004A

Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H_2O
1EL	3,55	**3,52**	398 1 790	256 2 040	142 2 440	3 350 4 000	2 500 2 800	18 14	27,2 20,6	36,5 27,2
	4,25	**4,17**	335 1 850	216 2 110	120 2 520	4 500 5 300	2 800 3 550			
	5	**5,29**	264 1 930	170 2 200	94,4 2 390	3 710 4 500	2 800 4 000			
	6	**6,21**	225 1 840	145 1 890	80,5 1 960	3 030 3 750	2 800 4 000			
	7,1	**7,64**	183 1 340	118 1 380	65,5 1 430	2 210 3 150	2 800 4 000			
2EL	12,5	**12,4**	113 2 180	72,8 2 490	40,4 2 970	3 350 4 000	2 800 3 150	12,5 9,5	18,5 14	24,3 18,5
	14	**14,7**	95,4 2 590	61,3 2 950	34,1 3 190	4 500 5 300	2 800 3 150			
	16	**17,4**	80,4 2 670	51,7 3 050	28,7 3 220	4 500 5 300	3 150 4 000			
	18	**18,6**	75,2 2 430	48,3 2 490	26,9 2 580	3 750 4 500	2 800 3 150			
	22,4	**22,1**	63,4 2 790	40,7 3 150	22,6 3 270	4 500 5 300	3 150 4 000			
	25	**25,9**	54,0 2 660	34,7 2 730	19,3 2 830	4 370 5 300	3 150 4 000			
	28	**28**	50,0 2 490	32,1 2 560	17,8 2 650	3 750 4 500	3 150 4 000			
	31,5	**31,9**	43,9 1 940	28,2 1 990	15,7 2 070	3 190 4 500	3 150 4 000			
	35,5	**32,9**	42,6 2 510	27,4 2 580	15,2 2 680	3 750 4 500	3 150 4 000			
	40	**40,4**	34,6 2 460	22,3 2 530	12,4 2 620	3 750 4 500	3 150 4 000			
	45	**47,5**	29,5 2 080	19,0 2 140	10,5 2 220	3 150 3 750	3 150 4 000			
3EL	50	**50,6**	27,6 3 230	17,8 3 320	9,87 3 440	4 500 5 300	2 800 3 150	9 6,7	13,2 10	18 13,6
	63	**61,1**	22,9 3 270	14,7 3 360	8,18 3 500	4 500 5 300	3 150 4 000			
	71	**72,5**	19,3 3 300	12,4 3 390	6,90 3 590	4 500 5 300	3 150 4 000			
	80	**76,2**	18,4 3 310	11,8 3 400	6,56 3 620	4 500 5 300	2 800 3 150			
	90	**92**	15,2 3 350	9,79 3 440	5,44 3 720	4 500 5 300	3 150 4 000			
	100	**105**	13,4 3 380	8,60 3 470	4,78 3 800	4 500 5 300	3 150 4 000			
	112	**109**	12,9 3 380	8,28 3 500	4,60 3 820	4 500 5 300	3 150 4 000			
	125	**124**	11,3 3 410	7,25 3 570	4,03 3 900	4 500 5 300	3 150 4 000			
	140	**136**	10,3 3 430	6,61 3 620	3,67 3 950	4 500 5 300	3 150 4 000			
	160	**157**	8,89 3 460	5,72 3 700	3,18 4 040	4 500 5 300	3 150 4 000			
	180	**185**	7,58 3 000	4,87 3 080	2,71 3 190	4 500 5 300	3 150 4 000			
	200	**200**	7,01 2 810	4,51 2 980	2,50 3 250	3 750 4 500	3 150 4 000			
	224	**221**	6,32 3 030	4,06 3 110	2,26 3 230	4 500 5 300	3 150 4 000			
	250	**249**	5,62 2 750	3,62 2 830	2,01 2 930	3 750 4 500	3 150 4 000			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H_2O
4EL	180	**175**	8,01 3 510	5,15 3 760	2,86 4 100	4 500 5 300	2 800 3 150	8 6	11,8 8,75	15,5 11,8
	200	**207**	6,75 3 600	4,34 3 850	2,41 4 210	4 500 5 300	2 800 3 150			
	250	**250**	5,60 3 710	3,60 3 960	2,00 4 330	4 500 5 300	3 150 4 000			
	280	**296**	4,73 3 800	3,04 4 070	1,69 4 440	4 500 5 300	3 150 4 000			
	315	**317**	4,41 3 840	2,84 4 110	1,58 4 440	4 500 5 300	3 150 4 000			
	355	**357**	3,93 3 910	2,52 4 180	1,40 4 500	4 500 5 300	3 150 4 000			
	400	**422**	3,32 4 010	2,13 4 290	1,19 4 500	4 500 5 300	3 150 4 000			
	450	**452**	3,09 4 060	1,99 4 340	1,11 4 500	4 500 5 300	3 150 4 000			
	500	**517**	2,71 4 140	1,74 4 420	0,968 4 500	4 500 5 300	3 150 4 000			
	560	**566**	2,47 4 200	1,59 4 440	0,883 4 500	4 500 5 300	3 150 4 000			
	630	**611**	2,29 4 240	1,47 4 500	0,819 4 500	4 500 5 300	3 150 4 000			
	710	**732**	1,91 4 360	1,23 4 500	0,683 4 500	4 500 5 300	3 150 4 000			
	800	**838**	1,67 4 430	1,07 4 500	0,597 4 500	4 500 5 300	3 150 4 000			
	900	**916**	1,53 4 500	0,983 4 500	0,546 4 500	4 500 5 300	3 150 4 000			
	1000	**970**	1,44 4 500	0,928 4 500	0,516 4 500	4 500 5 300	3 150 4 000			
	1120	**1122**	1,25 4 500	0,802 4 500	0,446 4 500	4 500 5 300	3 150 4 000			
	1250	**1270**	1,10 4 150	0,709 4 260	0,394 4 420	4 500 5 300	3 150 4 000			
	1400	**1344**	1,04 4 500	0,669 4 500	0,372 4 500	4 500 5 300	3 150 4 000			
	1600	**1611**	0,869 4 500	0,559 4 500	0,310 4 500	4 500 5 300	3 150 4 000			
	1800	**1730**	0,809 3 750	0,520 3 750	0,289 3 750	3 750 4 500	3 150 4 000			
	2000	**2001**	0,699 3 750	0,450 3 750	0,250 3 750	3 750 4 500	3 150 4 000			
	2500	**2399**	0,584 3 750	0,375 3 750	0,208 3 750	3 750 4 500	3 150 4 000			
	2800	**2947**	0,475 3 350	0,305 3 590	0,170 3 750	3 750 4 500	3 150 4 000			
	3550	**3460**	0,405 3 150	0,260 3 150	0,145 3 150	3 150 3 750	3 150 4 000			

In case of alternative output design , refer to torque limits at page 4.70, if any.

2591-01.02

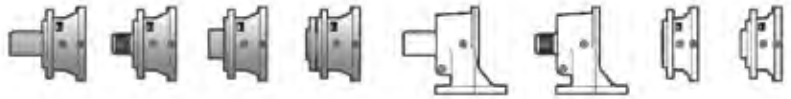
Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at –	20°C	40°C
2EB	9	**8,79**	159 1 930	102 2 210	56,9 2 630	3 070 3 870	2 800 3 550	13,2 10	19,5 14,5	25,7 19,5
	10	**10,4**	134 2 290	86,3 2 620	47,9 3 120	3 640 4 500	2 800 3 550			
	11,2	**11,1**	126 1 960	81,1 2 240	45,1 2 670	3 070 3 870	2 800 3 550			
	12,5	**13,2**	106 2 370	68,0 2 440	37,8 2 530	3 750 4 500	2 800 3 550			
	14	**15,5**	90,1 1 950	57,9 2 000	32,2 2 070	3 150 3 750	2 800 3 550			
	16	**16,7**	83,8 2 410	53,9 2 480	29,9 2 570	3 750 4 500	2 800 3 550			
	20	**19,6**	71,4 1 970	45,9 2 030	25,5 2 100	3 150 3 750	2 800 3 550			
	22,4	**21,2**	66,1 2 440	42,5 2 510	23,6 2 600	3 750 4 500	2 800 3 550			
	25	**24,9**	56,3 2 000	36,2 2 060	20,1 2 130	3 150 3 750	2 800 3 550			
	28	**26,5**	52,9 2 140	34,0 2 440	18,9 2 640	3 160 3 870	2 800 3 550			
	31,5	**31,1**	45,1 2 030	29,0 2 090	16,1 2 160	3 150 3 750	2 800 3 550			
3EB	31,5	**30,9**	45,3 2 870	29,1 3 160	16,2 3 270	3 350 4 000	2 800 3 550	9,5 7,1	14,5 10,9	19 14,5
	35,5	**36,7**	38,1 3 170	24,5 3 250	13,6 3 370	4 500 5 300	2 800 3 550			
	40	**39**	35,9 3 080	23,1 3 200	12,8 3 320	3 350 4 000	2 800 3 550			
	45	**43,6**	32,1 3 200	20,7 3 290	11,5 3 410	4 500 5 300	2 800 3 550			
	50	**46,3**	30,2 3 210	19,4 3 300	10,8 3 420	4 500 5 300	2 800 3 550			
	56	**54,9**	25,5 3 250	16,4 3 340	9,10 3 460	4 500 5 300	2 800 3 550			
	63	**64,8**	21,6 2 810	13,9 2 890	7,71 2 990	4 500 5 300	2 800 3 550			
	71	**69,7**	20,1 3 290	12,9 3 380	7,17 3 570	4 500 5 300	2 800 3 550			
	80	**81,8**	17,1 2 850	11,0 2 930	6,11 3 040	4 500 5 300	2 800 3 550			
	90	**88,4**	15,8 3 340	10,2 3 430	5,66 3 700	4 500 5 300	2 800 3 550			
	100	**104**	13,5 2 890	8,67 2 970	4,82 3 080	4 500 5 300	2 800 3 550			
	112	**110**	12,7 3 390	8,15 3 500	4,53 3 830	4 500 5 300	2 800 3 550			
	125	**130**	10,8 2 930	6,94 3 010	3,86 3 120	4 500 5 300	2 800 3 550			
	140	**140**	9,99 2 740	6,42 2 820	3,57 3 080	3 750 4 500	2 800 3 550			
	160	**164**	8,51 2 770	5,47 2 890	3,04 3 160	3 750 4 500	2 800 3 550			
	200	**202**	6,93 2 720	4,45 2 790	2,47 2 900	3 750 4 500	2 800 3 550			

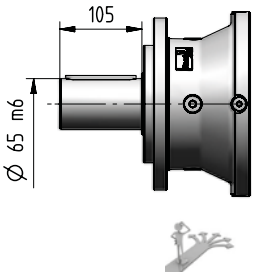
	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at –	20°C	40°C
4EB	160	**160**	8,76 3 470	5,63 3 700	3,13 4 050	4 500 5 300	2 800 3 550	8 6	11,8 9	16 12,2
	180	**181**	7,72 3 530	4,97 3 780	2,76 4 130	4 500 5 300	2 800 3 550			
	200	**193**	7,27 3 560	4,67 3 810	2,60 4 170	4 500 5 300	2 800 3 550			
	224	**229**	6,12 3 660	3,94 3 910	2,19 4 280	4 500 5 300	2 800 3 550			
	250	**240**	5,82 3 690	3,74 3 940	2,08 4 310	4 500 5 300	2 800 3 550			
	280	**290**	4,83 3 790	3,10 4 050	1,72 4 420	4 500 5 300	2 800 3 550			
	315	**310**	4,51 3 830	2,90 4 100	1,61 4 480	4 500 5 300	2 800 3 550			
	355	**362**	3,86 3 920	2,48 4 190	1,38 4 500	4 500 5 300	2 800 3 550			
	400	**418**	3,35 4 010	2,15 4 290	1,20 4 500	4 500 5 300	2 800 3 550			
	450	**460**	3,05 4 070	1,96 4 350	1,09 4 500	4 500 5 300	2 800 3 550			
	500	**497**	2,82 4 110	1,81 4 400	1,01 4 500	4 500 5 300	2 800 3 550			
	560	**544**	2,58 4 170	1,66 4 430	0,920 4 500	4 500 5 300	2 800 3 550			
	630	**630**	2,22 4 260	1,43 4 500	0,794 4 500	4 500 5 300	2 800 3 550			
	710	**680**	2,06 4 310	1,32 4 500	0,735 4 500	4 500 5 300	2 800 3 550			
	800	**787**	1,78 4 410	1,14 4 500	0,635 4 500	4 500 5 300	2 800 3 550			
	900	**943**	1,48 4 480	0,954 4 500	0,530 4 500	4 500 5 300	2 800 3 550			
	1000	**998**	1,40 3 550	0,901 3 750	0,501 3 750	3 750 4 500	2 800 3 550			
	1120	**1124**	1,25 3 620	0,801 3 750	0,445 3 750	3 750 4 500	2 800 3 550			
	1250	**1197**	1,17 3 650	0,752 3 750	0,418 3 750	3 750 4 500	2 800 3 550			
	1400	**1405**	0,997 3 740	0,641 3 750	0,356 3 750	3 750 4 500	2 800 3 550			
	1600	**1649**	0,849 3 060	0,546 3 150	0,303 3 150	3 150 3 750	2 800 3 550			
	1800	**1726**	0,811 3 100	0,521 3 310	0,290 3 610	3 750 4 500	2 800 3 550			
	2000	**2026**	0,691 3 150	0,444 3 150	0,247 3 150	3 150 3 750	2 800 3 550			

In case of alternative output design , refer to torque limits at page 4.70, if any.

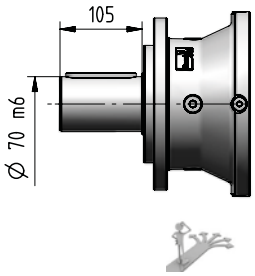
004A - Main Dimensions



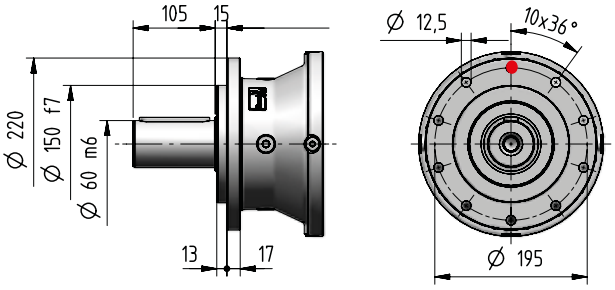
C065M1 F30b



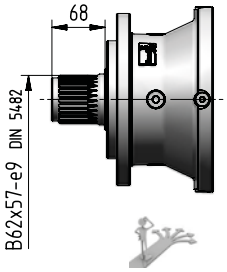
C070M1 F30b



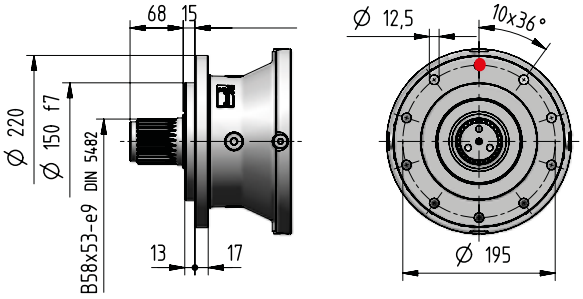
C060M1 F20b



S062M1 F30b



S058M1 F20b



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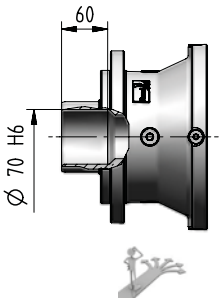

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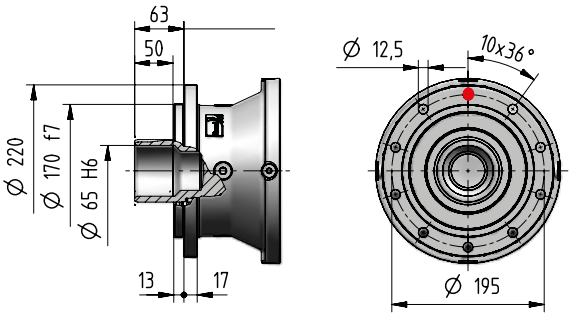
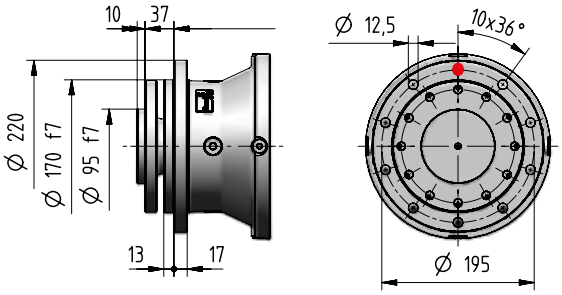
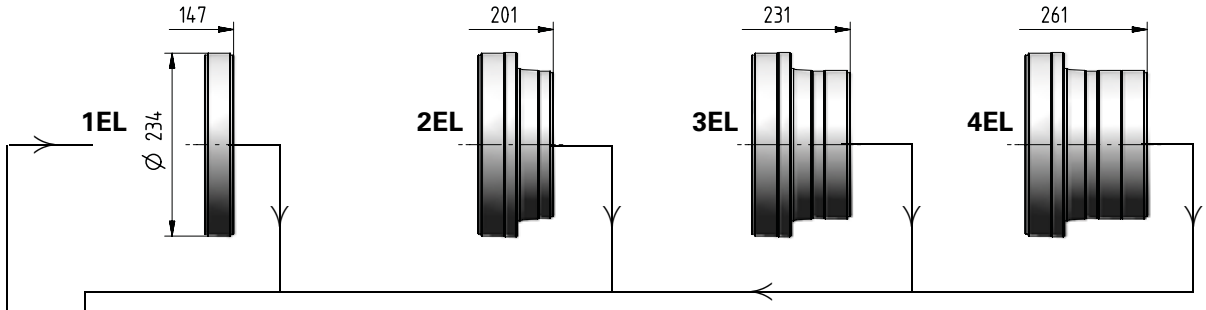


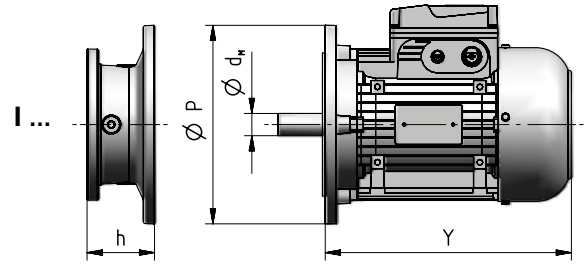
M095M1 A30b



kg	Input Options Code												Output Options (Δ) Code	
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	C…	U…	J…	C… S…	H… M…
1EL	-	-	-	41	45	51	51	54	63	46	38	-	+0	-4
2EL	38	40	40	42	45	51	51	-	–	43	40	-		
3EL	42	45	44	46	50	56	55	-	–	47	44	-		
4EL	47	49	49	51	54	60	60	-	–	51	49	-		
2EB	60	62	62	64	67	73	73	-	–	64	62	56		
3EB	55	58	58	59	63	69	68	-	–	60	57	52		
4EB	60	62	62	64	67	73	73	-	–	64	62	56		

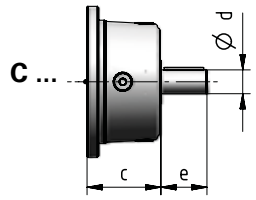
2591-01.02



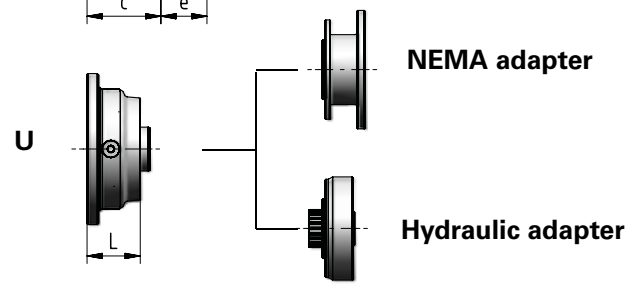


Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	52	52	52	52	52	52	**I14×160**
80	19×200	233	302	–	72	72	72	72	72	72	**I19×200**
90	24×200	287	366	–	72	72	72	72	72	72	**I24×200**
100	28×250	310	405	103	82	82	82	82	82	82	**I28×250**
112	28×250	336	435	103	82	82	82	82	82	82	**I28×250**
132	38×300	445	553	120	102	102	102	102	102	135	**I38×300**
160	42×350	573	640	153	135	135	135	135	135	135	**I42×350**
180	48×350	613	734	153	135	135	135	135	135	135	**I48×350**
200	55×400	654	734	153	–	–	–	–	–	–	**I55×400**
225	60×450	710	–	183	–	–	–	–	–	–	**I60×450**

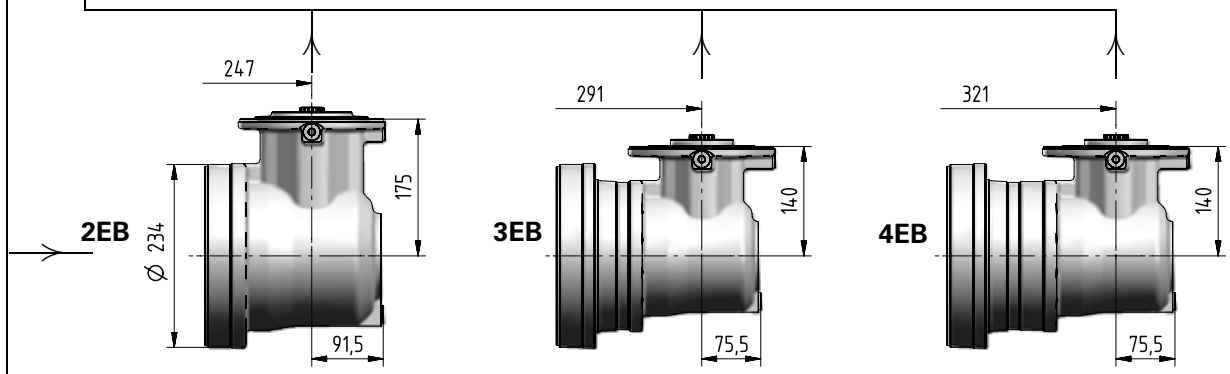
1) Values valid for brake motor; for other dimensions see TX catalog.



Train of gears	d	e	c	Code
1EL	48	82	115	**C48×82**
2EL	38	58	90	**C38×58**
3EL, 4EL	30	58	90	**C30×58**
2EB	38	58	90	**C38×58**
3EB, 4EB	38	58	90	**C38×58**



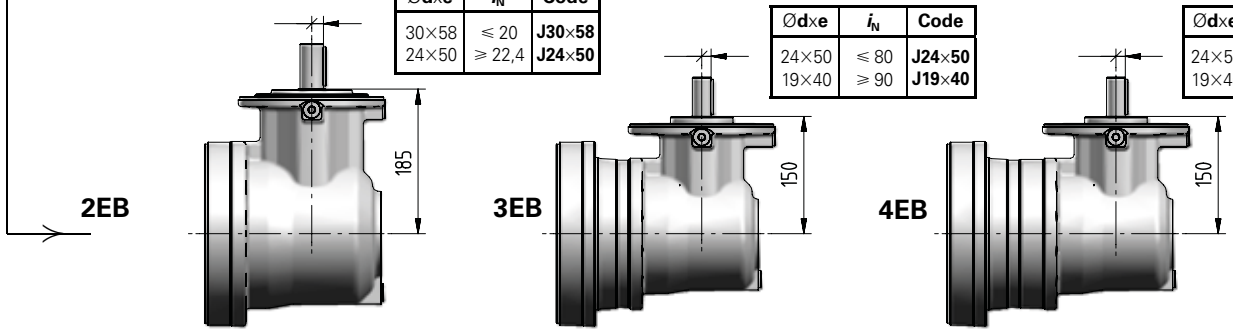
Train of gears	L	Code
1EL	62	ch.7
2EL ... 4EL	64	
2EB ... 4EB	64	



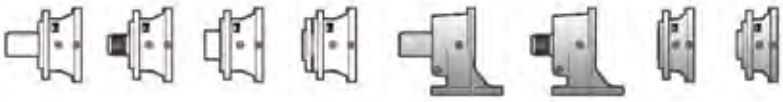
Ødxe	i_N	Code
30×58	⩽ 20	**J30×58**
24×50	⩾ 22,4	**J24×50**

Ødxe	i_N	Code
24×50	⩽ 80	**J24×50**
19×40	⩾ 90	**J19×40**

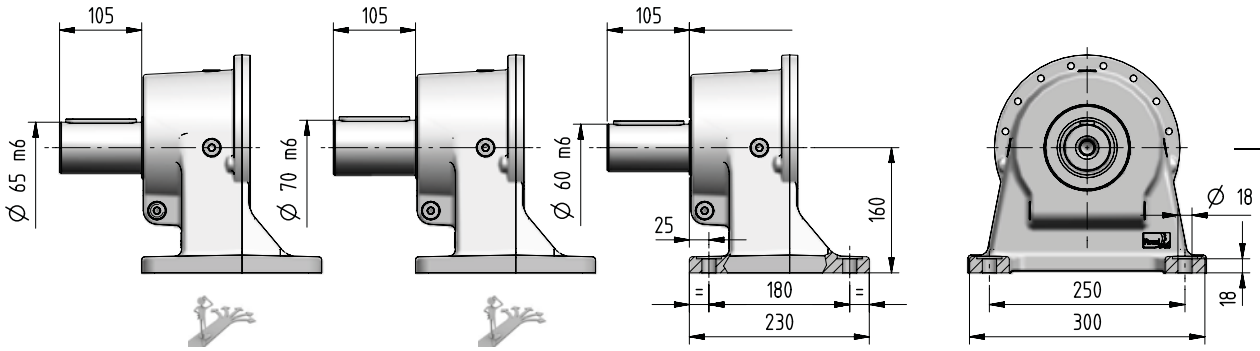
Ødxe	i_N	Code
24×50	⩽ 315	**J24×50**
19×40	⩾ 355	**J19×40**



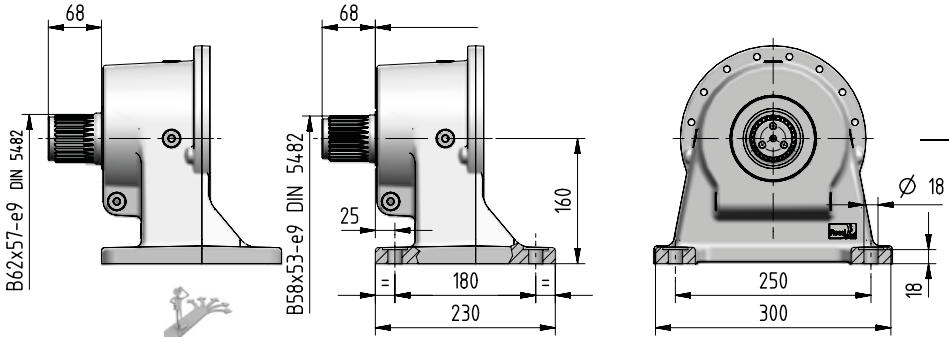
004A - Main Dimensions



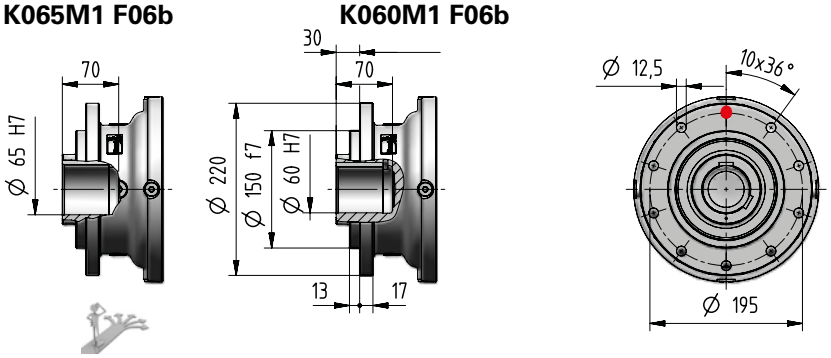
C065M1 P30b **C070M1 P30b** **C060M1 P20b**



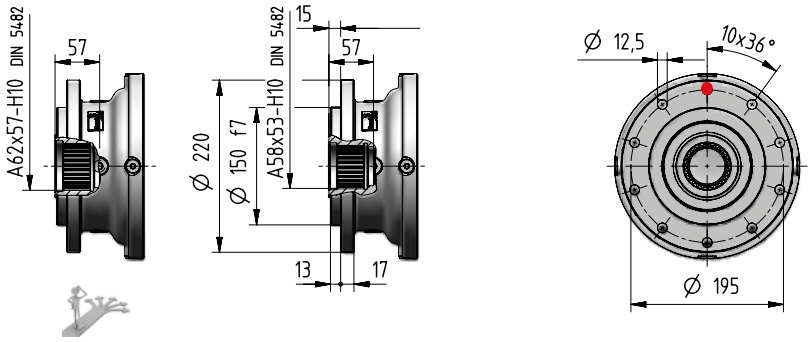
S062M1 P30b **S058M1 P20b**



K065M1 F06b **K060M1 F06b**

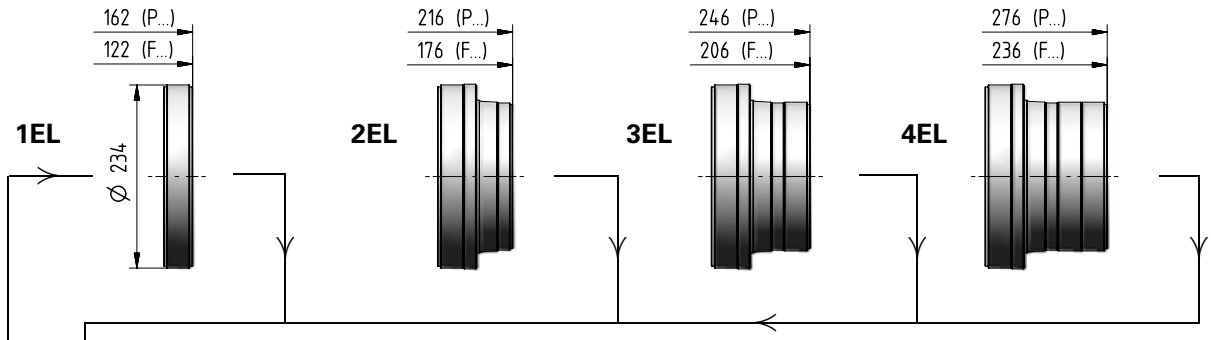


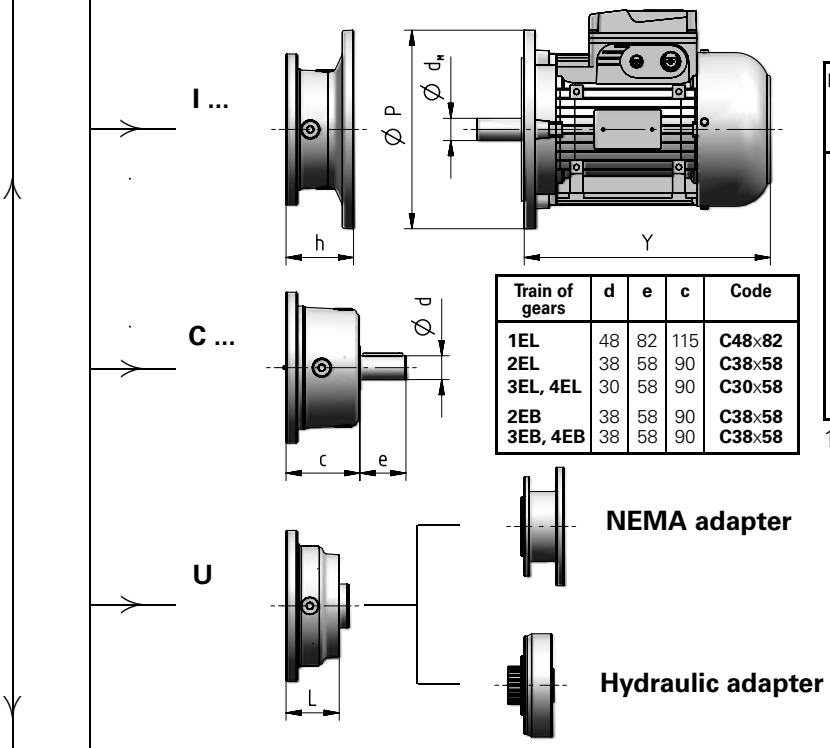
Z062M1 F05b **Z058M1 F05b**



kg	Input Options												Output Options (Δ)	
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	C…	U…	J…	C… S…	K… Z…
1EL	–	–	–	47	51	57	57	60	69	52	44	–	+0	-14
2EL	44	46	46	48	51	57	57	–	–	49	46	–		
3EL	48	51	50	52	56	62	61	–	–	53	50	–		
4EL	53	55	55	57	60	66	66	–	–	57	55	–		
2EB	66	68	68	70	73	79	79	–	–	70	68	62		
3EB	61	64	64	65	69	75	74	–	–	66	63	58		
4EB	66	68	68	70	73	79	79	–	–	70	68	62		

2591-01.02



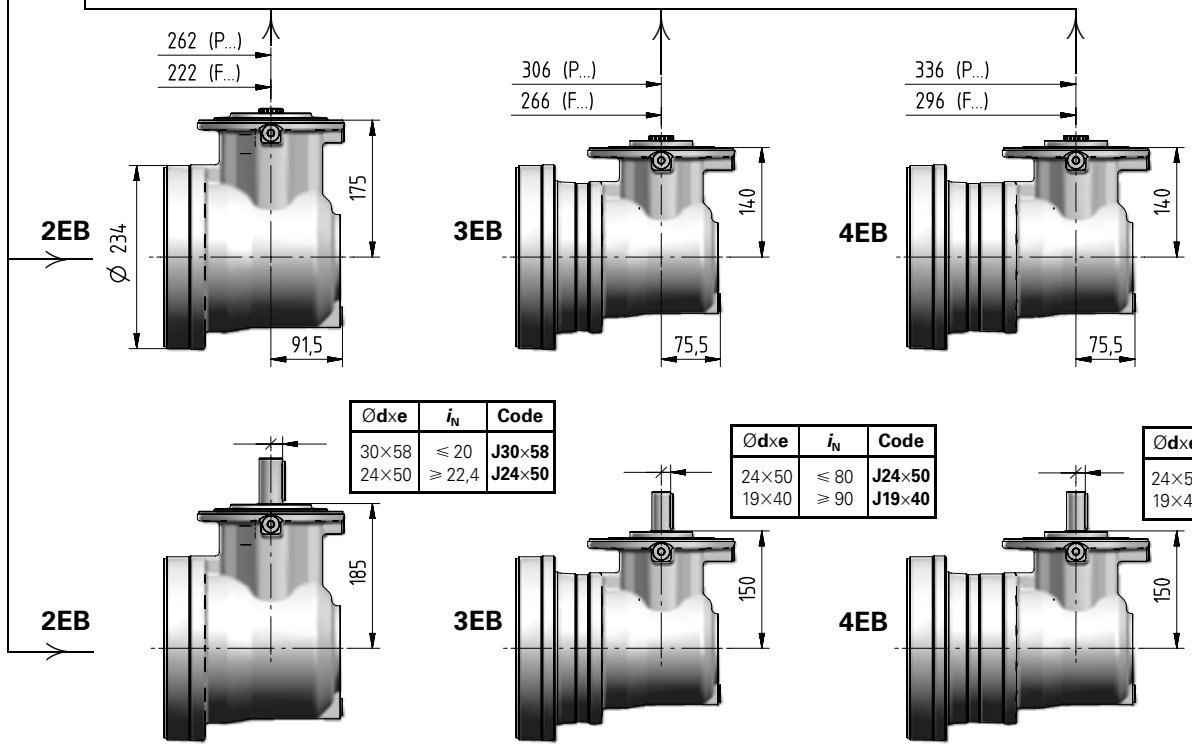


Train of gears	d	e	c	Code
1EL	48	82	115	**C48×82**
2EL	38	58	90	**C38×58**
3EL, 4EL	30	58	90	**C30×58**
2EB	38	58	90	**C38×58**
3EB, 4EB	38	58	90	**C38×58**

Motor size IEC	d_M×P	Y		Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
			1)	Dimension **h**							
71	14×160	216	278	–	52	52	52	52	52	52	**I14×160**
80	19×200	233	302	–	72	72	72	72	72	72	**I19×200**
90	24×200	287	366	–	72	72	72	72	72	72	**I24×200**
100	28×250	310	405	103	82	82	82	82	82	82	**I28×250**
112	28×250	336	435	103	82	82	82	82	82	82	**I28×250**
132	38×300	445	553	120	102	102	102	102	102	135	**I38×300**
160	42×350	573	640	153	135	135	135	135	135	135	**I42×350**
180	48×350	613	734	153	135	135	135	135	135	135	**I48×350**
200	55×400	654	734	153	–	–	–	–	–	–	**I55×400**
225	60×450	710	–	183	–	–	–	–	–	–	**I60×450**

1) Values valid for brake motor; for other dimensions see TX catalog.

Train of gears	L	Code
1EL	62	ch.7
2EL ... 4EL	64	
2EB ... 4EB	64	



Ødxe	i_N	Code
30×58	⩽ 20	**J30×58**
24×50	⩾ 22,4	**J24×50**

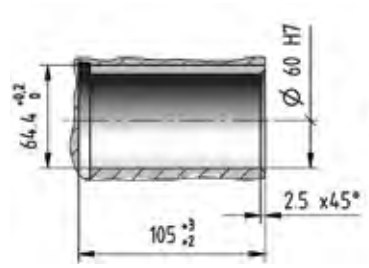
Ødxe	i_N	Code
24×50	⩽ 80	**J24×50**
19×40	⩾ 90	**J19×40**

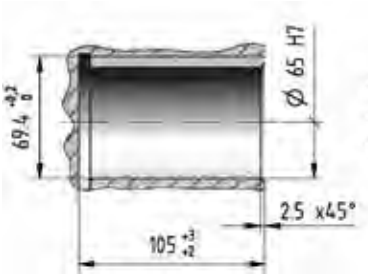
Ødxe	i_N	Code
24×50	⩽ 315	**J24×50**
19×40	⩾ 355	**J19×40**

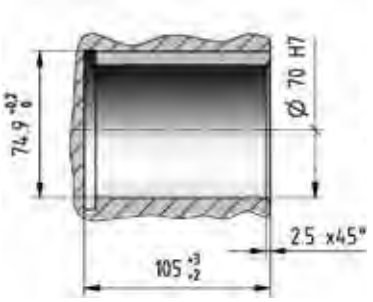
2591-01.02

004A - Output side details

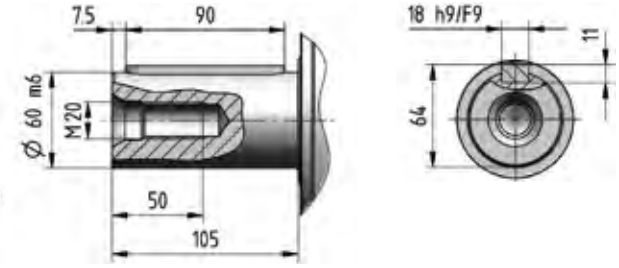
Suggested mating dimensions

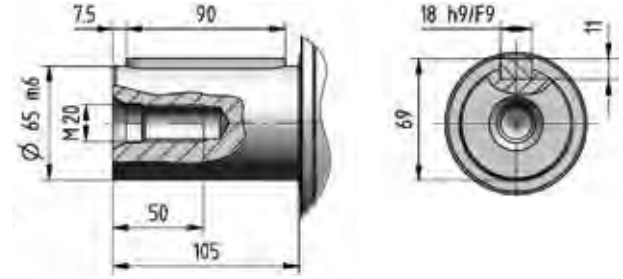


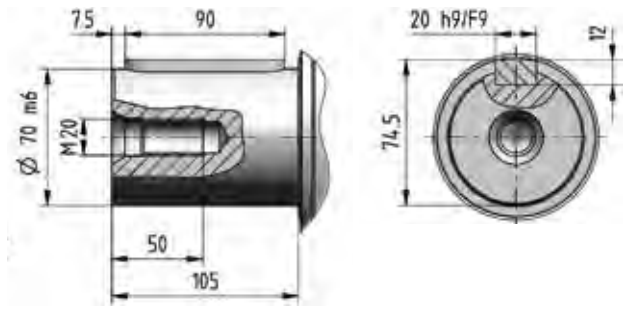




Gear reducer cylindrical shaft end



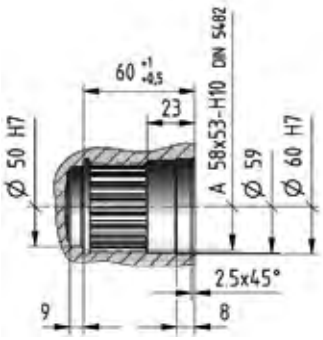


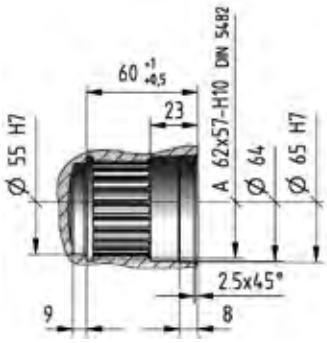


4

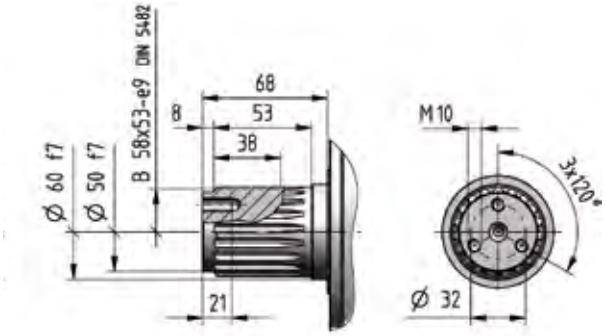
2591-01.02

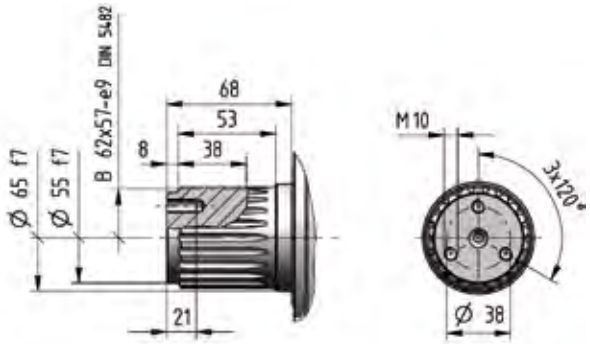
Suggested mating dimensions





Gear reducer splined shaft end



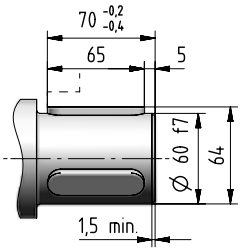


4

2591-01.02

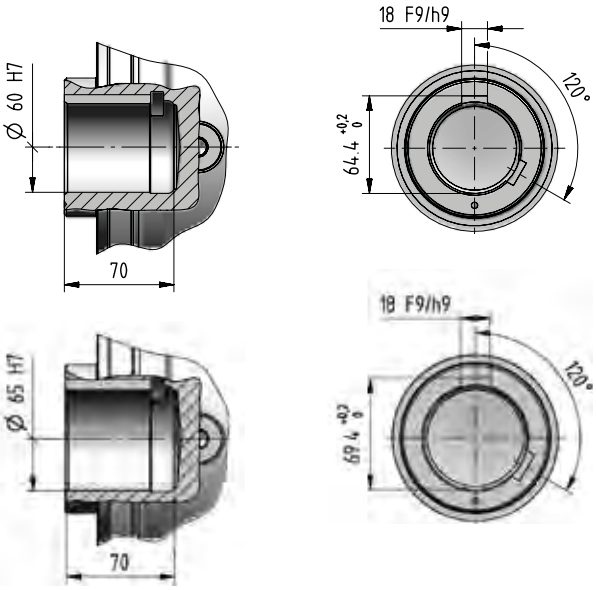
004A - Output side details

Suggested mating dimensions



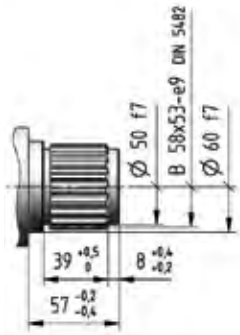
Key HRC hardness ⩾ 40.

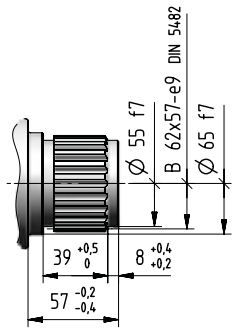
Gear reducer hollow shaft with keyways



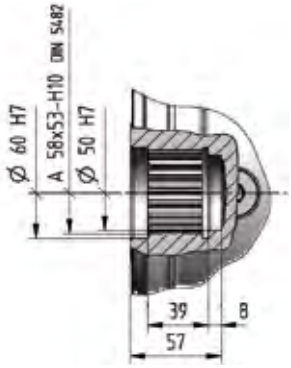
4

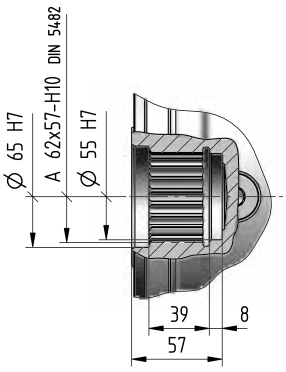
Suggested mating dimensions





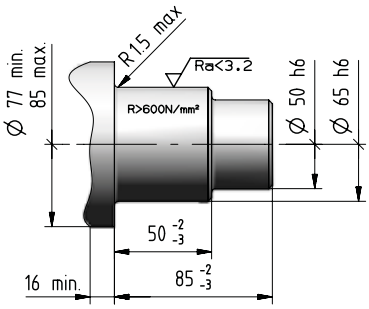
Splined hollow shaft

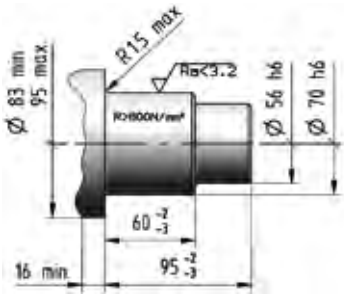




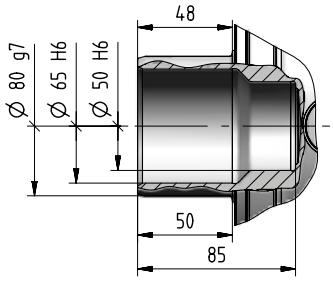
2591-01.02

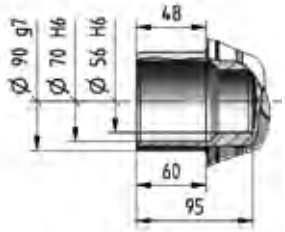
Suggested mating dimensions



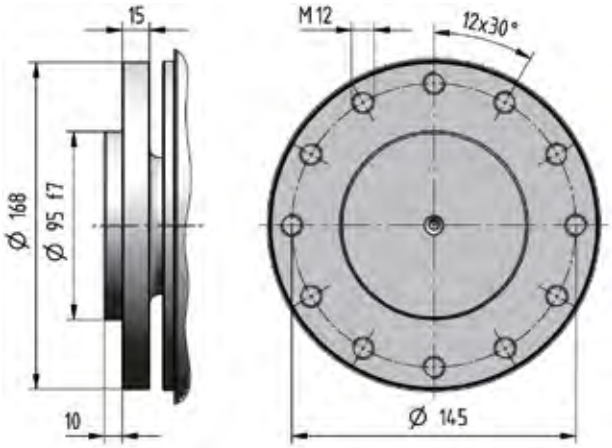


Gear reducer hollow shaft for shaft mounting





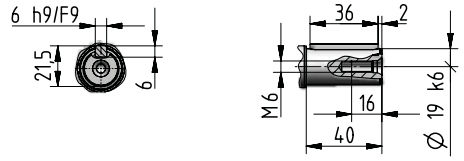
Gear reducer flanged shaft

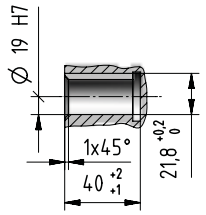


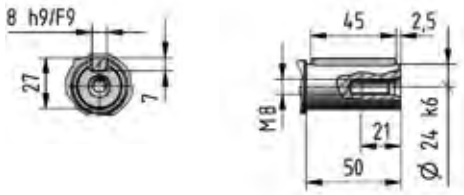
004A - Input side details

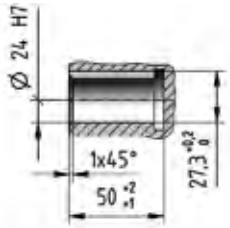
Gear reducer cylindrical shaft end

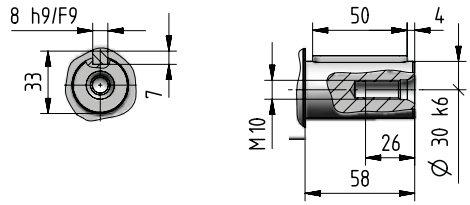
Suggested mating dimensions

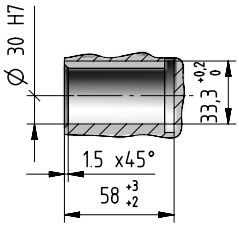


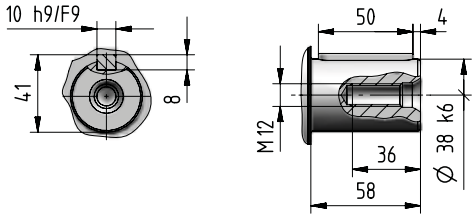


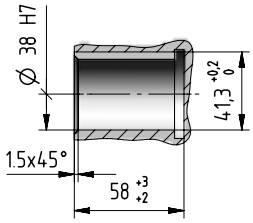


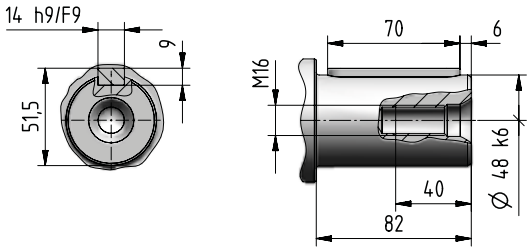


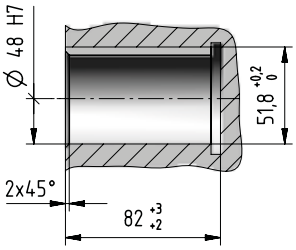




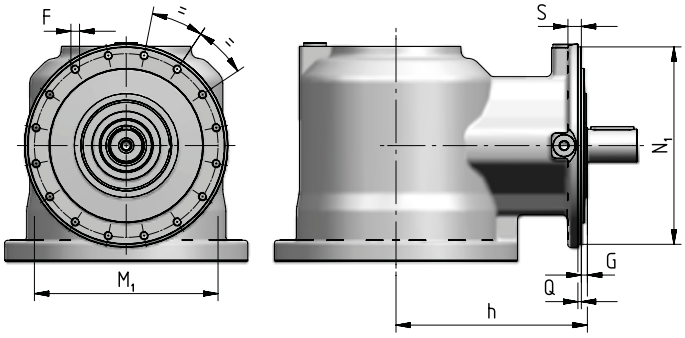






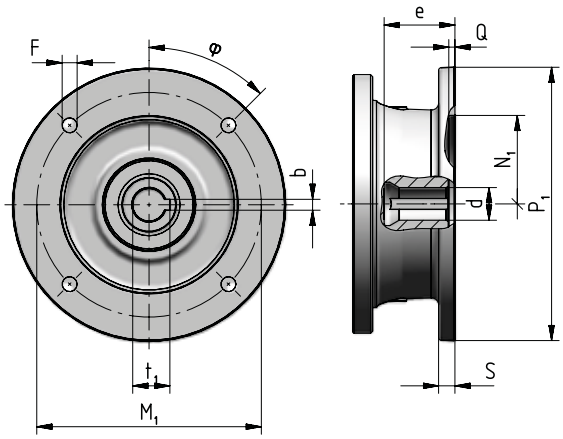


Bevel helical input flange



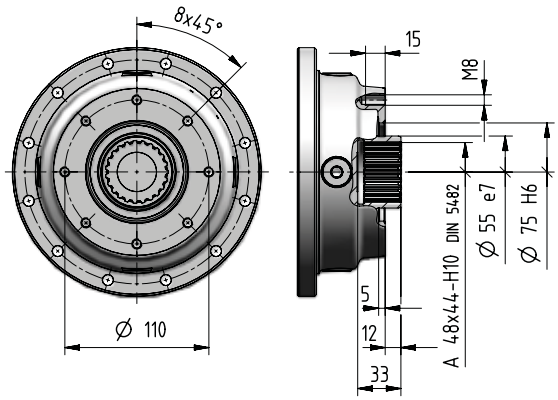
Train of gears	N_1 Ø h6	Q	M_1 Ø	F Ø	G	S	h
2EB	184	3,5	171	M8 (n. 12)	10	12	185
3EB, 4EB	184	3,5	171	M8 (n. 12)	10	12	150

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 x 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6

Universal flange adapter

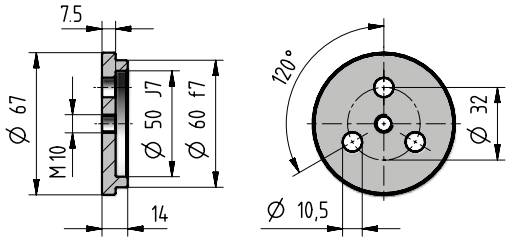


For more information see ch. 8.7.

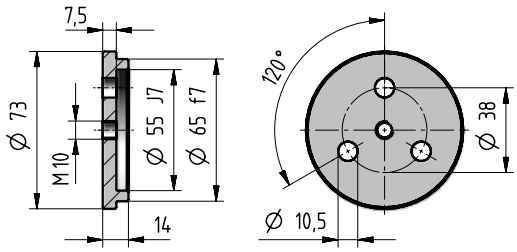
004A - Accessories

Stop washer

[included]



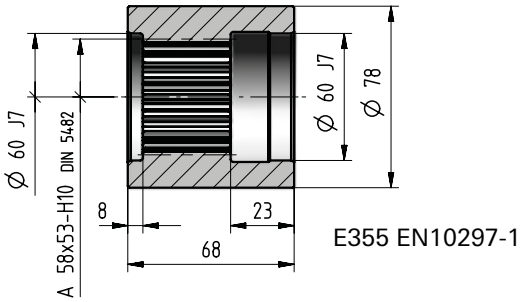
Code: **,SW058**



Code: **,SW062**

Splined bush

[included]



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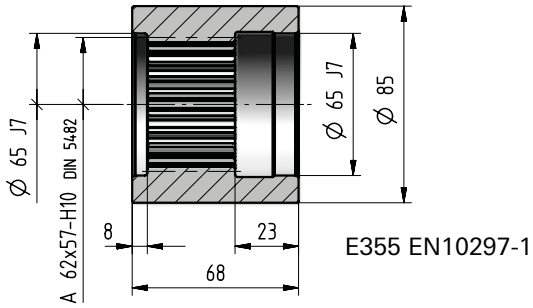
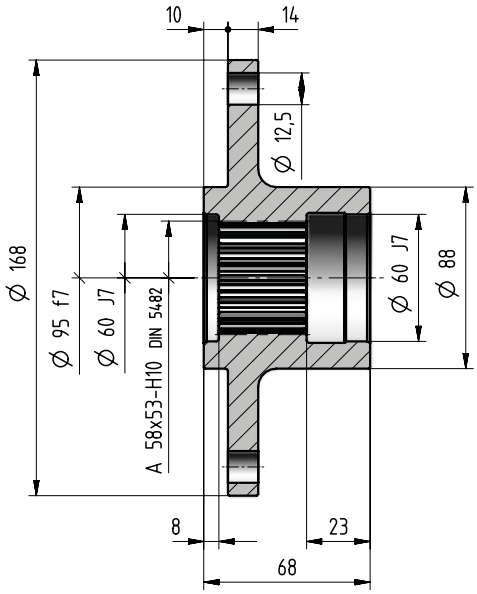


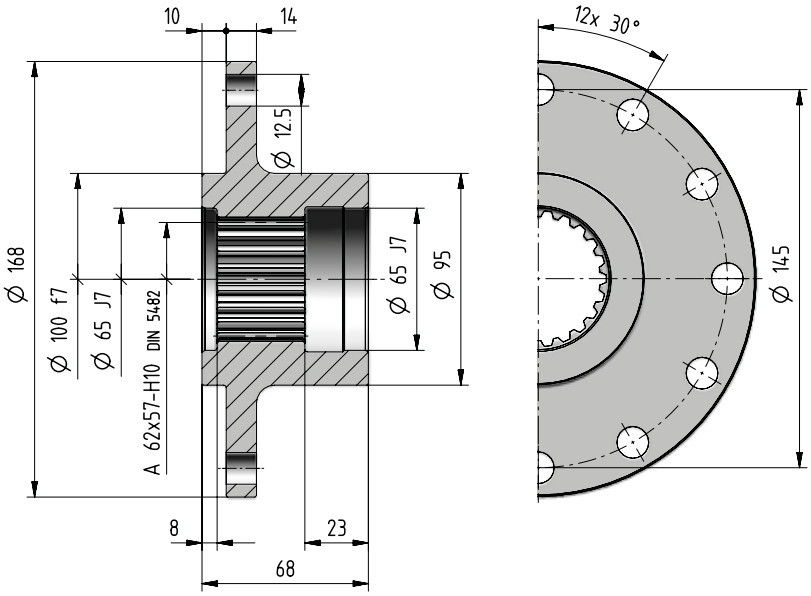
Code: **,SB062**

Wheel flange

[included]



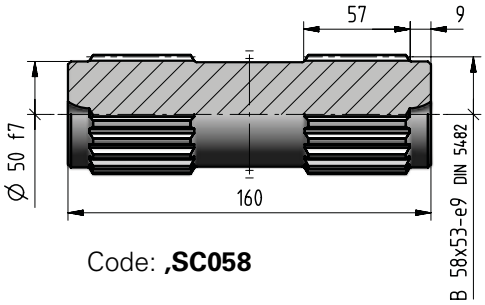
Code: **,WF058**



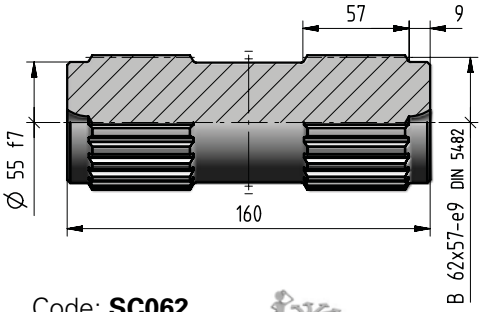
Code: **,WF062**

kg	Accessories																
	,SW058	,SW062	,SB058	,SB062	,WF058	,WF062	,SC058	,SC062	,R006DA	,R006DB	,R006CC	,R006CD	,R006CE	,R006CF	,TA10b	,SD080	,SD090
	0,24	0,28	1,4	1,7	3,2	4	2,8	3,3	4,5	5,5	3,8	4,5	5,3	6,2	3	2,4	3,3

Splined bar



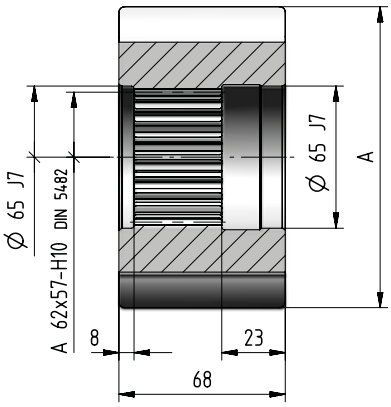
Code: **,SC058**



Code:**,SC062**

Pinion gear

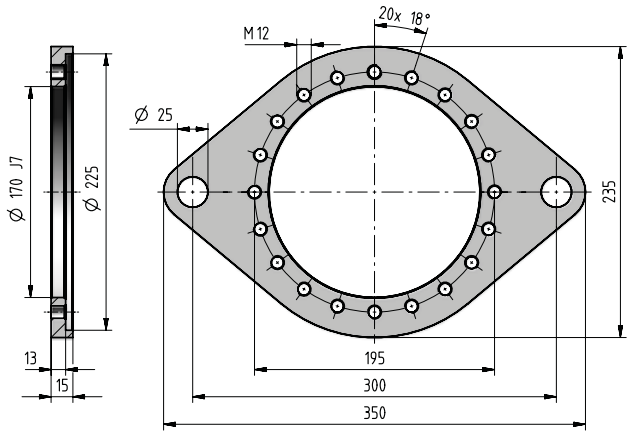
[included]



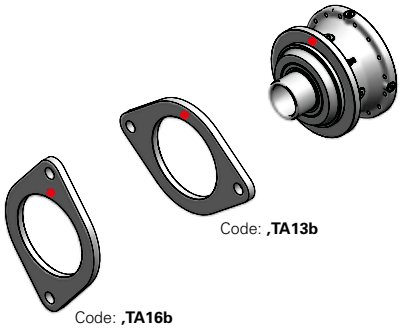
m_P	z_P	x	A Ø h9	Code
10	11	0,5	139	**,R006DA**
10	12	0,5	149	**,R006DB**
8	13	0,5	127	**,R006CC**
8	14	0,5	135	**,R006CD**
8	15	0,5	143	**,R006CE**
8	16	0,5	149,5	**,R006CF**

Torque arm

[included]



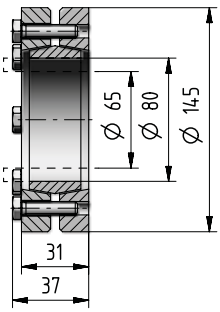
Code: **,TA10b**



If an already mounted torque arm is required, state the relevant position between torque arm and gear reducer. This position is given by the flange upper reference hole (stated in red in the figure).

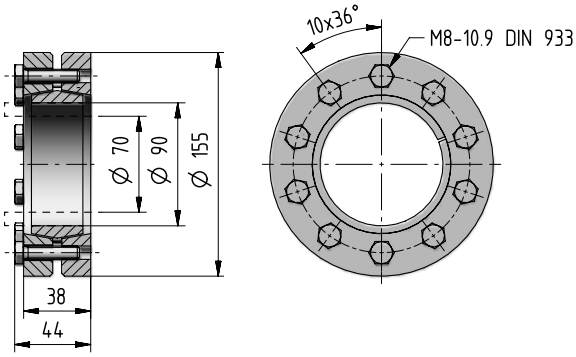
- Reference hole for the identification of the mounting position

Shrink disc



	L_h = 10 000 h n_1 rpm n_2 rpm T_{N2} lb in			T_{N2max} T_{2max} lb in	n_{1max} n_{1peak} rpm	n_1 = 1 750 rpm P_t hp 68°F (20°C) –	104°F (40°C)	
i_{act}	1 750	1 150	500					
175	10.0 30 420	6.58 32 020	2.86 36 320	39 820 47 500	2 800 3 150	7.5 5.6	12.5 9.5	15 11.2
267	8.44 30 840	5.55 32 860	2.41 37 280	39 820 47 500	2 800 3 150			
250	7.00 31 730	4.60 33 810	2.00 38 350	39 820 47 500	3 150 4 000			
296	5.92 32 540	3.89 34 680	1.69 39 330	39 820 47 500	3 150 4 000			
317	5.52 32 890	3.63 35 050	1.58 39 330	39 820 47 500	3 150 4 000			
357	4.91 33 480	3.22 35 670	1.40 39 820	39 820 47 500	3 150 4 000			
422	4.15 34 340	2.73 36 590	1.19 39 820	39 820 47 500	3 150 4 000			

Code: **,SD080**

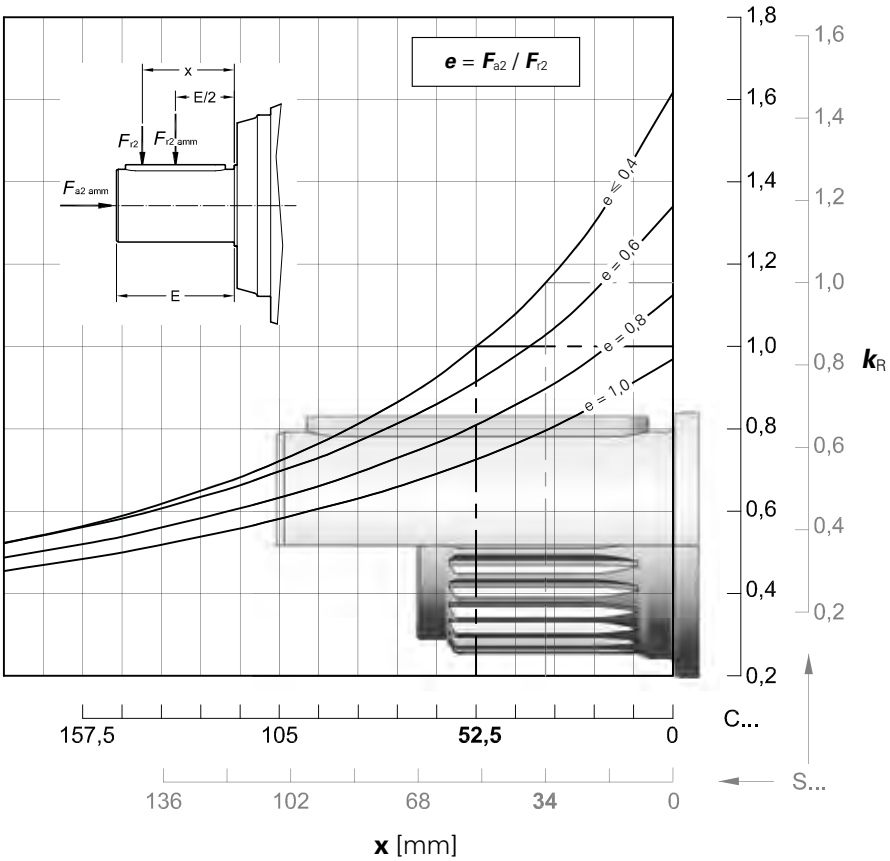


Code: **,SD090**

004A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

Radial loads $\boldsymbol{F}_{r2\,adm}$ and axial loads $\boldsymbol{F}_{a2\,adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

Output side: C060M1 F20b
S058M1 F20b
C060M1 P20b
S058M1 P20b



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{r2\,adm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	56 000	63 000	63 000	80 000
22 400	53 000	63 000	60 000	75 000
28 000	50 000	60 000	56 000	71 000
35 500	47 500	56 000	53 000	67 000
45 000	45 000	50 000	50 000	63 000
56 000	40 000	47 500	45 000	56 000
71 000	37 500	45 000	42 500	53 000
90 000	35 500	42 500	40 000	50 000
112 000	33 500	37 500	37 500	47 500
140 000	31 500	35 500	35 500	45 000
180 000	28 000	33 500	31 500	40 000
224 000	26 500	31 500	30 000	37 500
280 000	25 000	30 000	28 000	35 500
355 000	23 600	28 000	26 500	33 500
450 000	22 400	25 000	25 000	31 500
560 000	21 200	23 600	22 400	30 000
710 000	19 000	22 400	21 200	26 500
900 000	18 000	21 200	20 000	25 000
1 120 000	17 000	19 000	19 000	23 600
1 400 000	16 000	18 000	17 000	22 400
1 800 000	15 000	17 000	16 000	20 000
2 240 000	14 000	16 000	15 000	19 000
2 800 000	12 500	15 000	14 000	18 000
max	**56 000**	**63 000**	**63 000**	**80 000**

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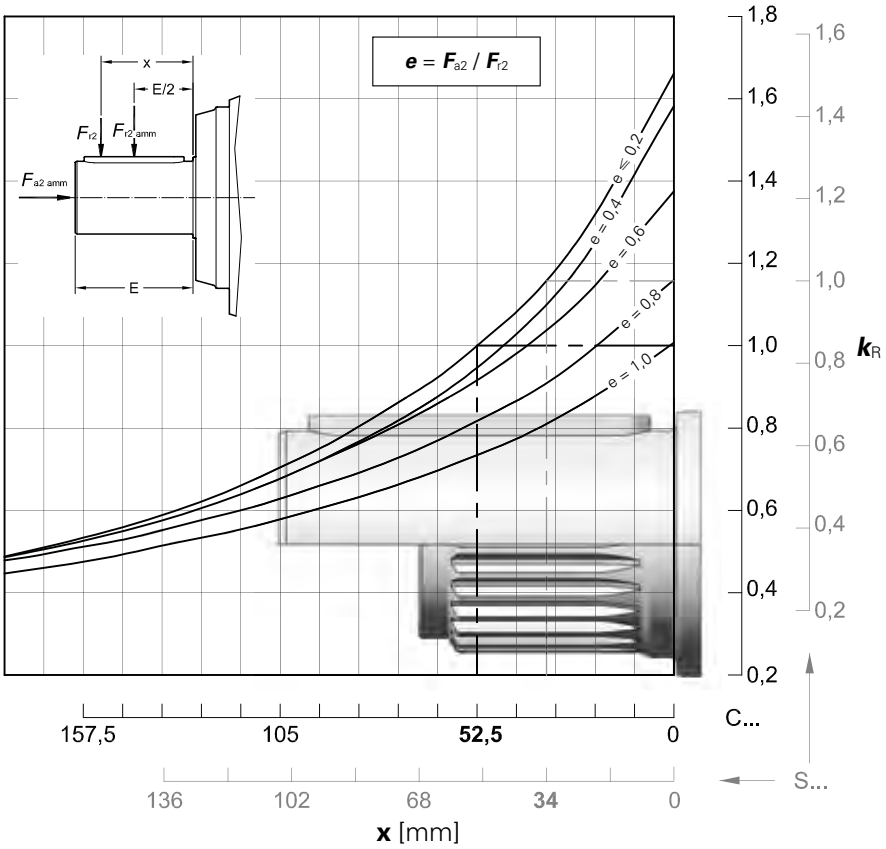
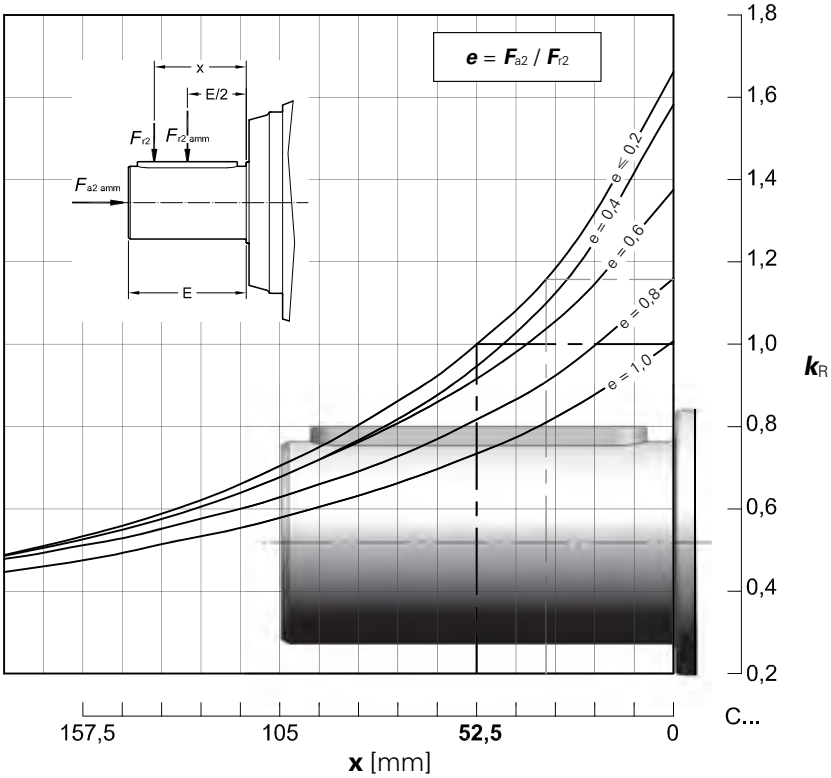
Output side: C070M1 F30b
S062M1 F30b
C070M1 P30b
S062M1 P30b



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\ adm}$ C ...	$F_{r2\ adm}$ S ...	$F_{a2\ adm}$ ←	$F_{a2\ adm}$ →
< **18 000**	67 000	80 000	63 000	106 000
22 400	67 000	75 000	63 000	100 000
28 000	60 000	71 000	63 000	95 000
35 500	56 000	67 000	63 000	90 000
45 000	53 000	63 000	63 000	85 000
56 000	50 000	56 000	56 000	80 000
71 000	45 000	53 000	53 000	71 000
90 000	42 500	50 000	50 000	67 000
112 000	40 000	47 500	47 500	63 000
140 000	37 500	45 000	45 000	60 000
180 000	35 500	40 000	40 000	56 000
224 000	33 500	37 500	37 500	50 000
280 000	30 000	35 500	35 500	47 500
355 000	28 000	33 500	33 500	45 000
450 000	26 500	31 500	31 500	42 500
560 000	25 000	28 000	28 000	40 000
710 000	23 600	26 500	26 500	35 500
900 000	21 200	25 000	25 000	33 500
1 120 000	20 000	23 600	26 000	31 500
1 400 000	19 000	22 400	22 400	30 000
1 800 000	17 000	20 000	20 000	28 000
2 240 000	16 000	19 000	19 000	26 500
2 800 000	15 000	18 000	18 000	23 600
max	**67 000**	**80 000**	**63 000**	**106 000**

Output side: C065M1 F30b
C065M1 P30b



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\ adm}$ C ...	$F_{a2\ adm}$ ←	$F_{a2\ adm}$ →
< **18 000**	67 000	63 000	106 000
22 400	67 000	63 000	100 000
28 000	60 000	63 000	95 000
35 500	56 000	63 000	90 000
45 000	53 000	63 000	85 000
56 000	50 000	56 000	80 000
71 000	45 000	53 000	71 000
90 000	42 500	50 000	67 000
112 000	40 000	47 500	63 000
140 000	37 500	45 000	60 000
180 000	35 500	40 000	56 000
224 000	33 500	37 500	50 000
280 000	30 000	35 500	47 500
355 000	28 000	33 500	45 000
450 000	26 500	31 500	42 500
560 000	25 000	28 000	40 000
710 000	23 600	26 500	35 500
900 000	21 200	25 000	33 500
1 120 000	20 000	26 000	31 500
1 400 000	19 000	22 400	30 000
1 800 000	17 000	20 000	28 000
2 240 000	16 000	19 000	26 500
2 800 000	15 000	18 000	23 600
max	**67 000**	**63 000**	**106 000**

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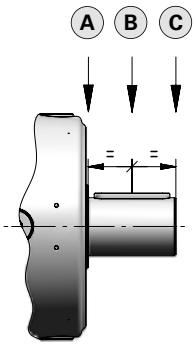
004A - Radial F_{r1} [N] and axial loads F_{a2} [N]

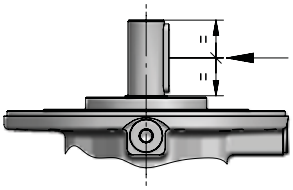
Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.



$n_1 \cdot L_h$	Train of gears											
	1EL			2EL			3EL			4EL		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	20 000	14 000	10 600	14 000	8 500	5 300	6 300	4 250	3 350	6 300	4 250	3 350
1 120 000	19 000	12 500	9 500	13 200	8 000	5 000	5 600	4 000	3 150	5 600	4 000	3 150
1 400 000	17 000	11 800	9 000	11 800	7 100	4 500	5 300	3 750	2 800	5 300	3 750	2 800
1 800 000	16 000	10 600	8 000	11 200	6 700	4 250	5 000	3 350	2 650	5 000	3 350	2 650
2 240 000	15 000	10 000	7 500	10 000	6 300	4 000	4 500	3 150	2 500	4 500	3 150	2 500
2 800 000	14 000	9 500	7 100	9 500	5 600	3 550	4 250	3 000	2 240	4 250	3 000	2 240
3 550 000	12 500	8 500	6 700	9 000	5 300	3 350	4 000	2 800	2 120	4 000	2 800	2 120
4 500 000	11 800	8 000	6 000	8 000	5 000	3 150	3 550	2 500	1 900	3 550	2 500	1 900
5 600 000	11 200	7 500	5 600	7 500	4 500	2 800	3 350	2 360	1 800	3 350	2 360	1 800
7 100 000	10 000	6 700	5 300	7 100	4 250	2 650	3 150	2 120	1 700	3 150	2 120	1 700
9 000 000	9 500	6 300	4 750	6 300	4 000	2 500	2 800	2 000	1 500	2 800	2 000	1 500
11 200 000	8 500	6 000	4 500	6 000	3 550	2 240	2 650	1 900	1 400	2 650	1 900	1 400
14 000 000	8 000	5 600	4 250	5 600	3 350	2 120	2 500	1 700	1 320	2 500	1 700	1 320
18 000 000	7 500	5 000	3 750	5 000	3 150	1 900	2 240	1 600	1 180	2 240	1 600	1 180
22 400 000	6 700	4 750	3 550	4 750	2 800	1 800	2 120	1 500	1 120	2 120	1 500	1 120
28 000 000	6 300	4 250	3 350	4 500	2 650	1 700	2 000	1 400	1 060	2 000	1 400	1 060
35 500 000	6 000	4 000	3 000	4 000	2 500	1 600	1 800	1 250	950	1 800	1 250	950
45 000 000	5 300	3 750	2 800	3 750	2 240	1 400	1 700	1 180	900	1 700	1 180	900

Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears					
	2EB		3EB		4EB	
	$i_N \leq 25$	$i_N \geq 28$	$i_N \leq 100$	$i_N \geq 112$	$i_N \leq 315$	$i_N \geq 355$
900 000	4 000	3 350	2 800	2 360	2 800	2 360
1 120 000	3 750	3 150	2 650	2 240	2 650	2 240
1 400 000	3 550	2 800	2 360	2 000	2 360	2 000
1 800 000	3 150	2 650	2 240	1 900	2 240	1 900
2 240 000	3 000	2 500	2 000	1 700	2 000	1 700
2 800 000	2 800	2 240	1 900	1 600	1 900	1 600
3 550 000	2 500	2 120	1 800	1 500	1 800	1 500
4 500 000	2 360	2 000	1 600	1 400	1 600	1 400
5 600 000	2 240	1 800	1 500	1 320	1 500	1 320
7 100 000	2 000	1 700	1 400	1 180	1 400	1 180
9 000 000	1 900	1 600	1 320	1 120	1 320	1 120
11 200 000	1 700	1 400	1 180	1 000	1 180	1 000
14 000 000	1 600	1 320	1 120	950	1 120	950
18 000 000	1 500	1 250	1 000	850	1 000	850
22 400 000	1 400	1 120	950	800	950	800
28 000 000	1 250	1 060	900	750	900	750
35 500 000	1 180	1 000	800	710	800	710
45 000 000	1 120	900	750	630	750	630



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006A

Data and performance summary

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H₂O
1EL	3,55	**3,52**	398 2 560	256 2 920	142 3 480	4 750 5 600	2 500 2 800	19 14	28 21,2	37,5 28
	4,25	**4,17**	335 2 640	216 3 010	120 3 600	6 300 7 500	2 800 3 550			
	5	**5,29**	264 2 760	170 3 150	94,4 3 270	5 080 6 300	2 800 4 000			
	6	**6,21**	225 2 590	145 2 670	80,5 2 760	4 270 5 300	2 800 4 000			
	7,1	**7,64**	183 1 900	118 1 950	65,5 2 020	3 110 4 500	2 800 4 000			
2EL	12,5	**12,4**	113 3 100	72,8 3 540	40,4 4 220	4 750 5 600	2 800 3 150	12,5 9,5	19 14,5	25,7 19,5
	14	**14,7**	95,4 3 670	61,3 4 200	34,1 4 370	6 300 7 500	2 800 3 150			
	16	**17,4**	80,4 3 790	51,7 4 250	28,7 4 410	6 300 7 500	3 150 4 000			
	18	**18,6**	75,2 3 320	48,3 3 410	26,9 3 540	5 300 6 300	2 800 3 150			
	22,4	**22,1**	63,4 3 960	40,7 4 320	22,6 4 480	6 300 7 500	3 150 4 000			
	25	**25,9**	54,0 3 750	34,7 3 850	19,3 3 990	6 170 7 500	3 150 4 000			
	28	**28**	50,0 3 400	32,1 3 500	17,8 3 630	5 300 6 300	3 150 4 000			
	31,5	**31,9**	43,9 2 740	28,2 2 810	15,7 2 920	4 490 6 500	3 150 4 000			
	35,5	**32,9**	42,6 3 440	27,4 3 530	15,2 3 660	5 300 6 300	3 150 4 000			
	40	**40,4**	34,6 3 470	22,3 3 570	12,4 3 700	5 300 6 300	3 150 4 000			
	45	**47,5**	29,5 2 940	19,0 3 020	10,5 3 130	4 500 5 300	3 150 4 000			
3EL	50	**50,6**	27,6 4 420	17,8 4 540	9,87 4 710	6 300 7 500	2 800 3 150	9,5 7,1	14 10,6	18,5 14
	63	**61,1**	22,9 4 470	14,7 4 600	8,18 4 790	6 300 7 500	3 150 4 000			
	71	**72,5**	19,3 4 520	12,4 4 640	6,90 4 920	6 300 7 500	3 150 4 000			
	80	**76,2**	18,4 4 530	11,8 4 660	6,56 4 960	6 300 7 500	2 800 3 150			
	90	**92**	15,2 4 590	9,79 4 710	5,44 5 100	6 300 7 500	3 150 4 000			
	100	**105**	13,4 4 110	8,60 4 220	4,78 4 380	6 300 7 500	3 150 4 000			
	112	**109**	12,9 4 630	8,28 4 780	4,60 5 230	6 300 7 500	3 150 4 000			
	125	**124**	11,3 4 670	7,25 4 880	4,03 5 200	6 300 7 500	3 150 4 000			
	140	**136**	10,3 4 700	6,61 4 950	3,67 5 410	6 300 7 500	3 150 4 000			
	160	**157**	8,89 4 740	5,72 5 060	3,18 5 530	6 300 7 500	3 150 4 000			
	180	**189**	7,42 4 610	4,77 4 740	2,65 4 910	6 300 7 500	3 150 4 000			
	200	**203**	6,91 3 840	4,44 4 080	2,47 4 460	5 300 6 300	3 150 4 000			
	224	**221**	6,32 4 270	4,06 4 390	2,26 4 550	6 300 7 500	3 150 4 000			
	250	**239**	5,85 3 920	3,76 4 190	2,09 4 580	5 300 6 300	3 150 4 000			

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H₂O
4EL	180	**175**	8,01 4 810	5,15 5 140	2,86 5 620	6 300 7 500	2 800 3 150	8 6	12,2 9,25	16 12,2
	200	**207**	6,75 4 930	4,34 5 280	2,41 5 770	6 300 7 500	2 800 3 150			
	250	**250**	5,60 5 080	3,60 5 430	2,00 5 930	6 300 7 500	3 150 4 000			
	280	**296**	4,73 5 210	3,04 5 570	1,69 6 080	6 300 7 500	3 150 4 000			
	315	**317**	4,41 5 260	2,84 5 630	1,58 6 080	6 300 7 500	3 150 4 000			
	355	**357**	3,93 5 360	2,52 5 730	1,40 6 260	6 300 7 500	3 150 4 000			
	400	**422**	3,32 5 490	2,13 5 870	1,19 6 300	6 300 7 500	3 150 4 000			
	450	**452**	3,09 5 550	1,99 5 940	1,11 6 300	6 300 7 500	3 150 4 000			
	500	**517**	2,71 5 670	1,74 6 060	0,968 6 300	6 300 7 500	3 150 4 000			
	560	**566**	2,47 5 740	1,59 6 080	0,883 6 300	6 300 7 500	3 150 4 000			
	630	**611**	2,29 5 810	1,47 6 210	0,819 6 300	6 300 7 500	3 150 4 000			
	710	**732**	1,91 5 970	1,23 6 300	0,683 6 300	6 300 7 500	3 150 4 000			
	800	**838**	1,67 6 060	1,07 6 300	0,597 6 300	6 300 7 500	3 150 4 000			
	900	**916**	1,53 6 180	0,983 6 300	0,546 6 300	6 300 7 500	3 150 4 000			
	1000	**970**	1,44 6 160	0,928 6 300	0,516 6 300	6 300 7 500	3 150 4 000			
	1120	**1122**	1,25 6 290	0,802 6 300	0,446 6 300	6 300 7 500	3 150 4 000			
	1250	**1248**	1,12 5 030	0,721 5 300	0,401 5 300	5 300 6 300	3 150 4 000			
	1400	**1344**	1,04 6 300	0,669 6 300	0,372 6 300	6 300 7 500	3 150 4 000			
	1600	**1611**	0,869 5 260	0,559 5 410	0,310 5 600	6 300 7 500	3 150 4 000			
	1800	**1730**	0,809 5 280	0,520 5 300	0,289 5 300	5 300 6 300	3 150 4 000			
	2000	**2043**	0,685 5 300	0,440 5 300	0,245 5 300	5 300 6 300	3 150 4 000			
	2500	**2399**	0,584 5 300	0,375 5 300	0,208 5 300	5 300 6 300	3 150 4 000			
	2800	**2947**	0,475 4 730	0,305 5 060	0,170 5 300	5 300 6 300	3 150 4 000			
	3550	**3460**	0,405 4 500	0,260 4 500	0,145 4 500	4 500 5 300	3 150 4 000			

In case of alternative output design , refer to torque limits at page 4.88, if any.

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Data and performance summary

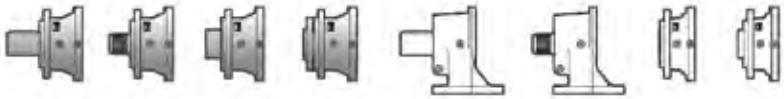
	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at –	20°C	40°C
2EB	9	**8,79**	159 1 930	102 2 210	56,9 2 630	3 070 3 870	2 800 3 550	13,2 10	20 15	26,5 20
	10	**10,4**	134 2 290	86,3 2 620	47,9 3 120	3 640 4 500	2 800 3 550			
	11,2	**11,1**	126 1 960	81,1 2 240	45,1 2 670	3 070 3 870	2 800 3 550			
	12,5	**13,2**	106 2 910	68,0 3 320	37,8 3 460	4 620 5 800	2 800 3 550			
	14	**15,5**	90,1 2 740	57,9 2 820	32,2 2 920	4 500 5 300	2 800 3 550			
	16	**16,7**	83,8 2 950	53,9 3 370	29,9 3 510	4 620 5 800	2 800 3 550			
	20	**19,6**	71,4 2 780	45,9 2 860	25,5 2 970	4 500 5 300	2 800 3 550			
	22,4	**21,2**	66,1 3 200	42,5 3 360	23,6 3 560	3 980 4 870	2 800 3 550			
	25	**24,9**	56,3 2 820	36,2 2 900	20,1 3 010	4 500 5 300	2 800 3 550			
	28	**26,5**	52,9 2 140	34,0 2 440	18,9 2 910	3 160 3 870	2 800 3 550			
	31,5	**31,1**	45,1 2 510	29,0 2 870	16,1 3 050	3 710 4 500	2 800 3 550			
3EB	31,5	**30,9**	45,3 3 170	29,1 3 630	16,2 4 130	4 130 5 600	2 800 3 550	10 7,5	15 11,2	19,5 15
	35,5	**36,7**	38,1 3 770	24,5 4 300	13,6 4 620	4 900 7 300	2 800 3 550			
	40	**39**	35,9 3 210	23,1 3 660	12,8 4 130	4 130 5 600	2 800 3 550			
	45	**43,6**	32,1 4 380	20,7 4 500	11,5 4 670	5 820 7 500	2 800 3 550			
	50	**46,3**	30,2 3 810	19,4 4 350	10,8 4 680	4 900 7 300	2 800 3 550			
	56	**55,2**	25,3 4 450	16,3 4 570	9,05 4 730	6 300 7 500	2 800 3 550			
	63	**64,8**	21,6 3 960	13,9 4 070	7,71 4 220	6 300 7 500	2 800 3 550			
	71	**69,7**	20,1 4 510	12,9 4 630	7,17 4 890	6 300 7 500	2 800 3 550			
	80	**81,8**	17,1 4 020	11,0 4 130	6,11 4 280	6 300 7 500	2 800 3 550			
	90	**88,4**	15,8 4 580	10,2 4 700	5,66 5 070	6 300 7 500	2 800 3 550			
	100	**104**	13,5 4 080	8,67 4 190	4,82 4 350	6 300 7 500	2 800 3 550			
	112	**110**	12,7 4 490	8,15 4 710	4,53 5 030	5 050 7 300	2 800 3 550			
	125	**130**	10,8 4 140	6,94 4 250	3,86 4 410	5 930 7 500	2 800 3 550			
	140	**140**	9,99 3 760	6,42 3 860	3,57 4 220	5 300 6 300	2 800 3 550			
	160	**164**	8,51 3 790	5,47 3 960	3,04 4 330	5 300 6 300	2 800 3 550			
	200	**202**	6,93 3 830	4,45 3 940	2,47 4 080	5 300 6 300	2 800 3 550			

	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at –	20°C	40°C
4EB	160	**160**	8,76 4 740	5,63 5 070	3,13 5 540	6 300 7 500	2 800 3 550	8 6,3	12,2 9,25	16,5 12,5
	180	**181**	7,72 4 840	4,97 5 170	2,76 5 650	6 300 7 500	2 800 3 550			
	200	**193**	7,27 4 880	4,67 5 220	2,60 5 700	6 300 7 500	2 800 3 550			
	224	**229**	6,12 5 010	3,94 5 350	2,19 5 850	6 300 7 500	2 800 3 550			
	250	**240**	5,82 5 050	3,74 5 400	2,08 5 900	6 300 7 500	2 800 3 550			
	280	**290**	4,83 5 190	3,10 5 550	1,72 6 050	6 300 7 500	2 800 3 550			
	315	**305**	4,59 5 230	2,95 5 590	1,64 6 070	6 300 7 500	2 800 3 550			
	355	**362**	3,86 5 370	2,48 5 740	1,38 6 270	6 300 7 500	2 800 3 550			
	400	**381**	3,67 5 410	2,36 5 780	1,31 6 250	6 300 7 500	2 800 3 550			
	450	**460**	3,05 5 570	1,96 5 950	1,09 6 300	6 300 7 500	2 800 3 550			
	500	**497**	2,82 5 310	1,81 5 460	1,01 5 660	6 300 7 500	2 800 3 550			
	560	**544**	2,58 5 710	1,66 6 070	0,920 6 300	6 300 7 500	2 800 3 550			
	630	**630**	2,22 5 840	1,43 6 170	0,794 6 300	6 300 7 500	2 800 3 550			
	710	**680**	2,06 5 910	1,32 6 240	0,735 6 300	6 300 7 500	2 800 3 550			
	800	**787**	1,78 6 040	1,14 6 300	0,635 6 300	6 300 7 500	2 800 3 550			
	900	**943**	1,48 5 090	0,954 5 230	0,530 5 420	6 300 7 500	2 800 3 550			
	1000	**1013**	1,38 4 870	0,888 5 210	0,494 5 300	5 300 6 300	2 800 3 550			
	1120	**1124**	1,25 4 950	0,801 5 290	0,445 5 300	5 300 6 300	2 800 3 550			
	1250	**1197**	1,17 5 000	0,752 5 300	0,418 5 300	5 300 6 300	2 800 3 550			
	1400	**1405**	0,997 5 120	0,641 5 300	0,356 5 300	5 300 6 300	2 800 3 550			
	1600	**1621**	0,864 4 300	0,555 4 500	0,308 4 500	4 500 5 300	2 800 3 550			
	1800	**1726**	0,811 4 370	0,521 4 660	0,290 5 100	5 300 6 300	2 800 3 550			
	2000	**2026**	0,691 4 450	0,444 4 500	0,247 4 500	4 500 5 300	2 800 3 550			

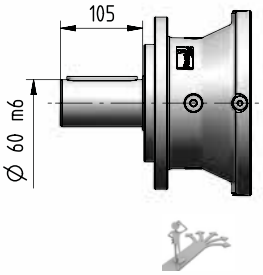
In case of alternative output design , refer to torque limits at page 4.88, if any.

2591-01.02

006A - Main Dimensions



C060M1 F20b



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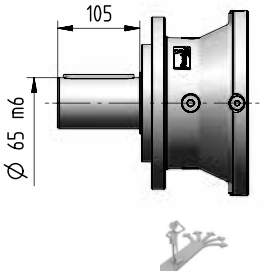

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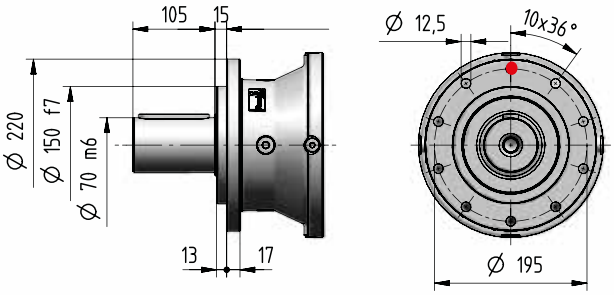

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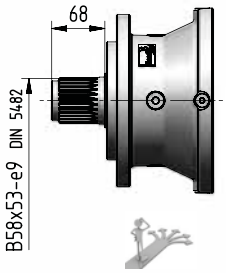

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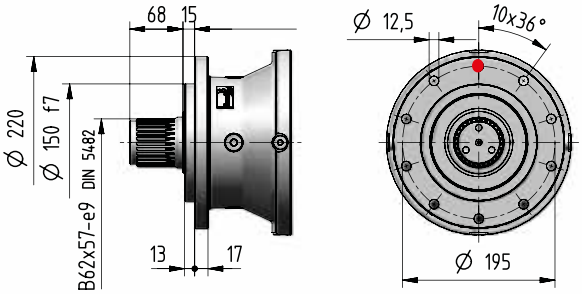
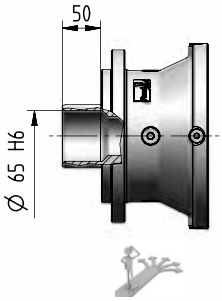


H065M1 A20b



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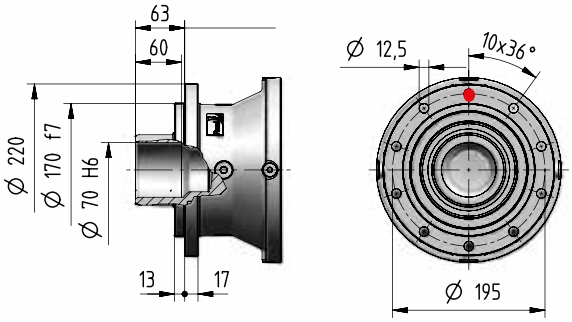
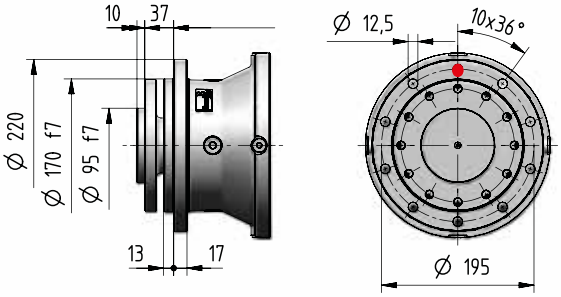


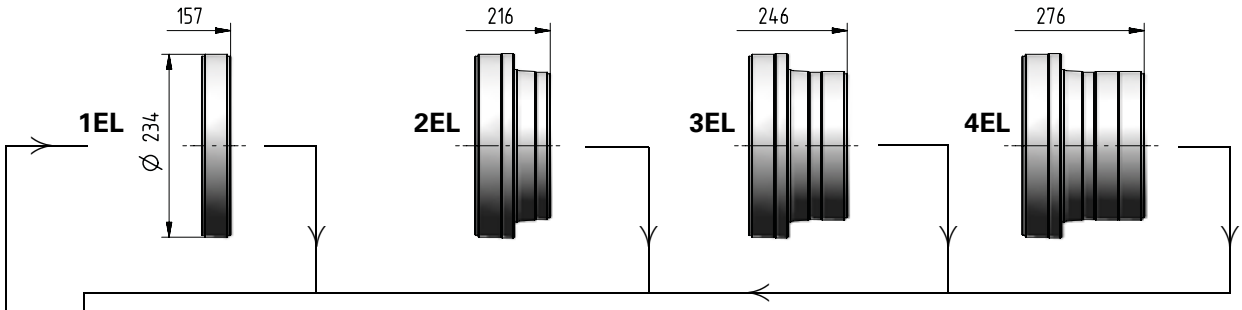
M095M1 A30b

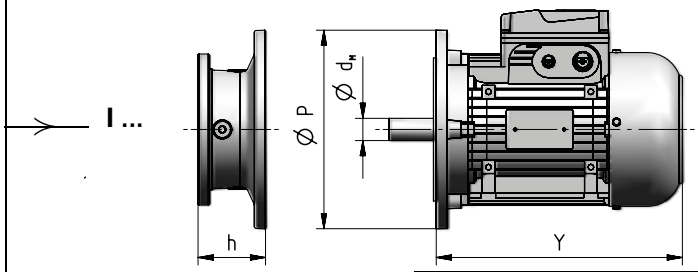


see page 4.89

kg	Input Options Code												Output Options (Δ) Code	
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	C...	U...	J...	C... S...	H... M...
1EL	-	-	-	44	48	54	54	56	65	49	41	–	+0	-4
2EL	45	48	48	49	53	59	58	–	–	50	47	–		
3EL	50	52	52	54	57	63	63	–	–	55	52	–		
4EL	53	56	56	57	61	67	66	–	–	58	55	–		
2EB	65	67	67	68	72	78	77	–	–	69	66	61		
3EB	62	65	64	66	70	76	75	–	–	67	64	59		
4EB	67	69	69	70	74	80	79	–	–	71	68	63		

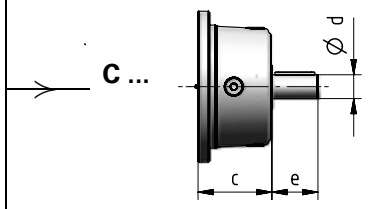
2591-01.02



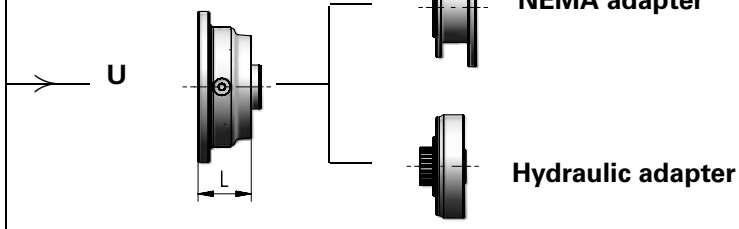


Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	52	52	52	52	52	52	**I14×160**
80	19×200	233	302	–	72	72	72	72	72	72	**I19×200**
90	24×200	287	366	–	72	72	72	72	72	72	**I24×200**
100	28×250	310	405	103	82	82	82	82	82	82	**I28×250**
112	28×250	336	435	103	82	82	82	82	82	82	**I28×250**
132	38×300	445	553	120	102	102	102	102	102	102	**I38×300**
160	42×350	573	640	153	135	135	135	135	135	135	**I42×350**
180	48×350	613	734	153	135	135	135	135	135	135	**I48×350**
200	55×400	654	734	153	–	–	–	–	–	–	**I55×400**
225	60×450	710	–	183	–	–	–	–	–	–	**I60×450**

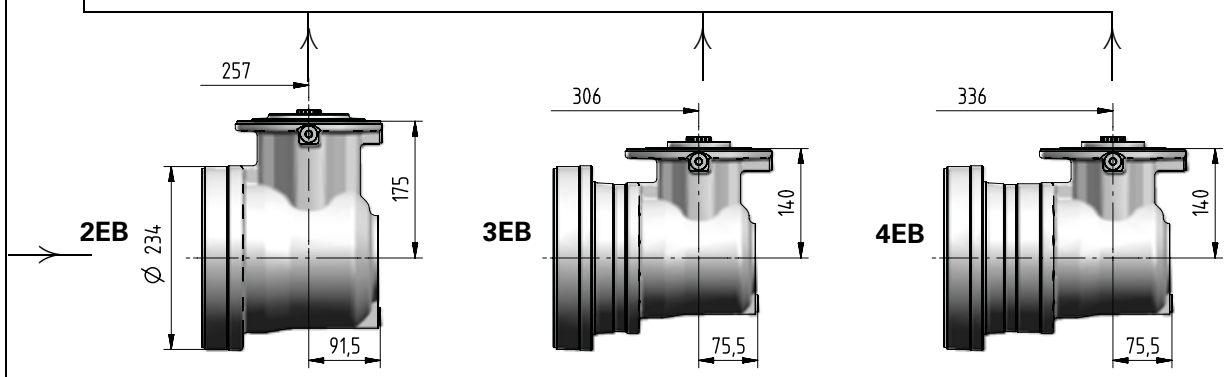
1) Values valid for brake motor; for other dimensions see TX catalog.



Train of gears	d	e	c	Code
1EL	48	82	115	**C48×82**
2EL	38	58	90	**C38×58**
3EL, 4EL	30	58	90	**C30×58**
2EB	38	58	90	**C38×58**
3EB, 4EB	38	58	90	**C38×58**



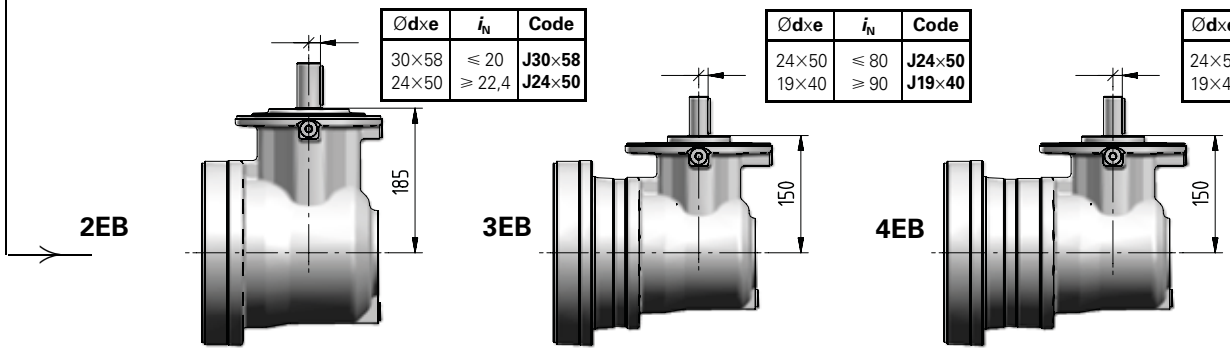
Train of gears	L	Code
1EL	62	ch.7
2EL ... 4EL	64	
2EB ... 4EB	64	



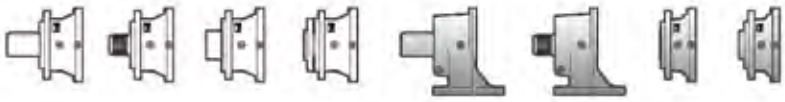
Ødxe	i_N	Code
30×58	⩽ 20	**J30×58**
24×50	⩾ 22,4	**J24×50**

Ødxe	i_N	Code
24×50	⩽ 80	**J24×50**
19×40	⩾ 90	**J19×40**

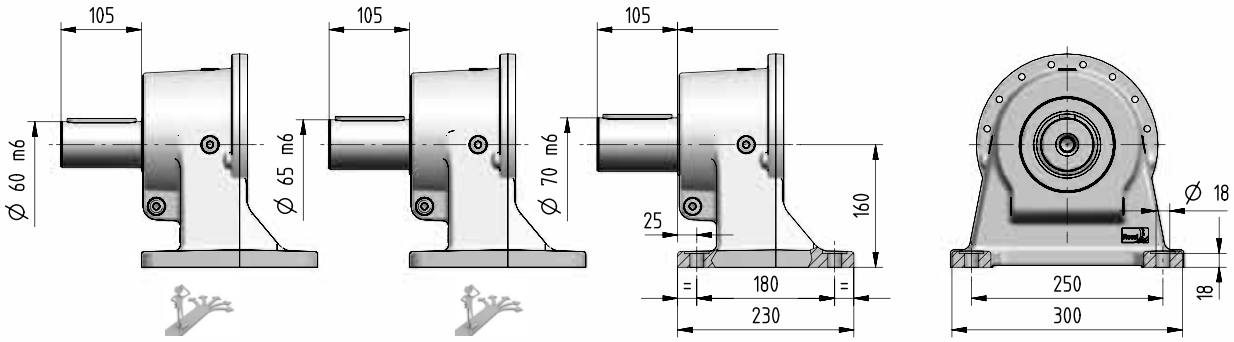
Ødxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**



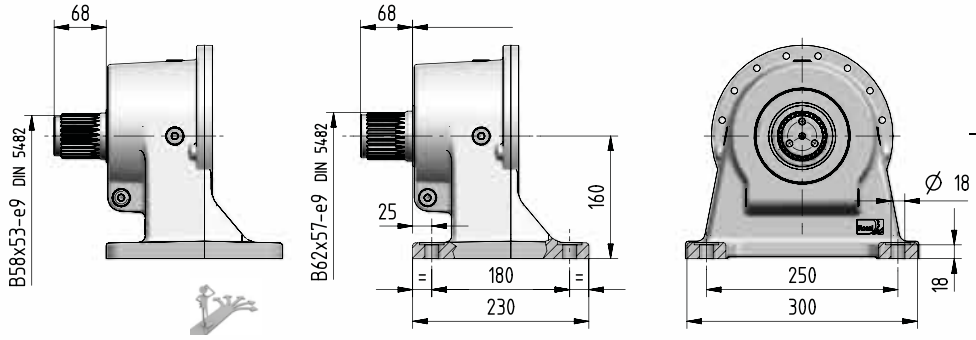
006A - Main Dimensions



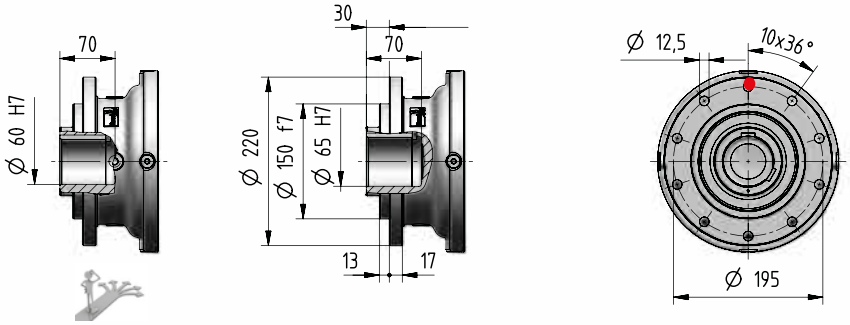
C060M1 P20b **C065M1 P30b** **C070M1 P30b**



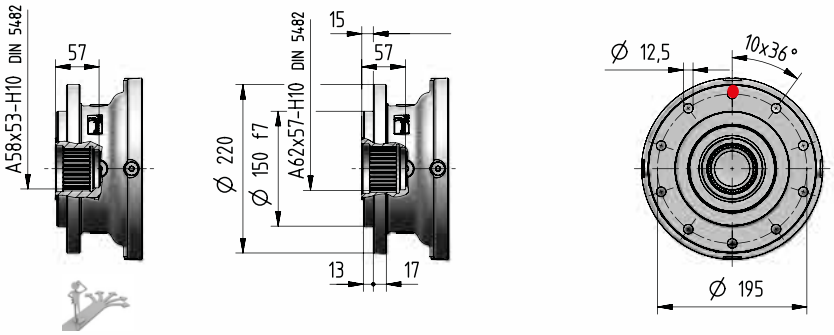
S058M1 P20b **S062M1 P30b**



K060M1 F06b **K065M1 F06b**



Z058M1 F05b **Z062M1 F05b**



ved. pag. 4.89

kg	Input Options Code												Output Options (Δ) Code	
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	C…	U…	J…	C… S…	K… Z…
1EL	–	–	–	50	54	60	60	62	71	55	47	–	+0	-14
2EL	51	54	54	55	59	65	64	–	–	56	53	–		
3EL	56	58	58	60	63	69	69	–	–	61	58	–		
4EL	59	62	62	63	67	73	72	–	–	64	61	–		
2EB	71	73	73	74	78	84	83	–	–	75	72	67		
3EB	68	71	70	72	76	82	81	–	–	73	70	65		
4EB	73	75	75	76	80	86	85	–	–	77	74	69		

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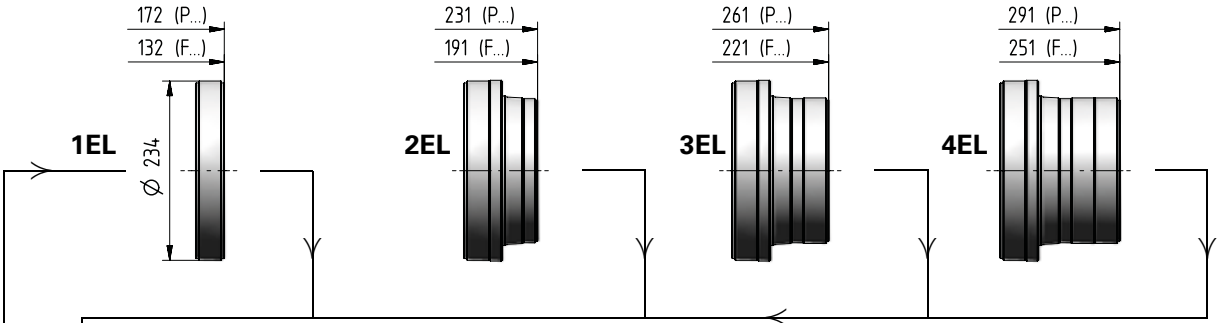
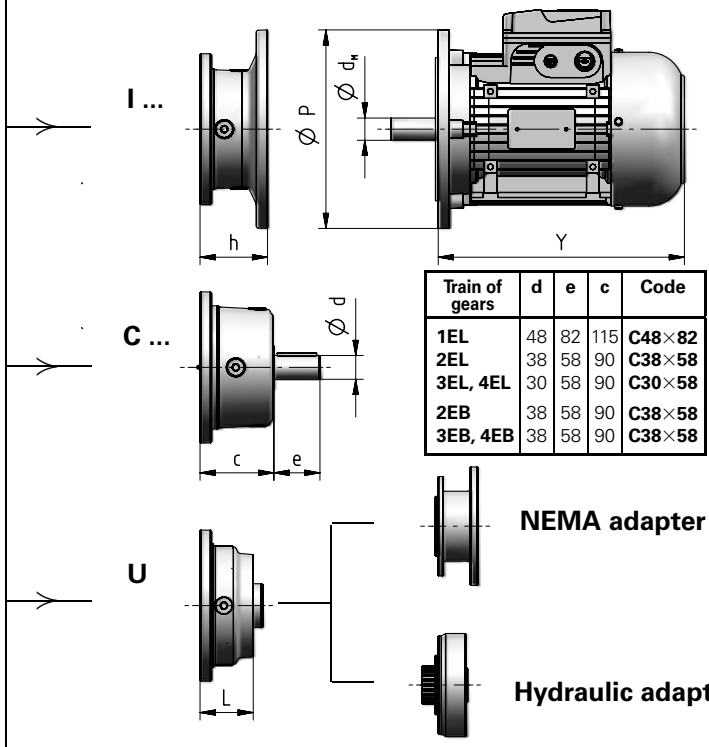


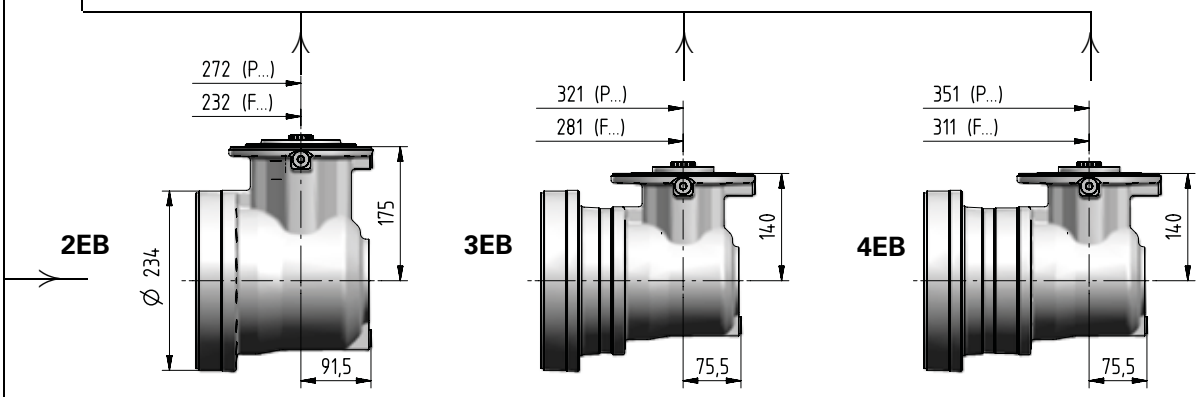


Train of gears	d	e	c	Code
1EL	48	82	115	**C48×82**
2EL	38	58	90	**C38×58**
3EL, 4EL	30	58	90	**C30×58**
2EB	38	58	90	**C38×58**
3EB, 4EB	38	58	90	**C38×58**

Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	52	52	52	52	52	52	**I14×160**
80	19×200	233	302	–	72	72	72	72	72	72	**I19×200**
90	24×200	287	366	–	72	72	72	72	72	72	**I24×200**
100	28×250	310	405	103	82	82	82	82	82	82	**I28×250**
112	28×250	336	435	103	82	82	82	82	82	82	**I28×250**
132	38×300	445	553	120	102	102	102	102	102	102	**I38×300**
160	42×350	573	640	153	135	135	135	135	135	135	**I42×350**
180	48×350	613	734	153	135	135	135	135	135	135	**I48×350**
200	55×400	654	734	153	–	–	–	–	–	–	**I55×400**
225	60×450	710	–	183	–	–	–	–	–	–	**I60×450**

1) Values valid for brake motor; for other dimensions see TX catalog.

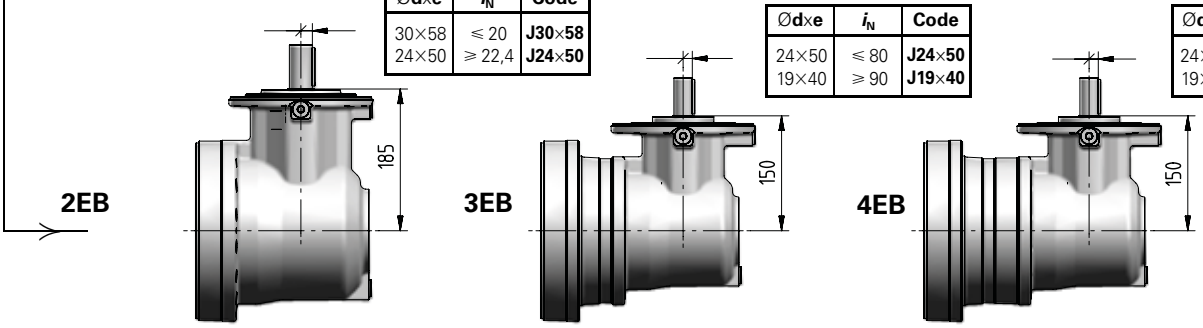
Train of gears	L	Code
1EL	62	ch.7
2EL ... 4EL	64	
2EB ... 4EB	64	



Ødxe	i_N	Code
30×58	⩽ 20	**J30×58**
24×50	⩾ 22,4	**J24×50**

Ødxe	i_N	Code
24×50	⩽ 80	**J24×50**
19×40	⩾ 90	**J19×40**

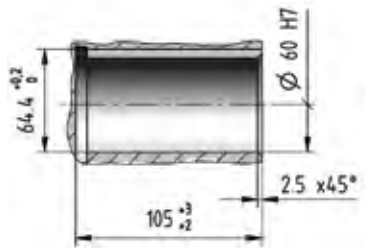
Ødxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**

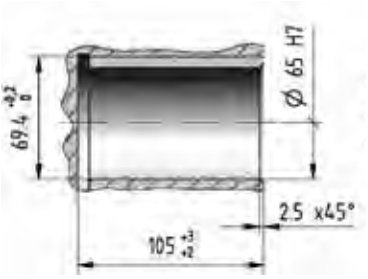


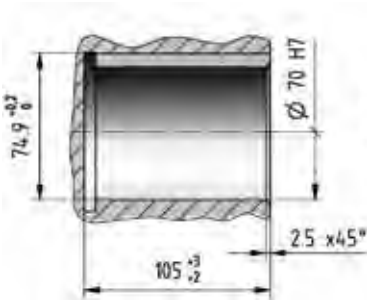
2591-01.02

006A - Output side details

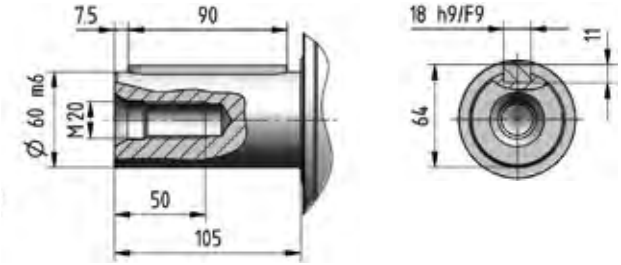
Suggested mating dimensions

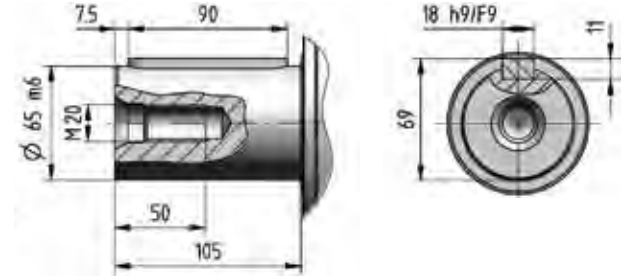


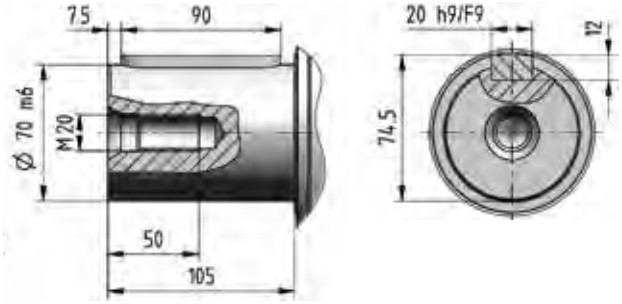




Gear reducer cylindrical shaft end



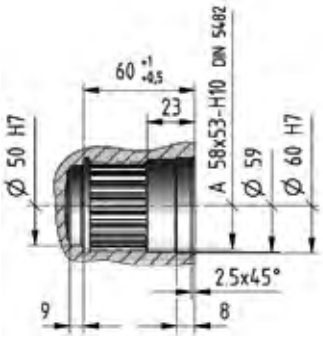


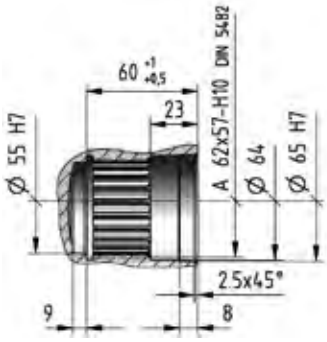


4

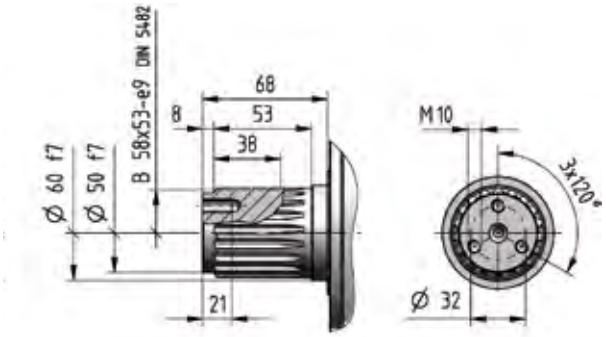
2591-01.02

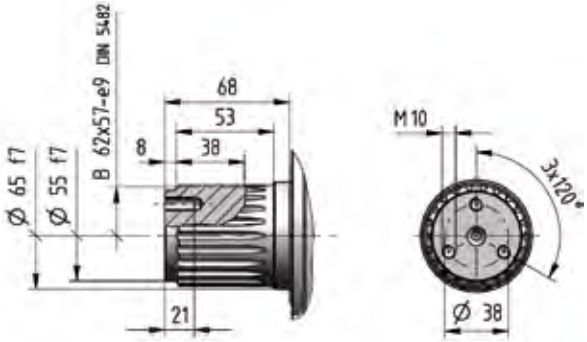
Suggested mating dimensions





Gear reducer splined shaft end

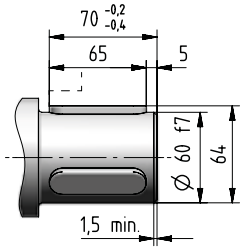




4

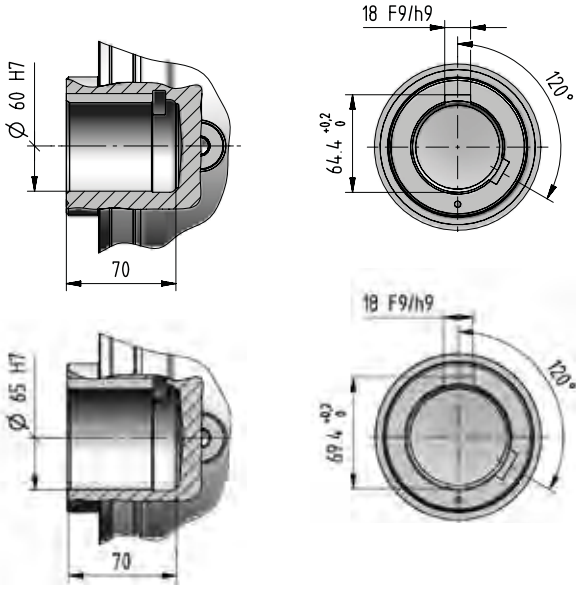
006A - Output side details

Suggested mating dimensions



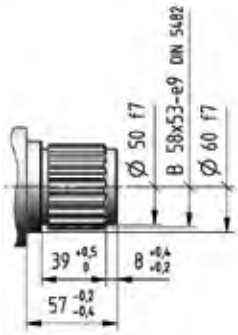
Key HRC hardness ⩾ 40.

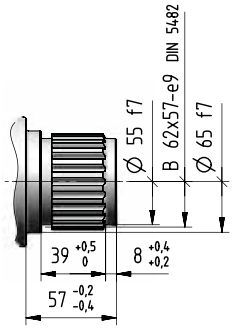
Gear reducer hollow shaft with keyways



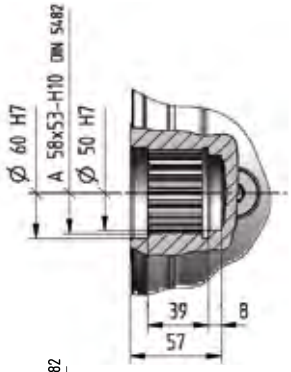
4

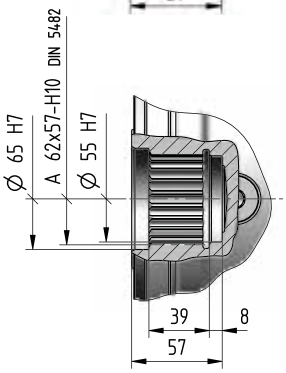
Suggested mating dimensions





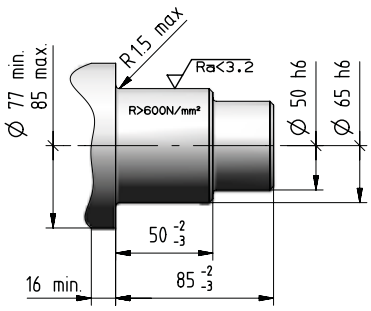
Splined hollow shaft

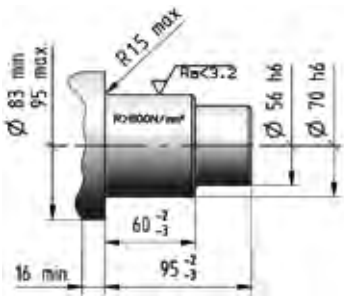




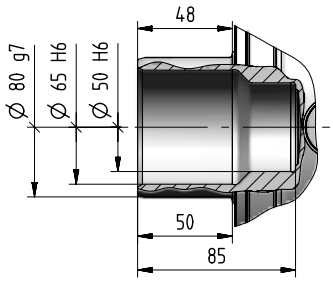
2591-01.02

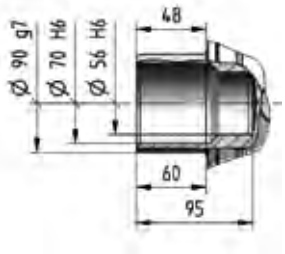
Suggested mating dimensions



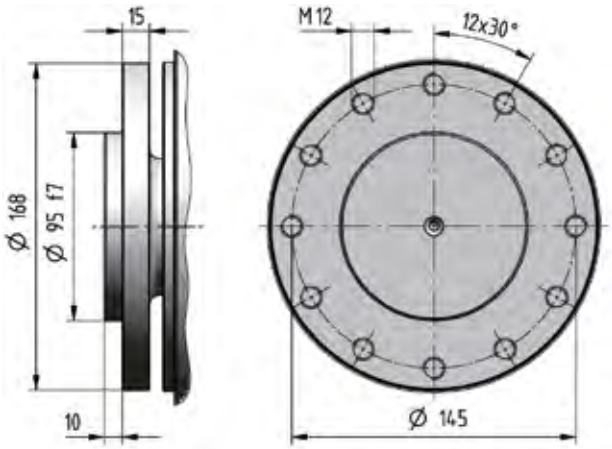


Gear reducer hollow shaft for shaft mounting



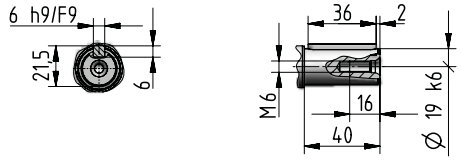


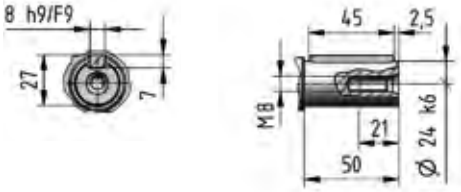
Gear reducer flanged shaft

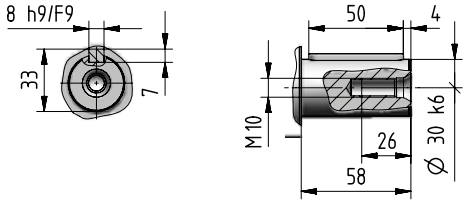


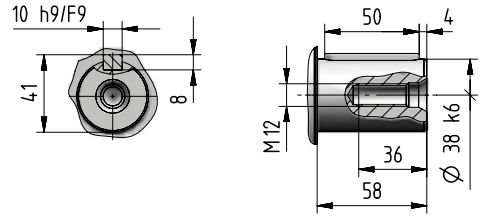
006A - Input side details

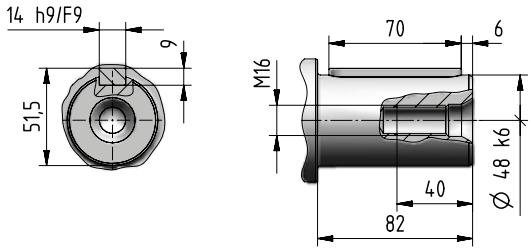
Gear reducer cylindrical shaft end



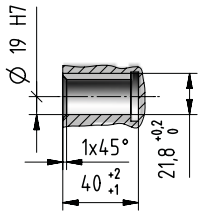


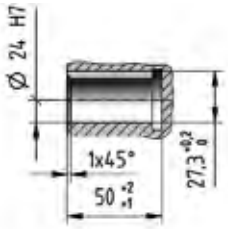


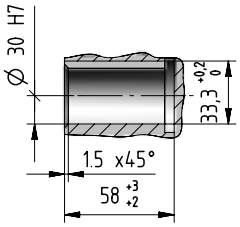


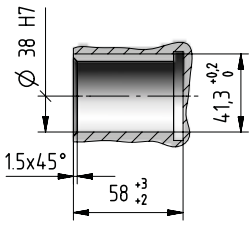


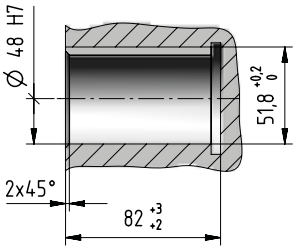
Suggested mating dimensions



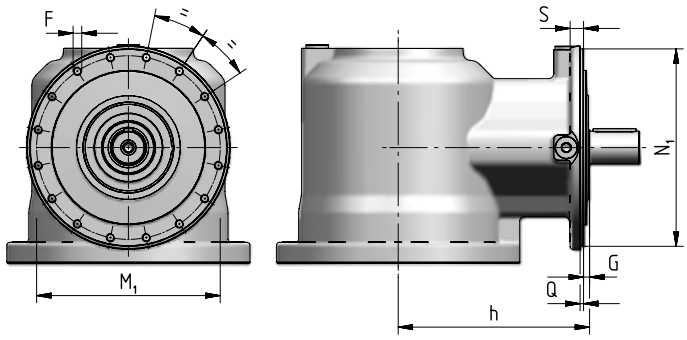






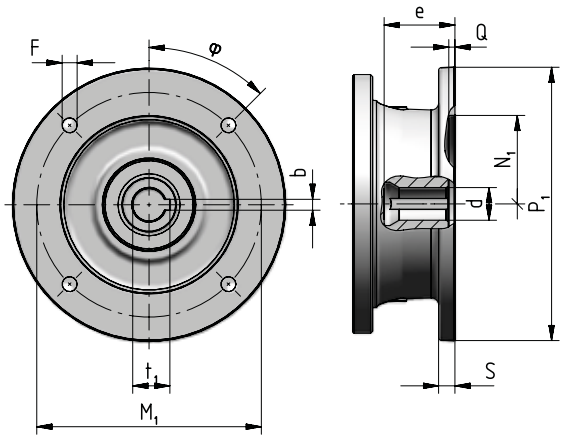


Bevel helical input flange



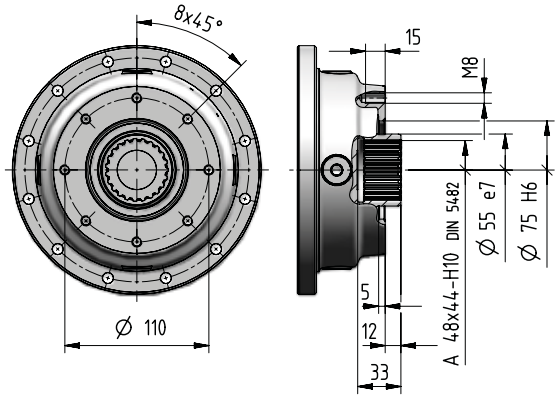
Train of gears	N_1 ∅ h6	Q	M_1 ∅	F ∅	G	S	h
2EB	184	3,5	171	M8 (n. 12)	10	12	185
3EB, 4EB	184	3,5	171	M8 (n. 12)	10	12	150

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	66,4	400	18 (n.8)	22,5°	350	6

Universal flange adapter

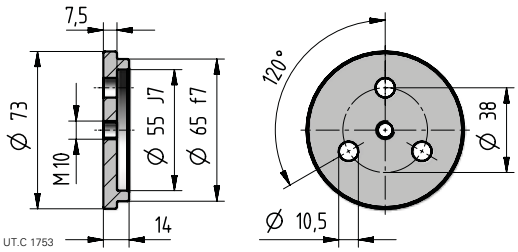


For more information see ch. 8.7.

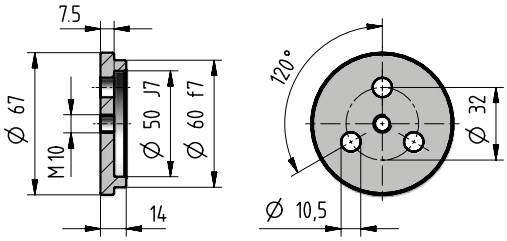
006A - Accessories

Stop washer

[included]



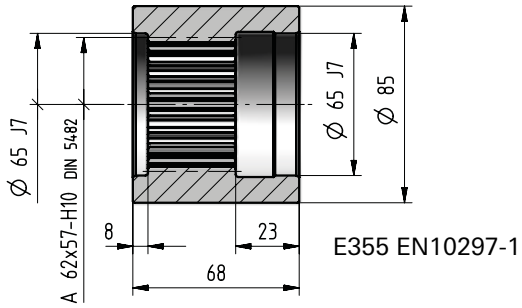
Code: **,SW062**



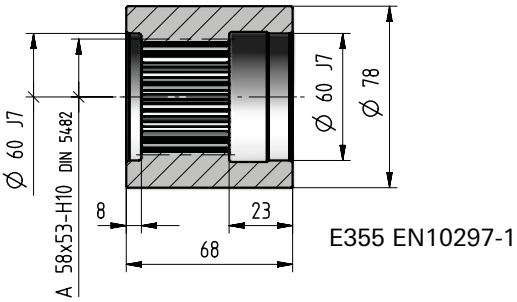
Code: **,SW058**

Splined bush

[included]



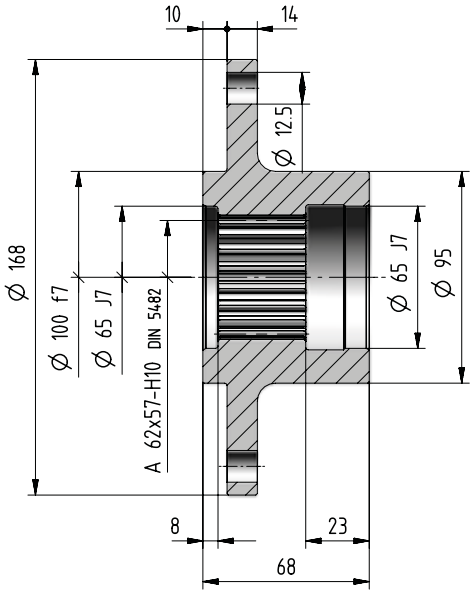
Code: **,SB062**



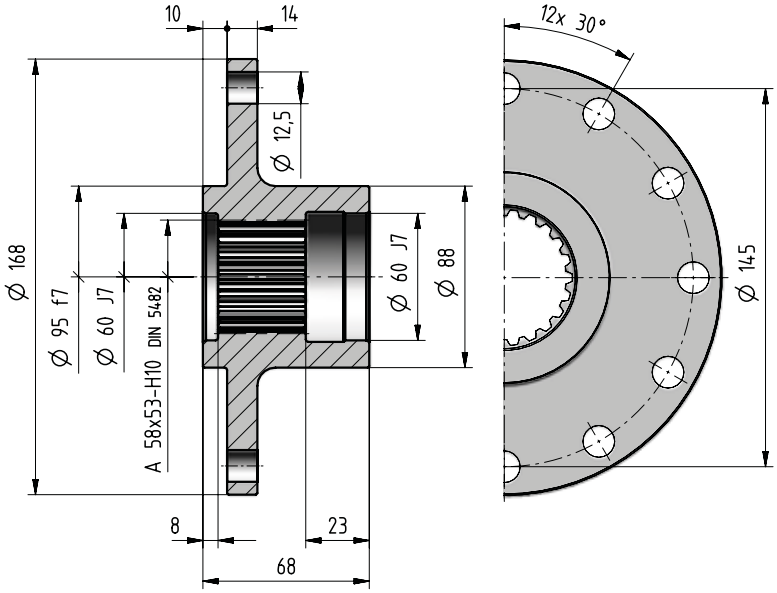
Code: **,SB058**

Wheel flange

[included]



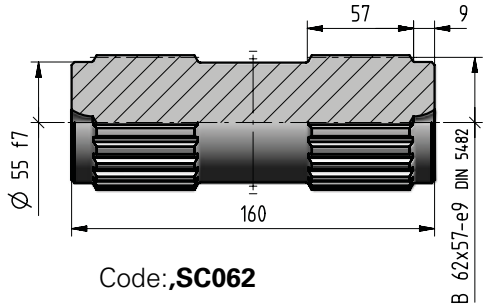
Code: **,WF062**



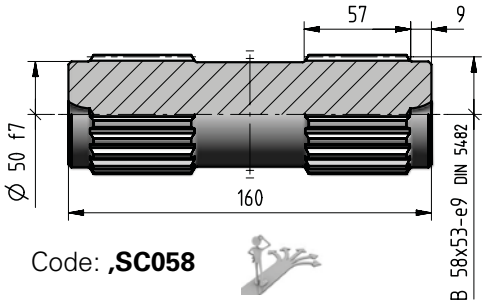
Code: **,WF058**

kg	Accessories																
	,SW062	,SW058	,SB062	,SB058	,WF062	,WF058	,SC062	,SC058	,R006DA	,R006DB	,R006CC	,R006CD	,R006CE	,R006CF	,TA10b	,SD090	,SD080
	0,28	0,24	1,7	1,4	4	3,2	3,3	2,8	4,5	5,5	3,8	4,5	5,3	6,2	3	3,3	2,4

Splined bar



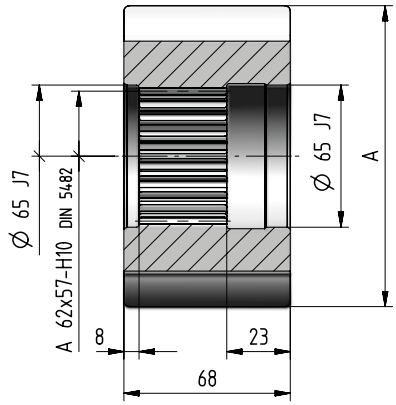
Code:**,SC062**



Code: **,SC058**

Pinion gear

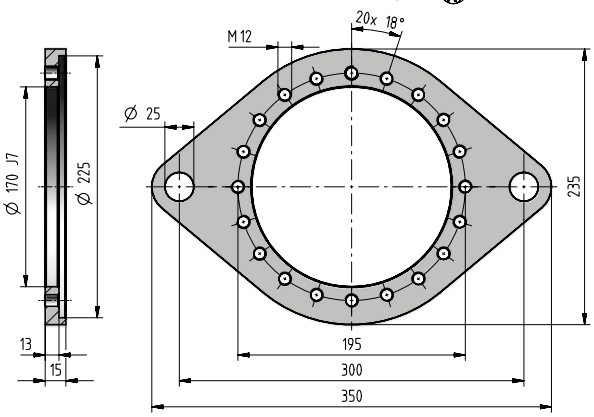
[included]



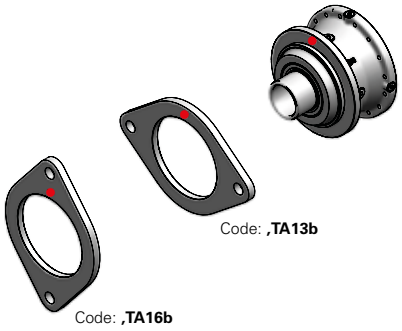
m_p	z_p	x	A Ø h9	Code
10	11	0,5	139	**,R006DA**
10	12	0,5	149	**,R006DB**
8	13	0,5	127	**,R006CC**
8	14	0,5	135	**,R006CD**
8	15	0,5	143	**,R006CE**
8	16	0,5	149,5	**,R006CF**

Torque arm

[included]



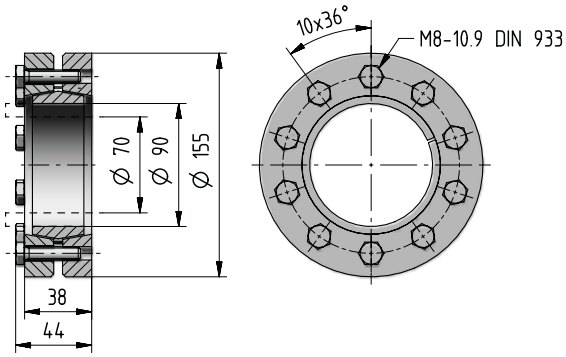
Code: **,TA10b**



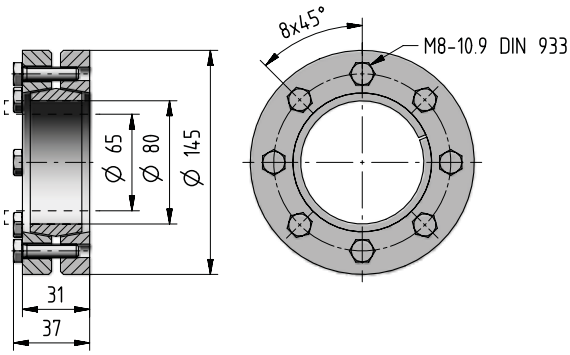
If an already mounted torque arm is required, state the relevant position between torque arm and gear reducer. This position is given by the flange upper reference hole (stated in red in the figure).

- Reference hole for the identification of the mounting position

Shrink disc



Code: **,SD090**

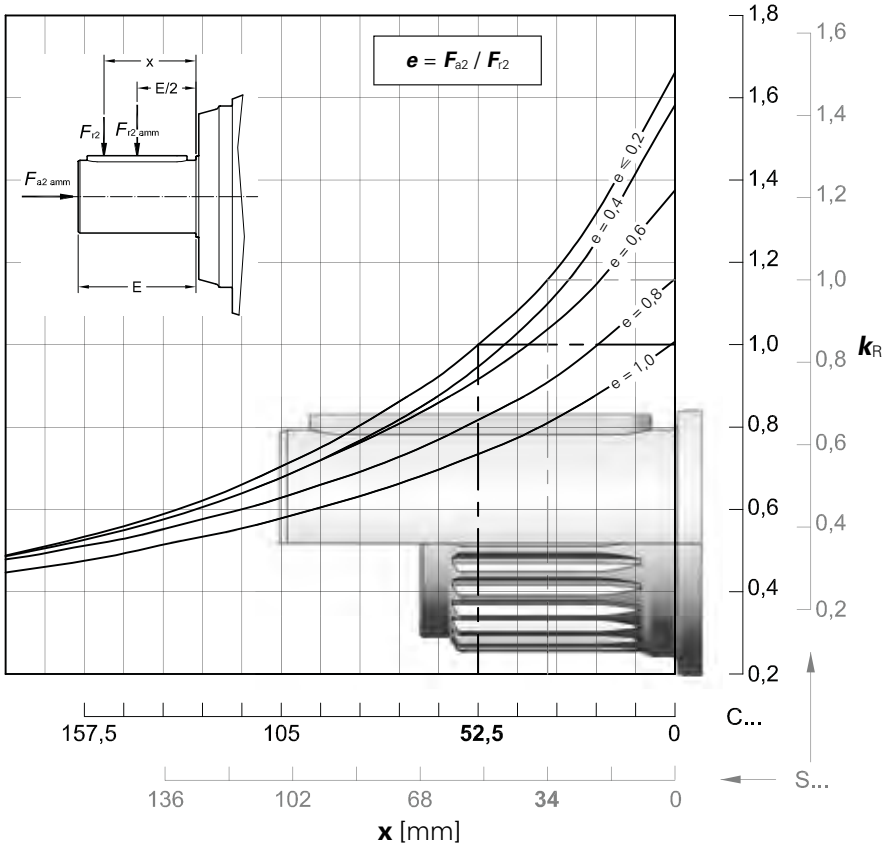


Code: **,SD080**

006A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

Radial loads $\boldsymbol{F}_{r2\,adm}$ and axial loads $\boldsymbol{F}_{a2\,adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

Output side: C070M1 F30b
S062M1 F30b
C070M1 P30b
S062M1 P30b



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{r2\,adm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	67 000	80 000	63 000	106 000
22 400	67 000	75 000	63 000	100 000
28 000	60 000	71 000	63 000	95 000
35 500	56 000	67 000	63 000	90 000
45 000	53 000	63 000	63 000	85 000
56 000	50 000	56 000	56 000	80 000
71 000	45 000	53 000	53 000	71 000
90 000	42 500	50 000	50 000	67 000
112 000	40 000	47 500	47 500	63 000
140 000	37 500	45 000	45 000	60 000
180 000	35 500	40 000	40 000	56 000
224 000	33 500	37 500	37 500	50 000
280 000	30 000	35 500	35 500	47 500
355 000	28 000	33 500	33 500	45 000
450 000	26 500	31 500	31 500	42 500
560 000	25 000	28 000	28 000	40 000
710 000	23 600	26 500	26 500	35 500
900 000	21 200	25 000	25 000	33 500
1 120 000	20 000	23 600	26 000	31 500
1 400 000	19 000	22 400	22 400	30 000
1 800 000	17 000	20 000	20 000	28 000
2 240 000	16 000	19 000	19 000	26 500
2 800 000	15 000	18 000	18 000	23 600
max	**67 000**	**80 000**	**63 000**	**106 000**

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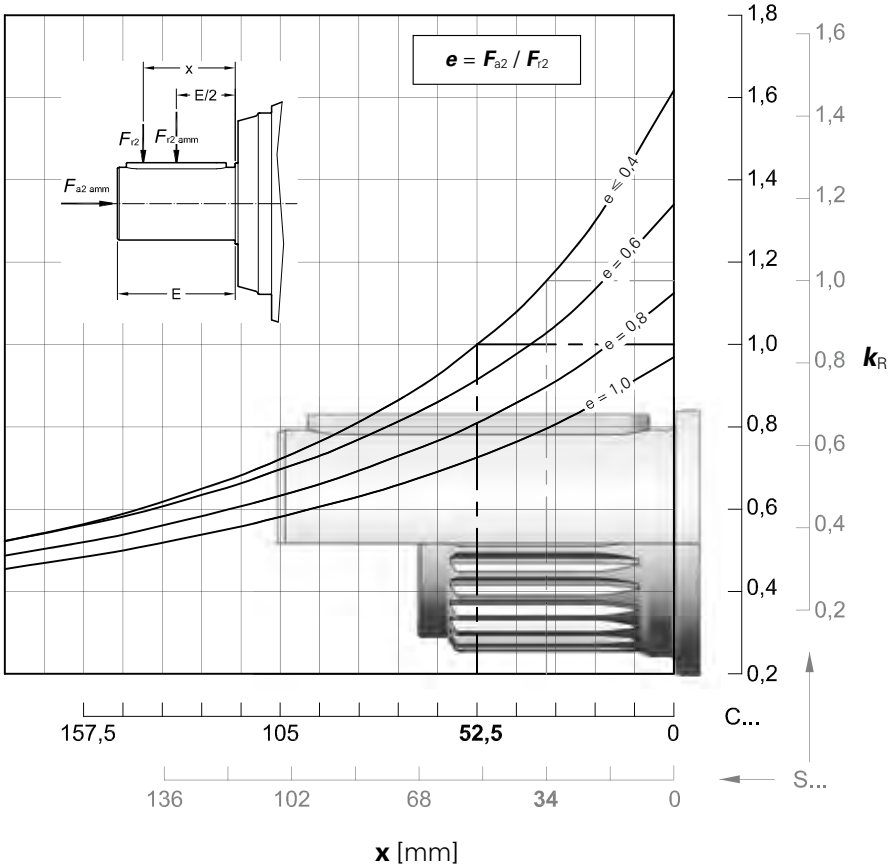
Output side: C060M1 F20b
S058M1 F20b
C060M1 P20b
S058M1 P20b

M_{2U} = 6 300 [N m]

M_{2U} = 4 500 [N m]

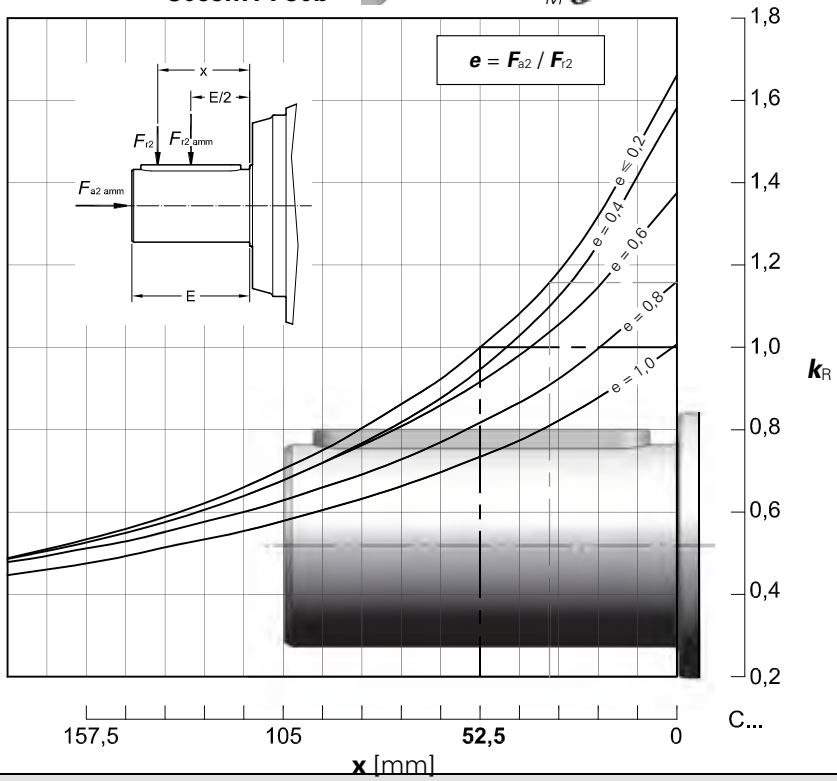


$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{r2\,adm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	56 000	63 000	63 000	80 000
22 400	53 000	63 000	60 000	75 000
28 000	50 000	60 000	56 000	71 000
35 500	47 500	56 000	53 000	67 000
45 000	45 000	50 000	50 000	63 000
56 000	40 000	47 500	45 000	56 000
71 000	37 500	45 000	42 500	53 000
90 000	35 500	42 500	40 000	50 000
112 000	33 500	37 500	37 500	47 500
140 000	31 500	35 500	35 500	45 000
180 000	28 000	33 500	31 500	40 000
224 000	26 500	31 500	30 000	37 500
280 000	25 000	30 000	28 000	35 500
355 000	23 600	28 000	26 500	33 500
450 000	22 400	25 000	25 000	31 500
560 000	21 200	23 600	22 400	30 000
710 000	19 000	22 400	21 200	26 500
900 000	18 000	21 200	20 000	25 000
1 120 000	17 000	19 000	19 000	23 600
1 400 000	16 000	18 000	17 000	22 400
1 800 000	15 000	17 000	16 000	20 000
2 240 000	14 000	16 000	15 000	19 000
2 800 000	12 500	15 000	14 000	18 000
max	**56 000**	**63 000**	**63 000**	**80 000**

Output side: C065M1 F30b
C065M1 P30b

M_{2U} = 6 300 [N m]

M_{2U} = 6 300 [N m]



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	67 000	63 000	106 000
22 400	67 000	63 000	100 000
28 000	60 000	63 000	95 000
35 500	56 000	63 000	90 000
45 000	53 000	63 000	85 000
56 000	50 000	56 000	80 000
71 000	45 000	53 000	71 000
90 000	42 500	50 000	67 000
112 000	40 000	47 500	63 000
140 000	37 500	45 000	60 000
180 000	35 500	40 000	56 000
224 000	33 500	37 500	50 000
280 000	30 000	35 500	47 500
355 000	28 000	33 500	45 000
450 000	26 500	31 500	42 500
560 000	25 000	28 000	40 000
710 000	23 600	26 500	35 500
900 000	21 200	25 000	33 500
1 120 000	20 000	26 000	31 500
1 400 000	19 000	22 400	30 000
1 800 000	17 000	20 000	28 000
2 240 000	16 000	19 000	26 500
2 800 000	15 000	18 000	23 600
max	**67 000**	**63 000**	**106 000**

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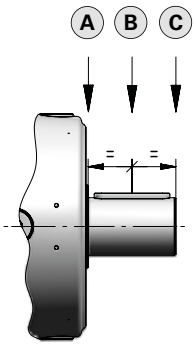
006A - Radial loads F_{r1} [N] on input shaft



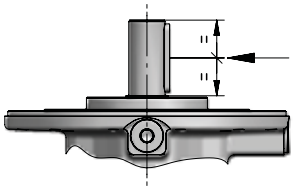
Radial loads $F_{r1\,adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears											
	1EL			**2EL**			**3EL**			**4EL**		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	20 000	14 000	10 600	14 000	8 500	5 300	6 300	4 250	3 350	6 300	4 250	3 350
1 120 000	19 000	12 500	9 500	13 200	8 000	5 000	5 600	4 000	3 150	5 600	4 000	3 150
1 400 000	17 000	11 800	9 000	11 800	7 100	4 500	5 300	3 750	2 800	5 300	3 750	2 800
1 800 000	16 000	10 600	8 000	11 200	6 700	4 250	5 000	3 350	2 650	5 000	3 350	2 650
2 240 000	15 000	10 000	7 500	10 000	6 300	4 000	4 500	3 150	2 500	4 500	3 150	2 500
2 800 000	14 000	9 500	7 100	9 500	5 600	3 550	4 250	3 000	2 240	4 250	3 000	2 240
3 550 000	12 500	8 500	6 700	9 000	5 300	3 350	4 000	2 800	2 120	4 000	2 800	2 120
4 500 000	11 800	8 000	6 000	8 000	5 000	3 150	3 550	2 500	1 900	3 550	2 500	1 900
5 600 000	11 200	7 500	5 600	7 500	4 500	2 800	3 350	2 360	1 800	3 350	2 360	1 800
7 100 000	10 000	6 700	5 300	7 100	4 250	2 650	3 150	2 120	1 700	3 150	2 120	1 700
9 000 000	9 500	6 300	4 750	6 300	4 000	2 500	2 800	2 000	1 500	2 800	2 000	1 500
11 200 000	8 500	6 000	4 500	6 000	3 550	2 240	2 650	1 900	1 400	2 650	1 900	1 400
14 000 000	8 000	5 600	4 250	5 600	3 350	2 120	2 500	1 700	1 320	2 500	1 700	1 320
18 000 000	7 500	5 000	3 750	5 000	3 150	1 900	2 240	1 600	1 180	2 240	1 600	1 180
22 400 000	6 700	4 750	3 550	4 750	2 800	1 800	2 120	1 500	1 120	2 120	1 500	1 120
28 000 000	6 300	4 250	3 350	4 500	2 650	1 700	2 000	1 400	1 060	2 000	1 400	1 060
35 500 000	6 000	4 000	3 000	4 000	2 500	1 600	1 800	1 250	950	1 800	1 250	950
45 000 000	5 300	3 750	2 800	3 750	2 240	1 400	1 700	1 180	900	1 700	1 180	900

4

Radial loads F_{r1adm} admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears					
	2EB		**3EB**		**4EB**	
	$i_N \leqslant 25$	$i_N \geqslant 28$	$i_N \leqslant 100$	$i_N \geqslant 112$	$i_N \leqslant 315$	$i_N \geqslant 355$
900 000	4 000	3 350	2 800	2 360	2 800	2 360
1 120 000	3 750	3 150	2 650	2 240	2 650	2 240
1 400 000	3 550	2 800	2 360	2 000	2 360	2 000
1 800 000	3 150	2 650	2 240	1 900	2 240	1 900
2 240 000	3 000	2 500	2 000	1 700	2 000	1 700
2 800 000	2 800	2 240	1 900	1 600	1 900	1 600
3 550 000	2 500	2 120	1 800	1 500	1 800	1 500
4 500 000	2 360	2 000	1 600	1 400	1 600	1 400
5 600 000	2 240	1 800	1 500	1 320	1 500	1 320
7 100 000	2 000	1 700	1 400	1 180	1 400	1 180
9 000 000	1 900	1 600	1 320	1 120	1 320	1 120
11 200 000	1 700	1 400	1 180	1 000	1 180	1 000
14 000 000	1 600	1 320	1 120	950	1 120	950
18 000 000	1 500	1 250	1 000	850	1 000	850
22 400 000	1 400	1 120	950	800	950	800
28 000 000	1 250	1 060	900	750	900	750
35 500 000	1 180	1 000	800	710	800	710
45 000 000	1 120	900	750	630	750	630



2591-01.02

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Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H2O
1EL	3,55	**3,52**	398 3 640	256 4 160	142 4 960	6 700 8 000	2 240 2 800	28 21,2	41,2 31,5	56 42,5
	4,25	**4,17**	335 3 760	216 4 290	120 5 120	9 000 10 600	2 240 3 150			
	5	**5,29**	264 3 930	170 4 450	94,4 4 620	7 160 9 000	2 240 3 550			
	6	**6,21**	225 3 660	145 3 760	80,5 3 900	6 020 7 500	2 240 3 550			
	7,1	**7,64**	183 2 670	118 2 750	65,5 2 850	4 390 6 300	2 240 3 550			
2EL	12,5	**12,4**	113 4 250	72,8 4 860	40,4 5 790	6 700 8 000	2 500 2 800	19 14	28 21,2	37,5 29
	14	**14,7**	95,4 5 050	61,3 5 760	34,1 6 340	9 000 10 600	2 500 2 800			
	16	**17,4**	80,4 5 210	51,7 5 950	28,7 6 410	9 000 10 600	2 800 3 550			
	18	**18,6**	75,2 4 680	48,3 4 810	26,9 4 990	7 500 9 000	2 500 2 800			
	22,4	**22,1**	63,4 5 440	40,7 6 210	22,6 6 500	9 000 10 600	2 800 4 000			
	25	**25,9**	54,0 5 280	34,7 5 430	19,3 5 630	8 700 10 600	2 800 4 000			
	28	**28**	50,0 4 800	32,1 4 930	17,8 5 110	7 500 9 000	2 800 4 000			
	31,5	**31,9**	43,9 3 860	28,2 3 970	15,7 4 110	6 330 9 000	2 800 4 000			
	35,5	**32,9**	42,6 4 850	27,4 4 980	15,2 5 160	7 500 9 000	2 800 4 000			
	40	**40,4**	34,6 4 900	22,3 5 030	12,4 5 220	7 500 9 000	2 800 4 000			
	45	**47,5**	29,5 4 140	19,0 4 260	10,5 4 410	6 300 7 500	2 800 4 000			
3EL	50	**51,6**	27,1 6 430	17,4 6 610	9,68 6 850	9 000 10 600	2 800 3 150	14 10,6	20,6 15,5	27,2 20,6
	63	**61,3**	22,8 6 500	14,7 6 680	8,16 6 960	9 000 10 600	2 800 3 150			
	71	**72,7**	19,3 6 570	12,4 6 750	6,88 7 150	9 000 10 600	3 150 4 000			
	80	**77,7**	18,0 6 590	11,6 6 770	6,43 7 220	9 000 10 600	2 800 3 150			
	90	**92,2**	15,2 6 660	9,76 6 840	5,42 7 410	9 000 10 600	3 150 4 000			
	100	**98,6**	14,2 5 180	9,13 5 330	5,07 5 650	7 500 9 000	3 150 4 000			
	112	**108**	12,9 6 730	8,31 6 940	4,62 7 590	9 000 10 600	3 150 4 000			
	125	**117**	12,0 6 760	7,69 7 030	4,27 7 680	9 000 10 600	3 150 4 000			
	140	**137**	10,2 6 830	6,55 7 200	3,64 7 870	9 000 10 600	3 150 4 000			
	160	**169**	8,30 6 950	5,33 7 430	2,96 8 010	9 000 10 600	3 150 4 000			
	180	**174**	8,04 5 370	5,17 5 630	2,87 6 150	7 500 9 000	3 150 4 000			
	200	**198**	7,07 5 980	4,54 6 150	2,52 6 370	9 000 10 600	3 150 4 000			
	224	**214**	6,54 5 440	4,21 5 810	2,34 6 350	7 500 9 000	3 150 4 000			
	250	**251**	5,57 5 570	3,58 5 950	1,99 6 500	7 500 9 000	3 150 4 000			

	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H2O
4EL	180	**178**	7,86 7 000	5,05 7 490	2,81 8 180	9 000 10 600	2 800 3 150	11,8 9	17,5 13,2	23,6 18
	200	**211**	6,62 7 190	4,26 7 680	2,37 8 400	9 000 10 600	2 800 3 150			
	250	**255**	5,49 7 390	3,53 7 910	1,96 8 640	9 000 10 600	3 150 4 000			
	280	**301**	4,64 7 580	2,99 8 110	1,66 8 860	9 000 10 600	3 150 4 000			
	315	**323**	4,33 7 670	2,78 8 190	1,55 8 960	9 000 10 600	3 150 4 000			
	355	**358**	3,91 7 780	2,52 8 320	1,40 9 000	9 000 10 600	3 150 4 000			
	400	**404**	3,47 7 930	2,23 8 150	1,24 8 620	9 000 10 600	2 800 3 150			
	450	**448**	3,13 8 050	2,01 8 610	1,12 9 000	9 000 10 600	3 150 4 000			
	500	**518**	2,70 8 230	1,74 8 800	0,965 9 000	9 000 10 600	3 150 4 000			
	560	**568**	2,46 8 350	1,58 8 920	0,880 9 000	9 000 10 600	3 150 4 000			
	630	**657**	2,13 8 530	1,37 9 000	0,761 9 000	9 000 10 600	3 150 4 000			
	710	**720**	1,94 8 220	1,25 8 610	0,694 9 000	9 000 10 600	3 150 4 000			
	800	**788**	1,78 8 770	1,14 9 000	0,635 9 000	9 000 10 600	3 150 4 000			
	900	**924**	1,51 8 980	0,974 9 000	0,541 9 000	9 000 10 600	3 150 4 000			
	1000	**999**	1,40 8 470	0,901 9 000	0,501 9 000	9 000 10 600	3 150 4 000			
	1120	**1136**	1,23 8 970	0,792 9 000	0,440 9 000	9 000 10 600	3 150 4 000			
	1250	**1202**	1,16 8 710	0,749 9 000	0,416 9 000	9 000 10 600	3 150 4 000			
	1400	**1441**	0,972 8 950	0,625 9 000	0,347 9 000	9 000 10 600	3 150 4 000			
	1600	**1691**	0,828 7 100	0,532 7 590	0,296 8 290	9 000 10 600	3 150 4 000			
	1800	**1790**	0,782 7 490	0,503 7 500	0,279 7 500	7 500 9 000	3 150 4 000			
	2000	**1901**	0,736 6 240	0,473 6 670	0,263 7 290	7 500 9 000	3 150 4 000			
	2240	**2145**	0,653 7 500	0,420 7 500	0,233 7 500	7 500 9 000	3 150 4 000			
	2500	**2636**	0,531 6 560	0,341 7 010	0,190 7 500	7 500 9 000	3 150 4 000			
	3150	**3094**	0,452 6 300	0,291 6 300	0,162 6 300	6 300 7 500	3 150 4 000			

In case of alternative output design , refer to torque limits at page 4.106, if any.

Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H_2O
2EB	9	**8,79**	159 3 720	102 4 250	56,9 5 070	6 140 7 750	2 240 2 800	20 15	30,7 23	41,2 30,7
	10	**10,4**	134 4 420	86,3 5 040	47,9 6 010	7 290 9 000	2 240 2 800			
	11,2	**11,1**	126 3 760	81,1 4 300	45,1 5 120	6 140 7 750	2 240 2 800			
	12,5	**13,2**	106 4 580	68,0 4 710	37,8 4 880	7 500 9 000	2 240 2 800			
	14	**15,5**	90,1 3 870	57,9 3 980	32,2 4 120	6 300 7 500	2 240 2 800			
	16	**16,7**	83,8 4 650	53,9 4 780	29,9 4 950	7 500 9 000	2 240 2 800			
	20	**19,6**	71,4 3 920	45,9 4 030	25,5 4 180	6 300 7 500	2 240 2 800			
	22,4	**21,2**	66,1 4 720	42,5 4 850	23,6 5 030	7 500 9 000	2 240 2 800			
	25	**24,9**	56,3 3 980	36,2 4 090	20,1 4 240	6 300 7 500	2 240 2 800			
	28	**26,5**	52,9 4 260	34,0 4 870	18,9 5 090	6 270 7 750	2 240 2 800			
	31,5	**31,1**	45,1 4 040	29,0 4 150	16,1 4 300	6 300 7 500	2 240 2 800			
3EB	31,5	**30,9**	45,3 5 600	29,1 6 310	16,2 6 540	6 700 8 000	2 800 3 550	14 10,6	21,2 16	28 21,2
	35,5	**36,7**	38,1 6 300	24,5 6 470	13,6 6 710	9 000 10 600	2 800 3 550			
	40	**39**	35,9 6 000	23,1 6 400	12,8 6 640	6 700 8 000	2 800 3 550			
	45	**43,6**	32,1 6 360	20,7 6 540	11,5 6 780	9 000 10 600	2 800 3 550			
	50	**46,3**	30,2 6 390	19,4 6 560	10,8 6 800	9 000 10 600	2 800 3 550			
	56	**54,9**	25,5 6 450	16,4 6 630	9,10 6 870	9 000 10 600	2 800 3 550			
	63	**64,8**	21,6 5 590	13,9 5 740	7,71 5 950	9 000 10 600	2 800 3 550			
	71	**69,7**	20,1 6 550	12,9 6 730	7,17 7 100	9 000 10 600	2 800 3 550			
	80	**81,8**	17,1 5 670	11,0 5 820	6,11 6 040	9 000 10 600	2 800 3 550			
	90	**88,4**	15,8 6 640	10,2 6 830	5,66 7 360	9 000 10 600	2 800 3 550			
	100	**104**	13,5 5 750	8,67 5 910	4,82 6 130	9 000 10 600	2 800 3 550			
	112	**110**	12,7 6 740	8,15 6 970	4,53 7 610	9 000 10 600	2 800 3 550			
	125	**130**	10,8 5 830	6,94 5 990	3,86 6 210	9 000 10 600	2 800 3 550			
	140	**140**	9,99 5 300	6,42 5 450	3,57 5 950	7 500 9 000	2 800 3 550			
	160	**164**	8,51 5 350	5,47 5 580	3,04 6 100	7 500 9 000	2 800 3 550			
	200	**202**	6,93 5 400	4,45 5 550	2,47 5 760	7 500 9 000	2 800 3 550			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H_2O
4EB	160	**163**	8,60 6 910	5,53 7 390	3,07 8 070	9 000 10 600	2 800 3 550	11,2 8,5	17 12,8	22,4 17
	180	**182**	7,70 7 030	4,95 7 510	2,75 8 210	9 000 10 600	2 800 3 550			
	200	**194**	7,21 7 100	4,63 7 590	2,57 8 290	9 000 10 600	2 800 3 550			
	224	**229**	6,10 7 280	3,92 7 780	2,18 8 500	9 000 10 600	2 800 3 550			
	250	**245**	5,71 7 350	3,67 7 860	2,04 8 590	9 000 10 600	2 800 3 550			
	280	**271**	5,17 7 460	3,33 7 980	1,85 8 720	9 000 10 600	2 800 3 550			
	315	**311**	4,50 7 620	2,89 8 150	1,61 8 900	9 000 10 600	2 800 3 550			
	355	**364**	3,85 7 800	2,48 8 340	1,38 9 000	9 000 10 600	2 800 3 550			
	400	**389**	3,60 7 880	2,32 8 430	1,29 9 000	9 000 10 600	2 800 3 550			
	450	**461**	3,04 8 090	1,95 8 650	1,08 9 000	9 000 10 600	2 800 3 550			
	500	**493**	2,84 6 160	1,83 6 590	1,01 7 200	7 500 9 000	2 800 3 550			
	560	**541**	2,59 8 290	1,66 8 860	0,924 9 000	9 000 10 600	2 800 3 550			
	630	**585**	2,39 8 120	1,54 8 350	0,855 9 000	9 000 10 600	2 800 3 550			
	710	**687**	2,04 8 200	1,31 8 550	0,728 9 000	9 000 10 600	2 800 3 550			
	800	**844**	1,66 8 300	1,07 8 820	0,593 9 000	9 000 10 600	2 800 3 550			
	900	**871**	1,61 6 720	1,03 7 180	0,574 7 500	7 500 9 000	2 800 3 550			
	1000	**990**	1,41 6 610	0,909 7 000	0,505 7 650	9 000 10 600	2 800 3 550			
	1120	**1070**	1,31 6 930	0,841 7 410	0,467 7 500	7 500 9 000	2 800 3 550			
	1250	**1256**	1,11 7 100	0,716 7 500	0,398 7 500	7 500 9 000	2 800 3 550			
	1400	**1450**	0,966 5 960	0,621 6 300	0,345 6 300	6 300 7 500	2 800 3 550			
	1600	**1544**	0,907 6 120	0,583 6 460	0,324 7 070	7 500 9 000	2 800 3 550			
	1800	**1812**	0,773 6 160	0,497 6 300	0,276 6 300	6 300 7 500	2 800 3 550			

In case of alternative output design , refer to torque limits at page 4.106, if any.

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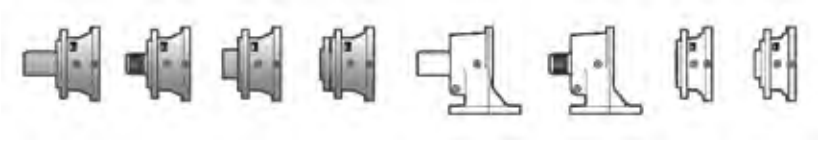
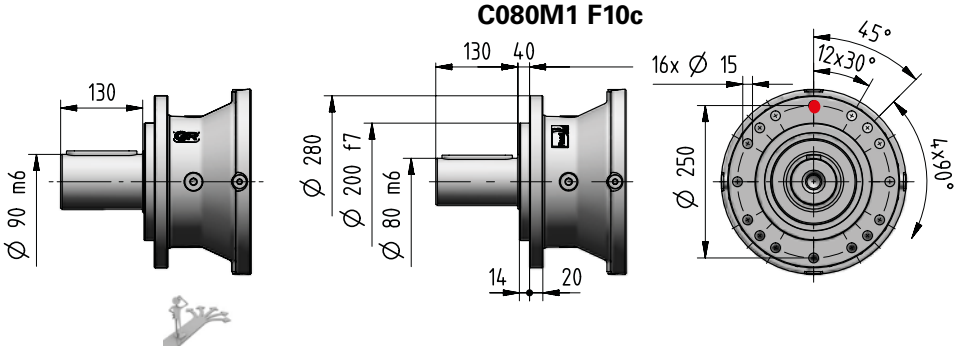
009A - Main Dimensions

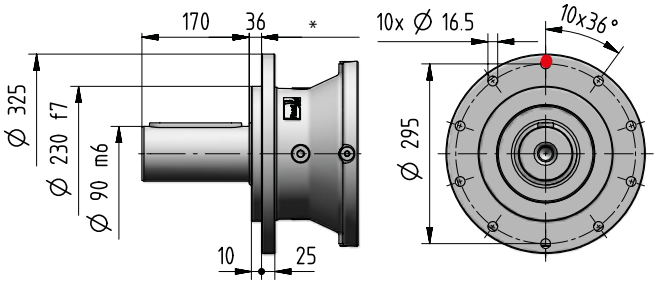


C080M1 F10c

C090M1 F20c



C090M2 F30c



S070M1 F10c

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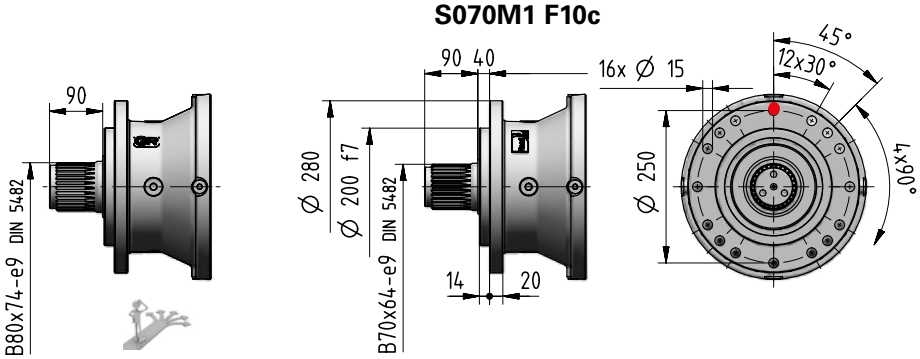

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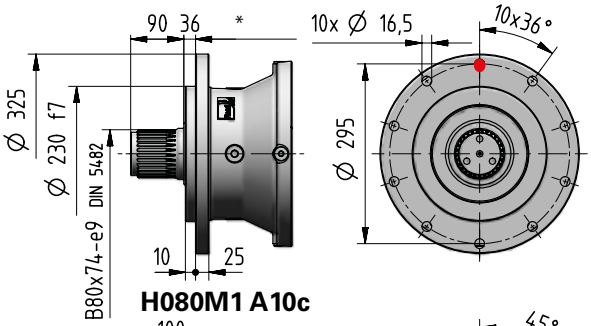
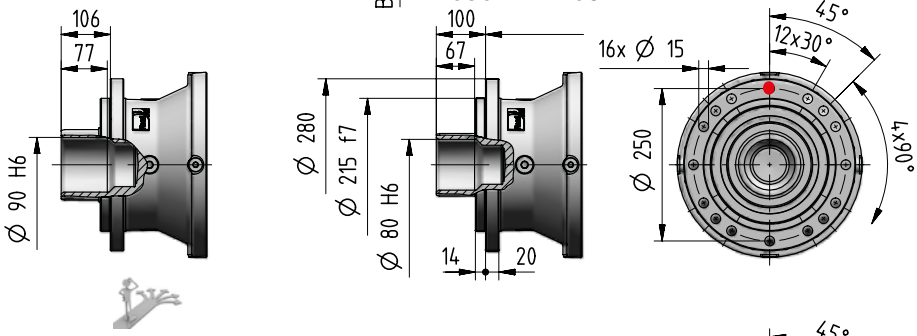
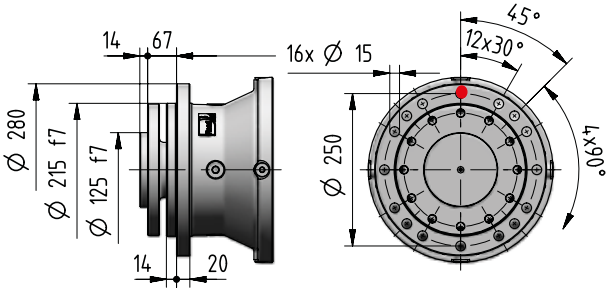


H080M1 A10c

H090M1 A20c



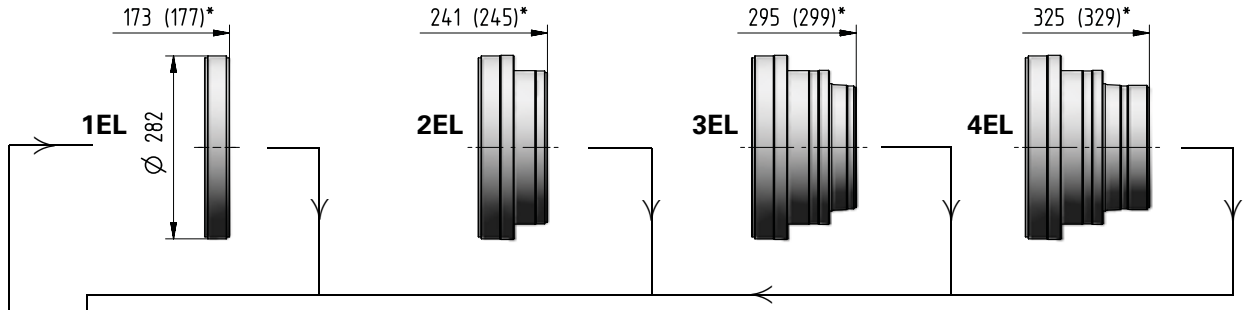
M125M1 A10c

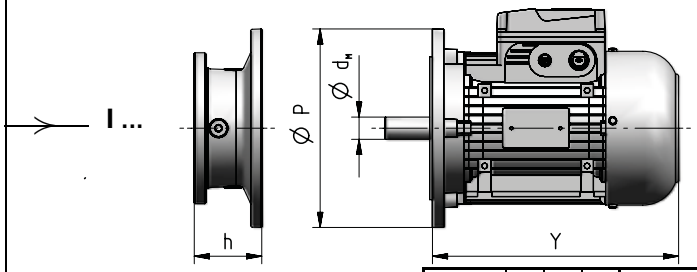


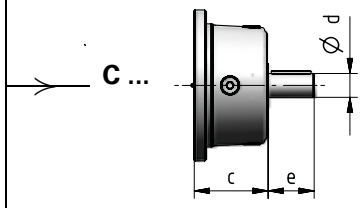
kg See page 4.96

4

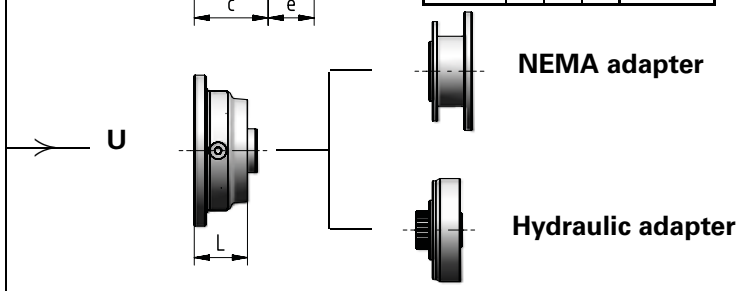
2591-01.02







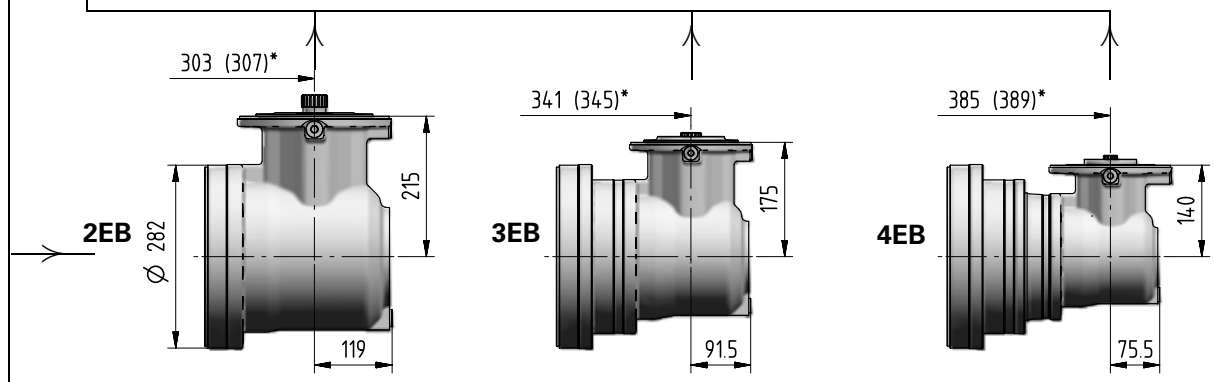
Train of gears	d	e	c	Codice
1EL	60	105	138	**C60×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	48	82	115	**C48×82**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**



Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	28×250	310	405	–	103	82	82	103	82	82	**I28×250**
112	28×250	336	435	–	103	82	82	103	82	82	**I28×250**
132	38×300	445	553	133,5	120	102	102	120	102	102	**I38×300**
160	42×350	573	640	159	153	135	135	153	135	135	**I42×350**
180	48×350	613	734	159	153	135	135	153	135	135	**I48×350**
200	55×400	654	734	159	153	–	–	153	–	–	**I55×400**
225	60×450	710	–	189	183	–	–	183	–	–	**I60×450**
250	65×550	735	–	189	–	–	–	–	–	–	**I65×550**
280	75×550	819	–	189	–	–	–	–	–	–	**I75×550**

1) Values valid for brake motor; for other dimensions see TX catalog.

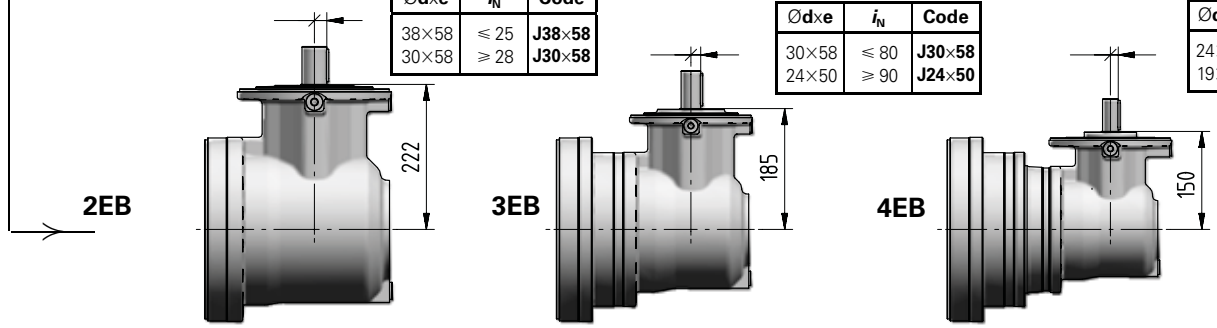
Train of gears	L	Code
2EL	62	ch.7
3EL, 4EL	64	
2EB	62	
3EB, 4EB	64	



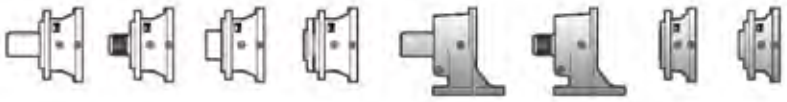
Ødxe	i_N	Code
38×58	⩽ 25	**J38×58**
30×58	⩾ 28	**J30×58**

Ødxe	i_N	Code
30×58	⩽ 80	**J30×58**
24×50	⩾ 90	**J24×50**

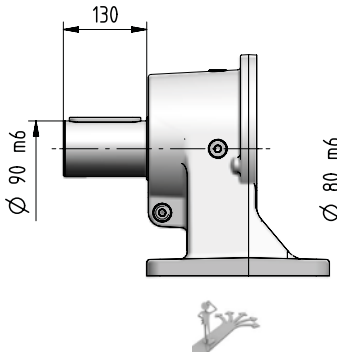
Ødxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**



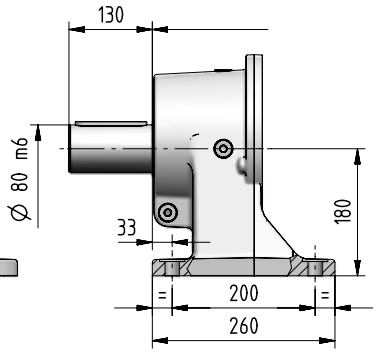
009A - Main Dimensions

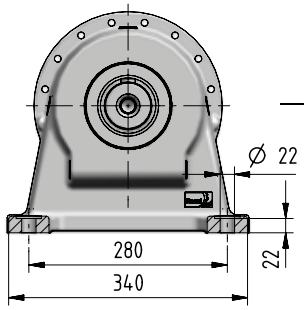


C090M1 P20c

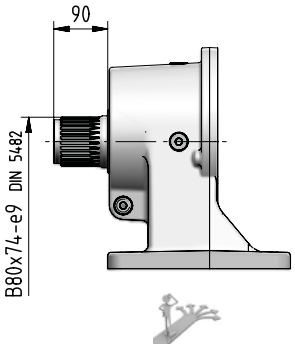


C080M1 P10c





S080M1 P20c



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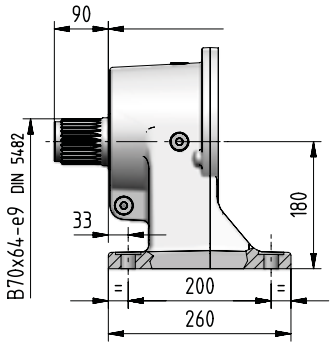
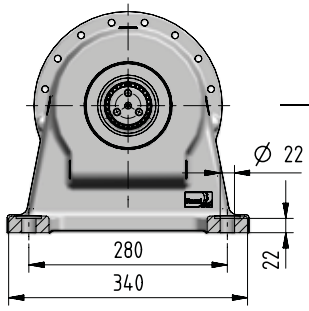
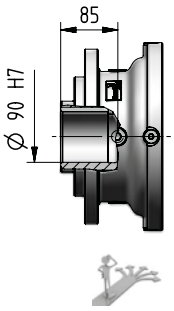
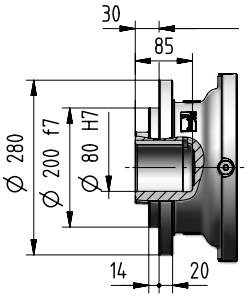


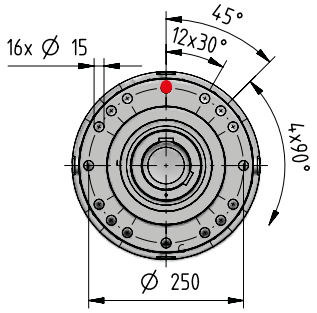


K090M1 F06c

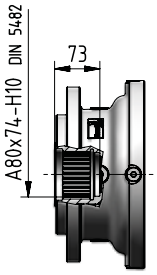


K080M1 F05c





Z080M1 F05c



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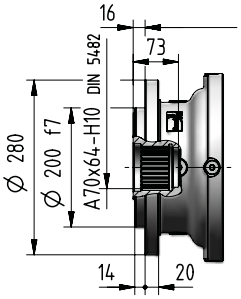
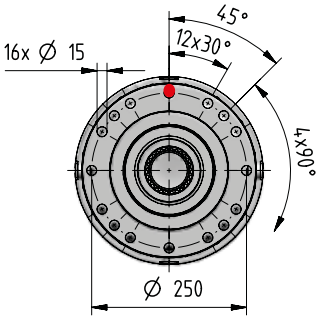
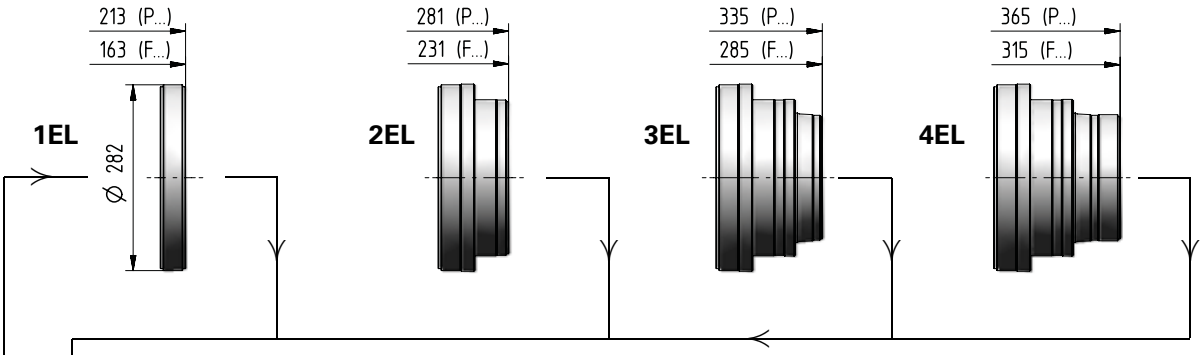
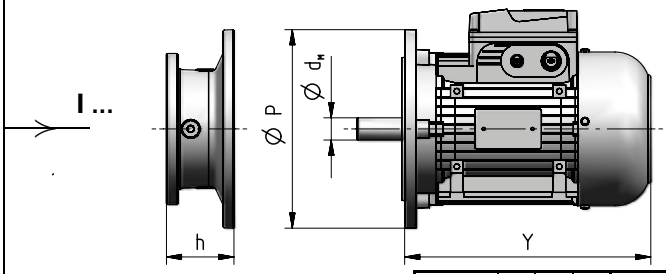




kg	Input options Code														Output options (Δ) Code			
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C…	U…	J…	C… S…	H… M…	C… P… S… P…	K… Z…
1EL	-	-	-	-	78	84	83	86	95	103	103	87	-	-	+0	-5	+8	-12,5
2EL	-	-	-	82	86	92	92	95	104	-	-	87	79	-				
3EL	81	83	83	85	88	94	94	-	-	-	-	86	82	-				
4EL	86	88	88	89	93	99	98	-	-	-	-	90	87	-				
2EB	-	-	-	117	121	127	127	130	139	-	-	121	114	107				
3EB	102	104	104	106	109	115	115	-	-	-	-	106	103	98				
4EB	99	101	101	103	106	112	112	-	-	-	-	103	100	95				

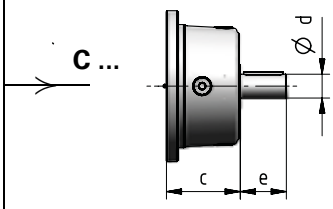
2591-01.02



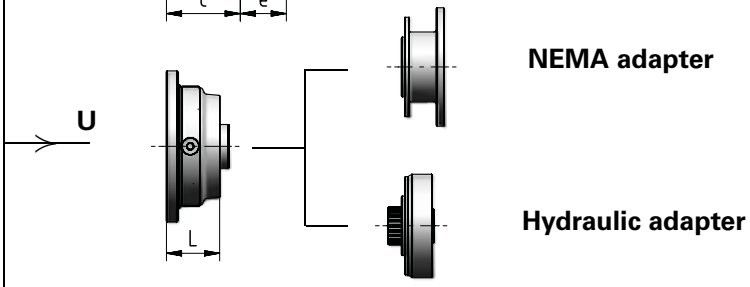


Motor size IEC	$d_M \times P$	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	I14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	I19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	I24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	I28×250	310	405	–	103	82	82	103	82	82	**I28×250**
112	I28×250	336	435	–	103	82	82	103	82	82	**I28×250**
132	I38×300	445	553	133,5	120	102	102	120	102	102	**I38×300**
160	I42×350	573	640	159	153	135	135	153	135	135	**I42×350**
180	I48×350	613	734	159	153	135	135	153	135	135	**I48×350**
200	I55×400	654	734	159	153	–	–	153	–	–	**I55×400**
225	I60×450	710	–	189	183	–	–	183	–	–	**I60×450**
250	I65×550	735	–	189	–	–	–	–	–	–	**I65×550**
280	I75×550	819	–	189	–	–	–	–	–	–	**I75×550**

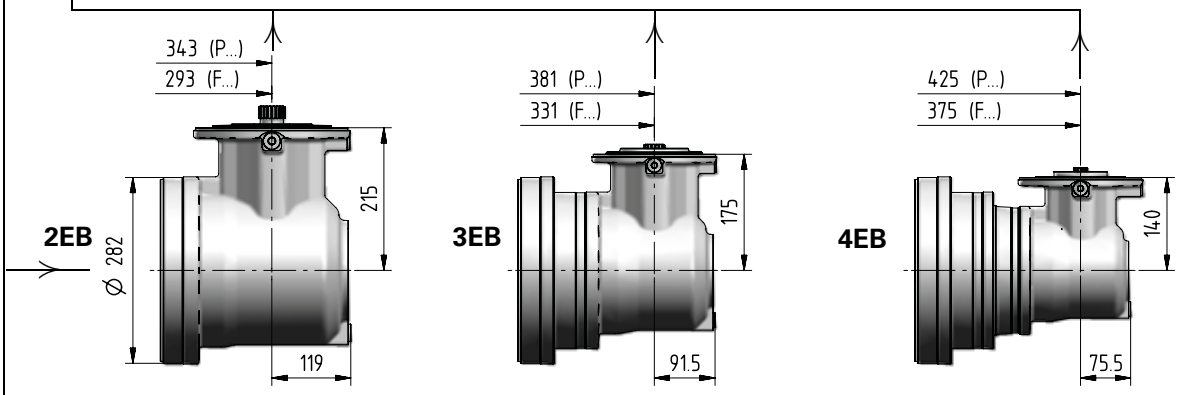
1) Values valid for brake motor; for other dimensions see TX catalog.

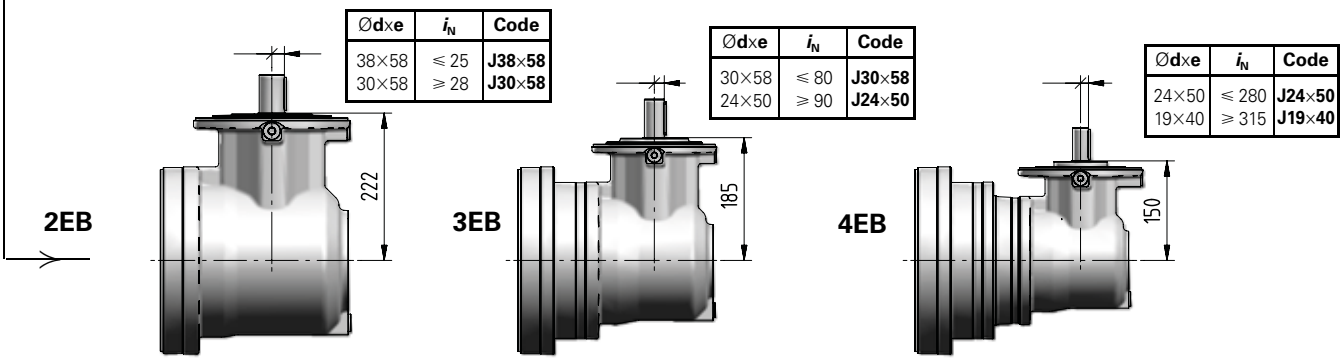


Train of gears	d	e	c	Code
1EL	60	105	138	**C60×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	48	82	115	**C48×82**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**



Train of gear	L	Code
2EL	62	ch.7
3EL, 4EL	64	
2EB	62	
3EB, 4EB	64	





Ödxe	i_N	Code
38×58	⩽ 25	**J38×58**
30×58	⩾ 28	**J30×58**

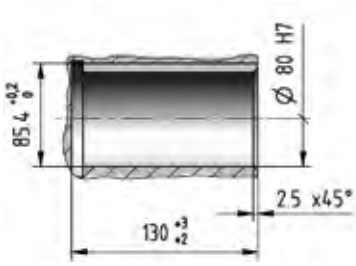
Ödxe	i_N	Code
30×58	⩽ 80	**J30×58**
24×50	⩾ 90	**J24×50**

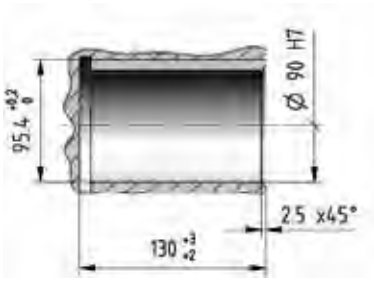
Ödxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**

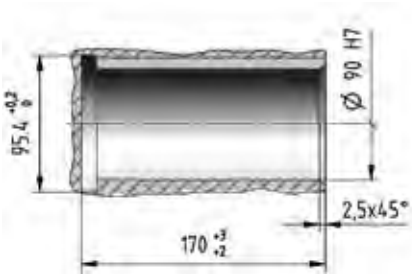
2591-01.02

009A - Output side details

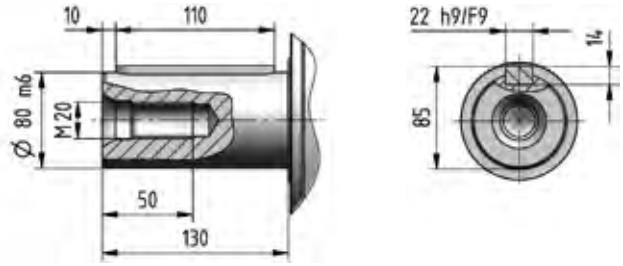
Suggested mating dimensions

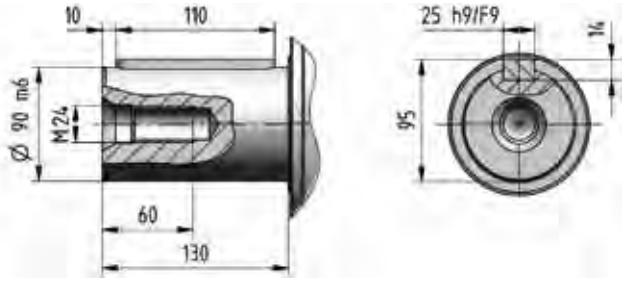


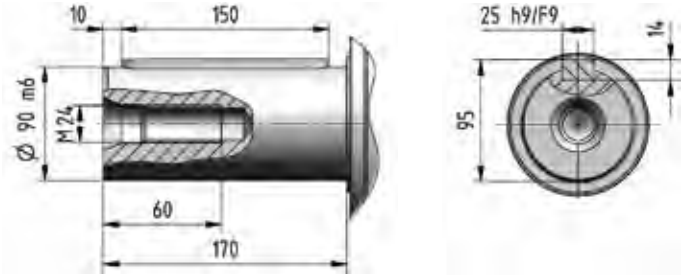




Gear reducer cylindrical shaft end







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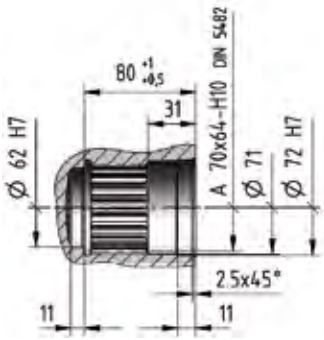
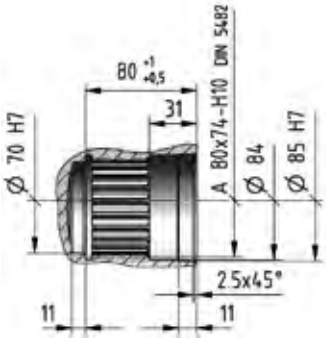
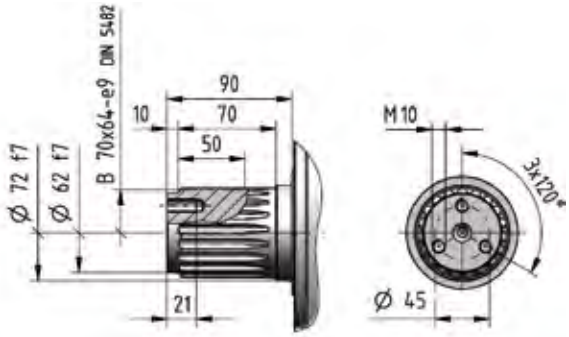
2591-01.02

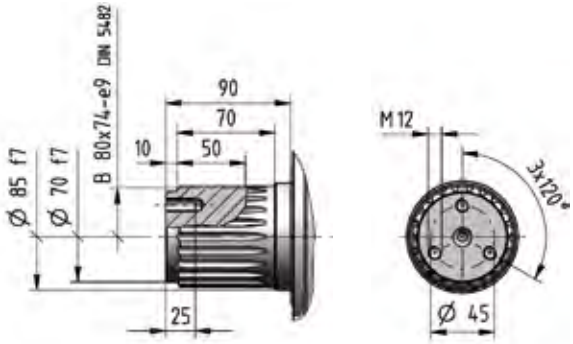
Suggested mating dimensions





Gear reducer splined shaft end



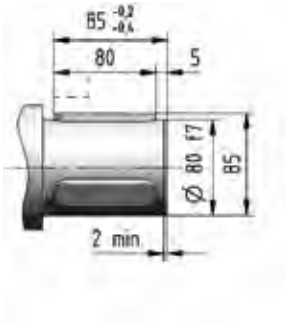


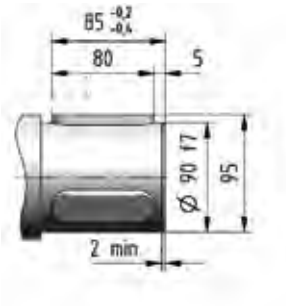
4

2591-01.02

009A - Output side details

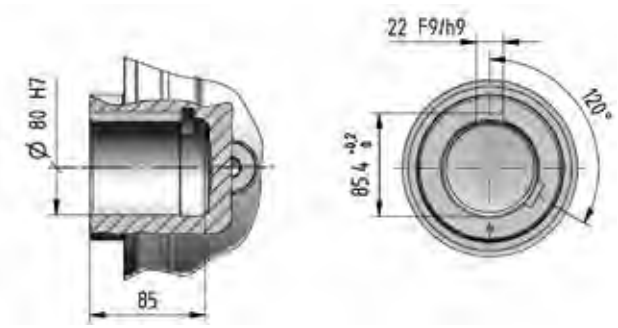
Suggested mating dimensions

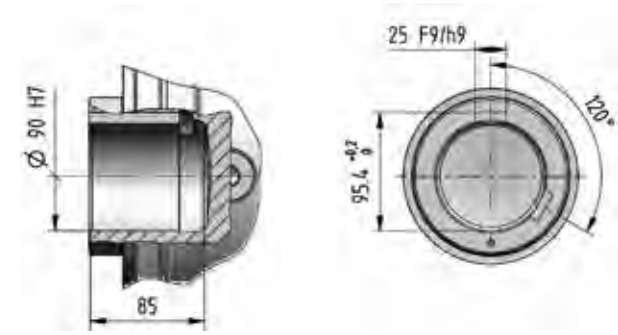




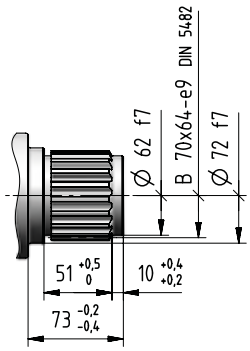
Keys hardness HRC ⩾ 40.

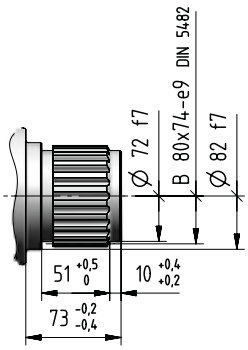
Gear reducer hollow shaft with keyways



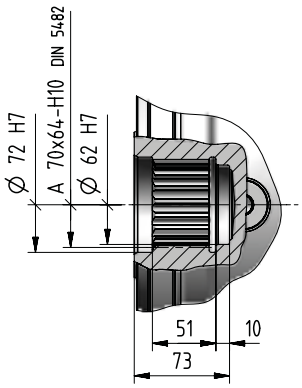


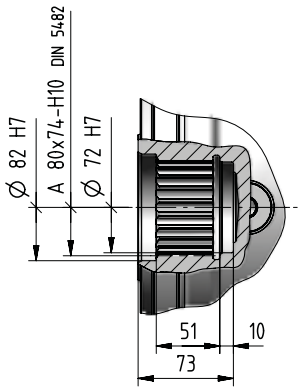
Suggested mating dimensions





Splined hollow shaft

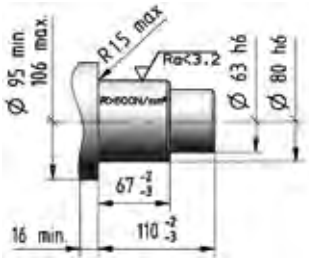


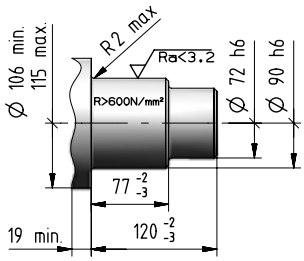


4

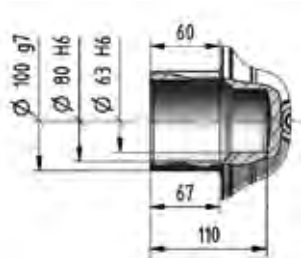
2591-01.02

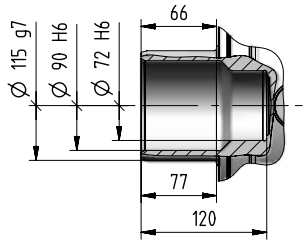
Suggested mating dimensions



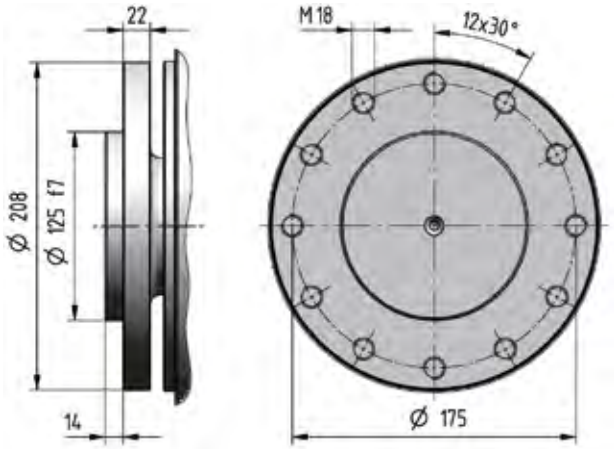


Gear reducer hollow shaft for shaft mounting



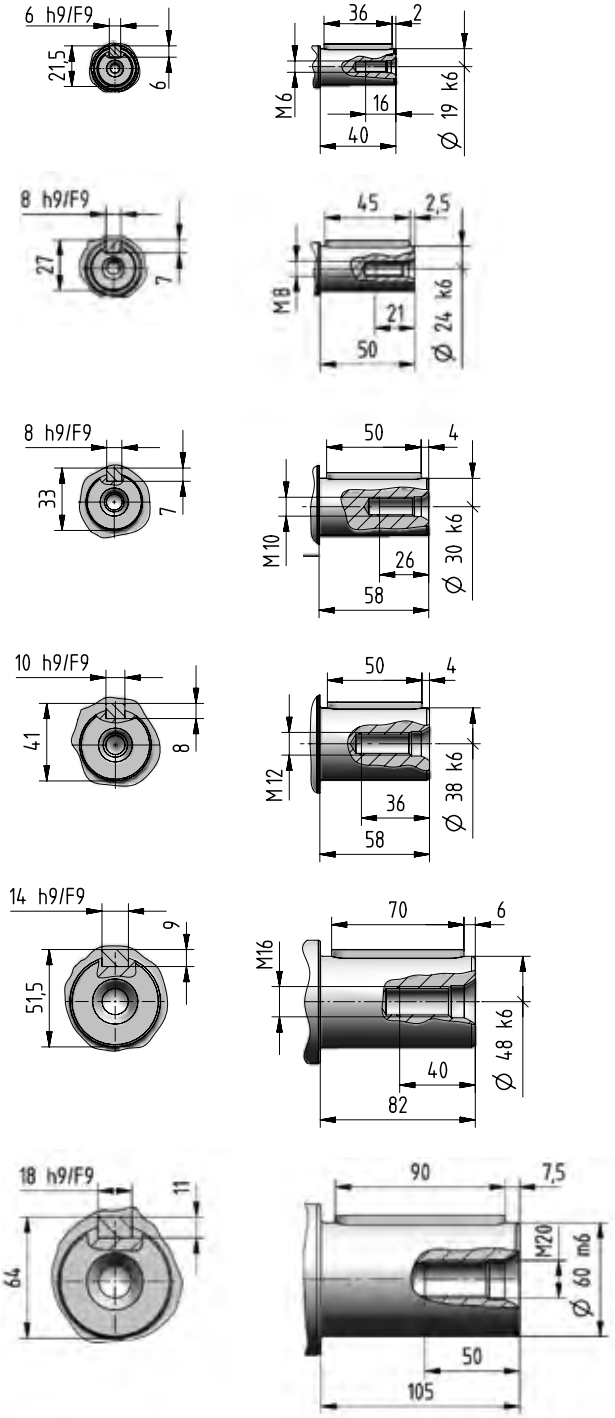


Gear reducer flanged shaft

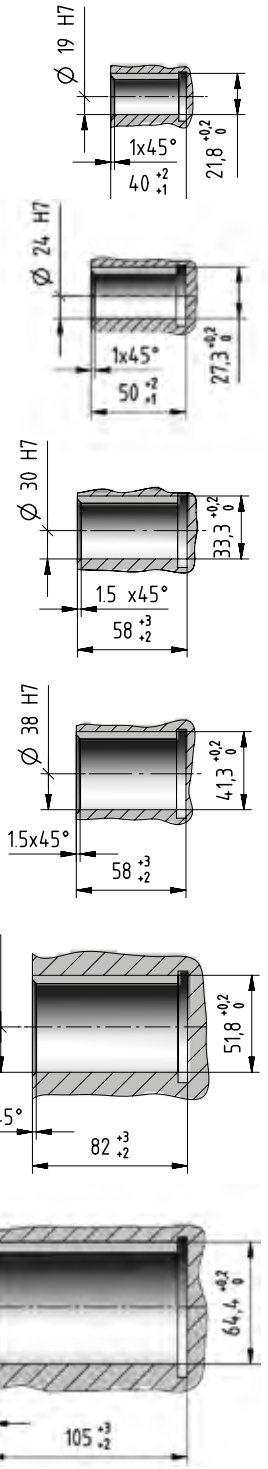


009A -Input side details

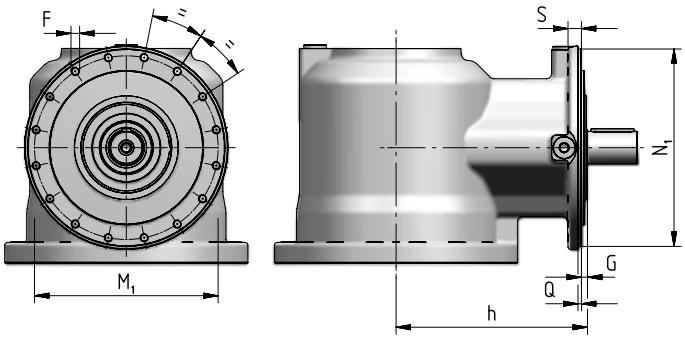
Gear reducer cylindrical shaft end



Suggested mating dimensions



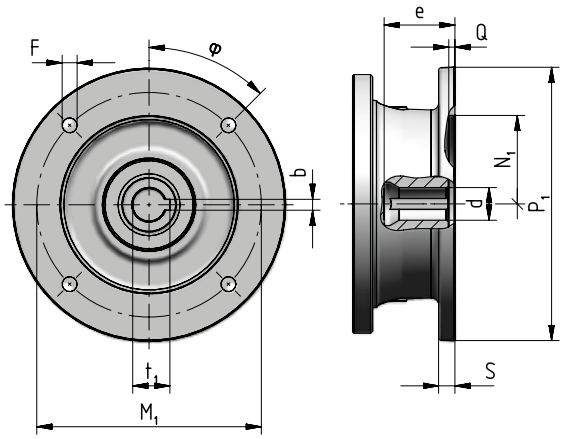
Bevel helical input flange



Train of gears	N_1 ∅ h6	Q	G	h	S	M_1 ∅	F ∅
2EB	229	4	7	222	15	213	M10 (n. 16)
3EB	184	3,5	10	185	12	171	M8 (n. 12)
4EB	184	3,5	10	150	12	171	M8 (n. 12)

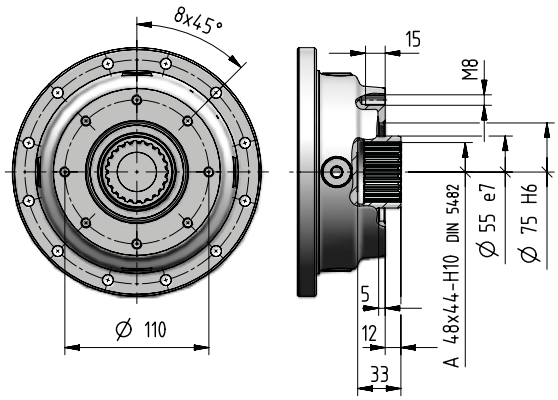
2591-01.02

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6
250	550	18	65 E6	142	18	69,4	500	18 (n.8)	22,5°	450	6
280	550	18	75 E6	142	20	79,9	500	18 (n.8)	22,5°	450	6

Universal flange adapter

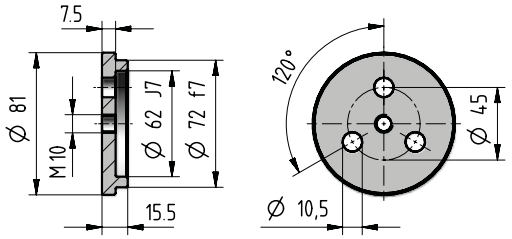


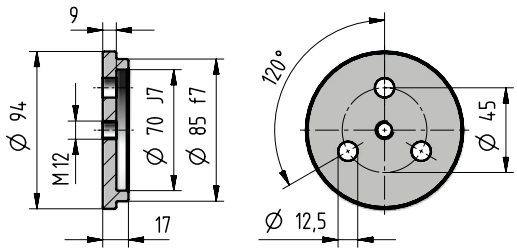
For more information see ch. 8.7.

009A - Accessories

Stop washer

[included]



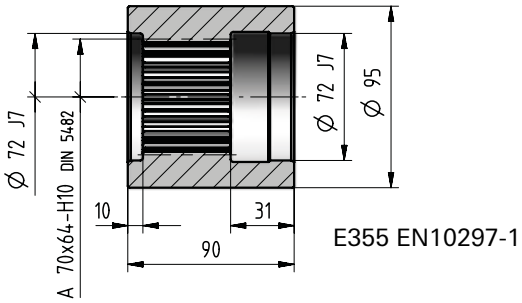


Code: **,SW070**

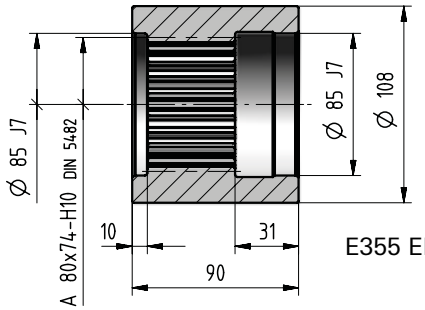
Code: **,SW080**

Splined bush

[included]



E355 EN10297-1



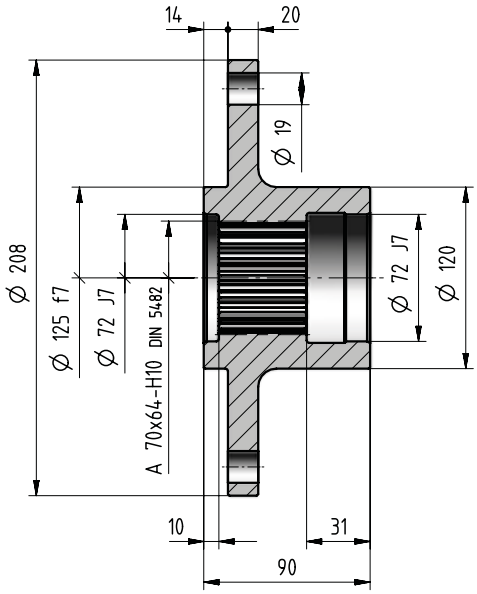
E355 EN10297-1

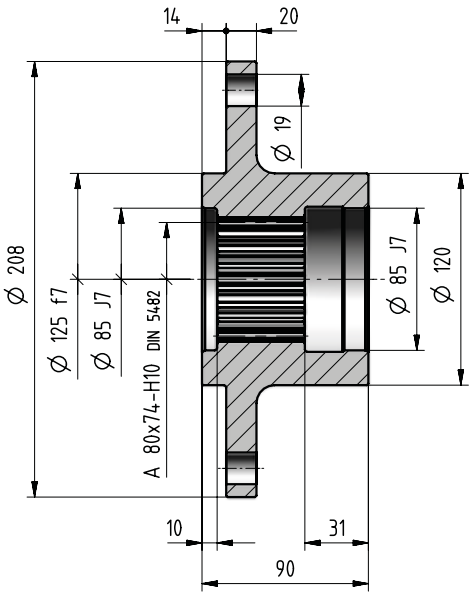
Code: **,SB070**

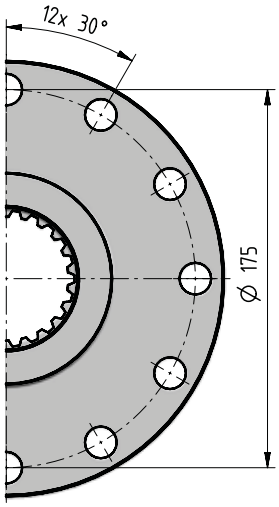
Code: **,SB080**

Wheel flange

[included]





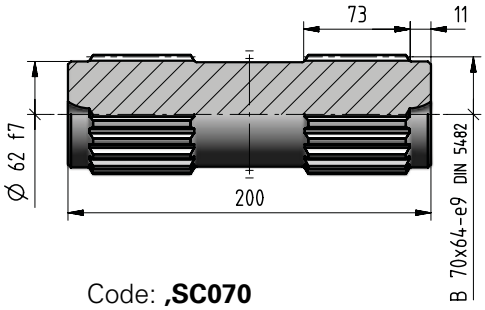


Code: **,WF070**

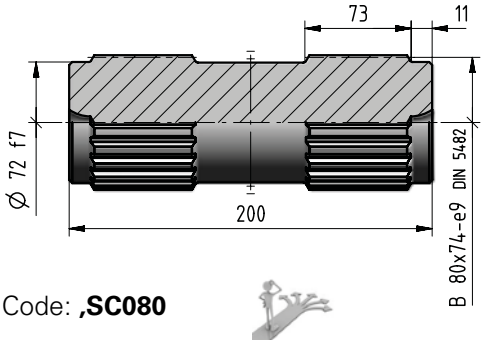
Code: **,WF080**

kg	Accessories																
	,SW070	**,SW080**	**,SB070**	**,SB080**	**,WF070**	**,WF080**	**,SC070**	**,SC080**	**,R012FA**	**,R012EB**	**,R012EC**	**,R012DD**	**,R012DE**	**,R012DF**	**,TA10c**	**,SD100**	**,SD115**
	0,35	0,6	2,7	3,4	8,9	8,2	5,2	7	12	10	12	9	10,8	12,6	6,5	4,4	7,2

Splined bar



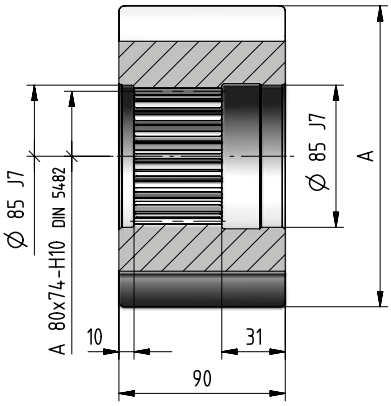
Code: **,SC070**



Code: **,SC080**

Pinion gear

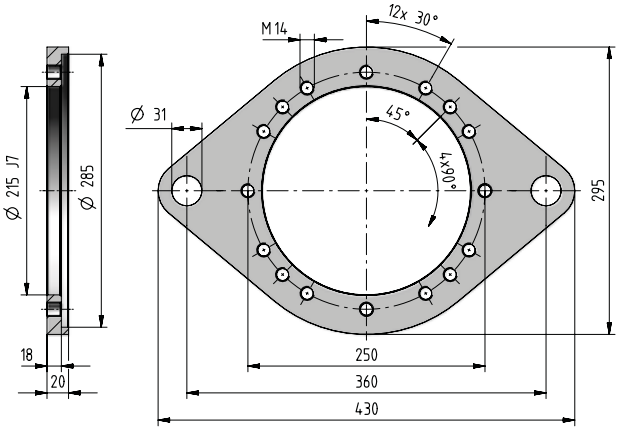
[included]



m_P	z_P	x	A Ø h9	Code
14	11	0,5	194,5	**,R012FA**
12	12	0,5	179	**,R012EB**
12	13	0,5	191	**,R012EC**
10	14	0,5	169	**,R012DD**
10	15	0,5	179	**,R012DE**
10	16	0,5	189	**,R012DF**

Torque arm

[included]

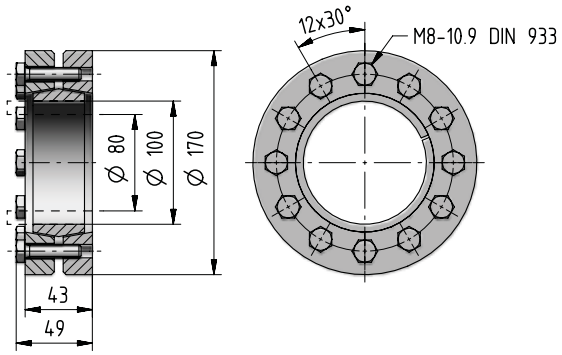


Code: **,TA10c**

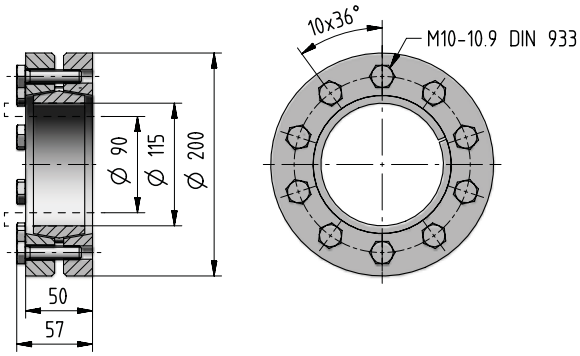
If an already mounted torque arm is required, state the relevant position between torque arm and gear reducer. This position is given by the flange upper fastening hole (stated in red in the figure).

- Reference hole for the identification of the mounting position

Shrink disc



Code: **,SD100**



Code: **,SD115**

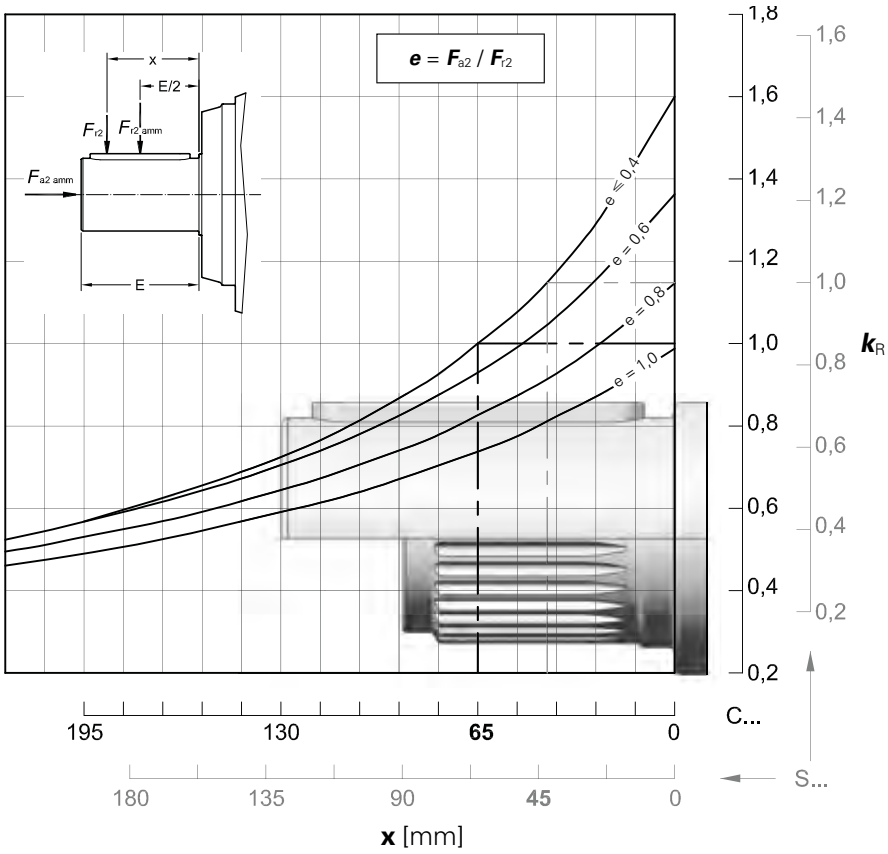
4

2591-01.02

009A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

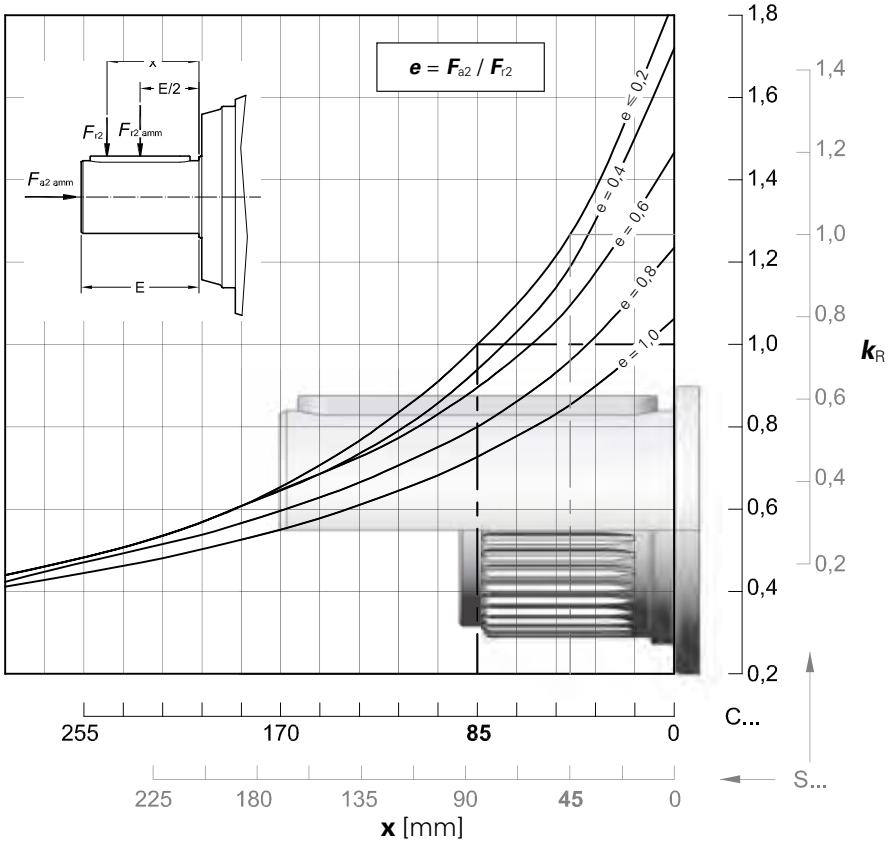
Radial loads $F_{r2\,adm}$ and axial loads $F_{a2\,adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

Output side: C080M1 F10c
S070M1 F10c
C080M1 P10c
S070M1 P10c



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{r2\,adm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	90 000	100 000	100 000	125 000
22 400	85 000	95 000	100 000	125 000
28 000	80 000	90 000	90 000	112 000
35 500	75 000	85 000	85 000	106 000
45 000	71 000	80 000	80 000	100 000
56 000	67 000	75 000	75 000	95 000
71 000	60 000	67 000	71 000	85 000
90 000	56 000	63 000	67 000	80 000
112 000	53 000	60 000	60 000	75 000
140 000	50 000	56 000	56 000	71 000
180 000	45 000	53 000	53 000	67 000
224 000	42 500	47 500	50 000	60 000
280 000	40 000	45 000	47 500	56 000
355 000	37 500	42 500	42 500	53 000
450 000	35 500	40 000	40 000	50 000
560 000	33 500	37 500	37 500	47 500
710 000	30 000	33 500	35 500	42 500
900 000	28 000	31 500	33 500	40 000
1 120 000	26 500	30 000	30 000	37 500
1 400 000	25 000	28 000	28 000	35 500
1 800 000	22 400	26 500	26 500	33 500
2 240 000	21 200	25 000	25 000	31 500
2 800 000	20 000	22 400	23 600	28 000
max	**90 000**	**100 000**	**100000**	**125 000**

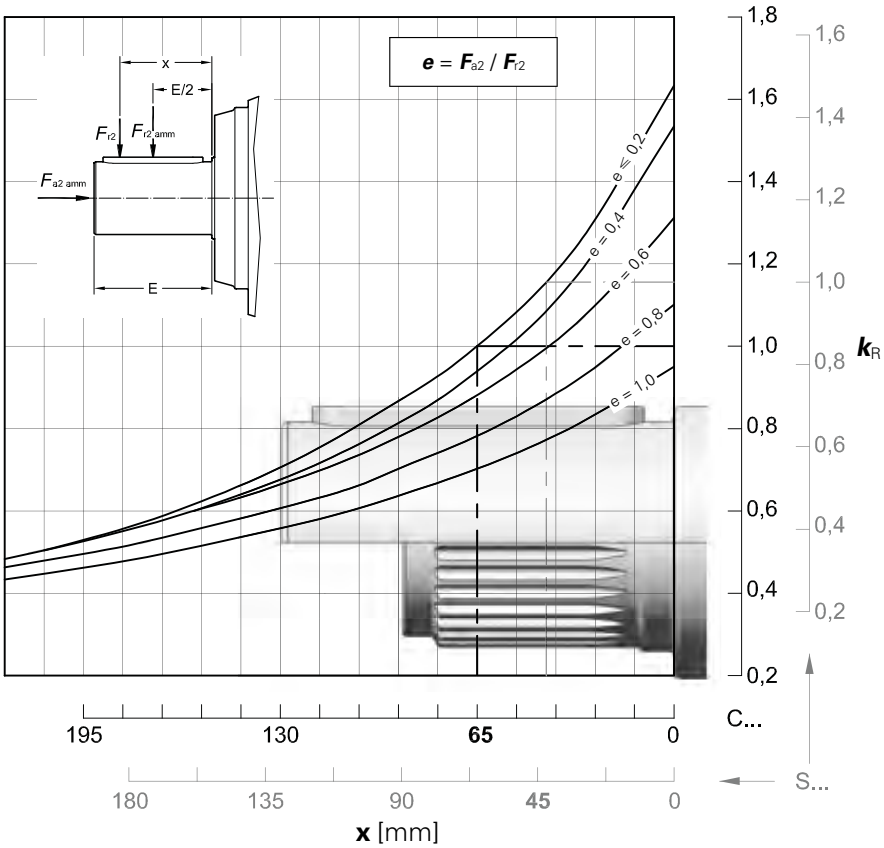
Output side: C090M2 F30c
S080M1 F30c



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{r2\,adm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	100 000	132 000	118 000	170 000
22 400	100 000	125 000	118 000	160 000
28 000	95 000	118 000	112 000	150 000
35 500	85 000	112 000	106 000	140 000
45 000	80 000	100 000	100 000	132 000
56 000	75 000	95 000	95 000	118 000
71 000	71 000	90 000	85 000	112 000
90 000	67 000	85 000	80 000	106 000
112 000	60 000	80 000	75 000	100 000
140 000	56 000	75 000	71 000	90 000
180 000	53 000	67 000	67 000	85 000
224 000	50 000	63 000	60 000	80 000
280 000	47 500	60 000	56 000	75 000
355 000	42 500	56 000	53 000	71 000
450 000	40 000	50 000	50 000	63 000
560 000	37 500	47 500	47 500	60 000
710 000	35 500	45 000	42 500	56 000
900 000	33 500	42 500	40 000	53 000
1 120 000	31 500	40 000	37 500	50 000
1 400 000	28 000	37 500	35 500	45 000
1 800 000	26 500	33 500	33 500	42 500
2 240 000	25 000	31 500	31 500	40 000
2 800 000	23 500	30 000	28 000	37 500
max	**100 000**	**132 000**	**118 000**	**170 000**

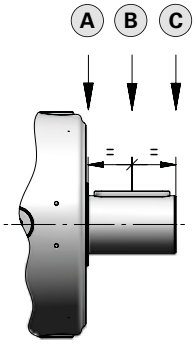
2591-01.02

Output side: C090M1 F20c
S080M1 F20c
C090M1 P20c
S080M1 P20c



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\ adm}$ C ...	$F_{r2\ adm}$ S ...	$F_{a2\ adm}$ ←	$F_{a2\ adm}$ →
< **18 000**	118 000	132 000	106 000	170 000
22 400	112 000	125 000	106 000	160 000
28 000	106 000	118 000	106 000	150 000
35 500	95 000	112 000	106 000	140 000
45 000	90 000	100 000	100 000	132 000
56 000	85 000	95 000	95 000	125 000
71 000	80 000	90 000	85 000	118 000
90 000	75 000	85 000	80 000	106 000
112 000	67 000	80 000	75 000	100 000
140 000	63 000	75 000	71 000	95 000
180 000	60 000	67 000	67 000	90 000
224 000	56 000	63 000	60 000	80 000
280 000	53 000	60 000	56 000	75 000
355 000	47 500	56 000	53 000	71 000
450 000	45 000	50 000	50 000	67 000
560 000	42 500	47 500	47 500	63 000
710 000	40 000	45 000	42 500	60 000
900 000	37 500	42 500	40 000	53 000
1 120 000	33 500	40 000	37 500	50 000
1 400 000	31 500	37 500	35 500	47 500
1 800 000	30 000	33 500	33 500	45 000
2 240 000	28 000	31 500	30 000	42 500
2 800 000	26 500	30 000	28 000	37 500
max	**118 000**	**132 000**	**106 000**	**170 000**

009A - Radial loads F_{r1} [N] on input shaft



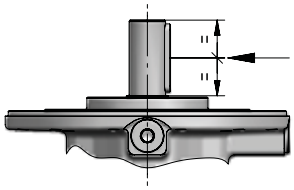
Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **In Line** gear reducers. For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears											
	1EL			**2EL**			**3EL**			**4EL**		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	28 000	19 000	14 000	20 000	14 000	10 600	14 000	8 500	5 300	6 300	4 250	3 350
1 120 000	26 500	18 000	13 200	19 000	12 500	9 500	13 200	8 000	5 000	5 600	4 000	3 150
1 400 000	25 000	16 000	12 500	17 000	11 800	9 000	11 800	7 100	4 500	5 300	3 750	2 800
1 800 000	22 400	15 000	11 200	16 000	10 600	8 000	11 200	6 700	4 250	5 000	3 350	2 650
2 240 000	21 200	14 000	10 600	15 000	10 000	7 500	10 000	6 300	4 000	4 500	3 150	2 500
2 800 000	20 000	13 200	9 500	14 000	9 500	7 100	9 500	5 600	3 550	4 250	3 000	2 240
3 550 000	18 000	11 800	9 000	12 500	8 500	6 700	9 000	5 300	3 350	4 000	2 800	2 120
4 500 000	17 000	11 200	8 500	11 800	8 000	6 000	8 000	5 000	3 150	3 550	2 500	1 900
5 600 000	16 000	10 600	7 500	11 200	7 500	5 600	7 500	4 500	2 800	3 350	2 360	1 800
7 100 000	14 000	9 500	7 100	10 000	6 700	5 300	7 100	4 250	2 650	3 150	2 120	1 700
9 000 000	13 200	9 000	6 700	9 500	6 300	4 750	6 300	4 000	2 500	2 800	2 000	1 500
11 200 000	12 500	8 000	6 000	8 500	6 000	4 500	6 000	3 550	2 240	2 650	1 900	1 400
14 000 000	11 200	7 500	5 600	8 000	5 600	4 250	5 600	3 350	2 120	2 500	1 700	1 320
18 000 000	10 600	7 100	5 300	7 500	5 000	3 750	5 000	3 150	1 900	2 240	1 600	1 180
22 400 000	10 000	6 700	4 750	6 700	4 750	3 550	4 750	2 800	1 800	2 120	1 500	1 120
28 000 000	9 000	6 000	4 500	6 300	4 250	3 350	4 500	2 650	1 700	2 000	1 400	1 060
35 500 000	8 500	5 600	4 250	6 000	4 000	3 000	4 000	2 500	1 600	1 800	1 250	950
45 000 000	8 000	5 300	3 750	5 300	3 750	2 800	3 750	2 240	1 400	1 700	1 180	900

4

Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers. For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears					
	2EB		**3EB**		**4EB**	
	$i_N \leqslant 25$	$i_N \geqslant 28$	$i_N \leqslant 100$	$i_N \geqslant 112$	$i_N \leqslant 315$	$i_N \geqslant 355$
900 000	5 600	4 750	4 000	3 350	2 800	2 360
1 120 000	5 300	4 500	3 750	3 150	2 650	2 240
1 400 000	4 750	4 000	3 550	2 800	2 360	2 000
1 800 000	4 500	3 750	3 150	2 650	2 240	1 900
2 240 000	4 000	3 550	3 000	2 500	2 000	1 700
2 800 000	3 750	3 150	2 800	2 240	1 900	1 600
3 550 000	3 550	3 000	2 500	2 120	1 800	1 500
4 500 000	3 350	2 800	2 360	2 000	1 600	1 400
5 600 000	3 000	2 650	2 240	1 800	1 500	1 320
7 100 000	2 800	2 360	2 000	1 700	1 400	1 180
9 000 000	2 650	2 240	1 900	1 600	1 320	1 120
11 200 000	2 360	2 000	1 700	1 400	1 180	1 000
14 000 000	2 240	1 900	1 600	1 320	1 120	950
18 000 000	2 000	1 700	1 500	1 250	1 000	850
22 400 000	1 900	1 600	1 400	1 120	950	800
28 000 000	1 800	1 500	1 250	1 060	900	750
35 500 000	1 600	1 400	1 180	1 000	800	710
45 000 000	1 500	1 320	1 120	900	750	630



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012A

Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H2O
1EL	3,55	**3,52**	398 5 060	256 5 780	142 6 890	9 500 11 200	2 240 2 800	28 21,2	42,5 32,5	58 43,7
	4,25	**4,17**	335 5 230	216 5 970	120 7 120	12 500 15 000	2 240 3 150			
	5	**5,29**	264 5 460	170 6 230	94,4 6 510	10 090 12 500	2 240 3 550			
	6	**6,21**	225 5 160	145 5 300	80,5 5 490	8 490 10 600	2 240 3 550			
	7,1	**7,64**	183 3 770	118 3 870	65,5 4 010	6 180 9 000	2 240 3 550			
2EL	12,5	**12,4**	113 6 110	72,8 6 970	40,4 8 320	9 500 11 200	2 500 2 800	20 15	29 22,4	38,7 30
	14	**14,7**	95,4 7 250	61,3 8 270	34,1 8 780	12 500 15 000	2 500 2 800			
	16	**17,4**	80,4 7 480	51,7 8 540	28,7 8 870	12 500 15 000	2 800 3 550			
	18	**18,6**	75,2 6 600	48,3 6 780	26,9 7 030	10 600 12 500	2 500 2 800			
	22,4	**22,1**	63,4 7 810	40,7 8 680	22,6 9 000	12 500 15 000	2 800 4 000			
	25	**25,9**	54,0 7 450	34,7 7 650	19,3 7 930	12 260 15 000	2 800 4 000			
	28	**28**	50,0 6 770	32,1 6 950	17,8 7 210	10 600 12 500	2 800 4 000			
	31,5	**31,9**	43,9 5 440	28,2 5 590	15,7 5 800	8 930 12 800	2 800 4 000			
	35,5	**32,9**	42,6 6 830	27,4 7 020	15,2 7 280	10 600 12 500	2 800 4 000			
	40	**40,4**	34,6 6 900	22,3 7 090	12,4 7 350	10 600 12 500	2 800 4 000			
	45	**47,5**	29,5 5 840	19,0 6 000	10,5 6 220	9 000 10 600	2 800 4 000			
3EL	50	**51,6**	27,1 8 830	17,4 9 140	9,68 9 480	12 500 15 000	2 800 3 150	14 10,6	21,2 16	28 21,2
	63	**61,3**	22,8 8 990	14,7 9 240	8,16 9 640	12 500 15 000	2 800 3 150			
	71	**72,7**	19,3 9 090	12,4 9 340	6,88 9 890	12 500 15 000	3 150 4 000			
	80	**77,7**	18,0 9 130	11,6 9 380	6,43 9 990	12 500 15 000	2 800 3 150			
	90	**92,2**	15,2 9 220	9,76 9 480	5,42 10 260	12 500 15 000	3 150 4 000			
	100	**98,6**	14,2 7 310	9,13 7 510	5,07 7 960	10 600 12 500	3 150 4 000			
	112	**108**	12,9 9 310	8,31 9 610	4,62 10 510	12 500 15 000	3 150 4 000			
	125	**117**	12,0 9 360	7,69 9 730	4,27 10 630	12 500 15 000	3 150 4 000			
	140	**137**	10,2 9 450	6,55 9 970	3,64 10 830	12 500 15 000	3 150 4 000			
	160	**169**	8,30 9 620	5,33 10 240	2,96 10 620	12 500 15 000	3 150 4 000			
	180	**174**	8,04 7 570	5,17 7 940	2,87 8 680	10 600 12 500	3 150 4 000			
	200	**198**	7,07 8 440	4,54 8 670	2,52 8 990	12 500 15 000	3 150 4 000			
	224	**214**	6,54 7 670	4,21 8 190	2,34 8 950	10 600 12 500	3 150 4 000			
	250	**251**	5,57 7 850	3,58 8 390	1,99 9 170	10 600 12 500	3 150 4 000			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H2O
4EL	180	**178**	7,86 9 700	5,05 10 370	2,81 11 330	12 500 15 000	2 800 3 150	12,5 9	18,5 14	24,3 18,5
	200	**211**	6,62 9 950	4,26 10 640	2,37 11 630	12 500 15 000	2 800 3 150			
	250	**255**	5,49 10 240	3,53 10 940	1,96 11 960	12 500 15 000	3 150 4 000			
	280	**301**	4,64 10 500	2,99 11 230	1,66 12 270	12 500 15 000	3 150 4 000			
	315	**323**	4,33 10 610	2,78 11 350	1,55 12 400	12 500 15 000	3 150 4 000			
	355	**358**	3,91 10 780	2,52 11 520	1,40 12 500	12 500 15 000	3 150 4 000			
	400	**404**	3,47 10 860	2,23 11 160	1,24 11 810	12 500 15 000	2 800 3 150			
	450	**448**	3,13 11 150	2,01 11 920	1,12 12 500	12 500 15 000	3 150 4 000			
	500	**518**	2,70 11 400	1,74 12 180	0,965 12 500	12 500 15 000	3 150 4 000			
	560	**568**	2,46 11 560	1,58 12 350	0,880 12 500	12 500 15 000	3 150 4 000			
	630	**657**	2,13 11 810	1,37 12 500	0,761 12 500	12 500 15 000	3 150 4 000			
	710	**720**	1,94 11 260	1,25 11 790	0,694 12 500	12 500 15 000	3 150 4 000			
	800	**788**	1,78 12 140	1,14 12 500	0,635 12 500	12 500 15 000	3 150 4 000			
	900	**924**	1,51 12 270	0,974 12 500	0,541 12 500	12 500 15 000	3 150 4 000			
	1000	**999**	1,40 11 590	0,901 12 390	0,501 12 500	12 500 15 000	3 150 4 000			
	1120	**1172**	1,19 11 870	0,768 12 500	0,426 12 500	12 500 15 000	3 150 4 000			
	1250	**1259**	1,11 10 010	0,715 10 600	0,397 10 600	10 600 12 500	3 150 4 000			
	1400	**1441**	0,972 11 370	0,625 11 690	0,347 12 110	12 500 15 000	3 150 4 000			
	1600	**1691**	0,828 10 010	0,532 10 700	0,296 11 690	12 500 15 000	3 150 4 000			
	1800	**1827**	0,766 10 590	0,492 10 600	0,274 10 600	10 600 12 500	3 150 4 000			
	2000	**1901**	0,736 8 800	0,473 9 410	0,263 10 280	10 600 12 500	3 150 4 000			
	2240	**2145**	0,653 10 600	0,420 10 600	0,233 10 600	10 600 12 500	3 150 4 000			
	2500	**2636**	0,531 9 240	0,341 9 880	0,190 10 600	10 600 12 500	3 150 4 000			
	3150	**3094**	0,452 9 000	0,291 9 000	0,162 9 000	9 000 10 600	3 150 4 000			

In case of alternative output design , refer to torque limits at page 4.124, if any.

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Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at –	20°C	40°C
2EB	9	**8,79**	159 3 720	102 4 250	56,9 5 070	6 140 7 750	2 240 2 800	21,2 16	31,5 23,6	41,2 31,5
	10	**10,4**	134 4 420	86,3 5 040	47,9 6 010	7 290 9 000	2 240 2 800			
	11,2	**11,1**	126 3 760	81,1 4 300	45,1 5 120	6 140 7 750	2 240 2 800			
	12,5	**13,2**	106 5 600	68,0 6 400	37,8 6 880	9 240 11 500	2 240 2 800			
	14	**15,5**	90,1 5 460	57,9 5 610	32,2 5 810	9 000 10 600	2 240 2 800			
	16	**16,7**	83,8 5 660	53,9 6 470	29,9 6 980	9 240 11 500	2 240 2 800			
	20	**19,6**	71,4 5 530	45,9 5 690	25,5 5 890	9 000 10 600	2 240 2 800			
	22,4	**21,2**	66,1 5 930	42,5 6 590	23,6 7 040	7 960 9 750	2 240 2 800			
	25	**24,9**	56,3 5 620	36,2 5 770	20,1 5 980	9 000 10 600	2 240 2 800			
	28	**26,5**	52,9 4 260	34,0 4 870	18,9 5 750	6 270 7 750	2 240 2 800			
	31,5	**31,1**	45,1 5 000	29,0 5 710	16,1 6 060	7 350 9 000	2 240 2 800			
3EB	31,5	**30,9**	45,3 6 600	29,1 7 530	16,2 8 980	9 500 11 200	2 800 3 550	14 11,2	21,8 16,5	29 21,8
	35,5	**36,7**	38,1 7 830	24,5 8 940	13,6 9 280	12 430 15 000	2 800 3 550			
	40	**39**	35,9 6 680	23,1 7 630	12,8 9 100	9 500 11 200	2 800 3 550			
	45	**43,6**	32,1 8 810	20,7 9 050	11,5 9 380	12 500 15 000	2 800 3 550			
	50	**46,3**	30,2 7 930	19,4 9 050	10,8 9 420	12 430 15 000	2 800 3 550			
	56	**54,9**	25,5 8 930	16,4 9 180	9,10 9 520	12 500 15 000	2 800 3 550			
	63	**64,8**	21,6 7 880	13,9 8 100	7,71 8 390	12 500 15 000	2 800 3 550			
	71	**69,7**	20,1 9 070	12,9 9 310	7,17 9 830	12 500 15 000	2 800 3 550			
	80	**81,8**	17,1 7 990	11,0 8 210	6,11 8 510	12 500 15 000	2 800 3 550			
	90	**88,4**	15,8 9 200	10,2 9 450	5,66 10 190	12 500 15 000	2 800 3 550			
	100	**104**	13,5 8 110	8,67 8 330	4,82 8 640	12 500 15 000	2 800 3 550			
	112	**110**	12,7 8 660	8,15 9 640	4,53 10 540	12 500 15 000	2 800 3 550			
	125	**130**	10,8 8 220	6,94 8 450	3,86 8 760	12 500 15 000	2 800 3 550			
	140	**140**	9,99 7 470	6,42 7 680	3,57 8 390	10 600 12 500	2 800 3 550			
	160	**164**	8,51 7 540	5,47 7 870	3,04 8 600	10 600 12 500	2 800 3 550			
	200	**202**	6,93 7 620	4,45 7 830	2,47 8 120	10 600 12 500	2 800 3 550			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at –	20°C	40°C
4EB	160	**163**	8,60 9 570	5,53 10 230	3,07 11 180	12 500 15 000	2 800 3 550	11,8 9	17,5 13,2	23 17,5
	180	**182**	7,70 9 730	4,95 10 400	2,75 11 370	12 500 15 000	2 800 3 550			
	200	**194**	7,21 9 820	4,63 10 500	2,57 11 480	12 500 15 000	2 800 3 550			
	224	**229**	6,10 10 070	3,92 10 770	2,18 11 770	12 500 15 000	2 800 3 550			
	250	**245**	5,71 10 180	3,67 10 880	2,04 11 890	12 500 15 000	2 800 3 550			
	280	**271**	5,17 10 330	3,33 11 040	1,85 12 070	12 500 15 000	2 800 3 550			
	315	**311**	4,50 10 550	2,89 11 280	1,61 12 330	12 500 15 000	2 800 3 550			
	355	**364**	3,85 10 800	2,48 11 550	1,38 12 500	12 500 15 000	2 800 3 550			
	400	**389**	3,60 10 910	2,32 11 660	1,29 12 500	12 500 15 000	2 800 3 550			
	450	**461**	3,04 11 200	1,95 11 970	1,08 12 500	12 500 15 000	2 800 3 550			
	500	**493**	2,84 8 690	1,83 9 290	1,01 10 150	10 600 12 500	2 800 3 550			
	560	**541**	2,59 11 470	1,66 12 200	0,924 12 500	12 500 15 000	2 800 3 550			
	630	**585**	2,39 11 110	1,54 11 430	0,855 12 490	12 500 15 000	2 800 3 550			
	710	**687**	2,04 11 220	1,31 11 710	0,728 12 500	12 500 15 000	2 800 3 550			
	800	**844**	1,66 11 010	1,07 11 310	0,593 11 720	12 500 15 000	2 800 3 550			
	900	**871**	1,61 9 470	1,03 10 130	0,574 10 600	10 600 12 500	2 800 3 550			
	1000	**990**	1,41 9 310	0,909 9 870	0,505 10 780	12 500 15 000	2 800 3 550			
	1120	**1070**	1,31 9 770	0,841 10 450	0,467 10 600	10 600 12 500	2 800 3 550			
	1250	**1256**	1,11 10 010	0,716 10 600	0,398 10 600	10 600 12 500	2 800 3 550			
	1400	**1450**	0,966 8 400	0,621 8 980	0,345 9 000	9 000 10 600	2 800 3 550			
	1600	**1544**	0,907 8 630	0,583 9 120	0,324 9 960	10 600 12 500	2 800 3 550			
	1800	**1812**	0,773 8 690	0,497 9 000	0,276 9 000	9 000 10 600	2 800 3 550			

In case of alternative output design , refer to torque limits at page 4.124, if any.

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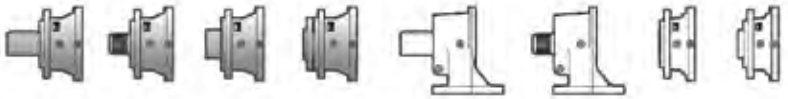
012A - Main Dimensions



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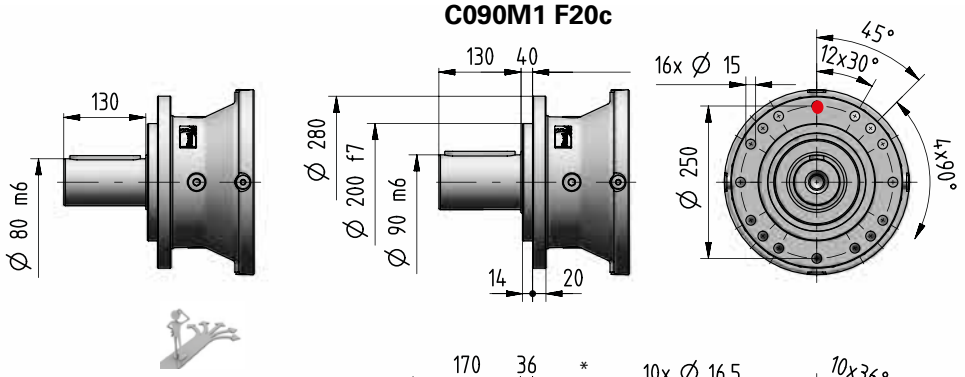
C080M1 F10c



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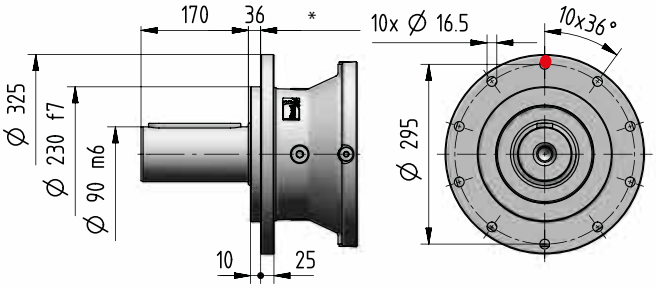
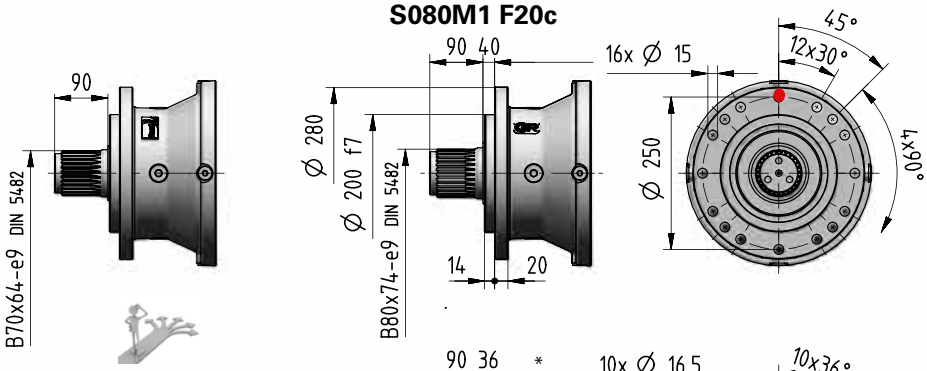


S080M1 F20c

S070M1 F10c



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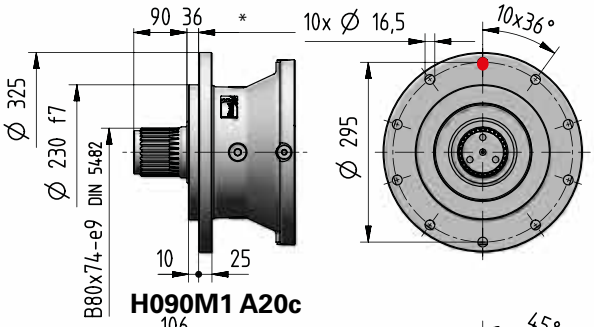

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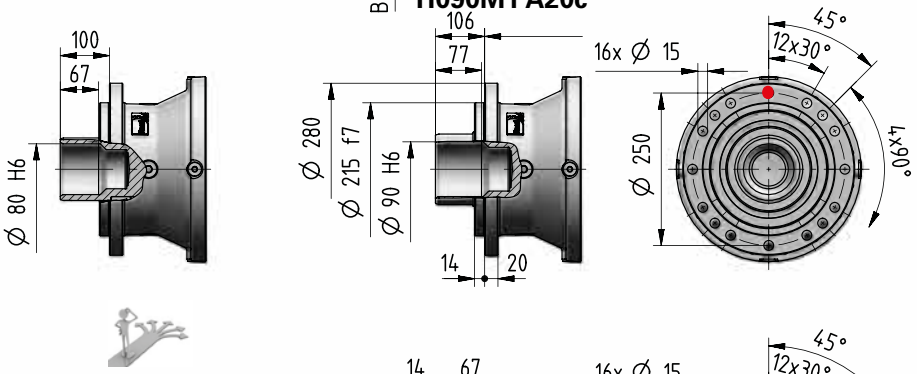

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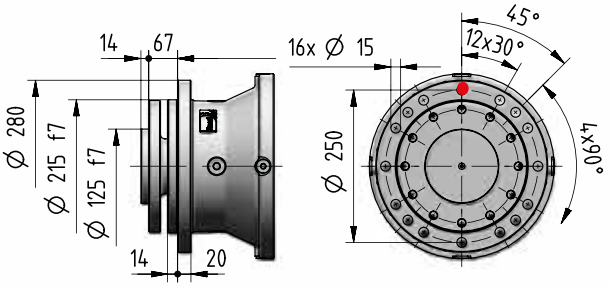

see page 4.125

See page 4.114

4

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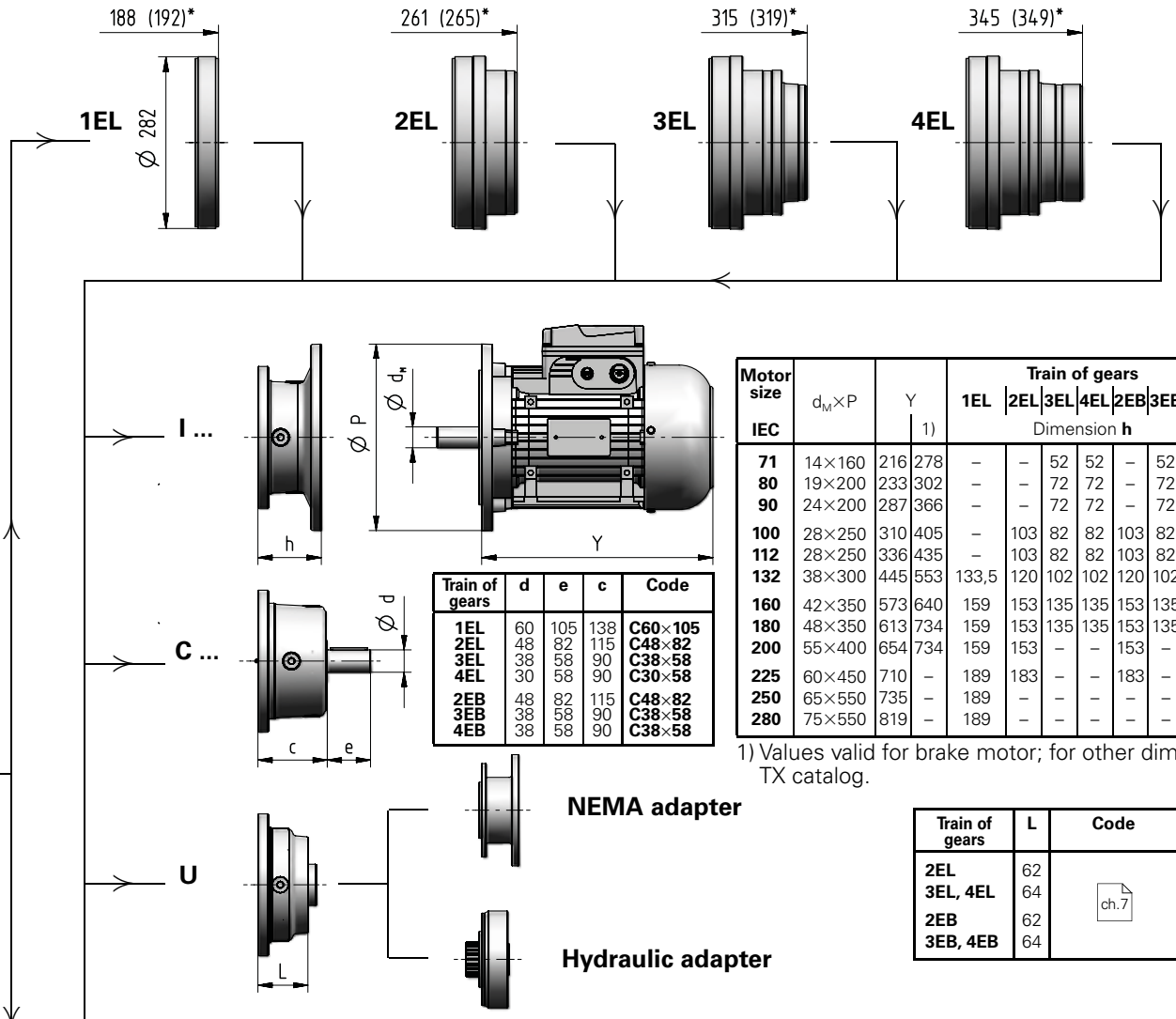
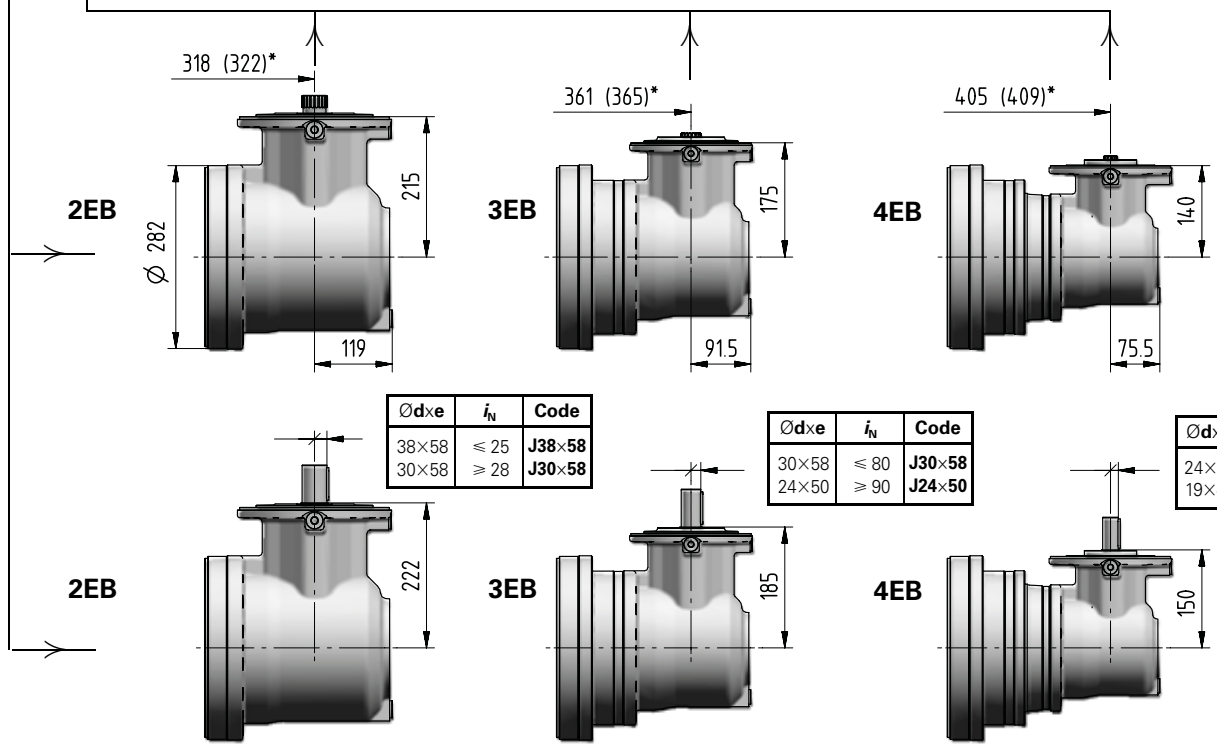


Train of gears	d	e	c	Code
1EL	60	105	138	**C60×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	48	82	115	**C48×82**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**

Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	28×250	310	405	–	103	82	82	103	82	82	**I28×250**
112	28×250	336	435	–	103	82	82	103	82	82	**I28×250**
132	38×300	445	553	133,5	120	102	102	120	102	102	**I38×300**
160	42×350	573	640	159	153	135	135	153	135	135	**I42×350**
180	48×350	613	734	159	153	135	135	153	135	135	**I48×350**
200	55×400	654	734	159	153	–	–	153	–	–	**I55×400**
225	60×450	710	–	189	183	–	–	183	–	–	**I60×450**
250	65×550	735	–	189	–	–	–	–	–	–	**I65×550**
280	75×550	819	–	189	–	–	–	–	–	–	**I75×550**

1) Values valid for brake motor; for other dimensions see TX catalog.

Train of gears	L	Code
2EL	62	ch.7
3EL, 4EL	64	
2EB	62	
3EB, 4EB	64	

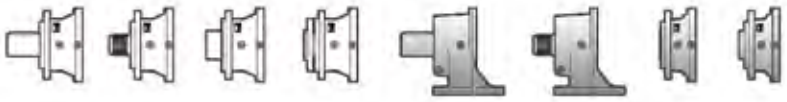


Ødxe	i_N	Code
38×58	⩽ 25	**J38×58**
30×58	⩾ 28	**J30×58**

Ødxe	i_N	Code
30×58	⩽ 80	**J30×58**
24×50	⩾ 90	**J24×50**

Ødxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**

012A - Main Dimensions



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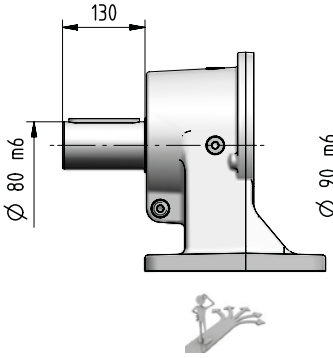
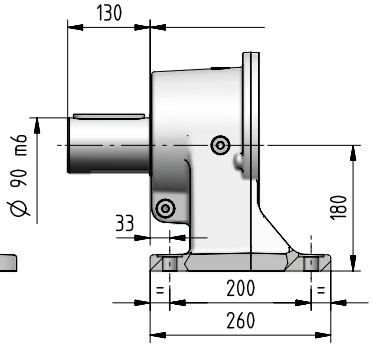
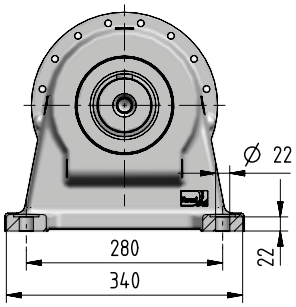
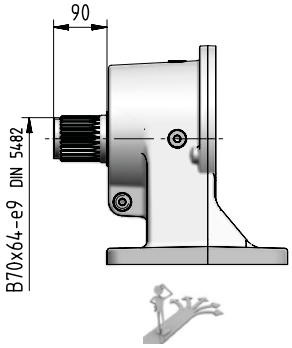


C090M1 P20c





S070M1 P10c



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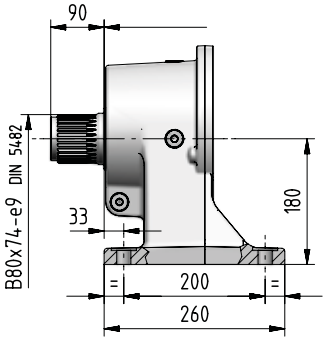
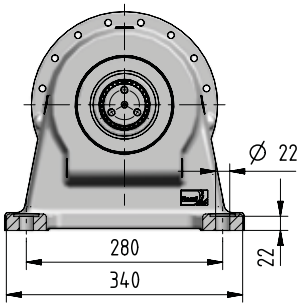
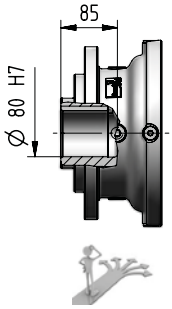




K080M1 F05c



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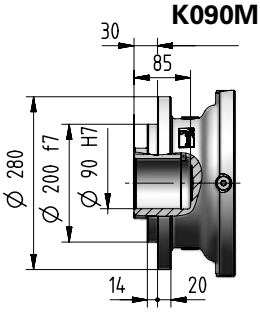

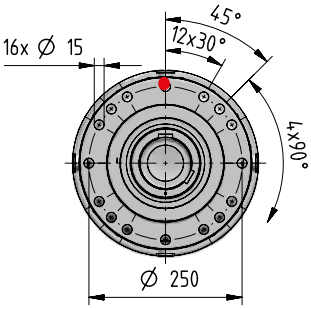

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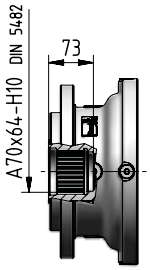

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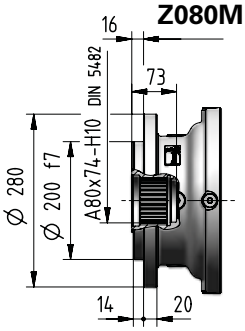
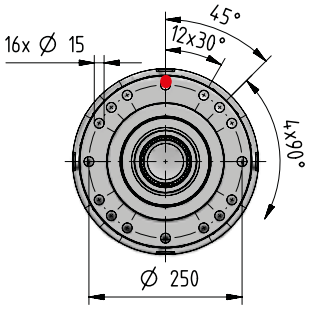
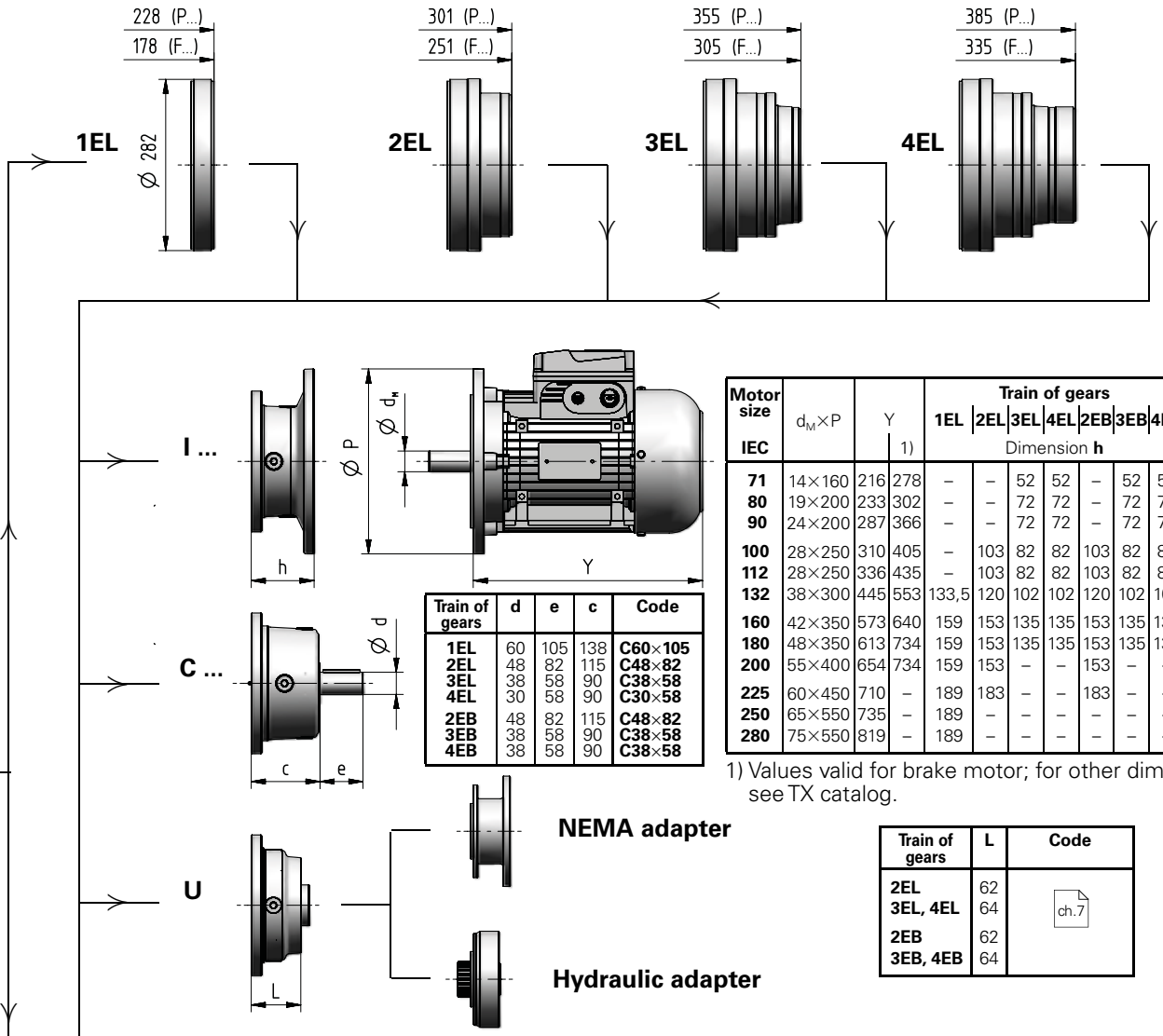




see page 4.125

kg	Input options Code														Output options (Δ) Code			
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C…	U…	J…	C… S…	H… M…	C… P… S… P…	K… Z…
1EL	-	-	-	-	86	92	92	94	104	112	112	95	-	-	+0	-6	+10	-13,5
2EL	-	-	-	93	97	103	103	106	115	-	-	98	90	-				
3EL	92	94	94	96	99	105	105	-	-	-	-	97	93	-				
4EL	97	99	99	100	104	110	109	-	-	-	-	101	98	-				
2EB	-	-	-	126	130	136	136	138	147	-	-	129	123	115				
3EB	112	114	114	116	119	125	125	-	-	-	-	116	113	108				
4EB	110	112	112	114	117	123	123	-	-	-	-	114	111	106				

2591-01.02

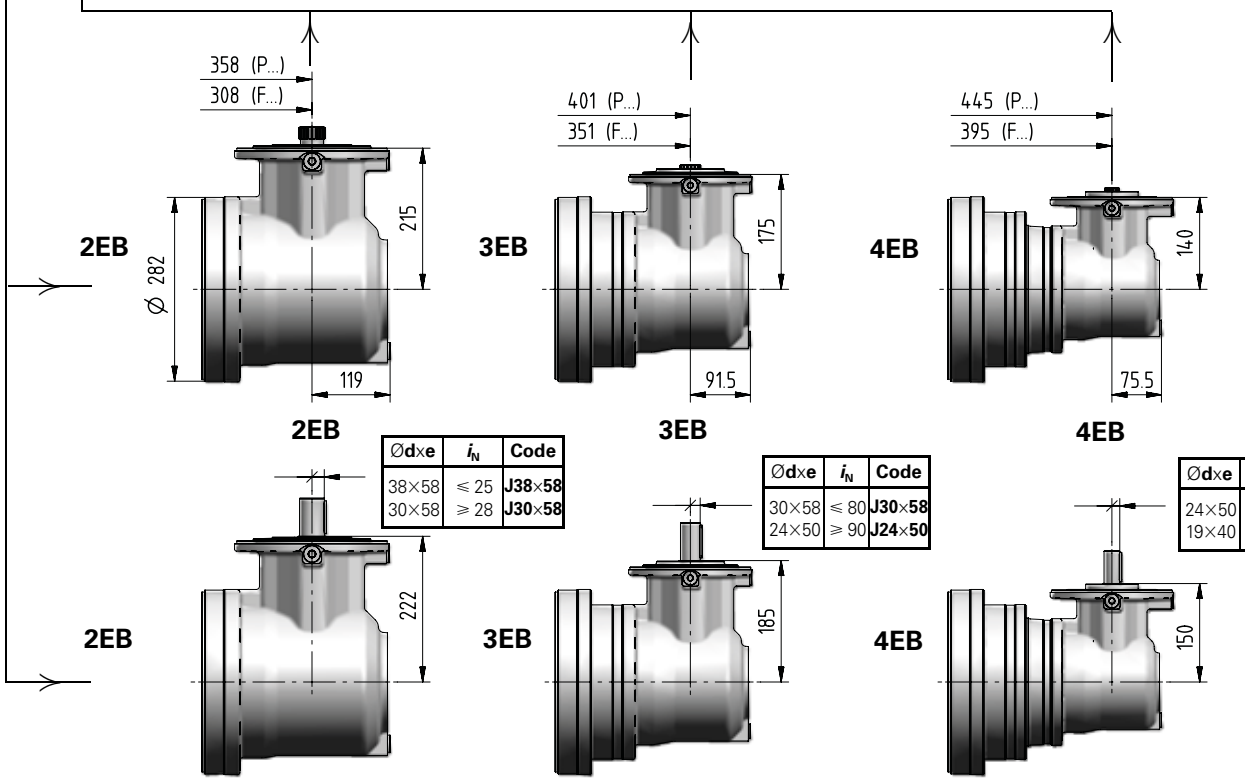


Train of gears	d	e	c	Code
1EL	60	105	138	**C60×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	48	82	115	**C48×82**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**

Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	28×250	310	405	–	103	82	82	103	82	82	**I28×250**
112	28×250	336	435	–	103	82	82	103	82	82	**I28×250**
132	38×300	445	553	133,5	120	102	102	120	102	102	**I38×300**
160	42×350	573	640	159	153	135	135	153	135	135	**I42×350**
180	48×350	613	734	159	153	135	135	153	135	135	**I48×350**
200	55×400	654	734	159	153	–	–	153	–	–	**I55×400**
225	60×450	710	–	189	183	–	–	183	–	–	**I60×450**
250	65×550	735	–	189	–	–	–	–	–	–	**I65×550**
280	75×550	819	–	189	–	–	–	–	–	–	**I75×550**

1) Values valid for brake motor; for other dimensions see TX catalog.

Train of gears	L	Code
2EL	62	ch.7
3EL, 4EL	64	
2EB	62	
3EB, 4EB	64	



Ødxe	i_N	Code
38×58	⩽ 25	**J38×58**
30×58	⩾ 28	**J30×58**

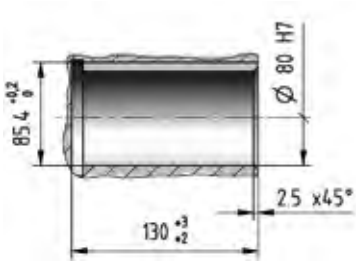
Ødxe	i_N	Code
30×58	⩽ 80	**J30×58**
24×50	⩾ 90	**J24×50**

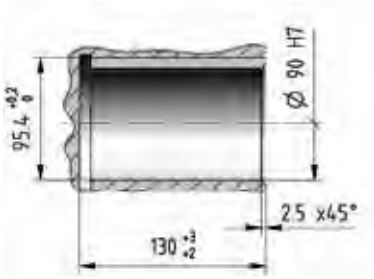
Ødxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**

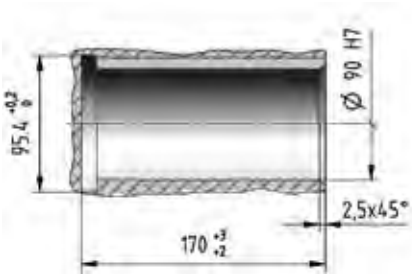
2591-01.02

012A - Output side details

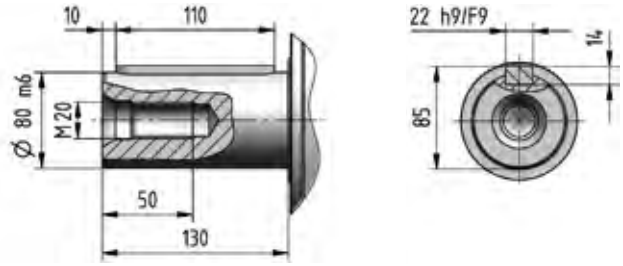
Suggested mating dimensions

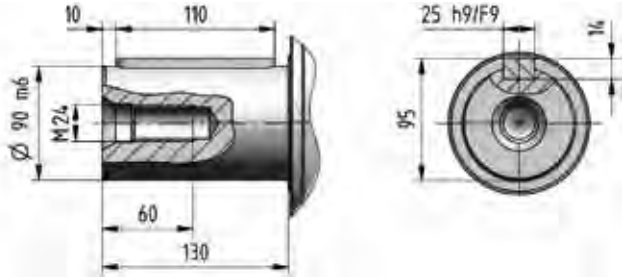


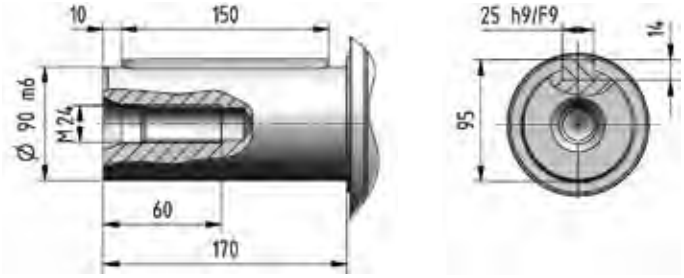




Gear reducer cylindrical shaft end



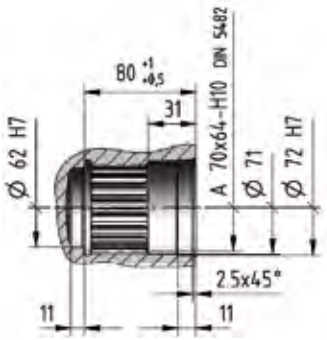


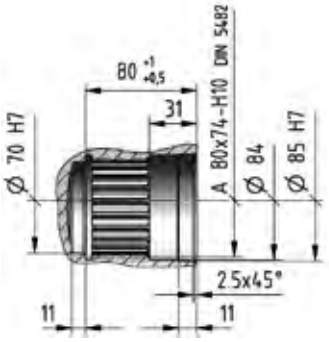


4

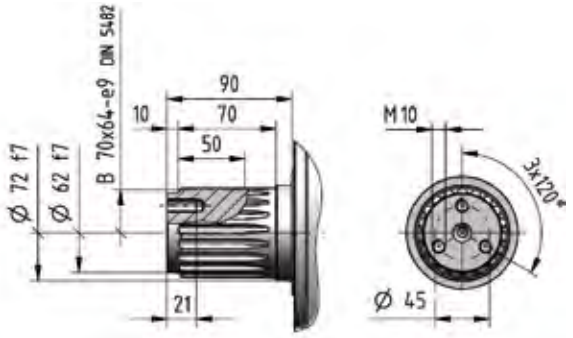
2591-01.02

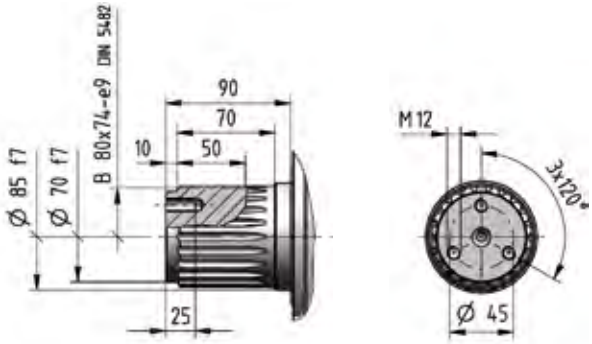
Suggested mating dimensions





Gear reducer splined shaft end



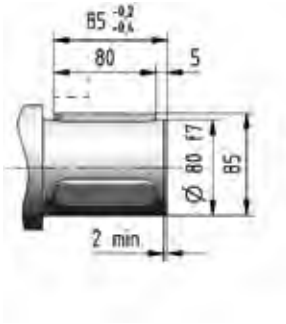


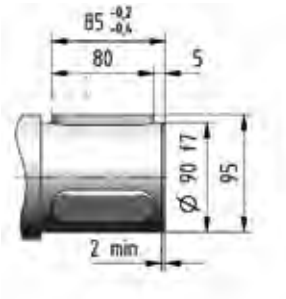
4

2591-01.02

012A - Output side details

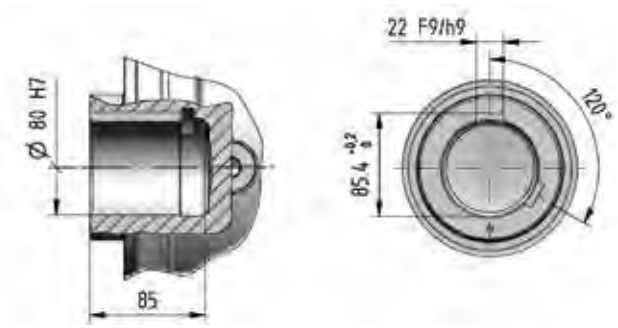
Suggested mating dimensions

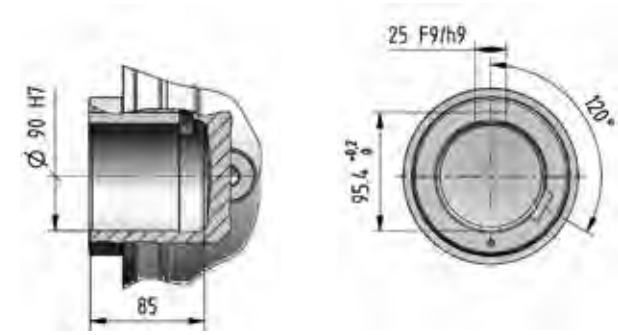




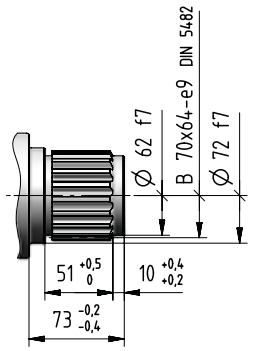
Keys hardness HRC ⩾ 40.

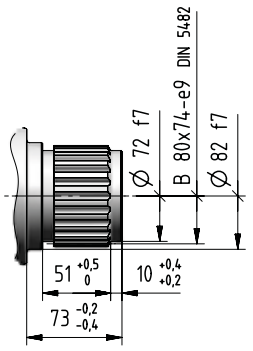
Gear reducer hollow shaft with keyway



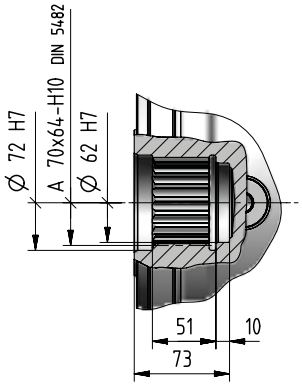


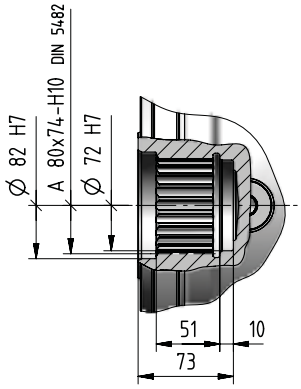
Suggested mating dimensions





Splined hollow shaft

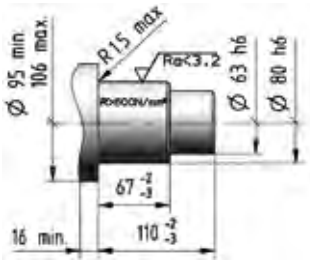


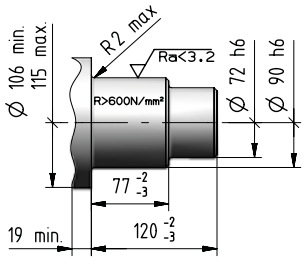


4

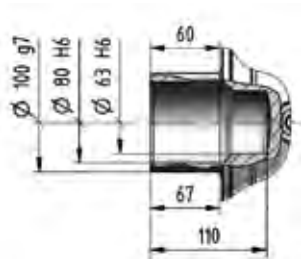
2591-01.02

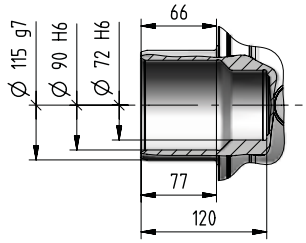
Suggested mating dimensions



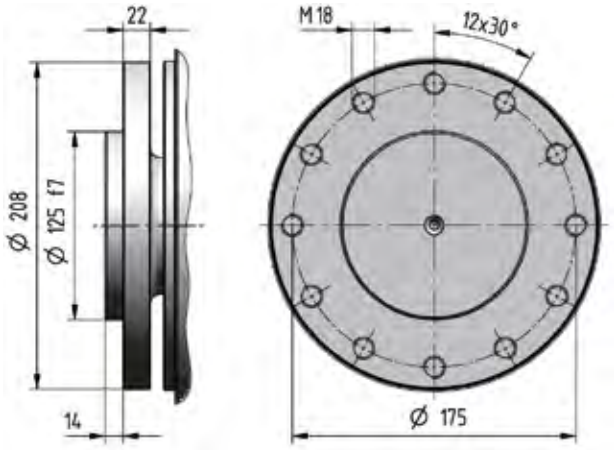


Gear reducer hollow shaft for shaft mounting



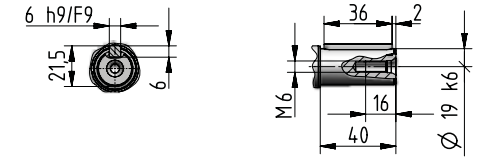


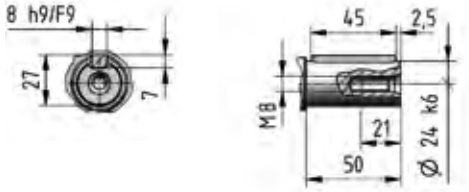
Gear reducer flanged shaft

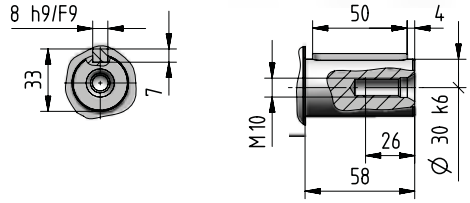


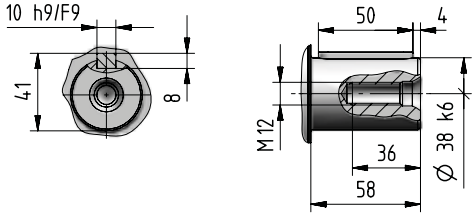
012A - Input side details

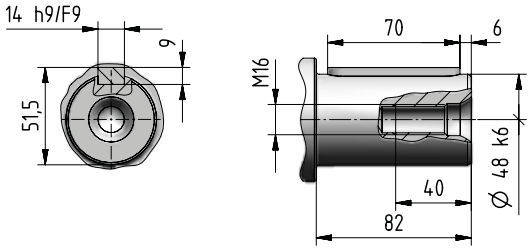
Gear reducer cylindrical shaft end

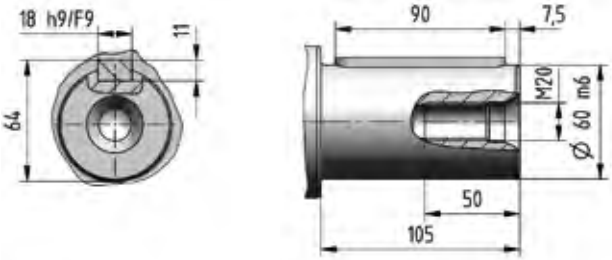




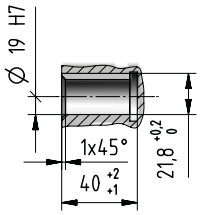


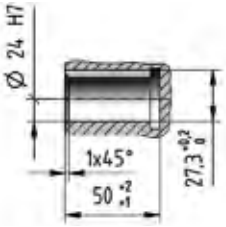


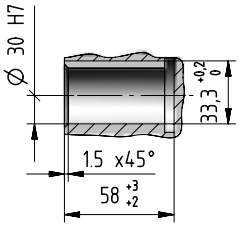


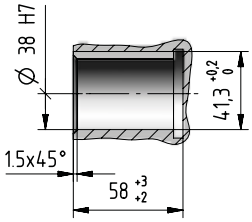


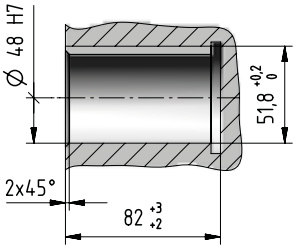
Suggested mating dimensions

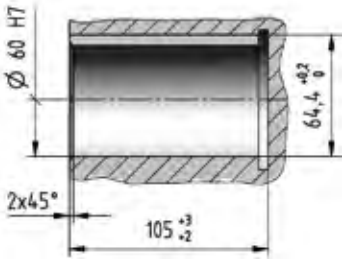




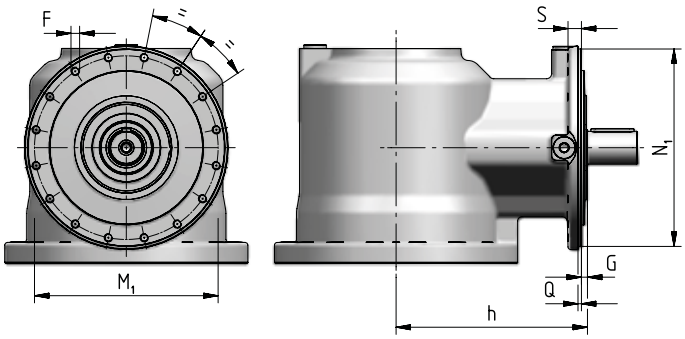








Bevel helical input flange



Train of gears	N_1 ∅ h6	Q	G	h	S	M_1 ∅	F ∅
2EB	229	4	7	222	15	213	M10 (n. 16)
3EB	184	3,5	10	185	12	171	M8 (n. 12)
4EB	184	3,5	10	150	12	171	M8 (n. 12)

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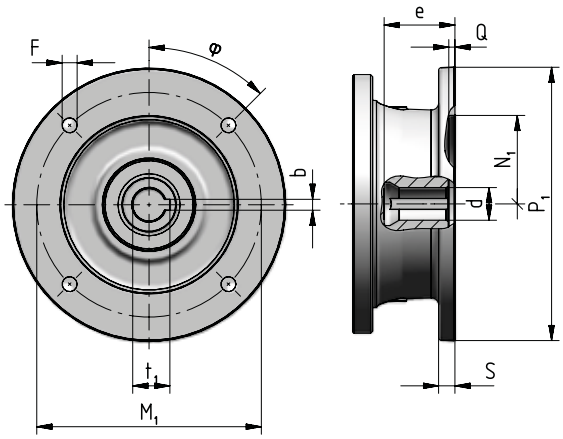
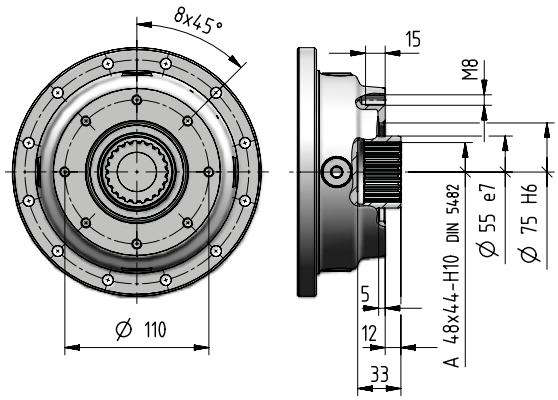
IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6
250	550	18	65 E6	142	18	69,4	500	18 (n.8)	22,5°	450	6
280	550	18	75 E6	142	20	79,9	500	18 (n.8)	22,5°	450	6

Universal flange adapter



For more information see ch. 8.7.

4

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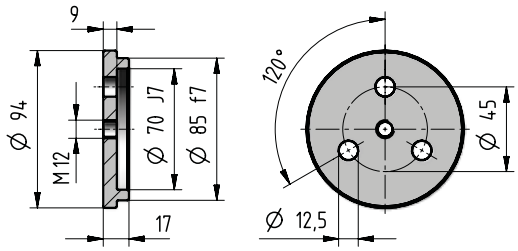
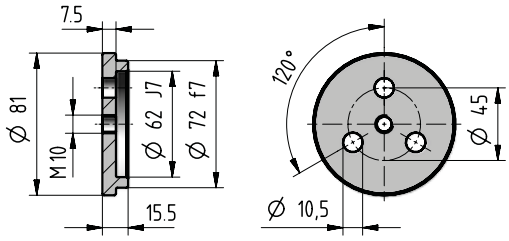
012A - Accessories

Stop washer

[included]



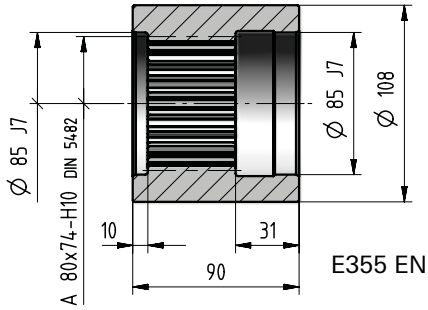
Code: **,SW080**



Code: **,SW070**

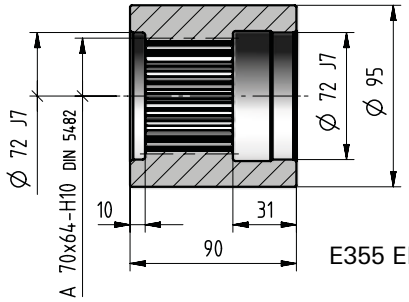
Splined bush

[included]



E355 EN10297-1

Code: **,SB080**

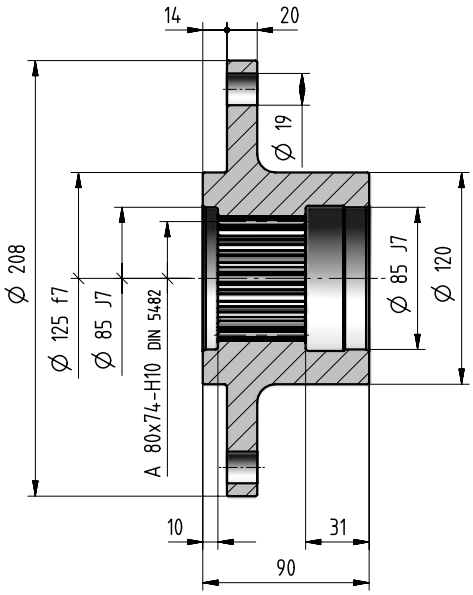


E355 EN10297-1

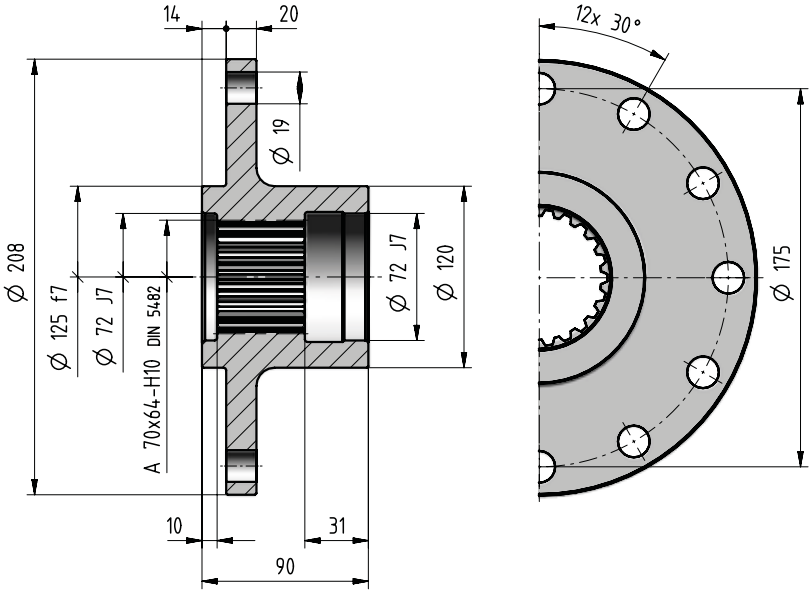
Code: **,SB070**

Wheel flange

[included]



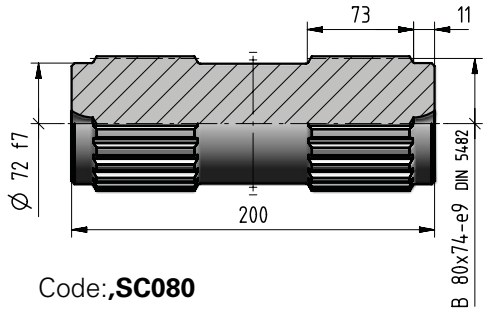
Code: **,WF080**



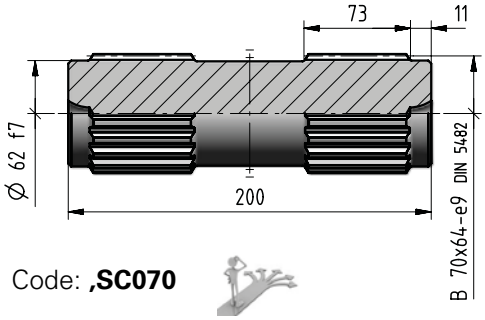
Code: **,WF070**

kg	Accessories																
	,SW080	,SW070	,SB080	,SB070	,WF080	,WF070	,SC080	,SC070	,R012FA	,R012EB	,R012EC	,R012DD	,R012DE	,R012DF	,TA10c	,SD115	,SD100
	0,6	0,35	3,4	2,7	8,2	8,9	7	5,2	12	10	12	9	10,8	12,6	6,5	7,2	4,4

Splined bar



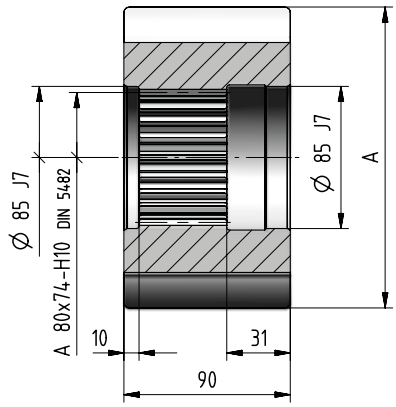
Code:**,SC080**



Code: **,SC070**

Pinion gear

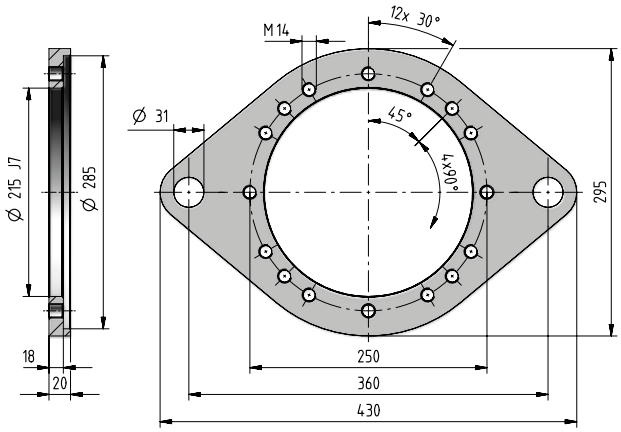
[included]



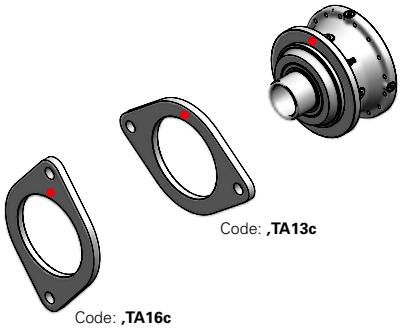
m_P	z_P	x	A Ø h9	Code
14	11	0,5	194,5	**,R012FA**
12	12	0,5	179	**,R012EB**
12	13	0,5	191	**,R012EC**
10	14	0,5	169	**,R012DD**
10	15	0,5	179	**,R012DE**
10	16	0,5	189	**,R012DF**

Torque arm

[included]



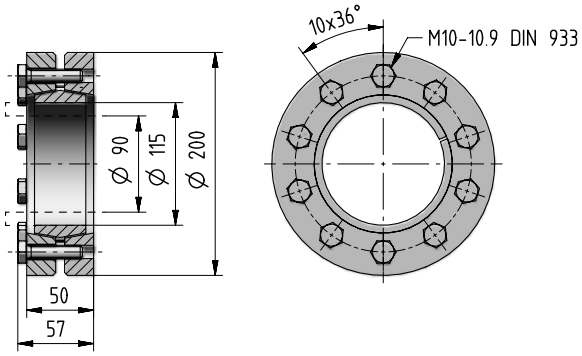
Code: **,TA10c**



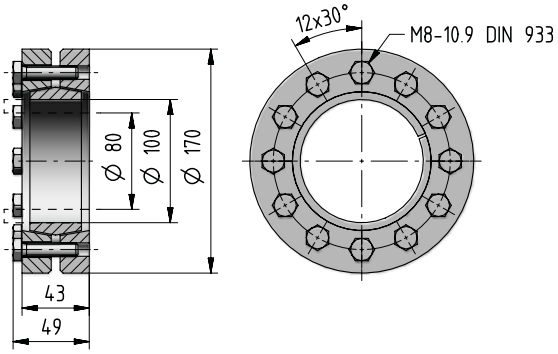
If an already mounted torque arm is required, state the relevant position between torque arm and gear reducer. This position is given by the flange upper fastening hole (stated in red in the figure).

● Reference hole for the identification of the mounting position

Shrink disc



Code: **,SD115**

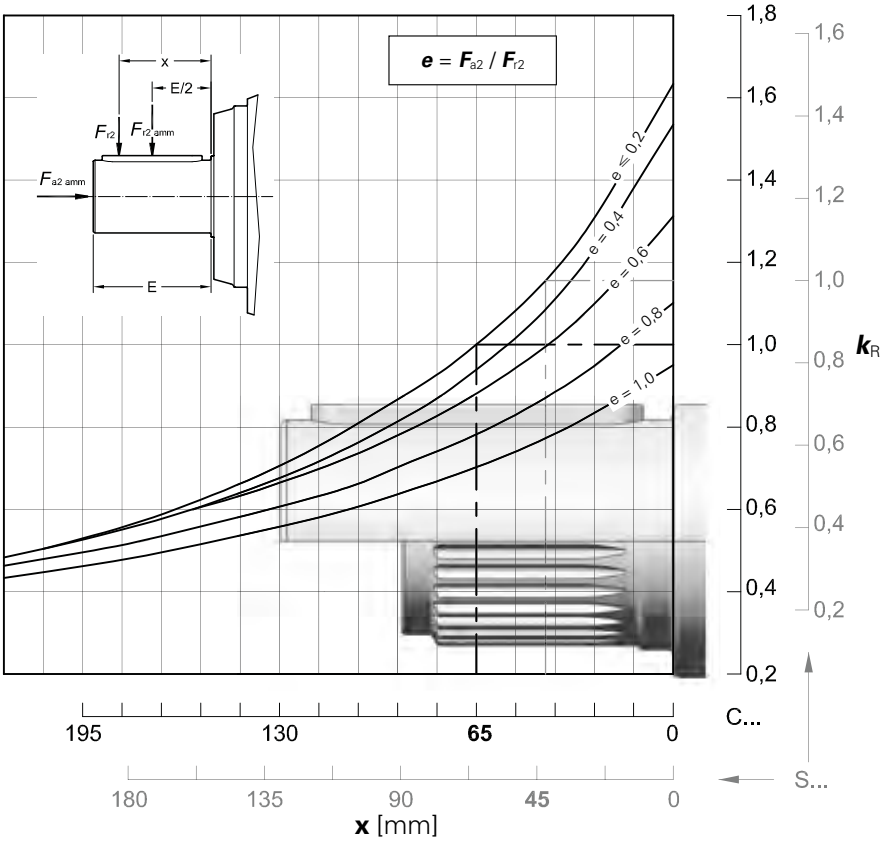


Code: **,SD100**

012A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

Radial loads $F_{r2\,adm}$ and axial loads $F_{a2\,adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

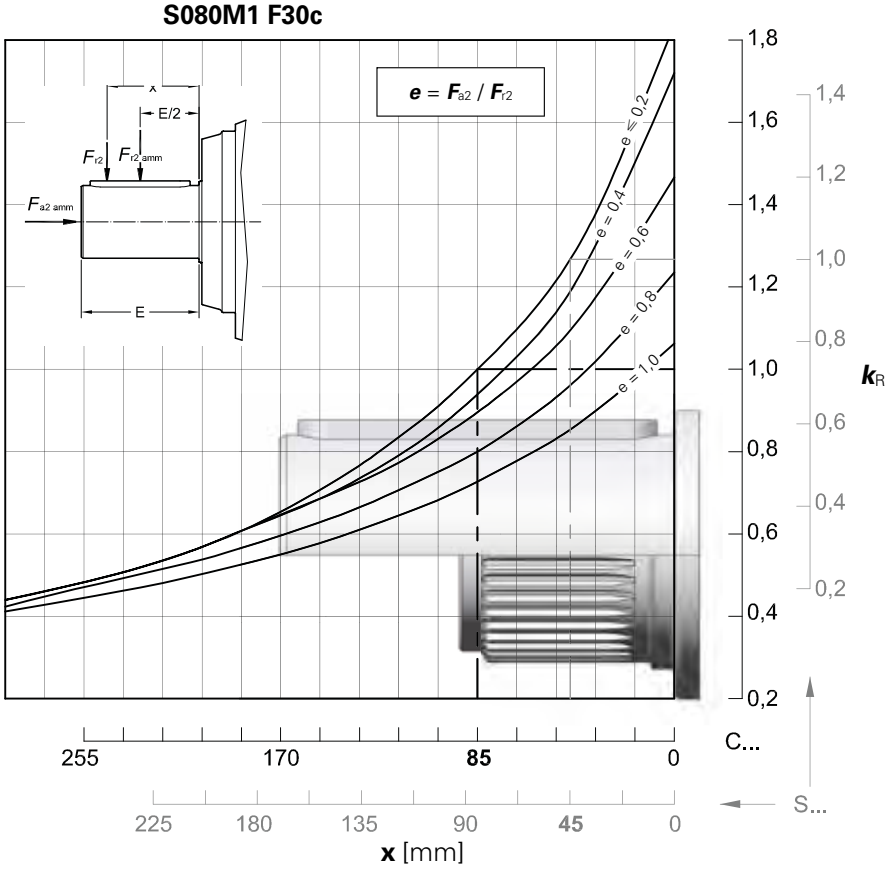
Output side: C090M1 F20c
S080M1 F20c
C090M1 P20c[1)]
S080M1 P20c[1)]



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{r2\,adm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	118 000	132 000	106 000	170 000
22 400	112 000	125 000	106 000	160 000
28 000	106 000	118 000	106 000	150 000
35 500	95 000	112 000	106 000	140 000
45 000	90 000	100 000	100 000	132 000
56 000	85 000	95 000	95 000	125 000
71 000	80 000	90 000	85 000	118 000
90 000	75 000	85 000	80 000	106 000
112 000	67 000	80 000	75 000	100 000
140 000	63 000	75 000	71 000	95 000
180 000	60 000	67 000	67 000	90 000
224 000	56 000	63 000	60 000	80 000
280 000	53 000	60 000	56 000	75 000
355 000	47 500	56 000	53 000	71 000
450 000	45 000	50 000	50 000	67 000
560 000	42 500	47 500	47 500	63 000
710 000	40 000	45 000	42 500	60 000
900 000	37 500	42 500	40 000	53 000
1 120 000	33 500	40 000	37 500	50 000
1 400 000	31 500	37 500	35 500	47 500
1 800 000	30 000	33 500	33 500	45 000
2 240 000	28 000	31 500	30 000	42 500
2 800 000	26 500	30 000	28 000	37 500
max	**118 000**	**132 000**	**106 000**	**170 000**

1) For foot mounting design multipy $F_{r2\,adm}$ by 0,85 and $F_{a2\,adm}$ by 0,56.

Output side: C090M2 F30c
S080M1 F30c



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,adm}$ C ...	$F_{r2\,adm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	100 000	132 000	118 000	170 000
22 400	100 000	125 000	118 000	160 000
28 000	95 000	118 000	112 000	150 000
35 500	85 000	112 000	106 000	140 000
45 000	80 000	100 000	100 000	132 000
56 000	75 000	95 000	95 000	118 000
71 000	71 000	90 000	85 000	112 000
90 000	67 000	85 000	80 000	106 000
112 000	60 000	80 000	75 000	100 000
140 000	56 000	75 000	71 000	90 000
180 000	53 000	67 000	67 000	85 000
224 000	50 000	63 000	60 000	80 000
280 000	47 500	60 000	56 000	75 000
355 000	42 500	56 000	53 000	71 000
450 000	40 000	50 000	50 000	63 000
560 000	37 500	47 500	47 500	60 000
710 000	35 500	45 000	42 500	56 000
900 000	33 500	42 500	40 000	53 000
1 120 000	31 500	40 000	37 500	50 000
1 400 000	28 000	37 500	35 500	45 000
1 800 000	26 500	33 500	33 500	42 500
2 240 000	25 000	31 500	31 500	40 000
2 800 000	23 600	30 000	28 000	37 500
max	**100 000**	**132 000**	**118 000**	**170 000**

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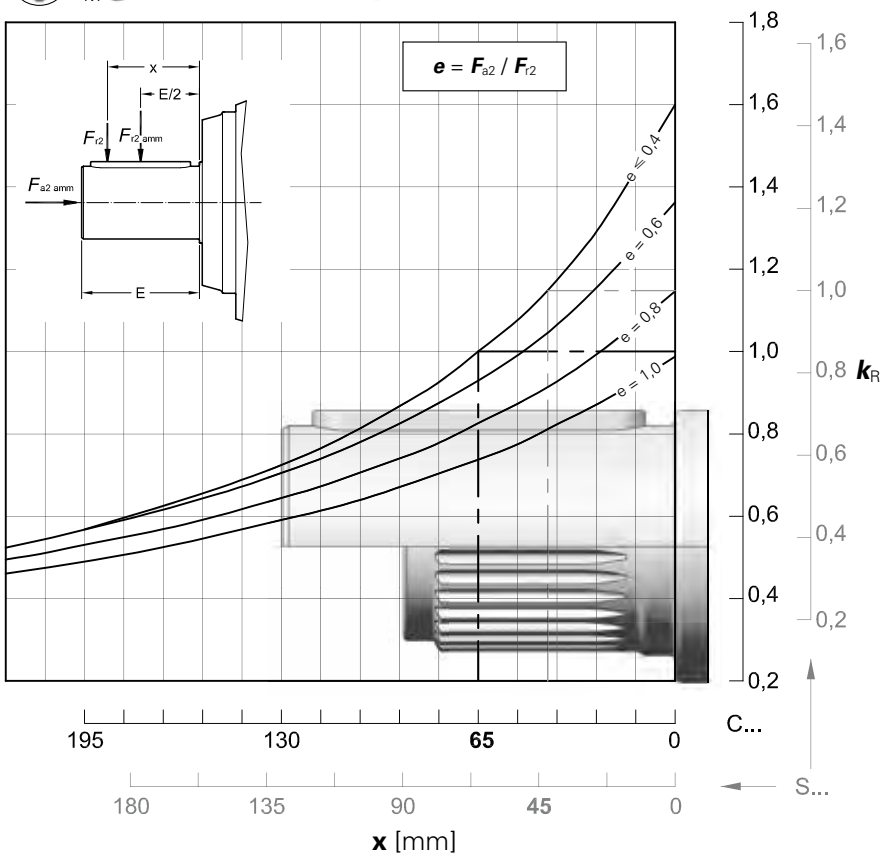
Output side: **C080M1 F10c**
S070M1 F10c
C080M1 P10c[1)]
S070M1 P10c[1)]

M_{2U} = 11 800 [N m]

M_{2U} = 9 000 [N m]



$n_2 \cdot L_h$	$F_{r2\ amm}$		$F_{a2\ adm}$	$F_{a2\ adm}$
min^{-1} · h	**C ...**	**S ...**	←	→
< **18 000**	90 000	100 000	100 000	125 000
22 400	85 000	95 000	100 000	125 000
28 000	80 000	90 000	90 000	112 000
35 500	75 000	85 000	85 000	106 000
45 000	71 000	80 000	80 000	100 000
56 000	67 000	75 000	75 000	95 000
71 000	60 000	67 000	71 000	85 000
90 000	56 000	63 000	67 000	80 000
112 000	53 000	60 000	60 000	75 000
140 000	50 000	56 000	56 000	71 000
180 000	45 000	53 000	53 000	67 000
224 000	42 500	47 500	50 000	60 000
280 000	40 000	45 000	47 500	56 000
355 000	37 500	42 500	42 500	53 000
450 000	35 500	40 000	40 000	50 000
560 000	33 500	37 500	37 500	47 500
710 000	30 000	33 500	35 500	42 500
900 000	28 000	31 500	33 500	40 000
1 120 000	26 500	30 000	30 000	37 500
1 400 000	25 000	28 000	28 000	35 500
1 800 000	22 400	26 500	26 500	33 500
2 240 000	21 200	25 000	25 000	31 500
2 800 000	20 000	22 400	23 600	28 000
max	**90 000**	**100 000**	**100000**	**125 000**

1) For foot mounting design multipy $F_{r2\ adm}$ by 0,85 and $F_{a2\ adm}$ by 0,56.

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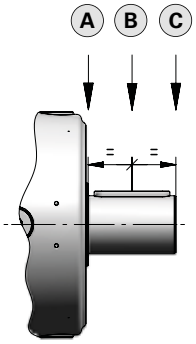
012A - Radial loads F_{r1} [N] on input shaft

Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.



$n_1 \cdot L_h$	Train of gears											
	1EL			2EL			3EL			4EL		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	28 000	19 000	14 000	20 000	14 000	10 600	14 000	8 500	5 300	6 300	4 250	3 350
1 120 000	26 500	18 000	13 200	19 000	12 500	9 500	13 200	8 000	5 000	5 600	4 000	3 150
1 400 000	25 000	16 000	12 500	17 000	11 800	9 000	11 800	7 100	4 500	5 300	3 750	2 800
1 800 000	22 400	15 000	11 200	16 000	10 600	8 000	11 200	6 700	4 250	5 000	3 350	2 650
2 240 000	21 200	14 000	10 600	15 000	10 000	7 500	10 000	6 300	4 000	4 500	3 150	2 500
2 800 000	20 000	13 200	9 500	14 000	9 500	7 100	9 500	5 600	3 550	4 250	3 000	2 240
3 550 000	18 000	11 800	9 000	12 500	8 500	6 700	9 000	5 300	3 350	4 000	2 800	2 120
4 500 000	17 000	11 200	8 500	11 800	8 000	6 000	8 000	5 000	3 150	3 550	2 500	1 900
5 600 000	16 000	10 600	7 500	11 200	7 500	5 600	7 500	4 500	2 800	3 350	2 360	1 800
7 100 000	14 000	9 500	7 100	10 000	6 700	5 300	7 100	4 250	2 650	3 150	2 120	1 700
9 000 000	13 200	9 000	6 700	9 500	6 300	4 750	6 300	4 000	2 500	2 800	2 000	1 500
11 200 000	12 500	8 000	6 000	8 500	6 000	4 500	6 000	3 550	2 240	2 650	1 900	1 400
14 000 000	11 200	7 500	5 600	8 000	5 600	4 250	5 600	3 350	2 120	2 500	1 700	1 320
18 000 000	10 600	7 100	5 300	7 500	5 000	3 750	5 000	3 150	1 900	2 240	1 600	1 180
22 400 000	10 000	6 700	4 750	6 700	4 750	3 550	4 750	2 800	1 800	2 120	1 500	1 120
28 000 000	9 000	6 000	4 500	6 300	4 250	3 350	4 500	2 650	1 700	2 000	1 400	1 060
35 500 000	8 500	5 600	4 250	6 000	4 000	3 000	4 000	2 500	1 600	1 800	1 250	950
45 000 000	8 000	5 300	3 750	5 300	3 750	2 800	3 750	2 240	1 400	1 700	1 180	900

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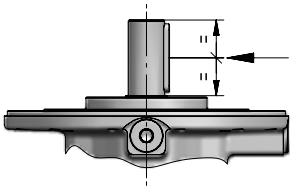
Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears					
	2EB		3EB		4EB	
	$i_N \leqslant 25$	$i_N \geqslant 28$	$i_N \leqslant 100$	$i_N \geqslant 112$	$i_N \leqslant 315$	$i_N \geqslant 355$
900 000	5 600	4 750	4 000	3 350	2 800	2 360
1 120 000	5 300	4 500	3 750	3 150	2 650	2 240
1 400 000	4 750	4 000	3 550	2 800	2 360	2 000
1 800 000	4 500	3 750	3 150	2 650	2 240	1 900
2 240 000	4 000	3 550	3 000	2 500	2 000	1 700
2 800 000	3 750	3 150	2 800	2 240	1 900	1 600
3 550 000	3 550	3 000	2 500	2 120	1 800	1 500
4 500 000	3 350	2 800	2 360	2 000	1 600	1 400
5 600 000	3 000	2 650	2 240	1 800	1 500	1 320
7 100 000	2 800	2 360	2 000	1 700	1 400	1 180
9 000 000	2 650	2 240	1 900	1 600	1 320	1 120
11 200 000	2 360	2 000	1 700	1 400	1 180	1 000
14 000 000	2 240	1 900	1 600	1 320	1 120	950
18 000 000	2 000	1 700	1 500	1 250	1 000	850
22 400 000	1 900	1 600	1 400	1 120	950	800
28 000 000	1 800	1 500	1 250	1 060	900	750
35 500 000	1 600	1 400	1 180	1 000	800	710
45 000 000	1 500	1 320	1 120	900	750	630



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015A

Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H₂O
1EL	3,55	**3,52**	398 6 740	256 7 690	142 9 170	11 200 13 200	2 240 2 800	28 21,2	42,5 32,5	58 43,7
	4,25	**4,17**	335 6 970	216 7 960	120 9 490	15 000 18 000	2 240 3 150			
	5	**5,29**	264 7 280	170 7 780	94,4 8 070	12 190 15 000	2 240 3 550			
	6	**5,87**	239 6 400	153 6 570	85,2 6 810	10 270 12 500	2 240 3 550			
2EL	12,5	**12,4**	113 8 720	72,8 9 800	40,4 10 160	11 200 13 200	2 500 2 800	20 15	29 22,4	38,7 30
	14	**14,7**	95,4 10 160	61,3 10 490	34,1 10 880	15 000 18 000	2 500 2 800			
	16	**17,4**	80,4 10 320	51,7 10 600	28,7 10 990	15 000 18 000	2 800 3 550			
	18	**18,6**	75,2 8 180	48,3 8 400	26,9 8 710	12 500 15 000	2 500 2 800			
	22,4	**22,1**	63,4 10 470	40,7 10 760	22,6 11 150	15 000 18 000	2 800 4 000			
	25	**25,9**	54,0 10 500	34,7 10 790	19,3 11 190	15 000 18 000	2 800 4 000			
	28	**28**	50,0 8 390	32,1 8 620	17,8 8 930	12 500 15 000	2 800 4 000			
	31,5	**31,9**	43,9 7 670	28,2 7 880	15,7 8 170	12 590 18 000	2 800 4 000			
	35,5	**32,9**	42,6 8 470	27,4 8 700	15,2 9 020	12 500 15 000	2 800 4 000			
	40	**40,4**	34,6 8 580	22,3 8 810	12,4 9 140	12 500 15 000	2 800 4 000			
	45	**44,8**	31,3 7 250	20,1 7 440	11,2 7 720	10 600 12 500	2 800 4 000			
3EL	50	**51,6**	27,1 11 030	17,4 11 330	9,68 11 750	15 000 18 000	2 800 3 150	14 10,6	21,2 16	28 21,2
	63	**61,3**	22,8 11 150	14,7 11 450	8,16 11 870	15 000 18 000	3 150 4 000			
	71	**72,7**	19,3 11 260	12,4 11 570	6,88 12 000	15 000 18 000	3 150 4 000			
	80	**77,7**	18,0 11 310	11,6 11 620	6,43 12 070	15 000 18 000	3 150 4 000			
	90	**92,2**	15,2 11 430	9,76 11 740	5,42 12 390	15 000 18 000	3 150 4 000			
	100	**98,6**	14,2 9 060	9,13 9 310	5,07 9 650	12 500 15 000	3 150 4 000			
	112	**108**	12,9 11 540	8,31 11 860	4,62 12 690	15 000 18 000	3 150 4 000			
	125	**117**	12,0 11 600	7,69 11 920	4,27 12 840	15 000 18 000	3 150 4 000			
	140	**137**	10,2 11 710	6,55 12 040	3,64 13 160	15 000 18 000	3 150 4 000			
	160	**169**	8,30 11 860	5,33 12 420	2,96 13 570	15 000 18 000	3 150 4 000			
	180	**174**	8,04 9 380	5,17 9 640	2,87 10 480	12 500 15 000	3 150 4 000			
	200	**198**	7,07 11 900	4,54 12 220	2,52 12 670	15 000 18 000	3 150 4 000			
	224	**214**	6,54 9 500	4,21 9 890	2,34 10 810	12 500 15 000	3 150 4 000			
	250	**251**	5,57 9 600	3,58 10 130	1,99 11 070	12 500 15 000	3 150 4 000			

	i_N	i_{eff}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H₂O
4EL	180	**178**	7,86 11 900	5,05 12 520	2,81 13 680	15 000 18 000	2 800 3 150	12,5 9	18,5 14	24,3 18,5
	200	**211**	6,62 12 030	4,26 12 850	2,37 14 040	15 000 18 000	2 800 3 150			
	250	**255**	5,49 12 360	3,53 13 220	1,96 14 450	15 000 18 000	3 150 4 000			
	280	**301**	4,64 12 680	2,99 13 560	1,66 14 820	15 000 18 000	3 150 4 000			
	315	**323**	4,33 12 820	2,78 13 700	1,55 14 980	15 000 18 000	3 150 4 000			
	355	**358**	3,91 13 010	2,52 13 910	1,40 15 000	15 000 18 000	3 150 4 000			
	400	**404**	3,47 13 250	2,23 14 170	1,24 15 000	15 000 18 000	2 800 3 150			
	450	**448**	3,13 13 460	2,01 14 390	1,12 15 000	15 000 18 000	3 150 4 000			
	500	**518**	2,70 13 760	1,74 14 710	0,965 15 000	15 000 18 000	3 150 4 000			
	560	**568**	2,46 13 960	1,58 14 920	0,880 15 000	15 000 18 000	3 150 4 000			
	630	**657**	2,13 14 270	1,37 15 000	0,761 15 000	15 000 18 000	3 150 4 000			
	710	**720**	1,94 14 470	1,25 15 000	0,694 15 000	15 000 18 000	3 150 4 000			
	800	**788**	1,78 14 660	1,14 15 000	0,635 15 000	15 000 18 000	3 150 4 000			
	900	**846**	1,66 14 820	1,06 15 000	0,591 15 000	15 000 18 000	3 150 4 000			
	1000	**999**	1,40 15 000	0,901 15 000	0,501 15 000	15 000 18 000	3 150 4 000			
	1120	**1172**	1,19 15 000	0,768 15 000	0,426 15 000	15 000 18 000	3 150 4 000			
	1250	**1267**	1,11 12 110	0,710 12 500	0,395 12 500	12 500 15 000	3 150 4 000			
	1400	**1441**	0,972 15 000	0,625 15 000	0,347 15 000	15 000 18 000	3 150 4 000			
	1600	**1691**	0,828 14 110	0,532 15 000	0,296 15 000	15 000 18 000	3 150 4 000			
	1800	**1827**	0,766 12 500	0,492 12 500	0,274 12 500	12 500 15 000	3 150 4 000			
	2240	**2145**	0,653 12 500	0,420 12 500	0,233 12 500	12 500 15 000	3 150 4 000			
	2500	**2636**	0,531 12 500	0,341 12 500	0,190 12 500	12 500 15 000	3 150 4 000			
	2800	**2921**	0,479 10 600	0,308 10 600	0,171 10 600	10 600 12 500	3 150 4 000			

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Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at –	20°C	40°C H₂O
2EB	9	**8,79**	159 3 720	102 4 250	56,9 5 070	6 140 7 750	2 240 2 800	21,2 16	31,5 23,6	41,2 31,5
	10	**10,4**	134 4 420	86,3 5 040	47,9 6 010	7 290 9 000	2 240 2 800			
	11,2	**11,1**	126 3 760	81,1 4 300	45,1 5 120	6 140 7 750	2 240 2 800			
	12,5	**13,2**	106 5 600	68,0 6 400	37,8 7 630	9 240 11 500	2 240 2 800			
	14	**14,7**	95,5 6 210	61,4 6 950	34,1 7 210	10 240 12 500	2 240 2 800			
	16	**16,7**	83,8 5 660	53,9 6 470	29,9 7 710	9 240 11 500	2 240 2 800			
	20	**18,5**	75,7 6 280	48,6 7 050	27,0 7 310	10 240 12 500	2 240 2 800			
	22,4	**21,2**	66,1 5 930	42,5 6 590	23,6 7 040	7 960 9 750	2 240 2 800			
	25	**23,5**	59,7 6 570	38,4 7 160	21,3 7 420	8 820 10 900	2 240 2 800			
	28	**26,5**	52,9 4 260	34,0 4 870	18,9 5 750	6 270 7 750	2 240 2 800			
	31,5	**29,3**	47,7 4 720	30,7 5 390	17,0 6 370	6 940 8 500	2 240 2 800			
3EB	31,5	**30,9**	45,3 6 600	29,1 7 530	16,2 8 980	10 480 13 200	2 800 3 550	14 11,2	21,8 16,5	29 21,8
	35,5	**36,7**	38,1 7 830	24,5 8 940	13,6 10 660	12 430 15 500	2 800 3 550			
	40	**39**	35,9 6 680	23,1 7 630	12,8 9 100	10 480 13 200	2 800 3 550			
	45	**43,6**	32,1 9 290	20,7 10 610	11,5 11 630	14 750 18 000	2 800 3 550			
	50	**46,6**	30,1 9 930	19,3 10 630	10,7 11 020	11 200 13 200	2 800 3 550			
	56	**55,2**	25,3 11 080	16,3 11 380	9,05 11 800	15 000 18 000	2 800 3 550			
	63	**64,8**	21,6 11 110	13,9 11 420	7,71 11 830	15 000 18 000	2 800 3 550			
	71	**69,7**	20,1 11 240	12,9 11 540	7,17 11 970	15 000 18 000	2 800 3 550			
	80	**81,8**	17,1 11 270	11,0 11 580	6,11 12 000	15 000 18 000	2 800 3 550			
	90	**88,4**	15,8 11 400	10,2 11 710	5,66 12 310	15 000 18 000	2 800 3 550			
	100	**104**	13,5 11 440	8,67 11 750	4,82 12 180	15 000 18 000	2 800 3 550			
	112	**110**	12,7 8 660	8,15 9 890	4,53 11 800	12 790 15 500	2 800 3 550			
	125	**130**	10,8 10 170	6,94 11 610	3,86 12 350	15 000 18 000	2 800 3 550			
	140	**140**	9,99 9 260	6,42 9 510	3,57 10 140	12 500 15 000	2 800 3 550			
	160	**164**	8,51 9 350	5,47 9 610	3,04 10 390	12 500 15 000	2 800 3 550			
	200	**202**	6,93 9 470	4,45 9 800	2,47 10 720	12 500 15 000	2 800 3 550			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at –	20°C	40°C H₂O
4EB	160	**153**	9,14 11 790	5,88 12 240	3,26 13 370	15 000 18 000	2 800 3 550	11,8 9	17,5 13,2	23 17,5
	180	**182**	7,70 11 920	4,95 12 560	2,75 13 730	15 000 18 000	2 800 3 550			
	200	**194**	7,21 11 960	4,63 12 690	2,57 13 860	15 000 18 000	2 800 3 550			
	224	**229**	6,10 12 170	3,92 13 010	2,18 14 220	15 000 18 000	2 800 3 550			
	250	**245**	5,71 12 290	3,67 13 140	2,04 14 360	15 000 18 000	2 800 3 550			
	280	**271**	5,17 12 470	3,33 13 340	1,85 14 580	15 000 18 000	2 800 3 550			
	315	**311**	4,50 12 740	2,89 13 620	1,61 14 890	15 000 18 000	2 800 3 550			
	355	**364**	3,85 13 040	2,48 13 950	1,38 15 000	15 000 18 000	2 800 3 550			
	400	**389**	3,60 13 180	2,32 14 090	1,29 15 000	15 000 18 000	2 800 3 550			
	450	**461**	3,04 13 520	1,95 14 460	1,08 15 000	15 000 18 000	2 800 3 550			
	500	**493**	2,84 10 490	1,83 11 220	1,01 12 260	12 500 15 000	2 800 3 550			
	560	**541**	2,59 13 850	1,66 14 810	0,924 15 000	15 000 18 000	2 800 3 550			
	630	**645**	2,17 12 790	1,40 13 140	0,776 14 250	15 000 18 000	2 800 3 550			
	710	**687**	2,04 14 360	1,31 15 000	0,728 15 000	15 000 18 000	2 800 3 550			
	800	**844**	1,66 14 820	1,07 15 000	0,593 15 000	15 000 18 000	2 800 3 550			
	900	**871**	1,61 11 440	1,03 12 230	0,574 12 500	12 500 15 000	2 800 3 550			
	1000	**990**	1,41 13 130	0,909 13 910	0,505 15 000	15 000 18 000	2 800 3 550			
	1120	**1070**	1,31 11 800	0,841 12 500	0,467 12 500	12 500 15 000	2 800 3 550			
	1250	**1256**	1,11 12 090	0,716 12 500	0,398 12 500	12 500 15 000	2 800 3 550			
	1400	**1392**	1,01 10 190	0,647 10 600	0,359 10 600	10 600 12 500	2 800 3 550			
	1600	**1544**	0,907 12 170	0,583 12 500	0,324 12 500	12 500 15 000	2 800 3 550			
	1800	**1711**	0,818 10 510	0,526 10 600	0,292 10 600	10 600 12 500	2 800 3 550			

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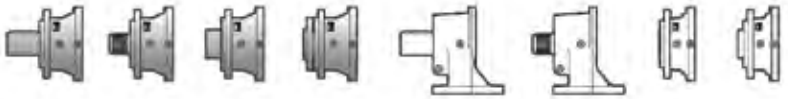
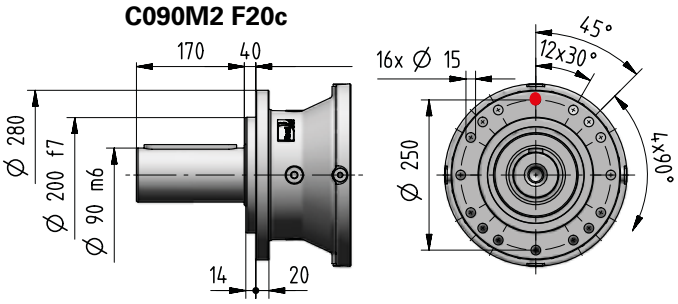
015A - Main Dimensions



C090M2 F20c



C090M2 F30c

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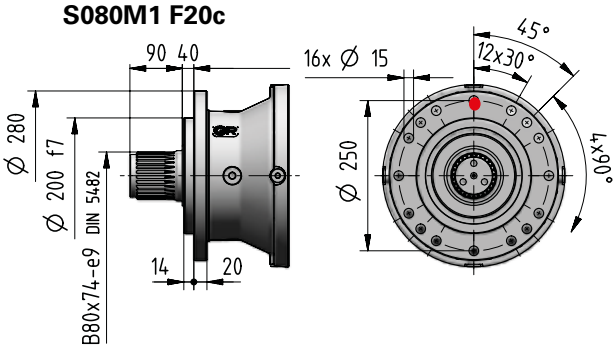

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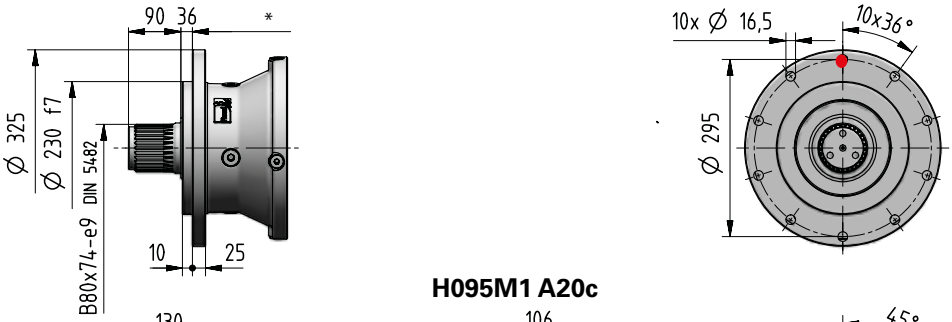

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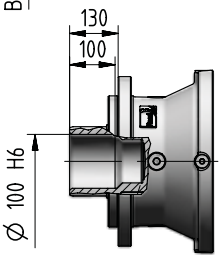

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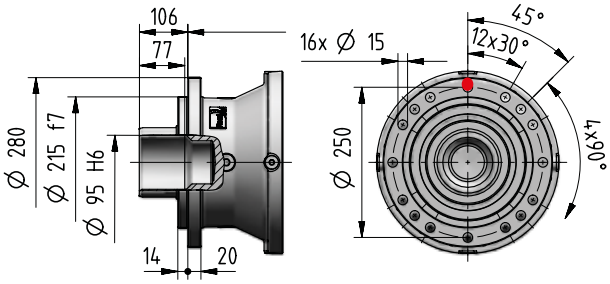

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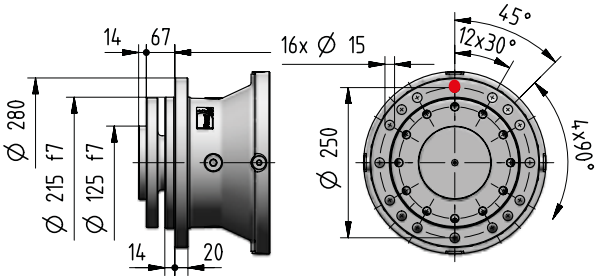

See page 4.132

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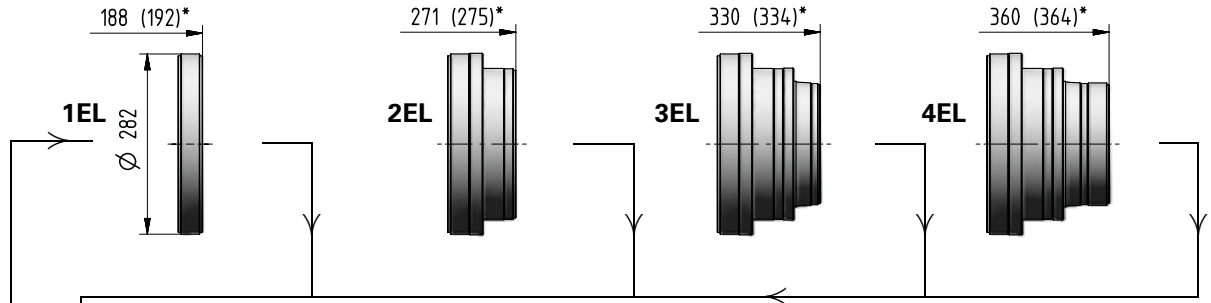
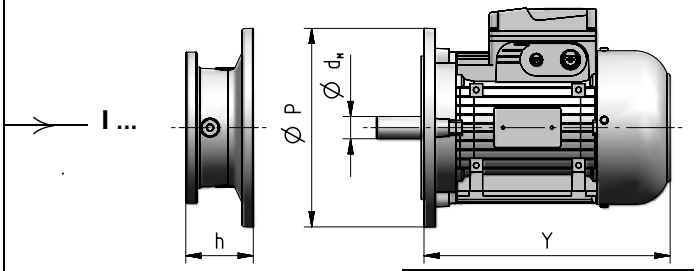
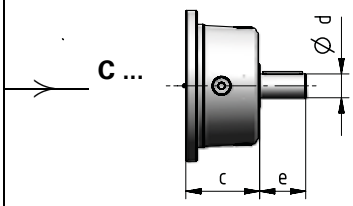


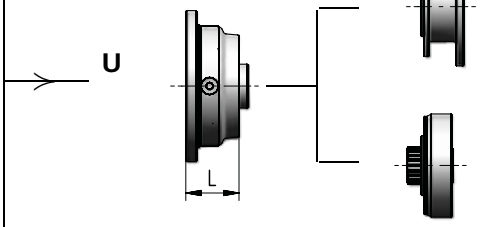


Motor size IEC	$d_M \times P$	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	28×250	310	405	–	103	82	82	103	82	82	**I28×250**
112	28×250	336	435	–	103	82	82	103	82	82	**I28×250**
132	38×300	445	553	133,5	120	102	102	120	102	102	**I38×300**
160	42×350	573	640	159	153	135	135	153	135	135	**I42×350**
180	48×350	613	734	159	153	135	135	153	135	135	**I48×350**
200	55×400	654	734	159	153	–	–	153	–	–	**I55×400**
225	60×450	710	–	189	183	–	–	183	–	–	**I60×450**
250	65×550	735	–	189	–	–	–	–	–	–	**I65×550**
280	75×550	819	–	189	–	–	–	–	–	–	**I75×550**

1) Values valid for brake motor; for other dimensions see TX catalog.



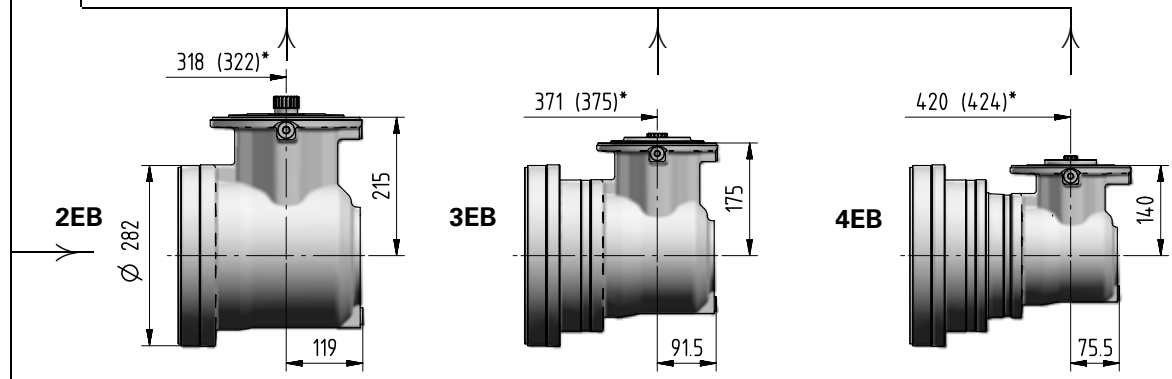
Train of gears	d	e	c	Code
1EL	60	105	138	**C60×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	48	82	115	**C48×82**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**



NEMA adapter

Hydraulic adapter

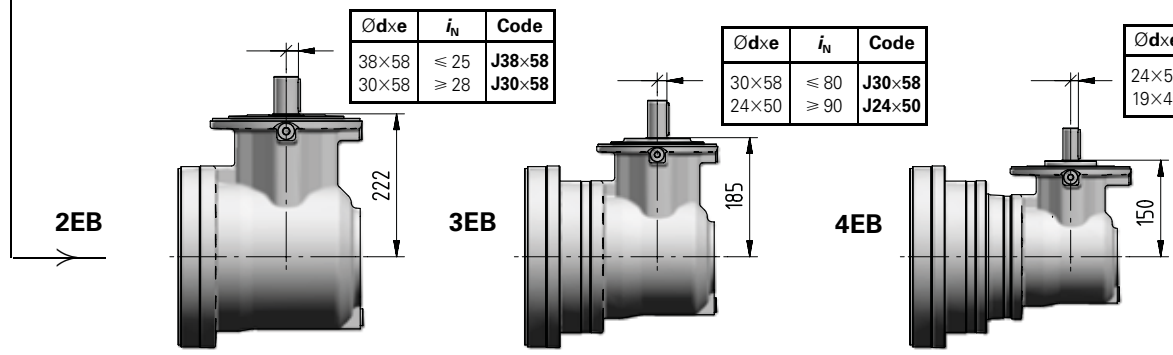
Train of gears	L	Code
2EL	62	ch.7
3EL, 4EL	64	
2EB	62	
3EB, 4EB	64	



Ødxe	i_N	Code
38×58	⩽ 25	**J38×58**
30×58	⩾ 28	**J30×58**

Ødxe	i_N	Code
30×58	⩽ 80	**J30×58**
24×50	⩾ 90	**J24×50**

Ødxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**



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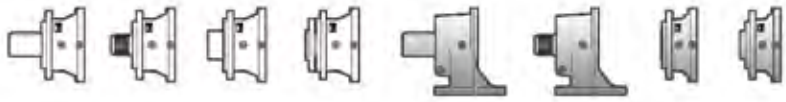
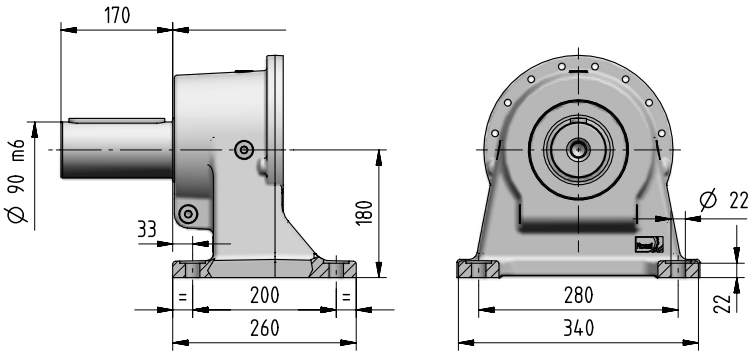
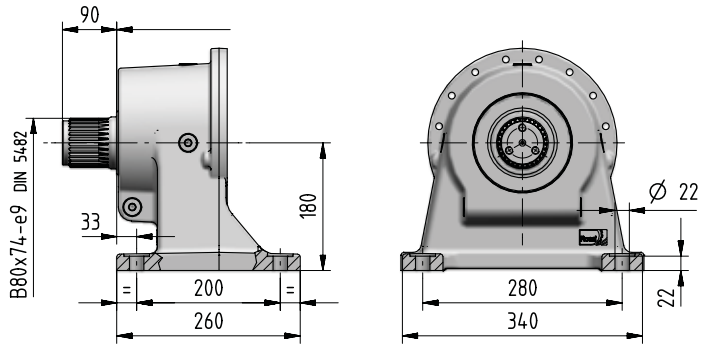
015A - Main Dimensions



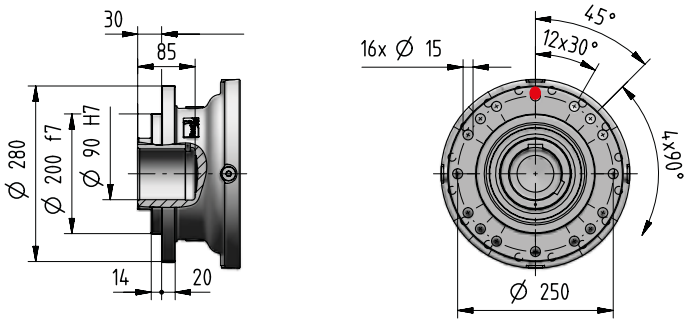
C090M2 P20c



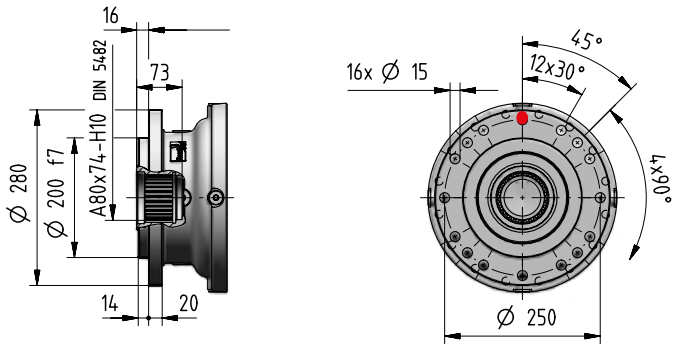
S080M1 P20c



K090M1 F06c

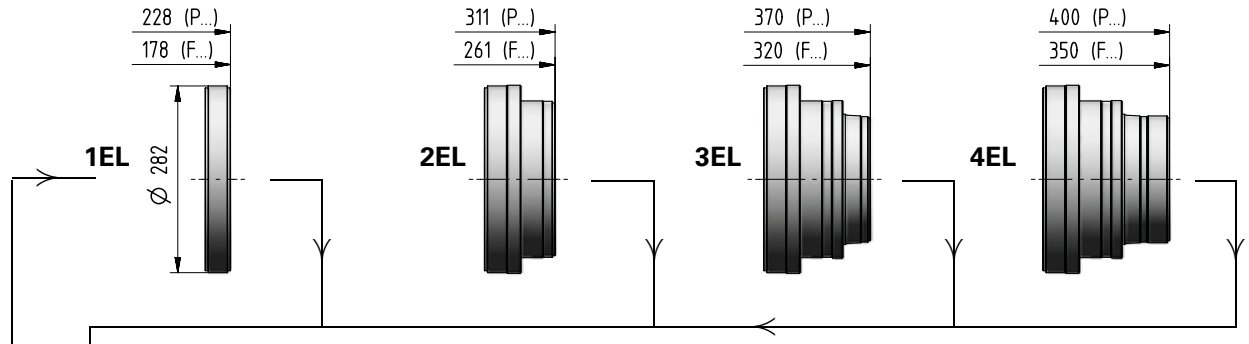


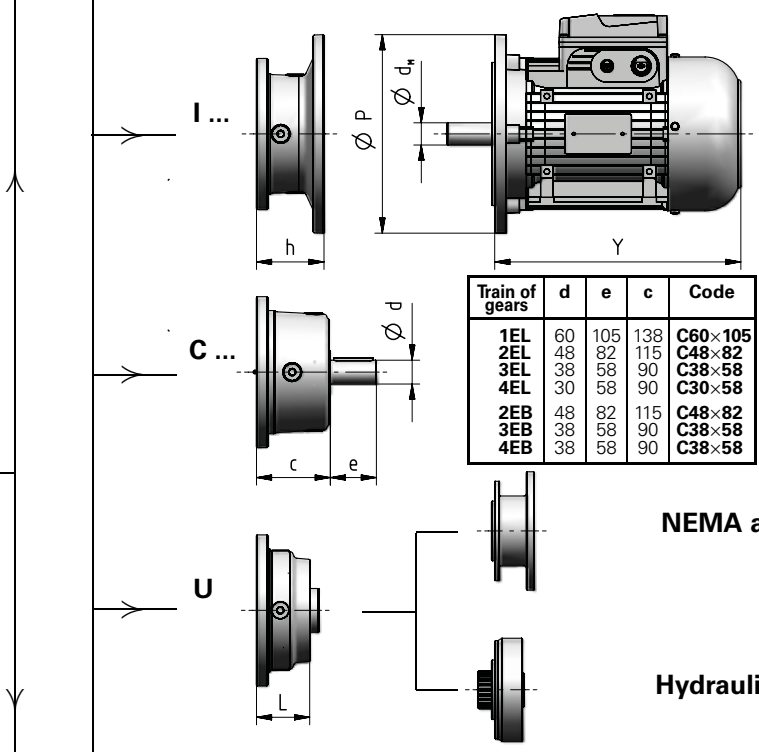
Z080M1 F05c



kg	Input options Code														Output options (Δ) Code			
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C...	U...	J...	C... S...	H... M...	C... P... S... P...	K... Z...
1EL	-	-	-	-	89	95	95	98	107	115	115	99	-	-				
2EL	-	-	-	97	101	107	107	109	118	-	-	102	94	-				
3EL	98	100	100	102	106	111	111	-	-	-	-	103	100	-				
4EL	103	105	105	107	110	116	116	-	-	-	-	108	104	-	+0	-6	+10	-15,5
2EB	-	-	-	129	133	139	139	141	150	-	-	132	126	118				
3EB	115	117	117	119	122	128	128	-	-	-	-	119	116	111				
4EB	113	115	115	117	120	126	126	-	-	-	-	117	114	109				

2591-01.02



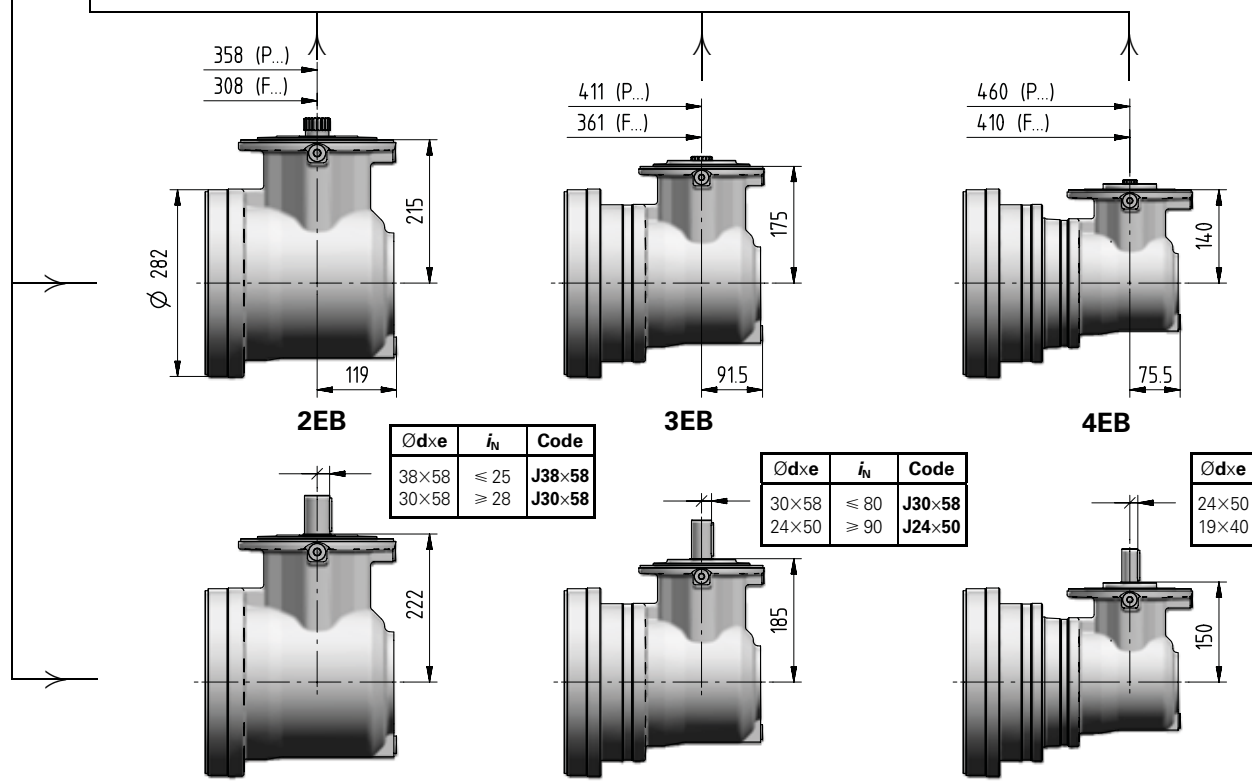


Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	28×250	310	405	–	103	82	82	103	82	82	**I28×250**
112	28×250	336	435	–	103	82	82	103	82	82	**I28×250**
132	38×300	445	553	133,5	120	102	102	120	102	102	**I38×300**
160	42×350	573	640	159	153	135	135	153	135	135	**I42×350**
180	48×350	613	734	159	153	135	135	153	135	135	**I48×350**
200	55×400	654	734	159	153	–	–	153	–	–	**I55×400**
225	60×450	710	–	189	183	–	–	183	–	–	**I60×450**
250	65×550	735	–	189	–	–	–	–	–	–	**I65×550**
280	75×550	819	–	189	–	–	–	–	–	–	**I75×550**

1) Values valid for brake motor; for other dimensions see TX catalog.

Train of gears	d	e	c	Code
1EL	60	105	138	**C60×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	48	82	115	**C48×82**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**

Train of gears	L	Code
2EL	62	ch.7
3EL, 4EL	64	
2EB	62	
3EB, 4EB	64	



Ødxe	i_N	Code
38×58	⩽ 25	**J38×58**
30×58	⩾ 28	**J30×58**

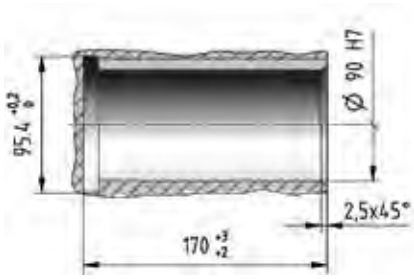
Ødxe	i_N	Code
30×58	⩽ 80	**J30×58**
24×50	⩾ 90	**J24×50**

Ødxe	i_N	Code
24×50	⩽ 280	**J24×50**
19×40	⩾ 315	**J19×40**

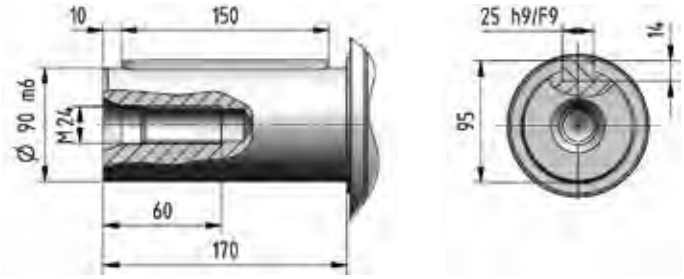
2591-01.02

015A - Output side details

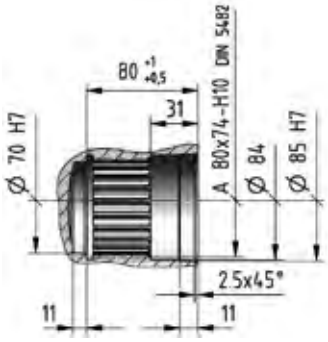
Suggested mating dimensions



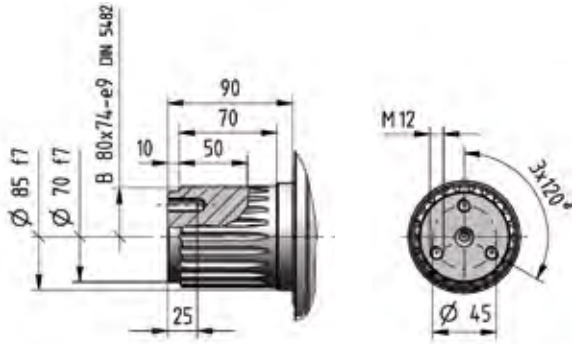
Gear reducer cylindrical shaft end



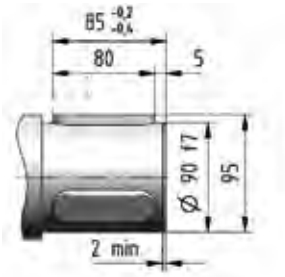
Suggested mating dimensions



Gear reducer splined shaft end

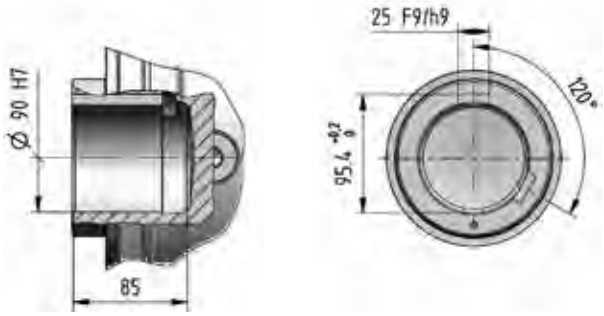


Suggested mating dimensions

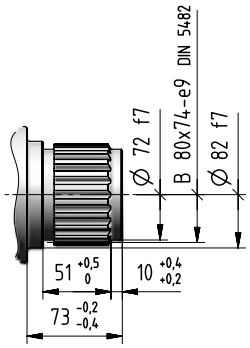


Key HRC hardness ⩾ 40.

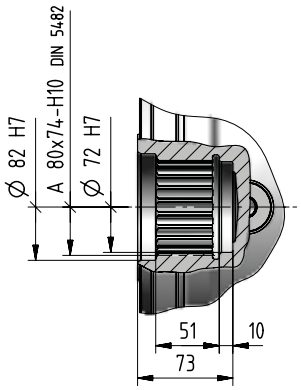
Gear reducer hollow shaft with keyway



Suggested mating dimensions



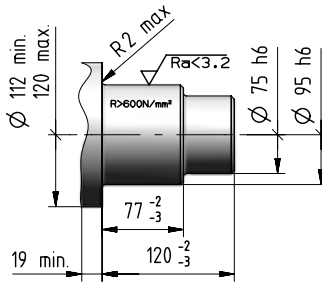
Splined hollow shaft

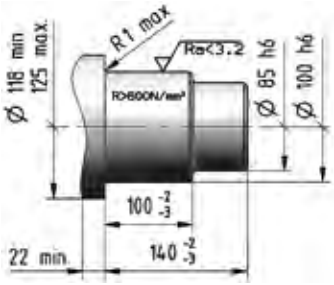


4

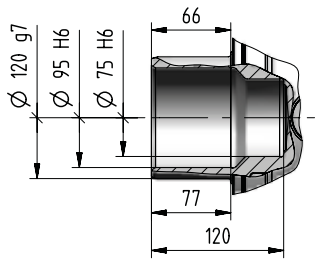
2591-01.02

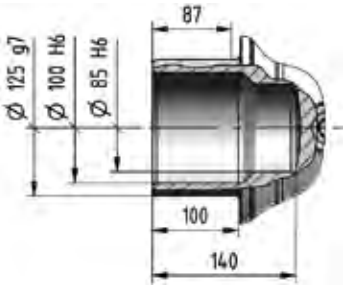
Suggested mating dimensions



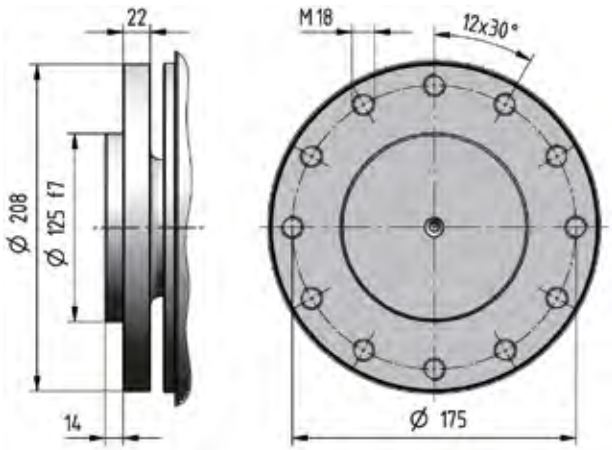


Gear reducer hollow shaft for shaft mounting





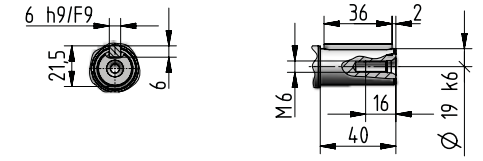
Gear reducer flanged shaft

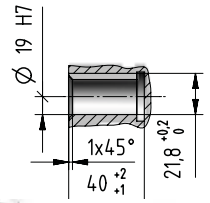


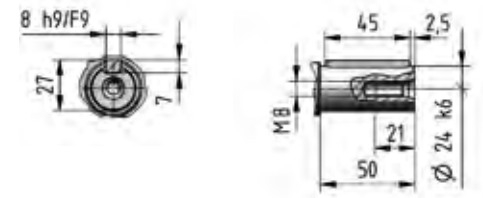
015A - Input side details

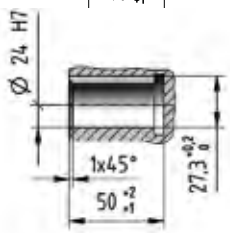
Gear reducer cylindrical shaft end

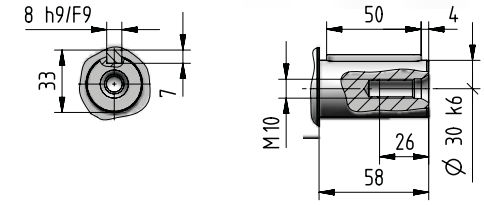
Suggested mating dimensions

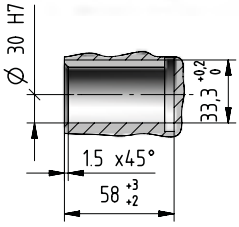


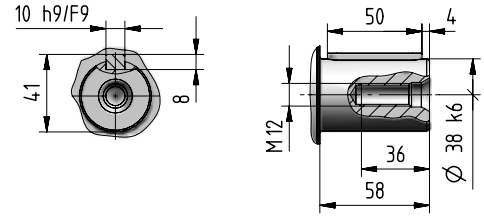


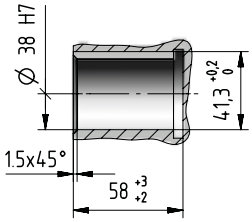


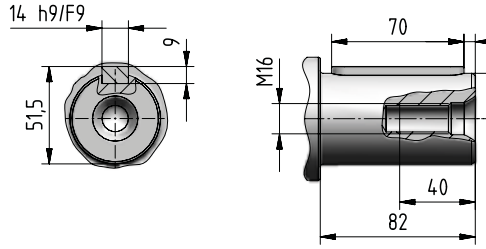


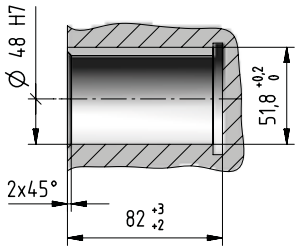


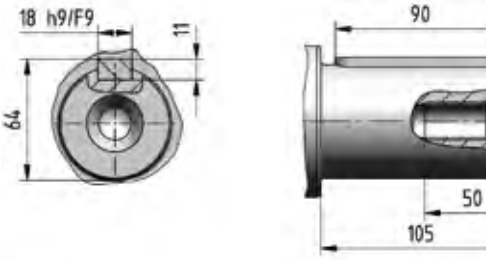


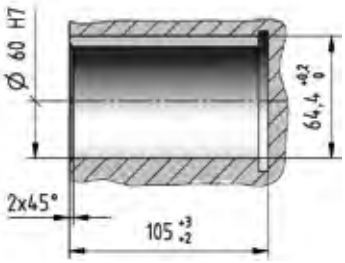




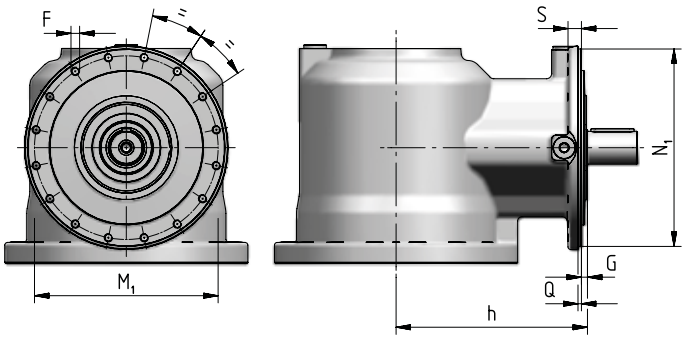








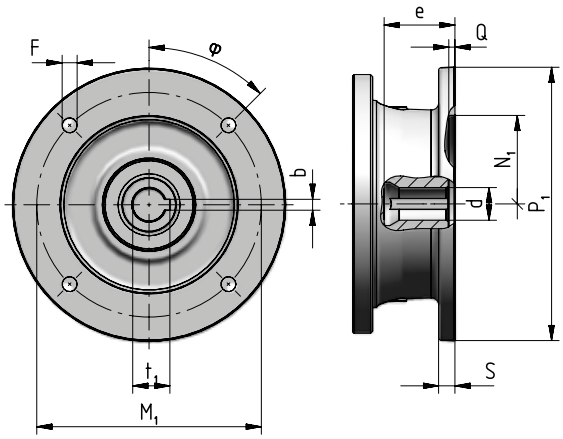
Bevel helical input flange



Train of gears	N_1 Ø h6	Q	G	h	S	M_1 Ø	F Ø
2EB	229	4	7	222	15	213	M10 (n. 16)
3EB	184	3,5	10	185	12	171	M8 (n. 12)
4EB	184	3,5	10	150	12	171	M8 (n. 12)

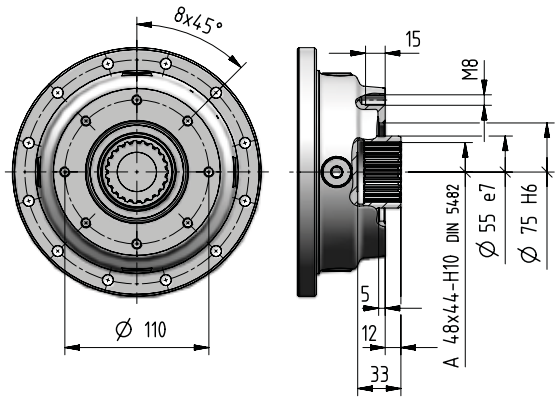
2591-01.02

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6
250	550	18	65 E6	142	18	69,4	500	18 (n.8)	22,5°	450	6
280	550	18	75 E6	142	20	79,9	500	18 (n.8)	22,5°	450	6

Universal flange adapter

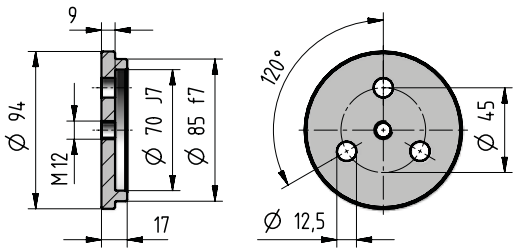


For more information see ch. 8.7.

015A - Accessories

Stop washer

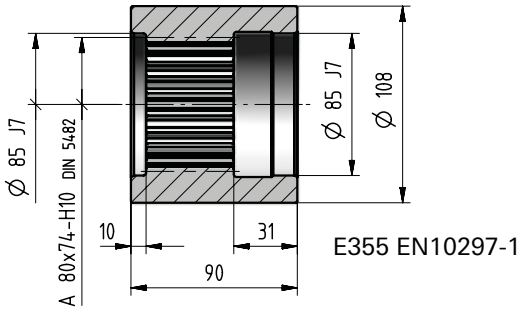
[included]



Code: **,SW080**

Splined bush

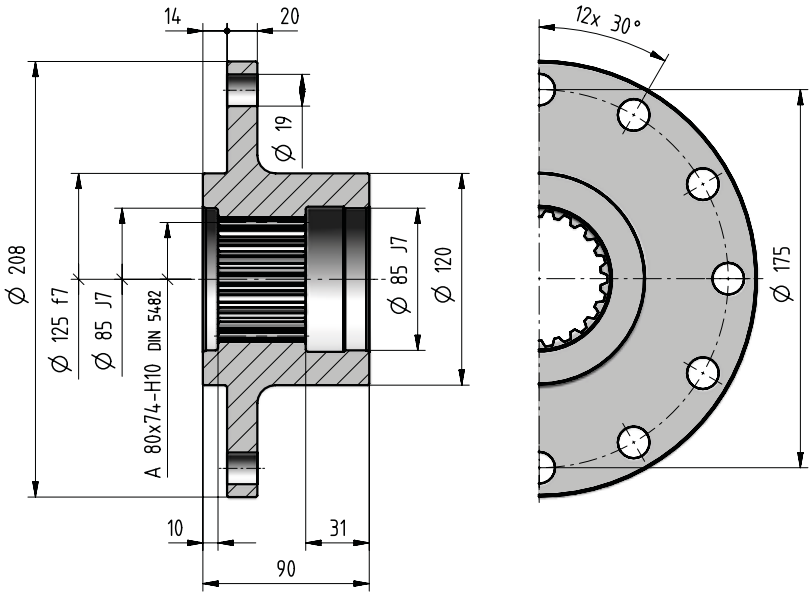
[included]



Code: **,SB080**

Wheel flange

[included]

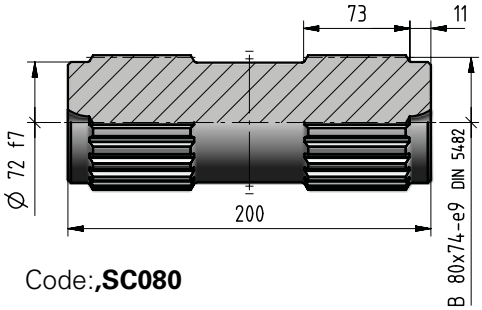


Code: **,WF080**

kg	Accessories												
	,SW080	**,SB080**	**,WF080**	**,SC080**	**,R012FA**	**,R012EB**	**,R012EC**	**,R012DD**	**,R012DE**	**,R012DF**	**,TA10c**	**,SD120**	**,SD125**
	0,6	3,4	8,2	7	12	10	12	9	10,8	12,6	6,5	8	8,7

2591-01.02

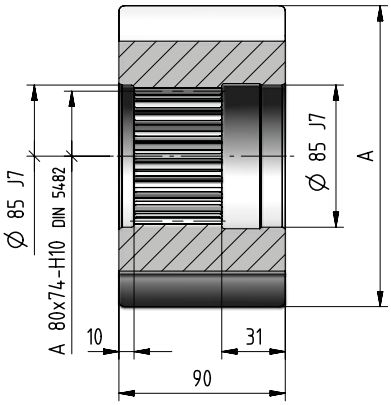
Splined bar



Code:**,SC080**

Pinion gear

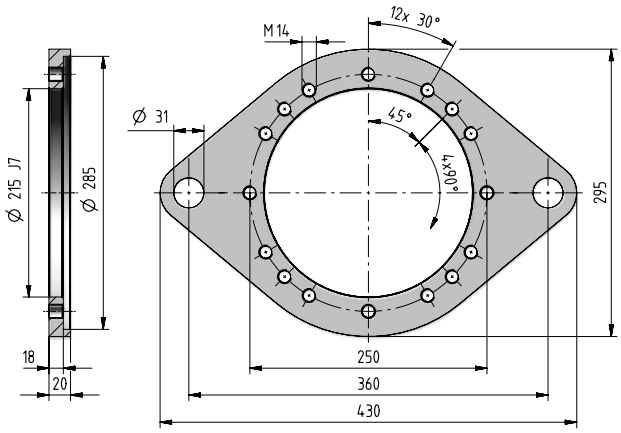
[included]



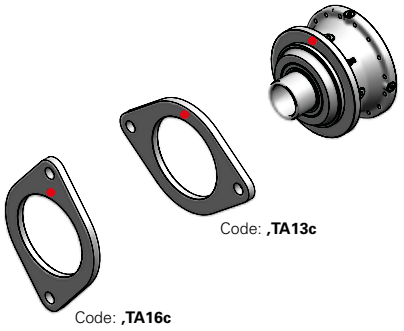
m_P	z_P	x	A Ø h9	Code
14	11	0,5	194,5	**,R012FA**
12	12	0,5	179	**,R012EB**
12	13	0,5	191	**,R012EC**
10	14	0,5	169	**,R012DD**
10	15	0,5	179	**,R012DE**
10	16	0,5	189	**,R012DF**

Torque arm

[included]



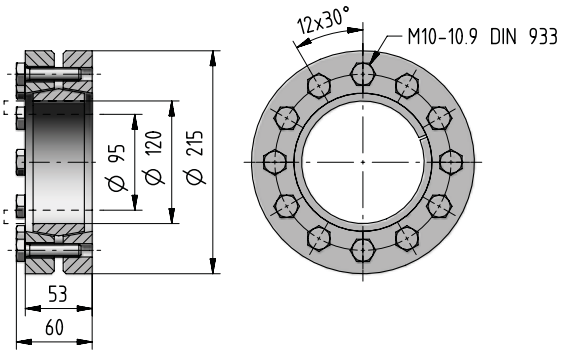
Code: **,TA10c**



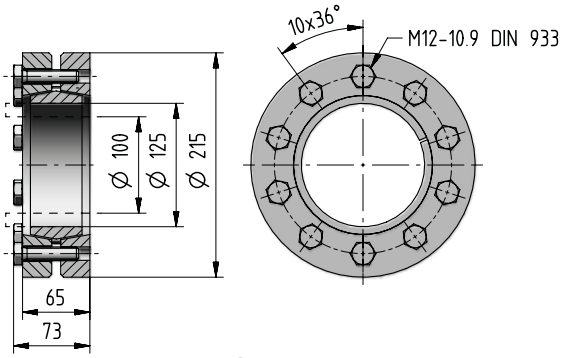
If an already mounted torque arm is required, state the relevant position between torque arm and gear reducer. This position is given by the flange upper fastening hole (stated in red in the figure).

- Reference hole for the identification of the mounting position.

Shrink disc



Code: **,SD120**

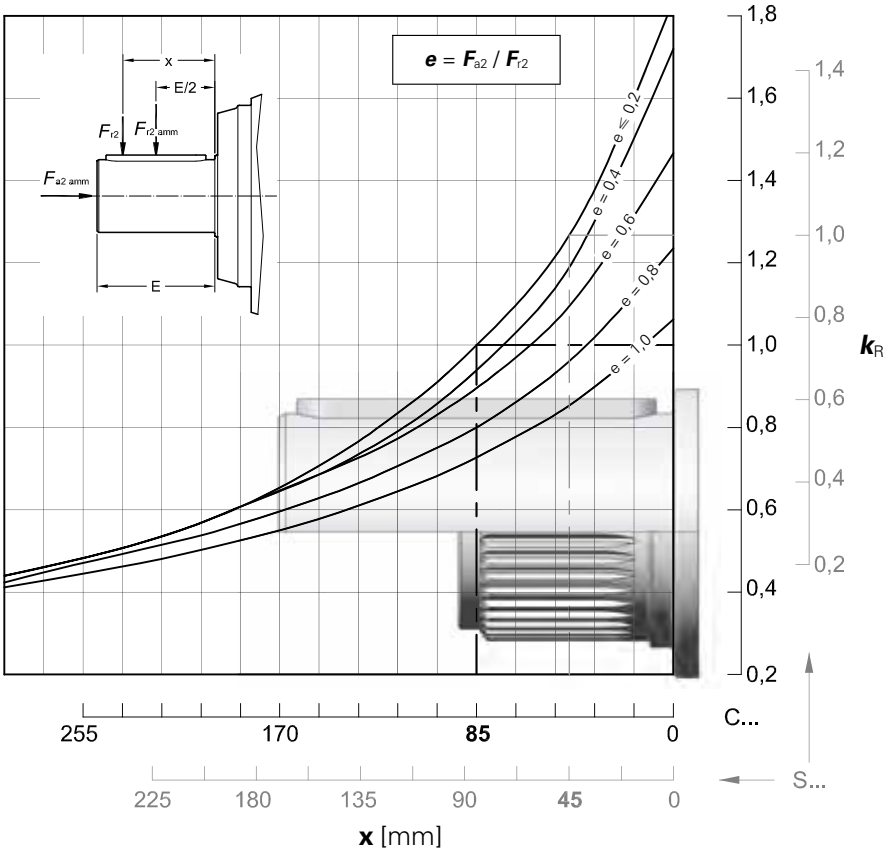


Code: **,SD125**

015A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

Radial loads $F_{r2\,adm}$ and axial loads $F_{a2\,adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

Output side: C090M2 F20c S080M1 F20c
C090M2 F30c S080M1 F30c
C090M2 P20c[1] **S080M1 P20c**[1]



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\,amm}$ C ...	$F_{r2\,amm}$ S ...	$F_{a2\,adm}$ ←	$F_{a2\,adm}$ →
< **18 000**	100 000	132 000	118 000	170 000
22 400	100 000	125 000	118 000	160 000
28 000	95 000	118 000	112 000	150 000
35 500	85 000	112 000	106 000	140 000
45 000	80 000	100 000	100 000	132 000
56 000	75 000	95 000	95 000	118 000
71 000	71 000	90 000	85 000	112 000
90 000	67 000	85 000	80 000	106 000
112 000	60 000	80 000	75 000	100 000
140 000	56 000	75 000	71 000	90 000
180 000	53 000	67 000	67 000	85 000
224 000	50 000	63 000	60 000	80 000
280 000	47 500	60 000	56 000	75 000
355 000	42 500	56 000	53 000	71 000
450 000	40 000	50 000	50 000	63 000
560 000	37 500	47 500	47 500	60 000
710 000	35 500	45 000	42 500	56 000
900 000	33 500	42 500	40 000	53 000
1 120 000	31 500	40 000	37 500	50 000
1 400 000	28 000	37 500	35 500	45 000
1 800 000	26 500	33 500	33 500	42 500
2 240 000	25 000	31 500	31 500	40 000
2 800 000	23 600	30 000	28 000	37 500
max	**100 000**	**132 000**	**118 000**	**170 000**

1) For foot mounting design multipy $F_{r2\,adm}$ by 0,85 and $F_{a2\,adm}$ by 0,56.

4

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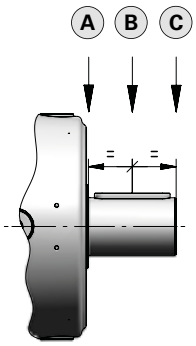
Radial loads F_{r1} [N] on input shaft

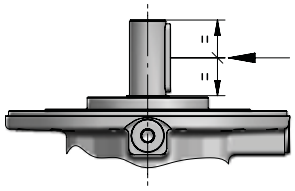


Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears											
	1EL			**2EL**			**3EL**			**4EL**		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	28 000	19 000	14 000	20 000	14 000	10 600	14 000	8 500	5 300	6 300	4 250	3 350
1 120 000	26 500	18 000	13 200	19 000	12 500	9 500	13 200	8 000	5 000	5 600	4 000	3 150
1 400 000	25 000	16 000	12 500	17 000	11 800	9 000	11 800	7 100	4 500	5 300	3 750	2 800
1 800 000	22 400	15 000	11 200	16 000	10 600	8 000	11 200	6 700	4 250	5 000	3 350	2 650
2 240 000	21 200	14 000	10 600	15 000	10 000	7 500	10 000	6 300	4 000	4 500	3 150	2 500
2 800 000	20 000	13 200	9 500	14 000	9 500	7 100	9 500	5 600	3 550	4 250	3 000	2 240
3 550 000	18 000	11 800	9 000	12 500	8 500	6 700	9 000	5 300	3 350	4 000	2 800	2 120
4 500 000	17 000	11 200	8 500	11 800	8 000	6 000	8 000	5 000	3 150	3 550	2 500	1 900
5 600 000	16 000	10 600	7 500	11 200	7 500	5 600	7 500	4 500	2 800	3 350	2 360	1 800
7 100 000	14 000	9 500	7 100	10 000	6 700	5 300	7 100	4 250	2 650	3 150	2 120	1 700
9 000 000	13 200	9 000	6 700	9 500	6 300	4 750	6 300	4 000	2 500	2 800	2 000	1 500
11 200 000	12 500	8 000	6 000	8 500	6 000	4 500	6 000	3 550	2 240	2 650	1 900	1 400
14 000 000	11 200	7 500	5 600	8 000	5 600	4 250	5 600	3 350	2 120	2 500	1 700	1 320
18 000 000	10 600	7 100	5 300	7 500	5 000	3 750	5 000	3 150	1 900	2 240	1 600	1 180
22 400 000	10 000	6 700	4 750	6 700	4 750	3 550	4 750	2 800	1 800	2 120	1 500	1 120
28 000 000	9 000	6 000	4 500	6 300	4 250	3 350	4 500	2 650	1 700	2 000	1 400	1 060
35 500 000	8 500	5 600	4 250	6 000	4 000	3 000	4 000	2 500	1 600	1 800	1 250	950
45 000 000	8 000	5 300	3 750	5 300	3 750	2 800	3 750	2 240	1 400	1 700	1 180	900

Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears					
	2EB		**3EB**		**4EB**	
	$i_N \leqslant 25$	$i_N \geqslant 28$	$i_N \leqslant 100$	$i_N \geqslant 112$	$i_N \leqslant 315$	$i_N \geqslant 355$
900 000	5 600	4 750	4 000	3 350	2 800	2 360
1 120 000	5 300	4 500	3 750	3 150	2 650	2 240
1 400 000	4 750	4 000	3 550	2 800	2 360	2 000
1 800 000	4 500	3 750	3 150	2 650	2 240	1 900
2 240 000	4 000	3 550	3 000	2 500	2 000	1 700
2 800 000	3 750	3 150	2 800	2 240	1 900	1 600
3 550 000	3 550	3 000	2 500	2 120	1 800	1 500
4 500 000	3 350	2 800	2 360	2 000	1 600	1 400
5 600 000	3 000	2 650	2 240	1 800	1 500	1 320
7 100 000	2 800	2 360	2 000	1 700	1 400	1 180
9 000 000	2 650	2 240	1 900	1 600	1 320	1 120
11 200 000	2 360	2 000	1 700	1 400	1 180	1 000
14 000 000	2 240	1 900	1 600	1 320	1 120	950
18 000 000	2 000	1 700	1 500	1 250	1 000	850
22 400 000	1 900	1 600	1 400	1 120	950	800
28 000 000	1 800	1 500	1 250	1 060	900	750
35 500 000	1 600	1 400	1 180	1 000	800	710
45 000 000	1 500	1 320	1 120	900	750	630



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018A

Data and performance summary

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, Pt [kW] at 20°C –	40°C	40°C H₂O
1EL	3,55	**3,52**	398 7 140	256 8 160	142 9 730	13 200 16 000	2 000 2 500	40 30	–	–
	4,25	**4,17**	335 7 390	216 8 440	120 10 070	18 000 21 200	2 000 2 800			
	5	**5,29**	264 7 720	170 8 810	94,4 9 450	14 650 18 000	2 000 2 800			
	6	**6,21**	225 7 270	145 7 470	80,5 7 750	11 970 15 000	2 000 2 800			
	7,1	**7,64**	183 5 310	118 5 460	65,5 5 660	8 720 12 500	2 000 2 800			
2EL	12,5	**12,4**	113 8 720	72,8 9 960	40,4 11 880	13 200 16 000	2 500 2 800	23,6 18	36,5 27,2	47,5 36,5
	14	**14,7**	95,4 10 350	61,3 11 820	34,1 13 510	18 000 21 200	2 500 2 800			
	16	**17,4**	80,4 10 690	51,7 12 200	28,7 13 650	18 000 21 200	2 800 3 550			
	18	**18,6**	75,2 9 590	48,3 9 850	26,9 10 210	15 000 18 000	2 500 2 800			
	22,4	**22,1**	63,4 11 160	40,7 12 740	22,6 13 250	18 000 21 200	2 800 4 000			
	25	**25,9**	54,0 10 500	34,7 10 790	19,3 11 190	17 290 21 200	2 800 4 000			
	28	**28**	50,0 9 830	32,1 10 100	17,8 10 470	15 000 18 000	2 800 4 000			
	31,5	**31,9**	43,9 7 670	28,2 7 880	15,7 8 170	12 590 18 000	2 800 4 000			
	35,5	**32,9**	42,6 9 930	27,4 10 200	15,2 10 570	15 000 18 000	2 800 4 000			
	40	**40,4**	34,6 9 730	22,3 10 000	12,4 10 370	15 000 18 000	2 800 4 000			
	45	**47,5**	29,5 8 240	19,0 8 460	10,5 8 780	12 500 15 000	2 800 4 000			
3EL	50	**51,6**	27,1 12 540	17,4 14 070	9,68 14 590	18 000 21 200	2 800 3 150	17 13,2	26,5 20	34,5 26,5
	63	**61,3**	22,8 12 940	14,7 14 220	8,16 14 840	18 000 21 200	3 150 4 000			
	71	**72,7**	19,3 13 990	12,4 14 370	6,88 15 230	18 000 21 200	3 150 4 000			
	80	**77,7**	18,0 13 520	11,6 14 430	6,43 15 380	18 000 21 200	3 150 4 000			
	90	**92,2**	15,2 14 190	9,76 14 580	5,42 15 780	18 000 21 200	3 150 4 000			
	100	**98,6**	14,2 10 620	9,13 10 910	5,07 11 560	15 000 18 000	3 150 4 000			
	112	**108**	12,9 14 330	8,31 14 800	4,62 16 160	18 000 21 200	3 150 4 000			
	125	**117**	12,0 13 780	7,69 14 160	4,27 14 680	18 000 21 200	3 150 4 000			
	140	**137**	10,2 13 920	6,55 14 300	3,64 14 830	18 000 21 200	3 150 4 000			
	160	**169**	8,30 14 060	5,33 14 440	2,96 14 980	18 000 21 200	3 150 4 000			
	180	**174**	8,04 10 990	5,17 11 530	2,87 12 600	15 000 18 000	3 150 4 000			
	200	**198**	7,07 11 900	4,54 12 220	2,52 12 670	18 000 21 200	3 150 4 000			
	224	**214**	6,54 11 130	4,21 11 890	2,34 13 000	15 000 18 000	3 150 4 000			
	250	**251**	5,57 11 400	3,58 12 180	1,99 13 320	15 000 18 000	3 150 4 000			

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, Pt [kW] at 20°C –	40°C	40°C H₂O
4EL	180	**178**	7,86 14 920	5,05 15 950	2,81 17 440	18 000 21 200	2 800 3 150	15 11,2	22,4 17	30 22,4
	200	**211**	6,62 15 310	4,26 16 370	2,37 17 890	18 000 21 200	2 800 3 150			
	250	**255**	5,49 15 750	3,53 16 840	1,96 18 000	18 000 21 200	3 150 4 000			
	280	**301**	4,64 16 160	2,99 17 270	1,66 18 000	18 000 21 200	3 150 4 000			
	315	**323**	4,33 16 330	2,78 17 460	1,55 18 000	18 000 21 200	3 150 4 000			
	355	**358**	3,91 16 580	2,52 17 730	1,40 18 000	18 000 21 200	3 150 4 000			
	400	**404**	3,47 14 870	2,23 15 280	1,24 16 160	18 000 21 200	2 800 3 150			
	450	**448**	3,13 17 150	2,01 18 000	1,12 18 000	18 000 21 200	3 150 4 000			
	500	**518**	2,70 17 540	1,74 18 000	0,965 18 000	18 000 21 200	3 150 4 000			
	560	**568**	2,46 17 780	1,58 18 000	0,880 18 000	18 000 21 200	3 150 4 000			
	630	**657**	2,13 18 000	1,37 18 000	0,761 18 000	18 000 21 200	3 150 4 000			
	710	**720**	1,94 15 410	1,25 16 140	0,694 17 640	18 000 21 200	3 150 4 000			
	800	**788**	1,78 18 000	1,14 18 000	0,635 18 000	18 000 21 200	3 150 4 000			
	900	**846**	1,66 15 560	1,06 16 540	0,591 18 000	18 000 21 200	3 150 4 000			
	1000	**999**	1,40 15 860	0,901 16 960	0,501 18 000	18 000 21 200	3 150 4 000			
	1120	**1172**	1,19 16 250	0,768 17 380	0,426 18 000	18 000 21 200	3 150 4 000			
	1250	**1267**	1,11 14 560	0,710 15 000	0,395 15 000	15 000 18 000	3 150 4 000			
	1400	**1441**	0,972 16 040	0,625 16 480	0,347 17 080	18 000 21 200	3 150 4 000			
	1600	**1525**	0,918 14 970	0,590 15 000	0,328 15 000	15 000 18 000	3 150 4 000			
	1800	**1790**	0,782 15 000	0,503 15 000	0,279 15 000	15 000 18 000	3 150 4 000			
	2240	**2145**	0,653 15 000	0,420 15 000	0,233 15 000	15 000 18 000	3 150 4 000			
	2500	**2636**	0,531 13 040	0,341 13 940	0,190 15 000	15 000 18 000	3 150 4 000			
	3150	**3094**	0,452 12 500	0,291 12 500	0,162 12 500	12 500 15 000	3 150 4 000			

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Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at –	20°C	40°C
2EB	9	**8,79**	159 7 670	102 8 760	56,9 10 450	12 790 15 500	1 800 2 240	26,5 20	38,7 30	53 40
	10	**10,4**	134 9 100	86,3 10 390	47,9 12 400	15 180 18 000	1 800 2 240			
	11,2	**11,1**	126 7 730	81,1 8 830	45,1 10 530	12 110 14 500	1 800 2 240			
	12,5	**13,2**	106 9 180	68,4 10 480	38,0 12 500	14 370 17 000	1 800 2 240			
	14	**15,5**	90,1 7 690	57,9 7 900	32,2 8 190	12 500 15 000	1 800 2 240			
	16	**16,7**	83,8 9 520	53,9 9 780	29,9 10 140	15 000 18 000	1 800 2 240			
	20	**19,6**	71,4 7 800	45,9 8 020	25,5 8 310	12 500 15 000	1 800 2 240			
	22,4	**21,2**	66,1 9 660	42,5 9 930	23,6 10 290	15 000 18 000	1 800 2 240			
	25	**24,9**	56,3 7 920	36,2 8 140	20,1 8 430	12 500 15 000	1 800 2 240			
	28	**26,5**	52,9 9 430	34,0 10 060	18,9 10 430	12 480 15 500	1 800 2 240			
	31,5	**31,1**	45,1 8 030	29,0 8 250	16,1 8 550	12 500 15 000	1 800 2 240			
3EB	31,5	**30,9**	45,3 6 600	29,1 7 530	16,2 8 980	10 480 13 200	2 800 3 550	17 13,2	25,7 19,5	34,5 26,5
	35,5	**36,7**	38,1 7 830	24,5 8 940	13,6 10 660	12 430 15 500	2 800 3 550			
	40	**39**	35,9 6 680	23,1 7 630	12,8 9 100	10 480 13 200	2 800 3 550			
	45	**43,6**	32,1 9 290	20,7 10 610	11,5 12 650	14 750 18 500	2 800 3 550			
	50	**46,6**	30,1 9 930	19,3 10 420	10,7 10 800	15 000 18 000	2 800 3 550			
	56	**55,2**	25,3 11 780	16,3 13 450	9,05 14 020	18 000 21 200	2 800 3 550			
	63	**64,8**	21,6 11 110	13,9 11 420	7,71 11 830	18 000 21 200	2 800 3 550			
	71	**69,7**	20,1 11 930	12,9 13 630	7,17 14 220	18 000 21 200	2 800 3 550			
	80	**81,8**	17,1 11 270	11,0 11 580	6,11 12 000	18 000 21 200	2 800 3 550			
	90	**88,4**	15,8 12 940	10,2 13 590	5,66 14 430	16 110 20 000	2 800 3 550			
	100	**104**	13,5 11 440	8,67 11 750	4,82 12 180	18 000 21 200	2 800 3 550			
	112	**112**	12,5 10 700	8,03 11 000	4,46 11 790	15 000 18 000	2 800 3 550			
	125	**132**	10,6 10 810	6,84 11 100	3,80 12 080	15 000 18 000	2 800 3 550			
	140	**140**	9,99 10 850	6,42 11 150	3,57 12 190	15 000 18 000	2 800 3 550			
	160	**164**	8,51 10 960	5,47 11 430	3,04 12 490	15 000 18 000	2 800 3 550			
	200	**202**	6,93 10 740	4,45 11 040	2,47 11 440	15 000 18 000	2 800 3 550			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at –	20°C	40°C
4EB	160	**153**	9,14 14 640	5,88 15 590	3,26 17 040	18 000 21 200	2 800 3 550	14 10,6	21,2 16	28 21,2
	180	**182**	7,70 14 970	4,95 16 000	2,75 17 490	18 000 21 200	2 800 3 550			
	200	**193**	7,24 15 110	4,66 16 150	2,59 17 650	18 000 21 200	2 800 3 550			
	224	**229**	6,10 15 500	3,92 16 570	2,18 18 000	18 000 21 200	2 800 3 550			
	250	**245**	5,71 15 660	3,67 16 740	2,04 18 000	18 000 21 200	2 800 3 550			
	280	**291**	4,81 16 070	3,09 17 180	1,72 18 000	18 000 21 200	2 800 3 550			
	315	**311**	4,50 16 230	2,89 17 360	1,61 18 000	18 000 21 200	2 800 3 550			
	355	**369**	3,79 16 660	2,44 17 810	1,36 18 000	18 000 21 200	2 800 3 550			
	400	**389**	3,60 15 310	2,32 16 080	1,29 17 160	17 240 21 200	2 800 3 550			
	450	**461**	3,04 17 230	1,95 18 000	1,08 18 000	18 000 21 200	2 800 3 550			
	500	**493**	2,84 12 620	1,83 13 490	1,01 14 750	15 000 18 000	2 800 3 550			
	560	**541**	2,59 16 740	1,66 17 200	0,924 17 840	18 000 21 200	2 800 3 550			
	630	**645**	2,17 12 790	1,40 13 140	0,776 14 250	18 000 21 200	2 800 3 550			
	710	**687**	2,04 15 360	1,31 16 020	0,728 17 520	18 000 21 200	2 800 3 550			
	800	**844**	1,66 15 520	1,07 15 940	0,593 16 530	18 000 21 200	2 800 3 550			
	900	**871**	1,61 13 750	1,03 14 710	0,574 15 000	15 000 18 000	2 800 3 550			
	1000	**1005**	1,39 14 060	0,896 15 000	0,498 15 000	15 000 18 000	2 800 3 550			
	1120	**1070**	1,31 14 190	0,841 15 000	0,467 15 000	15 000 18 000	2 800 3 550			
	1250	**1256**	1,11 14 540	0,716 15 000	0,398 15 000	15 000 18 000	2 800 3 550			
	1400	**1450**	0,966 11 850	0,621 12 500	0,345 12 500	12 500 15 000	2 800 3 550			
	1600	**1544**	0,907 12 170	0,583 12 850	0,324 14 050	15 000 18 000	2 800 3 550			
	1800	**1812**	0,773 12 250	0,497 12 500	0,276 12 500	12 500 15 000	2 800 3 550			

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Data and performance summary

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, Pt [kW] at 20°C –	40°C	40°C H₂O
1EL	3,55	**3,52**	398 8 930	256 10 200	142 12 160	15 700 19 000	2 000 2 800	40 30	–	–
	4,25	**4,17**	335 9 240	216 10 550	120 12 580	21 200 28 000	2 000 2 800			
	5	**5,29**	264 9 650	170 11 020	94,4 11 710	17 700 28 000	2 000 2 800			
	6	**5,87**	239 9 020	153 9 270	85,2 9 610	14 480 21 200	2 000 2 800			
2EL	12,5	**12,4**	113 8 720	72,8 9 960	40,4 11 880	15 700 19 000	2 500 2 800	23,6 18	36,5 27,2	48,7 36,5
	14	**14,7**	95,4 10 350	61,3 11 820	34,1 14 100	19 230 22 400	2 500 2 800			
	16	**17,4**	80,4 14 180	51,7 15 990	28,7 16 580	21 200 28 000	2 800 3 550			
	18	**18,6**	75,2 11 880	48,3 12 210	26,9 12 650	18 000 28 000	2 500 2 800			
	22,4	**22,1**	63,4 14 880	40,7 15 840	22,6 16 430	21 200 28 000	2 800 4 000			
	25	**25,9**	54,0 10 500	34,7 10 790	19,3 11 190	17 290 21 200	2 800 4 000			
	28	**28**	50,0 12 180	32,1 12 520	17,8 12 980	18 000 28 000	2 800 4 000			
	35,5	**32,9**	42,6 12 300	27,4 12 640	15,2 13 100	18 000 27 200	2 800 4 000			
	40	**40,4**	34,6 9 730	22,3 10 000	12,4 10 370	15 970 23 000	2 800 4 000			
	45	**44,8**	31,3 10 220	20,1 10 500	11,2 10 880	15 000 21 200	2 800 4 000			
3EL	50	**51,6**	27,1 12 540	17,4 14 310	9,68 17 070	19 230 22 400	2 800 3 150	17 13,2	26,5 20	34,5 26,5
	63	**61,3**	22,8 14 880	14,7 16 990	8,16 17 910	21 200 28 000	2 800 3 150			
	71	**72,7**	19,3 15 360	12,4 17 450	6,88 18 090	21 200 28 000	3 150 4 000			
	80	**77,7**	18,0 16 660	11,6 17 120	6,43 17 740	21 200 28 000	2 800 3 150			
	90	**92,2**	15,2 16 830	9,76 17 300	5,42 17 930	21 200 28 000	3 150 4 000			
	100	**98,6**	14,2 13 160	9,13 13 520	5,07 14 020	18 000 28 000	3 150 4 000			
	112	**108**	12,9 15 170	8,31 15 590	4,62 16 160	21 200 28 000	3 150 4 000			
	125	**117**	12,0 17 080	7,69 17 550	4,27 18 190	21 200 28 000	3 150 4 000			
	140	**137**	10,2 17 250	6,55 17 720	3,64 18 370	21 200 28 000	3 150 4 000			
	160	**169**	8,30 14 060	5,33 14 440	2,96 14 980	21 200 28 000	3 150 4 000			
	180	**174**	8,04 13 630	5,17 14 000	2,87 15 220	18 000 28 000	3 150 4 000			
	200	**204**	6,85 13 760	4,40 14 260	2,45 15 590	18 000 27 200	3 150 4 000			
	224	**214**	6,54 13 800	4,21 14 360	2,34 15 700	18 000 28 000	3 150 4 000			
	250	**251**	5,57 13 940	3,58 14 710	1,99 16 080	18 000 27 200	3 150 4 000			

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, Pt [kW] at 20°C –	40°C	40°C H₂O
4EL	180	**178**	7,86 17 950	5,05 18 480	2,81 19 160	19 230 22 400	2 800 3 150	15 11,2	22,4 17	30 22,4
	200	**211**	6,62 18 140	4,26 19 370	2,37 21 180	21 200 28 000	2 800 3 150			
	250	**255**	5,49 18 640	3,53 19 930	1,96 21 200	21 200 28 000	3 150 4 000			
	280	**303**	4,63 19 130	2,97 20 450	1,65 21 200	21 200 28 000	3 150 4 000			
	315	**318**	4,40 19 280	2,83 20 610	1,57 21 200	21 200 28 000	2 800 3 150			
	355	**358**	3,91 19 620	2,52 20 980	1,40 21 200	21 200 28 000	3 150 4 000			
	400	**404**	3,47 18 430	2,23 18 940	1,24 19 630	21 200 28 000	2 800 3 150			
	450	**448**	3,13 20 300	2,01 21 200	1,12 21 200	21 200 28 000	3 150 4 000			
	500	**518**	2,70 19 750	1,74 20 290	0,965 21 040	21 200 28 000	3 150 4 000			
	560	**568**	2,46 21 040	1,58 21 200	0,880 21 200	21 200 28 000	3 150 4 000			
	630	**657**	2,13 21 200	1,37 21 200	0,761 21 200	21 200 28 000	3 150 4 000			
	710	**720**	1,94 19 100	1,25 19 620	0,694 21 200	21 200 28 000	3 150 4 000			
	800	**788**	1,78 18 670	1,14 19 190	0,635 19 890	21 200 28 000	3 150 4 000			
	900	**846**	1,66 19 280	1,06 19 970	0,591 21 200	21 200 28 000	3 150 4 000			
	1000	**999**	1,40 19 480	0,901 20 480	0,501 21 200	21 200 28 000	3 150 4 000			
	1120	**1172**	1,19 19 680	0,768 20 980	0,426 21 200	21 200 28 000	3 150 4 000			
	1250	**1267**	1,11 17 580	0,710 18 000	0,395 18 000	18 000 28 000	3 150 4 000			
	1400	**1318**	1,06 17 690	0,683 18 000	0,379 18 000	18 000 28 000	3 150 4 000			
	1600	**1525**	0,918 18 000	0,590 18 000	0,328 18 000	18 000 28 000	3 150 4 000			
	1800	**1827**	0,766 18 000	0,492 18 000	0,274 18 000	18 000 28 000	3 150 4 000			
	2240	**2145**	0,653 17 900	0,420 18 000	0,233 18 000	18 000 27 200	3 150 4 000			
	2500	**2377**	0,589 15 000	0,379 15 000	0,210 15 000	15 000 21 200	3 150 4 000			

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Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H₂O
2EB	10	**10,4**	134 9 100	86,3 10 390	47,9 12 400	15 180 18 000	1 800 2 240	26,5 20	38,7 30	53 40
	11,2	**11,1**	126 7 730	81,1 8 830	45,1 10 530	12 110 14 500	1 800 2 240			
	12,5	**13,2**	106 11 550	68,0 11 950	37,8 12 390	18 000 23 000	1 800 2 240			
	14	**14,7**	95,5 9 540	61,4 9 800	34,1 10 160	15 000 21 200	1 800 2 240			
	16	**16,7**	83,8 11 640	53,9 12 120	29,9 12 570	18 000 21 800	1 800 2 240			
	20	**18,5**	75,7 9 680	48,6 9 940	27,0 10 310	15 000 21 200	1 800 2 240			
	22,4	**21,2**	66,1 11 970	42,5 12 300	23,6 12 750	15 770 19 500	1 800 2 240			
	25	**23,5**	59,7 9 820	38,4 10 090	21,3 10 460	15 000 21 200	1 800 2 240			
	28	**26,5**	52,9 9 430	34,0 10 460	18,9 11 170	12 480 15 500	1 800 2 240			
	31,5	**29,3**	47,7 9 950	30,7 10 230	17,0 10 600	13 830 17 000	1 800 2 240			
3EB	35,5	**36,7**	38,1 7 830	24,5 8 940	13,6 10 660	12 430 15 500	2 800 3 550	17 13,2	25,7 19,5	34,5 26,5
	40	**39**	35,9 6 680	23,1 7 630	12,8 9 100	10 480 13 200	2 800 3 550			
	45	**43,6**	32,1 9 290	20,7 10 610	11,5 12 650	14 750 18 500	2 800 3 550			
	50	**46,6**	30,1 9 930	19,3 11 340	10,7 13 390	15 770 19 500	2 800 3 550			
	56	**55,2**	25,3 11 780	16,3 13 450	9,05 16 050	18 710 23 000	2 800 3 550			
	63	**64,8**	21,6 11 110	13,9 11 420	7,71 11 830	18 220 21 200	2 800 3 550			
	71	**69,7**	20,1 11 930	12,9 13 630	7,17 16 250	18 710 23 000	2 800 3 550			
	80	**82,2**	17,0 13 010	10,9 13 370	6,08 13 860	18 000 27 200	2 800 3 550			
	90	**88,4**	15,8 13 070	10,2 13 430	5,66 13 920	18 000 28 000	2 800 3 550			
	100	**104**	13,5 13 200	8,67 13 560	4,82 14 070	18 000 27 200	2 800 3 550			
	112	**112**	12,5 13 260	8,03 13 630	4,46 14 230	18 000 25 000	2 800 3 550			
	125	**132**	10,6 13 390	6,84 13 760	3,80 14 580	18 000 27 200	2 800 3 550			
	140	**140**	9,99 10 990	6,42 12 540	3,57 14 720	16 220 20 000	2 800 3 550			
	160	**164**	8,51 12 900	5,47 13 950	3,04 15 080	18 000 23 000	2 800 3 550			
	200	**202**	6,93 10 740	4,45 11 040	2,47 11 440	18 000 23 000	2 800 3 550			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H₂O
4EB	160	**153**	9,14 15 250	5,88 17 420	3,26 19 850	19 850 28 000	2 800 3 550	14 10,6	21,2 16	28 21,2
	180	**182**	7,70 17 970	4,95 18 940	2,75 20 700	21 200 28 000	2 800 3 550			
	200	**194**	7,21 17 620	4,63 18 110	2,57 18 770	21 200 28 000	2 800 3 550			
	224	**229**	6,10 18 300	3,92 19 610	2,18 21 200	21 200 28 000	2 800 3 550			
	250	**245**	5,71 17 870	3,67 18 370	2,04 19 040	21 200 28 000	2 800 3 550			
	280	**291**	4,81 19 020	3,09 20 330	1,72 21 200	21 200 28 000	2 800 3 550			
	315	**311**	4,50 16 710	2,89 18 630	1,61 19 320	21 200 28 000	2 800 3 550			
	355	**369**	3,79 19 710	2,44 21 080	1,36 21 200	21 200 28 000	2 800 3 550			
	400	**433**	3,23 16 520	2,08 16 970	1,15 17 590	21 200 28 000	2 800 3 550			
	450	**468**	2,99 18 600	1,92 19 110	1,07 19 960	21 200 28 000	2 800 3 550			
	500	**493**	2,84 15 240	1,83 16 290	1,01 17 810	18 000 28 000	2 800 3 550			
	560	**549**	2,55 18 780	1,64 19 300	0,910 20 450	21 200 28 000	2 800 3 550			
	630	**585**	2,39 18 850	1,54 19 370	0,855 20 650	21 200 28 000	2 800 3 550			
	710	**687**	2,04 19 040	1,31 19 560	0,728 21 150	21 200 28 000	2 800 3 550			
	800	**818**	1,71 16 220	1,10 16 670	0,611 18 000	18 000 27 200	2 800 3 550			
	900	**871**	1,61 16 610	1,03 17 760	0,574 18 000	18 000 28 000	2 800 3 550			
	1000	**1005**	1,39 16 430	0,896 17 060	0,498 18 000	18 000 27 200	2 800 3 550			
	1120	**1070**	1,31 17 140	0,841 18 000	0,467 18 000	18 000 28 000	2 800 3 550			
	1250	**1256**	1,11 16 660	0,716 17 650	0,398 18 000	18 000 27 200	2 800 3 550			
	1400	**1392**	1,01 14 370	0,647 15 000	0,359 15 000	15 000 21 200	2 800 3 550			
	1600	**1544**	0,907 12 170	0,583 12 850	0,324 14 050	18 000 23 000	2 800 3 550			
	1800	**1711**	0,818 13 490	0,526 14 240	0,292 15 000	15 000 21 200	2 800 3 550			

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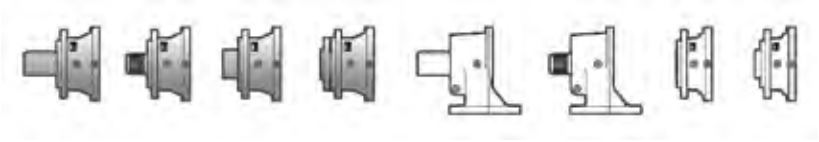
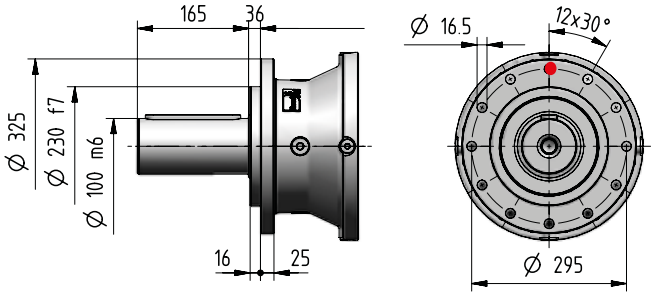
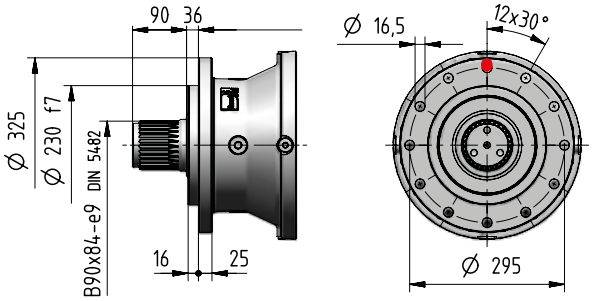
018A, 021A - Main Dimensions



C100M1 F10d



S090M1 F10d



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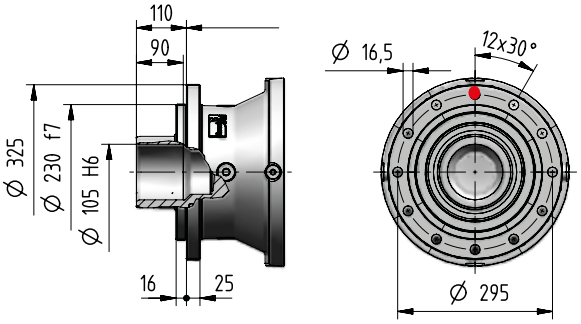
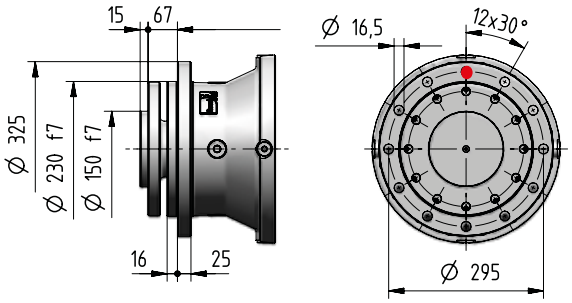
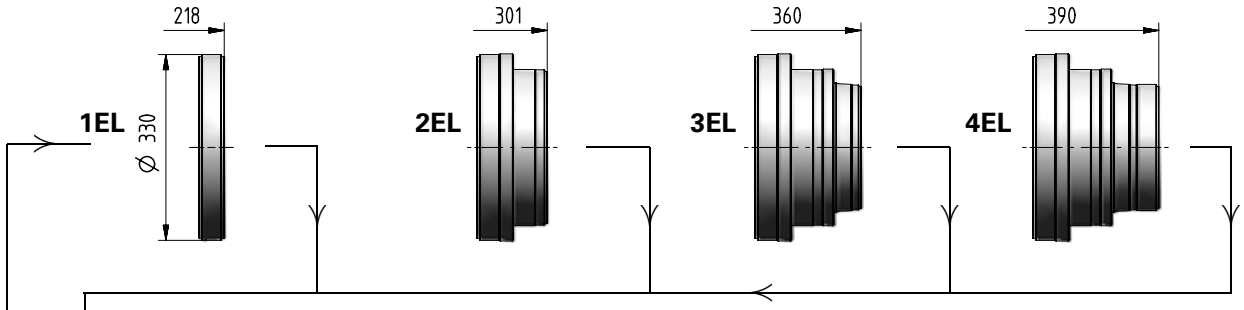


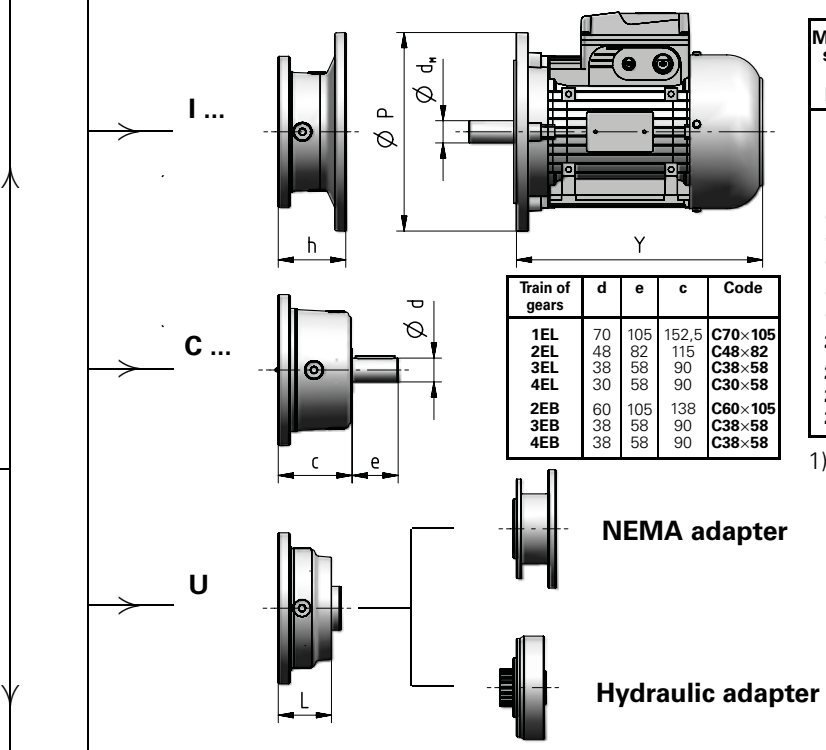
M150M1 A10d



kg 1)	Input Options Code														Output Options (Δ) Code	
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C…	U…	J…	C… S…	H… M…
1EL	-	-	-	-	-	133	133	135	145	152	152	140	-	-	+0	-9
2EL	-	-	-	134	138	144	144	147	156	-	-	139	131	-		
3EL	135	137	137	139	143	148	148	-	-	-	-	140	137	-		
4EL	140	142	142	144	147	153	153	-	-	-	-	145	142	-		
2EB	-	-	-	-	220	220	220	230	240	240	240	235	-	199		
3EB	155	157	157	159	162	168	168	-	-	-	-	159	157	151		
4EB	152	154	154	156	159	165	165	-	-	-	-	156	154	148		

1) For sizes 021A add 3 kg.



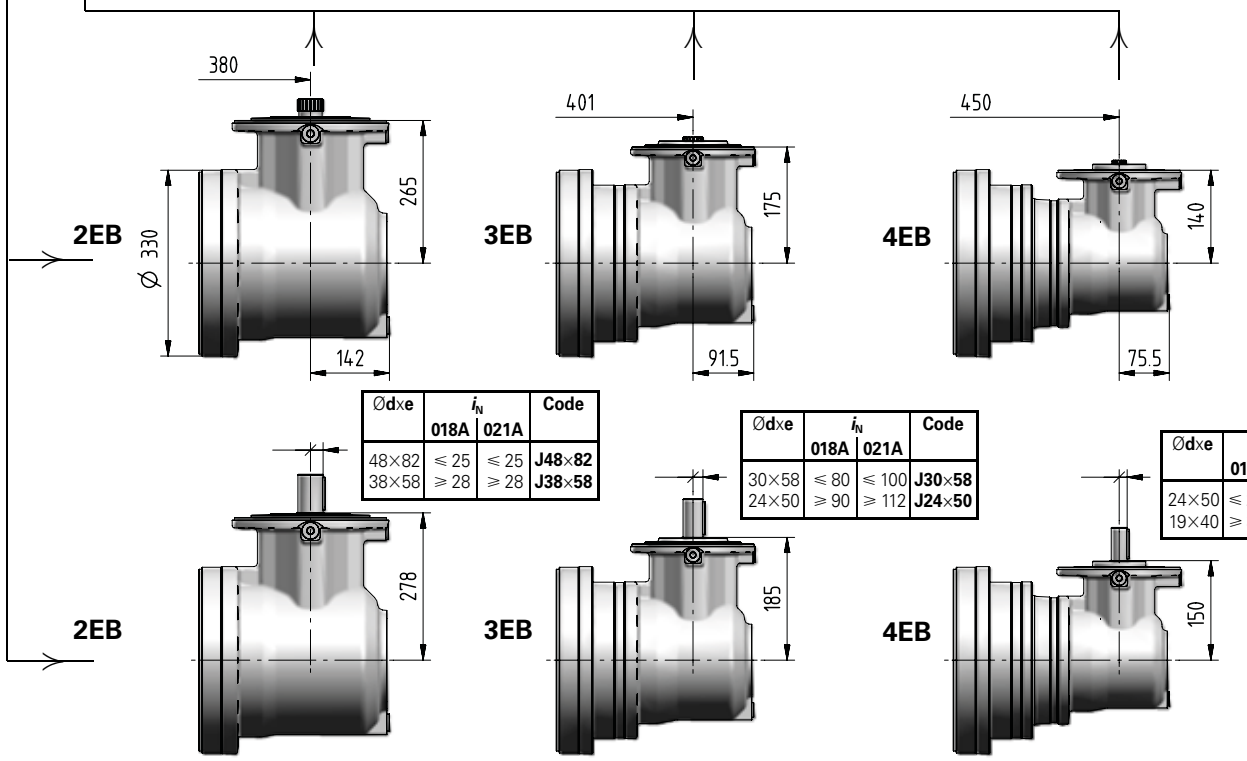


Train of gears	d	e	c	Code
1EL	70	105	152,5	**C70×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	60	105	138	**C60×105**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**

Motor size IEC	d_M×P	Y		Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
			1)	Dimension **h**							
71	14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	28×250	310	405	–	103	82	82	–	82	82	**I28×250**
112	28×250	336	435	–	103	82	82	–	82	82	**I28×250**
132	38×300	445	553	–	120	102	102	133,5	102	102	**I38×300**
160	42×350	573	640	159	153	135	135	159	135	135	**I42×350**
180	48×350	613	734	159	153	135	135	159	135	135	**I48×350**
200	55×400	654	734	159	153	–	–	159	–	–	**I55×400**
225	60×450	710	–	189	183	–	–	189	–	–	**I60×450**
250	65×550	735	–	189	–	–	–	189	–	–	**I65×550**
280	75×550	819	–	189	–	–	–	189	–	–	**I75×550**

1) Values valid for brake motor; for other dimensions see TX catalog.

Train of gears	L	Code
2EL	62	ch.7
3EL, 4EL	64	
3EB, 4EB	64	

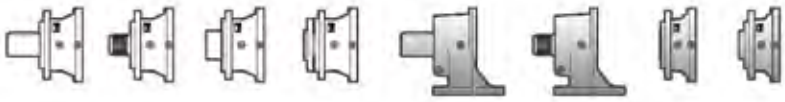


Ødxe	i_N 018A	i_N 021A	Code
48×82	≤ 25	≤ 25	**J48×82**
38×58	≥ 28	≥ 28	**J38×58**

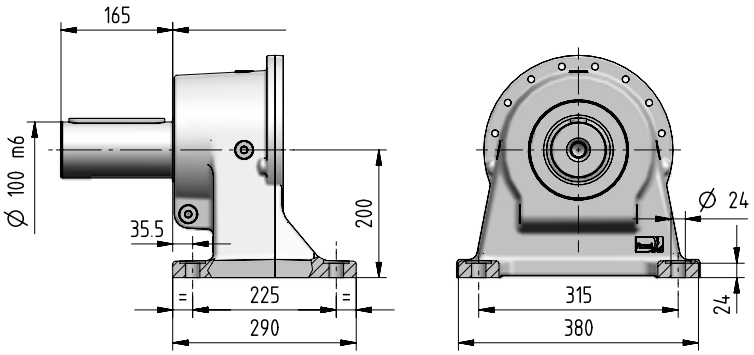
Ødxe	i_N 018A	i_N 021A	Code
30×58	≤ 80	≤ 100	**J30×58**
24×50	≥ 90	≥ 112	**J24×50**

Ødxe	i_N 018A	i_N 021A	Code
24×50	≤ 280	≤ 280	**J24×50**
19×40	≥ 315	≥ 315	**J19×40**

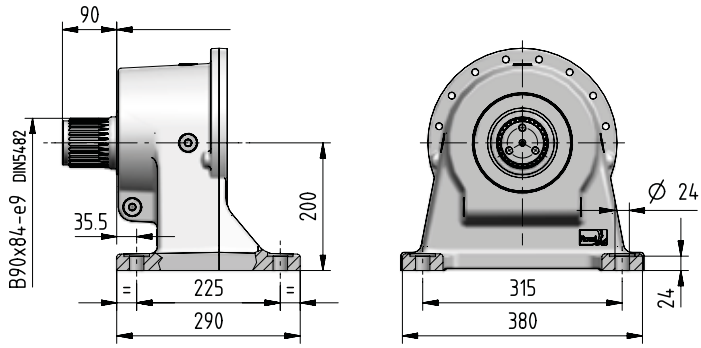
018A, 021A - Main Dimensions



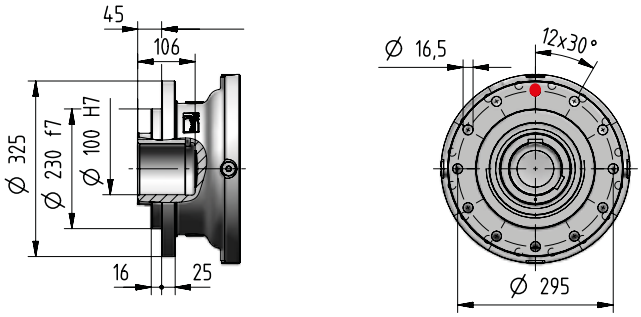
C100M1 P10d



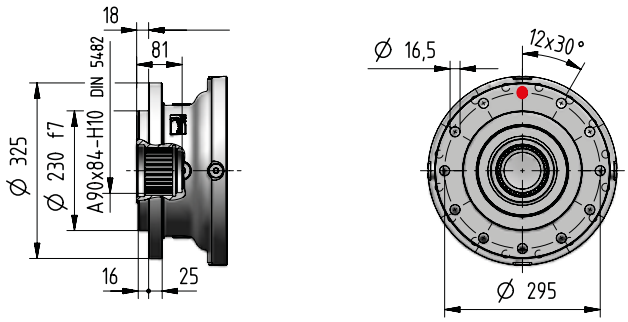
S090M1 P10d



K100M1 F06d



Z090M1 F05d



kg 1)	Input Options Code														Output Options (Δ) Code	
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C…	U…	J…	C… S…	K… Z…
1EL	–	–	–	–	–	143	143	145	155	162	162	150	–	–	+0	-34
2EL	–	–	–	144	148	154	154	157	166	–	–	149	141	–		
3EL	145	147	147	149	153	158	158	–	–	–	–	150	147	–		
4EL	150	152	152	154	157	163	163	–	–	–	–	155	152	–		
2EB	–	–	–	–	230	230	230	240	250	250	250	223	–	209		
3EB	165	167	167	169	172	178	178	–	–	–	–	169	167	161		
4EB	162	164	164	166	169	175	175	–	–	–	–	166	164	158		

1) For sizes 021A add 3 kg.

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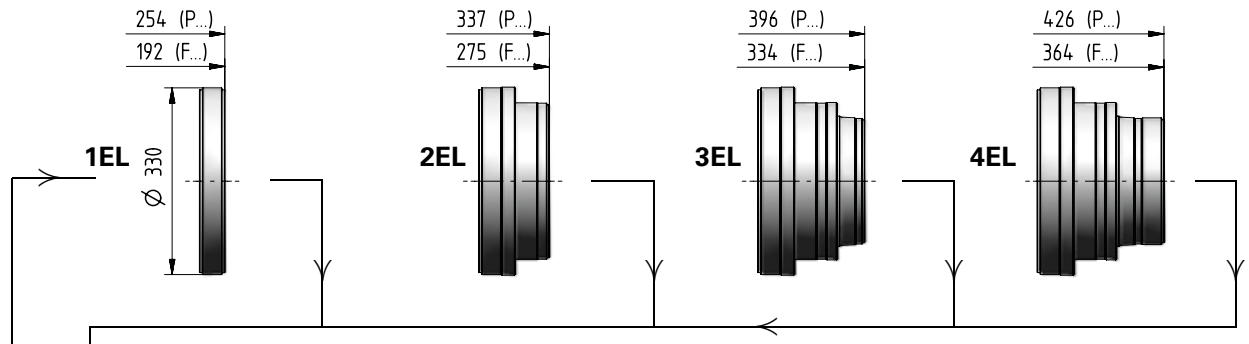
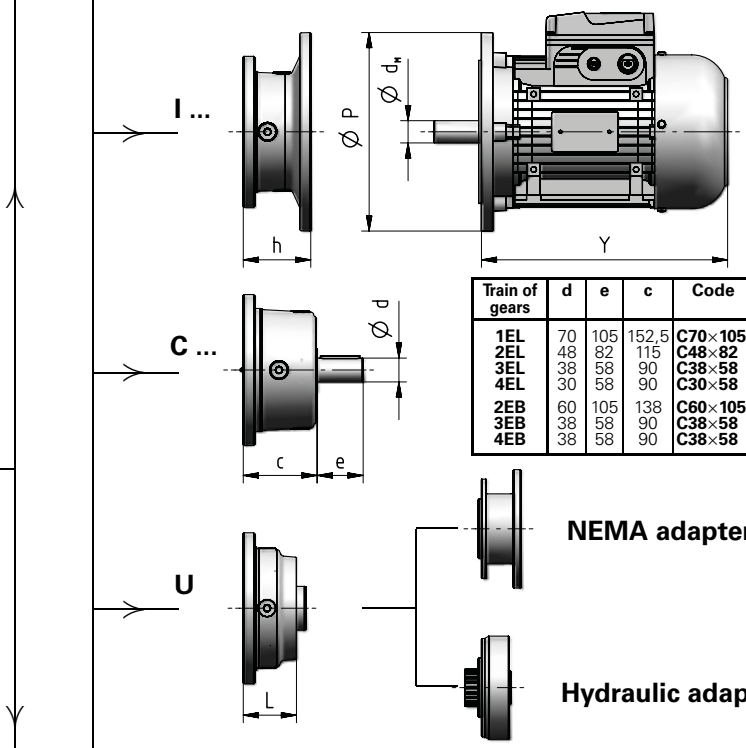


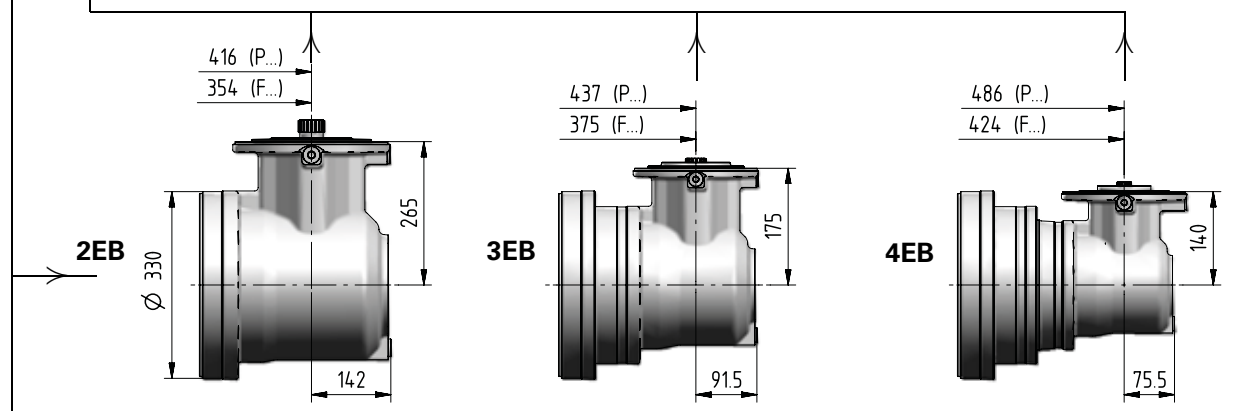
Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	52	52	–	52	52	**I14×160**
80	19×200	233	302	–	–	72	72	–	72	72	**I19×200**
90	24×200	287	366	–	–	72	72	–	72	72	**I24×200**
100	28×250	310	405	–	103	82	82	–	82	82	**I28×250**
112	28×250	336	435	–	103	82	82	–	82	82	**I28×250**
132	38×300	445	553	–	120	102	102	133,5	102	102	**I38×300**
160	42×350	573	640	159	153	135	135	159	135	135	**I42×350**
180	48×350	613	734	159	153	135	135	159	135	135	**I48×350**
200	55×400	654	734	159	153	–	–	159	–	–	**I55×400**
225	60×450	710	–	189	183	–	–	189	–	–	**I60×450**
250	65×550	735	–	189	–	–	–	189	–	–	**I65×550**
280	75×550	819	–	189	–	–	–	189	–	–	**I75×550**

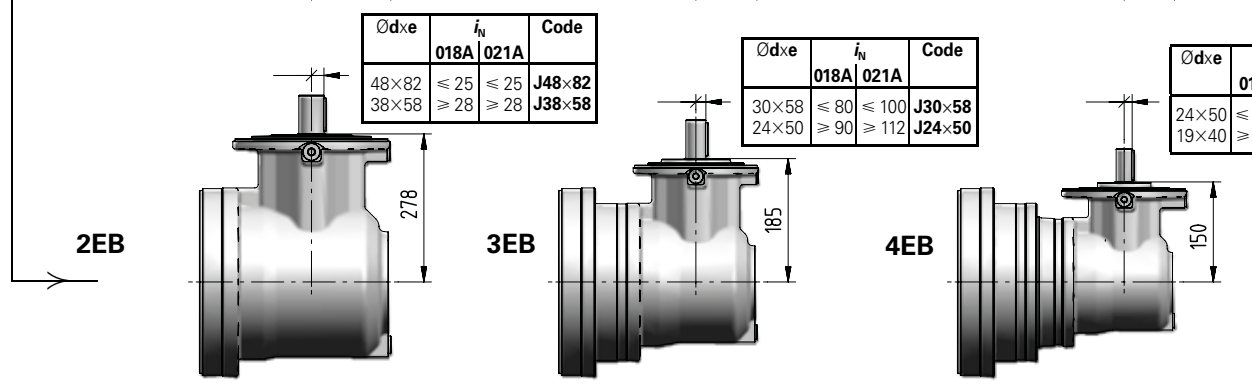
1) Values valid for brake motor; for other dimensions see TX catalog.



Train of gears	d	e	c	Code
1EL	70	105	152,5	**C70×105**
2EL	48	82	115	**C48×82**
3EL	38	58	90	**C38×58**
4EL	30	58	90	**C30×58**
2EB	60	105	138	**C60×105**
3EB	38	58	90	**C38×58**
4EB	38	58	90	**C38×58**

Train of gears	L	Code
2EL	62	ch.7
3EL, 4EL	64	
3EB, 4EB	64	





ØdxE	i_N 018A	i_N 021A	Code
48×82	≤ 25	≤ 25	**J48×82**
38×58	≥ 28	≥ 28	**J38×58**

ØdxE	i_N 018A	i_N 021A	Code
30×58	≤ 80	≤ 100	**J30×58**
24×50	≥ 90	≥ 112	**J24×50**

ØdxE	i_N 018A	i_N 021A	Code
24×50	≤ 280	≤ 280	**J24×50**
19×40	≥ 315	≥ 315	**J19×40**

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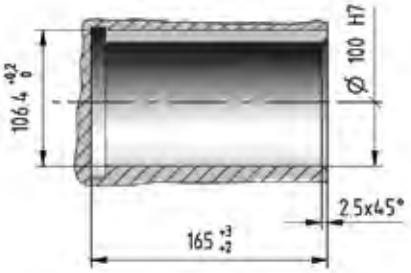
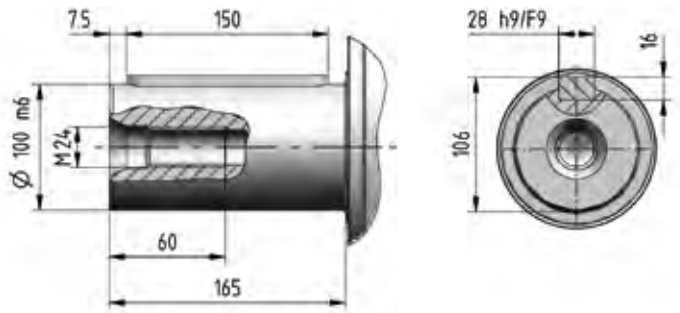
018A, 021A - Output side details

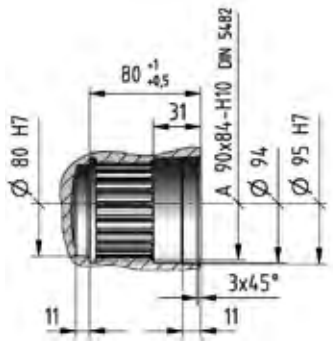
Suggested mating dimensions



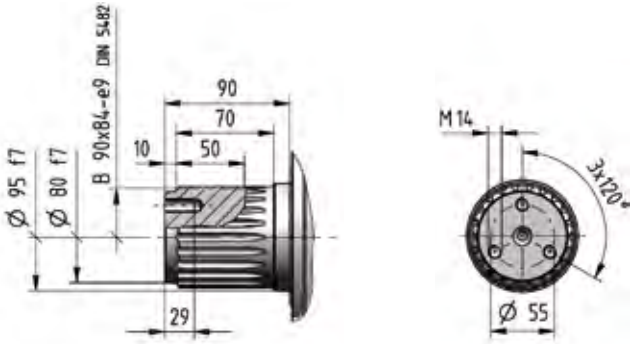
Gear reducer cylindrical shaft end



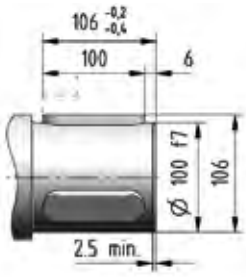
Suggested mating dimensions



Gear reducer splined shaft end

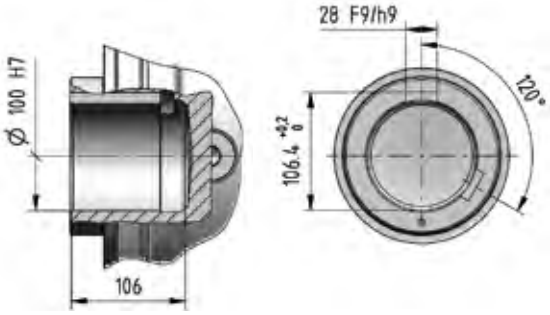


Suggested mating dimensions

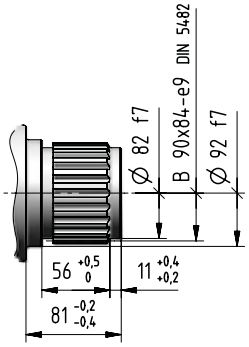


Key HRC hardness ⩾ 40.

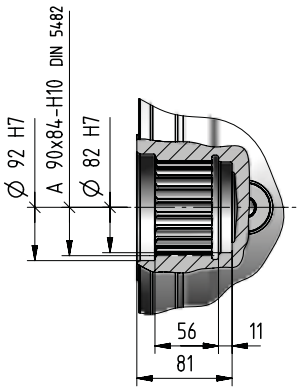
Gear reducer hollow shaft with keyways



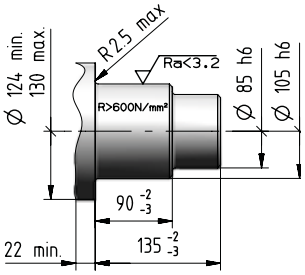
Suggested mating dimensions



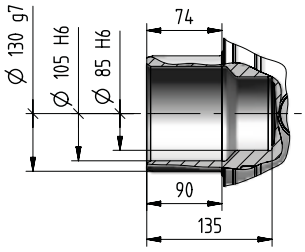
Splined hollow shaft



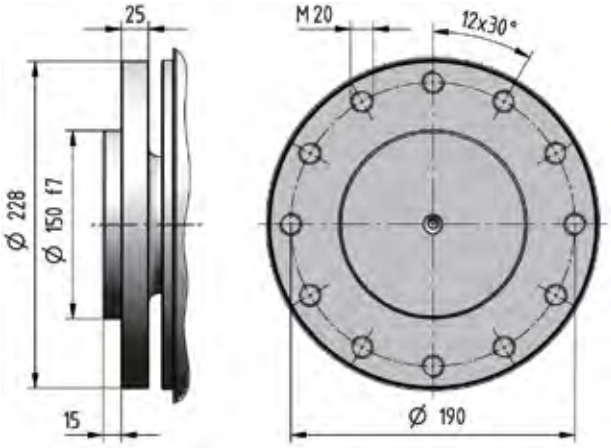
Suggested mating dimensions



Gear reducer hollow shaft for shaft mounting



Gear reducer flanged shaft



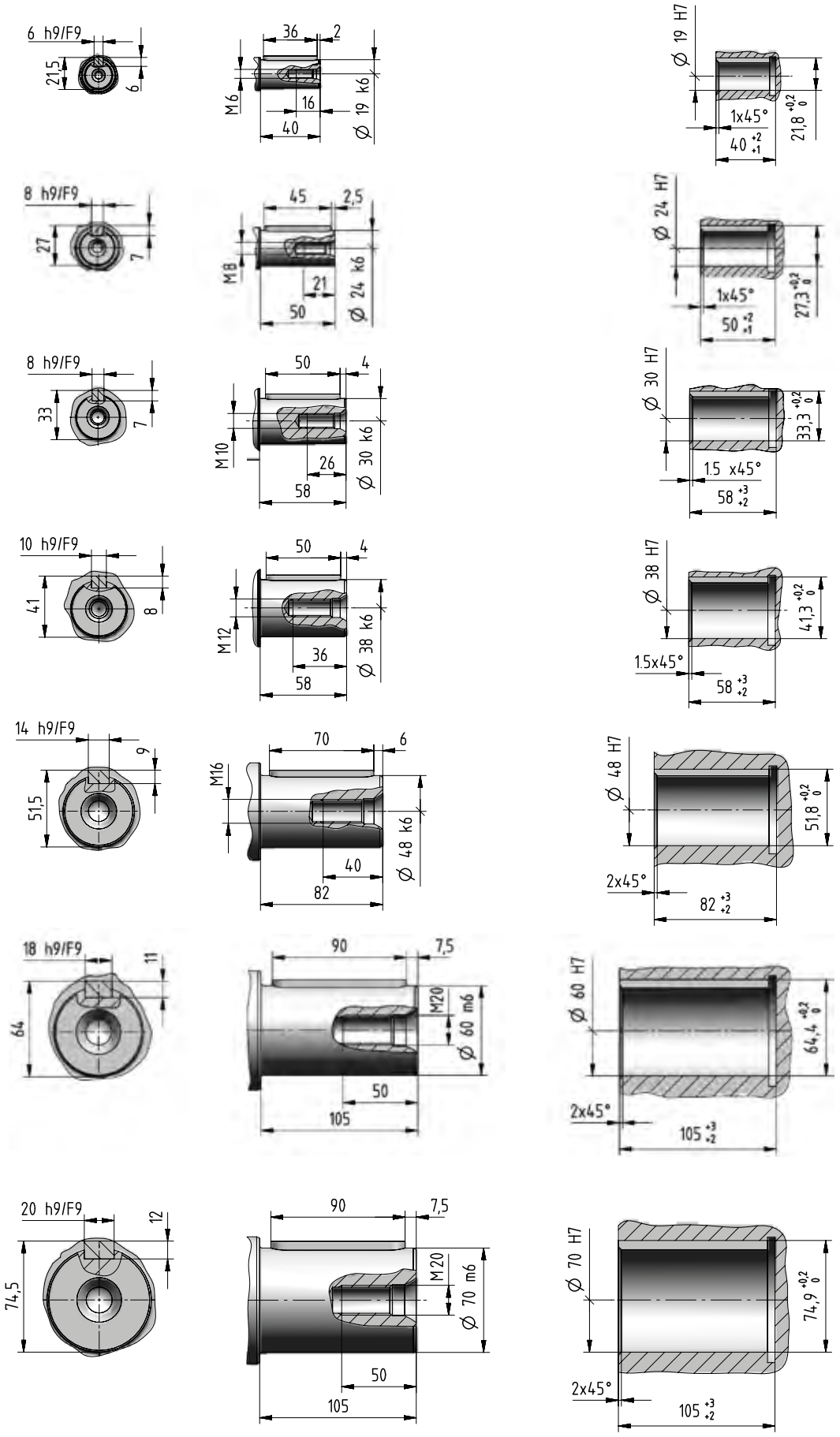
4

2591-01.02

018A, 021A - Input side details

Gear reducer cylindrical shaft end

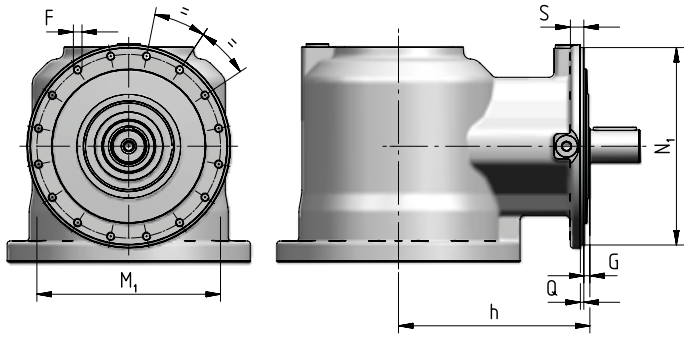
Suggested mating dimensions



4

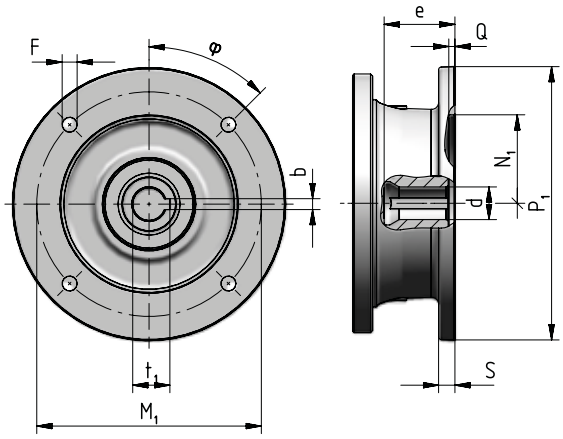
2591-01.02

Bevel helical input flange



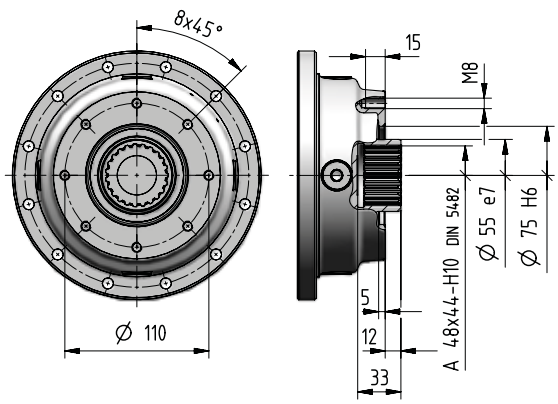
Train of gears	N_1 ∅ h6	Q	G	h	S	M_1 ∅	F ∅
2EB	274	4,5	13	278	18	255	M12 (n. 16)
3EB	184	3,5	10	185	12	171	M8 (n. 12)
4EB	184	3,5	10	150	12	171	M8 (n. 12)

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6
250	550	18	65 E6	142	18	69,4	500	18 (n.8)	22,5°	450	6
280	550	18	75 E6	142	20	79,9	500	18 (n.8)	22,5°	450	6

Universal flange adapter

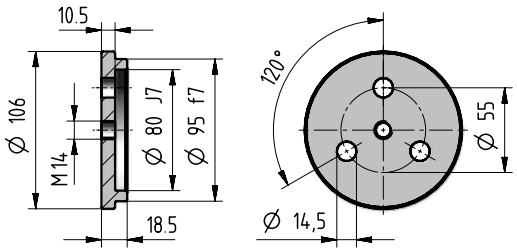


For more information see ch. 8.7.

018A, 021A - Accessories

Stop washer

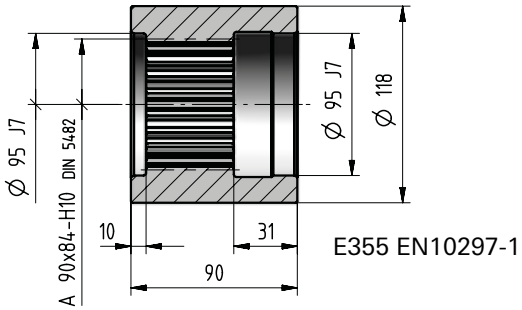
[included]



Code: **,SW090**

Splined bush

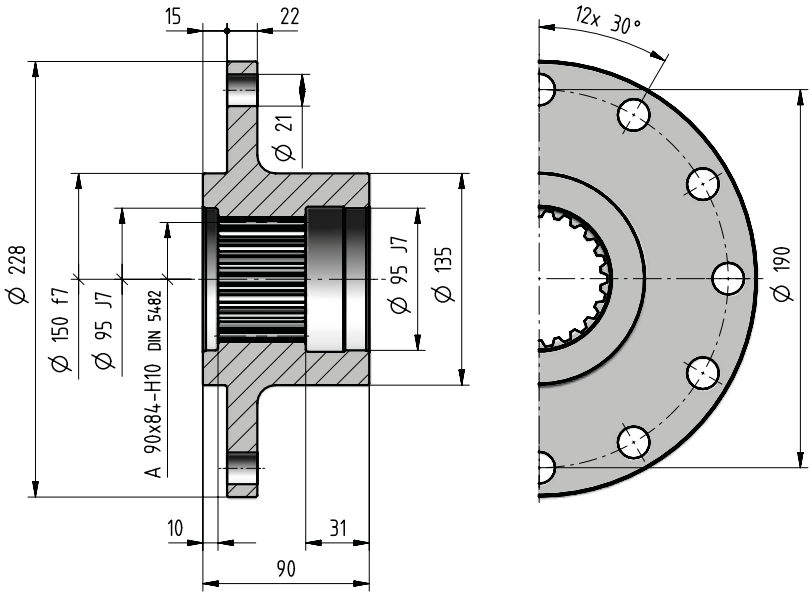
[included]



Code: **,SB090**

Wheel flange

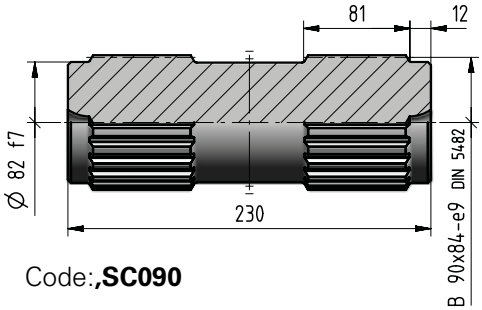
[included]



Code: **,WF090**

kg	Accessories											
	,SW090	**,SB090**	**,WF090**	**,SC090**	**,R018GA**	**,R018FB**	**,R018FC**	**,R018ED**	**,R018EE**	**,R018EF**	**,TA10d**	**,SD130**
	0,8	4	10,7	10,2	16	14	17	13,7	16,2	18,8	12,2	10

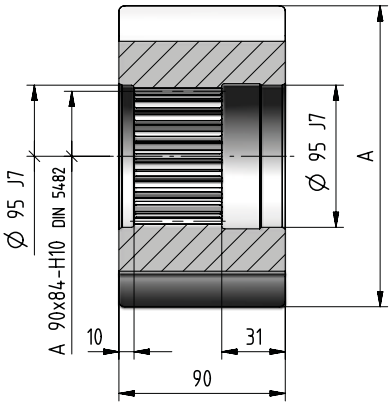
Splined bar



Code:**,SC090**

Pinion gear

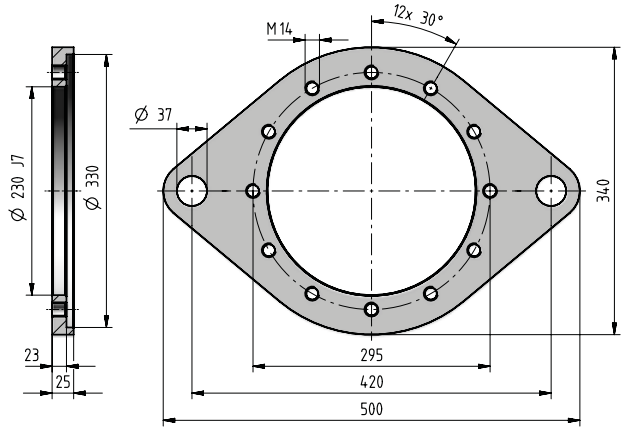
[included]



m_P	z_P	x	A Ø h9	Code
16	11	0,5	222,5	**,R018GA**
14	12	0,5	208,5	**,R018FB**
14	13	0,5	222,5	**,R018FC**
12	14	0,5	203	**,R018ED**
12	15	0,5	215	**,R018EE**
12	16	0,5	227	**,R018EF**

Torque arm

[included]

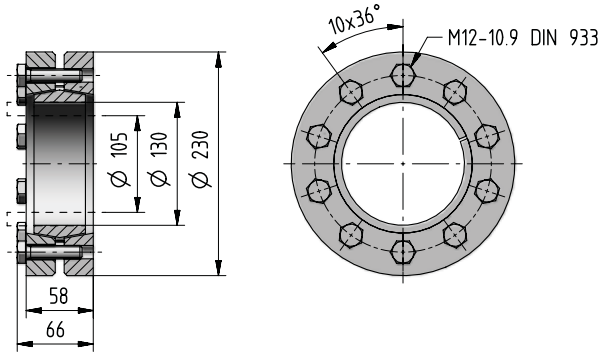


Code: **,TA10d**

If an already mounted torque arm is required, state the relevant position between torque arm and gear reducer. This position is given by the flange upper fastening hole (stated in red in the figure).

- Reference hole for the identification of the mounting position

Shrink disc

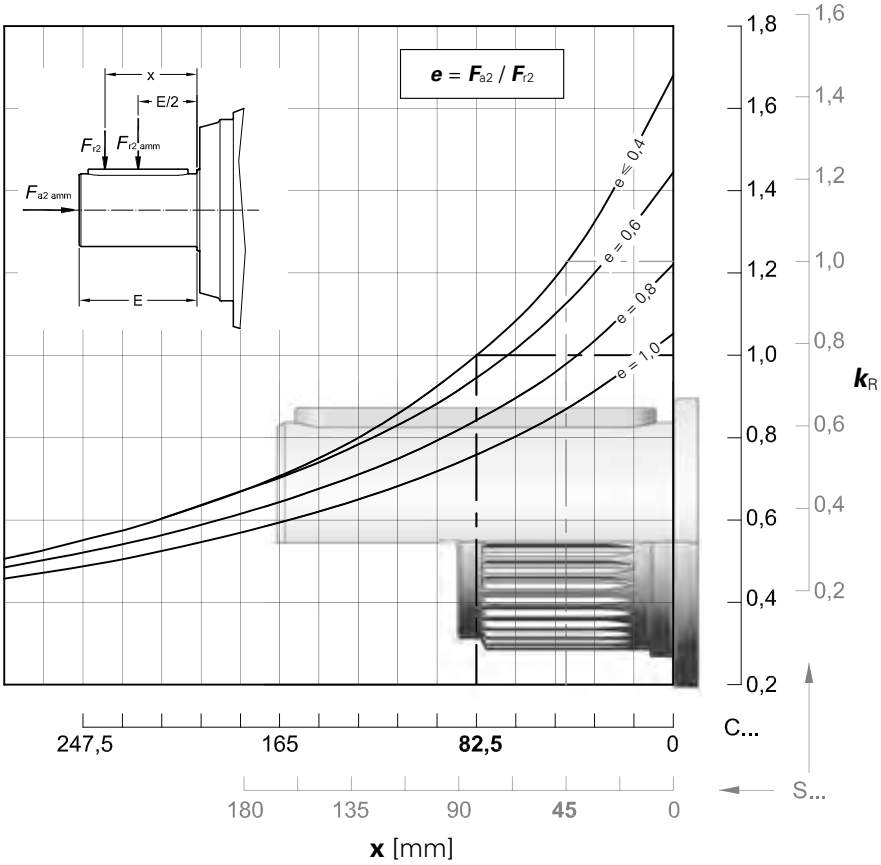


Code: **,SD130**

018A, 021A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

Radial $F_{r2\ adm}$ and axial loads $F_{a2\ adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

Output side: C100M1 F10d
S090M1 F10d
C100M1 P10d[1)]
S090M1 P10d[1)]



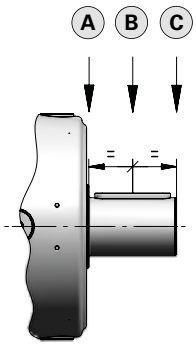
$n_2 \cdot L_h$ min⁻¹· h	$F_{r2\ adm}$ C ...	$F_{r2\ adm}$ S ...	$F_{a2\ adm}$ ←	$F_{a2\ adm}$ →
< **18 000**	140 000	170 000	140 000	212 000
22 400	132 000	160 000	140 000	212 000
28 000	125 000	150 000	140 000	200 000
35 500	118 000	140 000	140 000	180 000
45 000	106 000	132 000	132 000	170 000
56 000	100 000	125 000	125 000	160 000
71 000	95 000	118 000	112 000	150 000
90 000	90 000	106 000	106 000	140 000
112 000	80 000	100 000	100 000	132 000
140 000	75 000	95 000	95 000	118 000
180 000	71 000	90 000	85 000	112 000
224 000	67 000	80 000	80 000	106 000
280 000	63 000	75 000	75 000	100 000
355 000	60 000	71 000	71 000	90 000
450 000	53 000	67 000	67 000	85 000
560 000	50 000	63 000	63 000	80 000
710 000	47 500	56 000	56 000	75 000
900 000	45 000	53 000	53 000	67 000
1 120 000	42 500	50 000	50 000	63 000
1 400 000	37 500	47 500	47 500	60 000
1 800 000	35 500	45 000	42 500	56 000
2 240 000	33 500	40 000	40 000	53 000
2 800 000	31 500	37 500	37 500	50 000
max	**140 000**	**170 000**	**140 000**	**212 000**

1) For foot mounting design multipy by 0,9.

4

2591-01.02

018A, 021A - Radial loads F_{r1} [N] on input shaft

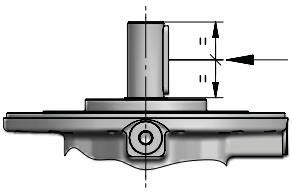


Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears											
	1EL			**2EL**			**3EL**			**4EL**		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	45 000	31 500	23 600	20 000	14 000	10 600	14 000	8 500	5 300	6 300	4 250	3 350
1 120 000	42 500	28 000	22 400	19 000	12 500	9 500	13 200	8 000	5 000	5 600	4 000	3 150
1 400 000	37 500	26 500	20 000	17 000	11 800	9 000	11 800	7 100	4 500	5 300	3 750	2 800
1 800 000	35 500	25 000	19 000	16 000	10 600	8 000	11 200	6 700	4 250	5 000	3 350	2 650
2 240 000	33 500	22 400	17 000	15 000	10 000	7 500	10 000	6 300	4 000	4 500	3 150	2 500
2 800 000	30 000	21 200	16 000	14 000	9 500	7 100	9 500	5 600	3 550	4 250	3 000	2 240
3 550 000	28 000	19 000	15 000	12 500	8 500	6 700	9 000	5 300	3 350	4 000	2 800	2 120
4 500 000	26 500	18 000	14 000	11 800	8 000	6 000	8 000	5 000	3 150	3 550	2 500	1 900
5 600 000	23 600	17 000	12 500	11 200	7 500	5 600	7 500	4 500	2 800	3 350	2 360	1 800
7 100 000	22 400	15 000	11 800	10 000	6 700	5 300	7 100	4 250	2 650	3 150	2 120	1 700
9 000 000	21 200	14 000	11 200	9 500	6 300	4 750	6 300	4 000	2 500	2 800	2 000	1 500
11 200 000	19 000	13 200	10 000	8 500	6 000	4 500	6 000	3 550	2 240	2 650	1 900	1 400
14 000 000	18 000	12 500	9 500	8 000	5 600	4 250	5 600	3 350	2 120	2 500	1 700	1 320
18 000 000	16 000	11 200	8 500	7 500	5 000	3 750	5 000	3 150	1 900	2 240	1 600	1 180
22 400 000	15 000	10 600	8 000	6 700	4 750	3 550	4 750	2 800	1 800	2 120	1 500	1 120
28 000 000	14 000	10 000	7 500	6 300	4 250	3 350	4 500	2 650	1 700	2 000	1 400	1 060
35 500 000	13 200	9 000	7 100	6 000	4 000	3 000	4 000	2 500	1 600	1 800	1 250	950
45 000 000	11 800	8 500	6 300	5 300	3 750	2 800	3 750	2 240	1 400	1 700	1 180	900

Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears					
	2EB		**3EB**		**4EB**	
	$i_N \leqslant 25$	$i_N \geqslant 28$	$i_N \leqslant 125$	$i_N \geqslant 140$	$i_N \leqslant 355$	$i_N \geqslant 400$
900 000	8 000	6 700	4 000	3 350	2 800	2 360
1 120 000	7 500	6 300	3 750	3 150	2 650	2 240
1 400 000	6 700	5 600	3 550	2 800	2 360	2 000
1 800 000	6 300	5 300	3 150	2 650	2 240	1 900
2 240 000	6 000	5 000	3 000	2 500	2 000	1 700
2 800 000	5 300	4 500	2 800	2 240	1 900	1 600
3 550 000	5 000	4 250	2 500	2 120	1 800	1 500
4 500 000	4 750	4 000	2 360	2 000	1 600	1 400
5 600 000	4 250	3 550	2 240	1 800	1 500	1 320
7 100 000	4 000	3 350	2 000	1 700	1 400	1 180
9 000 000	3 750	3 150	1 900	1 600	1 320	1 120
11 200 000	3 350	2 800	1 700	1 400	1 180	1 000
14 000 000	3 150	2 650	1 600	1 320	1 120	950
18 000 000	3 000	2 500	1 500	1 250	1 000	850
22 400 000	2 650	2 240	1 400	1 120	950	800
28 000 000	2 500	2 120	1 250	1 060	900	750
35 500 000	2 360	2 000	1 180	1 000	800	710
45 000 000	2 120	1 800	1 120	900	750	630



030A

Data and performance summary

	i_N	i_{act}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C oil	40°C H_2O
1EL	4,25	**4,09**	342 12 590	220 14 370	122 17 140	31 500 45 000	2 000 2 800	42,5 31,5	–	–
	5	**5,25**	267 13 180	171 15 050	95,2 17 760	26 830 45 000	2 000 2 800			
2EL	14	**14,4**	97,3 18 350	62,5 20 960	34,7 23 090	31 500 45 000	2 240 2 800	31,5 23,6	47,5 36,5	63 47,5
	16	**17,1**	82,0 19 320	52,7 22 060	29,3 23 330	31 500 45 000	2 240 3 150			
	18	**18,5**	75,8 18 010	48,7 18 500	27,1 19 180	28 000 45 000	2 240 2 800			
	22,4	**21,7**	64,6 20 750	41,6 22 840	23,1 23 680	31 500 45 000	2 240 3 550			
	25	**25,4**	55,1 20 470	35,4 21 030	19,7 21 800	31 500 42 500	2 240 3 550			
	28	**27,8**	50,4 18 460	32,4 18 970	18,0 19 670	28 000 45 000	2 240 3 550			
	31,5	**31,2**	44,8 14 950	28,8 15 360	16,0 15 930	24 540 35 500	2 240 3 550			
	35,5	**32,6**	42,9 18 650	27,6 19 160	15,3 19 860	28 000 45 000	2 240 3 550			
	40	**40,1**	34,9 18 880	22,4 19 400	12,5 20 120	28 000 45 000	2 240 3 550			
3EL	50	**50,6**	27,7 23 410	17,8 24 060	9,88 24 940	31 500 45 000	2 500 2 800	21,2 16	31,5 24,3	42,5 32,5
	63	**60,1**	23,3 23 660	15,0 24 310	8,33 25 200	31 500 45 000	2 500 2 800			
	71	**71,3**	19,6 23 910	12,6 24 570	7,02 25 470	31 500 45 000	2 800 3 550			
	80	**76,2**	18,4 24 010	11,8 24 670	6,56 25 640	31 500 45 000	2 800 4 000			
	90	**90,4**	15,5 24 260	9,96 24 930	5,53 26 310	31 500 45 000	2 800 4 000			
	100	**106**	13,2 24 500	8,48 25 180	4,71 26 950	31 500 45 000	2 800 4 000			
	112	**115**	12,2 24 620	7,85 25 300	4,36 27 270	31 500 45 000	2 800 4 000			
	125	**130**	10,7 21 600	6,90 22 190	3,83 23 010	31 500 45 000	2 800 4 000			
	140	**135**	10,4 24 860	6,69 25 560	3,72 27 940	31 500 45 000	2 800 4 000			
	160	**165**	8,47 25 180	5,44 26 370	3,02 28 830	31 500 45 000	2 800 4 000			
	180	**173**	8,11 20 650	5,21 21 220	2,89 23 070	28 000 45 000	2 800 4 000			
	200	**203**	6,91 20 860	4,44 21 620	2,47 23 630	28 000 45 000	2 800 4 000			
	224	**212**	6,60 20 920	4,24 21 770	2,36 23 800	28 000 45 000	2 800 4 000			
	250	**249**	5,62 21 120	3,61 22 310	2,01 24 380	28 000 45 000	2 800 4 000			

	i_N	i_{act}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C oil	40°C H_2O
4EL	180	**178**	7,87 25 290	5,06 26 670	2,81 29 150	31 500 45 000	2 800 3 150	17 12,5	25 19	33,5 25
	200	**211**	6,63 25 600	4,26 27 370	2,37 29 910	31 500 45 000	2 800 3 150			
	250	**251**	5,58 26 270	3,59 28 090	1,99 30 700	31 500 45 000	3 150 4 000			
	280	**297**	4,71 26 960	3,03 28 820	1,68 31 500	31 500 45 000	3 150 4 000			
	315	**318**	4,40 27 230	2,83 29 110	1,57 31 500	31 500 45 000	3 150 4 000			
	355	**344**	4,07 21 910	2,62 23 420	1,45 25 600	28 000 45 000	3 150 4 000			
	400	**377**	3,71 27 950	2,39 29 880	1,33 31 500	31 500 45 000	3 150 4 000			
	450	**443**	3,16 28 630	2,03 30 610	1,13 31 500	31 500 45 000	3 150 4 000			
	500	**479**	2,93 28 970	1,88 30 970	1,04 31 500	31 500 45 000	3 150 4 000			
	560	**562**	2,49 29 680	1,60 31 500	0,890 31 500	31 500 45 000	3 150 4 000			
	630	**659**	2,12 30 410	1,36 31 500	0,758 31 500	31 500 45 000	3 150 4 000			
	710	**713**	1,96 30 040	1,26 31 500	0,702 31 500	31 500 45 000	3 150 4 000			
	800	**836**	1,67 30 340	1,08 31 500	0,598 31 500	31 500 45 000	3 150 4 000			
	900	**876**	1,60 30 420	1,03 31 500	0,571 31 500	31 500 45 000	3 150 4 000			
	1000	**1028**	1,36 31 140	0,876 31 500	0,486 31 500	31 500 45 000	3 150 4 000			
	1120	**1206**	1,16 26 200	0,746 28 020	0,414 30 620	31 500 42 500	3 150 4 000			
	1250	**1263**	1,11 31 030	0,713 31 500	0,396 31 500	31 500 45 000	3 150 4 000			
	1400	**1482**	0,944 27 030	0,607 28 900	0,337 31 500	31 500 42 500	3 150 4 000			
	1600	**1621**	0,864 27 700	0,555 28 000	0,308 28 000	28 000 45 000	3 150 4 000			
	2000	**1902**	0,736 28 000	0,473 28 000	0,263 28 000	28 000 45 000	3 150 4 000			
	2240	**2338**	0,599 25 270	0,385 27 020	0,214 28 000	28 000 45 000	3 150 4 000			

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Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at 20°C	40°C	H₂O
2EB	10	**10,2**	137 8 920	88,0 10 190	48,9 12 150	14 880 18 000	1 800 2 240	28 21,2	42,5 31,5	56 42,5
	12,5	**13,1**	107 11 450	68,6 13 070	38,1 15 590	19 100 23 000	1 800 2 240			
	16	**16,6**	84,6 11 540	54,4 13 180	30,2 15 720	18 080 21 800	1 800 2 240			
	20	**21**	66,7 11 870	42,9 12 600	23,8 13 450	15 630 19 000	1 800 2 240			
	25	**26,2**	53,3 9 350	34,3 10 370	19,0 11 080	12 370 15 500	1 800 2 240			
3EB	35,5	**36**	38,9 14 770	25,0 16 860	13,9 20 110	24 370 30 000	2 240 2 800	20 15	30 22,4	40 30
	40	**42,7**	32,8 17 520	21,1 20 010	11,7 23 870	28 920 35 500	2 240 2 800			
	45	**46,2**	30,3 18 950	19,5 19 570	10,8 20 290	28 000 38 700	2 240 2 800			
	50	**54,1**	25,9 22 230	16,6 24 160	9,23 25 040	31 500 45 000	2 240 2 800			
	56	**58,2**	24,0 19 160	15,5 19 850	8,59 20 580	28 000 38 700	2 240 2 800			
	63	**63,6**	22,0 21 650	14,2 22 240	7,87 23 060	31 500 42 500	2 240 2 800			
	71	**68,3**	20,5 22 480	13,2 24 500	7,32 25 400	31 500 45 000	2 240 2 800			
	80	**80,2**	17,5 21 960	11,2 22 560	6,24 23 390	31 500 42 500	2 240 2 800			
	90	**86,6**	16,2 23 540	10,4 24 860	5,77 26 140	31 500 38 700	2 240 2 800			
	100	**102**	13,8 22 280	8,85 22 890	4,92 23 740	31 500 42 500	2 240 2 800			
	112	**111**	12,6 20 100	8,10 20 660	4,50 21 580	28 000 45 000	2 240 2 800			
	125	**127**	11,0 19 860	7,08 22 680	3,93 24 060	29 180 35 500	2 240 2 800			
	140	**139**	10,1 20 380	6,48 20 940	3,60 22 320	28 000 38 700	2 240 2 800			
	160	**163**	8,58 20 580	5,52 21 150	3,07 22 870	28 000 45 000	2 240 2 800			
	200	**200**	6,98 20 840	4,49 21 590	2,49 22 560	28 000 45 000	2 240 2 800			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at 20°C	40°C	H₂O
4EB	160	**150**	9,32 25 030	5,99 25 990	3,33 28 410	31 500 45 000	2 800 3 550	16 11,8	23,6 17,5	31,5 23,6
	180	**178**	7,86 25 290	5,05 26 670	2,81 29 150	31 500 45 000	2 800 3 550			
	200	**190**	7,35 25 400	4,73 26 940	2,63 29 450	31 500 45 000	2 800 3 550			
	224	**226**	6,19 25 860	3,98 27 650	2,21 30 220	31 500 45 000	2 800 3 550			
	250	**240**	5,83 26 100	3,75 27 910	2,08 30 500	31 500 45 000	2 800 3 550			
	280	**285**	4,91 26 790	3,16 28 640	1,75 31 300	31 500 45 000	2 800 3 550			
	315	**305**	4,59 27 060	2,95 28 930	1,64 31 500	31 500 45 000	2 800 3 550			
	355	**362**	3,87 27 770	2,49 29 690	1,38 31 500	31 500 45 000	2 800 3 550			
	400	**424**	3,30 28 450	2,12 30 410	1,18 31 500	31 500 45 000	2 800 3 550			
	450	**459**	3,05 28 780	1,96 30 040	1,09 31 500	31 500 45 000	2 800 3 550			
	500	**531**	2,64 29 420	1,70 31 460	0,942 31 500	31 500 45 000	2 800 3 550			
	560	**573**	2,44 29 640	1,57 30 480	0,872 31 500	31 500 45 000	2 800 3 550			
	630	**632**	2,22 24 920	1,42 25 610	0,791 27 770	31 500 42 500	2 800 3 550			
	710	**673**	2,08 29 940	1,34 31 230	0,743 31 500	31 500 45 000	2 800 3 550			
	800	**827**	1,69 30 240	1,09 31 070	0,605 31 500	31 500 45 000	2 800 3 550			
	900	**864**	1,62 25 180	1,04 26 920	0,579 28 000	28 000 45 000	2 800 3 550			
	1000	**971**	1,44 25 590	0,927 27 110	0,515 29 630	31 500 42 500	2 800 3 550			
	1120	**1061**	1,32 25 980	0,848 27 780	0,471 28 000	28 000 45 000	2 800 3 550			
	1250	**1246**	1,12 26 620	0,722 28 000	0,401 28 000	28 000 45 000	2 800 3 550			
	1600	**1531**	0,915 24 000	0,588 25 340	0,327 27 700	28 000 45 000	2 800 3 550			

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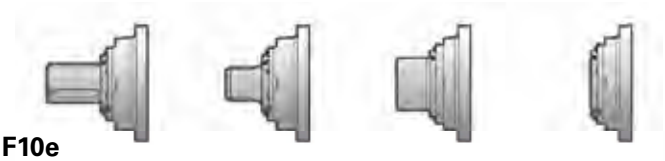
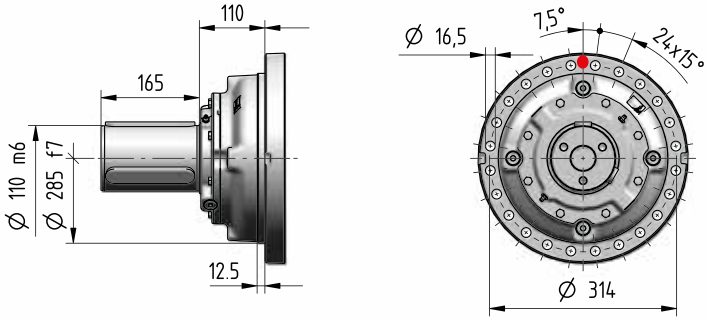
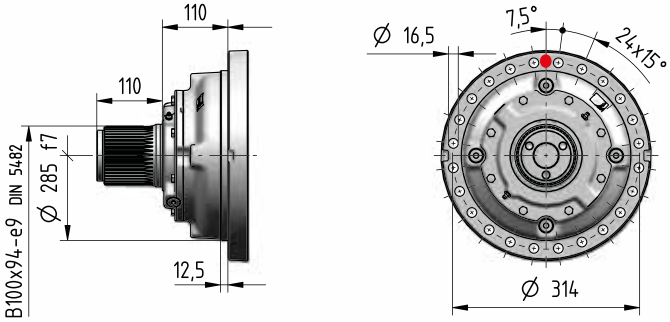
030A - Main Dimensions



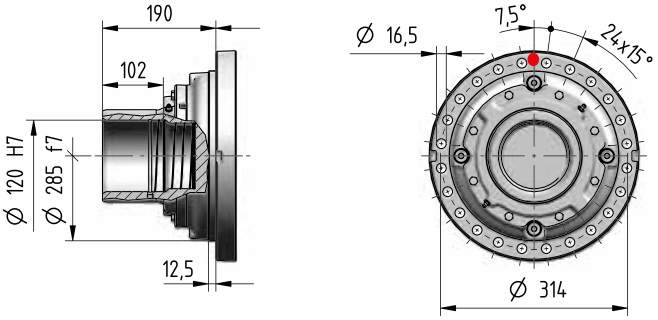
C110M1 F10e



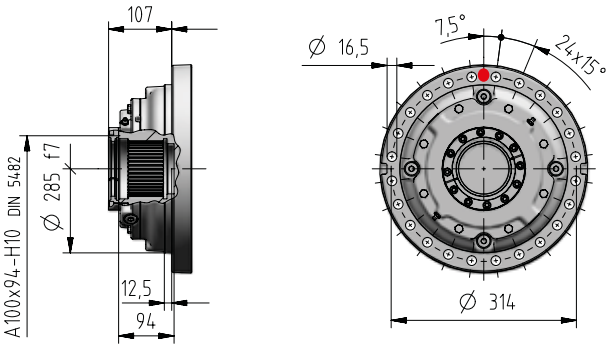
S100M1 F10e



H120M1 A10e



T100M1 A05e



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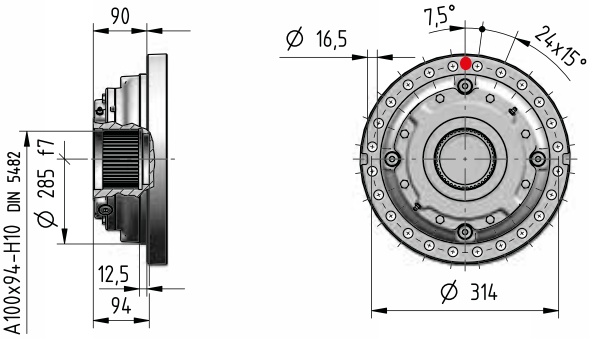

kg	Input options Code														Output options (Δ) Code				
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C...	U...	J...	C...	S...	H...	Z...	T...
1EL	-	-	-	-	-	139	139	140	151	158	158	156	-						
2EL	-	-	-	165	166	172	172	174	183	191	191	176	-						
3EL	-	-	172	176	176	182	182	185	194	-	-	177	169						
4EL	173	175	177	180	180	185	185	-	-	-	-	178	174		+0	-5	-7	-4,5	-3,5
2EB	-	-	-	210	214	220	220	220	230	240	240	224	-	198					
3EB	-	-	210	210	214	220	220	220	229	-	-	213	207	199					
4EB	192	194	196	199	195	200	200	-	-	-	-	197	189	189					

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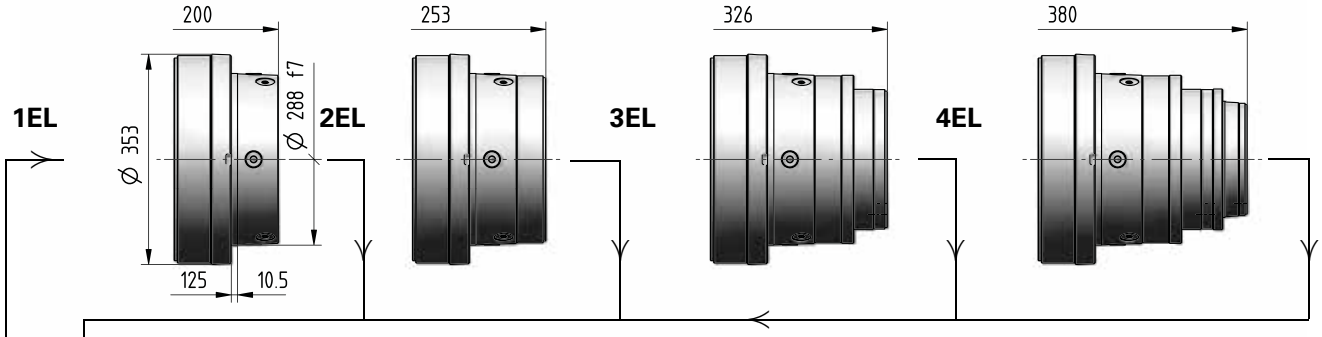
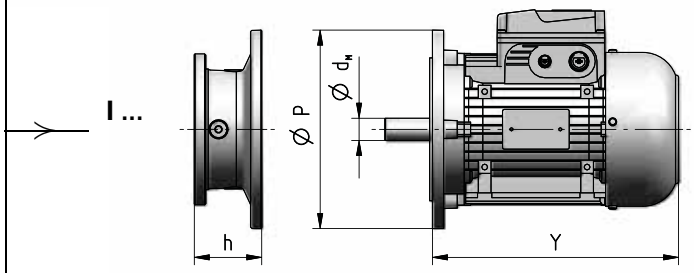
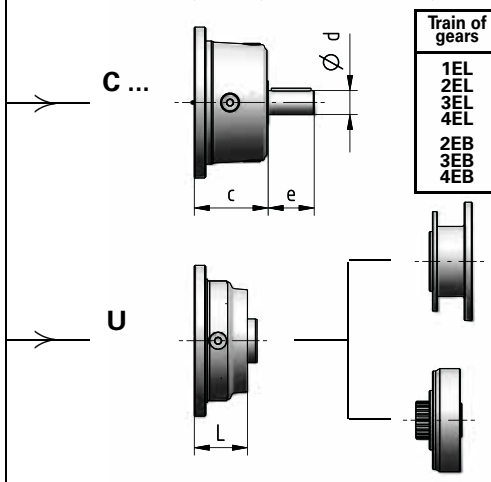




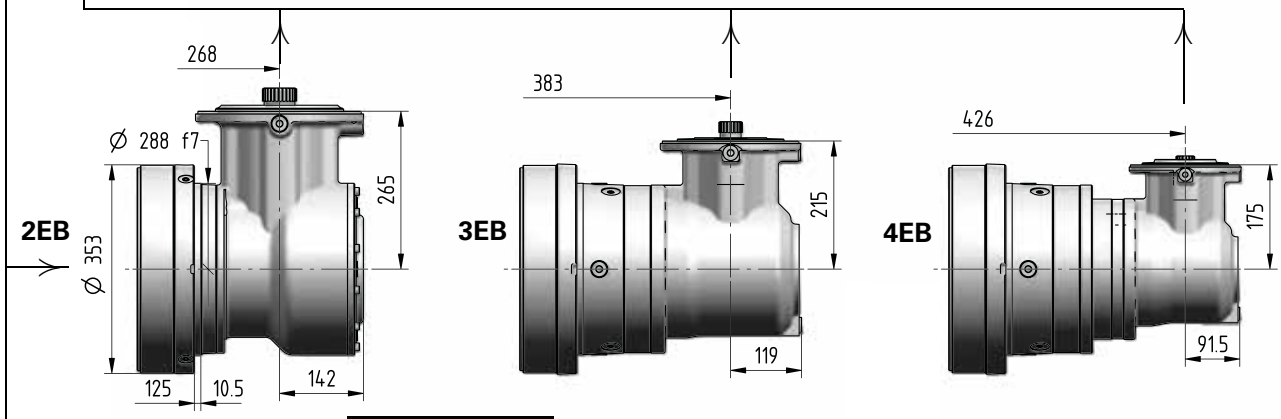
Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	–	52	–	–	52	**I14×160**
80	19×200	233	302	–	–	–	72	–	–	72	**I19×200**
90	24×200	287	366	–	–	–	72	–	–	72	**I24×200**
100	28×250	310	405	–	–	103	82	–	103	82	**I28×250**
112	28×250	336	435	–	–	103	82	–	103	82	**I28×250**
132	38×300	445	553	–	133,5	120	102	133,5	120	102	**I38×300**
160	42×350	573	640	111	159	153	135	159	153	135	**I42×350**
180	48×350	613	734	111	159	153	135	159	153	135	**I48×350**
200	55×400	654	734	111	159	153	–	159	153	–	**I55×400**
225	60×450	710	–	141	189	183	–	189	183	–	**I60×450**
250	65×550	735	–	141	189	–	–	189	–	–	**I65×550**
280	75×550	819	–	141	189	–	–	189	–	–	**I75×550**

1) Values valid for brake motor; for other dimensions see TX catalog.



Train of gears	d	e	c	Code
1EL	80	130	111	**C80×130**
2EL	60	105	138	**C60×105**
3EL	48	82	115	**C48×82**
4EL	38	58	90	**C38×58**
2EB	60	105	138	**C60×105**
3EB	48	82	115	**C48×82**
4EB	38	58	90	**C38×58**

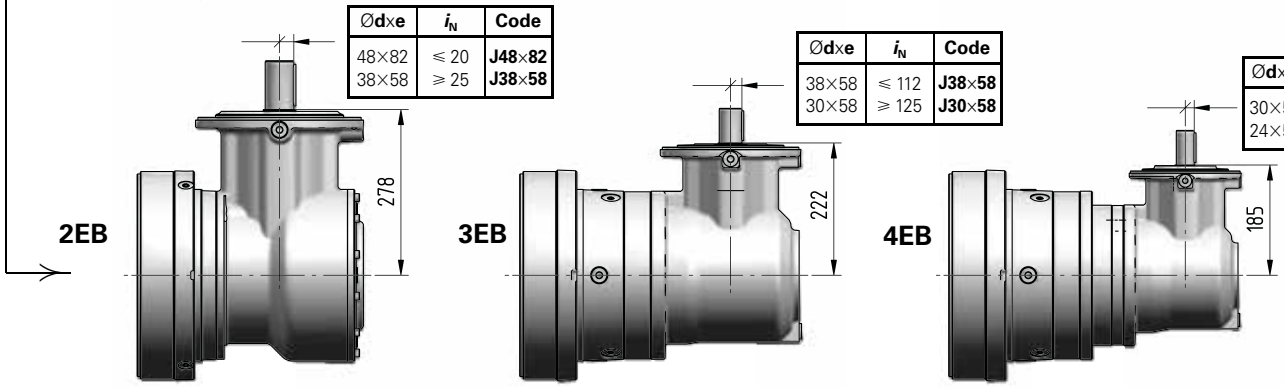
Train of gears	L	Code
3EL	62	ch.7
4EL	64	
2EB	–	
3EB	62	
4EB	64	



Ødxe	i_N	Code
48×82	⩽ 20	**J48×82**
38×58	⩾ 25	**J38×58**

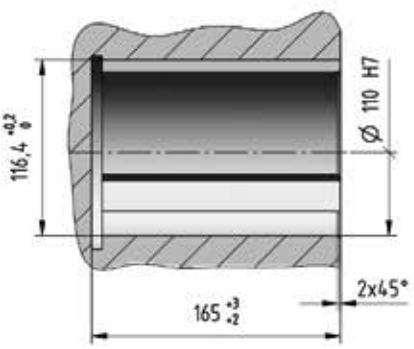
Ødxe	i_N	Code
38×58	⩽ 112	**J38×58**
30×58	⩾ 125	**J30×58**

Ødxe	i_N	Code
30×58	⩽ 280	**J30×58**
24×50	⩾ 315	**J24×50**

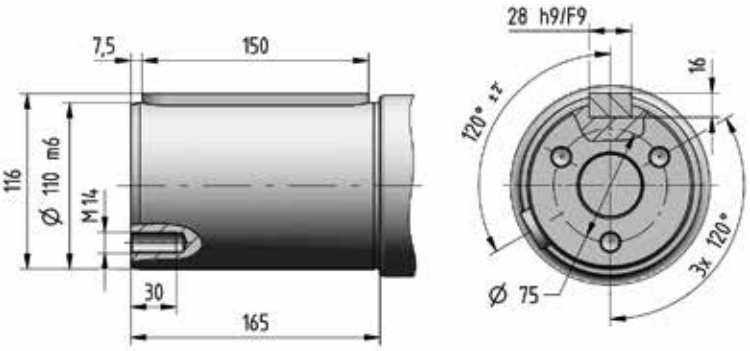


030A - Output side details

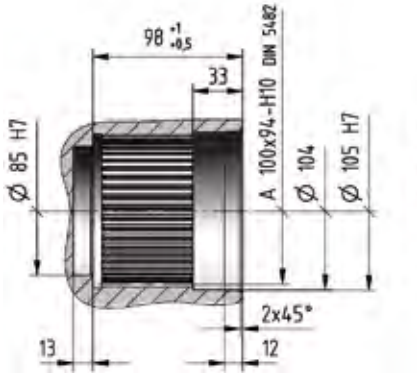
Suggested mating dimensions



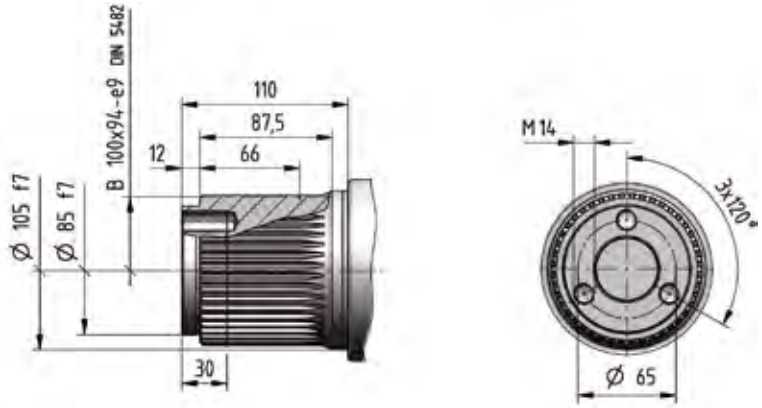
Gear reducer cylindrical shaft end



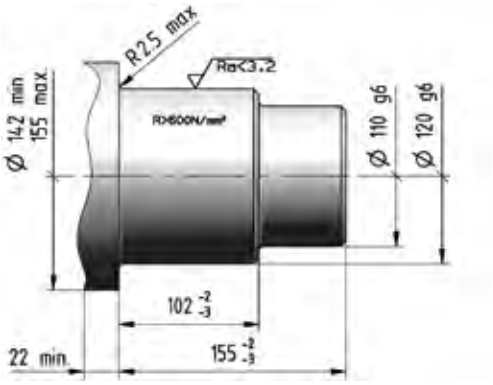
Suggested mating dimensions



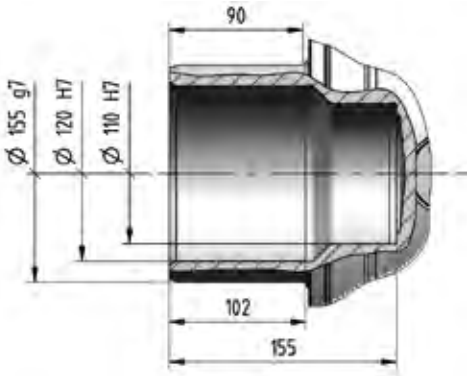
Gear reducer splined shaft end



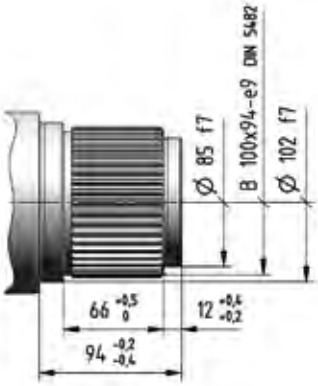
Suggested mating dimensions



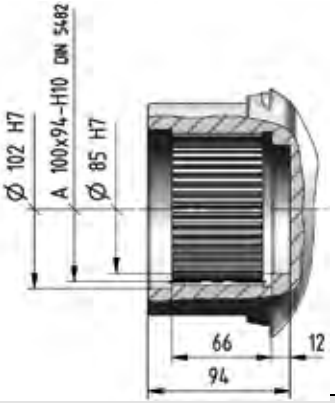
Gear reducer hollow shaft for shaft mounting



Suggested mating dimensions



Splined hollow shaft



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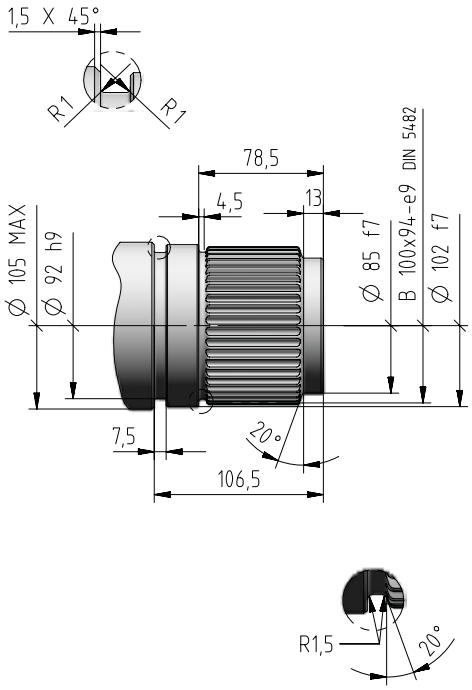
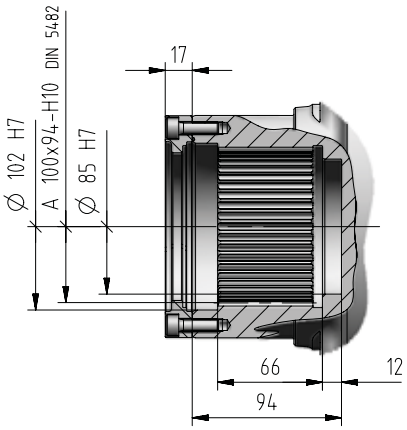
Suggested mating dimensions



Splined hollow shaft with axial locking

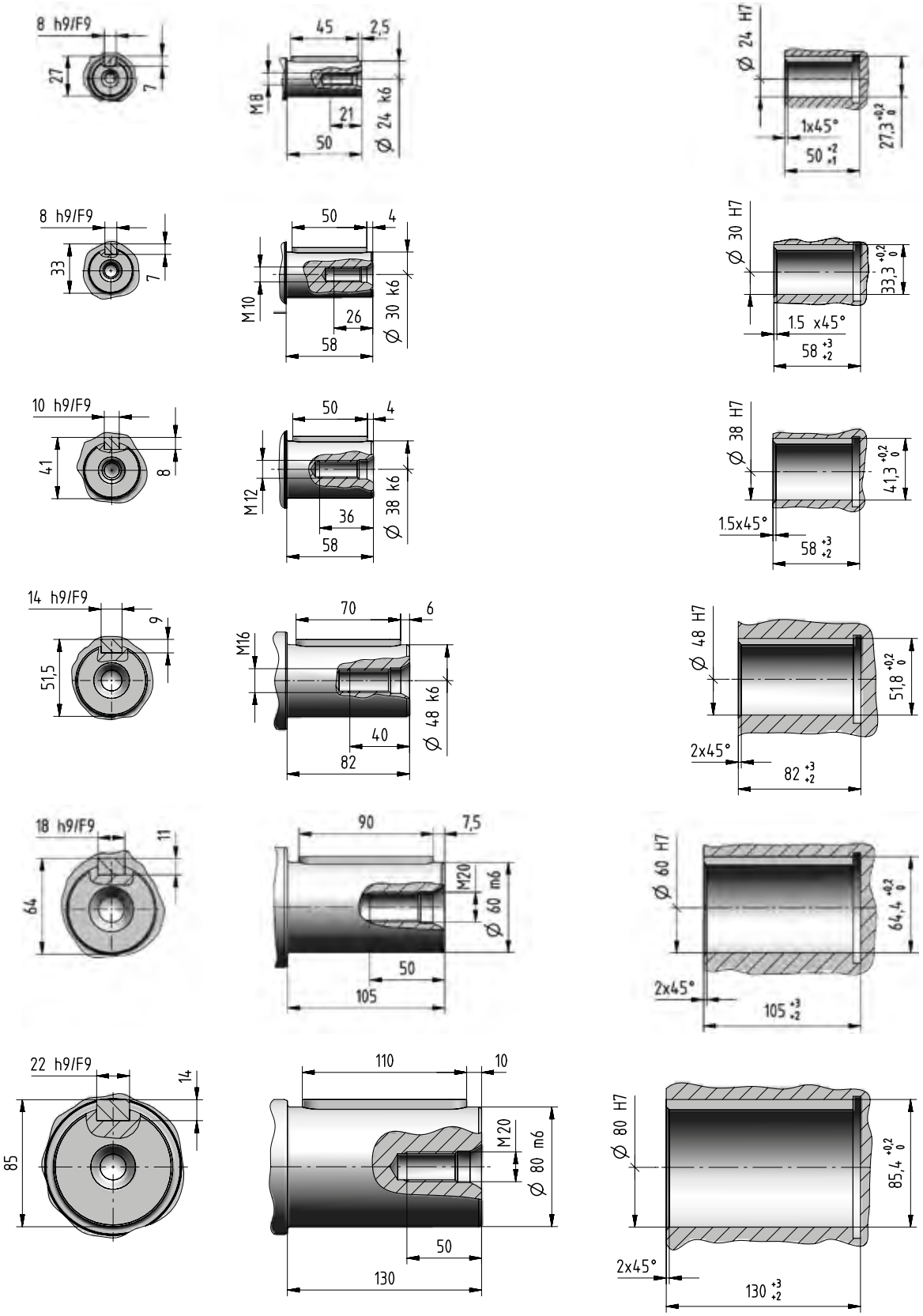


4

030A - Input side details

Gear reducer cylindrical shaft end

Suggested mating dimensions



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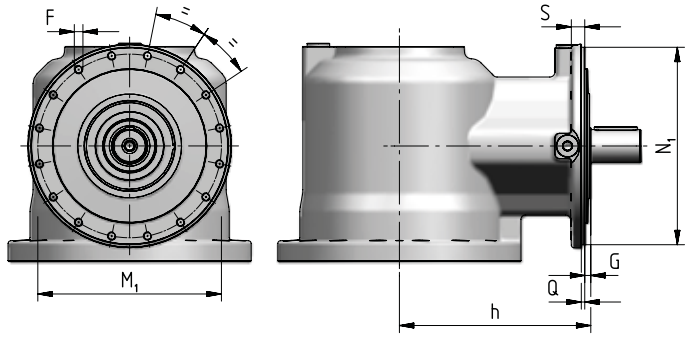
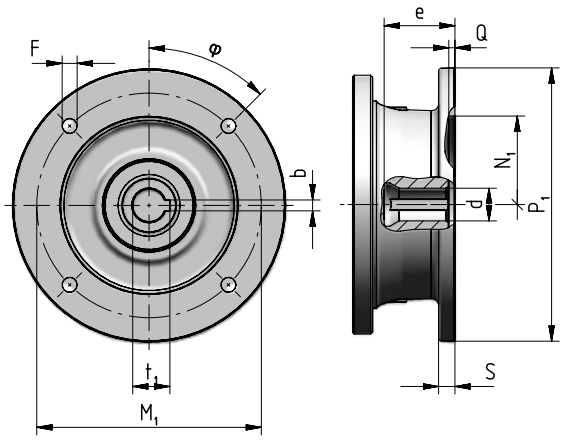
Bevel helical input flange



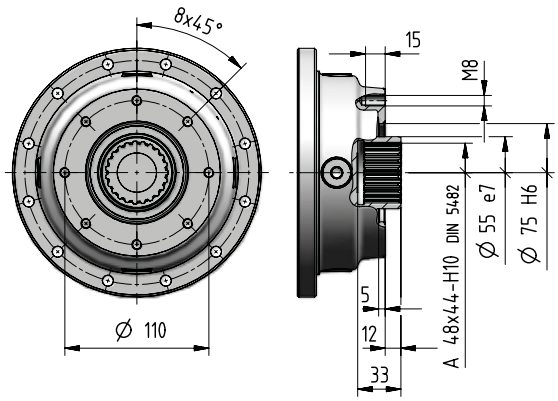
Train of gears	N_1 ∅ h6	Q	G	h	S	M_1 ∅	F ∅
2EB	274	4,5	13	278	18	255	M12 (n. 16)
3EB	229	4	7	222	15	213	M10 (n. 16)
4EB	184	3,5	10	185	12	171	M8 (n. 12)

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6
250	550	18	65 E6	142	18	69,4	500	18 (n.8)	22,5°	450	6
280	550	18	75 E6	142	20	79,9	500	18 (n.8)	22,5°	450	6

Universal flange adapter



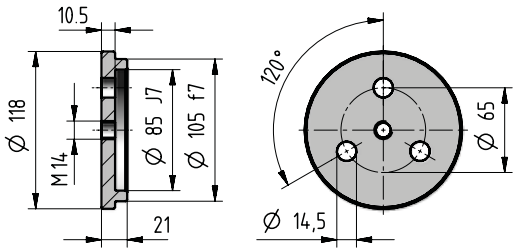
For more information see ch. 8.7.

2591-01.02

030A - Accessories

Stop washer

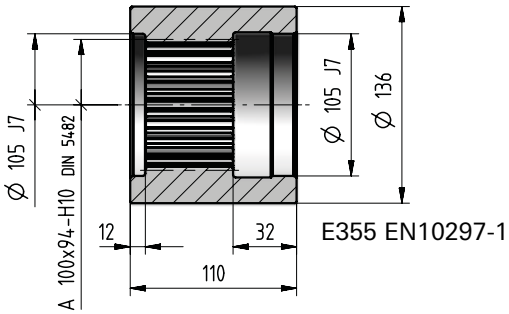
[included]



Code: **,SW100**

Splined bush

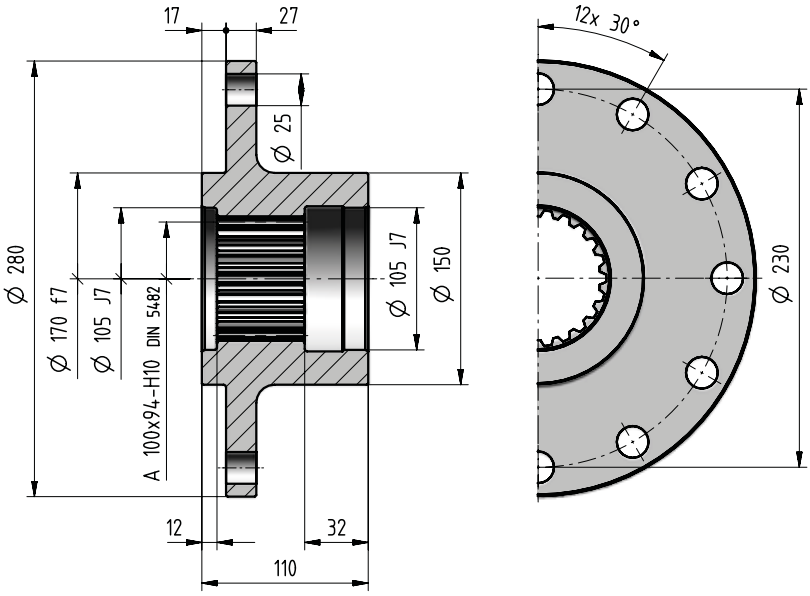
[included]



Code: **,SB100**

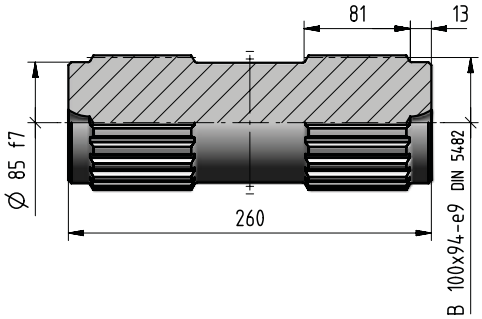
Wheel flange

[included]



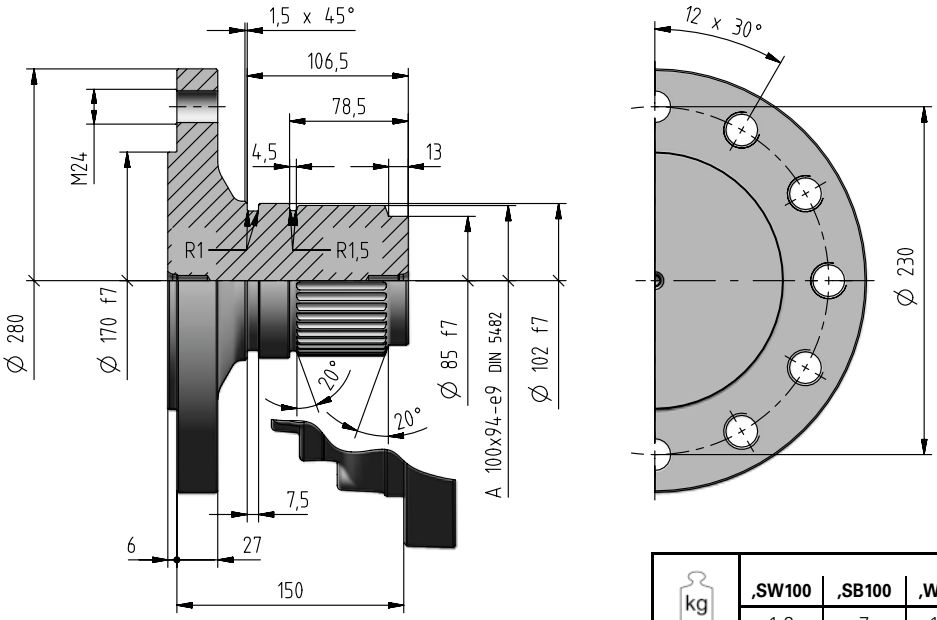
Code: **,WF100**

Splined bar



Code:**,SC100**

Wheel flange

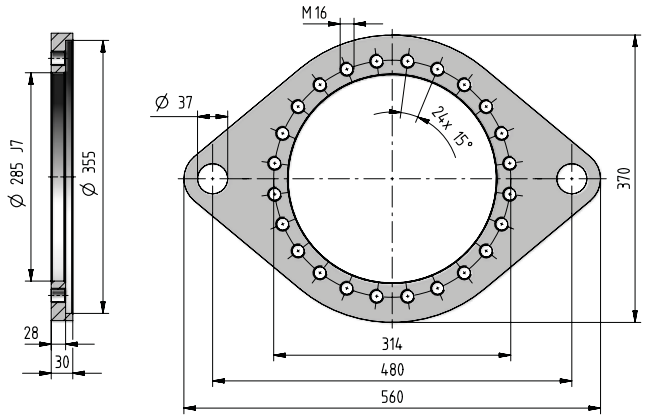


Code: **,WT100**

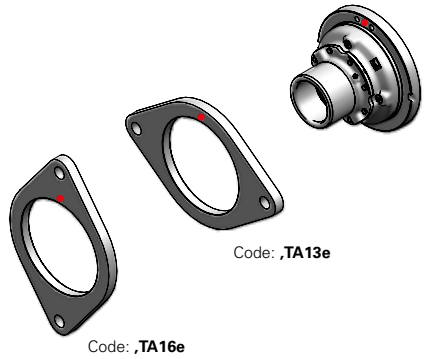
kg	Accessories							
	,SW100	,SB100	,WF100	,SC100	,TA10e	,SD155	,FB10e	,WT100
	1,2	7	18,4	14,2	14,5	20	33	21

Torque arm

[included]

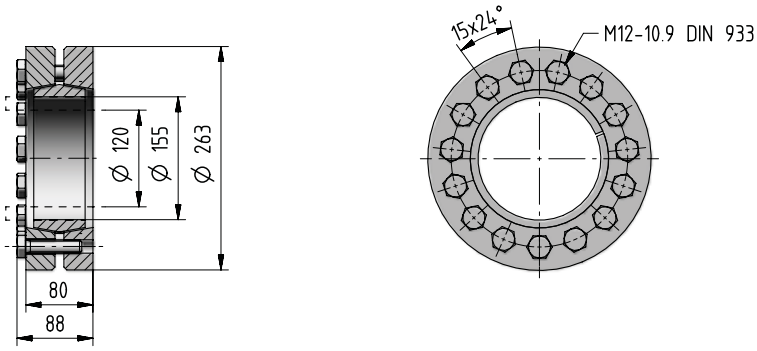


Code: **,TA10e**



- Reference hole for the identification of the mounting position

Shrink disc

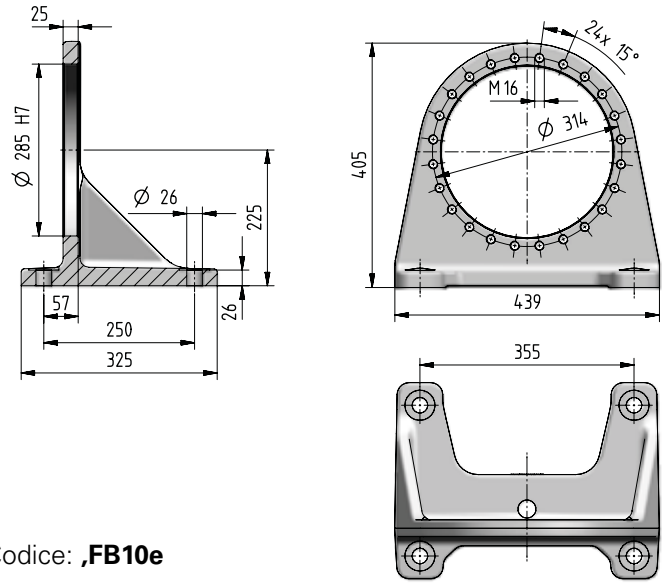


Code: **,SD155**

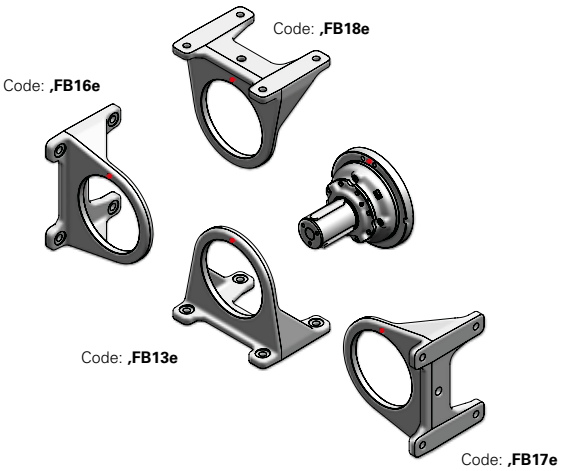
If an already mounted accessory is required, state the relevant position between accessory and gear reducer. This position is given by the flange upper reference hole (stated in red in the figure).

Foot bracket

[included]



Codice: **,FB10e**



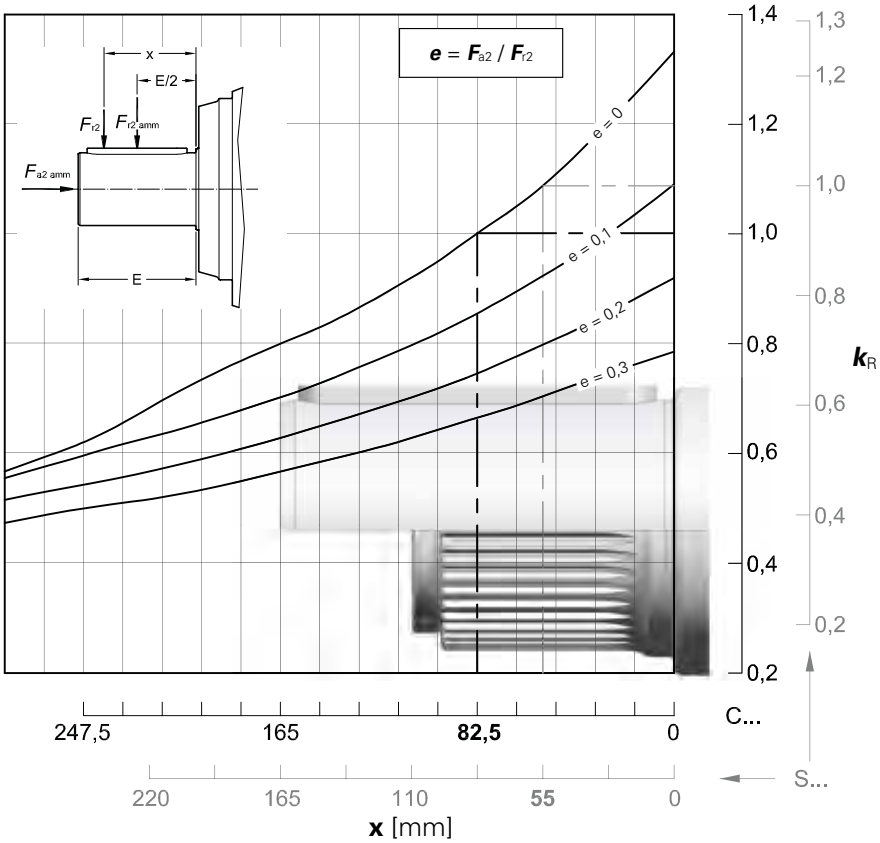
- Reference hole for the identification of the mounting position

In presence of a radial load F_{r2} ⩾70% of max value of F_{r2adm}, please foresee an additional foot. When having an axial load F_{a2} beside the radial load, this limit is to be reduced to 60%.

030A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

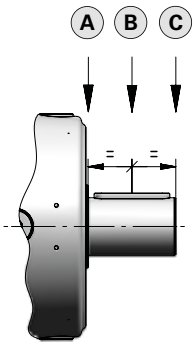
Radial loads $F_{r2\ adm}$ and axial loads $F_{a2\ adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

Output side: C110M1 F10e
S100M1 F10e



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\ adm}$ C ...	$F_{r2\ adm}$ S ...	$F_{a2\ adm}$ ←	$F_{a2\ adm}$ →
< **18 000**	160 000	180 000	53 000	
22 400	160 000	170 000	53 000	
28 000	150 000	160 000	53 000	
35 500	132 000	150 000	53 000	
45 000	125 000	140 000	50 000	
56 000	118 000	132 000	45 000	
71 000	112 000	118 000	42 500	
90 000	100 000	112 000	40 000	
112 000	95 000	106 000	37 500	
140 000	90 000	100 000	35 500	
180 000	85 000	90 000	31 500	
224 000	80 000	85 000	30 000	
280 000	75 000	80 000	28 000	
355 000	67 000	75 000	26 500	
450 000	63 000	71 000	25 000	
560 000	60 000	63 000	23 600	
710 000	56 000	60 000	21 200	
900 000	50 000	56 000	20 000	
1 120 000	47 500	53 000	19 000	
1 400 000	45 000	50 000	18 000	
1 800 000	42 500	45 000	16 000	
2 240 000	40 000	42 500	15 000	
2 800 000	37 500	40 000	14 000	
max	**160 000**	**180 000**	**53 000**	**28 000**

030A - Radial loads F_{r1} [N] on input shaft

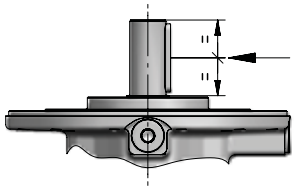


Radial loads $F_{r1\,adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears											
	1EL			**2EL**			**3EL**			**4EL**		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	63 000	42 500	31 500	28 000	19 000	14 000	20 000	14 000	10 600	14 000	8 500	5 300
1 120 000	60 000	40 000	30 000	26 500	18 000	13 200	19 000	12 500	9 500	13 200	8 000	5 000
1 400 000	56 000	37 500	26 500	25 000	16 000	12 500	17 000	11 800	9 000	11 800	7 100	4 500
1 800 000	50 000	33 500	25 000	22 400	15 000	11 200	16 000	10 600	8 000	11 200	6 700	4 250
2 240 000	47 500	31 500	23 600	21 200	14 000	10 600	15 000	10 000	7 500	10 000	6 300	4 000
2 800 000	45 000	30 000	21 200	20 000	13 200	9 500	14 000	9 500	7 100	9 500	5 600	3 550
3 550 000	40 000	26 500	20 000	18 000	11 800	9 000	12 500	8 500	6 700	9 000	5 300	3 350
4 500 000	37 500	25 000	18 000	17 000	11 200	8 500	11 800	8 000	6 000	8 000	5 000	3 150
5 600 000	35 500	23 600	17 000	16 000	10 600	7 500	11 200	7 500	5 600	7 500	4 500	2 800
7 100 000	31 500	21 200	16 000	14 000	9 500	7 100	10 000	6 700	5 300	7 100	4 250	2 650
9 000 000	30 000	20 000	15 000	13 200	9 000	6 700	9 500	6 300	4 750	6 300	4 000	2 500
11 200 000	28 000	18 000	13 200	12 500	8 000	6 000	8 500	6 000	4 500	6 000	3 550	2 240
14 000 000	26 500	17 000	12 500	11 200	7 500	5 600	8 000	5 600	4 250	5 600	3 350	2 120
18 000 000	23 600	16 000	11 800	10 600	7 100	5 300	7 500	5 000	3 750	5 000	3 150	1 900
22 400 000	22 400	15 000	10 600	10 000	6 700	4 750	6 700	4 750	3 550	4 750	2 800	1 800
28 000 000	20 000	13 200	10 000	9 000	6 000	4 500	6 300	4 250	3 350	4 500	2 650	1 700
35 500 000	19 000	12 500	9 500	8 500	5 600	4 250	6 000	4 000	3 000	4 000	2 500	1 600
45 000 000	18 000	11 800	8 500	8 000	5 300	3 750	5 300	3 750	2 800	3 750	2 240	1 400

Radial loads $F_{r1\,adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears					
	2EB		**3EB**		**4EB**	
	$i_N \leqslant 22{,}4$	$i_N \geqslant 25$	$i_N \leqslant 112$	$i_N \geqslant 125$	$i_N \leqslant 450$	$i_N \geqslant 500$
900 000	8 000	6 700	5 600	4 750	4 000	3 350
1 120 000	7 500	6 300	5 300	4 500	3 750	3 150
1 400 000	6 700	5 600	4 750	4 000	3 550	2 800
1 800 000	6 300	5 300	4 500	3 750	3 150	2 650
2 240 000	6 000	5 000	4 000	3 550	3 000	2 500
2 800 000	5 300	4 500	3 750	3 150	2 800	2 240
3 550 000	5 000	4 250	3 550	3 000	2 500	2 120
4 500 000	4 750	4 000	3 350	2 800	2 360	2 000
5 600 000	4 250	3 550	3 000	2 650	2 240	1 800
7 100 000	4 000	3 350	2 800	2 360	2 000	1 700
9 000 000	3 750	3 150	2 650	2 240	1 900	1 600
11 200 000	3 350	2 800	2 360	2 000	1 700	1 400
14 000 000	3 150	2 650	2 240	1 900	1 600	1 320
18 000 000	3 000	2 500	2000	1 700	1 500	1 250
22 400 000	2 650	2 240	1 900	1 600	1 400	1 120
28 000 000	2 500	2 120	1 800	1 500	1 250	1 060
35 500 000	2 360	2 000	1 600	1 400	1 180	1 000
45 000 000	2 120	1 800	1 500	1 320	1 120	900



042A

Data and performance summary

	i_N	i_{act}	L_h = 10 000 h n_1 min^{-1} n_2 min^{-1} M_{N2} N m 1 400	900	500	M_{N2max} M_{2max} N m	n_{1max} n_{1peak} min^{-1}	n_1 = 1 400 min^{-1} P_t [kW] at 20°C 40°C –		
1EL	4,25	**4,18**	335 18 590	215 21 230	120 25 320	45 000 67 000	2 000 2 800	56 42,5	–	–
	5	**4,89**	286 19 110	184 21 820	102 26 030	40 000 67 000	2 000 2 800			
2EL	14	**14,7**	95,2 27 120	61,2 30 960	34,0 35 090	45 000 53 000	2 240 2 800	40 30	60 45	80 60
	18	**17,5**	80,2 28 270	51,6 32 280	28,6 35 470	45 000 67 000	2 240 3 150			
	20	**20,4**	68,6 27 980	44,1 28 750	24,5 29 810	40 000 67 000	2 240 3 150			
	22,4	**22,1**	63,2 29 530	40,7 31 560	22,6 32 720	45 000 61 500	2 240 3 550			
	25	**25,9**	54,1 28 400	34,8 29 180	19,3 30 250	40 000 67 000	2 240 3 550			
	28	**28,7**	48,8 28 580	31,4 29 360	17,4 30 440	40 000 60 000	2 240 3 550			
	31,5	**30,4**	46,1 24 460	29,6 25 130	16,5 26 050	40 000 50 000	2 240 3 550			
	35,5	**37,3**	37,5 17 870	24,1 18 360	13,4 19 040	29 330 42 500	2 240 3 550			
3EL	50	**51,7**	27,1 35 380	17,4 36 570	9,66 37 910	45 000 53 000	2 500 2 800	26,5 20	40 30	53 40
	63	**61,4**	22,8 35 960	14,7 36 950	8,14 38 310	45 000 53 000	2 800 3 550			
	71	**72,9**	19,2 36 340	12,4 37 340	6,86 38 710	45 000 67 000	2 800 3 550			
	80	**77,9**	18,0 36 490	11,6 37 500	6,42 38 940	45 000 53 000	2 800 4 000			
	90	**92,4**	15,2 36 880	9,74 37 890	5,41 39 960	45 000 67 000	2 800 4 000			
	100	**108**	12,9 37 240	8,30 38 270	4,61 40 940	45 000 67 000	2 800 4 000			
	112	**117**	11,9 34 020	7,68 34 960	4,27 36 240	45 000 61 500	2 800 4 000			
	125	**127**	11,0 31 300	7,10 32 160	3,94 34 280	40 000 67 000	2 800 4 000			
	140	**138**	10,2 34 360	6,54 35 300	3,63 36 600	45 000 61 500	2 800 4 000			
	160	**169**	8,28 34 800	5,32 35 750	2,96 37 070	45 000 61 500	2 800 4 000			
	180	**178**	7,85 31 960	5,05 33 020	2,81 36 090	40 000 60 000	2 800 4 000			
	200	**198**	7,08 32 170	4,55 33 540	2,53 36 660	40 000 67 000	2 800 4 000			
	224	**219**	6,39 32 370	4,11 34 060	2,28 36 600	40 000 60 000	2 800 4 000			
	250	**232**	6,03 27 710	3,88 28 470	2,16 29 510	40 000 50 000	2 800 4 000			

	i_N	i_{act}	L_h = 10 000 h n_1 min^{-1} n_2 min^{-1} M_{N2} N m 1 400	900	500	M_{N2max} M_{2max} N m	n_{1max} n_{1peak} min^{-1}	n_1 = 1 400 min^{-1} P_t [kW] at 20°C 40°C –		
4EL	180	**182**	7,69 38 440	4,95 40 510	2,75 44 280	45 000 53 000	2 800 3 150	21,2 16	31,5 24,3	42,5 32,5
	200	**216**	6,48 38 880	4,17 41 570	2,32 45 000	45 000 53 000	3 150 4 000			
	250	**256**	5,46 39 900	3,51 42 660	1,95 45 000	45 000 67 000	3 150 4 000			
	280	**274**	5,11 40 310	3,29 43 090	1,83 45 000	45 000 53 000	3 150 4 000			
	315	**304**	4,60 40 950	2,96 43 780	1,64 45 000	45 000 67 000	3 150 4 000			
	355	**325**	4,31 41 370	2,77 44 230	1,54 45 000	45 000 67 000	3 150 4 000			
	400	**386**	3,63 42 450	2,33 45 000	1,30 45 000	45 000 67 000	3 150 4 000			
	450	**453**	3,09 43 490	1,99 45 000	1,10 45 000	45 000 67 000	3 150 4 000			
	500	**489**	2,86 44 010	1,84 45 000	1,02 45 000	45 000 67 000	3 150 4 000			
	560	**556**	2,52 44 870	1,62 45 000	0,899 45 000	45 000 67 000	3 150 4 000			
	630	**595**	2,35 44 950	1,51 45 000	0,841 45 000	45 000 53 000	3 150 4 000			
	710	**706**	1,98 45 000	1,28 45 000	0,709 45 000	45 000 67 000	3 150 4 000			
	800	**828**	1,69 45 000	1,09 45 000	0,604 45 000	45 000 67 000	3 150 4 000			
	900	**895**	1,56 38 540	1,01 40 110	0,559 43 840	45 000 61 500	3 150 4 000			
	1000	**1051**	1,33 38 920	0,857 41 100	0,476 44 920	45 000 61 500	3 150 4 000			
	1120	**1160**	1,21 38 060	0,776 39 530	0,431 40 000	40 000 60 000	3 150 4 000			
	1250	**1291**	1,08 39 660	0,697 42 400	0,387 45 000	45 000 61 500	3 150 4 000			
	1400	**1361**	1,03 38 440	0,661 40 000	0,367 40 000	40 000 60 000	3 150 4 000			
	1600	**1509**	0,928 40 000	0,596 40 000	0,331 40 000	40 000 67 000	3 150 4 000			
	1800	**1673**	0,837 39 080	0,538 40 000	0,299 40 000	40 000 60 000	3 150 4 000			

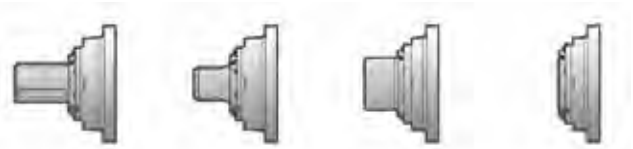
2591-01.02

Data and performance summary

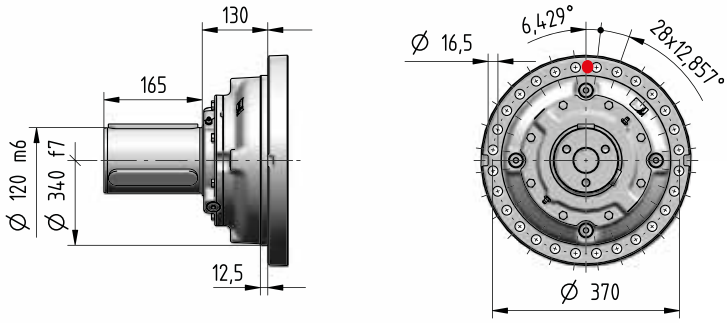
	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at 20°C / 40°C: –		
2EB	10	**10,5**	134 17 750	86,1 20 260	47,8 24 170	30 420 36 500	1 400 1 800	33,5 25	–	–
	12,5	**12,2**	115 20 750	73,6 23 690	40,9 28 260	35 570 42 500	1 400 1 800			
	16	**15,4**	90,8 20 950	58,4 23 920	32,4 28 530	33 670 40 000	1 400 1 800			
	20	**19,6**	71,6 21 490	46,0 24 540	25,6 26 380	29 160 35 500	1 400 1 800			
	25	**24,4**	57,3 15 660	36,8 17 880	20,5 21 320	23 090 28 000	1 400 1 800			
3EB	35,5	**36,8**	38,1 15 090	24,5 17 230	13,6 20 560	24 910 30 700	2 240 2 800	25 19	37,5 29	50 37,5
	40	**43**	32,6 17 650	20,9 20 150	11,6 24 030	29 120 36 500	2 240 2 800			
	50	**51**	27,4 20 940	17,6 23 910	9,80 28 520	34 560 42 500	2 240 2 800			
	56	**55,3**	25,3 22 720	16,3 25 940	9,03 30 940	37 500 46 200	2 240 2 800			
	63	**64,7**	21,6 26 560	13,9 30 330	7,73 32 000	40 000 54 500	2 240 2 800			
	71	**71,7**	19,5 29 430	12,6 31 060	6,97 32 200	40 000 60 000	2 240 2 800			
	80	**81,6**	17,2 26 860	11,0 30 670	6,13 32 460	40 000 54 500	2 240 2 800			
	90	**90,5**	15,5 29 760	9,95 31 500	5,53 32 660	40 000 60 000	2 240 2 800			
	100	**104**	13,5 28 130	8,69 31 260	4,83 33 240	37 750 46 200	2 240 2 800			
	112	**115**	12,2 31 110	7,84 31 970	4,36 33 760	40 000 51 500	2 240 2 800			
	125	**122**	11,5 26 630	7,41 27 360	4,11 28 370	40 000 50 000	2 240 2 800			
	140	**143**	9,76 22 410	6,28 25 580	3,49 30 190	32 920 40 000	2 240 2 800			
	160	**152**	9,22 23 730	5,92 27 100	3,29 28 760	34 870 42 500	2 240 2 800			

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; Pt [kW] at 20°C / 40°C: –		
4EB	160	**153**	9,12 31 750	5,86 36 260	3,26 43 150	45 000 63 000	2 800 3 550	20 15	30 22,4	40 30
	180	**182**	7,69 37 680	4,94 40 520	2,75 44 280	45 000 67 000	2 800 3 550			
	200	**195**	7,19 38 600	4,62 40 930	2,57 44 710	45 000 53 000	2 800 3 550			
	224	**231**	6,06 39 280	3,90 42 000	2,16 45 000	45 000 67 000	2 800 3 550			
	250	**246**	5,70 39 650	3,66 42 390	2,04 45 000	45 000 53 000	2 800 3 550			
	280	**271**	5,16 40 250	3,32 43 030	1,84 45 000	45 000 67 000	2 800 3 550			
	315	**311**	4,49 41 100	2,89 43 940	1,61 45 000	45 000 53 000	2 800 3 550			
	355	**370**	3,79 42 180	2,43 45 000	1,35 45 000	45 000 67 000	2 800 3 550			
	400	**404**	3,47 34 950	2,23 36 650	1,24 38 000	40 000 60 000	2 800 3 550			
	450	**434**	3,23 43 210	2,07 45 000	1,15 45 000	45 000 67 000	2 800 3 550			
	500	**507**	2,76 36 180	1,77 38 680	0,986 40 000	40 000 67 000	2 800 3 550			
	560	**542**	2,58 41 240	1,66 45 000	0,922 45 000	45 000 67 000	2 800 3 550			
	630	**634**	2,21 37 420	1,42 40 000	0,789 40 000	40 000 67 000	2 800 3 550			
	710	**688**	2,04 37 920	1,31 38 970	0,727 42 130	45 000 61 500	2 800 3 550			
	800	**845**	1,66 38 410	1,06 39 770	0,591 43 470	45 000 61 500	2 800 3 550			
	900	**891**	1,57 37 450	1,01 38 480	0,561 40 000	40 000 60 000	2 800 3 550			
	1000	**988**	1,42 40 000	0,911 40 000	0,506 40 000	40 000 67 000	2 800 3 550			
	1120	**1095**	1,28 37 930	0,822 39 190	0,457 40 000	40 000 60 000	2 800 3 550			

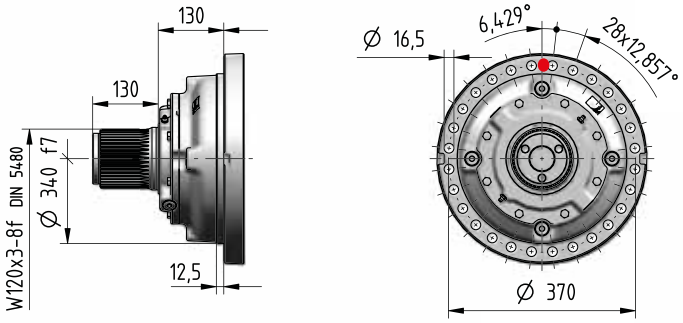
042A - Main Dimensions



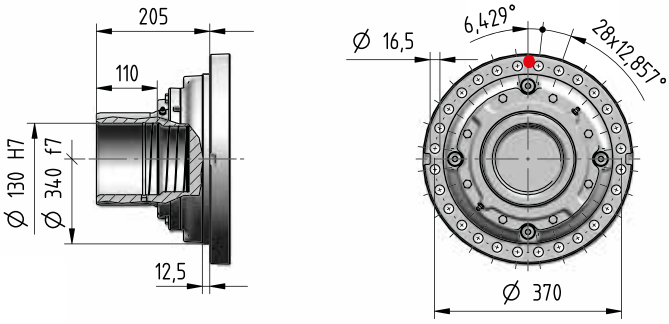
C120M1 F10f



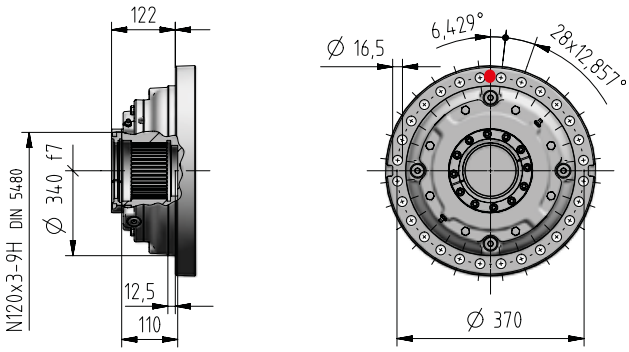
S120M1 F10f



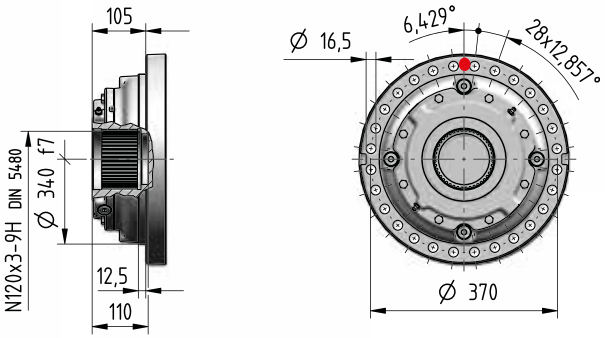
H130M1 A10f



T120M1 A05f

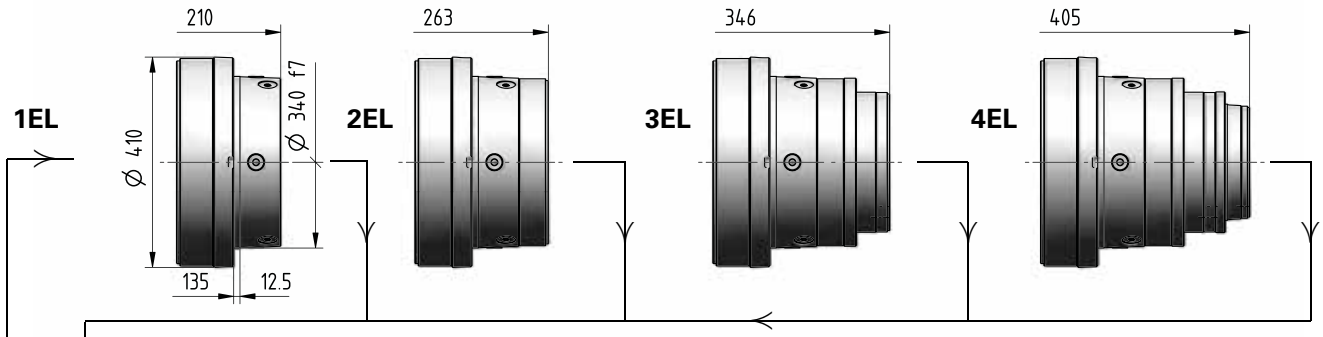


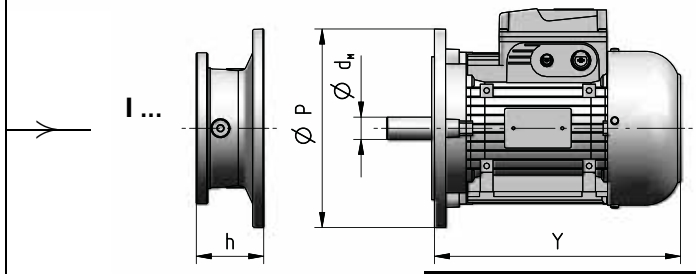
Z120M1 F05f



kg	Input Options Code														Output Options (Δ) Code				
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C…	U…	J…	C…	S…	H…	Z…	T…
1EL	-	-	-	-	-	189	189	190	200	210	210	210	-	-					
2EL	-	-	-	220	220	220	220	230	240	240	240	230	-	-					
3EL	-	-	230	230	230	240	240	240	249	-	-	240	227	-					
4EL	230	230	230	240	240	240	240	-	-	-	-	240	229	-	+0	-3	-11	-8	-7
2EB	-	-	-	-	-	340	340	340	350	360	360	354	-	320					
3EB	-	-	260	260	260	270	270	270	279	-	-	264	257	250					
4EB	250	250	250	250	260	260	260	-	-	-	-	258	249	250					

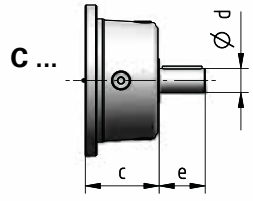
2591-01.02



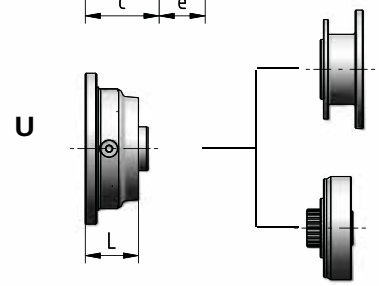


Motor size IEC	d_M×P	Y	Y 1)	Train of gears 1EL	2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**							
71	14×160	216	278	–	–	–	52	–	–	52	**I14×160**
80	19×200	233	302	–	–	–	72	–	–	72	**I19×200**
90	24×200	287	366	–	–	–	72	–	–	72	**I24×200**
100	28×250	310	405	–	–	103	82	–	103	82	**I28×250**
112	28×250	336	435	–	–	103	82	–	103	82	**I28×250**
132	38×300	445	553	–	133,5	120	102	–	120	102	**I38×300**
160	42×350	573	640	111	159	153	135	159	153	135	**I42×350**
180	48×350	613	734	111	159	153	135	159	153	135	**I48×350**
200	55×400	654	734	111	159	153	–	159	153	–	**I55×400**
225	60×450	710	–	141	189	183	–	189	183	–	**I60×450**
250	65×550	735	–	141	189	–	–	189	–	–	**I65×550**
280	75×550	819	–	141	189	–	–	189	–	–	**I75×550**

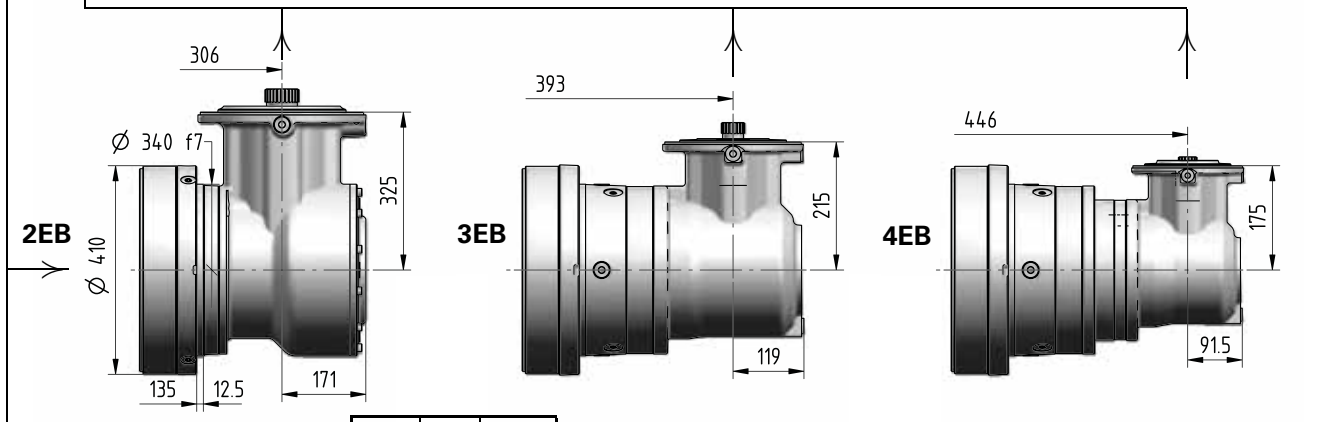
1) Values valid for brake motor; for other dimensions see TX catalog.



Train of gears	d	e	c	Code
1EL	80	130	111	**C80×130**
2EL	60	105	138	**C60×105**
3EL	48	82	115	**C48×82**
4EL	38	58	90	**C38×58**
2EB	70	105	152,5	**C70×105**
3EB	48	82	115	**C48×82**
4EB	38	58	90	**C38×58**



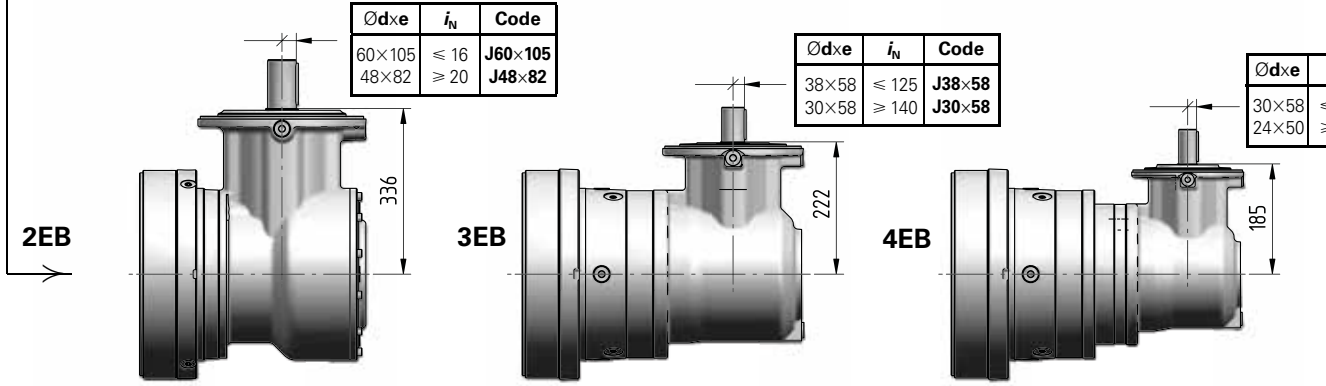
Train of gears	L	Code
3EL	62	ch.7
4EL	64	
3EB	62	
4EB	64	



Ødxe	i_N	Code
60×105	⩽ 16	**J60×105**
48×82	⩾ 20	**J48×82**

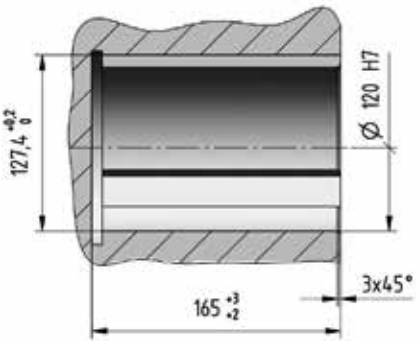
Ødxe	i_N	Code
38×58	⩽ 125	**J38×58**
30×58	⩾ 140	**J30×58**

Ødxe	i_N	Code
30×58	⩽ 280	**J30×58**
24×50	⩾ 315	**J24×50**

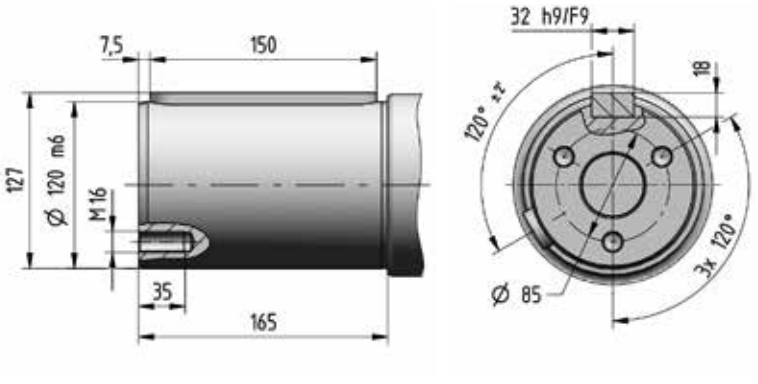


042A - Output side details

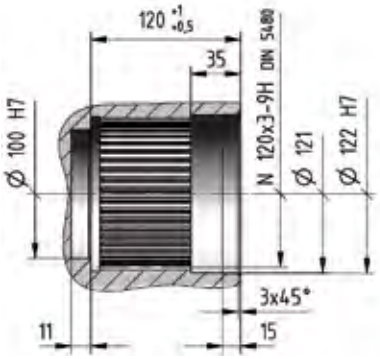
Suggested mating dimensions



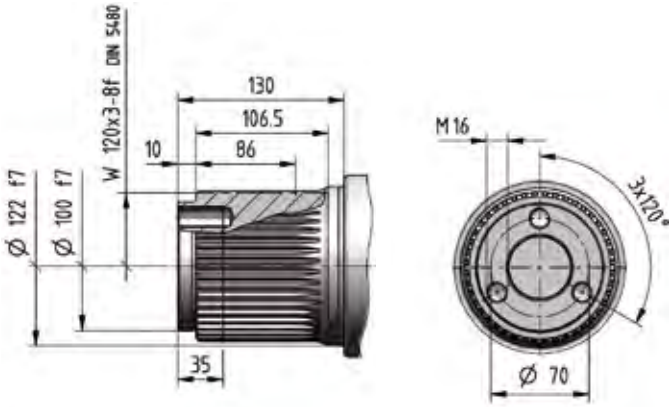
Gear reducer cylindrical shaft end



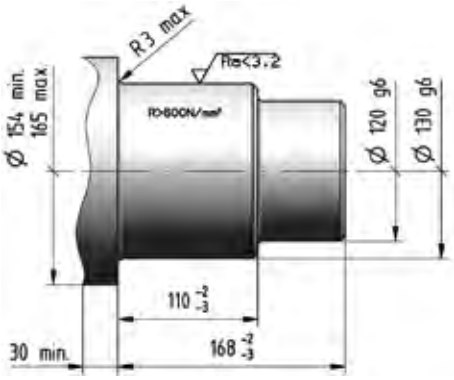
Suggested mating dimensions



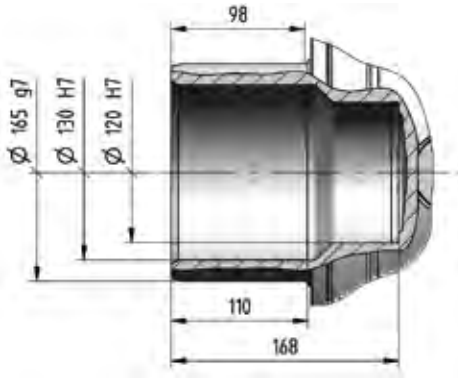
Gear reducer splined shaft end



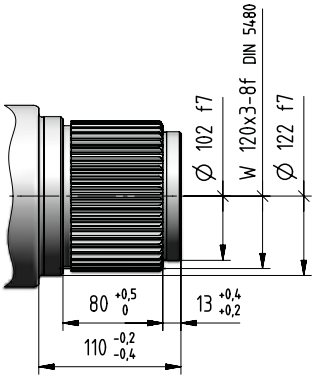
Suggested mating dimensions



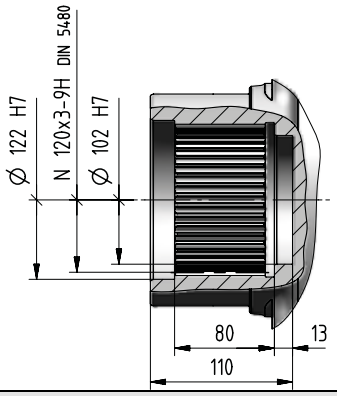
Gear reducer hollow shaft for shaft mounting



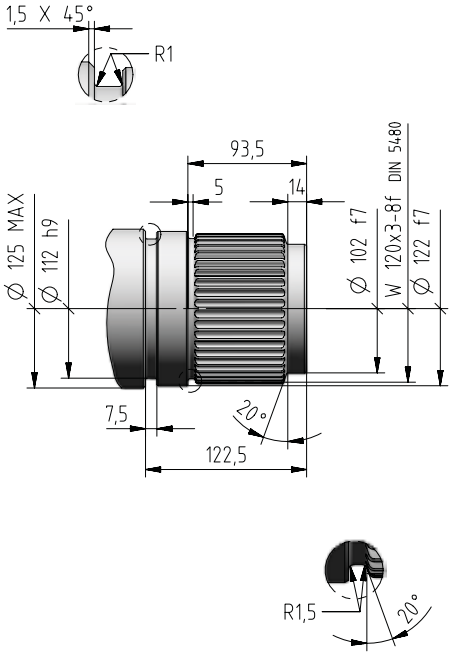
Suggested mating dimensions



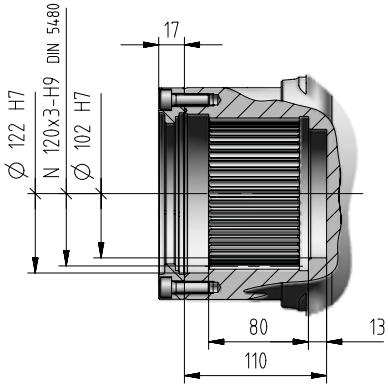
Splined hollow shaft



Suggested mating dimensions



Splined hollow shaft with axial locking



4

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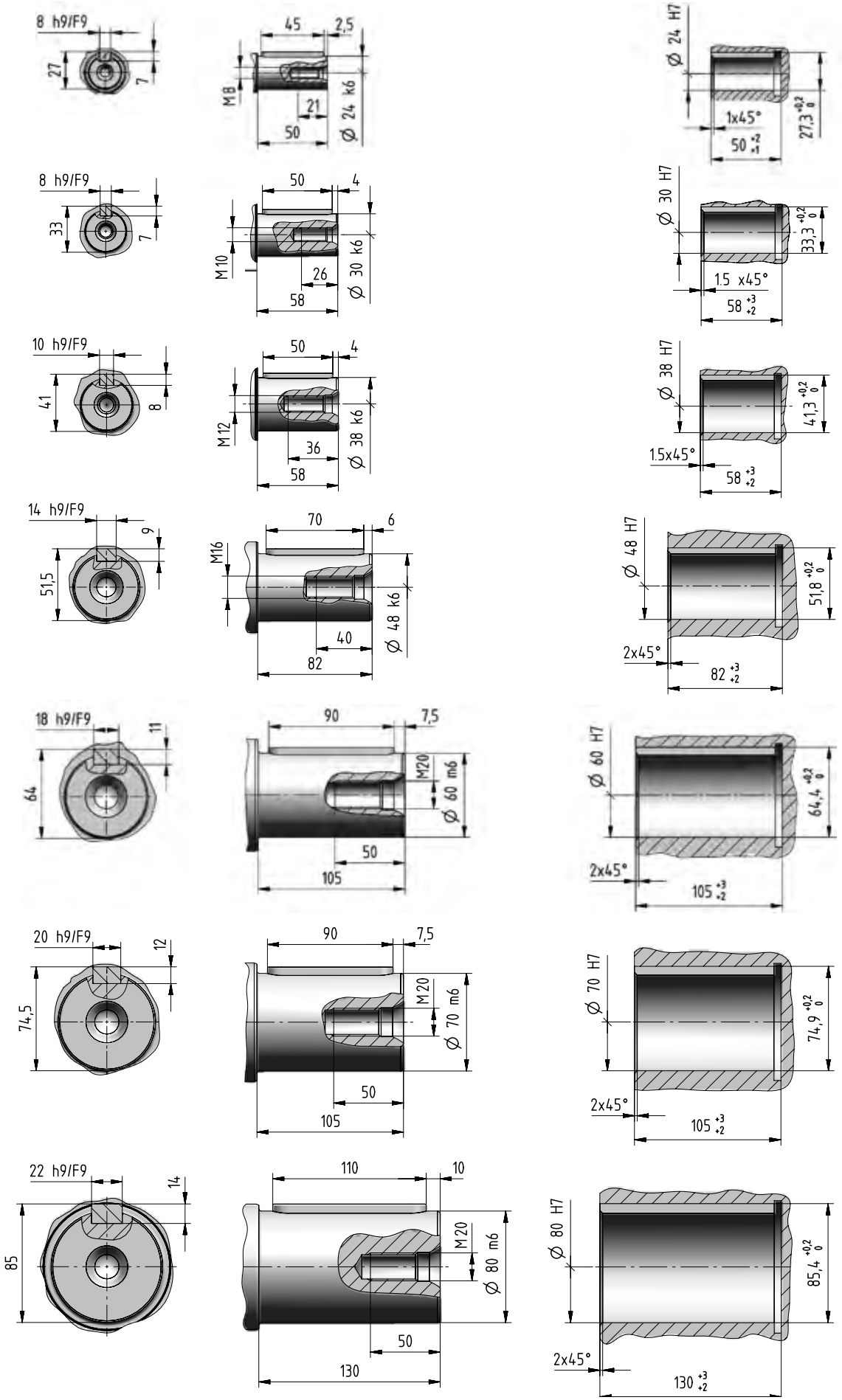
042A - Input side details

Gear reducer cylindrical shaft end

Suggested mating dimensions



4

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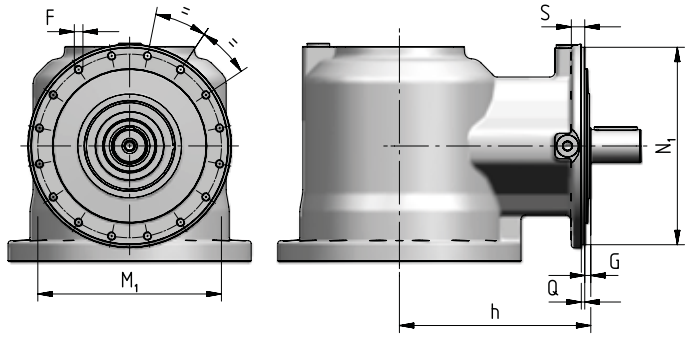
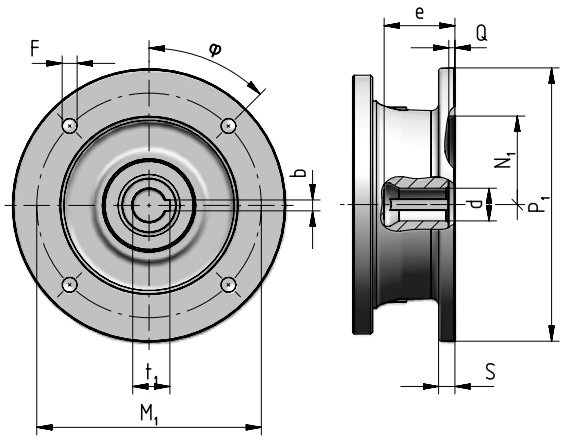
Bevel helical input flange



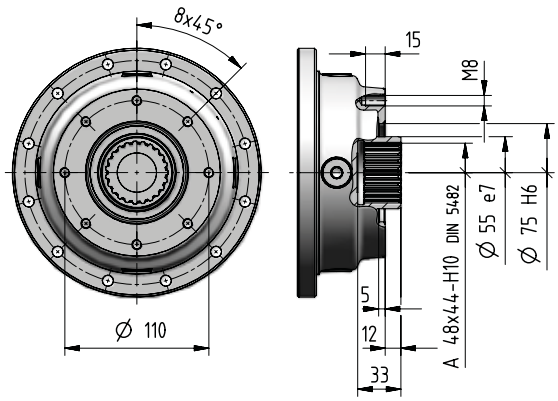
Train of gears	N_1 ∅ h6	Q	G	h	S	M_1 ∅	F ∅
2EB	321	5	11	336	20	300	M14 (n. 16)
3EB	229	4	7	222	15	213	M10 (n. 16)
4EB	184	3,5	10	185	12	171	M8 (n. 12)

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6
250	550	18	65 E6	142	18	69,4	500	18 (n.8)	22,5°	450	6
280	550	18	75 E6	142	20	79,9	500	18 (n.8)	22,5°	450	6

Universal flange adapter

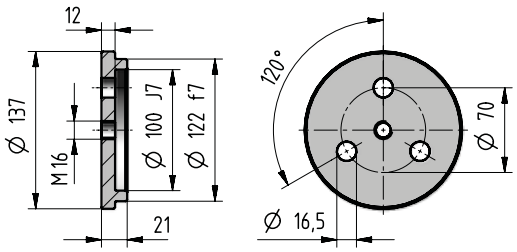


For more information see ch. 8.7.

042A - Accessories

Stop washer

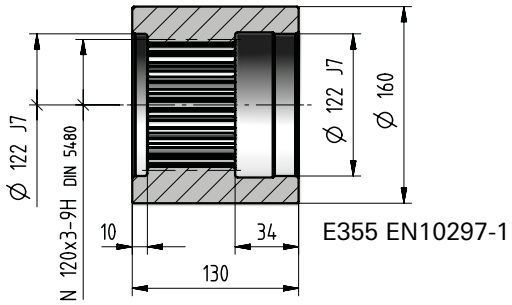
[included]



Code: **,SW120**

Splined bush

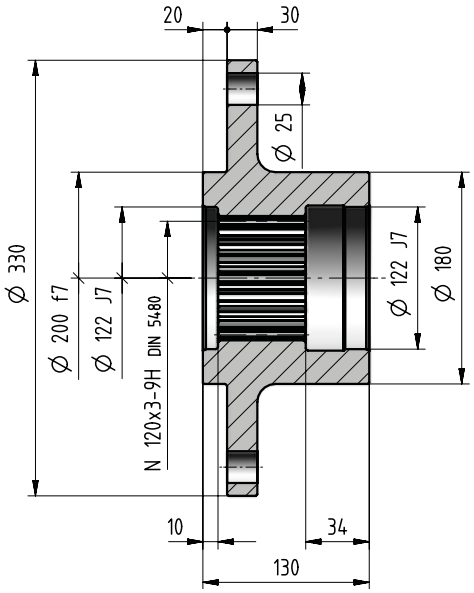
[included]

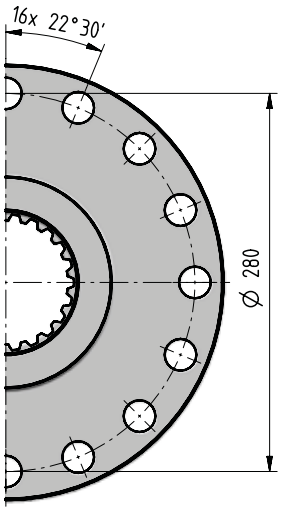


Code: **,SB120**

Wheel flange

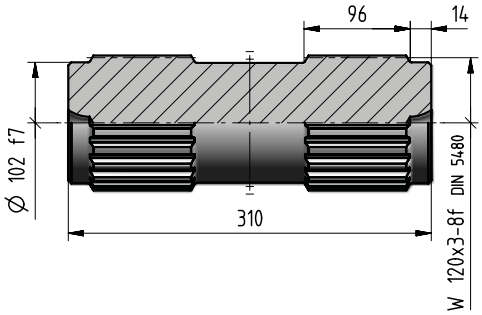
[included]





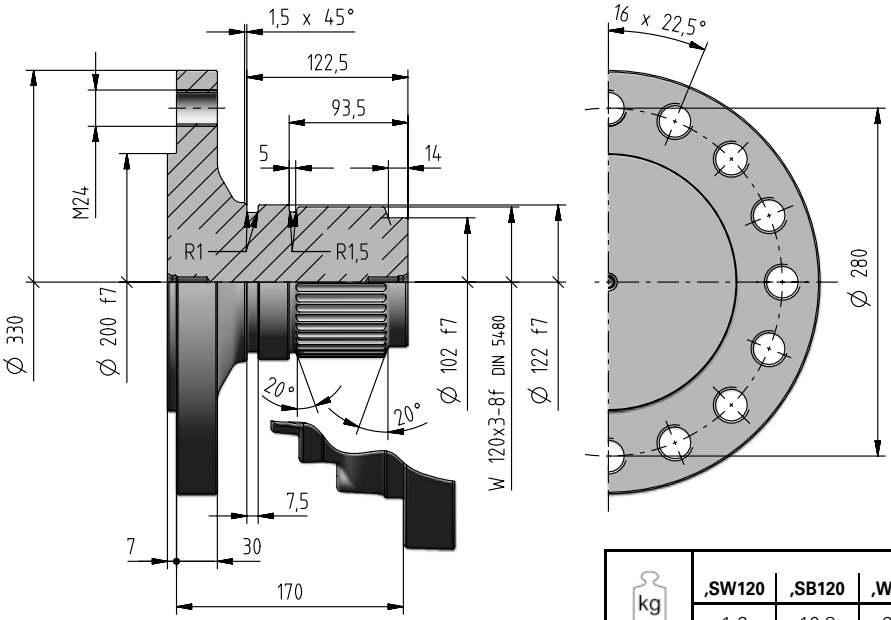
Code: **,WF120**

Splined bar



Code:**,SC120**

Wheel flange

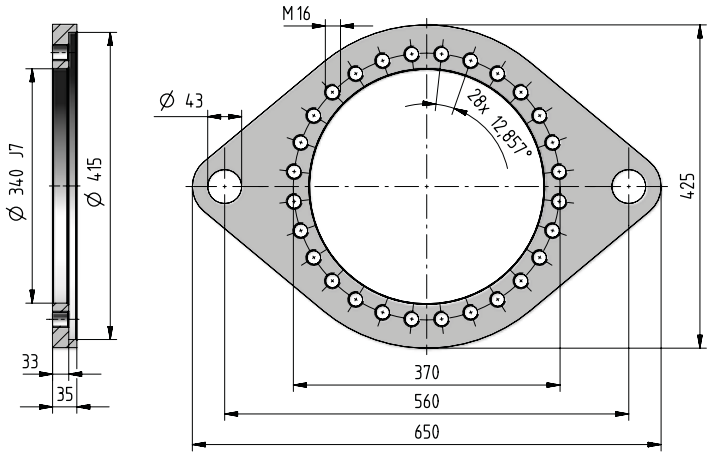


Code: **,WT120**

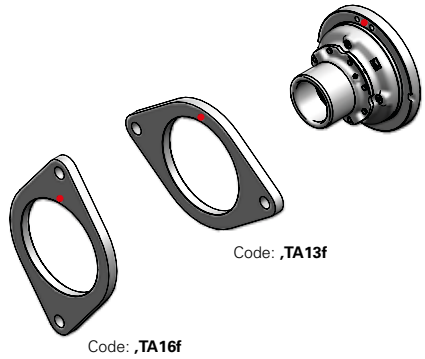
kg	Accessories							
	,SW120	**,SB120**	**,WF120**	**,SC120**	**,TA10f**	**,SD165**	**,FB10f**	**,WT120**
	1,6	10,8	29,8	24,7	21	27	42	33

Torque arm

[included]

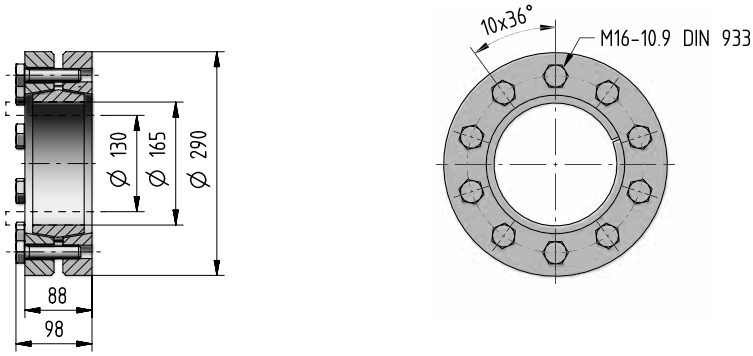


Code: **,TA10f**



- Reference hole for the identification of the mounting position

Shrink disc

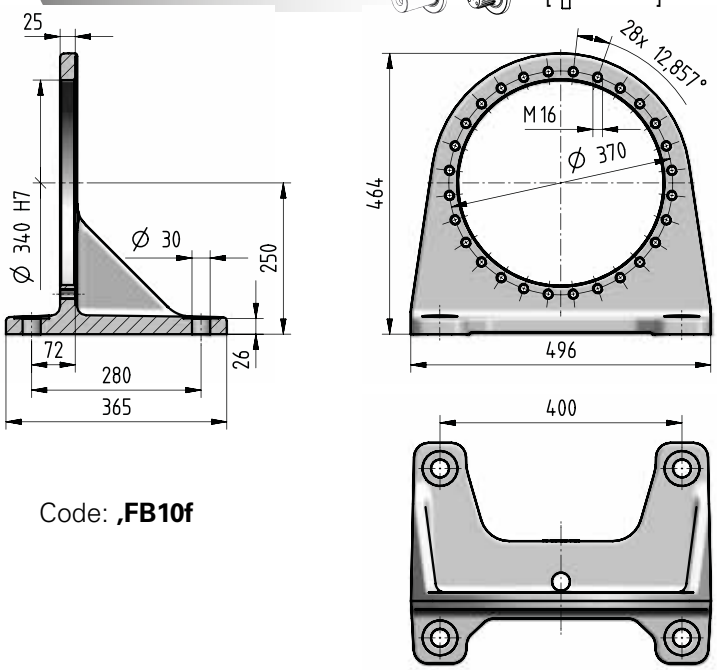


Code: **,SD165**

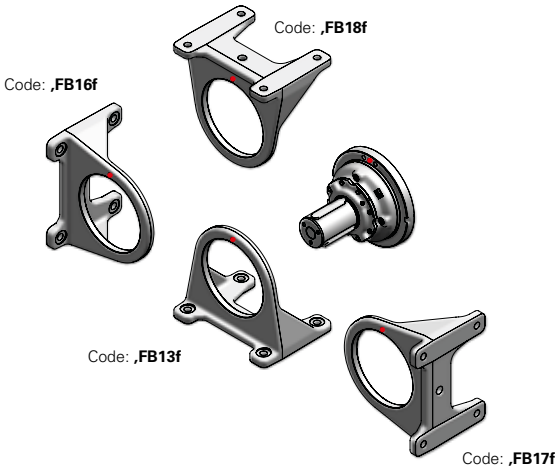
If an already mounted accessory is required, state the relevant position between accessory and gear reducer. This position is given by the flange upper reference hole (stated in red in the figure).

Foot bracket

[included]



Code: **,FB10f**



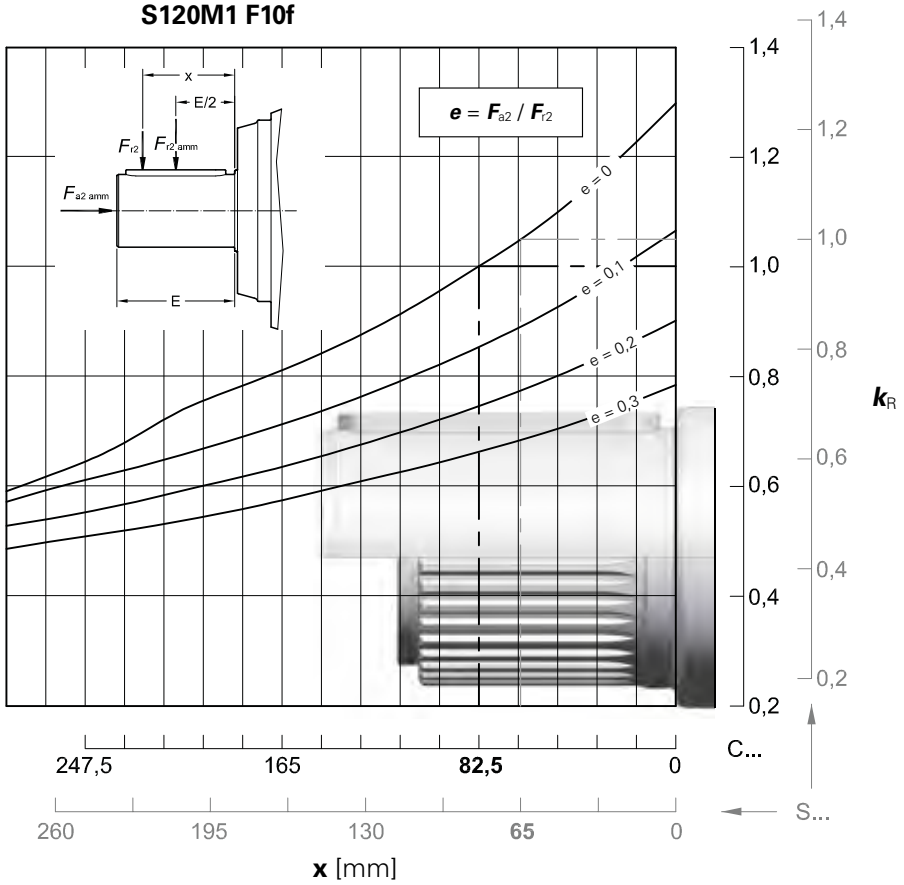
- Reference hole for the identification of the mounting position

In presence of a radial load F_{r2} ⩾70% of max value of F_{r2adm}, please foresee an additional foot. When having an axial load F_{a2} beside the radial load, this limit is to be reduced to 60%.

042A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

Radial loads $F_{r2\ adm}$ and axial loads $F_{a2\ adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

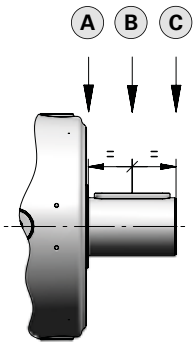
Output side: C120M1 F10f
S120M1 F10f



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\ amm}$ C ...	$F_{r2\ amm}$ S ...	$F_{a2\ adm}$ ←	$F_{a2\ adm}$ →
< **18 000**	212 000	224 000	71 000	
22 400	200 000	212 000	71 000	
28 000	190 000	200 000	71 000	
35 500	180 000	190 000	67 000	
45 000	160 000	170 000	63 000	
56 000	150 000	160 000	60 000	
71 000	140 000	150 000	56 000	
90 000	132 000	140 000	53 000	
112 000	125 000	132 000	50 000	
140 000	118 000	125 000	45 000	
180 000	106 000	112 000	42 500	
224 000	100 000	106 000	40 000	
280 000	95 000	100 000	37 500	
355 000	90 000	95 000	33 500	
450 000	80 000	85 000	31 500	
560 000	75 000	80 000	30 000	
710 000	71 000	75 000	28 000	
900 000	67 000	71 000	26 500	
1 120 000	63 000	67 000	25 000	
1 400 000	60 000	63 000	22 400	
1 800 000	53 000	56 000	21 200	
2 240 000	50 000	53 000	20 000	
2 800 000	47 500	50 000	19 000	
max	**212 000**	**224 000**	**71 000**	**37 500**

042A - Radial loads F_{r1} [N] on input shaft

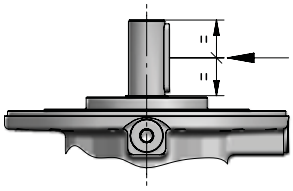
Radial loads $F_{r1\,adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.



$n_1 \cdot L_h$	Train of gears											
	1EL			2EL			3EL			4EL		
	A	B	C	A	B	C	A	B	C	A	B	C
900 000	63 000	42 500	31 500	28 000	19 000	14 000	20 000	14 000	10 600	14 000	8 500	5 300
1 120 000	60 000	40 000	30 000	26 500	18 000	13 200	19 000	12 500	9 500	13 200	8 000	5 000
1 400 000	56 000	37 500	26 500	25 000	16 000	12 500	17 000	11 800	9 000	11 800	7 100	4 500
1 800 000	50 000	33 500	25 000	22 400	15 000	11 200	16 000	10 600	8 000	11 200	6 700	4 250
2 240 000	47 500	31 500	23 600	21 200	14 000	10 600	15 000	10 000	7 500	10 000	6 300	4 000
2 800 000	45 000	30 000	21 200	20 000	13 200	9 500	14 000	9 500	7 100	9 500	5 600	3 550
3 550 000	40 000	26 500	20 000	18 000	11 800	9 000	12 500	8 500	6 700	9 000	5 300	3 350
4 500 000	37 500	25 000	18 000	17 000	11 200	8 500	11 800	8 000	6 000	8 000	5 000	3 150
5 600 000	35 500	23 600	17 000	16 000	10 600	7 500	11 200	7 500	5 600	7 500	4 500	2 800
7 100 000	31 500	21 200	16 000	14 000	9 500	7 100	10 000	6 700	5 300	7 100	4 250	2 650
9 000 000	30 000	20 000	15 000	13 200	9 000	6 700	9 500	6 300	4 750	6 300	4 000	2 500
11 200 000	28 000	18 000	13 200	12 500	8 000	6 000	8 500	6 000	4 500	6 000	3 550	2 240
14 000 000	26 500	17 000	12 500	11 200	7 500	5 600	8 000	5 600	4 250	5 600	3 350	2 120
18 000 000	23 600	16 000	11 800	10 600	7 100	5 300	7 500	5 000	3 750	5 000	3 150	1 900
22 400 000	22 400	15 000	10 600	10 000	6 700	4 750	6 700	4 750	3 550	4 750	2 800	1 800
28 000 000	20 000	13 200	10 000	9 000	6 000	4 500	6 300	4 250	3 350	4 500	2 650	1 700
35 500 000	19 000	12 500	9 500	8 500	5 600	4 250	6 000	4 000	3 000	4 000	2 500	1 600
45 000 000	18 000	11 800	8 500	8 000	5 300	3 750	5 300	3 750	2 800	3 750	2 240	1 400

Radial loads $F_{r1\,adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears						
	2EB			3EB		4EB	
	$i_N \leqslant 16$	$i_N = 20$	$i_N = 25$	$i_N \leqslant 125$	$i_N \geqslant 140$	$i_N \leqslant 500$	$i_N \geqslant 560$
900 000	10 600	8 000	6 700	5 600	4 750	4 000	3 350
1 120 000	10 000	7 500	6 300	5 300	4 500	3 750	3 150
1 400 000	9 000	6 700	5 600	4 750	4 000	3 550	2 800
1 800 000	8 500	6 300	5 300	4 500	3 750	3 150	2 650
2 240 000	8 000	6 000	5 000	4 000	3 550	3 000	2 500
2 800 000	7 100	5 300	4 500	3 750	3 150	2 800	2 240
3 550 000	6 700	5 000	4 250	3 550	3 000	2 500	2 120
4 500 000	6 300	4 750	4 000	3 350	2 800	2 360	2 000
5 600 000	5 600	4 250	3 550	3 000	2 650	2 240	1 800
7 100 000	5 300	4 000	3 350	2 800	2 360	2 000	1 700
9 000 000	5 000	3 750	3 150	2 650	2 240	1 900	1 600
11 200 000	4 500	3 350	2 800	2 360	2 000	1 700	1 400
14 000 000	4 250	3 150	2 650	2 240	1 900	1 600	1 320
18 000 000	4 000	3 000	2 500	2000	1 700	1 500	1 250
22 400 000	3 550	2 650	2 240	1 900	1 600	1 400	1 120
28 000 000	3 350	2 500	2 120	1 800	1 500	1 250	1 060
35 500 000	3 150	2 360	2 000	1 600	1 400	1 180	1 000
45 000 000	2 800	2 120	1 800	1 500	1 320	1 120	900



2591-01.02

060A

Data and performance summary

	i_N	i_{act}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H₂O
2EL	14	**14,4**	97,3 35 440	62,5 40 460	34,7 45 930	62 300 75 000	2 000 2 800	50 37,5	–	–
	16	**17,1**	82,0 36 660	52,7 41 860	29,3 46 420	63 000 90 000	2 000 2 800			
	18	**18,5**	75,8 34 920	48,7 35 880	27,1 37 200	56 000 90 000	2 000 2 800			
	22,4	**21,7**	64,6 38 290	41,6 43 720	23,1 46 490	63 000 90 000	2 000 2 800			
	25	**24**	58,3 35 790	37,5 36 770	20,8 38 120	57 470 85 000	2 000 2 800			
	28	**27,8**	50,4 35 810	32,4 36 790	18,0 38 150	56 000 90 000	2 000 2 800			
	31,5	**30,8**	45,5 36 040	29,2 37 030	16,2 38 390	56 000 90 000	2 000 2 800			
	35,5	**32,6**	42,9 36 160	27,6 37 160	15,3 38 520	56 000 77 500	2 000 2 800			
	40	**40,1**	34,9 27 060	22,4 27 800	12,5 28 820	44 410 63 000	2 000 2 800			
3EL	50	**50,6**	27,7 34 610	17,8 39 520	9,88 47 140	62 300 75 000	2 500 2 800	33,5 25	50 37,5	67 50
	63	**60,1**	23,3 47 070	15,0 48 370	8,33 50 140	62 300 75 000	2 800 3 550			
	71	**71,3**	19,6 47 570	12,6 48 880	7,02 50 670	63 000 90 000	2 800 3 550			
	80	**76,2**	18,4 47 770	11,8 49 080	6,56 51 000	62 300 75 000	2 800 4 000			
	90	**90,4**	15,5 48 270	9,96 49 600	5,53 52 340	63 000 90 000	2 800 4 000			
	100	**106**	13,2 41 680	8,48 42 820	4,71 44 400	63 000 85 000	2 800 4 000			
	112	**115**	12,2 48 340	7,85 49 670	4,36 51 490	63 000 90 000	2 800 4 000			
	125	**127**	11,0 39 640	7,08 40 730	3,94 42 230	59 520 85 000	2 800 4 000			
	140	**135**	10,4 48 820	6,69 50 160	3,72 52 000	63 000 90 000	2 800 4 000			
	160	**163**	8,59 39 920	5,52 41 010	3,07 44 350	56 000 90 000	2 800 4 000			
	180	**183**	7,64 40 540	4,91 41 660	2,73 43 190	59 520 85 000	2 800 4 000			
	200	**203**	6,91 40 450	4,44 41 940	2,47 44 130	56 000 77 500	2 800 4 000			
	224	**212**	6,60 40 570	4,24 42 230	2,36 46 160	56 000 90 000	2 800 4 000			
	250	**249**	5,62 40 970	3,61 43 100	2,01 44 690	56 000 77 500	2 800 4 000			

	i_N	i_{act}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C –	40°C	40°C H₂O
4EL	180	**178**	7,87 41 920	5,06 47 860	2,81 57 090	62 300 75 000	2 800 3 150	23,6 18	35,5 27,2	47,5 36,5
	200	**211**	6,63 49 750	4,26 54 450	2,37 59 510	63 000 90 000	2 800 3 150			
	250	**251**	5,58 52 260	3,59 55 880	1,99 61 070	63 000 90 000	2 800 3 150			
	280	**297**	4,71 53 630	3,03 57 340	1,68 62 670	63 000 90 000	3 150 4 000			
	315	**318**	4,40 54 180	2,83 57 840	1,57 59 960	62 300 75 000	3 150 4 000			
	355	**344**	4,07 42 490	2,62 45 430	1,45 49 650	56 000 90 000	3 150 4 000			
	400	**377**	3,71 55 600	2,39 59 440	1,33 63 000	63 000 90 000	3 150 4 000			
	450	**443**	3,16 56 960	2,03 60 900	1,13 63 000	63 000 90 000	3 150 4 000			
	500	**479**	2,93 57 630	1,88 61 620	1,04 63 000	63 000 90 000	3 150 4 000			
	560	**562**	2,49 59 050	1,60 63 000	0,890 63 000	63 000 90 000	3 150 4 000			
	630	**607**	2,31 53 540	1,48 55 010	0,824 58 930	63 000 90 000	3 150 4 000			
	710	**713**	1,96 54 070	1,26 55 560	0,702 60 380	63 000 90 000	3 150 4 000			
	800	**836**	1,67 54 600	1,08 56 600	0,598 61 860	63 000 90 000	3 150 4 000			
	900	**876**	1,60 54 760	1,03 56 990	0,571 62 290	63 000 90 000	3 150 4 000			
	1000	**1028**	1,36 55 300	0,876 58 390	0,486 63 000	63 000 90 000	3 150 4 000			
	1120	**1124**	1,25 50 830	0,801 54 340	0,445 56 000	56 000 90 000	3 150 4 000			
	1250	**1245**	1,12 51 620	0,723 55 190	0,402 56 000	56 000 90 000	3 150 4 000			
	1400	**1462**	0,958 52 890	0,616 56 000	0,342 56 000	56 000 90 000	3 150 4 000			
	1600	**1621**	0,864 53 720	0,555 56 000	0,308 56 000	56 000 90 000	3 150 4 000			
	1800	**1796**	0,779 54 560	0,501 56 000	0,278 56 000	56 000 90 000	3 150 4 000			

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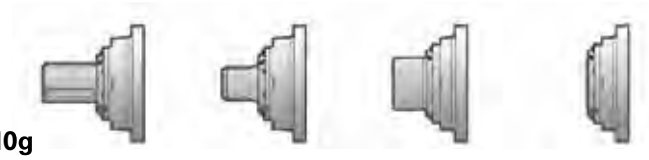
Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at –	20°C	40°C H2O
2EB	10	**10,2**	137 17 360	88,0 19 820	48,9 23 650	29 760 35 500	1 400 1 800	37,5 28	–	–
	12,5	**13,1**	107 22 280	68,6 25 440	38,1 30 350	38 190 46 200	1 400 1 800			
	16	**16,6**	84,6 22 490	54,4 25 680	30,2 30 630	36 160 43 700	1 400 1 800			
	20	**21**	66,7 23 080	42,9 26 350	23,8 28 330	31 320 38 700	1 400 1 800			
	25	**26,2**	53,3 16 810	34,3 19 200	19,0 22 900	24 800 30 700	1 400 1 800			
3EB	35,5	**36**	38,9 30 440	25,0 34 750	13,9 41 460	50 770 61 500	1 800 2 240	28 21,2	42,5 31,5	56 42,5
	40	**42,7**	32,8 36 120	21,1 41 240	11,7 49 100	60 250 73 000	1 800 2 240			
	45	**46,2**	30,3 36 940	19,5 37 960	10,8 39 350	56 000 77 500	1 800 2 240			
	50	**54,1**	25,9 45 820	16,6 47 430	9,23 49 170	63 000 90 000	1 800 2 240			
	56	**58,2**	24,0 37 470	15,5 38 500	8,59 39 920	56 000 73 000	1 800 2 240			
	63	**60**	23,3 37 860	15,0 38 900	8,33 40 330	59 520 85 000	1 800 2 240			
	71	**68,3**	20,5 46 180	13,2 48 110	7,32 49 880	63 000 87 500	1 800 2 240			
	80	**77**	18,2 38 120	11,7 39 170	6,49 40 610	56 000 90 000	1 800 2 240			
	90	**86,6**	16,2 47 500	10,4 48 820	5,77 50 610	62 560 77 500	1 800 2 240			
	100	**97,1**	14,4 38 670	9,27 39 730	5,15 41 190	56 000 90 000	1 800 2 240			
	112	**111**	12,6 38 990	8,10 40 060	4,50 41 850	56 000 90 000	1 800 2 240			
	125	**123**	11,4 39 240	7,31 40 310	4,06 42 510	56 000 90 000	1 800 2 240			
	140	**139**	10,1 39 530	6,48 40 610	3,60 43 290	56 000 77 500	1 800 2 240			
	160	**154**	9,09 39 780	5,84 40 870	3,25 43 970	56 000 87 500	1 800 2 240			

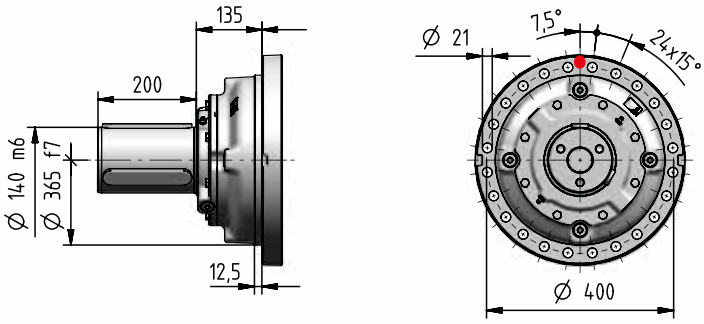
	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at –	20°C	40°C H2O
4EB	160	**162**	8,62 33 590	5,54 38 360	3,08 44 320	53 350 67 000	2 800 3 550	22,4 17	33,5 25,7	45 34,5
	180	**178**	7,86 36 860	5,05 42 090	2,81 50 210	58 540 73 000	2 800 3 550			
	200	**190**	7,35 39 400	4,73 44 990	2,63 53 120	62 570 77 500	2 800 3 550			
	224	**226**	6,19 46 760	3,98 53 390	2,21 55 640	63 000 90 000	2 800 3 550			
	250	**240**	5,83 39 910	3,75 45 560	2,08 53 880	62 570 77 500	2 800 3 550			
	280	**287**	4,88 51 130	3,14 52 540	1,74 54 470	63 000 90 000	2 800 3 550			
	315	**321**	4,36 42 060	2,80 44 960	1,56 49 150	56 000 90 000	2 800 3 550			
	355	**362**	3,87 51 870	2,49 53 290	1,38 55 250	63 000 90 000	2 800 3 550			
	400	**424**	3,30 52 380	2,12 53 820	1,18 55 830	63 000 90 000	2 800 3 550			
	450	**459**	3,05 52 630	1,96 54 070	1,09 56 490	63 000 90 000	2 800 3 550			
	500	**514**	2,72 45 160	1,75 48 280	0,972 52 770	56 000 90 000	2 800 3 550			
	560	**538**	2,60 53 150	1,67 54 610	0,929 57 870	63 000 90 000	2 800 3 550			
	630	**652**	2,15 46 810	1,38 50 050	0,767 54 700	56 000 90 000	2 800 3 550			
	710	**673**	2,08 51 170	1,34 55 360	0,743 59 860	63 000 90 000	2 800 3 550			
	800	**815**	1,72 48 420	1,10 51 760	0,613 56 000	56 000 90 000	2 800 3 550			
	900	**864**	1,62 48 840	1,04 52 220	0,579 56 000	56 000 90 000	2 800 3 550			
	1000	**957**	1,46 49 610	0,940 53 040	0,522 56 000	56 000 90 000	2 800 3 550			
	1120	**1061**	1,32 50 390	0,848 53 870	0,471 56 000	56 000 90 000	2 800 3 550			
	1250	**1176**	1,19 51 180	0,765 54 710	0,425 56 000	56 000 90 000	2 800 3 550			

2591-01.02

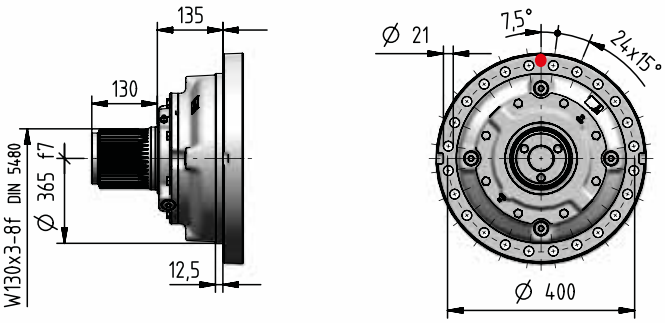
060A - Main Dimensions



C140M1 F10g



S130M1 F10g



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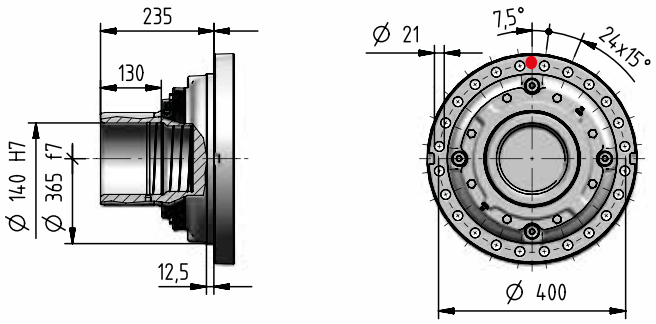
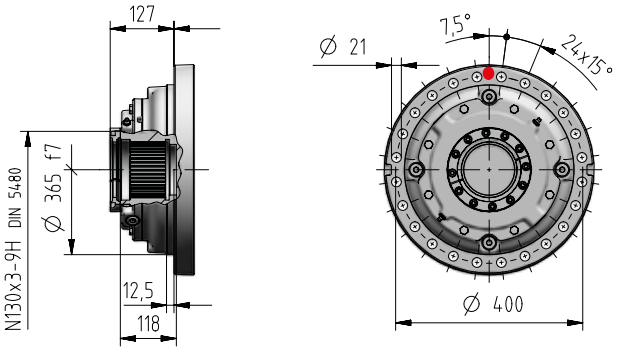


T130M1 A05g



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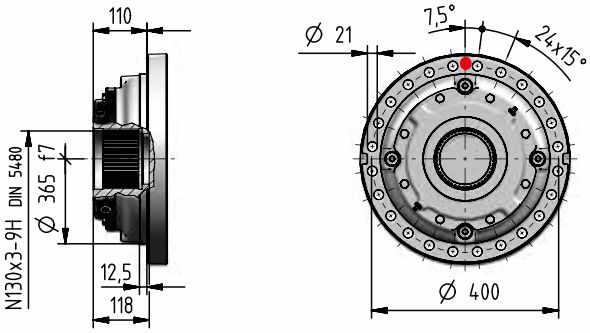

kg	Input Options Code													Output options (Δ) Code				
	I14×160	I19×200	I24×200	I28×250	I38×300	I42×350	I48×350	I55×400	I60×450	I65×550	I75×550	C…	U…	J…	C…	S…	H…	Z…	T…
1EL	-	-	-	-	-	-	-	-	-	-	-	-	-		+0	-9	-10,5	-9	-8
2EL	-	-	-	-	-	300	300	300	310	320	320	310	-						
3EL	-	-	-	300	310	310	310	320	329	-	-	310	297						
4EL	310	310	310	310	310	320	320	-	-	-	-	310	309						
2EB	-	-	-	-	-	390	390	400	410	410	410	404	-	370					
3EB	-	-	-	-	380	380	380	390	390	400	400	386	-	360					
4EB	320	330	330	330	330	340	340	-	-	-	-	328	329	320					

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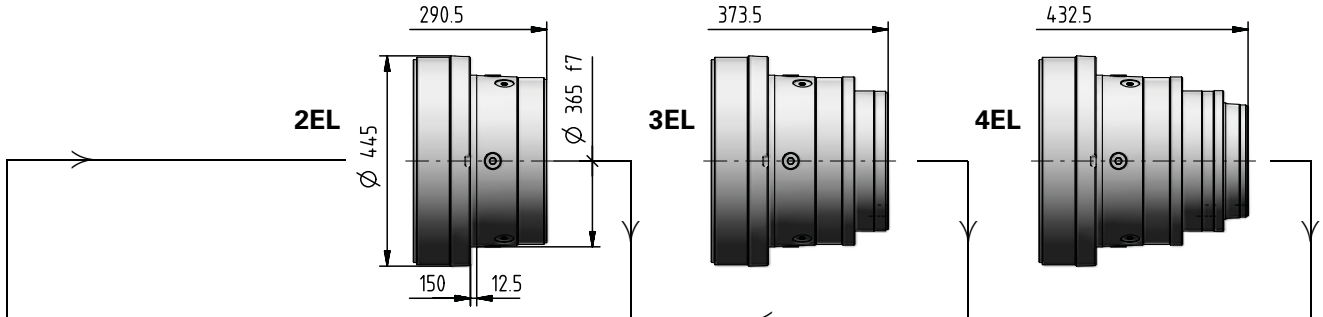
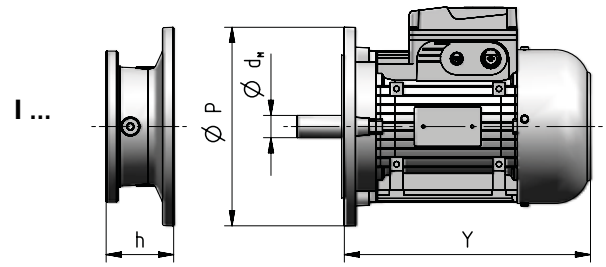
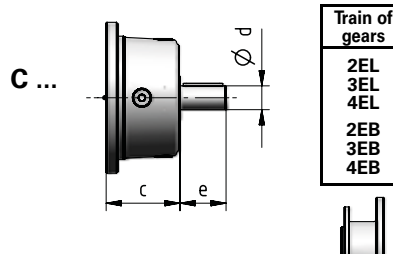


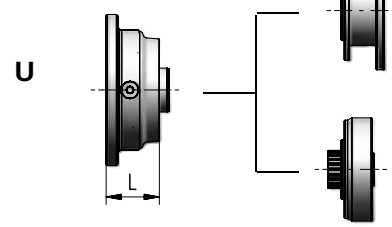


Motor size IEC	$d_M \times P$	Y	Y 1)	Train of gears 2EL	3EL	4EL	2EB	3EB	4EB	Code
				Dimension **h**						
71	14×160	216	278	–	–	52	–	–	52	**I14×160**
80	19×200	233	302	–	–	72	–	–	72	**I19×200**
90	24×200	287	366	–	–	72	–	–	72	**I24×200**
100	28×250	310	405	–	103	82	–	–	82	**I28×250**
112	28×250	336	435	–	103	82	–	–	82	**I28×250**
132	38×300	445	553	–	120	102	–	133,5	102	**I38×300**
160	42×350	573	640	159	153	135	159	159	135	**I42×350**
180	48×350	613	734	159	153	135	159	159	135	**I48×350**
200	55×400	654	734	159	153	–	159	159	–	**I55×400**
225	60×450	710	–	189	183	–	189	189	–	**I60×450**
250	65×550	735	–	189	–	–	189	189	–	**I65×550**
280	75×550	819	–	189	–	–	189	189	–	**I75×550**

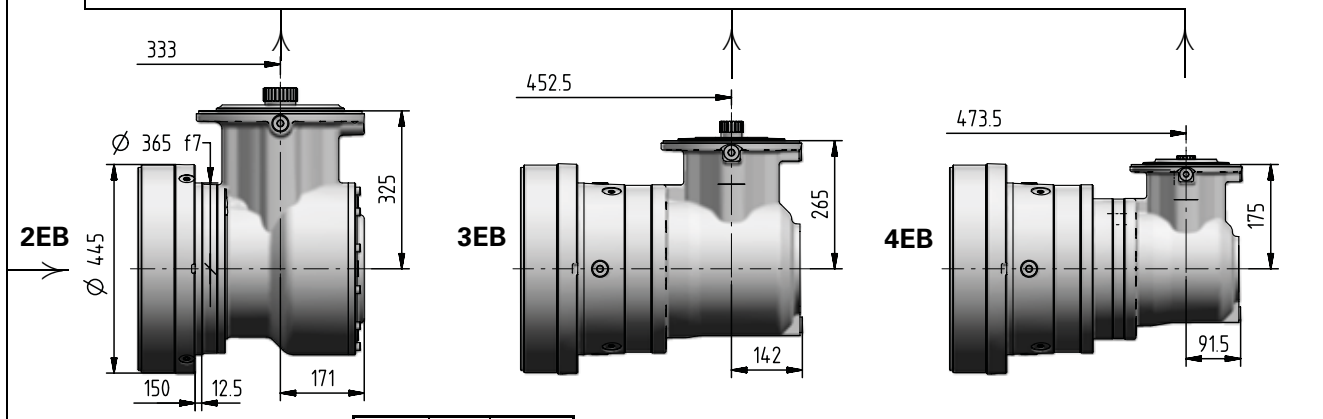
1) Values valid for brake motor; for other dimensions see TX catalog.



Train of gears	d	e	c	Code
2EL	70	105	153	**C70×105**
3EL	48	82	115	**C48×82**
4EL	38	58	90	**C38×58**
2EB	70	105	153	**C70×105**
3EB	60	105	138	**C60×105**
4EB	38	58	90	**C38×58**



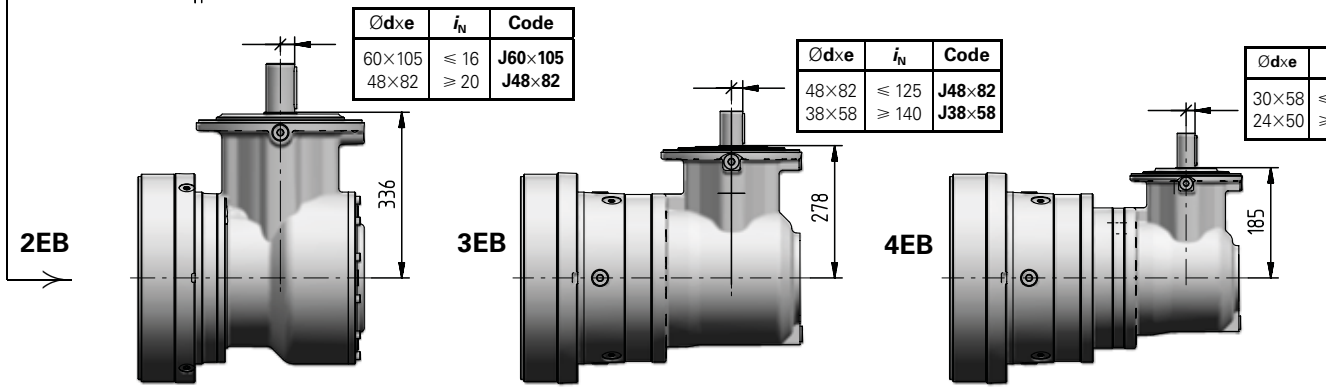
Train of gears	L	Code
3EL	62	ch.7
4EL	64	
4EB	64	



Ødxe	i_N	Code
60×105	⩽ 16	**J60×105**
48×82	⩾ 20	**J48×82**

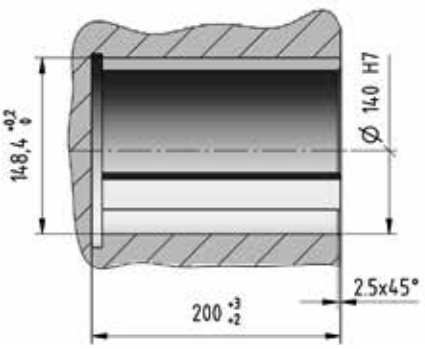
Ødxe	i_N	Code
48×82	⩽ 125	**J48×82**
38×58	⩾ 140	**J38×58**

Ødxe	i_N	Code
30×58	⩽ 400	**J30×58**
24×50	⩾ 450	**J24×50**

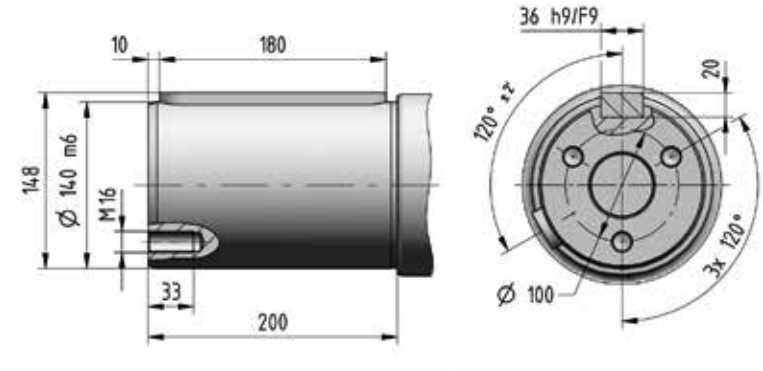


060A - Output side details

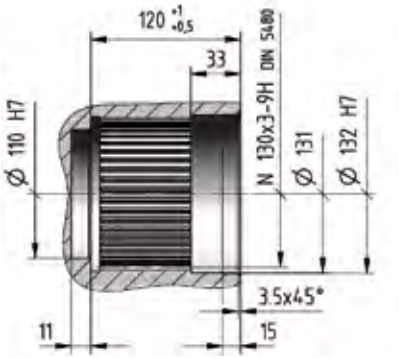
Suggested mating dimensions



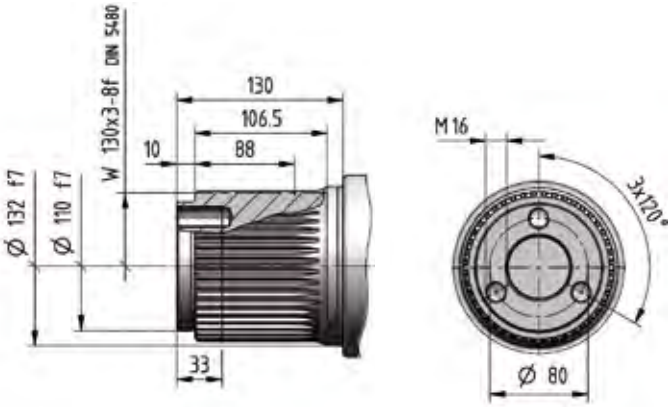
Gear reducer cylindrical shaft end



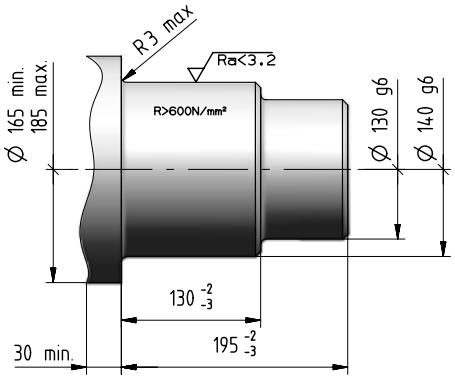
Suggested mating dimensions



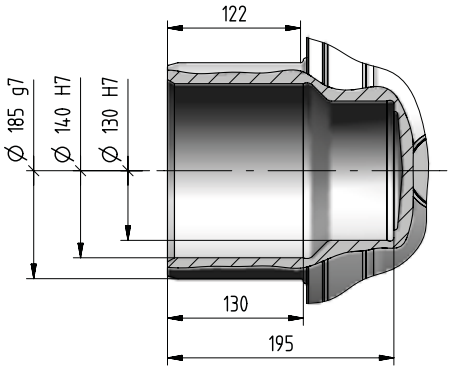
Gear reducer splined shaft end



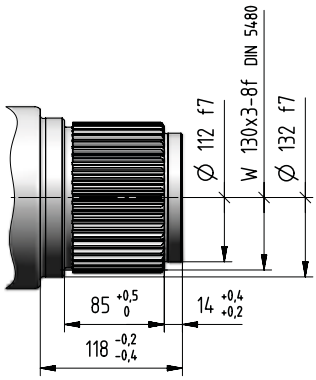
Suggested mating dimensions



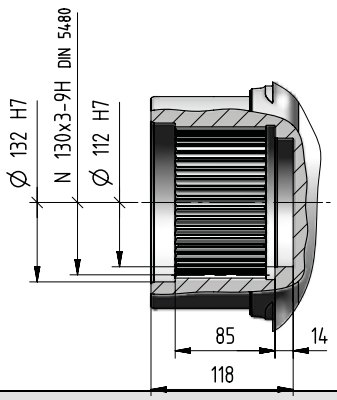
Gear reducer hollow shaft for shaft mounting



Suggested mating dimensions



Splined hollow shaft

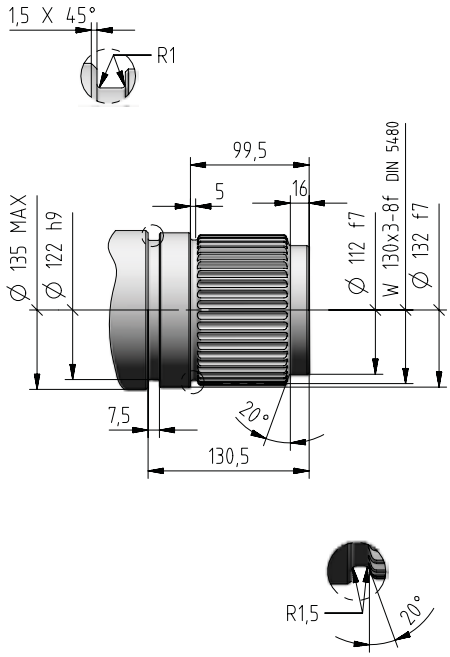


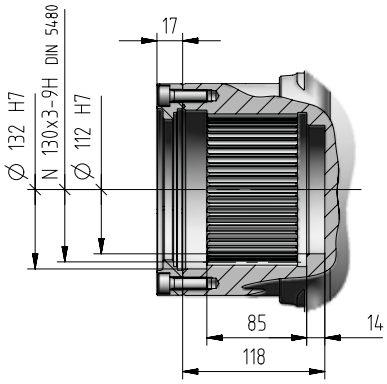
4

2591-01.02

Suggested mating dimensions

Splined hollow shaft with axial locking

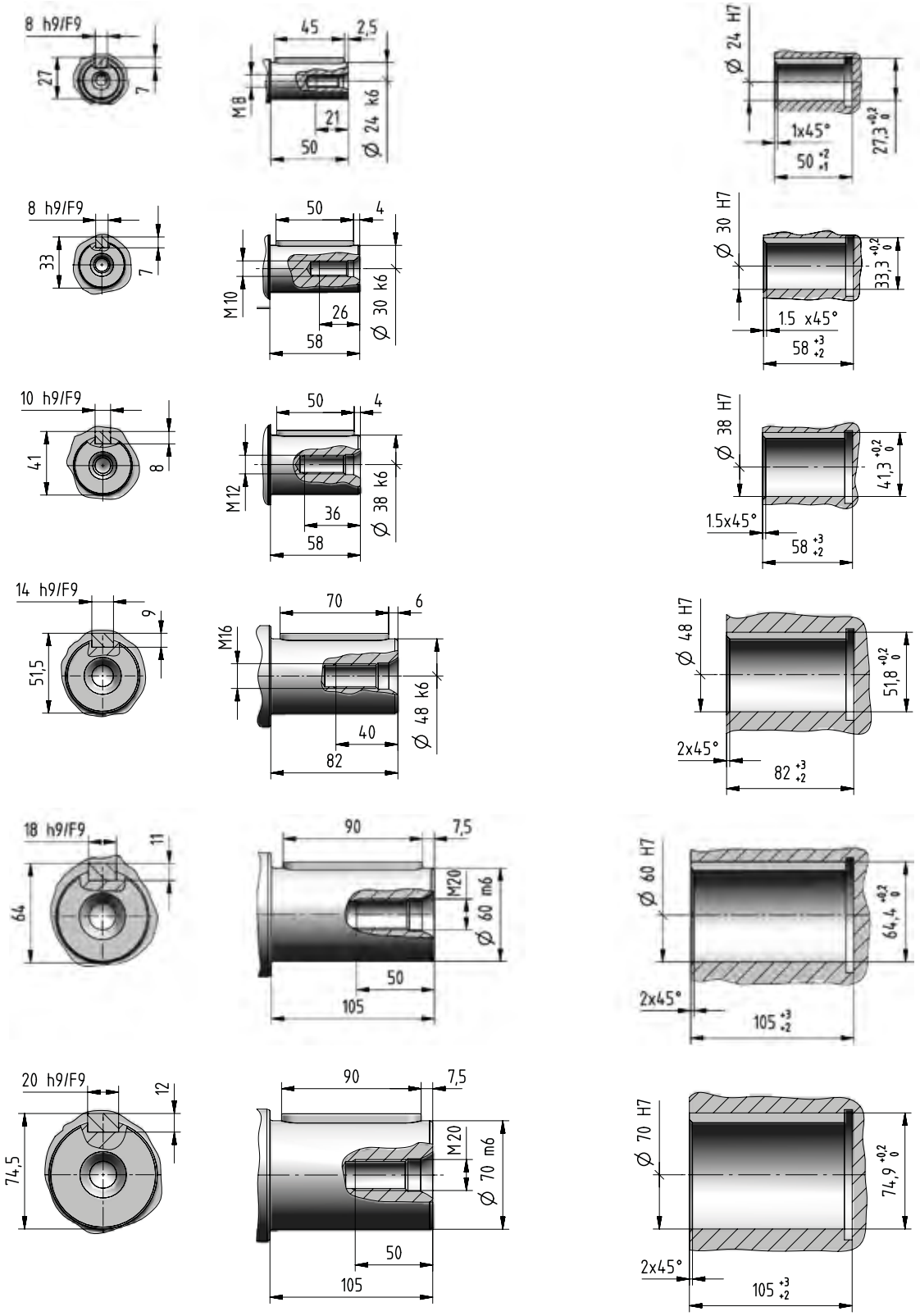




060A - Input side details

Gear reducer cylindrical shaft end

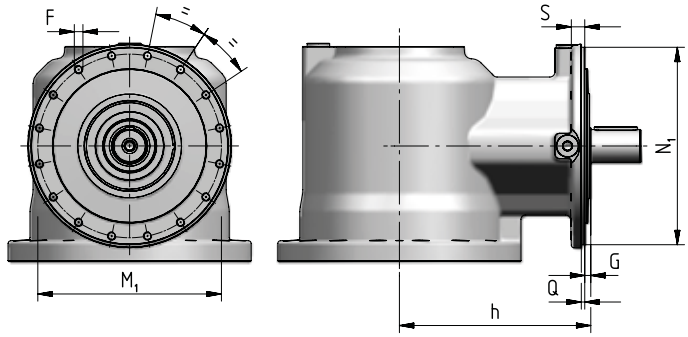
Suggested mating dimensions



4

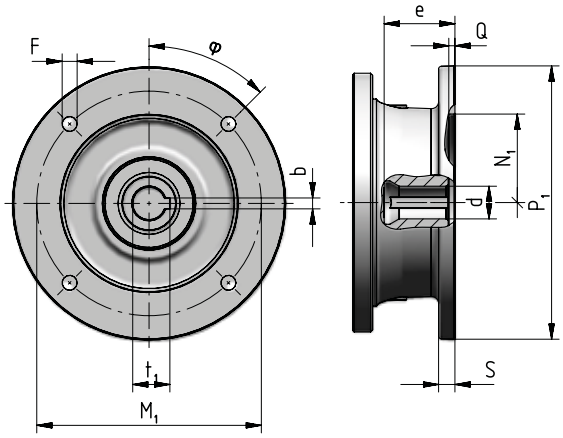
2591-01.02

Bevel helical input flange



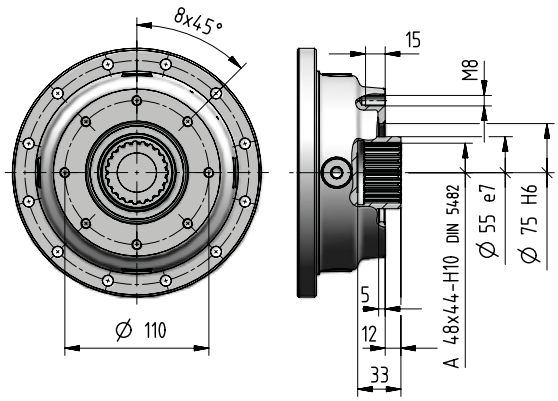
Train of gears	N_1 ∅ h6	Q	G	h	S	M_1 ∅	F ∅
2EB	321	5	11	336	20	300	M14 (n. 16)
3EB	274	4,5	13	278	18	255	M12 (n. 16)
4EB	184	3,5	10	185	12	171	M8 (n. 12)

IEC electric motor adapter



Motor size IEC	P_1 ∅	S	d ∅	e max	b F9	t_1	M_1	F ∅	φ	N_1 ∅ G7	Q
71	160	–	14 F6	32	5	16,3	130	M8 × 16 (n.4)	45°	110	4,5
80	200	12	19 F6	41,5	6	21,8	165	11 (n.4)	45°	130	4,5
90	200	12	24 F6	52	8	27,3	165	11 (n.4)	45°	130	4,5
100	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
112	250	14	28 F6	62	8	31,3	215	14 (n.4)	45°	180	5
132	300	14	38 F6	82	10	41,3	265	14 (n.4)	45°	230	5
160	350	15	42 F6	113	12	45,3	300	18 (n.4)	45°	250	6
180	350	15	48 F6	113	14	51,8	300	18 (n.4)	45°	250	6
200	400	15	55 E6	113	16	59,3	350	18 (n.4)	45°	300	6
225	450	18	60 E6	143	18	64,4	400	18 (n.8)	22,5°	350	6
250	550	18	65 E6	142	18	69,4	500	18 (n.8)	22,5°	450	6
280	550	18	75 E6	142	20	79,9	500	18 (n.8)	22,5°	450	6

Universal flange adapter



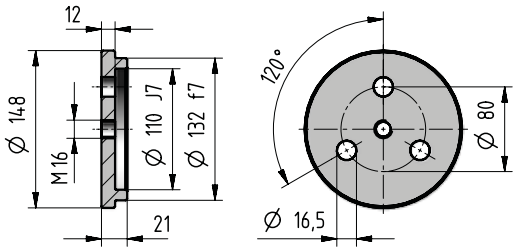
For more information see ch. 8.7.

2591-01.02

060A - Accessories

Stop washer

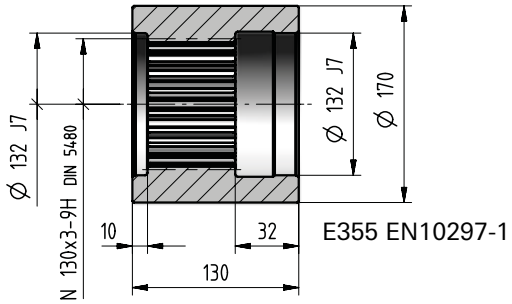
[included]



Code: **,SW130**

Splined bush

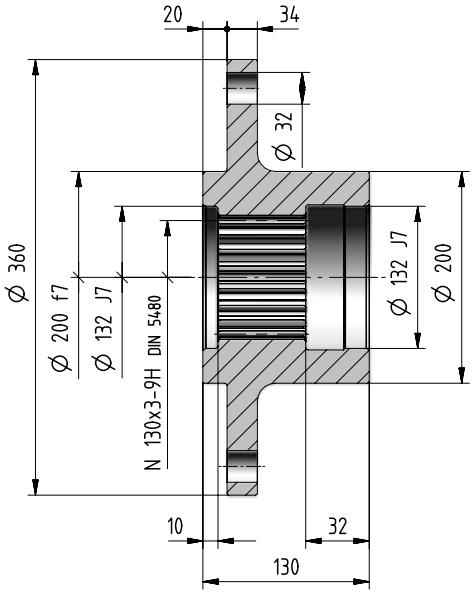
[included]

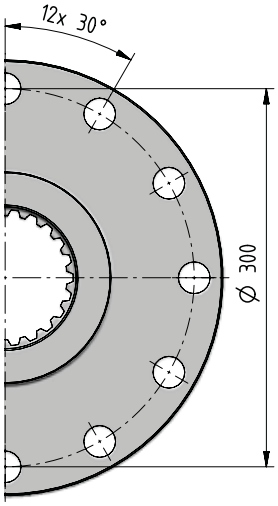


Code: **,SB130**

Wheel flange

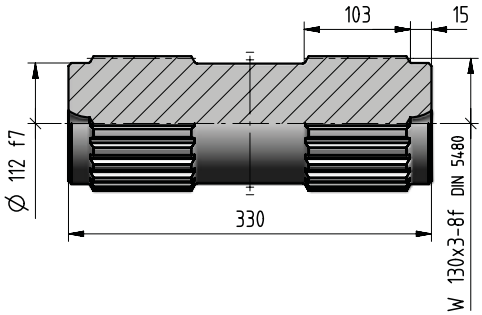
[included]





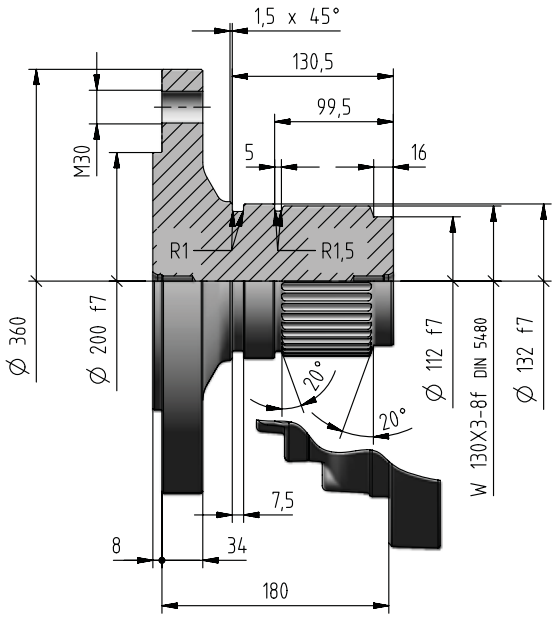
Code: **,WF130**

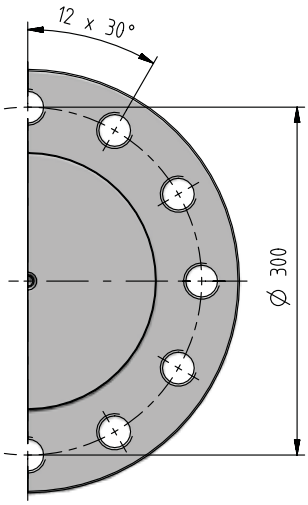
Splined bar



Code:**,SC130**

Wheel flange



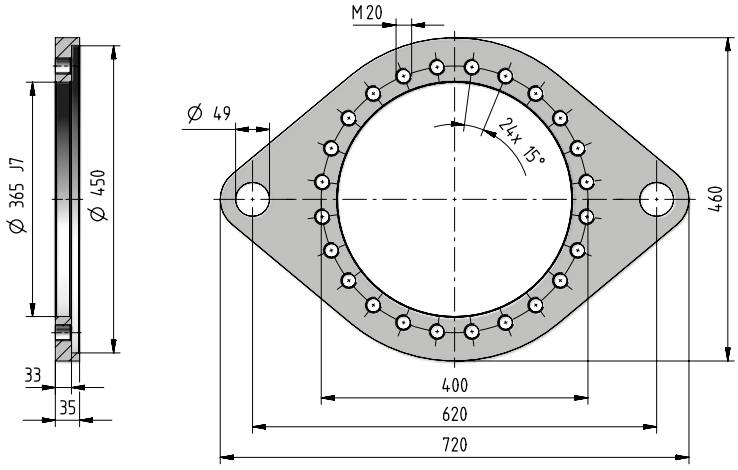


Code: **,WT130**

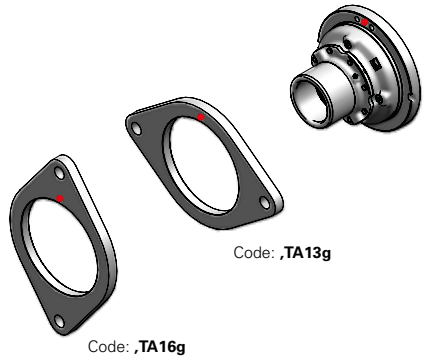
kg	Accessories							
	,SW130	**,SB130**	**,WF130**	**,SC130**	**,TA10g**	**,SD185**	**,FB10g**	**,WT130**
	1,8	11,7	37	31,2	26	46	61,5	43

Torque arm

[included]

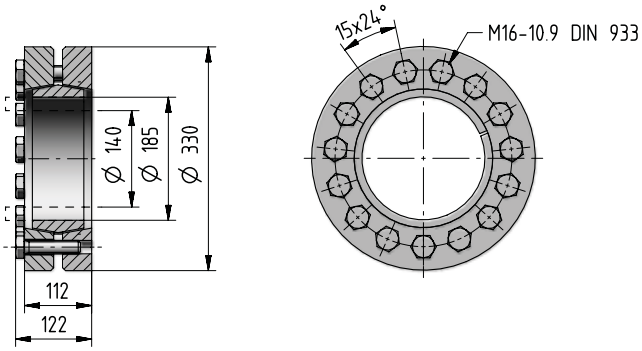


Code: **,TA10g**



- Reference hole for the identification of the mounting position

Shrink disc

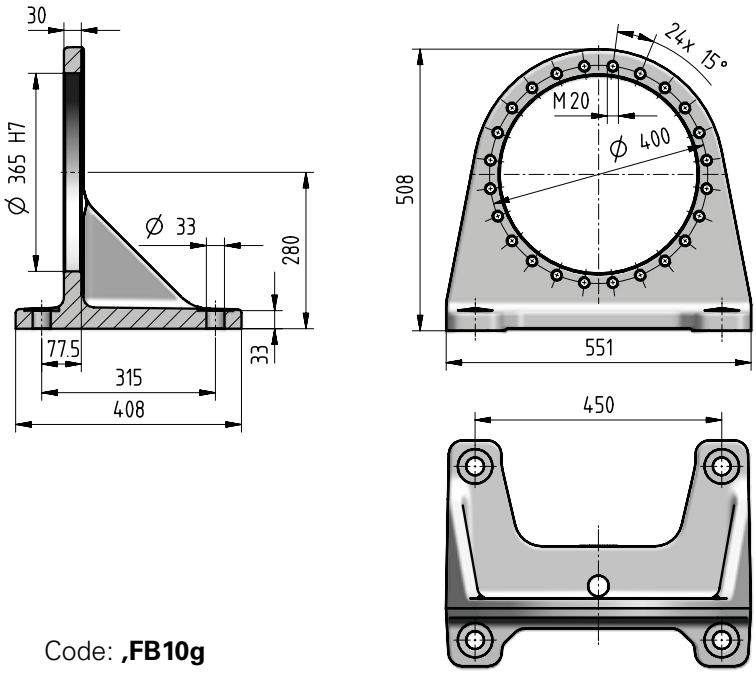


Code: **,SD185**

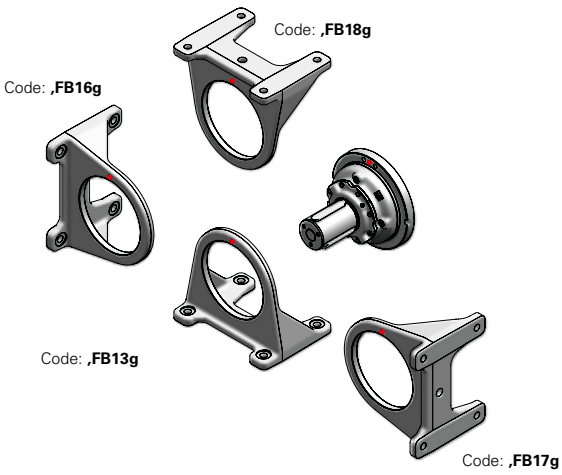
If an already mounted accessory is required, state the relevant position between accessory and gear reducer. This position is given by the flange upper fastening hole (stated in red in the figure).

Foot bracket

[included]



Code: **,FB10g**



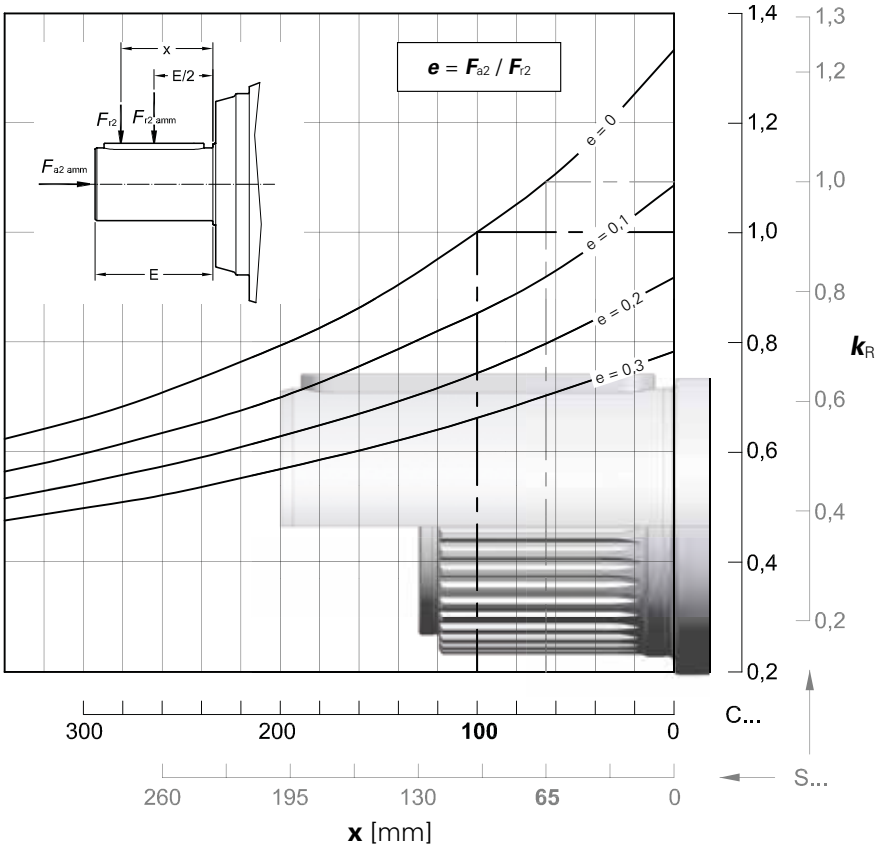
- Reference hole for the identification of the mounting position

In presence of a radial load F_{r2} ⩾70% of max value of F_{r2adm}, please foresee an additional foot. When having an axial load F_{a2} beside the radial load, this limit is to be reduced to 60%.

060A - Radial loads F_{r2} [N] and axial loads F_{a2} [N]

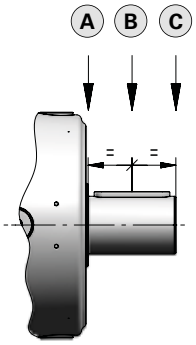
Radial loads $F_{r2\ adm}$ and axial loads $F_{a2\ adm}$ admitted on low speed shaft end of gear reducer.
For more information see ch. 2.2.

Output side: C140M1 F10g
S130M1 F10g



$n_2 \cdot L_h$ min^{-1} · h	$F_{r2\ adm}$ C ...	$F_{r2\ adm}$ S ...	$F_{a2\ adm}$ ←	$F_{a2\ adm}$ →
< **18 000**	236 000	250 000	80 000	
22 400	224 000	250 000	80 000	
28 000	212 000	224 000	80 000	
35 500	190 000	212 000	75 000	
45 000	180 000	200 000	71 000	
56 000	170 000	190 000	67 000	
71 000	160 000	170 000	60 000	
90 000	150 000	160 000	56 000	
112 000	140 000	150 000	53 000	
140 000	132 000	140 000	50 000	
180 000	118 000	132 000	47 500	
224 000	112 000	125 000	42 500	
280 000	106 000	112 000	40 000	
355 000	95 000	106 000	37 500	
450 000	90 000	100 000	35 500	
560 000	85 000	95 000	33 500	
710 000	80 000	85 000	31 500	
900 000	75 000	80 000	28 000	
1 120 000	71 000	75 000	26 500	
1 400 000	63 000	71 000	25 000	
1 800 000	60 000	67 000	23 600	
2 240 000	56 000	60 000	22 400	
2 800 000	53 000	56 000	20 000	
max	**236 000**	**250 000**	**80 000**	**45 000**

060A - Radial loads F_{r1} [N] on input shaft



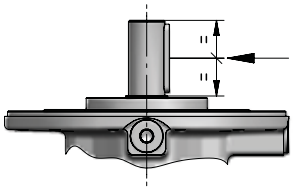
Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **In Line** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears 2EL			3EL			4EL		
	A	B	C	A	B	C	A	B	C
900 000	45 000	31 500	23 600	20 000	14 000	10 600	14 000	8 500	5 300
1 120 000	42 500	28 000	22 400	19 000	12 500	9 500	13 200	8 000	5 000
1 400 000	37 500	26 500	20 000	17 000	11 800	9 000	11 800	7 100	4 500
1 800 000	35 500	25 000	19 000	16 000	10 600	8 000	11 200	6 700	4 250
2 240 000	33 500	22 400	17 000	15 000	10 000	7 500	10 000	6 300	4 000
2 800 000	30 000	21 200	16 000	14 000	9 500	7 100	9 500	5 600	3 550
3 550 000	28 000	19 000	15 000	12 500	8 500	6 700	9 000	5 300	3 350
4 500 000	26 500	18 000	14 000	11 800	8 000	6 000	8 000	5 000	3 150
5 600 000	23 600	17 000	12 500	11 200	7 500	5 600	7 500	4 500	2 800
7 100 000	22 400	15 000	11 800	10 000	6 700	5 300	7 100	4 250	2 650
9 000 000	21 200	14 000	11 200	9 500	6 300	4 750	6 300	4 000	2 500
11 200 000	19 000	13 200	10 000	8 500	6 000	4 500	6 000	3 550	2 240
14 000 000	18 000	12 500	9 500	8 000	5 600	4 250	5 600	3 350	2 120
18 000 000	16 000	11 200	8 500	7 500	5 000	3 750	5 000	3 150	1 900
22 400 000	15 000	10 600	8 000	6 700	4 750	3 550	4 750	2 800	1 800
28 000 000	14 000	10 000	7 500	6 300	4 250	3 350	4 500	2 650	1 700
35 500 000	13 200	9 000	7 100	6 000	4 000	3 000	4 000	2 500	1 600
45 000 000	11 800	8 500	6 300	5 300	3 750	2 800	3 750	2 240	1 400

4

Radial loads $F_{r1\ adm}$ admitted on high speed shaft end of **Bevel helical** gear reducers.
For more information see ch. 2.2.

$n_1 \cdot L_h$	Train of gears 2EB			3EB		4EB	
	$i_N \leqslant 16$	$i_N = 20$	$i_N = 25$	$i_N \leqslant 125$	$i_N \geqslant 140$	$i_N \leqslant 630$	$i_N \geqslant 710$
900 000	10 600	8 000	6 700	8 000	6 700	4 000	3 350
1 120 000	10 000	7 500	6 300	7 500	6 300	3 750	3 150
1 400 000	9 000	6 700	5 600	6 700	5 600	3 550	2 800
1 800 000	8 500	6 300	5 300	6 300	5 300	3 150	2 650
2 240 000	8 000	6 000	5 000	6 000	5 000	3 000	2 500
2 800 000	7 100	5 300	4 500	5 300	4 500	2 800	2 240
3 550 000	6 700	5 000	4 250	5 000	4 250	2 500	2 120
4 500 000	6 300	4 750	4 000	4 750	4 000	2 360	2 000
5 600 000	5 600	4 250	3 550	4 250	3 550	2 240	1 800
7 100 000	5 300	4 000	3 350	4 000	3 350	2 000	1 700
9 000 000	5 000	3 750	3 150	3 750	3 150	1 900	1 600
11 200 000	4 500	3 350	2 800	3 350	2 800	1 700	1 400
14 000 000	4 250	3 150	2 650	3 150	2 650	1 600	1 320
18 000 000	4 000	3 000	2 500	3 000	2 500	1 500	1 250
22 400 000	3 550	2 650	2 240	2 650	2 240	1 400	1 120
28 000 000	3 350	2 500	2 120	2 500	2 120	1 250	1 060
35 500 000	3 150	2 360	2 000	2 360	2 000	1 180	1 000
45 000 000	2 800	2 120	1 800	2 120	1 800	1 120	900



085A

Data and performance summary

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H₂O
2EL	16	**17,1**	82,0 50 960	52,7 58 180	29,3 68 830	90 000 140 000	2 000 2 800	60 45	–	–
	22,4	**21,9**	63,9 53 370	41,1 60 930	22,8 69 890	90 000 140 000	2 000 2 800			
	25	**24,4**	57,3 54 510	36,8 56 460	20,5 58 530	88 250 136 000	2 000 2 800			
	28	**27,8**	50,4 56 920	32,4 58 490	18,0 60 630	80 000 140 000	2 000 2 800			
	31,5	**31**	45,1 57 300	29,0 58 880	16,1 61 040	80 000 140 000	2 000 2 800			
3EL	63	**60,1**	23,3 69 800	15,0 71 720	8,33 74 350	90 000 140 000	2 240 2 800	42,5 31,5	63 47,5	82,5 63
	71	**71,3**	19,6 70 530	12,6 72 470	7,02 75 130	90 000 140 000	2 240 3 150			
	80	**77,1**	18,2 70 870	11,7 72 820	6,49 75 570	90 000 140 000	2 240 2 800			
	90	**90,4**	15,5 71 570	9,96 73 540	5,53 77 420	90 000 140 000	2 240 3 550			
	100	**106**	13,2 72 280	8,48 74 260	4,71 79 320	90 000 140 000	2 240 3 550			
	112	**116**	12,1 72 670	7,76 74 670	4,31 79 630	90 000 140 000	2 240 3 550			
	125	**129**	10,8 62 550	6,95 64 270	3,86 68 010	80 000 140 000	2 240 3 150			
	140	**136**	10,3 73 390	6,61 75 410	3,67 80 420	90 000 140 000	2 240 3 550			
	160	**167**	8,37 74 330	5,38 77 750	2,99 81 440	90 000 140 000	2 240 3 550			
	180	**187**	7,50 62 250	4,82 63 960	2,68 66 310	90 000 136 000	2 240 3 550			
	200	**193**	7,27 64 100	4,67 66 090	2,59 72 230	80 000 140 000	2 240 3 550			
	224	**212**	6,60 64 480	4,24 67 060	2,36 73 300	80 000 140 000	2 240 3 550			
	250	**237**	5,91 64 920	3,80 68 180	2,11 74 520	80 000 140 000	2 240 3 550			

	i_N	i_{act}	L_h = 10 000 h, n_1 min^{-1}, n_2 min^{-1}, M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}, P_t [kW] at 20°C –	40°C	40°C H₂O
4EL	200	**211**	6,63 75 400	4,26 80 540	2,37 88 030	90 000 140 000	2 500 2 800	30 22,4	45 33,5	60 45
	250	**251**	5,58 77 310	3,59 82 650	1,99 90 000	90 000 140 000	2 800 3 550			
	280	**297**	4,71 79 330	3,03 84 820	1,68 90 000	90 000 140 000	2 800 3 550			
	315	**318**	4,40 80 140	2,83 85 680	1,57 90 000	90 000 140 000	2 800 4 000			
	355	**344**	4,07 67 470	2,62 72 140	1,45 78 850	80 000 140 000	2 500 2 800			
	400	**382**	3,67 80 420	2,36 82 630	1,31 85 670	90 000 140 000	2 800 3 550			
	450	**443**	3,16 84 260	2,03 90 000	1,13 90 000	90 000 140 000	2 800 4 000			
	500	**479**	2,93 85 250	1,88 90 000	1,04 90 000	90 000 140 000	2 800 4 000			
	560	**562**	2,49 87 340	1,60 90 000	0,890 90 000	90 000 140 000	2 800 4 000			
	630	**659**	2,12 89 490	1,36 90 000	0,758 90 000	90 000 140 000	2 800 4 000			
	710	**721**	1,94 83 620	1,25 85 920	0,694 90 000	90 000 140 000	2 800 4 000			
	800	**846**	1,65 84 450	1,06 87 550	0,591 90 000	90 000 140 000	2 800 4 000			
	900	**886**	1,58 84 690	1,02 88 160	0,564 90 000	90 000 140 000	2 800 4 000			
	1000	**1040**	1,35 85 520	0,865 90 000	0,481 90 000	90 000 140 000	2 800 4 000			
	1120	**1124**	1,25 80 000	0,801 80 000	0,445 80 000	80 000 140 000	2 800 4 000			
	1250	**1278**	1,10 87 150	0,704 90 000	0,391 90 000	90 000 140 000	2 800 4 000			
	1400	**1471**	0,951 80 000	0,612 80 000	0,340 80 000	80 000 140 000	2 800 4 000			
	1600	**1621**	0,864 80 000	0,555 80 000	0,308 80 000	80 000 140 000	2 800 4 000			
	1800	**1808**	0,774 80 000	0,498 80 000	0,277 80 000	80 000 140 000	2 800 4 000			

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Data and performance summary

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C / 40°C: –	20°C	40°C
2EB	10	**10,4**	-	86,3 35 280	47,9 42 080	60 730 73 000	1 120 1 400	50 37,5	–	–
	12,5	**13,2**	-	68,0 44 740	37,8 53 370	77 030 92 500	1 120 1 400			
	16	**16,7**	-	53,9 45 430	29,9 54 190	71 890 87 500	1 120 1 400			
	20	**21,2**	-	42,5 38 160	23,6 45 520	62 650 77 500	1 120 1 400			
	25	**26,5**	-	34,0 35 890	18,9 42 810	50 070 60 000	1 120 1 400			
3EB	45	**42,7**	32,8 36 120	21,1 41 240	11,7 49 200	60 250 73 000	1 800 2 240	35,5 26,5	53 40	69 53
	56	**54,8**	25,6 46 360	16,4 52 930	9,13 63 140	77 320 92 500	1 800 2 240			
	63	**61,1**	22,9 51 720	14,7 59 050	8,18 61 920	86 260 103 000	1 800 2 240			
	71	**69,5**	20,1 58 800	13,0 61 870	7,20 64 140	80 000 118 000	1 800 2 240			
	80	**77,5**	18,1 60 620	11,6 62 280	6,45 64 570	80 000 132 000	1 800 2 240			
	90	**87,7**	16,0 59 270	10,3 62 760	5,70 65 060	80 000 112 000	1 800 2 240			
	100	**97,8**	14,3 61 490	9,20 63 180	5,11 65 500	80 000 125 000	1 800 2 240			
	112	**111**	12,6 60 960	8,10 63 680	4,50 66 470	80 000 97 500	1 800 2 240			
	125	**124**	11,3 62 390	7,26 64 110	4,03 67 580	80 000 109 000	1 800 2 240			
	140	**139**	10,1 48 020	6,48 53 280	3,60 56 870	63 550 77 500	1 800 2 240			
	160	**155**	9,03 53 580	5,80 59 440	3,22 63 450	70 900 87 500	1 800 2 240			

Values referred to $n_1 = n_{1\,max}$.

	i_N	i_{eff}	L_h = 10 000 h; n_1 min^{-1}; n_2 min^{-1}; M_{N2} N m: 1 400	900	500	M_{N2max} / M_{2max} N m	n_{1max} / n_{1peak} min^{-1}	n_1 = 1 400 min^{-1}; P_t [kW] at 20°C / 40°C: –	20°C	40°C
4EB	160	**150**	9,32 59 790	5,99 68 260	3,33 81 420	90 000 122 000	2 240 2 800	28 21,2	42,5 31,5	56 42,5
	180	**178**	7,86 70 950	5,05 78 490	2,81 85 790	90 000 140 000	2 240 2 800			
	200	**193**	7,27 74 970	4,67 79 240	2,59 82 150	90 000 140 000	2 240 2 800			
	224	**226**	6,19 76 100	3,98 81 360	2,21 88 930	90 000 140 000	2 240 2 800			
	250	**243**	5,76 76 950	3,70 80 380	2,06 83 330	90 000 140 000	2 240 2 800			
	280	**285**	4,91 78 830	3,16 84 280	1,75 90 000	90 000 140 000	2 240 2 800			
	315	**335**	4,18 80 760	2,69 86 340	1,49 90 000	90 000 140 000	2 240 2 800			
	355	**366**	3,83 80 220	2,46 82 420	1,37 85 450	90 000 140 000	2 240 2 800			
	400	**424**	3,30 83 720	2,12 89 500	1,18 90 000	90 000 140 000	2 240 2 800			
	450	**464**	3,02 81 390	1,94 83 630	1,08 87 370	90 000 140 000	2 240 2 800			
	500	**518**	2,70 71 780	1,74 76 750	0,966 80 000	80 000 140 000	2 240 2 800			
	560	**545**	2,57 82 200	1,65 84 460	0,918 89 520	90 000 140 000	2 240 2 800			
	630	**669**	2,09 83 240	1,34 85 530	0,747 90 000	90 000 140 000	2 240 2 800			
	710	**736**	1,90 75 700	1,22 80 000	0,680 80 000	80 000 140 000	2 240 2 800			
	800	**837**	1,67 84 390	1,08 87 400	0,598 90 000	90 000 140 000	2 240 2 800			
	900	**864**	1,62 77 560	1,04 80 000	0,579 80 000	80 000 140 000	2 240 2 800			
	1000	**963**	1,45 78 860	0,934 80 000	0,519 80 000	80 000 140 000	2 240 2 800			
	1120	**1061**	1,32 80 000	0,848 80 000	0,471 80 000	80 000 140 000	2 240 2 800			
	1250	**1184**	1,18 80 000	0,760 80 000	0,422 80 000	80 000 140 000	2 240 2 800			

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