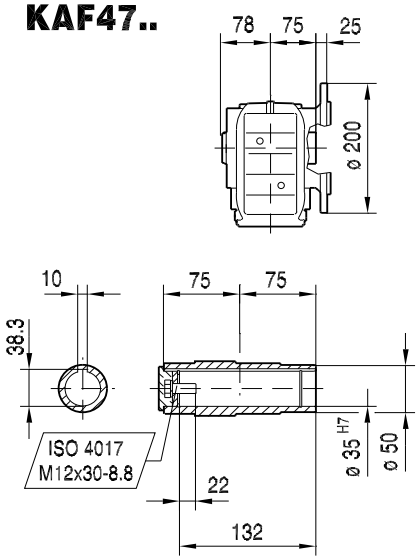

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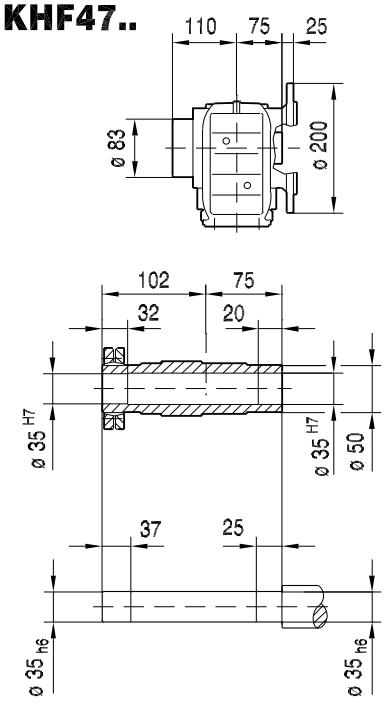

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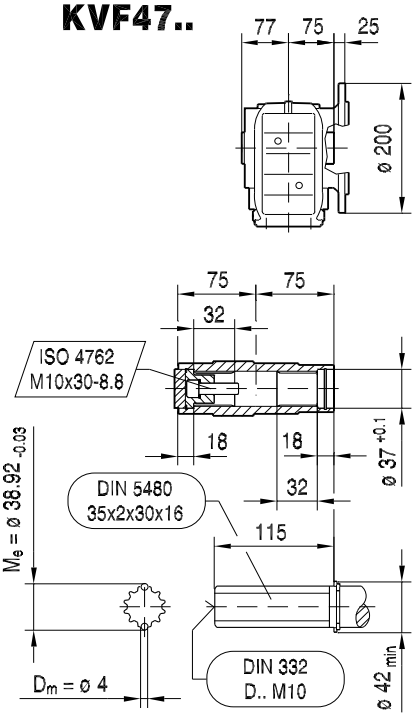
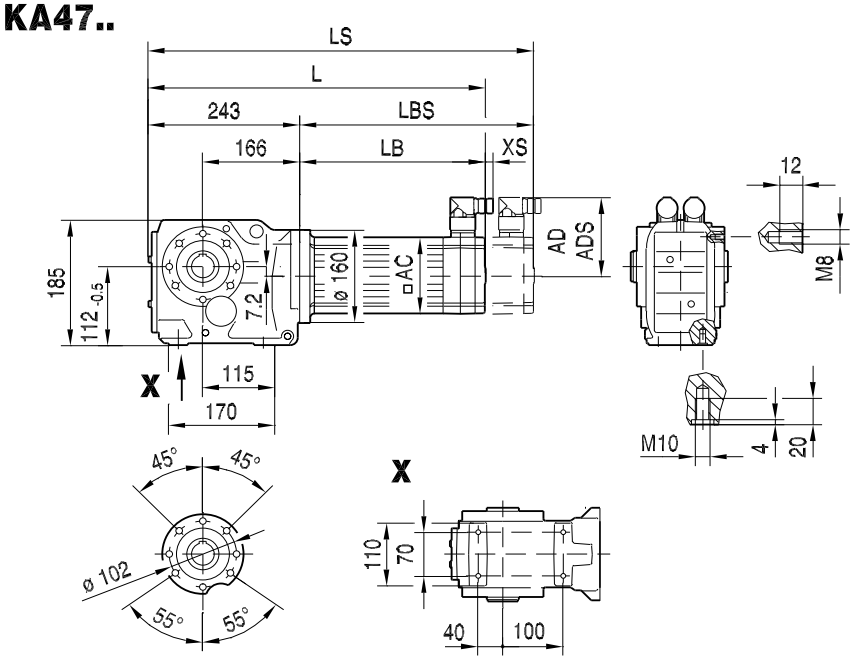
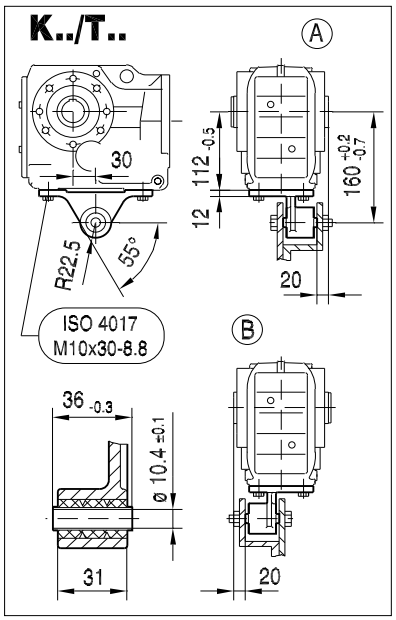


(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	382	421	460	416	466	516	409	434	484	449	487
LS	411	450	489	445	495	545	474	499	549	527	565
LB	139	178	217	173	223	273	166	191	241	206	244
LBS	168	207	246	202	252	302	231	256	306	284	322
XS	18	18	18	14	14	14	11	11	11	37	37

KA47..

33 016 00 07





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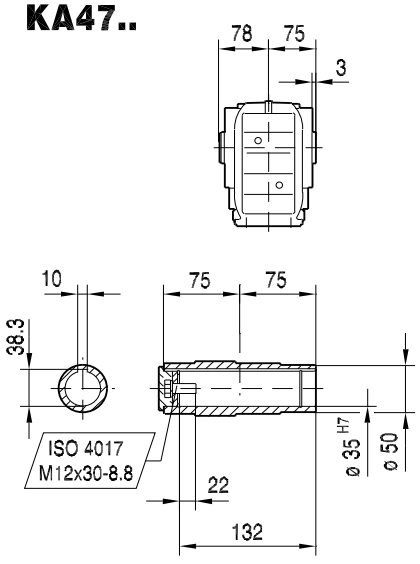

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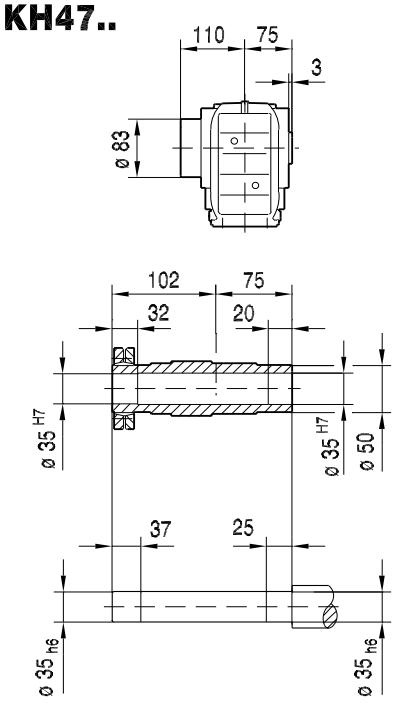

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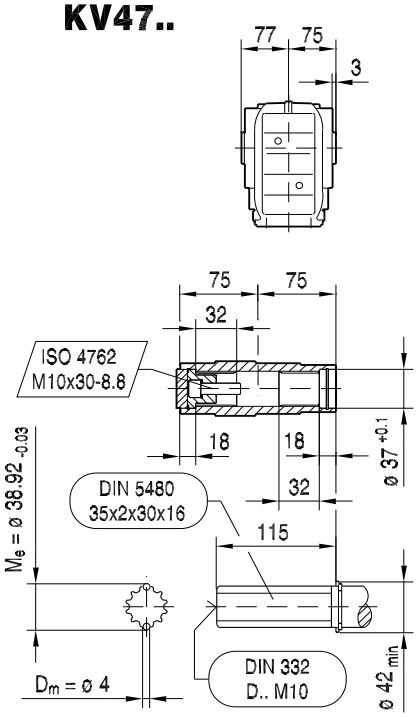
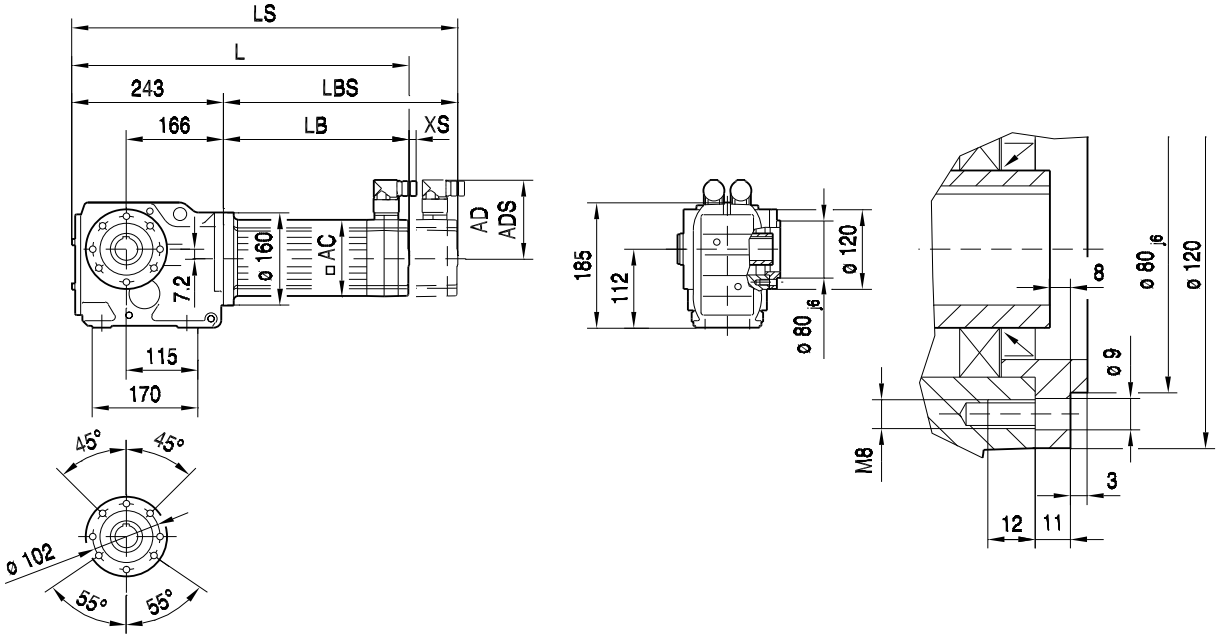


(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	382	421	460	416	466	516	409	434	484	449	487
LS	411	450	489	445	495	545	474	499	549	527	565
LB	139	178	217	173	223	273	166	191	241	206	244
LBS	168	207	246	202	252	302	231	256	306	284	322
XS	18	18	18	14	14	14	11	11	11	37	37

KAZ47..

33 017 00 07



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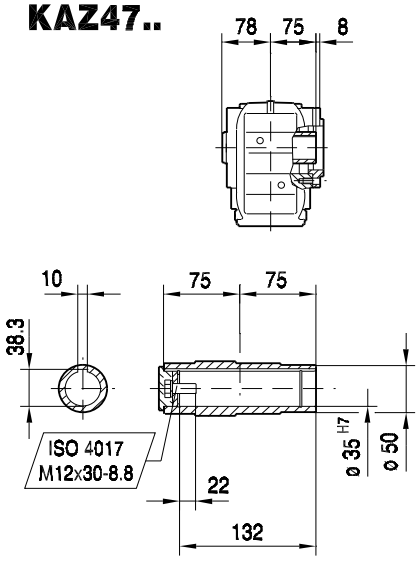

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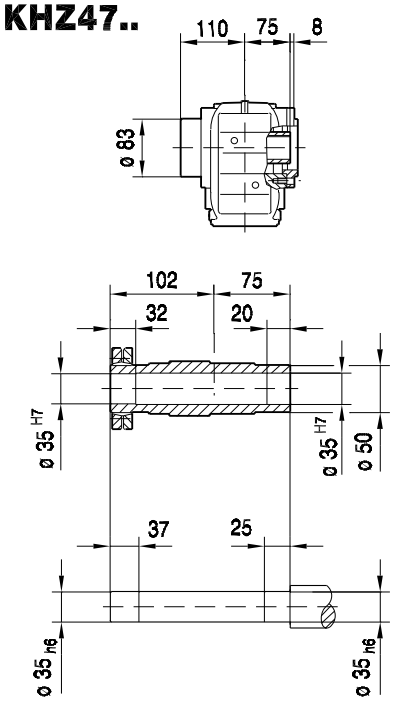

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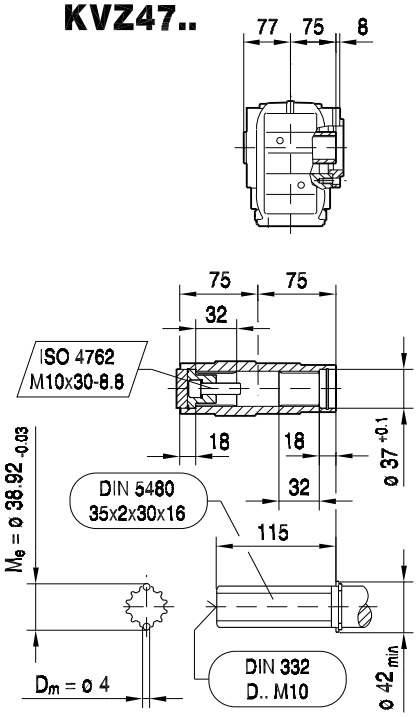
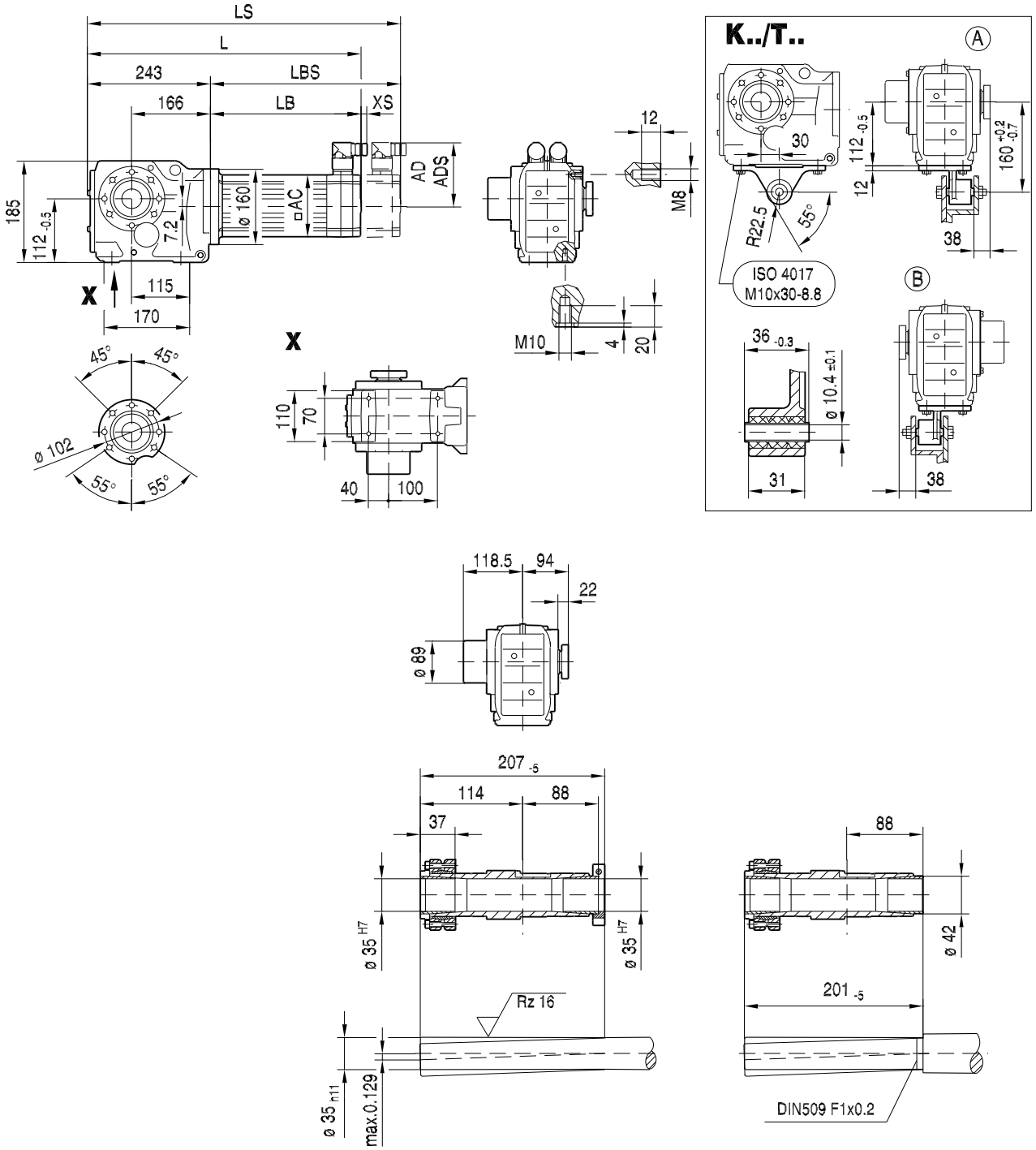


(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	382	421	460	416	466	516	409	434	484	449	487
LS	411	450	489	445	495	545	474	499	549	527	565
LB	139	178	217	173	223	273	166	191	241	206	244
LBS	168	207	246	202	252	302	231	256	306	284	322
XS	18	18	18	14	14	14	11	11	11	37	37

KT47..

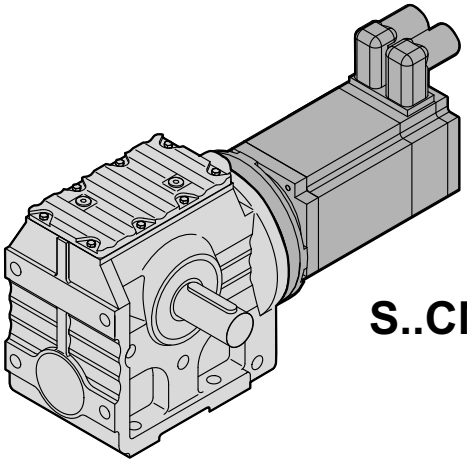
33 018 00 07



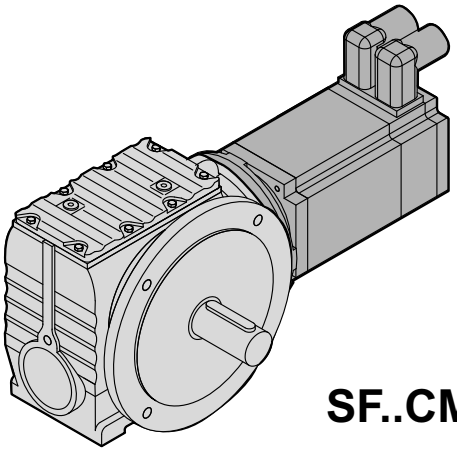
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	382	421	460	416	466	516	409	434	484	449	487
LS	411	450	489	445	495	545	474	499	549	527	565
LB	139	178	217	173	223	273	166	191	241	206	244
LBS	168	207	246	202	252	302	231	256	306	284	322
XS	18	18	18	14	14	14	11	11	11	37	37

6 S..CMP

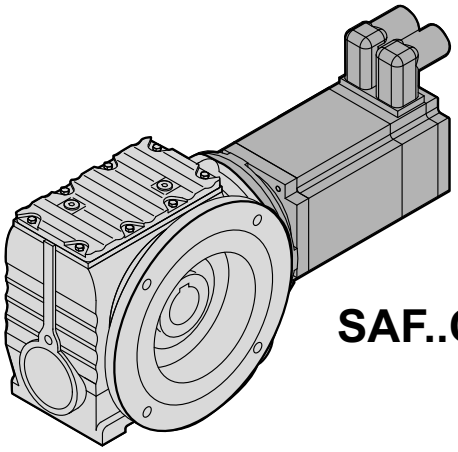
6.1 S, SF, SAF, SHF, SA../T, SH, SAZ, SHZ..CMP



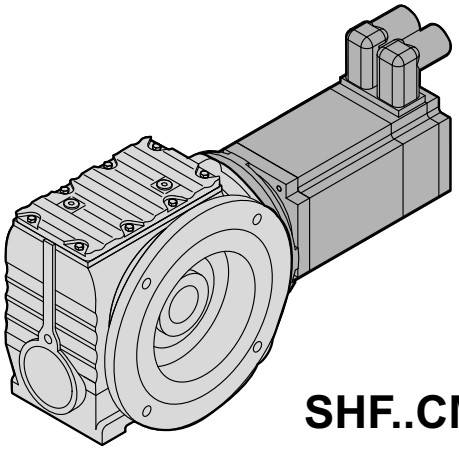
S..CMP..



SF..CMP..

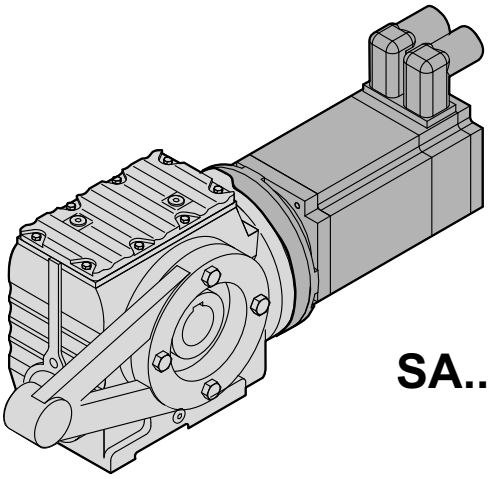


SAF..CMP..

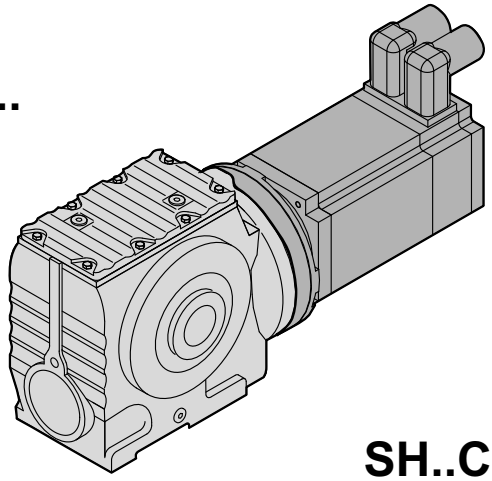


SHF..CMP..

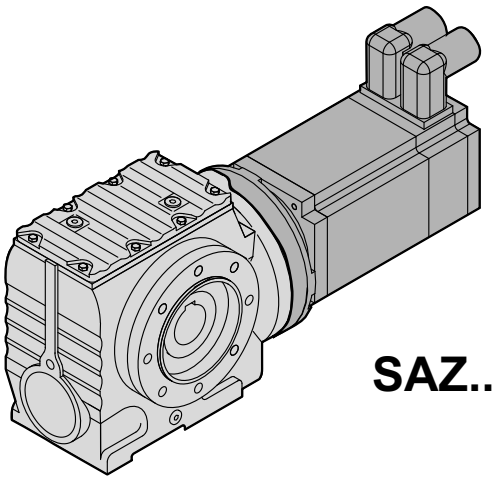
65965axx



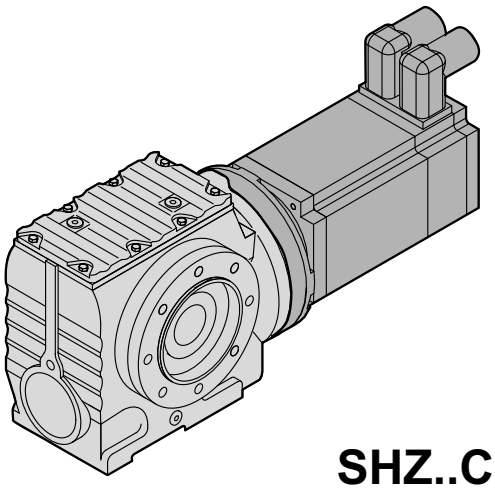
SA../T CMP..



SH..CMP..



SAZ..CMP..



SHZ..CMP..

65966axx

6.2 S..[mm]

6.2.1 S 47

M_{aDyn} [Nm]		CMP								
	i	50S	50M	50L	63S	63M	63L	71S	71M	80S
S47 2	4.00	19	37	55	40	>72	>72	69	>72	>72
	4.76	22	44	66	48	>87	>87	82	>87	>87
	5.39	25	49	74	53	>97	>97	92	>97	>97
	6.40	30	59	88	63	>114	>114	109	>114	>114
	6.83	32	63	94	67	>117	>117	117	>117	>117
	7.28	33	65	98	70	>129	>129	122	>129	>129
	8.64	39	77	116	83	>146	>146	144	>146	>146
	9.23	42	83	124	89	>146	>146	>146	>146	>146
	10.80	49	97	145	104	>145	>145	>145	>145	>145
	12.10	55	108	>145	117	>145	>145	>145	>145	>145
	14.24	64	126	>144	136	>144	>144	>144	>144	>144
	16.47	74	>144	>144	>144	>144		>144		
	17.62	79	>144	>144	>144	>144		>144		
	19.54		159	>184	171	>184	>184	>184	>184	>184
	20.33	90	>143		>143					
	23.20	95	189	>200	>200	>200	>200	>200	>200	>200
	24.77	102	200	>205	>205	>205	>205	>205	>205	>205
	29.00	118	>215	>215	>215	>215	>215	>215	>215	>215
	32.48	130	>215	>215	>215	>215	>215	>215	>215	>215
	38.23	153	>215	>215	>215	>215	>215	>215	>215	>215
	44.22	175	>210	>210	>210	>210		>210		
	47.32	185	>210	>210	>210	>210		>210		
	54.59	>210	>210		>210					
	63.80	>210								
	69.39	>210								

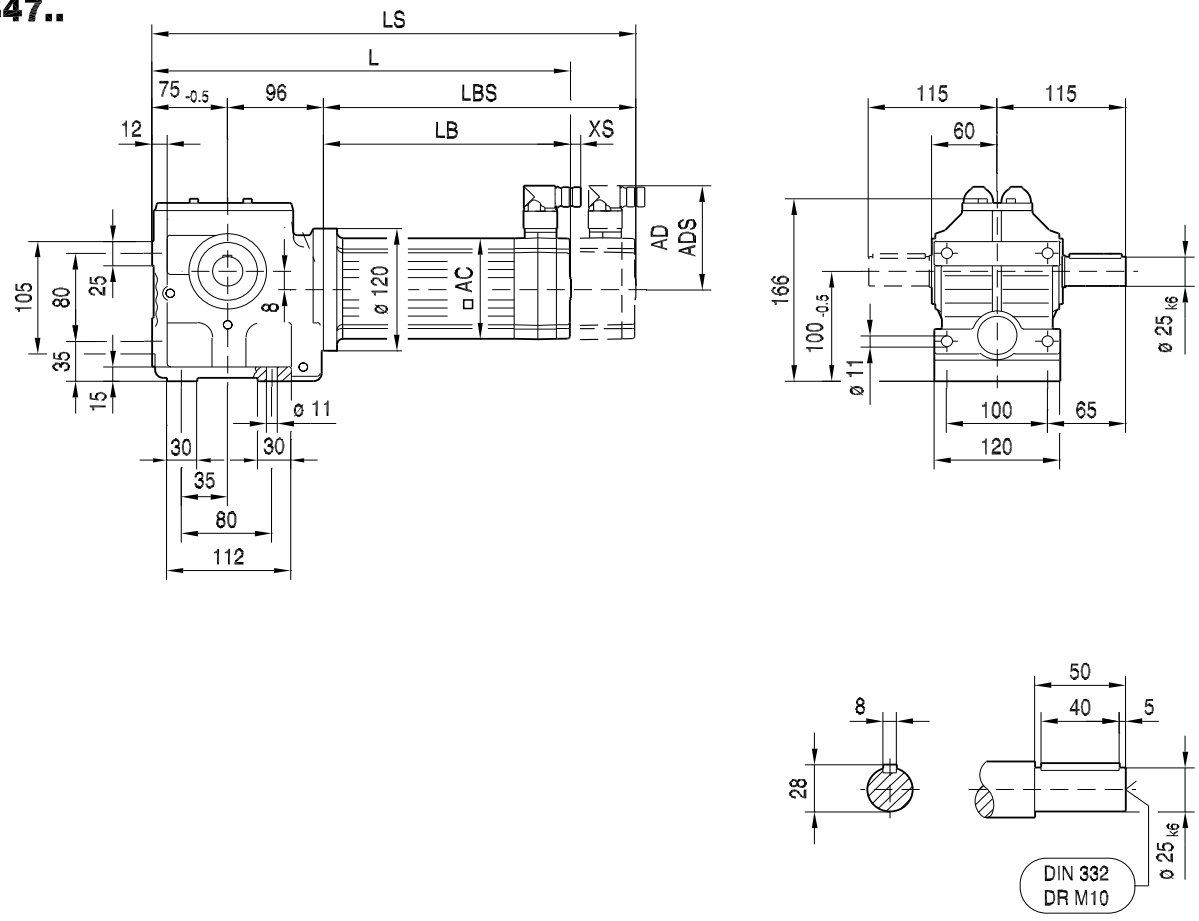
m [kg]		CMP								
	s	50S	50M	50L	63S	63M	63L	71S	71M	80S
S47	2	13	14	15	15	16	18	18	19	25
SF: + 3.6 kg / SA: + 1.1 kg / SAF: + 2.8 kg										

CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} S [Nm/']	SF [Nm/']	SA [Nm/']	SAF [Nm/']
S47 2	4.00	4500	90	-	-	-	-
	4.76	4500	90	-	-	-	-
	5.39	4500	89	-	-	-	-
	6.40	4500	89	-	-	-	-
	6.83	4500	89	-	-	-	-
	7.28	4500	87	-	-	-	-
	8.64	4500	87	-	-	-	-
	9.23	4500	87	-	-	-	-
	10.80	4500	87	-	-	-	-
	12.10	4500	87	-	-	-	-
	14.24	4500	86	-	-	-	-
	16.47	4500	86	-	-	-	-
	17.62	4500	86	-	-	-	-
	19.54	4500	79	-	-	-	-
	20.33	4500	85	-	-	-	-
	23.20	4500	79	-	-	-	-
	24.77	4500	79	-	-	-	-
	29.00	4500	78	-	-	-	-
	32.48	4500	77	-	-	-	-
	38.23	4500	77	-	-	-	-
	44.22	4500	76	-	-	-	-
	47.32	4500	75	-	-	-	-
	54.59	4500	75	-	-	-	-
	63.80	4500	74	-	-	-	-
	69.39	4500	73	-	-	-	-

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	S [N]	SF [N]	SA [N]	SAF [N]	S [N]	SF [N]	SA [N]	SAF [N]
S47 2	4.00	61	72	108	225	2.5	1980	2420	2740	2740	5660	6140	7000	7000
	4.76	72	87	130	231	1.8	2010	2490	2780	2780	5580	6070	7000	7000
	5.39	74	97	146	204	1.5	2110	2600	2920	2920	5530	6030	7000	7000
	6.40	76	114	171	172	1.1	2260	2780	3120	3120	5440	5940	7000	7000
	6.83	78	117	176	161	1.0	2300	2840	3190	3190	5420	5930	7000	7000
	7.28	103	129	175	27	1.1	2110	2690	2940	2940	5360	5870	7000	7000
	8.64	109	146	185	23	0.83	2230	2840	3110	3110	5260	5780	7000	7000
	9.23	109	146	185	22	0.74	2310	2930	3210	3210	5260	5780	7000	7000
	10.80	109	145	185	19	0.57	2500	3150	3480	3480	5270	5790	7000	7000
	12.10	109	145	185	17	0.47	2650	3310	3670	3670	5270	5790	7000	7000
	14.24	110	144	187	14	0.35	2850	3540	3950	3950	5270	5790	7000	7000
	16.47	110	144	187	12	0.28	3060	3770	4230	4230	5270	5790	7000	7000
	17.62	110	144	187	11	0.26	3160	3880	4360	4360	5270	5790	7000	7000
	19.54	144	184	245	10	0.94	3370	4120	4660	4660	5200	5710	7000	7000
	20.33	110	143	187	10	0.20	3370	4130	4650	4650	5280	5800	7000	7000
	23.20	152	200	258	9	0.72	3570	4360	4940	4940	5110	5620	7000	7000
	24.77	155	205	264	8	0.65	3650	4460	5050	5050	5080	5590	7000	7000
	29.00	155	215	264	7	0.49	3920	4760	5420	5420	5020	5530	7000	7000
	32.48	155	215	264	6	0.41	4120	4990	5690	5690	5020	5530	7000	7000
	38.23	155	215	264	5	0.31	4420	5330	6100	6100	5020	5530	7000	7000
	44.22	155	210	264	5	0.25	4710	5660	6490	6490	5050	5560	7000	7000
	47.32	155	210	264	4	0.23	4850	5810	6680	6680	5050	5560	7000	7000
	54.59	155	210	264	9	0.18	5150	5870	7000	7000	5050	5560	7000	7000
	63.80	155	210	264	8	0.15	5370	5870	7000	7000	5050	5560	7000	7000
	69.39	155	210	264	7	0.13	5370	5870	7000	7000	5050	5560	7000	7000

02 005 01 07

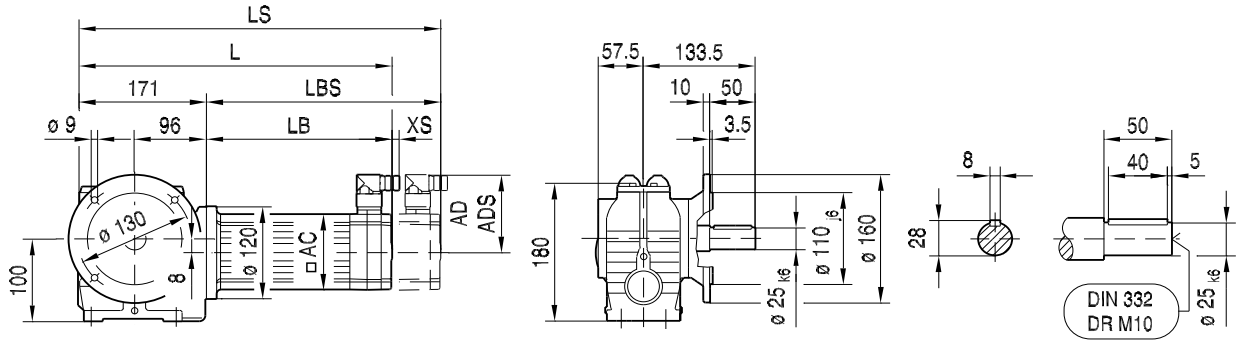
S47..



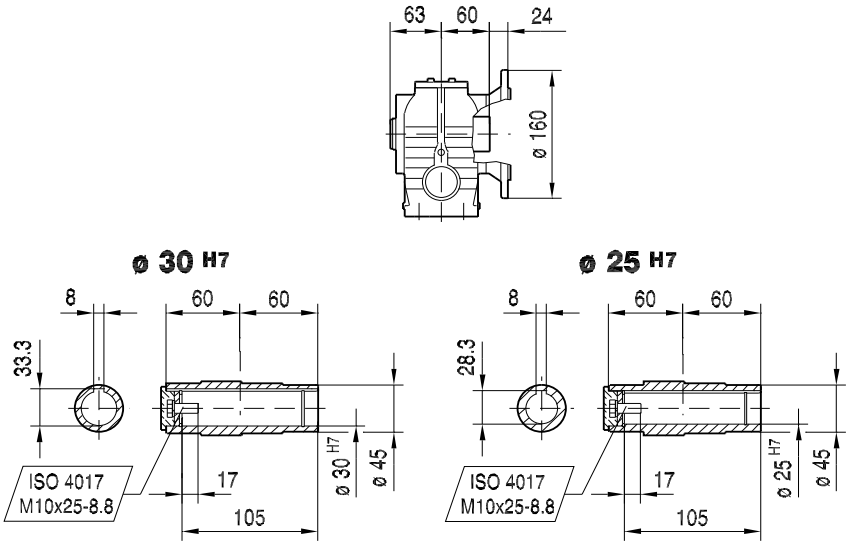
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	316	355	394	351	401	454	343	371	383
LS	345	384	423	379	429	483	408	436	461
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

02 006 01 07

SF47..



SAF47..



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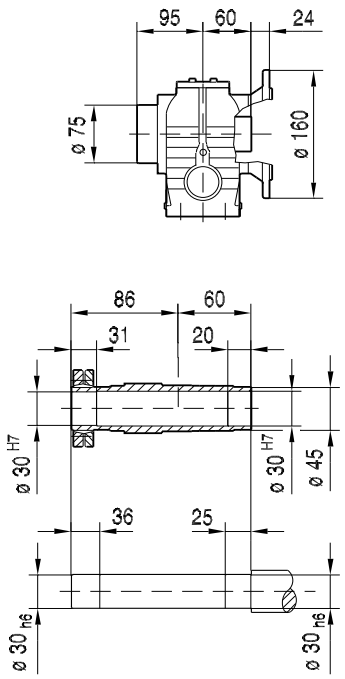
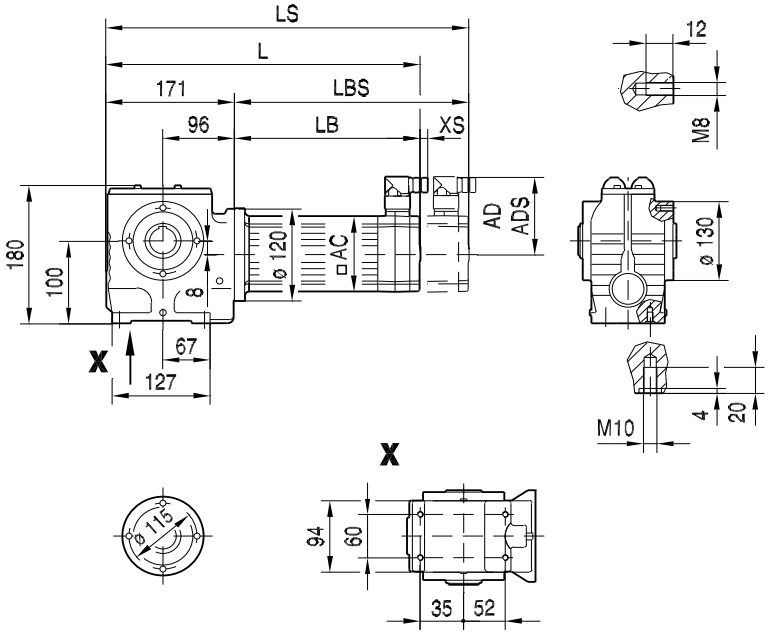
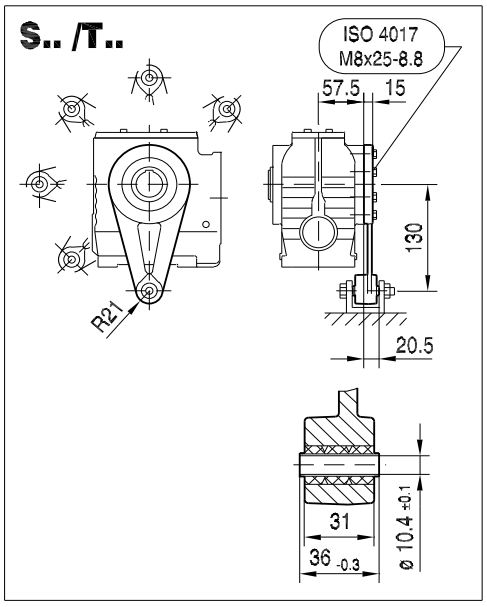


(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	316	355	394	351	401	454	343	371	383
LS	345	384	423	379	429	483	408	436	461
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

02 007 01 07

SA47..





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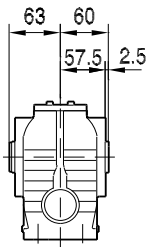
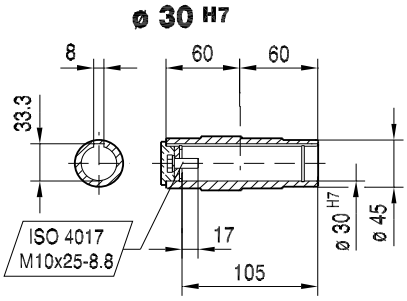
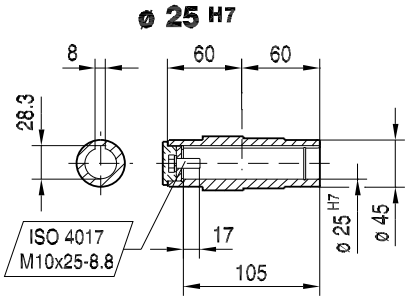
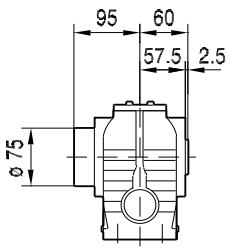
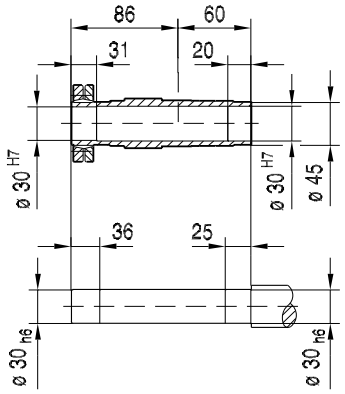






SH47..

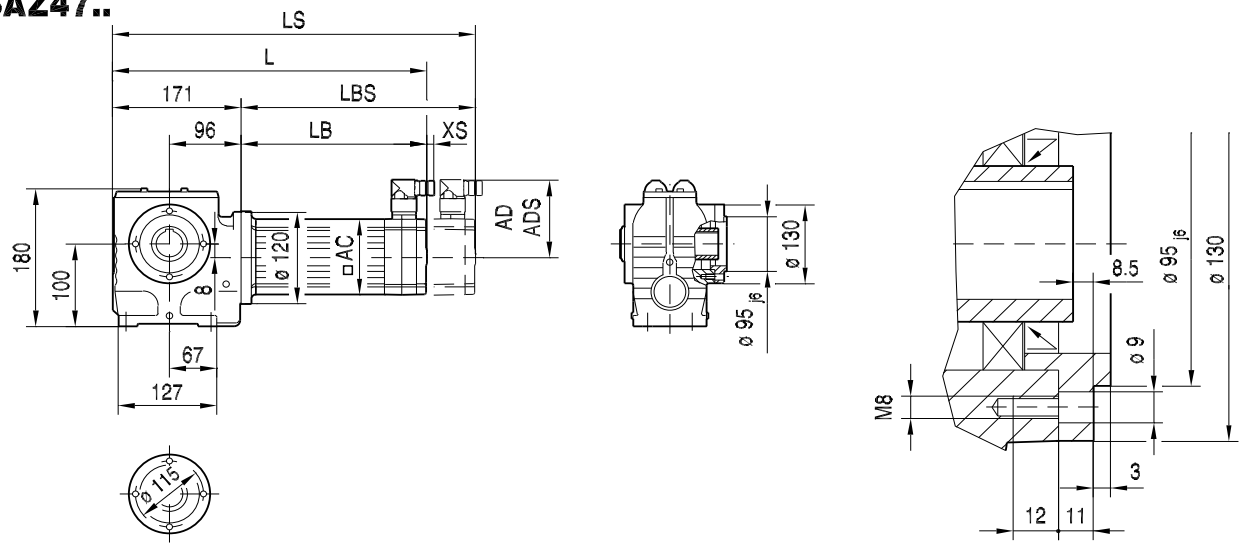




(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	316	355	394	351	401	454	343	371	383
LS	345	384	423	379	429	483	408	436	461
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

02 008 01 07

SAZ47..



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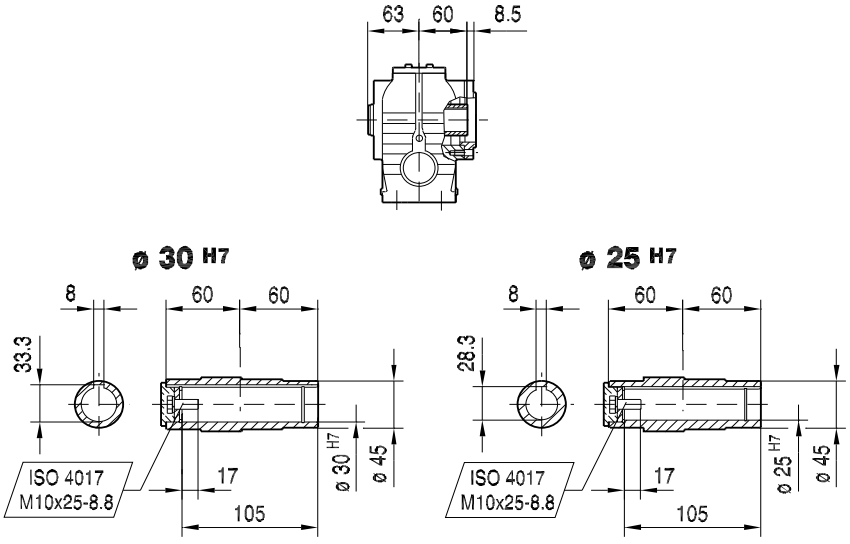
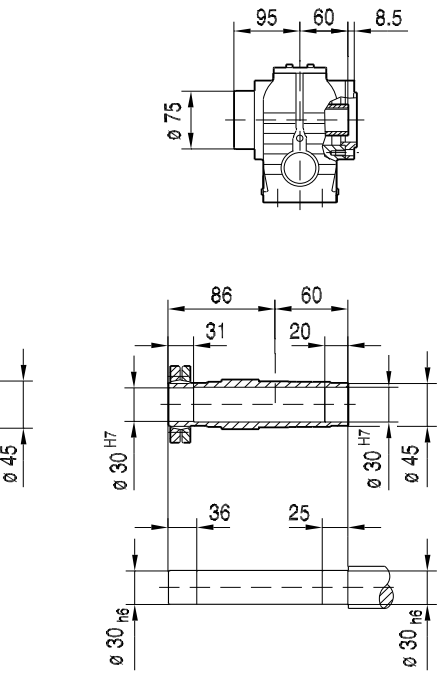


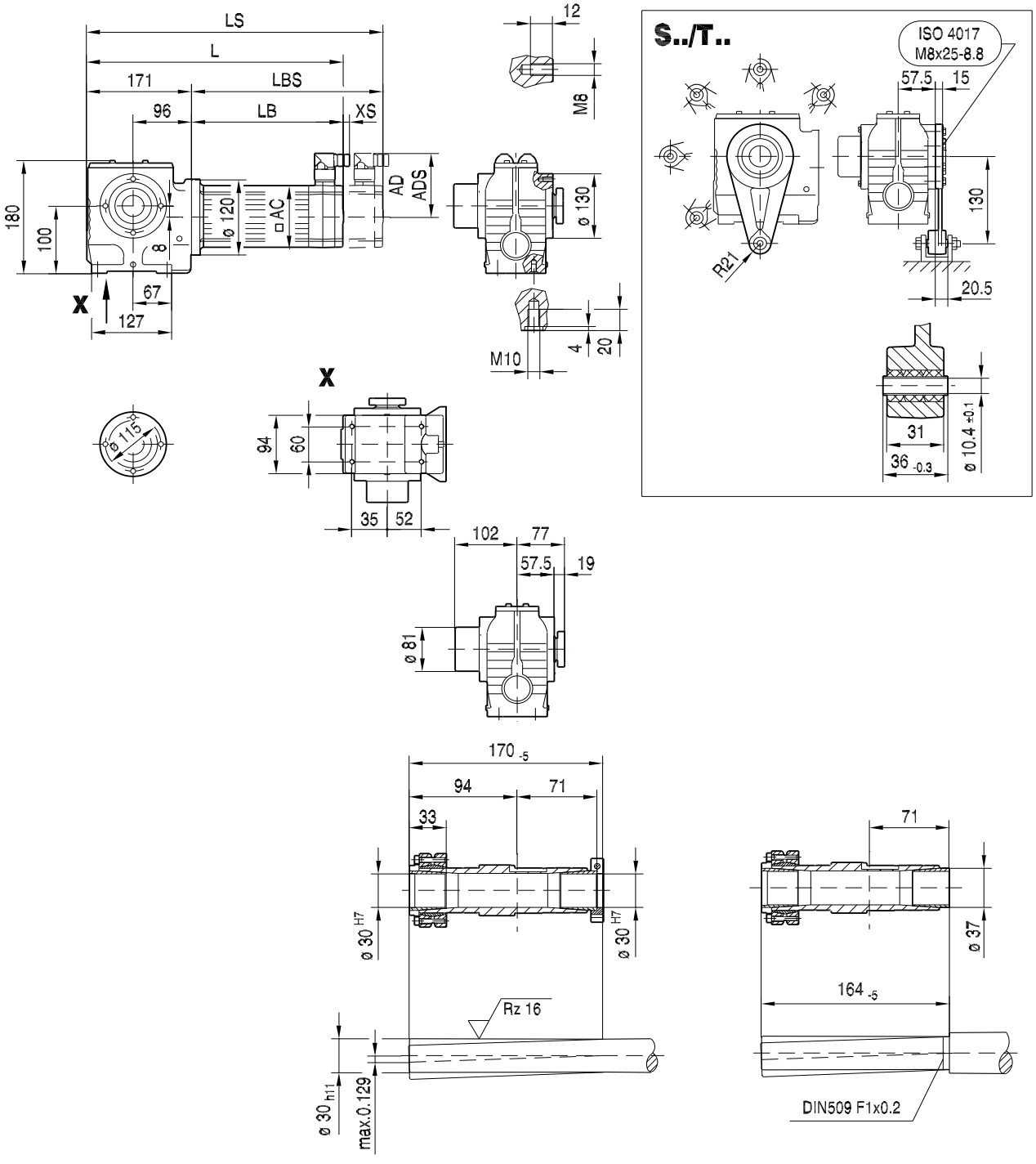
SHZ47..



(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	316	355	394	351	401	454	343	371	383
LS	345	384	423	379	429	483	408	436	461
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

02 009 01 07

ST47..

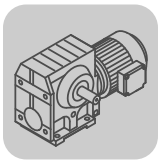


(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	316	355	394	351	401	454	343	371	383
LS	345	384	423	379	429	483	408	436	461
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

6.2.2 S 57

M_{aDyn} [Nm]		CMP										
	i	50S	50M	50L	63S	63M	63L	71S	71M	71L	80S	80M
	4.00	19	37	55	40	77	>106	69	>106	>106	>106	>106
	4.76	22	44	66	48	92	>126	82	>126	>126	>126	>126
	5.39	25	50	75	54	104	>142	93	>142	>142	>142	>142
	6.40	30	59	88	63	122	>147	109	>147	>147	>147	>147
	6.83	32	63	94	67	130	>150	117	>150	>150	>150	>150
	7.28	34	67	100	72	139	>183	124	>183	>183	>183	>183
	8.64	40	78	117	84	163	>210	146	>210	>210	>210	>210
	9.23	42	84	125	90	174	>220	156	>220	>220	>220	>220
	10.80	49	98	146	105	200	>220	182	>220	>220	>220	>220
	12.10	55	110	164	118	>220	>220	200	>220	>220	>220	>220
	14.24	64	128	191	138	>220	>220	>220	>220			
S57	16.47	75	148	>220	159	>220		>220				
 2	17.62	79	156	>215	168	>215		>215				
	19.54		163	240	176	>270	>270	>270	>270	>270	>270	>270
	20.33	91	180		194							
	23.20	98	194	285	205	>315	>315	>315	>315	>315	>315	>315
	24.77	103	200	305	215	>330	>330	>330	>330	>330	>330	>330
	29.00	121	235	355	255	>360	>360	>360	>360	>360	>360	>360
	32.48	133	260	>365	280	>365	>365	>365	>365	>365	>365	>365
	38.23	155	305	>365	330	>365	>365	>365	>365			
	44.22	179	355	>365	>365	>365		>365				
	47.32	189	>365	>365	>365	>365		>365				
	54.59	215	>365		>365							
	63.80	250										
	69.39	270										

m [kg]		CMP										
	s	50S	50M	50L	63S	63M	63L	71S	71M	71L	80S	80M
S57	 2	17	17	18	19	20	22	22	23	25	29	31
SF: + 3.8 kg / SA: + -0.3 kg / SAF: + 2.6 kg												



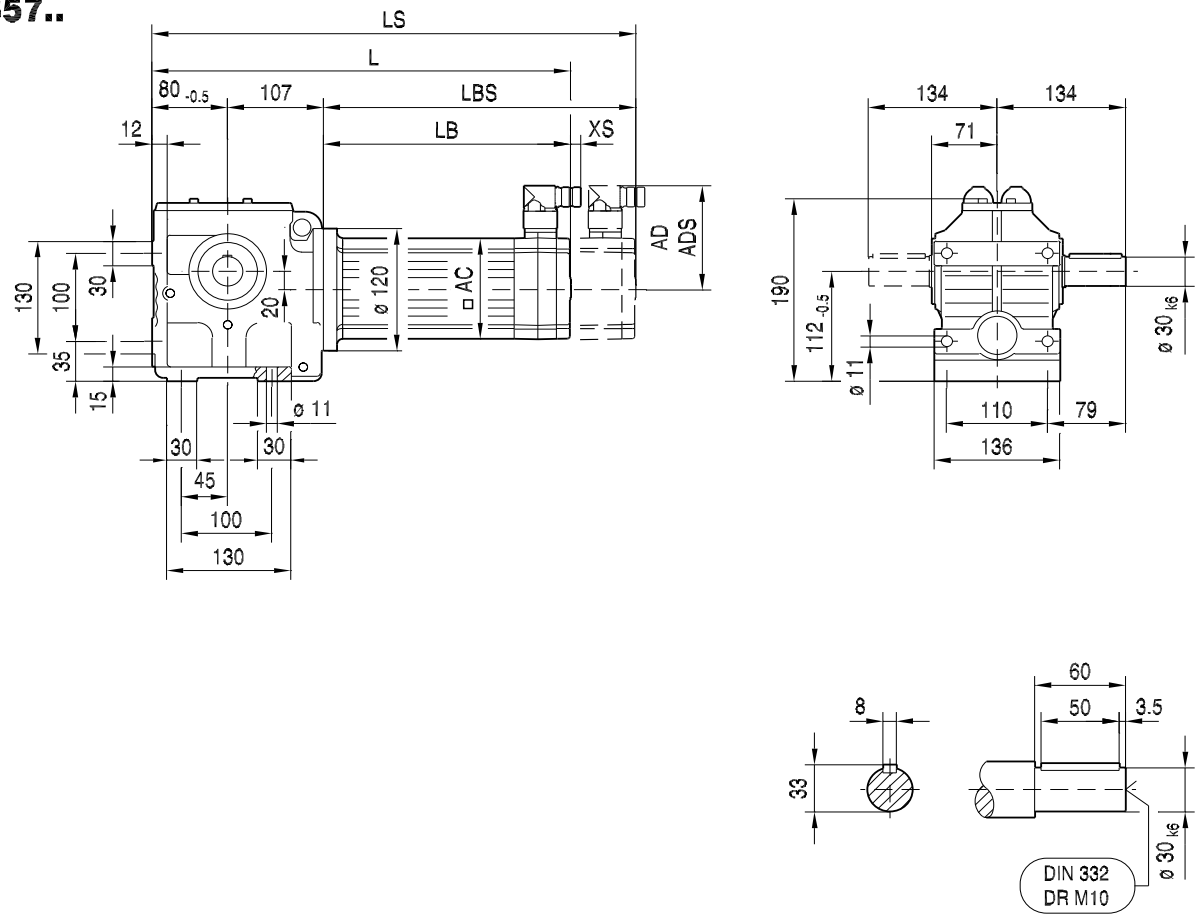
S..CMP
S..[mm]

CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} S [Nm/']	SF [Nm/']	SA [Nm/']	SAF [Nm/']
S57 2	4.00	4500	90	-	-	-	-
	4.76	4500	90	-	-	-	-
	5.39	4500	90	-	-	-	-
	6.40	4500	89	-	-	-	-
	6.83	4500	89	-	-	-	-
	7.28	4500	89	-	-	-	-
	8.64	4500	88	-	-	-	-
	9.23	4500	88	-	-	-	-
	10.80	4500	88	-	-	-	-
	12.10	4500	88	-	-	-	-
	14.24	4500	87	-	-	-	-
	16.47	4500	87	-	-	-	-
	17.62	4500	86	-	-	-	-
	19.54	4500	81	-	-	-	-
	20.33	4500	86	-	-	-	-
	23.20	4500	81	-	-	-	-
	24.77	4500	80	-	-	-	-
	29.00	4500	80	-	-	-	-
	32.48	4500	79	-	-	-	-
	38.23	4500	78	-	-	-	-
	44.22	4500	78	-	-	-	-
	47.32	4500	77	-	-	-	-
	54.59	4500	77	-	-	-	-
	63.80	4500	76	-	-	-	-
	69.39	4500	75	-	-	-	-

CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm^2]	S [N]	SF [N]	SA [N]	SAF [N]	S [N]	SF [N]	SA [N]	SAF [N]
S57 2	4.00	88	106	159	275	4.5	3380	3320	2730	2730	8170	8170	10000	10000
	4.76	93	126	189	231	3.3	3590	3520	2900	2900	8110	8110	10000	10000
	5.39	95	142	210	204	2.6	3760	3690	3040	3040	8060	8060	10000	10000
	6.40	98	147	220	172	1.9	4010	3930	3250	3250	8040	8040	10000	10000
	6.83	100	150	225	161	1.7	4100	4010	3330	3330	8030	8030	10000	10000
	7.28	146	183	248	27	1.7	3790	3770	2620	2620	7880	7880	10000	10000
	8.64	166	211	282	23	1.3	3900	3890	2430	2430	7730	7730	10000	10000
	9.23	169	223	287	22	1.1	3990	3980	2530	2530	7660	7660	10000	10000
	10.80	169	220	287	19	0.85	4290	4270	3000	3000	7680	7680	10000	10000
	12.10	169	220	287	17	0.70	4520	4490	3360	3360	7680	7680	10000	10000
	14.24	169	220	287	14	0.51	4860	4820	3810	3810	7680	7680	10000	10000
	16.47	168	220	286	12	0.40	5200	5130	4120	4120	7680	7680	10000	10000
	17.62	168	215	286	11	0.36	5350	5280	4260	4260	7710	7710	10000	10000
	19.54	215	274	366	26	1.3	5720	5620	4610	4610	7300	7300	10000	10000
	20.33	168	215	286	10	0.28	5690	5600	4560	4560	7710	7710	10000	10000
	23.20	245	315	417	9	0.95	5930	5840	4710	4710	6950	6950	10000	10000
	24.77	245	330	417	8	0.85	6100	6000	4870	4870	6800	6800	10000	10000
	29.00	245	360	417	7	0.65	6520	6410	5250	5250	6470	6470	10000	10000
	32.48	245	367	417	6	0.54	6840	6710	5540	5540	6380	6380	10000	10000
	38.23	245	367	417	5	0.39	7320	7170	5970	5970	6380	6380	10000	10000
	44.22	245	367	417	11	0.32	7520	7520	6380	6380	6380	6380	10000	10000
	47.32	245	367	417	11	0.28	7520	7520	6580	6580	6380	6380	10000	10000
	54.59	245	367	417	9	0.23	7520	7520	7000	7000	6380	6380	10000	10000
	63.80	245	360	417	8	0.18	7520	7520	7500	7500	6470	6470	10000	10000
	69.39	245	360	417	7	0.15	7520	7520	7770	7770	6470	6470	10000	10000

02 010 01 07

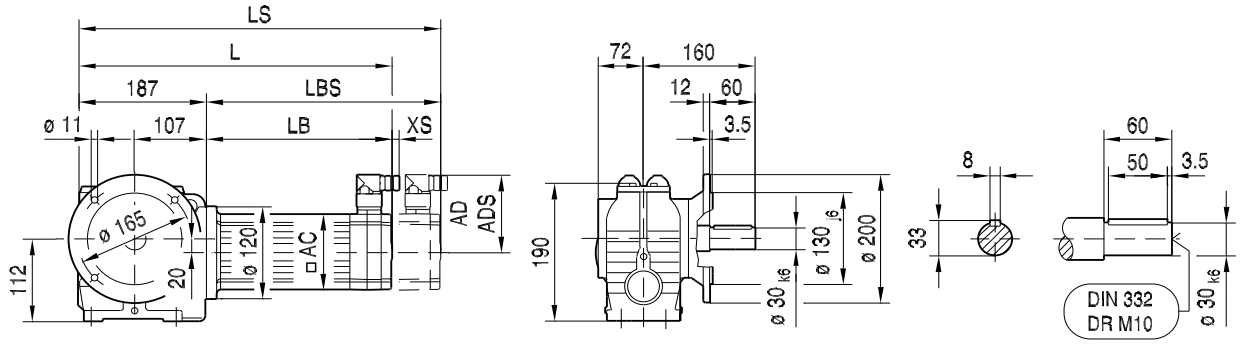
S57..



(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	332	371	410	367	417	470	359	387	434	399	436
LS	361	400	439	395	445	499	424	452	499	477	514
LB	145	184	223	180	230	283	172	200	247	212	249
LBS	174	213	252	208	258	312	237	265	312	290	327
XS	18	18	18	14	14	14	11	11	11	37	37

02 011 01 07

SF57..



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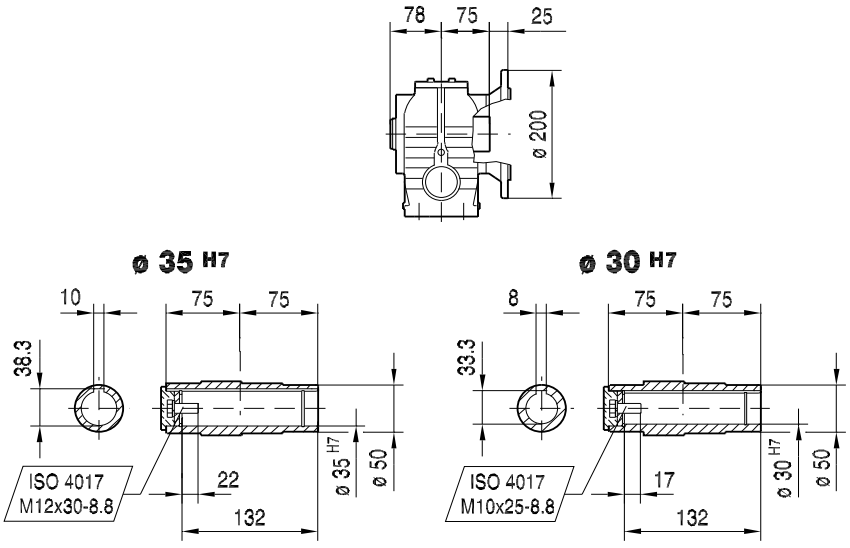

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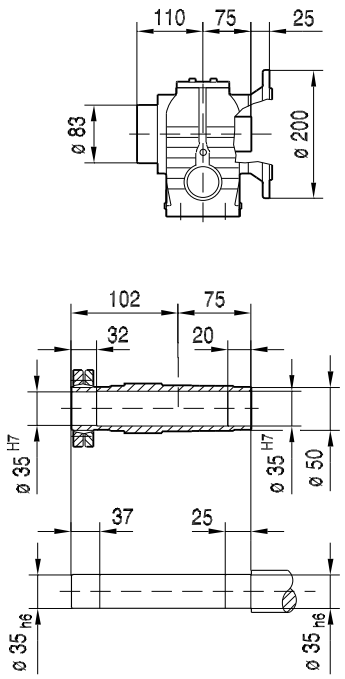
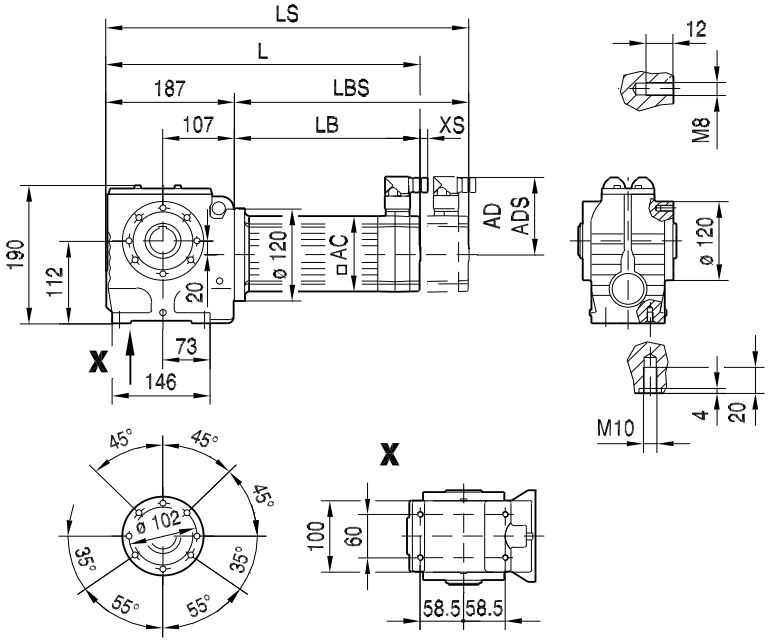
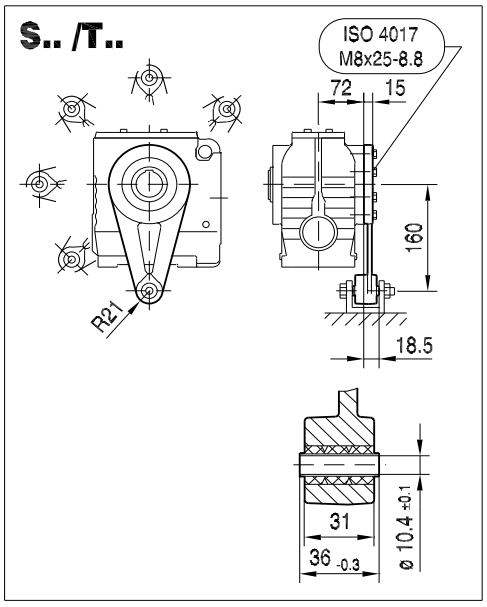


(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	332	371	410	367	417	470	359	387	434	399	436
LS	361	400	439	395	445	499	424	452	499	477	514
LB	145	184	223	180	230	283	172	200	247	212	249
LBS	174	213	252	208	258	312	237	265	312	290	327
XS	18	18	18	14	14	14	11	11	11	37	37

02 012 01 07

SA57..





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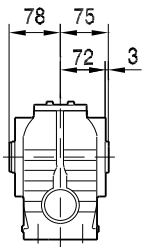
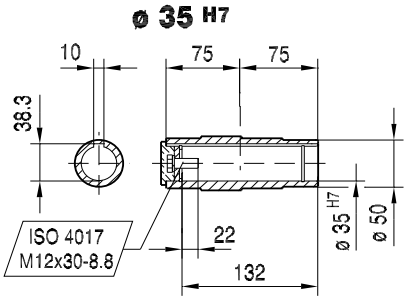
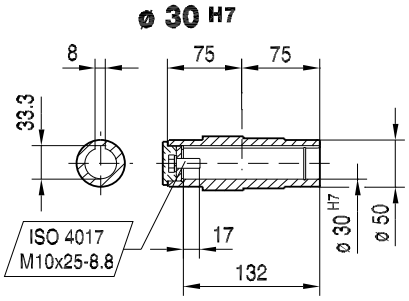
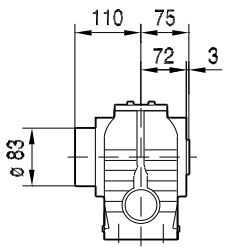
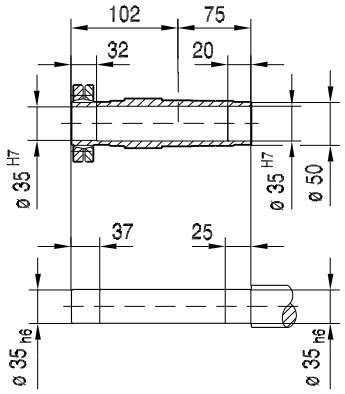






SH57..

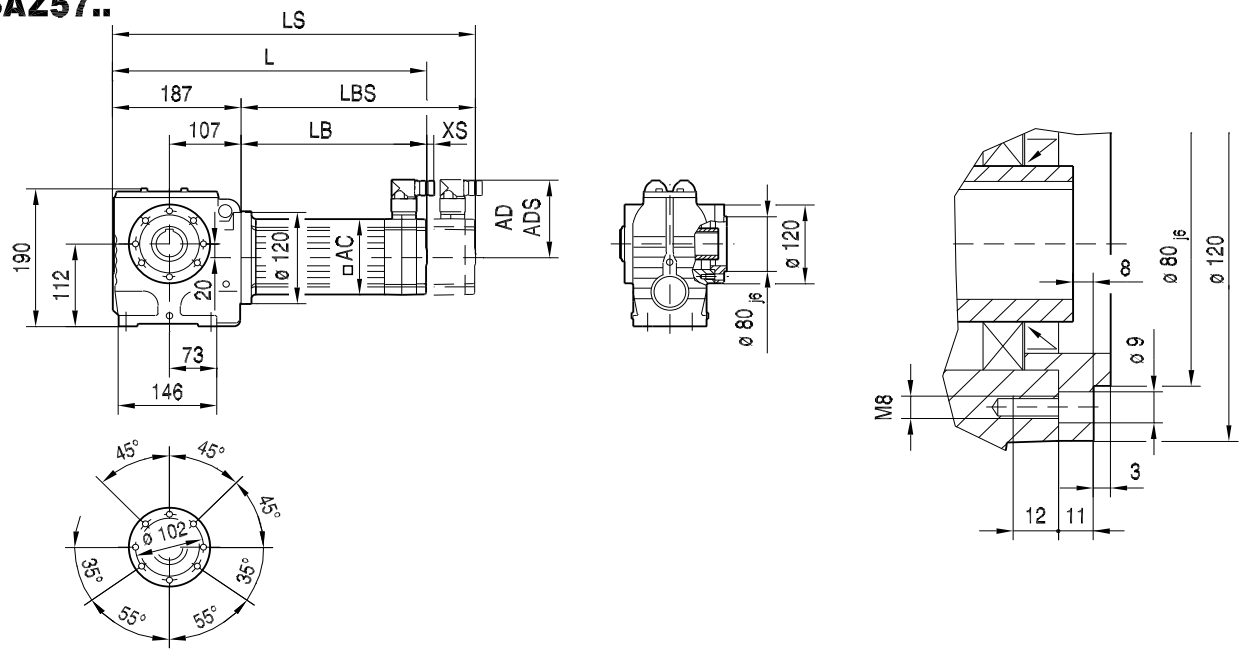




(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	332	371	410	367	417	470	359	387	434	399	436
LS	361	400	439	395	445	499	424	452	499	477	514
LB	145	184	223	180	230	283	172	200	247	212	249
LBS	174	213	252	208	258	312	237	265	312	290	327
XS	18	18	18	14	14	14	11	11	11	37	37

02 013 01 07

SAZ57..



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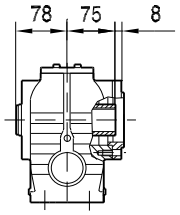

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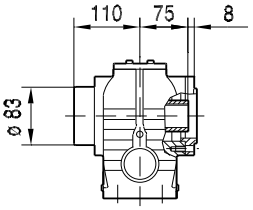
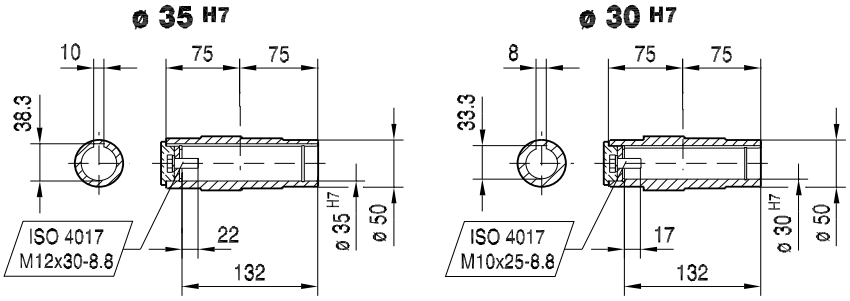
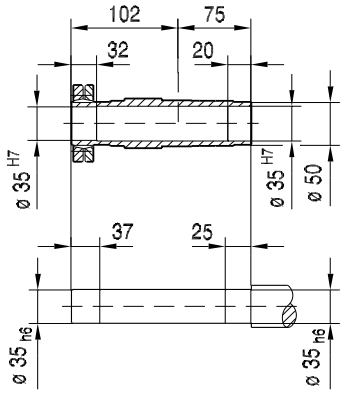


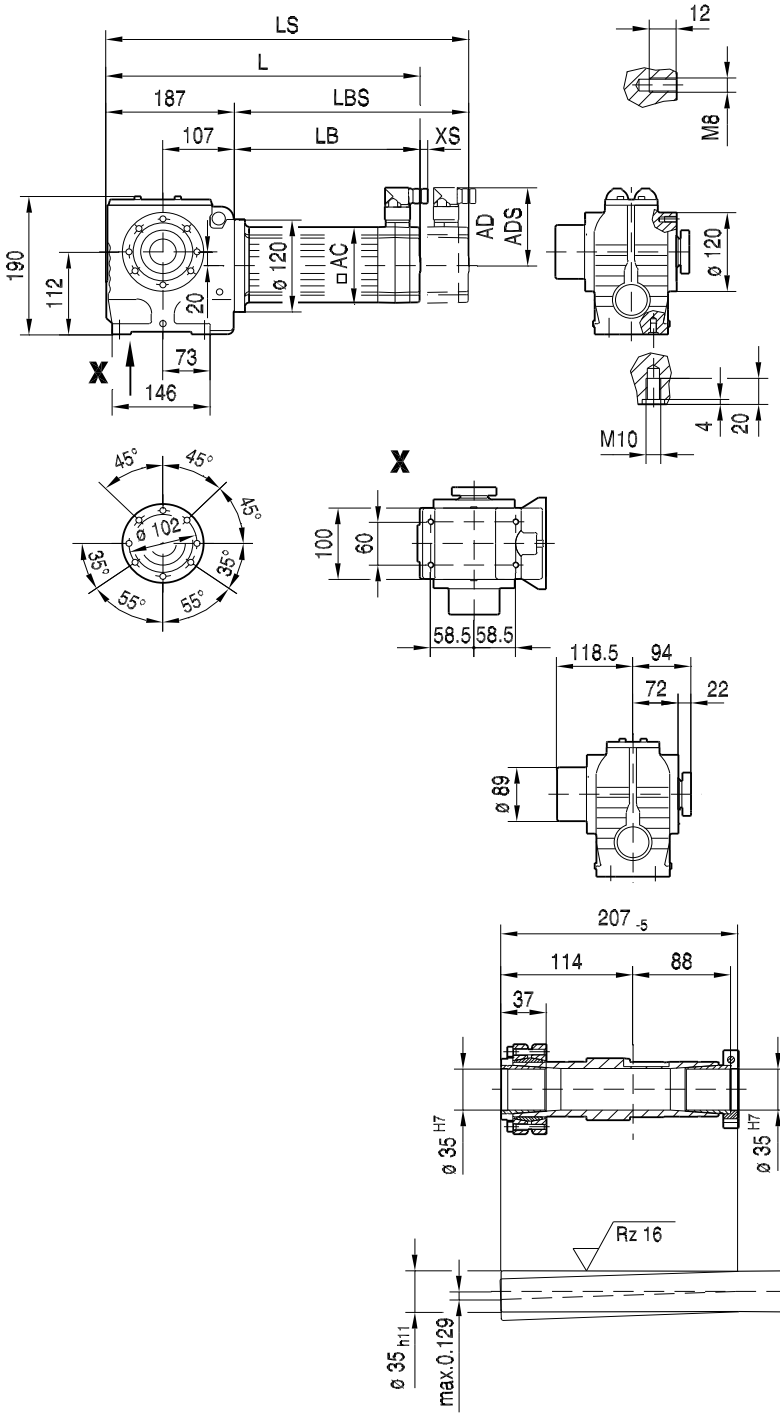


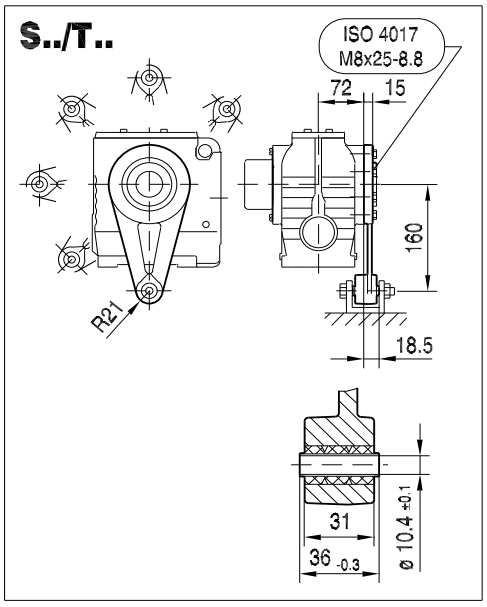


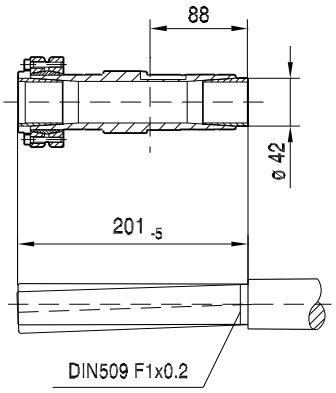
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	332	371	410	367	417	470	359	387	434	399	436
LS	361	400	439	395	445	499	424	452	499	477	514
LB	145	184	223	180	230	283	172	200	247	212	249
LBS	174	213	252	208	258	312	237	265	312	290	327
XS	18	18	18	14	14	14	11	11	11	37	37

02 014 01 07

ST57..



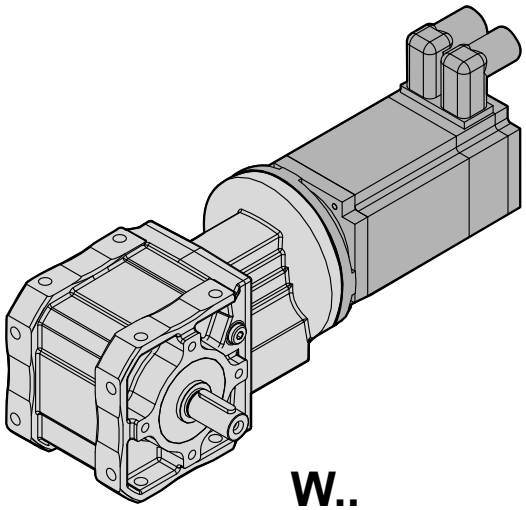




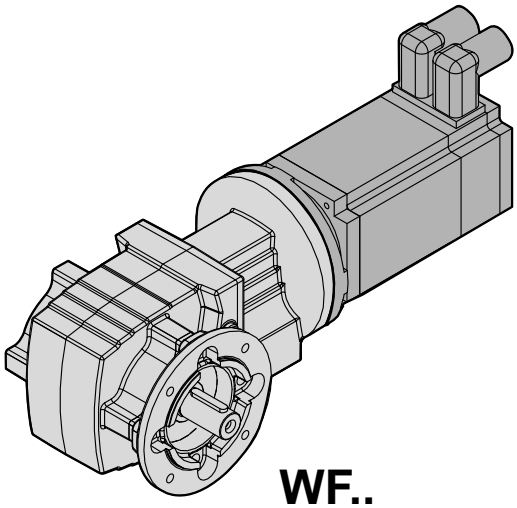
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M
AC	73	73	73	88	88	88	115	115	115	137	137
AD	86	86	86	92	92	92	102	102	102	134	134
ADS	86	86	86	92	92	92	104	104	104	137	137
L	332	371	410	367	417	470	359	387	434	399	436
LS	361	400	439	395	445	499	424	452	499	477	514
LB	145	184	223	180	230	283	172	200	247	212	249
LBS	174	213	252	208	258	312	237	265	312	290	327
XS	18	18	18	14	14	14	11	11	11	37	37

7 W..CMP

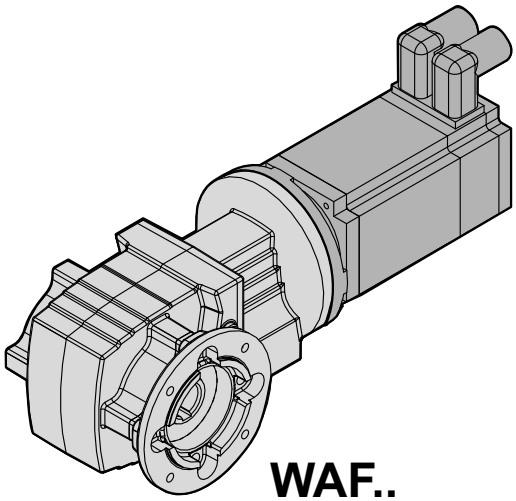
7.1 W..CMP



W..



WF..



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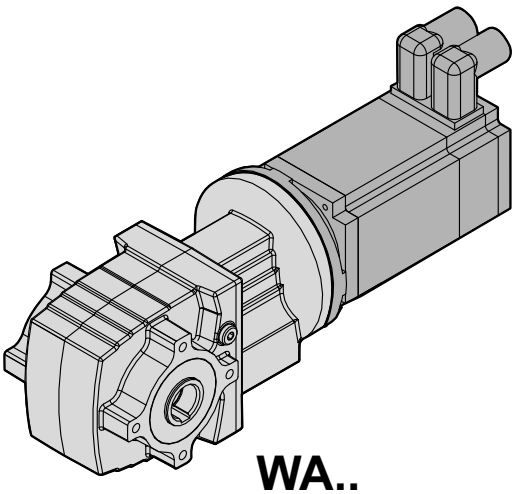
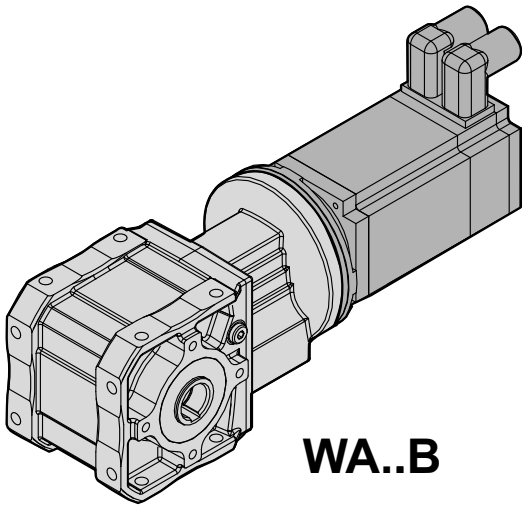
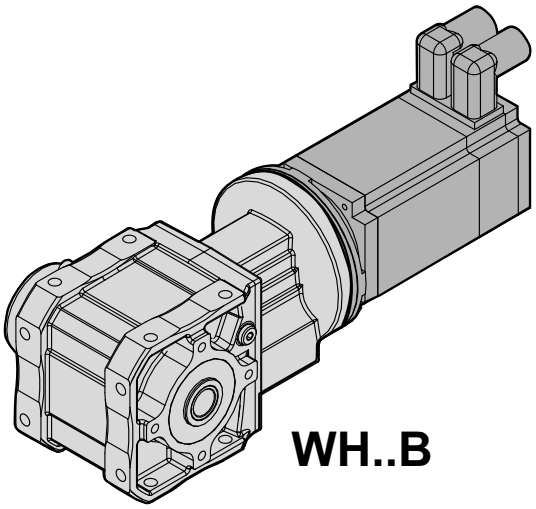


WA..

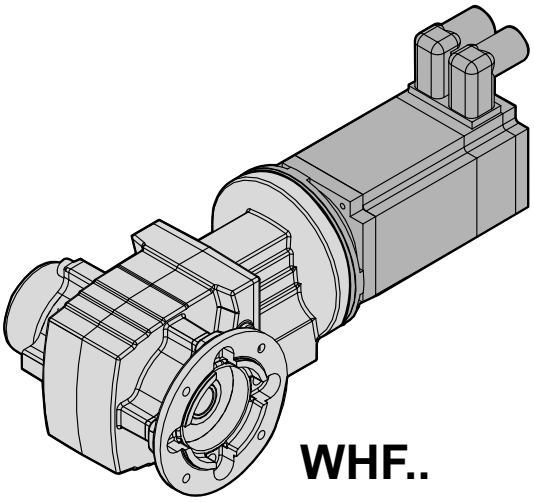
65967axx



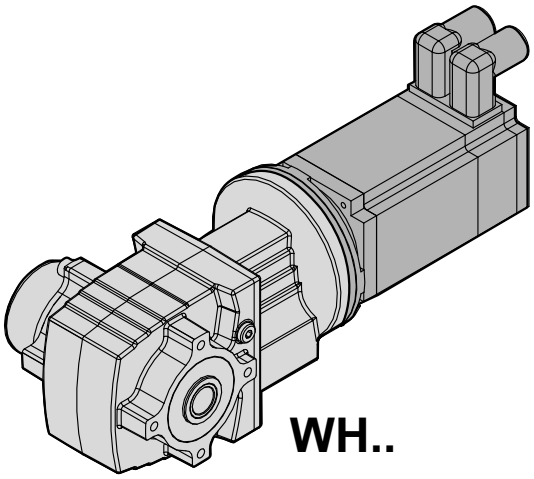
WA..B



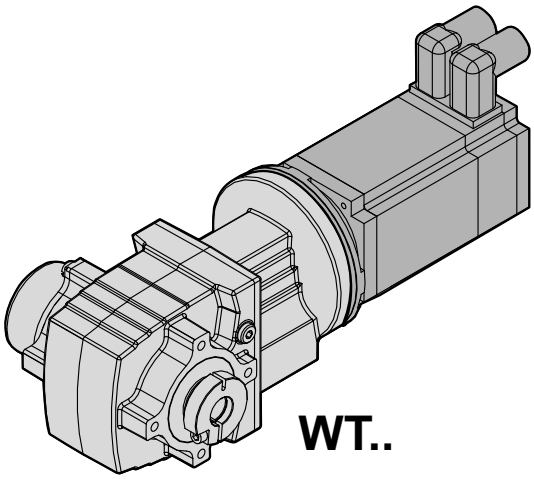
WH..B



WHF..



WH..



WT..

65969axx

7.2 W..[mm]

7.2.1 W 37

M_{aDyn} [Nm]		CMP								
	i	50S	50M	50L	63S	63M	63L	71S	71M	80S
W37 2	3.20	15	31	46	33	64	>84	57	>84	82
	3.93	19	37	56	40	77	>84	69	>84	>84
	5.11	24	48	72	52	>84	>84	>84	>84	>84
	5.77	28	55	82	59	>84	>84	>84	>84	>84
	6.97	33	66	>84	71	>84	>84	>84	>84	>84
	8.55	40	80	>84	>84	>84		>84		
	9.92	47	>84		>84					
	10.67	48	96	>108	103	>108	>108	>108	>108	>108
	11.65	55								
	12.70	60								
	13.89	62	>108	>108	>108	>108	>108	>108	>108	>108
	15.67	70	>108	>108	>108	>108	>108	>108	>108	>108
	18.94	84	>108	>108	>108	>108	>108	>108	>108	>108
	21.33	84	>110	>110	>110	>110	>110	>110	>110	>110
	23.25	102	>108	>108	>108	>108		>108		
	26.96	>108	>108		>108					
	27.78	107	>111	>111	>111	>111	>111	>111	>111	>111
	31.33	>117	>117	>117	>117	>117	>117	>117	>117	>117
	31.67	>108								
	34.52	>108								
	37.88	>126	>126	>126	>126	>126	>126	>126	>126	>126
	46.49	>130	>130	>130	>130	>130		>130		
	53.92	>130	>130		>130					
	63.33	>126								
	69.05	>130								

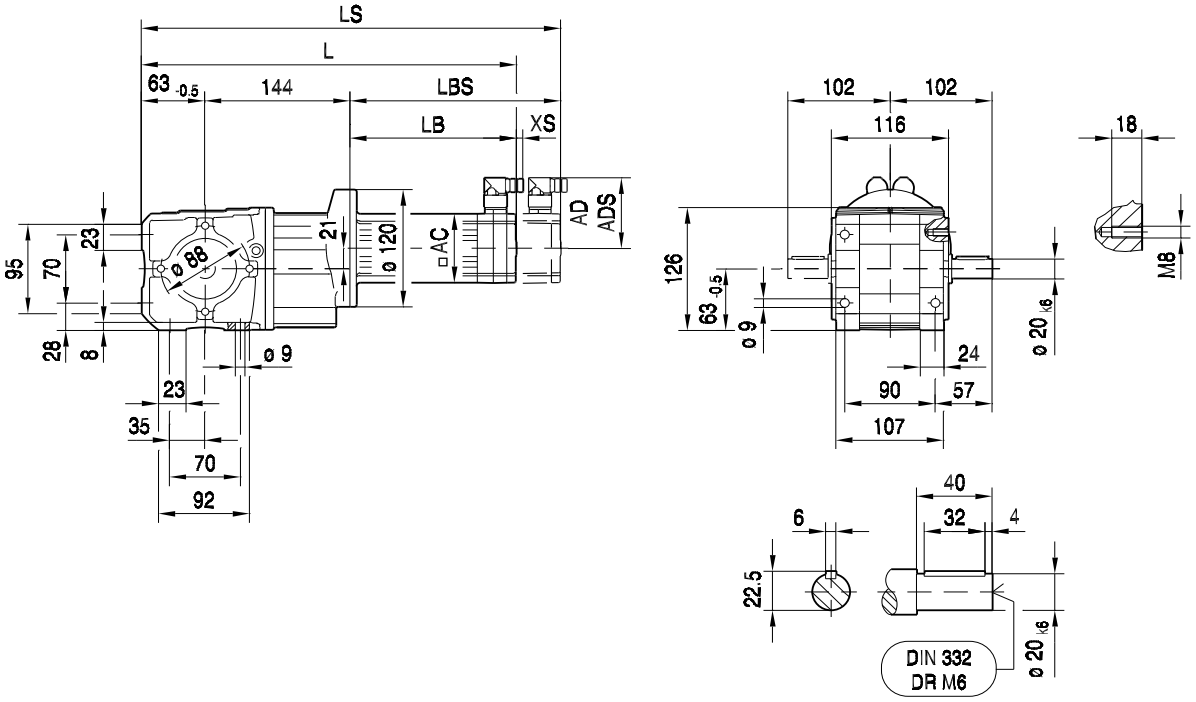
m [kg]		CMP								
	s	50S	50M	50L	63S	63M	63L	71S	71M	80S
W37	2	9.2	10	11	11	13	14	14	16	22
WF: + 0.0 kg / WA: + 0.0 kg / WAF: + 0.0 kg										

CMP..	i	n_{epk} [1/min]	η [%]	c_{TG} W [Nm/°]	WF [Nm/°]	WA [Nm/°]	WAF [Nm/°]
W37 2	3.20	4500	93	-	-	-	-
	3.93	4500	92	-	-	-	-
	5.11	4500	92	-	-	-	-
	5.77	4500	92	-	-	-	-
	6.97	4500	92	-	-	-	-
	8.55	4500	91	-	-	-	-
	9.92	4500	91	-	-	-	-
	10.67	4500	87	-	-	-	-
	11.65	4500	91	-	-	-	-
	12.70	4500	91	-	-	-	-
	13.89	4500	86	-	-	-	-
	15.67	4500	86	-	-	-	-
	18.94	4500	85	-	-	-	-
	21.33	4500	76	-	-	-	-
	23.25	4500	84	-	-	-	-
	26.96	4500	83	-	-	-	-
	27.78	4500	74	-	-	-	-
	31.33	4500	73	-	-	-	-
	31.67	4500	82	-	-	-	-
	34.52	4500	81	-	-	-	-
	37.88	4500	72	-	-	-	-
	46.49	4500	70	-	-	-	-
	53.92	4500	69	-	-	-	-
	63.33	4500	67	-	-	-	-
	69.05	4500	67	-	-	-	-

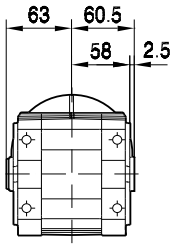
CMP..							F_{Ramax}				F_{Rapk}			
n_e = 1400	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_G 10^{-4} [kgm²]	W [N]	WF [N]	WA [N]	WAF [N]	W [N]	WF [N]	WA [N]	WAF [N]
W37 2	3.20	70	84	119	2188	2.3	2220	2350	2050	2050	3690	3690	5000	5000
	3.93	70	84	119	1781	1.6	2410	2550	2240	2240	3690	3690	5000	5000
	5.11	70	84	119	1370	0.96	2680	2820	2490	2490	3690	3690	5000	5000
	5.77	70	84	119	1213	0.77	2810	2950	2620	2620	3690	3690	5000	5000
	6.97	70	84	119	1004	0.54	3020	3170	2830	2830	3690	3690	5000	5000
	8.55	70	84	119	819	0.37	3270	3420	3070	3070	3690	3690	5000	5000
	9.92	70	84	119	706	0.28	3460	3620	3250	3250	3690	3690	5000	5000
	10.67	90	108	153	150	0.80	2880	3140	2530	2530	3360	3360	5000	5000
	11.65	70	84	119	601	0.21	3680	3830	3460	3460	3690	3690	5000	5000
	12.70	70	84	119	551	0.18	3800	3830	3580	3580	3690	3690	5000	5000
	13.89	90	108	153	151	0.52	3250	3510	2890	2890	3360	3360	5000	5000
	15.67	90	108	153	147	0.42	3430	3610	3070	3070	3360	3360	5000	5000
	18.94	90	108	153	148	0.30	3610	3610	3360	3360	3360	3360	5000	5000
	21.33	110	110	144	66	0.71	3320	3320	2940	2940	3320	3320	5000	5000
	23.25	90	108	153	146	0.21	3610	3610	3690	3690	3360	3360	5000	5000
	26.96	90	108	153	145	0.16	3610	3610	3950	3950	3360	3360	5000	5000
	27.78	110	111	158	50	0.46	3320	3320	3400	3400	3300	3300	5000	5000
	31.33	110	117	166	45	0.38	3320	3320	3620	3620	2960	2960	5000	5000
	31.67	90	108	153	145	0.13	3610	3610	4240	4240	3360	3360	5000	5000
	34.52	90	108	153	145	0.11	3610	3610	4410	4410	3360	3360	5000	5000
	37.88	110	126	178	37	0.27	3320	3320	3990	3990	2080	2080	5000	5000
	46.49	110	130	187	32	0.19	3320	3320	4410	4410	1490	1490	5000	5000
	53.92	110	130	187	32	0.15	3320	3320	4730	4730	1490	1490	5000	5000
	63.33	110	126	178	36	0.12	3320	3320	5000	5000	2080	2080	5000	5000
	69.05	110	130	187	32	0.10	3320	3320	5000	5000	1490	1490	5000	5000

20 031 00 07

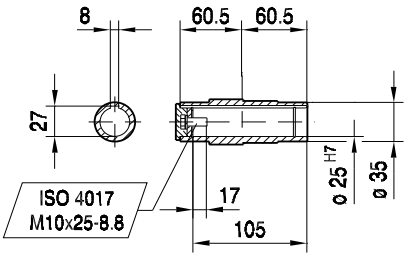
W37..



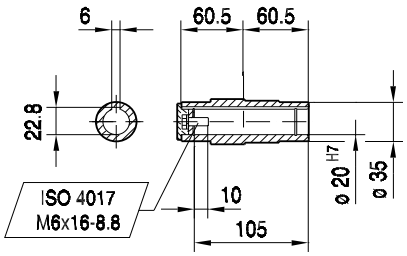
WA37B..



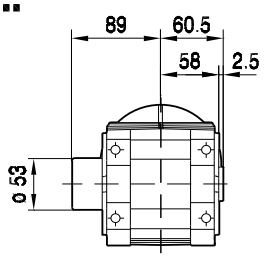
ø 25 H7
DIN 6885-3

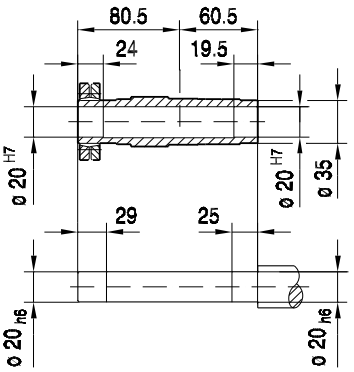


ø 20 H7



WH37B..

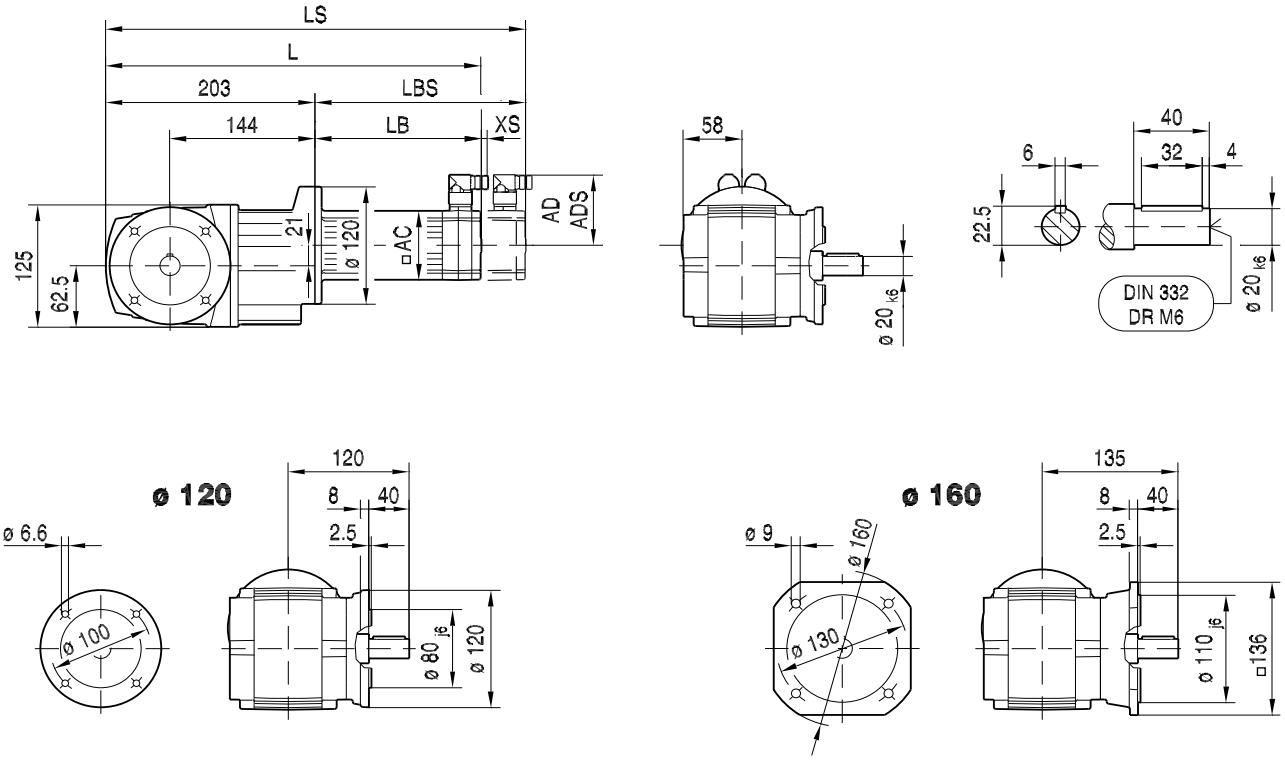




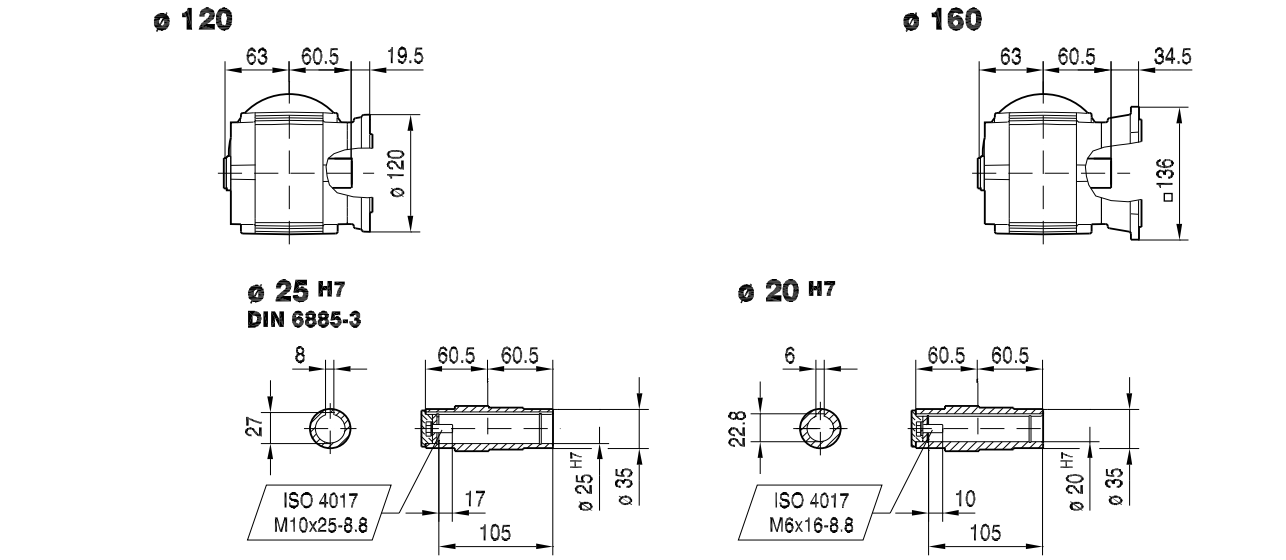
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	352	391	430	387	437	490	379	407	419
LS	381	420	459	415	465	519	444	472	497
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

20 032 00 07

WF37..



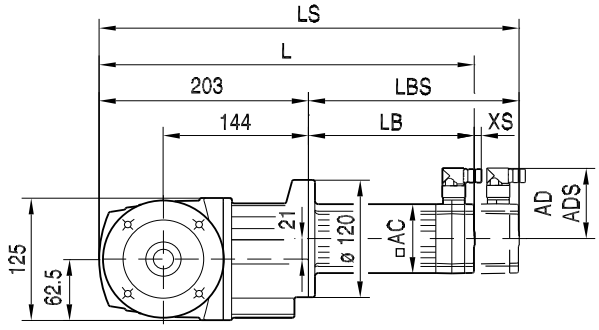
WAF37..



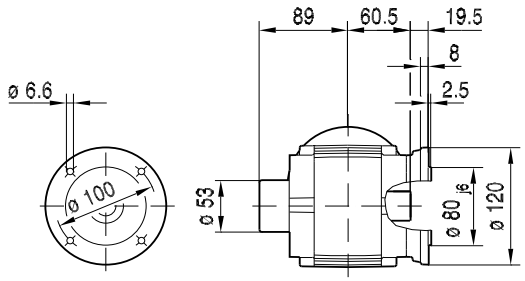
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	348	387	426	383	433	486	375	403	415
LS	377	416	455	411	461	515	440	468	493
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

20 033 00 07

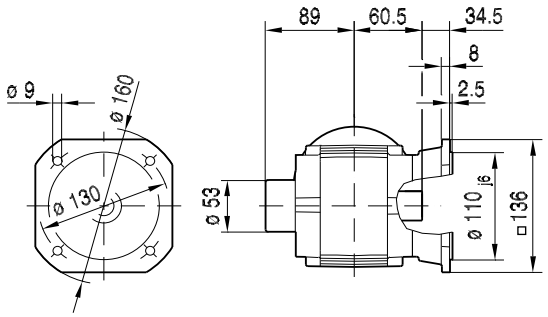
WHF37..

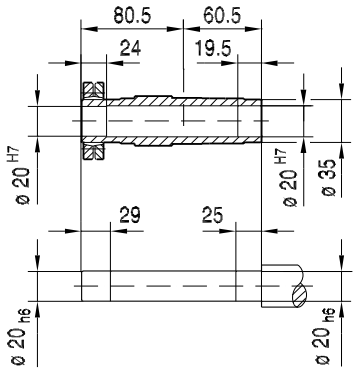


ø 120



ø 160

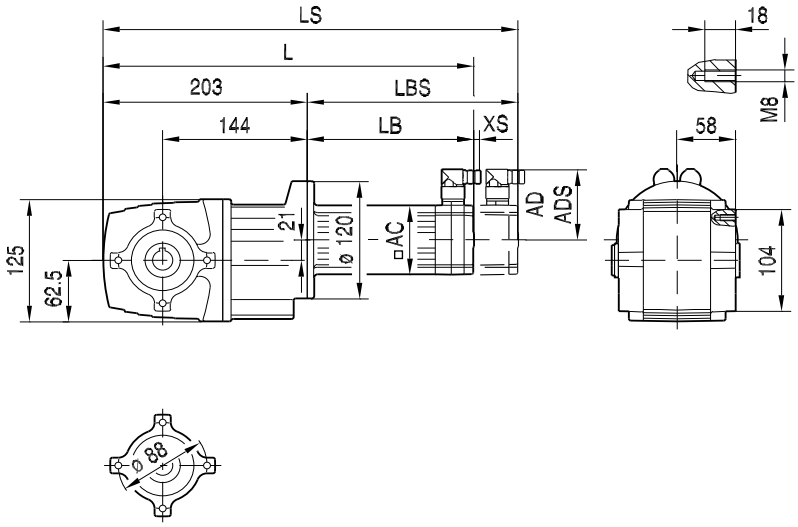




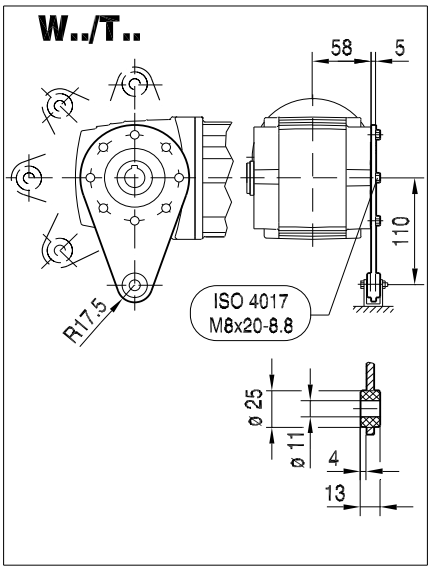
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	348	387	426	383	433	486	375	403	415
LS	377	416	455	411	461	515	440	468	493
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

20 034 00 07

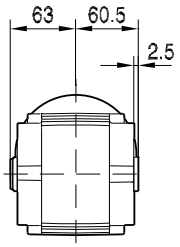
WA37..



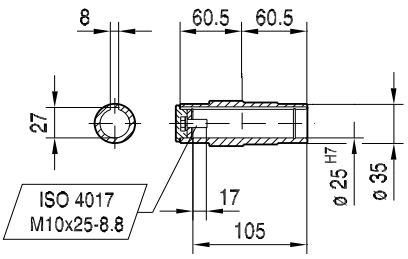
W../T..



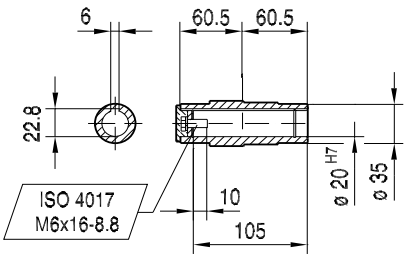
WA37..



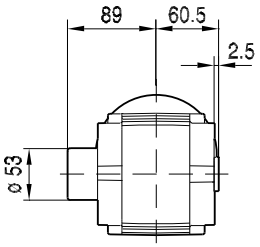
ø 25 H7
DIN 6885-3

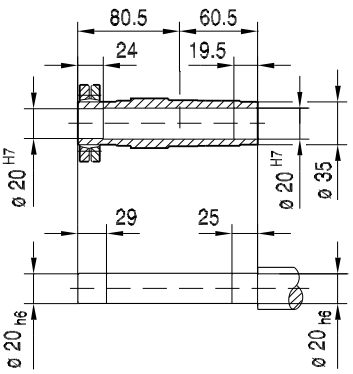


ø 20 H7



WH37..

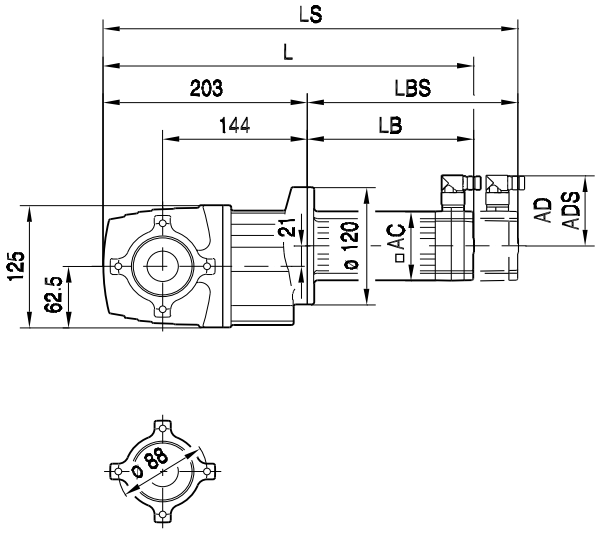


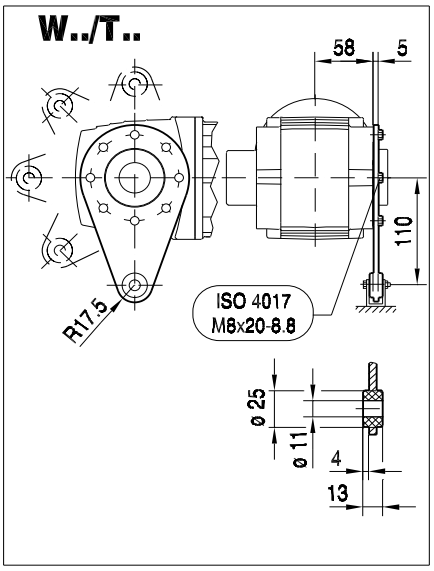


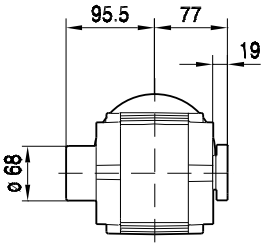
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	348	387	426	383	433	486	375	403	415
LS	377	416	455	411	461	515	440	468	493
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

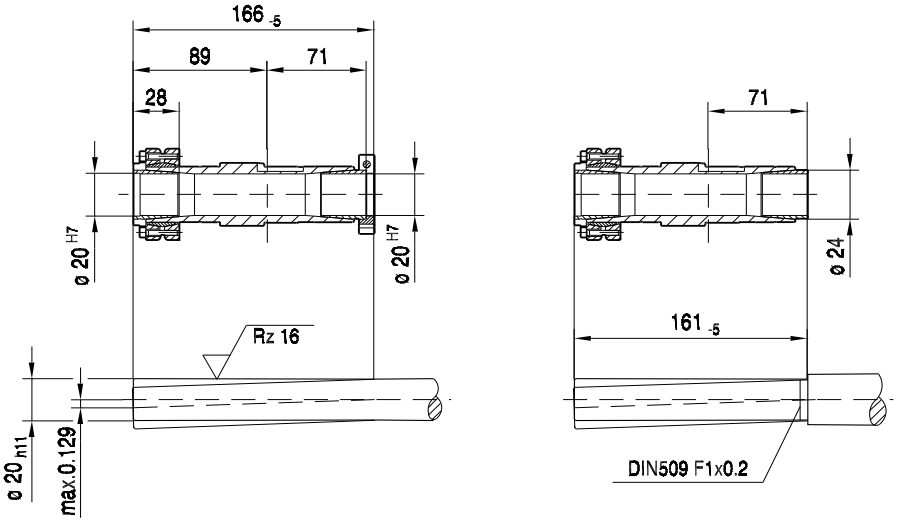
20 035 00 07

WT37..





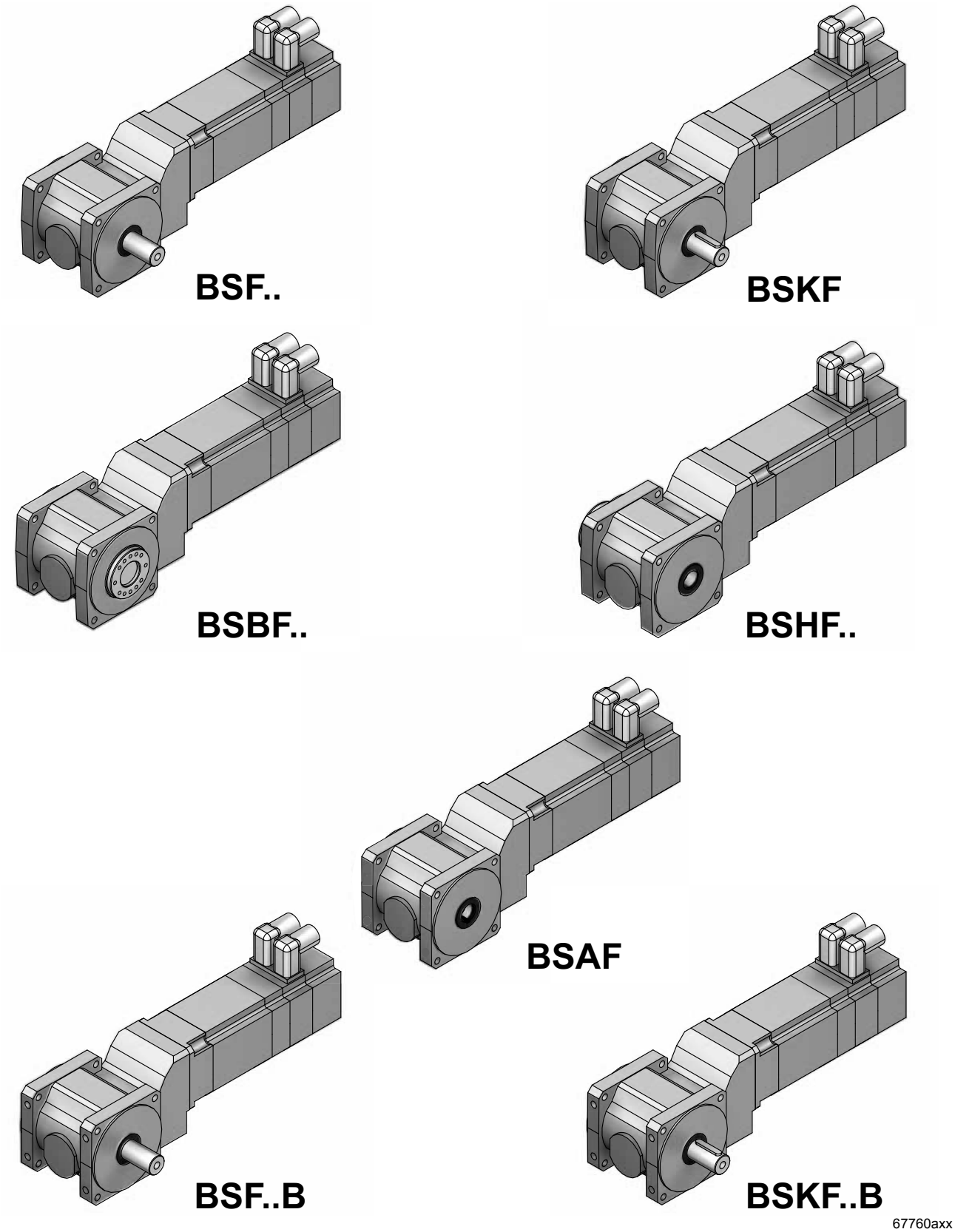




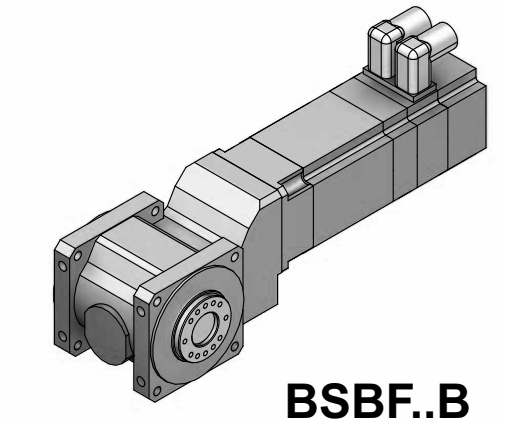
(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP80S
AC	73	73	73	88	88	88	115	115	137
AD	86	86	86	92	92	92	102	102	134
ADS	86	86	86	92	92	92	104	104	137
L	348	387	426	383	433	486	375	403	415
LS	377	416	455	411	461	515	440	468	493
LB	145	184	223	180	230	283	172	200	212
LBS	174	213	252	208	258	312	237	265	290
XS	18	18	18	14	14	14	11	11	37

8 BS.F..CMP

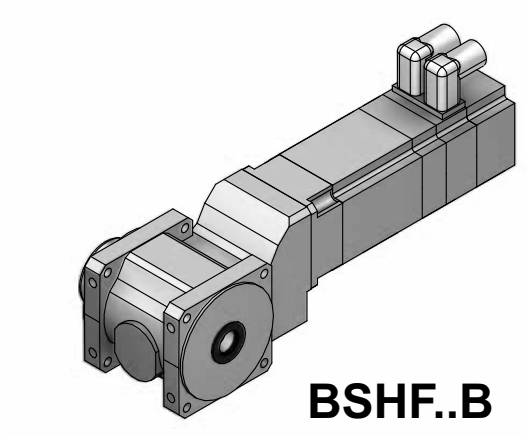
8.1 BSF, BSBF, BSKF, BSHF, BSF..B, BSBF..B, BSKF..B, BSHF..B, BSHF../T, BSHF../I, BSHF..B/I..CMP



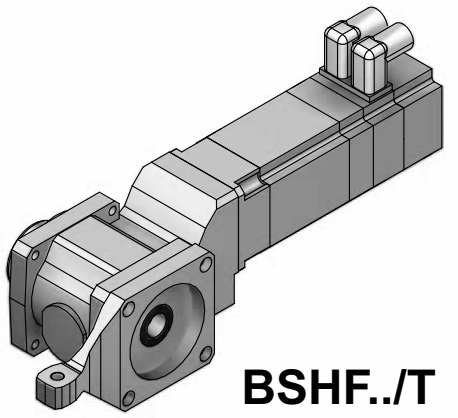
67760axx



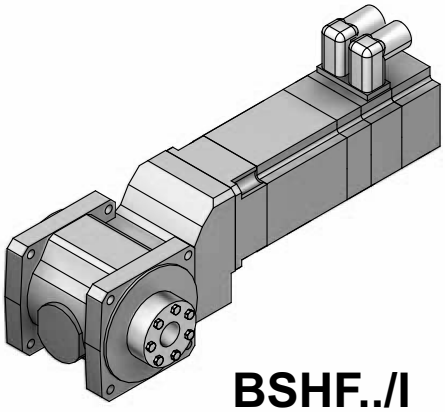
BSBF..B



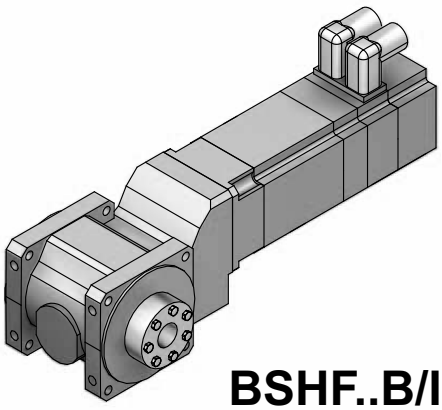
BSHF..B



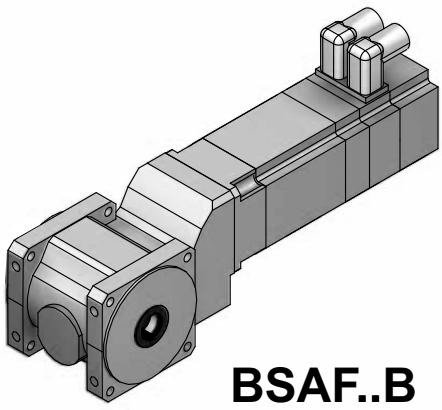
BSHF../T



BSHF../I



BSHF..B/I



BSAF..B

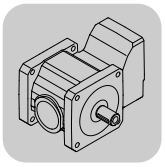
67761axx

8.2 BS.F..[mm]

8.2.1 BS.F 202

M_{aDyn} [Nm]		CMP			
	i	50S	50M	50L	63S
BSF202 2	3.00	15	29	39	31
	4.00	19	39	52	42
	6.00	29	58	>60	>60
	8.00	39	>60	>60	>60
	10.00	47	>51	>51	>51
	15.00	>51	>51	>51	>51
	20.00	>51	>51	>51	>51
	25.00	>51			

m [kg]		CMP			
	s	50S	50M	50L	63S
BSF202	2	7.2	8.1	9.0	8.5
BSBF: + 0.0 kg / BSHF: + 0.0 kg					



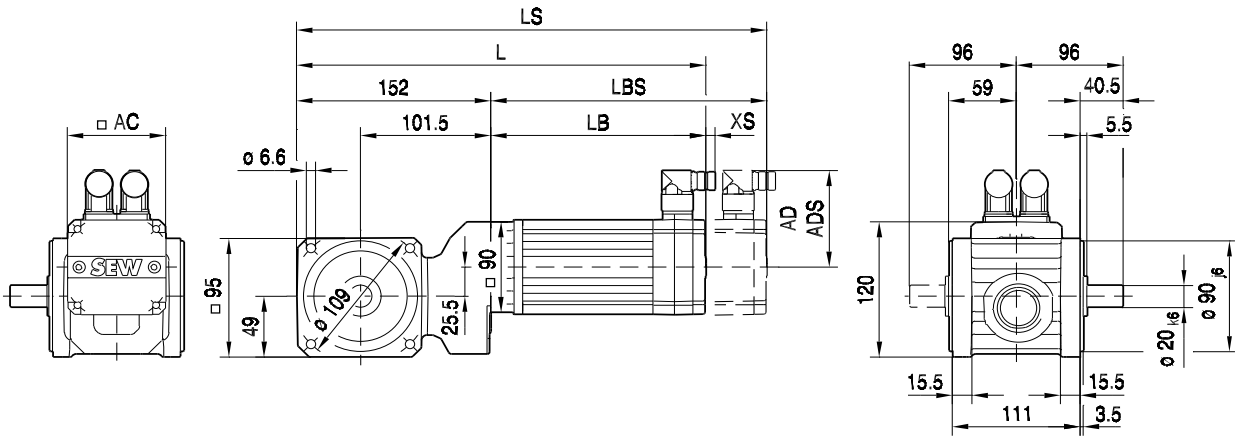
BS.F..CMP
BS.F..[mm]

CMP..				M1			M2;M4			M3;M5-6			φ		
	i	n_{epk} [1/min]	η [%]	a_0	a_1	a_2	a_0	a_1	a_2	a_0	a_1	a_2	[']	/R [']	/M [']
BSF202 2	3.00	4500	93.7	4.10	-0.011	77457	14.47	-0.020	66498	6.12	-0.013	75323	6	3	-
	4.00	4500	93.7	4.26	-0.014	76815	20.11	-0.028	60846	7.52	-0.017	73532	6	3	-
	6.00	4500	93.7	4.50	-0.019	75905	30.66	-0.042	51203	10.05	-0.024	70662	6	3	-
	8.00	4500	93.8	4.70	-0.022	75309	37.13	-0.052	46240	12.10	-0.029	68596	6	3	-
	10.00	4500	90.1	3.31	-0.057	47656	52.73	-0.146	26432	19.70	-0.083	39837	6	3	-
	15.00	4500	90.2	4.09	-0.076	46683	56.52	-0.189	28536	31.62	-0.125	34857	6	3	-
	20.00	4500	90.3	3.77	-0.089	46508	53.03	-0.210	32477	42.49	-0.161	30764	6	3	-
	25.00	4500	90.5	3.67	-0.098	46334	47.99	-0.221	36133	51.81	-0.191	27469	6	3	-

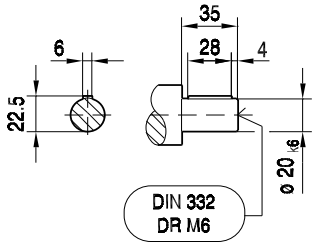
CMP..							c_T			F_{Ramax}			F_{Rapk}		
n_e = 1500	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	J_{GA} 10^{-4} [kgm^2]	BSF [Nm/']	BSBF [Nm/']	BSHF [Nm/']	BSF [N]	BSBF [N]	BSHF [N]	BSF [N]	BSBF [N]	BSHF [N]
BSF202 2	3.00	40	60	90	767	0.76	2.1	2.3	2.3	2680	2970	2600	4200	4200	4200
	4.00	40	60	90	775	0.47	2.2	2.4	2.4	3000	3330	2900	4200	4200	4200
	6.00	40	60	90	783	0.23	2.2	2.5	2.5	3500	3880	3390	4200	4200	4200
	8.00	40	60	90	875	0.14	2.3	2.5	2.5	3900	4200	3780	4200	4200	4200
	10.00	40	51	77	320	0.27	4.1	4.7	4.7	4150	4200	4020	4200	4200	4200
	15.00	40	51	77	327	0.14	4.2	4.8	4.7	4200	4200	4200	4200	4200	4200
	20.00	40	51	77	350	0.092	4.2	4.8	4.7	4200	4200	4200	4200	4200	4200
	25.00	40	51	77	280	0.066	4.2	4.8	4.8	4200	4200	4200	4200	4200	4200

BSF202..

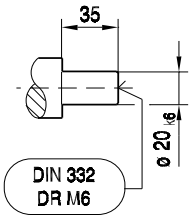
55 002 00 06



BSKF



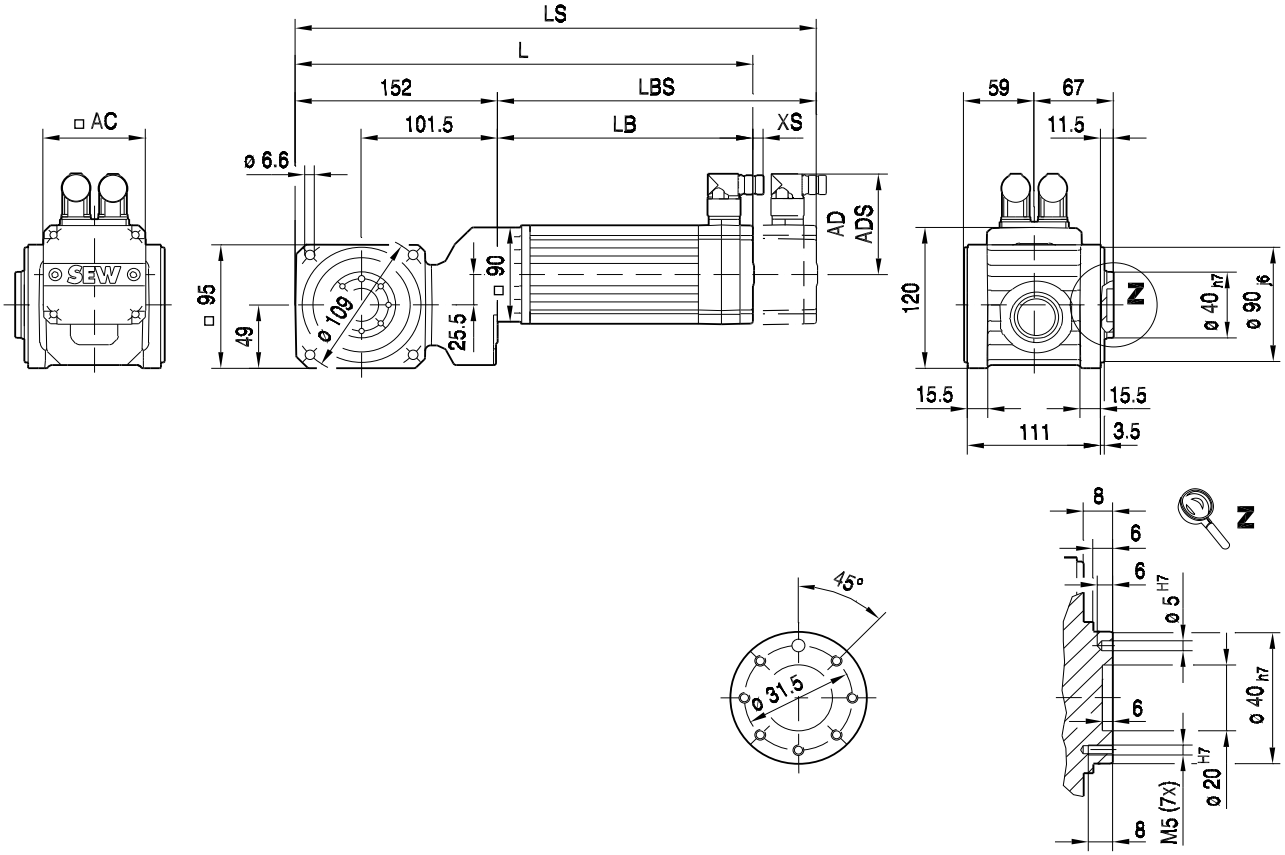
BSF



(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S				
AC	73	73	73	88				
AD	86	86	86	92				
ADS	86	86	86	92				
L	298	337	376	333				
LS	326	365	404	361				
LB	146	185	224	181				
LBS	175	214	253	210				
XS	18	18	18	14				

BSBF202..

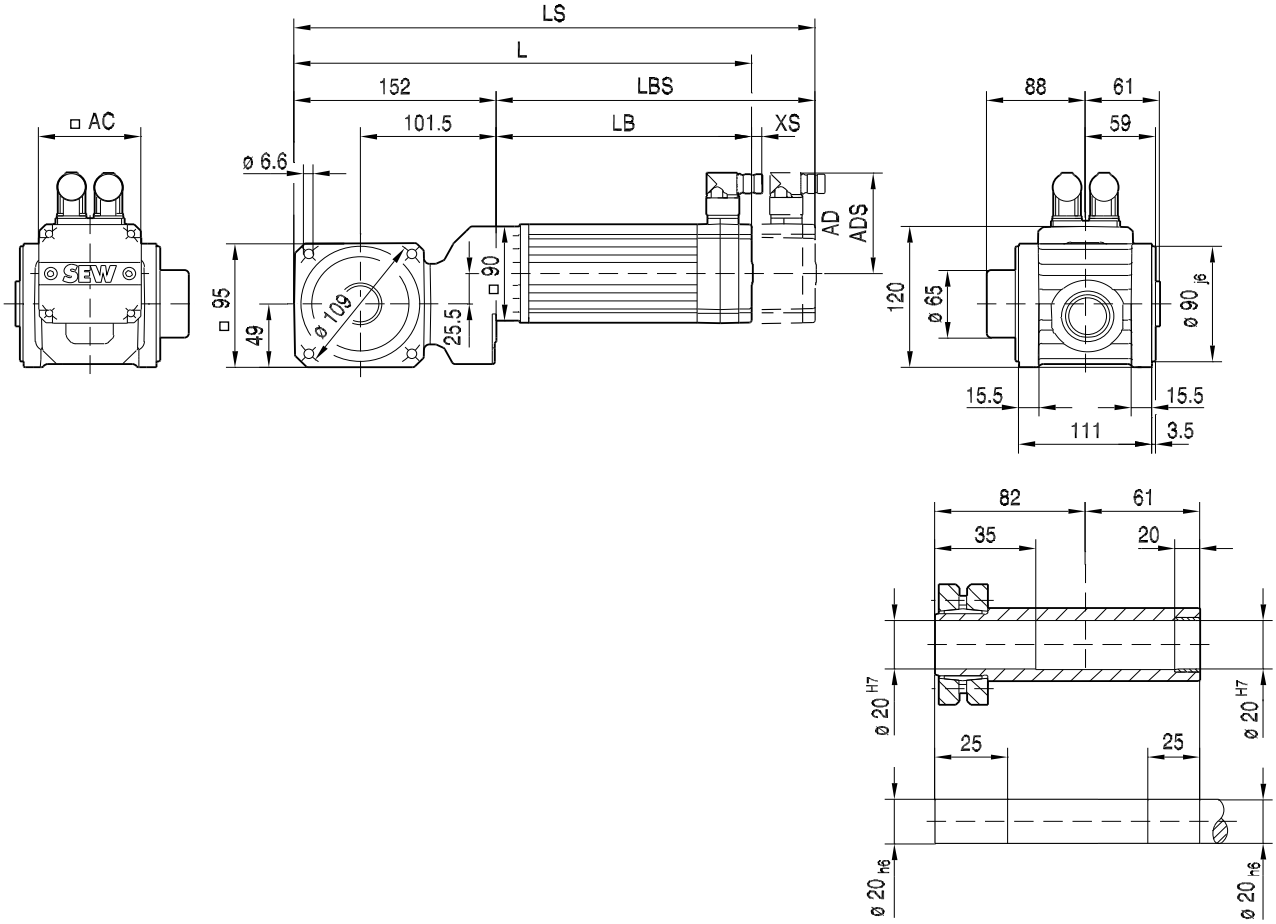
55 003 00 06



(→ 9)	CMP50S	CMP50M	CMP50L	CMP63S				
AC	73	73	73	88				
AD	86	86	86	92				
ADS	86	86	86	92				
L	298	337	376	333				
LS	326	365	404	361				
LB	146	185	224	181				
LBS	175	214	253	210				
XS	18	18	18	14				

BSHF202..

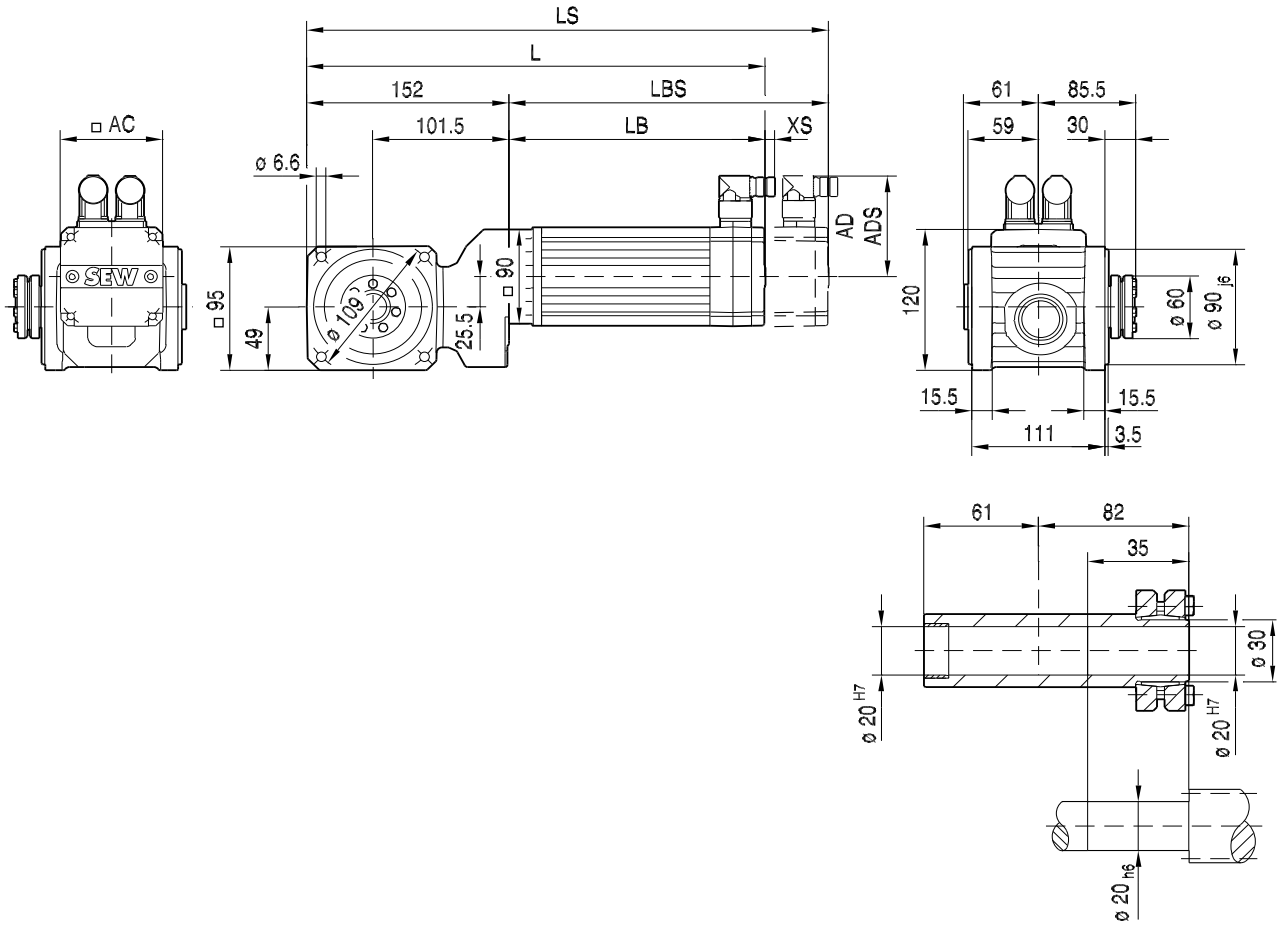
55 004 00 06



(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S				
AC	73	73	73	88				
AD	86	86	86	92				
ADS	86	86	86	92				
L	298	337	376	333				
LS	326	365	404	361				
LB	146	185	224	181				
LBS	175	214	253	210				
XS	18	18	18	14				

BSHF202/I..

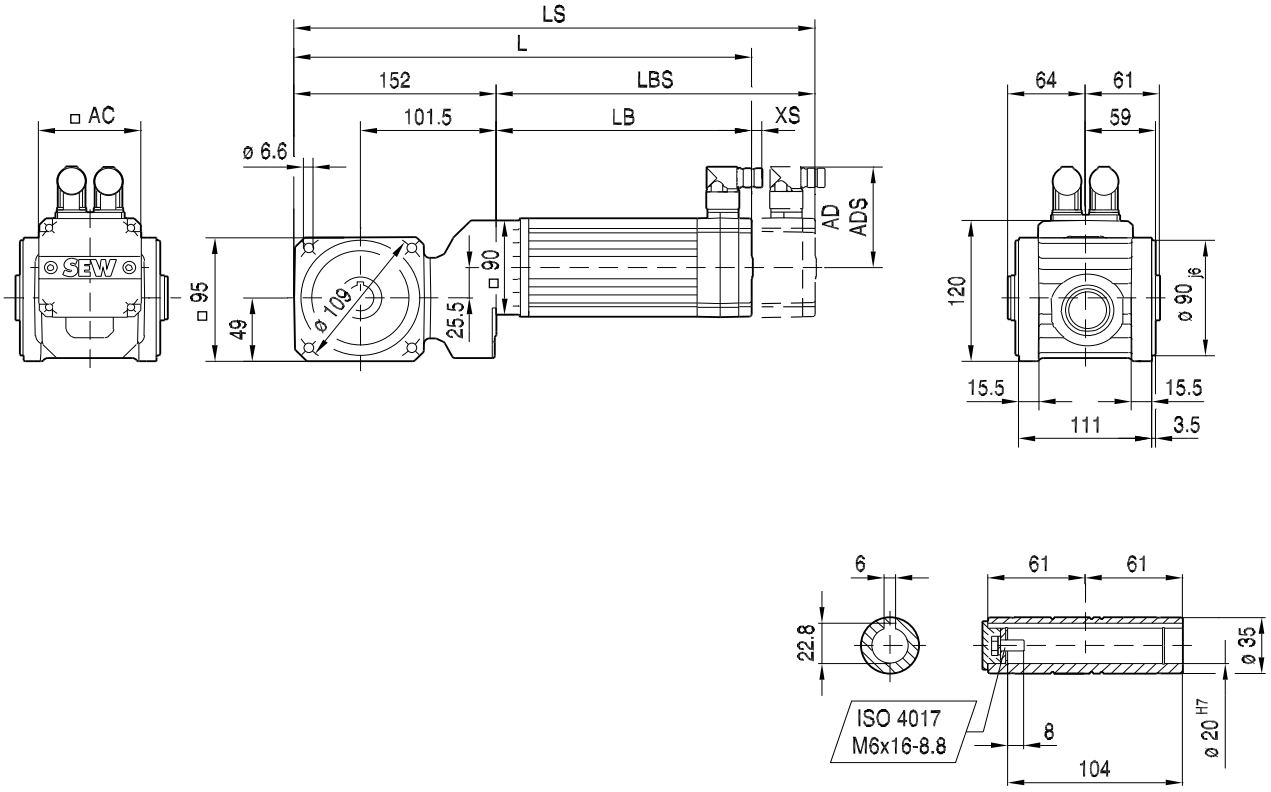
55 005 00 06



(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S				
AC	73	73	73	88				
AD	86	86	86	92				
ADS	86	86	86	92				
L	298	337	376	333				
LS	326	365	404	361				
LB	146	185	224	181				
LBS	175	214	253	210				
XS	18	18	18	14				

BSAF202..

55 015 00 07



(→ 📖 9)	CMP50S	CMP50M	CMP50L	CMP63S				
AC	73	73	73	88				
AD	86	86	86	92				
ADS	86	86	86	92				
L	298	337	376	333				
LS	326	365	404	361				
LB	146	185	224	181				
LBS	175	214	253	210				
XS	18	18	18	14				

9 Technische Hauptdaten der Servomotoren

Legende zu den Technischen Daten

n_N	Bemessungsdrehzahl
M_0	Stillstandsdrehmoment (thermisches Dauerdrehmoment bei kleinen Drehzahlen)
I_0	Stillstandsstrom
M_{pk}	Dynamisches Grenzmoment
I_{max}	Maximal zulässiger Motorstrom
M_{0VR}	Stillstandsdrehmoment mit Fremdlüfter
I_{0VR}	Stillstandsstrom mit Fremdlüfter
J_{mot}	Massenträgheitsmoment des Motors
J_{bmot}	Massenträgheitsmoment des Bremsmotors
M_{B1}	Standard-Bremsmoment
M_{B2}	Optionales Bremsmoment
W_{max1}	Maximal mögliche Bremsarbeit pro Bremsvorgang
W_{max2}	Maximal mögliche Bremsarbeit pro Bremsvorgang bei optionalem Bremsmoment
L_1	Induktivität zwischen Anschlussphase und Sternpunkt
R_1	Widerstand zwischen Anschlussphase und Sternpunkt
U_{p0} kalt	Polradspannung bei 1000 min^{-1}
m_{mot}	Masse des Motors
m_{bmot}	Masse des Bremsmotors

9.1 Technische Daten CMP-Motoren

Synchrone Servomotoren mit 400-V-Systemspannung

n_N min^{-1}	Motor	M_0 Nm	I_0 A	M_{pk} Nm	I_{max} A	M_{0VR} Nm	I_{0VR} A	m kg	J_{mot} $10^{-4}kgm^2$
2000	**CMP71S**	6.4	3.4	19.2	17	8.7	4.6	7	3.04
	CMP71M	9.4	5	30.8	26	13.7	7.3	8.4	4.08
	CMP71L	13.1	6.3	46.9	39	21	10.1	11.4	6.18
	CMP80S	13.4	6.9	42.1	33	18.5	9.5	12.8	8.78
	CMP80S*	13.4	6.9	27.5	14.9	18.5	9.5	12.8	8.78
	CMP80M	18.7	9.3	62.6	48	27	13.4	16.5	11.9
	CMP80M*	18.7	9.3	42.5	22.9	27	13.4	16.5	11.9
	CMP80L	27.5	12.5	107	72	44	20	21.4	18.1
	CMP100S	25.5	13.3	68.3	49	36	18.8	19.8	19.59
	CMP100M	31	14.7	108	69	47	22.3	24.8	26.49
	CMP100L	47	21.8	178.8	113	70	32.5	34.6	40.24
3000	**CMP40S**	0.5	1.2	1.9	6.1	–	–	1.3	0.1
	CMP40M	0.8	0.95	3.8	6.0	–	–	1.6	0.15
	CMP50S	1.3	0.96	5.2	5.1	1.7	1.25	2.3	0.42
	CMP50M	2.4	1.68	10.3	9.6	3.5	2.45	3.3	0.67
	CMP50L	3.3	2.2	15.4	13.6	4.8	3.2	4.1	0.92
	CMP50L*	3.3	2.2	14	11.6	4.8	3.2	4.1	0.92
	CMP63S	2.9	2.15	11.1	12.9	4	3	4.0	1.15
	CMP63M	5.3	3.6	21.4	21.6	7.5	5.1	5.7	1.92
	CMP63L	7.1	4.95	30.4	29.7	10.3	7.2	7.5	2.69
	CMP71S	6.4	4.9	19.2	25	8.7	6.7	7	3.04
	CMP71M	9.4	7.5	30.8	39	13.7	10.9	8.4	4.08
	CMP71L	13.1	9.4	46.9	58	21	15.1	11.4	6.18
	CMP80S	13.4	10	42.1	47	18.5	13.8	12.8	8.78
	CMP80S*	13.4	10	27.5	21.6	18.5	13.8	12.8	8.78
	CMP80M	18.7	13.4	62.6	69	27	19.3	16.5	11.9
	CMP80M*	18.7	13.4	42.5	33	27	19.3	16.5	11.9
	CMP80L	27.5	18.7	107	107	44	30	21.4	18.1
	CMP100S	25.5	19.6	68.3	73	36	27.5	19.8	19.34
	CMP100M	31	21.8	108	102	47	33	24.8	26.25
	CMP100L	47	32.3	178.8	167	70	48	34.6	40
4500	**CMP40S**	0.5	1.2	1.9	6.1	–	–	1.3	0.1
	CMP40M	0.8	0.95	3.8	6.0	–	–	1.6	0.15
	CMP50S	1.3	1.32	5.2	7.0	1.7	1.7	2.3	0.42
	CMP50M	2.4	2.3	10.3	13.1	3.5	3.35	3.3	0.67
	CMP50L	3.3	3.15	15.4	19.5	4.8	4.6	4.1	0.92
	CMP50L*	3.3	3.15	14	16.6	4.8	4.6	4.1	0.92
	CMP63S	2.9	3.05	11.1	18.3	4	4.2	4.0	1.15
	CMP63M	5.3	5.4	21.4	32.4	7.5	7.6	5.7	1.92
	CMP63L	7.1	6.9	30.4	41.4	10.3	10	7.5	2.69
	CMP71S	6.4	7.3	19.2	38	8.7	9.9	7	3.04
	CMP71M	9.4	10.9	30.8	57	13.7	15.9	8.4	4.08
	CMP71L	13.1	14.1	46.9	87	21	22.5	11.4	6.18
	CMP80S	13.4	15.3	42.1	73	18.5	21	12.8	8.78
	CMP80S*	13.4	15.3	27.5	33	18.5	21	12.8	8.78
	CMP80M	18.7	20.1	62.6	103	27	29	16.5	11.9
	CMP80M*	18.7	20.1	42.5	49.5	27	29	16.5	11.9
	CMP80L	27.5	27.8	107	159	44	44.5	21.4	18.1
	CMP100S	25.5	30	68.3	111	36	42.5	19.8	19.34
	CMP100M	31	33.1	108	154	–	–	24.8	26.25
	CMP100L	47	48.4	178.8	251	–	–	34.6	40

n_N min^{-1}	Motor	M_0 Nm	I_0 A	M_{pk} Nm	I_{max} A	M_{0VR} Nm	I_{0VR} A	m kg	J_{mot} $10^{-4}kgm^2$
6000	**CMP40S**	0.5	1.2	1.9	6.1	–	–	1.3	0.1
	CMP40M	0.8	1.1	3.8	6.9	–	–	1.6	0.15
	CMP50S	1.3	1.7	5.2	9.0	1.7	2.2	2.3	0.42
	CMP50M	2.4	3	10.3	17.1	3.5	4.4	3.3	0.67
	CMP50L	3.3	4.2	15.4	26	4.8	6.1	4.1	0.92
	CMP50L*	3.3	4.2	14	22.1	4.8	6.1	4.1	0.92
	CMP63S	2.9	3.9	11.1	23.4	4	5.4	4.0	1.15
	CMP63M	5.3	6.9	21.4	41.4	7.5	9.8	5.7	1.92
	CMP63L	7.1	9.3	30.4	55.8	10.3	13.5	7.5	2.69
	CMP71S	6.4	9.6	19.2	50	8.7	13.1	7	3.04
	CMP71M	9.4	14.7	30.8	76	13.7	21.5	8.4	4.08
	CMP71L	13.1	18.8	46.9	115	21	30	11.4	6.18
	CMP80S	13.4	20	42.1	95	18.5	27.5	12.8	8.78
	CMP80S*	13.4	20	27.5	43.2	18.5	27.5	12.8	8.78
	CMP80M	18.7	26.4	62.6	135	27	38	16.5	11.9
	CMP80M*	18.7	26.4	42.5	65	27	38	16.5	11.9
	CMP80L	27.5	37.6	107	215	–	–	21.4	18.1

Die mit * gekennzeichneten Motoren sind nur mit den im Folgenden aufgeführten Getrieben kombinierbar:

Motor	Getriebe
CMP50L	BSF202
CMP80S	F27, F37, K37, S47, W37
CMP80M	F47, K47, S57

n_N min^{-1}	Motor	L_1 mH	R_1 Ω	U_{p0}kalt V	m_{bmot} kg	J_{bmot} $10^{-4}kgm^2$	M_{B1} Nm	M_{B2} Nm
2000	**CMP71S**	33.5	3.48	128	9	3.44	7	14
	CMP71M	21.5	1.87	127	10.4	4.5	14	7
	CMP71L	16.2	1.2	142	13.4	6.6	14	7
	CMP80S	15.3	1.1	133	16.8	10.04	16	31
	CMP80S*	15.3	1.1	133	16.8	10.04	16	31
	CMP80M	10.5	0.69	136	20.5	13.16	31	16
	CMP80M*	10.5	0.69	136	20.5	13.16	31	16
	CMP80L	7.6	0.44	149	24.4	19.36	31	16
	CMP100S	8.5	0.44	130	22.8	21.34	24	47
	CMP100M	6.6	0.3	141	27.8	28.25	47	24
	CMP100L	4.15	0.169	145	37.6	42.82	47	24
3000	**CMP40S**	23	11.94	27.5	1.7	0.13	0.95	–
	CMP40M	46	19.93	56	2.0	0.18	0.95	–
	CMP50S	71	22.49	86	2.9	0.48	3.1	4.3
	CMP50M	38.5	9.96	90	3.9	0.73	4.3	3.1
	CMP50L	30.5	7.42	98	4.7	0.98	4.3	3.1
	CMP50L*	30.5	7.42	98	4.7	0.98	4.3	3.1
	CMP63S	36.5	6.79	90	5.0	1.49	7	9.3
	CMP63M	22	3.56	100	6.7	2.26	9.3	7
	CMP63L	14.2	2.07	100	8.5	3.03	9.3	7
	CMP71S	15.7	1.48	87.5	9	3.44	7	14
	CMP71M	9.7	0.81	85	10.4	4.5	14	7
	CMP71L	7.3	0.56	96	13.4	6.6	14	7
	CMP80S	7.2	0.54	91	16.8	10.04	16	31
	CMP80S*	7.2	0.54	91	16.8	10.04	16	31
	CMP80M	5	0.345	94	20.5	13.16	31	16
	CMP80M*	5	0.345	94	20.5	13.16	31	16
	CMP80L	3.35	0.21	99	24.4	19.36	31	16
	CMP100S	3.9	0.215	88	22.8	21.34	24	47
	CMP100M	3.05	0.142	95.5	27.8	28.25	47	24
	CMP100L	1.9	0.081	98	37.6	42	47	24
4500	**CMP40S**	23	11.94	27.5	1.7	0.13	0.95	–
	CMP40M	46	19.93	56	2.0	0.18	0.95	–
	CMP50S	37	11.61	62	2.9	0.48	3.1	4.3
	CMP50M	20.5	5.28	66	3.9	0.73	4.3	3.1
	CMP50L	14.6	3.57	68	4.7	0.98	4.3	3.1
	CMP50L*	14.6	3.57	68	4.7	0.98	4.3	3.1
	CMP63S	18.3	3.34	64	5.0	1.49	7	9.3
	CMP63M	9.8	1.48	67	6.7	2.26	9.3	7
	CMP63L	7.2	1.07	71	8.5	3.03	9.3	7
	CMP71S	7.1	0.72	59	9	3.44	7	14
	CMP71M	4.55	0.385	58	10.4	4.5	14	7
	CMP71L	3.25	0.24	64	13.4	6.6	14	7
	CMP80S	3.05	0.22	59	16.8	10.04	16	31
	CMP80S*	3.05	0.22	59	16.8	10.04	16	31
	CMP80M	2.25	0.148	63	20.5	13.16	31	16
	CMP80M*	2.25	0.148	63	20.5	13.16	31	16
	CMP80L	1.54	0.085	67	24.4	19.36	31	16
	CMP100S	1.68	0.086	58	22.8	21.34	24	47
	CMP100M	1.32	0.058	63	27.8	28.25	47	24
	CMP100L	0.84	0.038	65	37.6	42.82	47	24

n_N min^{-1}	Motor	L_1 mH	R_1 Ω	U_{p0}kalt V	m_{bmot} kg	J_{bmot} $10^{-4}kgm^2$	M_{B1} Nm	M_{B2} Nm
6000	**CMP40S**	23	11.94	27.5	1.7	0.13	0.95	–
	CMP40M	34	14.95	48.5	2.0	0.18	0.95	–
	CMP50S	22.5	7.11	48.5	2.9	0.48	3.1	4.3
	CMP50M	12	3.21	50.5	3.9	0.73	4.3	3.1
	CMP50L	8.2	1.91	51	4.7	0.98	4.3	3.1
	CMP50L*	8.2	1.91	51	4.7	0.98	4.3	3.1
	CMP63S	11.2	2.1	50	5.0	1.49	7	9.3
	CMP63M	5.9	0.92	52	6.7	2.26	9.3	7
	CMP63L	4	0.62	53	8.5	3.03	9.3	7
	CMP71S	4.15	0.395	45	9	3.44	7	14
	CMP71M	2.55	0.205	43.5	10.4	4.5	14	7
	CMP71L	1.84	0.145	48	13.4	6.6	14	7
	CMP80S	1.8	0.136	46	–	–	–	–
	CMP80S*	1.8	0.136	46	–	–	–	–
	CMP80M	1.3	0.087	48	–	–	–	–
	CMP80M*	1.3	0.087	48	–	–	–	–
	CMP80L	0.84	0.051	50	–	–	–	–

9.2 Technische Daten CMPZ-Motoren

Synchrone Servomotoren mit 400-V-Systemspannung

n_N	Motor	M_0	I_0	M_{pk}	I_{max}	M_{0VR}	I_{0VR}	m	J_{mot}
min^{-1}		Nm	A	Nm	A	Nm	A	kg	$10^{-4}kgm^2$
2000	**CMPZ71S**	6.4	3.4	19.2	17	8.7	4.6	8.6	9.32
	CMPZ71M	9.4	5	30.8	26	13.7	7.3	10	10.37
	CMPZ71L	13.1	6.3	46.9	39	21	10.1	13	12.47
	CMPZ80S	13.4	6.9	42.1	33	18.7	9.5	15.8	27.18
	CMPZ80S*	13.4	6.9	27.5	14.9	18.7	9.5	15.8	27.18
	CMPZ80M	18.7	9.3	62.6	48	27	13.4	19.5	30.3
	CMPZ80M*	18.7	9.3	42.5	22.9	27	13.4	19.5	30.3
	CMPZ80L	27.5	12.5	107	72	44	20	24.4	36.51
	CMPZ100S	25.5	13.3	68.3	49	36	18.8	24.2	79.76
	CMPZ100M	31	14.7	108	69	47	22.3	29.2	86.66
	CMPZ100L	47	21.8	178.8	113	70	32.5	39	100.41
3000	**CMPZ71S**	6.4	4.9	19.2	25	8.7	6.7	8.6	9.32
	CMPZ71M	9.4	7.5	30.8	39	13.7	10.9	10	10.37
	CMPZ71L	13.1	9.4	46.9	58	21	15.1	13	12.47
	CMPZ80S	13.4	10	42.1	47	18.5	13.8	15.8	27.18
	CMPZ80S*	13.4	10	27.5	21.6	18.5	13.8	15.8	27.18
	CMPZ80M	18.7	13.4	62.6	69	27	19.3	19.5	30.3
	CMPZ80M*	18.7	13.4	42.5	33	27	19.3	19.5	30.3
	CMPZ80L	27.5	18.7	107	107	44	30	24.4	36.51
	CMPZ100S	25.5	19.6	68.3	73	36	27.5	24.2	79.76
	CMPZ100M	31	21.8	108	102	47	33	29.2	86.66
	CMPZ100L	47	32.3	178.8	167	70	48	39	100.41
4500	**CMPZ71S**	6.4	7.3	19.2	38	8.7	9.9	8.6	9.32
	CMPZ71M	9.4	10.9	30.8	57	13.7	15.9	10	10.37
	CMPZ71L	13.1	14.1	46.9	87	21	22.5	13	12.47
	CMPZ80S	13.4	15.3	42.1	73	18.5	21	15.8	27.18
	CMPZ80S*	13.4	15.3	27.5	33	18.5	21	15.8	27.18
	CMPZ80M	18.7	20.1	62.6	103	27	29	19.5	30.3
	CMPZ80M*	18.7	20.1	42.5	49.5	27	29	19.5	30.3
	CMPZ80L	27.5	27.8	107	159	44	44.5	24.4	36.51
	CMPZ100S	25.5	30	68.3	111	36	42.5	24.2	79.76
	CMPZ100M	31	33.1	108	154	–	–	29.2	86.66
	CMPZ100L	47	48.4	178.8	251	–	–	39	100.41
6000	**CMPZ71S**	6.4	9.6	19.2	50	8.7	13.1	8.6	9.32
	CMPZ71M	9.4	14.7	30.8	76	13.7	21.5	10	10.37
	CMPZ71L	13.1	18.8	46.9	115	21	30	13	12.47
	CMPZ80S	13.4	20	42.1	95	18.5	27.5	15.8	27.18
	CMPZ80S*	13.4	20	27.5	43.2	18.5	27.5	15.8	27.18
	CMPZ80M	18.7	26.4	62.6	135	27	38	19.5	30.3
	CMPZ80M*	18.7	26.4	42.5	65	27	38	19.5	30.3
	CMPZ80L	27.5	37.6	107	215	–	–	24.4	36.51

Die mit * gekennzeichneten Motoren sind nur mit den im Folgenden aufgeführten Getrieben kombinierbar:

Motor	Getriebe
CMP50L	BSF202
CMP80S	F27, F37, K37, S47, W37
CMP80M	F47, K47, S57

n_N	Motor	L_1	R_1	U_{p0}kalt	$\Delta LB^{1)}$	m_{bmot}	J_{bmot}	M_{B1}	M_{B2}	$\Delta LBS^{2)}$
min^{-1}		mH	Ω	V	mm	kg	$10^{-4}kgm^2$	Nm		mm
2000	**CMPZ71S**	33.5	3.48	128	64.8	11.2	11.04	14	10	56.2
	CMPZ71M	21.5	1.87	127	64.8	12.6	12.09	20	14	56.2
	CMPZ71L	16.2	1.2	142	64.8	15.6	14.19	20	14	56.2
	CMPZ80S	15.3	1.1	133	77.5	20.8	30.95	28	20	60.5
	CMPZ80S*	15.3	1.1	133	77.5	20.8	30.95	28	20	60.5
	CMPZ80M	10.5	0.69	136	77.5	24.5	34.07	40	28	60.5
	CMPZ80M*	10.5	0.69	136	77.5	24.5	34.07	40	28	60.5
	CMPZ80L	7.6	0.44	149	77.5	29.4	40.28	40	28	60.5
	CMPZ100S	8.5	0.44	130	96.2	34.7	84.19	55	40	60.8
	CMPZ100M	6.6	0.3	141	96.2	39.7	91.1	80	55	60.8
	CMPZ100L	4.15	0.169	145	96.2	49.5	104.85	80	55	60.8
3000	**CMPZ71S**	15.7	1.48	87.5	64.8	11.2	11.04	14	10	56.2
	CMPZ71M	9.7	0.81	85	64.8	12.6	12.09	20	14	56.2
	CMPZ71L	7.3	0.56	96	64.8	15.6	14.19	20	14	56.2
	CMPZ80S	7.2	0.54	91	77.5	20.8	30.95	28	20	60.5
	CMPZ80S*	7.2	0.54	91	77.5	20.8	30.95	28	20	60.5
	CMPZ80M	5	0.345	94	77.5	24.5	34.07	40	28	60.5
	CMPZ80M*	5	0.345	94	77.5	24.5	34.07	40	28	60.5
	CMPZ80L	3.35	0.21	99	77.5	29.4	40.28	40	28	60.5
	CMPZ100S	3.9	0.215	88	96.2	34.7	84.19	55	40	60.8
	CMPZ100M	3.05	0.142	95.5	96.2	39.7	91.1	80	55	60.8
	CMPZ100L	1.9	0.081	98	96.2	49.5	104.85	80	55	60.8
4500	**CMPZ71S**	7.1	0.72	59	64.8	11.2	11.04	14	10	56.2
	CMPZ71M	4.55	0.385	58	64.8	12.6	12.09	20	14	56.2
	CMPZ71L	3.25	0.24	64	64.8	15.6	14.19	20	14	56.2
	CMPZ80S	3.05	0.22	59	77.5	20.8	30.95	28	20	60.5
	CMPZ80S*	3.05	0.22	59	77.5	20.8	30.95	28	20	60.5
	CMPZ80M	2.25	0.148	63	77.5	24.5	34.07	40	28	60.5
	CMPZ80M*	2.25	0.148	63	77.5	24.5	34.07	40	28	60.5
	CMPZ80L	1.54	0.085	67	77.5	29.4	40.28	40	28	60.5
	CMPZ100S	1.68	0.086	58	96.2	34.7	84.19	55	40	60.8
	CMPZ100M	1.32	0.058	63	96.2	39.7	91.1	80	55	60.8
	CMPZ100L	0.84	0.038	65	96.2	49.5	104.85	80	55	60.8
6000	**CMPZ71S**	4.15	0.395	45	64.8	11.2	11.04	14	10	56.2
	CMPZ71M	2.55	0.205	43.5	64.8	12.6	12.09	20	14	56.2
	CMPZ71L	1.84	0.145	48	64.8	15.6	14.19	20	14	56.2
	CMPZ80S	1.8	0.136	46	77.5	–	–	–	–	60.5
	CMPZ80S*	1.8	0.136	46	77.5	–	–	–	–	60.5
	CMPZ80M	1.3	0.087	48	77.5	–	–	–	–	60.5
	CMPZ80M*	1.3	0.087	48	77.5	–	–	–	–	60.5
	CMPZ80L	0.84	0.051	50	77.5	–	–	–	–	60.5

1) Längenunterschied von CMPZ..-Motor zum entsprechenden CMP..Motor

2) Längenunterschied von CMPZ../BY-Bremsmotor zum entsprechenden CMP../BP-Bremsmotor

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