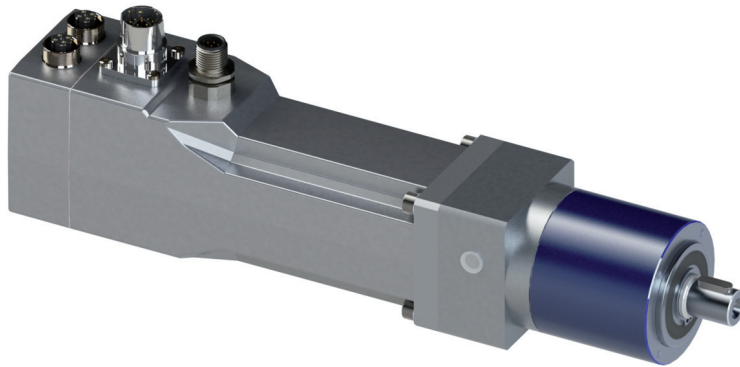


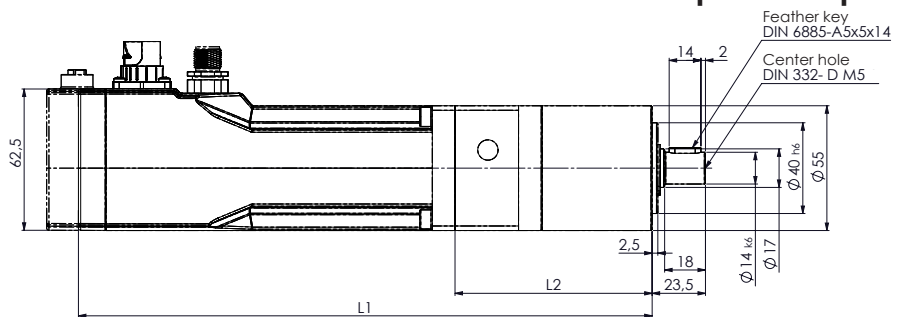
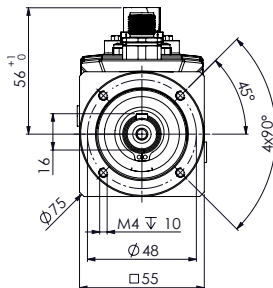
HFI 26 - GPK 55



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 55 up to 50 Nm peak torque



Type	Gear Ratio	Dimension	
		L1 *) **)	L2 **)
HFI2630-GPK55	4 : 1 - 9:1(1-stage)	223	87
HFI2630-GPK55	16 : 1 - 49:1(1-stage)	242	106
HFI2660-GPK55	4 : 1 - 9:1(1-stage)	253	87
HFI2660-GPK55	16 : 1 - 49:1(2-stage)	272	106

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

type	HFI 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

for detailed motor data please refer to data sheet HFI 26

Motor design:

The HFI 26 - GPK 55 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 selective 24VDC or 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 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.

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HFI 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 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 2630 - GPK 55

24 48	1000	1,4	2,3	145	8,8 4,4	150	4000	4 :1	95	1470	14	25	25	0,004477x10 ⁻³	2,30	800	300
24 48	571	2,4	3,9	145	8,8 4,4	150	4000	7 :1	95	840	14	25	25	0,003677x10 ⁻³	2,30	800	300
24 48	444	3,1	5,1	145	8,8 4,4	150	4000	9 :1	95	465	10	15	25	0,003524x10 ⁻³	2,30	800	300
24 48	250	5,2	9,0	135	8,8 4,4	150	4000	16 :1	90	735	28	50	30	0,004176x10 ⁻³	2,60	800	300
24 48	143	9,1	16	135	8,8 4,4	150	4000	28 :1	90	420	28	50	30	0,004126x10 ⁻³	2,60	800	300
24 48	82	16	28	135	8,8 4,4	150	4000	49 :1	90	215	25	50	30	0,003562x10 ⁻³	2,60	800	300

HFI 2660 - GPK 55

24 48	750	2,3	3,9	180	10,6 5,3	190	3000	4 :1	95	1100	14	25	25	0,004477x10 ⁻³	2,70	800	300
24 48	429	4,1	6,8	180	10,6 5,3	190	3000	7 :1	95	630	14	25	25	0,003677x10 ⁻³	2,70	800	300
24 48	333	5,2	8,8	180	10,6 5,3	190	3000	9 :1	95	350	10	15	25	0,003524x10 ⁻³	2,70	800	300
24 48	188	8,8	16	170	10,6 5,3	190	3000	16 :1	90	550	28	50	30	0,004176x10 ⁻³	3,00	800	300
24 48	107	15	27	170	10,6 5,3	190	3000	28 :1	90	315	28	50	30	0,004126x10 ⁻³	3,00	800	300
24 48	61	25 ⁵⁾	48	160	9,9 ⁵⁾ 4,9 ⁵⁾	180	3000	49 :1	90	160	25	50	30	0,003562x10 ⁻³	3,00	800	300

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.