



SEW
EURODRIVE

Aktuell K..9



Zweistufige Kegelradgetriebe K..19, K..29, K..39, K..49



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1 Produktbeschreibung

1.1 Eigenschaften und Merkmale

Die Kegelradgetriebe K..9 sind Winkelgetriebe, die analog zum Baukasten der 7er-Reihe ausgeführt sind. Als Ergänzung der vorhandenen K-Getriebe werden die Baugrößen K..19 bis K..49 als energieeffiziente, zweistufige Kegelradgetriebe für den unteren bis mittleren Drehmomentbereich angeboten. Die Getriebe verfügen eintriebsseitig über eine LIA-Flanschschnittstelle, an die eine Vielzahl von Motorausführungen und Adapter angebaut werden können. Die K..9-Getriebe sind mit DR..-, DRC..-, CMP..- und LSPM-Motoren und dem Adapterprogramm der 7er-Getriebe kombinierbar.

Die folgenden Merkmale wurden technisch in den K..9-Getrieben umgesetzt:

- Winkelgetriebe im Drehmomentbereich von 80 - 500 Nm
- 2-stufiges Kegelradgetriebe mit Hypoidverzahnung in der 2. Stufe
- LIA-Flanschschnittstelle für ein breites Anbauspektrum
- Kombinierbar mit DRC..-, DR..-, CMP..- und LSPM-Motoren
- Kombinierbar mit dem Adapterprogramm der 7er-Getriebe
- Verzahnungswirkungsgrad über 90% (bis 96 %) bei allen Übersetzungen
- Zweiteiliges Aluminium-Druckguss-Gehäuse für K..19/K..29
- Einteiliges Grauguss-Gehäuse für K..39/K..49

1.2 Design

Das Design erfüllt alle Ansprüche einer wirtschaftlichen Lösung und bietet alle Vorteile aus dem SEW-EURODRIVE-Baukastensystem.



1.3 Zielbranchen und Zielanwendungen

1

Die Getriebe K..9 eignen sich besonders für den Einsatz in den folgenden Bereichen:

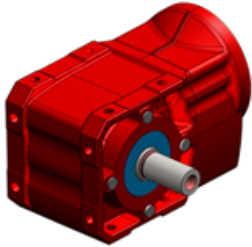
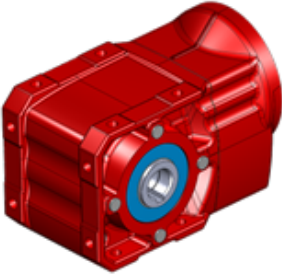
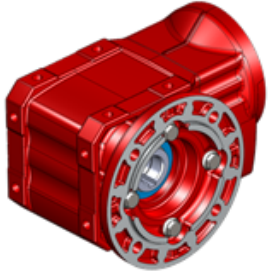
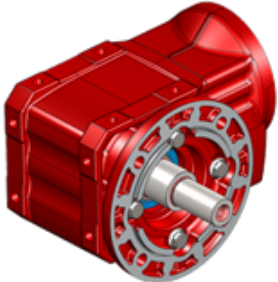
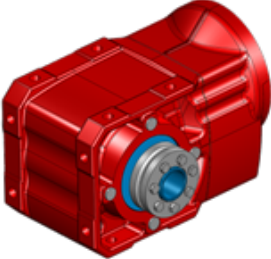
- Branchen:
 - Automobilindustrie
 - Transport und Logistik
 - Nahrungsmittelindustrie
 - Getränkeindustrie
 - Flughafenlogistik
 - ...
- Anwendungen:
 - Horizontalförderer, z. B. Rollen- und Gurtförderer
 - Vertikalförderer, z. B. Hubstation und Umsetzer
 - ...

1.4 Ausführungen

1.4.1 Getriebe K..19/K..29

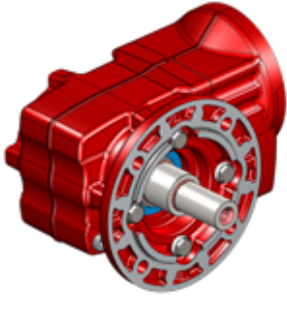
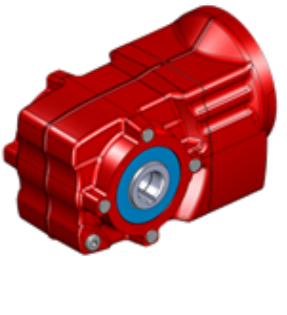
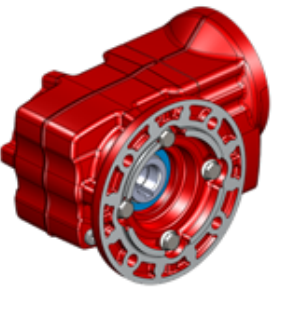
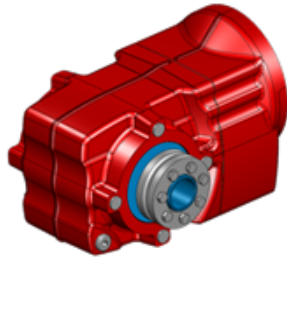
Die Getriebe K..19/K..29 sind als Fußgehäuse mit 3 Befestigungsleisten oder als Aufsteckgehäuse erhältlich:

Fußgehäuse mit 3 Befestigungsleisten

		
Vollwelle mit Passfeder K19.. K29..	Hohlwelle mit Passfedernut KA19B.. KA29B..	Hohlwelle mit Passfedernut und Flansch KAF19B.. KAF29B..
		
Vollwelle mit Passfeder und Flansch KF19B.. KF29B..	Hohlwelle mit Schrumpfscheibe Standardmäßig befindet sich die Schrumpfscheibe auf Lage B und wäre aus dieser Perspektive kaum sichtbar. Hier dargestellt ist die Schrumpfscheibe auf Lage A. KH19B.. KH29B..	Hohlwelle mit Schrumpfscheibe und Flansch Die Schrumpfscheibe befindet sich auf Lage B und ist aus dieser Perspektive nur leicht im Hintergrund sichtbar. KHF19B.. KHF29B..

Aufsteckgehäuse

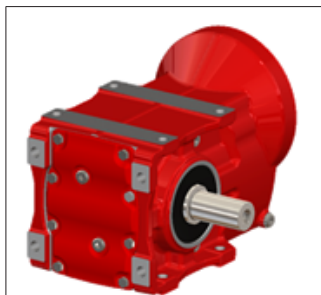
1

		
Vollwelle mit Passfeder und Flansch KF19.. KF29..	Hohlwelle mit Passfedernut KA19.. KA29..	Hohlwelle mit Passfedernut und Flansch KAF19.. KAF29..
	 14410341771	
Hohlwelle mit Schrumpfscheibe Standardmäßig befindet sich die Schrumpfscheibe auf Lage B und wäre aus dieser Perspektive kaum sichtbar. Hier dargestellt ist die Schrumpfscheibe auf Lage A. KH19.. KH29..	Hohlwelle mit Schrumpfscheibe und Flansch Die Schrumpfscheibe befindet sich auf Lage B und ist aus dieser Perspektive nur leicht im Hintergrund sichtbar. KHF19.. KHF29..	

1.4.2 Getriebe K..39/K..49

Die Getriebe K..39/K..49 sind ebenfalls als Fußgehäuse mit 3 Befestigungsleisten oder als Aufsteckgehäuse erhältlich:

Fußgehäuse mit 3 Befestigungsleisten

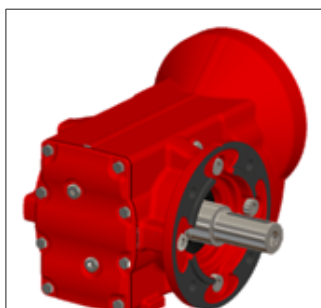


Vollwelle mit Passfeder

K39..

K49..

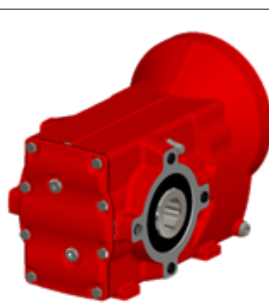
Aufsteckgehäuse



Vollwelle mit Passfeder und Flansch

KF39..

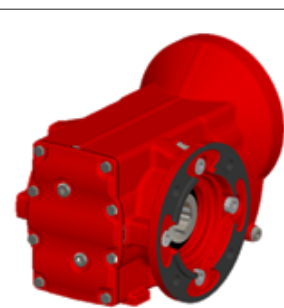
KF49..



Hohlwelle mit Passfedernut

KA39..

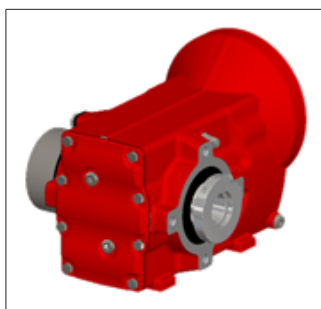
KA49..



Hohlwelle mit Passfedernut und Flansch

KAF39..

KAF49..



Hohlwelle mit TorqLOC®-Klemmverbindung

KT39..

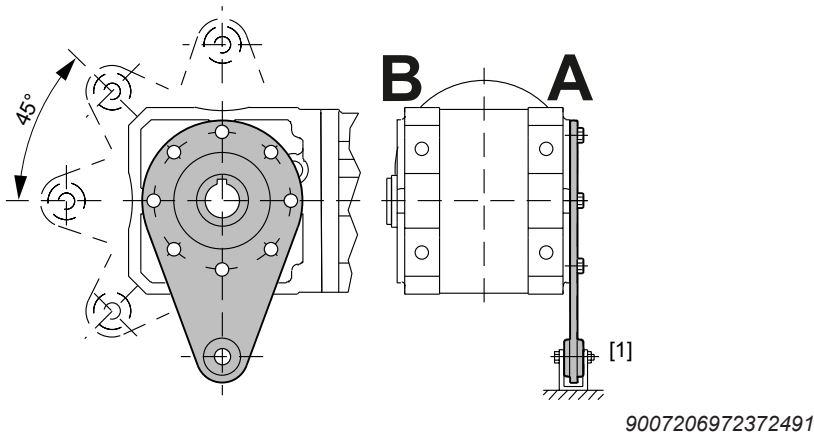
KT49..

1.5 Drehmomentstütze

Für die Aufsteckgetriebeausführungen mit Hohlwelle ist für alle Getriebegrößen optional eine Drehmomentstütze verfügbar. Die optionale Drehmomentstütze wird in der Typenbezeichnung mit /T gekennzeichnet.

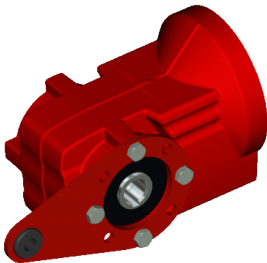
Die Drehmomentstütze wird an der Abtriebsseite des Getriebes montiert. Sie kann in 45° Schritten befestigt werden.

Die folgende Abbildung zeigt die Drehmomentabstützung bei den Kegelradgetrieben K..19 – K..49:



- [1] Buchse
- [A] Anschluss-Seite
- [B] Anschluss-Seite

Das folgende Bild zeigt als Beispiel ein Getriebe KA19/T mit montierter Drehmomentstütze:



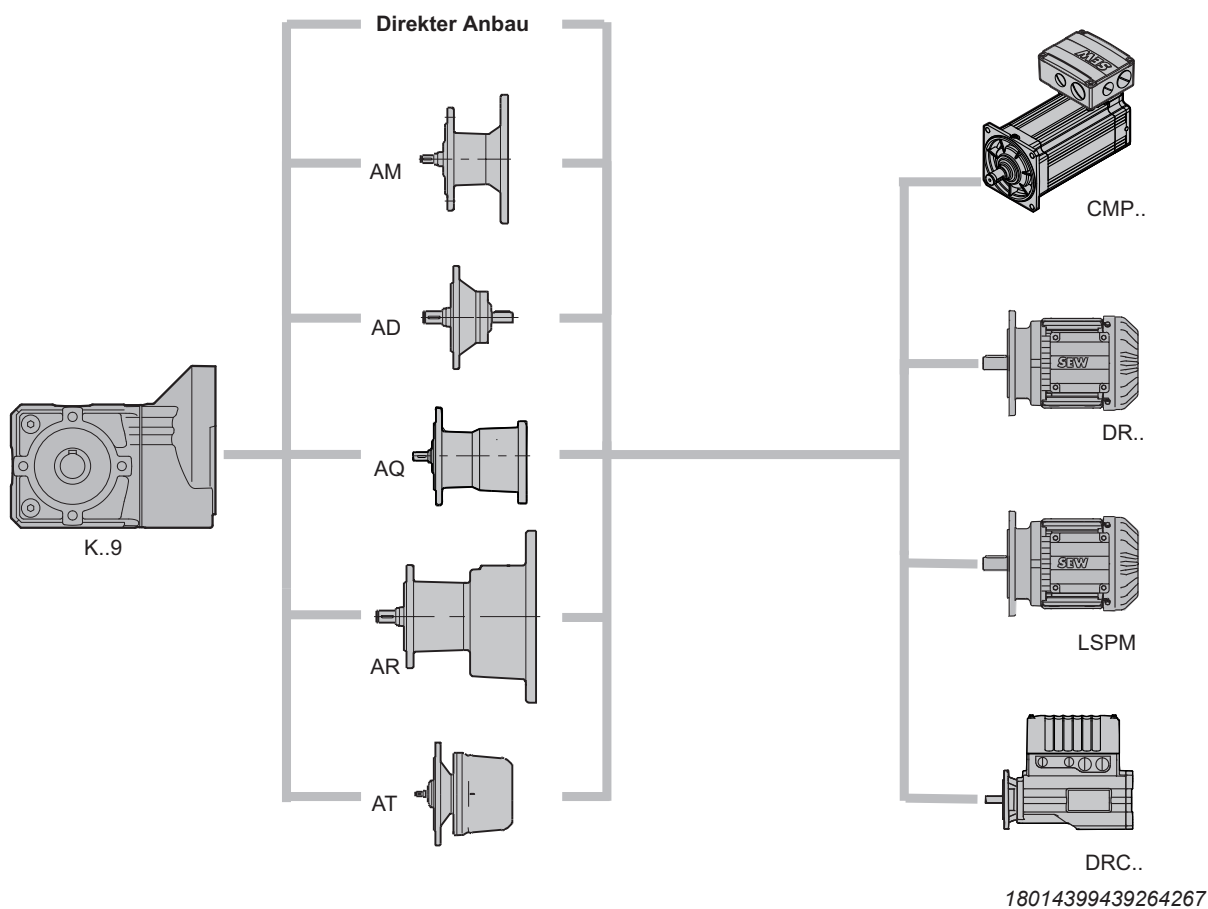
14751997323

Die Schrauben zur Befestigung der Drehmomentstütze können optional bezogen werden.

Getriebetyp	Schraubengröße	Anzahl der Schrauben	Sachnummer Beutel mit Schrauben
K..19	M8x20 – 8.8	4	18760570
K..29	M8x22 – 8.8	4	18760694
K..39	M10x30 – 8.8	4	18760597
K..49	M12x35 – 8.8	4	18760600

1.6 Übersicht der Motoren- und Getriebekombinationen

Folgende Abbildung zeigt mögliche Adapter- und Motorenkombinationen für die K..9-Getriebe:



2 Technische Daten

2.1 Technische Daten K..9

2

Die folgende Tabelle zeigt die technischen Daten für die Getriebe K..9:

Baureihe	K..19	K..29	K..39	K..49
M_{amax} in Nm	80	130	300	500
F_{Rmax} in N	4500	6000	7500	9000
Achshöhe in mm	50	63	80	100
Vollwelle in mm	20 x 40	25 x 50	30 x 60	35 x 70
Hohlwelle KA.. in mm	20	25 und 30 ¹⁾	30 / 35	35 / 40
Schrumpfscheibe KH.. in mm	20	25	--	--
TorqLOC® KT.. in mm	--	--	30 / 35	35 / 40
Flanschdurchmesser KF.. in mm	120 / 160	160 / 200	160	200
Übersetzung i	4.50 – 58.68	3.19 – 71.93	2.81 – 58.24	4.0 – 75.20
Abmaße L x B x H in mm	166 x 103 x 131	197 x 117 x 147	250 x 150 x 202	306 x 174 x 250

1) Für die Baugröße KA.29.. werden 2 Serienwellen mit Durchmesser 25 mm oder 30 mm angeboten. Die 30-mm-Hohlwelle benötigt eine niedrige Passfeder nach DIN 6885-3.

2.2 Schmierstofftabelle

Die Schmierstofftabelle auf der folgenden Seite zeigt die zugelassenen Schmierstoffe für Getriebe von SEW-EURODRIVE. Bitte beachten Sie die nachfolgende Legende zur Schmierstofftabelle.

2.2.1 Legende

Die folgende Tabelle zeigt die in der Schmierstofftabelle verwendeten Abkürzungen und Symbole und deren Bedeutung:

Abkürzung/ Symbol	Bedeutung
	Schmierstoff auf synthetischer Basis
CLP PG	Polyglykol (W-Getriebe USDA-H1-konform)
CLP HC	Synthetische Kohlenwasserstoffe
E	Esteröl (Wassergefährdungsklasse WGK 1)
HCE	Synthetische Kohlenwasserstoffe + Esteröl (USDA-H1-Zulassung)
HLP	Hydrauliköl
	Schmierstoff für die Nahrungsmittelindustrie (lebensmittelverträglich)
	Bio-Öl (Schmierstoff für Land-, Forst- und Wasserwirtschaft)

2.2.2 Schmierstofftabelle

01 751 09 04

2

	6)	DIN (ISO)	ISO, NLGI	Mobil®	Shell	bp	TEXACO	Castrol	Fuchs	TOTAL
R..		CLP (CC)	VG 220	Mobilgear 600 XP 220	Shell Omala S2 G 220	BP Energol GR-XP 220	Küboroil GEM 1-220 N	Tribol 1100/220	Renolin CLP 220	Carter EP 220
K37-187 (HK..)	-20	CLP PG	VG 220	Mobil Glycolyle 220	Shell Omala S4 WE 220	BP Energol SG-XP 220	Küboroil GEM 4-220 N	Tribol 800/220	Renolin PG 220	Carter SY 220
F..	-20	CLP HC	VG 220	Mobil SHC 630	Shell Omala S4 GX 220		Küboroil GEM 4-220 N	Tribol 1510/220	Renolin Unisyn CLP 220	Carter SH 220
	-40	CLP HC	VG 150	Mobil SHC 629	Shell Omala S4 GX 150		Küboroil GEM 4-150 N		Renolin Unisyn CLP 150	Carter SH 150
	-20	CLP (CC)	VG 150	Mobilgear 600 XP 150	Shell Omala S2 G 150	BP Energol GR-XP 150	Küboroil GEM 1-150 N	Tribol 1100/150	Renolin CLP 150	Carter EP 150
	-40	CLP HC	VG 68	Mobil SHC 626	Shell Omala S4 GX 68		Küboroil GEM 1-68 N		Renolin Unisyn CLP 68	
	-40	CLP HC	VG 32	Mobil SHC 624			Küboroil GEM 1-32 N		Renolin Unisyn OL 32	Dacnis SH 32
K..19 - K..49	Standard	CLP PG	VG 460				Küboroil GEM 6-460			
	-20	H1 PG	VG 460							
S.. (HS..)	Standard	CLP (CC)	VG 680	Mobilgear 600 XP 680	Shell Omala S2 G 680	BP Energol GR-XP 680	Küboroil GEM 1-680 N	Tribol 1100/680	Renolin SEW 680	Carter EP 680
	-20	CLP PG	VG 680	Mobil Glycolyle 680	Shell Omala S4 WE 680	BP Energol SG-XP 680	Küboroil GEM 4-680 N	Tribol 800/680	Renolin PG 680	
	-20	CLP HC	VG 460	Mobil SHC 634	Shell Omala S4 GX 460		Küboroil GEM 4-460 N		Renolin Unisyn CLP 460	Carter SH 460
	-40	CLP HC	VG 150	Mobil SHC 629	Shell Omala S4 GX 150		Küboroil GEM 4-150 N		Renolin Unisyn CLP 150	Carter SH 150
	-20	CLP (CC)	VG 150	Mobilgear 600 XP 150	Shell Omala S2 G 150	BP Energol GR-XP 150	Küboroil GEM 1-150 N	Tribol 1100/150	Renolin CLP 150	Carter EP 150
	-40	CLP PG	VG 220	Mobil Glycolyle 220	Shell Omala S4 WE 220	BP Energol SG-XP 220	Küboroil GEM 4-220 N	Tribol 800/220	Renolin PG 220	Carter SY 220
	-40	CLP HC	VG 68	Mobil SHC 626	Shell Omala S4 GX 68		Küboroil GEM 1-68 N		Renolin Unisyn CLP 68	
	-40	CLP HC	VG 32	Mobil SHC 624			Küboroil GEM 1-32 N		Renolin Unisyn OL 32	Dacnis SH 32
R..	-10	CLPHC NSF H1	VG 460				Küboroil 4UH1-460 N		Cassida Fluid GL 460	
K37-187 (HK..)	-20		VG 220				Küboroil 4UH1-220 N		Cassida Fluid GL 220	
F..	-40		VG 68				Küboroil 4UH1-68 N		Cassida Fluid HF 68	
S.. (HS..)	-20		VG 460				Küboroil CA2-460		Plantogear 460 S	
W.. (HW..)	Standard	SEW PG	VG 460				Küboroil SEW HT-460-5			
	-20	API GL5	SAE 75W90 (-VG 100)	Mobil Synth oil 75W90						
	-20	H1 PG	VG 460				Küboroil UH1 6-460			
PS.F..	Standard	CLP PG	VG 220				Küboroil GEM 6-220			
	-20	H1 PG	VG 460				Küboroil UH1 6-460			
	-40	CLP HC	VG 32	Mobil SHC 624						
PS.C..	Standard	CLP (CC)	VG 220	Mobilgear 600 XP 220						
	-20	DIN 51 818	NLGI 00	Mobilux EP 004			Küboroil UH1 14-151			
	-20	DIN 51 818	NLGI 1							
	-40	CLP HC	VG 32	Mobil SHC 624						
BS.F..	Standard	CLP PG	VG 220				Küboroil GEM 6-220			
	-20	H1 PG	VG 460				Küboroil UH1 6-460			

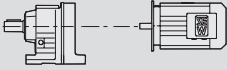
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HINWEIS

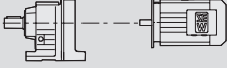


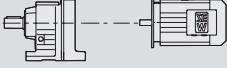
Diese Schmierstoffempfehlung stellt keine Freigabe im Sinne einer Garantie für die Qualität des vom jeweiligen Lieferanten angelieferten Schmierstoffs dar. Jeder Schmierstoffhersteller ist für die Qualität seines Produkts selbst verantwortlich. Die Schmierstofftabelle ist deshalb nicht verbindlich. Halten Sie ggf. Rücksprache mit SEW-EURODRIVE.

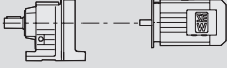
2.3 Auswahltabellen K..9 / DR..

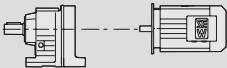
P_m = 0.12 kW									
n_a rpm	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg
1.5	615	908	9000	0.80	K KF KA KAF	49R37	DR	63S4	43
1.7	545	802	9000	0.90					
2.0	460	701	9000	1.10					
2.1	445	645	9000	1.10					
2.3	385	595	9000	1.30					
2.5	360	543	9000	1.35					
2.8	315	501	9000	1.60					
3.1	285	449	9000	1.75					
3.4	245	401	9000	2.0					
3.8	225	360	9000	2.2					
4.2	205	330	9000	2.4					
4.6	197	300	9000	2.5					
5.0	172	274	9000	2.9					
5.7	149	243	9000	3.3					
6.4	138	217	9000	3.6					
7.2	130	193	9000	3.9					
2.7	330	504	7500	0.90	K KF KA KAF	39R17	DR	63S4	24
3.0	315	454	7500	0.95					
3.5	265	399	7500	1.10					
3.8	250	365	7500	1.20					
4.4	205	312	7500	1.45					
4.6	200	299	7500	1.50					
5.4	172	254	7500	1.75					
5.9	154	234	7500	1.95					
6.6	140	210	7500	2.1					
7.3	128	189	7500	2.3					
7.9	120	174	7500	2.5					
8.8	104	156	7500	2.9					
9.7	96	142	7500	3.1	K KF KA KAF	29	DR	63S4	10
12	78	117	7500	3.8					
19	60	71.93	5190	2.2					
21	55	66.25	5200	2.4					
23	51	61.28	5210	2.6					
25	46	54.89	5230	2.8					
27	42	50.35	5240	3.1	K KF KA KAF	19	DR	63S4	8.5
32	36	42.87	5260	3.6					
24	49	58.68	4460	1.45					
26	45	53.88	4480	1.55					
28	41	49.69	4500	1.70					
31	37	44.48	4500	1.85					
34	34	40.63	4500	2.00					
40	28	34.29	4500	2.2					
43	26	31.74	4500	3.0					
47	24	29.29	4500	2.5					
47	24	29.14	4500	3.3					
51	23	27.16	4500	2.7					
51	22	26.88	4500	3.6					
57	20	24.06	4460	4.0					
63	18	21.98	4340	4.4					
74	15	18.55	4120	5.2					
87	13	15.84	3920	6.1					
94	12	14.69	3830	6.6					
109	11	12.70	3660	7.6					
117	9.8	11.84	3580	8.0					
134	8.6	10.32	3430	8.9					
144	8.0	9.58	3370	7.9					

P_m = 0.18 kW

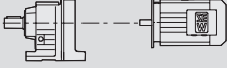
n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
2.4	595	543	9000	0.85	K KF KA KAF	49R37	DR	63M4	43
2.6	530	501	9000	0.95					
2.9	475	449	9000	1.05					
3.3	415	401	9000	1.20					
3.7	380	360	9000	1.30					
4.0	345	330	9000	1.45					
4.4	325	300	9000	1.55					
4.8	285	274	9000	1.70					
5.4	250	243	9000	1.95					
6.1	230	217	9000	2.2					
6.8	210	193	9000	2.4					
7.5	190	176	9000	2.6	K KF KA KAF	39R17	DR	63M4	24
8.7	158	152	9000	3.2					
11	133	125	9000	3.8					
4.2	335	312	7500	0.90					
4.4	325	299	7500	0.90					
5.2	280	254	7500	1.05					
5.6	250	234	7500	1.20					
6.3	225	210	7500	1.30					
7.0	205	189	7500	1.45					
7.6	195	174	7500	1.55					
8.4	171	156	7500	1.75					
9.3	157	142	7500	1.90	K KF KA KAF	29	DR	63M4	10
11	128	117	7500	2.3					
18	81	75	7500	3.6					
18	94	71.93	5090	1.40					
20	86	66.25	5110	1.50					
22	80	61.28	5130	1.65					
24	71	54.89	5160	1.80					
26	66	50.35	5170	2.00					
31	56	42.87	5200	2.3					
34	51	38.90	5220	2.6					
36	48	36.96	5220	2.5					
37	47	35.83	5230	2.8	K KF KA KAF	19	DR	63M4	8.5
40	43	33.15	5240	3.0					
44	39	30.11	5110	2.9					
44	39	29.69	5130	3.4					
48	35	27.23	5010	3.7					
53	32	24.91	4840	3.4					
22	76	58.68	4280	0.90					
24	70	53.88	4330	1.00					
27	65	49.69	4360	1.10					
30	58	44.48	4410	1.20					
32	53	40.63	4440	1.25					
38	45	34.29	4480	1.45	K KF KA KAF	19	DR	63M4	8.8
42	41	31.74	4500	1.95					
45	38	29.29	4500	1.60					
45	38	29.14	4500	2.1					
49	35	27.16	4490	1.70					
49	35	26.88	4500	2.3					
55	31	24.06	4410	2.6					
60	29	21.98	4300	2.8					
71	24	18.55	4090	3.3					
83	21	15.84	3900	3.9					
90	19	14.69	3820	4.2	K KF KA KAF	19	DR	63M4	8.0
104	17	12.70	3650	4.8					
111	15	11.84	3580	5.1					
128	13	10.32	3430	5.7					
138	12	9.58	3380	5.0					
163	11	8.09	3200	7.6					
191	9.0	6.91	3050	8.9					

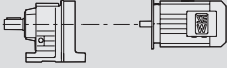
P_m = 0.25 kW									
n_a rpm	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg
3.2	610	401	9000	0.80	K KF KA KAF	49R37	DR	63L4	44 45 41 46
3.6	550	360	9000	0.90					
3.9	505	330	9000	1.00					
4.3	470	300	9000	1.05					
4.7	420	274	9000	1.20					
5.3	370	243	9000	1.35					
6.0	335	217	9000	1.50					
6.7	305	193	9000	1.65					
7.4	275	176	9000	1.80					
8.6	230	152	9000	2.2					
10	194	125	9000	2.6	K KF KA KAF	39R17	DR	63L4	25 26 24 25
13	151	99	9000	3.3					
5.6	365	234	7500	0.80					
6.2	330	210	7500	0.90					
6.9	300	189	7500	1.00					
7.5	275	174	7500	1.10					
8.3	245	156	7500	1.20					
9.2	225	142	7500	1.35					
11	185	117	7500	1.60					
17	117	75	7500	2.5					
17	138	75.20	9000	3.4	K KF KA KAF	49	DR	63L4	35 37 32 37
19	129	70.19	9000	3.4					
22	107	58.24	7500	2.8					
26	91	49.69	7500	3.3					
18	132	71.93	4970	1.00					
20	122	66.25	5000	1.05					
21	113	61.28	5030	1.15					
24	101	54.89	5070	1.30					
26	92	50.35	5090	1.40					
30	79	42.87	5130	1.65					
33	71	38.90	5170	1.80	K KF KA KAF	29	DR	63L4	11 12 10 11
35	68	36.96	5170	1.80					
36	66	35.83	5180	2.00					
39	61	33.15	5170	2.1					
43	55	30.11	4980	2.1					
44	55	29.69	5020	2.4					
48	50	27.23	4900	2.6					
52	46	24.91	4740	2.4					
56	43	23.19	4690	3.0					
59	41	22.08	4580	2.6					
65	37	19.99	4500	3.5	K KF KA KAF	19	DR	63L4	9.2 9.5 8.7 9.1
29	82	44.48	4240	0.85					
32	75	40.63	4300	0.90					
38	63	34.29	4380	1.00					
41	58	31.74	4400	1.35					
44	54	29.29	4410	1.15					
45	54	29.14	4430	1.50					
48	50	27.16	4330	1.20					
48	49	26.88	4430	1.60					
54	44	24.06	4300	1.80					
59	40	21.98	4200	2.00	K KF KA KAF	19	DR	63L4	9.2 9.5 8.7 9.1
70	34	18.55	4010	2.4					
82	29	15.84	3840	2.8					
88	27	14.69	3760	3.0					
102	23	12.70	3600	3.4					
110	22	11.84	3530	3.6					
126	19	10.32	3390	4.0					
136	18	9.58	3360	3.6					
161	15	8.09	3190	5.4					
188	13	6.91	3040	6.3					
203	12	6.41	2960	6.8	K KF KA KAF	19	DR	63L4	9.2 9.5 8.7 9.1
235	10	5.54	2830	7.9					
252	9.5	5.16	2770	8.4					

P_m = 0.37 kW									
n_a rpm	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg
5.0	600	274	9000	0.85	K KF KA KAF	49R37	DRS	71S4	46 47 43 48
5.7	530	243	9000	0.95					
6.4	475	217	9000	1.05					
7.2	430	193	9000	1.15					
7.8	390	176	9000	1.30					
9.1	330	152	9000	1.50					
11	275	125	9000	1.80					
14	215	99	9000	2.3	K KF KA KAF	39R17	DRS	71S4	26 28 25 27
8.8	345	156	7500	0.85					
9.7	315	142	7500	0.95					
12	260	117	7500	1.15					
18	166	75	7500	1.75	K KF KA KAF	49	DRS	71S4	37 39 34 39
18	193	75.20	9000	2.5					
20	180	70.19	9000	2.5					
23	154	60.27	9000	3.2					
24	149	58.24	7500	2.0	K KF KA KAF	39	DRS	71S4	24 25 23 24
28	127	49.69	7500	2.4					
32	111	43.45	7500	2.7					
33	106	41.28	7500	2.8					
38	93	36.22	7500	3.2					
25	141	54.89	4940	0.90	K KF KA KAF	29	DRS	71S4	13 14 12 13
27	129	50.35	4980	1.00					
32	110	42.87	5000	1.15					
37	95	36.96	4860	1.30					
46	77	30.11	4650	1.50					
46	76	29.69	4720	1.70					
51	70	27.23	4620	1.85					
55	64	24.91	4450	1.70					
60	59	23.19	4440	2.2					
62	57	22.08	4330	1.85					
69	51	19.99	4270	2.5					
85	42	16.29	4050	3.1					
47	75	29.29	4050	0.80	K KF KA KAF	19	DRS	71S4	11 11 11 11
51	70	27.16	3990	0.85					
57	62	24.06	4030	1.30					
63	56	21.98	3940	1.40					
74	47	18.55	3780	1.70					
87	41	15.84	3640	1.95					
94	38	14.69	3570	2.1					
109	33	12.70	3430	2.5					
117	30	11.84	3370	2.6					
134	26	10.32	3240	2.9					
144	25	9.58	3230	2.6					
171	21	8.09	3080	3.9					
200	18	6.91	2930	4.5					
215	16	6.41	2870	4.9					
249	14	5.54	2740	5.6					
267	13	5.16	2680	6.0					
307	12	4.50	2570	6.9					

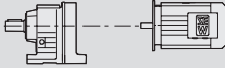
P_m = 0.55 kW									
n_a rpm	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg
7.7	595	176	9000	0.85	K KF KA KAF	49R37	DRS	71M4	47 48 44 49
9.0	505	152	9000	1.00					
11	420	125	9000	1.20					
14	330	99	9000	1.50					
18	255	75	7500	1.15	K KF KA KAF	39R17	DRS	71M4	28 29 27 28
18	255	75	7500	1.15					
18	255	75	7500	1.15					
18	255	75	7500	1.15					

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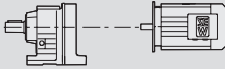
P_m = 0.55 kW									
n_a rpm	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg
18	290	75.20	9000	1.65	K KF KA KAF	49	DRS	71M4	38 40 36 40
19	270	70.19	9000	1.65					
23	230	60.27	9000	2.2					
26	200	52.94	9000	2.4					
27	194	50.29	9000	2.6					
31	172	44.44	9000	2.9					
36	147	37.98	9000	3.4	K KF KA KAF	39	DRS	71M4	25 26 24 25
23	220	58.24	7500	1.35					
27	192	49.69	7500	1.55					
31	168	43.45	7500	1.80					
33	159	41.28	7500	1.90					
38	140	36.22	7500	2.1					
44	119	30.72	7500	2.5					
49	107	27.73	7410	2.8					
56	94	24.40	7170	3.2					
59	89	23.04	7070	3.4	K KF KA KAF	29	DRS	71M4	14 15 14 14
37	143	36.96	4410	0.85					
45	116	30.11	4290	1.00					
46	115	29.69	4400	1.15					
50	105	27.23	4330	1.25					
55	96	24.91	4160	1.15					
59	90	23.19	4200	1.45					
62	85	22.08	4060	1.25					
68	77	19.99	4060	1.70					
84	63	16.29	3880	2.1					
101	52	13.47	3700	2.5					
114	46	11.94	3590	2.8					
137	38	9.90	3510	2.9					
159	33	8.53	3360	3.7	K KF KA KAF	19	DRS	71M4	12 13 12 12
57	93	24.06	3730	0.85					
62	85	21.98	3670	0.95					
73	72	18.55	3560	1.10					
86	61	15.84	3450	1.30					
93	57	14.69	3390	1.40					
107	49	12.70	3280	1.65					
115	46	11.84	3230	1.75					
132	40	10.32	3120	1.90					
142	37	9.58	3150	1.70					
168	31	8.09	3010	2.6					
197	27	6.91	2880	3.0					
212	25	6.41	2820	3.2					
246	21	5.54	2700	3.7					
263	20	5.16	2640	4.0					
302	17	4.50	2540	4.6					

P_m = 0.75 kW									
n_a rpm	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg
12	545	125	9000	0.90	K KF KA KAF	49R37	DRN	80M4	51 53 48 53
15	430	99	9000	1.15					
19	330	75	7500	0.90					
24	295	60.27	9000	1.65					
27	260	52.94	9000	1.90	K KF KA KAF	39R17	DRN	80M4	32 34 31 33
29	250	50.29	9000	2.0					
32	220	44.44	9000	2.3					
38	189	37.98	9000	2.6					
41	173	34.81	9000	2.9					
47	152	30.55	8960	3.3					
50	144	28.95	8840	3.5					

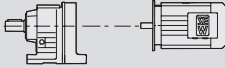
P_m = 0.75 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
29	245	49.69	7500	1.20	K KF KA KAF	39	DRN	80M4	30
33	215	43.45	7500	1.40					
35	205	41.28	7500	1.45					
40	180	36.22	7390	1.65					
47	153	30.72	7140	1.95					
52	138	27.73	6990	2.2					
59	121	24.40	6790	2.5					
62	115	23.04	6700	2.6					
73	98	19.62	6440	3.0					
81	89	17.83	6290	3.3					
93	77	15.44	6060	3.6					
58	124	24.91	3780	0.90	K KF KA KAF	29	DRN	80M4	19
62	115	23.19	3870	1.15					
65	110	22.08	3720	0.95					
72	99	19.99	3780	1.30					
88	81	16.29	3630	1.60					
107	67	13.47	3490	1.95					
121	59	11.94	3400	2.2					
146	49	9.90	3370	2.2					
157	46	9.17	3190	2.8					
169	42	8.53	3230	2.9					
193	37	7.48	3030	3.3					
207	35	6.95	3050	3.2					
78	92	18.55	3260	0.85	K KF KA KAF	19	DRN	80M4	17
91	79	15.84	3190	1.00					
98	73	14.69	3150	1.10					
113	63	12.70	3060	1.25					
122	59	11.84	3020	1.35					
140	51	10.32	2940	1.50					
178	40	8.09	2870	2.00					
208	34	6.91	2760	2.3					
225	32	6.41	2700	2.5					
260	28	5.54	2600	2.9					
279	26	5.16	2550	3.1					
320	22	4.50	2450	3.6					

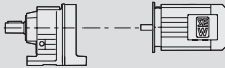
P_m = 1.1 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
24	435	60.27	9000	1.15	K KF KA KAF	49 49 49 49	DRN DRN DRN DRN	90S4 90S4 90S4 90S4	48 50 45 50
27	380	52.94	9000	1.30					
29	360	50.29	9000	1.40					
33	320	44.44	9000	1.55					
38	270	37.98	8800	1.80					
42	250	34.81	8660	2.00					
48	220	30.55	8430	2.3					
50	205	28.95	8340	2.4					
57	183	25.34	8100	2.7					
64	165	22.83	7900	3.0					
73	145	20.03	7660	3.5					
29	355	49.69	6810	0.85	K KF KA KAF	39 39 39 39	DRN DRN DRN DRN	90S4 90S4 90S4 90S4	36 38 35 37
33	310	43.45	6760	0.95					
35	295	41.28	6740	1.00					
40	260	36.22	6660	1.15					
47	220	30.72	6520	1.35					
52	200	27.73	6420	1.50					
60	176	24.40	6290	1.70					
63	166	23.04	6230	1.80					
74	142	19.62	6040	2.1					
82	129	17.83	5920	2.2					
94	111	15.44	5740	2.5					
108	97	13.44	5560	2.8					
114	92	12.73	5760	2.7					
120	87	12.09	5680	2.9					
137	77	10.61	5480	3.7					

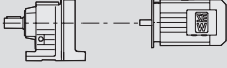
P_m = 1.1 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
73	144	19.99	3360	0.90	K KF KA KAF	29	DRN	90S4	25
89	118	16.29	3290	1.10					
108	97	13.47	3210	1.35					
122	86	11.94	3150	1.50					
147	71	9.90	3210	1.55					
159	66	9.17	2990	1.95					
171	62	8.53	3100	2.00					
195	54	7.48	2870	2.3					
209	50	6.95	2940	2.2					
253	42	5.75	2800	2.7					
285	37	5.10	2710	3.0					
115	92	12.70	2760	0.85	K KF KA KAF	19	DRN	90S4	23
123	85	11.84	2740	0.90					
141	74	10.32	2690	1.00					
180	58	8.09	2720	1.35					
211	50	6.91	2620	1.60					
227	46	6.41	2580	1.75					
263	40	5.54	2490	2.0					
282	37	5.16	2440	2.2					
323	32	4.50	2360	2.5					

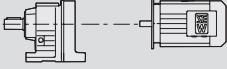
P_m = 1.5 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
28	515	52.94	8280	0.95	K KF KA KAF	49 49 49 49	DRN DRN DRN DRN	90L4 90L4 90L4 90L4	51 53 48 53
29	490	50.29	8260	1.00					
33	435	44.44	8200	1.15					
38	370	37.98	8080	1.35					
42	340	34.81	7990	1.45					
48	295	30.55	7850	1.65					
50	280	28.95	7780	1.75					
58	245	25.34	7610	2.0					
64	220	22.83	7470	2.2					
73	196	20.03	7280	2.6					
83	173	17.67	7090	2.9	K KF KA KAF	39 39 39 39	DRN DRN DRN DRN	90L4 90L4 90L4 90L4	39 41 38 40
93	154	15.67	6900	3.2					
109	131	13.38	6650	3.6					
40	355	36.22	5840	0.85					
48	300	30.72	5830	1.00					
53	270	27.73	5800	1.10					
60	235	24.40	5740	1.25					
63	225	23.04	5700	1.35					
74	192	19.62	5600	1.55					
82	175	17.83	5520	1.65					
95	151	15.44	5390	1.85					
109	132	13.44	5260	2.0					
115	125	12.73	5560	2.0					
121	119	12.09	5490	2.2					
138	104	10.61	5310	2.7					
162	88	9.00	5080	3.4					
180	80	8.12	4950	3.8					
90	160	16.29	2910	0.80	K KF KA KAF	29 29 29 29	DRN DRN DRN DRN	90L4 90L4 90L4 90L4	28 29 27 28
108	132	13.47	2890	1.00					
122	117	11.94	2860	1.10					
159	90	9.17	2780	1.45					
171	84	8.53	2940	1.45					
195	73	7.48	2690	1.70					
210	68	6.95	2820	1.65					
254	56	5.75	2690	2.00					
287	50	5.10	2620	2.2					
373	38	3.92	2440	3.3					
458	31	3.19	2310	3.5					

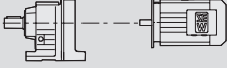
P_m = 2.2 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
38	550	37.98	6820	0.90					
42	500	34.81	6840	1.00					
47	440	30.55	6840	1.15					
50	415	28.95	6830	1.20					
57	365	25.34	6780	1.35					
64	330	22.83	6720	1.50	K	49	DRN	100LS4	55
72	290	20.03	6620	1.70	KF	49	DRN	100LS4	57
82	255	17.67	6510	1.95	KA	49	DRN	100LS4	53
93	225	15.67	6400	2.2	KAF	49	DRN	100LS4	58
108	194	13.38	6220	2.4					
128	165	11.37	6450	3.0					
139	151	10.42	6310	3.2					
159	132	9.14	6090	3.8					
59	350	24.40	4770	0.85					
63	330	23.04	4800	0.90					
74	280	19.62	4820	1.05					
81	255	17.83	4820	1.10					
94	220	15.44	4790	1.25					
108	195	13.44	4730	1.40	K	39	DRN	100LS4	43
137	154	10.61	5040	1.85	KF	39	DRN	100LS4	45
161	130	9.00	4860	2.3	KA	39	DRN	100LS4	42
178	118	8.12	4740	2.6	KAF	39	DRN	100LS4	44
203	104	7.15	4600	2.9					
215	98	6.75	4530	3.1					
252	83	5.75	4350	3.3					
278	76	5.22	4240	3.4					
320	66	4.52	4080	3.7					
368	57	3.94	3930	3.8					

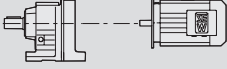
P_m = 3.0 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
48	600	30.55	5690	0.85					
50	565	28.95	5740	0.90					
57	495	25.34	5820	1.00					
64	445	22.83	5860	1.10					
73	390	20.03	5860	1.25					
82	345	17.67	5840	1.45	K	49	DRN	100L4	63
93	305	15.67	5800	1.60	KF	49	DRN	100L4	64
109	260	13.38	5710	1.80	KA	49	DRN	100L4	60
128	220	11.37	6160	2.2	KAF	49	DRN	100L4	65
140	200	10.42	6050	2.3					
159	180	9.14	5860	2.8					
168	170	8.66	5790	2.9					
192	149	7.58	5600	3.4					
213	134	6.83	5460	3.7					
82	350	17.83	4010	0.85					
94	300	15.44	4090	0.90					
108	260	13.44	4120	1.00					
137	205	10.61	4720	1.35					
162	177	9.00	4580	1.70	K	39	DRN	100L4	50
179	160	8.12	4490	1.90	KF	39	DRN	100L4	52
204	141	7.15	4380	2.1	KA	39	DRN	100L4	49
216	133	6.75	4320	2.3	KAF	39	DRN	100L4	51
253	113	5.75	4170	2.4					
279	103	5.22	4080	2.5					
322	89	4.52	3940	2.7					
370	77	3.94	3800	2.8					
518	55	2.81	3480	3.1					

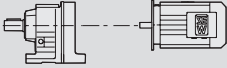
P_m = 4.0 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
64	595	22.83	4780	0.85					
73	520	20.03	4920	0.95					
83	460	17.67	5010	1.10					
93	405	15.67	5060	1.20					
109	345	13.38	5080	1.35					
129	295	11.37	5810	1.65	K	49	DRN	112M4	72
141	270	10.42	5720	1.75	KF	49	DRN	112M4	73
160	235	9.14	5580	2.1	KA	49	DRN	112M4	69
169	225	8.66	5520	2.2	KAF	49	DRN	112M4	74
193	198	7.58	5360	2.5					
214	178	6.83	5240	2.8					
244	156	5.99	5080	3.2					
277	138	5.29	4930	3.5					
312	122	4.69	4780	3.8					
163	230	9.00	4240	1.30					
180	210	8.12	4180	1.40					
205	187	7.15	4100	1.60	K	39	DRN	112M4	60
217	176	6.75	4060	1.70	KF	39	DRN	112M4	61
255	150	5.75	3950	1.85	KA	39	DRN	112M4	59
280	136	5.22	3880	1.90	KAF	39	DRN	112M4	60
324	118	4.52	3760	2.0					
372	103	3.94	3650	2.1					
521	73	2.81	3370	2.3					

P_m = 5.5 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
93	560	15.67	3950	0.85					
109	480	13.38	4130	1.00					
160	325	9.14	5160	1.50					
169	310	8.66	5130	1.60	K	49	DRN	132S4	83
193	270	7.58	5020	1.85	KF	49	DRN	132S4	85
214	245	6.83	4930	2.0	KA	49	DRN	132S4	80
244	215	5.99	4810	2.3	KAF	49	DRN	132S4	85
276	190	5.29	4690	2.6					
312	169	4.69	4570	2.8					
365	144	4.00	4410	3.1					

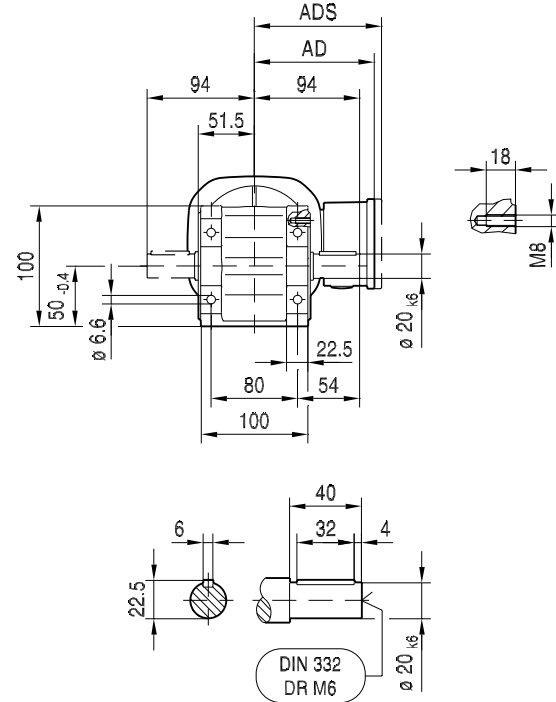
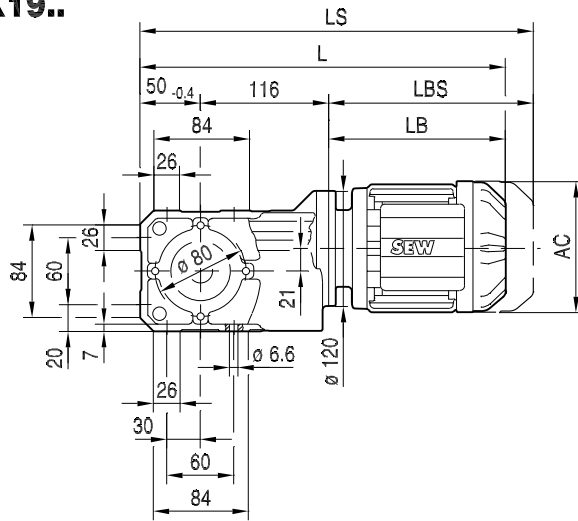
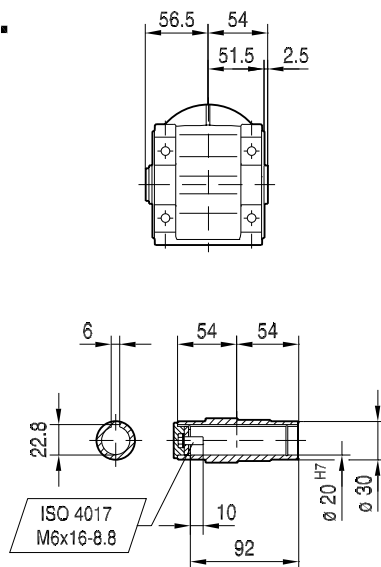
P_m = 7.5 kW

n _a rpm	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg
161	445	9.14	4610	1.10					
169	420	8.66	4600	1.20					
194	365	7.58	4560	1.35	K	49	DRN	132M4	100
215	330	6.83	4510	1.50	KF	49	DRN	132M4	105
245	290	5.99	4440	1.70	KA	49	DRN	132M4	98
278	255	5.29	4370	1.90	KAF	49	DRN	132M4	105
313	225	4.69	4280	2.0					
367	195	4.00	4170	2.2					

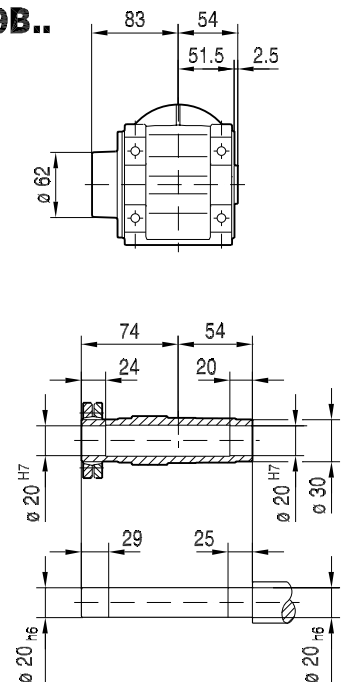
2.4 Maßblätter K..9 / DR..

33 008 00 15

K19..

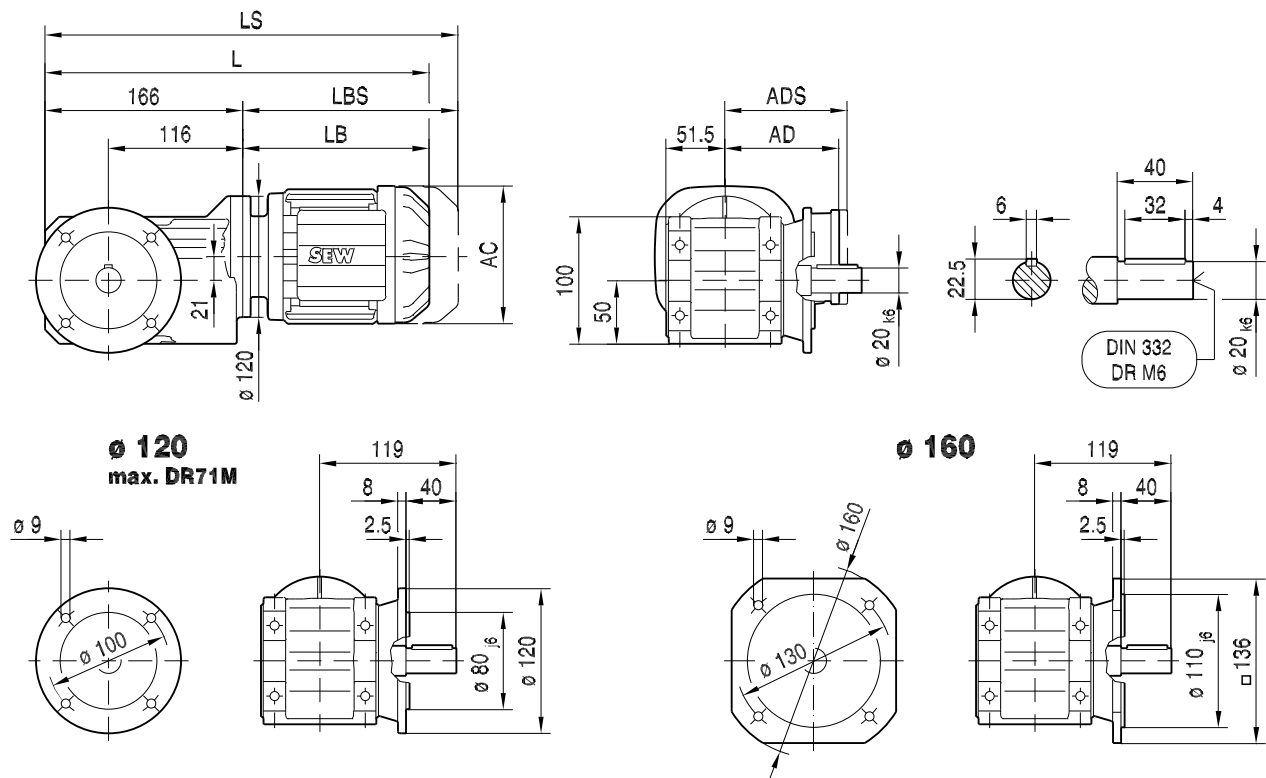
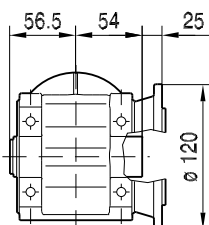
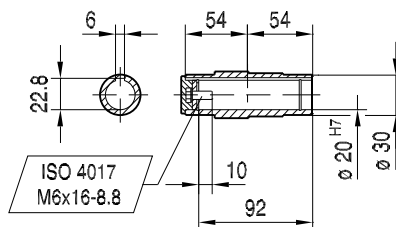
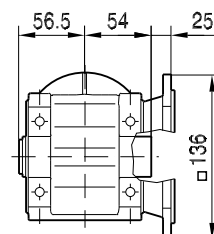
**KA19B..**

KH19B..



	DR63..	DR71S	DR71M	DRN80M	DRN90S			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	357	368	393	448	449			
LS	412	436	461	529	543			
LB	191	202	227	282	283			
LBS	246	270	295	363	377			

33 009 00 15

KF19B..**KAF19B..** **$\varnothing 120$
max. DR71M** **$\varnothing 160$** 

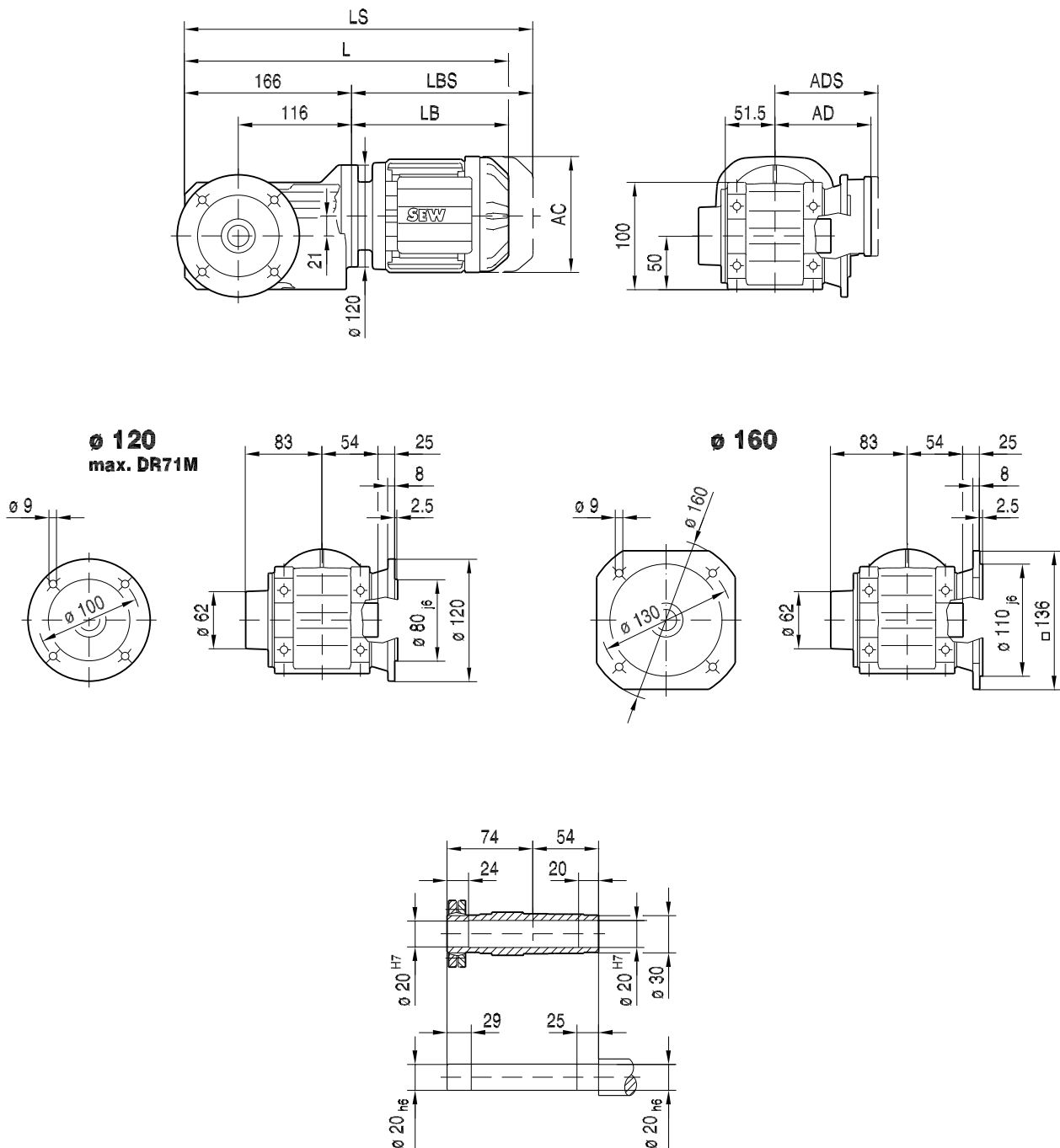
	DR63..	DR71S	DR71M	DRN80M	DRN90S			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	357	368	393	448	449			
LS	412	436	461	529	543			
LB	191	202	227	282	283			
LBS	246	270	295	363	377			

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KHF19B..

33 010 00 15

2

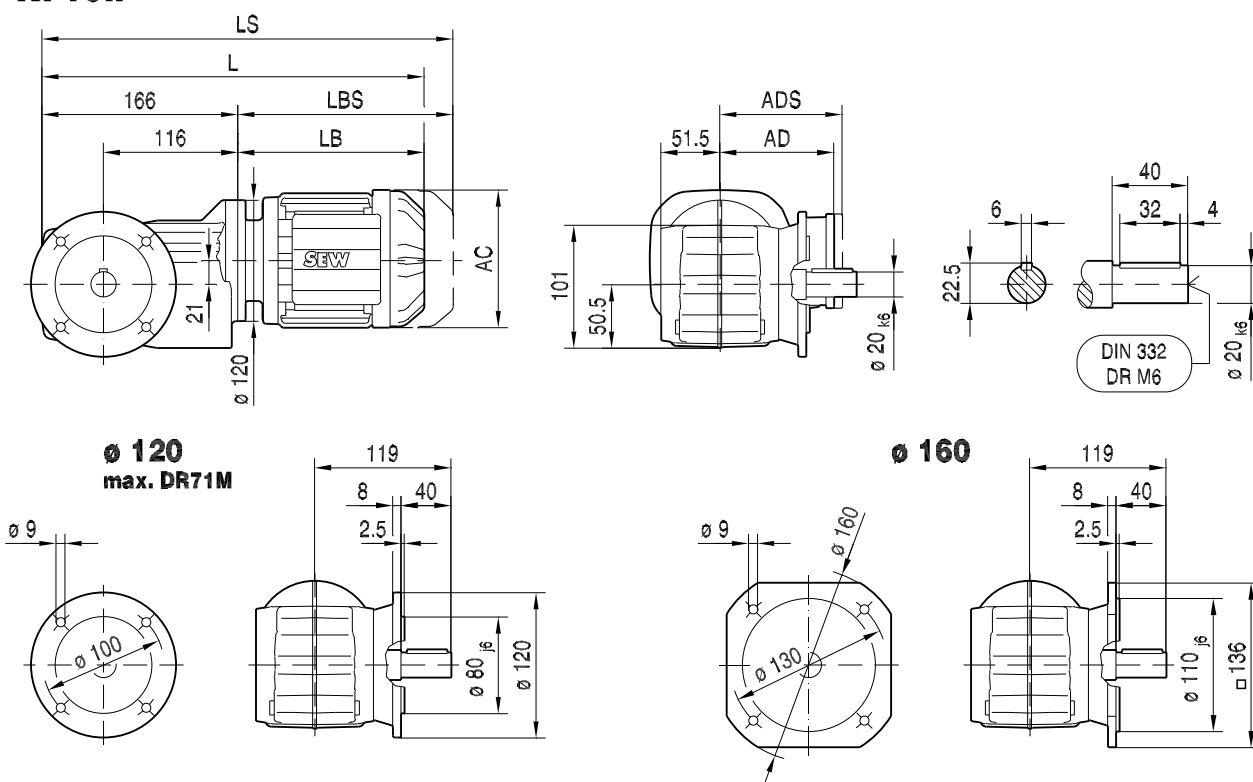


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	DR63..	DR71S	DR71M	DRN80M	DRN90S			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	357	368	393	448	449			
LS	412	436	461	529	543			
LB	191	202	227	282	283			
LBS	246	270	295	363	377			

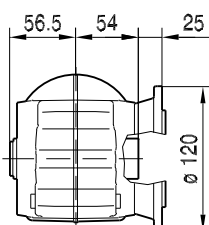
33 011 00 15

KF19..

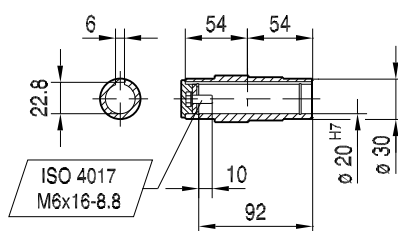
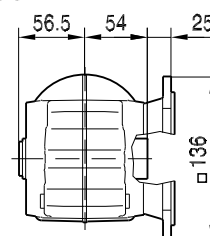


KAF19..

$\phi 120$
max. DR71M



$\phi 160$

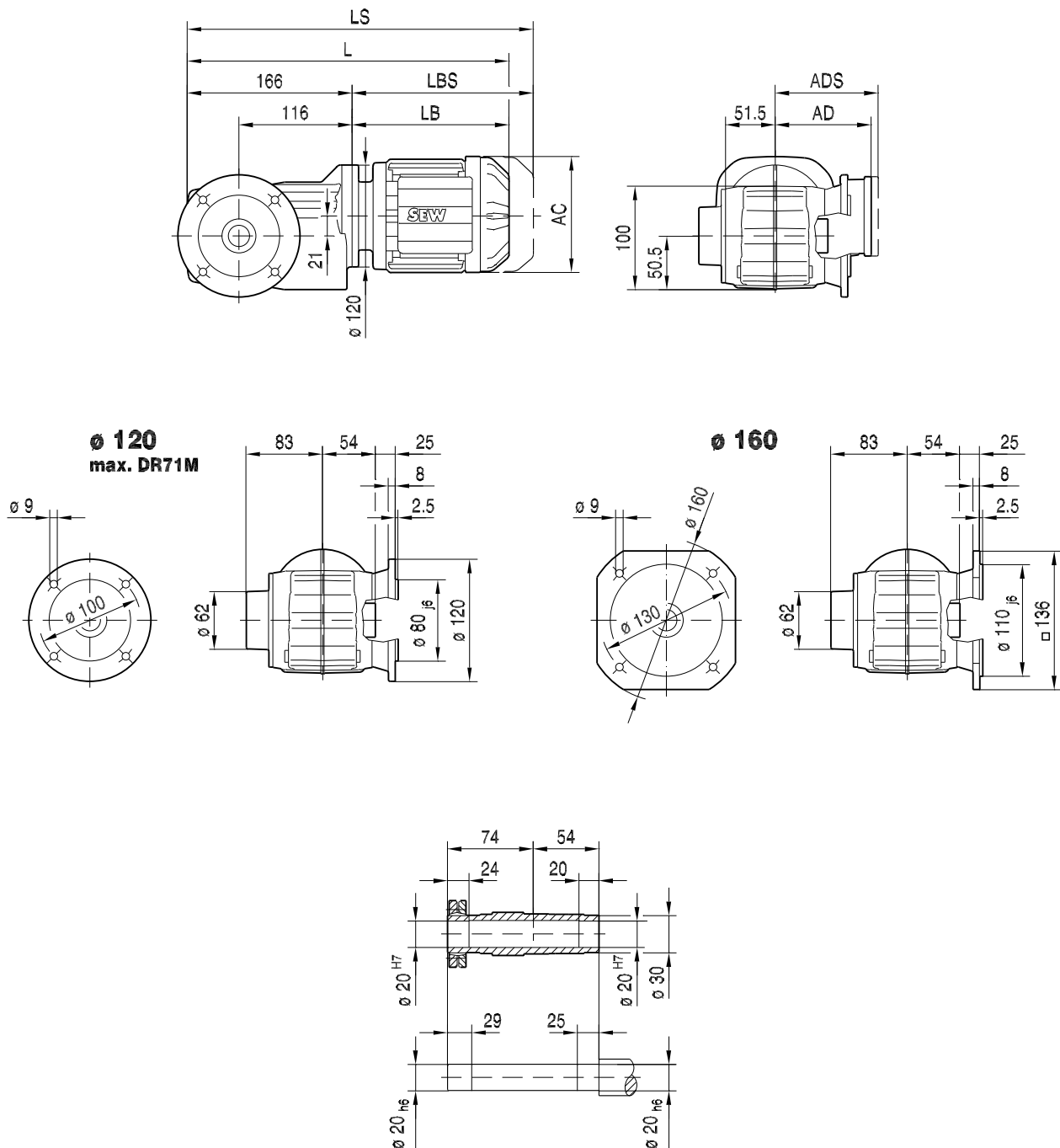


	DR63..	DR71S	DR71M	DRN80M	DRN90S			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	357	368	393	448	449			
LS	412	436	461	529	543			
LB	191	202	227	282	283			
LBS	246	270	295	363	377			

KHF19..

33 013 00 15

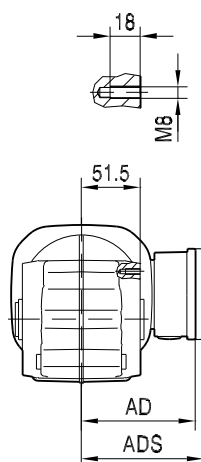
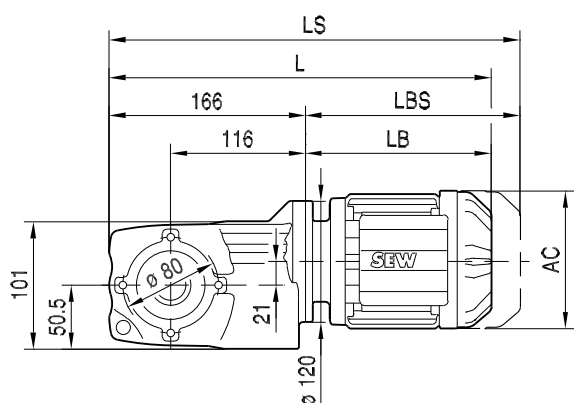
2



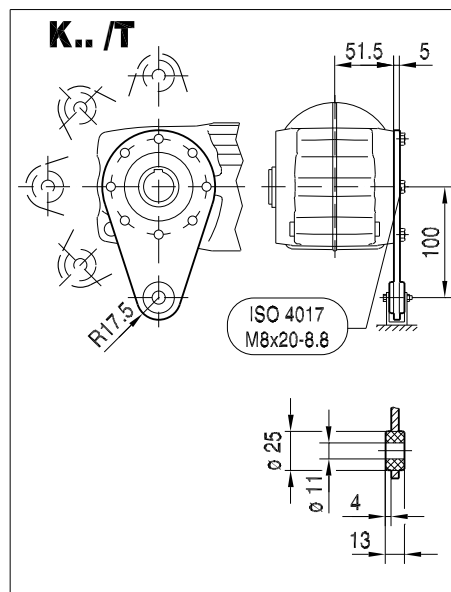
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	DR63..	DR71S	DR71M	DRN80M	DRN90S			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	357	368	393	448	449			
LS	412	436	461	529	543			
LB	191	202	227	282	283			
LBS	246	270	295	363	377			

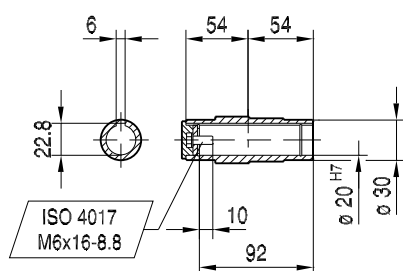
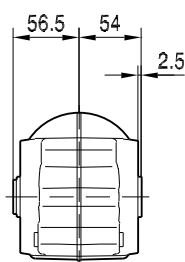
KA19..



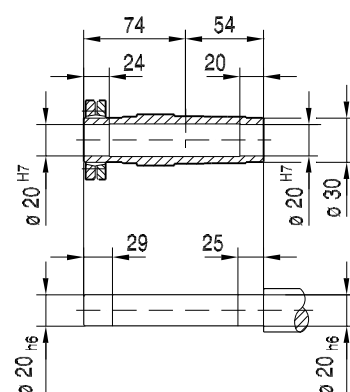
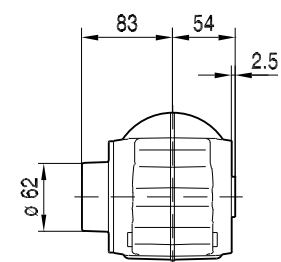
33 014 00 15



KA19..



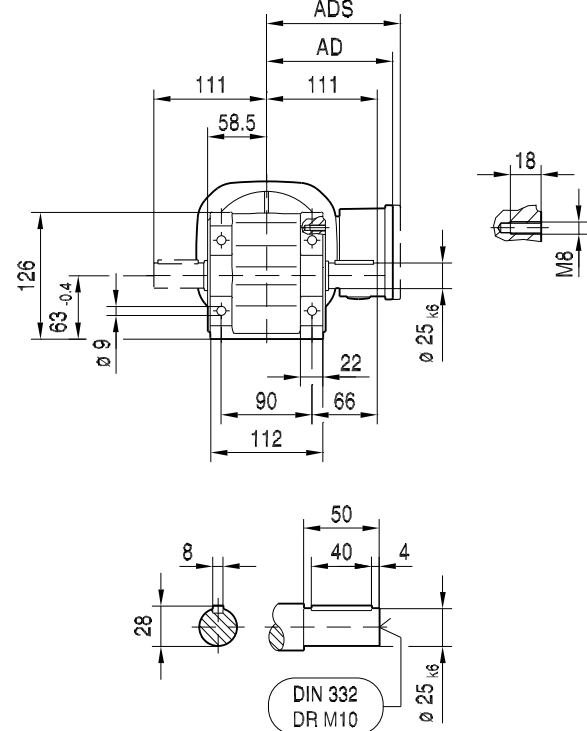
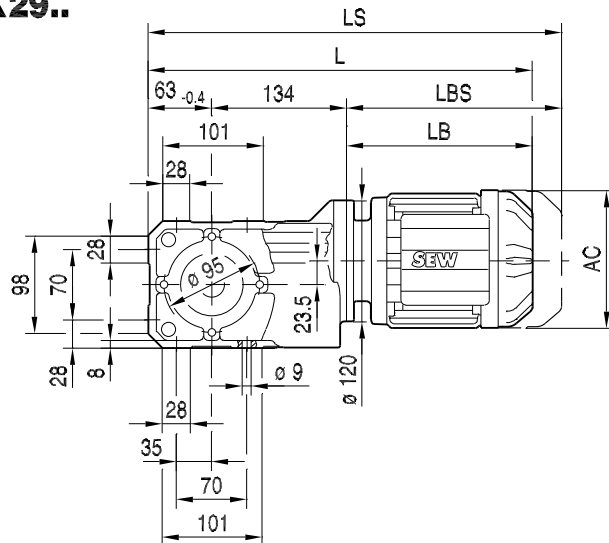
KH19..



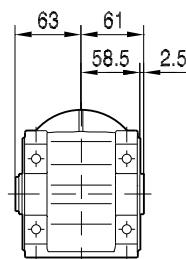
	DR63..	DR71S	DR71M	DRN80M	DRN90S			
AC	132	139	139	156	179			
AD	105	119	119	128	140			
ADS	105	129	129	139	150			
L	357	368	393	448	449			
LS	412	436	461	529	543			
LB	191	202	227	282	283			
LBS	246	270	295	363	377			

33 015 00 15

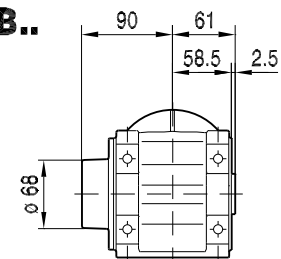
K29..



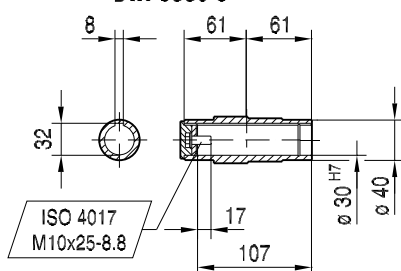
KA29B..



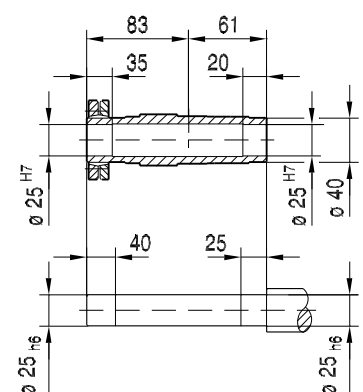
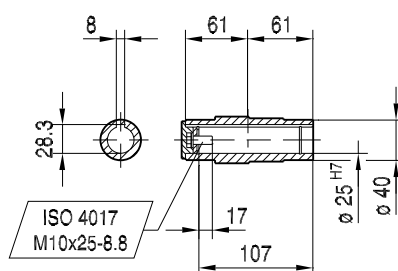
KH29B..



**Ø 30 H7
DIN 6885-3**

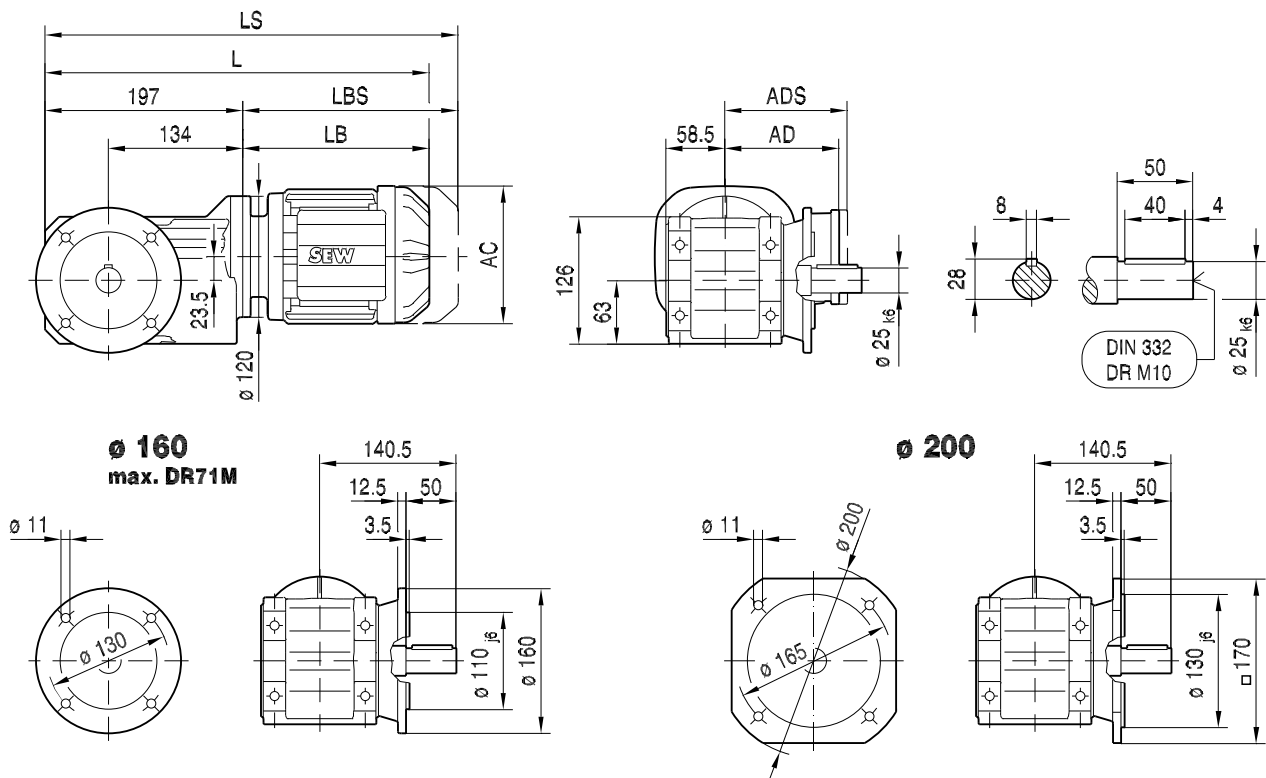


Ø 25 H7

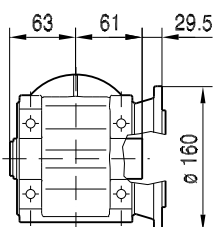


	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	388	399	424	479	480	512		
LS	443	467	492	560	574	606		
LB	191	202	227	282	283	315		
LBS	246	270	295	363	377	409		

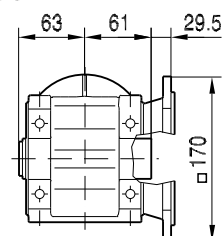
33 016 00 15

KF29B..**KAF29B..**

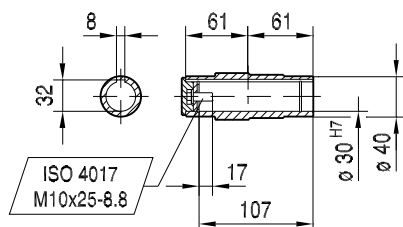
160
max. DR71M



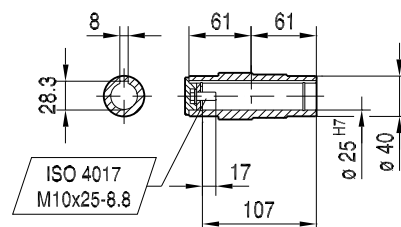
200



30 H7
DIN 6885-3



25 H7



	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	388	399	424	479	480	512		
LS	443	467	492	560	574	606		
LB	191	202	227	282	283	315		
LBS	246	270	295	363	377	409		

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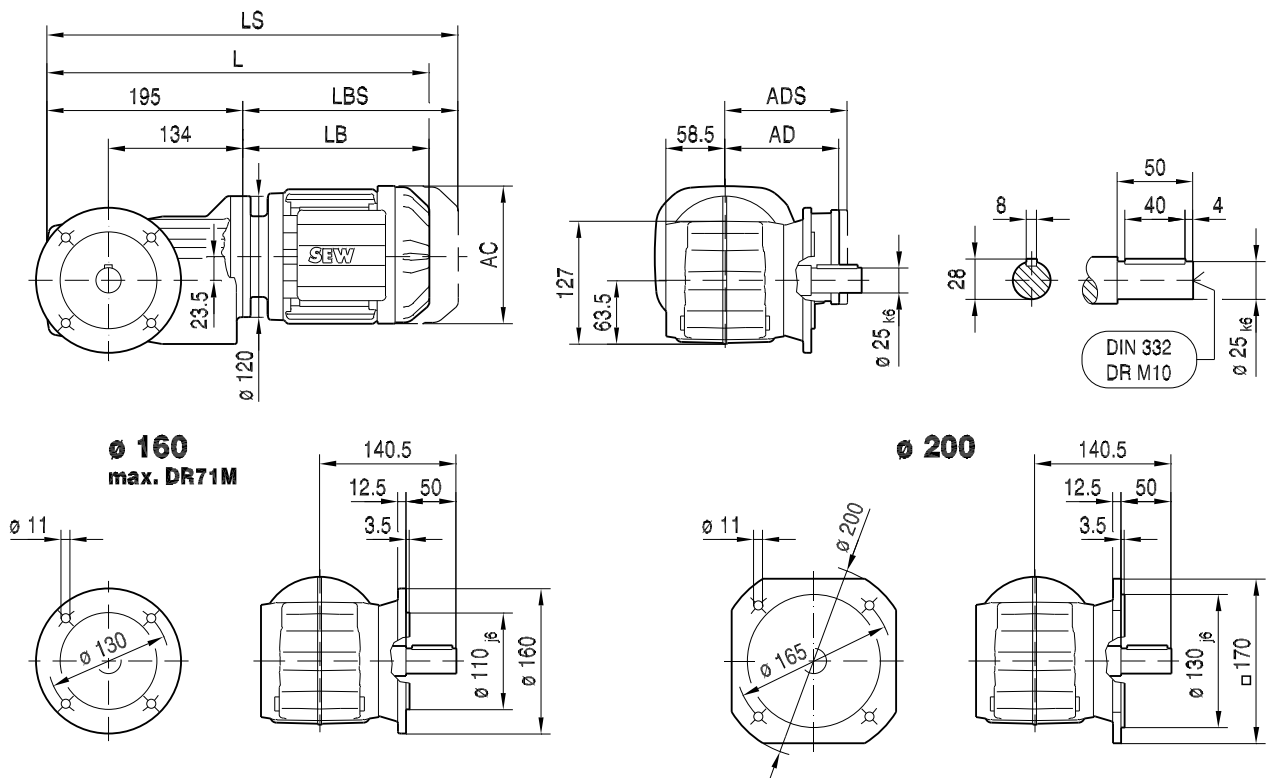
33 017 00 15

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SEW
EURODRIVE

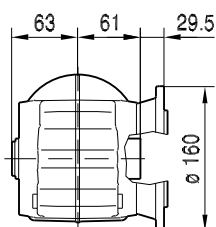
33 018 00 15

KF29..

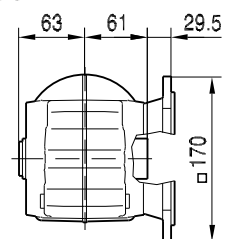


KAF29..

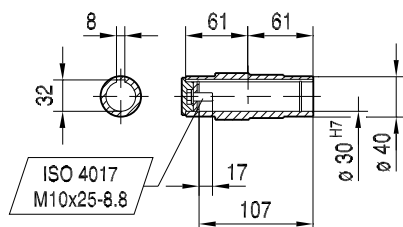
$\phi 160$
max. DR71M



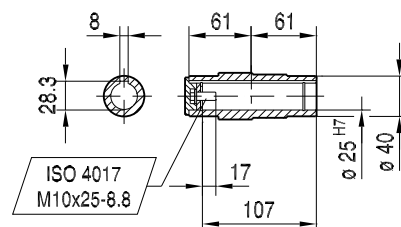
$\phi 200$



$\phi 30$ H7
DIN 6885-3

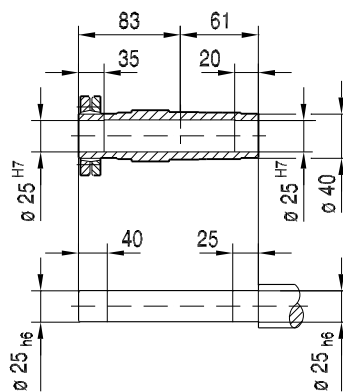


$\phi 25$ H7



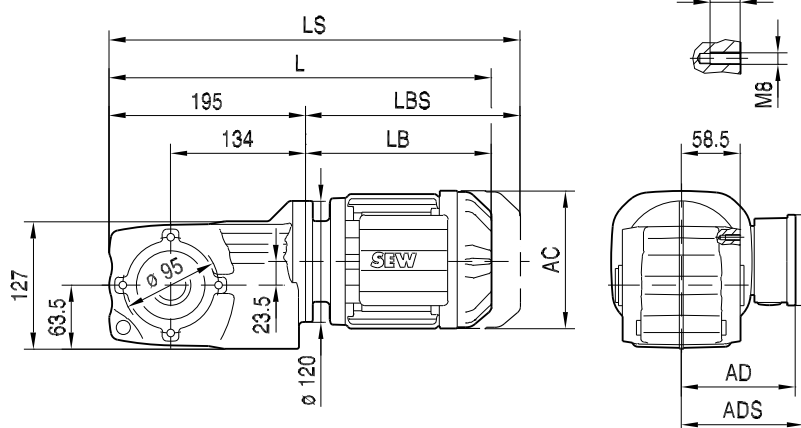
	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	386	397	422	477	478	510		
LS	441	465	490	558	572	604		
LB	191	202	227	282	283	315		
LBS	246	270	295	363	377	409		

33 019 00 15

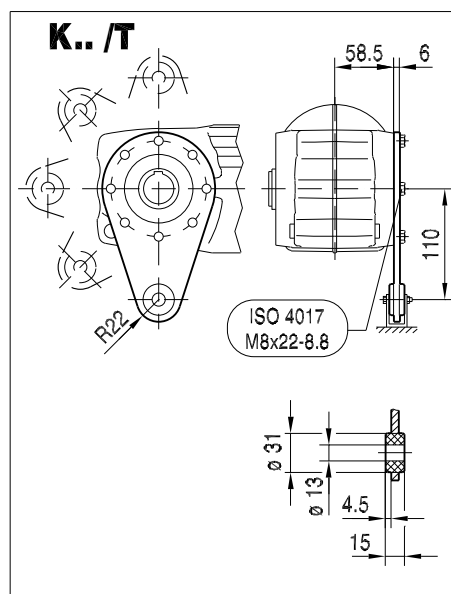


	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	386	397	422	477	478	510		
LS	441	465	490	558	572	604		
LB	191	202	227	282	283	315		
LBS	246	270	295	363	377	409		

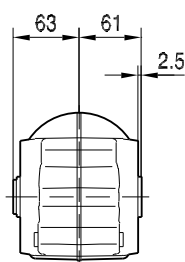
KA29..



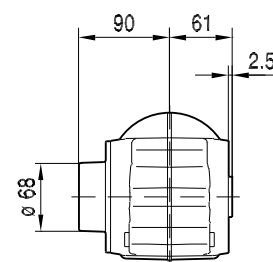
33 020 00 15



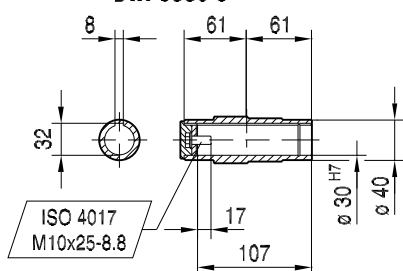
KA29..



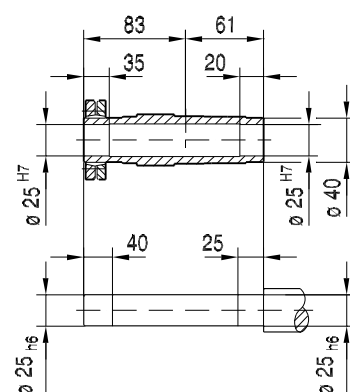
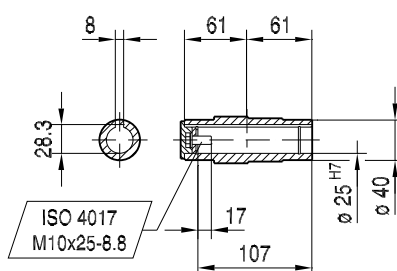
KH29..



$\varnothing 30$ H7
DIN 6885-3



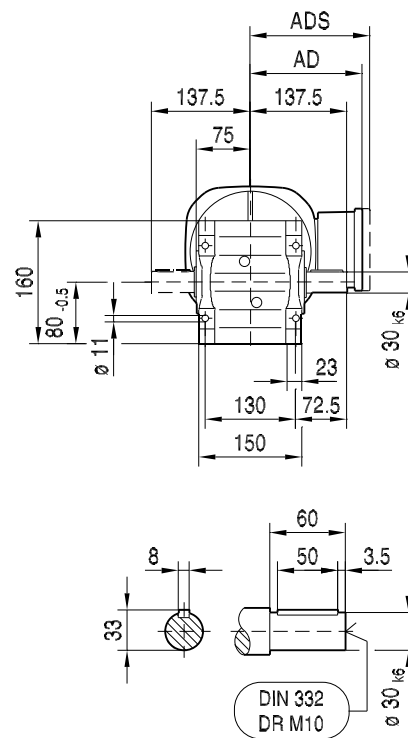
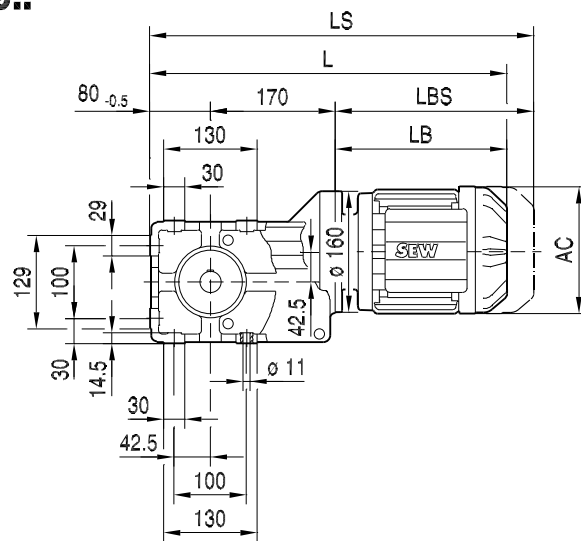
$\varnothing 25$ H7



	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L		
AC	132	139	139	156	179	179		
AD	105	119	119	128	140	140		
ADS	105	129	129	139	150	150		
L	386	397	422	477	478	510		
LS	441	465	490	558	572	604		
LB	191	202	227	282	283	315		
LBS	246	270	295	363	377	409		

33 021 00 14

K39..



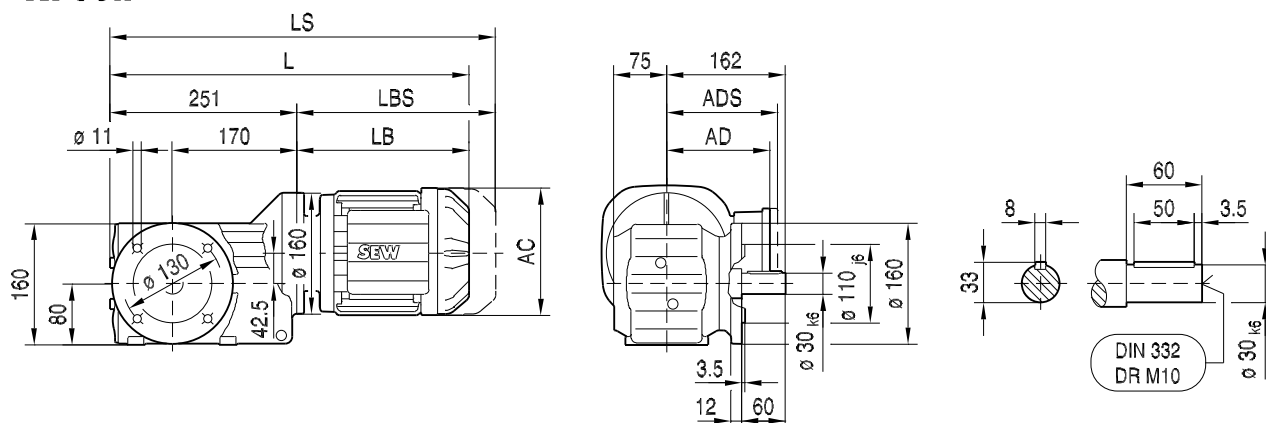
2

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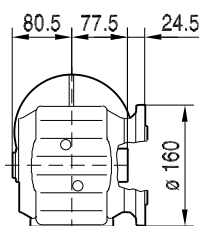
	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L	DRN100LS	DRN100L	DRN112M
AC	132	139	139	156	179	179	197	197	221
AD	105	119	119	128	140	140	157	157	170
ADS	105	129	129	139	150	150	158	158	172
L	435	446	471	525	527	559	555	605	636
LS	490	514	539	606	620	652	649	699	748
LB	185	196	221	275	277	309	305	355	386
LBS	240	264	289	356	370	402	399	449	498

33 022 00 14

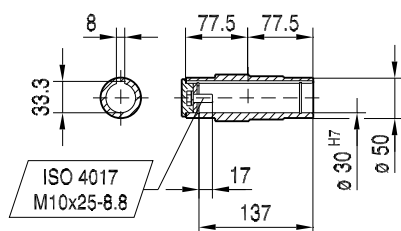
KF39..



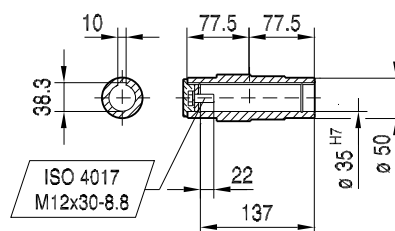
KAF39..



$\phi 30$ H7

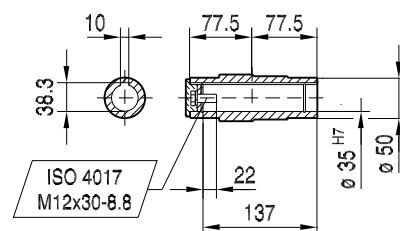
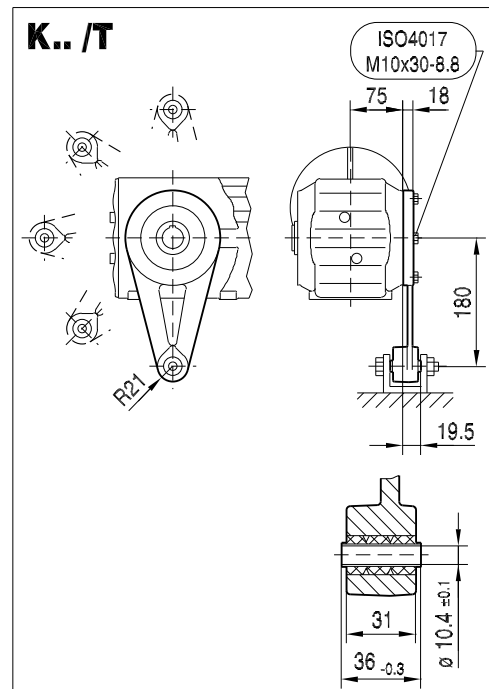


$\phi 35$ H7

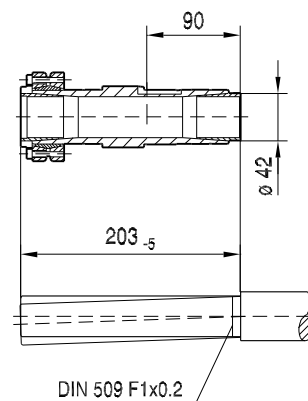
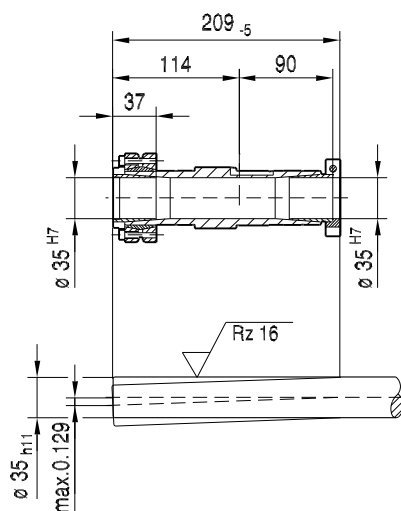
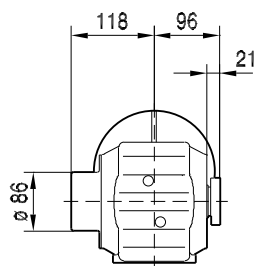
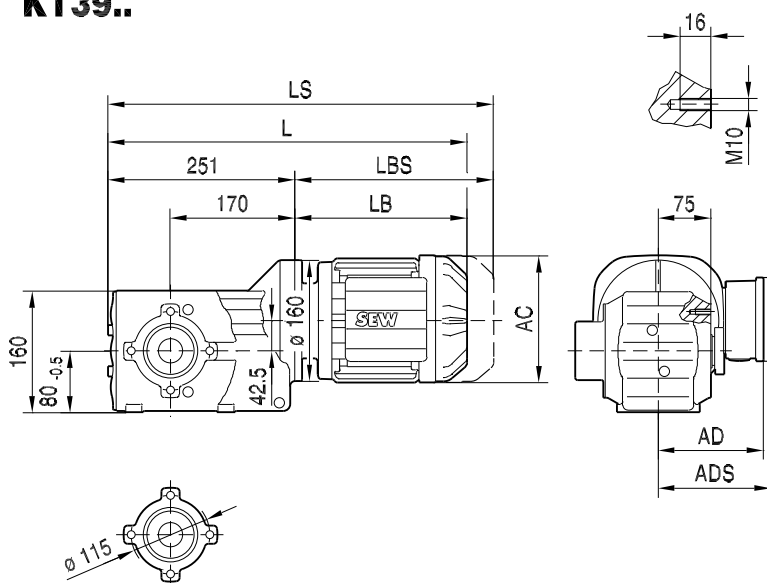


	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L	DRN100LS	DRN100L	DRN112M
AC	132	139	139	156	179	179	197	197	221
AD	105	119	119	128	140	140	157	157	170
ADS	105	129	129	139	150	150	158	158	172
L	436	447	472	526	528	560	556	606	637
LS	491	515	540	607	621	653	650	700	749
LB	185	196	221	275	277	309	305	355	386
LBS	240	264	289	356	370	402	399	449	498

33 023 00 14

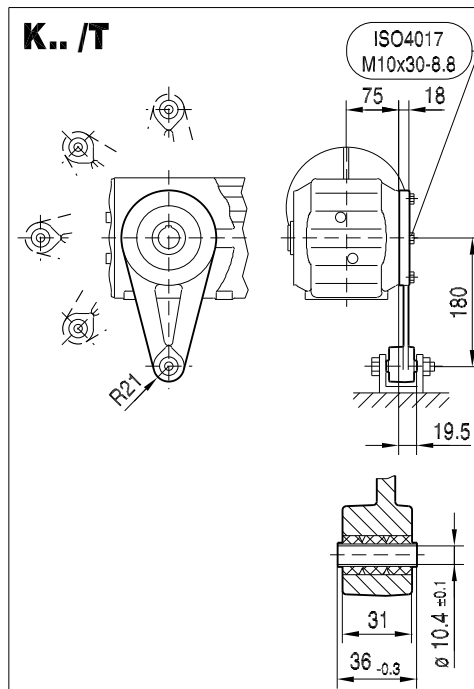
37

KT39..



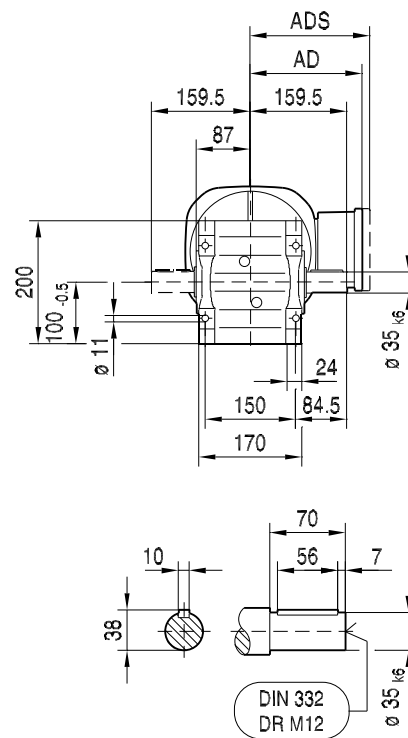
33 024 00 14

K.. /T



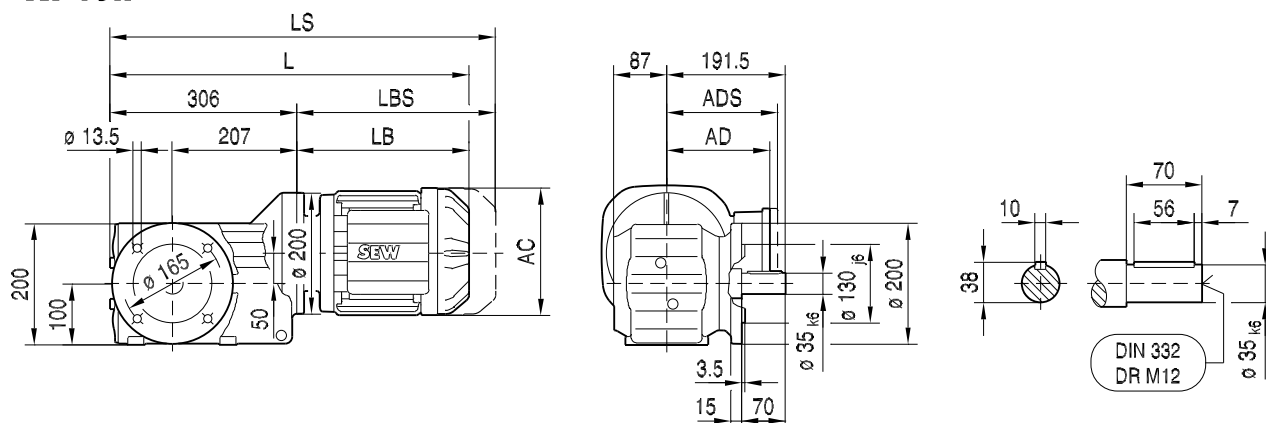
	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L	DRN100LS	DRN100L	DRN112M
AC	132	139	139	156	179	179	197	197	221
AD	105	119	119	128	140	140	157	157	170
ADS	105	129	129	139	150	150	158	158	172
L	436	447	472	526	528	560	556	606	637
LS	491	515	540	607	621	653	650	700	749
LB	185	196	221	275	277	309	305	355	386
LBS	240	264	289	356	370	402	399	449	498

33 025 00 14

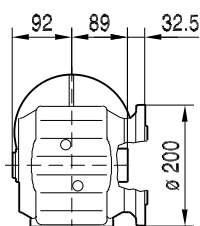
39

33 026 00 14

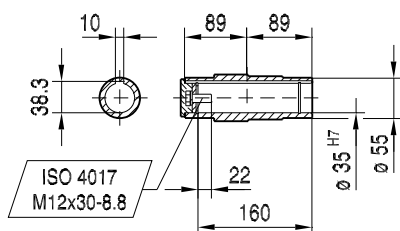
KF49..



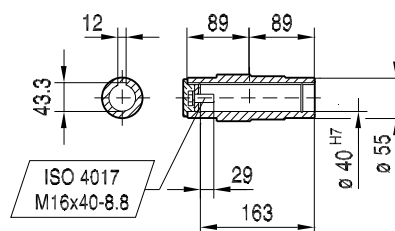
KAF49..



$\phi 35$ H7



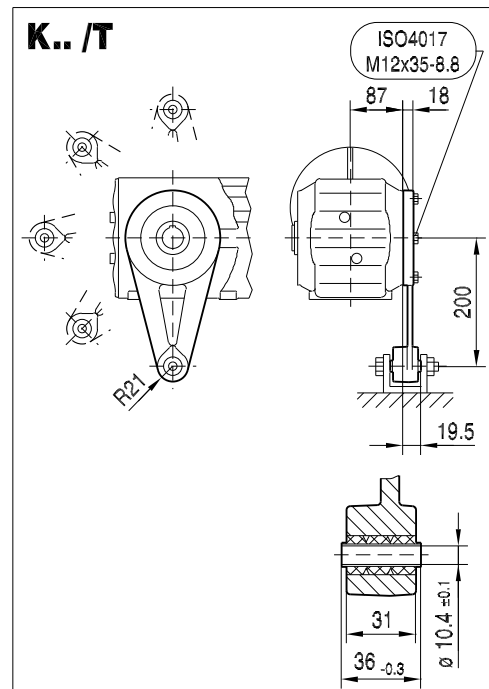
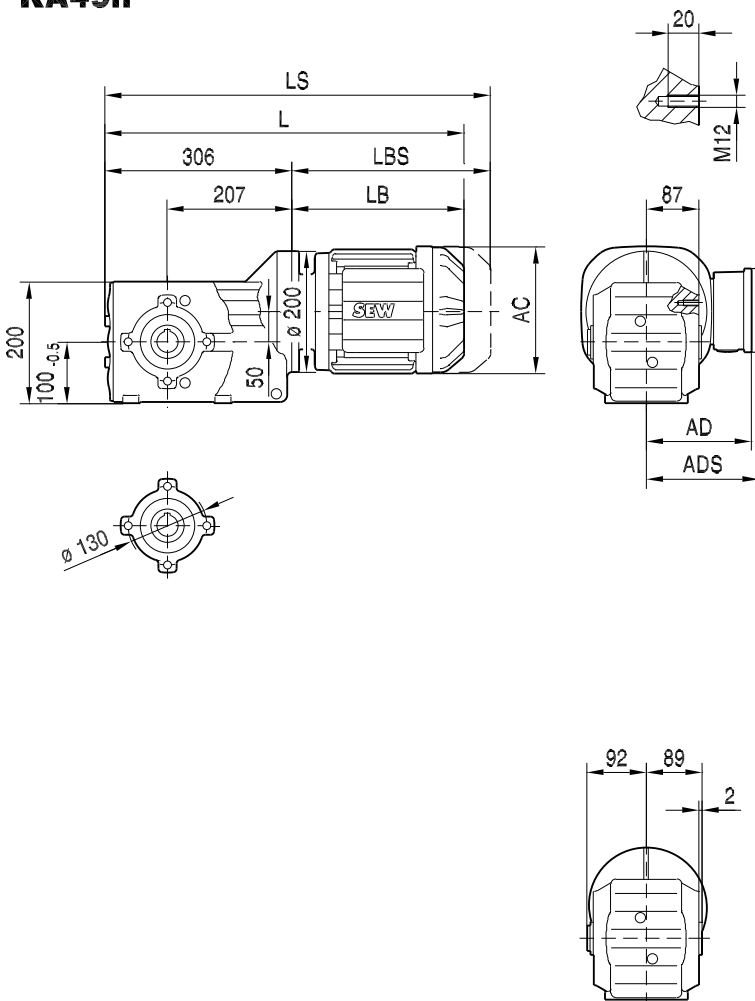
$\phi 40$ H7



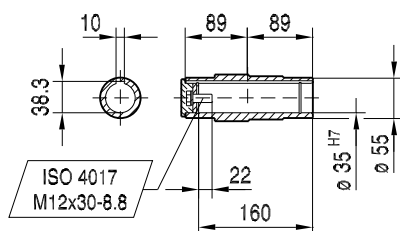
	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L	DRN100LS	DRN100L	DRN112M	DRN132S	DRN132M
AC	132	139	139	156	179	179	197	197	221	221	261
AD	105	119	119	128	140	140	157	157	170	170	228
ADS	105	129	129	139	150	150	158	158	172	172	228
L	484	495	520	574	576	608	604	654	685	735	753
LS	539	563	588	655	669	701	698	748	797	847	891
LB	178	189	214	268	270	302	298	348	379	429	447
LBS	233	257	282	349	363	395	392	442	491	541	585

KA49..

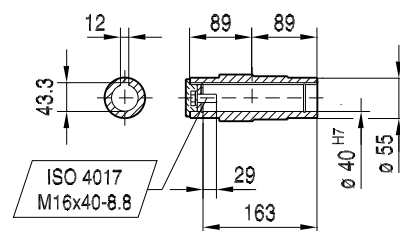
33 027 00 14



Ø 35 H7



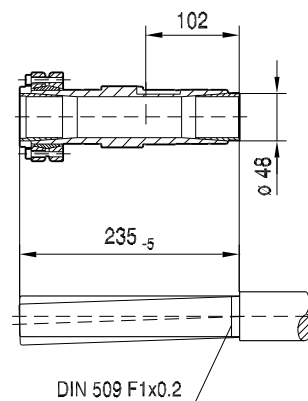
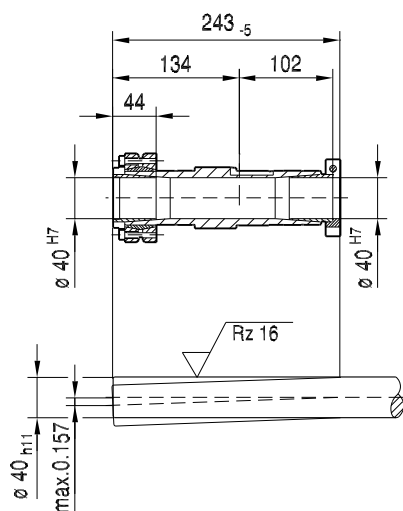
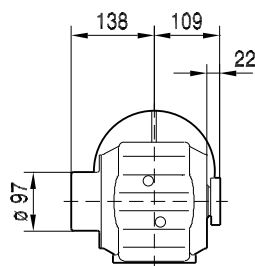
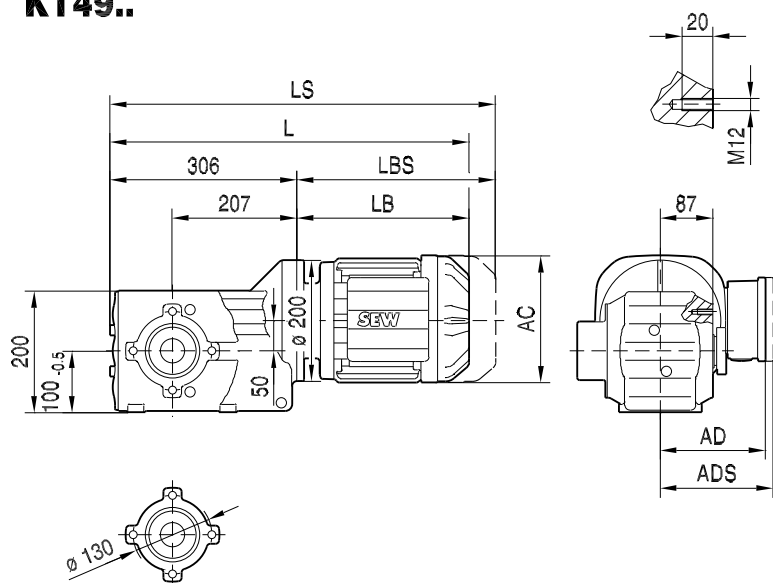
Ø 40 H7



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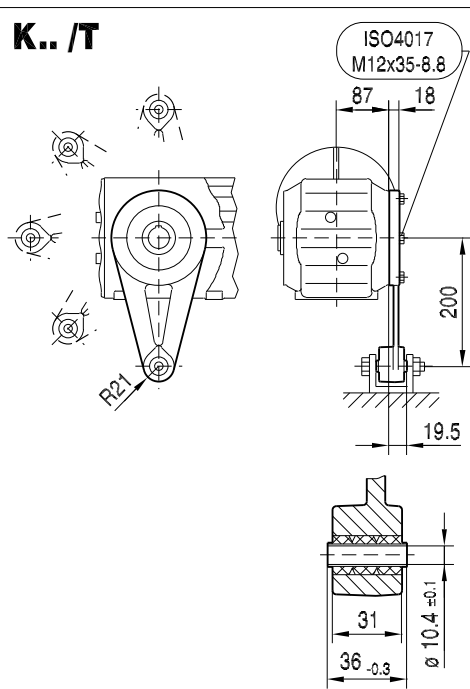
	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L	DRN100LS	DRN100L	DRN112M	DRN132S	DRN132M
AC	132	139	139	156	179	179	197	197	221	221	261
AD	105	119	119	128	140	140	157	157	170	170	228
ADS	105	129	129	139	150	150	158	158	172	172	228
L	484	495	520	574	576	608	604	654	685	735	753
LS	539	563	588	655	669	701	698	748	797	847	891
LB	178	189	214	268	270	302	298	348	379	429	447
LBS	233	257	282	349	363	395	392	442	491	541	585

KT49..



33 028 00 14

K.. /T



	DR63..	DR71S	DR71M	DRN80M	DRN90S	DRN90L	DRN100LS	DRN100L	DRN112M	DRN132S	DRN132M
AC	132	139	139	156	179	179	197	197	221	221	261
AD	105	119	119	128	140	140	157	157	170	170	228
ADS	105	129	129	139	150	150	158	158	172	172	228
L	484	495	520	574	576	608	604	654	685	735	753
LS	539	563	588	655	669	701	698	748	797	847	891
LB	178	189	214	268	270	302	298	348	379	429	447
LBS	233	257	282	349	363	395	392	442	491	541	585

2.5 Auswahltabellen K..9 / AM

K19, $n_e = 1400$ 1/min					80 Nm			
i	n_a [1/min]	$M_{a \max}$ [Nm]	F_{Ra} [N]	$\Phi_{(R)}$ [']	AM			
					63	71	80	90
 2								
4.50	311	80	2010	-				
5.16	271	80	2140	-				
5.54	253	80	2200	-				
6.41	218	80	2340	-				
6.91	203	80	2420	-				
8.09	173	80	2590	-				
9.58	146	63	2910	-				
10.32	136	76	2720	-				
11.84	118	79	2850	-				
12.70	110	80	2930	-				
14.69	95	80	3110	-				
15.84	88	80	3210	-				
18.55	75	80	3430	-				
21.98	64	80	3680	-				
24.06	58	80	3820	-				
26.88	52	80	3990	-				
27.16	52	60	4090	-				
29.14	48	80	4120	-				
29.29	48	61	4200	-				
31.74	44	80	4260	-				
34.29	41	64	4370	-				
40.63	34	67	4350	-				
44.48	31	69	4340	-				
49.69	28	70	4330	-				
53.88	26	70	4330	-				
58.68	24	70	4330	-				

K19, m [kg]			AM			
K	IEC	s	63	71	80	90
		 2	6.7	6.9	9.3	9.4
	NEMA	s	-	56	143	145
		 2	-	7.3	9.3	9.4

KF: + 0.30 kg / KA: + -0.45 kg / KAF: + -- kg

K29, $n_e = 1400$ 1/min					130 Nm			
i	n_a [1/min]	$M_{a \max}$ [Nm]	F_{Ra} [N]	$\Phi_{(R)}$ [']	AM			
					63	71	80	90
 2								
3.19	439	110	1830	-				
3.92	357	126	1910	-				
5.10	275	110	2260	-				
5.75	243	112	2370	-				
6.95	201	112	2580	-				
7.48	187	123	2300	-				
8.53	164	122	2740	-				
9.17	153	130	2470	-				
9.90	141	110	3000	-				
11.94	117	130	2810	-				
13.47	104	130	2970	-				
16.29	86	130	3240	-				
19.99	70	130	3550	-				
22.08	63	105	3820	-				
23.19	60	130	3790	-				
24.91	56	109	3980	-				
27.23	51	130	4060	-				
29.69	47	130	4210	-				
30.11	46	115	4250	-				
33.15	42	130	4410	-				
35.83	39	130	4560	-				
36.96	38	122	4560	-				
38.90	36	130	4720	-				
42.87	33	128	4790	-				
50.35	28	130	4980	-				
54.89	26	130	4980	-				
61.28	23	130	4980	-				
66.25	21	130	4980	-				
71.93	19	130	4980	-				

K29, m [kg]			AM			
K	IEC	s	63	71	80	90
		 2	8.5	8.7	11	11
	NEMA	s	-	56	143	145
		 2	-	9.1	11	11
KF: + 1.0 kg / KA: + -0.45 kg / KAF: + 0.35 kg						

K39, $n_e = 1400$ 1/min					300 Nm					
i	n_a [1/min]	$M_{a \max}$ [Nm]	F_{Ra} [N]	$\Phi_{(R)}$ [']	AM					
					63	71	80	90	100	112
 2										
2.81	498	170	2870	-						
3.94	355	215	3070	-						
4.52	310	240	3130	-						
5.22	268	260	3240	-						
5.75	243	275	3300	-						
6.75	207	300	3430	-						
7.15	196	300	3530	-						
8.12	172	300	3760	-						
9.00	156	300	3950	-						
10.61	132	285	4360	-						
12.09	116	255	4790	-						
12.73	110	250	4930	-						
13.44	104	270	4160	-						
15.44	91	280	4380	-						
17.83	79	290	4630	-						
19.62	71	295	4820	-						
23.04	61	300	5180	-						
24.40	57	300	5330	-						
27.73	50	300	5670	-						
30.72	46	300	5960	-						
36.22	39	300	6440	-						
41.28	34	300	6840	-						
43.45	32	300	7000	-						
49.69	28	300	7440	-						
58.24	24	300	7500	-						

K39, m [kg]			AM					
K	IEC	s	63	71	80	90	100	112
		 2	20	20	22	22	27	27
	NEMA	s	-	56	143	145	182	184
		 2	-	20	22	22	26	26
KF: + 1.5 kg / KA: + -1.0 kg / KAF: + 0.50 kg								

K49, $n_e = 1400$ 1/min											500 Nm
i	n_a [1/min]	$M_{a \max}$ [Nm]	F_{Ra} [N]	$\Phi_{(R)}$ [']	63	71	80	AM 90	100	112	132S/M
 2											
4.00	350	440	3110	-							
4.69	299	465	3270	-							
5.29	265	485	3400	-							
5.99	234	500	3570	-							
6.83	205	500	3840	-							
7.58	185	500	4050	-							
8.66	162	500	4340	-							
9.14	153	500	4460	-							
10.42	134	480	4860	-							
11.37	123	495	5000	-							
13.38	105	470	4320	-							
15.67	89	490	4590	-							
17.67	79	500	4860	-							
20.03	70	500	5220	-							
22.83	61	500	5610	-							
25.34	55	500	5940	-							
28.95	48	500	6370	-							
30.55	46	500	6550	-							
34.81	40	500	7000	-							
37.98	37	500	7310	-							
44.44	32	500	7900	-							
50.29	28	500	8380	-							
52.94	26	500	8590	-							
60.27	23	500	9000	-							
70.19	20	445	9000	-							
75.20	19	475	9000	-							

K49, m [kg]			AM						
K	IEC	s	63	71	80	90	100	112	132S/M
		 2	32	32	35	35	39	39	46
	NEMA	s	-	56	143	145	182	184	213/215
		 2	-	33	35	35	38	38	44
	KF: + 1.7 kg / KA: + -2.8 kg / KAF: + 2.1 kg								

K49R37, $n_e = 1400$ 1/min					500 Nm			
i	n_a [1/min]	$M_{a \max}$ [Nm]	F_{Ra} [N]	$\Phi_{(R)}$ [']	AM			
					63	71	80	90
 2  2								
99	14	500	9000	-				
125	11	500	9000	-				
152	9.2	500	9000	-				
176	8.0	500	9000	-				
193	7.3	500	9000	-				
217	6.5	500	9000	-				
243	5.8	500	9000	-				
274	5.1	500	9000	-				
300	4.7	500	9000	-				
330	4.2	500	9000	-				
360	3.9	500	9000	-				
401	3.5	500	9000	-				
449	3.1	500	9000	-				
501	2.8	500	9000	-				
543	2.6	500	9000	-				
595	2.4	500	9000	-				
645	2.2	500	9000	-				
701	2.0	500	9000	-				
802	1.7	500	9000	-				
908	1.5	500	9000	-				
1000	1.4	500	9000	-				
1120	1.2	500	9000	-				
1228	1.1	500	9000	-				
1309	1.1	500	9000	-				
1424	0.98	500	9000	-				
1521	0.92	500	9000	-				
1632	0.86	500	9000	-				
1741	0.80	500	9000	-				
1941	0.72	500	9000	-				
2118	0.66	500	9000	-				
2372	0.59	500	9000	-				
2545	0.55	500	9000	-				
2773	0.50	500	9000	-				
3081	0.45	500	9000	-				
3580	0.39	500	9000	-				
4034	0.35	500	9000	-				
5120	0.27	500	9000	-				
5991	0.23	500	9000	-				
7137	0.20	500	9000	-				
 2  3								
99	14	500	9000	-				
125	11	500	9000	-				
152	9.2	500	9000	-				
176	8.0	500	9000	-				
193	7.3	500	9000	-				
217	6.5	500	9000	-				
243	5.8	500	9000	-				
274	5.1	500	9000	-				
300	4.7	500	9000	-				
330	4.2	500	9000	-				

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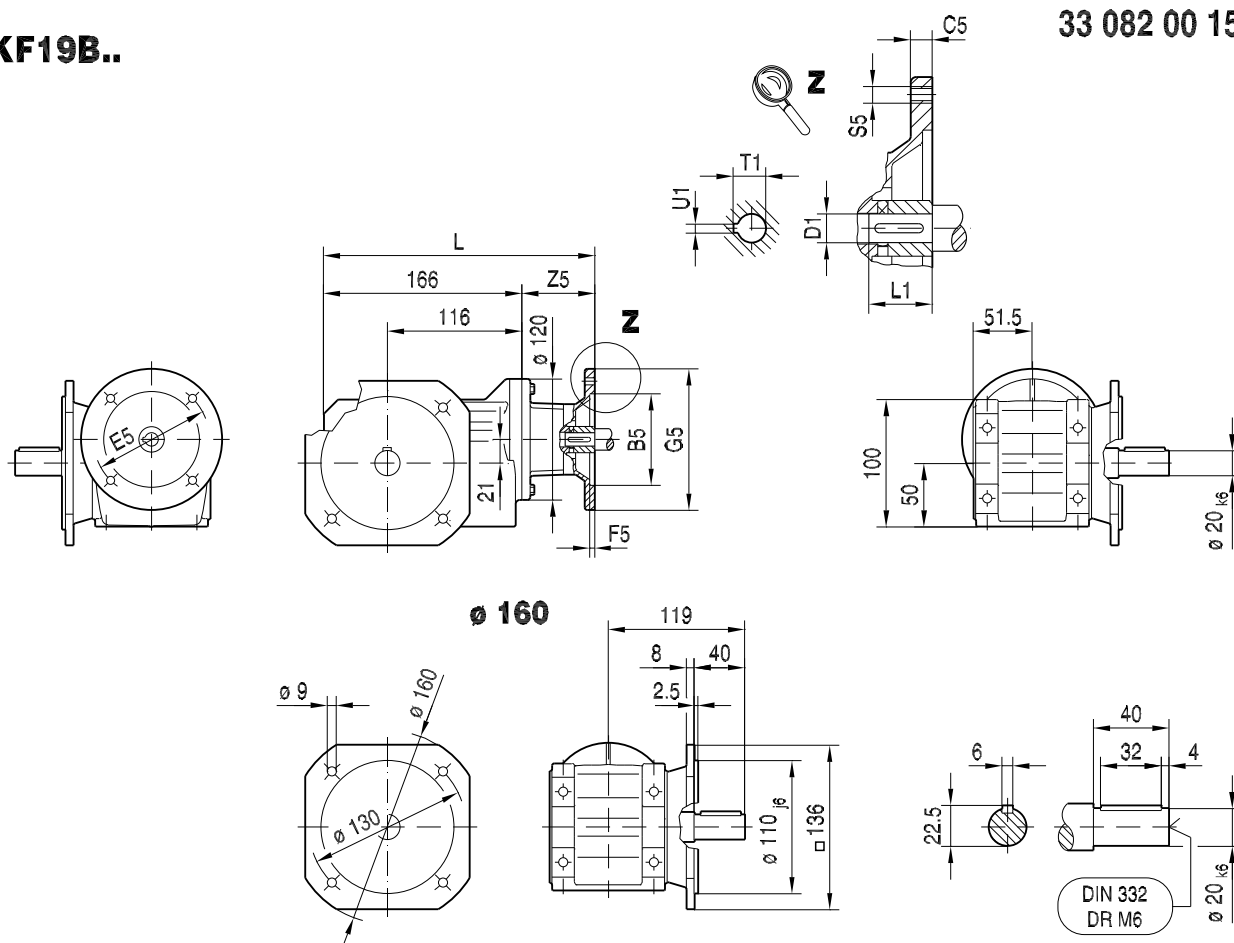
K49R37, $n_e = 1400$ 1/min					500 Nm			
i	n_a [1/min]	$M_{a \max}$ [Nm]	F_{Ra} [N]	$\Phi_{(R)}$ [']	AM			
					63	71	80	90
360	3.9	500	9000	-				
401	3.5	500	9000	-				
449	3.1	500	9000	-				
501	2.8	500	9000	-				
543	2.6	500	9000	-				
595	2.4	500	9000	-				
645	2.2	500	9000	-				
701	2.0	500	9000	-				
802	1.7	500	9000	-				
908	1.5	500	9000	-				
1000	1.4	500	9000	-				
1120	1.2	500	9000	-				
1228	1.1	500	9000	-				
1309	1.1	500	9000	-				
1424	0.98	500	9000	-				
1521	0.92	500	9000	-				
1632	0.86	500	9000	-				
1741	0.80	500	9000	-				
1941	0.72	500	9000	-				
2118	0.66	500	9000	-				
2372	0.59	500	9000	-				
2545	0.55	500	9000	-				
2773	0.50	500	9000	-				
3081	0.45	500	9000	-				
3580	0.39	500	9000	-				
4034	0.35	500	9000	-				
5120	0.27	500	9000	-				
5991	0.23	500	9000	-				
7137	0.20	500	9000	-				

K49R37, m [kg]			AM			
K	IEC	s	63	71	80	90
			42	42	45	45
			42	42	45	45
	NEMA	s	-	56	143	145
			-	43	45	45
		-	43	45	45	
KF: + 1.7 kg / KA: + -2.8 kg / KAF: + 2.1 kg						

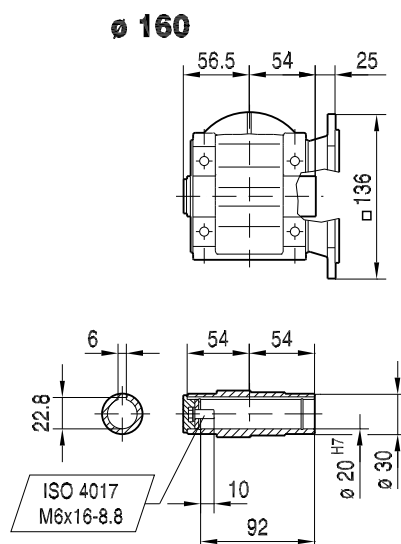
2

KF19B..

33 082 00 15



KAF19B..



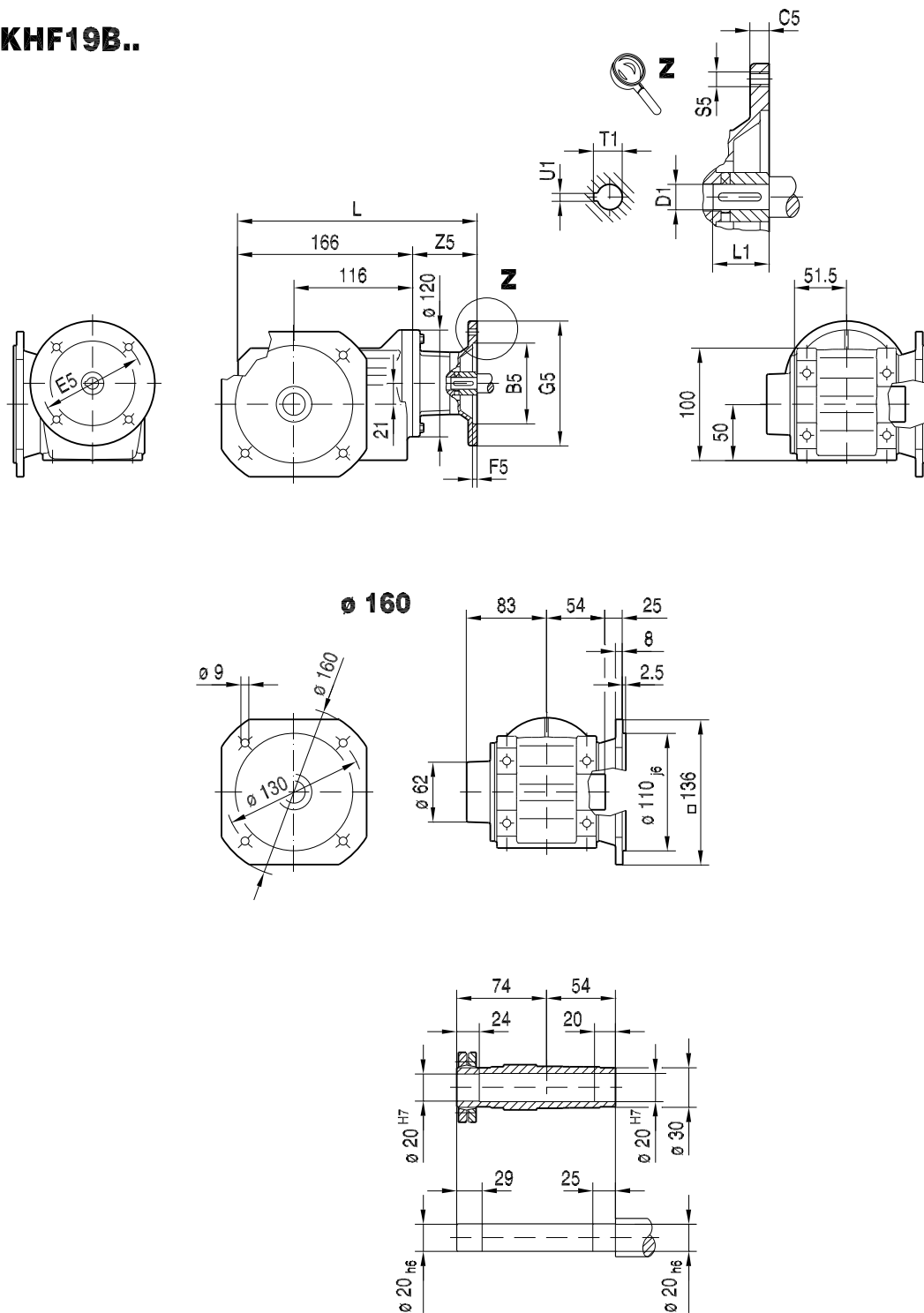
	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	238	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	238	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	272	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	272	M10	106	24	50	27.3	8

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KHF19B..

33 083 00 15

2

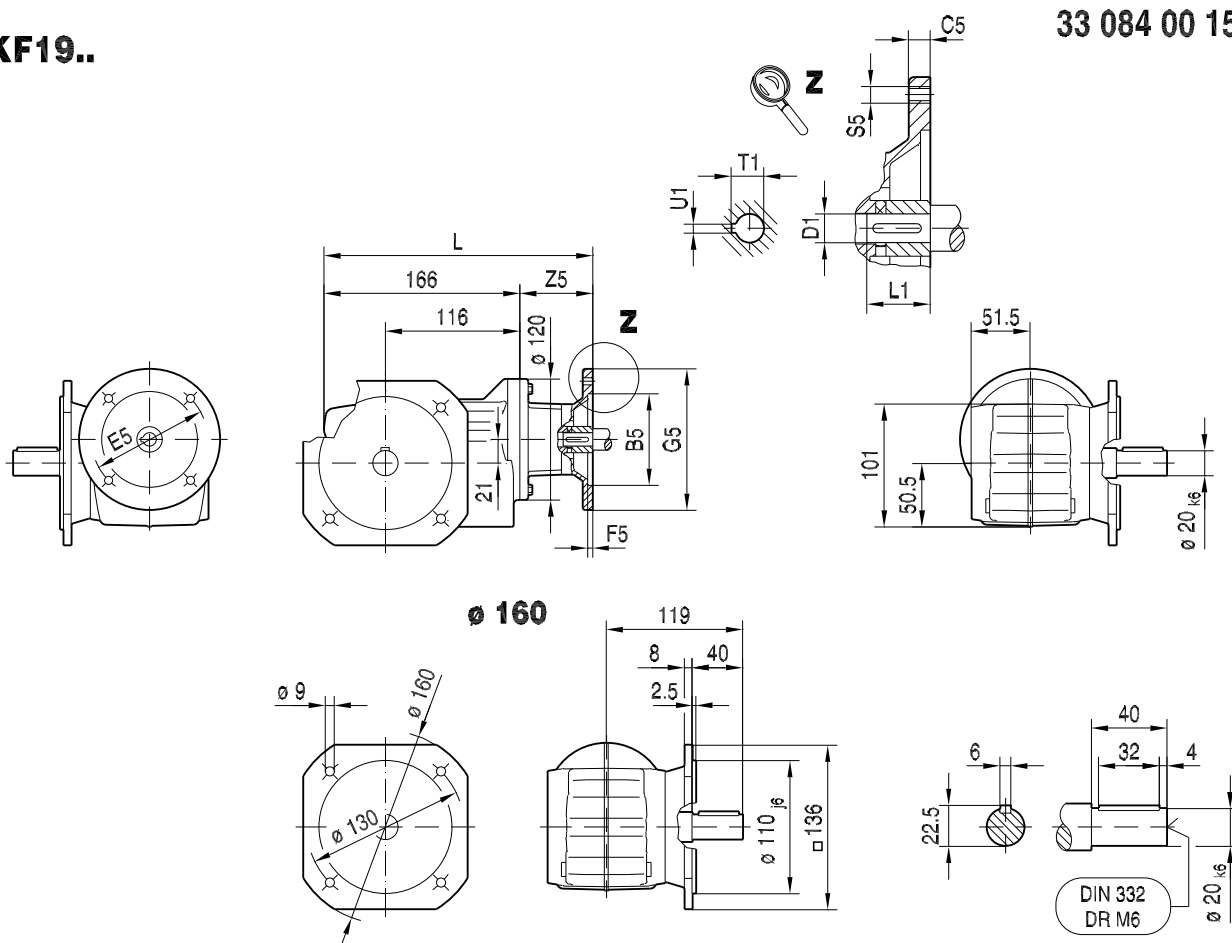


	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	238	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	238	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	272	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	272	M10	106	24	50	27.3	8

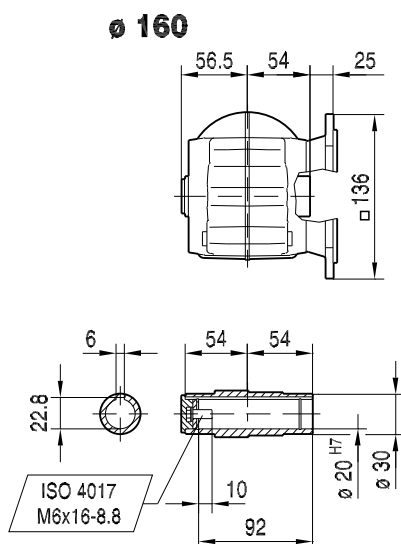
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KF19..

33 084 00 15



KAF19..



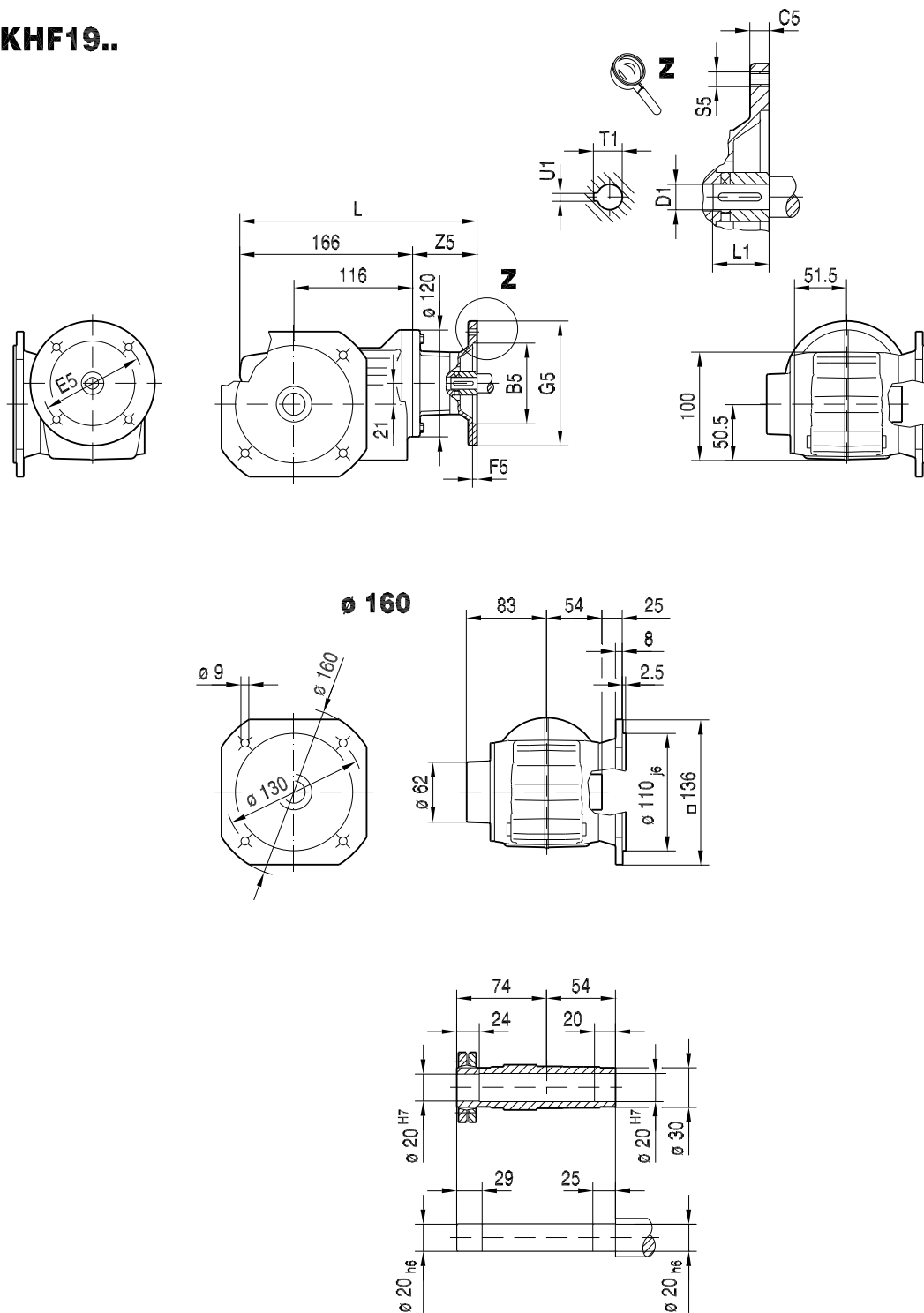
	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	238	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	238	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	272	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	272	M10	106	24	50	27.3	8

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KHF19..

33 085 00 15

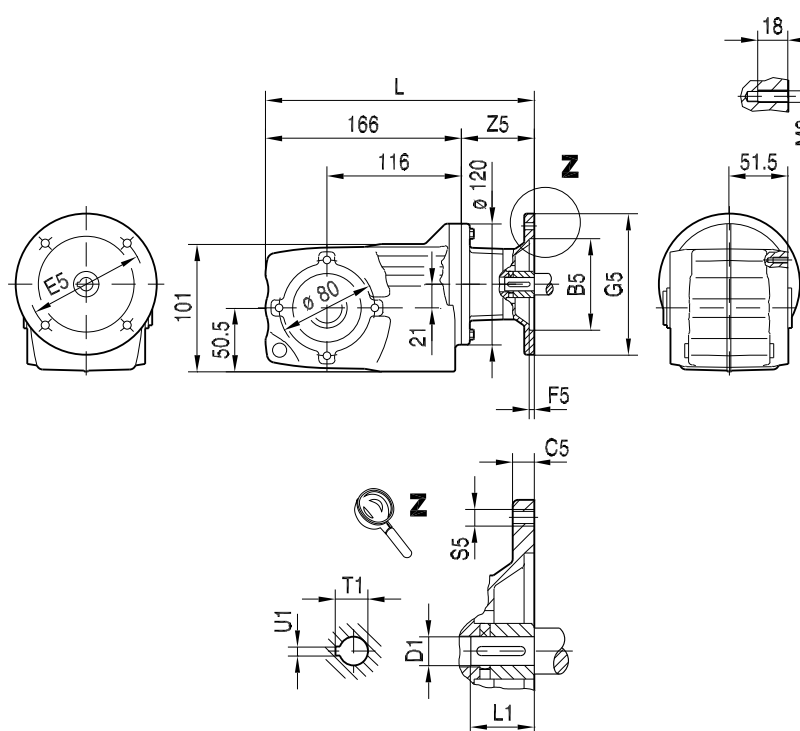
2



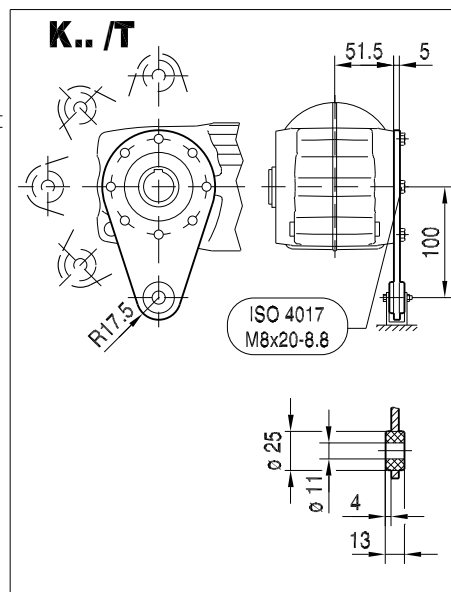
	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	238	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	238	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	272	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	272	M10	106	24	50	27.3	8

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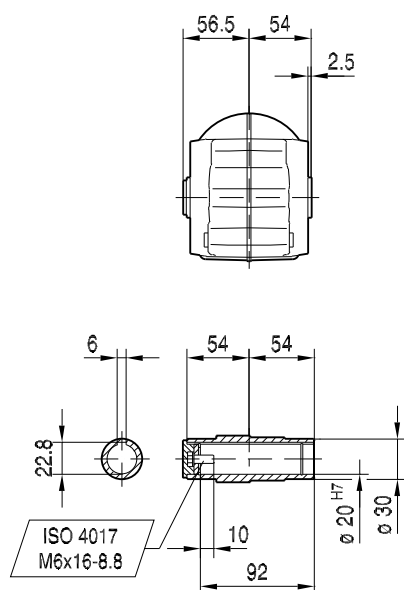
KA19..



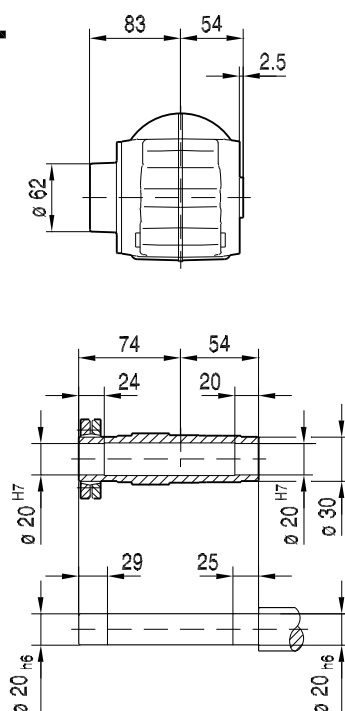
33 086 00 15



KA19..



KH19..

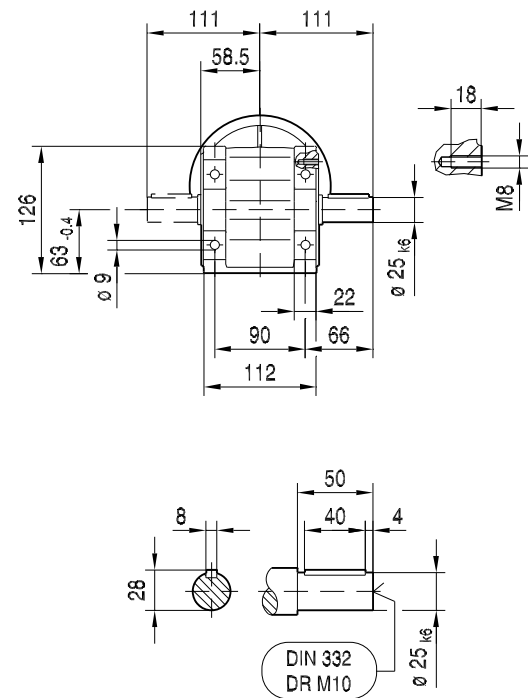
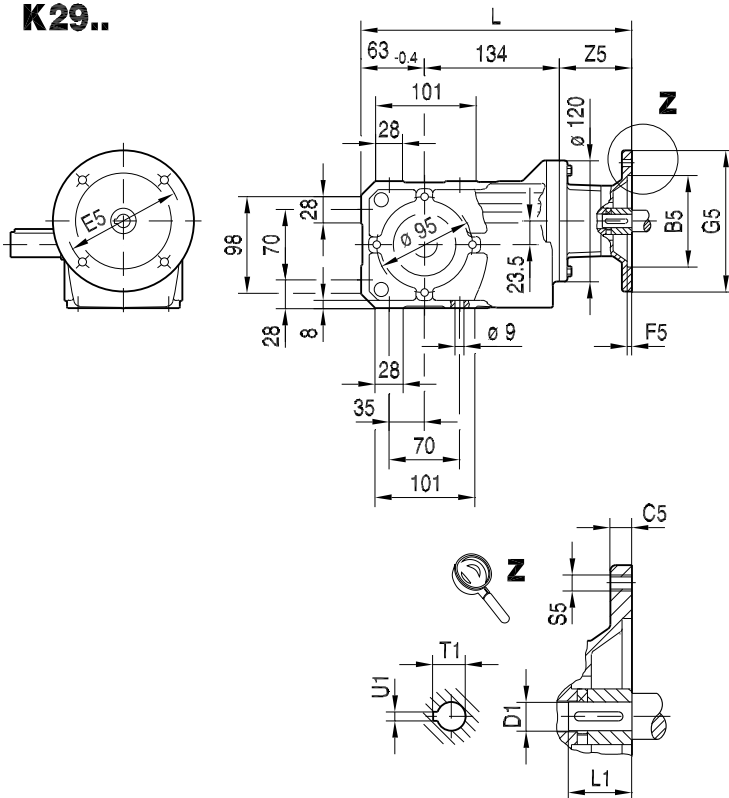


	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	238	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	238	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	272	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	272	M10	106	24	50	27.3	8

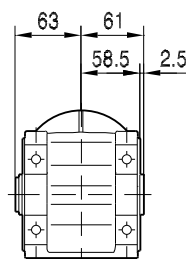
21932379/DE – 05/2015

33 087 00 15

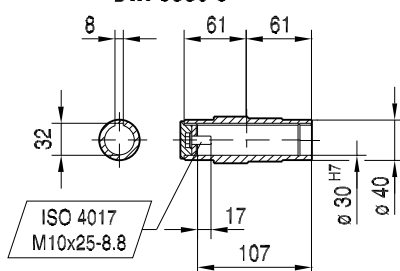
K29..



KA29B..

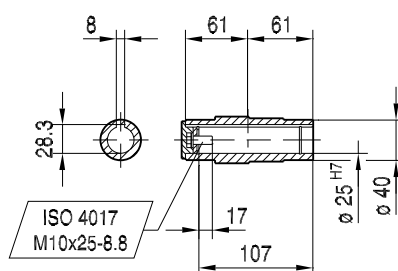


Ø 30 H7
DIN 6885-3



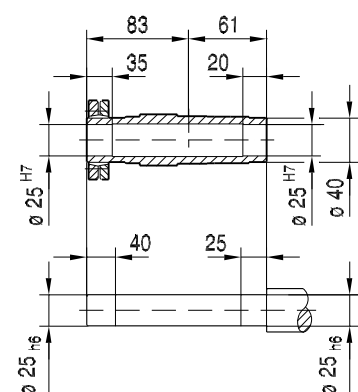
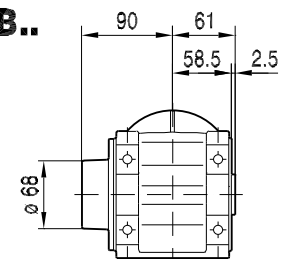
ISO 4017
M10x25-8.8

Ø 25 H7



ISO 4017
M10x25-8.8

KH29B..



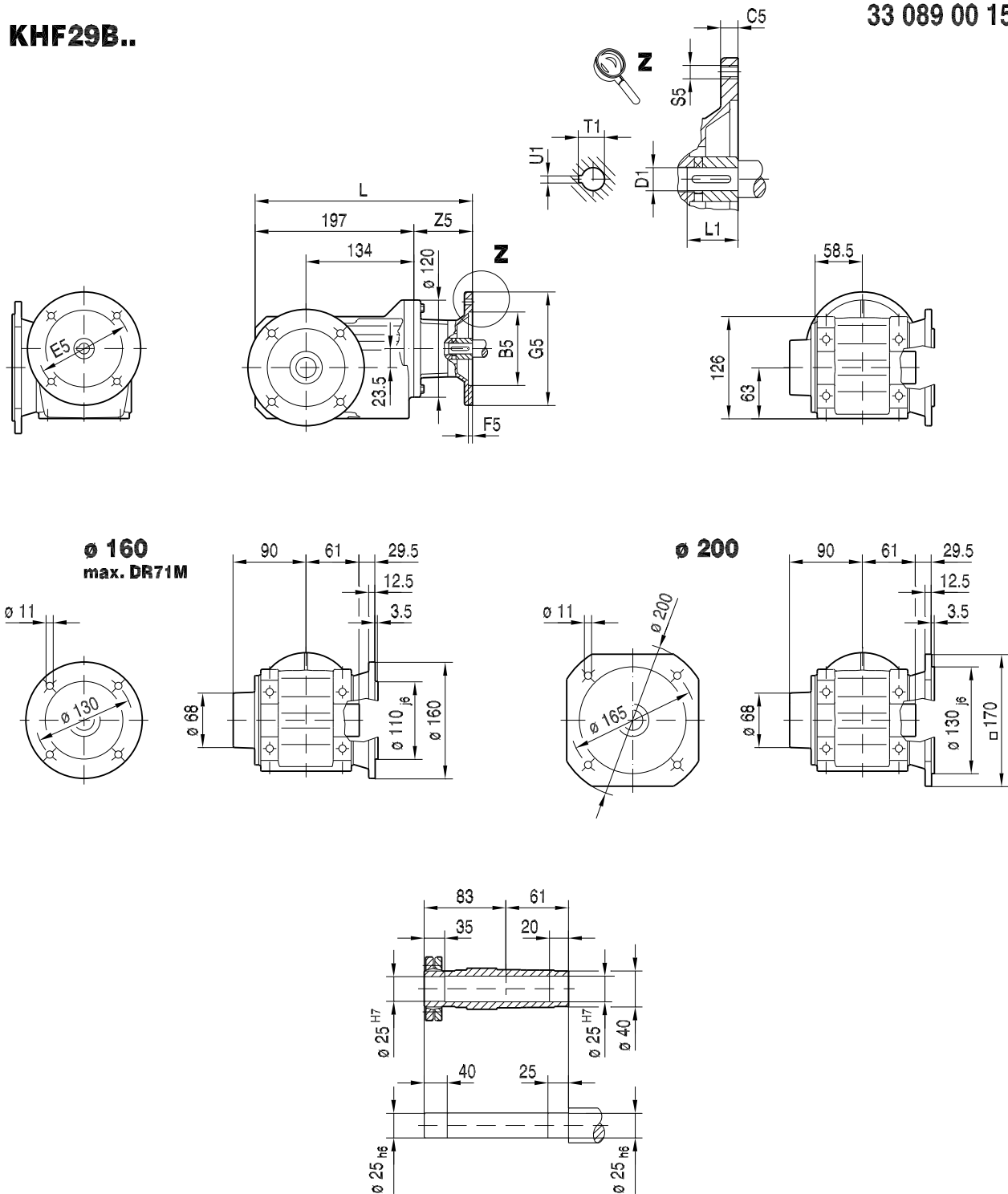
21932379/DE – 05/2015

	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	269	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	269	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	303	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	303	M10	106	24	50	27.3	8

KHF29B..

33 089 00 15

2

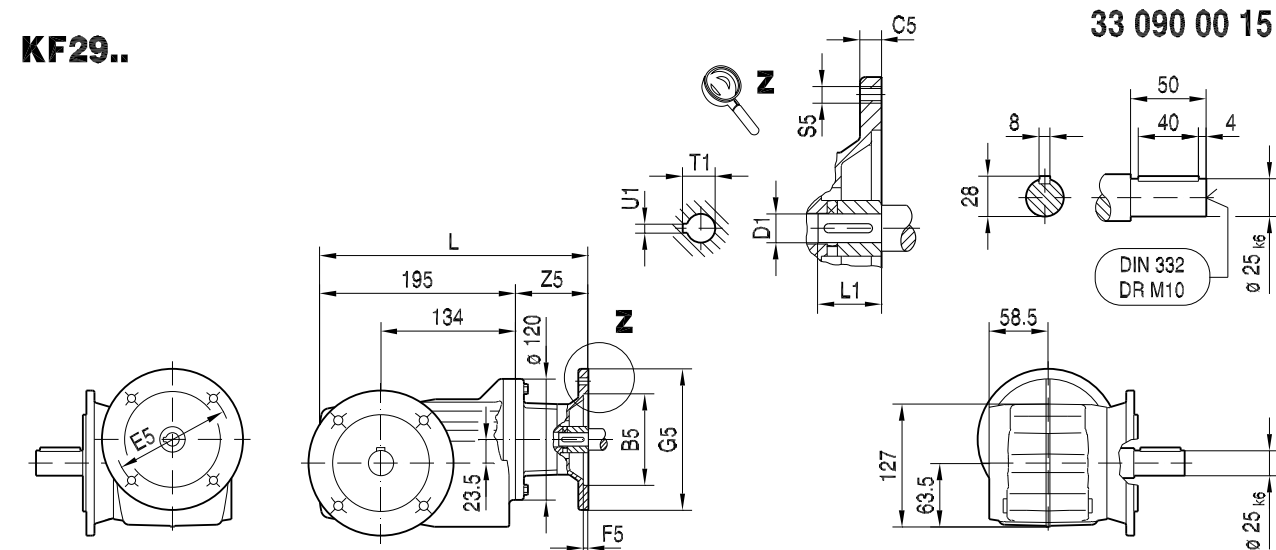


	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	269	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	269	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	303	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	303	M10	106	24	50	27.3	8

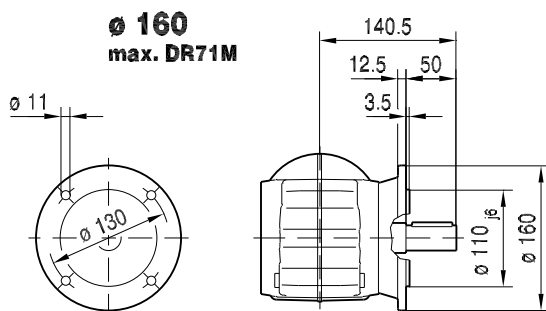
21932379/DE – 05/2015

KF29..

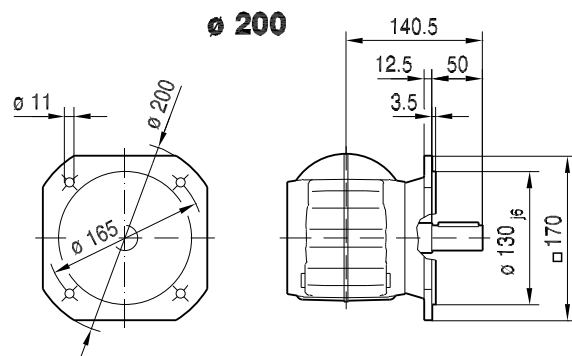
33 090 00 15



Ø 160
max. DR71M

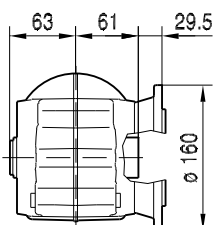


Ø 200

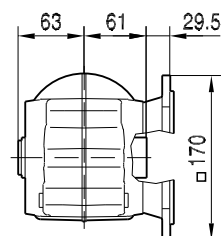


KAF29..

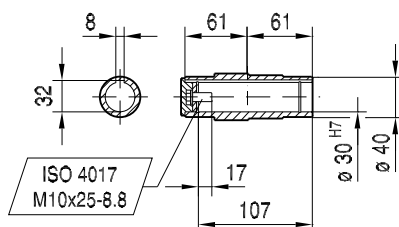
Ø 160
max. DR71M



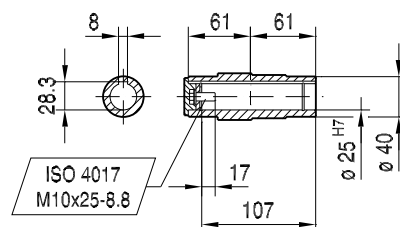
Ø 200



Ø 30 H7
DIN 6885-3



Ø 25 H7

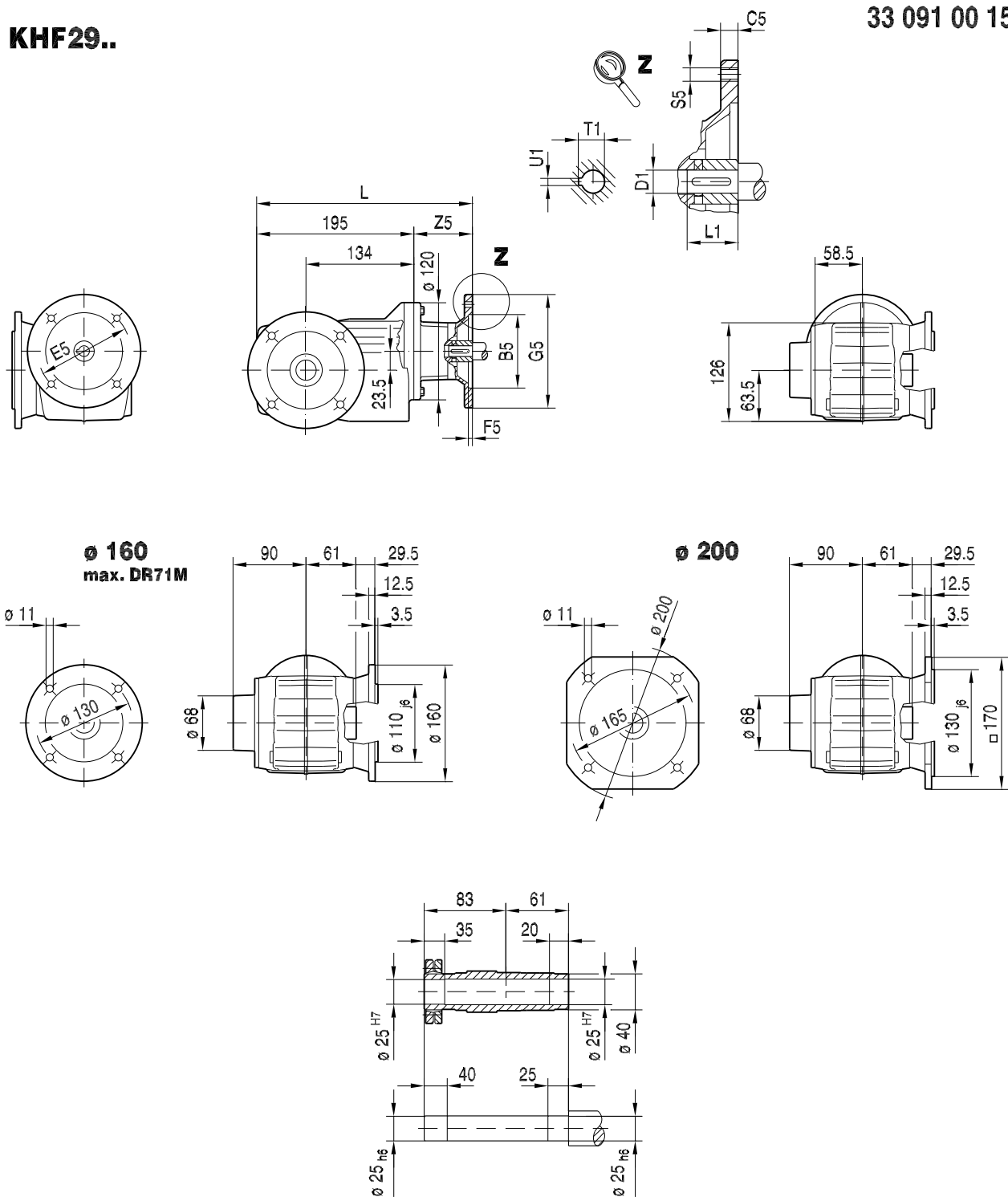


	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	267	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	267	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	301	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	301	M10	106	24	50	27.3	8

KHF29..

33 091 00 15

2



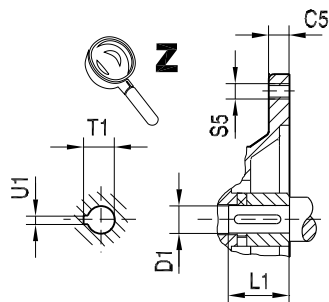
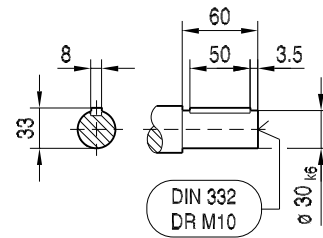
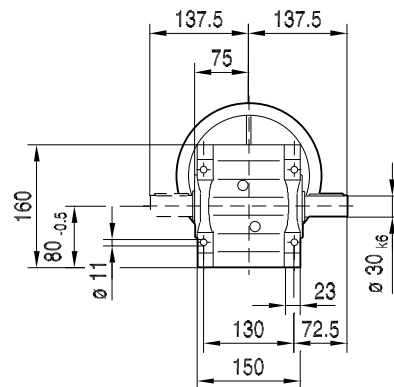
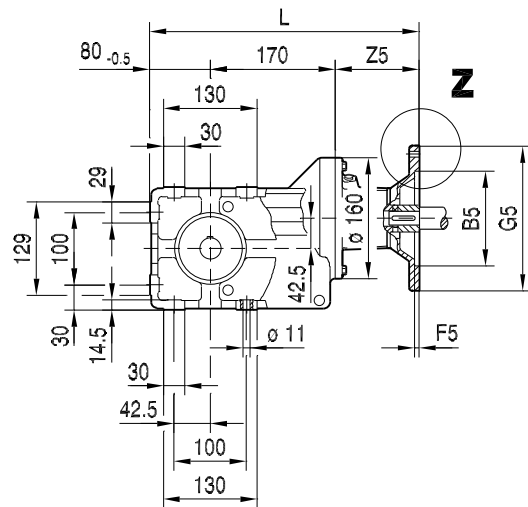
	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	267	M8	72	11	23	12.8	4
AM71	110	10	130	4	160	267	M8	72	14	30	16.3	5
AM80	130	12	165	4.5	200	301	M10	106	19	40	21.8	6
AM90	130	12	165	4.5	200	301	M10	106	24	50	27.3	8

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33 052 00 15

K39..

2

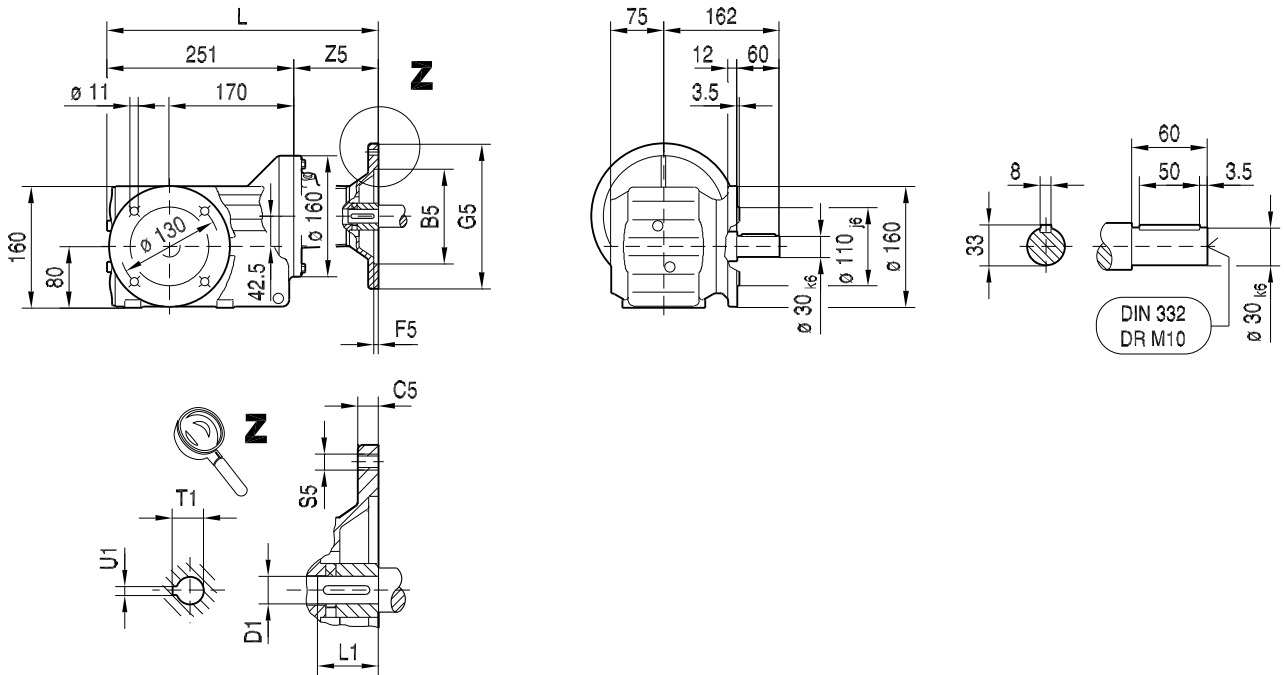


	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	316	M8	66	11	23	12.8	4
AM71	110	10	130	4	160	316	M8	66	14	30	16.3	5
AM80	130	12	165	4.5	200	349	M10	99	19	40	21.8	6
AM90	130	12	165	4.5	200	349	M10	99	24	50	27.3	8
AM100	180	15	215	5	250	384	M12	134	28	60	31.3	8
AM112	180	15	215	5	250	384	M12	134	28	60	31.3	8

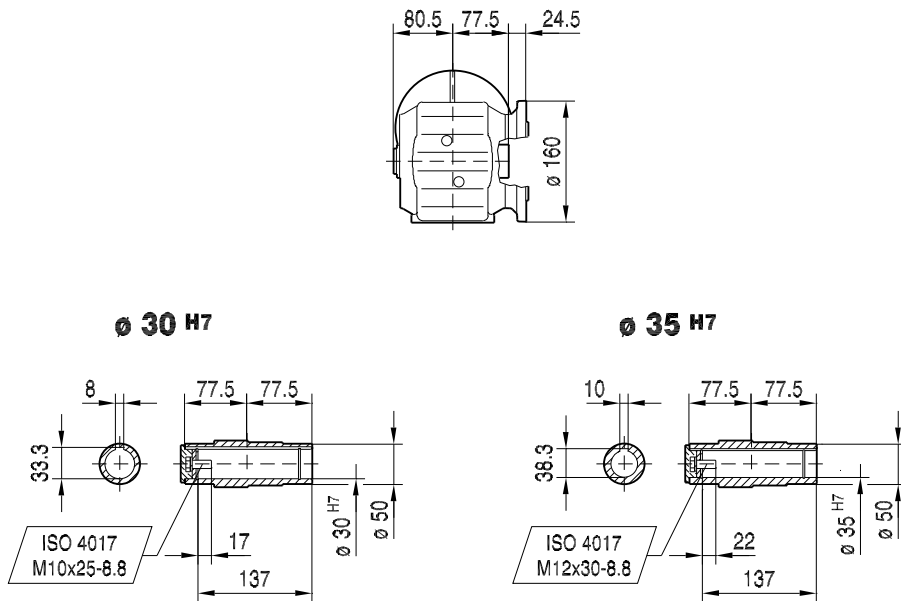
21932379/DE – 05/2015

33 053 00 15

KF39..



KAF39..

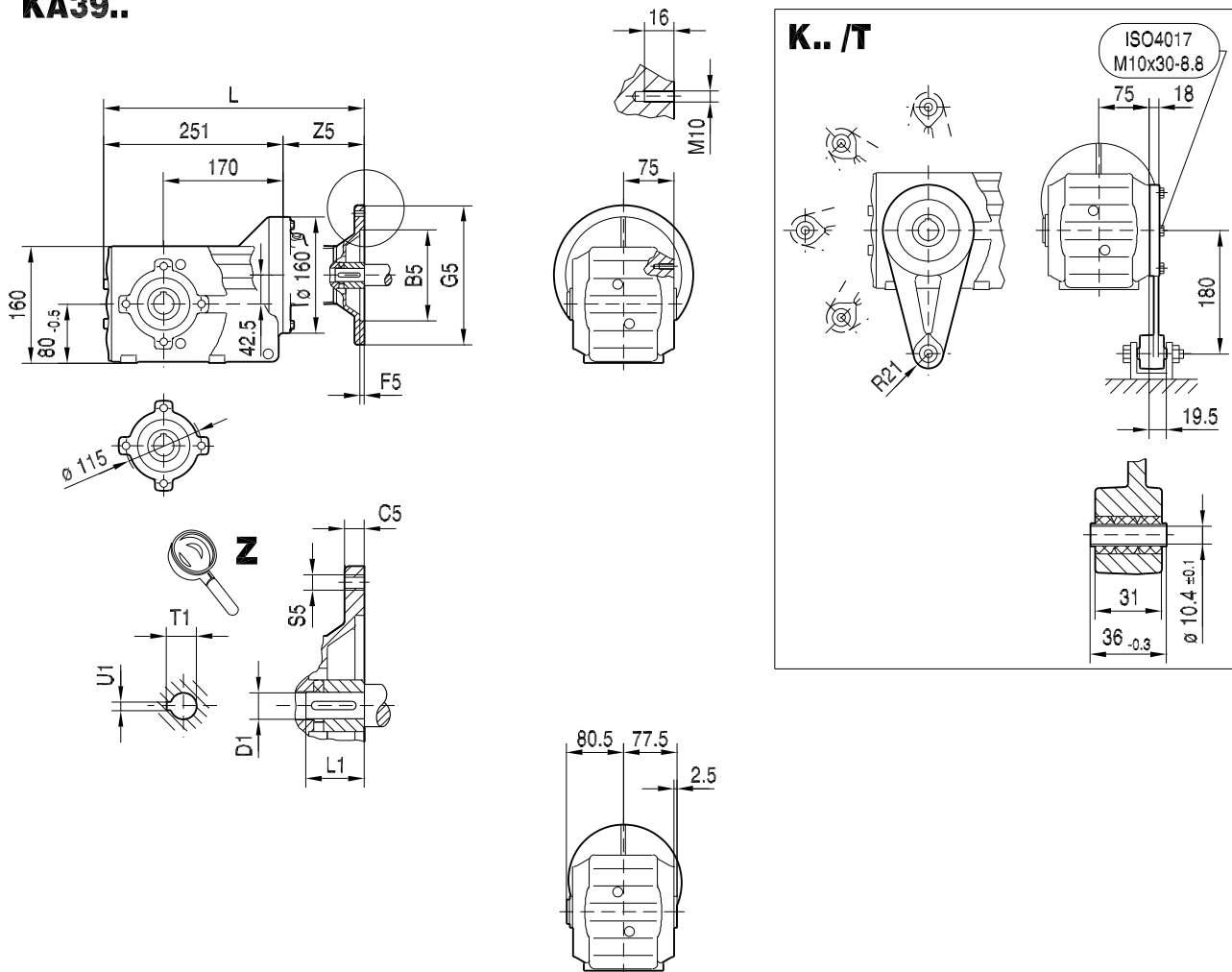


	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	317	M8	66	11	23	12.8	4
AM71	110	10	130	4	160	317	M8	66	14	30	16.3	5
AM80	130	12	165	4.5	200	350	M10	99	19	40	21.8	6
AM90	130	12	165	4.5	200	350	M10	99	24	50	27.3	8
AM100	180	15	215	5	250	385	M12	134	28	60	31.3	8
AM112	180	15	215	5	250	385	M12	134	28	60	31.3	8

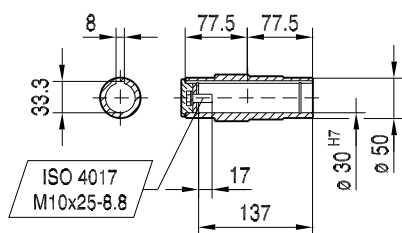
KA39..

33 054 00 15

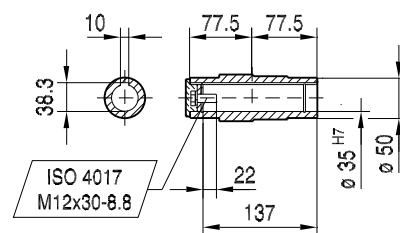
2



Ø 30 H7



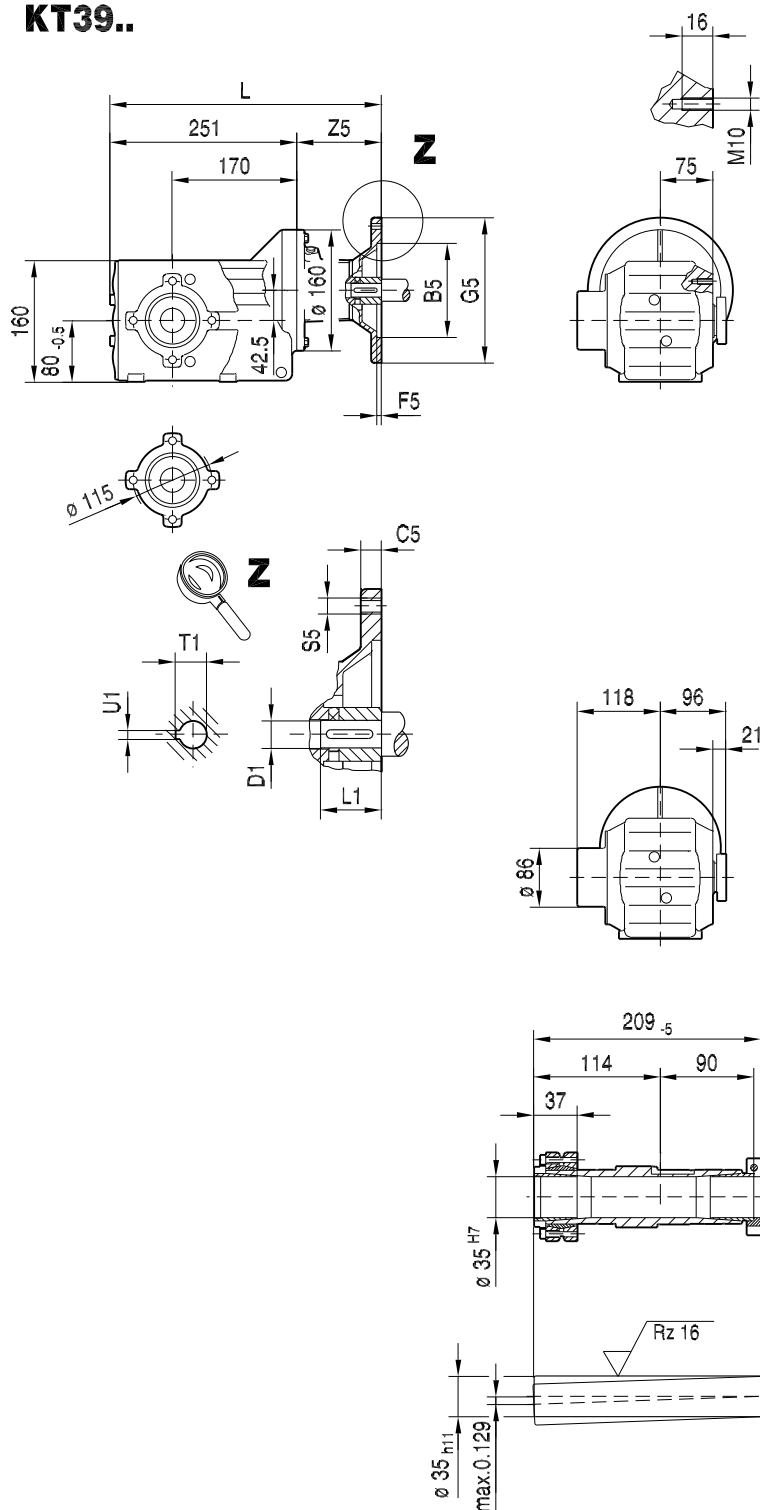
Ø 35 H7



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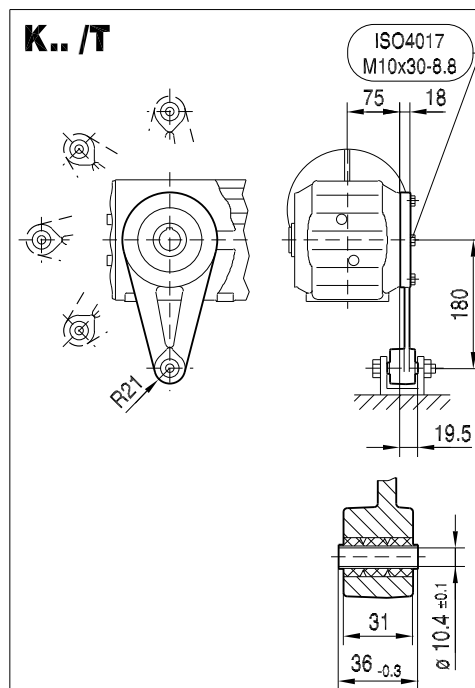
	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	317	M8	66	11	23	12.8	4
AM71	110	10	130	4	160	317	M8	66	14	30	16.3	5
AM80	130	12	165	4.5	200	350	M10	99	19	40	21.8	6
AM90	130	12	165	4.5	200	350	M10	99	24	50	27.3	8
AM100	180	15	215	5	250	385	M12	134	28	60	31.3	8
AM112	180	15	215	5	250	385	M12	134	28	60	31.3	8

KT39..



33 055 00 15

K.. /T



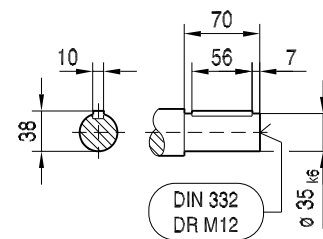
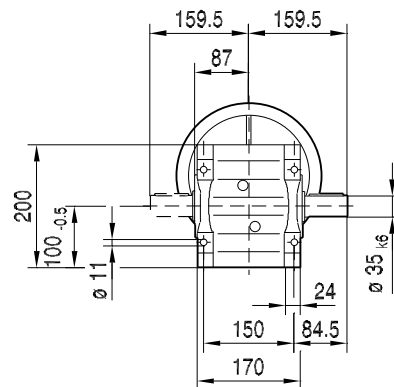
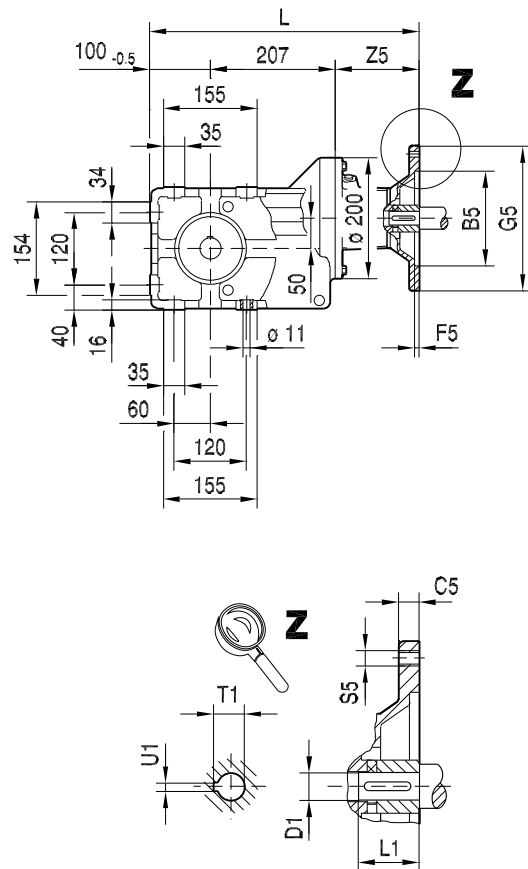
	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	317	M8	66	11	23	12.8	4
AM71	110	10	130	4	160	317	M8	66	14	30	16.3	5
AM80	130	12	165	4.5	200	350	M10	99	19	40	21.8	6
AM90	130	12	165	4.5	200	350	M10	99	24	50	27.3	8
AM100	180	15	215	5	250	385	M12	134	28	60	31.3	8
AM112	180	15	215	5	250	385	M12	134	28	60	31.3	8

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33 056 00 15

K49..

2

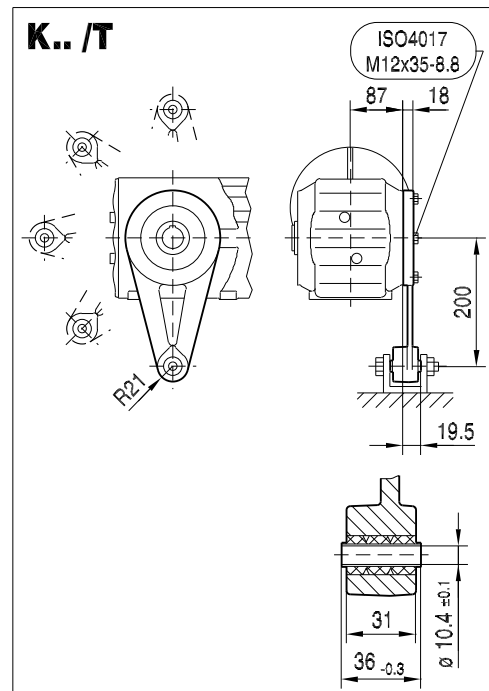
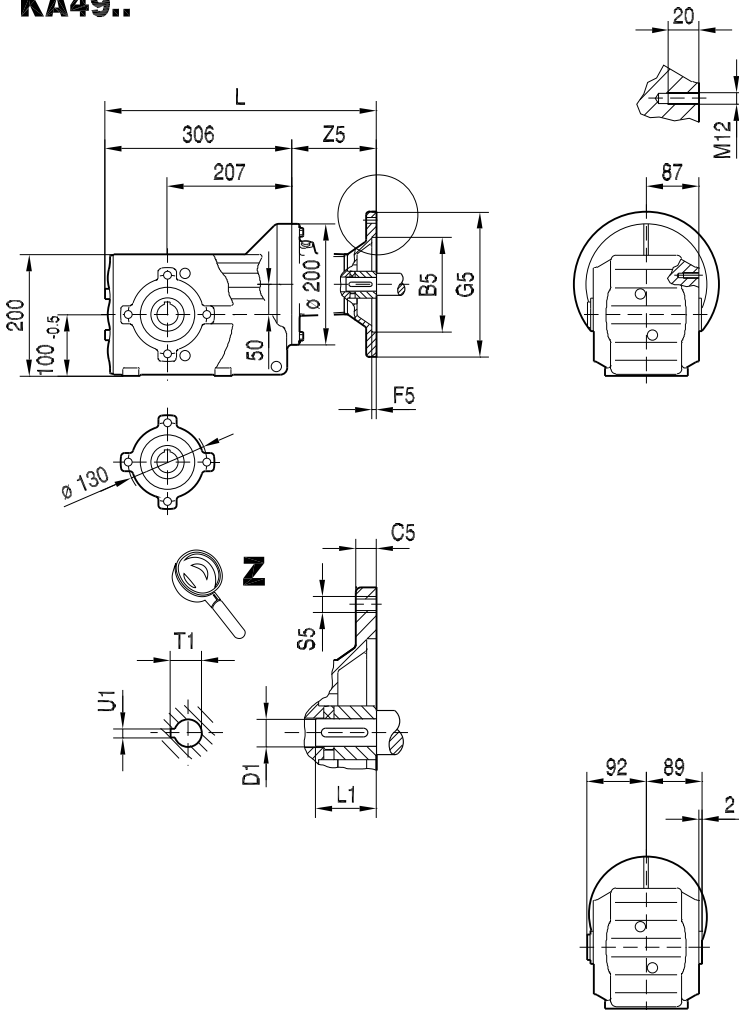


	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	367	M8	60	11	23	12.8	4
AM71	110	10	130	4	160	367	M8	60	14	30	16.3	5
AM80	130	12	165	4.5	200	399	M10	92	19	40	21.8	6
AM90	130	12	165	4.5	200	399	M10	92	24	50	27.3	8
AM100	180	15	215	5	250	433	M12	126	28	60	31.3	8
AM112	180	15	215	5	250	433	M12	126	28	60	31.3	8
AM132S/M	230	16	265	5	300	486	M12	179	38	80	41.3	10

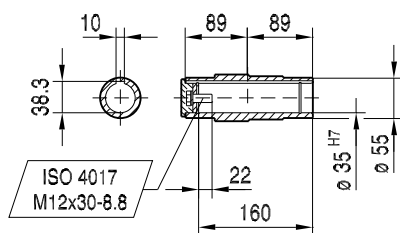
21932379/DE – 05/2015

KA49..

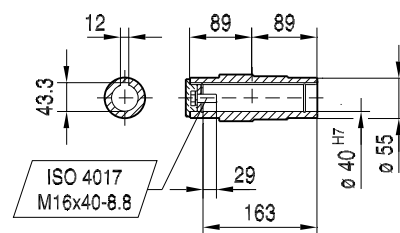
33 058 00 15



Ø 35 H7



Ø 40 H7



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	B5	C5	E5	F5	G5	L	S5	Z5	D1	L1	T1	U1
AM63	95	10	115	3.5	140	366	M8	60	11	23	12.8	4
AM71	110	10	130	4	160	366	M8	60	14	30	16.3	5
AM80	130	12	165	4.5	200	398	M10	92	19	40	21.8	6
AM90	130	12	165	4.5	200	398	M10	92	24	50	27.3	8
AM100	180	15	215	5	250	432	M12	126	28	60	31.3	8
AM112	180	15	215	5	250	432	M12	126	28	60	31.3	8
AM132S/M	230	16	265	5	300	485	M12	179	38	80	41.3	10

2.7 Auswahltabellen K..9 / CMP..

K19, M _{aDyn} [Nm]							80 Nm
i	40M	50S	50M	CMP 50L	63S	63M	71S
 2							
4.50	17	23	45	67	48	>88	84
5.16	19	26	52	77	56	>88	>88
5.54	20	28	55	83	60	>88	>88
6.41	24	32	64	>88	69	>88	>88
6.91	25	35	69	>88	74	>88	>88
8.09	30	41	81		87		
9.58	35	48					
10.32	38	52	>83	>83	>83	>83	>83
11.84	43	59	>86	>86	>86	>86	>86
12.70	46	63	>88	>88	>88	>88	>88
14.69	54	73	>88	>88	>88	>88	>88
15.84	58	79	>88	>88	>88	>88	>88
18.55	68	>88	>88		>88		
21.98	80	>88					
24.06	88	>88					
26.88							
27.16	>66	>66	>66	>66	>66	>66	>66
29.14							
29.29	>67	>67	>67	>67	>67	>67	>67
31.74							
34.29	>70	>70	>70		>70		
40.63	>73	>73					
44.48	>75	>75					
49.69							
53.88							
58.68							

K19, m [kg]				CMP			
s	40M	50S	50M	50L	63S	63M	71S
 2	5.9	7.6	8.5	9.4	9.7	11	13

KF: + 0.30 kg / KA: + -0.45 kg / KAF: + -- kg

CMP..				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K19  2	4.50	4500	97	5.1	4.4	8.5	8.5
	5.16	4500	97	5.1	4.4	8.5	8.5
	5.54	4500	97	5.1	4.4	8.5	8.5
	6.41	4500	97	5.1	4.4	8.5	8.5
	6.91	4500	97	5.1	4.4	8.5	8.5
	8.09	4500	97	5.1	4.5	8.6	8.6
	9.58	4500	97	5.1	4.5	8.6	8.6
	10.32	4500	96	6.2	5.2	12	12
	11.84	4500	96	6.2	5.2	12	12
	12.70	4500	96	5.1	4.5	8.6	8.6
	14.69	4500	96	6.2	5.2	12	12
	15.84	4500	96	6.2	5.2	12	12
	18.55	4500	96	6.2	5.2	12	12
	21.98	4500	96	6.2	5.2	12	12
	24.06	4500	96	6.2	5.2	12	12
	26.88	4500	96	6.2	5.2	12	12
	27.16	4500	91	6.2	5.2	12	12
	29.14	4500	96	6.2	5.2	12	12
	29.29	4500	91	6.2	5.2	12	12
	31.74	4500	96	6.2	5.2	12	12
	34.29	4500	91	6.2	5.2	12	12
	40.63	4500	91	6.2	5.2	12	12
	44.48	4500	91	6.2	5.2	12	12
	49.69	4500	91	6.2	5.2	12	12
	53.88	4500	91	6.2	5.2	12	12
	58.68	4500	91	6.2	5.2	12	12

CMP.. $n_e = 1400$							F_{Ramax}				F_{Rapk}			
	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	$J_G \cdot 10^{-4}$ [kg*m ²]	K [N]	KF [N]	KA [N]	KAF [N]	K [N]	KF [N]	KA [N]	KAF [N]
K19  2	4.50	80	88	132	433	0.38	2010	1620	2500	2500	4190	3630	4500	4500
	5.16	80	88	132	424	0.30	2140	1720	2650	2650	4190	3630	4500	4500
	5.54	80	88	132	419	0.27	2200	1780	2730	2730	4190	3630	4500	4500
	6.41	80	88	132	410	0.21	2340	1890	2900	2900	4190	3630	4500	4500
	6.91	80	88	132	407	0.18	2420	1950	3000	3000	4190	3630	4500	4500
	8.09	80	88	132	399	0.14	2590	2080	3200	3200	4190	3630	4500	4500
	9.58	63	69	104	731	0.11	2910	2340	3600	3600	4340	3670	4500	4500
	10.32	76	83	124	102	0.22	2720	2190	3370	3370	4230	3610	4500	4500
	11.84	79	86	129	90	0.18	2850	2300	3530	3530	4210	3600	4500	4500
	12.70	80	88	132	83	0.16	2930	2360	3630	3630	4190	3600	4500	4500
	14.69	80	88	132	82	0.13	3110	2510	3860	3860	4190	3600	4500	4500
	15.84	80	88	132	81	0.12	3210	2590	3980	3980	4190	3600	4500	4500
	18.55	80	88	132	81	0.092	3430	2760	4250	4250	4190	3600	4500	4500
	21.98	80	88	132	81	0.072	3680	2960	4500	4500	4190	3600	4500	4500
	24.06	80	88	132	81	0.063	3820	3080	4500	4500	4190	3600	4500	4500
	26.88	80	88	132	80	0.054	3990	3220	4500	4500	4190	3600	4500	4500
	27.16	60	66	99	38	0.13	4090	3290	4500	4500	4360	3630	4500	4500
	29.14	80	88	132	80	0.048	4120	3320	4500	4500	4190	3600	4500	4500
	29.29	61	67	100	36	0.11	4200	3380	4500	4500	4350	3630	4500	4500
	31.74	80	88	132	80	0.042	4260	3440	4500	4500	4190	3600	4500	4500
	34.29	64	70	105	31	0.090	4370	3570	4500	4500	4330	3620	4500	4500
	40.63	67	73	110	27	0.071	4350	3630	4500	4500	4310	3610	4500	4500
	44.48	69	75	112	24	0.062	4340	3620	4500	4500	4290	3600	4500	4500
	49.69	70	77	116	22	0.053	4330	3620	4500	4500	4280	3600	4500	4500
	53.88	70	77	116	22	0.047	4330	3620	4500	4500	4280	3600	4500	4500
	58.68	70	77	116	22	0.042	4330	3620	4500	4500	4280	3600	4500	4500

K29, M _{aDyn} [Nm]								130 Nm
i	CMP							
	50S	50M	50L	63S	63M	63L	71S	71M
 2								
3.19	16	32	48	34	66	94	59	95
3.92	20	39	59	42	81	116	73	117
5.10	26	51	76	55	106	>121	95	>121
5.75	29	57	86	62	119	>123	107	>123
6.95	35	69	104	75	>123	>123	>123	>123
7.48	37	74	111	80	>135	>135	>135	>135
8.53	43	85	127	92	>134		>134	
9.17	46	91	136	98	>143	>143	>143	>143
9.90	50	99		107				
11.94	60	118	>143	127	>143	>143	>143	>143
13.47	67	133	>143	>143	>143	>143	>143	>143
16.29	81	>143	>143	>143	>143	>143	>143	>143
19.99	100	>143	>143	>143	>143		>143	
22.08	104	>115	>115	>115	>115	>115	>115	>115
23.19	116	>143		>143				
24.91	118	>119	>119	>119	>119	>119	>119	>119
27.23	136							
29.69	>143							
30.11	>126	>126	>126	>126	>126	>126	>126	>126
33.15								
35.83								
36.96	>134	>134	>134	>134	>134		>134	
38.90								
42.87	>140	>140		>140				
50.35	>143							
54.89	>143							
61.28								
66.25								
71.93								

K29, m [kg]				CMP				
s	50S	50M	50L	63S	63M	63L	71S	71M
 2	9.4	10	11	11	13	14	14	16
KF: + 1.0 kg / KA: + -0.45 kg / KAF: + 0.35 kg								

CMP..				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K29  2	3.19	4500	97	8.3	7.4	16	16
	3.92	4500	97	8.3	7.4	16	16
	5.10	4500	97	8.4	7.5	17	17
	5.75	4500	97	8.4	7.5	17	17
	6.95	4500	97	8.4	7.5	17	17
	7.48	4500	96	10	8.8	25	25
	8.53	4500	97	8.4	7.5	17	17
	9.17	4500	96	10	8.8	25	25
	9.90	4500	97	8.4	7.5	17	17
	11.94	4500	96	10	8.8	25	25
	13.47	4500	96	10	8.8	25	25
	16.29	4500	96	10	8.8	25	25
	19.99	4500	96	10	8.8	25	25
	22.08	4500	91	8.6	7.6	18	18
	23.19	4500	96	10	8.8	25	25
	24.91	4500	91	8.6	7.6	18	18
	27.23	4500	96	10	8.8	25	25
	29.69	4500	96	10	8.8	25	25
	30.11	4500	91	8.6	7.6	18	18
	33.15	4500	96	10	8.8	25	25
	35.83	4500	96	10	8.8	25	25
	36.96	4500	92	8.6	7.6	18	18
	38.90	4500	95	10	8.8	25	25
	42.87	4500	91	8.6	7.6	18	18
	50.35	4500	91	8.6	7.6	18	18
	54.89	4500	91	8.6	7.6	18	18
	61.28	4500	91	8.6	7.6	18	18
	66.25	4500	91	8.6	7.6	18	18
	71.93	4500	91	8.6	7.6	18	18

CMP..							F _{Ramax}				F _{Rapk}			
n _e = 1400		M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m²]	K [N]	KF [N]	KA [N]	KAF [N]	K [N]	KF [N]	KA [N]	KAF [N]
K29  2	3.19	110	121	182	1082	1.6	1830	1200	1860	1860	5070	6000	6000	6000
	3.92	126	138	205	722	1.1	1910	1240	1920	1920	5030	6000	6000	6000
	5.10	110	121	182	1080	0.68	2260	1500	2320	2320	5070	6000	6000	6000
	5.75	112	123	184	1030	0.55	2370	1580	2440	2440	5070	6000	6000	6000
	6.95	112	123	184	1007	0.39	2580	1720	2660	2660	5070	6000	6000	6000
	7.48	123	135	200	138	0.74	2300	1480	2300	2300	4980	6000	6000	6000
	8.53	122	134	200	755	0.27	2740	1830	2830	2830	5040	6000	6000	6000
	9.17	130	143	210	112	0.55	2470	1600	2480	2480	4960	6000	6000	6000
	9.90	110	121	182	707	0.21	3000	2020	3120	3120	5070	6000	6000	6000
	11.94	130	143	210	112	0.37	2810	1830	2840	2840	4960	6000	6000	6000
	13.47	130	143	210	111	0.30	2970	1950	3010	3010	4960	6000	6000	6000
	16.29	130	143	210	111	0.22	3240	2140	3300	3300	4960	6000	6000	6000
	19.99	130	143	210	111	0.16	3550	2350	3640	3640	4960	6000	6000	6000
	22.08	105	115	172	47	0.33	3820	2560	3950	3950	5020	6000	6000	6000
	23.19	130	143	210	110	0.12	3790	2520	3900	3900	4960	6000	6000	6000
	24.91	109	119	178	42	0.27	3980	2660	4120	4120	5010	6000	6000	6000
	27.23	130	143	210	110	0.098	4060	2710	4190	4190	4960	6000	6000	6000
	29.69	130	143	210	110	0.086	4210	2820	4360	4360	4960	6000	6000	6000
	30.11	115	126	189	35	0.20	4250	2850	4400	4400	4990	6000	6000	6000
	33.15	130	143	210	110	0.073	4410	2960	4580	4580	4960	6000	6000	6000
	35.83	130	143	210	110	0.065	4560	3060	4740	4740	4960	6000	6000	6000
	36.96	122	134	200	28	0.14	4560	3060	4730	4730	4960	6000	6000	6000
	38.90	130	143	210	110	0.057	4720	3170	4910	4910	4960	6000	6000	6000
	42.87	128	140	210	24	0.11	4790	3210	4970	4970	4940	6000	6000	6000
	50.35	130	143	210	22	0.090	4980	3430	5300	5300	4930	6000	6000	6000
	54.89	130	143	210	23	0.079	4980	3560	5510	5510	4930	6000	6000	6000
	61.28	130	143	210	23	0.068	4980	3730	5770	5770	4930	6000	6000	6000
	66.25	130	143	210	22	0.060	4980	3860	5970	5970	4930	6000	6000	6000
	71.93	130	143	210	23	0.053	4980	4000	6000	6000	4930	6000	6000	6000

K29
2

K39, M _{aDyn} [Nm]										300 Nm
i	50S	50M	50L	63S	CMP		71S	71M	71L	80S
					 2					
2.81		27	41	30	57	81	51	82	125	112
3.94		39	58	42	81	115	73	116	177	159
4.52	23	45	67	48	93	132	83	134	200	183
5.22	26	52	77	56	107	152	96	154	235	210
5.75	29	57	85	61	118	168	106	170	255	230
6.75	34	67	100	72	139	197	124	200	300	270
7.15	36	71	106	76	147	205	132	210	320	285
8.12	41	80	120	87	167	235	150	240	365	325
9.00	45	89	133	96	185	260	166	265	>385	360
10.61	53	105	157	113	215	305	196	310		
12.09	60	120	179	129	245		220			
12.73	64	126	188	136	260		230			
13.44		126	188	136	260	370	230	375	>405	>405
15.44	73	145	215	156	300	>410	265	>410	>410	>410
17.83	84	167	245	180	345	>410	310	>410	>410	>410
19.62	93	184	270	198	380	>410	340	>410	>410	>410
23.04	109	215	320	230	>410	>410	400	>410	>410	>410
24.40	115	225	340	245	>410	>410	>410	>410	>410	>410
27.73	131	255	385	280	>410	>410	>410	>410	>410	>410
30.72	145	285	>410	310	>410	>410	>410	>410	>410	>410
36.22	171	335	>410	365	>410	>410	>410	>410		
41.28	195	385	>410	>410	>410		>410			
43.45	205	405	>410	>410	>410		>410			
49.69	235	>410		>410						
58.24	275									

K39, m [kg]										CMP
s	50S	50M	50L	63S	63M	63L	71S	71M	71L	80S
 2	20	21	22	22	24	25	25	27	29	32
KF: + 1.5 kg / KA: + -1.0 kg / KAF: + 0.50 kg										

CMP..				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K39  2	2.81	4500	95	15	14	30	30
	3.94	4500	96	15	14	30	30
	4.52	4500	96	15	14	30	30
	5.22	4500	96	15	14	30	30
	5.75	4500	96	15	14	30	30
	6.75	4500	96	15	14	30	30
	7.15	4500	96	15	14	30	30
	8.12	4500	96	15	14	30	30
	9.00	4500	96	15	14	30	30
	10.61	4500	96	15	14	37	37
	12.09	4500	96	15	14	37	37
	12.73	4500	96	15	14	37	37
	13.44	4500	91	20	19	67	67
	15.44	4500	91	20	19	67	67
	17.83	4500	91	20	19	67	67
	19.62	4500	91	20	19	67	67
	23.04	4500	91	20	19	67	67
	24.40	4500	91	20	19	67	67
	27.73	4500	91	20	19	67	67
	30.72	4500	91	20	19	67	67
	36.22	4500	91	20	19	67	67
	41.28	4500	91	20	19	67	67
	43.45	4500	91	20	19	67	67
	49.69	4500	91	20	19	67	67
	58.24	4500	91	20	19	67	67

CMP.. $n_e = 1400$							F_{Ramax}				F_{Rapk}			
	i	M_{amax} [Nm]	M_{apk} [Nm]	$M_{aNotaus}$ [Nm]	n_{ak} [1/min]	$J_G \cdot 10^{-4}$ [kg*m ²]	K [N]	KF [N]	KA [N]	KAF [N]	K [N]	KF [N]	KA [N]	KAF [N]
K39  2	2.81	170	255	285	811	7.9	2870	2460	2180	2180	7500	6260	7500	7500
	3.94	215	320	365	378	4.6	3070	2630	2260	2260	7500	6180	7500	7500
	4.52	240	360	405	257	3.6	3130	2680	1730	1730	7500	6130	7500	7500
	5.22	260	390	440	192	2.9	3240	2770	960	960	7500	6090	7500	7500
	5.75	275	410	465	158	2.5	3300	2830	290	290	7470	6060	7500	7500
	6.75	300	435	510	130	2.0	3430	2940	0	0	7300	6020	7500	7500
	7.15	300	435	510	129	1.8	3530	3020	157	157	7300	6020	7500	7500
	8.12	300	385	510	193	1.4	3760	3220	2080	2080	7500	6090	7500	7500
	9.00	300	385	510	192	1.2	3950	3380	2860	2860	7500	6090	7500	7500
	10.61	285	370	485	218	0.91	4360	3730	3250	3250	7500	6110	7500	7500
	12.09	255	295	430	464	0.65	4790	4110	3700	3700	7500	6210	7500	7500
	12.73	250	295	425	463	0.58	4930	4220	3830	3830	7500	6210	7500	7500
	13.44	270	405	455	27	2.6	4160	3560	2830	2830	7500	5980	7500	7500
	15.44	280	410	475	26	2.2	4380	3750	2990	2990	7490	5960	7500	7500
	17.83	290	410	490	25	1.8	4630	3960	3180	3180	7490	5960	7500	7500
	19.62	295	410	500	25	1.5	4820	4120	3330	3330	7490	5960	7500	7500
	23.04	300	410	510	24	1.3	5180	4440	3630	3630	7490	5960	7500	7500
	24.40	300	410	510	24	1.2	5330	4560	3760	3760	7490	5960	7500	7500
	27.73	300	410	510	24	0.95	5670	4860	4070	4070	7490	5960	7500	7500
	30.72	300	410	510	24	0.82	5960	5100	4320	4320	7490	5960	7500	7500
	36.22	300	410	510	23	0.65	6440	5520	4740	4740	7490	5960	7500	7500
	41.28	300	410	510	23	0.44	6840	5860	5100	5100	7490	5960	7500	7500
	43.45	300	410	510	23	0.39	7000	6000	5240	5240	7490	5960	7500	7500
	49.69	300	410	510	23	0.32	7440	6150	5630	5630	7490	5960	7500	7500
	58.24	300	410	510	23	0.26	7500	6150	6110	6110	7490	5960	7500	7500

K49, M _{aDyn} [Nm]									500 Nm
i	63S	63M	63L	71S	CMP 71M	71L	80S	80M	100S
 2									
4.00	43	82	117	74	118	180	162	240	260
4.69	50	96	137	86	139	210	190	280	305
5.29	56	109	154	98	156	235	210	315	345
5.99	64	123	175	110	177	265	240	355	390
6.83	73	140	199	126	200	305	275	410	445
7.58	81	156	220	140	220	340	305	455	495
8.66	92	178	250	160	255	385	350	520	565
9.14	97	188	265	168	270	410	365	545	595
10.42	111	210	300	192	305	465	420		
11.37	121	230	330	205	335	510	455		
13.38	137	260	370	235	375	575	515	>605	>605
15.67	160	305	435	275	440	>605	>605	>605	>605
17.67	180	345	490	310	500	>605	>605	>605	>605
20.03	200	390	560	350	565	>605	>605	>605	>605
22.83	230	445	>605	400	>605	>605	>605	>605	>605
25.34	255	495	>605	445	>605	>605	>605	>605	>605
28.95	295	565	>605	510	>605	>605	>605	>605	>605
30.55	310	600	>605	535	>605	>605	>605	>605	>605
34.81	355	>605	>605	>605	>605	>605	>605		
37.98	385	>605	>605	>605	>605	>605	>605		
44.44	450	>605	>605	>605	>605				
50.29	510	>605		>605					
52.94	540	>605		>605					
60.27	>605								
70.19									
75.20									

K49, m [kg]					CMP				
s	63S	63M	63L	71S	71M	71L	80S	80M	100S
 2	33	35	36	38	40	42	43	45	50
KF: + 1.7 kg / KA: + -2.8 kg / KAF: + 2.1 kg									

CMP..				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K49  2	4.00	4500	96	27	26	77	77
	4.69	4500	96	27	26	77	77
	5.29	4500	96	27	26	77	77
	5.99	4500	96	27	26	77	77
	6.83	4500	96	27	26	77	77
	7.58	4500	96	27	26	77	77
	8.66	4500	96	27	26	77	77
	9.14	4500	96	27	26	77	77
	10.42	4500	96	27	26	77	77
	11.37	4500	96	27	26	77	77
	13.38	4500	92	35	32	48	48
	15.67	4500	92	35	32	48	48
	17.67	4500	92	35	32	48	48
	20.03	4500	92	35	32	48	48
	22.83	4500	92	35	32	48	48
	25.34	4500	92	35	32	48	48
	28.95	4500	92	35	32	48	48
	30.55	4500	92	35	32	48	48
	34.81	4500	92	35	32	48	48
	37.98	4500	92	35	32	48	48
	44.44	4500	92	35	32	48	48
	50.29	4500	92	35	32	48	48
	52.94	4500	92	35	32	48	48
	60.27	4500	91	35	32	48	48
	70.19	4500	91	35	32	48	48
	75.20	4500	91	35	32	48	48

CMP.. n _e = 1400							F _{Ramax}				F _{Rapk}			
	i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]	K [N]	KF [N]	KA [N]	KAF [N]	K [N]	KF [N]	KA [N]	KAF [N]
K49  2	4.00	440	605	745	218	11	3110	2390	0	0	9000	9000	9000	9000
	4.69	465	605	790	217	8.8	3270	2600	0	0	9000	9000	9000	9000
	5.29	485	605	820	217	7.2	3400	2770	0	0	9000	9000	9000	9000
	5.99	500	605	850	219	5.9	3570	3030	0	0	9000	9000	9000	9000
	6.83	500	605	850	218	4.8	3840	3250	0	0	9000	9000	9000	9000
	7.58	500	605	850	218	4.1	4050	3440	1030	1030	9000	9000	9000	9000
	8.66	500	605	850	218	3.3	4340	3680	3790	3790	9000	9000	9000	9000
	9.14	500	605	850	218	3.1	4460	3780	3910	3910	9000	9000	9000	9000
	10.42	480	585	810	238	2.4	4860	4120	4330	4330	9000	9000	9000	9000
	11.37	495	605	840	218	2.1	5000	4240	4450	4450	9000	9000	9000	9000
	13.38	470	605	795	46	6.5	4320	3660	3510	3510	9000	9000	9000	9000
	15.67	490	605	830	45	5.2	4590	3890	3750	3750	9000	9000	9000	9000
	17.67	500	605	850	44	4.4	4860	4120	3990	3990	9000	9000	9000	9000
	20.03	500	605	850	43	3.7	5220	4420	4350	4350	9000	9000	9000	9000
	22.83	500	605	850	43	3.1	5610	4750	4750	4750	9000	9000	9000	9000
	25.34	500	605	850	42	2.8	5940	5030	5070	5070	9000	9000	9000	9000
	28.95	500	605	850	42	2.3	6370	5400	5510	5510	9000	9000	9000	9000
	30.55	500	605	850	42	2.1	6550	5550	5690	5690	9000	9000	9000	9000
	34.81	500	605	850	42	1.7	7000	5930	6140	6140	9000	9000	9000	9000
	37.98	500	605	850	41	1.5	7310	6200	6450	6450	9000	9000	9000	9000
	44.44	500	605	850	41	1.2	7900	6690	7040	7040	9000	9000	9000	9000
	50.29	500	605	850	41	0.83	8380	7100	7530	7530	9000	9000	9000	9000
	52.94	500	605	850	41	0.75	8590	7280	7730	7730	9000	9000	9000	9000
	60.27	500	605	850	41	0.61	9000	7740	8280	8280	9000	9000	9000	9000
	70.19	445	605	755	40	0.50	9000	8630	9000	9000	9000	9000	9000	9000
75.20	475	605	800	41	0.43	9000	8720	9000	9000	9000	9000	9000	9000	

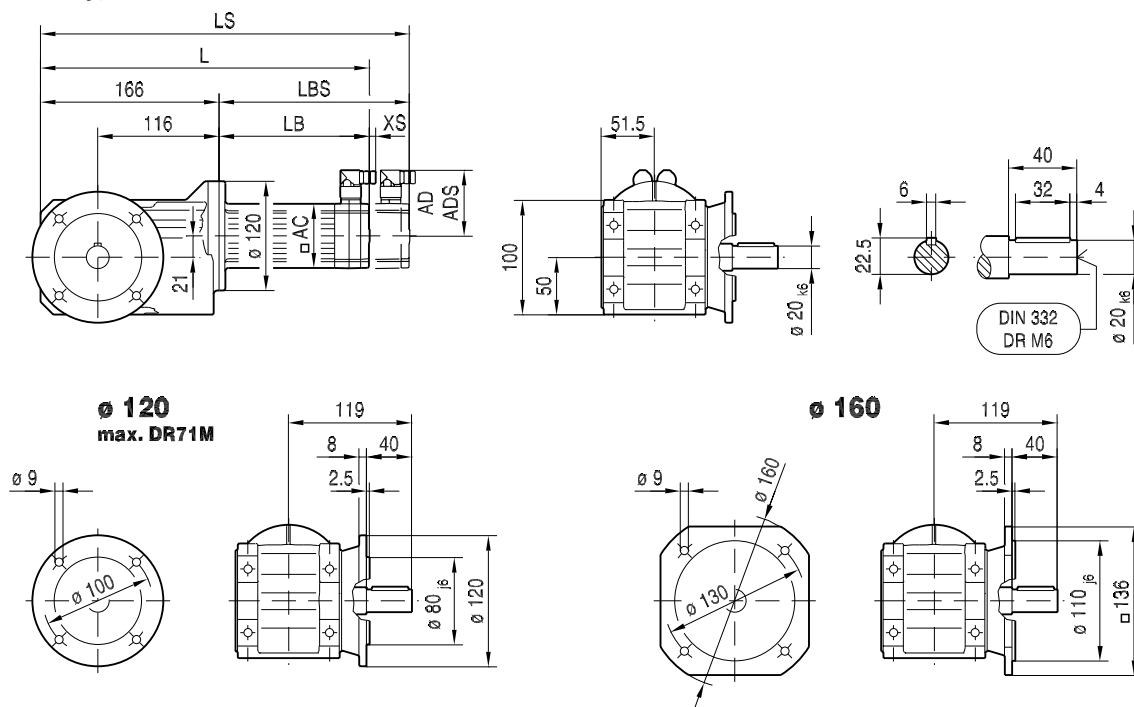
K49
 2

2

	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP71S	
AC	57	73	73	73	88	88	116	
AD	78	86	86	86	92	92	102	
ADS	78	86	86	86	92	92	104	
L	309	311	350	389	346	396	338	
LS	339	340	379	418	374	424	403	
LB	143	145	184	223	180	230	172	
LBS	173	174	213	252	208	258	237	
XS	19	18	18	18	14	14	11	

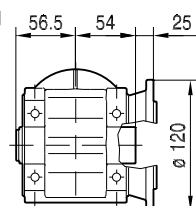
33 070 00 15

KF19B..

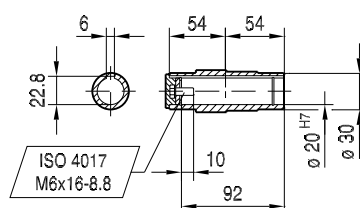
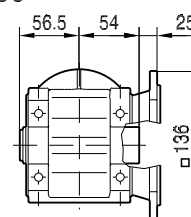


KAF19B..

$\varnothing 120$
max. DR71M



$\varnothing 160$



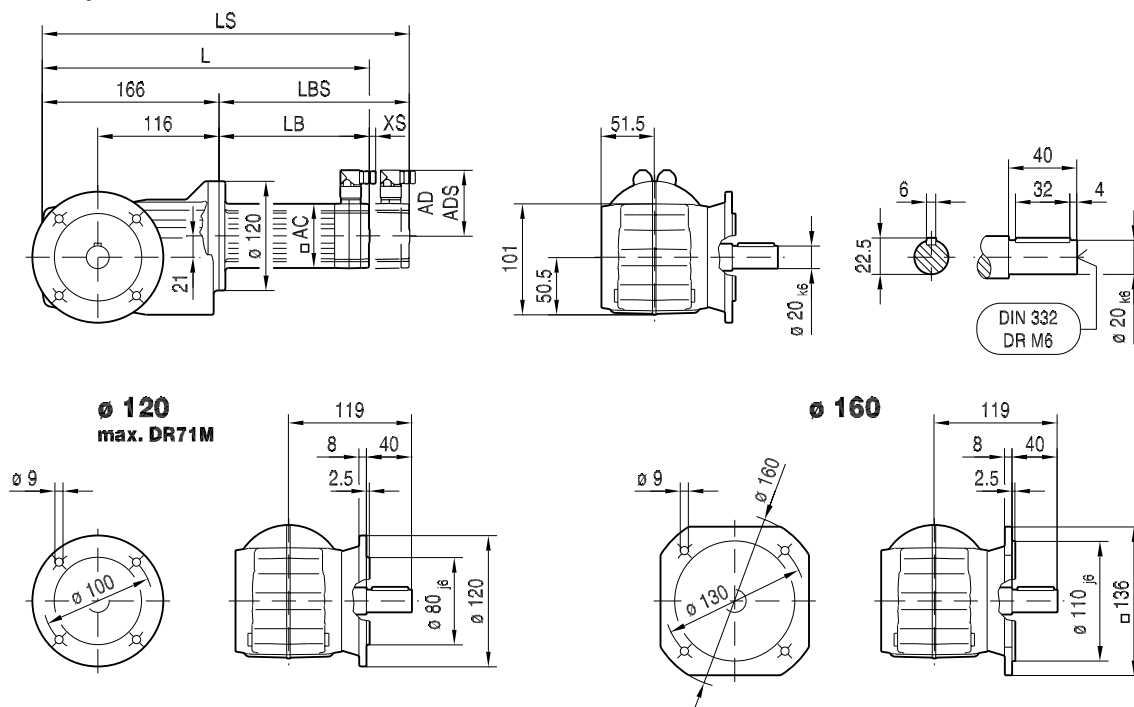
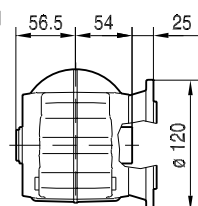
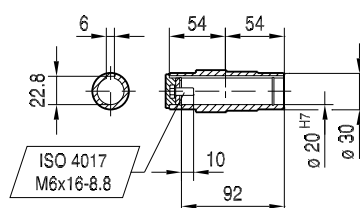
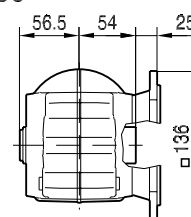
	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP71S	
AC	57	73	73	73	88	88	116	
AD	78	86	86	86	92	92	102	
ADS	78	86	86	86	92	92	104	
L	309	311	350	389	346	396	338	
LS	339	340	379	418	374	424	403	
LB	143	145	184	223	180	230	172	
LBS	173	174	213	252	208	258	237	
XS	19	18	18	18	14	14	11	

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33 071 00 15

	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP71S	
AC	57	73	73	73	88	88	116	
AD	78	86	86	86	92	92	102	
ADS	78	86	86	86	92	92	104	
L	309	311	350	389	346	396	338	
LS	339	340	379	418	374	424	403	
LB	143	145	184	223	180	230	172	
LBS	173	174	213	252	208	258	237	
XS	19	18	18	18	14	14	11	

33 072 00 15

KF19..**KAF19..****120**
max. DR71M**160**

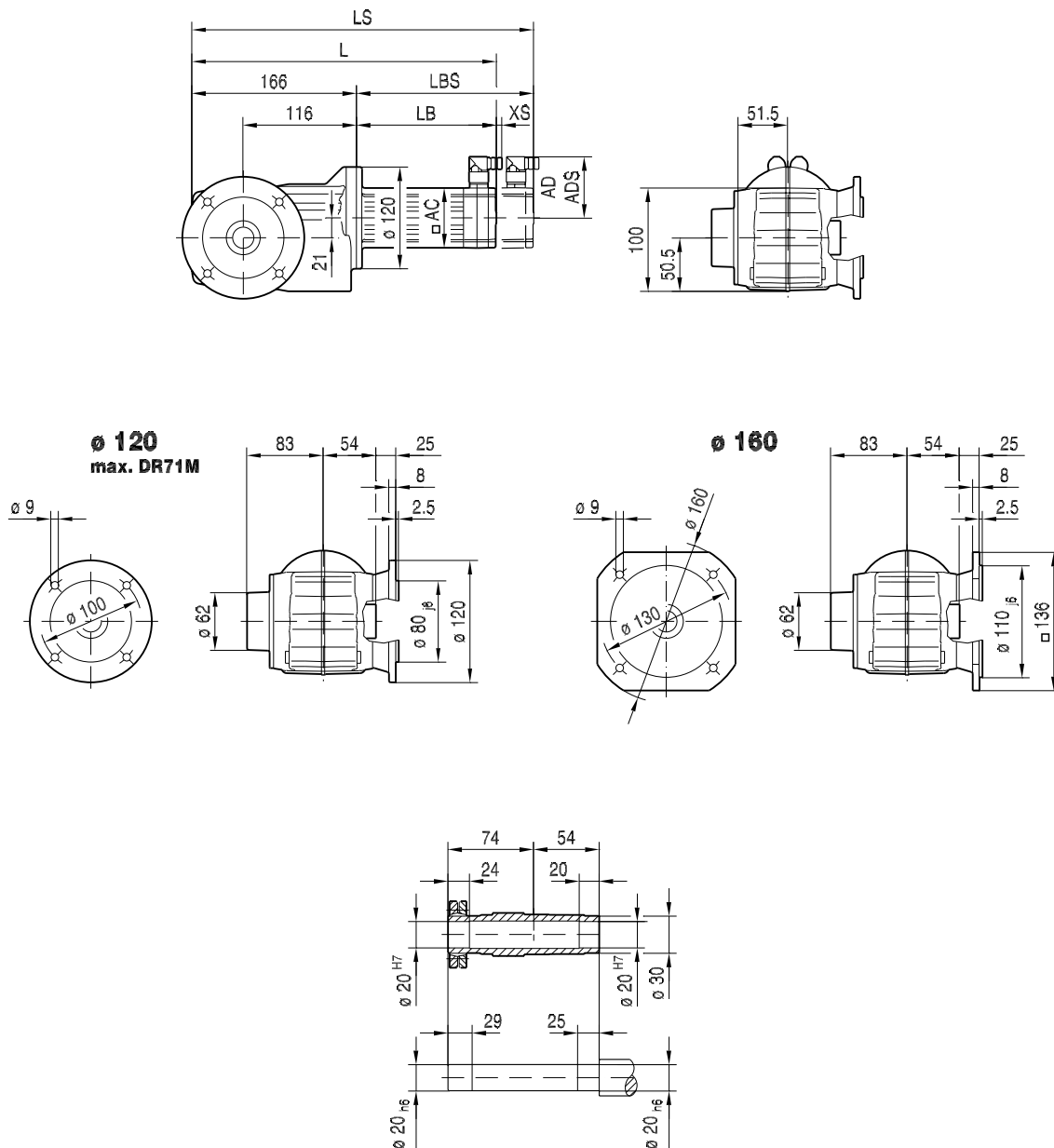
	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP71S	
AC	57	73	73	73	88	88	116	
AD	78	86	86	86	92	92	102	
ADS	78	86	86	86	92	92	104	
L	309	311	350	389	346	396	338	
LS	339	340	379	418	374	424	403	
LB	143	145	184	223	180	230	172	
LBS	173	174	213	252	208	258	237	
XS	19	18	18	18	14	14	11	

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KHF19..

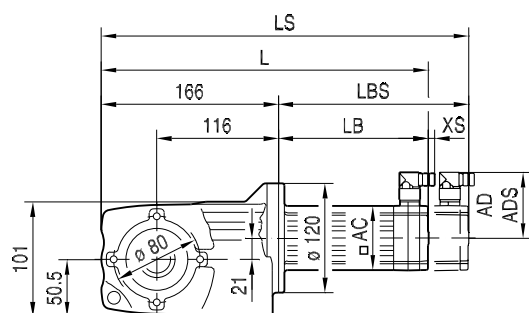
33 073 00 15

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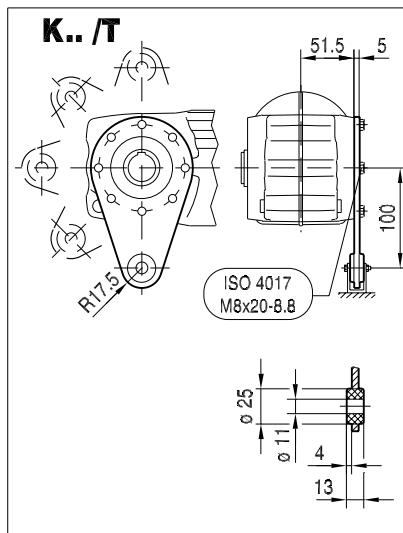


	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP71S	
AC	57	73	73	73	88	88	116	
AD	78	86	86	86	92	92	102	
ADS	78	86	86	86	92	92	104	
L	309	311	350	389	346	396	338	
LS	339	340	379	418	374	424	403	
LB	143	145	184	223	180	230	172	
LBS	173	174	213	252	208	258	237	
XS	19	18	18	18	14	14	11	

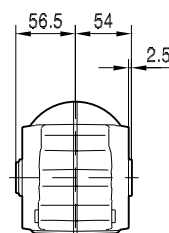
KA19..



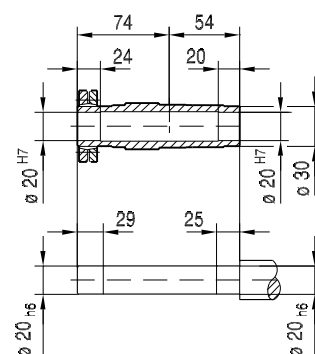
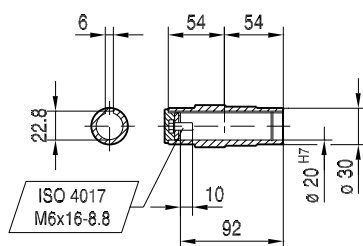
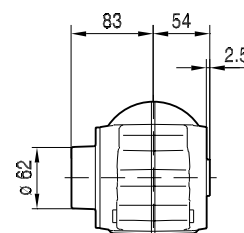
33 074 00 15



KA19..



KH19..

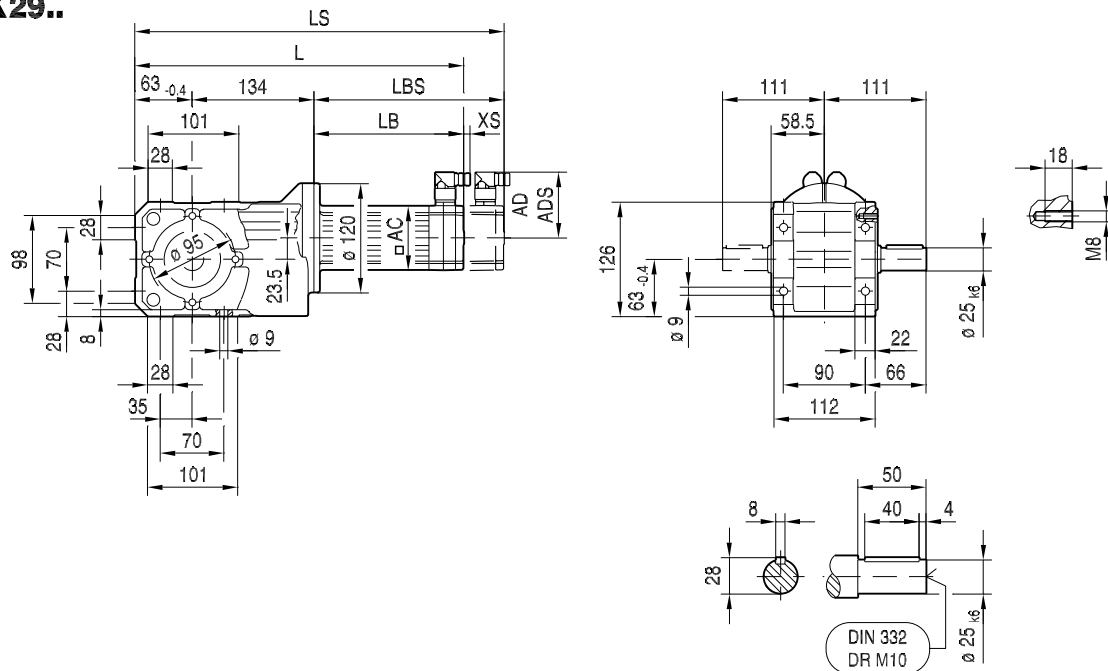


	CMP40M	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP71S	
AC	57	73	73	73	88	88	116	
AD	78	86	86	86	92	92	102	
ADS	78	86	86	86	92	92	104	
L	309	311	350	389	346	396	338	
LS	339	340	379	418	374	424	403	
LB	143	145	184	223	180	230	172	
LBS	173	174	213	252	208	258	237	
XS	19	18	18	18	14	14	11	

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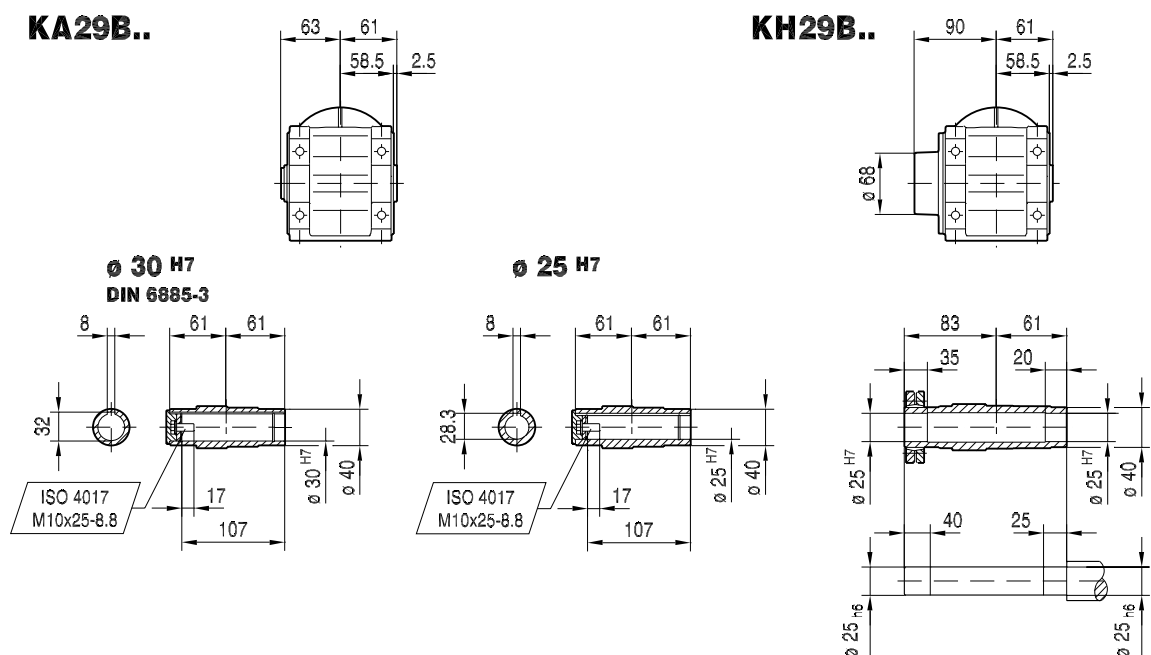
K29..

33 075 00 15



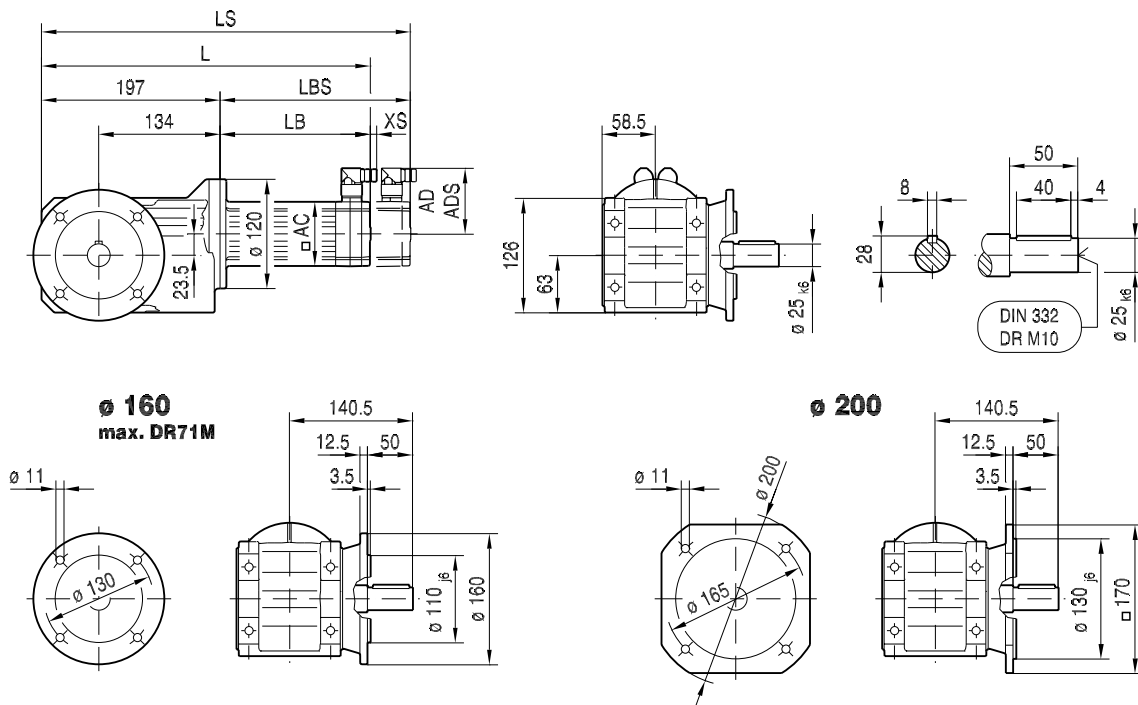
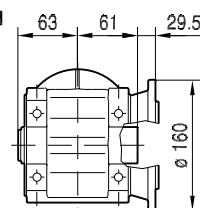
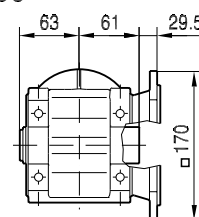
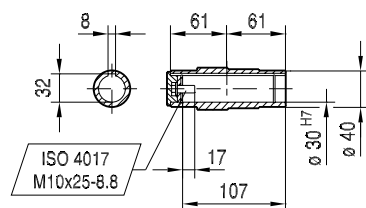
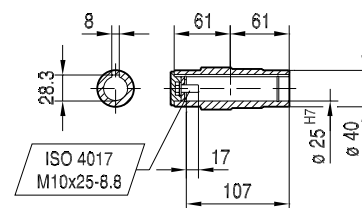
KA29B..

KH29B..



	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M
AC	73	73	73	88	88	88	116	116
AD	86	86	86	92	92	92	102	102
ADS	86	86	86	92	92	92	104	104
L	342	381	420	377	427	480	369	397
LS	371	410	449	405	455	509	434	462
LB	145	184	223	180	230	283	172	200
LBS	174	213	252	208	258	312	237	265
XS	18	18	18	14	14	14	11	11

33 076 00 15

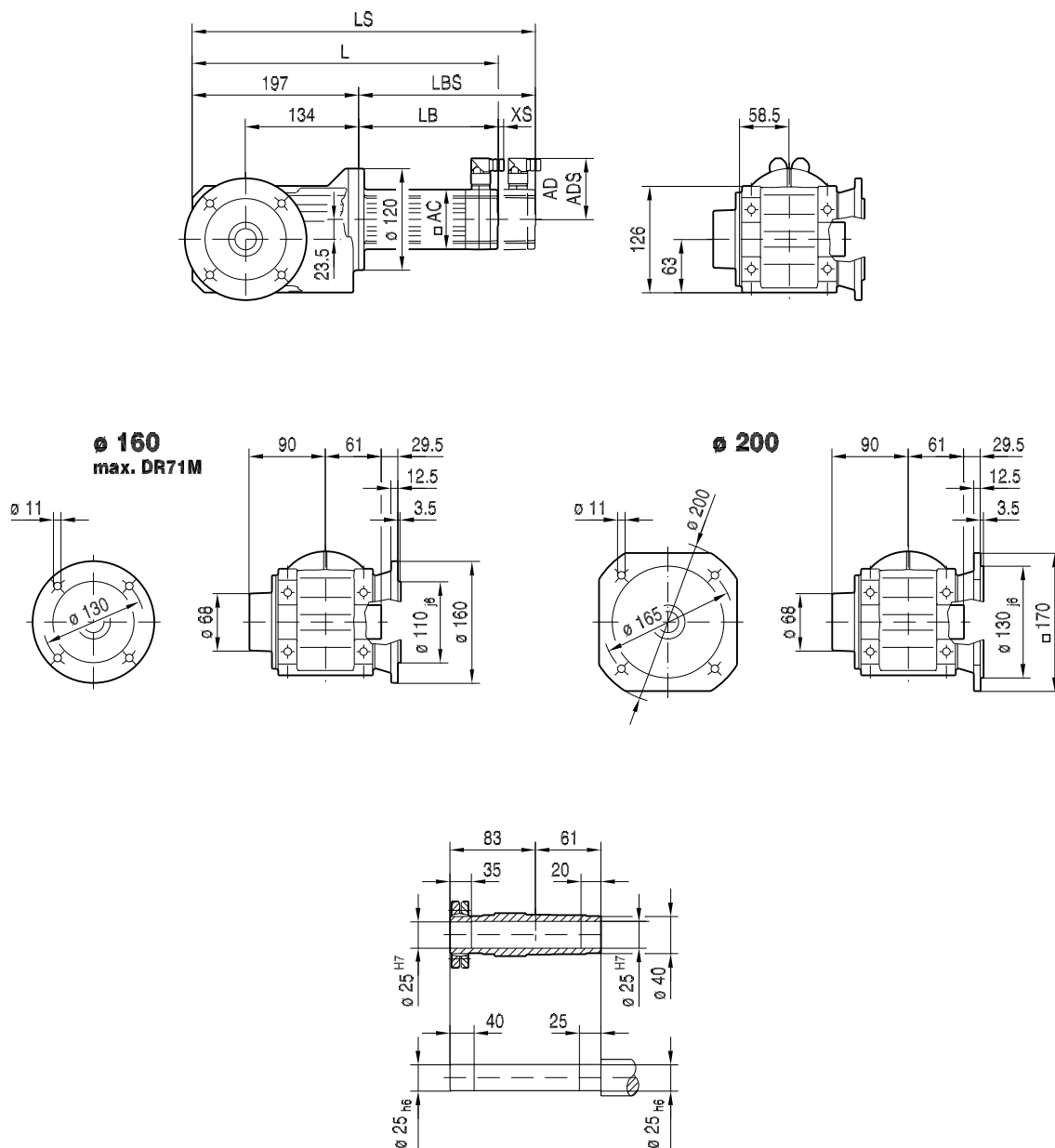
KF29B..**KAF29B..** **$\varnothing 160$
max. DR71M** **$\varnothing 200$**  **$\varnothing 30$ H7
DIN 6885-3** **$\varnothing 25$ H7**

	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M
AC	73	73	73	88	88	88	116	116
AD	86	86	86	92	92	92	102	102
ADS	86	86	86	92	92	92	104	104
L	342	381	420	377	427	480	369	397
LS	371	410	449	405	455	509	434	462
LB	145	184	223	180	230	283	172	200
LBS	174	213	252	208	258	312	237	265
XS	18	18	18	14	14	14	11	11

KHF29B..

33 077 00 15

2

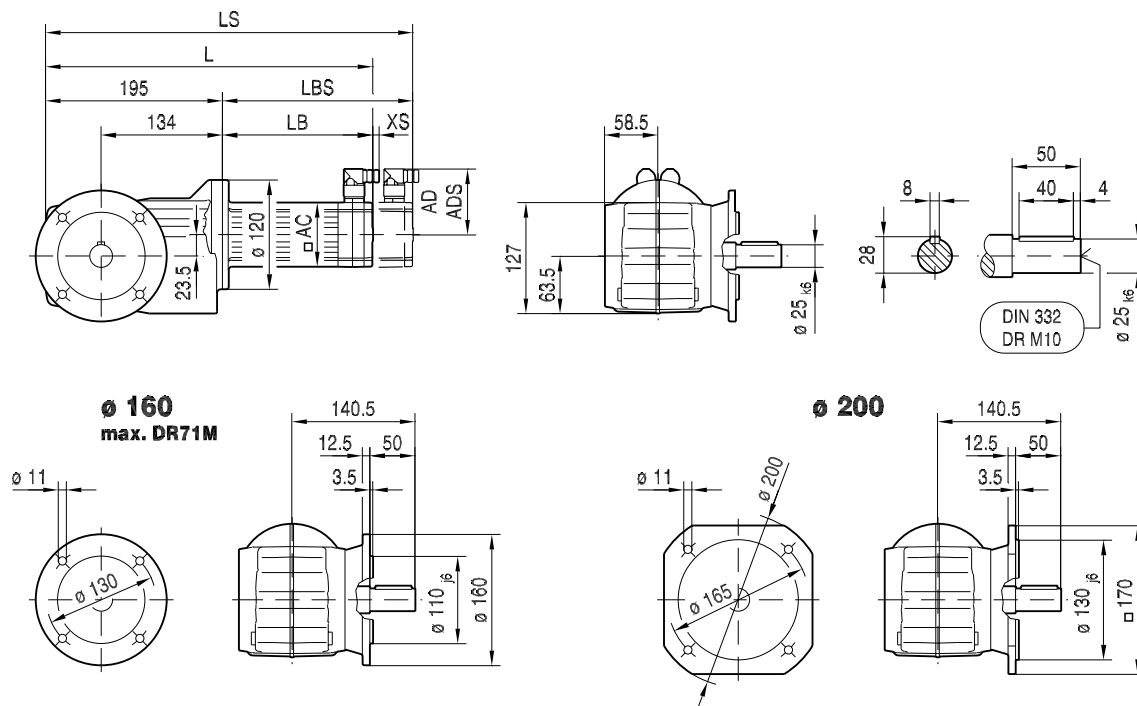


	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M
AC	73	73	73	88	88	88	116	116
AD	86	86	86	92	92	92	102	102
ADS	86	86	86	92	92	92	104	104
L	342	381	420	377	427	480	369	397
LS	371	410	449	405	455	509	434	462
LB	145	184	223	180	230	283	172	200
LBS	174	213	252	208	258	312	237	265
XS	18	18	18	14	14	14	11	11

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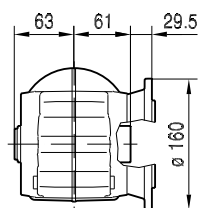
33 078 00 15

KF29..

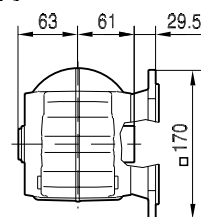


KAF29..

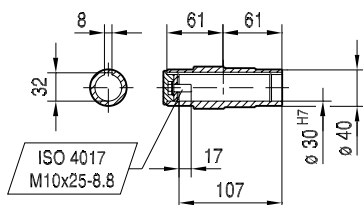
Ø 160
max. DR71M



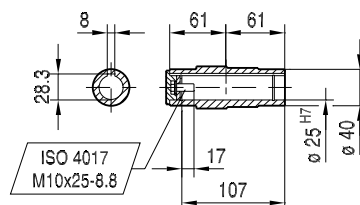
Ø 200



Ø 30 H7
DIN 6885-3



Ø 25 H7



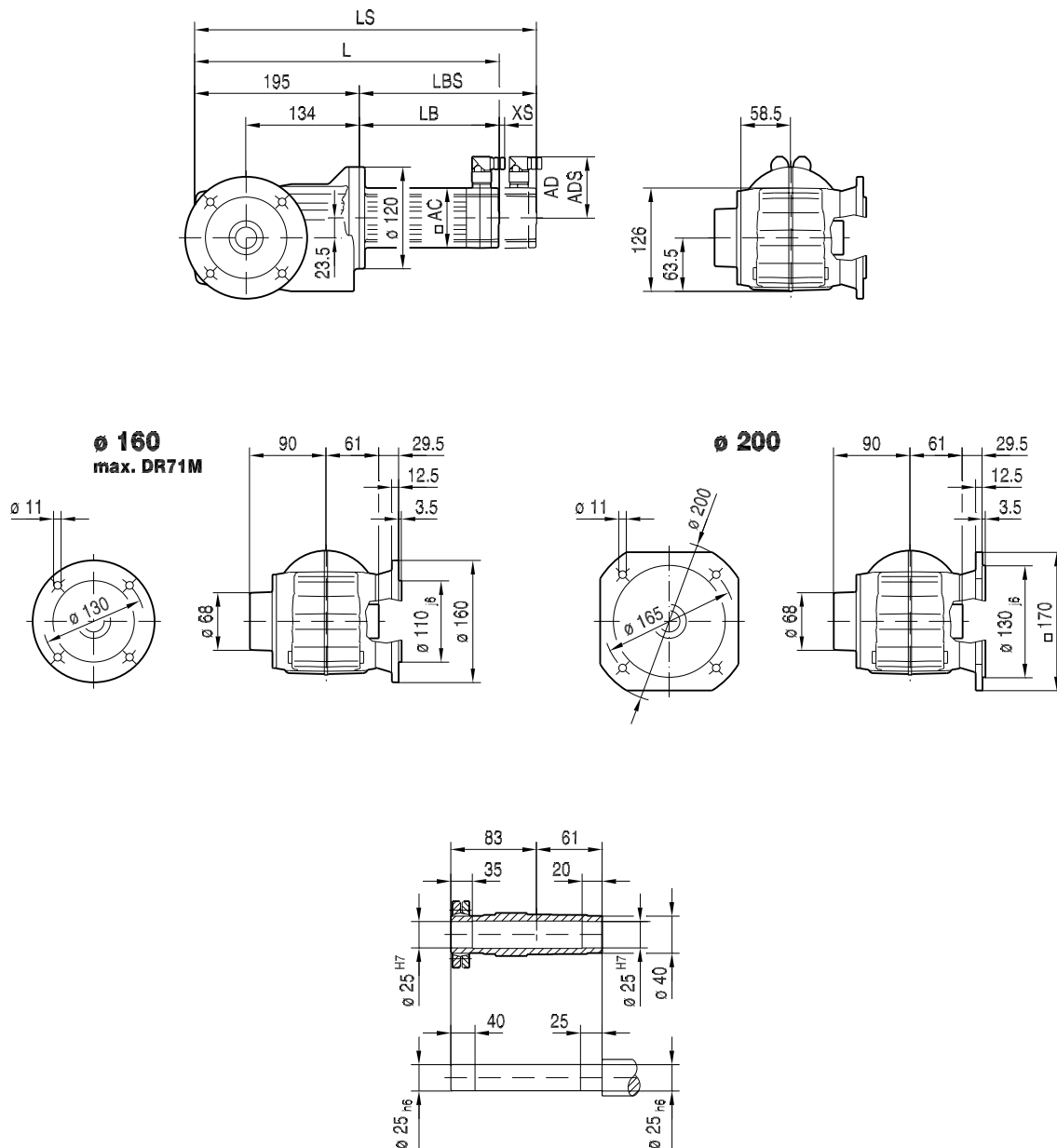
	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M
AC	73	73	73	88	88	88	116	116
AD	86	86	86	92	92	92	102	102
ADS	86	86	86	92	92	92	104	104
L	340	379	418	375	425	478	367	395
LS	369	408	447	403	453	507	432	460
LB	145	184	223	180	230	283	172	200
LBS	174	213	252	208	258	312	237	265
XS	18	18	18	14	14	14	11	11

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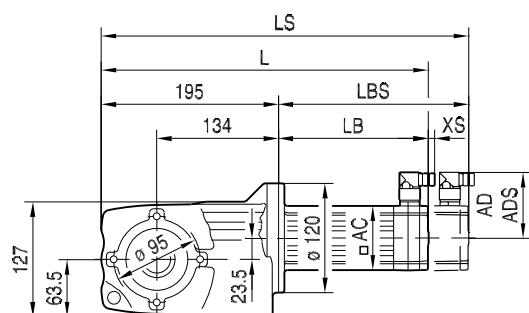
KHF29..

33 079 00 15

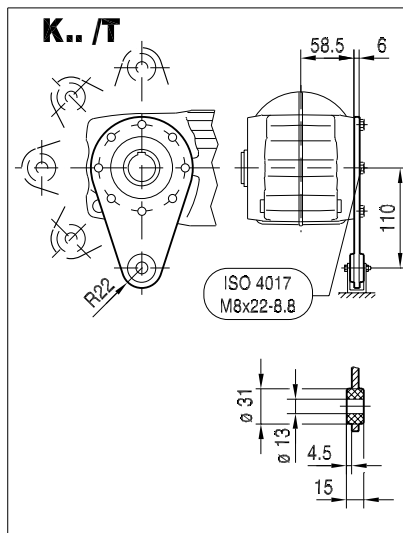
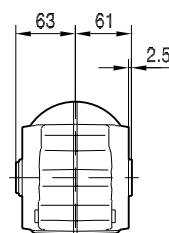
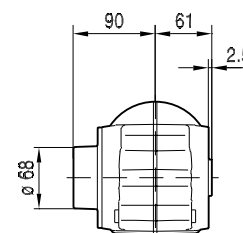
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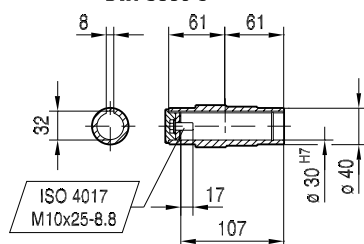
	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M
AC	73	73	73	88	88	88	116	116
AD	86	86	86	92	92	92	102	102
ADS	86	86	86	92	92	92	104	104
L	340	379	418	375	425	478	367	395
LS	369	408	447	403	453	507	432	460
LB	145	184	223	180	230	283	172	200
LBS	174	213	252	208	258	312	237	265
XS	18	18	18	14	14	14	11	11

KA29..

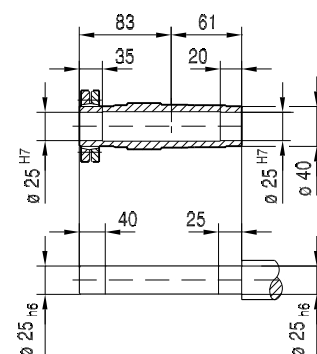
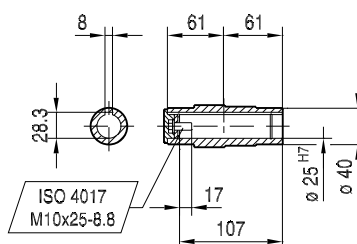
33 080 00 15

**KA29..****KH29..**

Ø 30 H7
DIN 6985-3



Ø 25 H7

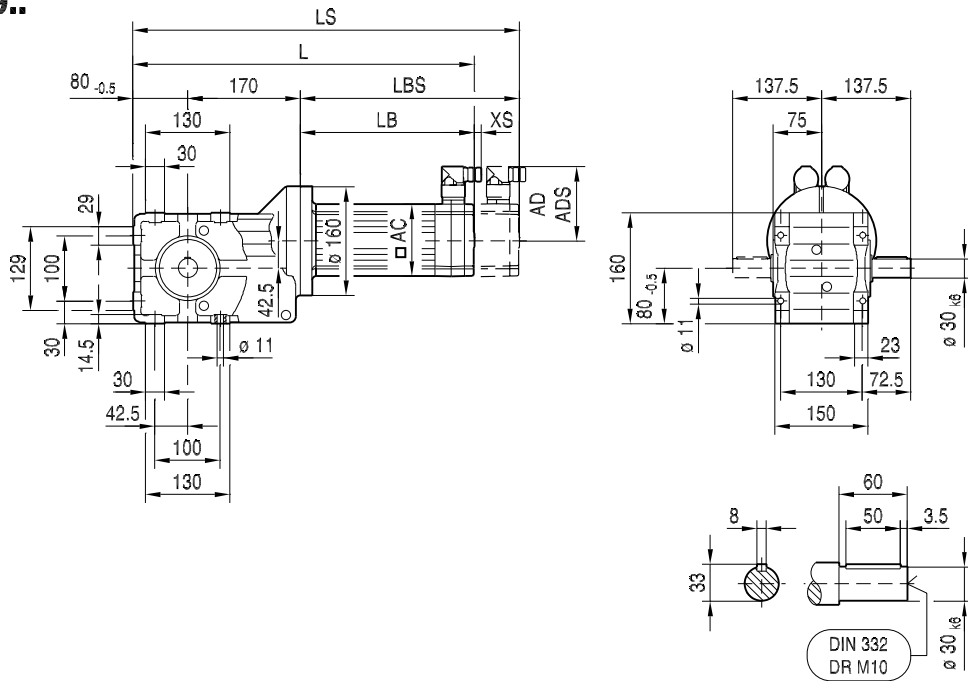


	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M
AC	73	73	73	88	88	88	116	116
AD	86	86	86	92	92	92	102	102
ADS	86	86	86	92	92	92	104	104
L	340	379	418	375	425	478	367	395
LS	369	408	447	403	453	507	432	460
LB	145	184	223	180	230	283	172	200
LBS	174	213	252	208	258	312	237	265
XS	18	18	18	14	14	14	11	11

K39..

33 036 00 15

2

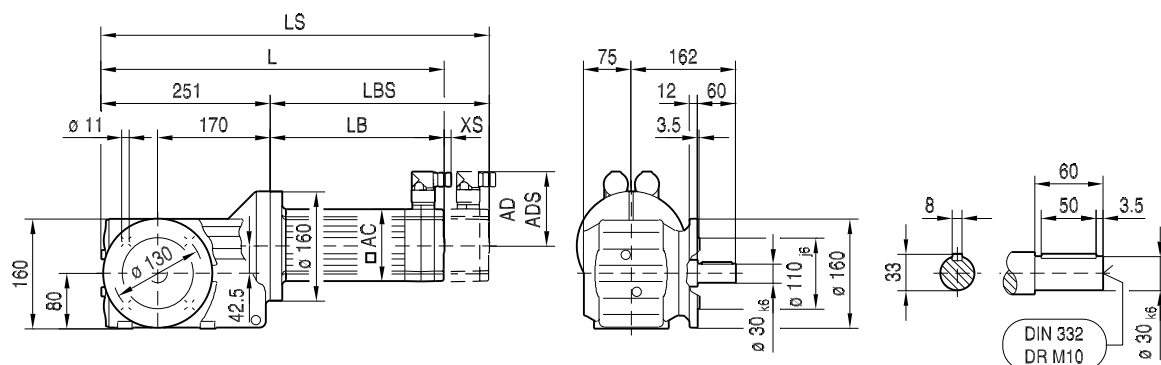


	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S
AC	73	73	73	88	88	88	116	116	115	137
AD	86	86	86	92	92	92	102	102	102	134
ADS	86	86	86	92	92	92	104	104	104	137
L	389	428	467	423	473	523	416	441	491	456
LS	418	457	496	452	502	552	481	506	556	534
LB	139	178	217	173	223	273	166	191	241	206
LBS	168	207	246	202	252	302	231	256	306	284
XS	18	18	18	14	14	14	11	11	11	37

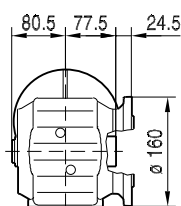
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33 037 00 15

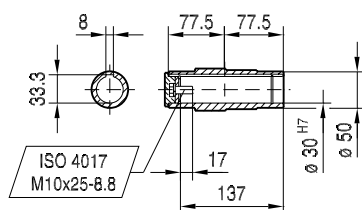
KF39..



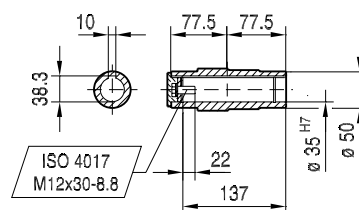
KAF39..



$\phi 30 \text{ H7}$



$\phi 35 \text{ H7}$

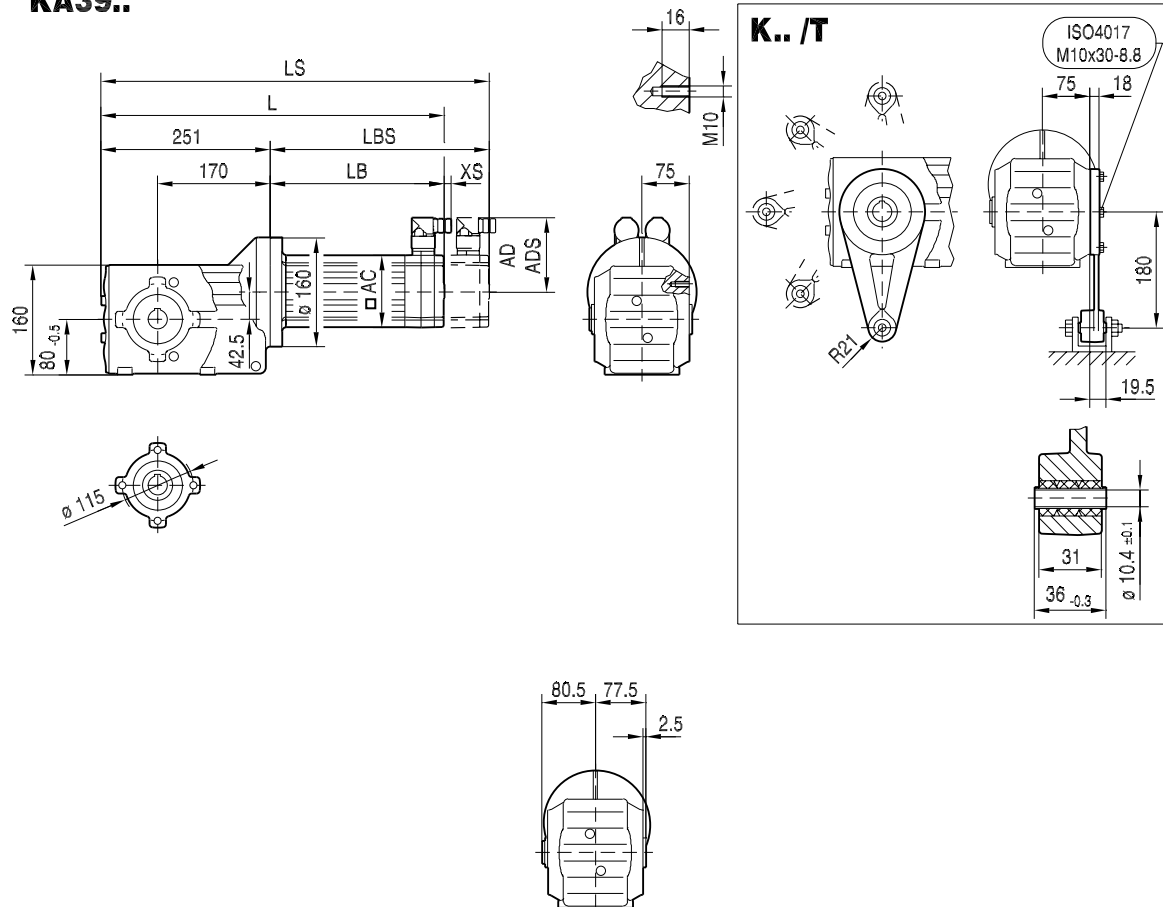


	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S
AC	73	73	73	88	88	88	116	116	115	137
AD	86	86	86	92	92	92	102	102	102	134
ADS	86	86	86	92	92	92	104	104	104	137
L	390	429	468	424	474	524	417	442	492	457
LS	419	458	497	453	503	553	482	507	557	535
LB	139	178	217	173	223	273	166	191	241	206
LBS	168	207	246	202	252	302	231	256	306	284
XS	18	18	18	14	14	14	11	11	11	37

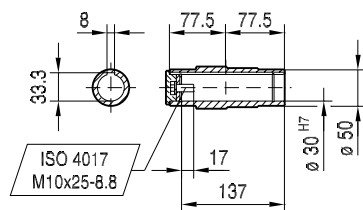
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KA39..

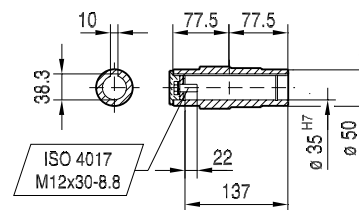
33 038 00 15



Ø 30 H7



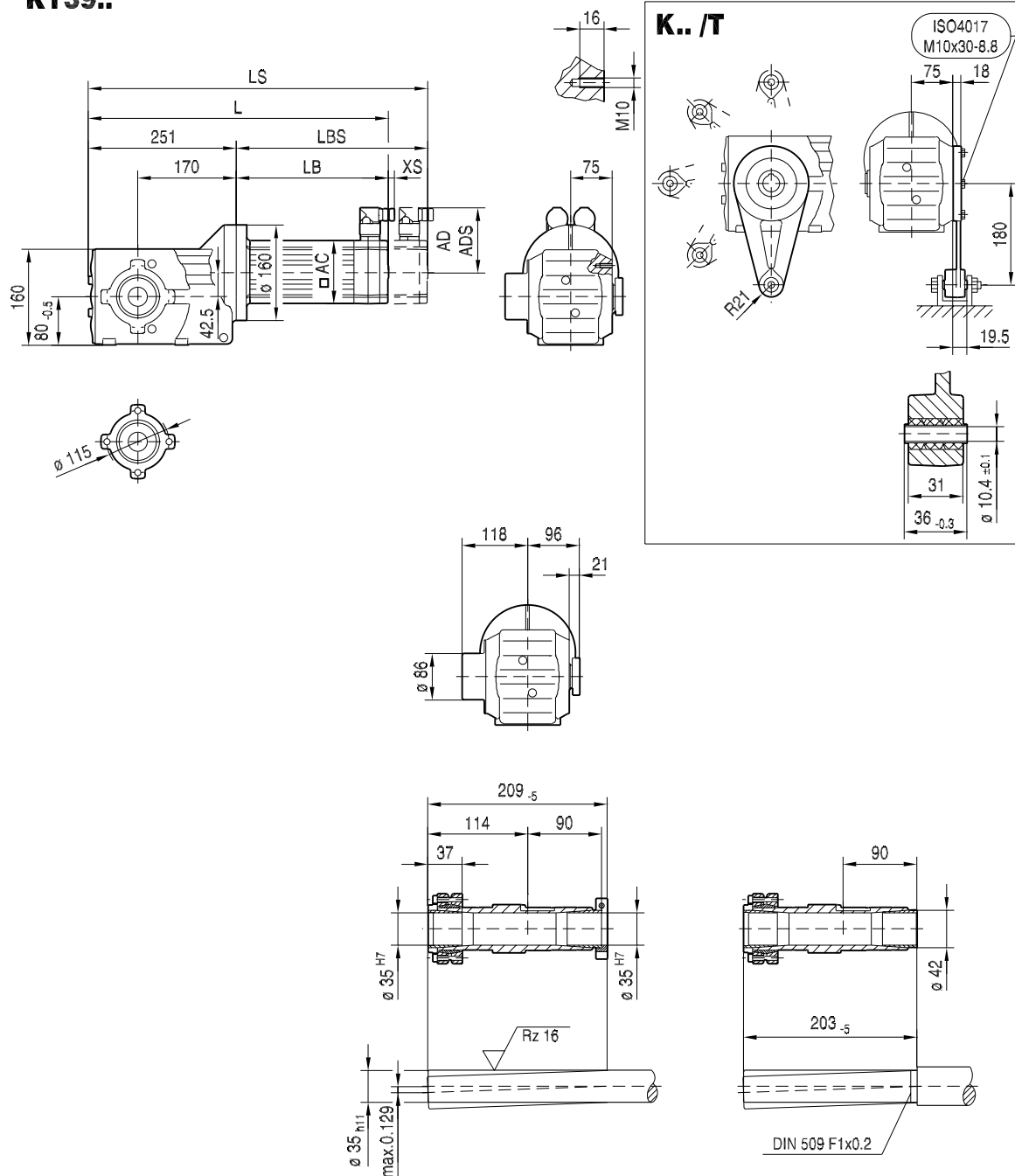
Ø 35 H7



	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S
AC	73	73	73	88	88	88	116	116	115	137
AD	86	86	86	92	92	92	102	102	102	134
ADS	86	86	86	92	92	92	104	104	104	137
L	390	429	468	424	474	524	417	442	492	457
LS	419	458	497	453	503	553	482	507	557	535
LB	139	178	217	173	223	273	166	191	241	206
LBS	168	207	246	202	252	302	231	256	306	284
XS	18	18	18	14	14	14	11	11	11	37

KT39..

33 039 00 15

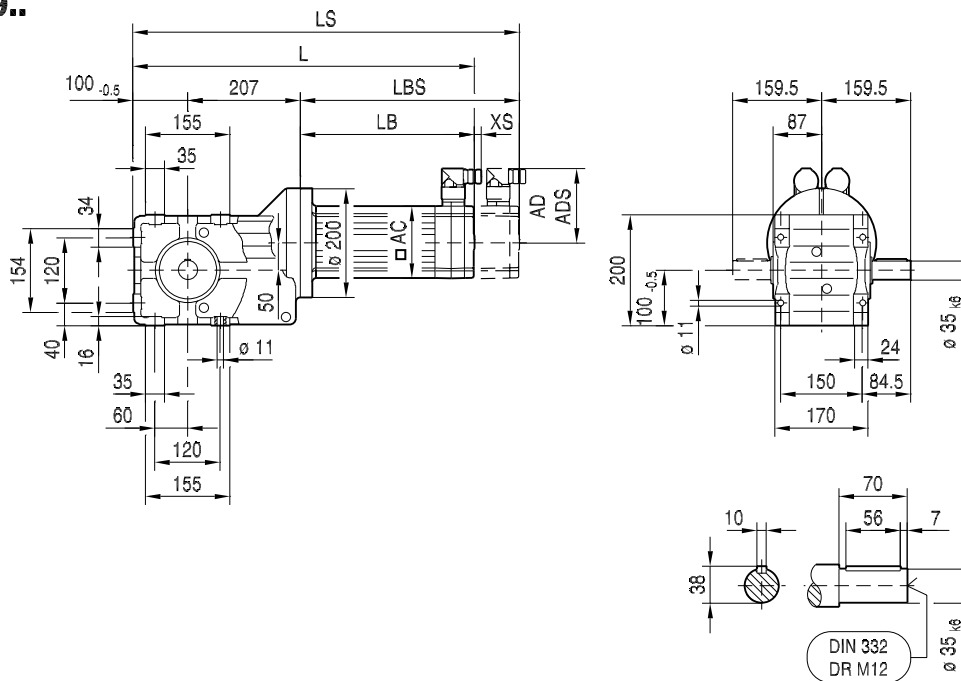


	CMP50S	CMP50M	CMP50L	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S
AC	73	73	73	88	88	88	116	116	115	137
AD	86	86	86	92	92	92	102	102	102	134
ADS	86	86	86	92	92	92	104	104	104	137
L	390	429	468	424	474	524	417	442	492	457
LS	419	458	497	453	503	553	482	507	557	535
LB	139	178	217	173	223	273	166	191	241	206
LBS	168	207	246	202	252	302	231	256	306	284
XS	18	18	18	14	14	14	11	11	11	37

K49..

33 040 00 15

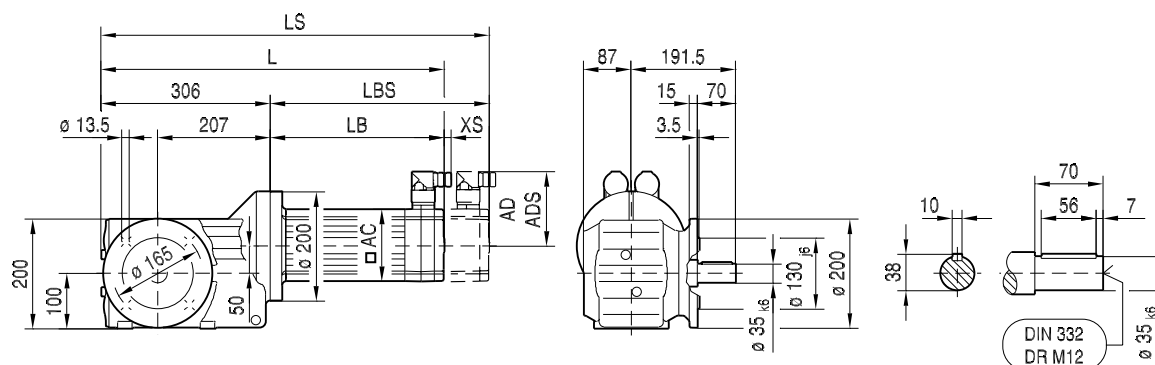
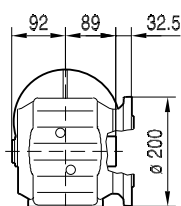
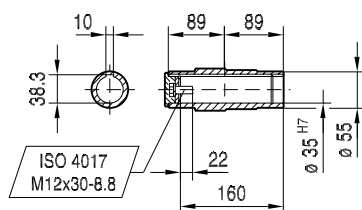
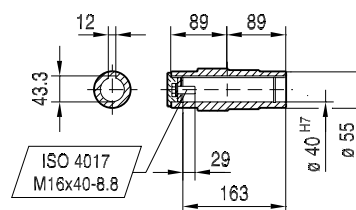
2



	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M	CMP100S
AC	88	88	88	116	116	115	137	137	162
AD	92	92	92	102	102	102	134	134	146
ADS	92	92	92	104	104	104	137	137	147
L	474	524	574	465	490	540	505	539	537
LS	503	553	603	530	555	605	583	617	633
LB	167	217	267	158	183	233	198	232	230
LBS	196	246	296	223	248	298	276	310	326
XS	14	14	14	11	11	11	37	37	37

21932379/DE – 05/2015

33 041 00 15

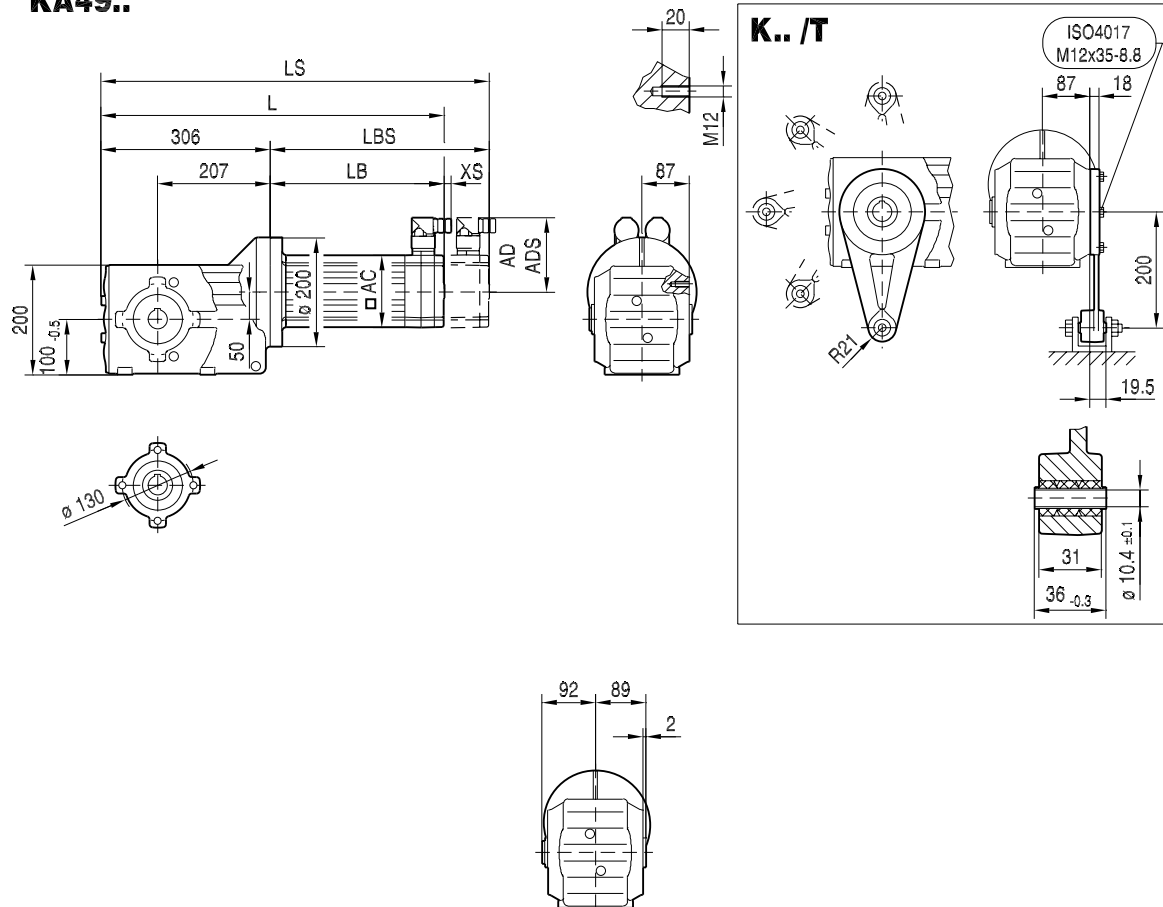
KF49..**KAF49..** **$\phi 35 \text{ H7}$**  **$\phi 40 \text{ H7}$** 

	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M	CMP100S
AC	88	88	88	116	116	115	137	137	162
AD	92	92	92	102	102	102	134	134	146
ADS	92	92	92	104	104	104	137	137	147
L	473	523	573	464	489	539	504	538	536
LS	502	552	602	529	554	604	582	616	632
LB	167	217	267	158	183	233	198	232	230
LBS	196	246	296	223	248	298	276	310	326
XS	14	14	14	11	11	11	37	37	37

21932379/DE – 05/2015

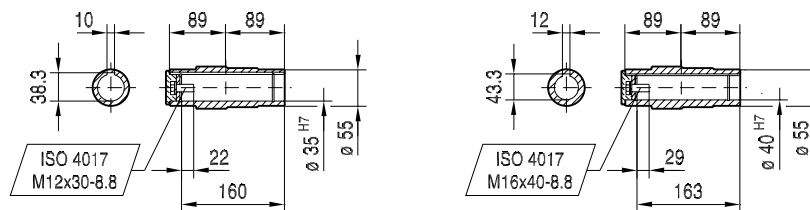
KA49..

33 042 00 15



Ø 35 H7

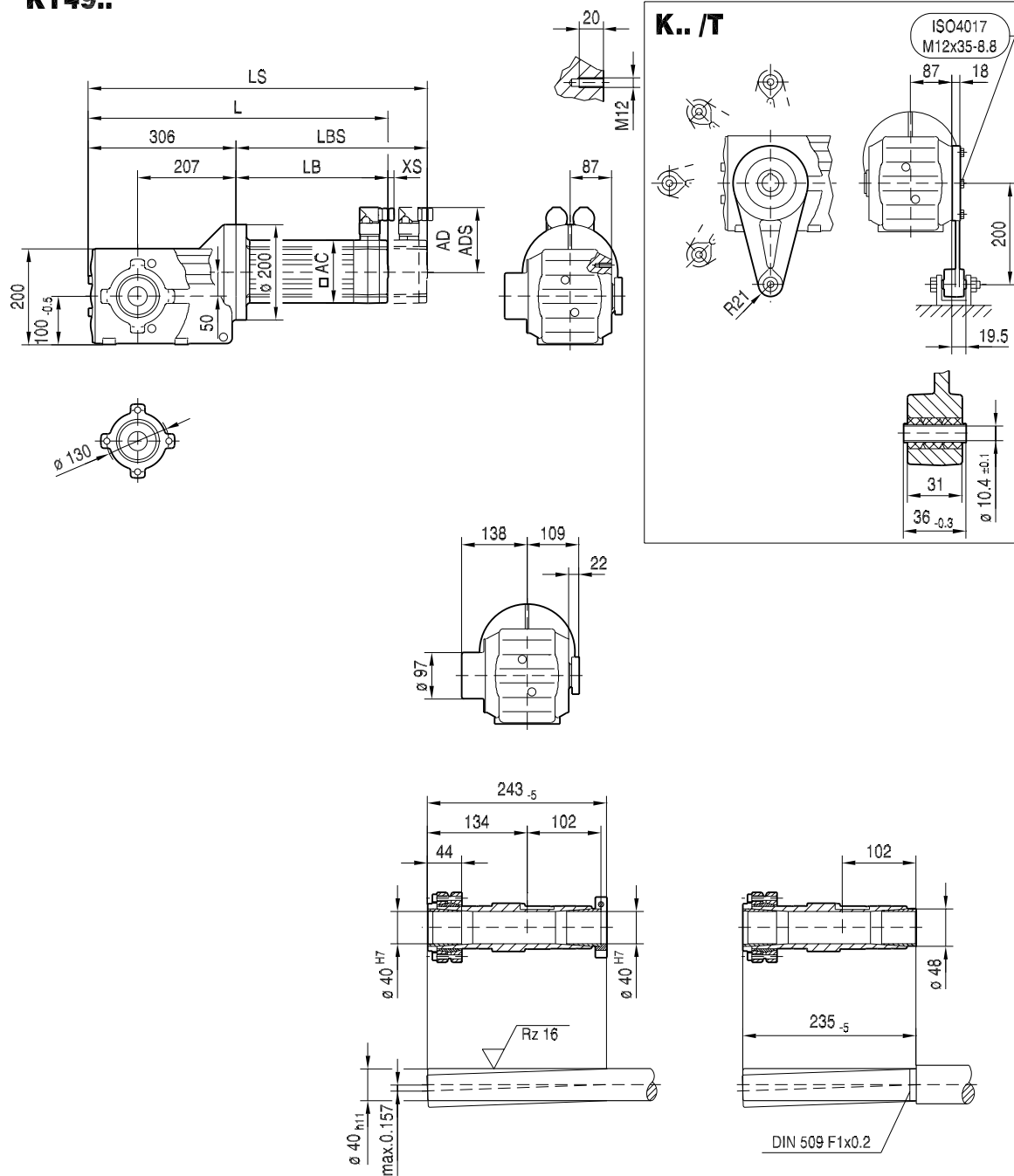
Ø 40 H7



	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M	CMP100S
AC	88	88	88	116	116	115	137	137	162
AD	92	92	92	102	102	102	134	134	146
ADS	92	92	92	104	104	104	137	137	147
L	473	523	573	464	489	539	504	538	536
LS	502	552	602	529	554	604	582	616	632
LB	167	217	267	158	183	233	198	232	230
LBS	196	246	296	223	248	298	276	310	326
XS	14	14	14	11	11	11	37	37	37

KT49..

33 043 00 15



	CMP63S	CMP63M	CMP63L	CMP71S	CMP71M	CMP71L	CMP80S	CMP80M	CMP100S
AC	88	88	88	116	116	115	137	137	162
AD	92	92	92	102	102	102	134	134	146
ADS	92	92	92	104	104	104	137	137	147
L	473	523	573	464	489	539	504	538	536
LS	502	552	602	529	554	604	582	616	632
LB	167	217	267	158	183	233	198	232	230
LBS	196	246	296	223	248	298	276	310	326
XS	14	14	14	11	11	11	37	37	37

2.9 Auswahltabellen K..9 / DRL..

M_{aDyn} [Nm]		DRL						
i		71S		71M		80S		80M
		D1	D2	D1	D2	D1	D2	D1
K19  2	4.50	22	37	31	61	44	>88	57
	5.16	25	43	35	70	50	>88	65
	5.54	27	46	38	75	54	>88	70
	6.41	31	53	44	87	62	>88	81
	6.91	34	57	47	>88	67	>88	87
	8.09	39	67	55		78		>88
	9.58	46		65				
	10.32	50	>83	69	>83	>83	>83	>83
	11.84	57	>86	80	>86	>86	>86	>86
	12.70	61	>88	85	>88	>88	>88	>88
	14.69	71	>88	>88	>88	>88	>88	>88
	15.84	76	>88	>88	>88	>88	>88	>88
	18.55	>88	>88	>88		>88		>88
	21.98	>88		>88				
	24.06	>88		>88				
	26.88							
	27.16	>66	>66	>66	>66	>66	>66	>66
	29.14							
	29.29	>67	>67	>67	>67	>67	>67	>67
	31.74							
	34.29	>70	>70	>70		>70		>70
	40.63	>73		>73				
	44.48	>75		>75				
	49.69							
	53.88							
	58.68							

m [kg]		DRL			
s		71S	71M	80S	80M
K19  2		12	13	15	18

KF: + 0.3 kg / KA: + -0.5 kg / KAF: + 0.0 kg

DRL..				C_{TG}			
	i	n_{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K19  2	4.50	4500	97	5.1	4.4	8.5	8.5
	5.16	4500	97	5.1	4.4	8.5	8.5
	5.54	4500	97	5.1	4.4	8.5	8.5
	6.41	4500	97	5.1	4.4	8.5	8.5
	6.91	4500	97	5.1	4.4	8.5	8.5
	8.09	4500	97	5.1	4.5	8.6	8.6
	9.58	4500	97	5.1	4.5	8.6	8.6
	10.32	4500	96	6.2	5.2	12	12
	11.84	4500	96	6.2	5.2	12	12
	12.70	4500	96	5.1	4.5	8.6	8.6
	14.69	4500	96	6.2	5.2	12	12
	15.84	4500	96	6.2	5.2	12	12
	18.55	4500	96	6.2	5.2	12	12
	21.98	4500	96	6.2	5.2	12	12
	24.06	4500	96	6.2	5.2	12	12
	26.88	4500	96	6.2	5.2	12	12
	27.16	4500	91	6.2	5.2	12	12
	29.14	4500	96	6.2	5.2	12	12
	29.29	4500	91	6.2	5.2	12	12
	31.74	4500	96	6.2	5.2	12	12
	34.29	4500	91	6.2	5.2	12	12
	40.63	4500	91	6.2	5.2	12	12
	44.48	4500	91	6.2	5.2	12	12
	49.69	4500	91	6.2	5.2	12	12
	53.88	4500	91	6.2	5.2	12	12
	58.68	4500	91	6.2	5.2	12	12

DRL..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]		[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
 K19	4.50	80	88	132	433	0.38	2010	1620	2500	2500	4190	3630	4500	4500
	5.16	80	88	132	424	0.30	2140	1720	2650	2650	4190	3630	4500	4500
	5.54	80	88	132	419	0.27	2200	1780	2730	2730	4190	3630	4500	4500
	6.41	80	88	132	410	0.21	2340	1890	2900	2900	4190	3630	4500	4500
	6.91	80	88	132	407	0.18	2420	1950	3000	3000	4190	3630	4500	4500
	8.09	80	88	132	399	0.14	2590	2080	3200	3200	4190	3630	4500	4500
	9.58	63	69	104	731	0.11	2910	2340	3600	3600	4340	3670	4500	4500
	10.32	76	83	124	102	0.22	2720	2190	3370	3370	4230	3610	4500	4500
	11.84	79	86	129	90	0.18	2850	2300	3530	3530	4210	3600	4500	4500
	12.70	80	88	132	83	0.16	2930	2360	3630	3630	4190	3600	4500	4500
	14.69	80	88	132	82	0.13	3110	2510	3860	3860	4190	3600	4500	4500
	15.84	80	88	132	81	0.12	3210	2590	3980	3980	4190	3600	4500	4500
	18.55	80	88	132	81	0.092	3430	2760	4250	4250	4190	3600	4500	4500
	21.98	80	88	132	81	0.072	3680	2960	4500	4500	4190	3600	4500	4500
	24.06	80	88	132	81	0.063	3820	3080	4500	4500	4190	3600	4500	4500
	26.88	80	88	132	80	0.054	3990	3220	4500	4500	4190	3600	4500	4500
	27.16	60	66	99	38	0.13	4090	3290	4500	4500	4360	3630	4500	4500
	29.14	80	88	132	80	0.048	4120	3320	4500	4500	4190	3600	4500	4500
	29.29	61	67	100	36	0.11	4200	3380	4500	4500	4350	3630	4500	4500
	31.74	80	88	132	80	0.042	4260	3440	4500	4500	4190	3600	4500	4500
	34.29	64	70	105	31	0.090	4370	3570	4500	4500	4330	3620	4500	4500
	40.63	67	73	110	27	0.071	4350	3630	4500	4500	4310	3610	4500	4500
	44.48	69	75	112	24	0.062	4340	3620	4500	4500	4290	3600	4500	4500
	49.69	70	77	116	22	0.053	4330	3620	4500	4500	4280	3600	4500	4500
	53.88	70	77	116	22	0.047	4330	3620	4500	4500	4280	3600	4500	4500
	58.68	70	77	116	22	0.042	4330	3620	4500	4500	4280	3600	4500	4500

M_{aDyn} [Nm]		DRL							
i		71S		71M		80S		80M	90L
		D1	D2	D1	D2	D1	D2	D1	D1
K29  2	3.19	15	26	22	43	31	77	40	77
	3.92	19	32	27	53	38	95	49	95
	5.10	25	42	35	69	49	>121	64	>121
	5.75	28	47	39	78	56	>123	73	>123
	6.95	34	57	47	94	67	>123	88	>123
	7.48	36	61	50	101	72	>135	93	>135
	8.53	41	70	58	116	83	>134	108	
	9.17	44	75	62	123	88	>143	114	>143
	9.90	48	82	67		96		>121	
	11.94	57	97	80	>143	115	>143	>143	>143
	13.47	65	110	91	>143	129	>143	>143	>143
	16.29	78	133	109	>143	>143	>143	>143	>143
	19.99	96	>143	134	>143	>143	>143	>143	
	22.08	100	>115	>115	>115	>115	>115	>115	>115
	23.19	111	>143	>143		>143		>143	
	24.91	113	>119	>119	>119	>119	>119	>119	>119
	27.23	131		>143					
	29.69	143		>143					
	30.11	>126	>126	>126	>126	>126	>126	>126	>126
	33.15								
	35.83								
	36.96	>134	>134	>134	>134	>134	>134	>134	
	38.90								
	42.87	>140	>140	>140		>140		>140	
	50.35	>143		>143					
	54.89	>143		>143					
	61.28								
	66.25								
	71.93								

m [kg]		DRL				
s		71S	71M	80S	80M	90L
K29  2		14	15	17	20	27

KF: + 1.0 kg / KA: + -0.5 kg / KAF: + 0.4 kg

DRL..				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
 K29	3.19	4500	97	8.3	7.4	16	16
	3.92	4500	97	8.3	7.4	16	16
	5.10	4500	97	8.4	7.5	17	17
	5.75	4500	97	8.4	7.5	17	17
	6.95	4500	97	8.4	7.5	17	17
	7.48	4500	96	10	8.8	25	25
	8.53	4500	97	8.4	7.5	17	17
	9.17	4500	96	10	8.8	25	25
	9.90	4500	97	8.4	7.5	17	17
	11.94	4500	96	10	8.8	25	25
	13.47	4500	96	10	8.8	25	25
	16.29	4500	96	10	8.8	25	25
	19.99	4500	96	10	8.8	25	25
	22.08	4500	91	8.6	7.6	18	18
	23.19	4500	96	10	8.8	25	25
	24.91	4500	91	8.6	7.6	18	18
	27.23	4500	96	10	8.8	25	25
	29.69	4500	96	10	8.8	25	25
	30.11	4500	91	8.6	7.6	18	18
	33.15	4500	96	10	8.8	25	25
	35.83	4500	96	10	8.8	25	25
	36.96	4500	92	8.6	7.6	18	18
	38.90	4500	95	10	8.8	25	25
	42.87	4500	91	8.6	7.6	18	18
	50.35	4500	91	8.6	7.6	18	18
	54.89	4500	91	8.6	7.6	18	18
	61.28	4500	91	8.6	7.6	18	18
	66.25	4500	91	8.6	7.6	18	18
	71.93	4500	91	8.6	7.6	18	18

DRL..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]		[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
 K29 2	3.19	110	121	182	1082	1.6	1830	1200	1860	1860	5070	6000	6000	6000
	3.92	126	138	205	722	1.1	1910	1240	1920	1920	5030	6000	6000	6000
	5.10	110	121	182	1080	0.68	2260	1500	2320	2320	5070	6000	6000	6000
	5.75	112	123	184	1030	0.55	2370	1580	2440	2440	5070	6000	6000	6000
	6.95	112	123	184	1007	0.39	2580	1720	2660	2660	5070	6000	6000	6000
	7.48	123	135	200	138	0.74	2300	1480	2300	2300	4980	6000	6000	6000
	8.53	122	134	200	755	0.27	2740	1830	2830	2830	5040	6000	6000	6000
	9.17	130	143	210	112	0.55	2470	1600	2480	2480	4960	6000	6000	6000
	9.90	110	121	182	707	0.21	3000	2020	3120	3120	5070	6000	6000	6000
	11.94	130	143	210	112	0.37	2810	1830	2840	2840	4960	6000	6000	6000
	13.47	130	143	210	111	0.30	2970	1950	3010	3010	4960	6000	6000	6000
	16.29	130	143	210	111	0.22	3240	2140	3300	3300	4960	6000	6000	6000
	19.99	130	143	210	111	0.16	3550	2350	3640	3640	4960	6000	6000	6000
	22.08	105	115	172	47	0.33	3820	2560	3950	3950	5020	6000	6000	6000
	23.19	130	143	210	110	0.12	3790	2520	3900	3900	4960	6000	6000	6000
	24.91	109	119	178	42	0.27	3980	2660	4120	4120	5010	6000	6000	6000
	27.23	130	143	210	110	0.098	4060	2710	4190	4190	4960	6000	6000	6000
	29.69	130	143	210	110	0.086	4210	2820	4360	4360	4960	6000	6000	6000
	30.11	115	126	189	35	0.20	4250	2850	4400	4400	4990	6000	6000	6000
	33.15	130	143	210	110	0.073	4410	2960	4580	4580	4960	6000	6000	6000
	35.83	130	143	210	110	0.065	4560	3060	4740	4740	4960	6000	6000	6000
	36.96	122	134	200	28	0.14	4560	3060	4730	4730	4960	6000	6000	6000
	38.90	130	143	210	110	0.057	4720	3170	4910	4910	4960	6000	6000	6000
	42.87	128	140	210	24	0.11	4790	3210	4970	4970	4940	6000	6000	6000
	50.35	130	143	210	22	0.090	4980	3430	5300	5300	4930	6000	6000	6000
	54.89	130	143	210	23	0.079	4980	3560	5510	5510	4930	6000	6000	6000
	61.28	130	143	210	23	0.068	4980	3730	5770	5770	4930	6000	6000	6000
	66.25	130	143	210	22	0.060	4980	3860	5970	5970	4930	6000	6000	6000
	71.93	130	143	210	23	0.053	4980	4000	6000	6000	4930	6000	6000	6000

M _{aDyn} [Nm]		DRL										
i		71S		71M		80S		80M		90L		100L
		D1	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1
K39  2	2.81		23		37	27	67	35	80	67	123	107
	3.94		32		53	38	95	49	113	95	174	151
	4.52	22	37	30	61	43	108	56	130	108	200	174
	5.22	25	43	35	70	50	125	65	150	125	230	200
	5.75	28	47	39	77	55	138	72	166	138	250	220
	6.75	32	55	45	91	65	162	84	194	162	295	255
	7.15	34	58	48	96	69	172	89	205	172	315	270
	8.12	39	66	55	109	78	195	101	230	195	355	310
	9.00	43	73	60	121	86	215	112	255	215	>385	345
	10.61	51	87	71	143	102	250	132	305	250		>370
	12.09	58	99	81	162	116	290	151				
	12.73	61	104	86	171	122	>295	159				
	13.44		104		171	122	305	159	365	305	>405	>405
	15.44	70	119	98	197	141	350	183	>410	350	>410	>410
	17.83	81	138	114	225	162	405	210	>410	405	>410	>410
	19.62	89	152	125	245	179	>410	230	>410	>410	>410	>410
	23.04	105	178	147	290	205	>410	270	>410	>410	>410	>410
	24.40	111	189	155	310	220	>410	285	>410	>410	>410	>410
	27.73	126	210	177	350	250	>410	325	>410	>410	>410	>410
	30.72	140	235	196	390	275	>410	360	>410	>410	>410	>410
	36.22	165	280	230	>410	325	>410	>410	>410	>410		>410
	41.28	188	315	260	>410	375	>410	>410				
	43.45	198	335	275	>410	395	>410	>410				
	49.69	225	380	315		>410		>410				
	58.24	260		370								

m [kg]		DRL					
s		71S	71M	80S	80M	90L	100L
K39  2		24	26	28	31	39	46

KF: + 1.5 kg / KA: + -1.0 kg / KAF: + 0.5 kg

DRL..				C_{TG}			
	i	n_{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K39  2	2.81	4500	95	15	14	30	30
	3.94	4500	96	15	14	30	30
	4.52	4500	96	15	14	30	30
	5.22	4500	96	15	14	30	30
	5.75	4500	96	15	14	30	30
	6.75	4500	96	15	14	30	30
	7.15	4500	96	15	14	30	30
	8.12	4500	96	15	14	30	30
	9.00	4500	96	15	14	30	30
	10.61	4500	96	15	14	37	37
	12.09	4500	96	15	14	37	37
	12.73	4500	96	15	14	37	37
	13.44	4500	91	20	19	67	67
	15.44	4500	91	20	19	67	67
	17.83	4500	91	20	19	67	67
	19.62	4500	91	20	19	67	67
	23.04	4500	91	20	19	67	67
	24.40	4500	91	20	19	67	67
	27.73	4500	91	20	19	67	67
	30.72	4500	91	20	19	67	67
	36.22	4500	91	20	19	67	67
	41.28	4500	91	20	19	67	67
	43.45	4500	91	20	19	67	67
	49.69	4500	91	20	19	67	67
	58.24	4500	91	20	19	67	67

DRL..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]		[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
 K39 2	2.81	170	255	285	811	7.9	2870	2460	2180	2180	7500	6260	7500	7500
	3.94	215	320	365	378	4.6	3070	2630	2260	2260	7500	6180	7500	7500
	4.52	240	360	405	257	3.6	3130	2680	1730	1730	7500	6130	7500	7500
	5.22	260	390	440	192	2.9	3240	2770	960	960	7500	6090	7500	7500
	5.75	275	410	465	158	2.5	3300	2830	290	290	7470	6060	7500	7500
	6.75	300	435	510	130	2.0	3430	2940	0	0	7300	6020	7500	7500
	7.15	300	435	510	129	1.8	3530	3020	157	157	7300	6020	7500	7500
	8.12	300	385	510	193	1.4	3760	3220	2080	2080	7500	6090	7500	7500
	9.00	300	385	510	192	1.2	3950	3380	2860	2860	7500	6090	7500	7500
	10.61	285	370	485	218	0.91	4360	3730	3250	3250	7500	6110	7500	7500
	12.09	255	295	430	464	0.65	4790	4110	3700	3700	7500	6210	7500	7500
	12.73	250	295	425	463	0.58	4930	4220	3830	3830	7500	6210	7500	7500
	13.44	270	405	455	27	2.6	4160	3560	2830	2830	7500	5980	7500	7500
	15.44	280	410	475	26	2.2	4380	3750	2990	2990	7490	5960	7500	7500
	17.83	290	410	490	25	1.8	4630	3960	3180	3180	7490	5960	7500	7500
	19.62	295	410	500	25	1.5	4820	4120	3330	3330	7490	5960	7500	7500
	23.04	300	410	510	24	1.3	5180	4440	3630	3630	7490	5960	7500	7500
	24.40	300	410	510	24	1.2	5330	4560	3760	3760	7490	5960	7500	7500
	27.73	300	410	510	24	0.95	5670	4860	4070	4070	7490	5960	7500	7500
	30.72	300	410	510	24	0.82	5960	5100	4320	4320	7490	5960	7500	7500
	36.22	300	410	510	23	0.65	6440	5520	4740	4740	7490	5960	7500	7500
	41.28	300	410	510	23	0.44	6840	5860	5100	5100	7490	5960	7500	7500
	43.45	300	410	510	23	0.39	7000	6000	5240	5240	7490	5960	7500	7500
	49.69	300	410	510	23	0.32	7440	6150	5630	5630	7490	5960	7500	7500
	58.24	300	410	510	23	0.26	7500	6150	6110	6110	7490	5960	7500	7500

M_{aDyn} [Nm]		DRL												
i		71S		71M		80S		80M		90L		100L		132S
		D1	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1	D2	D1
K49 	4.00		33		54	38	96	50	115	96	177	154	325	305
	4.69		38		63	45	113	59	135	113	205	180	380	360
	5.29		43		71	51	127	66	152	127	230	200	430	405
	5.99	29	49	40	81	58	144	75	173	144	260	230	485	460
	6.83	33	56	46	92	66	164	85	197	164	300	260	555	520
	7.58	36	62	51	102	73	182	95	215	182	330	290	>605	580
	8.66	42	71	58	116	83	205	108	245	205	380	330	>605	>605
	9.14	44	75	61	123	88	215	114	260	215	400	350	>605	>605
	10.42	50	85	70	140	100	250	130	300	250	460	400		
	11.37	55	93	76	153	109	270	142	325	270	500	435		
	13.38		105		172	123	305	160	365	305	565	490	>605	>605
	15.67		123		200	144	360	187	430	360	>605	575	>605	>605
	17.67		138		225	163	405	210	485	405	>605	>605	>605	>605
	20.03	92	157	129	255	184	460	235	550	460	>605	>605	>605	>605
	22.83	105	179	147	290	210	525	270	>605	525	>605	>605	>605	>605
	25.34	117	198	163	325	230	580	300	>605	580	>605	>605	>605	>605
	28.95	133	225	186	370	265	>605	345	>605	>605	>605	>605	>605	>605
	30.55	141	235	197	390	280	>605	365	>605	>605	>605	>605	>605	>605
	34.81	160	270	220	445	320	>605	415	>605	>605	>605	>605		
	37.98	175	295	240	485	345	>605	450	>605	>605	>605	>605		
	44.44	200	345	285	570	405	>605	530	>605	>605		>605		
	50.29	230	390	320	>605	460	>605	600						
	52.94	240	410	340	>605	485	>605	>605						
	60.27	270	465	380		545		>605						
	70.19	315		445										
	75.20	340		475										

m [kg]		DRL							
s		71S	71M	80S	80M	90L	100L	132S	
K49	 2	38	39	42	44	51	59	74	
KF: + 1.7 kg / KA: + -2.8 kg / KAF: + 2.1 kg									

DRL..				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K49  2	4.00	4500	96	27	26	77	77
	4.69	4500	96	27	26	77	77
	5.29	4500	96	27	26	77	77
	5.99	4500	96	27	26	77	77
	6.83	4500	96	27	26	77	77
	7.58	4500	96	27	26	77	77
	8.66	4500	96	27	26	77	77
	9.14	4500	96	27	26	77	77
	10.42	4500	96	27	26	77	77
	11.37	4500	96	27	26	77	77
	13.38	4500	92	35	32	48	48
	15.67	4500	92	35	32	48	48
	17.67	4500	92	35	32	48	48
	20.03	4500	92	35	32	48	48
	22.83	4500	92	35	32	48	48
	25.34	4500	92	35	32	48	48
	28.95	4500	92	35	32	48	48
	30.55	4500	92	35	32	48	48
	34.81	4500	92	35	32	48	48
	37.98	4500	92	35	32	48	48
	44.44	4500	92	35	32	48	48
	50.29	4500	92	35	32	48	48
	52.94	4500	92	35	32	48	48
	60.27	4500	91	35	32	48	48
	70.19	4500	91	35	32	48	48
	75.20	4500	91	35	32	48	48

DRL..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m²]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
K49  2	4.00	440	605	745	218	11	3110	2390	0	0	9000	9000	9000	9000
	4.69	465	605	790	217	8.8	3270	2600	0	0	9000	9000	9000	9000
	5.29	485	605	820	217	7.2	3400	2770	0	0	9000	9000	9000	9000
	5.99	500	605	850	219	5.9	3570	3030	0	0	9000	9000	9000	9000
	6.83	500	605	850	218	4.8	3840	3250	0	0	9000	9000	9000	9000
	7.58	500	605	850	218	4.1	4050	3440	1030	1030	9000	9000	9000	9000
	8.66	500	605	850	218	3.3	4340	3680	3790	3790	9000	9000	9000	9000
	9.14	500	605	850	218	3.1	4460	3780	3910	3910	9000	9000	9000	9000
	10.42	480	585	810	238	2.4	4860	4120	4330	4330	9000	9000	9000	9000
	11.37	495	605	840	218	2.1	5000	4240	4450	4450	9000	9000	9000	9000
	13.38	470	605	795	46	6.5	4320	3660	3510	3510	9000	9000	9000	9000
	15.67	490	605	830	45	5.2	4590	3890	3750	3750	9000	9000	9000	9000
	17.67	500	605	850	44	4.4	4860	4120	3990	3990	9000	9000	9000	9000
	20.03	500	605	850	43	3.7	5220	4420	4350	4350	9000	9000	9000	9000
	22.83	500	605	850	43	3.1	5610	4750	4750	4750	9000	9000	9000	9000
	25.34	500	605	850	42	2.8	5940	5030	5070	5070	9000	9000	9000	9000
	28.95	500	605	850	42	2.3	6370	5400	5510	5510	9000	9000	9000	9000
	30.55	500	605	850	42	2.1	6550	5550	5690	5690	9000	9000	9000	9000
	34.81	500	605	850	42	1.7	7000	5930	6140	6140	9000	9000	9000	9000
	37.98	500	605	850	41	1.5	7310	6200	6450	6450	9000	9000	9000	9000
	44.44	500	605	850	41	1.2	7900	6690	7040	7040	9000	9000	9000	9000
	50.29	500	605	850	41	0.83	8380	7100	7530	7530	9000	9000	9000	9000
	52.94	500	605	850	41	0.75	8590	7280	7730	7730	9000	9000	9000	9000
	60.27	500	605	850	41	0.61	9000	7740	8280	8280	9000	9000	9000	9000
	70.19	445	605	755	40	0.50	9000	8630	9000	9000	9000	9000	9000	9000
	75.20	475	605	800	41	0.43	9000	8720	9000	9000	9000	9000	9000	9000

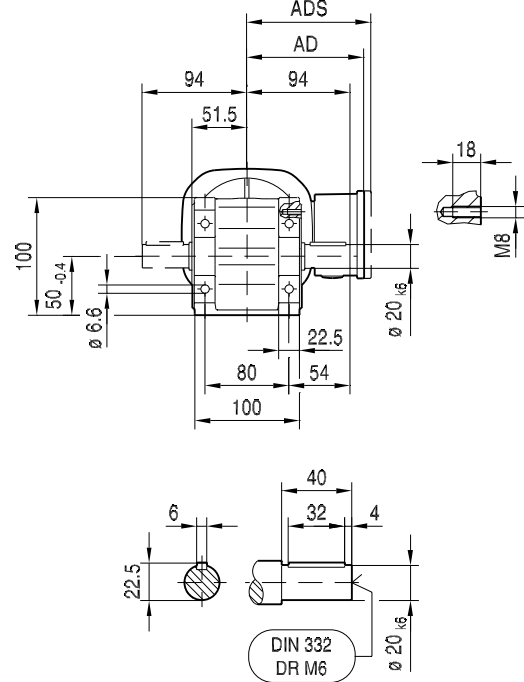
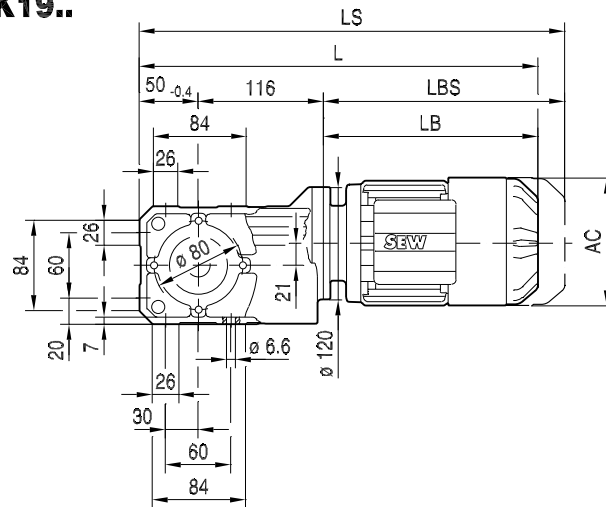
K49
 2

2.10 Maßblätter K..9 / DRL..

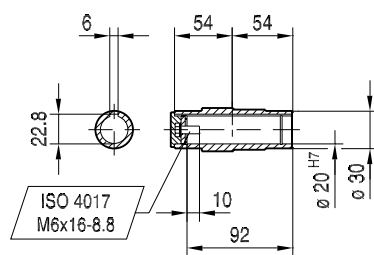
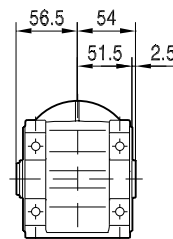
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33 093 00 15

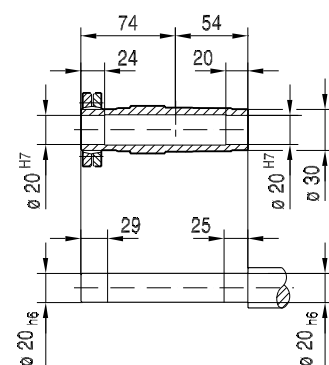
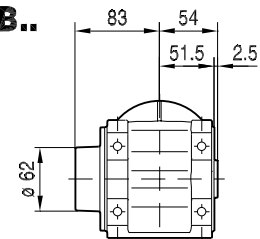
K19..



KA19B..



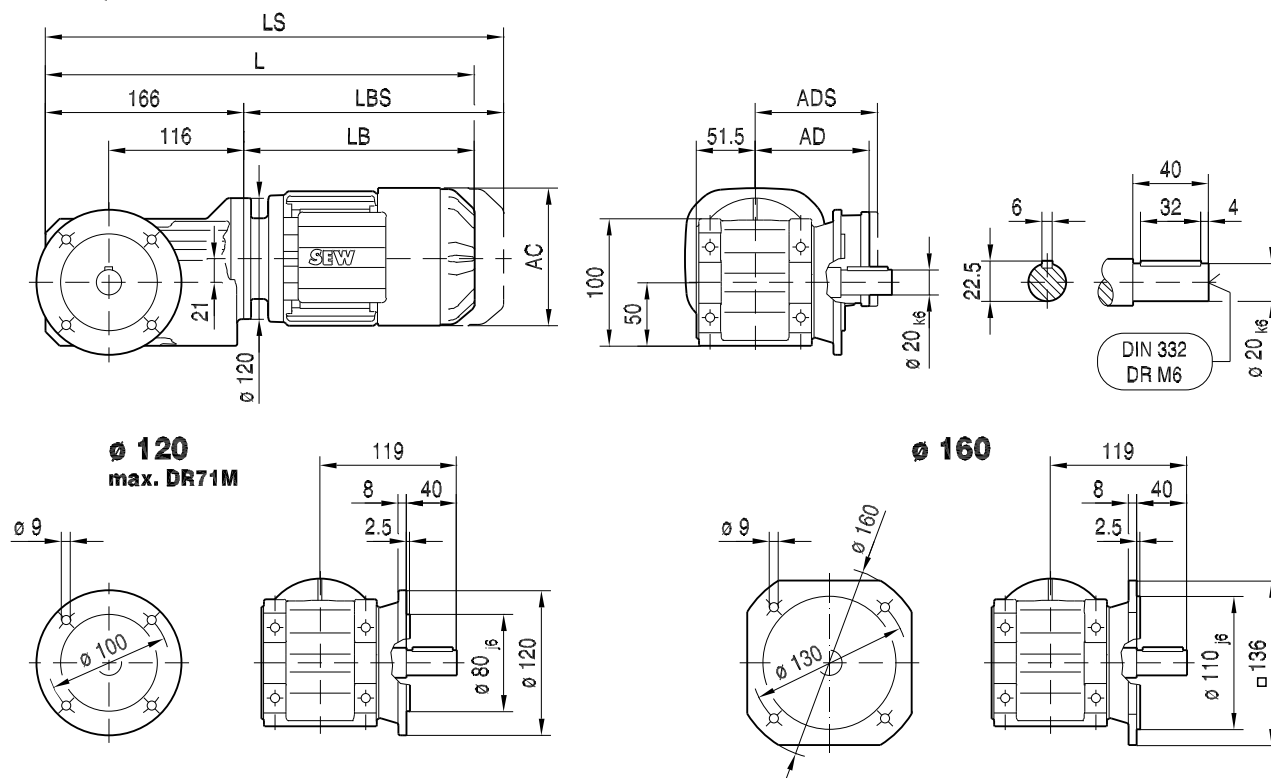
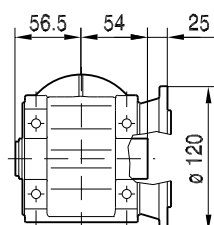
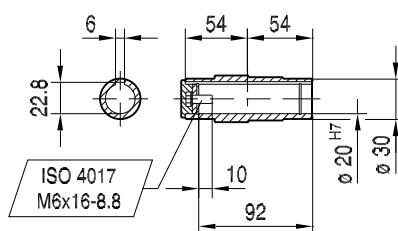
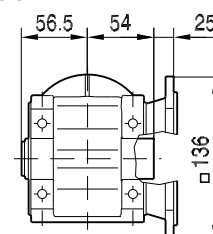
KH19B..



	DRL71S	DRL71M	DRL80S	DRL80M				
AC	139	139	156	156				
AD	119	119	128	128				
ADS	129	129	139	139				
L	454	479	498	529				
LS	518	543	578	609				
LB	288	313	332	363				
LBS	352	377	412	443				

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33 094 00 15

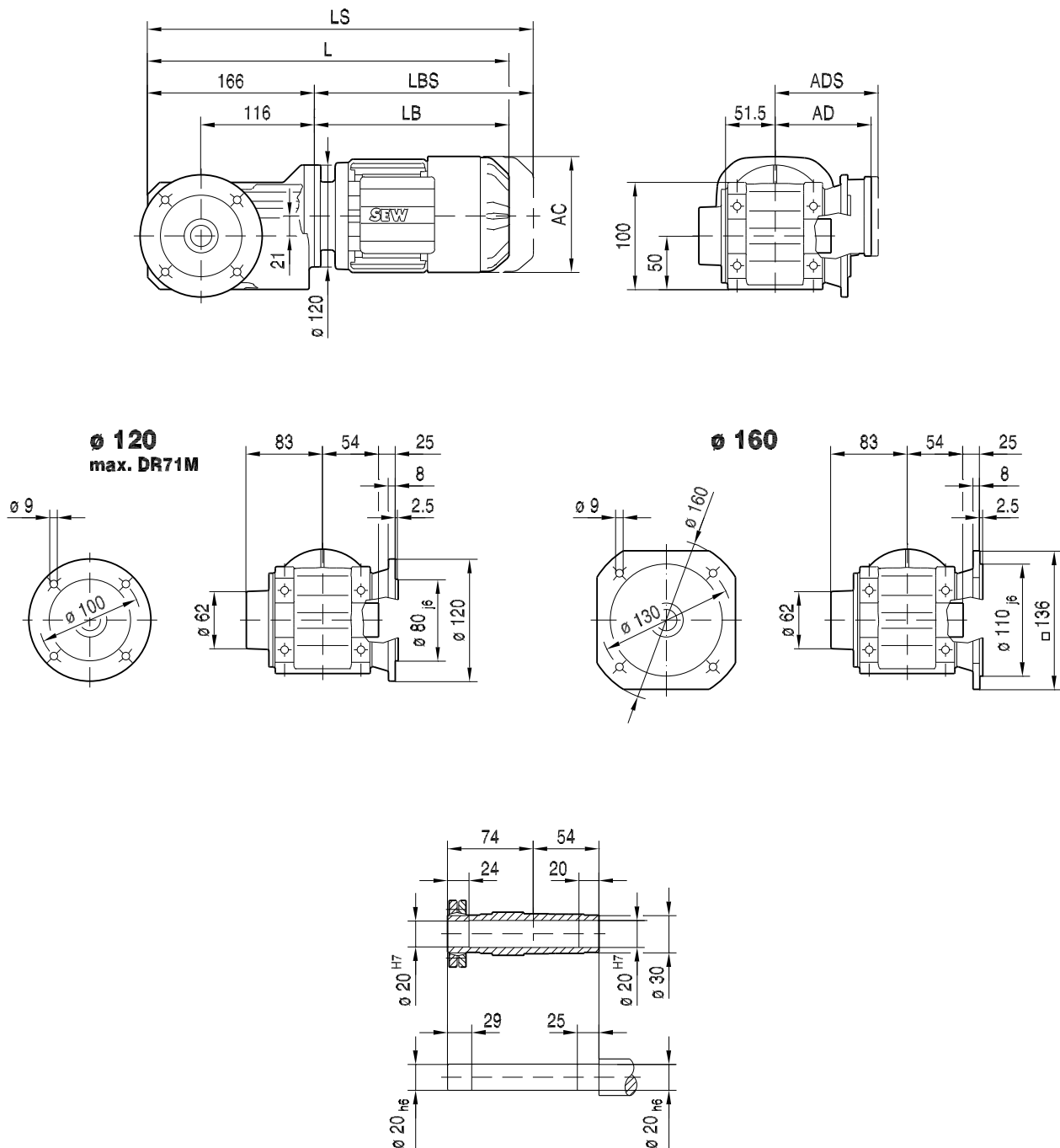
KF19B..**KAF19B..****ø 120 max. DR71M****ø 160**

	DRL71S	DRL71M	DRL80S	DRL80M			
AC	139	139	156	156			
AD	119	119	128	128			
ADS	129	129	139	139			
L	454	479	498	529			
LS	518	543	578	609			
LB	288	313	332	363			
LBS	352	377	412	443			

KHF19B..

33 095 00 15

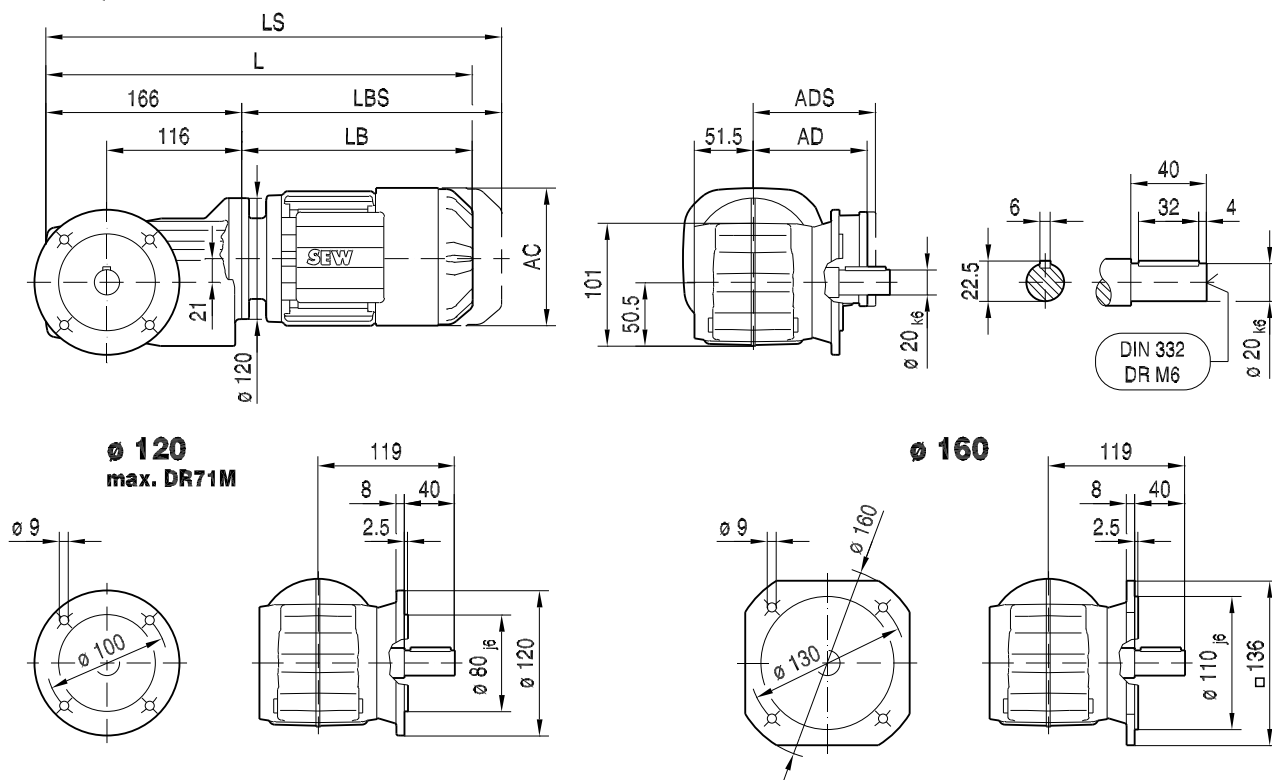
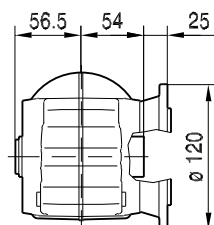
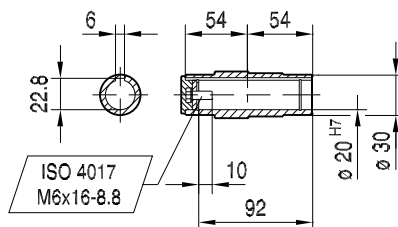
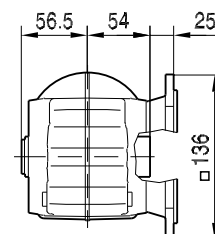
2



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	DRL71S	DRL71M	DRL80S	DRL80M			
AC	139	139	156	156			
AD	119	119	128	128			
ADS	129	129	139	139			
L	454	479	498	529			
LS	518	543	578	609			
LB	288	313	332	363			
LBS	352	377	412	443			

33 096 00 15

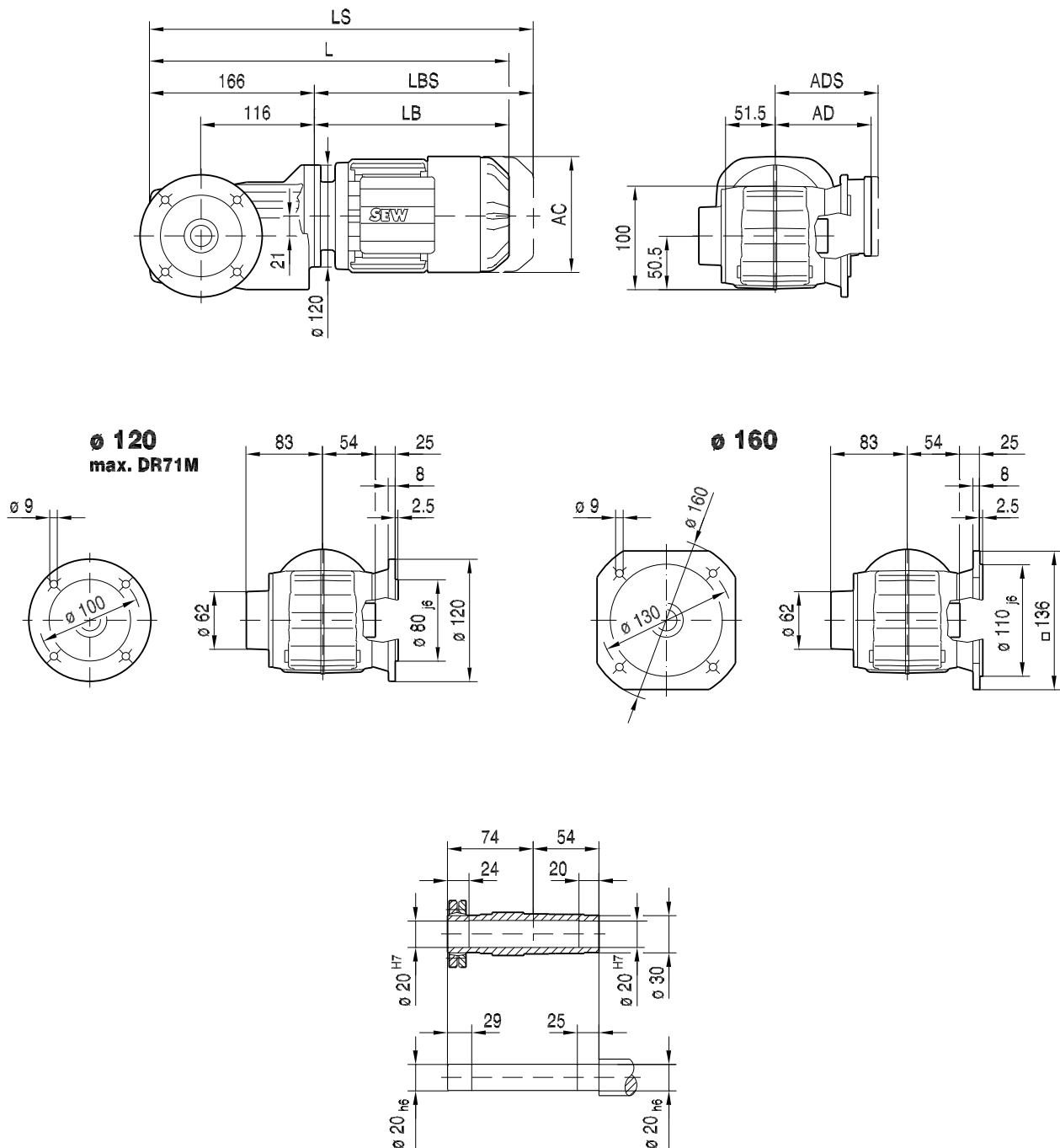
KF19..**KAF19..** **$\varnothing 120$
max. DR71M** **$\varnothing 160$** 

	DRL71S	DRL71M	DRL80S	DRL80M			
AC	139	139	156	156			
AD	119	119	128	128			
ADS	129	129	139	139			
L	454	479	498	529			
LS	518	543	578	609			
LB	288	313	332	363			
LBS	352	377	412	443			

KHF19..

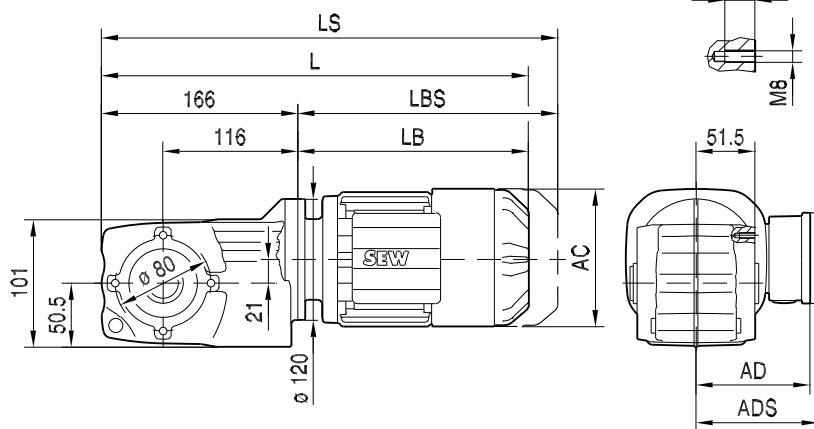
33 097 00 15

2

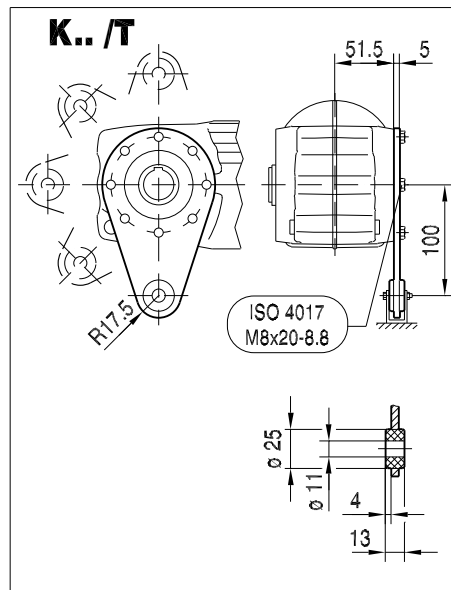
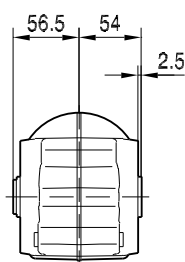
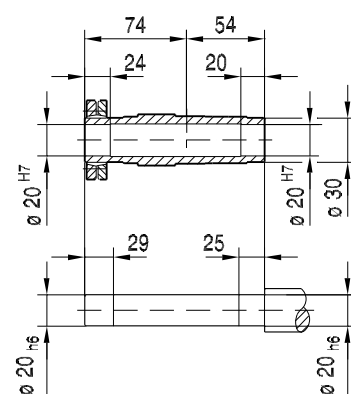
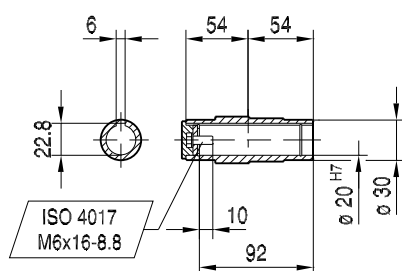
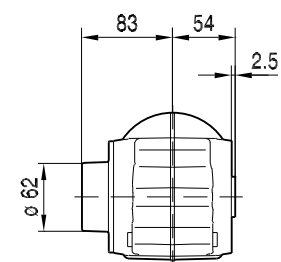


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	DRL71S	DRL71M	DRL80S	DRL80M				
AC	139	139	156	156				
AD	119	119	128	128				
ADS	129	129	139	139				
L	454	479	498	529				
LS	518	543	578	609				
LB	288	313	332	363				
LBS	352	377	412	443				

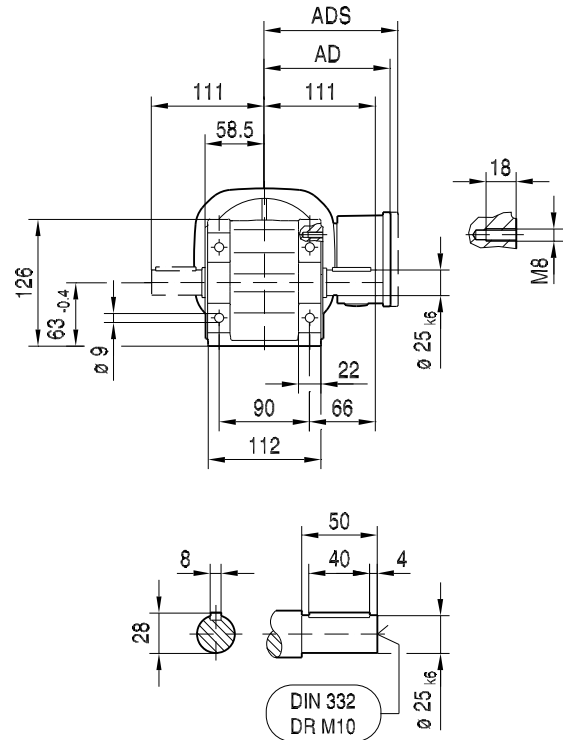
KA19..

33 098 00 15

**KA19..****KH19..**

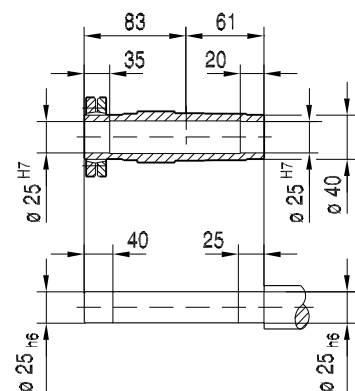
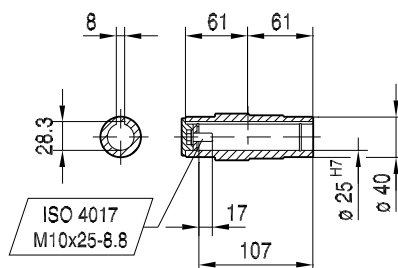
	DRL71S	DRL71M	DRL80S	DRL80M				
AC	139	139	156	156				
AD	119	119	128	128				
ADS	129	129	139	139				
L	454	479	498	529				
LS	518	543	578	609				
LB	288	313	332	363				
LBS	352	377	412	443				

33 099 00 15



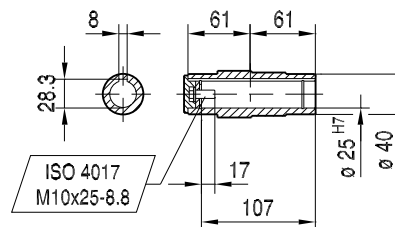
Technical drawing of a mechanical part with dimensions: 63, 61, 58.5, and 2.5.

Ø 25 H7



	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L			
AC	139	139	156	156	179			
AD	119	119	128	128	140			
ADS	129	129	139	139	150			
L	485	510	529	560	577			
LS	549	574	609	640	663			
LB	288	313	332	363	380			
LBS	352	377	412	443	466			

KF29B..

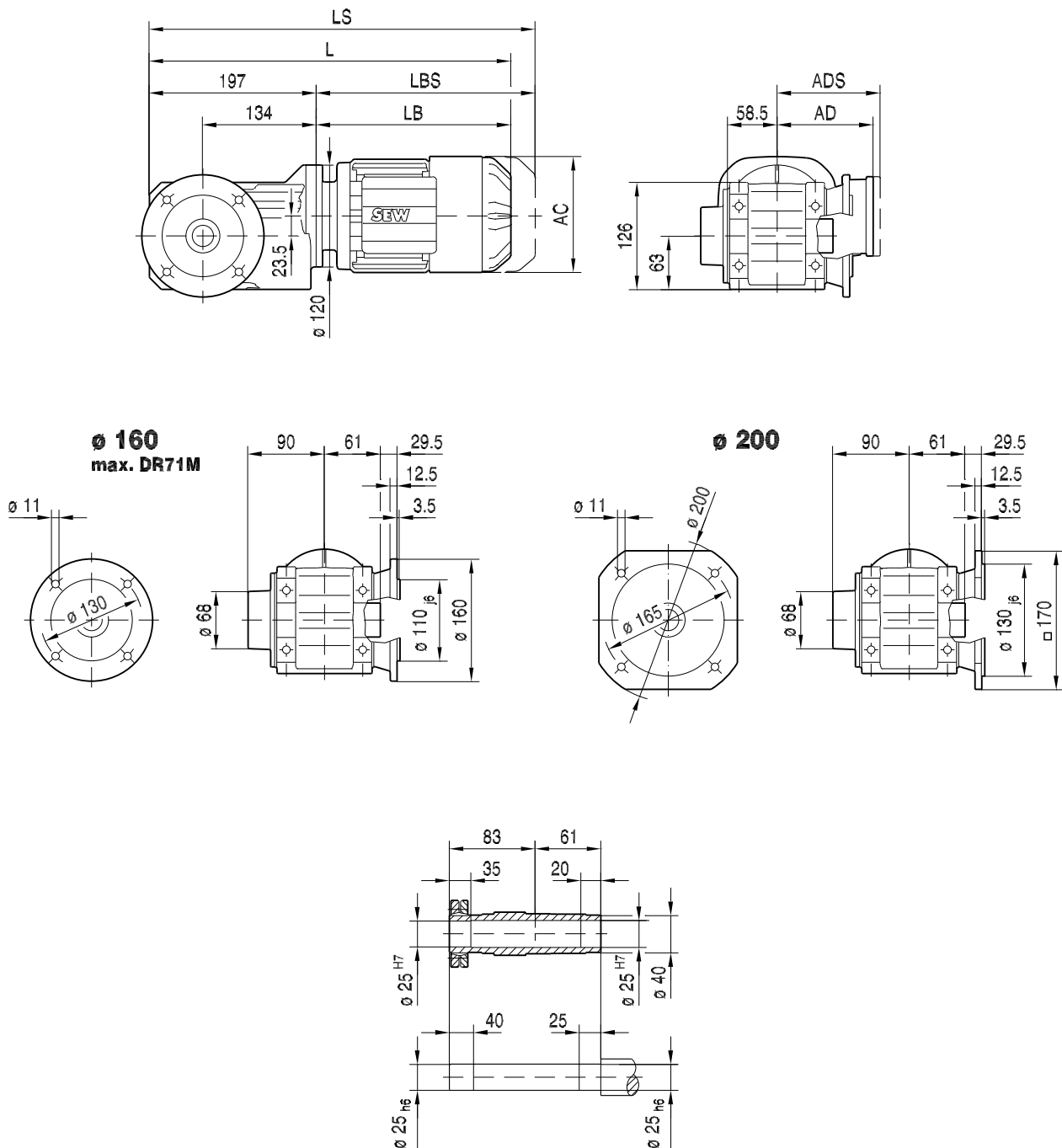


	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L			
AC	139	139	156	156	179			
AD	119	119	128	128	140			
ADS	129	129	139	139	150			
L	485	510	529	560	577			
LS	549	574	609	640	663			
LB	288	313	332	363	380			
LBS	352	377	412	443	466			

KHF29B..

33 101 00 15

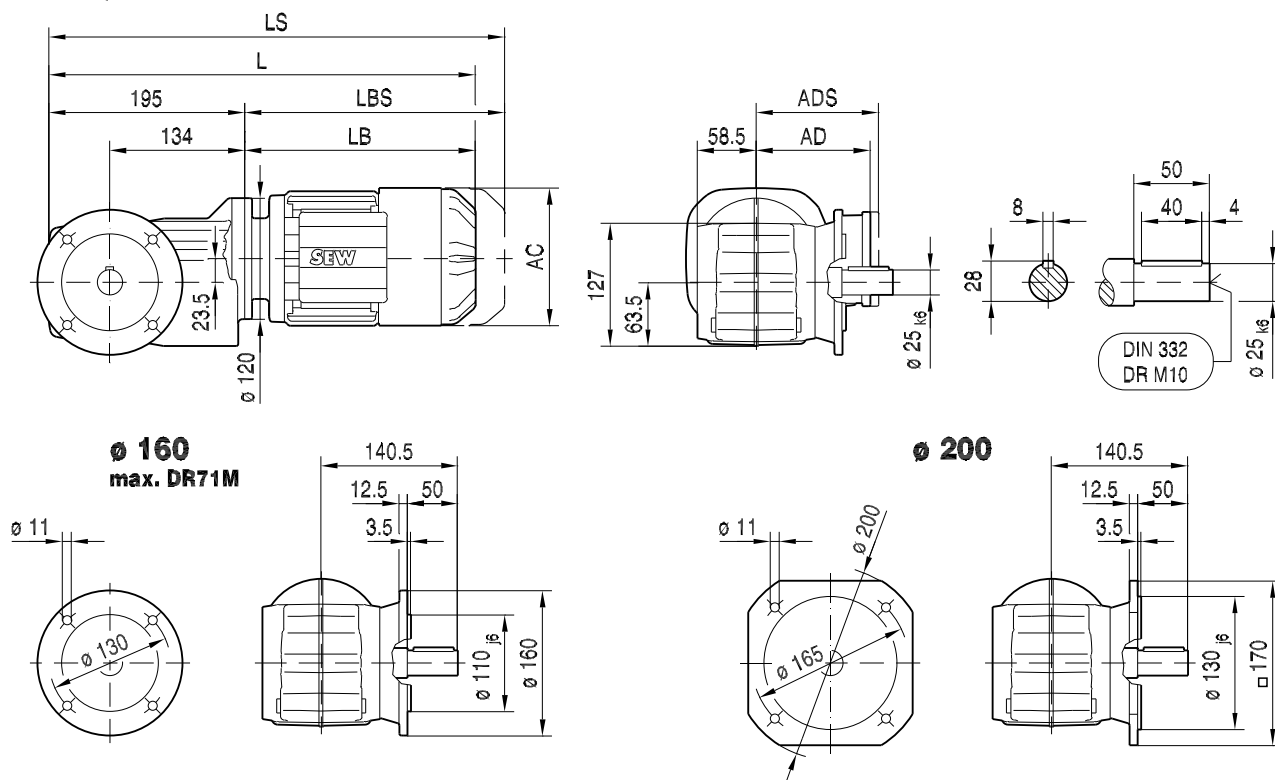
2



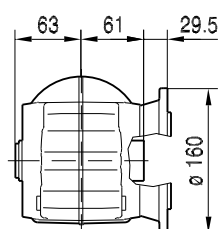
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	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L			
AC	139	139	156	156	179			
AD	119	119	128	128	140			
ADS	129	129	139	139	150			
L	485	510	529	560	577			
LS	549	574	609	640	663			
LB	288	313	332	363	380			
LBS	352	377	412	443	466			

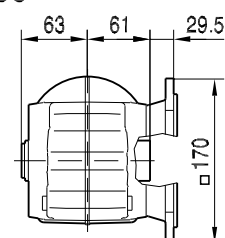
33 102 00 15

KF29..**KAF29..**

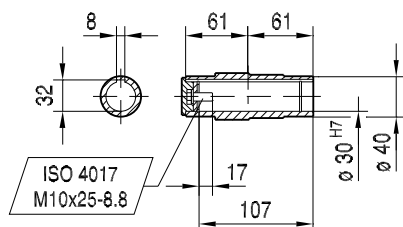
Ø 160
max. DR71M



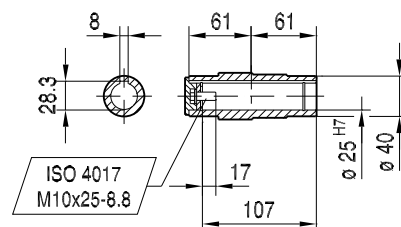
Ø 200



Ø 30 H7
DIN 6885-3



Ø 25 H7

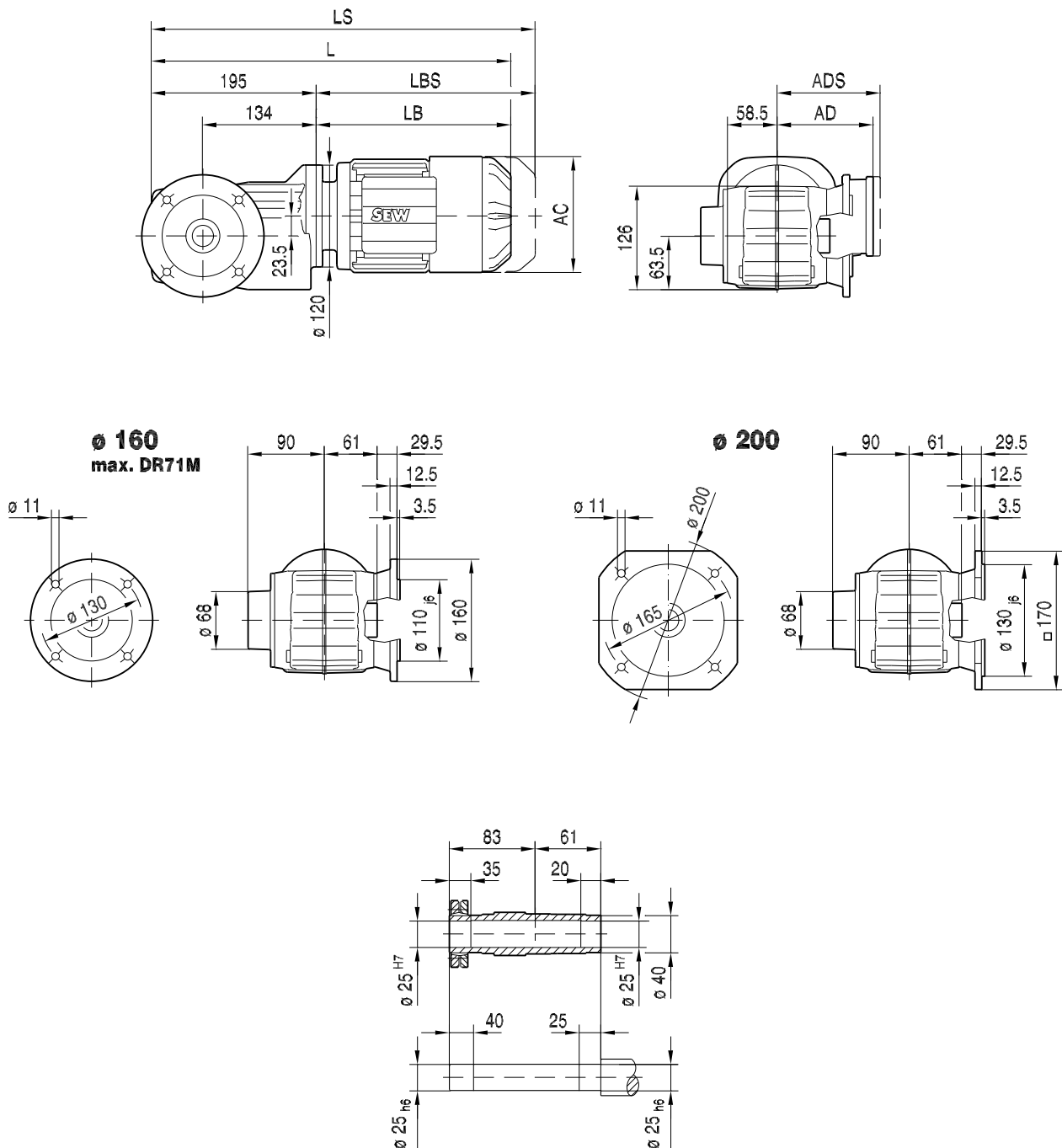


	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L			
AC	139	139	156	156	179			
AD	119	119	128	128	140			
ADS	129	129	139	139	150			
L	483	508	527	558	575			
LS	547	572	607	638	661			
LB	288	313	332	363	380			
LBS	352	377	412	443	466			

KHF29..

33 103 00 15

2



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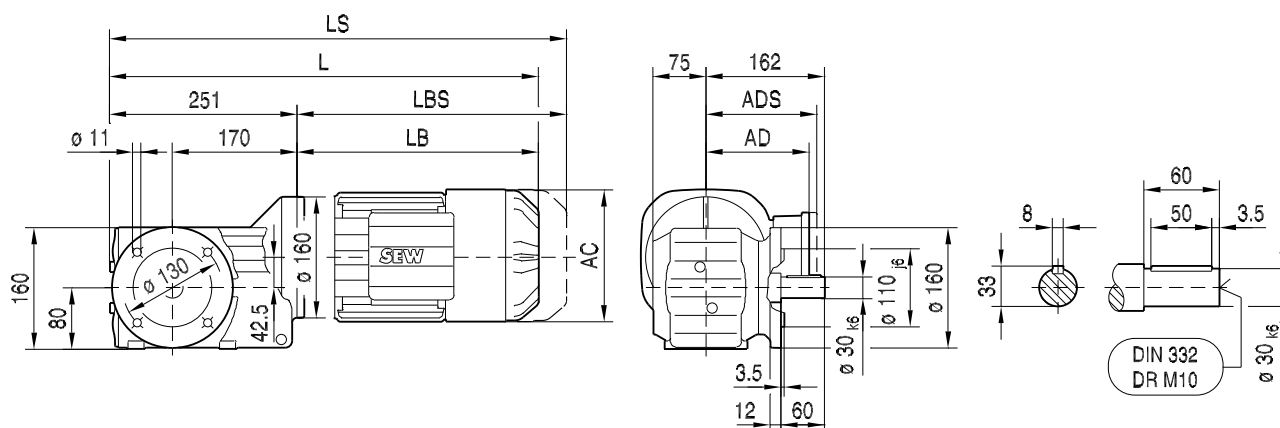
	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L			
AC	139	139	156	156	179			
AD	119	119	128	128	140			
ADS	129	129	139	139	150			
L	483	508	527	558	575			
LS	547	572	607	638	661			
LB	288	313	332	363	380			
LBS	352	377	412	443	466			

33 044 00 15

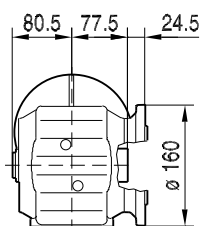
	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L		
AC	139	139	156	156	179	197		
AD	119	119	128	128	140	157		
ADS	129	129	139	139	150	158		
L	530	555	576	607	621	680		
LS	595	620	656	687	707	767		
LB	280	305	326	357	371	430		
LBS	345	370	406	437	457	517		

33 045 00 15

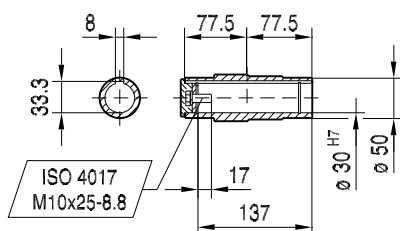
KF39..



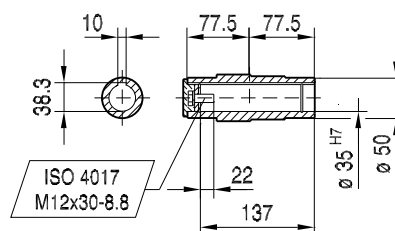
KAF39..



$\phi 30$ H7



$\phi 35$ H7

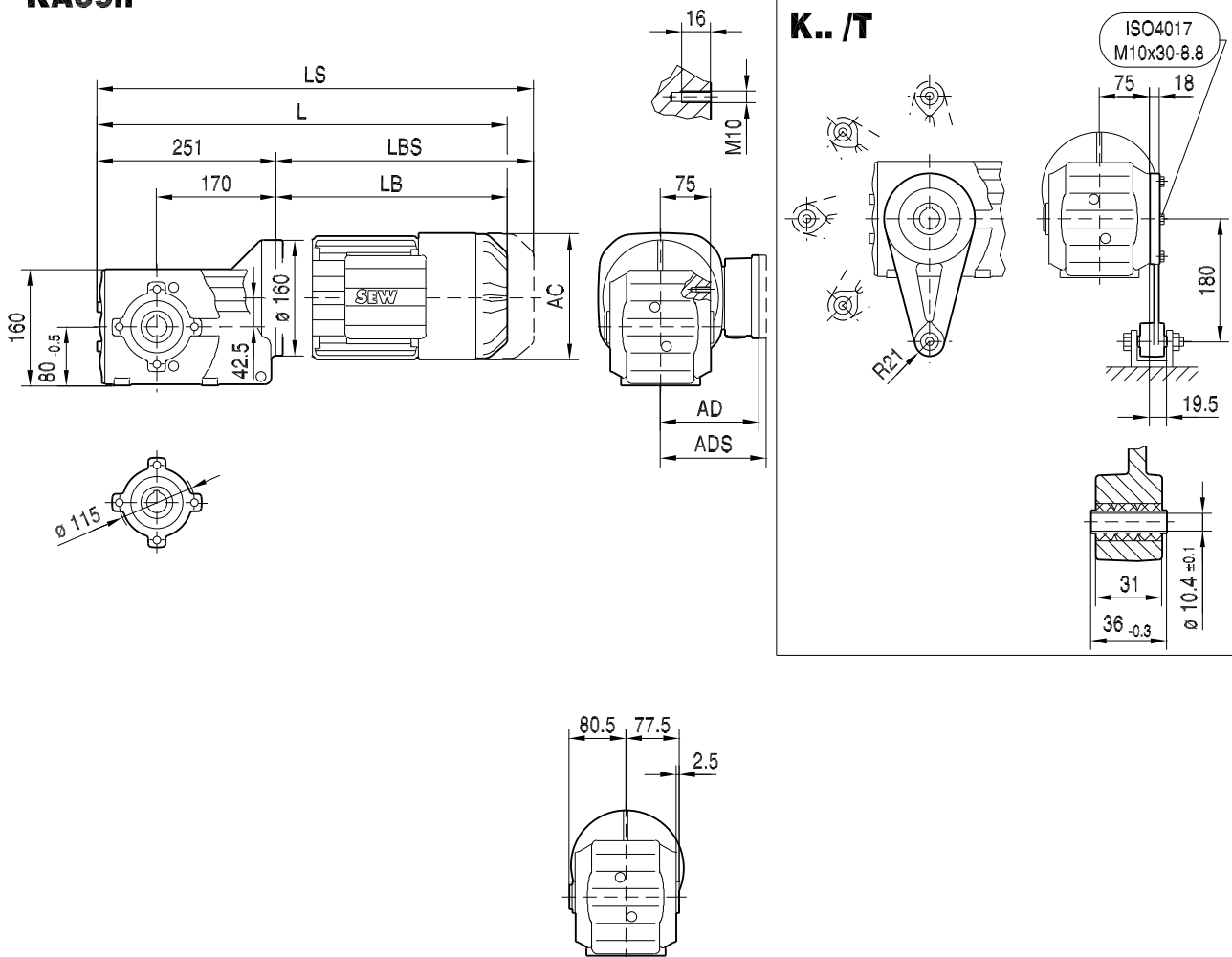


	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L		
AC	139	139	156	156	179	197		
AD	119	119	128	128	140	157		
ADS	129	129	139	139	150	158		
L	531	556	577	608	622	681		
LS	596	621	657	688	708	768		
LB	280	305	326	357	371	430		
LBS	345	370	406	437	457	517		

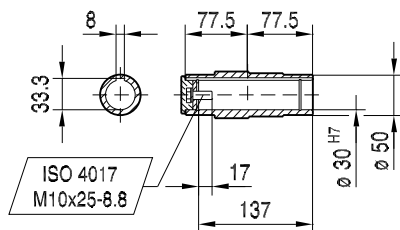
KA39..

33 046 00 15

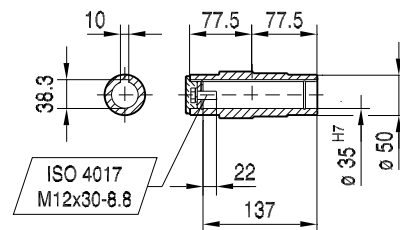
2



Ø 30 H7



Ø 35 H7

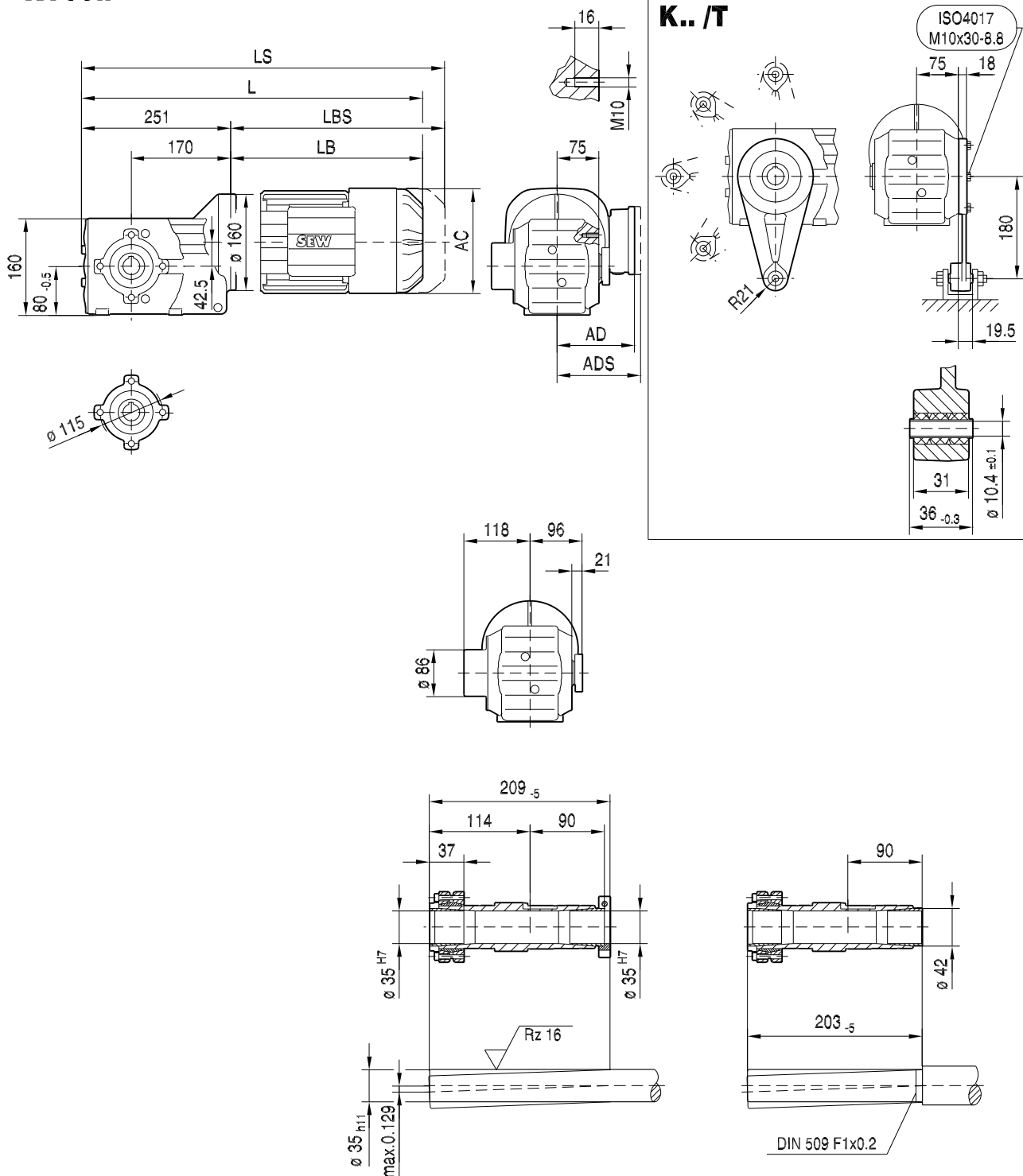


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	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L		
AC	139	139	156	156	179	197		
AD	119	119	128	128	140	157		
ADS	129	129	139	139	150	158		
L	531	556	577	608	622	681		
LS	596	621	657	688	708	768		
LB	280	305	326	357	371	430		
LBS	345	370	406	437	457	517		

KT39..

33 047 00 15

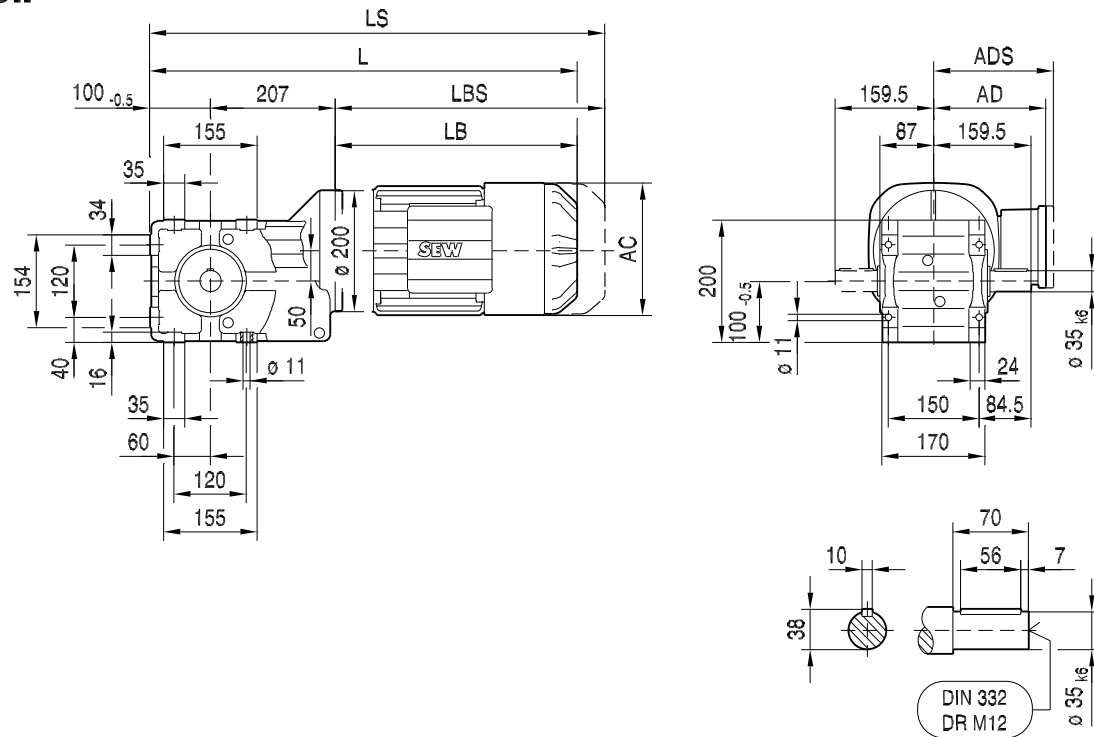


	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L		
AC	139	139	156	156	179	197		
AD	119	119	128	128	140	157		
ADS	129	129	139	139	150	158		
L	531	556	577	608	622	681		
LS	596	621	657	688	708	768		
LB	280	305	326	357	371	430		
LBS	345	370	406	437	457	517		

K49..

33 048 00 15

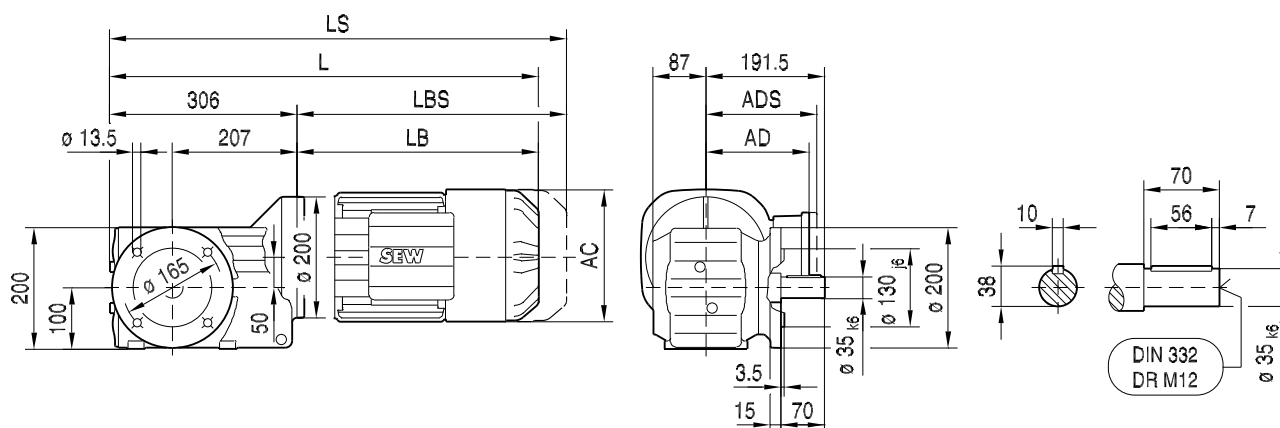
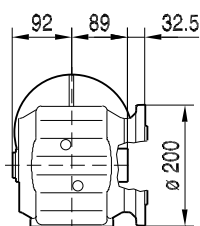
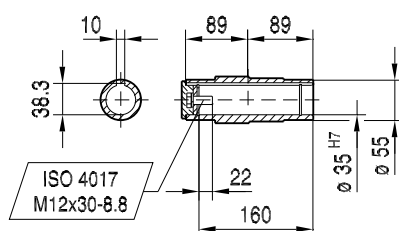
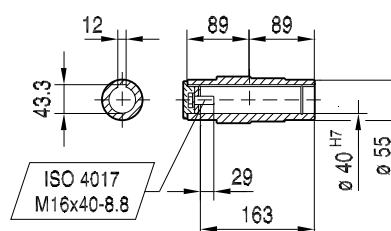
2



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	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L	DRL132S	
AC	139	139	156	156	179	197	221	
AD	119	119	128	128	140	157	170	
ADS	129	129	139	139	150	158	172	
L	580	605	626	657	671	730	811	
LS	645	670	706	737	757	817	919	
LB	273	298	319	350	364	423	504	
LBS	338	363	399	430	450	510	612	

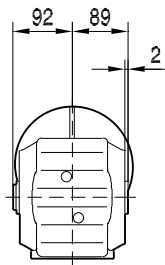
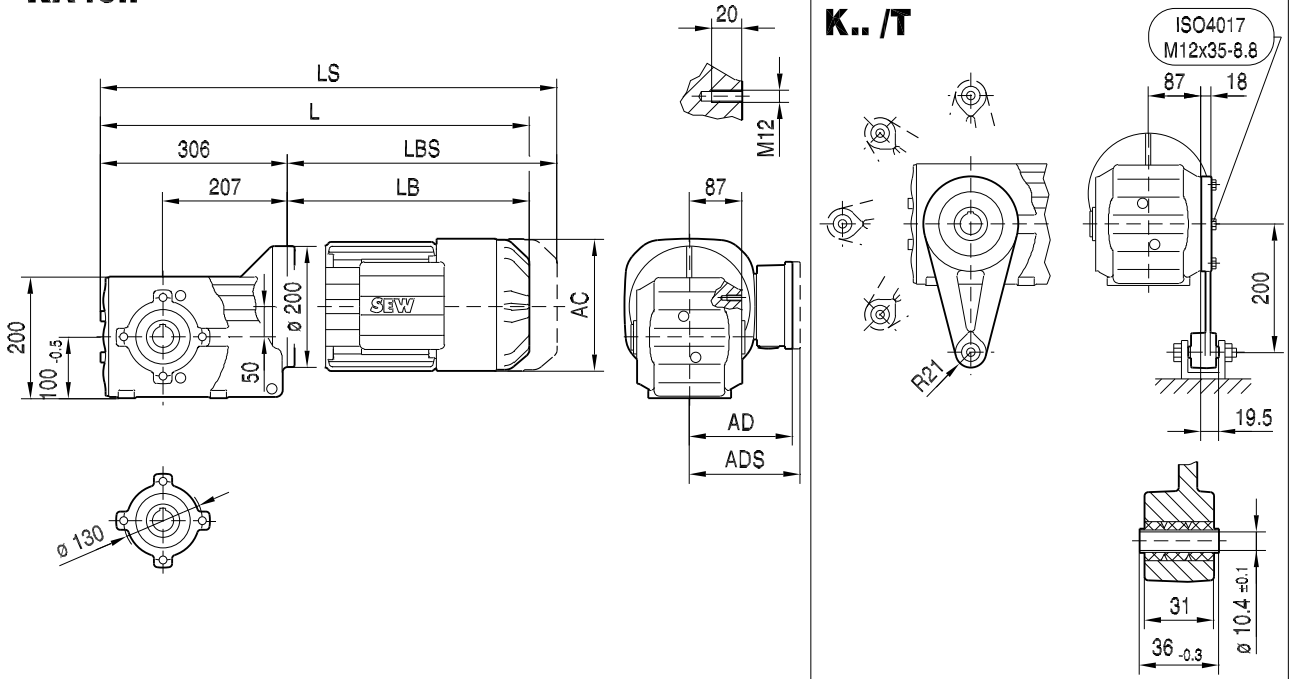
33 049 00 15

KF49..**KAF49..** **$\varnothing 35$ H7** **$\varnothing 40$ H7**

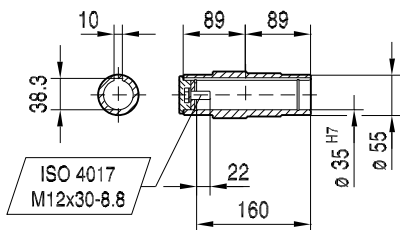
	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L	DRL132S	
AC	139	139	156	156	179	197	221	
AD	119	119	128	128	140	157	170	
ADS	129	129	139	139	150	158	172	
L	579	604	625	656	670	729	810	
LS	644	669	705	736	756	816	918	
LB	273	298	319	350	364	423	504	
LBS	338	363	399	430	450	510	612	

KA49..

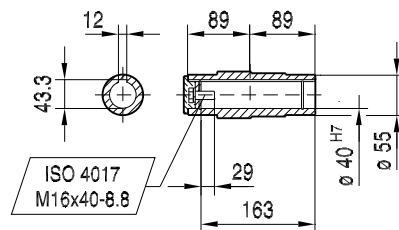
33 050 00 15



Ø 35 H7



Ø 40 H7



	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L	DRL132S	
AC	139	139	156	156	179	197	221	
AD	119	119	128	128	140	157	170	
ADS	129	129	139	139	150	158	172	
L	579	604	625	656	670	729	810	
LS	644	669	705	736	756	816	918	
LB	273	298	319	350	364	423	504	
LBS	338	363	399	430	450	510	612	

33 051 00 15



	DRL71S	DRL71M	DRL80S	DRL80M	DRL90L	DRL100L	DRL132S	
AC	139	139	156	156	179	197	221	
AD	119	119	128	128	140	157	170	
ADS	129	129	139	139	150	158	172	
L	579	604	625	656	670	729	810	
LS	644	669	705	736	756	816	918	
LB	273	298	319	350	364	423	504	
LBS	338	363	399	430	450	510	612	

2.11 Auswahltabellen K..9 / DRC..

			DRC1		DRC2		M _{aNotAus} [Nm]	i
	na ₁ [min ⁻¹]	na ₂₀₀₀ [min ⁻¹]	M _a [Nm]	M _{apk} [Nm]	M _a [Nm]	M _{apk} [Nm]		
K19  2	0.22	444	12	29	31	79	132	4.50
	0.19	388	13	33	36	>88	132	5.16
	0.18	361	14	36	39	>88	132	5.54
	0.16	312	16	41	45	>88	132	6.41
	0.14	289	18	44	48	>88	132	6.91
	0.12	247	21	52			132	8.09
	0.10	209	25	62			104	9.58
	0.10	194	26	66	71	>83	124	10.32
	0.08	169	30	75	>79	>86	129	11.84
	0.08	157	32	81	>80	>88	132	12.70
	0.07	136	37	>88	>80	>88	132	14.69
	0.06	126	40	>88	>80	>88	132	15.84
	0.05	108	47	>88			132	18.55
	0.05	91	56	>88			132	21.98
	0.04	83	61	>88			132	24.06
	0.04	74					132	26.88
	0.04	74	>60	>66	>60	>66	99	27.16
	0.03	69					132	29.14
	0.03	68	>61	>67	>61	>67	100	29.29
	0.03	63					132	31.74
	0.03	58	>64	>70			105	34.29
	0.02	49	>67	>73			110	40.63
	0.02	45	>69	>75			112	44.48
	0.02	40					116	49.69
	0.02	37					116	53.88
	0.02	34					116	58.68

m [kg]		DRC1	DRC2	
K19	 2	24	30	
KF: + 0.3 kg / KA: + -0.5 kg / KAF: + 0.0 kg				

DRC..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
K19  2	4.50	80	88	132	433	0.38	2010	1620	2500	2500	4190	3630	4500	4500
	5.16	80	88	132	424	0.30	2140	1720	2650	2650	4190	3630	4500	4500
	5.54	80	88	132	419	0.27	2200	1780	2730	2730	4190	3630	4500	4500
	6.41	80	88	132	410	0.21	2340	1890	2900	2900	4190	3630	4500	4500
	6.91	80	88	132	407	0.18	2420	1950	3000	3000	4190	3630	4500	4500
	8.09	80	88	132	399	0.14	2590	2080	3200	3200	4190	3630	4500	4500
	9.58	63	69	104	731	0.11	2910	2340	3600	3600	4340	3670	4500	4500
	10.32	76	83	124	102	0.22	2720	2190	3370	3370	4230	3610	4500	4500
	11.84	79	86	129	90	0.18	2850	2300	3530	3530	4210	3600	4500	4500
	12.70	80	88	132	83	0.16	2930	2360	3630	3630	4190	3600	4500	4500
	14.69	80	88	132	82	0.13	3110	2510	3860	3860	4190	3600	4500	4500
	15.84	80	88	132	81	0.12	3210	2590	3980	3980	4190	3600	4500	4500
	18.55	80	88	132	81	0.092	3430	2760	4250	4250	4190	3600	4500	4500
	21.98	80	88	132	81	0.072	3680	2960	4500	4500	4190	3600	4500	4500
	24.06	80	88	132	81	0.063	3820	3080	4500	4500	4190	3600	4500	4500
	26.88	80	88	132	80	0.054	3990	3220	4500	4500	4190	3600	4500	4500
	27.16	60	66	99	38	0.13	4090	3290	4500	4500	4360	3630	4500	4500
	29.14	80	88	132	80	0.048	4120	3320	4500	4500	4190	3600	4500	4500
	29.29	61	67	100	36	0.11	4200	3380	4500	4500	4350	3630	4500	4500
	31.74	80	88	132	80	0.042	4260	3440	4500	4500	4190	3600	4500	4500
	34.29	64	70	105	31	0.090	4370	3570	4500	4500	4330	3620	4500	4500
	40.63	67	73	110	27	0.071	4350	3630	4500	4500	4310	3610	4500	4500
	44.48	69	75	112	24	0.062	4340	3620	4500	4500	4290	3600	4500	4500
	49.69	70	77	116	22	0.053	4330	3620	4500	4500	4280	3600	4500	4500
	53.88	70	77	116	22	0.047	4330	3620	4500	4500	4280	3600	4500	4500
	58.68	70	77	116	22	0.042	4330	3620	4500	4500	4280	3600	4500	4500

			DRC1		DRC2		M _{aNotAus} [Nm]	i
	na ₁ [min ⁻¹]	na ₂₀₀₀ [min ⁻¹]	M _a [Nm]	M _{apk} [Nm]	M _a [Nm]	M _{apk} [Nm]		
K29 	0.31	627	8.2	20	22	56	182	3.19
	0.26	510	10	25	27	68	205	3.92
	0.20	392	13	33	36	89	182	5.10
	0.17	348	15	37	40	100	184	5.75
	0.14	288	18	45	49	121	184	6.95
	0.13	267	19	48	52	129	200	7.48
	0.12	234	22	55	60	>134	200	8.53
	0.11	218	23	58	63	>143	210	9.17
	0.10	202	25	64			182	9.90
	0.08	168	30	76	83	>143	210	11.94
	0.07	148	34	86	93	>143	210	13.47
	0.06	123	41	104	113	>143	210	16.29
	0.05	100	51	127	>130	>143	210	19.99
	0.05	91	53	>115	>105	>115	172	22.08
	0.04	86	59	>143			210	23.19
	0.04	80	60	>119	>109	>119	178	24.91
	0.04	73	69	>143			210	27.23
	0.03	67	76	>143			210	29.69
	0.03	66	73	>126	>115	>126	189	30.11
	0.03	60					210	33.15
	0.03	56					210	35.83
	0.03	54	90	>134	>122	>134	200	36.96
	0.03	51					210	38.90
	0.02	47	103	>140			210	42.87
	0.02	40	121	>143			210	50.35
	0.02	36	>130	>143			210	54.89
	0.02	33					210	61.28
	0.02	30					210	66.25
	0.01	28					210	71.93

m [kg]		DRC1	DRC2	
K29		26	32	
KF: + 1.0 kg / KA: + -0.5 kg / KAF: + 0.4 kg				

DRC..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]		[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
 K29 2	3.19	110	121	182	1082	1.6	1830	1200	1860	1860	5070	6000	6000	6000
	3.92	126	138	205	722	1.1	1910	1240	1920	1920	5030	6000	6000	6000
	5.10	110	121	182	1080	0.68	2260	1500	2320	2320	5070	6000	6000	6000
	5.75	112	123	184	1030	0.55	2370	1580	2440	2440	5070	6000	6000	6000
	6.95	112	123	184	1007	0.39	2580	1720	2660	2660	5070	6000	6000	6000
	7.48	123	135	200	138	0.74	2300	1480	2300	2300	4980	6000	6000	6000
	8.53	122	134	200	755	0.27	2740	1830	2830	2830	5040	6000	6000	6000
	9.17	130	143	210	112	0.55	2470	1600	2480	2480	4960	6000	6000	6000
	9.90	110	121	182	707	0.21	3000	2020	3120	3120	5070	6000	6000	6000
	11.94	130	143	210	112	0.37	2810	1830	2840	2840	4960	6000	6000	6000
	13.47	130	143	210	111	0.30	2970	1950	3010	3010	4960	6000	6000	6000
	16.29	130	143	210	111	0.22	3240	2140	3300	3300	4960	6000	6000	6000
	19.99	130	143	210	111	0.16	3550	2350	3640	3640	4960	6000	6000	6000
	22.08	105	115	172	47	0.33	3820	2560	3950	3950	5020	6000	6000	6000
	23.19	130	143	210	110	0.12	3790	2520	3900	3900	4960	6000	6000	6000
	24.91	109	119	178	42	0.27	3980	2660	4120	4120	5010	6000	6000	6000
	27.23	130	143	210	110	0.098	4060	2710	4190	4190	4960	6000	6000	6000
	29.69	130	143	210	110	0.086	4210	2820	4360	4360	4960	6000	6000	6000
	30.11	115	126	189	35	0.20	4250	2850	4400	4400	4990	6000	6000	6000
	33.15	130	143	210	110	0.073	4410	2960	4580	4580	4960	6000	6000	6000
	35.83	130	143	210	110	0.065	4560	3060	4740	4740	4960	6000	6000	6000
	36.96	122	134	200	28	0.14	4560	3060	4730	4730	4960	6000	6000	6000
	38.90	130	143	210	110	0.057	4720	3170	4910	4910	4960	6000	6000	6000
	42.87	128	140	210	24	0.11	4790	3210	4970	4970	4940	6000	6000	6000
	50.35	130	143	210	22	0.090	4980	3430	5300	5300	4930	6000	6000	6000
	54.89	130	143	210	23	0.079	4980	3560	5510	5510	4930	6000	6000	6000
	61.28	130	143	210	23	0.068	4980	3730	5770	5770	4930	6000	6000	6000
	66.25	130	143	210	22	0.060	4980	3860	5970	5970	4930	6000	6000	6000
	71.93	130	143	210	23	0.053	4980	4000	6000	6000	4930	6000	6000	6000

	na ₁ [min ⁻¹]	na ₂₀₀₀ [min ⁻¹]	DRC1		DRC2		M _{aNotAus} [Nm]	i
			M _a [Nm]	M _{apk} [Nm]	M _a [Nm]	M _{apk} [Nm]		
K39 	0.36	712			19	48	285	2.81
	0.25	508			27	68	365	3.94
	0.22	442	11	29	31	78	405	4.52
	0.19	383	13	33	36	90	440	5.22
	0.17	348	15	37	40	99	465	5.75
	0.15	296	17	43	47	117	510	6.75
	0.14	280	18	45	49	124	510	7.15
	0.12	246	21	52	56	140	510	8.12
	0.11	222	23	57	62	156	510	9.00
	0.09	189	27	67	73	183	485	10.61
	0.08	165	31	77	84	205	430	12.09
	0.08	157	32	81	88	215	425	12.73
	0.07	149			88	220	455	13.44
	0.06	130	37	93	101	250	475	15.44
	0.06	112	43	107	117	290	490	17.83
	0.05	102	47	118	129	320	500	19.62
	0.04	87	56	139	151	375	510	23.04
	0.04	82	59	147	160	395	510	24.40
	0.04	72	67	167	182	>410	510	27.73
	0.03	65	74	185	200	>410	510	30.72
	0.03	55	87	215	235	>410	510	36.22
	0.02	48	100	245	270	>410	510	41.28
	0.02	46	105	260	280	>410	510	43.45
	0.02	40	120	295			510	49.69
	0.02	34	140	350			510	58.24

m [kg]		DRC1	DRC2
K39		37	43

KF: + 1.5 kg / KA: + -1.0 kg / KAF: + 0.5 kg

DRC..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
K39 	2.81	170	255	285	811	7.9	2870	2460	2180	2180	7500	6260	7500	7500
	3.94	215	320	365	378	4.6	3070	2630	2260	2260	7500	6180	7500	7500
	4.52	240	360	405	257	3.6	3130	2680	1730	1730	7500	6130	7500	7500
	5.22	260	390	440	192	2.9	3240	2770	960	960	7500	6090	7500	7500
	5.75	275	410	465	158	2.5	3300	2830	290	290	7470	6060	7500	7500
	6.75	300	435	510	130	2.0	3430	2940	0	0	7300	6020	7500	7500
	7.15	300	435	510	129	1.8	3530	3020	157	157	7300	6020	7500	7500
	8.12	300	385	510	193	1.4	3760	3220	2080	2080	7500	6090	7500	7500
	9.00	300	385	510	192	1.2	3950	3380	2860	2860	7500	6090	7500	7500
	10.61	285	370	485	218	0.91	4360	3730	3250	3250	7500	6110	7500	7500
	12.09	255	295	430	464	0.65	4790	4110	3700	3700	7500	6210	7500	7500
	12.73	250	295	425	463	0.58	4930	4220	3830	3830	7500	6210	7500	7500
	13.44	270	405	455	27	2.6	4160	3560	2830	2830	7500	5980	7500	7500
	15.44	280	410	475	26	2.2	4380	3750	2990	2990	7490	5960	7500	7500
	17.83	290	410	490	25	1.8	4630	3960	3180	3180	7490	5960	7500	7500
	19.62	295	410	500	25	1.5	4820	4120	3330	3330	7490	5960	7500	7500
	23.04	300	410	510	24	1.3	5180	4440	3630	3630	7490	5960	7500	7500
	24.40	300	410	510	24	1.2	5330	4560	3760	3760	7490	5960	7500	7500
	27.73	300	410	510	24	0.95	5670	4860	4070	4070	7490	5960	7500	7500
	30.72	300	410	510	24	0.82	5960	5100	4320	4320	7490	5960	7500	7500
	36.22	300	410	510	23	0.65	6440	5520	4740	4740	7490	5960	7500	7500
	41.28	300	410	510	23	0.44	6840	5860	5100	5100	7490	5960	7500	7500
	43.45	300	410	510	23	0.39	7000	6000	5240	5240	7490	5960	7500	7500
	49.69	300	410	510	23	0.32	7440	6150	5630	5630	7490	5960	7500	7500
	58.24	300	410	510	23	0.26	7500	6150	6110	6110	7490	5960	7500	7500

	na ₁ [min ⁻¹]	na ₂₀₀₀ [min ⁻¹]	DRC1		DRC2		DRC3		DRC4		M _{aNotAus} [Nm]	i
			M _a [Nm]	M _{apk} [Nm]	M _a [Nm]	M _{apk} [Nm]	M _a [Nm]	M _{apk} [Nm]	M _a [Nm]	M _{apk} [Nm]		
K49  2	0.25	500			28	69	55	137	73	139	745	4.00
	0.21	426			32	81	64	161	86	163	790	4.69
	0.19	378			37	91	73	182	97	184	820	5.29
	0.17	334	15	38	41	104	82	205	110	205	850	5.99
	0.15	293	17	43	47	118	94	230	125	235	850	6.83
	0.13	264	19	48	52	131	104	260	139	260	850	7.58
	0.12	231	22	55	60	150	119	295	159	300	850	8.66
	0.11	219	23	58	63	158	126	310	168	315	850	9.14
	0.10	192	27	66	72	180	143	355	191	360	810	10.42
	0.09	176	29	72	79	196	156	390	205	395	840	11.37
	0.07	149			89	220	176	440	235	445	795	13.38
	0.06	128			104	255	205	515	275	520	830	15.67
	0.06	113			117	290	230	580	310	590	850	17.67
	0.05	100	49	122	133	330	260	>605	350	>605	850	20.03
	0.04	88	56	139	151	375	300	>605	400	>605	850	22.83
	0.04	79	62	154	168	415	330	>605	445	>605	850	25.34
	0.03	69	71	176	192	475	380	>605	>500	>605	850	28.95
	0.03	65	74	186	200	505	400	>605	>500	>605	850	30.55
	0.03	57	85	210	230	575	455	>605	>500	>605	850	34.81
	0.03	53	93	230	250	>605	>500	>605	>500	>605	850	37.98
	0.02	45	108	270	290	>605					850	44.44
	0.02	40	123	305	330	>605					850	50.29
	0.02	38	129	320	350	>605					850	52.94
	0.02	33	145	360							850	60.27
	0.01	28	169	420							755	70.19
	0.01	27	181	450							800	75.20

m [kg]		DRC1	DRC2	DRC3	DRC4	
K49	 2	50	56	86	60	

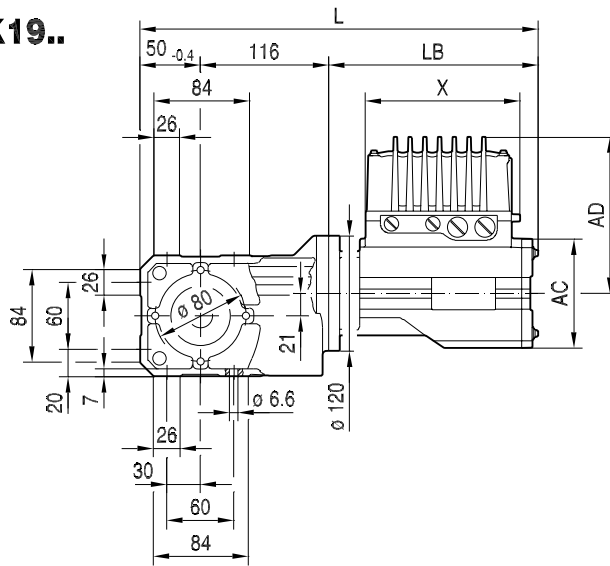
KF: + 1.7 kg / KA: + -2.8 kg / KAF: + 2.1 kg

DRC..							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _G 10 ⁻⁴ [kg*m ²]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
K49 	4.00	440	605	745	218	11	3110	2390	0	0	9000	9000	9000	9000
	4.69	465	605	790	217	8.8	3270	2600	0	0	9000	9000	9000	9000
	5.29	485	605	820	217	7.2	3400	2770	0	0	9000	9000	9000	9000
	5.99	500	605	850	219	5.9	3570	3030	0	0	9000	9000	9000	9000
	6.83	500	605	850	218	4.8	3840	3250	0	0	9000	9000	9000	9000
	7.58	500	605	850	218	4.1	4050	3440	1030	1030	9000	9000	9000	9000
	8.66	500	605	850	218	3.3	4340	3680	3790	3790	9000	9000	9000	9000
	9.14	500	605	850	218	3.1	4460	3780	3910	3910	9000	9000	9000	9000
	10.42	480	585	810	238	2.4	4860	4120	4330	4330	9000	9000	9000	9000
	11.37	495	605	840	218	2.1	5000	4240	4450	4450	9000	9000	9000	9000
	13.38	470	605	795	46	6.5	4320	3660	3510	3510	9000	9000	9000	9000
	15.67	490	605	830	45	5.2	4590	3890	3750	3750	9000	9000	9000	9000
	17.67	500	605	850	44	4.4	4860	4120	3990	3990	9000	9000	9000	9000
	20.03	500	605	850	43	3.7	5220	4420	4350	4350	9000	9000	9000	9000
	22.83	500	605	850	43	3.1	5610	4750	4750	4750	9000	9000	9000	9000
	25.34	500	605	850	42	2.8	5940	5030	5070	5070	9000	9000	9000	9000
	28.95	500	605	850	42	2.3	6370	5400	5510	5510	9000	9000	9000	9000
	30.55	500	605	850	42	2.1	6550	5550	5690	5690	9000	9000	9000	9000
	34.81	500	605	850	42	1.7	7000	5930	6140	6140	9000	9000	9000	9000
	37.98	500	605	850	41	1.5	7310	6200	6450	6450	9000	9000	9000	9000
	44.44	500	605	850	41	1.2	7900	6690	7040	7040	9000	9000	9000	9000
	50.29	500	605	850	41	0.83	8380	7100	7530	7530	9000	9000	9000	9000
	52.94	500	605	850	41	0.75	8590	7280	7730	7730	9000	9000	9000	9000
	60.27	500	605	850	41	0.61	9000	7740	8280	8280	9000	9000	9000	9000
	70.19	445	605	755	40	0.50	9000	8630	9000	9000	9000	9000	9000	9000
	75.20	475	605	800	41	0.43	9000	8720	9000	9000	9000	9000	9000	9000

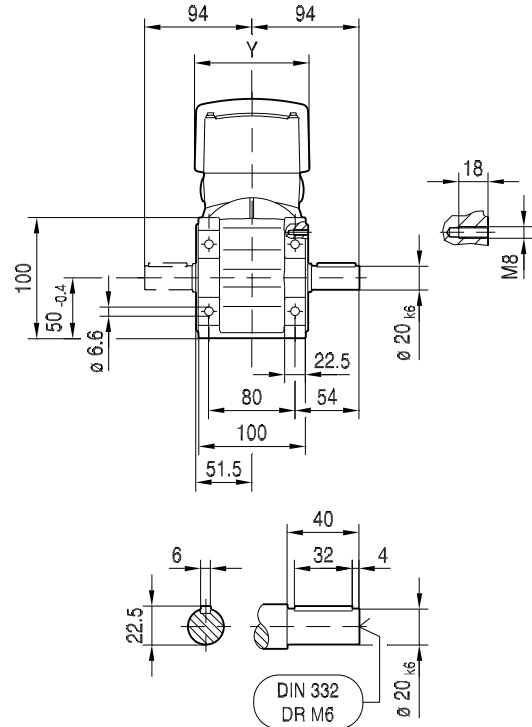
2.12 Maßblätter K..9 / DRC..

2

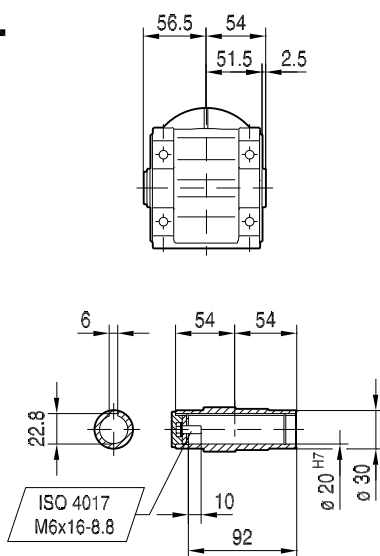
K19..



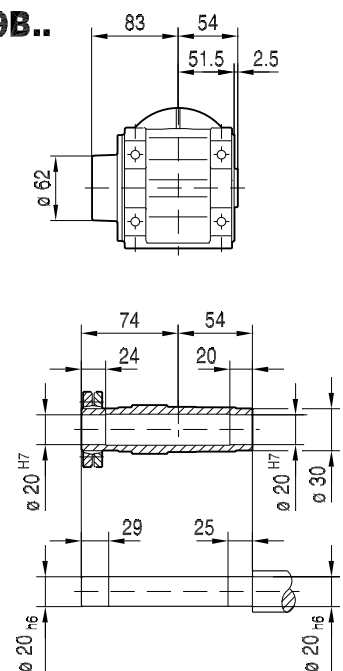
33 105 00 15



KA19B..



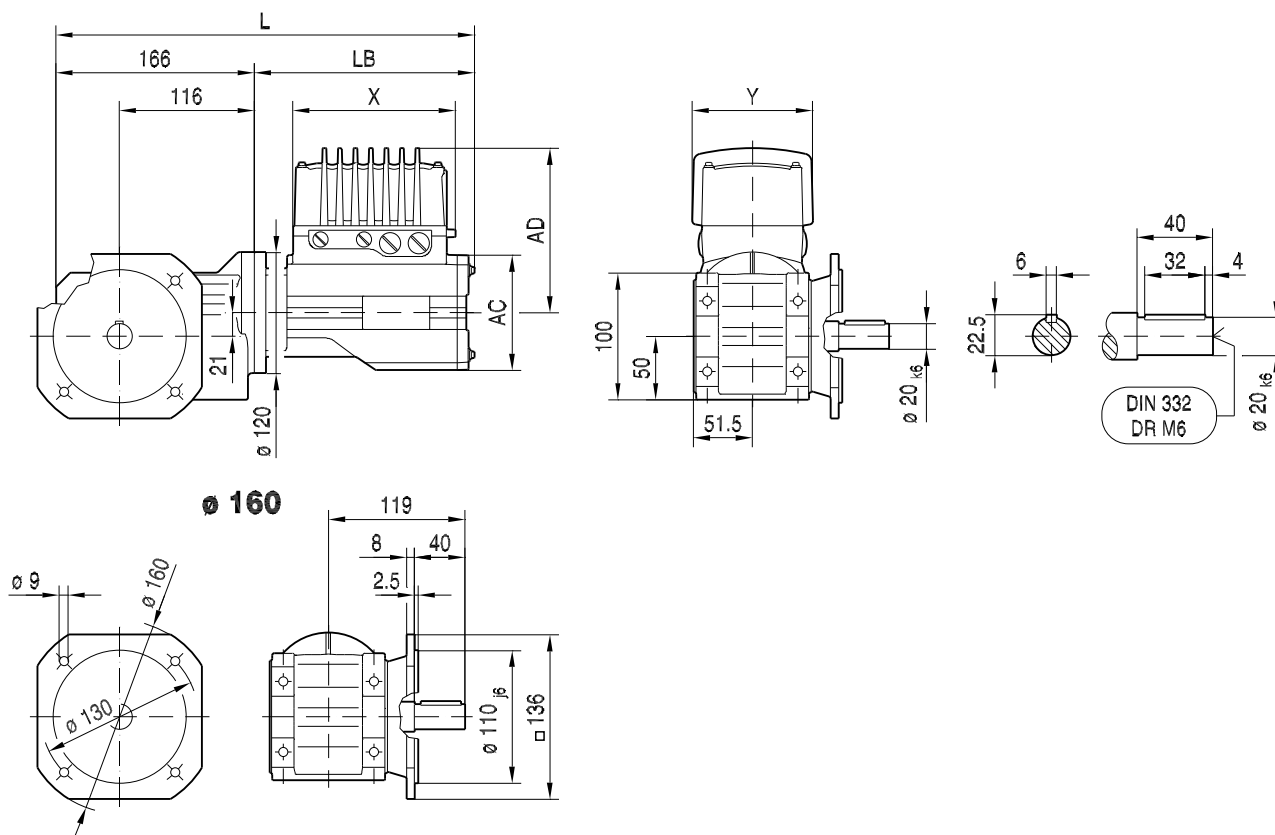
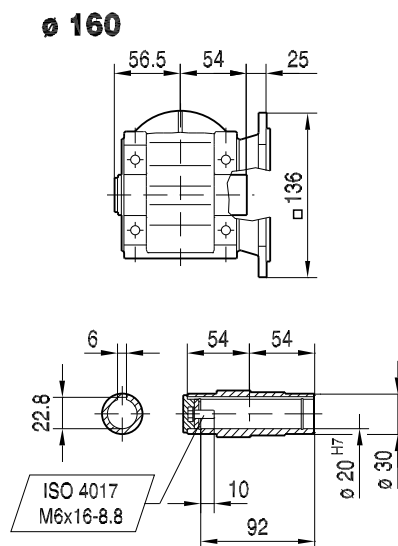
KH19B..



	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	460	476						
LB/LBS	294	310						
X	202	223						
Y	134	160						

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33 106 00 15

KF19B..**KAF19B..**

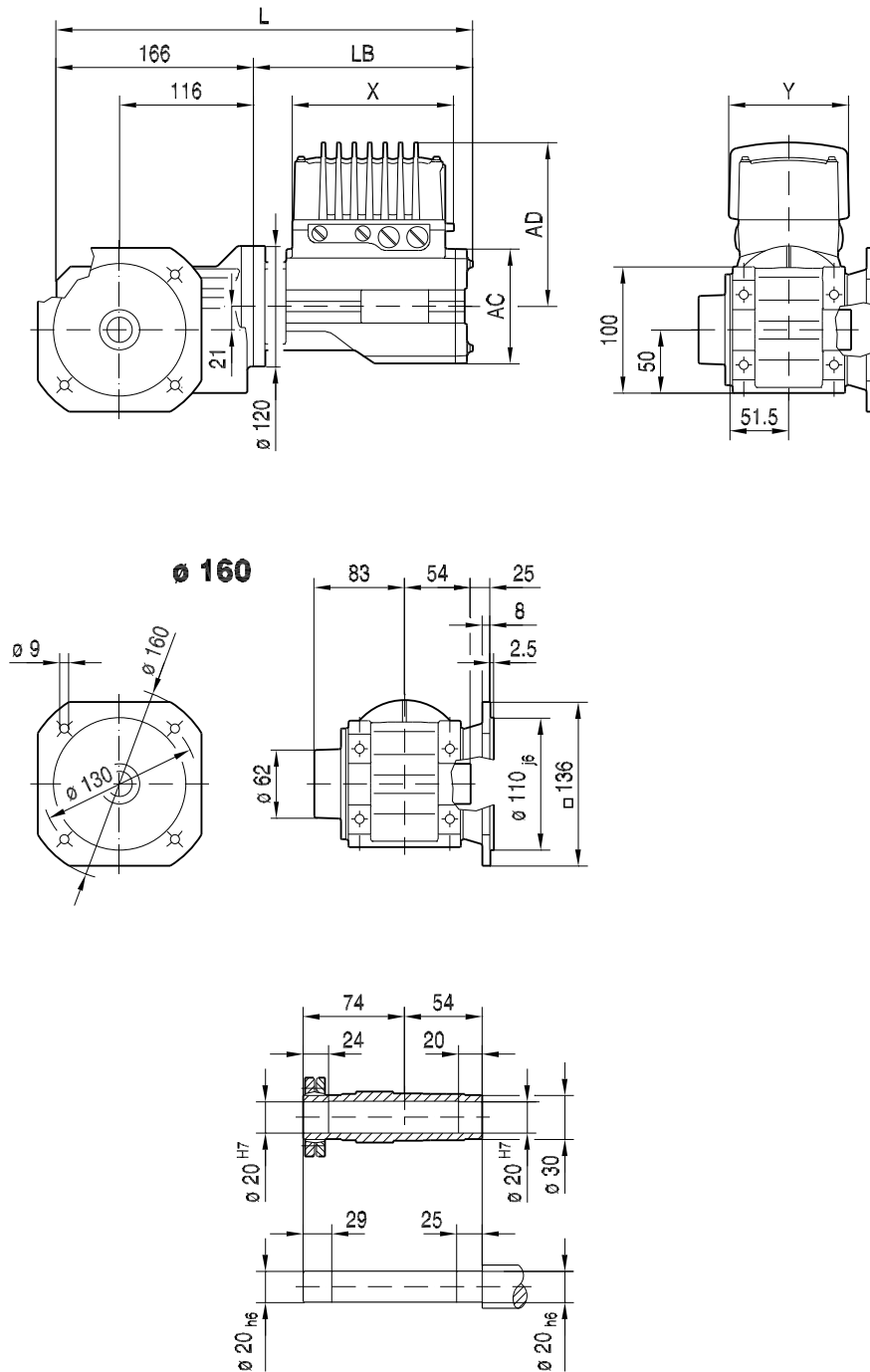
	DRC1	DRC2					
AC	128	154					
AD/ADS	185	218					
L/LS	460	476					
LB/LBS	294	310					
X	202	223					
Y	134	160					

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KHF19B..

33 107 00 15

2

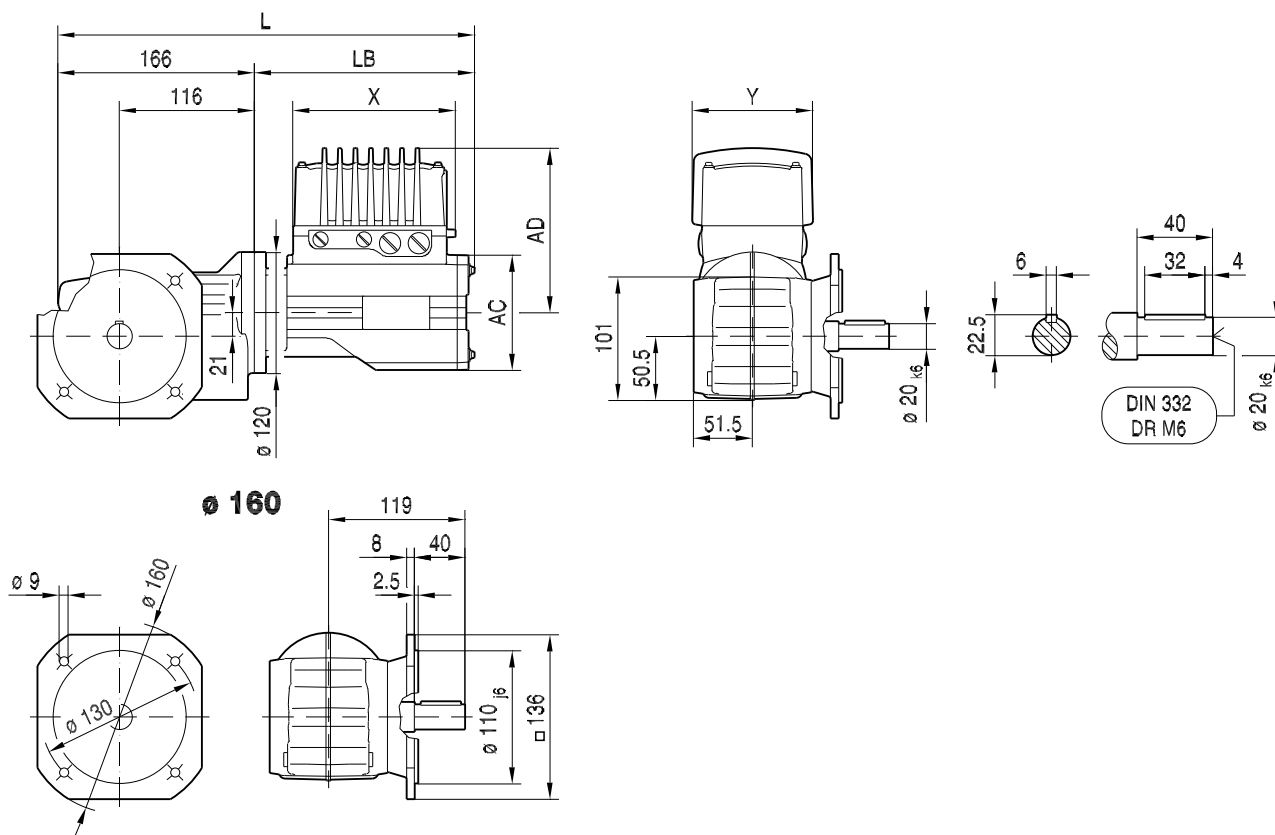


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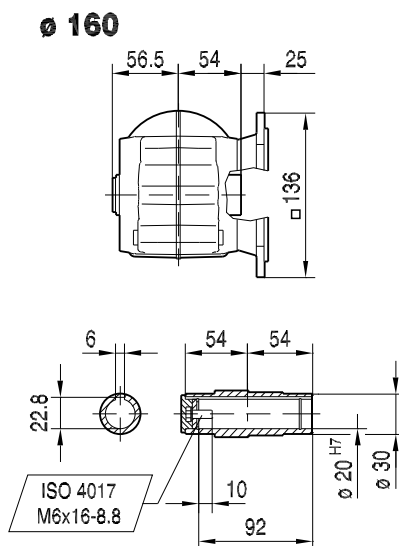
	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	460	476						
LB/LBS	294	310						
X	202	223						
Y	134	160						

33 108 00 15

KF19..



KAF19..



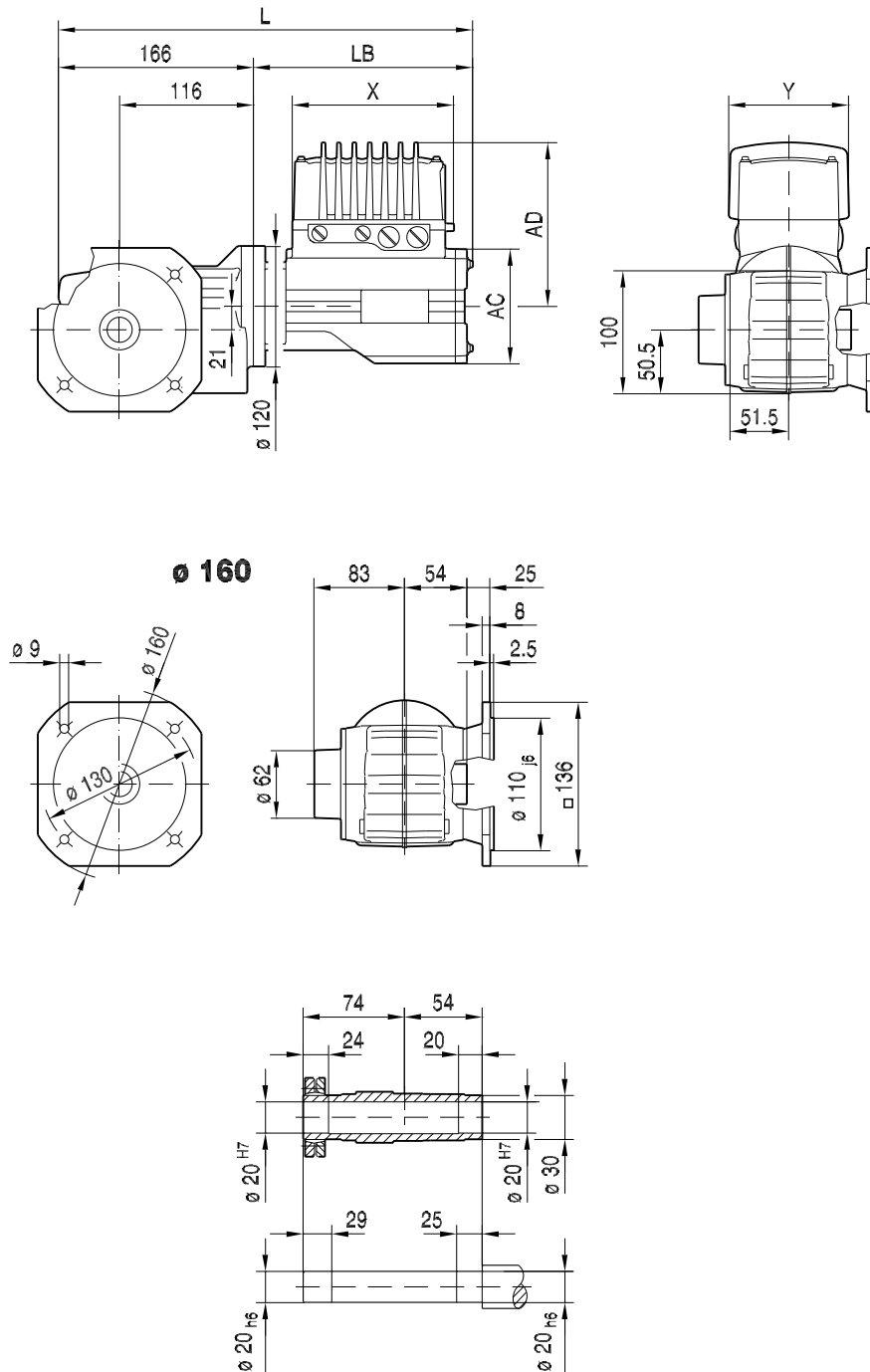
	DRC1	DRC2					
AC	128	154					
AD/ADS	185	218					
L/LS	460	476					
LB/LBS	294	310					
X	202	223					
Y	134	160					

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KHF19..

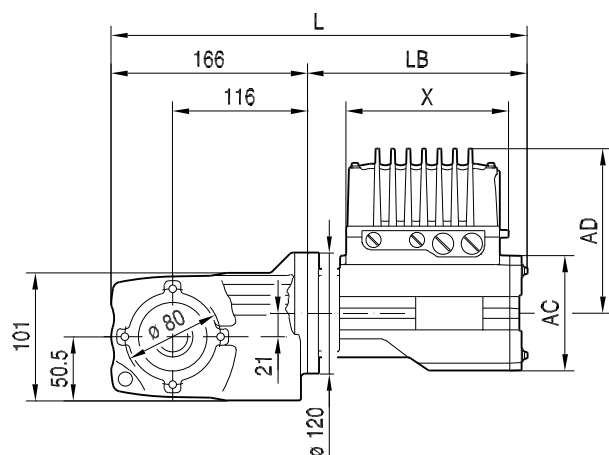
33 109 00 15

2

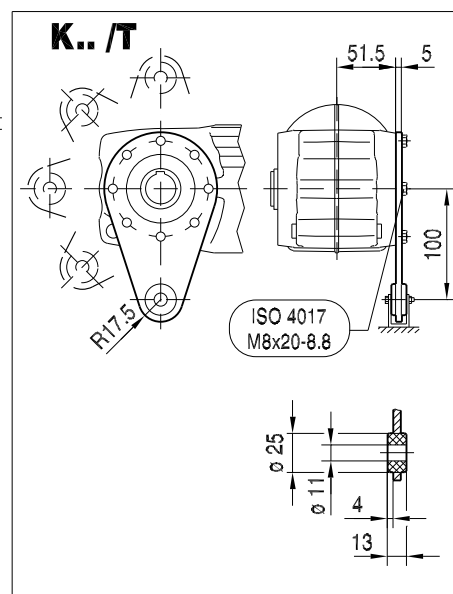
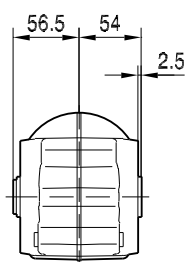
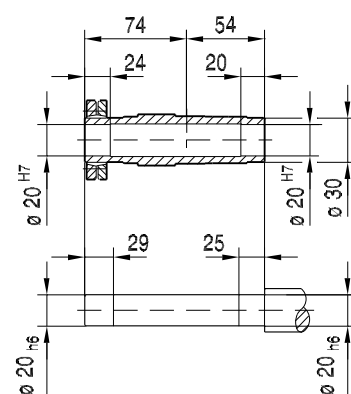
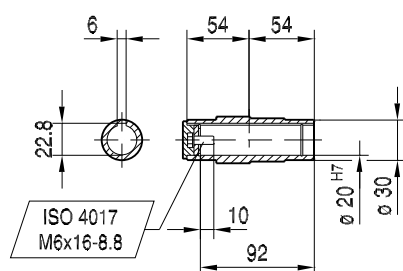
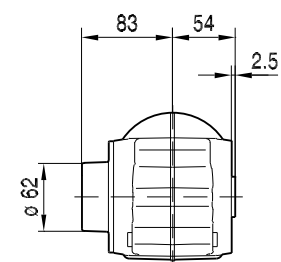


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	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	460	476						
LB/LBS	294	310						
X	202	223						
Y	134	160						

KA19..

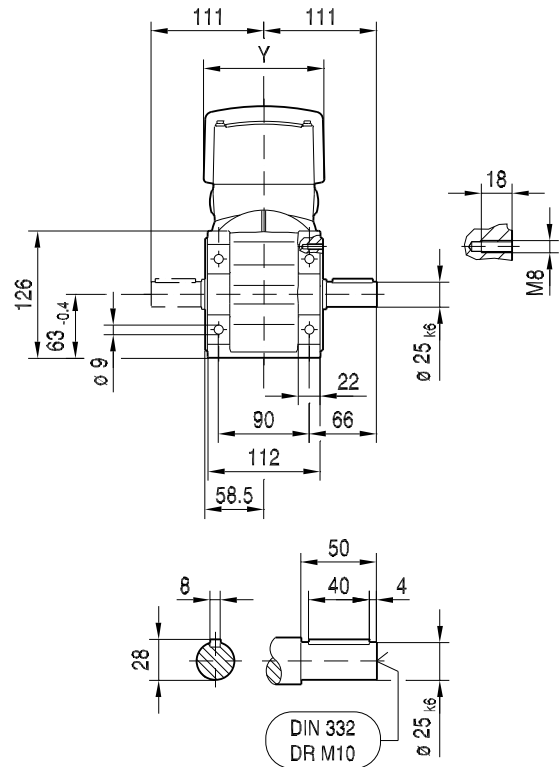
33 110 00 15

**KA19..****KH19..**

	DRC1	DRC2					
AC	128	154					
AD/ADS	185	218					
L/LS	460	476					
LB/LBS	294	310					
X	202	223					
Y	134	160					

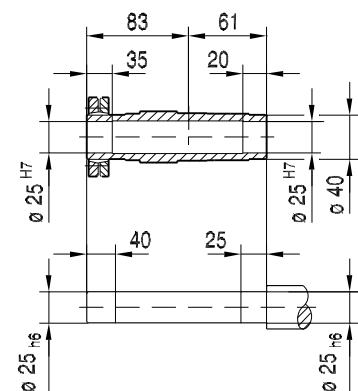
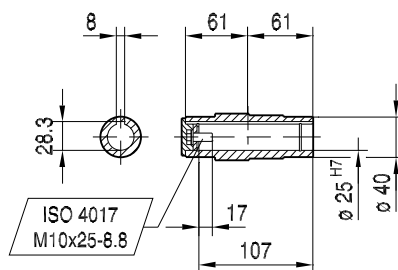
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2



Technical drawing of a mechanical part (likely a valve or actuator) showing dimensions: 63, 61, 58.5, and 2.5.

Ø 25 H7

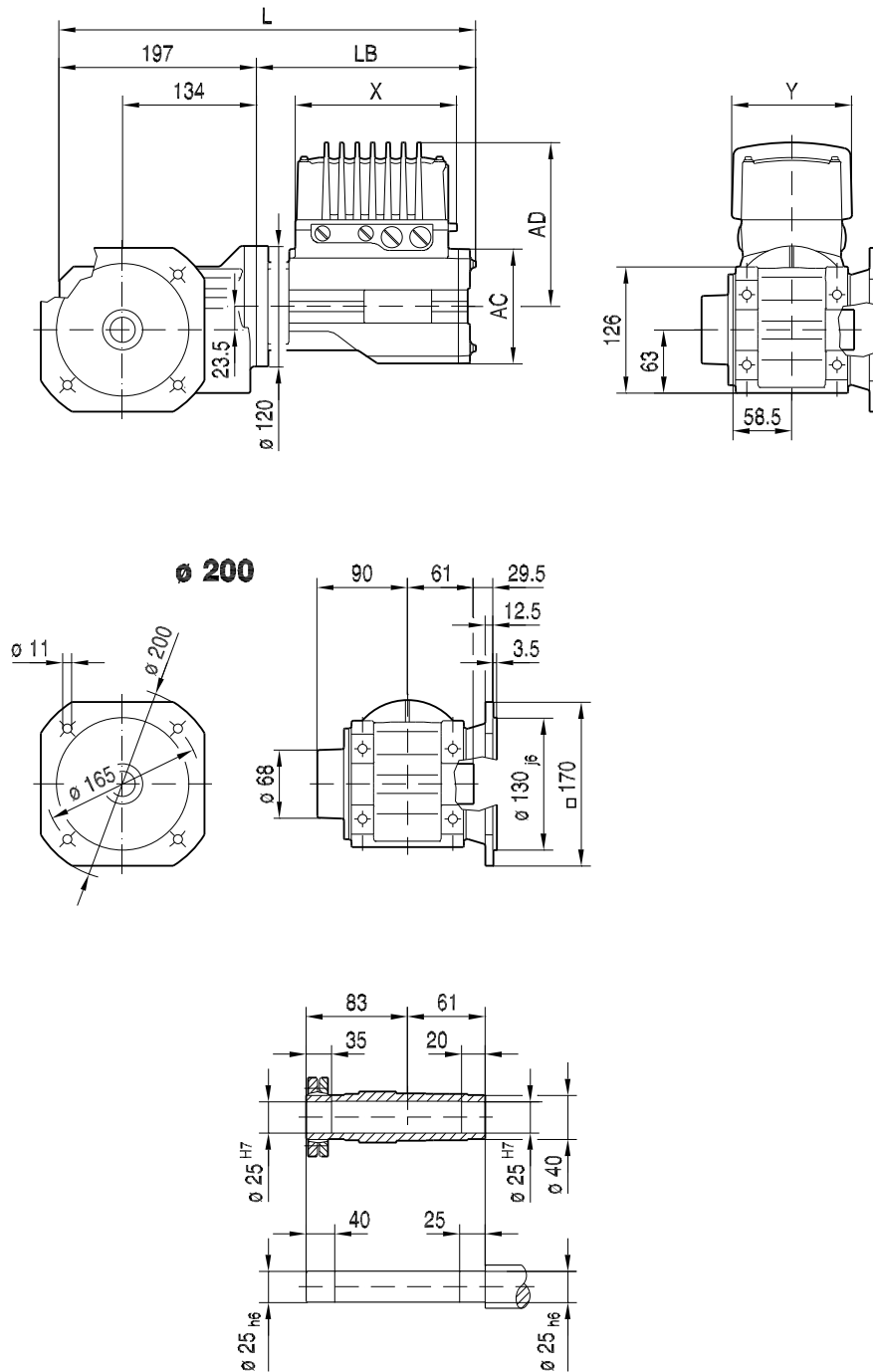


	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	491	507						
LB/LBS	294	310						
X	202	223						
Y	134	160						

KHF29B..

33 113 00 15

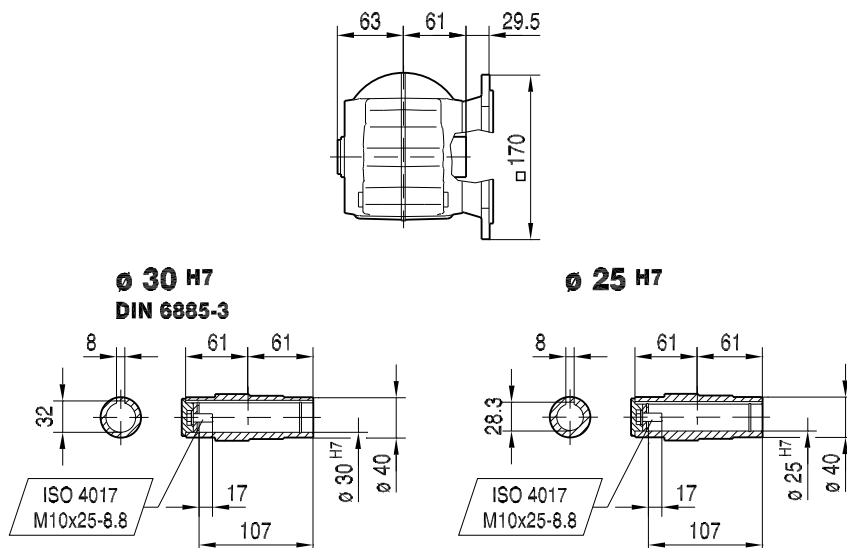
2



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	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	491	507						
LB/LBS	294	310						
X	202	223						
Y	134	160						

KF29..



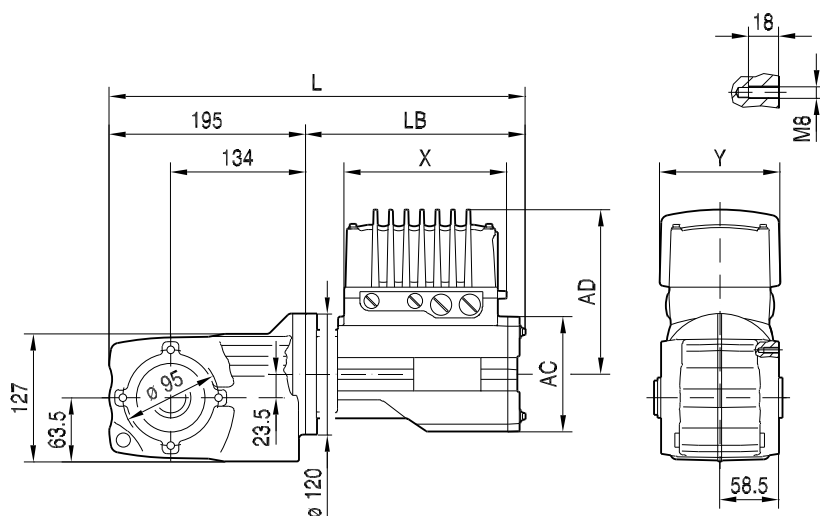
	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	489	505						
LB/LBS	294	310						
X	202	223						
Y	134	160						

33 115 00 15

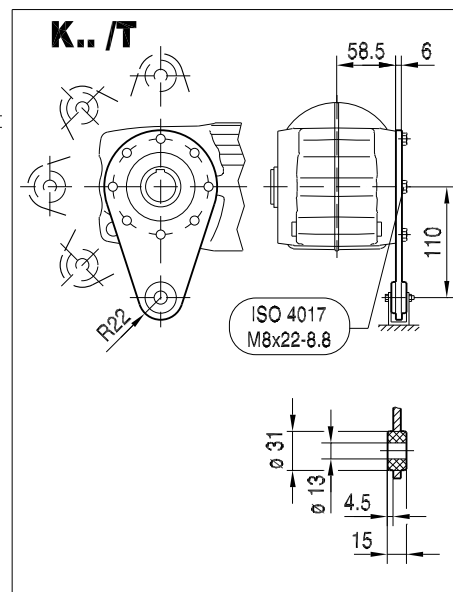
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	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	489	505						
LB/LBS	294	310						
X	202	223						
Y	134	160						

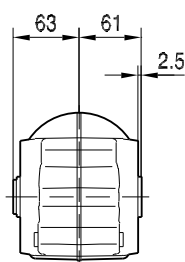
KA29..



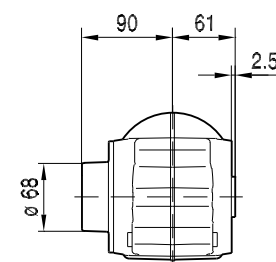
33 116 00 15



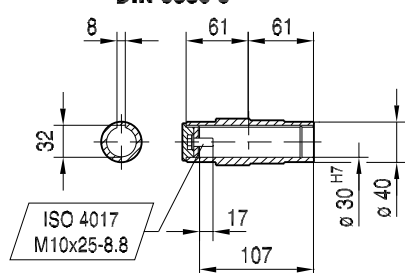
KA29..



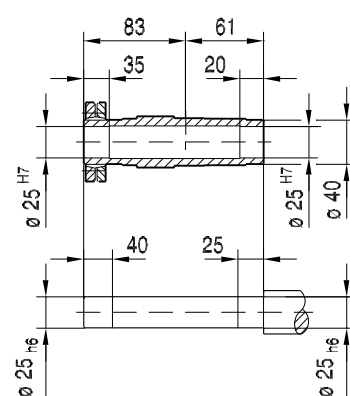
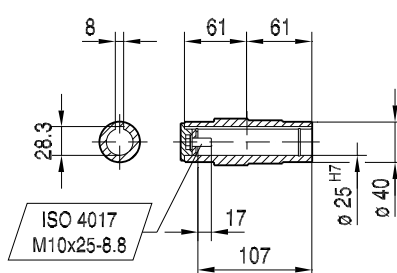
KH29..



$\phi 30$ H7
DIN 6885-3



$\phi 25$ H7



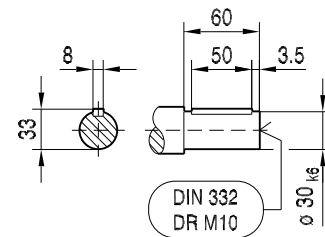
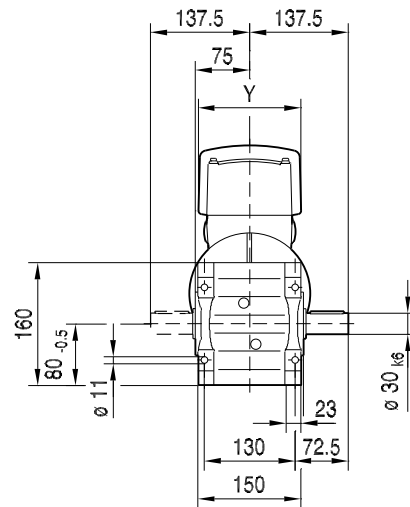
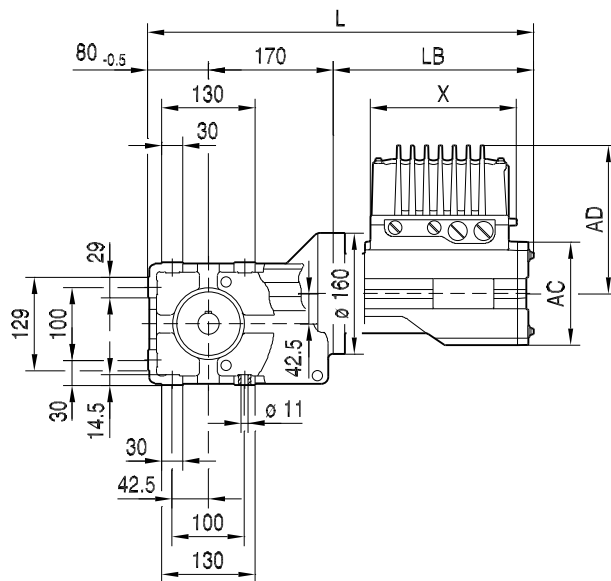
	DRC1	DRC2					
AC	128	154					
AD/ADS	185	218					
L/LS	489	505					
LB/LBS	294	310					
X	202	223					
Y	134	160					

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33 029 00 15

K39..

2

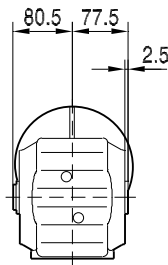
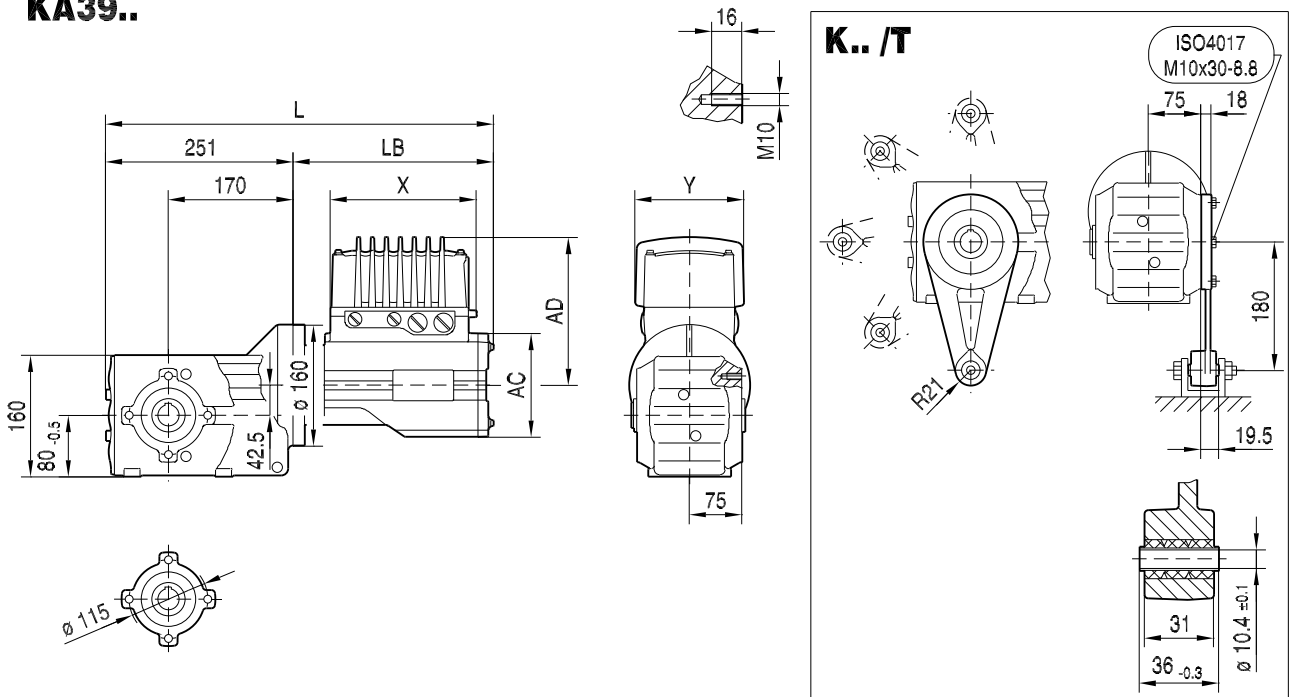


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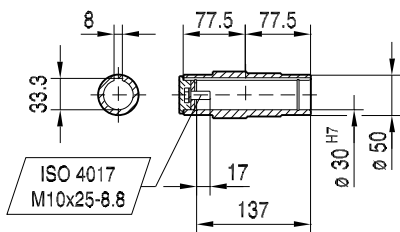
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AC	128	154						
AD/ADS	185	218						
L/LS	537	554						
LB/LBS	287	304						
X	202	223						
Y	134	160						

KA39..

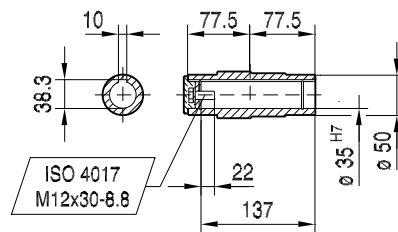
33 030 00 15



Ø 30 H7

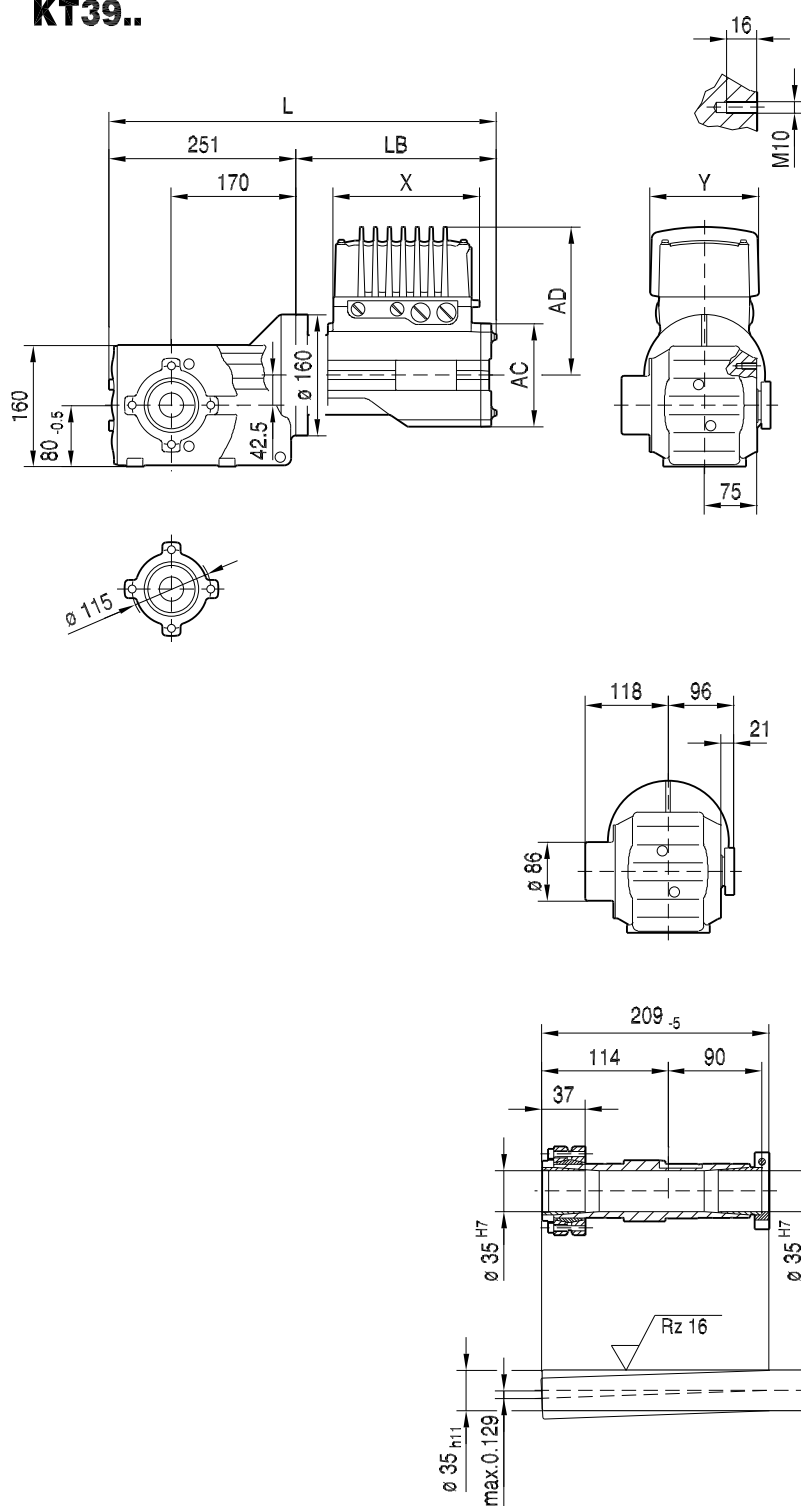


Ø 35 H7

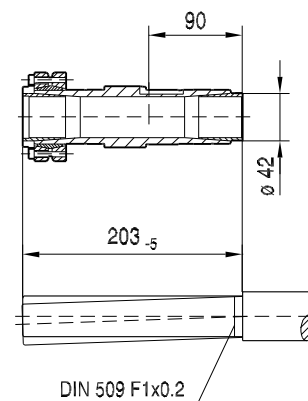
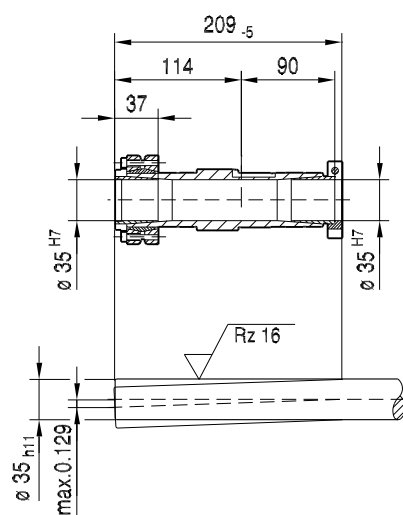
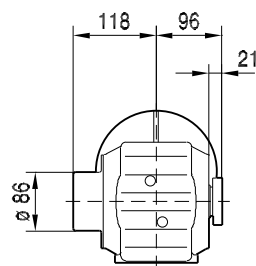
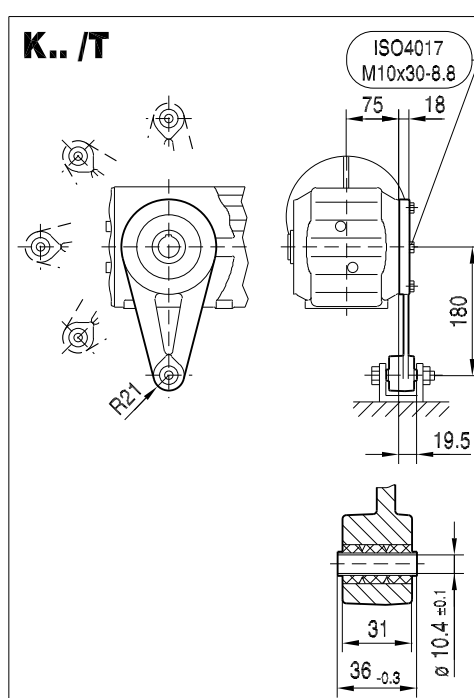


	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	538	555						
LB/LBS	287	304						
X	202	223						
Y	134	160						

KT39..



33 031 00 15

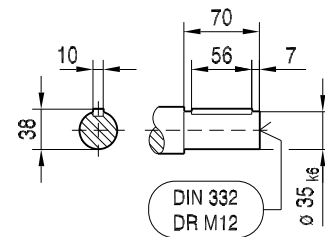
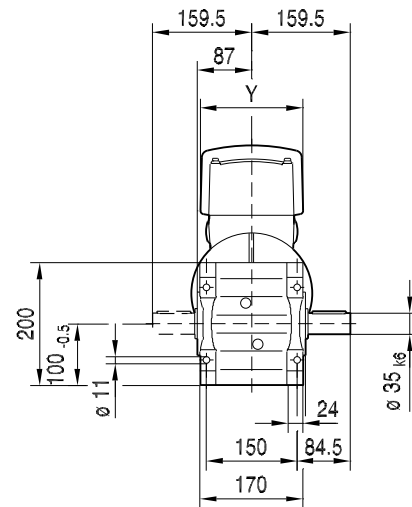
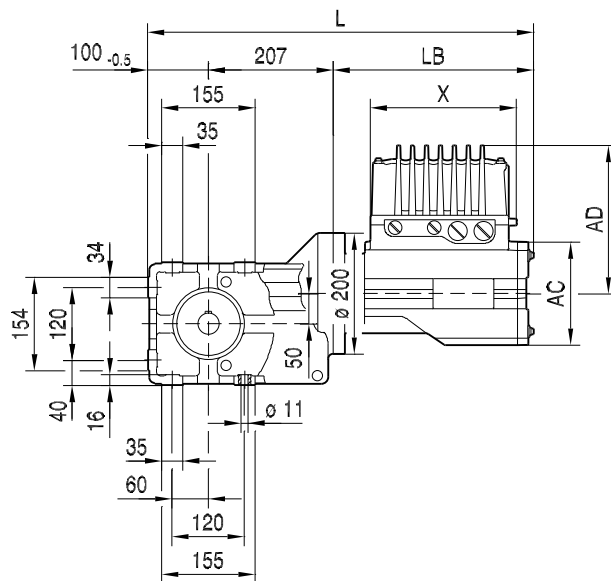


	DRC1	DRC2						
AC	128	154						
AD/ADS	185	218						
L/LS	538	555						
LB/LBS	287	304						
X	202	223						
Y	134	160						

K49..

33 032 00 15

2

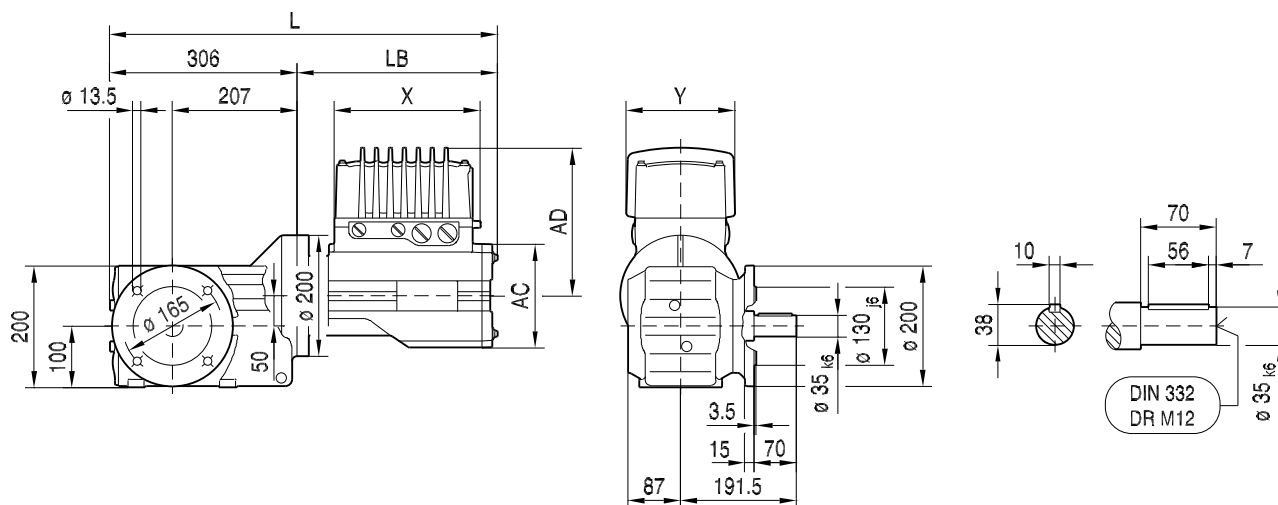


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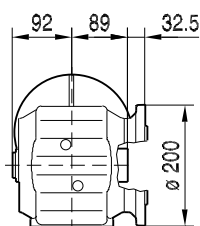
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AD/ADS	185	218	261	261				
L/LS	588	605	720	720				
LB/LBS	281	298	413	413				
X	202	223	334	334				
Y	134	160	192	192				

33 033 00 15

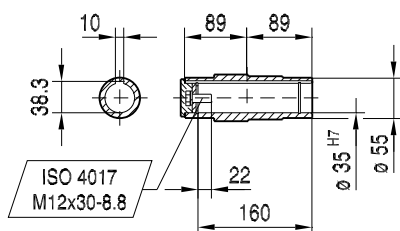
KF49..



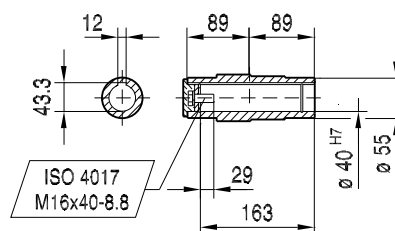
KAF49..



$\varnothing 35$ H7



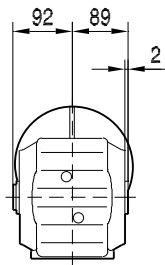
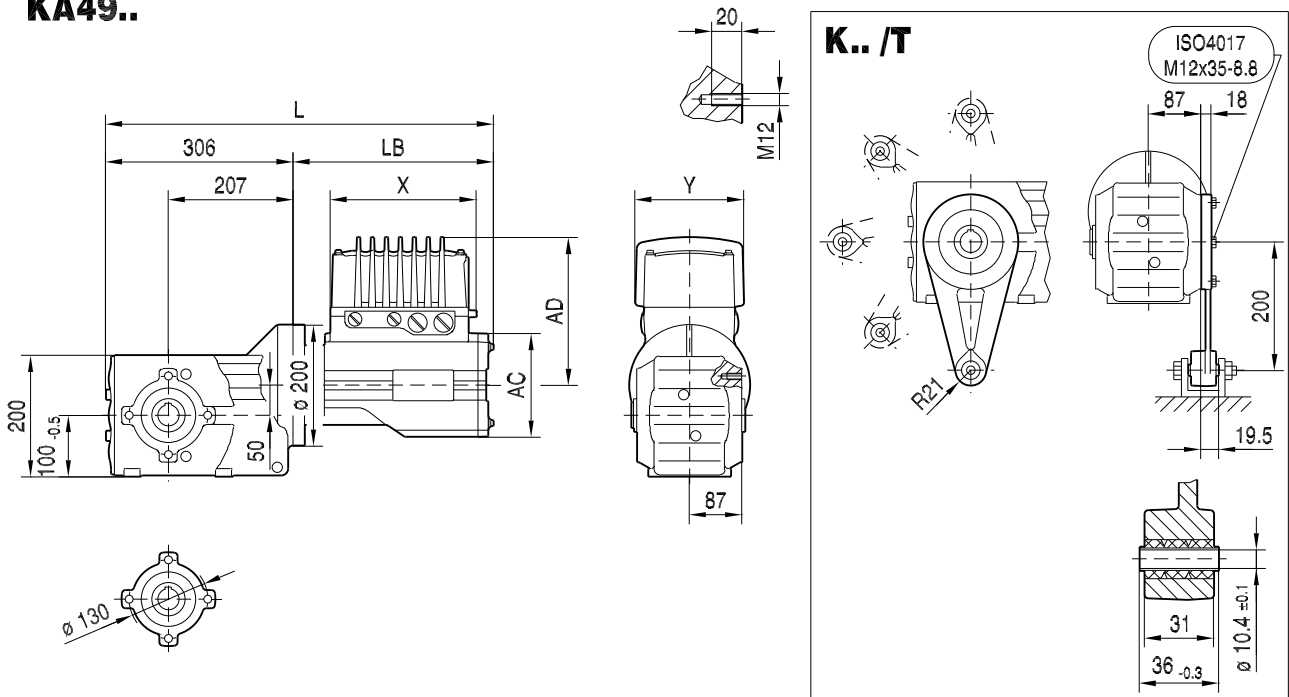
$\varnothing 40$ H7



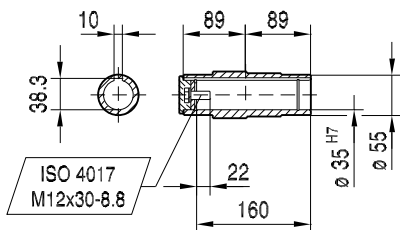
	DRC1	DRC2	DRC3	DRC4				
AC	128	154	198	198				
AD/ADS	185	218	261	261				
L/LS	587	604	719	719				
LB/LBS	281	298	413	413				
X	202	223	334	334				
Y	134	160	192	192				

KA49..

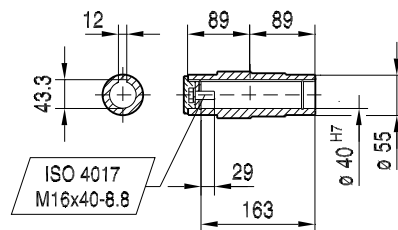
33 034 00 15



Ø 35 H7



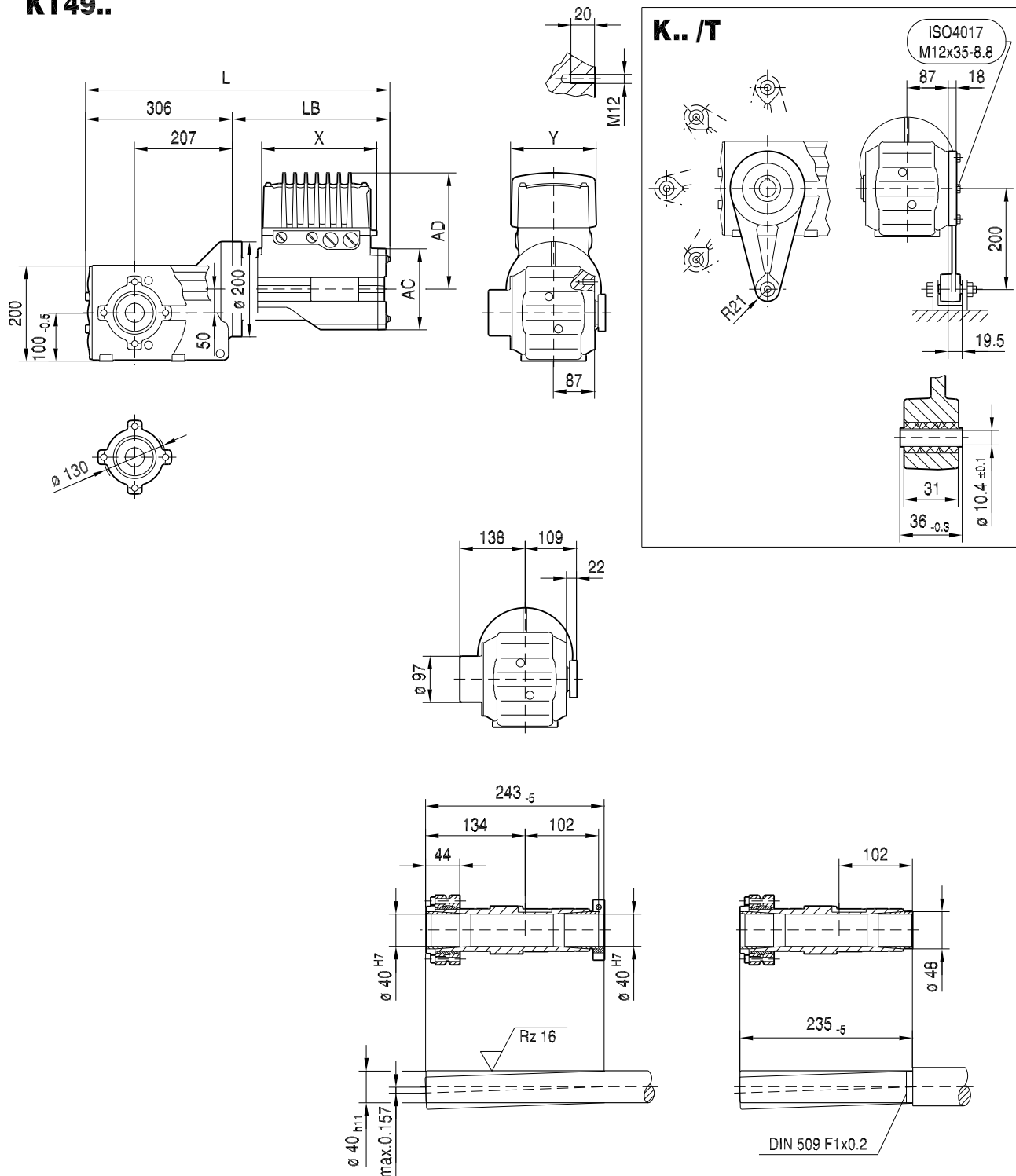
Ø 40 H7



	DRC1	DRC2	DRC3	DRC4				
AC	128	154	198	198				
AD/ADS	185	218	261	261				
L/LS	587	604	719	719				
LB/LBS	281	298	413	413				
X	202	223	334	334				
Y	134	160	192	192				

KT49..

33 035 00 15



	DRC1	DRC2	DRC3	DRC4				
AC	128	154	198	198				
AD/ADS	185	218	261	261				
L/LS	587	604	719	719				
LB/LBS	281	298	413	413				
X	202	223	334	334				
Y	134	160	192	192				

2.13 Auswahltabellen K..9 / AQ

[Nm]		AQ.											
		$M_{amax} M_{apk} M_{aNotaus}$											
	i	80/1-3			100/1-4			115/1-2			115/3		
K19  2	4.50	34	37	56	64	70	105	64	70	105	64	70	105
	5.16	36	40	60	68	75	113	68	75	113	68	75	113
	5.54	37	41	62	70	77	116	70	77	116	70	77	116
	6.41	39	43	65	74	81	122	74	81	122	74	81	122
	6.91	41	45	68	76	84	126	76	84	126	76	84	126
	8.09	43	47	71	80	88	132	80	88	132	80	88	132
	9.58	45	50	75	62	68	102	62	68	102	62	68	102
	10.32	76	83	125	76	83	125	76	83	125	76	83	125
	11.84	79	86	129	79	86	129	79	86	129	79	86	129
	12.70	80	88	132	80	88	132	80	88	132	80	88	132
	14.69	80	88	132	80	88	132	80	88	132	80	88	132
	15.84	80	88	132	80	88	132	80	88	132	80	88	132
	18.55	80	88	132	80	88	132	80	88	132	80	88	132
	21.98	80	88	132	80	88	132	80	88	132	80	88	132
	24.06	80	88	132	80	88	132	80	88	132	80	88	132
	26.88												
	27.16	60	66	99	60	66	99	60	66	99	60	66	99
	29.14												
	29.29	61	67	101	61	67	101	61	67	101	61	67	101
	31.74												
	34.29	64	70	105	64	70	105	64	70	105	64	70	105
	40.63	67	73	110	67	73	110	67	73	110	67	73	110
	44.48	69	75	113	69	75	113	69	75	113	69	75	113
	49.69												
	53.88												
	58.68												

K19, m [kg]		AQ.			
s		80/1-3	100/1-4	115/1-2	115/3
 2		7.8	8.5	9.0	9.0
KF: + 0.30 kg / KA: + -0.45 kg / KAF: + -- kg					

K19, J _A / c _{TA}		AQ.			
		80/1-3	100/1-4	115/1-2	115/3
J _A 10 ⁻⁴	[kgm ²]	0.77	1.4	1.4	3.1
c _{TA}	[Nm/m]	0.25	0.25	0.25	0.625

K19							F_{Ramax}				F_{Rapk}			
n_e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M_{amax} [Nm]	M_{apk} [Nm]	M_{aNotaus} [Nm]	n_{ak} [1/min]	J_{GA} 10⁻⁴ [kg*m ²]	K [N]	KF [N]	KA [N]	KAF [N]	K [N]	KF [N]	KA [N]	KAF [N]
K19 	4.50	80	88	132	433	0.38	2010	1620	2500	2500	4190	3630	4500	4500
	5.16	80	88	132	424	0.30	2140	1720	2650	2650	4190	3630	4500	4500
	5.54	80	88	132	419	0.27	2200	1780	2730	2730	4190	3630	4500	4500
	6.41	80	88	132	410	0.21	2340	1890	2900	2900	4190	3630	4500	4500
	6.91	80	88	132	407	0.18	2420	1950	3000	3000	4190	3630	4500	4500
	8.09	80	88	132	399	0.14	2590	2080	3200	3200	4190	3630	4500	4500
	9.58	63	69	104	731	0.11	2910	2340	3600	3600	4340	3670	4500	4500
	10.32	76	83	124	102	0.22	2720	2190	3370	3370	4230	3610	4500	4500
	11.84	79	86	129	90	0.18	2850	2300	3530	3530	4210	3600	4500	4500
	12.70	80	88	132	83	0.16	2930	2360	3630	3630	4190	3600	4500	4500
	14.69	80	88	132	82	0.13	3110	2510	3860	3860	4190	3600	4500	4500
	15.84	80	88	132	81	0.12	3210	2590	3980	3980	4190	3600	4500	4500
	18.55	80	88	132	81	0.092	3430	2760	4250	4250	4190	3600	4500	4500
	21.98	80	88	132	81	0.072	3680	2960	4500	4500	4190	3600	4500	4500
	24.06	80	88	132	81	0.063	3820	3080	4500	4500	4190	3600	4500	4500
	26.88	80	88	132	80	0.054	3990	3220	4500	4500	4190	3600	4500	4500
	27.16	60	66	99	38	0.13	4090	3290	4500	4500	4360	3630	4500	4500
	29.14	80	88	132	80	0.048	4120	3320	4500	4500	4190	3600	4500	4500
	29.29	61	67	100	36	0.11	4200	3380	4500	4500	4350	3630	4500	4500
	31.74	80	88	132	80	0.042	4260	3440	4500	4500	4190	3600	4500	4500
	34.29	64	70	105	31	0.090	4370	3570	4500	4500	4330	3620	4500	4500
	40.63	67	73	110	27	0.071	4350	3630	4500	4500	4310	3610	4500	4500
	44.48	69	75	112	24	0.062	4340	3620	4500	4500	4290	3600	4500	4500
	49.69	70	77	116	22	0.053	4330	3620	4500	4500	4280	3600	4500	4500
	53.88	70	77	116	22	0.047	4330	3620	4500	4500	4280	3600	4500	4500
	58.68	70	77	116	22	0.042	4330	3620	4500	4500	4280	3600	4500	4500

AQ.				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K19  2	4.50	4500	97	5.1	4.4	8.5	8.5
	5.16	4500	97	5.1	4.4	8.5	8.5
	5.54	4500	97	5.1	4.4	8.5	8.5
	6.41	4500	97	5.1	4.4	8.5	8.5
	6.91	4500	97	5.1	4.4	8.5	8.5
	8.09	4500	97	5.1	4.5	8.6	8.6
	9.58	4500	97	5.1	4.5	8.6	8.6
	10.32	4500	96	6.2	5.2	12	12
	11.84	4500	96	6.2	5.2	12	12
	12.70	4500	96	5.1	4.5	8.6	8.6
	14.69	4500	96	6.2	5.2	12	12
	15.84	4500	96	6.2	5.2	12	12
	18.55	4500	96	6.2	5.2	12	12
	21.98	4500	96	6.2	5.2	12	12
	24.06	4500	96	6.2	5.2	12	12
	26.88	4500	96	6.2	5.2	12	12
	27.16	4500	91	6.2	5.2	12	12
	29.14	4500	96	6.2	5.2	12	12
	29.29	4500	91	6.2	5.2	12	12
	31.74	4500	96	6.2	5.2	12	12
	34.29	4500	91	6.2	5.2	12	12
	40.63	4500	91	6.2	5.2	12	12
	44.48	4500	91	6.2	5.2	12	12
	49.69	4500	91	6.2	5.2	12	12
	53.88	4500	91	6.2	5.2	12	12
	58.68	4500	91	6.2	5.2	12	12

[Nm]		AQ.											
		M _{amax} M _{apk} M _{aNotaus}											
	i	80/1-3			100/1-4			115/1-2			115/3		
K29  2	3.19	32	35	53	51	51	77	51	51	77	62	68	102
	3.92	36	40	60	62	62	93	62	62	93	69	76	114
	5.10	41	45	68	79	82	123	79	82	123	79	87	131
	5.75	44	48	72	82	90	135	82	90	135	82	90	135
	6.95	47	52	78	88	97	146	88	97	146	88	97	146
	7.48	75	82	123	117	117	176	117	117	176	123	135	203
	8.53	50	55	83	94	103	155	94	103	155	94	103	155
	9.17	84	92	138	130	143	215	130	143	215	130	143	215
	9.90	52	57	86	98	108	162	98	108	162	98	108	162
	11.94	96	106	159	130	143	215	130	143	215	130	143	215
	13.47	101	111	167	130	143	215	130	143	215	130	143	215
	16.29	108	119	179	130	143	215	130	143	215	130	143	215
	19.99	115	127	191	130	143	215	130	143	215	130	143	215
	22.08	105	115	173	105	115	173	105	115	173	105	115	173
	23.19	120	132	198	130	143	215	130	143	215	130	143	215
	24.91	109	119	179	109	119	179	109	119	179	109	119	179
	27.23	125	138	207	130	143	215	130	143	215	130	143	215
	29.69	128	141	212	130	143	215	130	143	215	130	143	215
	30.11	115	126	189	115	126	189	115	126	189	115	126	189
	33.15												
	35.83												
	36.96	122	134	201	122	134	201	122	134	201	122	134	201
	38.90												
	42.87	128	140	210	128	140	210	128	140	210	128	140	210
	50.35	130	143	215	130	143	215	130	143	215	130	143	215
	54.89	130	143	215	130	143	215	130	143	215	130	143	215
	61.28												
	66.25												
	71.93												

K29, m [kg]		AQ.			
s		80/1-3	100/1-4	115/1-2	115/3
 2		9.6	10	11	11
KF: + 1.0 kg / KA: + -0.45 kg / KAF: + 0.35 kg					

K29, J _A / c _{TA}		AQ.			
		80/1-3	100/1-4	115/1-2	115/3
J _A 10 ⁻⁴	[kgm ²]	0.77	1.4	1.4	3.1
c _{TA}	[Nm/m]	0.25	0.25	0.25	0.625

K29							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _{GA} 10 ⁻⁴ [kg*m ²]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
 K29 2	3.19	110	121	182	1082	1.6	1830	1200	1860	1860	5070	6000	6000	6000
	3.92	126	138	205	722	1.1	1910	1240	1920	1920	5030	6000	6000	6000
	5.10	110	121	182	1080	0.68	2260	1500	2320	2320	5070	6000	6000	6000
	5.75	112	123	184	1030	0.55	2370	1580	2440	2440	5070	6000	6000	6000
	6.95	112	123	184	1007	0.39	2580	1720	2660	2660	5070	6000	6000	6000
	7.48	123	135	200	138	0.74	2300	1480	2300	2300	4980	6000	6000	6000
	8.53	122	134	200	755	0.27	2740	1830	2830	2830	5040	6000	6000	6000
	9.17	130	143	210	112	0.55	2470	1600	2480	2480	4960	6000	6000	6000
	9.90	110	121	182	707	0.21	3000	2020	3120	3120	5070	6000	6000	6000
	11.94	130	143	210	112	0.37	2810	1830	2840	2840	4960	6000	6000	6000
	13.47	130	143	210	111	0.30	2970	1950	3010	3010	4960	6000	6000	6000
	16.29	130	143	210	111	0.22	3240	2140	3300	3300	4960	6000	6000	6000
	19.99	130	143	210	111	0.16	3550	2350	3640	3640	4960	6000	6000	6000
	22.08	105	115	172	47	0.33	3820	2560	3950	3950	5020	6000	6000	6000
	23.19	130	143	210	110	0.12	3790	2520	3900	3900	4960	6000	6000	6000
	24.91	109	119	178	42	0.27	3980	2660	4120	4120	5010	6000	6000	6000
	27.23	130	143	210	110	0.098	4060	2710	4190	4190	4960	6000	6000	6000
	29.69	130	143	210	110	0.086	4210	2820	4360	4360	4960	6000	6000	6000
	30.11	115	126	189	35	0.20	4250	2850	4400	4400	4990	6000	6000	6000
	33.15	130	143	210	110	0.073	4410	2960	4580	4580	4960	6000	6000	6000
	35.83	130	143	210	110	0.065	4560	3060	4740	4740	4960	6000	6000	6000
	36.96	122	134	200	28	0.14	4560	3060	4730	4730	4960	6000	6000	6000
	38.90	130	143	210	110	0.057	4720	3170	4910	4910	4960	6000	6000	6000
	42.87	128	140	210	24	0.11	4790	3210	4970	4970	4940	6000	6000	6000
	50.35	130	143	210	22	0.090	4980	3430	5300	5300	4930	6000	6000	6000
	54.89	130	143	210	23	0.079	4980	3560	5510	5510	4930	6000	6000	6000
	61.28	130	143	210	23	0.068	4980	3730	5770	5770	4930	6000	6000	6000
	66.25	130	143	210	22	0.060	4980	3860	5970	5970	4930	6000	6000	6000
	71.93	130	143	210	23	0.053	4980	4000	6000	6000	4930	6000	6000	6000

AQ.				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K29  2	3.19	4500	97	8.3	7.4	16	16
	3.92	4500	97	8.3	7.4	16	16
	5.10	4500	97	8.4	7.5	17	17
	5.75	4500	97	8.4	7.5	17	17
	6.95	4500	97	8.4	7.5	17	17
	7.48	4500	96	10	8.8	25	25
	8.53	4500	97	8.4	7.5	17	17
	9.17	4500	96	10	8.8	25	25
	9.90	4500	97	8.4	7.5	17	17
	11.94	4500	96	10	8.8	25	25
	13.47	4500	96	10	8.8	25	25
	16.29	4500	96	10	8.8	25	25
	19.99	4500	96	10	8.8	25	25
	22.08	4500	91	8.6	7.6	18	18
	23.19	4500	96	10	8.8	25	25
	24.91	4500	91	8.6	7.6	18	18
	27.23	4500	96	10	8.8	25	25
	29.69	4500	96	10	8.8	25	25
	30.11	4500	91	8.6	7.6	18	18
	33.15	4500	96	10	8.8	25	25
	35.83	4500	96	10	8.8	25	25
	36.96	4500	92	8.6	7.6	18	18
	38.90	4500	95	10	8.8	25	25
	42.87	4500	91	8.6	7.6	18	18
	50.35	4500	91	8.6	7.6	18	18
	54.89	4500	91	8.6	7.6	18	18
	61.28	4500	91	8.6	7.6	18	18
	66.25	4500	91	8.6	7.6	18	18
	71.93	4500	91	8.6	7.6	18	18

[Nm]		AQ.																				
		M _{amax} M _{apk} M _{aNotaus}																				
	i	80/1-3			100/1-4			115/1-2			115/3			140/1			140/2-4			160/1		
K39  2	2.81	44	46	69	46	46	69	46	46	69	83	124	129	163	163	245	170	200	281	170	200	281
	3.94	53	64	90	64	64	96	64	64	96	99	148	168	205	225	338	205	260	349	205	260	349
	4.52	56	74	95	74	74	111	74	74	111	105	158	179	215	260	366	215	290	366	215	290	366
	5.22	60	85	102	85	85	128	85	85	128	112	168	190	230	300	391	230	325	391	230	325	391
	5.75	62	93	105	94	94	141	94	94	141	116	174	197	235	330	400	235	345	400	235	345	400
	6.75	67	100	114	110	110	165	110	110	165	124	186	211	250	375	425	250	375	425	250	375	425
	7.15	68	102	116	117	117	176	117	117	176	126	189	214	255	380	434	255	380	434	255	380	434
	8.12	70	105	119	129	133	200	129	133	200	129	194	219	265	385	451	265	385	451	265	385	451
	9.00	72	108	122	133	147	221	133	147	221	133	200	226	270	375	459	270	375	459	270	375	459
	10.61	75	112	128	139	174	236	139	174	236	139	205	236	285	330	485	285	330	485	285	330	485
	12.09	79	118	134	145	198	247	145	198	247	145	215	247									
	12.73	79	118	134	145	205	247	145	205	247	145	215	247									
	13.44	172	205	292	205	205	308	205	205	308	270	405	459	270	405	459	270	405	459	270	405	459
	15.44	183	235	311	235	235	353	235	235	353	280	410	476	280	410	476	280	410	476	280	410	476
	17.83	194	275	330	275	275	413	275	275	413	290	410	493	290	410	493	290	410	493	290	410	493
	19.62	200	300	340	295	300	450	295	300	450	295	410	502	295	410	502	295	410	502	295	410	502
	23.04	215	320	366	300	355	510	300	355	510	300	410	510	300	410	510	300	410	510	300	410	510
	24.40	220	330	374	300	375	510	300	375	510	300	410	510	300	410	510	300	410	510	300	410	510
	27.73	225	335	383	300	410	510	300	410	510	300	410	510	300	410	510	300	410	510	300	410	510
	30.72	230	345	391	300	410	510	300	410	510	300	410	510	300	410	510	300	410	510	300	410	510
	36.22	240	360	408	300	410	510	300	410	510	300	410	510	300	410	510	300	410	510	300	410	510
	41.28	250	375	425	300	410	510	300	410	510	300	410	510									
	43.45	255	380	434	300	410	510	300	410	510	300	410	510									
	49.69	260	390	442	300	410	510	300	410	510	300	410	510									
	58.24	270	405	459	300	410	510	300	410	510	300	410	510									

K39, m [kg]		AQ.						
s		80/1-3	100/1-4	115/1-2	115/3	140/1	140/2-4	160/1
	2	21	22	22	22	27	27	27

KF: + 1.5 kg / KA: + -1.0 kg / KAF: + 0.50 kg

K39, J _A / c _{TA}		AQ.						
		80/1-3	100/1-4	115/1-2	115/3	140/1	140/2-4	160/1
J _A 10 ⁻⁴	[kgm ²]	0.77	1.4	1.4	3.1	5.1	10.0	10.0
c _{TA}	[Nm/°]	0.25	0.25	0.25	0.625	0.625	1.0	1.0

K39							F_{Ramax}				F_{Rapk}			
n_e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M_{amax} [Nm]	M_{apk} [Nm]	M_{aNotaus} [Nm]	n_{ak} [1/min]	J_{GA} 10⁻⁴ [kg*m²]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
K39 	2.81	170	255	285	811	7.9	2870	2460	2180	2180	7500	6260	7500	7500
	3.94	215	320	365	378	4.6	3070	2630	2260	2260	7500	6180	7500	7500
	4.52	240	360	405	257	3.6	3130	2680	1730	1730	7500	6130	7500	7500
	5.22	260	390	440	192	2.9	3240	2770	960	960	7500	6090	7500	7500
	5.75	275	410	465	158	2.5	3300	2830	290	290	7470	6060	7500	7500
	6.75	300	435	510	130	2.0	3430	2940	0	0	7300	6020	7500	7500
	7.15	300	435	510	129	1.8	3530	3020	157	157	7300	6020	7500	7500
	8.12	300	385	510	193	1.4	3760	3220	2080	2080	7500	6090	7500	7500
	9.00	300	385	510	192	1.2	3950	3380	2860	2860	7500	6090	7500	7500
	10.61	285	370	485	218	0.91	4360	3730	3250	3250	7500	6110	7500	7500
	12.09	255	295	430	464	0.65	4790	4110	3700	3700	7500	6210	7500	7500
	12.73	250	295	425	463	0.58	4930	4220	3830	3830	7500	6210	7500	7500
	13.44	270	405	455	27	2.6	4160	3560	2830	2830	7500	5980	7500	7500
	15.44	280	410	475	26	2.2	4380	3750	2990	2990	7490	5960	7500	7500
	17.83	290	410	490	25	1.8	4630	3960	3180	3180	7490	5960	7500	7500
	19.62	295	410	500	25	1.5	4820	4120	3330	3330	7490	5960	7500	7500
	23.04	300	410	510	24	1.3	5180	4440	3630	3630	7490	5960	7500	7500
	24.40	300	410	510	24	1.2	5330	4560	3760	3760	7490	5960	7500	7500
	27.73	300	410	510	24	0.95	5670	4860	4070	4070	7490	5960	7500	7500
	30.72	300	410	510	24	0.82	5960	5100	4320	4320	7490	5960	7500	7500
	36.22	300	410	510	23	0.65	6440	5520	4740	4740	7490	5960	7500	7500
	41.28	300	410	510	23	0.44	6840	5860	5100	5100	7490	5960	7500	7500
	43.45	300	410	510	23	0.39	7000	6000	5240	5240	7490	5960	7500	7500
	49.69	300	410	510	23	0.32	7440	6150	5630	5630	7490	5960	7500	7500
	58.24	300	410	510	23	0.26	7500	6150	6110	6110	7490	5960	7500	7500

AQ.				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K39  2	2.81	4500	95	15	14	30	30
	3.94	4500	96	15	14	30	30
	4.52	4500	96	15	14	30	30
	5.22	4500	96	15	14	30	30
	5.75	4500	96	15	14	30	30
	6.75	4500	96	15	14	30	30
	7.15	4500	96	15	14	30	30
	8.12	4500	96	15	14	30	30
	9.00	4500	96	15	14	30	30
	10.61	4500	96	15	14	37	37
	12.09	4500	96	15	14	37	37
	12.73	4500	96	15	14	37	37
	13.44	4500	91	20	19	67	67
	15.44	4500	91	20	19	67	67
	17.83	4500	91	20	19	67	67
	19.62	4500	91	20	19	67	67
	23.04	4500	91	20	19	67	67
	24.40	4500	91	20	19	67	67
	27.73	4500	91	20	19	67	67
	30.72	4500	91	20	19	67	67
	36.22	4500	91	20	19	67	67
	41.28	4500	91	20	19	67	67
	43.45	4500	91	20	19	67	67
	49.69	4500	91	20	19	67	67
	58.24	4500	91	20	19	67	67

[Nm]		AQ.																							
		M _{amax} M _{apk} M _{aNotaus}																							
	i	80/1-3			100/1-4			115/1-2			115/3		140/1		140/2-4			160/1			190/1-3				
K49  2	4.00	64	65	98	65	65	98	65	65	98	121	178	184	230	230	345	250	375	400	250	375	400	395	500	640
	4.69	69	76	114	76	76	114	76	76	114	130	195	216	265	270	405	265	395	451	265	395	451	425	565	723
	5.29	73	86	124	86	86	129	86	86	129	136	200	231	280	305	458	280	420	476	280	420	476	445	605	757
	5.99	76	98	129	98	98	147	98	98	147	143	210	243	295	345	502	295	440	502	295	440	502	465	605	791
	6.83	80	112	136	112	112	168	112	112	168	149	220	253	305	395	519	305	455	519	305	455	519	485	605	825
	7.58	84	124	143	124	124	186	124	124	186	156	230	265	320	435	544	320	480	544	320	480	544	500	605	850
	8.66	87	130	148	142	142	213	142	142	213	162	240	275	335	500	570	335	500	570	335	500	570	500	605	850
	9.14	89	134	151	149	149	224	149	149	224	165	245	281	340	510	578	340	510	578	340	510	578	500	605	850
	10.42	92	138	156	170	170	255	170	170	255	170	255	289	350	525	595	350	525	595	350	525	595			
	11.37	93	140	158	172	186	279	172	186	279	172	255	292	350	525	595	350	525	595	350	525	595			
	13.38	200	205	308	205	205	308	205	205	308	380	560	615	470	605	799	470	605	799	470	605	799	470	605	799
	15.67	215	240	360	240	240	360	240	240	360	410	605	697	490	605	833	490	605	833	490	605	833	490	605	833
	17.67	230	270	391	270	270	405	270	270	405	430	605	731	500	605	850	500	605	850	500	605	850	500	605	850
	20.03	240	310	408	305	305	458	305	305	458	450	605	765	500	605	850	500	605	850	500	605	850	500	605	850
	22.83	250	350	425	350	350	525	350	350	525	470	605	799	500	605	850	500	605	850	500	605	850	500	605	850
	25.34	265	390	451	390	390	585	390	390	585	490	605	833	500	605	850	500	605	850	500	605	850	500	605	850
	28.95	275	410	468	445	445	668	445	445	668	500	605	850	500	605	850	500	605	850	500	605	850	500	605	850
	30.55	280	420	476	470	470	705	470	470	705	500	605	850	500	605	850	500	605	850	500	605	850	500	605	850
	34.81	290	435	493	500	535	803	500	535	803	500	605	850	500	605	850	500	605	850	500	605	850			
	37.98	290	435	493	500	585	850	500	585	850	500	605	850	500	605	850	500	605	850	500	605	850			
	44.44	305	455	519	500	605	850	500	605	850	500	605	850	500	605	850	500	605	850	500	605	850			
	50.29	315	470	536	500	605	850	500	605	850	500	605	850												
	52.94	320	480	544	500	605	850	500	605	850	500	605	850												
	60.27	325	485	553	500	605	850	500	605	850	500	605	850												
	70.19	330	495	561	445	605	757	445	605	757	445	605	757												
	75.20	330	495	561	475	605	808	475	605	808	475	605	808												

K49, m [kg]

AQ.

s	80/1-3	100/1-4	115/1-2	115/3	140/1	140/2-4	160/1	190/1-3
 2	33	34	34	34	39	39	39	48

KF: + 1.7 kg / KA: + -2.8 kg / KAF: + 2.1 kg

K49, J_A / c_{TA}

AQ.

	80/1-3	100/1-4	115/1-2	115/3	140/1	140/2-4	160/1	190/1-3
J _A 10 ⁻⁴ [kgm ²]	0.77	1.4	1.4	3.1	5.1	10.0	10.0	25.0
c _{TA} [Nm/°]	0.25	0.25	0.25	0.625	0.625	1.0	1.0	2.08

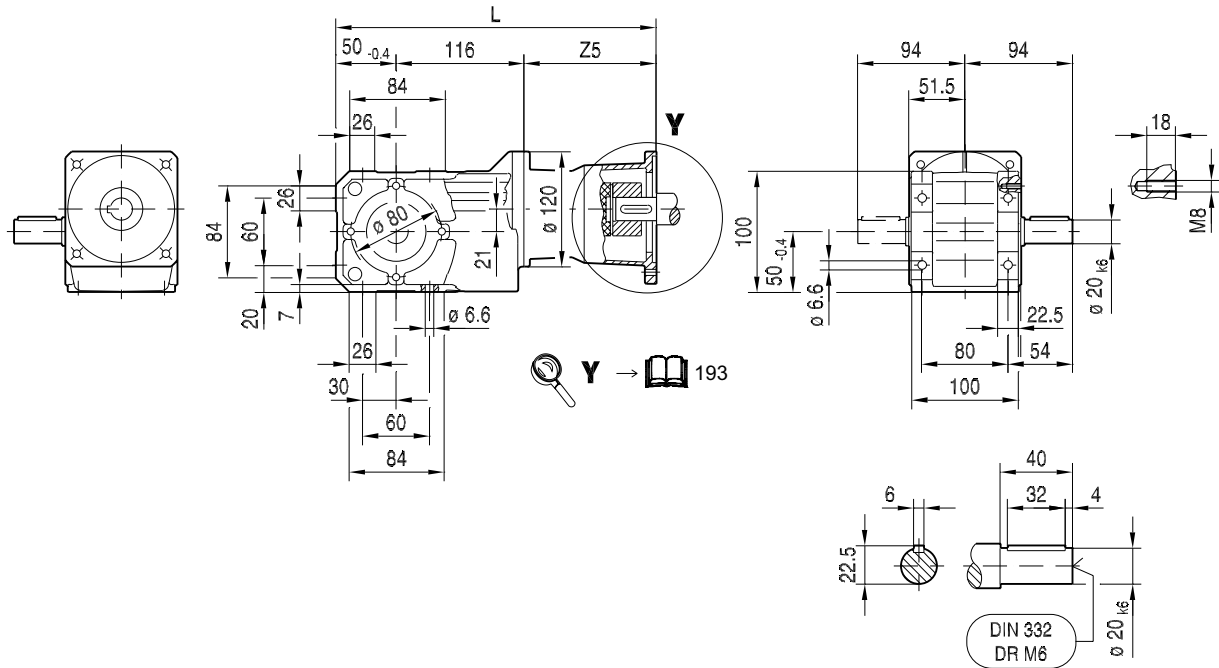
K49							F _{Ramax}				F _{Rapk}			
n _e = 1400							K	KF	KA	KAF	K	KF	KA	KAF
	i	M _{amax} [Nm]	M _{apk} [Nm]	M _{aNotaus} [Nm]	n _{ak} [1/min]	J _{GA} 10 ⁻⁴ [kg*m ²]	[N]	[N]	[N]	[N]	[N]	[N]	[N]	[N]
 K49 2	4.00	440	605	745	218	11	3110	2390	0	0	9000	9000	9000	9000
	4.69	465	605	790	217	8.8	3270	2600	0	0	9000	9000	9000	9000
	5.29	485	605	820	217	7.2	3400	2770	0	0	9000	9000	9000	9000
	5.99	500	605	850	219	5.9	3570	3030	0	0	9000	9000	9000	9000
	6.83	500	605	850	218	4.8	3840	3250	0	0	9000	9000	9000	9000
	7.58	500	605	850	218	4.1	4050	3440	1030	1030	9000	9000	9000	9000
	8.66	500	605	850	218	3.3	4340	3680	3790	3790	9000	9000	9000	9000
	9.14	500	605	850	218	3.1	4460	3780	3910	3910	9000	9000	9000	9000
	10.42	480	585	810	238	2.4	4860	4120	4330	4330	9000	9000	9000	9000
	11.37	495	605	840	218	2.1	5000	4240	4450	4450	9000	9000	9000	9000
	13.38	470	605	795	46	6.5	4320	3660	3510	3510	9000	9000	9000	9000
	15.67	490	605	830	45	5.2	4590	3890	3750	3750	9000	9000	9000	9000
	17.67	500	605	850	44	4.4	4860	4120	3990	3990	9000	9000	9000	9000
	20.03	500	605	850	43	3.7	5220	4420	4350	4350	9000	9000	9000	9000
	22.83	500	605	850	43	3.1	5610	4750	4750	4750	9000	9000	9000	9000
	25.34	500	605	850	42	2.8	5940	5030	5070	5070	9000	9000	9000	9000
	28.95	500	605	850	42	2.3	6370	5400	5510	5510	9000	9000	9000	9000
	30.55	500	605	850	42	2.1	6550	5550	5690	5690	9000	9000	9000	9000
	34.81	500	605	850	42	1.7	7000	5930	6140	6140	9000	9000	9000	9000
	37.98	500	605	850	41	1.5	7310	6200	6450	6450	9000	9000	9000	9000
	44.44	500	605	850	41	1.2	7900	6690	7040	7040	9000	9000	9000	9000
	50.29	500	605	850	41	0.83	8380	7100	7530	7530	9000	9000	9000	9000
	52.94	500	605	850	41	0.75	8590	7280	7730	7730	9000	9000	9000	9000
	60.27	500	605	850	41	0.61	9000	7740	8280	8280	9000	9000	9000	9000
	70.19	445	605	755	40	0.50	9000	8630	9000	9000	9000	9000	9000	9000
	75.20	475	605	800	41	0.43	9000	8720	9000	9000	9000	9000	9000	9000

AQ.				C _{TG}			
	i	n _{epk} [1/min]	eta [%]	K [Nm/"]	KF [Nm/"]	KA [Nm/"]	KAF [Nm/"]
K49  2	4.00	4500	96	27	26	77	77
	4.69	4500	96	27	26	77	77
	5.29	4500	96	27	26	77	77
	5.99	4500	96	27	26	77	77
	6.83	4500	96	27	26	77	77
	7.58	4500	96	27	26	77	77
	8.66	4500	96	27	26	77	77
	9.14	4500	96	27	26	77	77
	10.42	4500	96	27	26	77	77
	11.37	4500	96	27	26	77	77
	13.38	4500	92	35	32	48	48
	15.67	4500	92	35	32	48	48
	17.67	4500	92	35	32	48	48
	20.03	4500	92	35	32	48	48
	22.83	4500	92	35	32	48	48
	25.34	4500	92	35	32	48	48
	28.95	4500	92	35	32	48	48
	30.55	4500	92	35	32	48	48
	34.81	4500	92	35	32	48	48
	37.98	4500	92	35	32	48	48
	44.44	4500	92	35	32	48	48
	50.29	4500	92	35	32	48	48
	52.94	4500	92	35	32	48	48
	60.27	4500	91	35	32	48	48
	70.19	4500	91	35	32	48	48
	75.20	4500	91	35	32	48	48

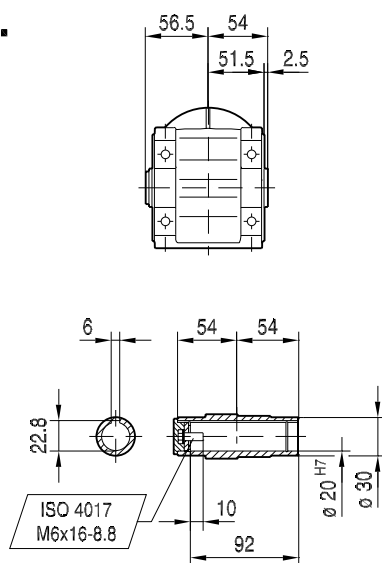
2.14 Maßblätter K..9 / AQA, AQH

33 117 00 15

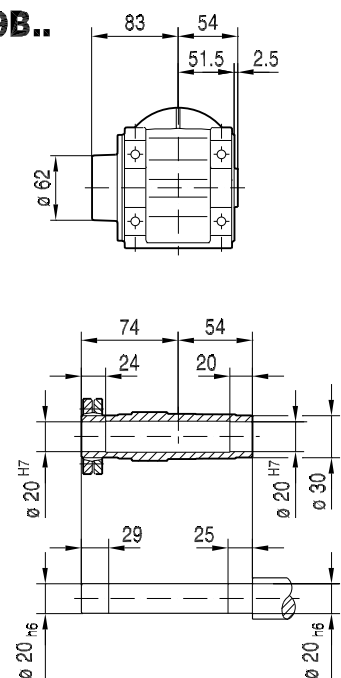
K19..



KA19B..

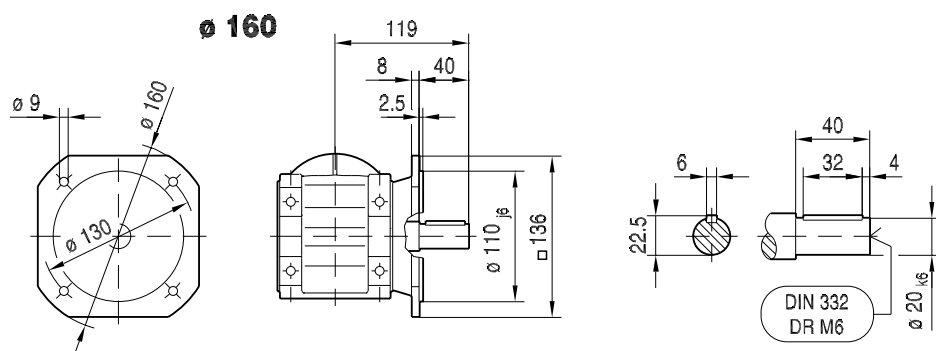
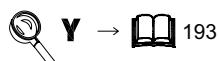
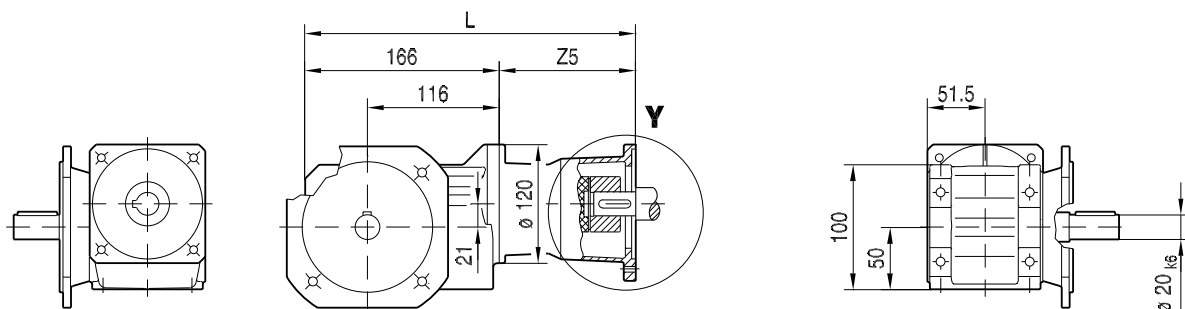
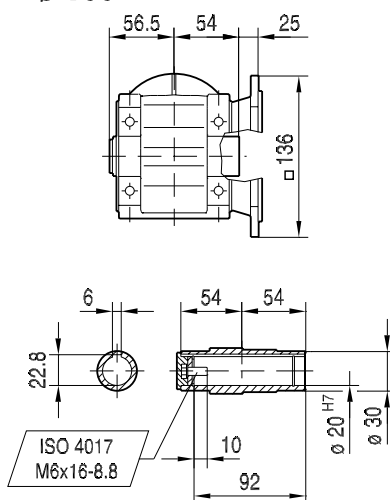


KH19B..



	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	271	296	310	319				

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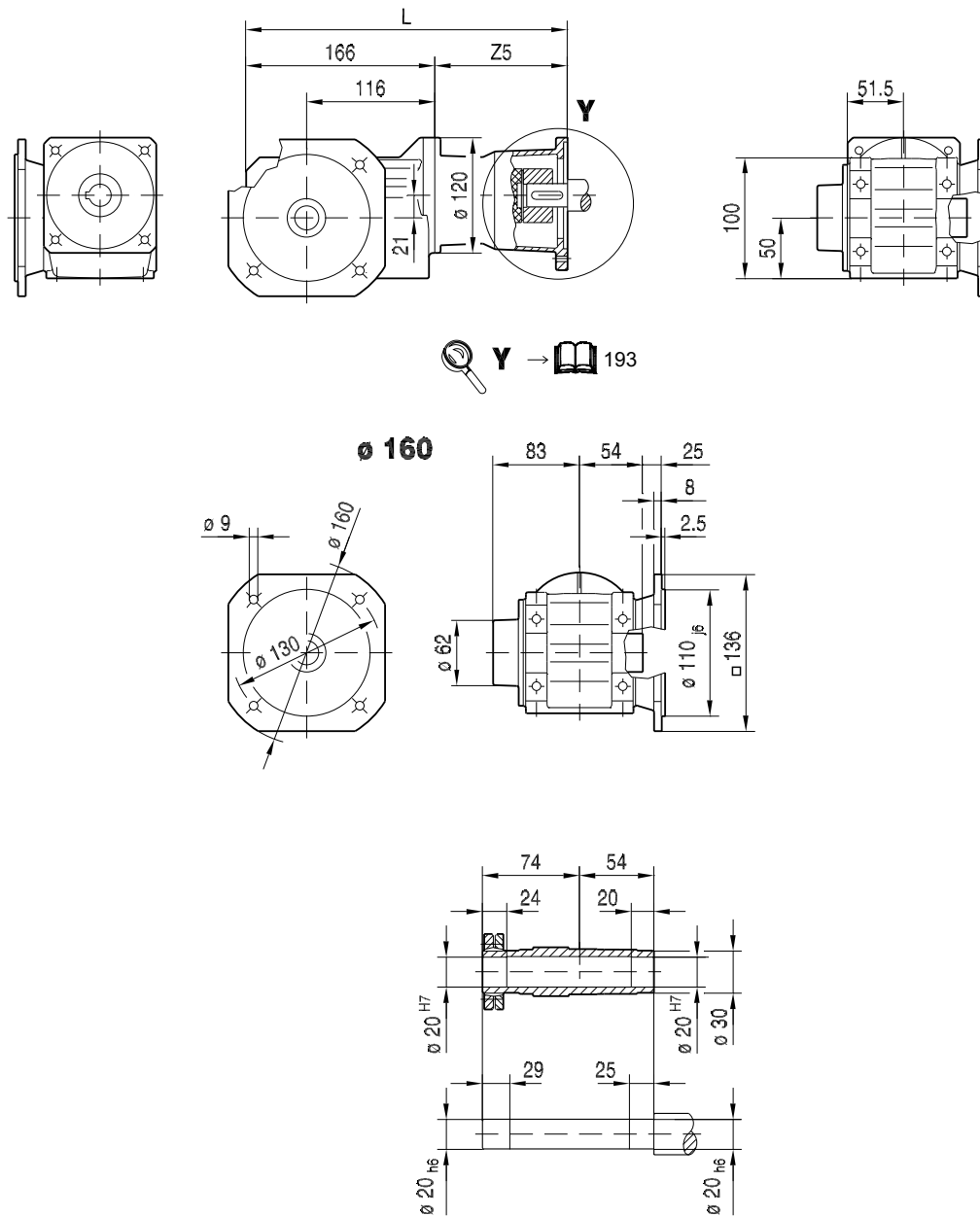
KF19B..**33 118 00 15****KAF19B..****Ø 160**

	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	271	296	310	319				

KHF19B..

33 119 00 15

2

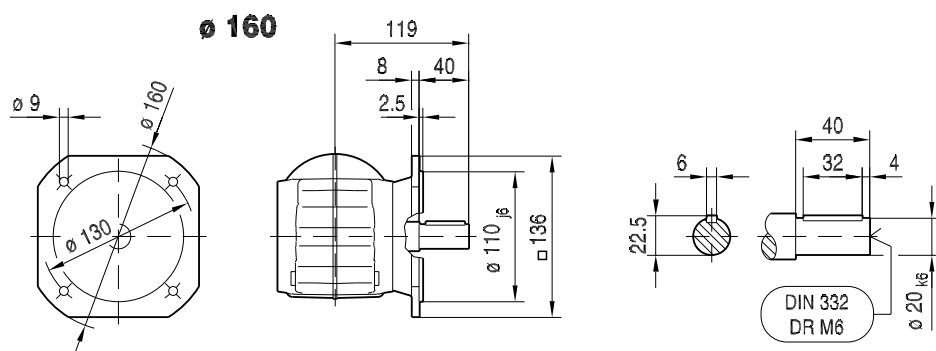
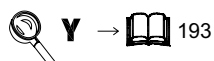
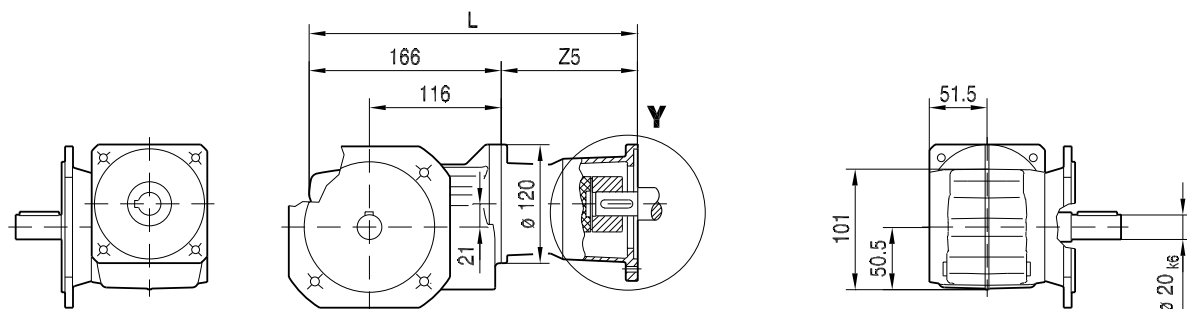


	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	271	296	310	319				

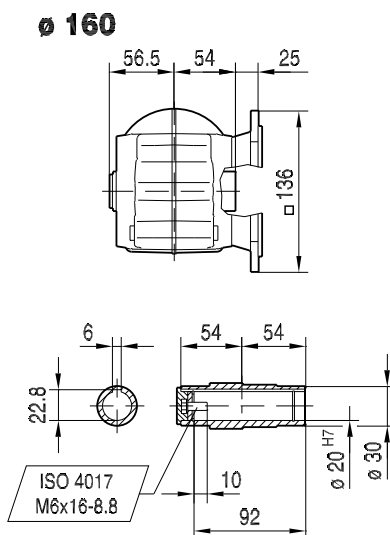
21932379/DE – 05/2015

33 120 00 15

KF19..



KAF19..

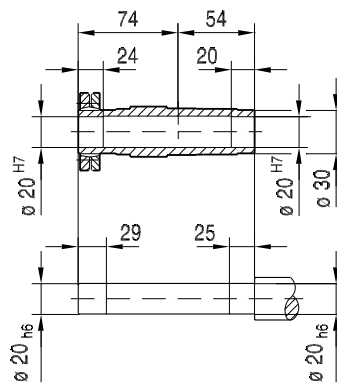
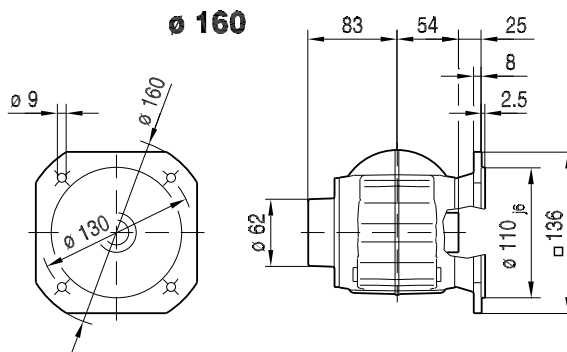
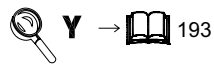
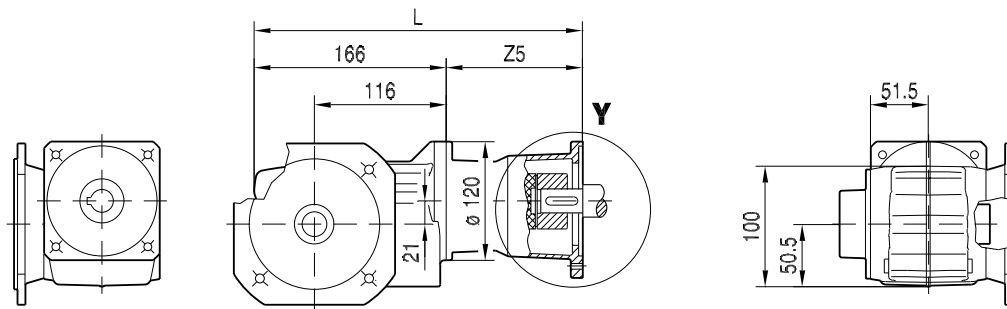


	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	271	296	310	319				

KHF19..

33 121 00 15

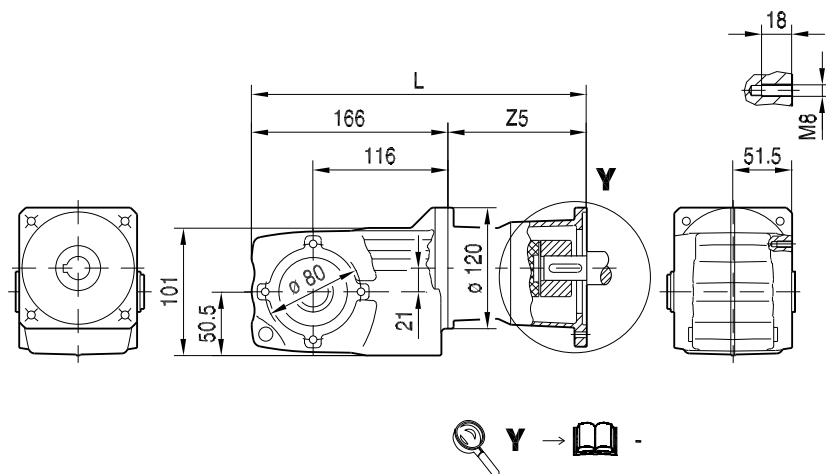
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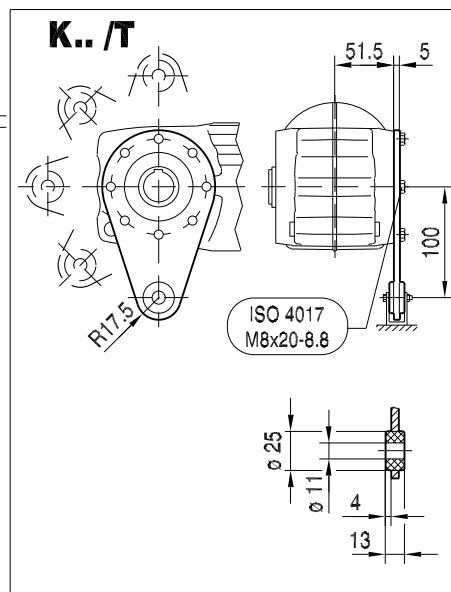
21932379/DE – 05/2015

	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	271	296	310	319				

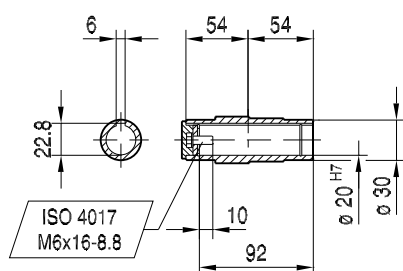
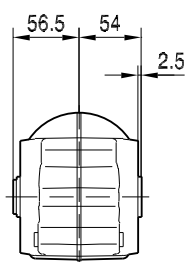
KA19..



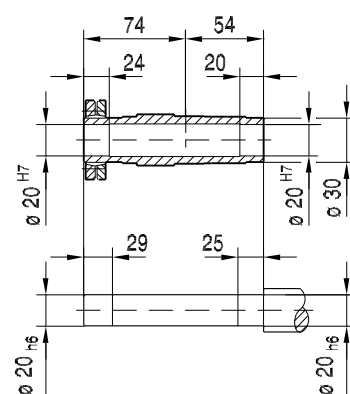
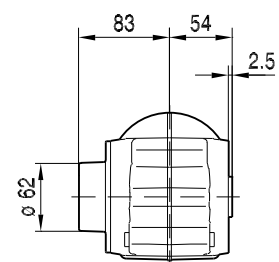
33 122 00 15



KA19..



KH19..



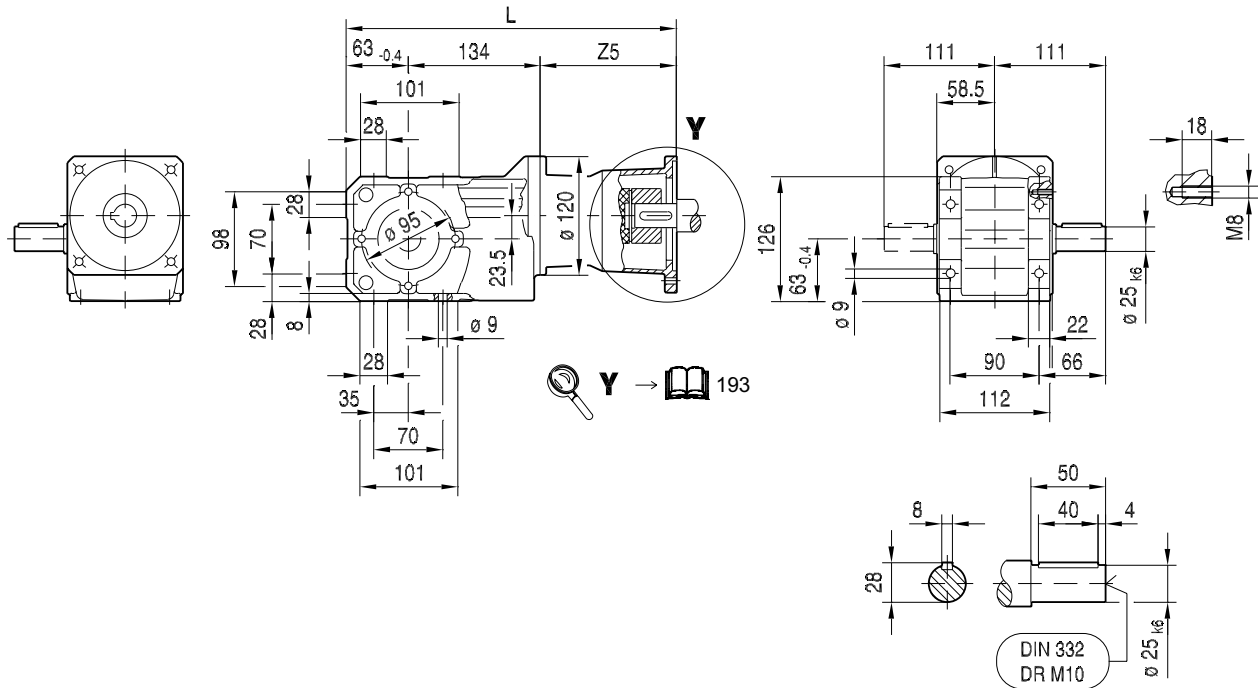
	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	271	296	310	319				

21932379/DE – 05/2015

K29..

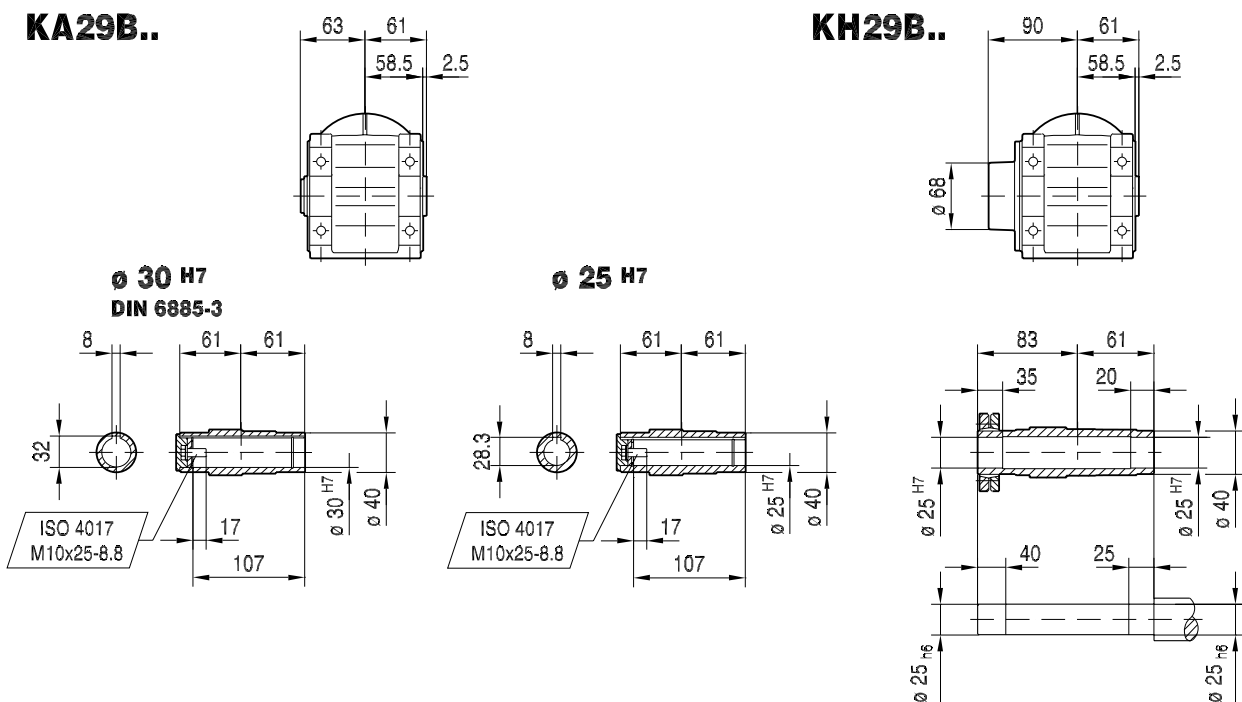
33 123 00 15

2



KA29B..

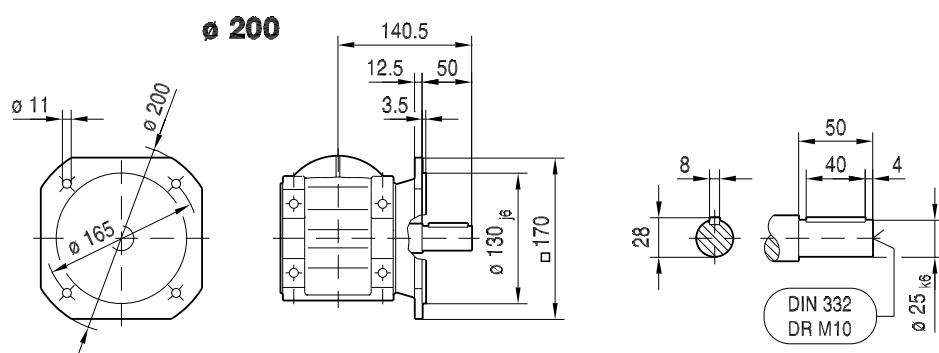
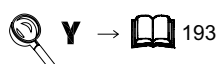
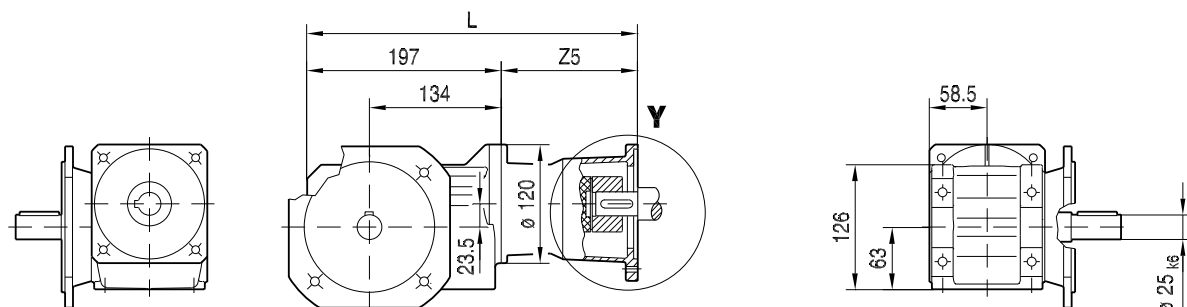
KH29B..



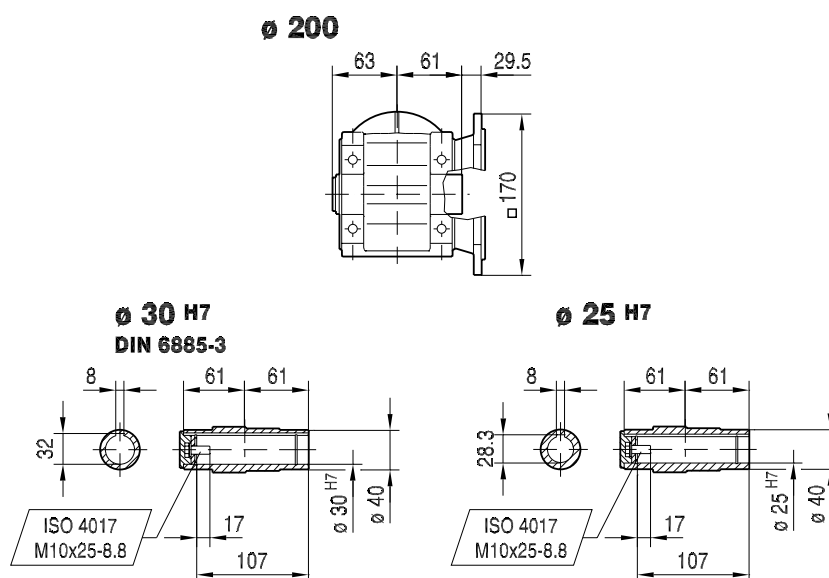
	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	302	327	341	350				

KF29B..

33 124 00 15



KAF29B..



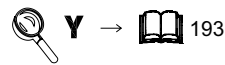
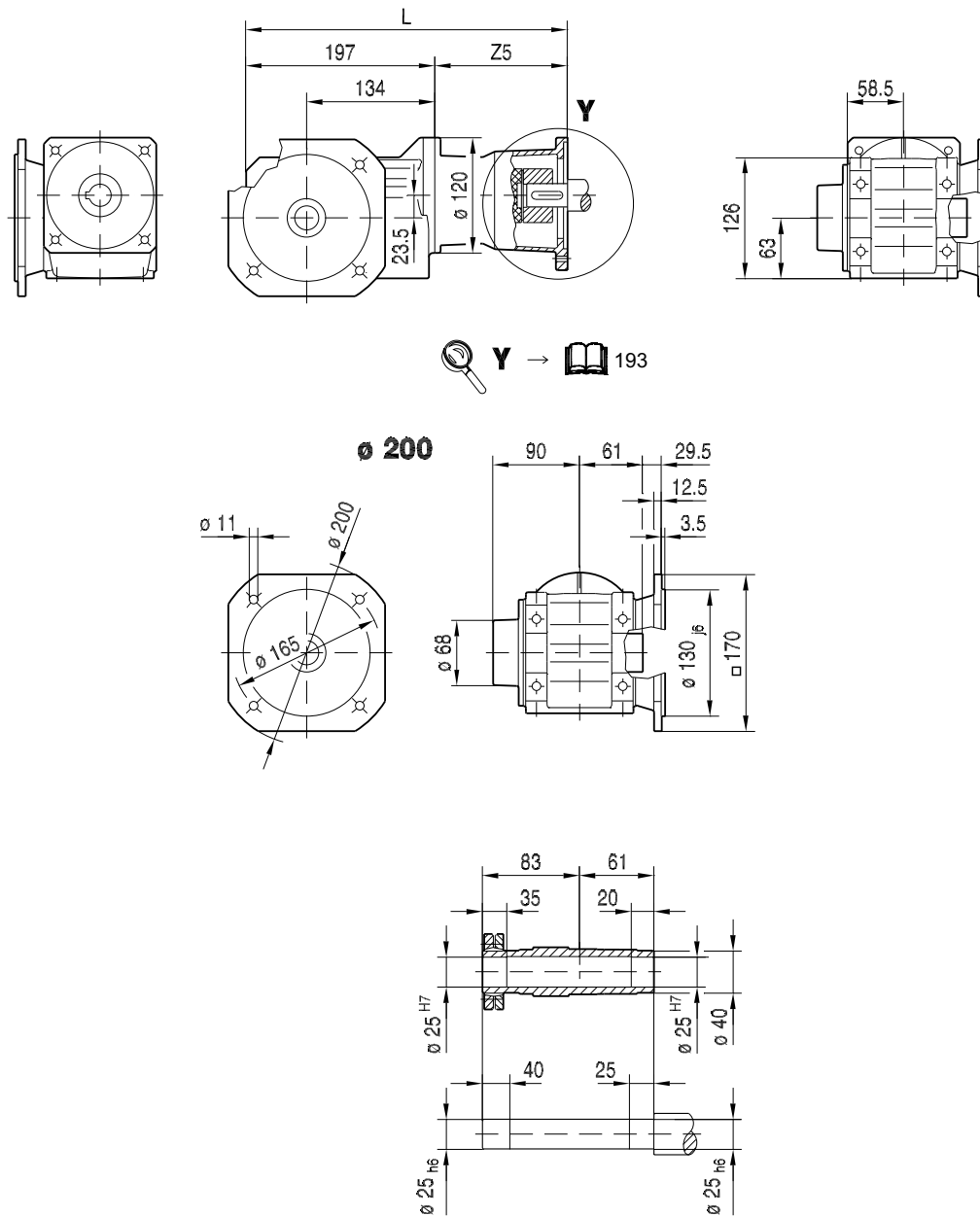
	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	302	327	341	350				

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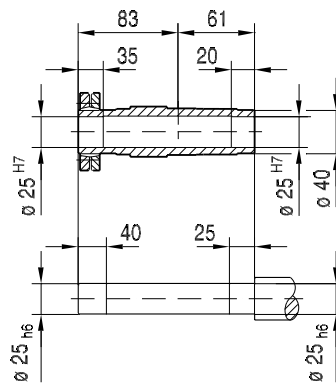
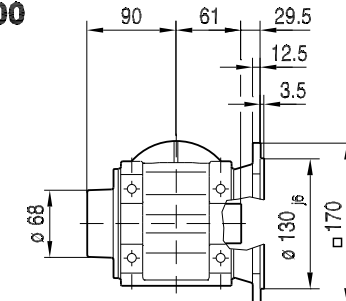
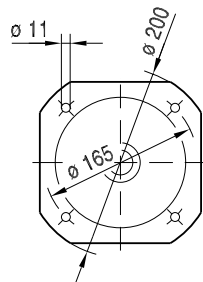
KHF29B..

33 125 00 15

2



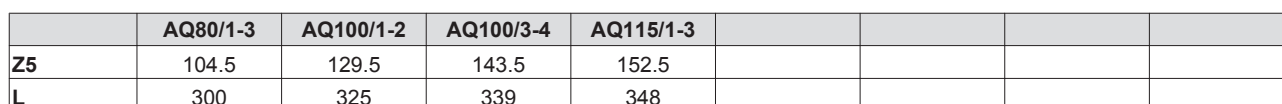
Ø 200



	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	302	327	341	350				

21932379/DE – 05/2015

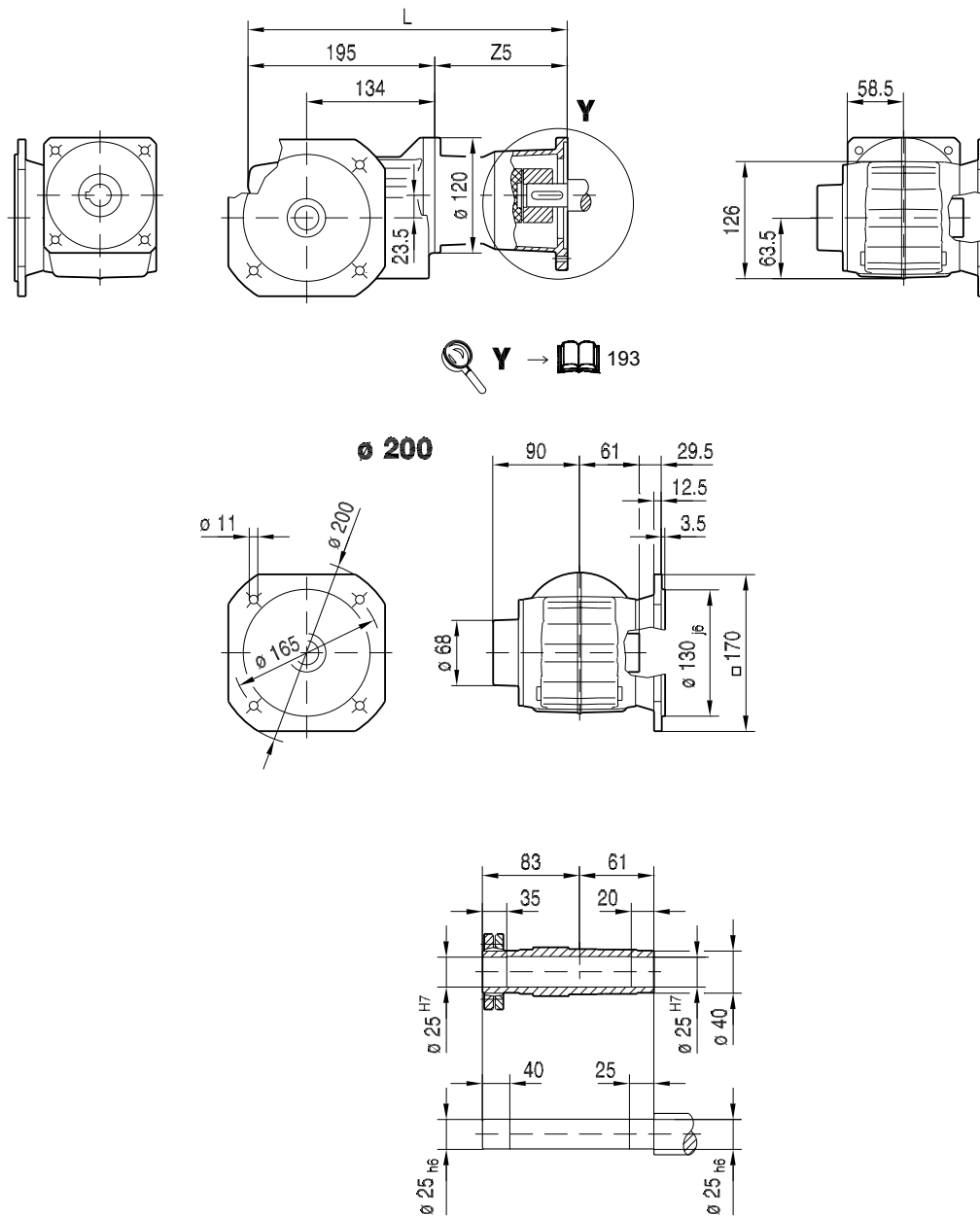
KF29..



KHF29..

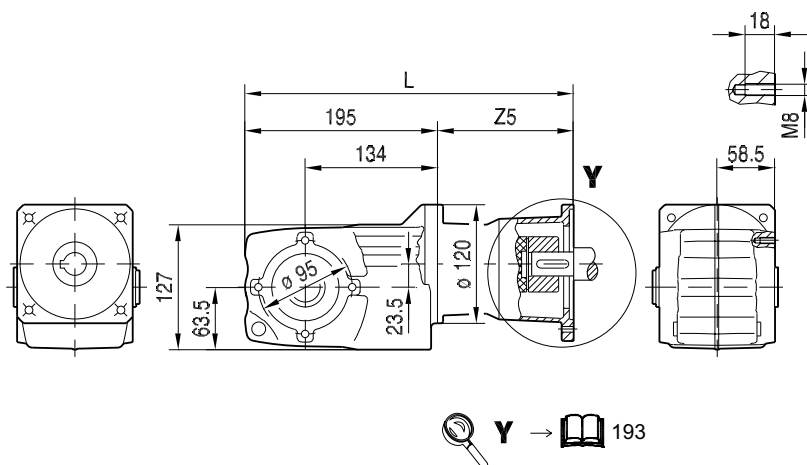
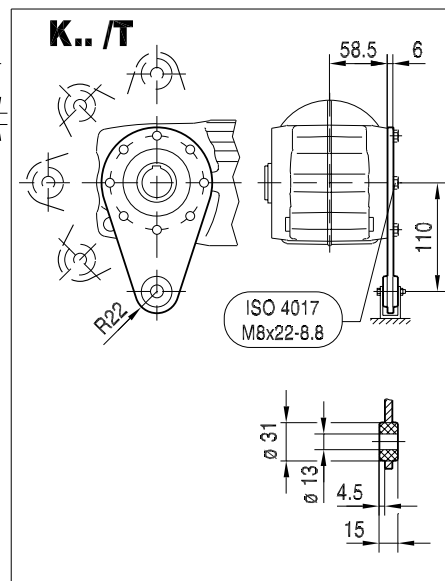
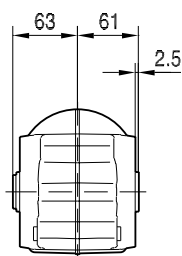
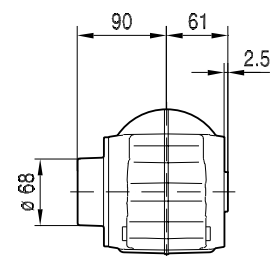
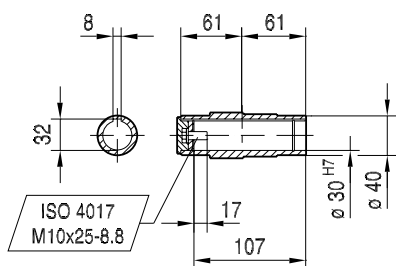
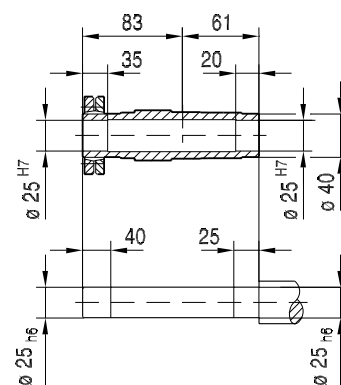
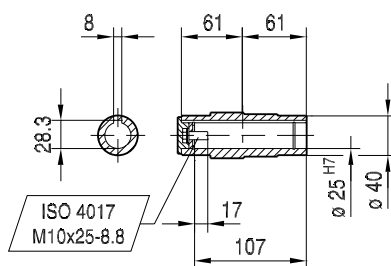
33 127 00 15

2



	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	300	325	339	348				

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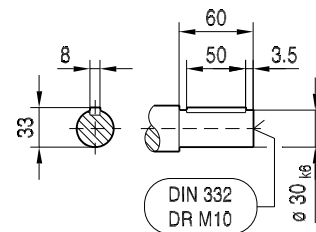
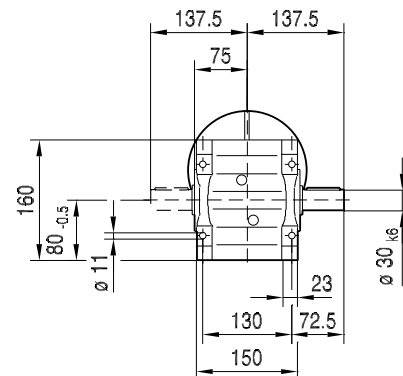
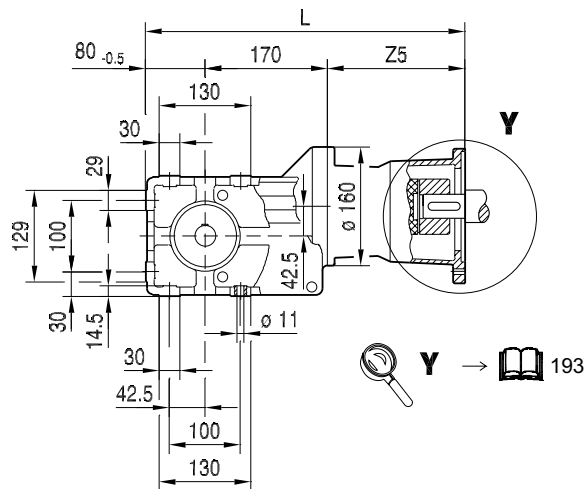
KA29..**33 128 00 15****KA29..****KH29..****Ø 30 H7
DIN 6885-3****Ø 25 H7**

	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3				
Z5	104.5	129.5	143.5	152.5				
L	300	325	339	348				

K39..

33 060 00 15

2

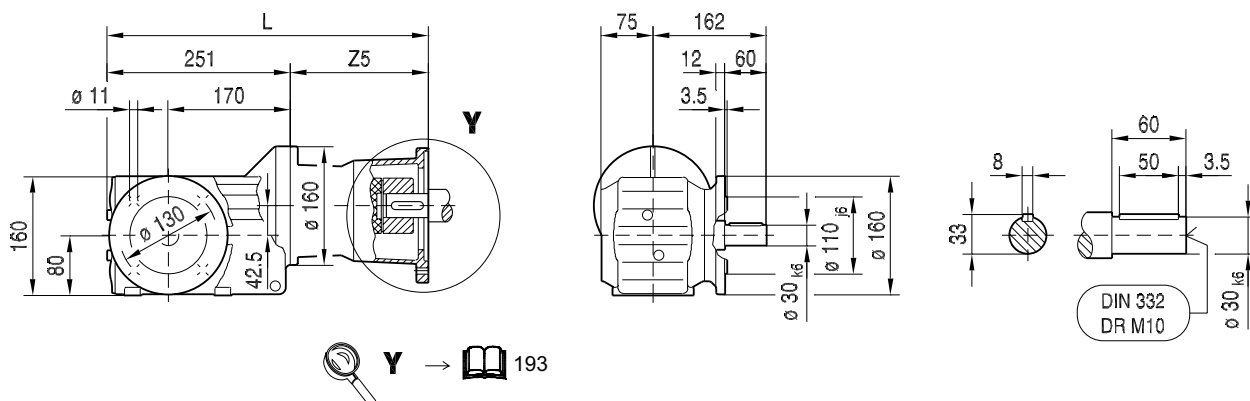


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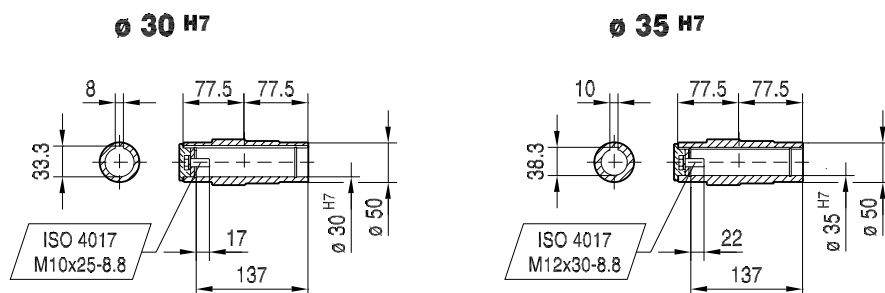
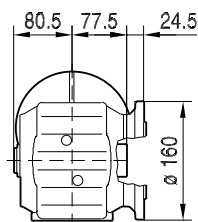
	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3	AQ140/1-2	AQ140/3-4	AQ160/1	
Z5	98	123	137	146	175	188	188	
L	348	373	387	396	425	438	438	

KF39..

33 061 00 15



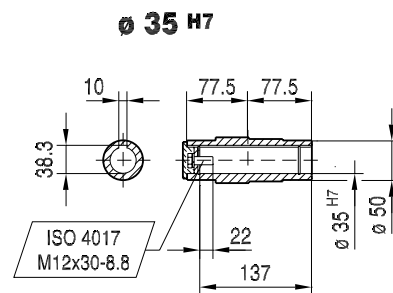
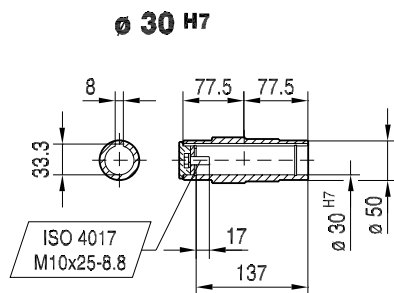
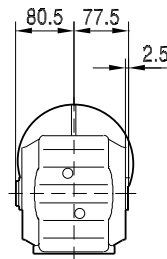
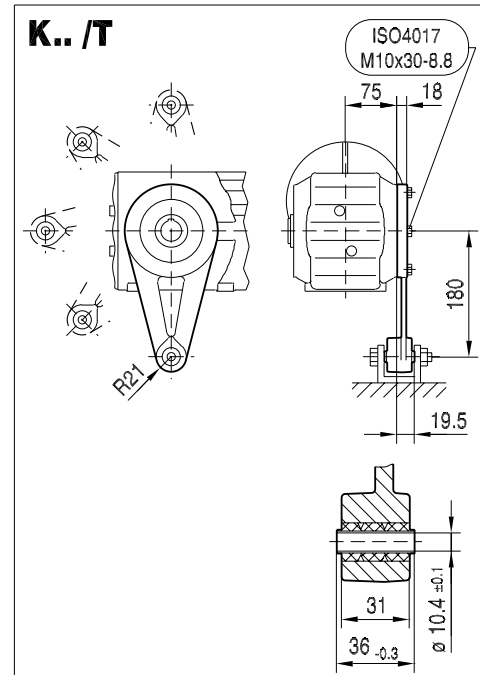
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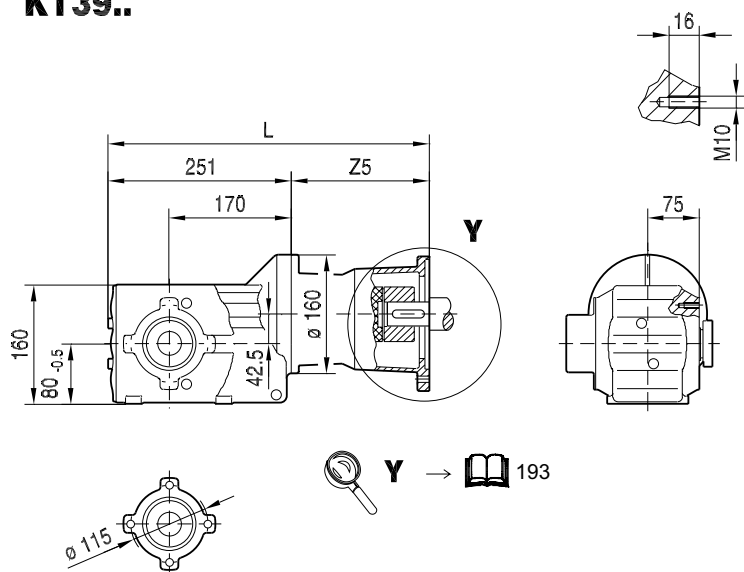


	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3	AQ140/1-2	AQ140/3-4	AQ160/1	
Z5	98	123	137	146	175	188	188	
L	349	374	388	397	426	439	439	

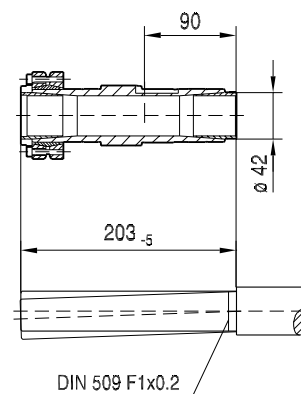
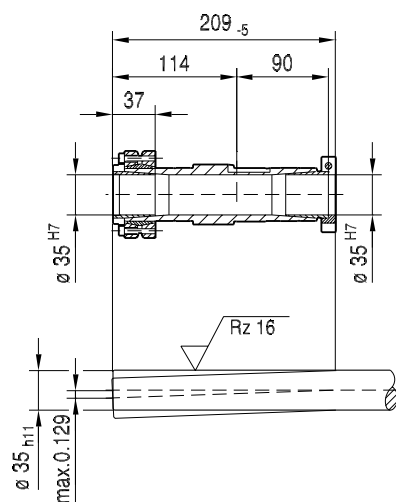
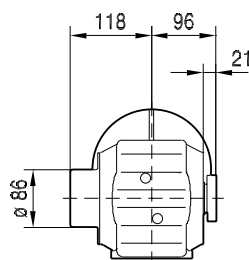
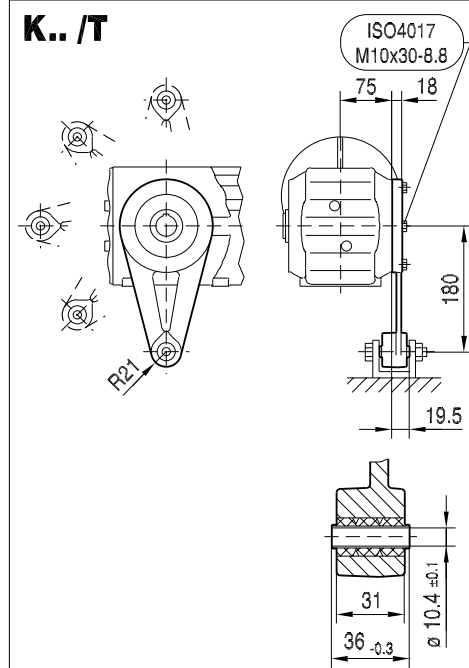
21932379/DE – 05/2015

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KT39..

Y → 193

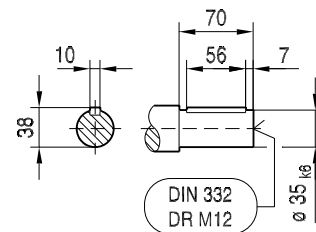
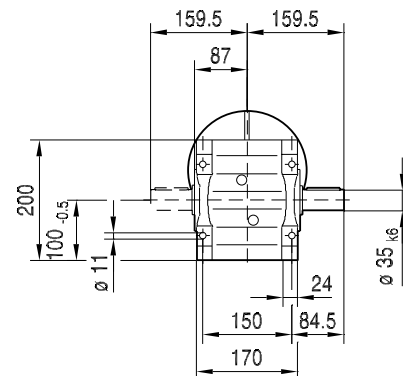
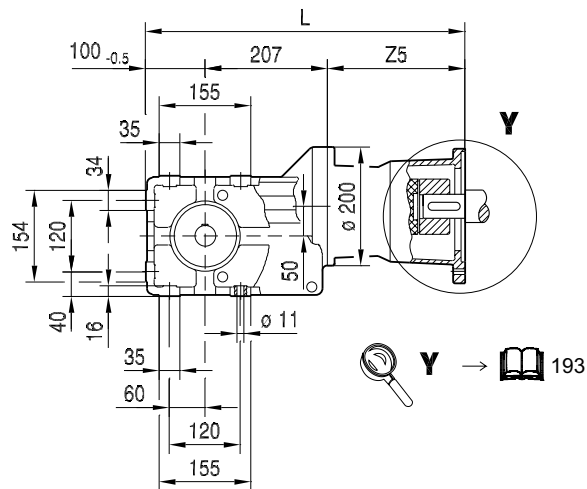
**33 063 00 15**

	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3	AQ140/1-2	AQ140/3-4	AQ160/1	
Z5	98	123	137	146	175	188	188	
L	349	374	388	397	426	439	439	

K49..

33 064 00 15

2

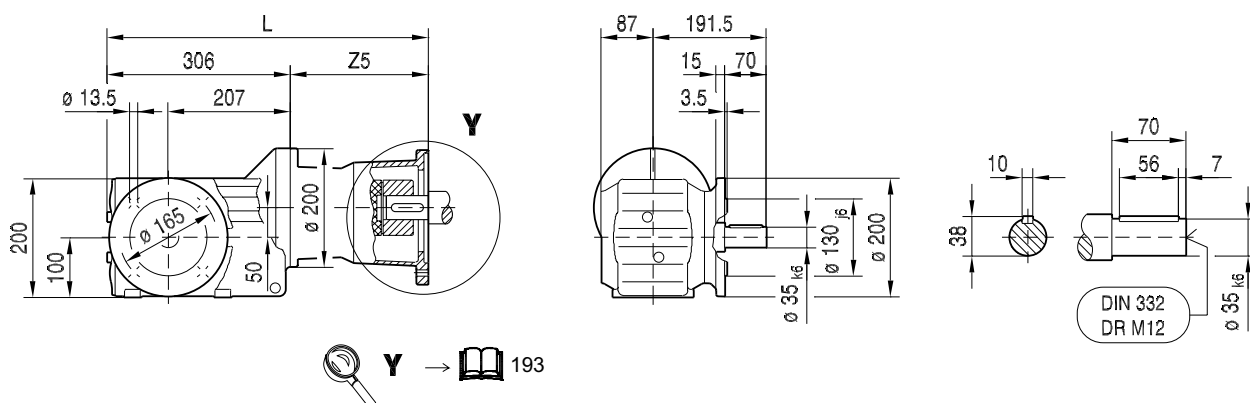


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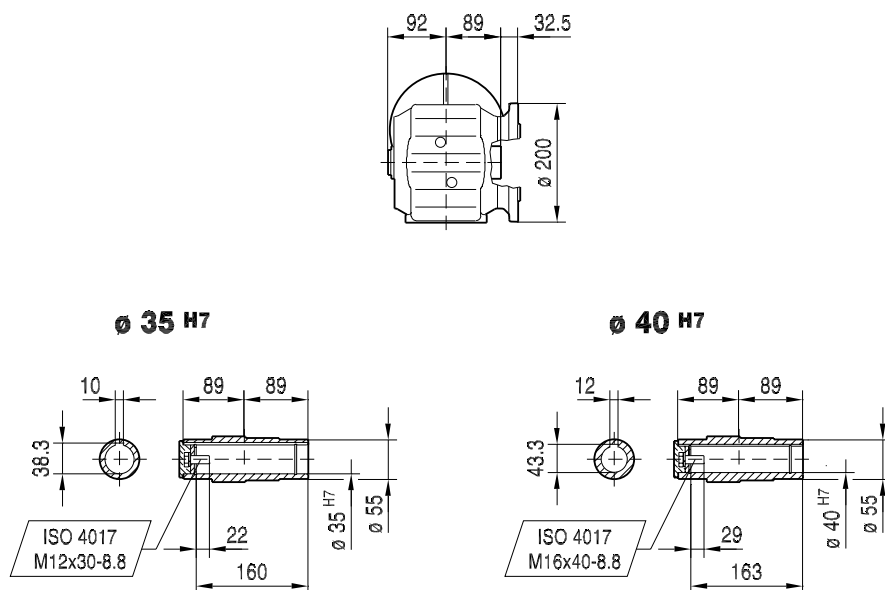
	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3	AQ140/1-2	AQ140/3-4	AQ160/1	AQ190/1-2	AQ190/3
Z5	92	116	130	139	167	180	180	225.5	249.5
L	399	423	437	446	474	487	487	533	557

33 065 00 15

KF49..



KAF49..



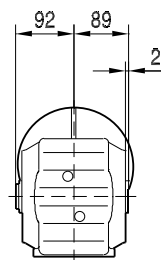
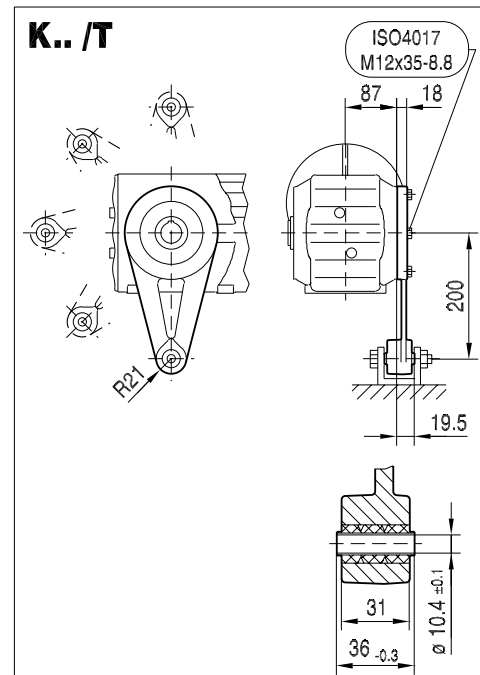
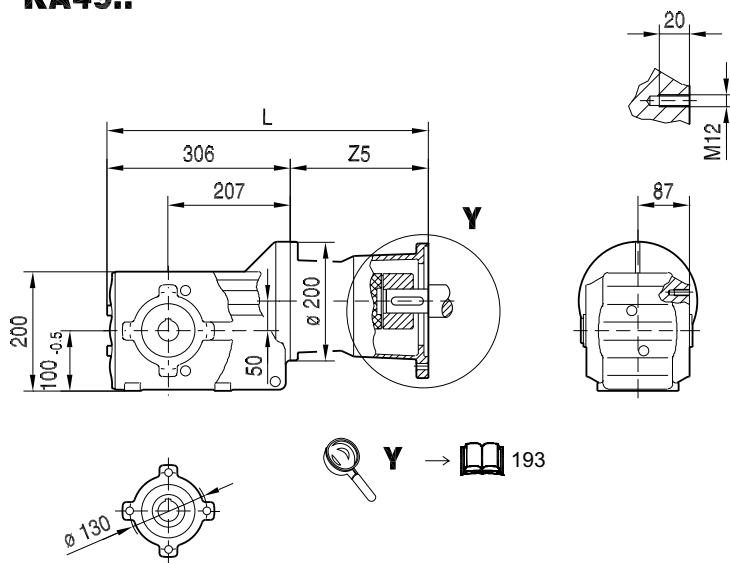
	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3	AQ140/1-2	AQ140/3-4	AQ160/1	AQ190/1-2	AQ190/3
Z5	92	116	130	139	167	180	180	225.5	249.5
L	398	422	436	445	473	486	486	532	556

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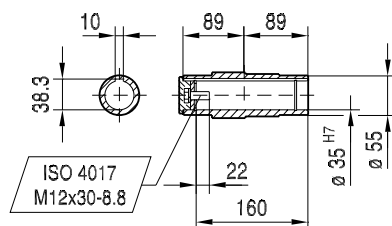
KA49..

33 066 00 15

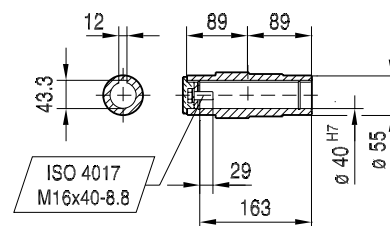
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Ø 35 H7

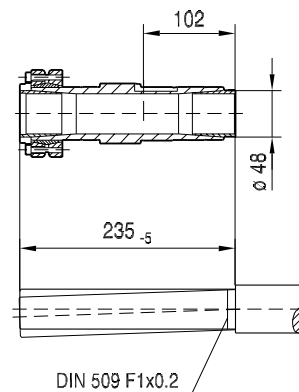
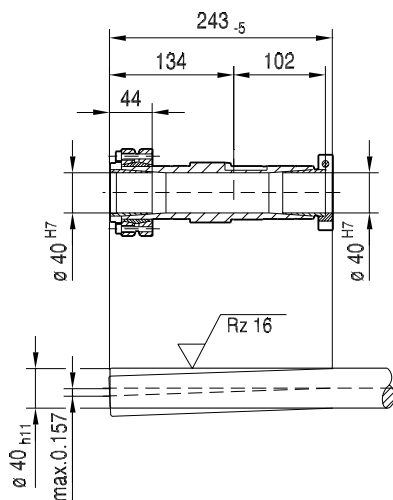
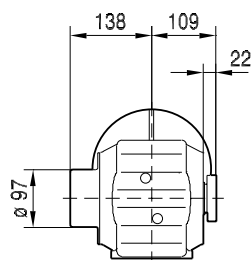
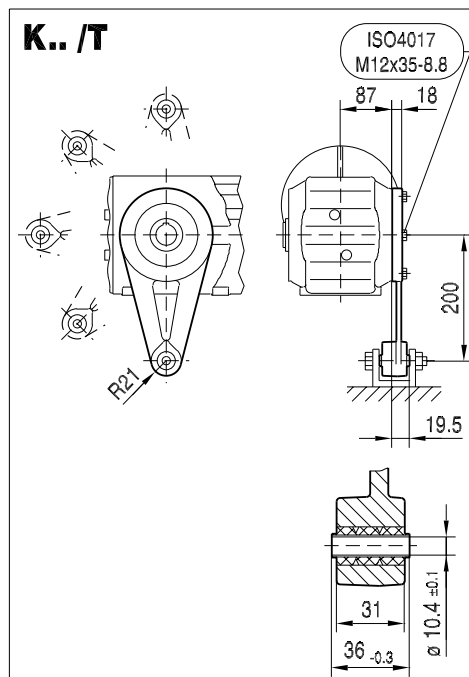


Ø 40 H7



	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3	AQ140/1-2	AQ140/3-4	AQ160/1	AQ190/1-2	AQ190/3
Z5	92	116	130	139	167	180	180	225.5	249.5
L	398	422	436	445	473	486	486	532	556

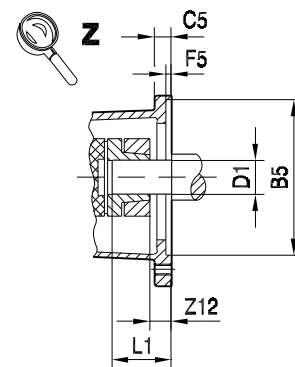
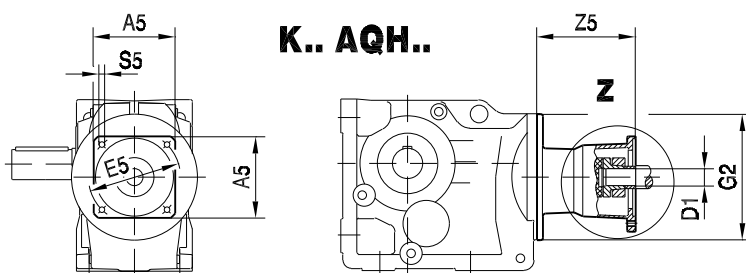
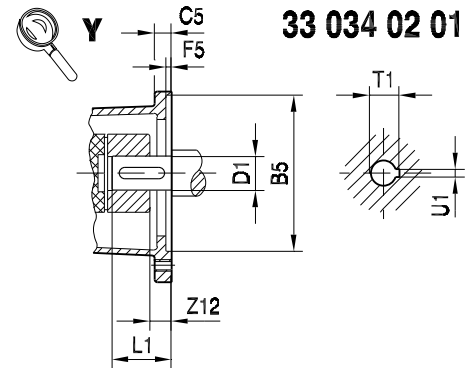
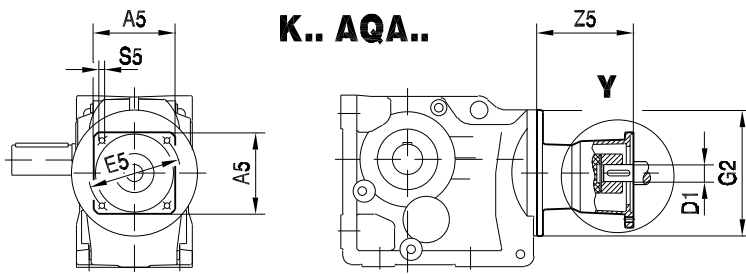
33 067 00 15



	AQ80/1-3	AQ100/1-2	AQ100/3-4	AQ115/1-3	AQ140/1-2	AQ140/3-4	AQ160/1	AQ190/1-2	AQ190/3
Z5	92	116	130	139	167	180	180	225.5	249.5
L	398	422	436	445	473	486	486	532	556

2.15 Maßblätter AQ

2



	A5	B5	C5	E5	F5	S5	Z12 (AQA)	Z12 (AQH)	D1	L1	T1	U1
AQ_80/1	82	60	8	75	3.5	M5	5.5	5.5	11	23	12.8	4
AQ_80/2	82	60	8	75	3.5	M5	5.5	5.5	14	30	16.3	5
AQ_80/3	82	50	8	95	3	M6	5.5	5.5	14	30	16.3	5
AQ_100/1	100	80	10	100	4	M6	0	0	14	30	16.3	5
AQ_100/2	100	95	12	115	4	M8	0	0	14	30	16.3	5
AQ_100/3	100	80	10	100	4	M6	2	14	19	40	21.8	6
AQ_100/4	100	95	12	115	4	M8	2	14	19	40	21.8	6
AQ_115/1	115	95	12	130	5	M8	11	23	19	40	21.8	6
AQ_115/2	115	110	12	130	5	M8	11	23	19	40	21.8	6
AQ_115/3	115	110	12	130	5	M8	16	16	24	50	27.3	8
AQ_140/1	140	110	15	165	5	M10	16	16	24	50	27.3	8
AQ_140/2	140	130	15	165	5	M10	16	16	24	50	27.3	8
AQ_140/3	140	130	15	165	5	M10	22	22	32	60	35.3	10
AQ_140/4	140	130	15	165	5	M10	22	22	28	60	31.3	8
AQ_160/1	162	155	15	190	5	M10	22	22	32	60	35.3	10
AQ_190/1	190	130	16	215	5	M12	24	24	32	60	35.3	10
AQ_190/2	190	180	16	215	5	M12	24	24	32	60	35.3	10
AQ_190/3	190	180	16	215	5	M12	34	34	38	80	41.3	10

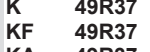
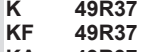
A5: Quadratmaß
B5: Ø Zentrierung
C5: Flanschdicke
E5: Ø Lochkreis

F5: Zentriertiefe
S5: Gewindebohrung
D1: Ø Kupplungsbohrung
L1: Max. Einstecktiefe Motorwelle

2.16 Auswahltabellen K..9 / AD

i	n _a [rpm]	M _{a,max} [Nm]	P _e [kW]	F _{Ra} ¹⁾ [N]	F _{Re} [N]	Φ _(/R)			m [kg]	
K19 AD.. , n _e = 1400 rpm										80 Nm
44.48	31	69	0.28	4340	615	-	-	K 19 AD1 6.2 KF 19 AD1 6.5 KA 19 AD1 5.8 KAF 19 AD1 6.2	197	
40.63	34	67	0.30	4350	615	-	-			
34.29	41	64	0.34	4370	610	-	-			
29.29	48	61	0.38	4200	610	-	-			
27.16	52	60	0.40	4090	605	-	-			
24.06	58	80	0.54	3820	230	-	-			
21.98	64	80	0.60	3680	215	-	-			
18.55	75	80	0.70	3430	174	-	-			
15.84	88	80	0.82	3210	131	-	-			
14.69	95	80	0.88	3110	108	-	-			
12.70	110	80	1.0	2930	58	-	-			
11.84	118	79	1.1	2850	1600	-	-	K 19 AD2 7.3 KF 19 AD2 7.6 KA 19 AD2 6.9 KAF 19 AD2 7.3	197	
10.32	136	76	1.2	2720	1590	-	-			
9.58	146	63	1.0	2910	600	-	-			
8.09	173	80	1.5	2590	1310	-	-			
6.91	203	80	1.8	2420	1280	-	-			
6.41	219	80	2.0	2340	1260	-	-			
5.54	253	80	2.3	2200	1230	-	-			
5.16	271	80	2.4	2140	1210	-	-			
4.50	311	73	2.5	2070	1230	-	-			
K29 AD.. , n _e = 1400 rpm										130 Nm
54.89	26	130	0.41	4980	425	-	-	K 29 AD1 8.0 KF 29 AD1 9.0 KA 29 AD1 7.5 KAF 29 AD1 8.4	197	
50.35	28	130	0.44	4980	415	-	-			
42.87	33	128	0.51	4790	400	-	-			
36.96	38	122	0.56	4560	400	-	-			
30.11	46	115	0.65	4250	395	-	-			
29.69	47	128	0.69	4230	3	-	-			
27.23	51	125	0.74	4100	6	-	-			
24.91	56	109	0.75	3980	385	-	-			
23.19	60	120	0.83	3880	6	-	-			
22.08	63	105	0.81	3820	380	-	-			
19.99	70	130	1.0	3550	1540	-	-	K 29 AD2 9.1 KF 29 AD2 10 KA 29 AD2 8.7 KAF 29 AD2 9.5	197	
16.29	86	130	1.3	3240	1520	-	-			
13.47	104	130	1.5	2970	1490	-	-			
11.94	117	130	1.7	2810	1470	-	-			
9.90	141	110	1.7	3000	1240	-	-			
9.17	153	130	2.3	2470	1400	-	-			
8.53	164	113	2.0	2800	1190	-	-			
7.48	187	123	2.6	2300	1370	-	-			
6.95	201	110	2.4	2590	1160	-	-			
5.75	243	112	3.0	2370	1090	-	-			
5.10	275	110	3.3	2260	1060	-	-			
3.92	358	126	4.9	1910	800	-	-			
3.19	439	110	5.3	1830	820	-	-			
K39 AD.. , n _e = 1400 rpm										300 Nm

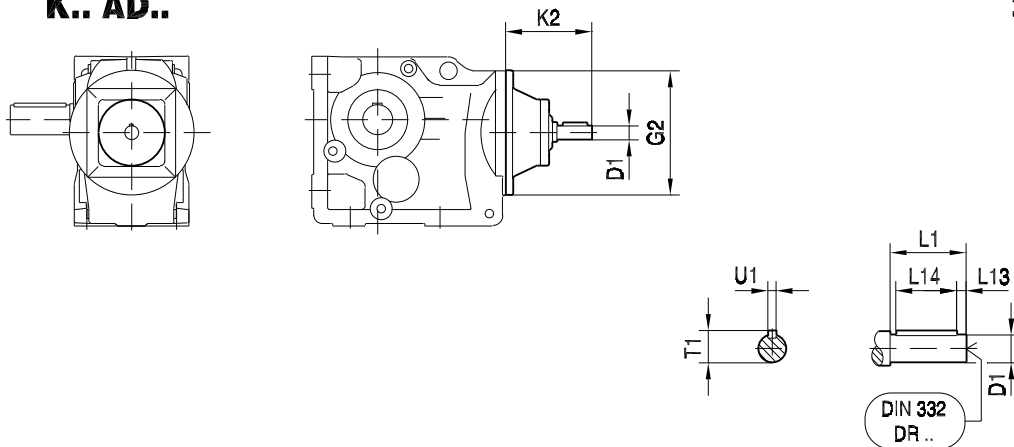
i	n _a [rpm]	Ma _{max} [Nm]	P _e [kW]	F _{Ra} ¹⁾ [N]	F _{Re} [N]	φ _(/R)			m [kg]	
58.24	24	300	0.85	7500	960	-	-			
49.69	28	300	0.99	7440	1540	-	-			
43.45	32	300	1.1	7000	1530	-	-			
41.28	34	300	1.2	6840	1530	-	-			
36.22	39	300	1.4	6440	1510	-	-			
30.72	46	300	1.6	5960	1490	-	-			
27.73	50	300	1.8	5670	1480	-	-			
24.40	57	300	2.0	5330	1460	-	-			
23.04	61	300	2.1	5180	1450	-	-			
19.62	71	295	2.4	4820	1430	-	-			
17.83	79	290	2.6	4630	1420	-	-			
17.06	82	114	1.0	6360	635	-	-			
15.44	91	280	2.9	4380	1400	-	-	K 39	AD2	20
14.56	96	190	2.0	5570	1160	-	-	KF 39	AD2	22
13.44	104	270	3.2	4160	1380	-	-	KA 39	AD2	19
12.73	110	192	2.3	5260	1130	-	-	KAF 39	AD2	21
12.09	116	187	2.4	5180	1140	-	-			
10.61	132	285	4.1	4360	600	-	-			
9.60	146	250	4.2	3640	1320	-	-			
9.00	156	300	5.1	3950	360	-	-			
8.12	172	285	5.3	3840	420	-	-			
7.15	196	265	5.6	3730	535	-	-			
6.75	207	255	5.7	3690	585	-	-			
5.75	244	225	5.9	3590	725	-	-			
5.22	268	210	6.1	3520	760	-	-			
4.52	309	191	6.4	3410	795	-	-			
3.94	356	171	6.6	3320	840	-	-			
2.81	498	128	6.9	3110	940	-	-			
K49 AD.. , n_e = 1400 rpm										500 Nm
75.20	19	475	1.0	9000	545	-	-			
70.19	20	445	1.0	9000	660	-	-			
60.27	23	500	1.4	9000	1420	-	-			
52.94	26	500	1.5	8590	1410	-	-			
50.29	28	500	1.6	8380	1410	-	-			
44.44	32	500	1.8	7900	1380	-	-			
42.10	32	500	1.8	7860	1370	-	-			
37.98	37	500	2.1	7310	1360	-	-			
34.81	40	500	2.3	7000	1350	-	-			
30.55	46	500	2.6	6550	1330	-	-			
28.95	48	500	2.8	6370	1320	-	-			
25.34	55	500	3.2	5940	1290	-	-	K 49	AD2	33
22.83	61	500	3.5	5610	1260	-	-	KF 49	AD2	34
22.50	62	150	1.0	8470	555	-	-	KA 49	AD2	30
21.00	67	140	1.0	8310	675	-	-	KAF 49	AD2	35
20.03	70	500	4.0	5220	1220	-	-			
18.04	78	260	2.2	7300	1110	-	-			
17.67	79	500	4.6	4860	1190	-	-			
15.84	88	260	2.5	6940	1090	-	-			
15.67	89	490	5.0	4590	1160	-	-			
15.05	93	255	2.6	6830	1110	-	-			
13.38	105	470	5.7	4320	1130	-	-			
13.30	105	420	4.8	5740	142	-	-			
12.60	106	420	4.9	5710	86	-	-			
11.75	126	450	6.5	4000	1060	-	-			
11.37	123	415	5.6	5370	1520	-	-			
10.42	134	395	5.8	5250	1560	-	-			
9.14	153	500	8.3	4460	940	-	-			
8.66	162	500	8.8	4340	880	-	-			
7.58	185	500	10.0	4050	735	-	-	K 49	AD3	36
6.83	205	500	11.1	3840	560	-	-	KF 49	AD3	38
5.99	234	500	12.7	3570	380	-	-	KA 49	AD3	33
5.29	265	485	13.9	3400	310	-	-	KAF 49	AD3	38
4.69	299	465	15.1	3270	285	-	-			
4.00	350	435	16.5	3130	275	-	-			
3.52	422	365	16.7	3140	505	-	-			

i	n _a [rpm]	Ma _{max} [Nm]	P _e [kW]	F _{Ra} ¹⁾ [N]	F _{Re} [N]	φ _(/R)			m [kg]	
7137	0.20	500	<0.05	9000	820	-	-		197	
5991	0.23	500	<0.05	9000	820	-	-			
5120	0.27	500	<0.05	9000	820	-	-			
4034	0.35	500	<0.05	9000	820	-	-			
3580	0.39	500	<0.05	9000	820	-	-			
3081	0.45	500	0.05	9000	820	-	-			
2773	0.50	500	0.05	9000	820	-	-			
2545	0.55	500	0.06	9000	820	-	-			
2372	0.59	500	0.06	9000	820	-	-			
2118	0.66	500	0.06	9000	810	-	-			
1941	0.72	500	0.07	9000	810	-	-			
1741	0.80	500	0.07	9000	810	-	-			
1632	0.86	500	0.08	9000	810	-	-			
1521	0.92	500	0.08	9000	810	-	-			
1228	1.1	500	0.10	9000	810	-	-			
1000	1.4	500	0.11	9000	810	-	-			
1424	0.98	500	0.08	9000	800	-	-		197	
1309	1.1	500	0.09	9000	800	-	-			
1120	1.2	500	0.10	9000	795	-	-			
908	1.5	500	0.12	9000	795	-	-			
802	1.8	500	0.13	9000	790	-	-			
701	2.0	500	0.15	9000	795	-	-			
645	2.2	500	0.15	9000	775	-	-			
595	2.4	500	0.17	9000	790	-	-			
543	2.6	500	0.18	9000	775	-	-			
501	2.8	500	0.20	9000	785	-	-			
449	3.1	500	0.22	9000	780	-	-			
401	3.5	500	0.24	9000	780	-	-			
360	3.9	500	0.26	9000	770	-	-			
330	4.2	500	0.28	9000	765	-	-			
300	4.7	500	0.30	9000	745	-	-			
274	5.1	500	0.33	9000	755	-	-			
243	5.8	500	0.37	9000	750	-	-			
217	6.4	500	0.41	9000	730	-	-			
193	7.2	500	0.45	9000	595	-	-			
176	8.0	500	0.50	9000	635	-	-			
152	9.2	500	0.58	9000	660	-	-			
125	11	500	0.69	9000	535	-	-			
99	14	500	0.87	9000	480	-	-			

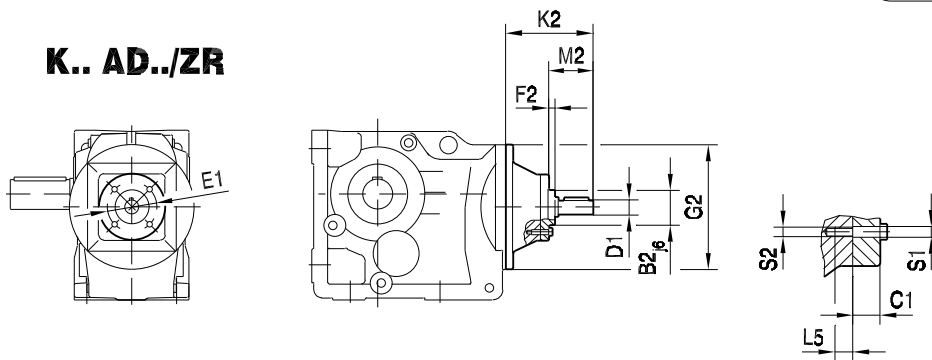
2.17 Maßblätter AD

K.. AD..

33 039 02 01



K.. AD../ZR



		B2	C1	E1	F2	G2	K2	L5	M2	S1	S2	D1	L1	L13	L14	T1	U1
K..19, K..29	AD1	-	-	-	-	120	102	-	-	-	-	16	40	4	32	18	5
	AD2, AD2/ZR	55	13.5	80	8		130	12	50	9	M8	19	40	4	32	21.5	6
K..39	AD2, AD2/ZR	55	13.5	80	8	160	123	12	50	9	M8	19	40	4	32	21.5	6
	AD3, AD3/ZR	70	15.5	105	8		159	16	60	11	M10	24	50	5	40	27	8
K..49	AD2, AD2/ZR	55	13.5	80	8	200	116	12	50	9	M8	19	40	4	32	21.5	6
	AD3, AD3/ZR	70	15.5	105	8		151	16	60	11	M10	24	50	5	40	27	8
	AD4, AD4/ZR	100	16	130	13		224	20	95.5	13.5	M12	38	80	5	70	41	10

3 Vorzüge

- Geringer Energieverbrauch, speziell in Kombination mit DRC..-Motoren
- Hohe zulässige Drehmomente
- Geringe Life-Cycle-Kosten
- Verzahnungswirkungsgrad >90% (bis 96%)
- Nachhaltige und zukunftsichere Investition
- Kompatibel mit bestehenden Lösungen
- Über LIA-Schnittstelle ist ein breites SEW-EURODRIVE-Motor- und -Adapterspektrum anbaubar.
- Kombinierbar mit DRC..-, DR..-, LSPM-, DRU..- und CMP..-Motoren
- Vielseitig einsetzbar
- Variantenreduktion durch variable Anbaubarkeit
- Kostenersparnis in Konstruktion, Abwicklung und Logistik

4 Dokumentation und Software

4.1 Dokumentation

Folgende Druckschriften stehen beim Verkaufsstart zur Verfügung:

Druckschrift	Ausgabe	Sachnummer	
		Deutsch	Englisch
Aktuell "Zweistufige Kegelradgetriebe der Baugrößen K..19 – K..49"	05/2015	21932379	21932387
Betriebsanleitung "Getriebe Typenreihen R..7, F..7, K..7, K..9, S..7, SPIROPLAN® W"	05/2015	21932778	21932786
Flyer "Sie setzen die Standards bei zweistufige Kegelradgetrieben Baugröße K..19, K..29 und Baugröße K..39, K..49"	05/2015	22113096	22113118

4.2 Online-Dokumentation und CAD-Daten

Die Dokumentationen für die Getriebe K..9 befinden sich auf der Dokumentationsseite der SEW-EURODRIVE-Homepage. Die CAD-Daten sind im Bereich des Online Support der Internetseite erhältlich.

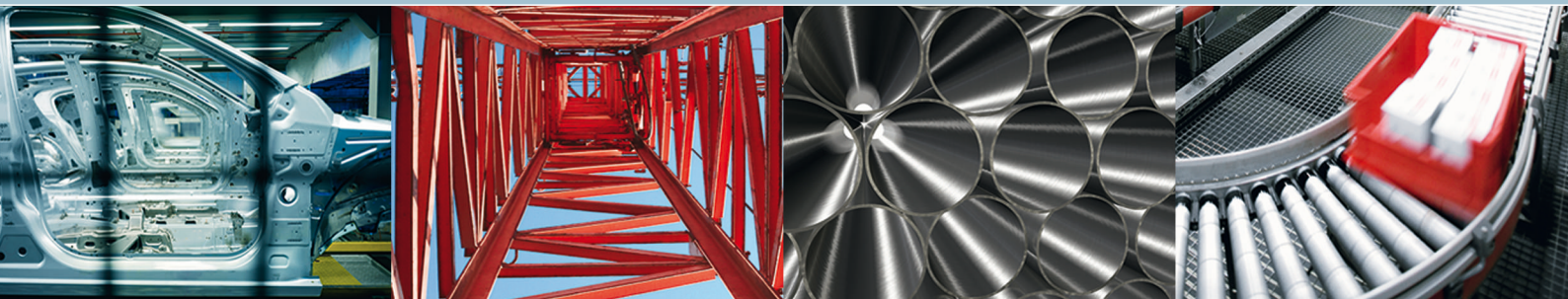
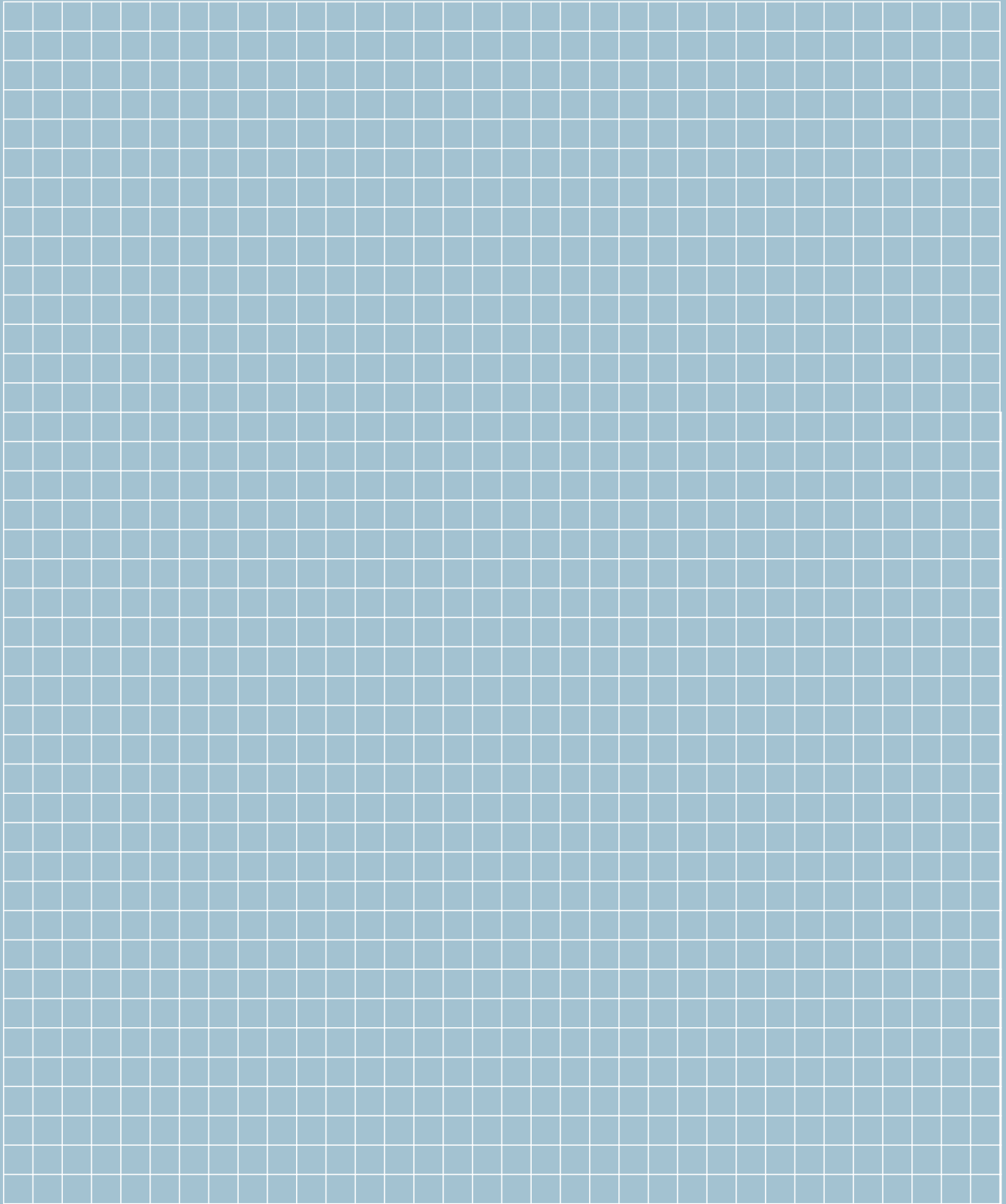
4.3 Projektierungswerkzeug

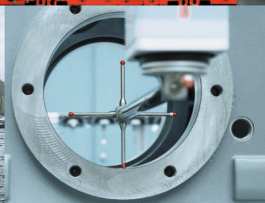
Die Getriebe K..19 / K..29 sind in der SEW Workbench ab Version 2.12 integriert.
Die Getriebe K..39 / K..49 sind in der SEW Workbench ab Version 2.17 integriert.











SEW-EURODRIVE
Driving the world

SEW
EURODRIVE

SEW-EURODRIVE GmbH & Co KG
P.O. Box 3023
76642 BRUCHSAL
GERMANY
Phone +49 7251 75-0
Fax +49 7251 75-1970
sew@sew-eurodrive.com
→ www.sew-eurodrive.com