

Drum motor

HERKULES 60



The drum motors of the product range HERKULES 60 come with very powerful, yet efficient, synchronous motors, which have been designed using the very latest calculation methods for the application in question. The motors are equipped with planetary gears, which are dimensioned for compactness and output density. The planetary wheels of each gearing stage are fitted with their own bearing. This guarantees the highest level of quiet operation and a long working life. The drum motors can be adapted to the respective application with regard to their connection dimensions and mechanical/electrical interfaces

Characteristics

Applications

- Transport of pallets with high switching frequency
- Eccentric drive, lifting and lowering of pallets
- Belt conveyors
- Chain conveyors

Features

- Synchronous technology, outstanding energy efficiency
- Maintenance-free due to lifetime-lubricated planetary gearboxes
- Integrated thermal protection
- Reversible



Technical data

Technical data	
Motor type	Synchronous motor
Insulation class of the motor winding	Class F
Voltage	400VAC
Protection type	IP54 (on request IP66)
Thermal protection	PTC
Brake	Spring tension 0.36Nm, 24VDC
Noise level	< 63dB (depending on the application)
Length of motor cable	500 / 1500 / 3000*
Clamping length	300 ... 1200*
Ambient temperature	0 to 40
Version A side	Ø20/SW14x12.5mm
Version B side	Smooth Ø20/SW14x12.5mm Double chain wheel 1/2" z=13
Bearing flange A-side and B-side	Galvanised steel / stainless steel
Pipe wall thickness	Ø 60 x 3
Pipe material	Galvanised steel / stainless steel
Pipe sleeve	PVC hose, PU hose, rubber coating
Pipe	straight or crowned
Maximum load	Depending on pipe length
Weight	9kg



*Dimensions and design can be adapted according to the customer.

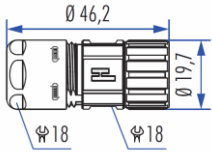

Options:

- Rubber coating for bands
- Electromagnetic brakes
- Double rotor brake for increased standstill torque
- Variety of encoder systems for individual connection of drive controllers

Electrical connection drum motor HERKULES 60:

Pin assignment of magnetic encoder (motor and encoder cable separated)

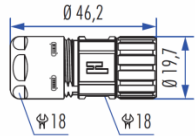
Signal	Pin	Description	Wire colour
5V	2	5V IN	Green / white
GND	1	GND Encoder	Green / brown
A	8	Track A positive	Red
B	6	Track B positive	Grey
I	4	Track I positive	Yellow
/A	7	Track A Negative	Black
/B	5	Track B Negative	Pink
/I	3	Track I Negative	Purple
PWM	10	Track PWM positive	Brown
/PWM	9	Track PWM Negative	Green
BRK +	A	Brake +	Blue
BRK -	B	Brake -	White

Cable specification: Construction: (4 x 2 x 0.14 + 4 x 0.25mm ²) shielded Material: PUR, black Nominal voltage: 300V Outer diameter: 6.1 +/- 0.2mm Temperature: unmoved: -50°C ... +80°C moved: -40°C ... +80°C Certification: CE, UL Halogen free: Yes	Connector specification: Type: Circular connectors M16 Gender: Connector, pin Number of pins: 12+3 Manufacturer: Hummel
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If the motor and encoder cable are separated, the following specification applies to the motor

Signal	Pin	Description	Wire colour
U	A	Motor phase U	Black 1
V	B	Motor phase V	Black 2
W	C	Motor phase W	Black 3
PE	GND	Earth	Green / yellow
T1	1	PTC +	White
T2	2	PTC -	Black



Cable specification: Construction: (4G0.75 + (2 x 0.34)) mm ² shielded Material: PUR, orange (DESINA) Nominal voltage: 1000V Outer diameter: 8.0 +/- 0.2mm Temperature: unremoved: -50°C ... +80°C moved: - Certification: CE, UL Halogen free: Yes	Connector specification: Type: Circular connectors M16 Gender: Connector, pin Number of pins: 4 + 3 + PE Manufacturer: Hummel
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On request, the connection cables can be supplied with open ends or with pre-assembled connection plugs.

Mechanical data Drum motor supply voltage 400VAC

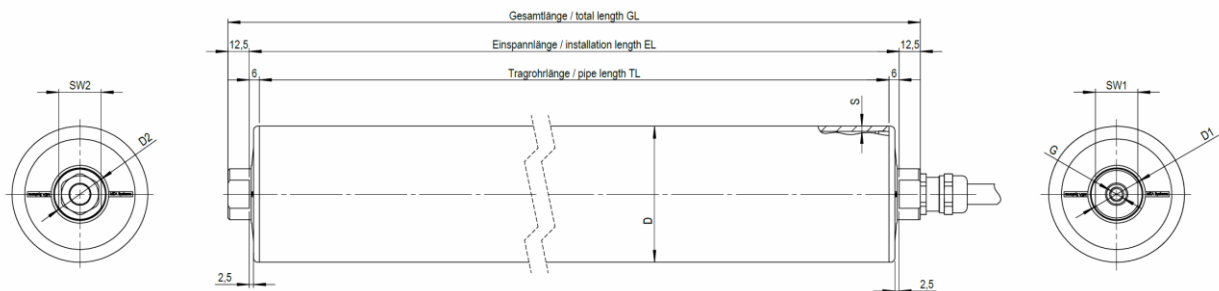
Type	Output [kW]	V [m/s]	i	M_n [Nm]	M_{max} [Nm]	M_o [Nm]	F_n [N]	F_{max} [N]
HERKULES 60-93N	0.41	0 ... 0.26	49	43.7	55.0	47.3	1458	1833
		0 ... 0.36	35	31.2	55.0	33.8	1041	1833
		0 ... 0.5	25	22.3	55.0	24.2	744	1833
		0 ... 0.63	20	17.8	52.0	19.3	595	1733
		0 ... 0.79	16	14.3	48.6	15.5	476	1619
		0 ... 1.05	12	10.7	36.4	11.6	357	1214
		0 ... 1.8	7	6.4	21.7	6.9	213	724
		0 ... 3.14	4	3.6	12.4	3.9	122	414

Electrical data synchronous motor 400VAC

Type	HERKULES 60-93N	
Motor data		
Motor type		Pegasos 53E40
Nominal voltage	VDC	565
Nominal current	A	1
Nominal frequency	Hz	200
Nominal torque	Nm	0.97
Maximum torque	Nm	3.3
Nominal speed	rpm	4000
Permissible peak current	A	3.4
Holding torque	Nm	1.03
Rated capacity	W	410
Torque constant	Nm/A	0.985
Phase resistance	Ω	11.28
Connection inductance L_q	mH	18.27
Connection inductance L_d	mH	13.61
Winding connection		Star
Number of pole pairs		3

Dimensions

Smooth version



Double chain wheel version

