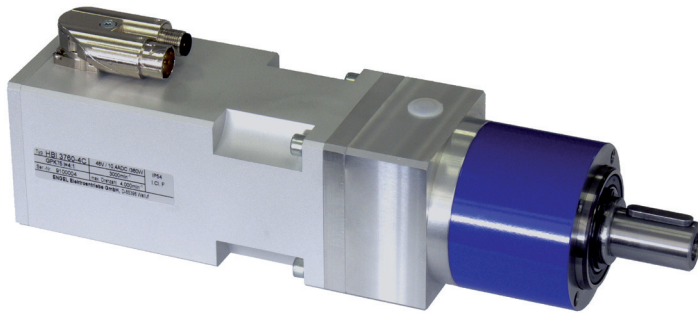


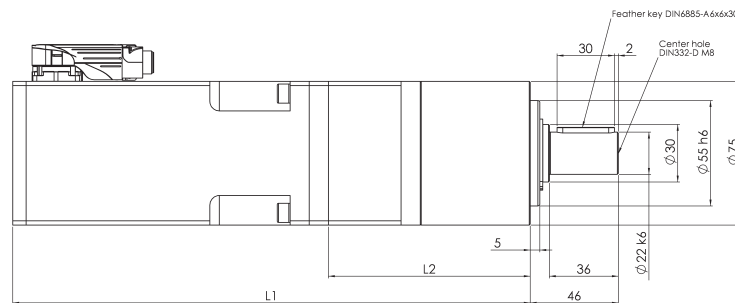
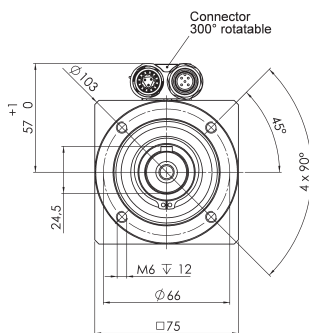
HBI 37 - GPK 75



Integrated Synchronous Servo Drive with planetary gear

positioning capability with linear hall sensor system with or without parking brake

Planetary gear series GPK 75 up to 110 Nm peak torque



Type	Gear Ratio	Dimension	
		L1 *) **)	L2 **)
HBI3760-GPK75	4 :1 - 9:1(1-stage)	272	107
HBI3760-GPK75	16 :1 - 49:1(1-stage)	294	129
HBI3790-GPK75	4 :1 - 9:1(1-stage)	302	107
HBI3790-GPK75	16 :1 - 49:1(2-stage)	324	129

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

type	HBI 37 - GPK 75
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

for detailed motor data please refer to data sheet HBI 37

Motor design:

The HBI 37 - GPK 75 are composed of brushless synchronous servo motors with concentrated winding systems and integrated electronics and a flange-mounted planetary gear. These compact and powerful drives are well suited for peripheral applications in single or multi axes systems operating at 48VDC.

The HBI's are operated either by analogue/digital signals or via the CAN interface.

The rotor position is evaluated through a linear hall sensor system. The sinusoidal motor current feed leads to smooth and constant torque development.

The drive's configuration is done via RS232 and a clear and simple to use PC-Software „DserV“.

Other gear ratios and special designs on request.

Gearbox design:

The planetary gear GPK 75 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 75 are well suited for industrial applications.

HBI 37 - GPK 75

1 nominal voltage	2 nominal speed	3 nominal torque ²⁾	4 starting torque	5 nominal power ²⁾	6 nominal current ¹⁾	7 power gear box input	8 nominal speed gear box input	9 ratio gear box	10 efficiency gear box	load limitations gear box			14 max. backlash	15 moment of inertia gear box ³⁾	16 total weight motor + gear box	17 F _R (allow. radial shaft load) ⁴⁾	18 F _A (allow. axial shaft load)
VDC	rpm	Nm	Nm	W	ADC	W	rpm	i	%	W	Nm	Nm	° min	kgm ²	kg	N	N

HBI 3760 - GPK 75

48	750	4,4	6,9	345	10,4	360	3000	4 :1	95	3140	40	60	25	-	5,40	1000	700
48	429	7,6	12	345	10,4	360	3000	7 :1	95	1800	40	60	25	-	5,40	1000	700
48	333	9,8	16	345	10,4	360	3000	9 :1	95	1050	30	45	25	-	5,40	1000	700
48	188	17	28	325	10,4	360	3000	16 :1	90	1470	75	110	30	-	6,00	1000	700
48	107	29	48	325	10,4	360	3000	28 :1	90	840	75	110	30	-	6,00	1000	700
48	61	51	85	325	10,4	360	3000	49 :1	90	385	60	90	30	-	6,00	900	400

HBI 3790 - GPK 75

48	750	5,9	9,3	465	13,5	485	3000	4 :1	95	3140	40	60	25	-	6,10	1000	700
48	429	10	16	465	13,5	485	3000	7 :1	95	1800	40	60	25	-	6,10	1000	700
48	333	13	21	465	13,5	485	3000	9 :1	95	1050	30	45	25	-	6,10	1000	700
48	188	22	37	440	13,5	485	3000	16 :1	90	1470	75	110	30	-	6,70	1000	700
48	107	39	65	440	13,5	485	3000	28 :1	90	840	75	110	30	-	6,70	1000	700
48	61	60 ⁵⁾	90 ⁵⁾	385	10,0 ⁵⁾	430	3000	49 :1	90	385	60	90	30	-	6,70	900	400

Tolerances +/- 10 %.

Columns 3 and 10

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

Columns 3 and 6

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

Columns 4

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 integrated electronics.

Columns 11, 12 and 13

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

¹⁾ input DC-current

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 integrated electronics to avoid excess of the mentioned value.