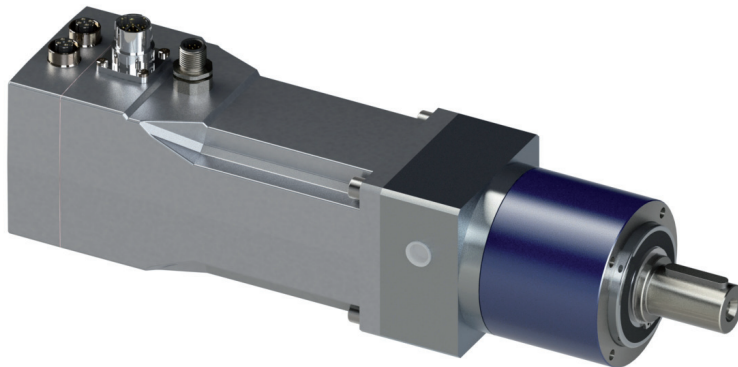


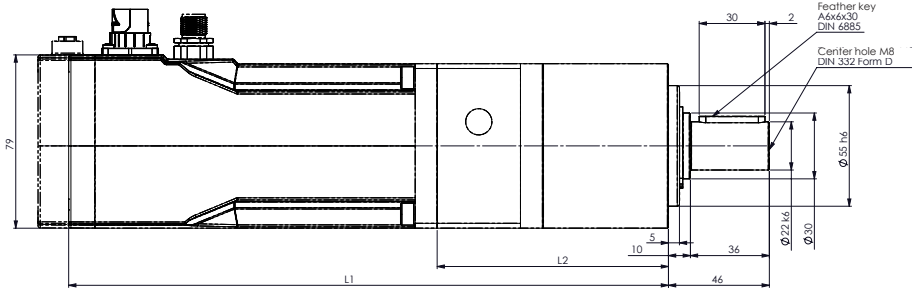
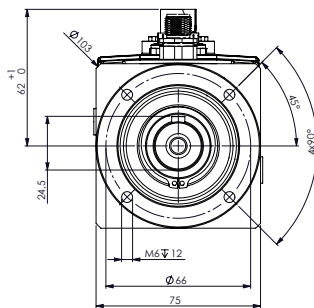
HFI 37 - GPK 75



Integrated Synchronous Servo Drive with planetary gear

positioning capability
various field bus systems
functional safety STO
with or without parking brake

Planetary gear series GPK 75 up to 110 Nm peak torque



- *1) Designs with parking brake respectively 30 mm longer.
Designs with fieldbus module respectively 14 mm longer.
**1) Shorter designs with teathed motorshaft on request.

Type	Gear Ratio	Dimension	
		L1 *) **1)	L2 **1)
HFI3760-GPK75	4 :1 - 9:1(1-stage)	275	107
HFI3760-GPK75	16 :1 - 49:1(1-stage)	297	129
HFI3790-GPK75	4 :1 - 9:1(1-stage)	305	107
HFI3790-GPK75	16 :1 - 49:1(2-stage)	327	129

type	HFI 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 HFI 37

Motor design:

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

The HFI's are operated either by analogue/digital signals or via the CAN interface. By means of an optional fieldbus module, the devices can be integrated into common, Ethernet-based fieldbuses.

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

Optionally the drives are available with functional safety „STO“ according to Performance-Level [e], cat. 3; SIL-3.

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.

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HFI 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

HFI 3760 - GPK 75

48	750	5,3	9,0	420	10,7	440	3000	4 :1	95	3140	40	60	25	-	5,35	1000	700
48	429	9,3	16	420	10,7	440	3000	7 :1	95	1800	40	60	25	-	5,35	1000	700
48	333	12	20	420	10,7	440	3000	9 :1	95	1050	30	45	25	-	5,35	1000	700
48	188	20	36	395	10,7	440	3000	16 :1	90	1470	75	110	30	-	5,95	1000	700
48	107	35	63	395	10,7	440	3000	28 :1	90	840	75	110	30	-	5,95	1000	700
48	61	60 ⁵⁾	90 ⁵⁾	385	10,4 ⁵⁾	430	3000	49 :1	90	385	60	90	30	-	5,95	900	400

HFI 3790 - GPK 75

48	750	6,8	12	535	13,4	565	3000	4 :1	95	3140	40	60	25	-	6,20	1000	700
48	429	12	21	535	13,4	565	3000	7 :1	95	1800	40	60	25	-	6,20	1000	700
48	333	15	27	535	13,4	565	3000	9 :1	95	1050	30	45	25	-	6,20	1000	700
48	188	26	48	510	13,4	565	3000	16 :1	90	1470	75	110	30	-	6,80	1000	700
48	107	45	84	510	13,4	565	3000	28 :1	90	840	75	110	30	-	6,80	1000	700
48	61	60 ⁵⁾	90 ⁵⁾	385	10,1 ⁵⁾	430	3000	49 :1	90	385	60	90	30	-	6,80	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.