Flange-mounted designs

The flange-mounted designs are available with different diameters.

Gearbox type	Flange diameter mm													Order code
Helical gearboxes DF and ZF														
Gearbox size	**19**	**29**	**39**	**49**	**59**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**	
	120	120	120											**H02**
	140	140		140										**H03**
	160	160	160	160	160									**H04**
			200	200	200	200								**H05**
					250	250	250							**H06**
							300	300						**H07**
							350	350	350	350				**H08**
								450	450	450	450	450		**H09**
										550	550	550	550	**H10**
												660	660	**H11**
Helical gearboxes VLplus								300						**H07**
								350	350	350				**H08**
								450	450	450	450	450		**H09**
										550	550	550		**H10**
												660		**H11**
Helical gearboxes XLplus								450	450					**H09**
										550	550			**H10**
												660		**H11**

Helical gearboxes DB and ZB								Order code
Gearbox size	**29**	**39**	**49**	**59**	**69**	**79**	**89**	
	120	120						**H02**
			140					**H03**
			160	160				**H04**
					200			**H05**
						250		**H06**
							300	**H07**

Helical gearboxes EF								Order code
Gearbox size	**39**	**49**	**69**	**89**	**109**	**129**	**149**	
	120							**H02**
	140							**H03**
	160	160						**H04**
	200	200	200					**H05**
		250	250	250				**H06**
				300	300			**H07**
				350	350	350	350	**H08**
					450	450	450	**H09**
							550	**H10**

Cooling tower gearboxes											Order code
Gearbox size	**EKF89**	**EKF109**	**EKF129**	**EKF149**	**ZKF89**	**ZKF109**	**ZKF129**	**ZKF149**	**ZKF169**	**ZKF189**	
	250										**H06**
	300	300			300						**H07**
	350	350	350	350	350	350	350				**H08**
		450	450	450	450	450	450	450	450		**H09**
				550			550	550	550	550	**H10**
									660	660	**H11**
Cooling tower gearboxes XLplus					450	450					**H09**
							550	550			**H10**
									660		**H11**

Flange-mounted designs (continued)

Gearbox type	Flange diameter mm											Order code
Parallel shaft gearboxes F..F												
Gearbox size	**29**	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**	
	120											**H02**
	160	160										**H04**
			200									**H05**
				250	250							**H06**
						300						**H07**
							350					**H08**
								450	450			**H09**
										550		**H10**
											660	**H11**
Parallel shaft gearbox VLplus						300						**H07**
							350					**H08**
								450	450			**H09**
										550		**H10**
Bevel gearboxes B.F												
Gearbox size	**19**			**29**			**39**			**49**		
	120			120								**H02**
				160			160					**H04**
							200			200		**H05**
Bevel gearboxes K.F												
Gearbox size	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**		
	160											**H04**
		200										**H05**
			250	250								**H06**
					300							**H07**
						350						**H08**
							450	450				**H09**
									550			**H10**
										660		**H11**
Bevel gearboxes VLplus					300							**H07**
						350						**H08**
							450	450				**H09**
									550			**H10**
Helical worm gearboxes C.F												
Gearbox size	**29**		**39**		**49**		**69**		**89**			
	120											**H02**
	160		160									**H04**
					200		200					**H05**
									250			**H06**
Worm gearboxes S.F												
Gearbox size	**09**			**19**			**29**					
	80			110			120					**H01**
	120 / Q90			120			160 / Q136					**H02**

Mounting types

Flange-mounted designs (continued)

Water drain holes at the output flange

For gearboxes in a flange-mounted design, water drain holes can be located at the output flange. This is required for mounting position M2 (output shaft facing upwards), if there is a risk that water will collect in the output flange.

Order code:

Water drain holes at the output flange	**G77**

Flange diameter — Possible for

mm

Helical gearboxes Z and D

Gearbox size	19	29	39	49	59	69	79	89	109	129	149	169	189
120													
140				✓									
160				✓	✓[1]								
200				✓	✓	✓[2]							
250					✓	✓	✓[1]						
300							✓	✓					
350							✓	✓	✓	✓			
450								✓	✓	✓	✓	✓	
550										✓	✓	✓	✓
660												✓	✓

[1] Water drain holes are also possible for foot/flange-mounted designs
[2] Water drain holes are only possible for foot/flange-mounted designs

Helical gearboxes E

Gearbox size	39	49	69	89	109	129	149
120	✓						
140	✓						
160	✓	✓					
200	✓	✓	✓				
250		✓	✓	✓			
300				✓	✓		
350					✓	✓	✓
450						✓	✓

Cooling tower gearboxes

Gearbox size	EKF89	EKF109	EKF129	EKF149	ZKF89	ZKF109	ZKF129	ZKF149	ZKF169	ZKF189
250	✓									
300	✓	✓			✓					
350	✓	✓	✓	✓	✓	✓	✓			
450		✓	✓	✓	✓	✓	✓	✓	✓	
550				✓			✓	✓	✓	✓
660									✓	✓

Parallel shaft gearboxes F

Gearbox size	29	39	49	69	79	89	109	129	149	169	189
120											
140											
160		✓									
200			✓								
250				✓	✓						
300						✓					
350							✓				
450								✓	✓		
550										✓	
660											✓

Bevel gearboxes K

Gearbox size	39	49	69	79	89	109	129	149	169	189
160	✓									
200		✓								
250			✓	✓						
300					✓					
350						✓				
450							✓	✓		
550									✓	
660										✓

Flange-mounted designs (continued)

Output flange seal

The flange sealing option enables you to create a fluid-tight interface between the housing and the output flange. The seal prevents the escape of fluids (e.g. oil or water).

The gearbox in a flange-mounted design can be used when a fluid-tight space at the output is required. Input gears are a typical application.

The flange sealing option must always be ordered for use in combination with the "water drain holes at the output flange" option.

Order code:

Output flange seal	**G78**

Parallel shaft gearboxes F.AD. in a shaft-mounted design

The rubber buffers (supplied loose) are used to flexibly support the gearbox on the housing plate provided.

When mounting, the rubber buffers must be pretensioned to the dimension specified in the dimensional drawing.

The elastomer used for support is manufactured out of natural rubber 70° ± 5 Shore A.

The rubber buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +80 °C.

Article No. at 14th data position

Shaft-mounted design	**D**

The dimensions of the torque arm can be seen in the dimensional drawings.

Bevel gearboxes KAD. in a shaft-mounted design

The torque arm of bevel gearboxes K is mounted on the underside of the housing. The rubber buffers are used to flexibly support the gearbox on the torque arm.

The elastomer used for support is manufactured out of natural rubber of grade 60° Shore A.

The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +80 °C.

Article No. at 14th data position

Shaft-mounted design	**C**

The dimensions of the torque arm can be seen in the dimensional drawings.

Bevel gearboxes BAD. in a shaft-mounted design

The torque arm can be screwed to the gearbox housing at various positions.

The elastomer used for support is manufactured out of natural rubber 60° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +80 °C.

Article No. at 14th data position

Shaft-mounted design	**D**

When ordered, the torque arm is supplied loose.

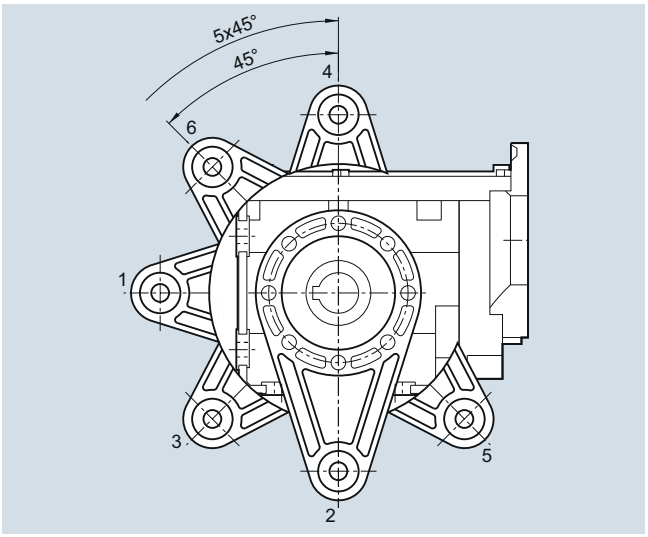

Fig. 10/8 Bevel gearboxes BAD., sizes 19 and 29

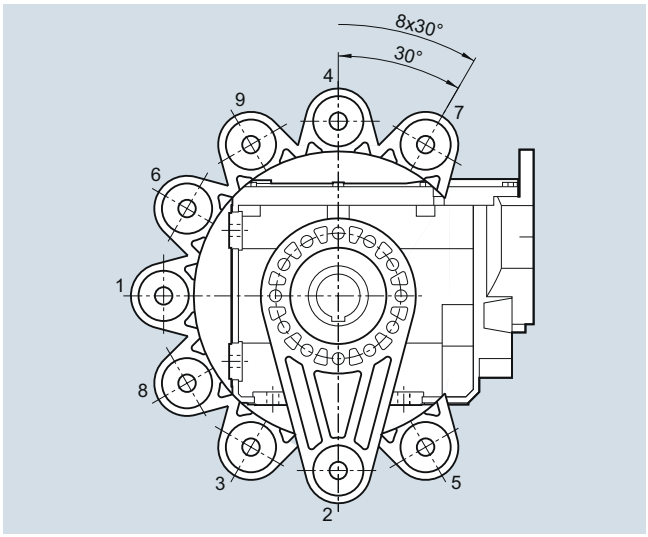

Fig. 10/9 Bevel gearboxes BAD., sizes 39 and 49

Helical worm gearboxes CAD. in a shaft-mounted design

The torque arm can be screwed to the gearbox housing at various positions.

The elastomer used for support is manufactured out of natural rubber 60° Shore A. The rubber elastic buffers are suitable for all mounting positions and can withstand temperatures of between -40 and +80 °C.

Shaft-mounted design for size 29

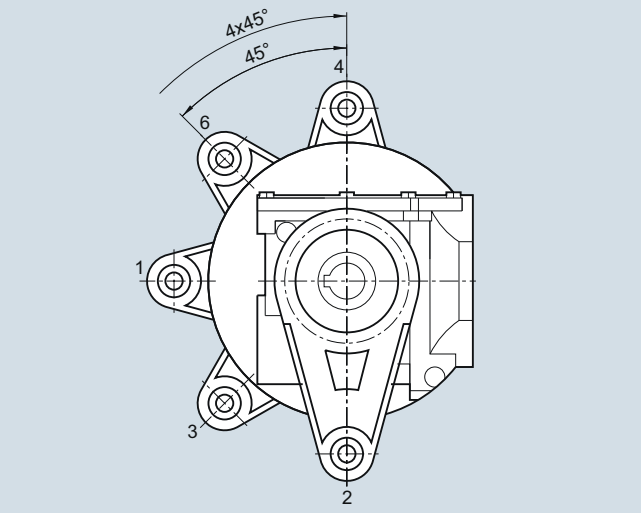

Fig. 10/10 Helical worm gearboxes CAD., size 29

Shaft-mounted design for sizes 39 to 89

Article No. at 14th data position	
Shaft-mounted design	**D**

When ordered, the torque arm is supplied loose.

Order code:	
Figure 1	**G09**
Figure 2	**G10**

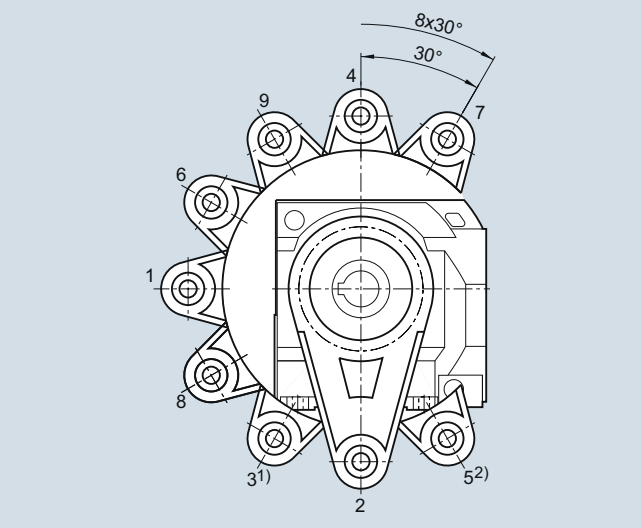

Fig. 10/11 Helical worm gearboxes CAD., Figure 1, sizes 39 to 89

1) Position not possible for sizes CAD.39 and CAD.69

2) Position not possible for size CAD.39

Article No. at 14th data position	
Shaft-mounted design	**D**

When ordered, the torque arm is supplied loose.

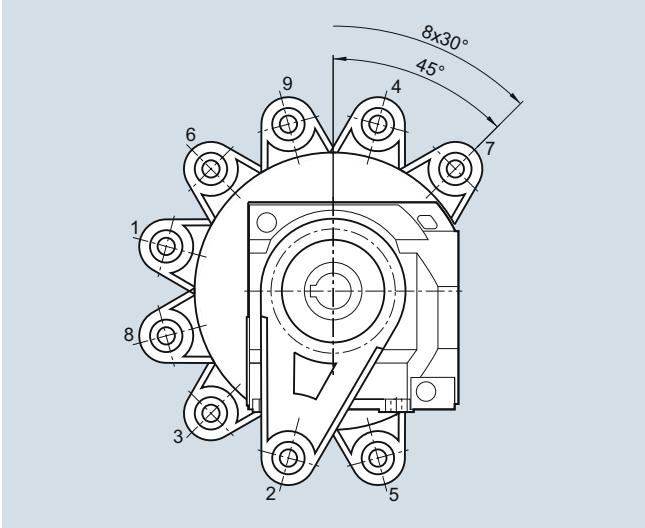

Fig. 10/12 Helical worm gearboxes CAD., Figure 2, sizes 39 to 89

Worm gearboxes SAD. in a shaft-mounted design

The torque arm can be screwed to the gearbox housing at various positions.

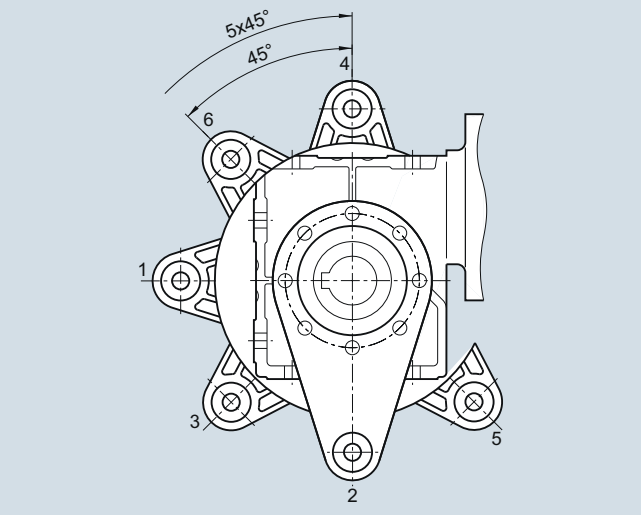

Fig. 10/13 Worm gearboxes S in a shaft-mounted design

Article No. at 14th data position	
Shaft-mounted design	**D**

When ordered, the torque arm is supplied loose.

Shaft designs

Selection and ordering data

Shaft design	Dimensions mm						Article No. 8th data position	Article No. supplement
Helical gearboxes Z and D								
Gearbox size	**19**	**29**	**39**	**49**	**59**	**69**		
Solid shaft	V20 x 40	V25 x 50	V25 x 50	V30 x 60	V35 x 70	V35 x 70	**1**	
	V16 x 28				V30 x 60		**2**	
	V16 x 40		V30 x 60		V40 x 80		**3**	
Solid shaft without feather key	VG20 x 40	VG25 x 50	VG25 x 50	VG30 x 60	VG35 x 70	VG35 x 70	**9**	**H1G**
Solid shaft, inches	V0.75" x 1.57"	V1" x 1.97"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.375" x 2.76"	**9**	**H6A**
Gearbox size	**79**	**89**	**109**	**129**	**149**	**169**		
Solid shaft	V40 x 80	V50 x 100	V60 x 120	V70 x 140	V90 x 170	V110 x 210	**1**	
	V35 x 70					V100 x 210	**2**	
	V50 x 100	V60 x 120					**3**	
Solid shaft without feather key	VG40 x 80	VG50 x 100	-	-	-	-	**9**	**H1G**
Solid shaft, inches	V1.625" x 3.15"	V2.125" x 3.94"	V2.375" x 4.72"	V2.875" x 5.51"	V3.625" x 6.69"	V4.375" x 8.27"	**9**	**H6A**
Solid shaft VLplus		VM50 x 100	VM70 x 140	VM90 x 170	VM110 x 210	VM120 x 210	**9**	**H1C**
Solid shaft XLplus		VR50 x 100	VR70 x 140	VR90 x 170	VR110 x 210	VR120 x 210	**9**	**H1D**
Gearbox size	**189**							
Solid shaft	V120 x 210						**1**	
Solid shaft, inches	V4.75" x 8.27"						**9**	**H6A**

Helical gearboxes E								
Gearbox size	**39**	**49**	**69**	**89**	**109**	**129**	**149**	
Solid shaft	V20 x 40	V25 x 50	V30 x 60	V40 x 80	V50 x 100	V60 x 120	V70 x 140	**1**
Solid shaft, inches	V0.75" x 1.57"	V1" x 1.97"	V1.25" x 2.36"	V1.625" x 3.15"	V2.125" x 3.94"	V2.375" x 4.725"	V2.875" x 5.51"	**9** **H6A**

Cooling tower gearboxes								
Gearbox size	**EKF89**	**EKF109**	**EKF129**	**EKF149**				
Solid shaft	VC40 x 80/160	VC50 x 100/180	VC60 x 120/200	VC70 x 140/220			**9**	**H1B**
Gearbox size	**ZKF89**	**ZKF109**	**ZKF129**	**ZKF149**	**ZKF169**	**ZKF189**		
Solid shaft	VC50 x 100/180	VC60 x 120/200	VC70 x 140/220	VC90 x 170/250	VC110 x 210/330	VC120 x 210/330	**9**	**H1B**
Solid shaft XLplus	VC60 x 120	VC70 x 140	VC90 x 170	VC100 x 210	VC120 x 210		**9**	**H1C**

Selection and ordering data (continued)

Shaft design	Dimensions mm						Article No. 8th data position	Article No. supplement
Parallel shaft gearboxes F								
Gearbox size	**29**	**39**	**49**	**69**	**79**	**89**		
Solid shaft	V25 x 50	V25 x 50	V30 x 60	V35 x 70	V40 x 80	V50 x 100	**1**	
		V30 x 70	V40 x 80		V50 x 100		**3**	
Solid shaft without feather key	VG25 x 50	VG25 x 50	VG30 x 60	VG35 x 70	VG40 x 80	VG50 x 100	**9**	**H1G**
Solid shaft, inches	V1" x 1.97"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.625" x 3.15"	V2" x 3.94"	**9**	**H6A**
Solid shaft VLplus						VM60 x 120	**9**	**H1C**
Hollow shaft	H25	H30	H35	H40	H40	H50	**5**	
		H25	H30				**6**	
Hollow shaft, inches	H1"	H1.25"	H1.375"	H1.5"	H1.5"	H2"	**9**	**H7A**
Hollow shaft VLplus						HM50	**9**	**H2F**
Hollow shaft with shrink disk	HS25	HS30	HS35	HS40	HS40	HS50	**9**	**H3A**
SIMOLOC assembly system, metric	HF25	HF30	HF35	HF40	HF40	HF50	**9**	**H3G**
	HF20	HF25	HF30	HF35	HF35	HF40	**9**	**H3H**
SIMOLOC assembly system, inches	HF1.0"	HF1.25"	HF1.375"	HF1.5"	HF1.5"	HF2.0"	**9**	**H3J**
	HF0.75"	HF1.1875"	HF1.4375"	HF1.625"	HF1.625"	HF1.9375"	**9**	**H3K**
		HF1.0"	HF1.25"	HF1.4375"	HF1.4375"	HF1.75"	**9**	**H3L**
		-	HF1.1875"	HF1.375"	HF1.375"	HF1.625"	**9**	**H3M**
Splined hollow shaft		N30	N35	N35	N45	N50	**9**	**H4A**
Gearbox size	**109**	**129**	**149**	**169**	**189**			
Solid shaft	V60 x 120	V70 x 140	V90 x 170	V110x120	V120x210		**1**	
	V80 x 170	V90 x 170	V100 x 210	V120 x 210	V140 x 250		**3**	
Solid shaft, inches	V2.375" x 4.72	V2.875 x 5.51	V3.625" x 6.69"	V4.375"x8.27"	V4.75"x8.27"		**9**	**H6A**
Solid shaft VLplus	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210			**9**	**H1C**
Hollow shaft	H60	H70	H90	H100	H120		**5**	
	H70		H80	H110			**6**	
Hollow shaft, inches	H2.375"	H2.75"	H3.625"	H4"	H4.5"		**9**	**H7A**
Hollow shaft VLplus	HM60	HM70	HM90	HM100			**9**	**H2F**
Hollow shaft with shrink disk	HS65	HS75	HS95	HS105	HS125		**9**	**H3A**
			HS90				**9**	**H3B**
	HS70						**9**	**H3C**
Splined hollow shaft	N65	N70	N85	N90	N110		**9**	**H4A**

Shaft design	Dimensions mm				Article No. 8th data position	Article No. supplement
Bevel gearboxes B						
Gearbox size	**19**	**29**	**39**	**49**		
Solid shaft	V20 x 40	V20 x 40	V30 x 60	V35 x 70	**1**	
Solid shaft without feather key	VG20 x 40	VG20 x 40	VG30 x 60	VG35 x 70	**9**	**H1G**
Solid shaft, inches	V0.75" x 1.57"	V0.75" x 1.57"	V1" x 1.97"	V1.375" x 2.76"	**9**	**H6A**
Solid shaft, both ends [1]	VD20 x 40	VD20 x 40	VD30 x 60	VD35 x 70	**9**	**H5A**
Hollow shaft	H20	H20	H30	H40	**5**	
		H25	H35	H35	**6**	
			H40		**7**	
Hollow shaft, inches	H0.75"	H0.75"	H1.25"	H1.5"	**9**	**H7A**
Hollow shaft with shrink disk		HS20	HS35	HS40	**9**	**H3A**
SIMOLOC assembly system, metric		HF25	HF30	HF35	**9**	**H3G**
		HF20	HF25	HF30	**9**	**H3H**
				HF40	**9**	**H3I**
SIMOLOC assembly system, inches		HF1.0"	HF1.25"	HF1.375"	**9**	**H3J**
		HF0.75"	HF1.1875"	HF1.4375"	**9**	**H3K**
			HF1.0"	HF1.25"	**9**	**H3L**
				HF1.1875"	**9**	**H3M**
				HF1.625"	**9**	**H3N**

[1] Can only be selected in conjunction with foot-mounted design

Selection and ordering data (continued)

Shaft design	Dimensions mm					Article No. 8th data position	Article No. supplement
Bevel gearboxes K							
Gearbox size	**39**	**49**	**69**	**79**	**89**		
Solid shaft	V25 x 50	V30 x 60	V35 x 70	V40 x 80	V50 x 100	**1**	
	V35 x 70	V40 x 80		V50 x 100		**3**	
Solid shaft without feather key	VG25 x 50	VG30 x 60	VG35 x 70	VG40 x 80	VG50 x 100	**9**	**H1G**
Solid shaft, inches	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.625" x 3.15"	V2" x 3.94"	**9**	**H6A**
Solid shaft, both ends [1]	VD25 x 50	VD30 x 60	VD35 x 70	VD40 x 80	VD50 x 100	**9**	**H5A**
Solid shaft VLplus					VM60 x 120	**9**	**H1C**
Hollow shaft	H30	H35	H40	H40	H50	**5**	
	H25	H30				**6**	
Hollow shaft, inches	H1.25"	H1.375"	H1.5"	H1.5"	H2"	**9**	**H7A**
Hollow shaft VLplus					HM50	**9**	**H2F**
Hollow shaft with shrink disk	HS30	HS35	HS40	HS40	HS50	**9**	**H3A**
SIMOLOC assembly system, metric	HF30	HF35	HF40	HF40	HF50	**9**	**H3G**
	HF25	HF30	HF35	HF35	HF40	**9**	**H3H**
SIMOLOC assembly system, inches	HF1.25"	HF1.375"	HF1.5"	HF1.5"	HF2.0"	**9**	**H3J**
	HF1.1875"	HF1.4375"	HF1.625"	HF1.625"	HF1.9375"	**9**	**H3K**
	HF1.0"	HF1.25"	HF1.4375"	HF1.4375"	HF1.75"	**9**	**H3L**
		HF1.1875"	HF1.375"	HF1.375"	HF1.625"	**9**	**H3M**
Splined hollow shaft	N30	N35	N35	N45	N50	**9**	**H4A**
Gearbox size	**109**	**129**	**149**	**169**	**189**		
Solid shaft	V60 x 120	V70 x 140	V90 x 170	V110 x 210	V120 x 210	**1**	
	V80 x 170	V90 x 170	V100 x 210	V120 x 210	V140 x 250	**3**	
Solid shaft, inches	V2.375" x 4.72"	V2.875" x 5.51"	V3.625" x 6.69"	V4.375" x 8.27"	V4.75" x 8.27"	**9**	**H6A**
Solid shaft, both ends [1]	VD60 x 120	VD70 x 140	VD90 x 170	VD110 x 210	VD120 x 210	**9**	**H5A**
Solid shaft VLplus	VM70 x 140	VM90 x 170	VM100 x 210	VM120 x 210		**9**	**H1C**
Hollow shaft	H60	H70	H90	H100	H120	**5**	
			H80			**6**	
	H70			H110		**7**	
Hollow shaft, inches	H2.375"	H2.75"	H3.625"	H4"	H4.5"	**9**	**H7A**
Hollow shaft VLplus	HM60	HM70	HM90	HM100		**9**	**H2F**
Hollow shaft with shrink disk	HS65	HS75	HS95	HS105	HS125	**9**	**H3A**
			HS90			**9**	**H3B**
	HS70					**9**	**H3C**
Splined hollow shaft	N65	N70	N85	N90	N110	**9**	**H4A**
Helical worm gearboxes C							
Gearbox size	**29**	**39**	**49**	**69**	**89**		
Solid shaft	V20 x 40	V25 x 50	V30 x 60	V35 x 70	V45 x 90	**1**	
				V40 x 80	V50 x 100	**2**	
		V35 x 70	V40 x 80	V50 x 100	V70 x 140	**3**	
Solid shaft without feather key	VG20 x 40	VG25 x 50	VG30 x 60	VG35 x 70	VG45 x 90	**9**	**H1G**
Solid shaft, inches	V0.75" x 1.57"	V1" x 1.97"	V1.25" x 2.36"	V1.375" x 2.76"	V1.75" x 3.54"	**9**	**H6A**
Solid shaft, both ends [1]	VD20 x 40	VD25 x 50	VD30 x 60	VD35 x 70	VD45 x 90	**9**	**H5A**
Hollow shaft	H20	H25	H30	H40	H50	**5**	
		H30	H35	H45	H60	**6**	
Hollow shaft, inches	H0.75"	H1.25"	H1.375"	H1.5"	H2"	**9**	**H7A**
Hollow shaft with shrink disk	HS20	HS30	HS35	HS40	HS50	**9**	**H3A**
				HS50	HS60	**9**	**H3C**
SIMOLOC assembly system, metric	HF25	HF30	HF35	HF40	HF50	**9**	**H3G**
	HF20	HF25	HF30	HF35	HF40	**9**	**H3H**
SIMOLOC assembly system, inches	HF1.0"	HF1.25"	HF1.375"	HF1.5"	HF2.0"	**9**	**H3J**
	HF0.75"	HF1.1875"	HF1.4375"	HF1.625"	HF1.9375"	**9**	**H3K**
		HF1.0"	HF1.25"	HF1.4375"	HF1.75"	**9**	**H3L**
		-	HF1.1875"	HF1.375"	HF1.625"	**9**	**H3M**

[1] Can only be selected in conjunction with foot-mounted design

Selection and ordering data (continued)

Shaft design	Dimensions mm			Article No. 8th data position	Article No. supplement
Worm gearboxes S					
Gearbox size	**09**	**19**	**29**		
Solid shaft	V16 x 40	V20 x 40	V20 x 40	**1**	
	V14 x 30	V18 x 40	V25 x 50	**3**	
Solid shaft, both ends [1]	VD16 x 40	VD20 x 40	VD20 x 40	**9**	**H5A**
Hollow shaft	H16	H18	H20	**5**	
	H14	H20	H25	**6**	
Hollow shaft stainless steel	HX16	HX20	HX20	**9**	**H8A**
Plug-in shaft	VE16 x 40	VE20 x 40	VE20 x 40	**7**	

[1] Can only be selected in conjunction with foot-mounted design

SIMOLOC assembly system

The new SIMOLOC assembly system has been designed to provide a friction-locked connection between the motor shaft made of drawn shaft material of grade h11 or lower and the hollow shaft in the gearbox.

The SIMOLOC assembly system offers a low-cost, easy-to-fit alternative to conventional shaft connections such as hollow shaft with a feather key, hollow shaft with shrink disk or hollow shaft with spline.

It is compatible with the shaft-mounted designs of the parallel shaft, bevel and helical worm gearboxes.

Several diameters are available for each gearbox size.

Components of the SIMOLOC assembly system

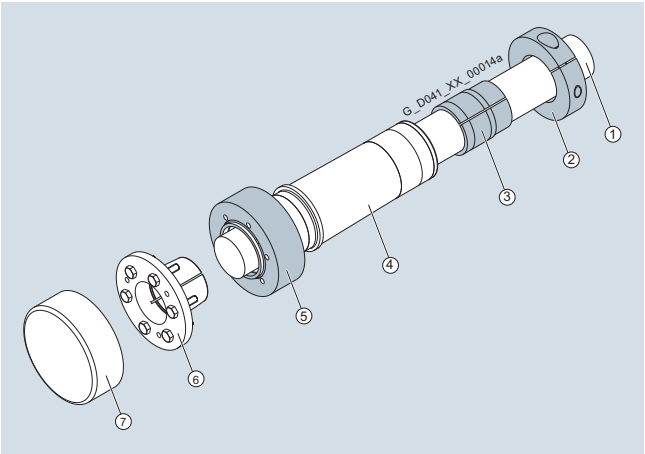

Fig. 10/14 SIMOLOC assembly system

① Machine shaft
② Clamping ring
③ Bronze bushing
④ Hollow shaft of gearbox
⑤ V-ring
⑥ Taper bushing
⑦ Rotating protection cover

Benefits

Cost reduction

- The drive shaft of the motor can be made of low-cost, drawn shaft material of grade h11 or lower.
- The shaft is cheaper to machine because there is no need to machine the shaft seat and a keyway is not required.

Quick and easy mounting

- Easy to mount and dismantle thanks to adequate clearance between the motor shaft and hollow shaft. The press fit is not made until the taper bushing is inserted.
- The press fit prevents the formation of fretting corrosion. The taper bushing can be removed easily in order to separate the press-fit connection.
- No tight fits need to be overcome when the gearbox is pushed onto the motor shaft.

Variability

- Quick adjustment of the gearbox to different motor shaft diameters is possible by replacement of the taper and bronze bushings.
- Easy conversion from metric to inch dimensions and vice versa.

Available diameters

The SIMOLOC assembly system can be supplied for shaft-mounted designs. 2 metric versions and 2 to 4 inch versions are available for all sizes.

Scope of supply

The gearbox is shipped with a SIMOLOC hollow shaft. The diameter-specific components are supplied as a separate assembly kit. The unit is supplied with pre-assembled rotating protection cover. The non-rotating protection cover can be ordered as an option.

Hollow shaft cover

Sealing cap

The bore of the hollow shaft is sealed using a plastic sealing cap.

Gearboxes in size 39 and larger with hollow shaft and shrink disk have a rotating protective cover.

The dimensions of the rotating protective cover can be seen in the dimensional drawings provided in the gearbox chapters.

For safety reasons, stationary protection covers may be required.

The sealing cap is not approved for the ATEX design.

Protection cover

For sizes 19 to 189, a stationary protection cover for the hollow shaft or hollow shaft with shrink disk versions can be selected.

The dimensions of the protection cover can be seen in the separate dimensional drawing provided in the gearbox chapters.

The protection cover is approved for the ATEX design.

Order code:	
Protection cover	**G60**

Reinforced output shaft bearings

The gearboxes can be supplied with the standard design or with a reinforced output shaft bearing design. The reinforced bearings allow higher radial and combined forces (radial and axial) to be absorbed.

Design	Possible for													Order code
Helical gearboxes Z and D														
Gearbox size	**19**	**29**	**39**	**49**	**59**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**	
Radially reinforced output shaft bearings						✓	✓	✓	✓	✓	✓			**G20**
VLplus reinforced bearing system [2]								✓	✓	✓	✓	✓		**G30**
XLplus reinforced bearing system [2]								✓	✓	✓	✓	✓		**G31**
Cooling tower gearboxes														
Gearbox size	**EKF89**	**EKF109**	**EKF129**	**EKF149**	**ZKF89**	**ZKF109**	**ZKF129**	**ZKF149**	**ZKF169**	**ZKF189**				
Radially reinforced output shaft bearings					✓	✓	✓	✓						**G20**
XLplus reinforced bearing system [2]					✓	✓	✓	✓	✓					**G31**
Parallel shaft gearboxes F														
Gearbox size	**29**	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**			
Radially reinforced output shaft bearings			✓[1]	✓	✓	✓	✓	✓	✓	✓	✓			**G20**
VLplus reinforced bearing system [2]						✓	✓	✓	✓	✓				**G30**
Bevel gearboxes K														
Gearbox size	**39**	**49**	**69**	**79**	**89**	**109**	**129**	**149**	**169**	**189**				
Radially reinforced output shaft bearings		✓[1]	✓	✓	✓	✓	✓	✓	✓	✓				**G20**
VLplus reinforced bearing system [2]					✓	✓	✓	✓	✓					**G30**

[1] Not possible for flange-mounted design with solid shaft (gearbox type FZF, FDF, KF)
[2] VLplus and XLplus reinforced bearing systems can only be selected with flange-mounted design.