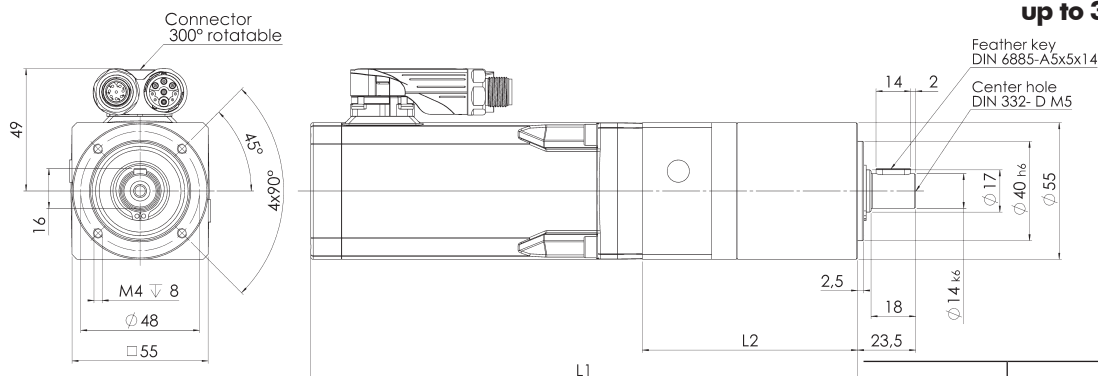


HBR 26 - GPK 55

Geared Synchronous Servo Motors with permanent magnetic field

Motor series HBR 26
with linear hall sensor system
with or without parking brake

**Planetary gear series GPK 55
up to 30 Nm peak torque**



Type	Gear Ratio	Dimension	
		L1 *) **)	L2 **)
HBR2630-GPK55	4 :1 - 9:1(1-stage)	191	87
HBR2630-GPK55	16 :1 - 49:1(2-stage)	210	106
HBR2630-GPK55	64 :1 - 196:1(3-stage)	229	125
HBR2660-GPK55	4 :1 - 7:1(1-stage)	221	87
HBR2660-GPK55	16 :1 - 49:1(2-stage)	240	106
HBR2660-GPK55	64 :1 - 196:1(3-stage)	259	125

*) Designs with parking brake respectively 30 mm longer.
**) Shorter designs with teathed motorshaft on request.

type	HBR 26 - GPK 55	
series	-	
operation acc. to standards VDE 0530	S1	
isolation acc. to standards VDE 0530	F	
protection acc. to standards VDE 0530	IP 54	
kind of connection	flange connector	
rotating direction	reversible	
bearing (motor and gear box)	ball bearing	
gear box	not self-locking	
parking brake B 7.02:		
nominal voltage	V	24
nominal current	A	0,5
static break torque	Nm	2

for detailed motor data please refer to data sheet HBR 26

Motor design:

The Synchronous Servo Motors of series HBR 26 are fitted with a 3-phase concentrated stator-winding system. The 6-pole rotor-magnet system is made of plastic-bonded Neodymium Iron Boron ring magnets.

The motors have a sinusoidal Back EMF.

The position information of the rotor will be generated using the integrated linear hall sensor system with 12Bit resolution and pure digital interface (BiSS).

To avoid thermal overload a PTC resistor is embedded in the stator winding.

All geared motors are also available with integrated parking brake.

Special designs on request.

Gearbox design:

The planetary gear GPK 55 splits the torque to be transmitted into three symmetrical parts. In conjunction with the one-piece gear housing and with the combination of output bearing and centring flange it leads to a very compact design.

The connection to the motor shaft is done via a clamping hub and offers easy possibilities of interchanging.

All toothing parts are made of heat-treated high-strength steel.

The gearbox has a synthetic grease lifetime lubrication.

The planet wheels are equipped with needle bearings.

The output shaft is double-supported by roller bearing which leads to high axial and radial load capabilities.

Through the very robust construction the gearboxes series GPK 55 are well suited for industrial applications.

preliminary edition 06.17

HBR 26 - GPK 55

1 nominal voltage	2 nominal speed	3 nominal torque ²⁾	4 starting torque	5 nominal power ²⁾	6 nominal current ¹⁾	7 nominal current, rms	8 peak current ¹⁾	9 power gear box input	10 nominal speed gear box input	11 ratio gear box	12 efficiency gear box	load limitations gear box			16 max. backlash	17 moment of inertia gear box ³⁾	18 total weight motor + gear box	19 total weight motor + gear box + parking brake	20 F _r (allow. radial shaft load) ⁴⁾	21 F _a (allow. axial shaft load)
V	rpm	Nm	Nm	W	A	A	A	W	rpm	i	%	W	Nm	Nm	< min	kgm ²	kg	kg	N	N

HBR 2630 - GPK 55

24	1375	1,2	2,6	170	17,9	12,7	74,5	180	5500	4 :1	95	2020	14	25	25	0,00448x10 ⁻³	2,15	2,45	800	300
48		1,2		170	9,0	6,4	37,5	180												
24	786	2,1	4,6	170	17,9	12,7	74,5	180	5500	7 :1	95	1150	14	25	25	0,00368x10 ⁻³	2,15	2,45	800	300
48		2,1		170	9,0	6,4	37,5	180												
24	611	2,7	5,9	170	17,9	12,7	74,5	180	5500	9 :1	95	640	10	15	25	0,00352x10 ⁻³	2,15	2,45	800	300
48		2,7		170	9,0	6,4	37,5	180												
24	344	4,5	11	160	17,9	12,7	74,5	180	5500	16 :1	90	1010	28	30	30	0,00418x10 ⁻³	2,45	2,75	800	300
48		4,5		160	9,0	6,4	37,5	180												
24	196	7,8	18	160	17,9	12,7	74,5	180	5500	28 :1	90	575	28	30	30	0,00413x10 ⁻³	2,45	2,75	800	300
48		7,8		160	9,0	6,4	37,5	180												
24	112	14	30 ⁵⁾	160	17,9	12,7	69,5 ⁵⁾	180	5500	49 :1	90	295	25	30	30	0,00356x10 ⁻³	2,45	2,75	800	300
48		14		160	9,0	6,4	35,0 ⁵⁾	180												
24	86	17	30 ⁵⁾	150	17,9	12,7	53,5 ⁵⁾	180	5500	64 :1	85	250	28	30	35	-	2,75	3,05	800	300
48		17		150	9,0	6,4	27,0 ⁵⁾	180												
24	49	28 ⁵⁾	30 ⁵⁾	145	17,1 ⁵⁾	12,1 ⁵⁾	31,5 ⁵⁾	170	5500	112 :1	85	145	28	30	35	-	2,75	3,05	800	300
48		28 ⁵⁾		145	8,5 ⁵⁾	6,0 ⁵⁾	16,0 ⁵⁾	170												
24	28	28 ⁵⁾	30 ⁵⁾	82	10,4 ⁵⁾	7,4 ⁵⁾	19,0 ⁵⁾	96	5500	196 :1	85	80	28	30	35	-	2,75	3,05	800	300
48		28 ⁵⁾		82	5,2 ⁵⁾	3,7 ⁵⁾	9,5 ⁵⁾	96												

HBR 2660 - GPK 55

48	1250	2,3	5,3	305	13,1	9,3	57,0	320	5000	4 :1	95	1830	14	25	25	0,00448x10 ⁻³	2,50	2,80	800	300
48	714	4,1	9,2	305	13,1	9,3	57,0	320	5000	7 :1	95	1050	14	25	25	0,00368x10 ⁻³	2,50	2,80	800	300
48	556	5,2	12	305	13,1	9,3	57,0	320	5000	9 :1	95	580	10	15	25	0,00352x10 ⁻³	2,50	2,80	800	300
48	313	8,8	21	290	13,1	9,3	57,0	320	5000	16 :1	90	915	28	30	30	0,00418x10 ⁻³	2,80	3,10	800	300
48	179	15	30 ⁵⁾	290	13,1	9,3	46,5 ⁵⁾	320	5000	28 :1	90	525	28	30	30	0,00413x10 ⁻³	2,80	3,10	800	300
48	102	25 ⁵⁾	30 ⁵⁾	265	12,2 ⁵⁾	8,6 ⁵⁾	27,0 ⁵⁾	295	5000	49 :1	90	265	25	30	30	0,00356x10 ⁻³	2,80	3,10	800	300
48	78	28 ⁵⁾	30 ⁵⁾	230	11,1 ⁵⁾	7,9 ⁵⁾	21,0 ⁵⁾	270	5000	64 :1	85	230	28	30	35	-	3,10	3,40	800	300
48	45	28 ⁵⁾	30 ⁵⁾	130	6,6 ⁵⁾	4,7 ⁵⁾	12,5 ⁵⁾	155	5000	112 :1	85	130	28	30	35	-	3,10	3,40	800	300
48	26	28 ⁵⁾	30 ⁵⁾	75	4,0 ⁵⁾	2,9 ⁵⁾	7,5 ⁵⁾	88	5000	196 :1	85	75	28	30	35	-	3,10	3,40	800	300

Tolerances +/- 10 %.

Columns 3 and 12

Values are valid at operating temperature after run-in period.

Columns 3, 6 and 7

To avoid gearbox overload, it is necessary to limit the motor torque by adjusting the motor current in the servo controller (at higher gear ratios).

Columns 4 and 8

Values are valid assuming that the drive is loaded with peak torque. For higher ratios it is necessary to limit the peak current in the servo controller.

Columns 13, 14 and 15

To avoid gearbox overload do not exceed the mentioned values. For oscillating operation the mentioned limitations must be multiplied by 0,75.

1) Sinusoidal-peak

2) Values are for motor-assembling on a locating face of aluminium of at least 0,15 m² at a thickness of 10 mm or similar metal face.

3) Values are reduced to motor shaft.

4) Middle of the shaft-extension.

5) Motor current must be limited in the servo controller to avoid excess of the mentioned value.