




Energy Efficient Geared Motors

AC Variable Speed

										73734 Esslingen Made in Germany	
3-Mot.-No E 11242943 - 1 A/ 188Z9641										11/2021	
Type BF80Z-44/S09SA4-TF/C2-SP											
PMSM 2p=4 U-VSD 380...500V 50/60 Hz IE4-89,2 % F/155 °C 50 Hz											
1,5 kW	n ₁ 1500	1/ω ₁	n ₂ 1,3 1/ω ₂	M ₂ 1200 Nm	M ₁ [Nm]	ti 0,94	2,9 A				
Hz	kW	A	n ₁ [1/min]	M ₂ [Nm]	M ₁ [Nm]	n ₁ [1/min]	I _N [A]				
5	0,13	2,6	150	8,5	0,13	9500					
16,66	0,52	3,1	500	10	0,44	11200					
33,33	1,05	3,1	1000	10	0,85	11200					
50	1,5	2,9	1500	10	1,3	11200					
60	1,9	3,1	1800	10	1,6	11200					
IM H4/V2 15° IP65  21/1,2 L CPL 220											
PTC temp. -20... 40 °C S1 1124											
Ld/la 64,1/1000,0 mH R-SLA 950 Ω Ka 208 V/1000 rpm-1 33,33 Nm/A											
IE4 acc. IEC 60034-30-2 TS:2/1813/CD  EN 60034 SCHB											

3

Type Designations

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Type Designations

Significance of type designation

Example: Bauer bevel-gear motor with brake and standard add-ons

Significance of type designation

The type designation of a BAUER geared motor is a code designating all the features in the drive configuration.

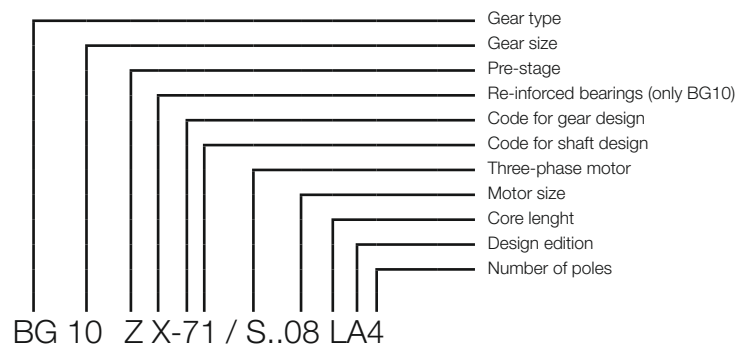
The build-up of the type designation is explained with the help of the following example of a bevel geared motor with brake and series options.

	Gear									/	Motor									/	Brake					
	BK	50	Z	-	1	1	U	W	/	S..	09L	A	4	-	TF	-	S	/	ES	010	A	9	HN	/	C2	
Bauer bevel-gears																										
Gear size 50																										
With pre-stage																										
Separates gear type from gear design																										
Gear housing, foot with clearance holes at bottom																										
Solid output shaft at front																										
Foot with clearance holes at bottom																										
Double shaft seals																										
End of gear part, start of motor part																										
Permanentmagnet synchronous motor (PMSM)																										
Motor size																										
State of construction of motor																										
Poles of Winding																										
Separates motor-type from motor supplement																										
Motor protection, thermistors from thermal class F																										
Separation between motor supplements																										
Standard brake rectifier, in the motor terminal box																										
End of motor, start of brake																										
Single disc brake																										
Brake size																										
State of construction of brake																										
Code for braking torque set																										
Manual release non lockable																										
End of supplement, start total design																										
Unit in corrosion protection CORO2																										

Type Designations

BG-series helical-geared motor

3



Z- Gear with pre-stage
 G- Tandem gear

1 Foot with clearance holes

2 Small A-flange with clearance holes

3 Standard A-flange with clearance holes

4 Large A-flange with clearance holes

6 . L Foot with tapped holes, left

6 . R Foot with tapped holes, right

6 . LR Foot with tapped holes, left and right

7 C-flange with threaded holes

8 Completely machined

9 . L Foot plate, left

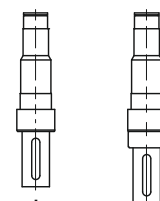
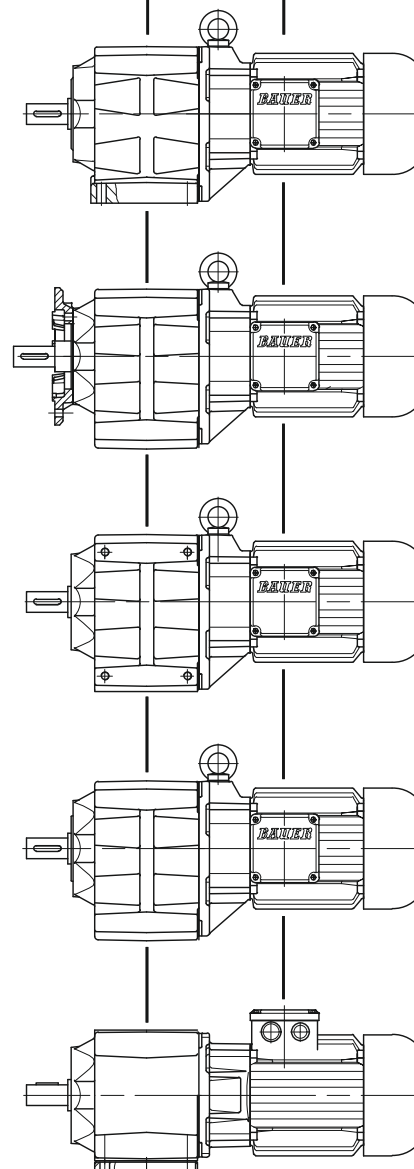
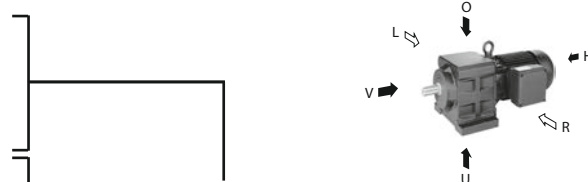
9 . R Footplate, right

9 . LR Footplate, left and right

. 1 Solid shaft on gear side V

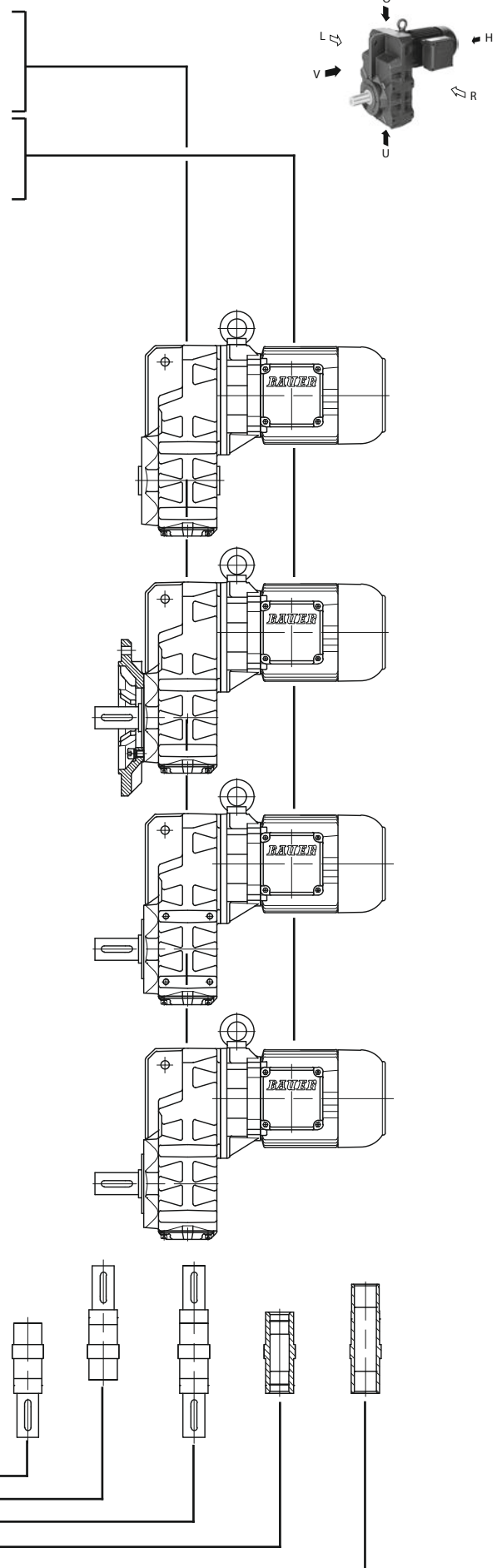
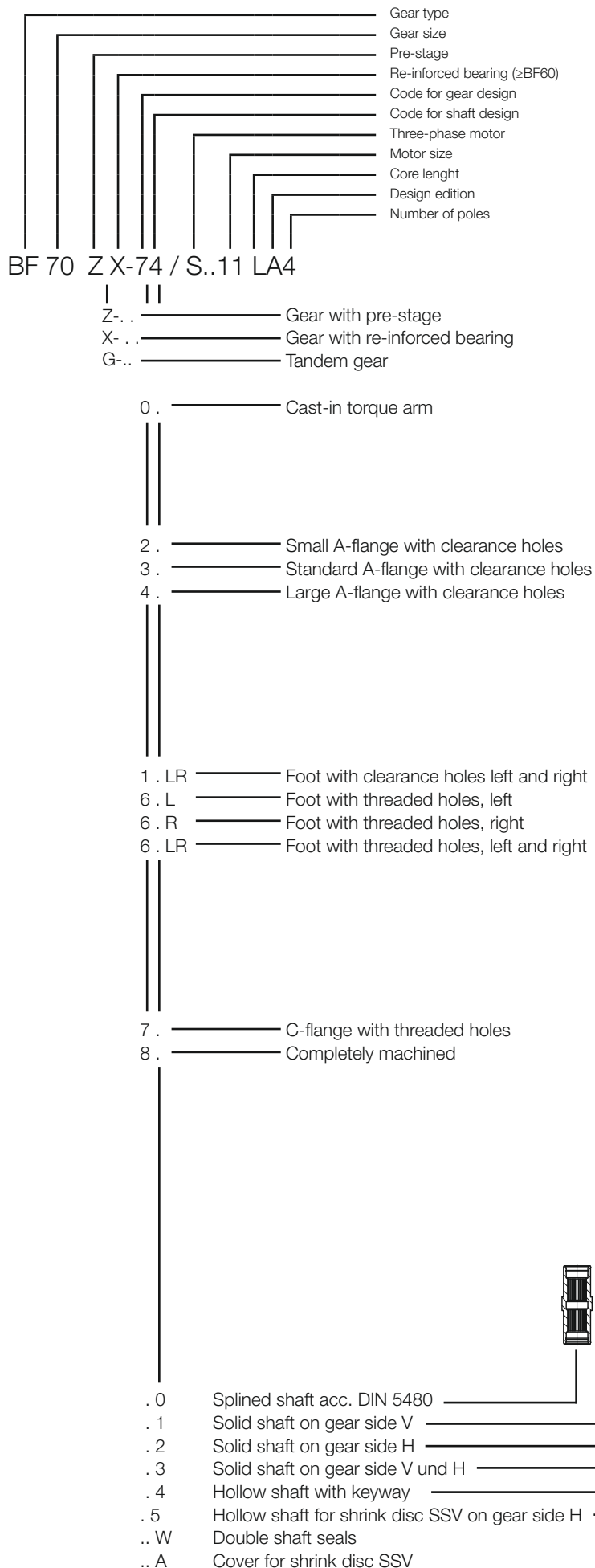
. 7 Solid shaft on gear side V for flange as from BG10

.. W Double shaft seals



Type Designations

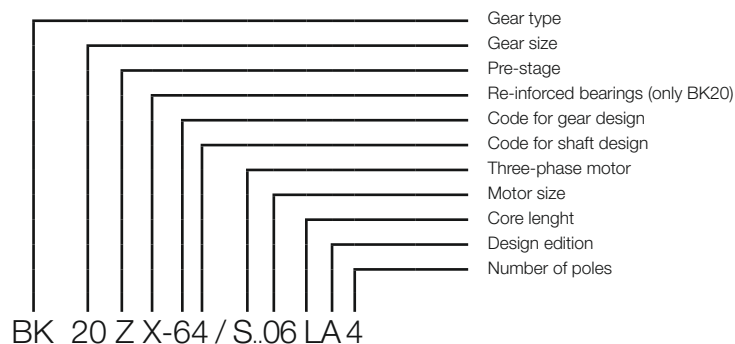
BF-series shaft-mounted geared motor



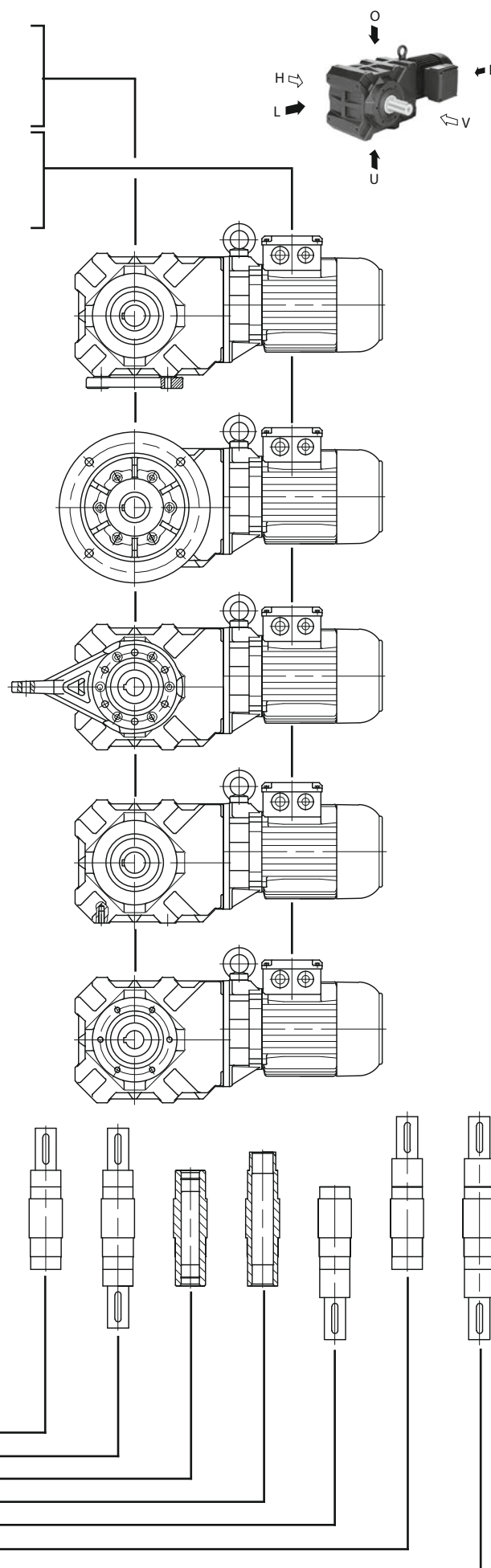
Type Designations

BK-series bevel-geared motor

3

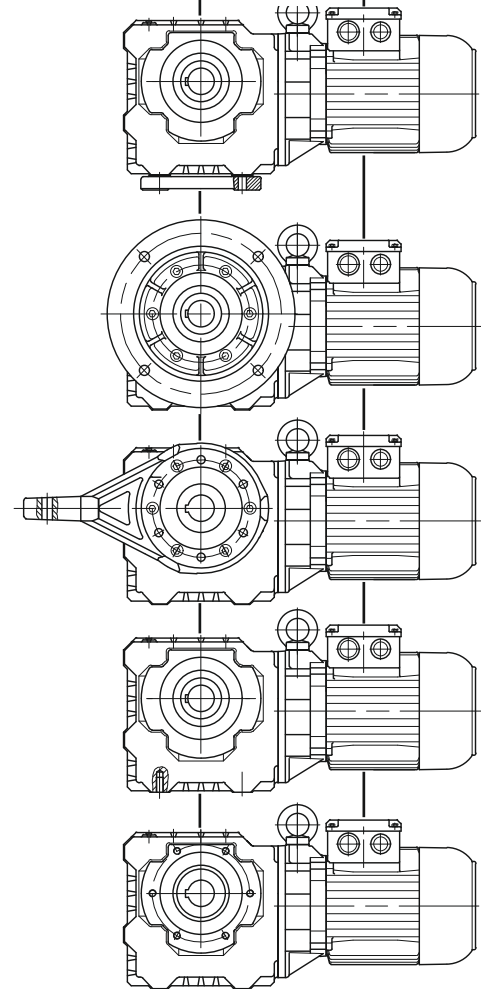
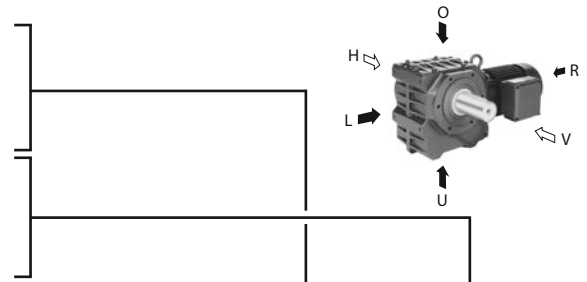
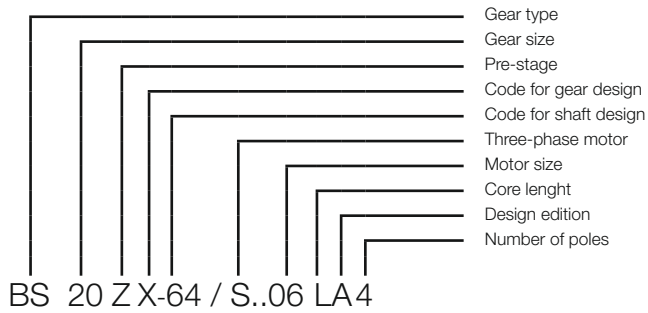


- 1 . U — Foot with clearance holes, bottom
- 1 . L — Foot with clearance holes, left
- 1 . O — Foot with clearance holes, top
- 2 . V — small A-flange with clearance holes , front
- 3 . V — Standard A-flange with clearance holes, front
- 4 . V — large A-flange with clearance holes, front
- .. H — A-flange, rear
- .. VH — A-flange, front and rear
- 5 . V — Torque arm at front
- 5 . VL — Torque arm, front to left
- 5 . VO — Torque arm, front to top
- 5 . VU — Torque arm, front to bottom
- 5 . HL — Torque arm, rear to left
- 5 . HO — Torque arm, rear to top
- 5 . HU — Torque arm, rear to bottom
- 6 . U — Foot with threaded holes, bottom
- 6 . L — Foot with threaded holes, left
- 6 . O — Foot with threaded holes, top
- 7 . V — C-flange with threaded holes, front
- 7 . H — C-flange with threaded holes, rear
- 7 . VH — C-flange with threaded holes, front and rear
- 8 . — Completely machined

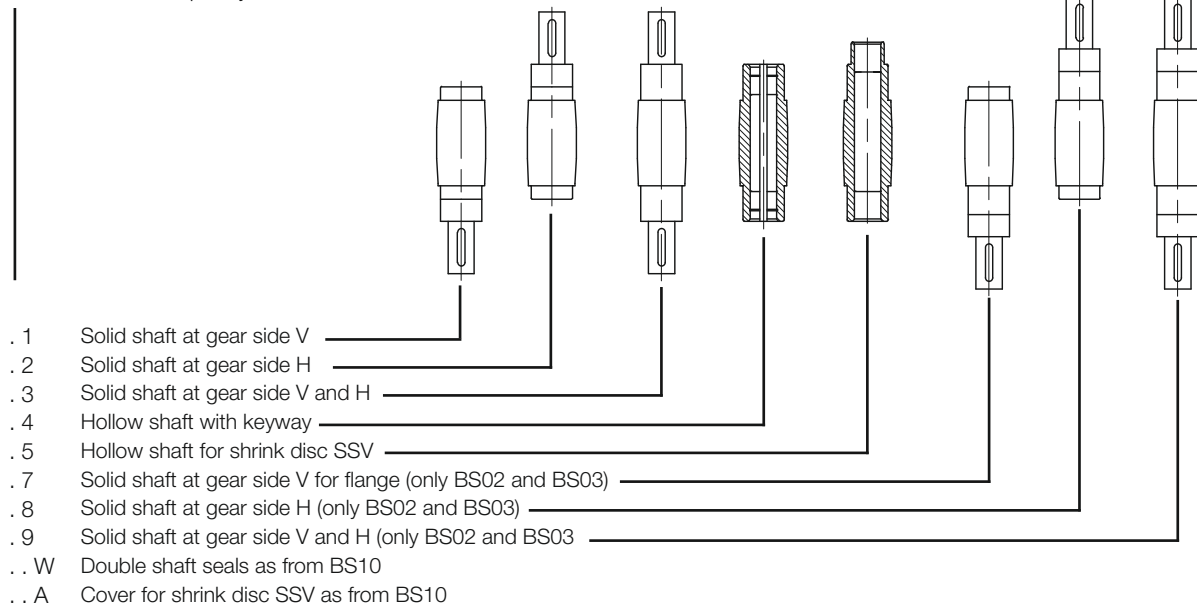


Type Designations

BS-series worm-geared motor



- 1 . U — Foot with clearance holes, bottom
- 1 . L — Foot with clearance holes, left
- 1 . O — Foot with clearance holes, top
- 2 . V — small A-flange with clearance holes , front
- 3 . V — Standard A-flange with clearance holes, front
- 4 . V — large A-flange with clearance holes, front
- .. H — A-flange, rear
- .. VH — A-flange, front and rear
- 5 . V — Torque arm at front
- 5 . VL — Torque arm, front to left
- 5 . VO — Torque arm, front to top
- 5 . VU — Torque arm, front to bottom
- 5 . HL — Torque arm, rear to left
- 5 . HO — Torque arm, rear to top
- 5 . HU — Torque arm, rear to bottom
- 6 . U — Foot with threaded holes, bottom
- 6 . L — Foot with threaded holes, left
- 6 . O — Foot with threaded holes, top
- 7 . V — C-flange with threaded holes, front
- 7 . H — C-flange with threaded holes, rear
- 7 . VH — C-flange with threaded holes, front and rear
- 8 . — Completely machined

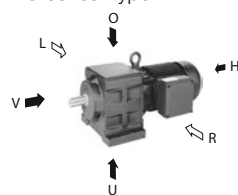


Type Designations

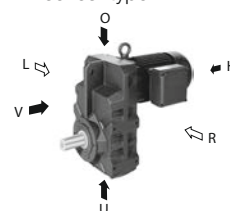
Versions and options

BG and BF series

BG series: type H4



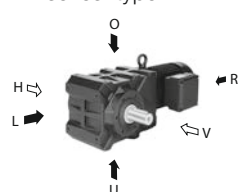
BF series: type H4



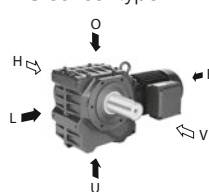
- V = Front
The side of the gear unit facing away from the motor or the source of motive power
- H = Rear
The side of the gear unit facing toward the motor or the source of motive power
- L = Left
The left side of the gear unit as viewed from the output shaft side of type B3 for the BG series or type H4 for the BF series
- R = Right
The right side of the gear unit as viewed from the output shaft side of type B3 for the BG series or type H4 for the BF series

BK and BS series

BK series: type H1



BS series: type H1



- V = Front
The side of the gear unit facing toward the viewer looking toward the type H1 unit
- H = Rear
The side of the gear unit facing away from the viewer looking toward the type H1 unit
- L = Left
The left side of the gear unit as viewed from the output shaft side of type H1, or the torque brace oriented to the left
- O = Top
The top side of the gear unit as viewed from the output shaft side of type H1, or the torque brace oriented upwards
- U = Bottom
The bottom side of the gear unit as viewed from the output shaft side of type H1, or the torque brace oriented downwards

	Gear										/	Motor										/	Brake										
	BK	50	Z	-	1	1	U	W	/	S..	09L	A	4	-	TF	-	S	/	ES	010	A	9	HN	/	C2								
Bauer bevel gears																																	
Gear size 50																																	
With pre-stage																																	
Separates gear type from gear design																																	
Gear housing: foot with clearance holes																																	
Output shaft at front																																	
Foot with clearance holes at bottom																																	
Double shaft seal																																	
End of gear part, start of motor part																																	
Permanentmagnet synchronous motor (PMSM)																																	
Motor size																																	
State of construction of motor																																	
Number of winding poles																																	
Separates motor type from motor supplements																																	
Motor protection: thermistors for thermal class F																																	
Separation between motor supplements																																	
Standard rectifier for brake, in motor terminal box																																	
End of motor, start of brake																																	
Single-disc brake																																	
Brake size																																	
State of construction of brake																																	
Configured braking torque																																	
Manual release, non-lockable																																	
End of supplement, start of total design																																	
Unit with CORO2 corrosion protection																																	

Permanentmagnet synchronous motor (PMSM)	S	=	Permanentmagnet synchronous motor (PMSM)	
	. A	=	Aseptic motor (germ-free drive)	
	. N	=	Motor without gear unit; foot-mount version	
	. NF	=	Motor without gear unit; flange-mount version	
	. U	=	Unventilated (no forced ventilation)	
Motor protection	TB	=	Thermistor 140°	
	TF	=	Thermistor 160°	
	TH	=	Thermistor 180°	
	TEB	=	Thermistor warning/shutdown 120°/140°	
	TBF	=	Thermistor warning/shutdown 140°/160°	
	TFH	=	Thermistor warning/shutdown 160°/180°	
	TOB	=	Thermostatic switch, NC 140°	
	TOF	=	Thermostatic switch, NC 160°	
	TOH	=	Thermostatic switch, NC 180°	
	TSB	=	Thermostatic switch, NO 125°	
	TSF	=	Thermostatic switch, NO 160°	
	TSH	=	Thermostatic switch, NO 180°	
	TX	=	Other	
Brake rectifier in motor terminal box	S	=	Standard rectifier	SG
	E	=	Special rectifier	ESG
	M	=	Special rectifier	MSG
Plug connector	ST	=	Harting (other)	
Heavy-duty fan	SL			
Protective cover	D			
CleanDrive	CD	=	Aseptic drive with cable	

Type Designations

Supplement types

3

	Gear								/	Motor								/	Brake						
	BK	50	Z	-	1	1	U	W	/	S..	09L	A	4	-	TF	-	S	/	ES	010	A	9	HN	/	C2
Bauer bevel gears																									
Gear size 50																									
With pre-stage																									
Separates gear type from gear design																									
Gear housing: foot with clearance holes																									
Output shaft at front																									
Foot with clearance holes at bottom																									
Double shaft seal																									
End of gear part, start of motor part																									
Permanentmagnet synchronous motor (PMSM)																									
Motor size																									
State of construction of motor																									
Number of winding poles																									
Separates motor type from motor supplements																									
Motor protection: thermistors for thermal class F																									
Separation between motor supplements																									
Standard rectifier for brake, in motor terminal box																									
End of motor, start of brake																									
Single-disc brake																									
Brake size																									
State of construction of brake																									
Configured braking torque																									
Manual release, non-lockable																									
End of supplement, start of total design																									
Unit with CORO2 corrosion protection																									

Brake

E	=	Single-disc brake
ES	=	Single-disc holding brake
EH	=	Single-disc holding brake in heavy duty
ZS	=	Two-disc holding brake
ESX	=	Single-disc service brake
EHX	=	Single-disc service brake in heavy duty version
ZSX	=	Two-disc service brake
... 010	=	Brake size
... .. A	=	Construction state
... .. 9	=	Code for configured braking torque
... .. . HN	=	Manual release (not lockable)
... .. . HA	=	Manual release (lockable)

Digital and analogue encoder

G

Second shaft end

ZW	=	With key
ZV	=	With square shaft

Forced ventilation

FV

Overall design

UL	=	US version
C1	=	Coro1 corrosion protection
C2	=	Coro2 corrosion protection
C3	=	Coro3 corrosion protection
C4	=	Coro4 corrosion protection
C5I	=	Coro5 corrosion protection
C5M	=	Coro5 corrosion protection
IM2	=	Protection against sea or brackish water
SP	=	Non-catalogue version