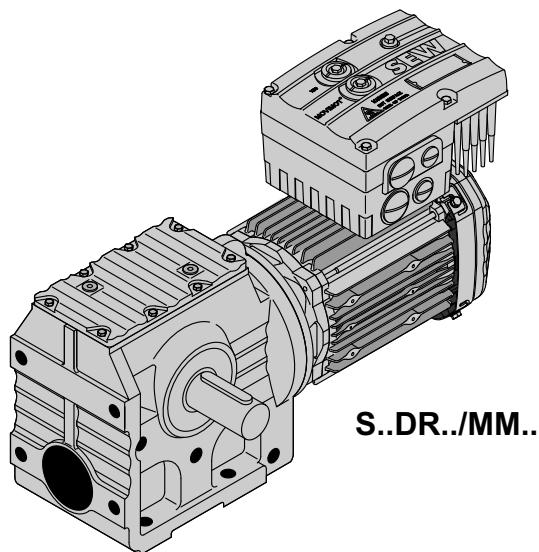


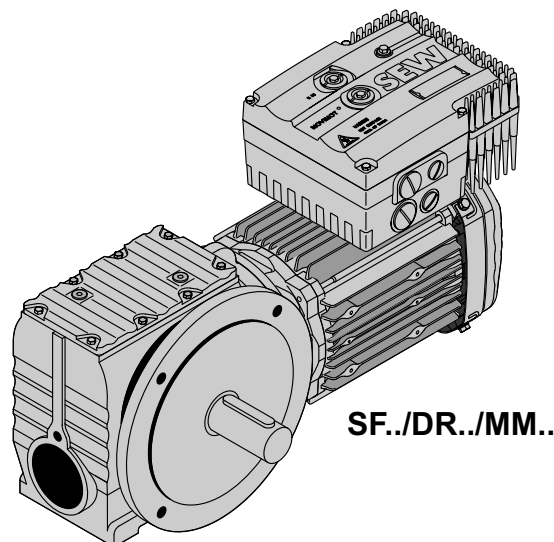
11 S..DR..MM.. helical-worm gearmotors

MM03 – MM15

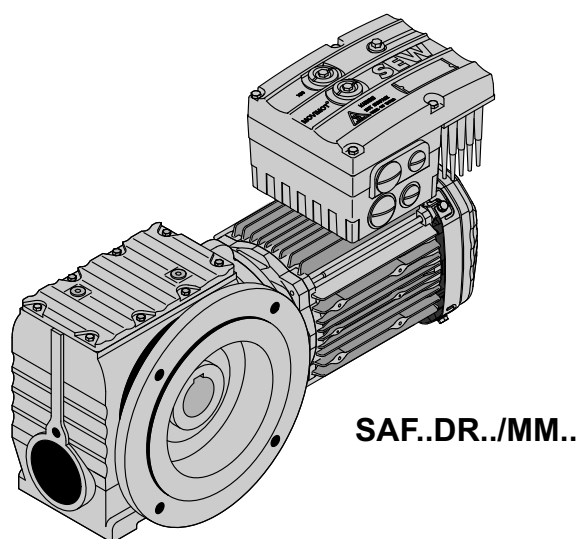


S..DR../MM..

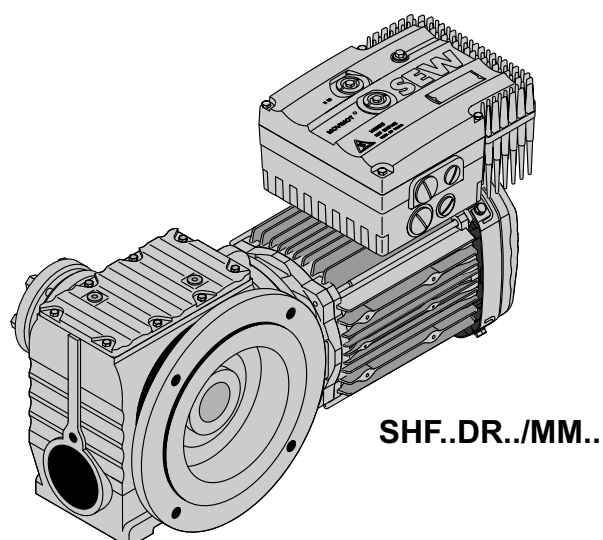
MM22 – MM30



SF../DR../MM..



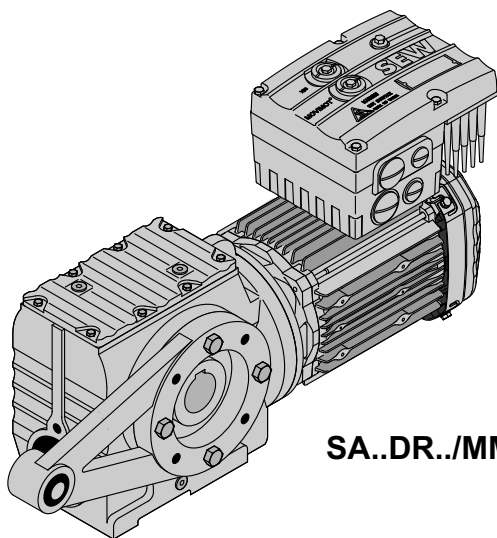
SAF../DR../MM..



SHF../DR../MM..

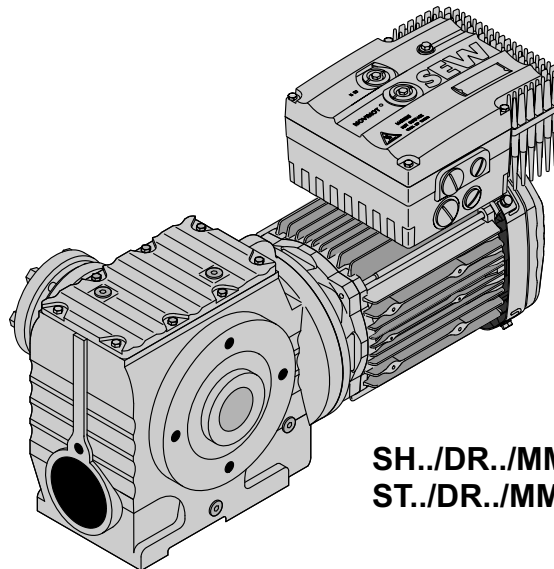
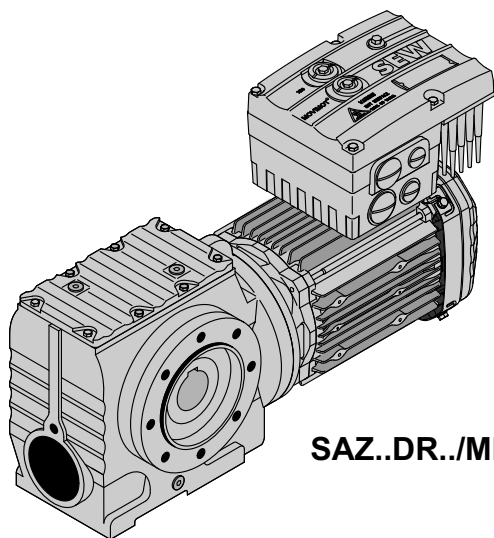
5942711307

MM03 – MM15

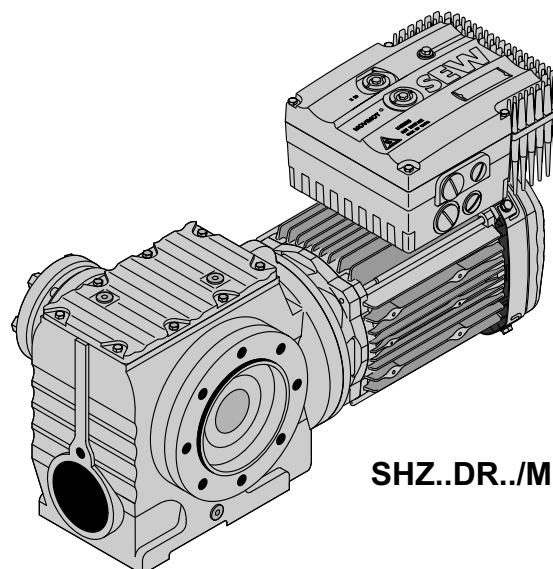


SA..DR../MM..

MM22 – MM30

SH../DR../MM..
ST../DR../MM..

SAZ..DR../MM..



SHZ..DR../MM..

5942717963

22148205/EN – 09/2016

11.1 S..DR..MM.. selection tables [1:10, 290 – 2900 min⁻¹]

P _m = 0.55 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.3 - 13	205 - 265	217.41	10300	1.75	S SF SA SAF	67	DRS	71S4 MM05	31	436
1.5 - 15	182 - 235	190.11	10400	1.95					37	437
1.6 - 16	174 - 220	180.60*	10400	2.1					37	437
1.8 - 18	154 - 200	158.45	10500	2.3					32	438
2.2 - 22	133 - 172	134.40*	10600	2.7					36	437
2.4 - 24	122 - 156	121.33	10600	3.0						
1.4 - 14	183 - 235	201.00*	7580	1.15	S SF SA SAF	57	DRS	71S4 MM05	20	431
1.6 - 16	168 - 215	184.80*	7690	1.25					24	432
1.8 - 18	145 - 190	158.12	7850	1.40					20	433
2.1 - 21	127 - 167	137.05	7960	1.60					23	432
2.3 - 23	120 - 157	128.10*	8000	1.70						
2.6 - 26	105 - 137	110.73	8070	1.85						
3.1 - 31	91 - 118	94.08*	8140	1.90						
3.5 - 35	82 - 107	84.00*	8170	1.90						
4.0 - 40	72 - 92	71.75*	8210	1.90						
4.2 - 42	88 - 103	69.39	7980	2.1						
4.3 - 43	68 - 87	67.20*	8080	1.90						
4.5 - 45	81 - 95	63.80*	7800	2.3						
5.3 - 53	70 - 82	54.59	7460	2.7						
1.8 - 18	142 - 185	158.12	5260	0.80	S SF SA SAF	47	DRS	71S4 MM05	16	426
2.1 - 21	123 - 162	137.05	5380	0.90					20	427
2.3 - 23	116 - 153	128.10*	5430	1.00					17	428
2.6 - 26	102 - 134	110.73	5440	1.10					19	427
3.1 - 31	88 - 116	94.08*	5240	1.25						
3.5 - 35	80 - 104	84.00*	5100	1.25						
4.0 - 40	69 - 90	71.75*	4910	1.20						
4.2 - 42	87 - 101	69.39	4660	1.40						
4.3 - 43	65 - 85	67.20*	4830	1.15						
4.5 - 45	80 - 94	63.80*	4580	1.50						
5.3 - 53	69 - 81	54.59	4420	1.75						
6.1 - 61	60 - 71	47.32	4270	2.0						
6.6 - 66	57 - 66	44.22*	4200	2.1						
7.6 - 76	50 - 58	38.23	4050	2.4						
8.9 - 89	43 - 49	32.48*	3880	2.4						
10 - 100	38 - 44	29.00*	3770	2.4						
12 - 117	33 - 38	24.77	3610	2.3						
12 - 125	31 - 36	23.20*	3550	2.2						
4.1 - 41	66 - 87	71.44*	2980	0.80	S SF SA SAF	37	DRS	71S4 MM05	13	422
4.6 - 46	60 - 78	63.33	2930	0.85					15	423
5.2 - 52	70 - 81	55.93	2650	0.90					13	424
5.7 - 57	64 - 75	51.30*	2620	0.95					15	423
6.6 - 66	55 - 64	43.68	2570	1.10						
7.7 - 77	48 - 56	37.66	2510	1.20						
8.3 - 83	45 - 52	35.10*	2480	1.25						
9.4 - 95	39 - 46	30.68	2420	1.40						
10 - 101	37 - 43	28.76	2390	1.50						
11 - 114	33 - 38	25.38*	2330	1.60						
13 - 129	30 - 34	22.50*	2270	1.65						
15 - 146	29 - 32	19.89	2100	1.35						
16 - 159	27 - 30	18.24*	2060	1.50						
19 - 187	23 - 25	15.53	2000	1.65						
22 - 217	20 - 22	13.39	1930	1.85						
23 - 232	19 - 20	12.48*	1900	1.95						
27 - 266	16 - 18	10.91	1840	2.2						
28 - 284	15 - 17	10.23	1820	2.3						
32 - 321	14 - 15	9.02*	1760	2.4						
36 - 362	12 - 13	8.00*	1710	2.6						
43 - 426	10 - 11	6.80*	1640	2.6						

S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:10, 290 – 2900 min⁻¹]

P_m = 0.75 kW										
n_a min⁻¹	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg	
1.1 - 11	360 - 450	256.47	16000	2.5	S	77	DRS	71M4 MM07	53	441
1.3 - 13	320 - 400	225.26	16000	2.9	SF	77	DRS	71M4 MM07	63	442
1.4 - 14	305 - 380	214.00*	16000	3.0	SA	77	DRS	71M4 MM07	52	443
1.5 - 15	270 - 340	189.09	16000	3.3	SAF	77	DRS	71M4 MM07	59	442
1.3 - 13	280 - 360	217.41	9810	1.30	S SF SA SAF	67 67 67 67	DRS DRS DRS DRS	71M4 MM07 71M4 MM07 71M4 MM07 71M4 MM07	32 38 33 37	436 437 438 437
1.5 - 15	245 - 320	190.11	10000	1.45						
1.6 - 16	235 - 305	180.60*	10100	1.50						
1.8 - 18	210 - 270	158.45	10200	1.70						
2.2 - 22	182 - 230	134.40*	10400	2.0						
2.4 - 24	166 - 210	121.33	10500	2.2						
2.7 - 27	148 - 189	106.75*	10400	2.5						
2.9 - 29	141 - 179	100.80*	10200	2.6						
3.4 - 34	122 - 154	85.83	9760	2.6						
3.9 - 39	133 - 155	75.06	9190	2.8						
1.8 - 18	197 - 255	158.12	7420	1.05	S SF SA SAF	57 57 57 57	DRS DRS DRS DRS	71M4 MM07 71M4 MM07 71M4 MM07 71M4 MM07	21 25 21 24	431 432 433 432
2.1 - 21	174 - 225	137.05	7630	1.20						
2.3 - 23	163 - 210	128.10*	7710	1.25						
2.6 - 26	143 - 187	110.73	7860	1.35						
3.1 - 31	124 - 161	94.08*	7980	1.40						
3.5 - 35	112 - 145	84.00*	8040	1.40						
4.0 - 40	98 - 126	71.75*	8020	1.40						
4.3 - 43	92 - 118	67.20*	7880	1.40						
5.3 - 53	96 - 112	54.59	7240	1.95						
6.1 - 61	84 - 97	47.32	6970	2.3						
6.6 - 66	79 - 91	44.22*	6850	2.4						
7.6 - 76	69 - 79	38.23	6580	2.6						
8.9 - 89	59 - 68	32.48*	6280	2.6						
10 - 100	53 - 61	29.00*	6080	2.7						
12 - 117	46 - 52	24.77	5810	2.7						
2.6 - 26	139 - 183	110.73	5050	0.80	S SF SA SAF	47 47 47 47	DRS DRS DRS DRS	71M4 MM07 71M4 MM07 71M4 MM07 71M4 MM07	17 21 18 20	426 427 428 427
3.1 - 31	120 - 158	94.08*	4910	0.95						
3.5 - 35	109 - 142	84.00*	4800	0.90						
4.0 - 40	95 - 123	71.75*	4650	0.85						
4.3 - 43	89 - 116	67.20*	4590	0.85						
5.3 - 53	94 - 110	54.59	4160	1.25						
6.1 - 61	82 - 96	47.32	4040	1.45						
6.6 - 66	77 - 90	44.22*	3990	1.55						
7.6 - 76	68 - 79	38.23	3860	1.75						
8.9 - 89	58 - 67	32.48*	3720	1.75						
10 - 100	52 - 60	29.00*	3630	1.70						
12 - 117	45 - 52	24.77	3490	1.70	S SF SA SAF	47 47 47 47	DRS DRS DRS DRS	71M4 MM07 71M4 MM07 71M4 MM07 71M4 MM07	17 21 18 20	426 427 428 427
12 - 125	42 - 49	23.20*	3430	1.60						
14 - 143	41 - 45	20.33	3170	2.2						
16 - 165	36 - 39	17.62	3070	2.5						
18 - 176	34 - 37	16.47*	3020	2.7						
20 - 204	29 - 32	14.24	2910	3.0						
6.6 - 66	75 - 88	43.68	2280	0.80	S SF SA SAF	37 37 37 37	DRS DRS DRS DRS	71M4 MM07 71M4 MM07 71M4 MM07 71M4 MM07	14 16 14 16	422 423 424 423
7.7 - 77	65 - 76	37.66	2260	0.90						
8.3 - 83	61 - 71	35.10*	2250	0.90						
9.4 - 95	54 - 63	30.68	2220	1.00						
10 - 101	51 - 59	28.76	2200	1.10						
11 - 114	45 - 52	25.38*	2160	1.20						
13 - 129	40 - 47	22.50*	2120	1.20						
15 - 152	35 - 40	19.13*	2060	1.10						
19 - 187	31 - 34	15.53	1860	1.20						
22 - 217	27 - 30	13.39	1810	1.35						
23 - 232	25 - 28	12.48*	1790	1.45						
27 - 266	22 - 24	10.91	1750	1.60						
28 - 284	21 - 23	10.23	1720	1.65						
32 - 321	19 - 20	9.02*	1680	1.75						
36 - 362	17 - 18	8.00*	1640	1.95						
43 - 426	14 - 15	6.80*	1580	1.90						

P_m = 1.1 kW										
n_a min⁻¹	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg	
1.0 - 10	630 - 775	288.00*	29900	2.7	S	87	DRN	80M4 MM11	94	446
1.1 - 11	570 - 700	258.18	29900	2.9	SF	87	DRN	80M4 MM11	115	447
1.3 - 13	495 - 610	222.40*	30000	3.3	SA	87	DRN	80M4 MM11	91	448
					SAF	87	DRN	80M4 MM11	105	447
1.1 - 11	525 - 665	256.47	15500	1.75	S	77	DRN	80M4 MM11	58	441
1.3 - 13	470 - 590	225.26	15700	1.95						
1.4 - 14	445 - 560	214.00*	15800	2.0						
1.5 - 15	400 - 500	189.09	16000	2.3						
1.8 - 18	345 - 435	161.60*	15800	2.5						
2.0 - 20	320 - 400	148.15	15500	2.7	SAF	77	DRN	80M4 MM11	64	442
1.3 - 13	410 - 530	217.41	8560	0.85	S	67	DRN	80M4 MM11	37	436
1.5 - 15	360 - 470	190.11	9090	1.00						
1.6 - 16	345 - 445	180.60*	9250	1.05						
1.8 - 18	305 - 395	158.45	9590	1.15						
2.2 - 22	265 - 340	134.40*	9910	1.35						
2.4 - 24	240 - 310	121.33	10100	1.50						
2.7 - 27	215 - 275	106.75*	9890	1.70						
2.9 - 29	205 - 260	100.80*	9760	1.75						
3.4 - 34	179 - 225	85.83	9370	1.75						
3.9 - 39	196 - 225	75.06	8750	1.90						
4.4 - 44	173 - 200	65.63	8470	2.2						
4.7 - 47	164 - 190	62.35*	8370	2.3						
5.3 - 53	146 - 168	54.70	8100	2.6						
2.1 - 21	250 - 330	137.05	6760	0.80	S	57	DRN	80M4 MM11	26	431
2.3 - 23	235 - 310	128.10*	6960	0.85						
2.6 - 26	210 - 270	110.73	7300	0.95						
3.1 - 31	182 - 235	94.08*	7570	0.95						
3.5 - 35	165 - 210	84.00*	7720	0.95						
4.0 - 40	144 - 184	71.75*	7640	0.95						
4.3 - 43	136 - 173	67.20*	7520	0.95						
5.3 - 53	140 - 164	54.59	6860	1.35						
6.1 - 61	123 - 143	47.32	6640	1.55	SAF	57	DRN	80M4 MM11	28	432
6.6 - 66	115 - 134	44.22*	6540	1.65	S	57	DRN	80M4 MM11	26	431
7.6 - 76	101 - 116	38.23	6310	1.75						
8.9 - 89	87 - 100	32.48*	6050	1.80						
10 - 100	78 - 89	29.00*	5880	1.80						
12 - 117	67 - 77	24.77	5640	1.80						
12 - 125	63 - 72	23.20*	5540	1.80						
14 - 143	60 - 67	20.33	5160	2.4						
16 - 165	53 - 58	17.62	4970	2.8						
18 - 176	49 - 54	16.47*	4890	2.9	SAF	57	DRN	80M4 MM11	28	432
5.3 - 53	138 - 162	54.59	3700	0.85	S	47	DRN	80M4 MM11	22	426
6.1 - 61	121 - 141	47.32	3640	1.00						
6.6 - 66	113 - 133	44.22*	3610	1.05						
7.6 - 76	99 - 115	38.23	3540	1.20						
8.9 - 89	85 - 99	32.48*	3450	1.20						
10 - 100	77 - 89	29.00*	3380	1.15						
12 - 117	66 - 76	24.77	3280	1.15						
12 - 125	62 - 71	23.20*	3230	1.10						
14 - 143	60 - 66	20.33	2930	1.50						
16 - 165	53 - 58	17.62	2860	1.75						
18 - 176	49 - 54	16.47*	2820	1.85	SAF	47	DRN	80M4 MM11	25	427
20 - 204	43 - 47	14.24	2740	2.1	S	47	DRN	80M4 MM11	22	426
24 - 240	37 - 40	12.10*	2650	2.0						
27 - 269	33 - 36	10.80*	2580	2.0						
31 - 314	28 - 31	9.23*	2490	1.95						
34 - 336	27 - 29	8.64*	2450	1.90						
40 - 398	23 - 24	7.28	2350	1.70	SAF	47	DRN	80M4 MM11	25	427

S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:10, 290 – 2900 min⁻¹]

P _m = 1.1 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
11 - 114	66 - 77	25.38*	1860	0.80						
13 - 129	59 - 68	22.50*	1850	0.85						
19 - 187	46 - 51	15.53	1620	0.85						
22 - 217	40 - 44	13.39	1600	0.95						
23 - 232	37 - 41	12.48*	1600	1.00						
27 - 266	33 - 36	10.91	1580	1.10						
28 - 284	31 - 34	10.23	1560	1.15						
32 - 321	27 - 30	9.02*	1540	1.20						
36 - 362	24 - 26	8.00*	1510	1.30	S	37	DRN	80M4 MM11	19	422
43 - 426	21 - 23	6.80*	1470	1.30	SF	37	DRN	80M4 MM11	20	423
					SA	37	DRN	80M4 MM11	19	424
					SAF	37	DRN	80M4 MM11	20	423

P _m = 1.5 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.0 - 10	860 - 1060	288.00*	29600	1.95	S SF SA SAF	87	DRN	90S4 MM15	99	446
1.1 - 11	775 - 960	258.18	29700	2.1					120	447
1.3 - 13	675 - 830	222.40*	29800	2.4					96	448
1.4 - 14	620 - 765	202.96	29900	2.6					110	447
1.6 - 16	560 - 685	180.00*	29900	2.8						
1.9 - 19	475 - 580	151.30	30000	3.1						
1.3 - 13	640 - 800	225.26	14900	1.45	S SF SA SAF	77	DRN	90S4 MM15	63	441
1.4 - 14	610 - 765	214.00*	15000	1.50					72	442
1.5 - 15	545 - 685	189.09	15400	1.65					62	443
1.8 - 18	470 - 590	161.60*	15100	1.85					69	442
2.0 - 20	435 - 545	148.15	14800	1.95						
2.2 - 22	390 - 480	130.00*	14400	2.1						
2.4 - 24	370 - 460	123.20*	14200	2.2						
2.7 - 27	330 - 405	107.83	13700	2.4						
3.0 - 30	300 - 365	97.14	13400	2.5						
3.4 - 34	265 - 320	85.22	12900	2.7						
3.9 - 39	290 - 325	75.09	12100	3.1						
1.8 - 18	420 - 540	158.45	8450	0.85	S SF SA SAF	67	DRN	90S4 MM15	43	436
2.2 - 22	360 - 465	134.40*	9110	1.00					50	437
2.4 - 24	330 - 425	121.33	9420	1.10					44	438
2.7 - 27	295 - 375	106.75*	9350	1.25					48	437
2.9 - 29	280 - 355	100.80*	9240	1.30						
3.4 - 34	240 - 305	85.83	8930	1.30						
3.7 - 37	220 - 280	78.00*	8740	1.30						
4.4 - 44	235 - 270	65.63	8030	1.60						
4.7 - 47	220 - 255	62.35*	7940	1.70	S SF SA SAF	67	DRN	90S4 MM15	43	436
5.3 - 53	198 - 225	54.70	7730	1.90					50	437
6.2 - 62	170 - 195	46.40*	7440	2.2					44	438
6.9 - 69	155 - 177	41.89	7270	2.4					48	437
7.9 - 79	137 - 156	36.85	7040	2.4						
8.3 - 83	130 - 148	34.80*	6940	2.5						
9.8 - 98	112 - 126	29.63	6670	2.5						
11 - 108	103 - 115	26.93	6500	2.4						
6.1 - 61	167 - 195	47.32	6260	1.15	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	90S4 MM15 90S4 MM15 90S4 MM15 90S4 MM15	32 35 31 34	431 432 433 432
6.6 - 66	157 - 183	44.22*	6180	1.20	S SF SA SAF	57	DRN	90S4 MM15	32	431
7.6 - 76	137 - 159	38.23	6000	1.30					35	432
8.9 - 89	118 - 136	32.48*	5790	1.35					31	433
10 - 100	106 - 122	29.00*	5640	1.35					34	432
12 - 117	92 - 105	24.77	5430	1.35						
12 - 125	86 - 98	23.20*	5350	1.35						
15 - 148	74 - 83	19.54	5120	1.30						
16 - 165	72 - 79	17.62	4770	2.0						
18 - 176	67 - 74	16.47*	4700	2.1						
20 - 204	59 - 64	14.24	4540	2.2						
24 - 240	50 - 55	12.10*	4350	2.2						
27 - 269	45 - 49	10.80*	4230	2.2						

P _m = 1.5 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
7.6 - 76	135 - 157	38.23	3170	0.90						
8.9 - 89	116 - 135	32.48*	3130	0.85						
10 - 100	104 - 121	29.00*	3090	0.85						
12 - 117	90 - 104	24.77	3030	0.85						
12 - 125	85 - 97	23.20*	3000	0.80						
16 - 165	72 - 79	17.62	2620	1.25						
18 - 176	67 - 74	16.47*	2600	1.35						
20 - 204	58 - 64	14.24	2550	1.50						
24 - 240	50 - 55	12.10*	2480	1.50	S	47	DRN	90S4 MM15	28	426
27 - 269	45 - 49	10.80*	2430	1.50						
31 - 314	39 - 42	9.23*	2360	1.45	SF	47	DRN	90S4 MM15	32	427
34 - 336	36 - 39	8.64*	2330	1.40	SA	47	DRN	90S4 MM15	29	428
40 - 398	31 - 33	7.28	2240	1.25	SAF	47	DRN	90S4 MM15	31	427
27 - 266	45 - 49	10.91	1270	0.80	S	37	DRN	90S4 MM15	25	422
28 - 284	42 - 46	10.23	1320	0.85	SF	37	DRN	90S4 MM15	26	423
32 - 321	37 - 41	9.02*	1380	0.90	SA	37	DRN	90S4 MM15	25	424
36 - 362	33 - 36	8.00*	1360	0.95	SAF	37	DRN	90S4 MM15	26	423
43 - 426	28 - 31	6.80*	1340	0.95						

P _m = 2.2 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.5 - 15	800 - 1000	189.09	13800	1.15	S SF SA SAF	77 77 77 77	DRN DRN DRN DRN	90L4 MM22 90L4 MM22 90L4 MM22 90L4 MM22	66 76 65 72	441 442 443 442
1.8 - 18	695 - 870	161.60*	13900	1.25						
2.0 - 20	640 - 800	148.15	13700	1.35						
2.2 - 22	570 - 710	130.00*	13400	1.45						
2.4 - 24	545 - 675	123.20*	13200	1.50						
2.7 - 27	480 - 595	107.83	12900	1.65						
3.0 - 30	440 - 535	97.14	12600	1.70						
3.4 - 34	390 - 475	85.22	12200	1.85						
4.3 - 44	315 - 375	66.67	11600	2.0	S SF SA SAF	67 67 67 67	DRN DRN DRN DRN	90L4 MM22 90L4 MM22 90L4 MM22 90L4 MM22	46 53 47 52	436 437 438 437
4.6 - 46	360 - 400	63.03	10900	2.5						
5.1 - 51	270 - 320	56.92	11100	1.95						
5.4 - 54	310 - 345	53.87	10600	3.0						
2.7 - 27	430 - 550	106.75*	8340	0.85						
2.9 - 29	410 - 525	100.80*	8330	0.90						
3.4 - 34	355 - 450	85.83	8150	0.90						
3.7 - 37	325 - 410	78.00*	8020	0.90						
5.3 - 53	290 - 335	54.70	7080	1.30	S SF SA SAF	67 67 67 67	DRN DRN DRN DRN	90L4 MM22 90L4 MM22 90L4 MM22 90L4 MM22	46 53 47 52	436 437 438 437
6.2 - 62	245 - 285	46.40*	6890	1.50						
6.9 - 69	225 - 255	41.89	6760	1.65						
7.9 - 79	200 - 225	36.85	6600	1.65						
8.3 - 83	191 - 215	34.80*	6520	1.70						
9.8 - 98	164 - 185	29.63	6310	1.65						
11 - 108	151 - 169	26.93	6170	1.65						
14 - 142	125 - 135	20.37	5480	2.3						
17 - 168	107 - 115	17.28*	5300	2.7	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	90L4 MM22 90L4 MM22 90L4 MM22 90L4 MM22	35 39 35 37	431 432 433 432
19 - 186	97 - 104	15.60*	5180	2.8						
7.6 - 76	200 - 230	38.23	5460	0.90						
8.9 - 89	173 - 199	32.48*	5330	0.90						
10 - 100	156 - 179	29.00*	5230	0.90						
12 - 117	135 - 153	24.77	5080	0.90						
12 - 125	127 - 144	23.20*	5020	0.90						
15 - 148	108 - 122	19.54	4840	0.90						
16 - 165	106 - 116	17.62	4420	1.40						
18 - 176	99 - 108	16.47*	4360	1.45						
20 - 204	86 - 94	14.24	4250	1.50						
24 - 240	74 - 80	12.10*	4110	1.50						
27 - 269	66 - 72	10.80*	4010	1.50						

S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:10, 290 – 2900 min⁻¹]

P _m = 2.2 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
20 - 204	86 - 94	14.24	2200	1.05						
24 - 240	73 - 80	12.10*	2190	1.05	S	47	DRN	90L4 MM22	31	426
27 - 269	66 - 72	10.80*	2170	1.00	SF	47	DRN	90L4 MM22	35	427
31 - 314	57 - 61	9.23*	2140	1.00	SA	47	DRN	90L4 MM22	32	428
34 - 336	53 - 58	8.64*	2120	0.95	SAF	47	DRN	90L4 MM22	34	427
40 - 398	45 - 49	7.28	2070	0.85						

P _m = 3.0 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.0 - 10	1790 - 2180	286.40*	36000	1.70	S SF SA SAF	97	DRN	100LS4 MM30	165	451
1.1 - 11	1650 - 2010	262.22	36200	1.80					200	452
1.2 - 13	1470 - 1790	231.67	36400	1.95					160	453
1.5 - 15	1270 - 1530	196.52	36600	2.2					185	452
1.6 - 16	1180 - 1410	180.95	36600	2.3						
1.8 - 18	1060 - 1270	161.74	36700	2.5						
2.0 - 20	960 - 1150	145.60*	36800	2.6						
1.1 - 11	1550 - 1920	258.18	28600	1.10	S SF SA SAF	87	DRN	100LS4 MM30	105	446
1.3 - 13	1350 - 1670	222.40*	28900	1.20					130	447
1.4 - 14	1240 - 1530	202.96	29100	1.30					105	448
1.6 - 16	1120 - 1370	180.00*	29300	1.40					120	447
1.9 - 19	950 - 1160	151.30	29500	1.55						
2.1 - 21	880 - 1070	139.05	29600	1.65						
2.4 - 23	795 - 950	123.48	29700	1.75						
2.6 - 26	720 - 860	110.40*	29800	1.90						
2.9 - 29	655 - 775	99.26	29900	2.0						
3.4 - 34	575 - 680	86.15	29900	2.0						
3.5 - 35	650 - 720	81.76	29900	2.0						
3.8 - 38	520 - 610	77.14	30000	2.0						
4.1 - 41	565 - 620	70.43	29900	2.4						
1.5 - 15	1090 - 1370	189.09	7310	0.85	S SF SA SAF	77	DRN	100LS4 MM30	70	441
1.8 - 18	940 - 1180	161.60*	12400	0.90					80	442
2.0 - 20	870 - 1090	148.15	12400	1.00					69	443
2.2 - 22	780 - 960	130.00*	12300	1.05					76	442
2.4 - 24	740 - 920	123.20*	12200	1.10						
2.7 - 27	660 - 810	107.83	12000	1.20						
3.0 - 30	600 - 735	97.14	11800	1.25						
3.4 - 34	535 - 645	85.22	11500	1.35						
3.9 - 39	475 - 575	75.20*	11200	1.45						
4.3 - 44	430 - 510	66.67	11000	1.45						
4.6 - 46	490 - 545	63.03	10200	1.85						
5.1 - 51	370 - 440	56.92	10600	1.45	S SF SA SAF	77	DRN	100LS4 MM30	70	441
5.4 - 54	420 - 470	53.87	9930	2.2					80	442
5.9 - 59	390 - 430	49.38	9770	2.3					69	443
6.7 - 67	340 - 380	43.33	9520	2.5					76	442
7.1 - 71	325 - 360	41.07	9420	2.6						
5.3 - 53	395 - 455	54.70	6330	0.95	S SF SA SAF	67	DRN	100LS4 MM30	50	436
6.2 - 62	340 - 390	46.40*	6260	1.10					57	437
6.9 - 69	305 - 350	41.89	6190	1.20					51	438
7.9 - 79	270 - 310	36.85	6090	1.20					55	437
8.3 - 83	260 - 295	34.80*	6040	1.25						
9.8 - 98	220 - 250	29.63	5900	1.25						
11 - 108	205 - 230	26.93	5800	1.20						
12 - 124	180 - 200	23.33	5650	1.20	S SF SA SAF	67	DRN	100LS4 MM30	50	436
14 - 142	170 - 185	20.37	5090	1.70					57	437
17 - 168	145 - 157	17.28*	4960	2.0					51	438
19 - 186	132 - 142	15.60*	4880	2.1					55	437
21 - 211	117 - 125	13.73*	4760	2.1						
22 - 224	110 - 118	12.96*	4700	2.1						
26 - 263	95 - 101	11.03	4550	2.1						
29 - 289	86 - 92	10.03	4450	2.1						
33 - 334	75 - 80	8.69	4310	2.1						
38 - 384	66 - 70	7.56*	4160	2.0						

P_m = 3.0 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
20 - 204	117 - 128	14.24	3920	1.10	S	57	DRN	100LS4 MM30	39	431
24 - 240	101 - 109	12.10*	3830	1.10					43	432
27 - 269	90 - 98	10.80*	3760	1.10					39	433
31 - 314	78 - 84	9.23*	3660	1.10					41	432
34 - 336	73 - 78	8.64*	3610	1.10						
40 - 398	62 - 66	7.28	3480	1.10	SAF	57	DRN	100LS4 MM30		

P_m = 4.0 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.0 - 10	2380 - 2910	286.40*	35100	1.25	S	97	DRN	100L4 MM40	170	451
1.1 - 11	2200 - 2680	262.22	35400	1.35					205	452
1.2 - 13	1960 - 2380	231.67	35800	1.45					165	453
1.5 - 15	1690 - 2040	196.52	36100	1.65					195	452
1.6 - 16	1570 - 1880	180.95	36300	1.70						
1.8 - 18	1420 - 1690	161.74	36400	1.85	SF	97	DRN	100L4 MM40		
2.0 - 20	1290 - 1530	145.60*	36600	1.95	SA	97	DRN	100L4 MM40		
2.2 - 22	1180 - 1390	131.85	36700	2.1	SAF	97	DRN	100L4 MM40		
2.5 - 25	1060 - 1240	116.92	36700	2.2						
2.7 - 27	960 - 1120	105.71	36800	2.3						
1.1 - 11	2070 - 2560	258.18	27400	0.80	S	87	DRN	100L4 MM40	115	446
1.3 - 13	1810 - 2220	222.40*	28000	0.90					135	447
1.4 - 14	1660 - 2040	202.96	28400	0.95					110	448
1.6 - 16	1490 - 1820	180.00*	28700	1.05					125	447
1.9 - 19	1270 - 1550	151.30	29100	1.15						
2.1 - 21	1180 - 1430	139.05	29200	1.25	SF	87	DRN	100L4 MM40		
2.4 - 23	1060 - 1270	123.48	29400	1.30	SA	87	DRN	100L4 MM40		
2.6 - 26	960 - 1150	110.40*	29600	1.40	SAF	87	DRN	100L4 MM40		
2.9 - 29	870 - 1030	99.26	29700	1.50						
3.4 - 34	765 - 900	86.15	29800	1.55						
3.5 - 35	870 - 960	81.76	29700	1.55						
3.8 - 38	695 - 810	77.14	29800	1.50						
4.1 - 41	755 - 830	70.43	29800	1.75						
4.5 - 45	690 - 760	64.27	29200	1.95						
5.1 - 51	615 - 675	57.00*	28400	2.2						
2.2 - 22	1040 - 1290	130.00*	10900	0.80	S	77	DRN	100L4 MM40	77	441
2.4 - 24	990 - 1220	123.20*	10900	0.80					87	442
2.7 - 27	880 - 1080	107.83	10800	0.90					77	443
3.0 - 30	800 - 980	97.14	10700	0.95					83	442
3.4 - 34	710 - 860	85.22	10600	1.00						
3.9 - 39	635 - 765	75.20*	10400	1.10	SF	77	DRN	100L4 MM40		
4.3 - 44	570 - 680	66.67	10200	1.10	SA	77	DRN	100L4 MM40		
4.6 - 46	655 - 730	63.03	9290	1.40	SAF	77	DRN	100L4 MM40		
5.1 - 51	495 - 585	56.92	9960	1.10						
5.4 - 54	560 - 625	53.87	9150	1.60						
5.9 - 59	520 - 575	49.38	9050	1.75						
6.7 - 67	455 - 505	43.33	8890	1.90						
7.1 - 71	435 - 480	41.07	8820	1.95	S	77	DRN	100L4 MM40	77	441
8.1 - 81	385 - 420	35.94	8620	2.1	SF	77	DRN	100L4 MM40	87	442
9.0 - 90	345 - 380	32.38	8460	2.3	SA	77	DRN	100L4 MM40	77	443
					SAF	77	DRN	100L4 MM40	83	442

S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:10, 290 – 2900 min⁻¹]**P_m = 4.0 kW**

n_a min⁻¹	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg	
6.2 - 62	450 - 520	46.40*	5460	0.85						
6.9 - 69	410 - 470	41.89	5470	0.90						
7.9 - 79	365 - 415	36.85	5460	0.90						
8.3 - 83	345 - 390	34.80*	5450	0.95						
9.8 - 98	295 - 335	29.63	5380	0.90						
11 - 108	270 - 305	26.93	5330	0.90						
12 - 124	235 - 265	23.33	5240	0.90	S	67	DRN	100L4 MM40	57	436
14 - 142	225 - 245	20.37	4600	1.30	SF	67	DRN	100L4 MM40	64	437
17 - 168	194 - 205	17.28*	4550	1.50	SA	67	DRN	100L4 MM40	58	438
19 - 186	176 - 189	15.60*	4500	1.55	SAF	67	DRN	100L4 MM40	63	437
21 - 211	155 - 167	13.73*	4430	1.60						
22 - 224	147 - 158	12.96*	4390	1.60						
26 - 263	126 - 135	11.03	4280	1.60						
29 - 289	115 - 123	10.03	4210	1.60						
33 - 334	100 - 106	8.69	4100	1.55						
38 - 384	88 - 93	7.56*	3980	1.50						
20 - 204	157 - 171	14.24	3510	0.80						
24 - 240	134 - 146	12.10*	3480	0.85						
27 - 269	120 - 130	10.80*	3450	0.85						
31 - 314	104 - 112	9.23*	3390	0.85	S	57	DRN	100L4 MM40	46	431
34 - 336	97 - 105	8.64*	3360	0.85	SF	57	DRN	100L4 MM40	50	432
40 - 398	83 - 88	7.28	3280	0.80	SA	57	DRN	100L4 MM40	46	433
45 - 453	74 - 78	6.40*	3170	0.80	SAF	57	DRN	100L4 MM40	49	432
54 - 538	63 - 66	5.39	3070	0.80						
61 - 609	56 - 59	4.76	2990	0.80						
72 - 725	47 - 49	4.00*	2880	0.75						

11.2 S..DR..MM.. selection tables [1:5, 280 – 1400 min⁻¹]

P _m = 0.37 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.3 - 6.4	285 - 340	217.41	9920	1.50	S SF SA SAF	67 67 67 67	DRS DRS DRS DRS	71S4 MM03 71S4 MM03 71S4 MM03 71S4 MM03	31 37 32 36	436 437 438 437
1.5 - 7.4	250 - 300	190.11	10100	1.70						
1.6 - 7.8	240 - 290	180.60*	10200	1.80						
1.8 - 8.8	210 - 255	158.45	10300	2.0						
2.1 - 10	185 - 220	134.40*	10400	2.3						
2.3 - 12	169 - 200	121.33	10500	2.5						
2.6 - 13	151 - 182	106.75*	10500	2.9						
1.4 - 7.0	255 - 300	201.00*	7080	1.00	S SF SA SAF	57 57 57 57	DRS DRS DRS DRS	71S4 MM03 71S4 MM03 71S4 MM03 71S4 MM03	20 24 20 23	431 432 433 432
1.5 - 7.6	230 - 275	184.80*	7260	1.05						
1.8 - 8.8	200 - 240	158.12	7530	1.20						
2.0 - 10	177 - 210	137.05	7710	1.35						
2.2 - 11	166 - 200	128.10*	7780	1.45						
2.5 - 13	146 - 178	110.73	7900	1.65						
3.0 - 15	126 - 154	94.08*	8010	1.90						
3.3 - 17	114 - 139	84.00*	8070	2.1						
3.9 - 20	100 - 121	71.75*	8130	2.4						
4.0 - 20	122 - 137	69.39	8080	1.80						
4.2 - 21	94 - 114	67.20*	8150	2.5						
4.4 - 22	113 - 126	63.80*	8110	1.95						
5.1 - 26	97 - 109	54.59	8160	2.2						
5.9 - 30	85 - 96	47.32	8200	2.6						
6.3 - 32	80 - 90	44.22*	8210	2.7						
2.0 - 10	172 - 205	137.05	5130	0.80	S SF SA SAF	47 47 47 47	DRS DRS DRS DRS	71S4 MM03 71S4 MM03 71S4 MM03 71S4 MM03	16 20 17 19	426 427 428 427
2.2 - 11	161 - 196	128.10*	5200	0.85						
2.5 - 13	141 - 173	110.73	5330	0.95						
3.0 - 15	122 - 149	94.08*	5440	1.10						
3.3 - 17	111 - 135	84.00*	5510	1.25						
3.9 - 20	96 - 118	71.75*	5590	1.40						
4.0 - 20	122 - 135	69.39	5470	1.15						
4.2 - 21	91 - 111	67.20*	5620	1.50						
4.4 - 22	112 - 125	63.80*	5520	1.25						
5.1 - 26	96 - 108	54.59	5580	1.45						
5.9 - 30	84 - 94	47.32	5400	1.65						
6.3 - 32	79 - 89	44.22*	5310	1.75						
7.3 - 37	69 - 77	38.23	5120	2.0						
8.6 - 43	59 - 66	32.48*	4920	2.3						
9.7 - 48	53 - 60	29.00*	4770	2.6						
11 - 57	46 - 51	24.77	4580	3.0						
12 - 60	43 - 48	23.20*	4500	3.1						
14 - 69	42 - 45	20.33	4180	2.4						
4.4 - 22	83 - 101	63.33	3000	0.80	S SF SA SAF	37 37 37 37	DRS DRS DRS DRS	71S4 MM03 71S4 MM03 71S4 MM03 71S4 MM03	13 15 13 15	422 423 424 423
5.5 - 27	89 - 99	51.30*	3000	0.80						
6.4 - 32	76 - 86	43.68	3000	0.95						
7.4 - 37	66 - 75	37.66	3000	1.05						
8.0 - 40	62 - 70	35.10*	3000	1.10						
9.1 - 46	55 - 62	30.68	3000	1.25						
9.7 - 49	52 - 58	28.76	3000	1.30						
11 - 55	46 - 52	25.38*	2940	1.45						
12 - 62	41 - 46	22.50*	2860	1.60						
14 - 70	41 - 44	19.89	2630	1.20						
15 - 77	37 - 40	18.24*	2590	1.30						
18 - 90	32 - 34	15.53	2510	1.45						
21 - 105	28 - 30	13.39	2430	1.65						
22 - 112	26 - 28	12.48*	2400	1.70						
26 - 128	23 - 24	10.91	2320	1.95						
27 - 137	21 - 23	10.23	2290	2.0						
31 - 155	19 - 20	9.02*	2220	2.3						
35 - 175	17 - 18	8.00*	2160	2.5						
41 - 206	15 - 15	6.80*	2070	2.8						

S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:5, 280 – 1400 min⁻¹]

P _m = 0.55 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.1 - 5.5	545 - 640	256.47	15600	1.95	S SF SA SAF	77 77 77 77	DRS DRS DRS DRS	71M4 MM05 71M4 MM05 71M4 MM05 71M4 MM05	53	441
1.2 - 6.2	485 - 570	225.26	15800	2.2					63	442
1.3 - 6.5	460 - 545	214.00*	15900	2.3					52	443
1.5 - 7.4	410 - 485	189.09	16000	2.6					59	442
1.7 - 8.7	355 - 420	161.60*	16000	3.0						
1.3 - 6.4	425 - 505	217.41	8780	1.00	S SF SA SAF	67 67 67 67	DRS DRS DRS DRS	71M4 MM05 71M4 MM05 71M4 MM05 71M4 MM05	32	436
1.5 - 7.4	375 - 450	190.11	9230	1.15					38	437
1.6 - 7.8	355 - 430	180.60*	9380	1.20					33	438
1.8 - 8.8	315 - 380	158.45	9680	1.35					37	437
2.1 - 10	275 - 330	134.40*	9970	1.55						
2.3 - 12	250 - 300	121.33	10100	1.70						
2.6 - 13	220 - 270	106.75*	10200	1.90						
2.8 - 14	210 - 255	100.80*	10300	2.0						
3.3 - 16	185 - 220	85.83	10400	2.3						
3.7 - 19	200 - 225	75.06	10400	2.1						
4.3 - 21	178 - 199	65.63	10500	2.4						
4.5 - 22	170 - 189	62.35*	10500	2.5						
1.8 - 8.8	295 - 360	158.12	6440	0.80	S SF SA SAF	57 57 57 57	DRS DRS DRS DRS	71M4 MM05 71M4 MM05 71M4 MM05 71M4 MM05	21	431
2.0 - 10	260 - 315	137.05	6900	0.90					25	432
2.2 - 11	245 - 300	128.10*	7080	1.00					21	433
2.5 - 13	215 - 260	110.73	7380	1.10					24	432
3.0 - 15	188 - 225	94.08*	7620	1.30						
3.3 - 17	170 - 205	84.00*	7760	1.45						
3.9 - 20	148 - 180	71.75*	7900	1.60						
4.2 - 21	140 - 169	67.20*	7940	1.70						
5.1 - 26	145 - 163	54.59	7980	1.50						
5.9 - 30	127 - 142	47.32	8060	1.70						
6.3 - 32	119 - 133	44.22*	8090	1.85						
7.3 - 37	104 - 116	38.23	8140	2.1						
8.6 - 43	89 - 100	32.48*	7910	2.5						
3.3 - 17	164 - 200	84.00*	5170	0.85					S SF SA SAF	47 47 47 47
3.9 - 20	143 - 175	71.75*	5320	0.95	21	427				
4.2 - 21	135 - 165	67.20*	5370	1.00	18	428				
5.1 - 26	143 - 160	54.59	5110	0.95	20	427				
5.9 - 30	125 - 140	47.32	4990	1.10						
6.3 - 32	117 - 132	44.22*	4930	1.20						
7.3 - 37	102 - 115	38.23	4790	1.35						
8.6 - 43	88 - 99	32.48*	4630	1.55						
9.7 - 48	79 - 89	29.00*	4520	1.75						
11 - 57	68 - 76	24.77	4350	2.0						
12 - 60	64 - 72	23.20*	4290	2.1						
14 - 69	62 - 67	20.33	3930	1.65						
16 - 79	54 - 58	17.62	3810	1.90						
17 - 85	51 - 55	16.47*	3760	2.0						
20 - 98	44 - 48	14.24	3630	2.3						
23 - 116	38 - 41	12.10*	3490	2.7						
9.1 - 46	81 - 92	30.68	2680	0.85	S SF SA SAF	37 37 37 37	DRS DRS DRS DRS	71M4 MM05 71M4 MM05 71M4 MM05 71M4 MM05	14	422
9.7 - 49	77 - 86	28.76	2660	0.85					16	423
11 - 55	68 - 77	25.38*	2630	0.95					14	424
12 - 62	61 - 68	22.50*	2590	1.05					16	423
15 - 73	53 - 59	19.13*	2530	1.20						
18 - 90	47 - 51	15.53	2260	1.00						
21 - 105	41 - 44	13.39	2210	1.10						
22 - 112	39 - 41	12.48*	2190	1.15						
26 - 128	34 - 36	10.91	2140	1.30						
27 - 137	32 - 34	10.23	2120	1.40						
31 - 155	28 - 30	9.02*	2070	1.50						
35 - 175	25 - 27	8.00*	2020	1.65						
41 - 206	22 - 23	6.80*	1960	1.85						

P _m = 0.75 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
0.97 - 4.9	880 - 1030	288.00*	29700	2.2	S	87	DRN	80M4 MM07	94	446
1.1 - 5.4	800 - 930	258.18	29700	2.4	SF	87	DRN	80M4 MM07	115	447
1.3 - 6.3	700 - 810	222.40*	29800	2.8	SA	87	DRN	80M4 MM07	91	448
1.4 - 6.9	645 - 750	202.96	29900	3.0	SAF	87	DRN	80M4 MM07	105	447
1.1 - 5.5	745 - 870	256.47	14500	1.45						
1.2 - 6.2	660 - 780	225.26	15000	1.60						
1.3 - 6.5	630 - 745	214.00*	15200	1.70						
1.5 - 7.4	560 - 665	189.09	15500	1.90						
1.7 - 8.7	485 - 575	161.60*	15800	2.2						
1.9 - 9.4	450 - 535	148.15	15900	2.3						
2.1 - 11	400 - 475	130.00*	16000	2.5						
2.3 - 11	380 - 450	123.20*	16000	2.6						
2.6 - 13	340 - 400	107.83	16000	2.9	SAF	77	DRN	80M4 MM07	64	442
1.5 - 7.4	510 - 615	190.11	7670	0.85						
1.6 - 7.8	485 - 585	180.60*	7980	0.90						
1.8 - 8.8	430 - 520	158.45	8640	1.00						
2.1 - 10	375 - 450	134.40*	9230	1.15						
2.3 - 12	340 - 410	121.33	9500	1.25						
2.6 - 13	305 - 365	106.75*	9780	1.40						
2.8 - 14	290 - 345	100.80*	9880	1.50						
3.3 - 16	250 - 300	85.83	10100	1.70						
3.7 - 19	275 - 305	75.06	10100	1.55						
4.3 - 21	240 - 270	65.63	10200	1.75						
4.5 - 22	230 - 255	62.35*	10300	1.85						
5.1 - 26	205 - 225	54.70	10200	2.1						
6.0 - 30	176 - 196	46.40*	9810	2.5						
6.7 - 33	160 - 177	41.89	9550	2.7						
2.5 - 13	295 - 360	110.73	6460	0.80						
3.0 - 15	255 - 310	94.08*	6970	0.95						
3.3 - 17	230 - 280	84.00*	7240	1.05						
3.9 - 20	200 - 240	71.75*	7520	1.20						
4.2 - 21	191 - 230	67.20*	7610	1.25						
5.1 - 26	197 - 220	54.59	7670	1.10						
5.9 - 30	173 - 194	47.32	7830	1.25						
6.3 - 32	162 - 182	44.22*	7890	1.35						
7.3 - 37	142 - 159	38.23	7960	1.55						
8.6 - 43	122 - 136	32.48*	7650	1.80						
9.7 - 48	110 - 122	29.00*	7430	2.0						
11 - 57	95 - 105	24.77	7130	2.3						
12 - 60	89 - 99	23.20*	7000	2.5						
14 - 69	85 - 92	20.33	6500	1.85						
16 - 79	74 - 80	17.62	6270	2.1						
17 - 85	70 - 75	16.47*	6160	2.2						
5.9 - 30	170 - 191	47.32	4530	0.80	S	57	DRN	80M4 MM07	26	431
6.3 - 32	160 - 179	44.22*	4500	0.85	SF	57	DRN	80M4 MM07	30	432
7.3 - 37	139 - 157	38.23	4420	1.00	SA	57	DRN	80M4 MM07	26	433
8.6 - 43	120 - 134	32.48*	4310	1.15	SAF	57	DRN	80M4 MM07	28	432
9.7 - 48	110 - 122	29.00*	7430	2.0						
11 - 57	95 - 105	24.77	7130	2.3						
12 - 60	89 - 99	23.20*	7000	2.5						
14 - 69	85 - 92	20.33	6500	1.85						
16 - 79	74 - 80	17.62	6270	2.1						
17 - 85	70 - 75	16.47*	6160	2.2						
5.9 - 30	170 - 191	47.32	4530	0.80						
6.3 - 32	160 - 179	44.22*	4500	0.85						
7.3 - 37	139 - 157	38.23	4420	1.00						
8.6 - 43	120 - 134	32.48*	4310	1.15						
9.7 - 48	108 - 121	29.00*	4230	1.30						
11 - 57	93 - 104	24.77	4110	1.50						
12 - 60	88 - 98	23.20*	4060	1.55						
14 - 69	85 - 91	20.33	3640	1.20						
16 - 79	74 - 80	17.62	3560	1.40						
17 - 85	70 - 75	16.47*	3520	1.45						
20 - 98	60 - 65	14.24	3430	1.70						
23 - 116	52 - 55	12.10*	3320	1.95						
26 - 130	46 - 50	10.80*	3240	2.2						
30 - 152	40 - 43	9.23*	3130	2.6						
32 - 162	38 - 40	8.64*	3080	2.7						
38 - 192	32 - 34	7.28	2960	3.0						
11 - 57	93 - 104	24.77	4110	1.50	S	47	DRN	80M4 MM07	22	426
12 - 60	88 - 98	23.20*	4060	1.55	SF	47	DRN	80M4 MM07	26	427
14 - 69	85 - 91	20.33	3640	1.20	SA	47	DRN	80M4 MM07	23	428
16 - 79	74 - 80	17.62	3560	1.40	SAF	47	DRN	80M4 MM07	25	427
17 - 85	70 - 75	16.47*	3520	1.45						
20 - 98	60 - 65	14.24	3430	1.70						
23 - 116	52 - 55	12.10*	3320	1.95						
26 - 130	46 - 50	10.80*	3240	2.2						
30 - 152	40 - 43	9.23*	3130	2.6						
32 - 162	38 - 40	8.64*	3080	2.7	S	47	DRN	80M4 MM07	22	426
38 - 192	32 - 34	7.28	2960	3.0	SF	47	DRN	80M4 MM07	26	427
11 - 57	93 - 104	24.77	4110	1.50	SA	47	DRN	80M4 MM07	23	428
12 - 60	88 - 98	23.20*	4060	1.55	SAF	47	DRN	80M4 MM07	25	427
14 - 69	85 - 91	20.33	3640	1.20						
16 - 79	74 - 80	17.62	3560	1.40						
17 - 85	70 - 75	16.47*	3520	1.45						
20 - 98	60 - 65	14.24	3430	1.70						
23 - 116	52 - 55	12.10*	3320	1.95						
26 - 130	46 - 50	10.80*	3240	2.2	S	47	DRN	80M4 MM07	22	426
30 - 152	40 - 43	9.23*	3130	2.6	SF	47	DRN	80M4 MM07	26	427
32 - 162	38 - 40	8.64*	3080	2.7	SA	47	DRN	80M4 MM07	23	428
38 - 192	32 - 34	7.28	2960	3.0	SAF	47	DRN	80M4 MM07	25	427

S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:5, 280 – 1400 min⁻¹]**P_m = 0.75 kW**

n_a min^{-1}	M_a Nm	i	$F_{Ra}^{1)}$ N	SEW f_B					m kg	
15 - 73	72 - 80	19.13*	2270	0.90						
21 - 105	56 - 60	13.39	1970	0.80						
22 - 112	53 - 56	12.48*	1960	0.85	S	37	DRN	80M4 MM07	19	422
26 - 128	46 - 50	10.91	1940	0.95	SF	37	DRN	80M4 MM07	20	423
27 - 137	43 - 47	10.23	1930	1.00	SA	37	DRN	80M4 MM07	19	424
31 - 155	39 - 41	9.02*	1910	1.10	SAF	37	DRN	80M4 MM07	20	423
35 - 175	34 - 37	8.00*	1880	1.25						
41 - 206	29 - 31	6.80*	1830	1.35						

P_m = 1.1 kW

n_a min ⁻¹	M_a Nm	i	$F_{Ra}^{1)}$ N	SEW f_B					m kg	
0.97 - 4.9	1300 - 1510	288.00*	29100	1.50	S SF SA SAF	87	DRN	90S4 MM11	99	446
1.1 - 5.4	1170 - 1370	258.18	29300	1.65		87	DRN	90S4 MM11	120	447
1.3 - 6.3	1020 - 1200	222.40*	29500	1.90		87	DRN	90S4 MM11	96	448
1.4 - 6.9	940 - 1100	202.96	29600	2.0		87	DRN	90S4 MM11	110	447
1.6 - 7.8	840 - 980	180.00*	29700	2.2						
1.9 - 9.2	720 - 840	151.30	29800	2.5						
2.0 - 10	670 - 775	139.05	29900	2.7						
1.2 - 6.2	970 - 1140	225.26	12800	1.10	S SF SA SAF	77	DRN	90S4 MM11	63	441
1.3 - 6.5	920 - 1090	214.00*	13200	1.15		77	DRN	90S4 MM11	72	442
1.5 - 7.4	820 - 970	189.09	13900	1.30		77	DRN	90S4 MM11	62	443
1.7 - 8.7	715 - 840	161.60*	14700	1.50		77	DRN	90S4 MM11	69	442
1.9 - 9.4	660 - 785	148.15	15000	1.60						
2.1 - 11	590 - 695	130.00*	15400	1.75						
2.3 - 11	560 - 660	123.20*	15500	1.80						
2.6 - 13	495 - 585	107.83	15800	2.0						
2.9 - 14	455 - 530	97.14	15900	2.1						
3.3 - 16	405 - 470	85.22	16000	2.3						
3.7 - 19	440 - 475	75.09	15100	2.3						
3.9 - 20	415 - 455	71.33	14900	2.4						
4.2 - 21	325 - 375	66.67	15200	2.8						
4.4 - 22	370 - 405	63.03	14500	2.7						
2.3 - 12	500 - 605	121.33	7790	0.85	S SF SA SAF	67	DRN	90S4 MM11	43	436
2.6 - 13	445 - 540	106.75*	8490	0.95		67	DRN	90S4 MM11	50	437
2.8 - 14	425 - 510	100.80*	8740	1.00		67	DRN	90S4 MM11	44	438
3.3 - 16	365 - 440	85.83	9300	1.15		67	DRN	90S4 MM11	48	437
3.6 - 18	340 - 405	78.00*	9550	1.30						
4.3 - 21	355 - 395	65.63	9600	1.20						
4.5 - 22	335 - 375	62.35*	9720	1.25						
5.1 - 26	300 - 335	54.70	9570	1.45						
6.0 - 30	255 - 285	46.40*	9250	1.65						
6.7 - 33	230 - 260	41.89	9040	1.85						
7.6 - 38	205 - 230	36.85	8780	2.1						
8.1 - 40	197 - 215	34.80*	8660	2.2						
9.4 - 47	170 - 187	29.63	8340	2.6						
10 - 52	156 - 171	26.93	8140	2.8						
11 - 57	154 - 164	24.44	7570	2.1						
12 - 60	146 - 156	23.22*	7480	2.2						
14 - 69	129 - 138	20.37	7260	2.5						
3.9 - 20	295 - 355	71.75*	6480	0.80	S	57	DRN	90S4 MM11	32	431
4.2 - 21	275 - 335	67.20*	6710	0.85	SF	57	DRN	90S4 MM11	35	432
5.0 - 25	240 - 285	56.61	7170	0.90	SA	57	DRN	90S4 MM11	31	433
5.9 - 30	250 - 280	47.32	7220	0.85	SAF	57	DRN	90S4 MM11	34	432

P_m = 1.1 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
6.3 - 32	235 - 265	44.22*	7360	0.90	S	57	DRN	90S4 MM11	32	431
7.3 - 37	205 - 230	38.23	7420	1.05						
8.6 - 43	179 - 200	32.48*	7180	1.25						
9.7 - 48	161 - 179	29.00*	7010	1.35						
11 - 57	139 - 154	24.77	6770	1.60						
12 - 60	131 - 145	23.20*	6670	1.70						
14 - 72	112 - 123	19.54	6400	1.75						
16 - 79	109 - 117	17.62	5910	1.45						
17 - 85	102 - 110	16.47*	5820	1.55						
20 - 98	89 - 95	14.24	5640	1.75						
23 - 116	76 - 81	12.10*	5430	2.1						
26 - 130	68 - 73	10.80*	5280	2.3						
30 - 152	59 - 63	9.23*	5080	2.7	SF	57	DRN	90S4 MM11	35	432
32 - 162	55 - 59	8.64*	4990	2.8	SA	57	DRN	90S4 MM11	31	433
38 - 192	47 - 50	7.28	4770	2.9	SAF	57	DRN	90S4 MM11	34	432
9.7 - 48	158 - 177	29.00*	3730	0.90	S	47	DRN	90S4 MM11	28	426
11 - 57	137 - 153	24.77	3680	1.00						
12 - 60	129 - 143	23.20*	3650	1.05						
14 - 72	110 - 122	19.54	3570	1.20						
16 - 79	109 - 117	17.62	3130	0.95						
17 - 85	102 - 109	16.47*	3120	1.00	SAF	47	DRN	90S4 MM11	31	427
20 - 98	89 - 95	14.24	3080	1.15	S	47	DRN	90S4 MM11	28	426
23 - 116	76 - 81	12.10*	3020	1.35						
26 - 130	68 - 73	10.80*	2970	1.50						
30 - 152	59 - 62	9.23*	2900	1.75						
32 - 162	55 - 59	8.64*	2870	1.85						
38 - 192	47 - 50	7.28	2770	2.1	SAF	47	DRN	90S4 MM11	31	427
35 - 175	50 - 54	8.00*	1600	0.85	S	37	DRN	90S4 MM11	25	422
41 - 206	43 - 46	6.80*	1610	0.95	SF	37	DRN	90S4 MM11	26	423
					SA	37	DRN	90S4 MM11	25	424
					SAF	37	DRN	90S4 MM11	26	423

P_m = 1.5 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
0.98 - 4.9	1850 - 2140	286.40*	36000	1.85	S	97	DRN	90L4 MM15	160	451
1.1 - 5.3	1700 - 1980	262.22	36200	2.0						
1.2 - 6.0	1520 - 1760	231.67	36400	2.3						
1.4 - 7.1	1310 - 1510	196.52	36600	2.6						
1.6 - 7.7	1210 - 1400	180.95	36600	2.8	SAF	97	DRN	90L4 MM15	180	452
0.97 - 4.9	1770 - 2060	288.00*	28300	1.10	S	87	DRN	90L4 MM15	100	446
1.1 - 5.4	1600 - 1870	258.18	28600	1.20						
1.3 - 6.3	1400 - 1630	222.40*	29000	1.40						
1.4 - 6.9	1290 - 1500	202.96	29200	1.50						
1.6 - 7.8	1150 - 1340	180.00*	29300	1.65						
1.9 - 9.2	980 - 1140	151.30	29600	1.85						
2.0 - 10	910 - 1060	139.05	29600	2.0						
2.3 - 11	820 - 950	123.48	29700	2.2						
2.5 - 13	740 - 850	110.40*	29800	2.3						
2.8 - 14	675 - 775	99.26	29900	2.5						
3.1 - 15	750 - 800	91.20*	29800	1.85						
3.2 - 16	595 - 680	86.15	29900	2.8						
3.4 - 17	675 - 725	81.76	29900	2.2						
4.0 - 20	585 - 630	70.43	29900	2.5						
					SF	87	DRN	90L4 MM15	125	447
					SA	87	DRN	90L4 MM15	99	448
					SAF	87	DRN	90L4 MM15	115	447

P _m = 1.5 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.5 - 7.4	1120 - 1330	189.09	10100	0.95	S SF SA SAF	77	DRN	90L4 MM15	66	441
1.7 - 8.7	970 - 1150	161.60*	12700	1.10						
1.9 - 9.4	900 - 1070	148.15	13300	1.15						
2.1 - 11	800 - 950	130.00*	14100	1.25						
2.3 - 11	765 - 900	123.20*	14400	1.35						
2.6 - 13	680 - 800	107.83	14900	1.45						
2.9 - 14	620 - 725	97.14	15200	1.55						
3.3 - 16	550 - 640	85.22	15400	1.70						
3.7 - 19	600 - 650	75.09	14200	1.70						
3.9 - 20	570 - 620	71.33	14100	1.75						
4.2 - 21	440 - 510	66.67	14600	2.0						
4.4 - 22	505 - 550	63.03	13700	2.0						
4.9 - 25	385 - 440	56.92	14000	2.2						
5.2 - 26	435 - 475	53.87	13300	2.3						
3.3 - 16	500 - 600	85.83	7800	0.85	S	67	DRN	90L4 MM15	46	436
3.6 - 18	460 - 550	78.00*	8350	0.95	SF	67	DRN	90L4 MM15	53	437
4.3 - 21	485 - 540	65.63	8470	0.90	SA	67	DRN	90L4 MM15	47	438
					SAF	67	DRN	90L4 MM15	52	437
4.5 - 22	460 - 515	62.35*	8710	0.95	S SF SA SAF	67	DRN	90L4 MM15	46	436
5.1 - 26	410 - 455	54.70	8820	1.05						
6.0 - 30	350 - 390	46.40*	8610	1.25						
6.7 - 33	315 - 350	41.89	8460	1.35						
7.6 - 38	280 - 310	36.85	8270	1.55						
8.1 - 40	265 - 295	34.80*	8180	1.60						
9.4 - 47	230 - 255	29.63	7920	1.90						
10 - 52	210 - 230	26.93	7760	2.1						
11 - 57	205 - 220	24.44	7090	1.50						
12 - 60	200 - 210	23.22*	7020	1.60						
14 - 69	176 - 188	20.37	6860	1.80						
16 - 81	150 - 160	17.28*	6640	2.1						
18 - 90	136 - 145	15.60*	6490	2.4						
20 - 102	121 - 128	13.73*	6310	2.7						
22 - 108	114 - 121	12.96*	6230	2.8						
8.6 - 43	240 - 270	32.48*	6650	0.90	S SF SA SAF	57	DRN	90L4 MM15	35	431
9.7 - 48	215 - 240	29.00*	6530	1.00						
11 - 57	190 - 210	24.77	6360	1.15						
12 - 60	179 - 198	23.20*	6280	1.25						
14 - 72	152 - 168	19.54	6070	1.30						
16 - 79	149 - 160	17.62	5500	1.05						
17 - 85	140 - 150	16.47*	5440	1.10						
20 - 98	121 - 130	14.24	5300	1.30						
23 - 116	104 - 111	12.10*	5140	1.50						
26 - 130	93 - 100	10.80*	5030	1.70						
30 - 152	80 - 85	9.23*	4860	2.0						
32 - 162	75 - 80	8.64*	4790	2.1						
38 - 192	64 - 68	7.28	4600	2.1						
14 - 72	150 - 166	19.54	3180	0.85	S	47	DRN	90L4 MM15	31	426
20 - 98	121 - 130	14.24	2680	0.85	SF	47	DRN	90L4 MM15	35	427
23 - 116	104 - 111	12.10*	2680	1.00	SA	47	DRN	90L4 MM15	32	428
26 - 130	93 - 99	10.80*	2670	1.10	SAF	47	DRN	90L4 MM15	34	427
30 - 152	80 - 85	9.23*	2640	1.30	S	47	DRN	90L4 MM15	31	426
32 - 162	75 - 80	8.64*	2620	1.35	SF	47	DRN	90L4 MM15	35	427
38 - 192	64 - 68	7.28	2570	1.50	SA	47	DRN	90L4 MM15	32	428
					SAF	47	DRN	90L4 MM15	34	427

P _m = 2.2 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
0.98 - 4.9	2710 - 3140	286.40*	34700	1.25	S SF SA SAF	97 97 97 97	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	165	451
1.1 - 5.3	2500 - 2900	262.22	35100	1.40					200	452
1.2 - 6.0	2230 - 2590	231.67	35500	1.55					160	453
1.4 - 7.1	1920 - 2220	196.52	35900	1.80					185	452
1.6 - 7.7	1780 - 2060	180.95	36100	1.90						
1.7 - 8.7	1610 - 1850	161.74	36300	2.1						
1.9 - 9.6	1460 - 1680	145.60*	36400	2.2	S SF SA SAF	87 87 87 87	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	105	446
2.1 - 11	1340 - 1530	131.85	36600	2.4					130	447
1.1 - 5.4	2350 - 2740	258.18	26500	0.85					105	448
1.3 - 6.3	2050 - 2400	222.40*	27700	0.95					120	447
1.4 - 6.9	1890 - 2200	202.96	28100	1.00						
1.6 - 7.8	1690 - 1970	180.00*	28500	1.10						
1.9 - 9.2	1440 - 1680	151.30	28900	1.30	S SF SA SAF	77 77 77 77	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	70	441
2.0 - 10	1340 - 1550	139.05	29100	1.35					80	442
2.3 - 11	1200 - 1390	123.48	29300	1.45					69	443
2.5 - 13	1090 - 1250	110.40*	29400	1.60					76	442
2.8 - 14	990 - 1130	99.26	29600	1.70						
3.2 - 16	870 - 990	86.15	29700	1.90						
3.4 - 17	990 - 1060	81.76	29600	1.50	S SF SA SAF	67 67 67 67	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	50	436
3.6 - 18	790 - 890	77.14	29800	2.0					57	437
4.0 - 20	860 - 920	70.43	29700	1.75					51	438
4.4 - 22	785 - 840	64.27	29800	1.90					55	437
4.9 - 25	700 - 755	57.00*	29900	2.1						
2.1 - 11	1180 - 1390	130.00*	5060	0.85					S SF SA SAF	57 57 57 57
2.3 - 11	1120 - 1320	123.20*	10600	0.90	43	432				
2.6 - 13	990 - 1170	107.83	12500	1.00	39	433				
2.9 - 14	910 - 1060	97.14	13400	1.05	41	432				
3.3 - 16	810 - 940	85.22	14100	1.15						
3.7 - 19	720 - 840	75.20*	13800	1.25						
4.2 - 21	650 - 750	66.67	13500	1.40	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	39	431
4.4 - 22	745 - 810	63.03	12400	1.35					43	432
4.9 - 25	565 - 645	56.92	13100	1.55					39	433
5.2 - 26	640 - 695	53.87	12200	1.60					41	432
5.7 - 28	590 - 640	49.38	12000	1.70						
6.5 - 32	520 - 565	43.33	11700	1.95						
6.8 - 34	495 - 535	41.07	11600	2.0	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	39	431
7.8 - 39	435 - 470	35.94	11300	2.3					43	432
8.7 - 43	395 - 425	32.38	11100	2.5					39	433
9.9 - 49	350 - 375	28.41	10800	2.8					41	432
11 - 56	310 - 330	25.07	10500	3.1						
12 - 61	295 - 310	22.89	9610	2.2						
13 - 67	270 - 285	20.99	9450	2.4	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	39	431
6.0 - 30	515 - 570	46.40*	7490	0.85					43	432
6.7 - 33	465 - 520	41.89	7450	0.90					39	433
7.6 - 38	415 - 460	36.85	7370	1.05					41	432
8.1 - 40	390 - 435	34.80*	7330	1.10						
9.4 - 47	335 - 370	29.63	7190	1.30						
10 - 52	310 - 340	26.93	7100	1.40	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	39	431
12 - 60	270 - 295	23.33	6940	1.60					43	432
14 - 69	255 - 275	20.37	6160	1.25					39	433
16 - 81	220 - 230	17.28*	6040	1.45					41	432
18 - 90	200 - 210	15.60*	5950	1.60						
20 - 102	177 - 187	13.73*	5840	1.80						
22 - 108	167 - 177	12.96*	5780	1.90	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	39	431
25 - 127	144 - 152	11.03	5610	2.2					43	432
12 - 60	260 - 285	23.20*	5610	0.85					39	433
14 - 72	220 - 245	19.54	5500	0.85					41	432
20 - 98	178 - 191	14.24	4720	0.90						
23 - 116	152 - 163	12.10*	4640	1.05						
26 - 130	137 - 146	10.80*	4580	1.15	S SF SA SAF	57 57 57 57	DRN DRN DRN DRN	100LS4 MM22 100LS4 MM22 100LS4 MM22 100LS4 MM22	39	431
30 - 152	118 - 125	9.23*	4480	1.35					43	432
32 - 162	111 - 117	8.64*	4430	1.40					39	433
38 - 192	94 - 99	7.28	4300	1.45					41	432

S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:5, 280 – 1400 min⁻¹]**P_m = 2.2 kW**

n_a min ⁻¹	M_a Nm	i	$F_{Ra}^{1)}$ N	SEW f_B					m kg	
30 - 152	117 - 125	9.23*	2000	0.85	S	47	DRN	100LS4 MM22	35	426
32 - 162	110 - 117	8.64*	2100	0.95	SF	47	DRN	100LS4 MM22	39	427
38 - 192	94 - 99	7.28	2200	1.05	SA	47	DRN	100LS4 MM22	36	428
					SAF	47	DRN	100LS4 MM22	38	427

P_m = 3.0 kW

n_a min ⁻¹	M_a Nm	i	$F_{Ra}^{1)}$ N	SEW f_B					m kg	
0.98 - 4.9	3700 - 4290	286.40*	32600	0.95						
1.1 - 5.3	3410 - 3960	262.22	33300	1.00						
1.2 - 6.0	3050 - 3530	231.67	34100	1.15						
1.4 - 7.1	2620 - 3030	196.52	34900	1.30	S	97	DRN	100L4 MM30	170	451
1.6 - 7.7	2430 - 2810	180.95	35200	1.40	SF	97	DRN	100L4 MM30	205	452
1.7 - 8.7	2200 - 2530	161.74	35600	1.50	SA	97	DRN	100L4 MM30	165	453
1.9 - 9.6	2000 - 2290	145.60*	35900	1.65	SAF	97	DRN	100L4 MM30	195	452
2.1 - 11	1830 - 2090	131.85	36100	1.75						
2.4 - 12	1640 - 1860	116.92	36300	1.90						
2.6 - 13	1490 - 1690	105.71	36400	2.0						
1.6 - 7.8	2310 - 2690	180.00*	27100	0.80						
1.9 - 9.2	1970 - 2290	151.30	27900	0.95						
2.0 - 10	1830 - 2120	139.05	28200	1.00						
2.3 - 11	1640 - 1900	123.48	28600	1.10						
2.5 - 13	1480 - 1710	110.40*	28900	1.15						
2.8 - 14	1350 - 1550	99.26	29100	1.25						
3.2 - 16	1190 - 1360	86.15	29300	1.40						
3.4 - 17	1350 - 1450	81.76	29200	1.10	S	87	DRN	100L4 MM30	115	446
3.6 - 18	1070 - 1220	77.14	29500	1.50	SF	87	DRN	100L4 MM30	135	447
4.0 - 20	1170 - 1260	70.43	29400	1.25	SA	87	DRN	100L4 MM30	110	448
4.4 - 22	1070 - 1150	64.27	29500	1.40	SAF	87	DRN	100L4 MM30	125	447
4.9 - 25	950 - 1020	57.00*	29600	1.55						
5.8 - 29	810 - 870	47.91	29800	1.85						
6.4 - 32	745 - 800	44.03	29800	2.0						
7.2 - 36	665 - 715	39.10	29900	2.2						
8.0 - 40	600 - 640	34.96*	29900	2.5						
8.9 - 45	540 - 575	31.43	30000	2.8						
10 - 51	475 - 500	27.28	28900	3.2						
3.3 - 16	1100 - 1280	85.22	11500	0.85	S	77	DRN	100L4 MM30	77	441
3.7 - 19	980 - 1140	75.20*	12500	0.95	SF	77	DRN	100L4 MM30	87	442
4.2 - 21	880 - 1020	66.67	12400	1.00	SA	77	DRN	100L4 MM30	77	443
4.4 - 22	1010 - 1100	63.03	10900	1.00	SAF	77	DRN	100L4 MM30	83	442
4.9 - 25	770 - 880	56.92	12100	1.10						
5.2 - 26	870 - 950	53.87	10900	1.15						
5.7 - 28	800 - 870	49.38	10800	1.25						
6.5 - 32	710 - 770	43.33	10700	1.40						
6.8 - 34	675 - 730	41.07	10600	1.50						
7.8 - 39	595 - 640	35.94	10500	1.70						
8.7 - 43	540 - 580	32.38	10300	1.85	S	77	DRN	100L4 MM30	77	441
9.9 - 49	475 - 510	28.41	10100	2.0	SF	77	DRN	100L4 MM30	87	442
11 - 56	420 - 455	25.07	9860	2.2	SA	77	DRN	100L4 MM30	77	443
12 - 61	405 - 425	22.89	8830	1.65	SAF	77	DRN	100L4 MM30	83	442
13 - 67	370 - 390	20.99	8730	1.80						
15 - 76	325 - 345	18.42	8570	2.0						
16 - 80	310 - 325	17.45	8500	2.2						
18 - 92	270 - 285	15.28	8310	2.5						
20 - 102	245 - 260	13.76	8150	2.7						
8.1 - 40	535 - 595	34.80*	6360	0.80	S	67	DRN	100L4 MM30	57	436
9.4 - 47	460 - 510	29.63	6360	0.95	SF	67	DRN	100L4 MM30	64	437
10 - 52	420 - 465	26.93	6340	1.05	SA	67	DRN	100L4 MM30	58	438
					SAF	67	DRN	100L4 MM30	63	437

P_m = 3.0 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
12 - 60	370 - 405	23.33	6280	1.20	S SF SA SAF	67	DRN	100L4 MM30	57	436
14 - 69	350 - 375	20.37	5350	0.90					64	437
16 - 81	300 - 315	17.28*	5360	1.05					58	438
18 - 90	270 - 285	15.60*	5340	1.15					63	437
20 - 102	240 - 255	13.73*	5290	1.35						
22 - 108	225 - 240	12.96*	5260	1.40						
25 - 127	196 - 205	11.03	5170	1.65						
28 - 140	179 - 188	10.03	5110	1.80						
32 - 161	156 - 163	8.69	5000	2.0	S SF SA SAF	57	DRN	100L4 MM30	46	431
37 - 185	136 - 143	7.56*	4880	2.1					50	432
26 - 130	187 - 199	10.80*	4070	0.85					46	433
30 - 152	161 - 171	9.23*	4040	1.00					49	432
32 - 162	151 - 160	8.64*	4020	1.05						
38 - 192	128 - 136	7.28	3950	1.10						

P_m = 4.0 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
1.2 - 6.0	4060 - 4710	231.67	26300	0.85	S SF SA SAF	97	DRN	112M4 MM40	180	451
1.4 - 7.1	3500 - 4040	196.52	33100	1.00					215	452
1.6 - 7.7	3250 - 3740	180.95	33700	1.05					175	453
1.7 - 8.7	2930 - 3370	161.74	34400	1.15					200	452
1.9 - 9.6	2660 - 3060	145.60*	34900	1.20						
2.1 - 11	2440 - 2780	131.85	35300	1.30						
2.4 - 12	2180 - 2490	116.92	35600	1.40						
2.6 - 13	1990 - 2260	105.71	35900	1.50						
3.1 - 16	1720 - 1930	89.60*	36200	1.65						
3.5 - 17	1830 - 1960	80.85	36200	1.65						
3.9 - 20	1630 - 1740	71.43	36400	1.90	S SF SA SAF	87	DRN	112M4 MM40	125	446
4.6 - 23	1390 - 1480	60.59	36600	2.2					145	447
5.0 - 25	1280 - 1370	55.79	36700	2.4					120	448
5.6 - 28	1150 - 1220	49.87	36800	2.7					135	447
2.3 - 11	2190 - 2530	123.48	27400	0.80						
2.5 - 13	1980 - 2280	110.40*	27900	0.85						
2.8 - 14	1800 - 2070	99.26	28300	0.95						
3.2 - 16	1580 - 1810	86.15	28700	1.05						
3.6 - 18	1430 - 1630	77.14	29000	1.10						
4.0 - 20	1560 - 1680	70.43	28900	0.95						
4.4 - 22	1430 - 1540	64.27	29100	1.05						
4.9 - 25	1270 - 1370	57.00*	29300	1.15						
5.8 - 29	1080 - 1160	47.91	29500	1.40						
6.4 - 32	990 - 1070	44.03	29600	1.50						
7.2 - 36	890 - 950	39.10	29700	1.70						
8.0 - 40	800 - 850	34.96*	29800	1.85	S SF SA SAF	77	DRN	112M4 MM40	86	441
8.9 - 45	720 - 770	31.43	29300	2.1					96	442
10 - 51	630 - 670	27.28	28300	2.4					86	443
11 - 55	610 - 640	25.50*	26800	1.95					93	442
13 - 65	515 - 540	21.43	25800	2.3						
14 - 71	475 - 500	19.70	25300	2.5						
16 - 80	425 - 445	17.49	24700	2.8						
4.9 - 25	1020 - 1170	56.92	10800	0.85						
5.2 - 26	1160 - 1260	53.87	9300	0.85						
5.7 - 28	1070 - 1160	49.38	9370	0.95						
6.5 - 32	950 - 1020	43.33	9410	1.05						

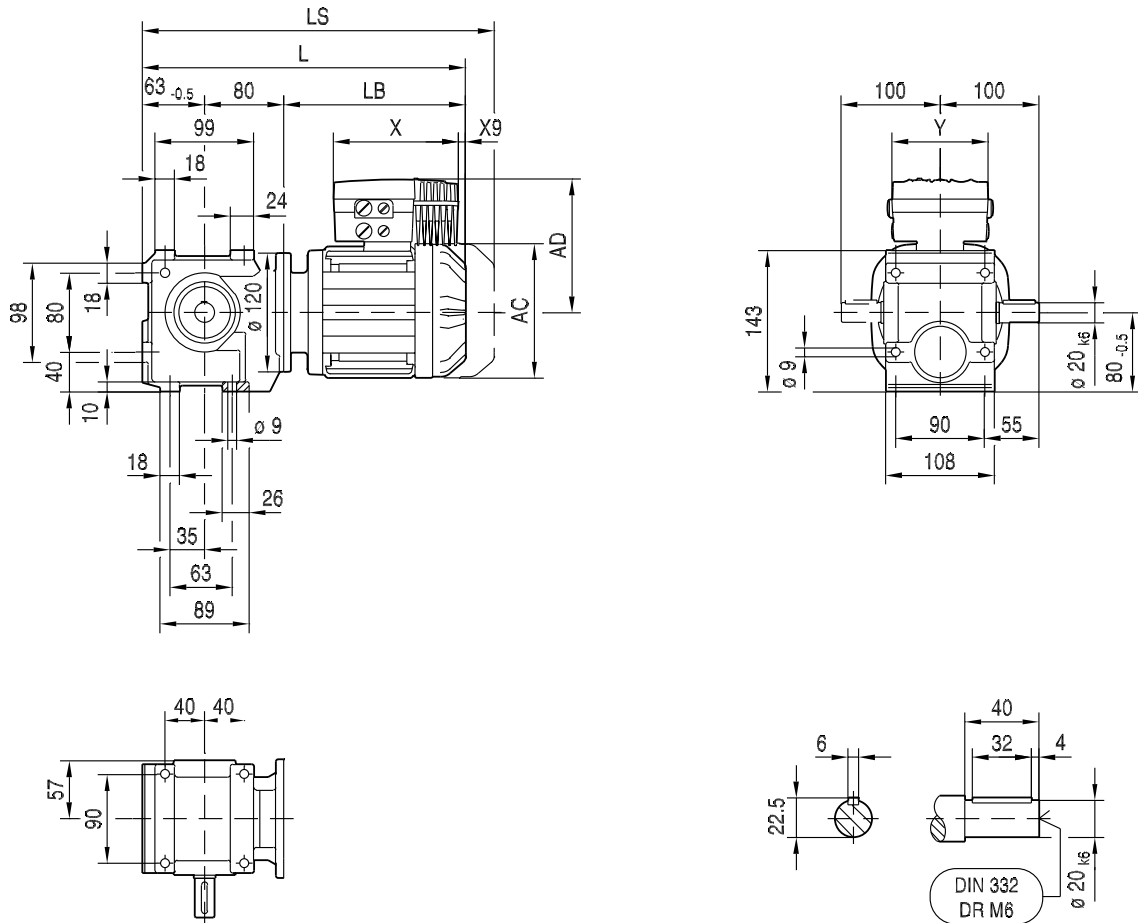
S..DR..MM.. helical-worm gearmotorsS..DR..MM.. selection tables [1:5, 280 – 1400 min⁻¹]**P_m = 4.0 kW**

n_a min⁻¹	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B					m kg	
6.8 - 34	900 - 970	41.07	9420	1.15						
7.8 - 39	795 - 850	35.94	9390	1.30						
8.7 - 43	720 - 775	32.38	9330	1.40						
9.9 - 49	635 - 680	28.41	9240	1.55						
11 - 56	565 - 605	25.07	9110	1.70						
12 - 61	540 - 570	22.89	7850	1.25	S	77	DRN	112M4 MM40	86	441
13 - 67	495 - 525	20.99	7830	1.35		77	DRN	112M4 MM40	96	442
15 - 76	435 - 460	18.42	7780	1.55		77	DRN	112M4 MM40	86	443
16 - 80	415 - 435	17.45	7750	1.60		77	DRN	112M4 MM40	93	442
18 - 92	365 - 385	15.28	7660	1.85		77	DRN	112M4 MM40		
20 - 102	330 - 345	13.76	7560	2.0						
23 - 116	290 - 305	12.07	7430	2.4						
26 - 131	255 - 270	10.65	7280	2.7						
30 - 148	230 - 240	9.44	7130	3.0						
35 - 174	198 - 205	8.06	6920	3.3						
12 - 60	490 - 540	23.33	5450	0.90	S	67	DRN	112M4 MM40	67	436
14 - 69	430 - 470	20.30*	5470	0.90		67	DRN	112M4 MM40	73	437
16 - 81	400 - 425	17.28*	3890	0.80		67	DRN	112M4 MM40	68	438
18 - 90	360 - 385	15.60*	4260	0.90		67	DRN	112M4 MM40	72	437
20 - 102	320 - 340	13.73*	4610	1.00		67	DRN	112M4 MM40		
22 - 108	300 - 320	12.96*	4620	1.05						
25 - 127	260 - 275	11.03	4620	1.25						
28 - 140	235 - 250	10.03	4610	1.35						
32 - 161	205 - 215	8.69	4560	1.55						
37 - 185	182 - 190	7.56*	4500	1.55						

11.3 S..DR..MM.. dimension sheets in mm

02 006 00 16

S37..



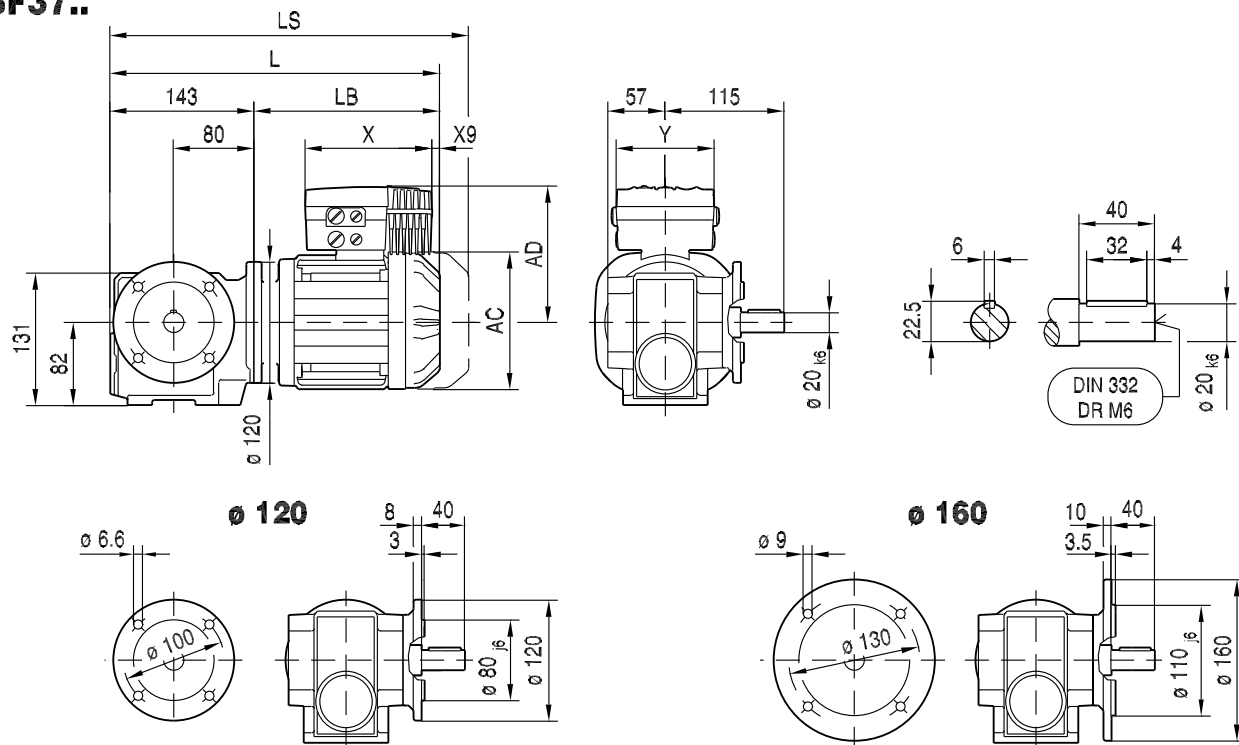
11

(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	
AC	139	139	156	179	179	179	179	
AD	185	185	197	208	208	208	208	
L	345	370	425	426	426	458	458	
LS	413	438	506	520	520	552	552	
LB	202	227	282	283	283	315	315	
X	182	182	182	182	228	182	228	
X9	-14	-14	-7	-1	-16	-1	-16	
Y	148	148	148	148	186	148	186	

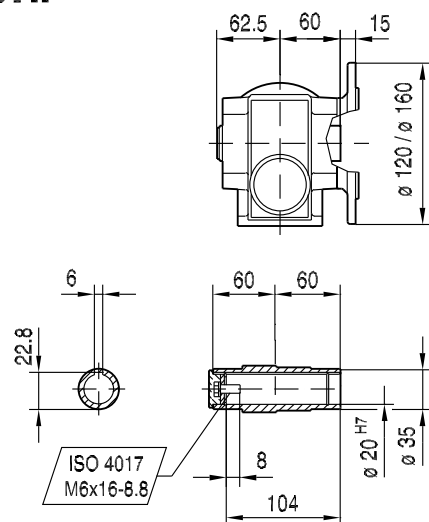
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02 007 00 16

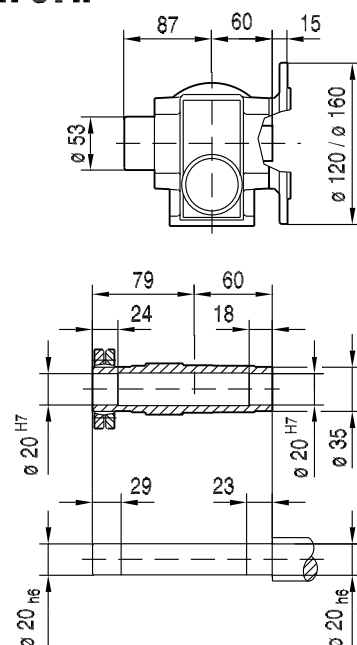
SF37..



SAF37..



SHF37..

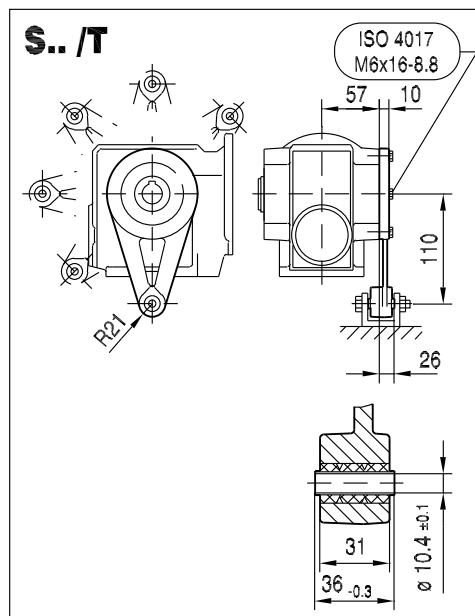
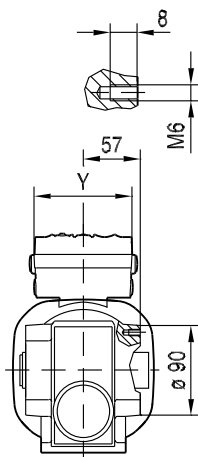
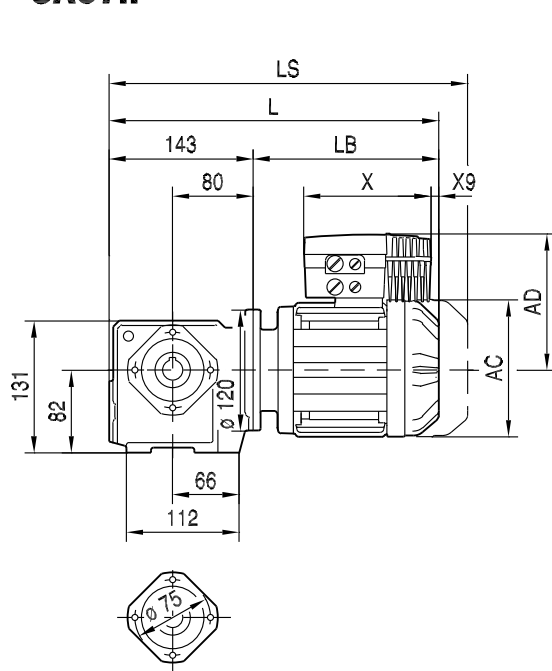


(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	
AC	139	139	156	179	179	179	179	
AD	185	185	197	208	208	208	208	
L	345	370	425	426	426	458	458	
LS	413	438	506	520	520	552	552	
LB	202	227	282	283	283	315	315	
X	182	182	182	182	228	182	228	
X9	-14	-14	-7	-1	-16	-1	-16	
Y	148	148	148	148	186	148	186	

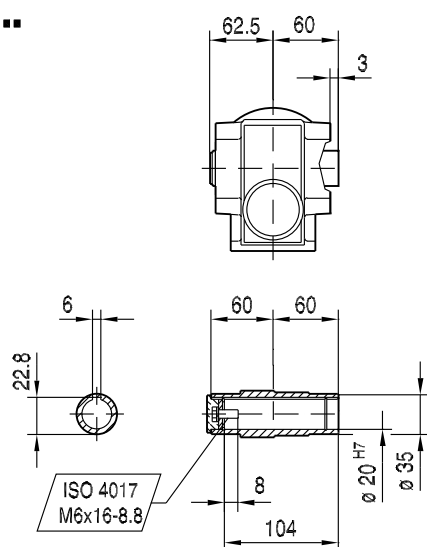
22148205/EN – 09/2016

SA37..

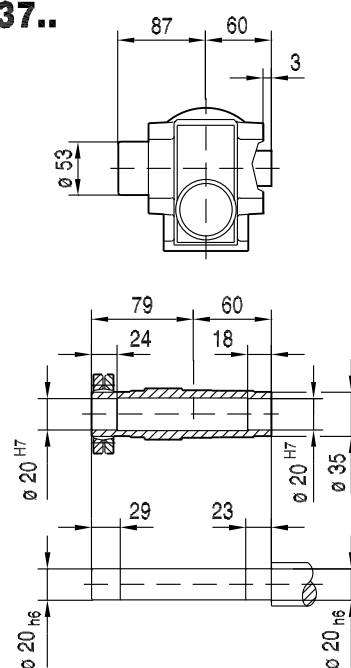
02 008 00 16



SA37..



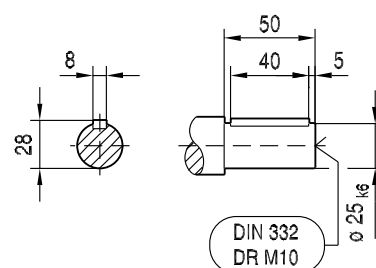
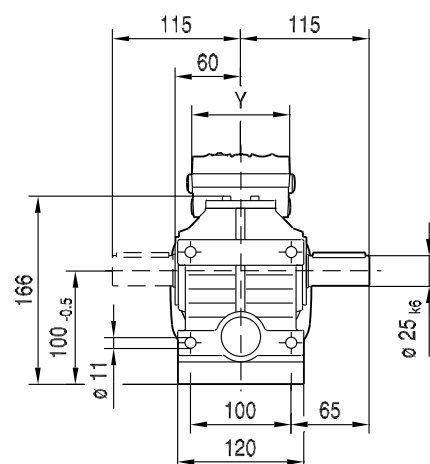
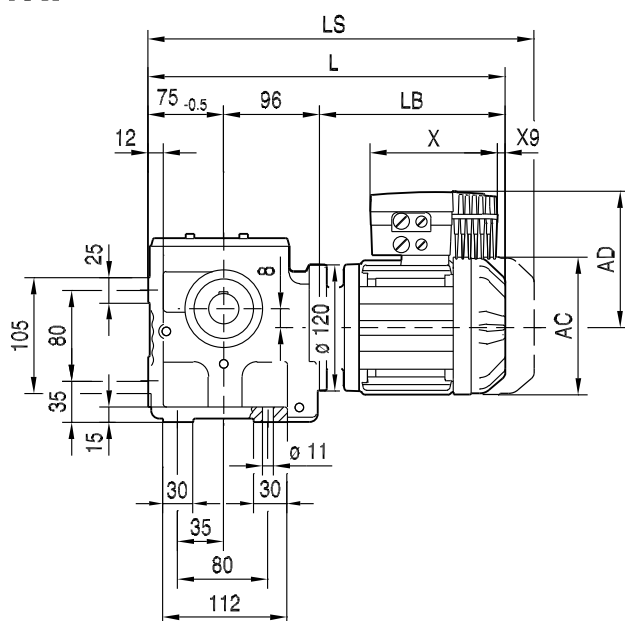
SH37..



(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	
AC	139	139	156	179	179	179	179	
AD	185	185	197	208	208	208	208	
L	345	370	425	426	426	458	458	
LS	413	438	506	520	520	552	552	
LB	202	227	282	283	283	315	315	
X	182	182	182	182	228	182	228	
X9	-14	-14	-7	-1	-16	-1	-16	
Y	148	148	148	148	186	148	186	

02 010 00 16

\$47..



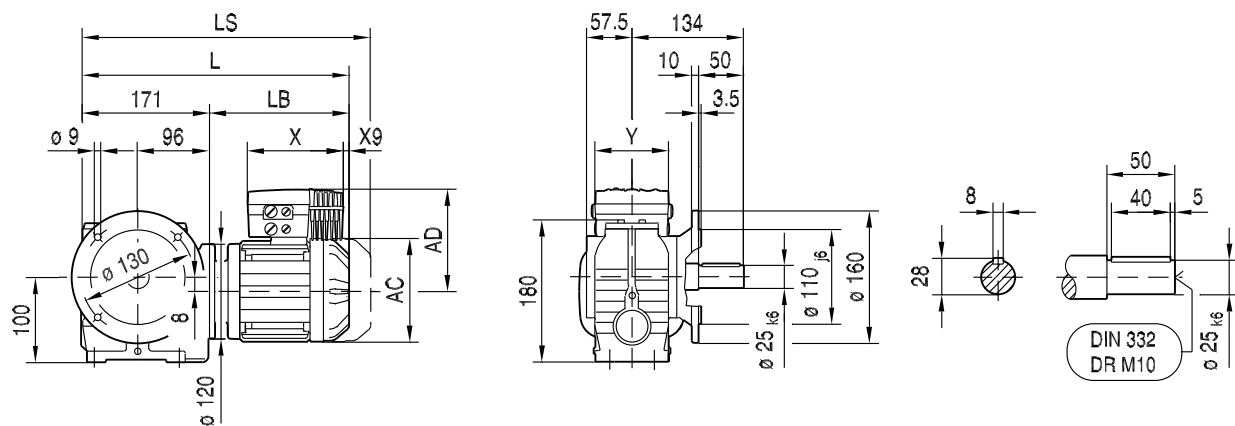
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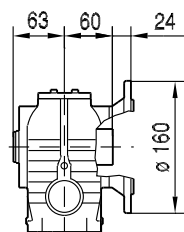
(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	373	398	453	454	454	486	486	485	535
LS	441	466	534	548	548	580	580	579	629
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

02 011 00 16

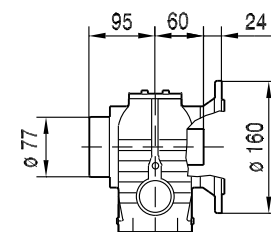
SF47..



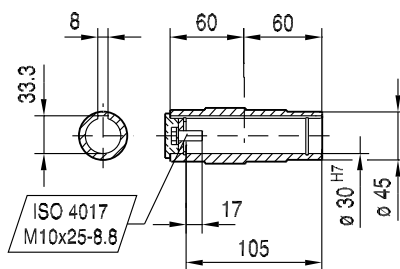
SAF47..



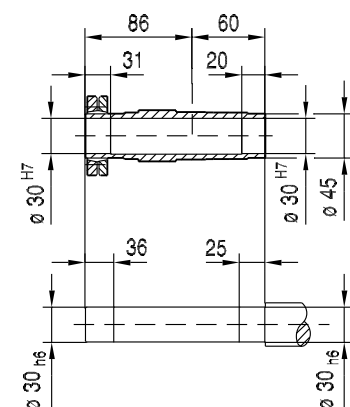
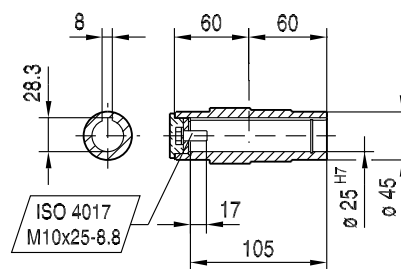
SHF47..



ø 30 H7



ø 25 H7

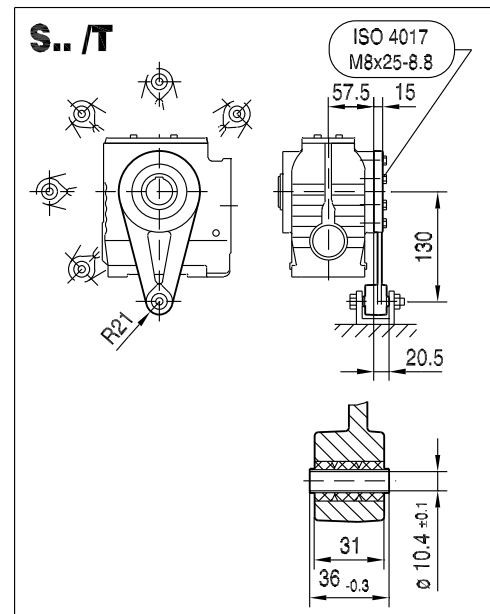
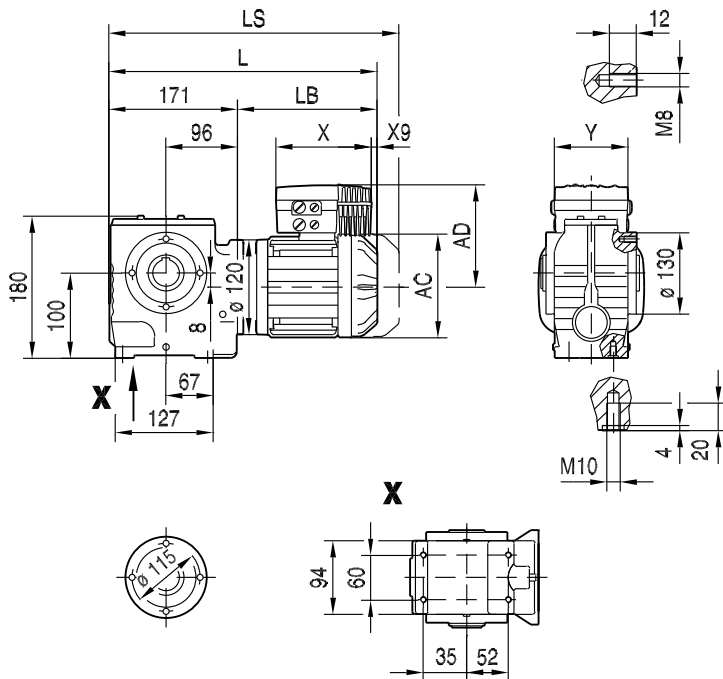


(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	373	398	453	454	454	486	486	485	535
LS	441	466	534	548	548	580	580	579	629
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

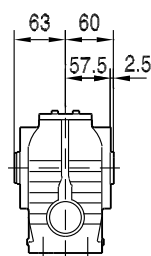
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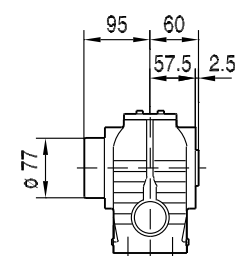
SA47..



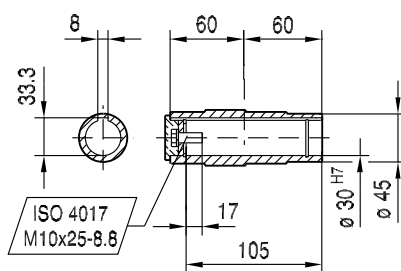
SA47..



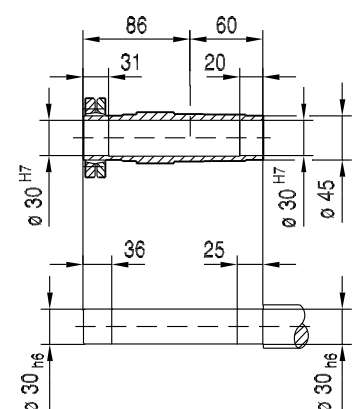
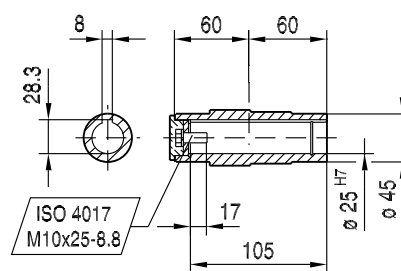
SH47..



SA47..



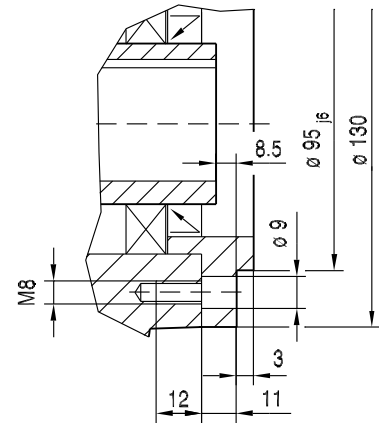
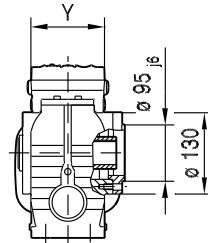
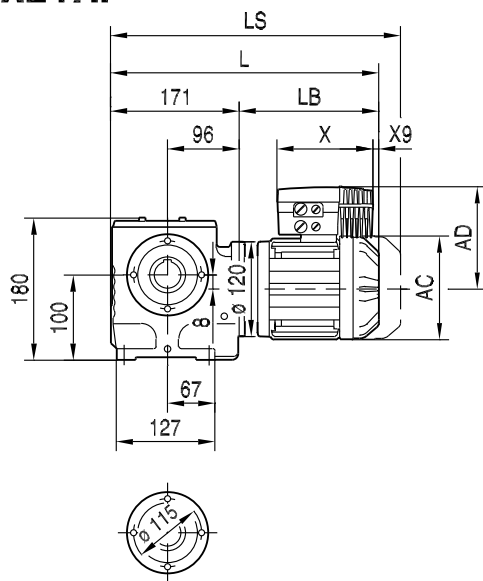
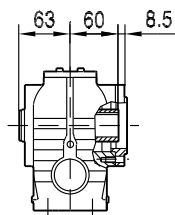
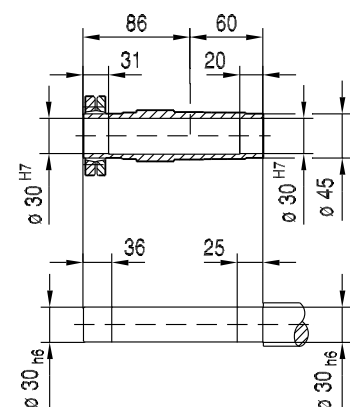
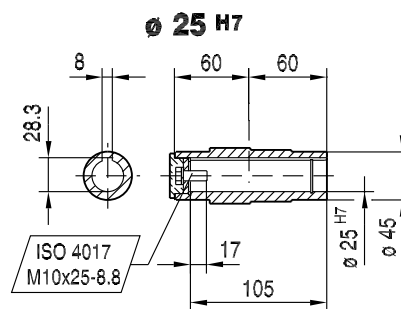
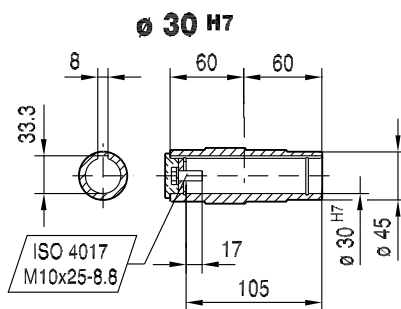
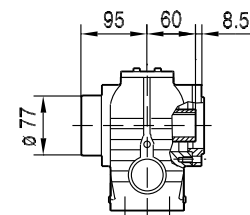
SH47..



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(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	373	398	453	454	454	486	486	485	535
LS	441	466	534	548	548	580	580	579	629
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

02 013 00 16

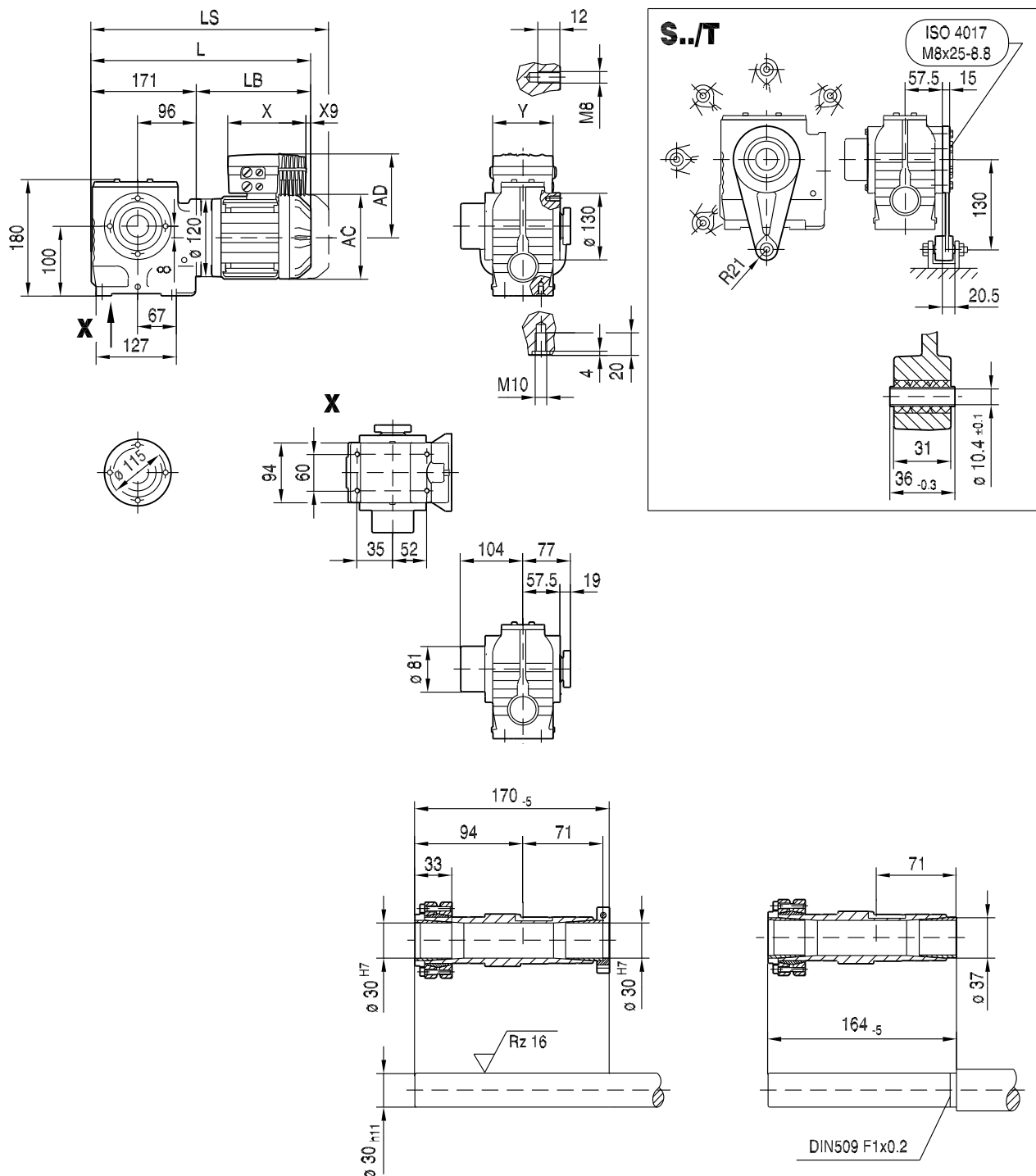
SAZ47..**SAZ47..****SHZ47..**

(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	373	398	453	454	454	486	486	485	535
LS	441	466	534	548	548	580	580	579	629
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

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ST47..



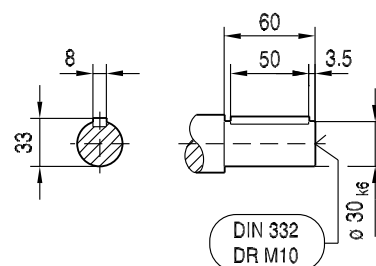
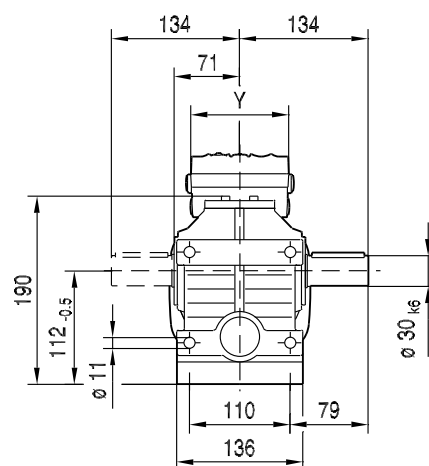
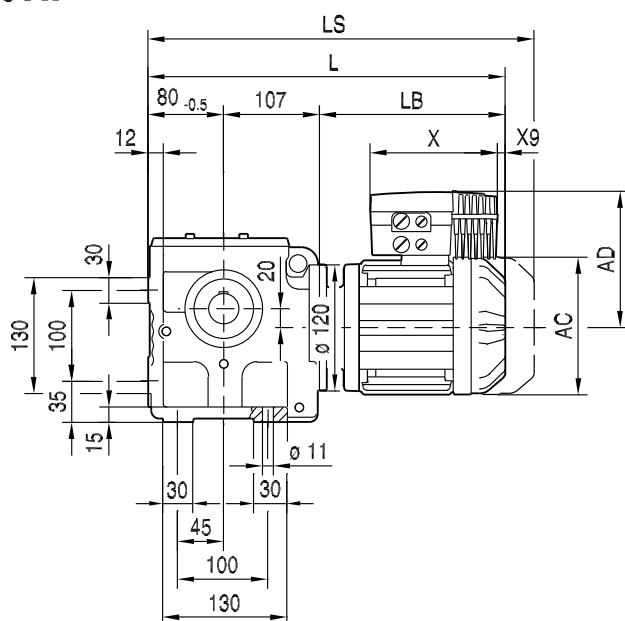
11

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(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	373	398	453	454	454	486	486	485	535
LS	441	466	534	548	548	580	580	579	629
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

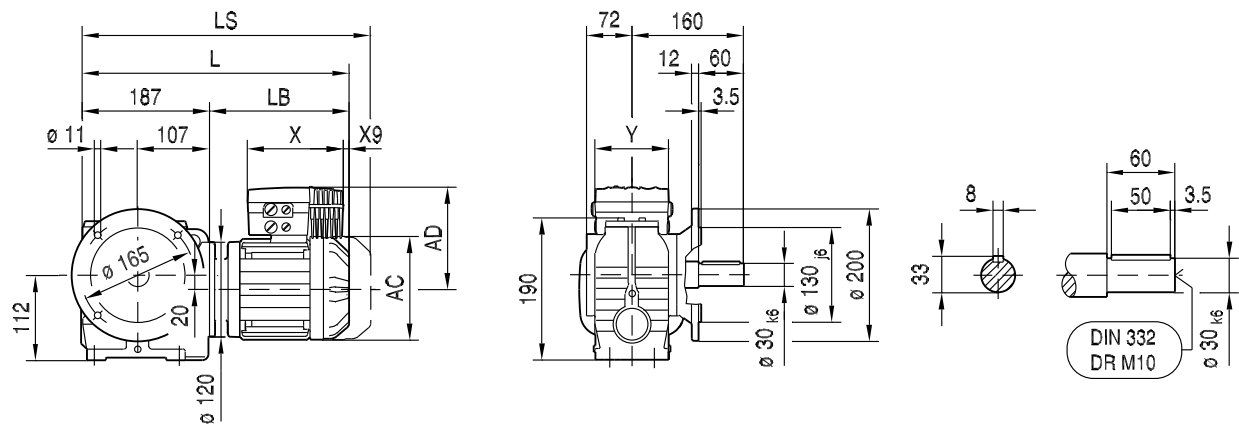
02 015 00 16

S57..

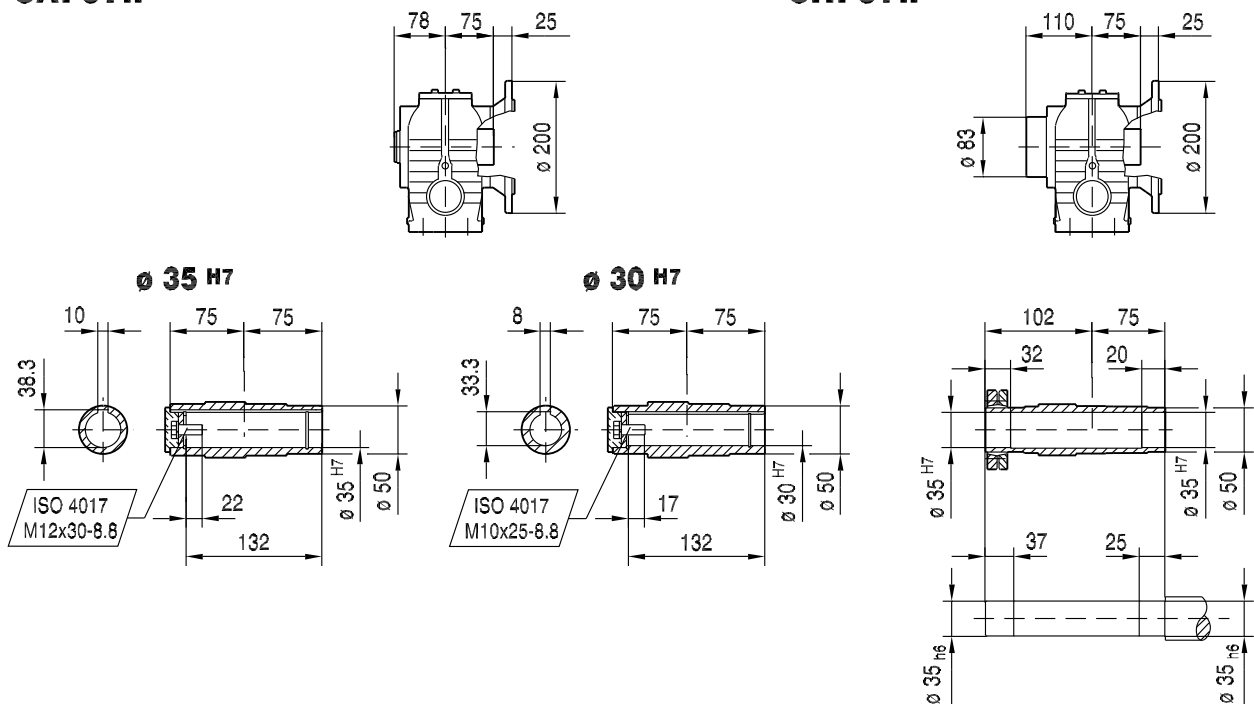


(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	389	414	469	470	470	502	502	501	551
LS	457	482	550	564	564	596	596	595	645
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

02 016 00 16

SF57..

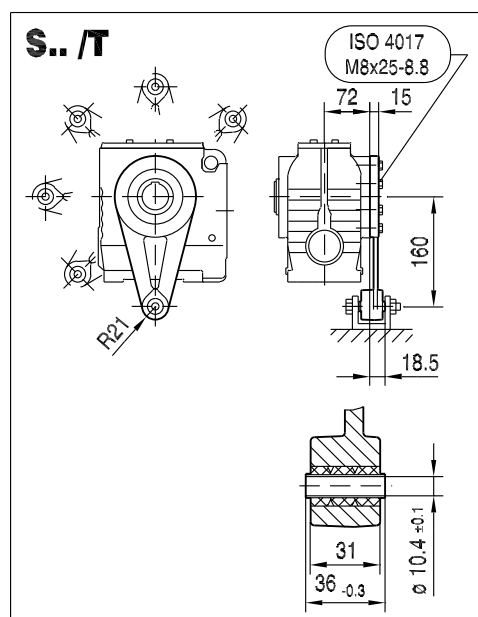
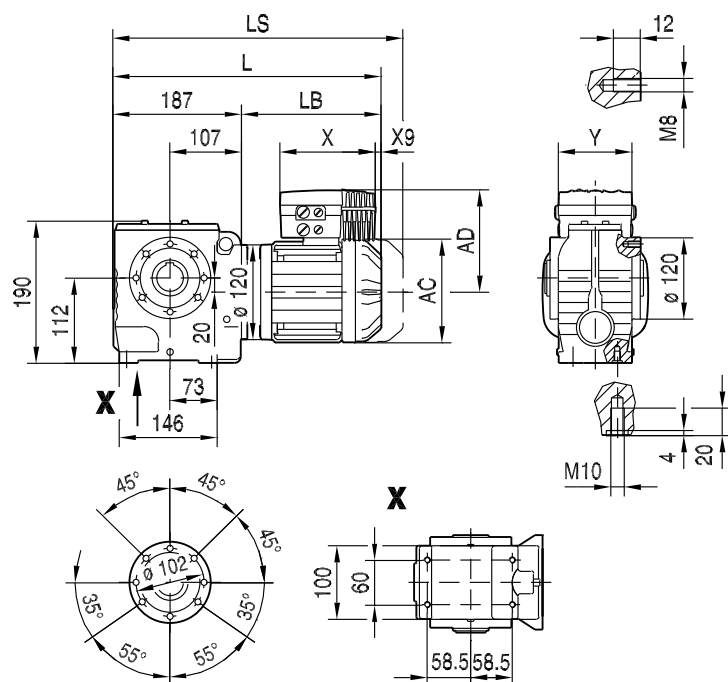
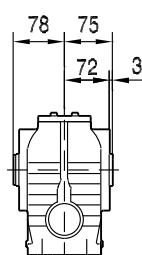
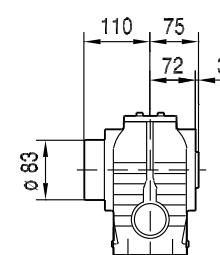
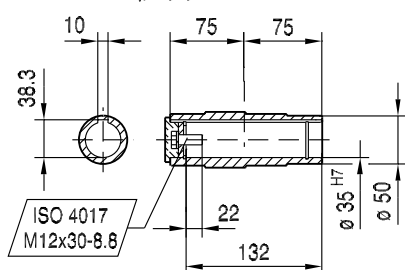
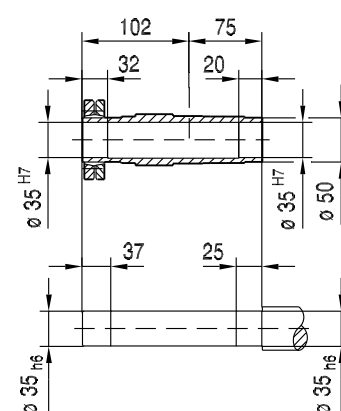
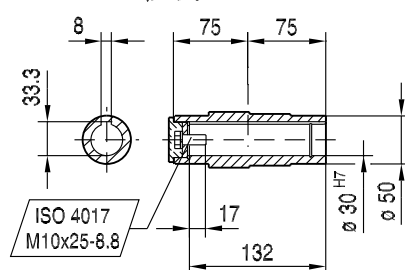
11

SAF57..**SHF57..**

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(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	389	414	469	470	470	502	502	501	551
LS	457	482	550	564	564	596	596	595	645
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

02 017 00 16

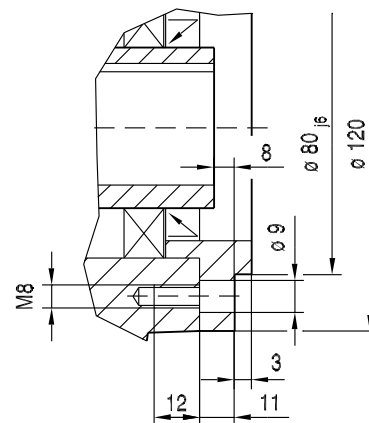
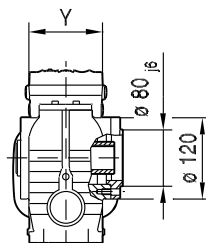
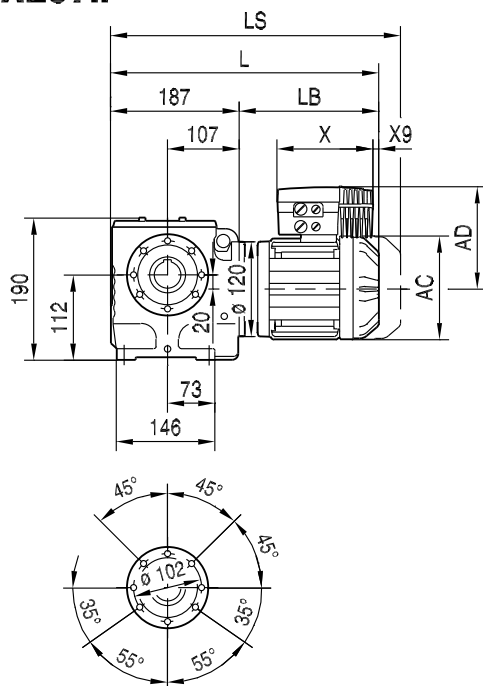
SA57..**SA57..****SH57..****ø 35 H7****ø 30 H7**

(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	389	414	469	470	470	502	502	501	551
LS	457	482	550	564	564	596	596	595	645
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

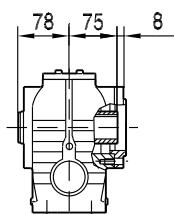
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02 018 00 16

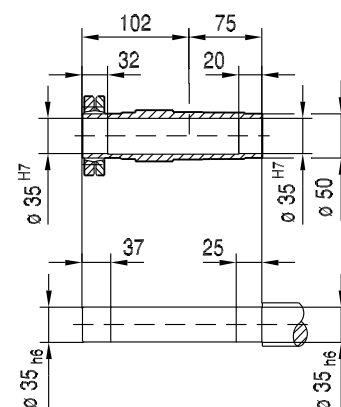
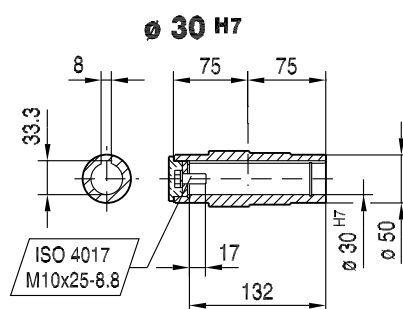
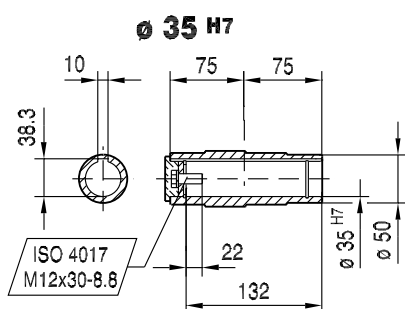
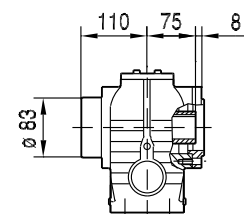
SAZ57..



SAZ57..



SHZ57..

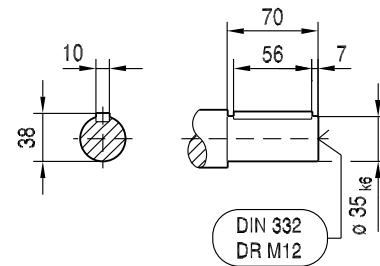
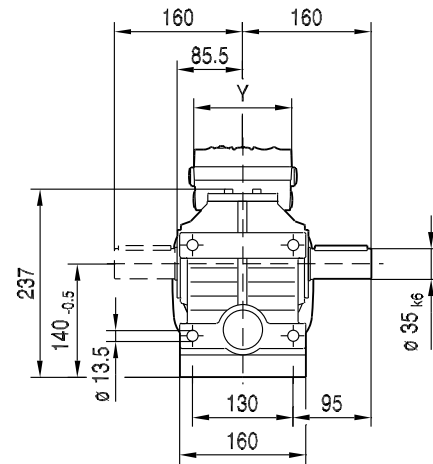
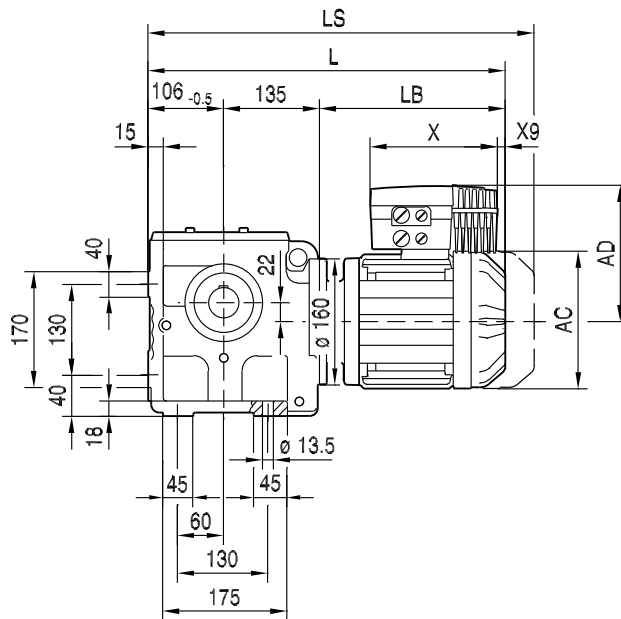


(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	389	414	469	470	470	502	502	501	551
LS	457	482	550	564	564	596	596	595	645
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

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S67..



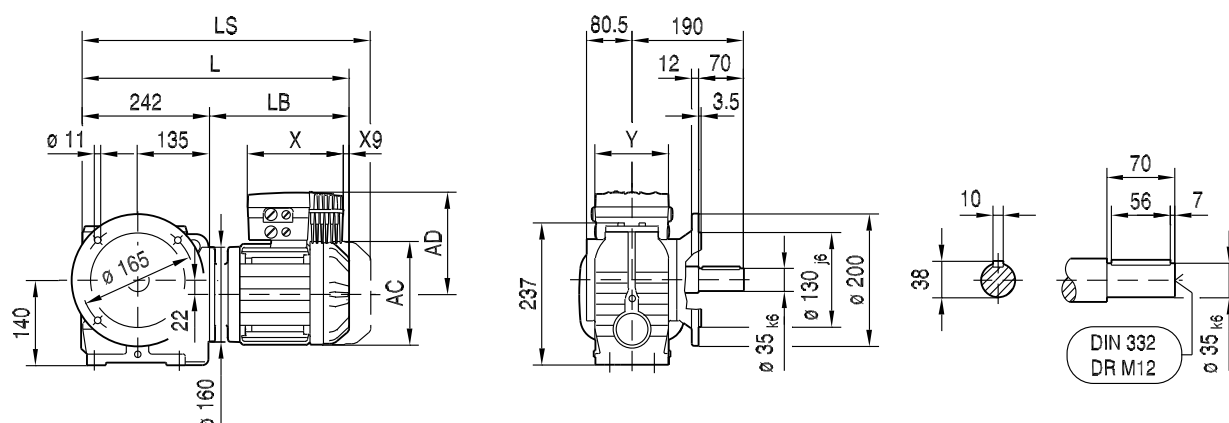
11

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(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	437	462	516	518	518	550	550	546	596	627
LS	504	529	597	611	611	643	643	640	690	739
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

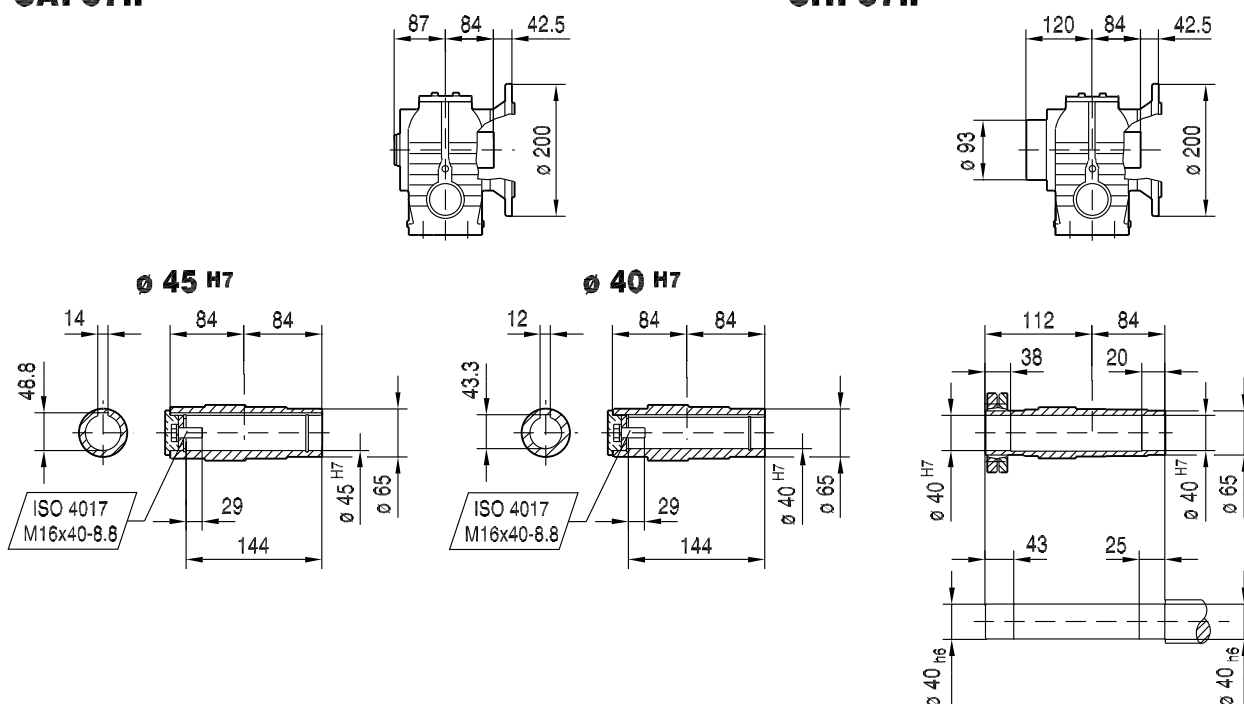
02 021 00 16

SF67..



SAF67..

SHF67..

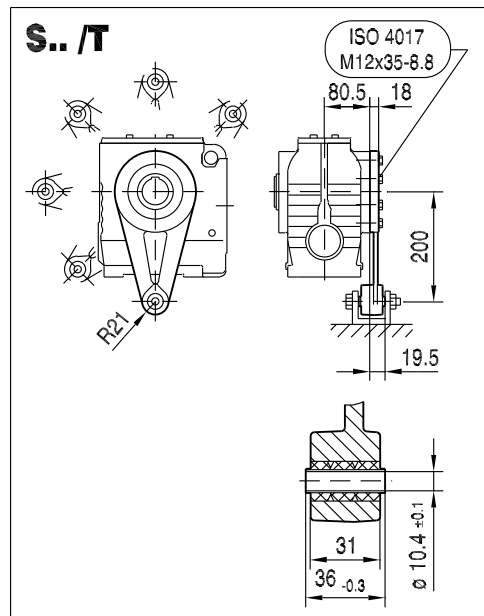
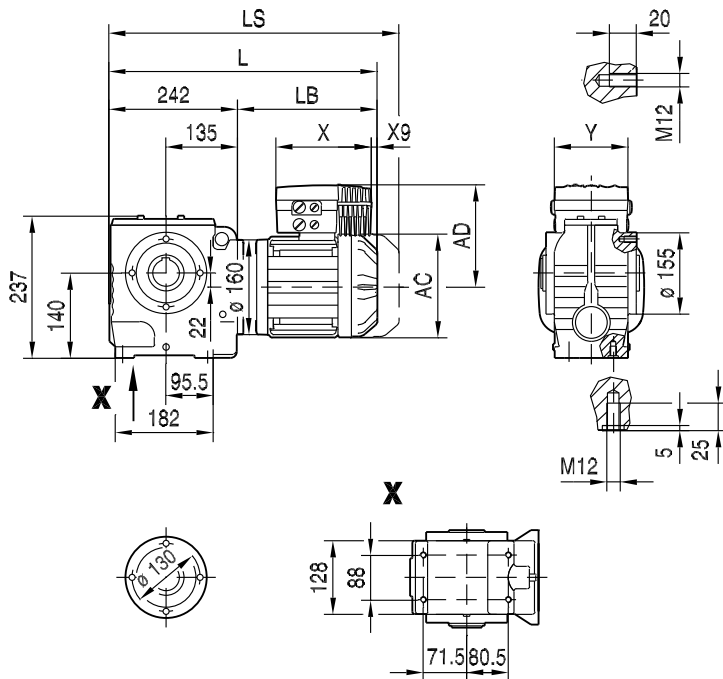


(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	438	463	517	519	519	551	551	547	597	628
LS	505	530	598	612	612	644	644	641	691	740
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

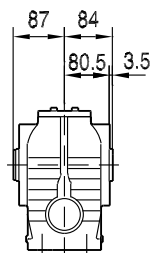
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02 022 00 16

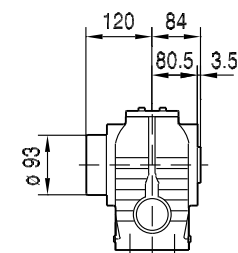
SA67..



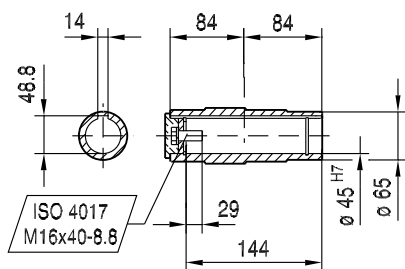
SA67..



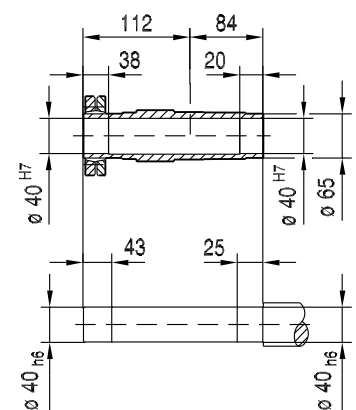
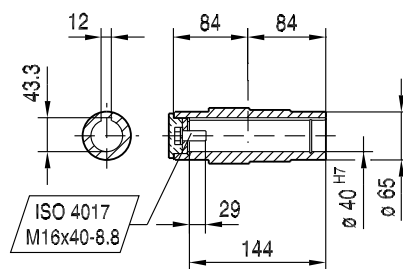
SH67..



ø 45 H7



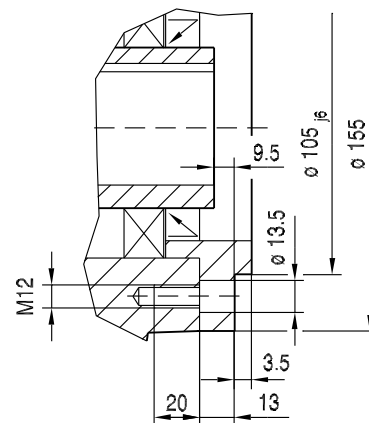
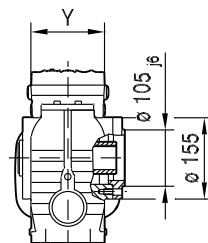
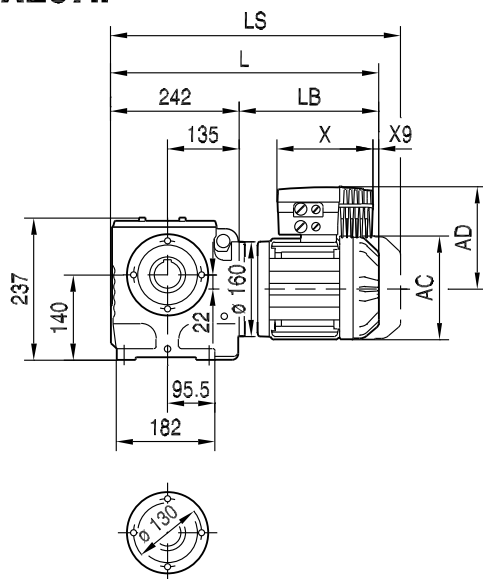
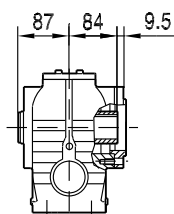
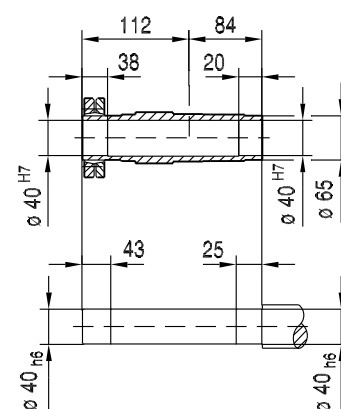
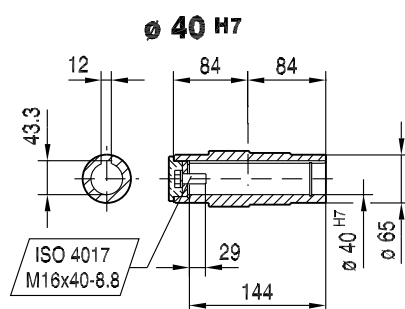
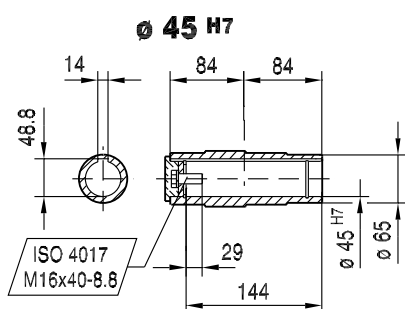
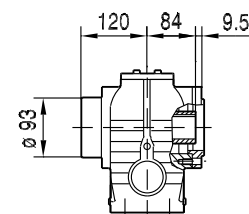
ø 40 H7



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(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	438	463	517	519	519	551	551	547	597	628
LS	505	530	598	612	612	644	644	641	691	740
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

02 023 00 16

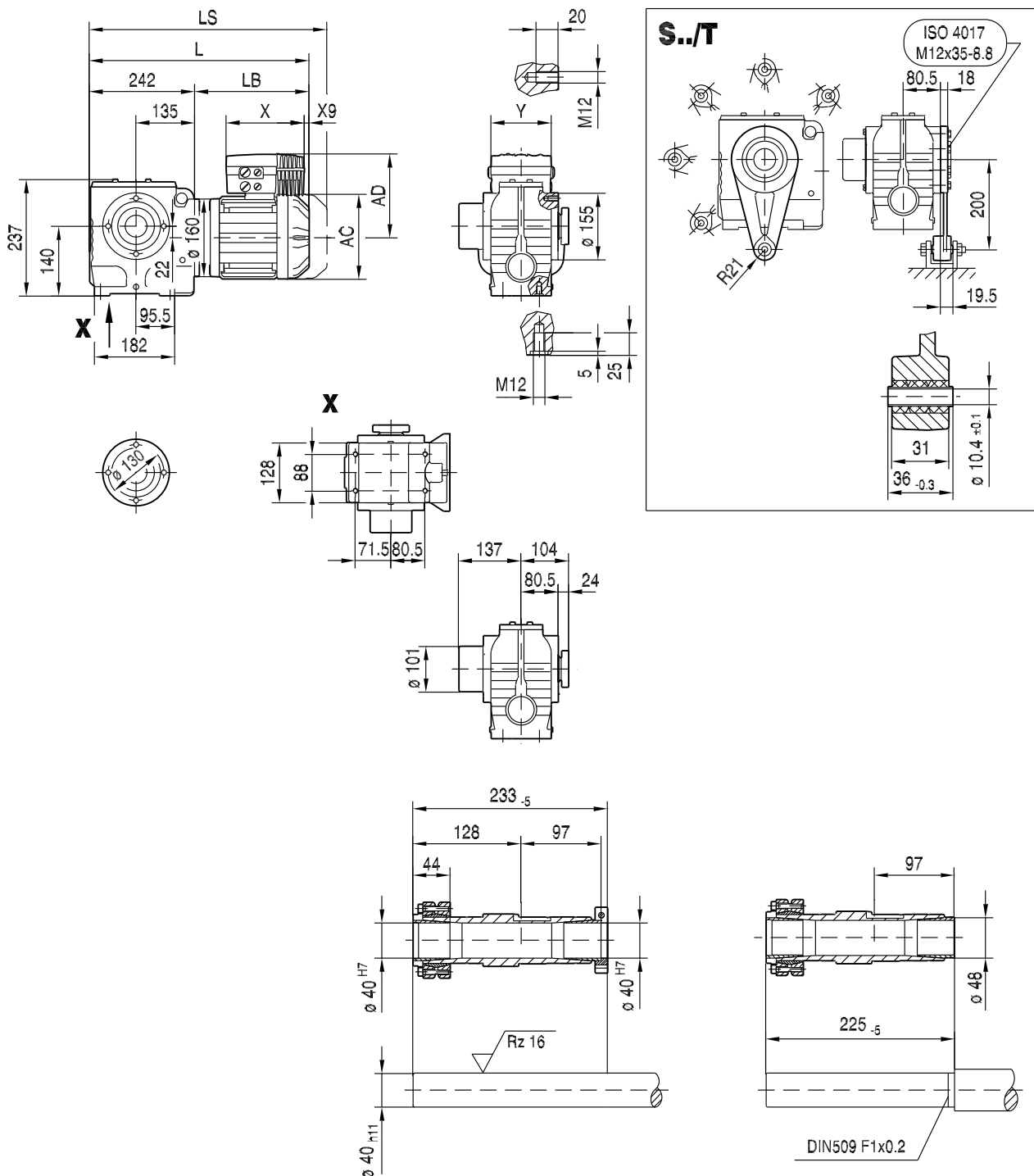
SAZ67..**SAZ67..****SHZ67..**

(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	438	463	517	519	519	551	551	547	597	628
LS	505	530	598	612	612	644	644	641	691	740
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

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02 024 00 16

ST67..



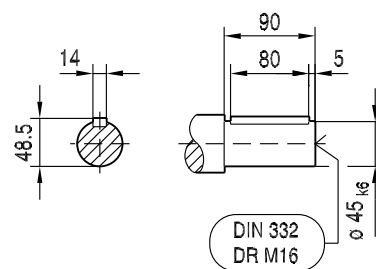
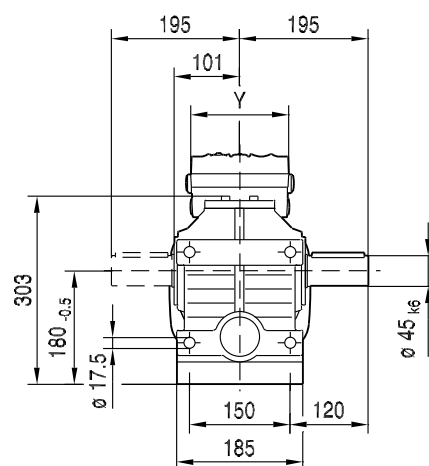
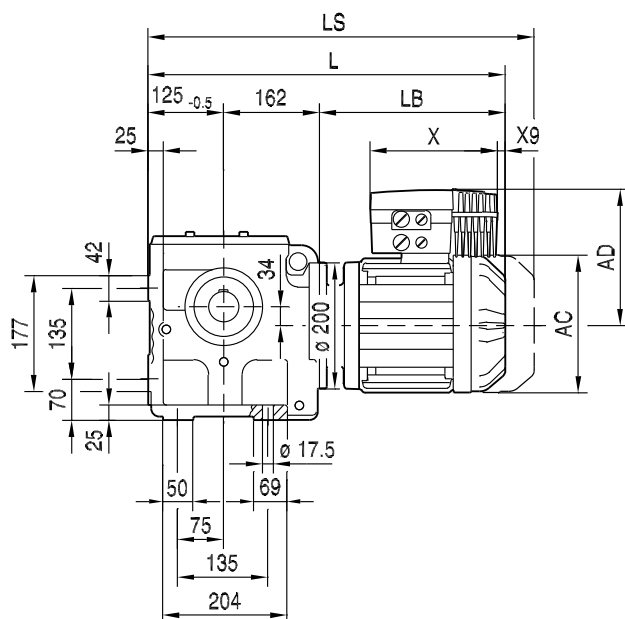
11

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(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	438	463	517	519	519	551	551	547	597	628
LS	505	530	598	612	612	644	644	641	691	740
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

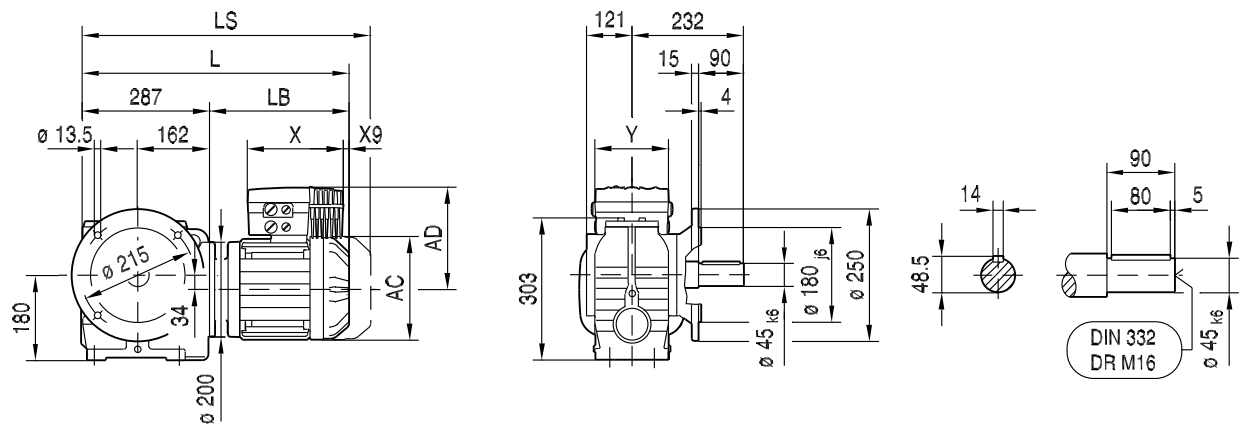
02 025 00 16

S77..

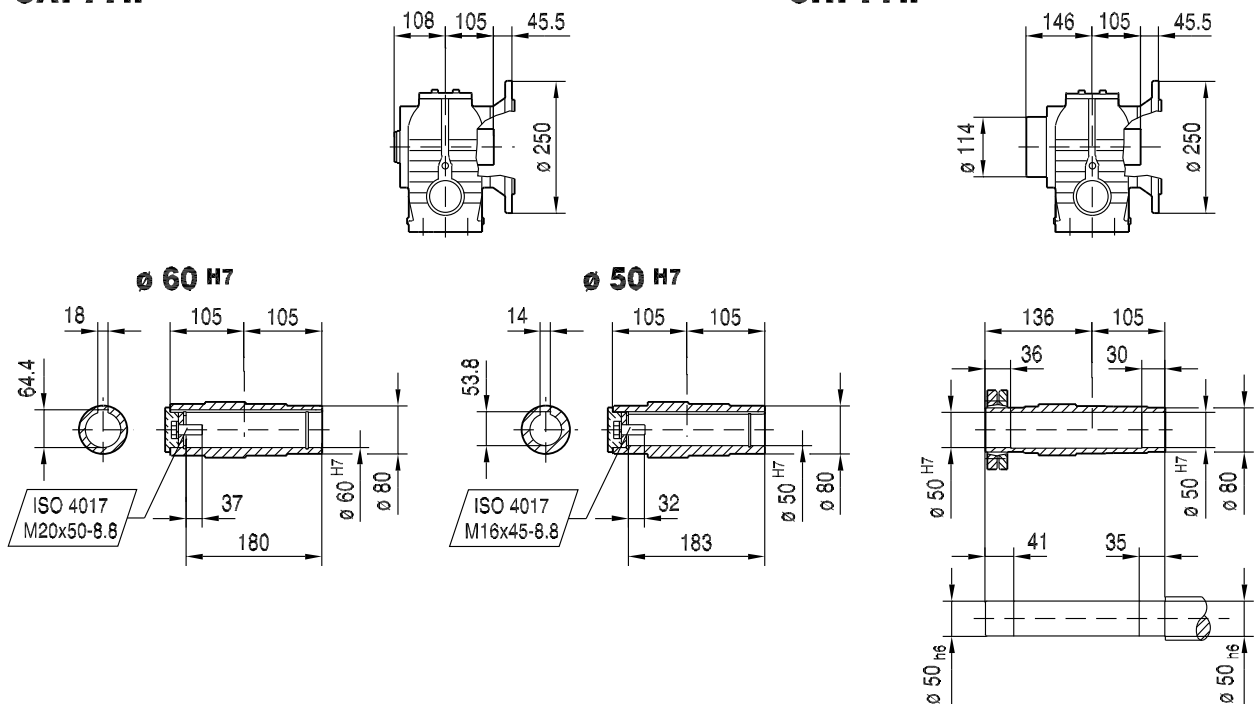


(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	502	555	557	557	589	589	585	635	666
LS	569	636	650	650	682	682	679	729	778
LB	215	268	270	270	302	302	298	348	379
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

02 026 00 16

SF77..

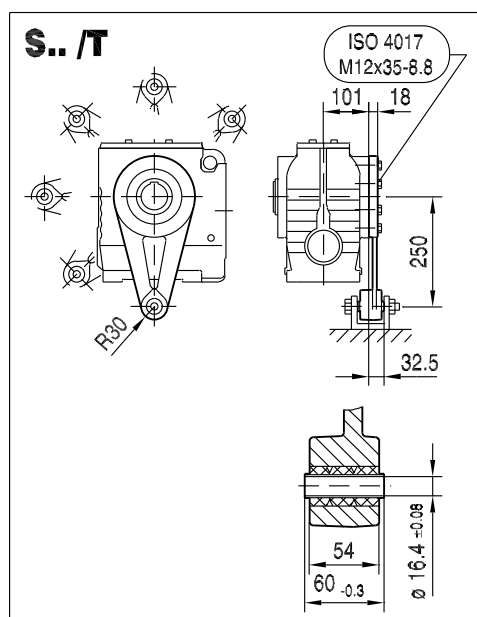
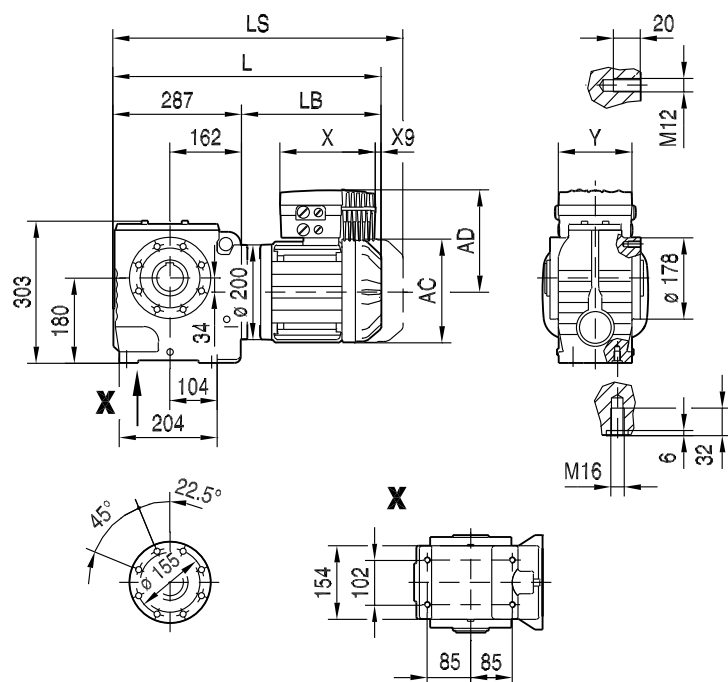
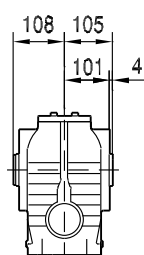
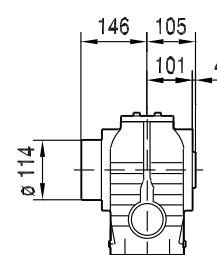
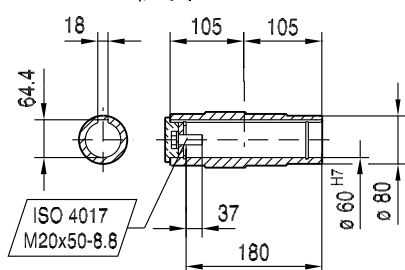
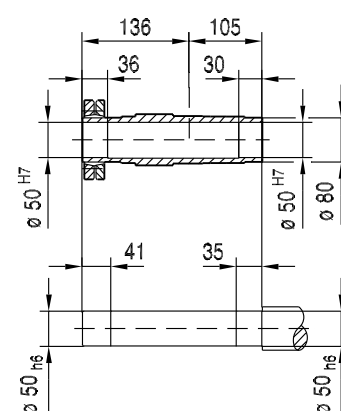
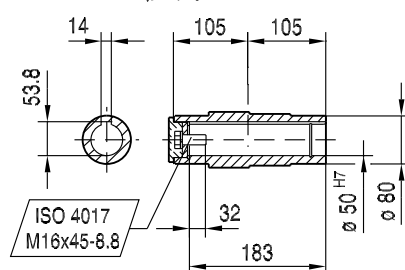
11

SAF77..**SHF77..**

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(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	502	555	557	557	589	589	585	635	666
LS	569	636	650	650	682	682	679	729	778
LB	215	268	270	270	302	302	298	348	379
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

02 027 00 16

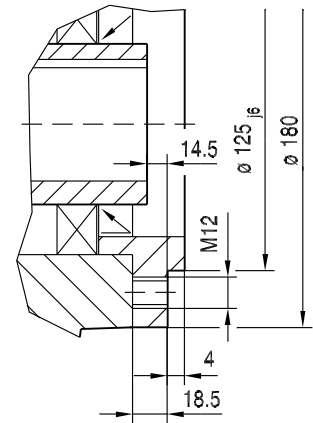
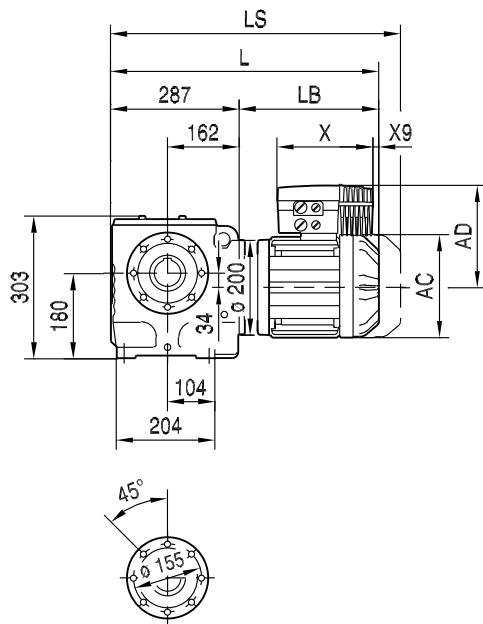
SA77..**SA77..****SH77..****ø 60 H7****ø 50 H7**

(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	502	555	557	557	589	589	585	635	666
LS	569	636	650	650	682	682	679	729	778
LB	215	268	270	270	302	302	298	348	379
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

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02 028 00 16

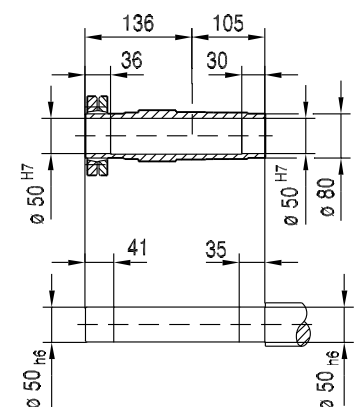
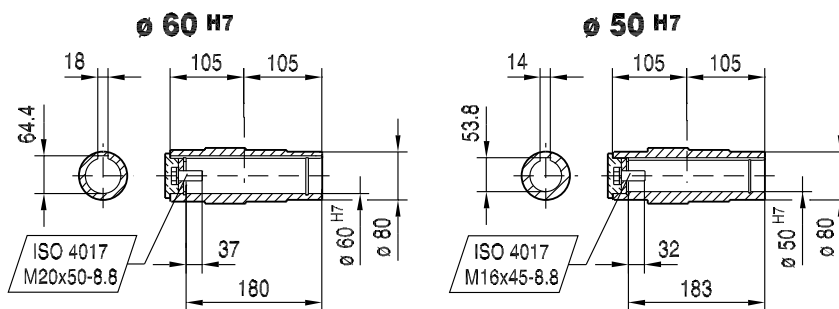
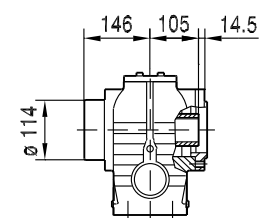
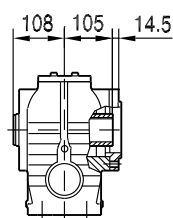
SAZ77..



11

SAZ77..

SHZ77..

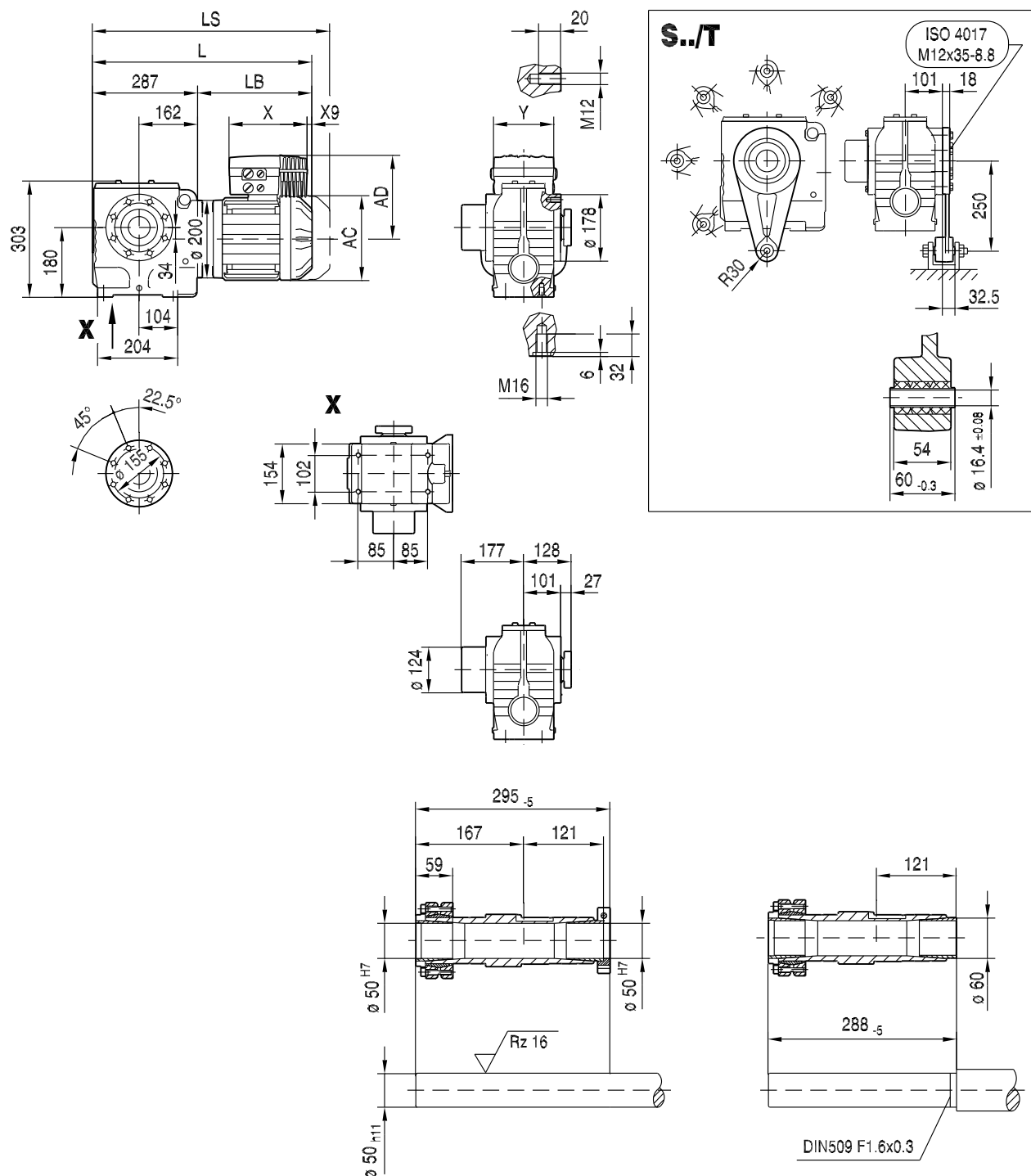


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(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	502	555	557	557	589	589	585	635	666
LS	569	636	650	650	682	682	679	729	778
LB	215	268	270	270	302	302	298	348	379
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

02 029 00 16

ST77..

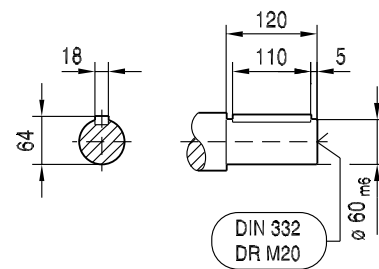
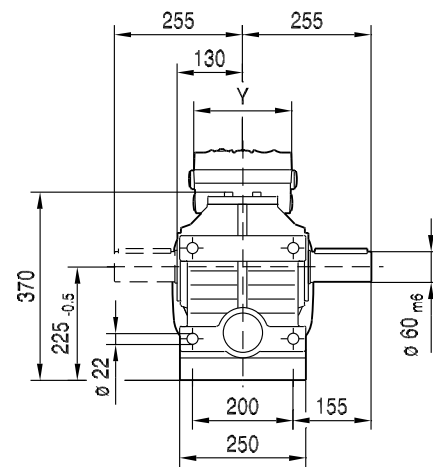
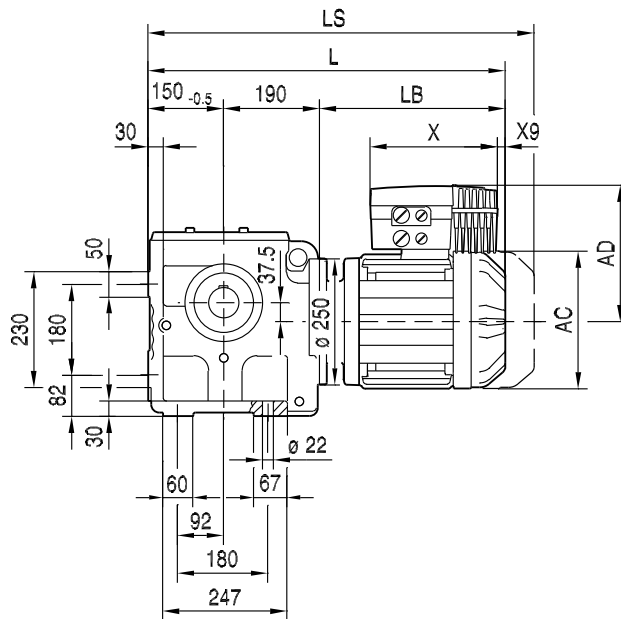


(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	502	555	557	557	589	589	585	635	666
LS	569	636	650	650	682	682	679	729	778
LB	215	268	270	270	302	302	298	348	379
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

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02 030 00 16

S87..



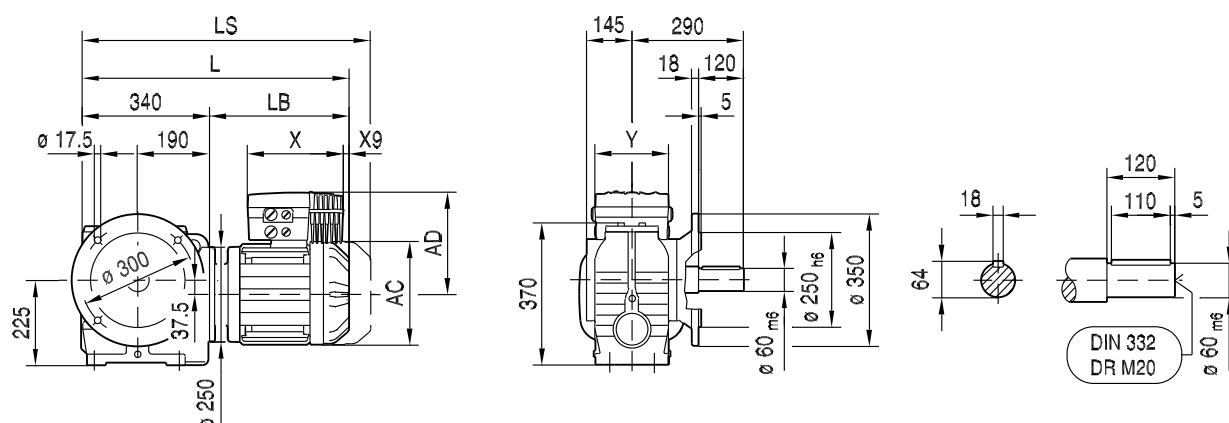
11

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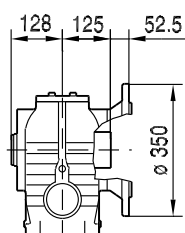
(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	549	603	605	605	637	637	633	683	714
LS	616	684	698	698	730	730	727	777	826
LB	209	263	265	265	297	297	293	343	374
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

02 031 00 16

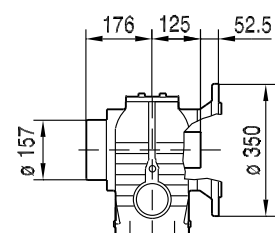
SF87..



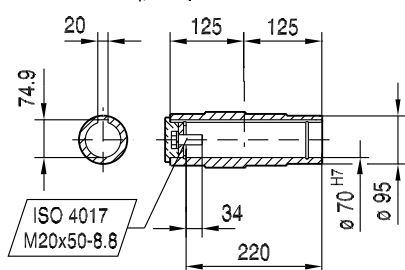
SAF87..



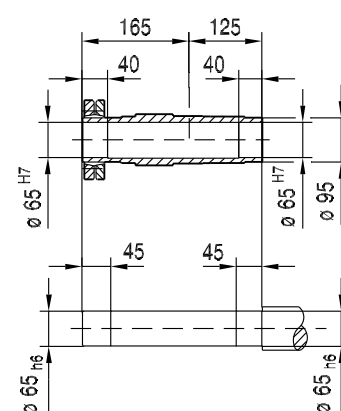
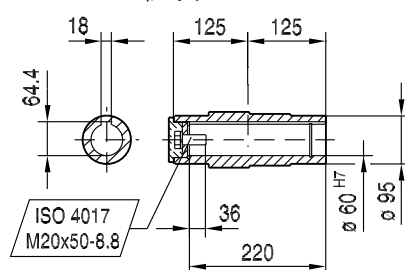
SHF87..



Ø 70 H7



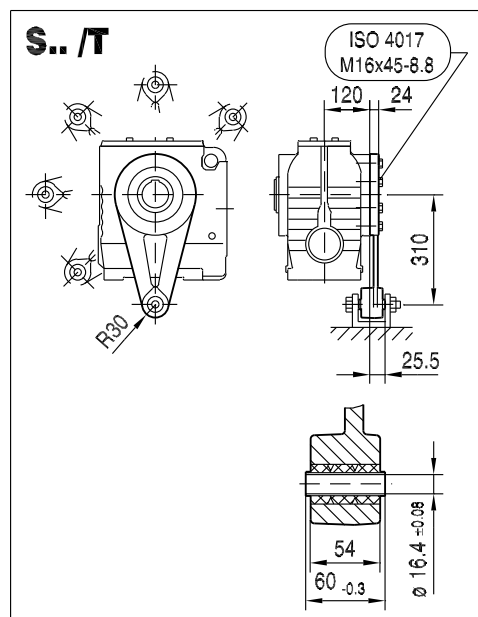
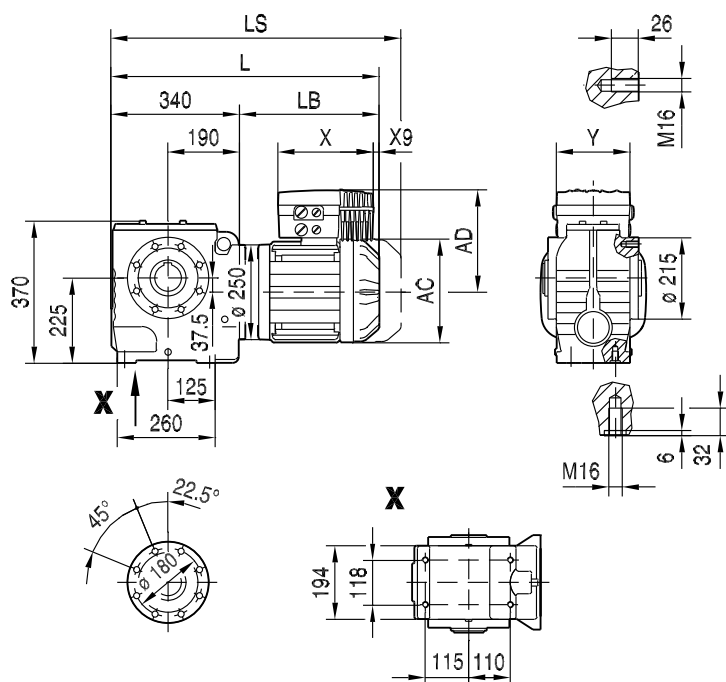
Ø 60 H7



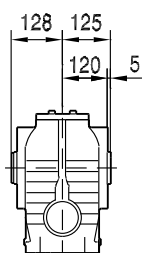
(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	549	603	605	605	637	637	633	683	714
LS	616	684	698	698	730	730	727	777	826
LB	209	263	265	265	297	297	293	343	374
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

02 032 00 16

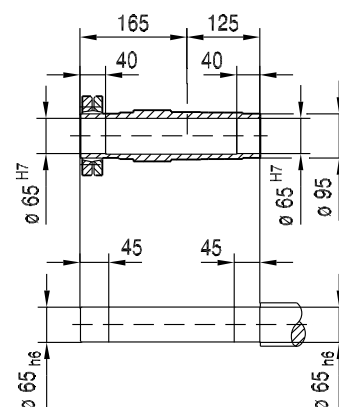
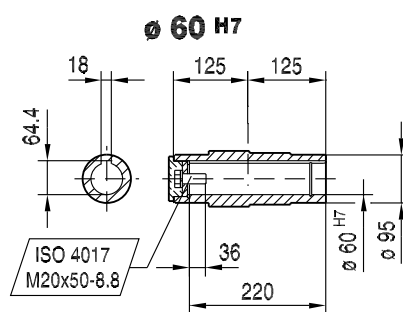
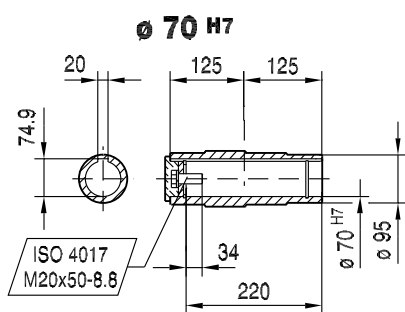
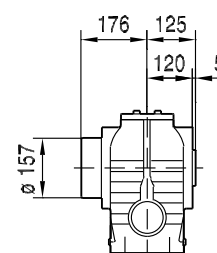
SA87..



SA87..



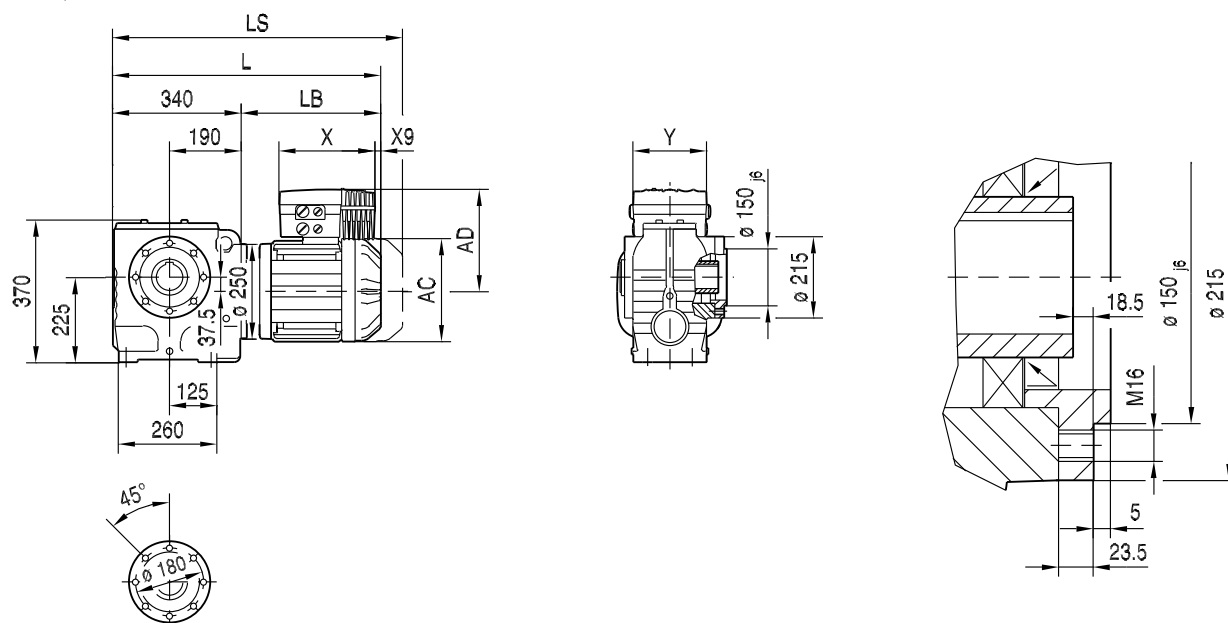
SH87..



(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	549	603	605	605	637	637	633	683	714
LS	616	684	698	698	730	730	727	777	826
LB	209	263	265	265	297	297	293	343	374
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

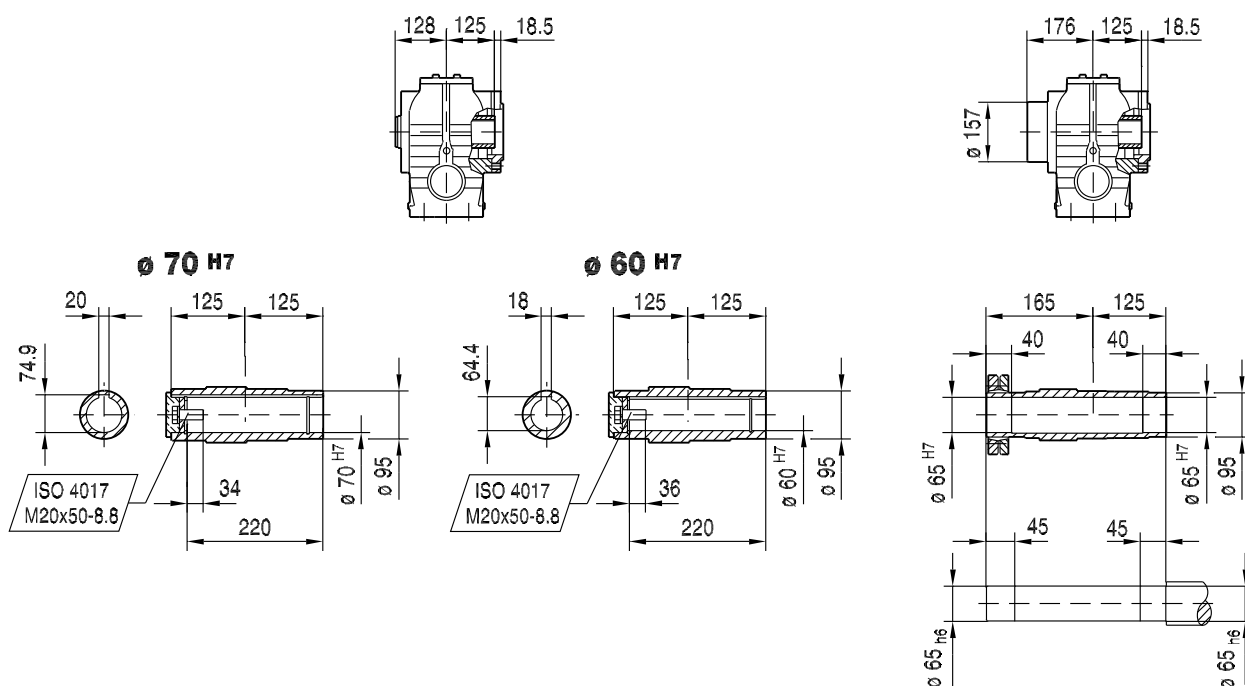
02 033 00 16

SAZ87..



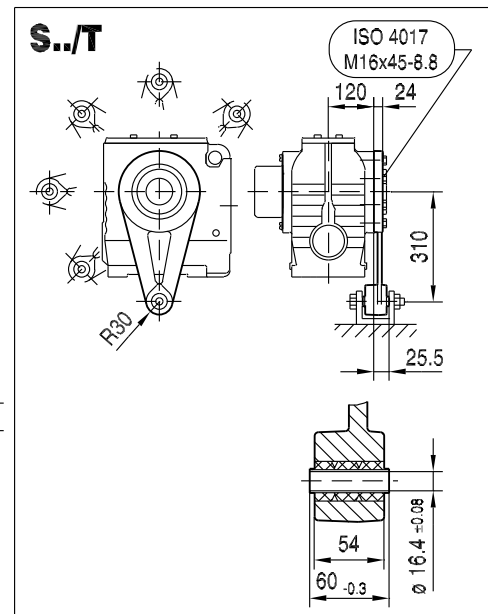
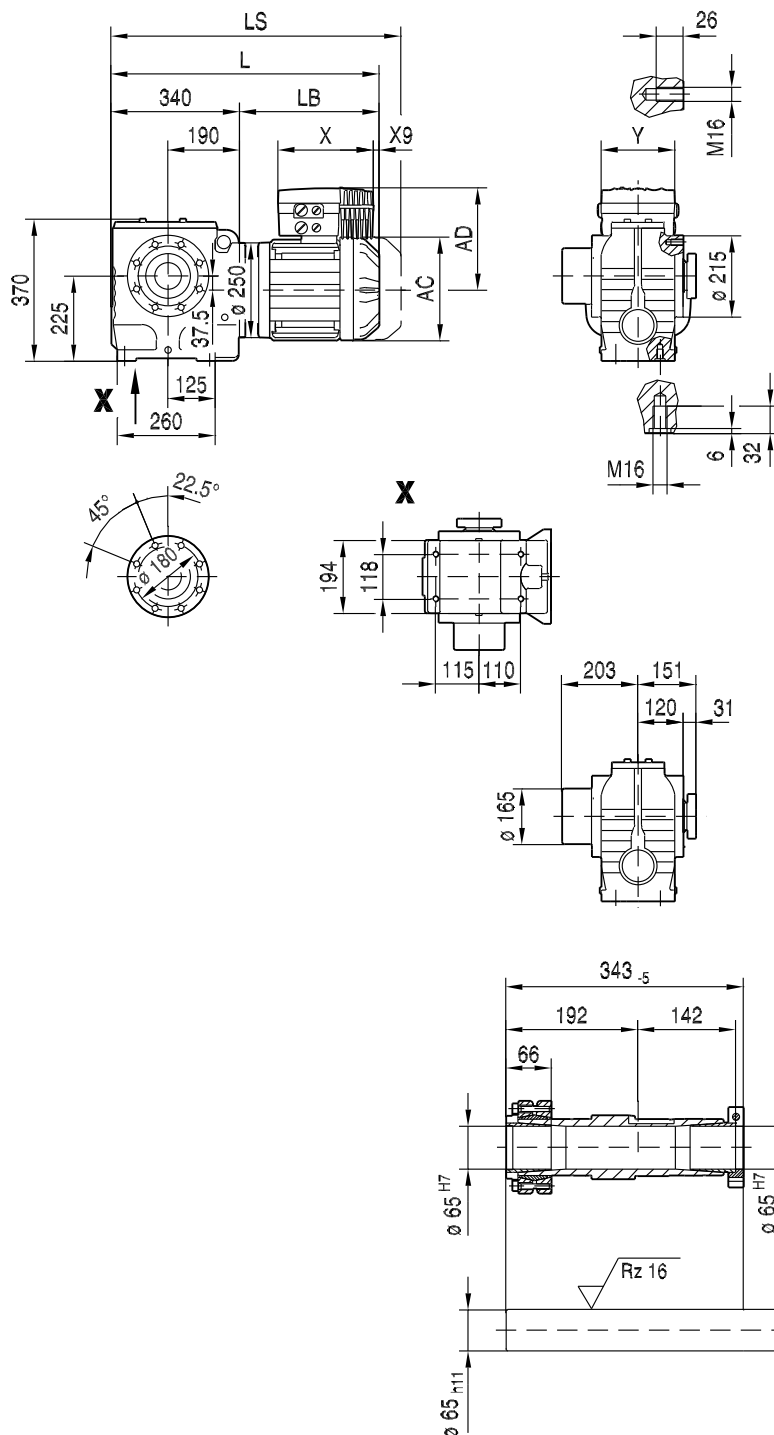
SAZ87..

SHZ87..



(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	549	603	605	605	637	637	633	683	714
LS	616	684	698	698	730	730	727	777	826
LB	209	263	265	265	297	297	293	343	374
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

02 034 00 16

ST87..

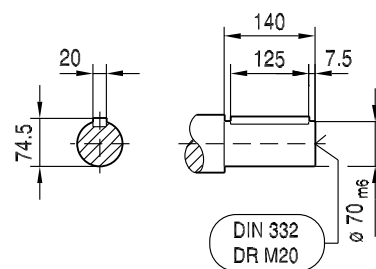
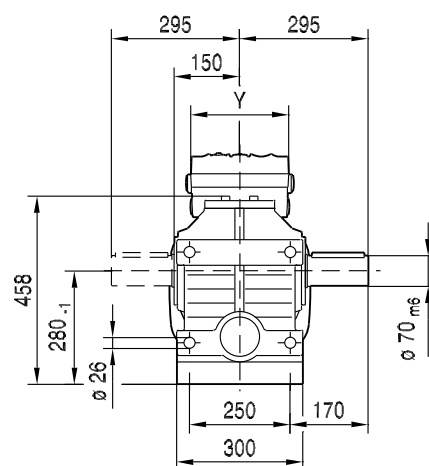
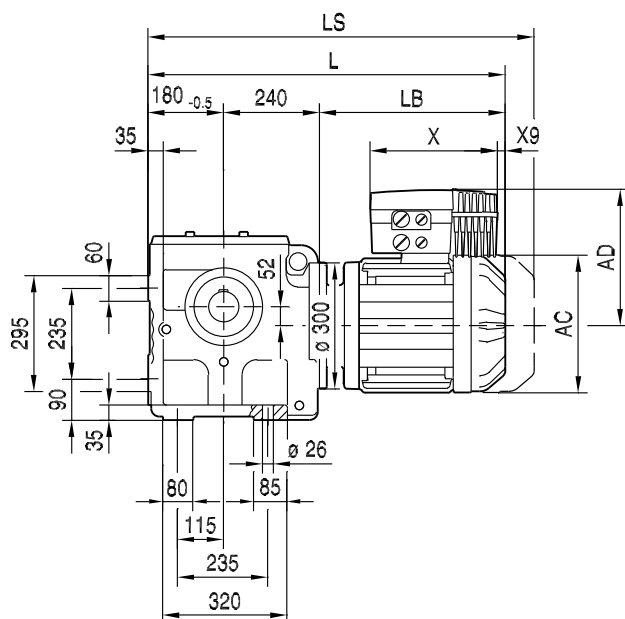
11

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(→ 149)	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	156	179	179	179	179	197	197	221
AD	185	197	208	208	208	208	216	216	230
L	549	603	605	605	637	637	633	683	714
LS	616	684	698	698	730	730	727	777	826
LB	209	263	265	265	297	297	293	343	374
X	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	186	148	186	186	186	186

02 035 00 16

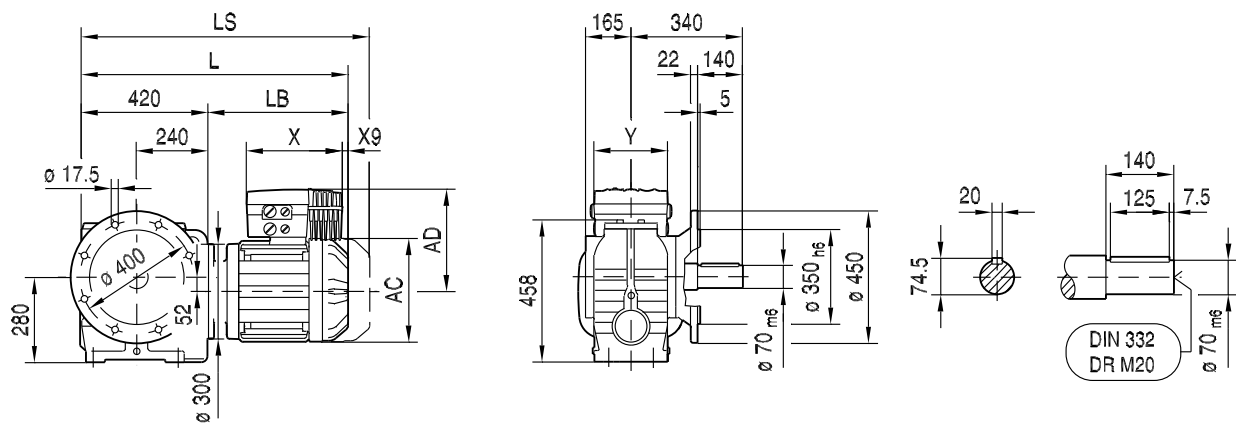
S97..



(→ 149)	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	156	179	179	179	179	197	197	221
AD	197	208	208	208	208	216	216	230
L	678	680	680	712	712	708	758	789
LS	759	773	773	805	805	802	852	901
LB	258	260	260	292	292	288	338	369
X	182	182	228	182	228	228/254	228/254	254
X9	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	186	148	186	186	186	186

SF97..

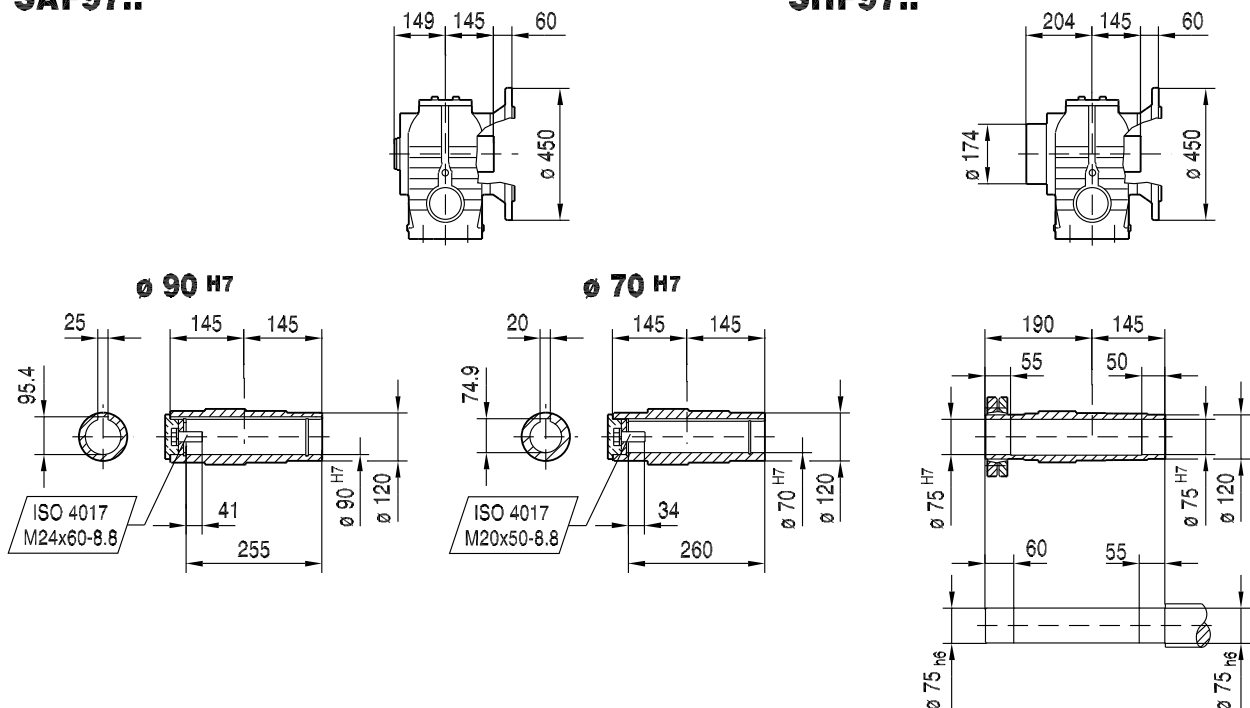
02 036 00 16



11

SAF97..

SHF97..

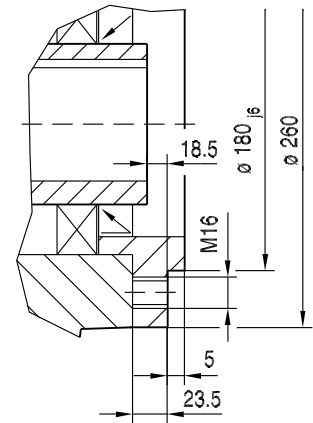
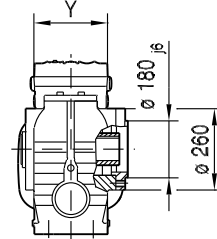
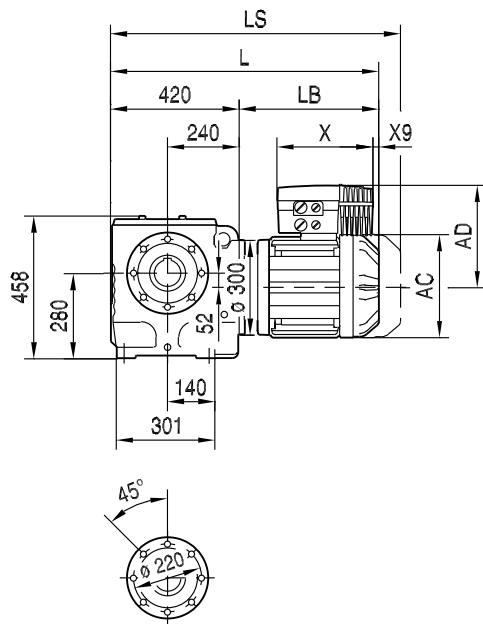


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(→ 149)	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	156	179	179	179	179	197	197	221
AD	197	208	208	208	208	216	216	230
L	678	680	680	712	712	708	758	789
LS	759	773	773	805	805	802	852	901
LB	258	260	260	292	292	288	338	369
X	182	182	228	182	228	228/254	228/254	254
X9	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	186	148	186	186	186	186

02 038 00 16

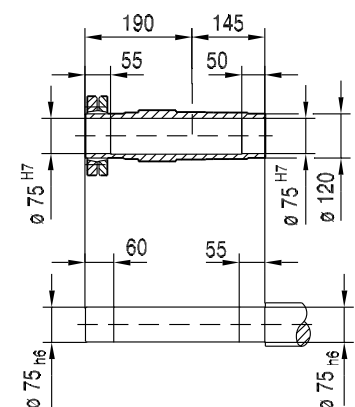
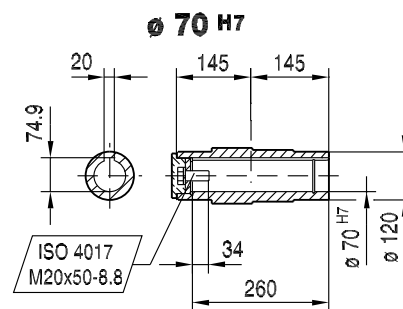
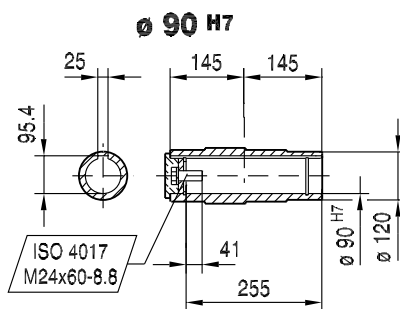
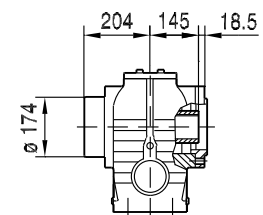
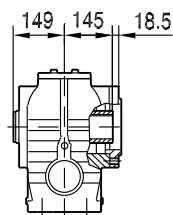
SAZ97..



11

SAZ97..

SHZ97..

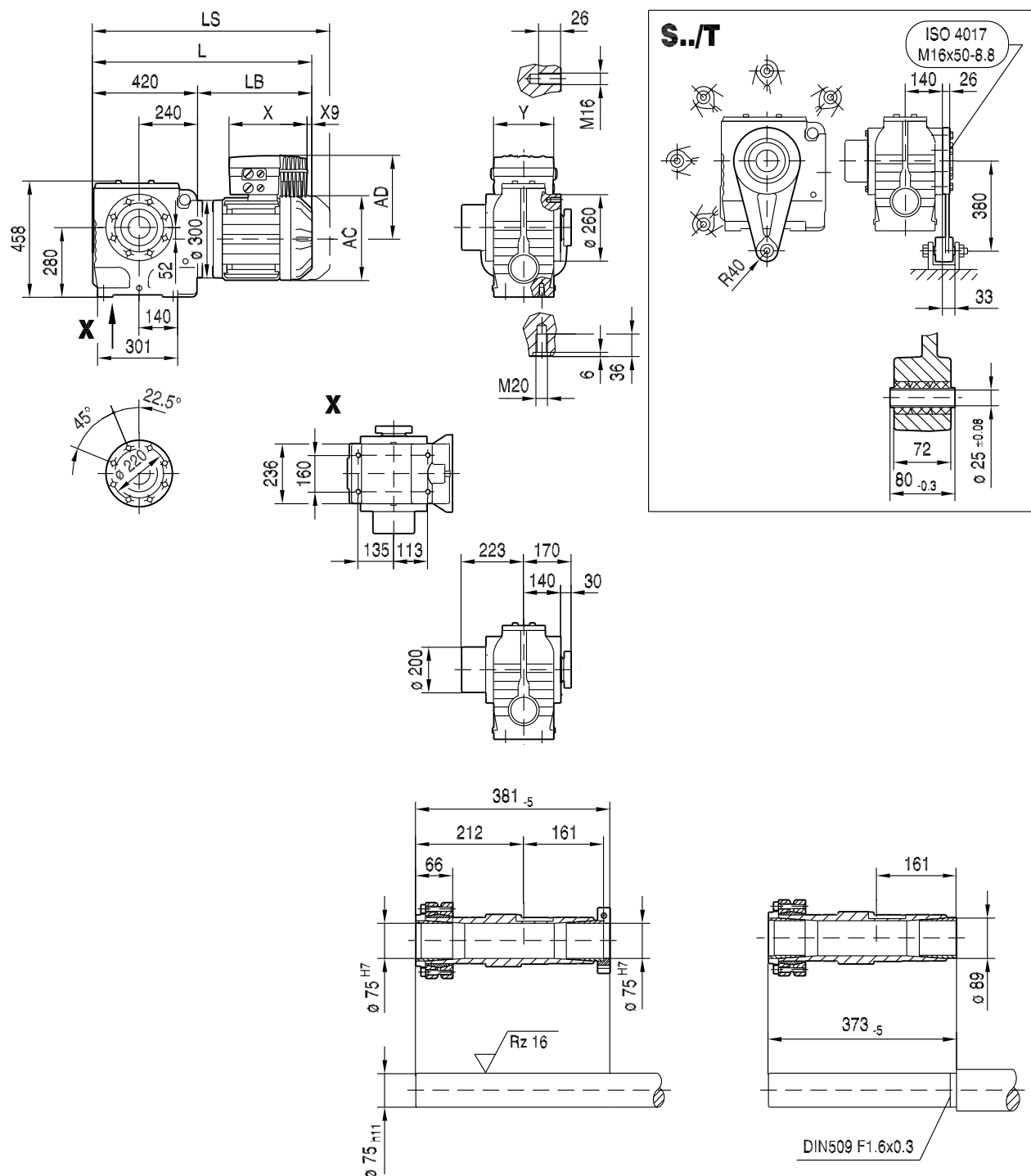


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(→ 149)	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	156	179	179	179	179	197	197	221
AD	197	208	208	208	208	216	216	230
L	678	680	680	712	712	708	758	789
LS	759	773	773	805	805	802	852	901
LB	258	260	260	292	292	288	338	369
X	182	182	228	182	228	228/254	228/254	254
X9	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	186	148	186	186	186	186

02 039 00 16

ST97..

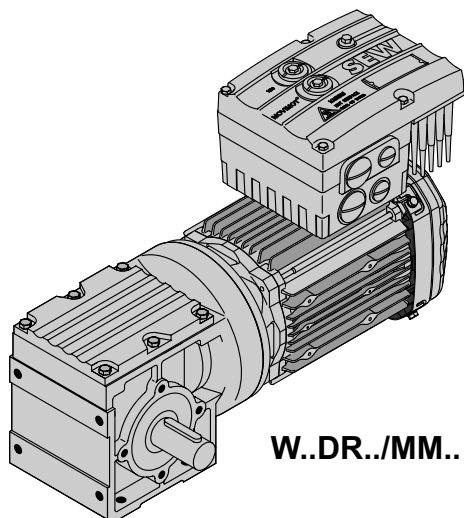


(→ 149)	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	156	179	179	179	179	197	197	221
AD	197	208	208	208	208	216	216	230
L	678	680	680	712	712	708	758	789
LS	759	773	773	805	805	802	852	901
LB	258	260	260	292	292	288	338	369
X	182	182	228	182	228	228/254	228/254	254
X9	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	186	148	186	186	186	186

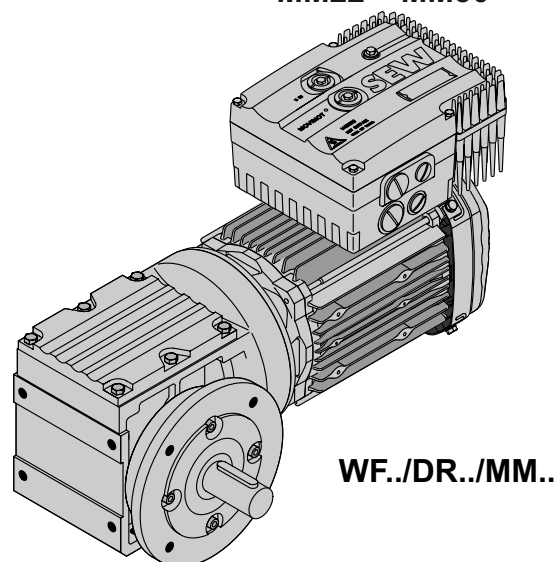
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12 W..DR..MM.. SPIROPLAN® gearmotors

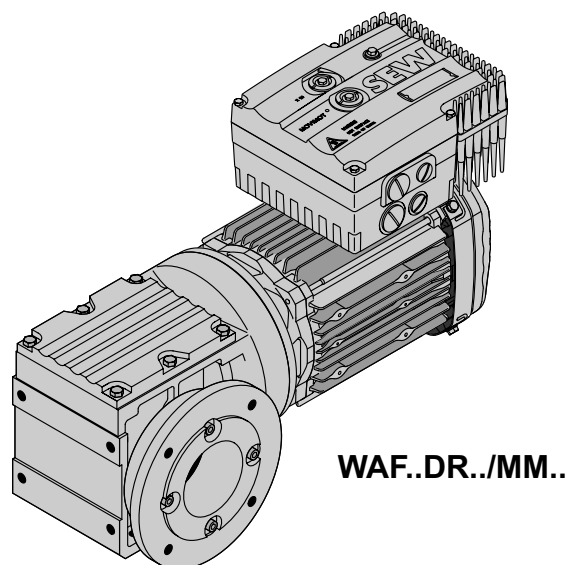
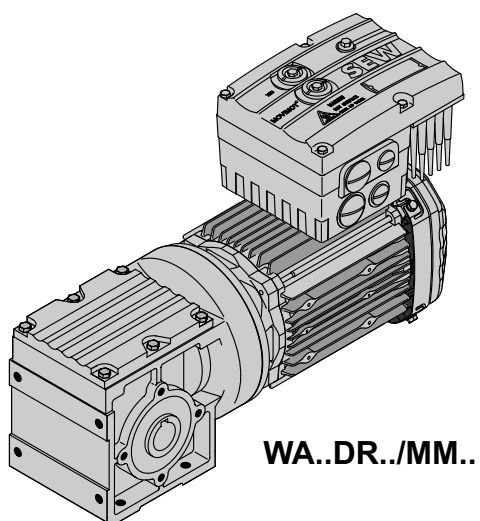
MM03 – MM15



MM22 – MM30



12



5942725003

12.1 W..DR..MM.. selection tables [1:10, 290 – 2900 min⁻¹]

P _m = 0.55 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
3.9 - 39	83 - 105	74.98	6250	1.70	W WF WA WAF	47 47 47 47	DRS DRS DRS DRS	71S4 MM05 71S4 MM05 71S4 MM05 71S4 MM05	18	477
4.2 - 42	77 - 98	68.93	6140	1.85					19	478
4.9 - 49	67 - 85	58.98	5930	2.1					17	479
5.7 - 57	58 - 74	51.12	5730	2.4					17	478
6.1 - 61	55 - 70	47.78	5640	2.6						
4.2 - 42	67 - 92	69.05	3590	1.20	W WF WA WAF	37 37 37 37	DRS DRS DRS DRS	71S4 MM05 71S4 MM05 71S4 MM05 71S4 MM05	13	472
4.6 - 46	62 - 85	63.33	3670	1.30					13	473
5.4 - 54	54 - 74	53.92	3800	1.50					13	475
6.2 - 62	47 - 65	46.49	3880	1.70					13	473
7.7 - 77	40 - 54	37.88	3960	2.0						
8.4 - 84	45 - 54	34.52	3960	1.65						
9.2 - 92	42 - 50	31.67	3910	1.80						
3.9 - 39	44 - 66	75.00*	3000	1.05	W WF WA WAF	30 30 30 30	DRS DRS DRS DRS	71S4 MM05 71S4 MM05 71S4 MM05 71S4 MM05	12	468
4.8 - 48	42 - 61	60.00*	3000	1.15					12	469
6.0 - 60	37 - 52	48.00*	3000	1.35					11	471
7.4 - 74	35 - 47	39.00*	3000	1.50					12	470
8.9 - 89	29 - 40	32.50*	3000	1.75						
11 - 105	29 - 36	27.50*	3000	1.90						
12 - 118	27 - 34	24.50*	3000	2.1						
15 - 149	24 - 28	19.50*	3000	2.5						
18 - 178	21 - 24	16.33	2910	2.5						
20 - 202	19 - 22	14.33	2810	2.7						
28 - 283	15 - 16	10.25*	2560	3.0						
35 - 354	12 - 13	8.20*	2400	3.0						
44 - 441	10 - 11	6.57	2250	3.5						
6.0 - 60	33 - 48	48.00*	2200	0.85	W WF WA WAF	20 20 20 20	DRS DRS DRS DRS	71S4 MM05 71S4 MM05 71S4 MM05 71S4 MM05	9.1	465
7.4 - 74	31 - 43	39.00*	2080	0.90					9.2	466
8.9 - 89	32 - 42	32.50*	1980	0.95					8.8	467
11 - 105	27 - 35	27.50*	1920	1.15					8.8	466
12 - 118	24 - 32	24.50*	1890	1.25						
15 - 149	22 - 27	19.50*	1800	1.30						
18 - 176	19 - 23	16.50*	1720	1.30						
20 - 202	18 - 22	14.33	1680	1.40						
28 - 283	14 - 16	10.25*	1550	1.55						
35 - 354	12 - 13	8.20*	1470	1.55						
44 - 441	9.9 - 11	6.57	1410	1.80						

P _m = 0.75 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
3.9 - 39	113 - 144	74.98	5770	1.25	W WF WA WAF	47 47 47 47	DRS DRS DRS DRS	71M4 MM07 71M4 MM07 71M4 MM07 71M4 MM07	19	477
4.2 - 42	105 - 133	68.93	5690	1.35					20	478
4.9 - 49	91 - 115	58.98	5540	1.55					18	479
5.7 - 57	80 - 101	51.12	5390	1.80					19	478
6.1 - 61	75 - 95	47.78	5320	1.90						
7.0 - 70	66 - 83	41.30	5160	2.2						
8.3 - 83	57 - 72	35.09	4980	2.5						
9.2 - 92	62 - 69	31.62	4960	2.3						
11 - 106	54 - 60	27.41	4790	2.7						
4.2 - 42	91 - 126	69.05	2130	0.90	W WF WA WAF	37 37 37 37	DRS DRS DRS DRS	71M4 MM07 71M4 MM07 71M4 MM07 71M4 MM07	14	472
4.6 - 46	85 - 116	63.33	3020	0.95					14	473
5.4 - 54	74 - 101	53.92	3470	1.10					14	475
6.2 - 62	65 - 88	46.49	3640	1.25					14	473
7.7 - 77	54 - 73	37.88	3720	1.50						
8.4 - 84	61 - 74	34.52	3740	1.20						
9.2 - 92	57 - 68	31.67	3680	1.35						
9.3 - 93	46 - 61	31.33	3600	1.80						
10 - 104	42 - 55	27.78	3520	2.0						
11 - 108	49 - 58	26.96	3560	1.55						
12 - 125	43 - 51	23.25	3450	1.80						
4.2 - 42	91 - 126	69.05	2130	0.90						
4.6 - 46	85 - 116	63.33	3020	0.95						
5.4 - 54	74 - 101	53.92	3470	1.10						
6.2 - 62	65 - 88	46.49	3640	1.25						
7.7 - 77	54 - 73	37.88	3720	1.50						
8.4 - 84	61 - 74	34.52	3740	1.20						
9.2 - 92	57 - 68	31.67	3680	1.35						
9.3 - 93	46 - 61	31.33	3600	1.80						
10 - 104	42 - 55	27.78	3520	2.0						
11 - 108	49 - 58	26.96	3560	1.55						
12 - 125	43 - 51	23.25	3450	1.80						

P_m = 0.75 kW									
n_a min⁻¹	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B				m kg	
4.8 - 48	57 - 83	60.00*	3000	0.85					
6.0 - 60	51 - 71	48.00*	3000	1.00					
11 - 105	39 - 50	27.50*	3000	1.40					
12 - 118	37 - 46	24.50*	3000	1.50					
18 - 178	28 - 33	16.33	2820	1.80	W	30	DRS	71M4 MM07	13 468
20 - 202	26 - 30	14.33	2730	2.0	WF	30	DRS	71M4 MM07	13 469
28 - 283	20 - 22	10.25*	2500	2.2	WA	30	DRS	71M4 MM07	13 471
35 - 354	17 - 18	8.20*	2360	2.2	WAF	30	DRS	71M4 MM07	13 470
44 - 441	14 - 15	6.57	2210	2.6					

P_m = 1.1 kW									
n_a min⁻¹	M_a Nm	i	F_{Ra}¹⁾ N	SEW f_B				m kg	
4.9 - 49	133 - 169	58.98	4860	1.05					
5.7 - 57	117 - 149	51.12	4800	1.20					
6.1 - 61	110 - 140	47.78	4760	1.30					
7.0 - 70	96 - 122	41.30	4670	1.50					
8.3 - 83	83 - 105	35.09	4560	1.70					
9.2 - 92	91 - 101	31.62	4620	1.60	W	47	DRN	80M4 MM11	24 477
9.3 - 93	75 - 94	31.33	4470	1.90	WF	47	DRN	80M4 MM11	25 478
11 - 106	79 - 88	27.41	4490	1.80	WA	47	DRN	80M4 MM11	23 479
11 - 108	65 - 81	26.76	4350	2.2	WAF	47	DRN	80M4 MM11	24 478
11 - 113	74 - 83	25.62	4430	1.95					
12 - 116	62 - 77	25.07	4290	2.4					
13 - 131	64 - 72	22.15	4290	2.2					
15 - 154	55 - 61	18.82	4130	2.6					
24 - 236	41 - 43	12.30	3860	2.6					
6.2 - 62	95 - 129	46.49	1650	0.85					
7.7 - 77	80 - 107	37.88	3210	1.05	W	37	DRN	80M4 MM11	18 472
9.3 - 93	68 - 90	31.33	3170	1.20	WF	37	DRN	80M4 MM11	18 473
10 - 104	61 - 81	27.78	3130	1.35	WA	37	DRN	80M4 MM11	18 475
11 - 108	72 - 85	26.96	3210	1.05	WAF	37	DRN	80M4 MM11	18 473
12 - 125	63 - 74	23.25	3150	1.20					
12 - 118	54 - 68	24.50*	2840	1.05					
18 - 178	41 - 49	16.33	2650	1.25	W	30	DRN	80M4 MM11	17 468
20 - 202	38 - 44	14.33	2580	1.35	WF	30	DRN	80M4 MM11	18 469
28 - 283	29 - 33	10.25*	2400	1.50	WA	30	DRN	80M4 MM11	17 471
35 - 354	24 - 27	8.20*	2280	1.50	WAF	30	DRN	80M4 MM11	17 470
44 - 441	20 - 23	6.57	2150	1.75					

P _m = 1.5 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
5.7 - 57	159 - 200	51.12	4110	0.90						
6.1 - 61	150 - 190	47.78	4120	0.95						
7.0 - 70	131 - 166	41.30	4110	1.10						
8.3 - 83	114 - 143	35.09	4080	1.25						
9.2 - 92	124 - 138	31.62	4230	1.15						
9.3 - 93	103 - 129	31.33	4040	1.40						
11 - 106	108 - 120	27.41	4150	1.35						
11 - 108	89 - 111	26.76	3970	1.60						
11 - 113	101 - 113	25.62	4110	1.40	W	47	DRN	90S4 MM15	30	477
12 - 116	84 - 104	25.07	3940	1.70	WF	47	DRN	90S4 MM15	31	478
13 - 131	88 - 98	22.15	4020	1.65	WA	47	DRN	90S4 MM15	29	479
15 - 154	75 - 84	18.82	3900	1.90	WAF	47	DRN	90S4 MM15	30	478
17 - 173	67 - 75	16.80	3810	2.1						
20 - 202	58 - 65	14.35	3690	2.5						
22 - 216	54 - 61	13.44	3640	2.6						
24 - 236	56 - 58	12.30	3760	1.90						
27 - 272	49 - 51	10.66	3620	2.2						
29 - 291	45 - 47	9.96	3550	2.3						
34 - 337	39 - 41	8.61	3410	2.7						
9.3 - 93	93 - 123	31.33	2420	0.90						
10 - 104	84 - 110	27.78	2690	1.00						
12 - 125	85 - 101	23.25	2800	0.90	W	37	DRN	90S4 MM15	24	472
14 - 136	67 - 86	21.33	2680	1.25	WF	37	DRN	90S4 MM15	24	473
15 - 153	71 - 83	18.94	2760	1.10	WA	37	DRN	90S4 MM15	24	475
19 - 185	60 - 69	15.67	2700	1.30	WAF	37	DRN	90S4 MM15	24	473
21 - 209	53 - 62	13.89	2660	1.45						

P _m = 2.2 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
8.3 - 83	167 - 205	35.09	3230	0.85	W 47 WF 47 WA 47 WAF 47	DRN DRN DRN DRN	90L4 MM22 90L4 MM22 90L4 MM22 90L4 MM22	34 34 32 33	477 478 479 478	
9.3 - 93	151 - 189	31.33	3280	0.95						
11 - 106	158 - 176	27.41	3560	0.90						
11 - 108	131 - 163	26.76	3320	1.10						
11 - 113	148 - 165	25.62	3560	0.95						
12 - 116	124 - 153	25.07	3320	1.20						
13 - 131	129 - 144	22.15	3530	1.10						
15 - 154	110 - 123	18.82	3480	1.30						
17 - 173	99 - 110	16.80	3440	1.45						
20 - 202	85 - 95	14.35	3370	1.70						
22 - 216	80 - 89	13.44	3340	1.80						
26 - 256	68 - 75	11.32	3240	2.1						
27 - 272	71 - 74	10.66	3460	1.50						
29 - 291	67 - 69	9.96	3400	1.60						
34 - 337	58 - 60	8.61	3280	1.85						
40 - 396	49 - 51	7.32	3150	2.1						
44 - 444	44 - 46	6.53	3050	2.4						
14 - 136	98 - 127	21.33	1980	0.85	W 37 WF 37 WA 37 WAF 37	DRN DRN DRN DRN	90L4 MM22 90L4 MM22 90L4 MM22 90L4 MM22	27 27 27 27	472 473 475 473	
19 - 185	87 - 102	15.67	2290	0.90						
21 - 209	78 - 91	13.89	2290	1.00						
27 - 272	62 - 70	10.67	2260	1.30						
34 - 339	56 - 59	8.55	2440	1.20						
42 - 416	46 - 48	6.97	2340	1.45						
50 - 503	38 - 40	5.77	2240	1.75						
57 - 567	34 - 35	5.11	2180	2.0						
74 - 739	26 - 27	3.93	2040	2.6						

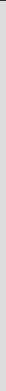
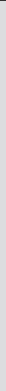
P _m = 3.0 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
11 - 108	179 - 220	26.76	2570	0.80						
12 - 116	168 - 205	25.07	2620	0.85						
13 - 131	175 - 196	22.15	2980	0.80						
15 - 154	150 - 168	18.82	3010	0.95						
17 - 173	135 - 150	16.80	3020	1.05						
20 - 202	116 - 129	14.35	3010	1.25	W	47	DRN	100LS4 MM30	38	477
22 - 216	109 - 121	13.44	3000	1.30	WF	47	DRN	100LS4 MM30	38	478
26 - 256	92 - 103	11.32	2950	1.55	WA	47	DRN	100LS4 MM30	36	479
34 - 337	79 - 82	8.61	3130	1.35	WAF	47	DRN	100LS4 MM30	37	478
40 - 396	67 - 70	7.32	3020	1.60						
44 - 444	60 - 62	6.53	2940	1.75						
52 - 520	51 - 53	5.58	2830	2.1						
55 - 555	48 - 50	5.23	2780	2.2						
66 - 659	41 - 42	4.40	2660	2.6						
27 - 272	84 - 96	10.67	1930	0.95						
42 - 416	62 - 65	6.97	2190	1.05	W	37	DRN	100LS4 MM30	31	472
50 - 503	52 - 54	5.77	2120	1.30	WF	37	DRN	100LS4 MM30	31	473
57 - 567	46 - 48	5.11	2070	1.45	WA	37	DRN	100LS4 MM30	31	475
74 - 739	35 - 37	3.93	1950	1.90	WAF	37	DRN	100LS4 MM30	31	473
91 - 906	29 - 30	3.20*	1860	2.3						

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P _m = 4.0 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
20 - 202	154 - 172	14.35	2550	0.95	W WF WA WAF	47 47 47 47	DRN DRN DRN DRN	100L4 MM40 100L4 MM40 100L4 MM40 100L4 MM40	45 45 43 44	477 478 479 478
22 - 216	145 - 162	13.44	2570	1.00						
26 - 256	123 - 137	11.32	2590	1.15						
34 - 337	105 - 109	8.61	2950	1.00						
40 - 396	89 - 93	7.32	2860	1.20						
44 - 444	80 - 83	6.53	2800	1.30						
52 - 520	68 - 71	5.58	2710	1.55						
55 - 555	64 - 67	5.23	2670	1.65						
66 - 659	54 - 56	4.40	2570	1.95						
75 - 746	48 - 50	3.89	2490	2.2						
89 - 888	40 - 42	3.27	2390	2.6						
42 - 416	83 - 87	6.97	2010	0.80	W WF WA WAF	37 37 37 37	DRN DRN DRN DRN	100L4 MM40 100L4 MM40 100L4 MM40 100L4 MM40	39 39 39 39	472 473 475 473
50 - 503	69 - 72	5.77	1960	0.95						
57 - 567	61 - 64	5.11	1930	1.10						
74 - 739	47 - 50	3.93	1850	1.40						
91 - 906	39 - 40	3.20*	1770	1.75						

12.2 W..DR..MM.. selection tables [1:5, 280 – 1400 min⁻¹]

P _m = 0.37 kW																
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg							
3.7 - 19	116 - 136	74.98	6680	1.30	W WF WA WAF	47	DRS	71S4 MM03	18	477						
4.1 - 20	107 - 126	68.93	6740	1.45												
4.8 - 24	93 - 110	58.98	6830	1.65												
5.5 - 27	81 - 97	51.12	6910	1.85												
5.9 - 29	76 - 91	47.78	6940	2.0												
6.8 - 34	67 - 80	41.30	6910	2.3												
8.0 - 40	58 - 69	35.09	6630	2.6												
8.8 - 44	63 - 68	31.62	6530	2.4	W WF WA WAF	37	DRS	71S4 MM03	13	472						
10 - 51	55 - 59	27.41	6280	2.7												
4.1 - 20	93 - 117	69.05	2930	0.95												
4.4 - 22	86 - 109	63.33	3340	1.00												
5.2 - 26	75 - 95	53.92	3550	1.15												
6.0 - 30	66 - 83	46.49	3700	1.30												
7.4 - 37	55 - 69	37.88	3840	1.60												
8.1 - 41	63 - 72	34.52	3820	1.25	W WF WA WAF	37	DRS	71S4 MM03	13	473						
8.8 - 44	58 - 66	31.67	3870	1.35												
8.9 - 45	47 - 59	31.33	3930	1.90												
10 - 50	42 - 53	27.78	3970	2.1												
10 - 52	50 - 57	26.96	3940	1.60												
12 - 60	44 - 50	23.25	3990	1.80												
3.7 - 19	60 - 85	75.00*	3000	0.80							W WF WA WAF	30	DRS	71S4 MM03	12	468
4.7 - 23	57 - 79	60.00*	3000	0.90												
5.8 - 29	52 - 69	48.00*	3000	1.00												
7.2 - 36	48 - 62	39.00*	3000	1.10												
8.6 - 43	40 - 52	32.50*	3000	1.35												
10 - 51	40 - 49	27.50*	3000	1.45												
11 - 57	38 - 45	24.50*	3000	1.55												
14 - 72	33 - 38	19.50*	3000	1.85												
17 - 86	29 - 33	16.33	3000	1.80												
20 - 98	26 - 30	14.33	3000	2.0												
27 - 137	20 - 22	10.25*	3000	2.2												
34 - 171	17 - 18	8.20*	3000	2.2												
43 - 213	14 - 15	6.57	2860	2.6												
10 - 51	37 - 46	27.50*	2200	0.85	W WF WA WAF	20	DRS	71S4 MM03	9.1	465						
11 - 57	34 - 42	24.50*	2200	0.95												
14 - 72	30 - 36	19.50*	2200	0.95												
17 - 85	26 - 32	16.50*	2180	0.95												
20 - 98	25 - 29	14.33	2120	1.05												
27 - 137	19 - 22	10.25*	1960	1.15												
34 - 171	16 - 18	8.20*	1860	1.10												
43 - 213	14 - 15	6.57	1790	1.35												

P _m = 0.55 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
3.7 - 19	172 - 200	74.98	6250	0.90						
4.1 - 20	159 - 188	68.93	6350	0.95						
4.8 - 24	138 - 163	58.98	6510	1.10						
5.5 - 27	121 - 144	51.12	6630	1.25						
5.9 - 29	114 - 135	47.78	6610	1.35						
6.8 - 34	100 - 119	41.30	6420	1.50						
8.0 - 40	86 - 102	35.09	6210	1.75						
8.8 - 44	94 - 101	31.62	6180	1.60						
8.9 - 45	78 - 92	31.33	6060	1.95						
10 - 51	82 - 88	27.41	5980	1.80						
10 - 52	68 - 80	26.76	5840	2.2						
11 - 55	77 - 83	25.62	5890	1.95						
11 - 56	64 - 75	25.07	5760	2.4						
13 - 63	67 - 72	22.15	5680	2.2						
15 - 74	57 - 62	18.82	5450	2.6						
23 - 114	43 - 44	12.30	5000	2.5						

P_m = 0.55 kW

n_a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
6.0 - 30	98 - 124	46.49	2340	0.90	W WF WA WAF	37 37 37 37	DRS DRS DRS DRS	71M4 MM05 71M4 MM05 71M4 MM05 71M4 MM05	14 14 14 14	472 473 475 473
7.4 - 37	82 - 103	37.88	3430	1.05						
8.1 - 41	93 - 107	34.52	3380	0.85						
8.8 - 44	86 - 98	31.67	3500	0.90						
8.9 - 45	70 - 87	31.33	3650	1.25						
10 - 50	63 - 78	27.78	3750	1.40						
10 - 52	74 - 85	26.96	3680	1.05						
12 - 60	65 - 74	23.25	3800	1.20						
13 - 66	51 - 62	21.33	3900	1.80						
15 - 74	54 - 61	18.94	3910	1.50						
18 - 89	45 - 51	15.67	3930	1.75	W WF WA WAF	30 30 30 30	DRS DRS DRS DRS	71M4 MM05 71M4 MM05 71M4 MM05 71M4 MM05	13 13 13 13	468 469 471 470
20 - 101	40 - 45	13.89	3820	2.0						
22 - 110	43 - 44	12.70	3900	1.60						
24 - 120	39 - 40	11.65	3810	1.75						
10 - 51	59 - 72	27.50*	3000	0.95						
11 - 57	56 - 67	24.50*	3000	1.05						
17 - 86	42 - 49	16.33	3000	1.20						
20 - 98	39 - 44	14.33	3000	1.35						
27 - 137	30 - 33	10.25*	3000	1.50						
34 - 171	25 - 27	8.20*	2960	1.45						
43 - 213	21 - 23	6.57	2790	1.75						

P_m = 0.75 kW

n_a min^{-1}	M_a Nm	i	$F_{Ra}^{1)}$ N	SEW f_B					m kg	
4.8 - 24	188 - 220	58.98	6110	0.80						
5.5 - 27	165 - 196	51.12	6030	0.90						
5.9 - 29	155 - 184	47.78	5980	1.00						
6.8 - 34	136 - 162	41.30	5880	1.10						
8.0 - 40	117 - 140	35.09	5740	1.30						
8.8 - 44	128 - 137	31.62	5800	1.15						
8.9 - 45	106 - 126	31.33	5630	1.45						
10 - 51	111 - 120	27.41	5640	1.35						
10 - 52	92 - 109	26.76	5480	1.65	W	47	DRN	80M4 MM07	24	477
11 - 55	104 - 113	25.62	5570	1.40	WF	47	DRN	80M4 MM07	25	478
11 - 56	87 - 103	25.07	5410	1.75	WA	47	DRN	80M4 MM07	23	479
13 - 63	91 - 98	22.15	5400	1.65	WAF	47	DRN	80M4 MM07	24	478
15 - 74	78 - 84	18.82	5210	1.90						
17 - 83	70 - 75	16.80	5070	2.1						
20 - 98	60 - 65	14.35	4880	2.5						
21 - 104	56 - 61	13.44	4800	2.6						
23 - 114	58 - 59	12.30	4890	1.85						
26 - 131	50 - 52	10.66	4700	2.1						
28 - 141	47 - 48	9.96	4610	2.3						
33 - 163	41 - 42	8.61	4420	2.6						
8.9 - 45	95 - 119	31.33	2810	0.95						
10 - 50	86 - 107	27.78	3380	1.05						
12 - 60	88 - 101	23.25	3470	0.90						
13 - 66	69 - 84	21.33	3690	1.30	W	37	DRN	80M4 MM07	18	472
15 - 74	73 - 83	18.94	3700	1.10	WF	37	DRN	80M4 MM07	18	473
18 - 89	62 - 69	15.67	3690	1.30	WA	37	DRN	80M4 MM07	18	475
20 - 101	55 - 62	13.89	3610	1.45	WAF	37	DRN	80M4 MM07	18	473
26 - 131	43 - 48	10.67	3410	1.85						
28 - 141	46 - 47	9.92	3540	1.50						
33 - 164	39 - 41	8.55	3400	1.70						
17 - 86	58 - 67	16.33	3000	0.90	W	30	DRN	80M4 MM07	17	468
20 - 98	53 - 61	14.33	3000	1.00	WF	30	DRN	80M4 MM07	18	469
27 - 137	41 - 46	10.25*	3000	1.10	WA	30	DRN	80M4 MM07	17	471
34 - 171	34 - 37	8.20*	2870	1.05	WAF	30	DRN	80M4 MM07	17	470
43 - 213	29 - 31	6.57	2720	1.30						

P _m = 1.1 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
8.0 - 40	172 - 200	35.09	4920	0.90						
8.9 - 45	155 - 185	31.33	4890	0.95						
10 - 51	163 - 176	27.41	5060	0.90						
10 - 52	135 - 160	26.76	4830	1.15						
11 - 55	153 - 165	25.62	5020	0.95						
11 - 56	127 - 151	25.07	4800	1.20						
13 - 63	133 - 144	22.15	4920	1.10						
15 - 74	114 - 123	18.82	4800	1.30						
17 - 83	102 - 111	16.80	4700	1.45						
20 - 98	88 - 95	14.35	4560	1.70						
21 - 104	82 - 89	13.44	4510	1.80						
23 - 114	85 - 87	12.30	4700	1.25						
25 - 124	70 - 76	11.32	4340	2.1						
26 - 131	74 - 76	10.66	4530	1.45						
28 - 141	69 - 71	9.96	4450	1.55						
33 - 163	60 - 61	8.61	4280	1.80						
38 - 191	51 - 52	7.32	4100	2.1						
43 - 214	46 - 47	6.53	3970	2.4						
50 - 251	39 - 40	5.58	3800	2.7						
13 - 66	101 - 123	21.33	2390	0.90						
18 - 89	90 - 102	15.67	3280	0.90						
20 - 101	81 - 91	13.89	3240	1.00						
26 - 131	64 - 71	10.67	3120	1.25						
28 - 141	67 - 69	9.92	3350	1.00						
33 - 164	58 - 60	8.55	3240	1.15						
40 - 201	47 - 49	6.97	3080	1.45						
49 - 243	39 - 41	5.77	2940	1.70						
55 - 274	35 - 36	5.11	2850	1.95						
71 - 357	27 - 28	3.93	2650	2.5						

P _m = 1.5 kW										
n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
10 - 52	184 - 215	26.76	4100	0.85						
11 - 56	174 - 205	25.07	4110	0.90						
13 - 63	181 - 196	22.15	4370	0.80						
15 - 74	155 - 168	18.82	4320	0.95						
17 - 83	139 - 151	16.80	4280	1.05						
20 - 98	120 - 130	14.35	4200	1.25						
21 - 104	112 - 122	13.44	4160	1.30	W	47	DRN	90L4 MM15	34	477
25 - 124	96 - 104	11.32	4050	1.55	WF	47	DRN	90L4 MM15	34	478
26 - 131	101 - 103	10.66	4350	1.05	WA	47	DRN	90L4 MM15	32	479
28 - 141	94 - 97	9.96	4280	1.15	WAF	47	DRN	90L4 MM15	33	478
33 - 163	82 - 84	8.61	4130	1.30						
38 - 191	69 - 71	7.32	3970	1.55						
43 - 214	62 - 64	6.53	3850	1.70						
50 - 251	53 - 55	5.58	3700	2.0						
54 - 268	50 - 51	5.23	3630	2.1						
64 - 318	42 - 43	4.40	3460	2.5						
26 - 131	87 - 96	10.67	2800	0.95						
33 - 164	79 - 81	8.55	3060	0.85	W	37	DRN	90L4 MM15	27	472
40 - 201	64 - 67	6.97	2930	1.05	WF	37	DRN	90L4 MM15	27	473
49 - 243	53 - 55	5.77	2820	1.25	WA	37	DRN	90L4 MM15	27	475
55 - 274	48 - 49	5.11	2740	1.40	WAF	37	DRN	90L4 MM15	27	473
71 - 357	37 - 38	3.93	2570	1.85						
88 - 438	30 - 31	3.20*	2440	2.2						

P_m = 2.2 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
20 - 98	176 - 190	14.35	3560	0.85						
21 - 104	165 - 179	13.44	3560	0.90						
25 - 124	140 - 152	11.32	3540	1.05						
33 - 163	120 - 123	8.61	3870	0.90						
38 - 191	102 - 105	7.32	3740	1.05	W	47	DRN	100LS4 MM22	38	477
43 - 214	91 - 94	6.53	3650	1.15	WF	47	DRN	100LS4 MM22	38	478
50 - 251	78 - 80	5.58	3520	1.35	WA	47	DRN	100LS4 MM22	36	479
54 - 268	73 - 75	5.23	3470	1.45	WAF	47	DRN	100LS4 MM22	37	478
64 - 318	62 - 64	4.40	3330	1.75						
72 - 360	55 - 56	3.89	3220	1.95						
86 - 429	46 - 47	3.27	3080	2.3						
49 - 243	78 - 81	5.77	2600	0.85	W	37	DRN	100LS4 MM22	31	472
55 - 274	70 - 72	5.11	2540	0.95	WF	37	DRN	100LS4 MM22	31	473
71 - 357	54 - 56	3.93	2420	1.25	WA	37	DRN	100LS4 MM22	31	475
88 - 438	44 - 46	3.20*	2310	1.55	WAF	37	DRN	100LS4 MM22	31	473

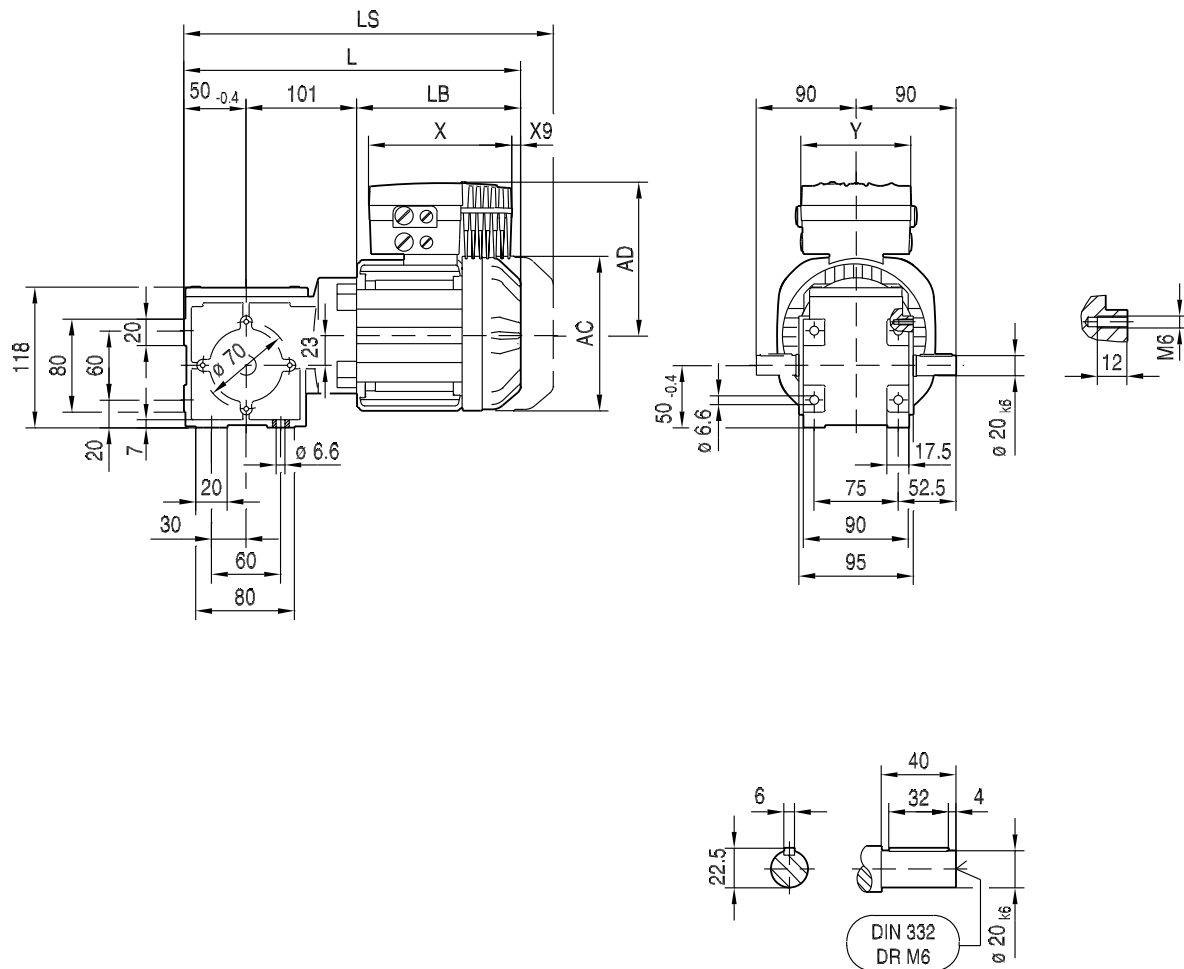
P_m = 3.0 kW

n _a min ⁻¹	M _a Nm	i	F _{Ra} ¹⁾ N	SEW f _B					m kg	
43 - 214	124 - 128	6.53	3420	0.85						
50 - 251	106 - 109	5.58	3330	1.00						
54 - 268	100 - 103	5.23	3290	1.05						
64 - 318	84 - 87	4.40	3170	1.25						
72 - 360	75 - 77	3.89	3090	1.45						
86 - 429	63 - 65	3.27	2970	1.70						
71 - 357	73 - 76	3.93	2240	0.90	W	37	DRN	100L4 MM30	39	472
88 - 438	60 - 62	3.20*	2170	1.15	WF	37	DRN	100L4 MM30	39	473
					WA	37	DRN	100L4 MM30	39	475
					WAF	37	DRN	100L4 MM30	39	473

12.3 W..DR..MM.. dimension sheets in mm

W20..

20 004 00 16

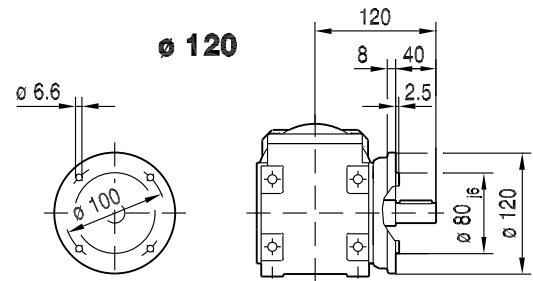
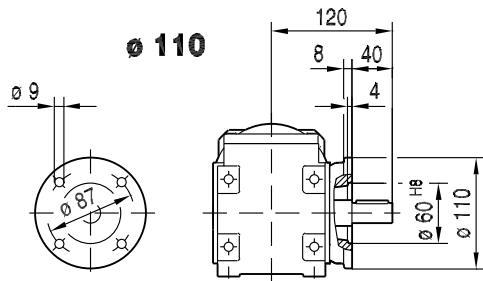
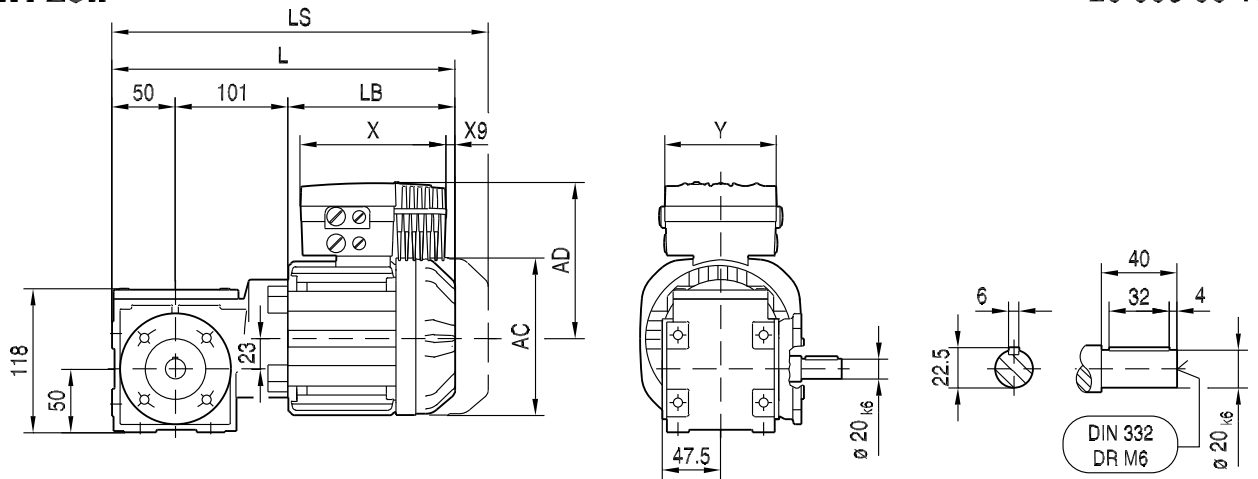


(→ 149)	DR71S. MM..	DR71M. MM..						
AC	139	139						
AD	185	185						
L	311	336						
LS	379	404						
LB	160	185						
X	182	182						
X9	-14	-14						
Y	148	148						

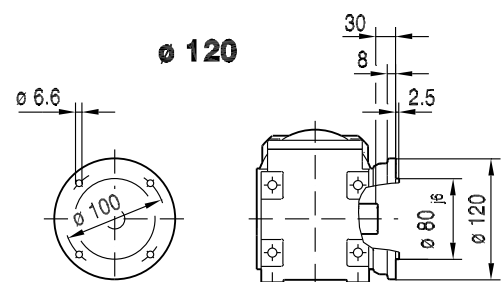
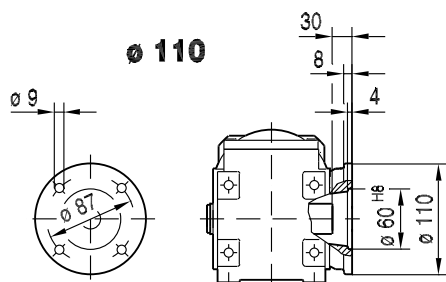
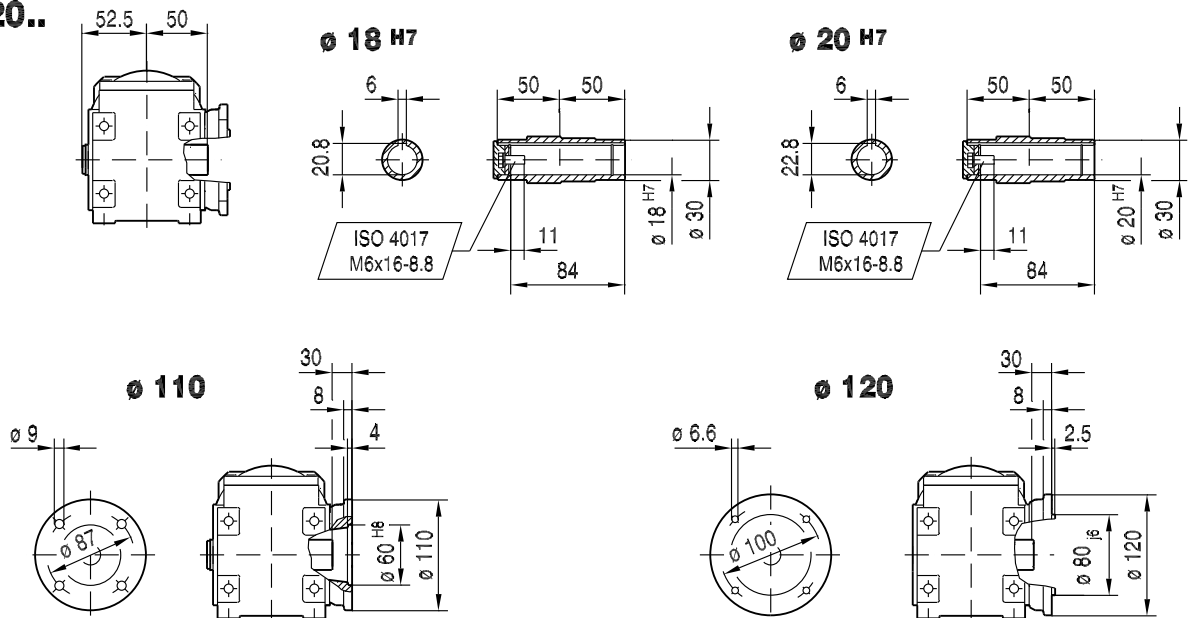
22148205/EN – 09/2016

WF20..

20 005 00 16



WAF20..

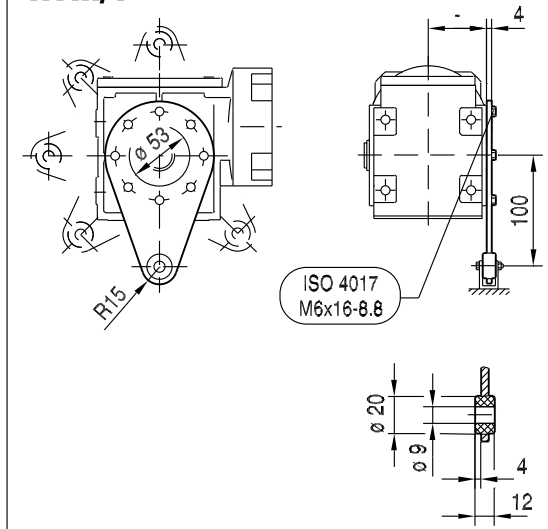


22148205/EN - 09/2016

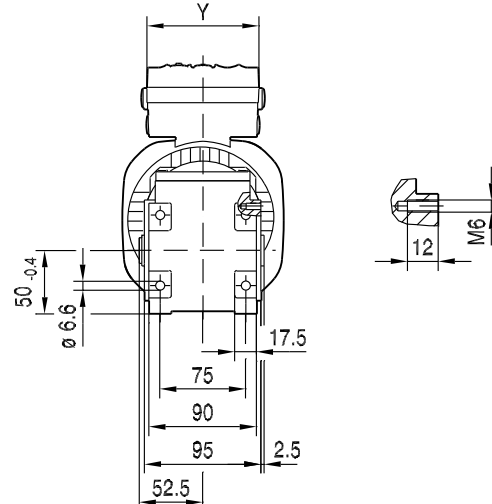
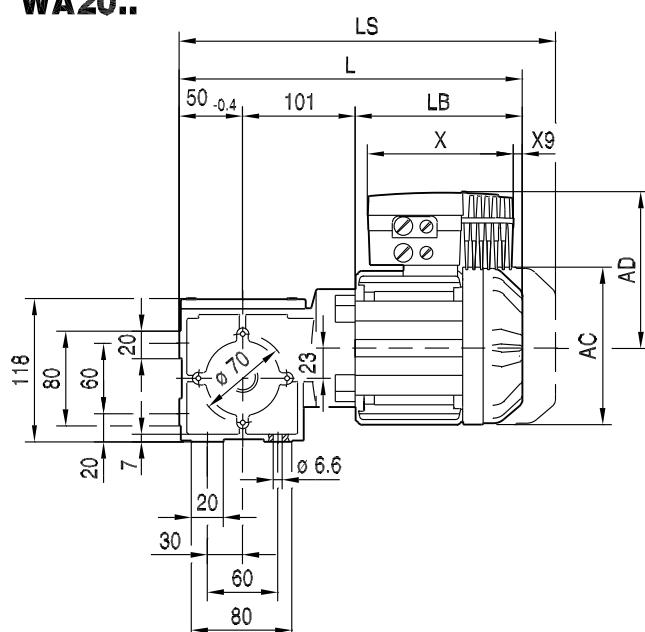
(→ 149)	DR71S. MM..	DR71M. MM..							
AC	139	139							
AD	185	185							
L	311	336							
LS	379	404							
LB	160	185							
X	182	182							
X9	-14	-14							
Y	148	148							

20 006 00 16

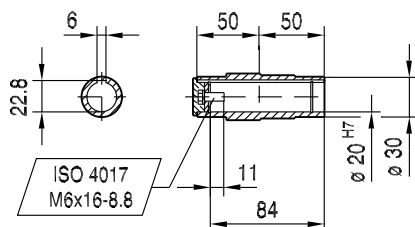
WA../T



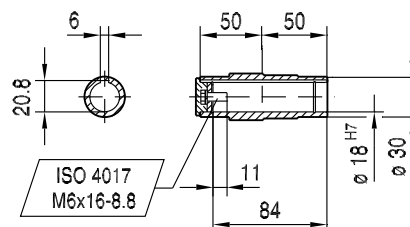
WA20..



Ø 20 H7



Ø 18 H7



(→ 149)	DR71S. MM..	DR71M. MM..						
AC	139	139						
AD	185	185						
L	311	336						
LS	379	404						
LB	160	185						
X	182	182						
X9	-14	-14						
Y	148	148						

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[illegible]

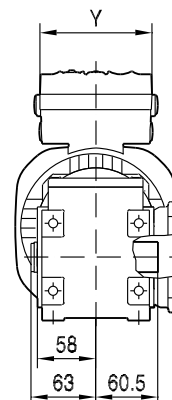
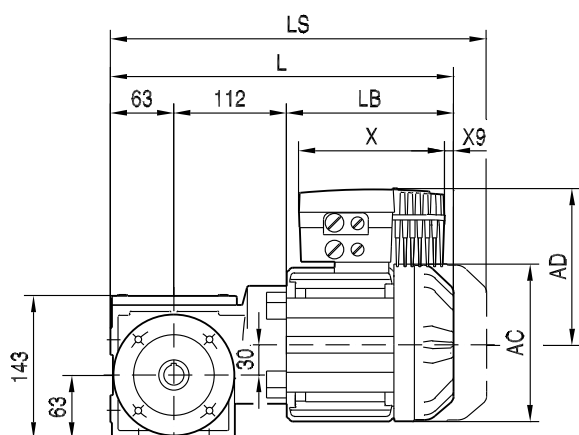
Technical drawing of a 1000W 24VDC brushless motor. The main view shows a side profile with dimensions 63_{-0.5} and 115. A detail view on the right shows a cross-section of the motor housing with dimensions 40, 32, 4, and 22.5. A callout indicates the mounting hole is DIN 332 DR M6.

(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..					
AC	139	139	156					
AD	185	185	197					
L	335	360	410					
LS	403	428	491					
LB	160	185	235					
X	182	182	182					
X9	-14	-14	-7					
Y	148	148	148					

22148205/EN – 09/2016

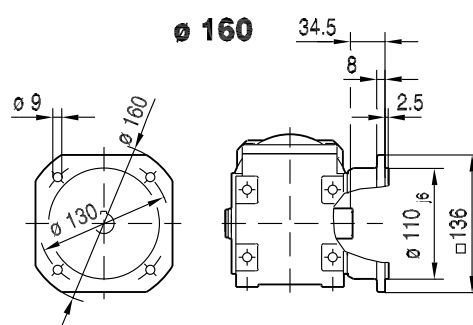
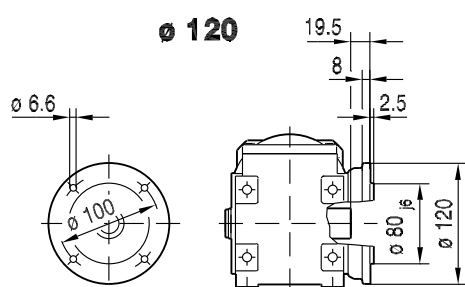
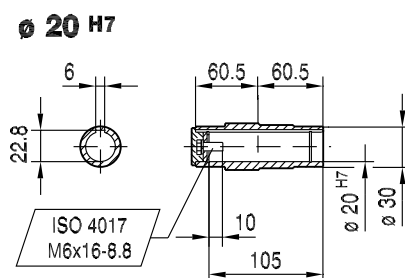
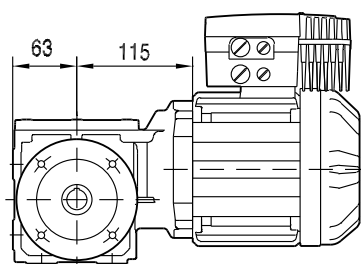
WAF30..

20 019 00 16



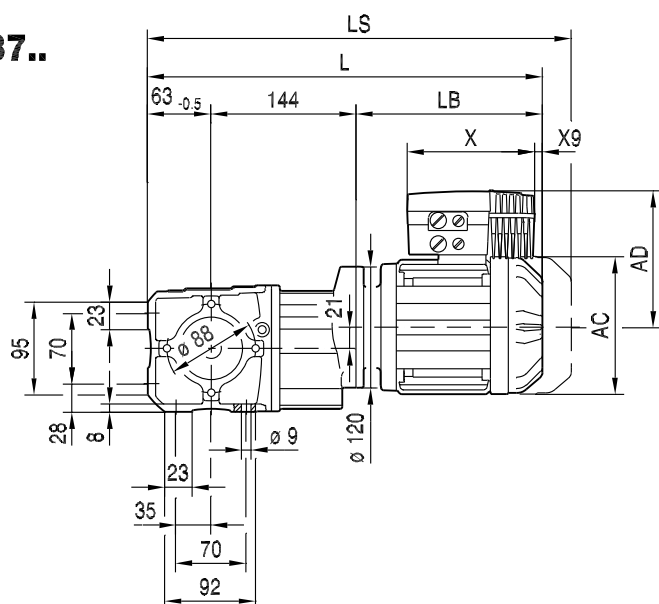
12

DRN80..

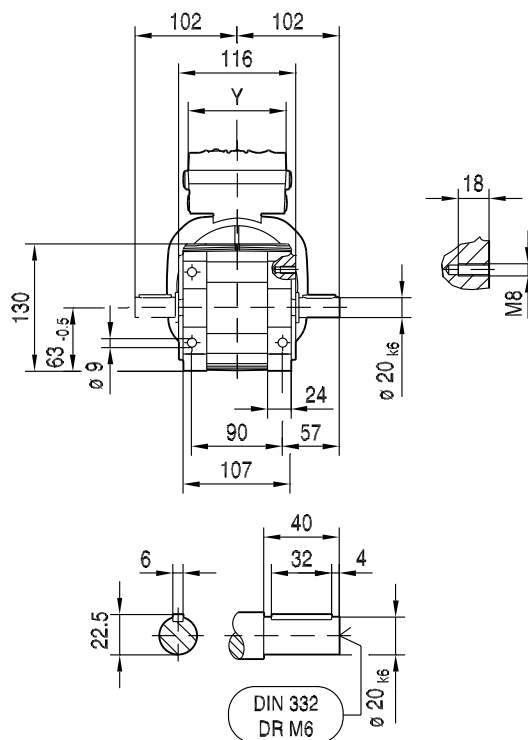


(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..					
AC	139	139	156					
AD	185	185	197					
L	335	360	410					
LS	403	428	491					
LB	160	185	235					
X	182	182	182					
X9	-14	-14	-7					
Y	148	148	148					

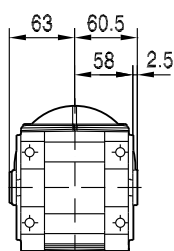
W37..



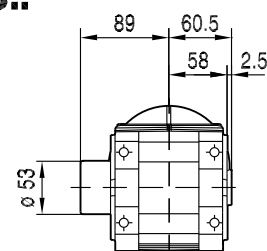
20 010 00 16



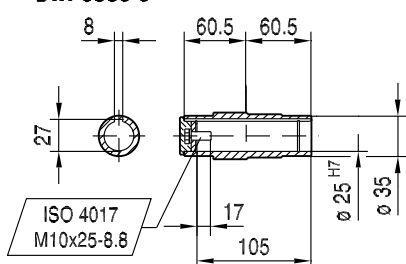
WA37B..



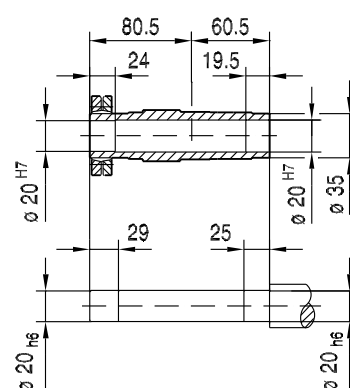
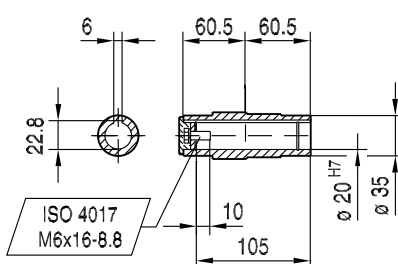
WH37B..



**Ø 25 H7
DIN 6885-3**

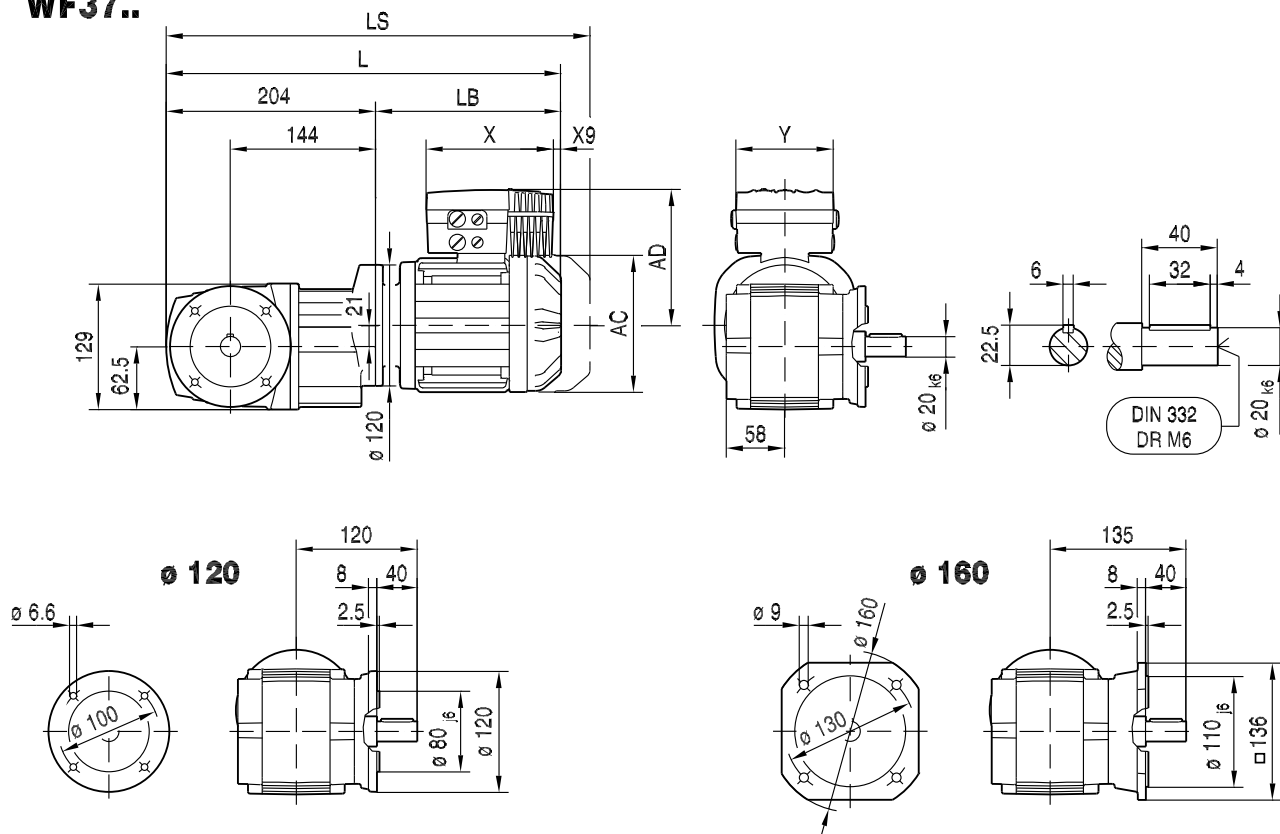
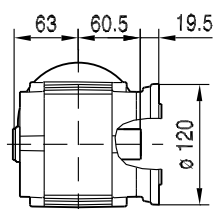
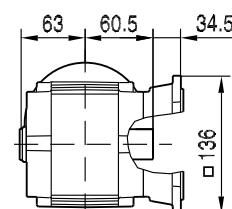
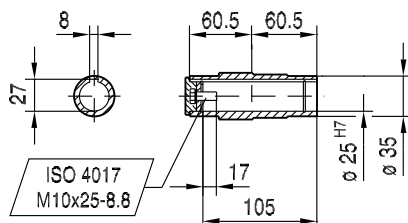
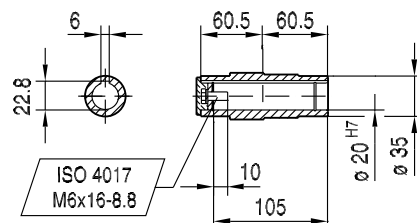


Ø 20 H7



(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	409	434	489	490	490	522	522	521	571
LS	477	502	570	584	584	616	616	615	665
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

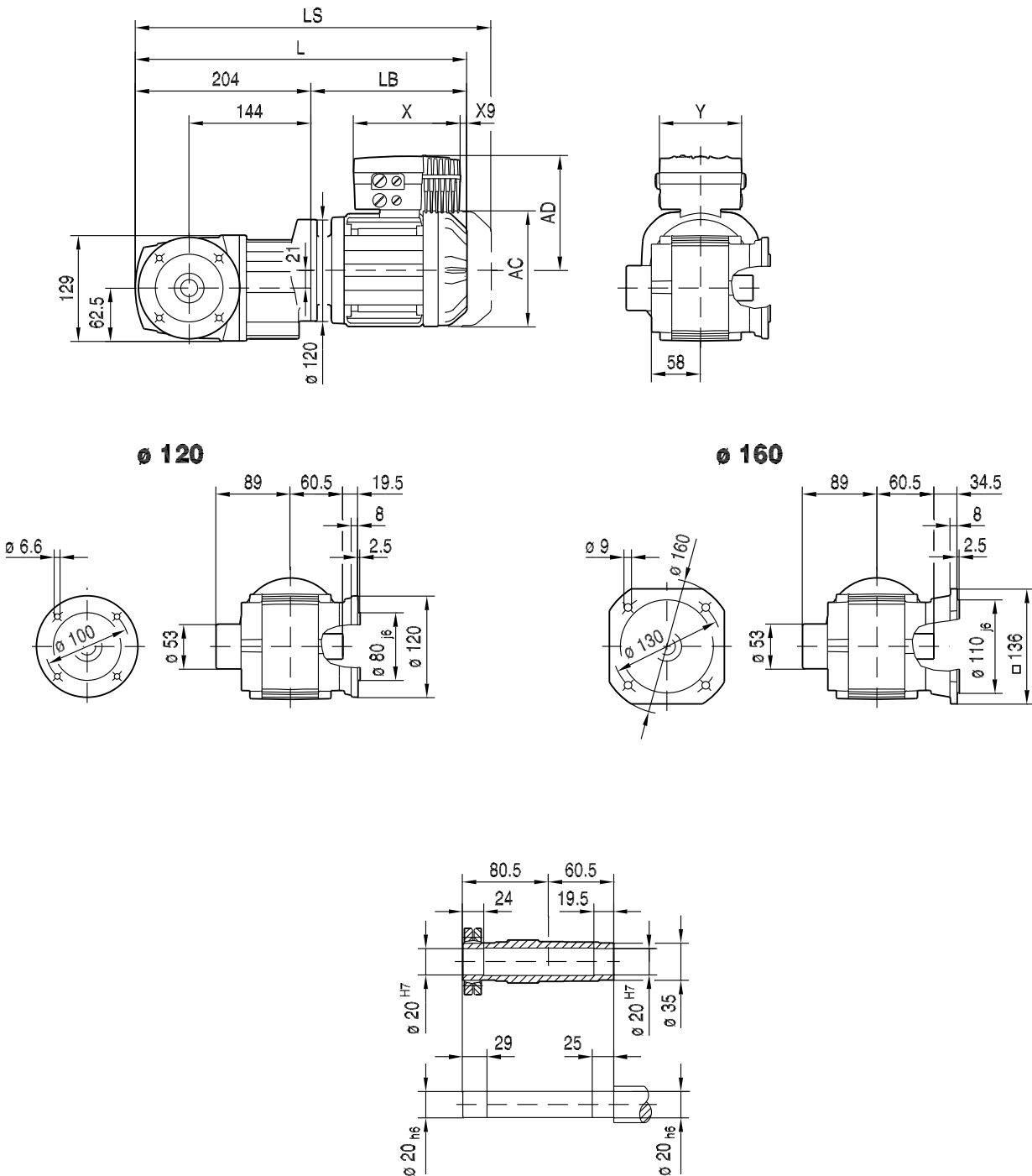
20 011 00 16

WF37..**WAF37..****120****160****25 H7**
DIN 6885-3**20 H7**

(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	405	430	485	486	486	518	518	517	567
LS	473	498	566	580	580	612	612	611	661
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

20 012 00 16

WHF37..



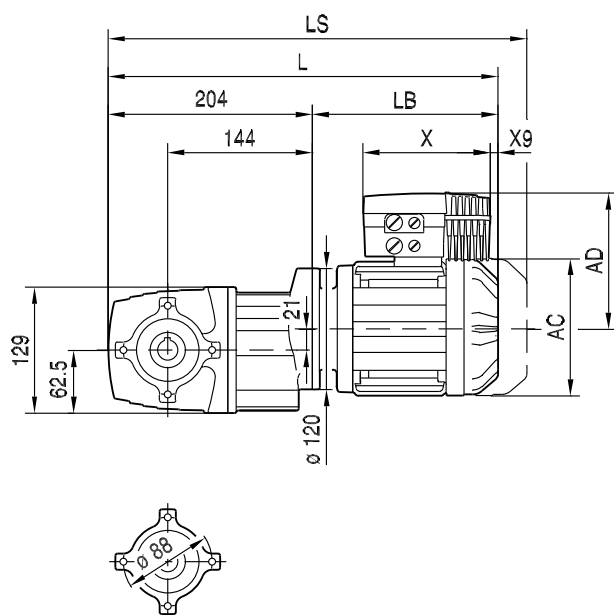
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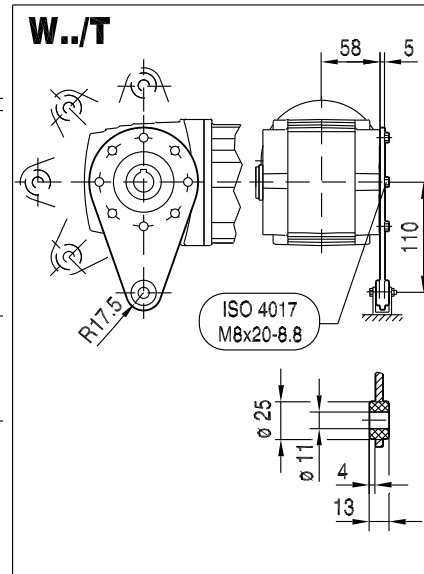
(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	405	430	485	486	486	518	518	517	567
LS	473	498	566	580	580	612	612	611	661
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

20 013 00 16

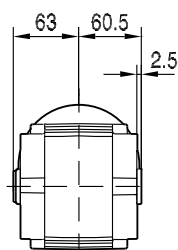
WA37..



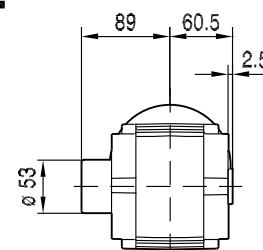
W../T



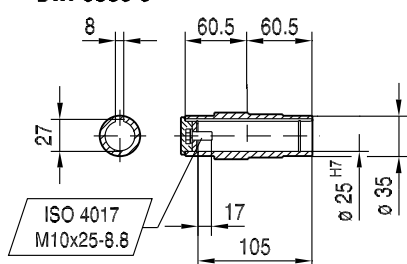
WA37..



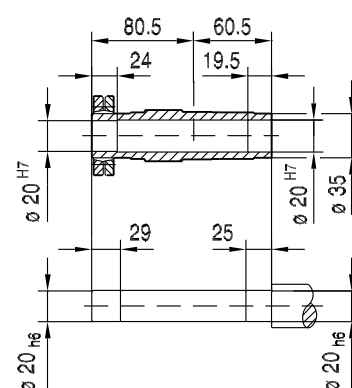
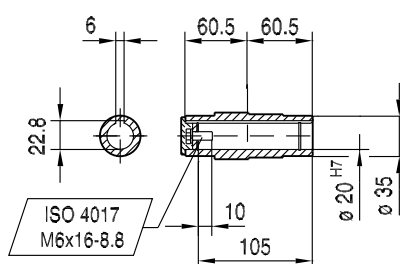
WH37..



$\phi 25$ H7
DIN 6885-3



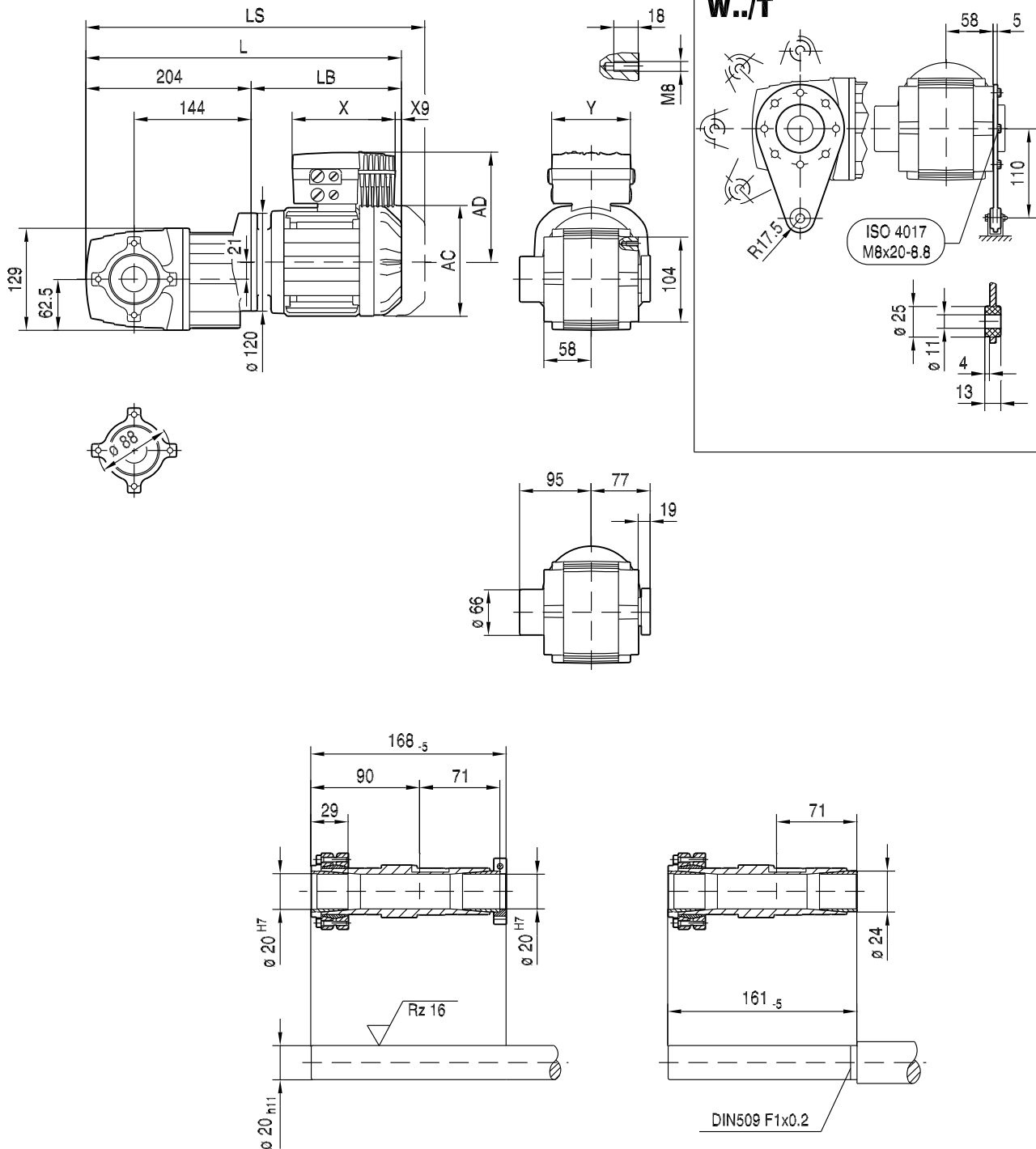
$\phi 20$ H7



(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	405	430	485	486	486	518	518	517	567
LS	473	498	566	580	580	612	612	611	661
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

WT37..

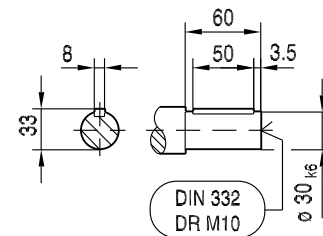
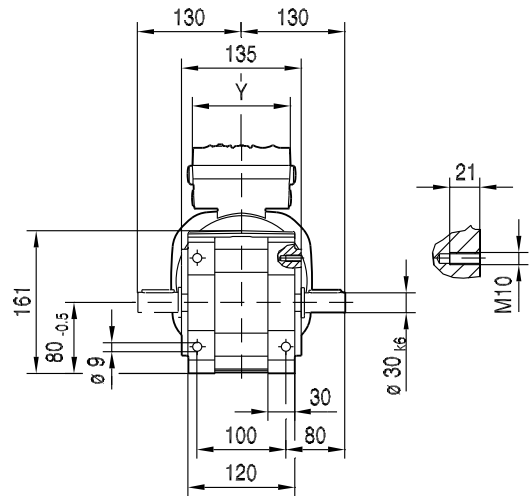
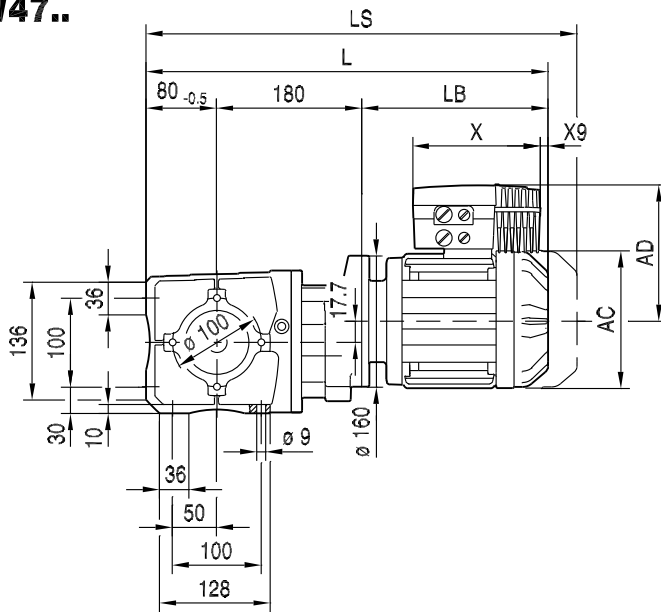
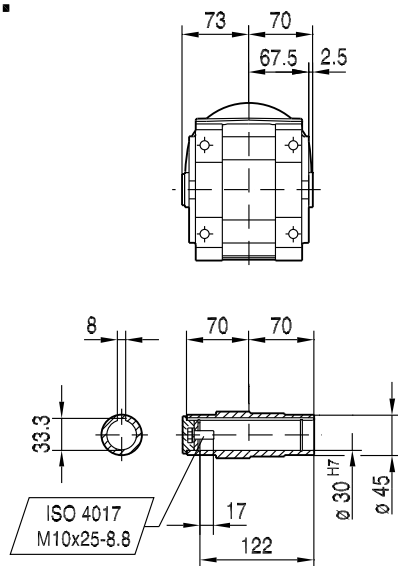
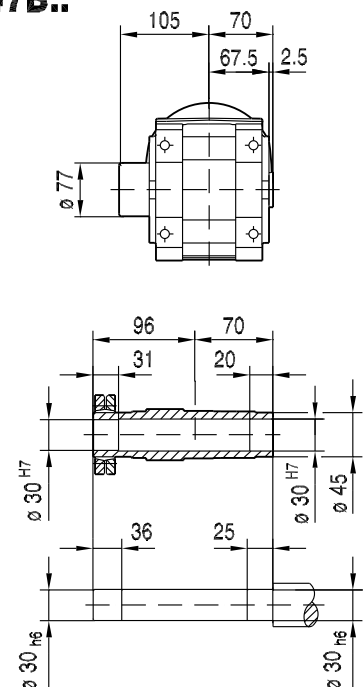
20 014 00 16



(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..
AC	139	139	156	179	179	179	179	197	197
AD	185	185	197	208	208	208	208	216	216
L	405	430	485	486	486	518	518	517	567
LS	473	498	566	580	580	612	612	611	661
LB	202	227	282	283	283	315	315	314	364
X	182	182	182	182	228	182	228	228/254	228/254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44
Y	148	148	148	148	186	148	186	186	186

W47..

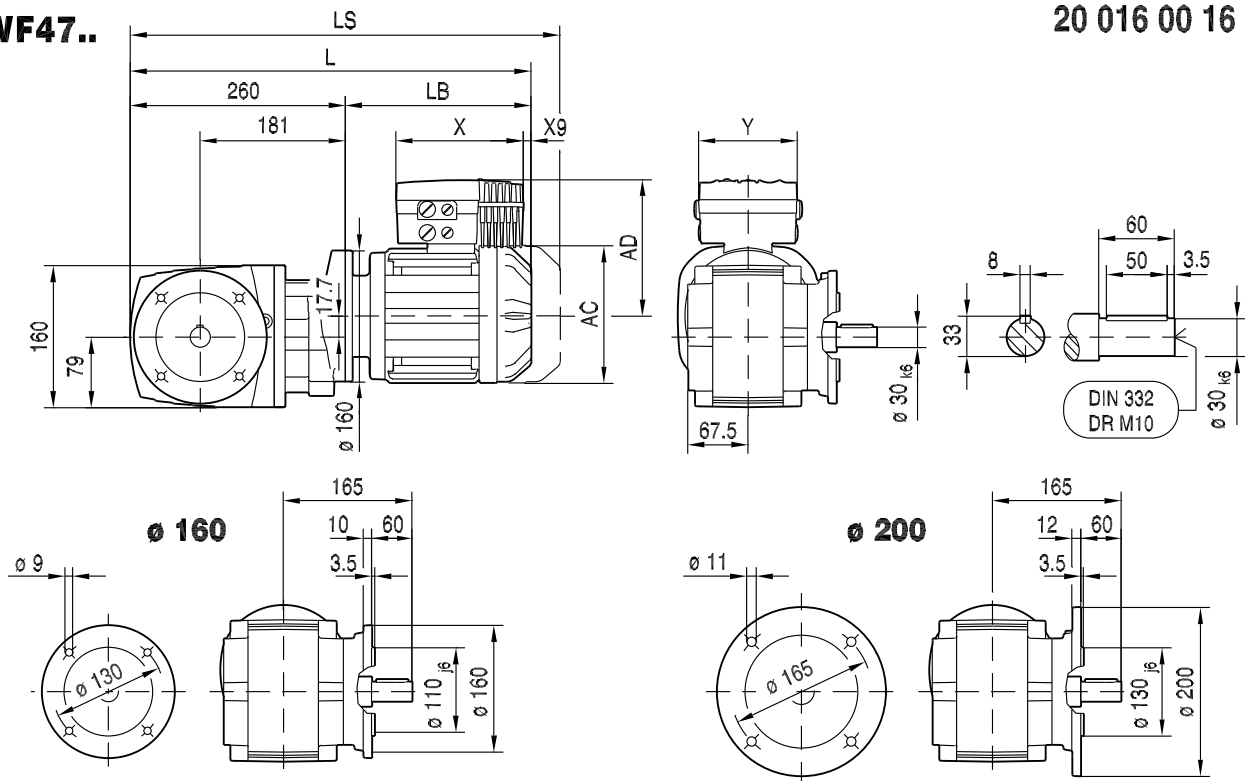
20 015 00 16

**WA47B..****WH47B..**

(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	457	482	536	538	538	570	570	566	616	647
LS	524	549	617	631	631	663	663	660	710	759
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

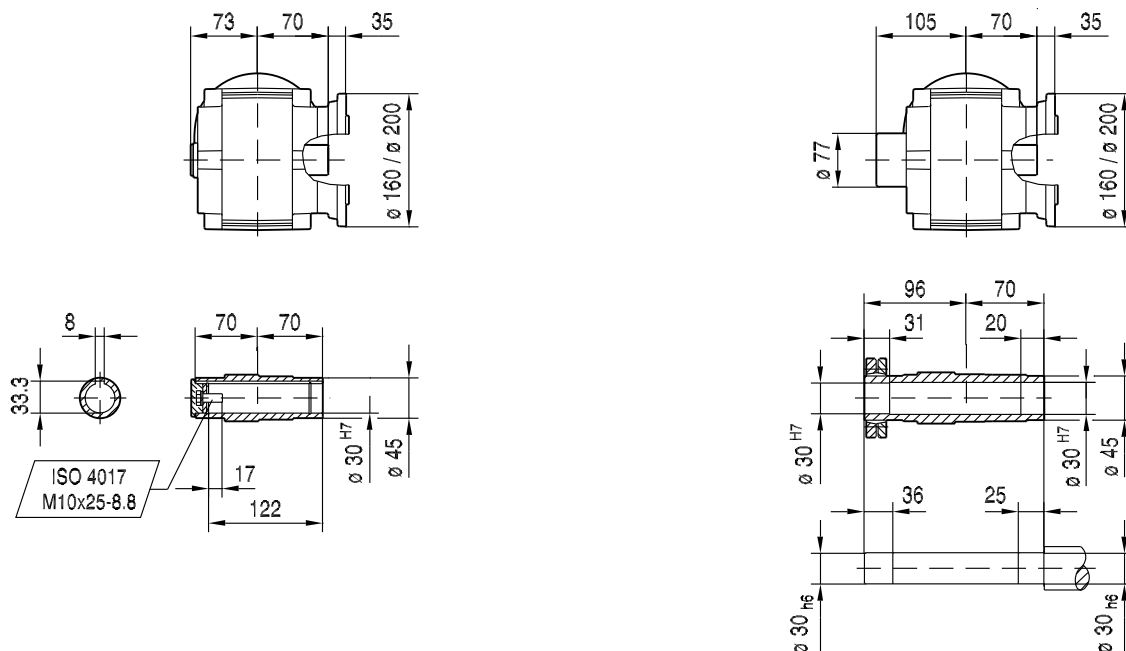
WF47..

20 016 00 16



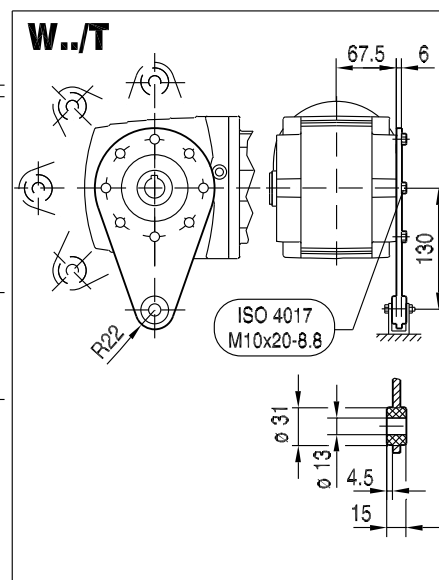
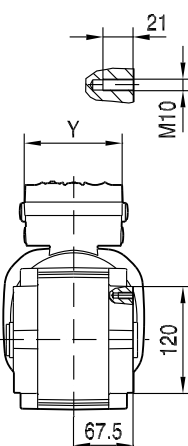
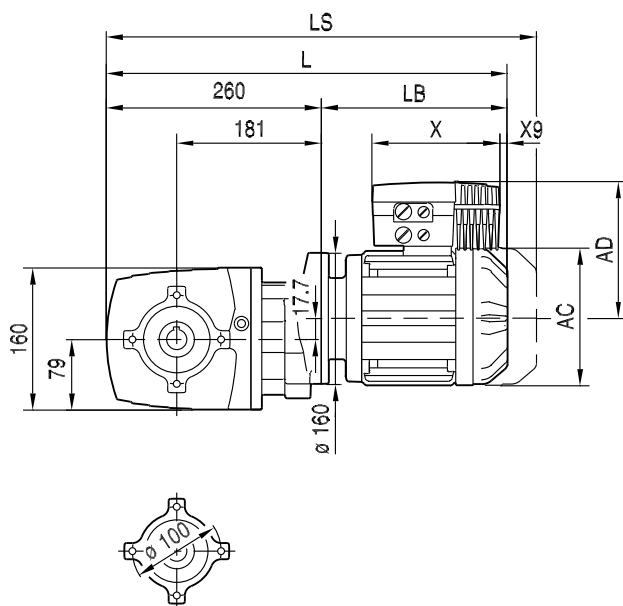
WAF47..

WHF47..

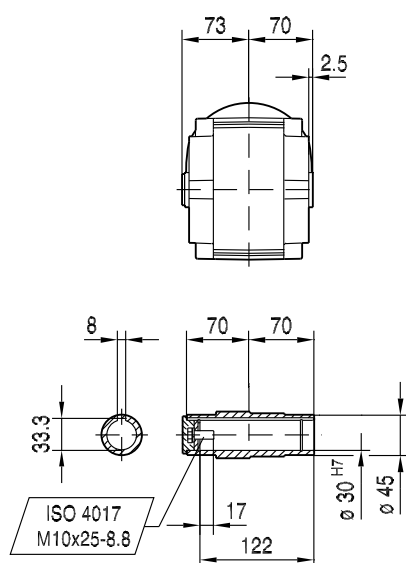


(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	456	481	535	537	537	569	569	565	615	646
LS	523	548	616	630	630	662	662	659	709	758
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

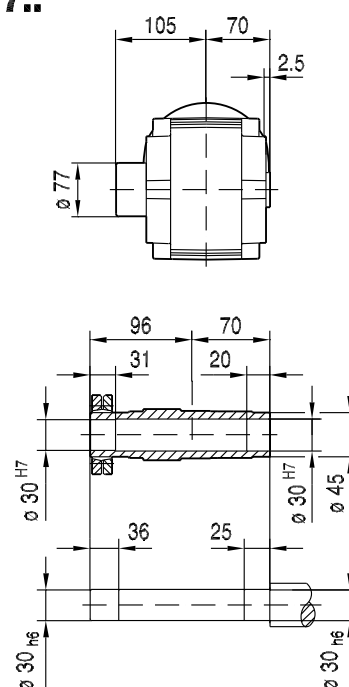
20 017 00 16



WA47..



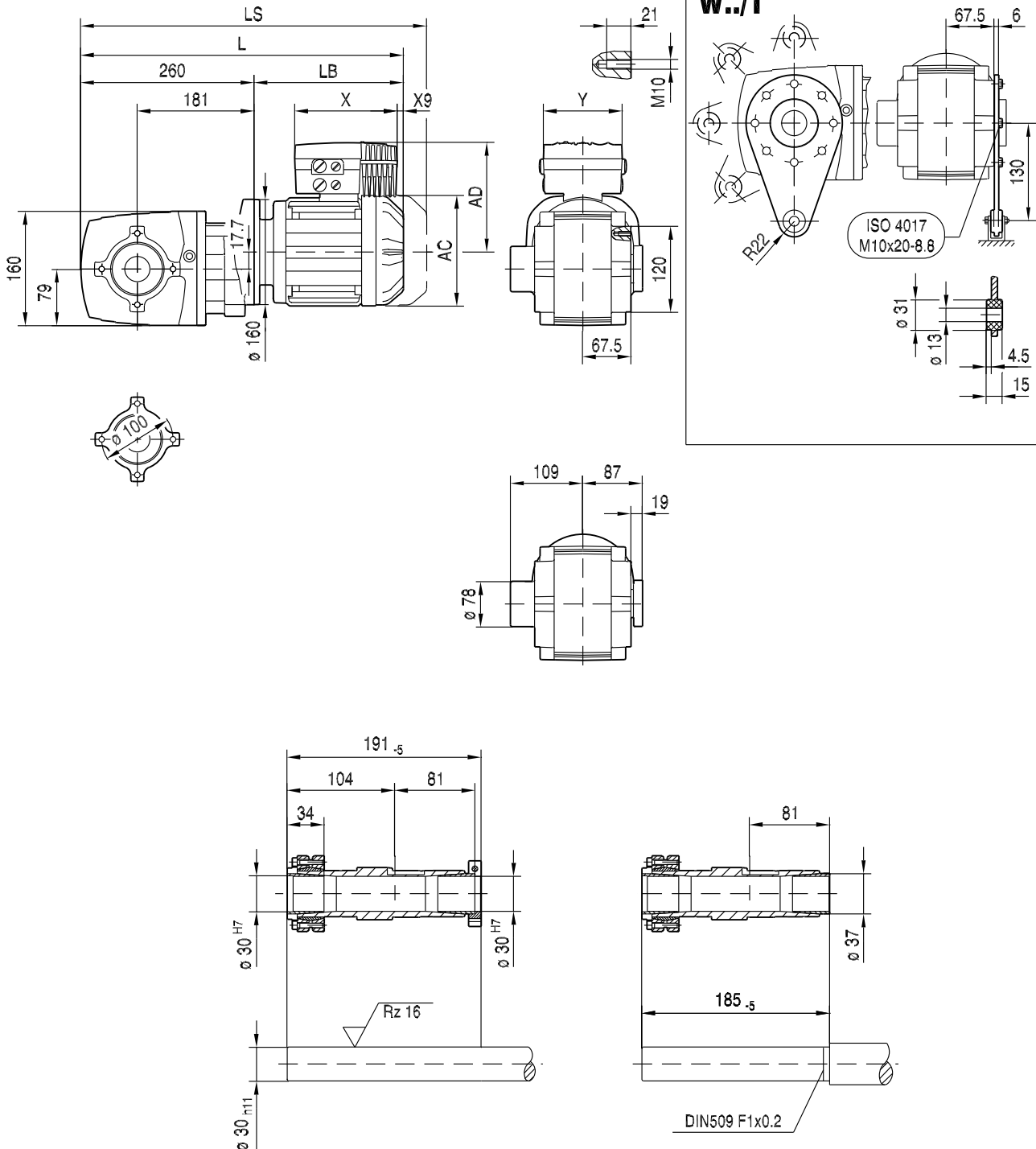
WH47..



(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	456	481	535	537	537	569	569	565	615	646
LS	523	548	616	630	630	662	662	659	709	758
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186

WT47..

20 018 00 16



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(→ 149)	DR71S. MM..	DR71M. MM..	DRN80M. MM..	DRN90S. MM11/15	DRN90S. MM22	DRN90L. MM15	DRN90L. MM22/30	DRN100LS. MM..	DRN100L. MM..	DRN112M. MM..
AC	139	139	156	179	179	179	179	197	197	221
AD	185	185	197	208	208	208	208	216	216	230
L	456	481	535	537	537	569	569	565	615	646
LS	523	548	616	630	630	662	662	659	709	758
LB	196	221	275	277	277	309	309	305	355	386
X	182	182	182	182	228	182	228	228/254	228/254	254
X9	-14	-14	-7	-1	-16	-1	-16	-18/-44	-18/-44	-23
Y	148	148	148	148	186	148	186	186	186	186