

Permissible radial and axial forces – helical gearboxes

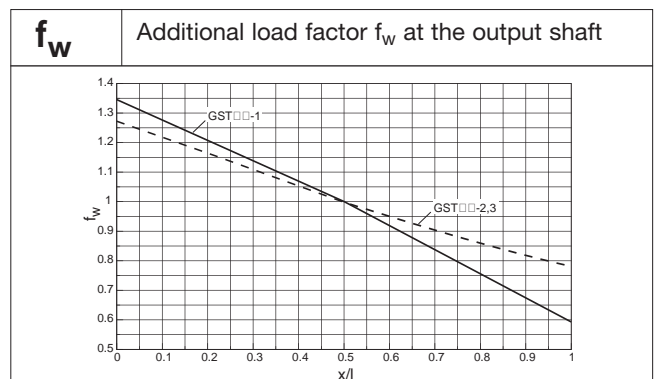
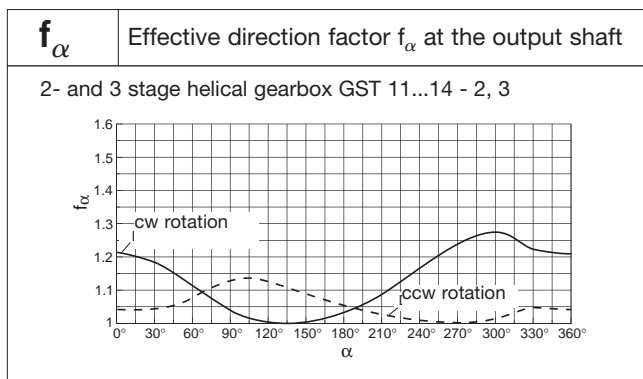
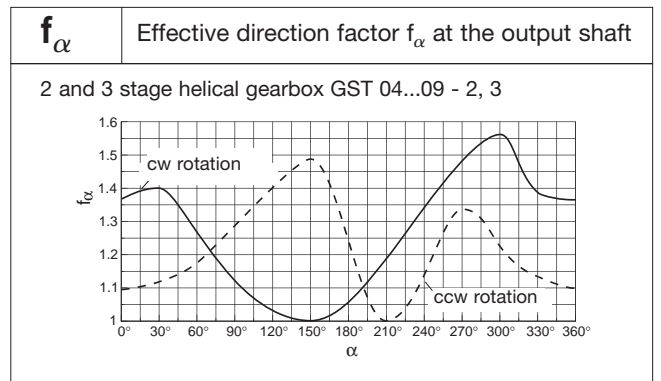
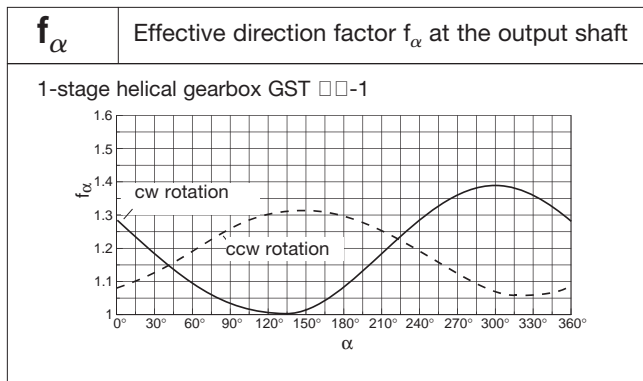
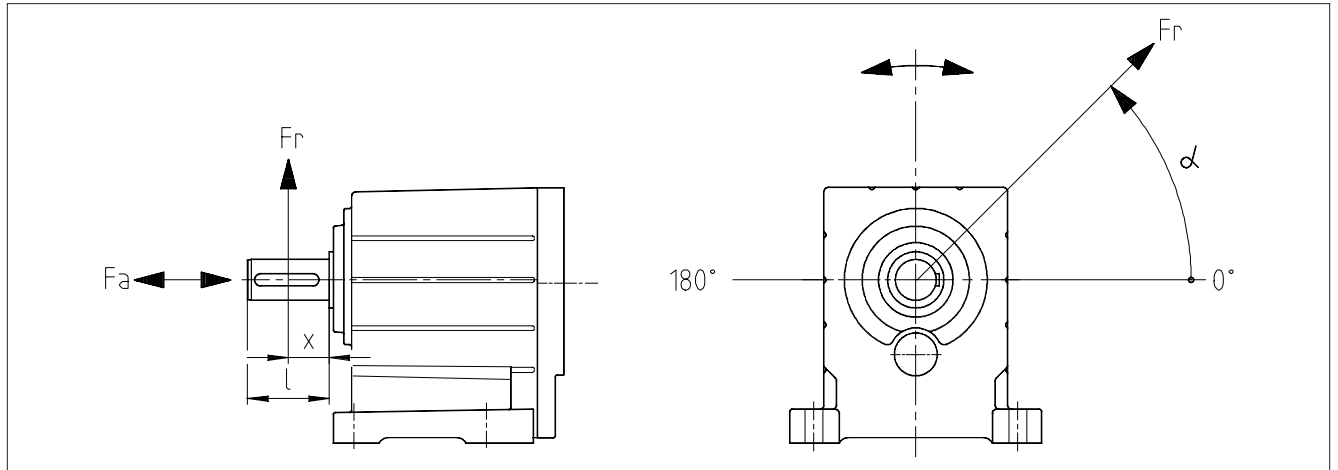
– Permissible radial force

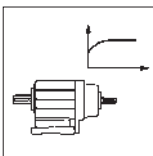
$$F_{r \text{ perm}} = f_w \cdot f_\alpha \cdot F_{r \text{ Tab}} \leq f_w \cdot F_{r \text{ max}}$$

– Permissible axial force

$$F_{a \text{ perm}} = F_{a \text{ Tab}} \quad \text{with } F_r = 0$$

Please contact Lenze if F_r and $F_a > 0$





Technical data

Gearboxes

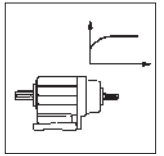
Permissible radial and axial forces – helical gearboxes

GST□□-1D (Feet on DISCO housing)

VCR	F _{r Tab} acts on the middle of the shaft (x = l/2) F _{a Tab} only valid if F _r = 0																	
	GST 04						GST 05						GST 06				GST 07	
	02C		03C		04D		03C		04D		05E		04D		05E		05E	
n ₂ [min ⁻¹]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]
1000	240	240	330	330	490	490	310	310	460	460	780	780	430	430	730	730	680	680
600	240	240	330	330	490	490	310	310	460	460	780	780	430	430	730	730	680	680
400	240	240	330	330	490	490	310	310	460	460	780	780	430	430	730	730	680	680
200	240	240	420	420	610	610	390	390	580	580	970	970	540	540	910	910	850	850
125	240	240	500	500	730	730	470	470	680	680	1170	1170	640	640	1100	1100	1020	1020
80	240	240	500	500	730	730	470	470	680	680	1170	1170	640	640	1100	1100	1020	1020
≤50	240	240	500	500	730	730	470	470	680	680	1170	1170	640	640	1100	1100	1020	1020
F _{r max.}	240	-	500	-	730	-	470	-	680	-	1170	-	640	-	1100	-	1020	-

GST □□-1

V □□	F _{r Tab} acts on the middle of the shaft (x = l/2) F _{a Tab} only valid if F _r = 0									
	GST 04		GST 05		GST 06		GST 07		GST 09	
	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]
1000	440	1000	550	1400	800	1500	1200	2000	2500	4300
600	600	1300	750	2000	800	2000	1300	2700	2500	5700
400	850	1400	1400	2000	1100	2500	1900	3300	3500	6800
200	1050	1400	2000	2000	2200	2500	3000	3700	6200	7000
125	1050	1400	2300	2000	2900	2500	3900	3700	7900	7000
80	1050	1400	2300	2000	3500	2500	4700	3700	9000	7000
≤50	1050	1400	2300	2000	3500	2500	5300	3700	9500	7000
F _{r max.}	1050	-	2300	-	3500	-	5300	-	9500	-



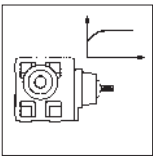
Permissible radial and axial forces – helical gearboxes

GST □□-2, 3 with standard bearing

V □□	F _{r Tab} acts on the middle of the shaft (x = l/2) F _{a Tab} only valid if F _r = 0													
	GST 04		GST 05		GST 06		GST 07		GST 09		GST 11		GST 14	
n ₂ [min ⁻¹]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]
400	1250	1100	1950	2000	2350	850	3400	1900	6800	2300	17000	9500	24000	15000
250	1450	1300	2200	2300	2600	900	3800	2200	7600	2800	19000	10000	27000	16000
160	1700	1650	2600	2650	3100	1250	4500	2900	9400	4000	21000	11000	31000	18000
100	2100	2000	3000	3100	3600	1800	5400	3900	11500	5600	21000	14000	36000	20000
63	2500	2000	3500	3600	4300	2600	6400	5300	11500	8900	21000	16000	39000	20000
40	2650	2000	3800	3600	4350	3600	7600	7000	11500	11000	21000	16000	40000	20000
25	2650	2000	3900	3600	4350	4800	9100	7000	11500	12000	21000	16000	40000	20000
<16	2650	2000	3900	3600	4350	4800	9500	7000	11500	12000	21000	16000	40000	20000
F _{r max.}	2650	–	3900	–	4350	–	9500	–	11500	–	21000	–	40000	–

GST □□-2, 3 with reinforced bearing

V □□	F _{r Tab} acts on the middle of the shaft (x = l/2) F _{a Tab} only valid if F _r = 0										GST 11	GST 14														
	GST 04		GST 05		GST 06		GST 07		GST 09																	
n ₂ [min ⁻¹]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	F _{r Tab} [N]	F _{a Tab} [N]	The standard bearing corresponds to a reinforced bearing															
400	2850	1700	4900	3600	6300	3500	8500	5500	16500	8000			The standard bearing corresponds to a reinforced bearing													
250	3150	1900	5400	3900	7000	3600	9500	6100	17000	9000					The standard bearing corresponds to a reinforced bearing											
160	3550	2200	5400	4300	7700	4200	10500	7100	17000	10500							The standard bearing corresponds to a reinforced bearing									
100	3750	2500	5400	4500	7700	4900	12500	8300	17000	12500									The standard bearing corresponds to a reinforced bearing							
63	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000											The standard bearing corresponds to a reinforced bearing					
40	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000													The standard bearing corresponds to a reinforced bearing			
25	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000															The standard bearing corresponds to a reinforced bearing	
< 16	3750	2500	5400	4500	7700	5700	13000	9000	17000	14000																
F _{r max.}	3750	–	5400	–	7700	–	13000	–	17000	–	The standard bearing corresponds to a reinforced bearing															

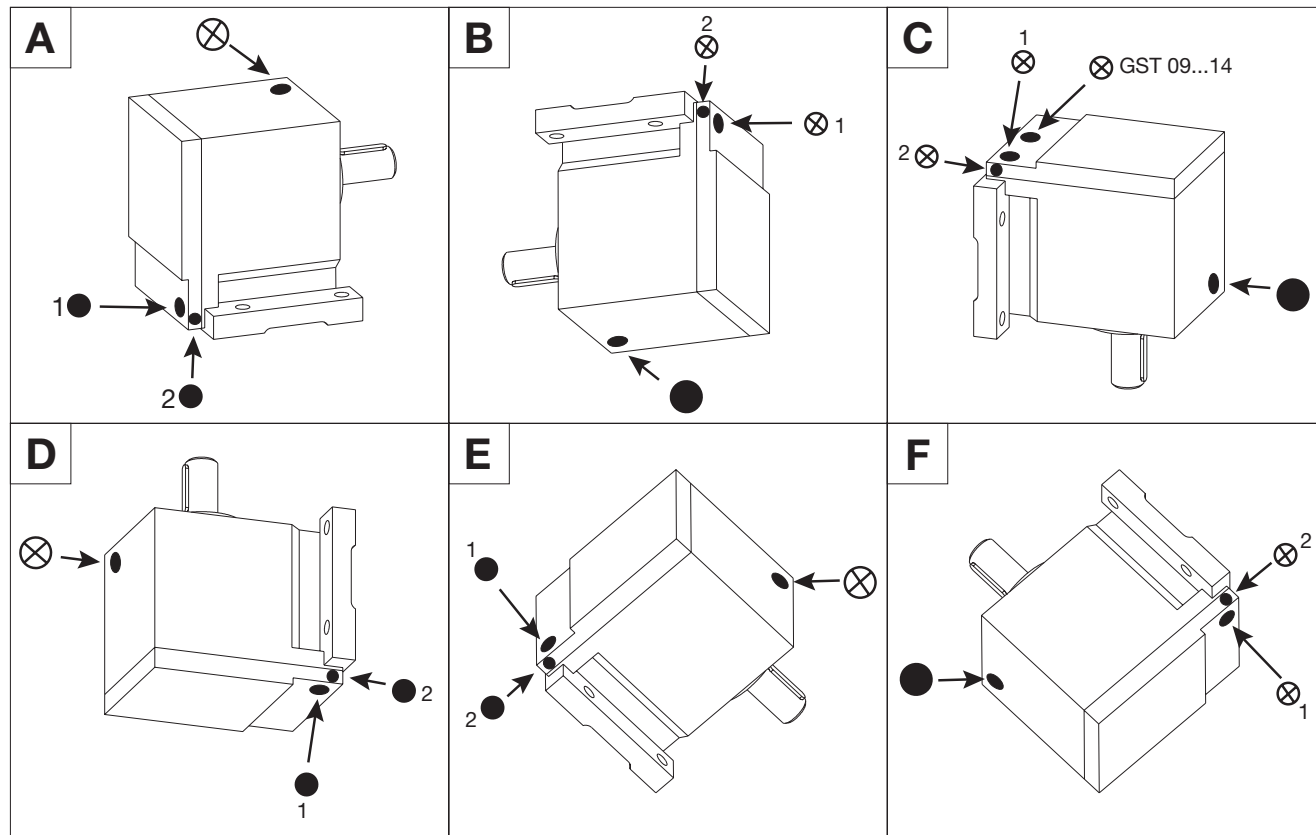


Technical data

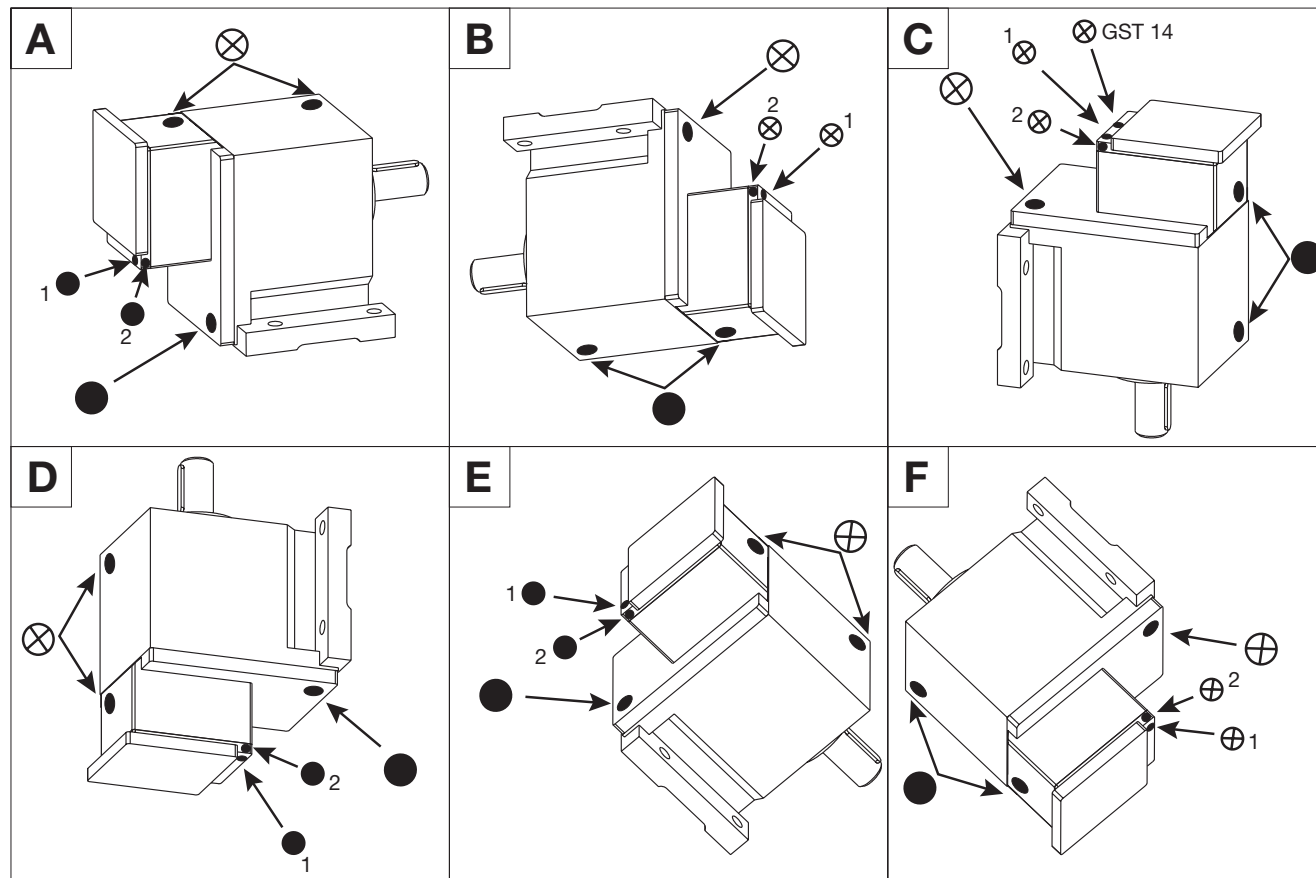
Gearboxes

Position of breather, oil filler plug and oil drain plug

Helical gearboxes GST 05...14 - 2



Helical gearboxes GST 05...14 - 3



Mounting position (A...F)

⊗ Breather/oil filler plug

● Oil drain plug