

DRUM MOTOR 113LP

113.5Ø 0.06kW - 0.37kW, with planetary gearbox
in polymer or polymer / steel combination for non-continuous operation

Product description

This Pulley is the ideal operator for light and medium conveyors, for non-continuous use.

Characteristics

- 3-phase or 1-phase AC induction motor
- Single supply voltage
- on request: 3-phase dual supply voltage (possible delta/star connection)
- Integral motor protection
- Gearbox planetary-type polymer or polymer / steel combination
- Low noise operation
- Light and distributed weight
- Maintenance free
- Reversible operation

Applications

- Conveyors for light loads, non continuous use
- Recycling bottles
- Packaging equipment
- X-ray inspection systems at airports
- Pharmaceutical industry
- Food processing
- Cash desks in supermarkets
- Dry, Damp and frequent wash down applications

TECHNICAL DATA

Motor Data

Type of Motor	Asynchronous squirrel-cage, IEC 34 (VDE 0530)
Insulation class of motor windings	Class F, IEC 34 (VDE 0530)
Voltage	230 or 400 V ± 5% (IEC 34/38)
Frequency	50/60 Hz
Internal shaft sealing system	Double-lipped of nitrile rubber, NBR
External shaft sealing system	Deflection seal nitrile rubber, NBR
Protection rate	IP66
Thermal protection	Bimetallic Contact
Ambient temperature, 3-phase motor	+5 to +40 °C
Ambient temperature, 1-phase motor	+10 to +40 °C
General technical data	
Max. Roller length (RL)	1212 mm

Drum motor with RL length greater than 706 mm have reinforced shaft.

All data and values declared in the catalogue refer to operation with a frequency of 50 Hz.



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Materials

The following drum motor components are available in different versions, as shown in the below chart, with further options for the material type as indicated.

Components	Version	Material			
		Standard Aluminium	Option		
			Steel	Stainless Steel	Brass /Nickel
Shell	Crowned	Std	✓	✓	
	Cylindrical	✓	✓	✓	
	Special crowns with grooves	✓	✓	✓	
End housing	Standard	Std		✓	
Shaft cap	Standard	Std			
	With cable protection			✓	✓
Electrical connection	Straight or 90° cable connector			✓	✓
	Elbow connector	✓		✓	

Please contact Rulmeca for further versions.

Options

- Rubber lagging for standard belts
- Dynamic balancing
- 3-phase dual supply voltage (possible delta/star connection)
- Oil for Food (EU, FDA and USDA)
- Oil for low temperatures
- Non-horizontal mounting (more than $\pm 5^\circ$)
- For special versions, please contact RULMECA.

Accessories

- Mounting brackets
- Idler Pulleys
- Rollers for conveyors

Cable Specifications

Cable options available:

- Standard, screened
- Standard, unscreened
- Halogen-free, screened
- Halogen-free, unscreened

Available lengths: 1,9 m (other lengths available on request).

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TECHNICAL DATA DRUM MOTOR 113LP - 3PHASE - 50HZ - STANDARD RANGE

P_N [kW]	np (rpm)	I_f [A]	gs	i	V_A [m/s]	V_N [m/s]	n_A [min ⁻¹]	M_N [Nm]	F_T [N]	TE [N]	RL [mm]			
0.06	4	0.9/0.4	4	267.7	0.03	0.03	5.1	75	1000	2000	min 256 max 1212			
				204.5	0.03	0.04	5.1	68	1000					
				120.2	0.05	0.06	8.4	56	1000					
			3	92.9	0.07	0.08	11.8	43	750					
				63.4	0.10	0.12	16.8	28	500					
				48.4	0.13	0.15	21.9	23	400					
				37.3	0.17	0.20	28.6	17	300					
				28.6	0.22	0.26	37.0	13	231					
				24.9	0.26	0.31	43.8	11	194					
				21.9	0.31	0.36	52.2	10	167					
			2	14.9	0.43	0.50	72.4	7	120			1500		
				11.3	0.59	0.69	99.3	5	87					
0.12	4	1.2/0.7	3	63.4	0.10	0.12	16.8	57	1000	2000	min 256 max 1212			
				48.4	0.13	0.15	21.9	45	800					
				37.3	0.17	0.20	28.6	34	600					
				28.6	0.22	0.26	37.0	26	462					
				24.9	0.26	0.31	43.8	22	387					
			2	21.9	0.31	0.36	52.2	19	333					
				14.9	0.43	0.50	72.4	14	240			1500		
				11.3	0.59	0.59	99.3	10	174					
				9.9	0.69	0.81	116.2	9	148					
				37.3	0.17	0.20	28.6	51	900				2000	min 256 max 1212
28.6	0.22	0.26	37.0	39	692									
24.9	0.26	0.31	43.8	33	581									
21.9	0.31	0.36	52.2	29	500									
2	14.9	0.43	0.50	72.4	21	360								
	11.3	0.59	0.69	99.3	15	261	1500							
	9.9	0.69	0.81	116.2	13	222								
	8.7	0.77	0.91	129.6	11	198								
	7.5	0.89	1.05	149.8	10	171								
0.25	4	1.8/1.2	3	28.6	0.22	0.26		37.0	55	962	2000	min 276 max 1212		
				24.9	0.26	0.31	43.8	46	806					
				21.9	0.31	0.36	52.2	39	694					
			2	14.9	0.43	0.50	72.4	29	500					
				11.3	0.59	0.69	99.3	21	362	1500				
				9.9	0.69	0.81	116.2	18	309					
				8.7	0.77	0.91	129.6	16	275					
				7.5	0.89	1.05	149.8	14	238					
				3	21.9	0.31	0.36	52.2	58				1028	2000
					14.9	0.43	0.50	72.4	42				740	
11.3	0.59	0.69	99.3		31	536	1500							
9.9	0.69	0.81	116.2		26	457								
8.7	0.77	0.91	129.6		23	407								
7.5	0.89	1.05	149.8	20	352									

P_N Nominal mechanical power
 np Number of poles
 I_f Amperage (230/400V) at full load
 gs Gear stages
 i Gear ratio
 V_A Theoretical actual belt (tangential) speed at full load*

V_N Nominal belt (tangential) speed
 n_A Revolutions of shell at full load*
 M_N Nominal Torque at full load
 F_T Belt pull (tangential force) on shell at full load*
 TE Maximum allowable belt tension (radial load)

RL Reference length
 * Valid for unlagged shells/ values can deviate at partly or no load conditions

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113.5Ø 0.06kW - 0.37kW, with planetary gearbox

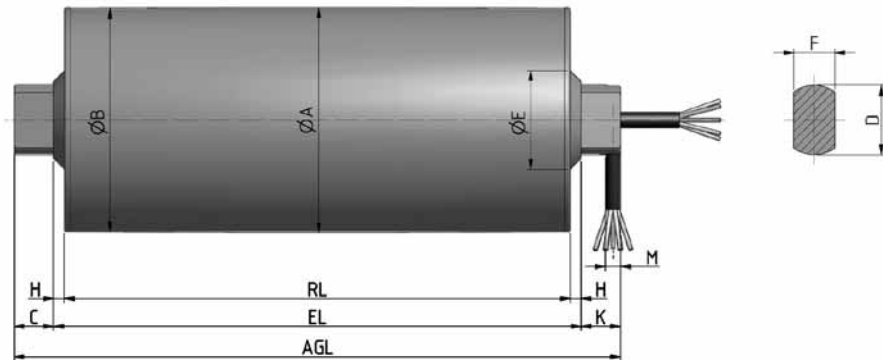
in polymer or polymer / steel combination for non-continuous operation

TECHNICAL DATA DRUM MOTOR 113LP - 1PHASE - 50HZ - STANDARD RANGE

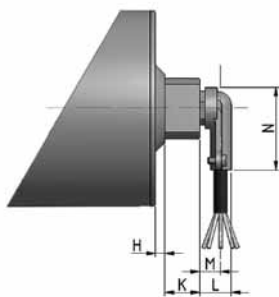
P_N [kW]	np (rpm)	I_T [A]	gs	i	V_A [m/s]	V_N [m/s]	n_A [min ⁻¹]	M_N [Nm]	F_T [N]	TE [N]	RL [mm]					
0.06	4	0.7	4	267.7	0.03	0.03	6.8	75	1000	2000	min 256 max 1212					
				204.5	0.03	0.04	6.8	68	1000							
				120.2	0.05	0.06	11.3	56	1000							
				92.9	0.07	0.08	15.8	43	750							
			3	63.4	0.10	0.12	22.6	28	500							
				48.4	0.13	0.15	29.4	23	400							
				37.3	0.17	0.20	38.4	17	300							
				28.6	0.22	0.26	49.7	13	231							
				24.9	0.26	0.31	58.8	11	194							
				21.9	0.31	0.36	70.1	10	167							
				2	14.9	0.43	0.50	97.2	7			120				
			11.3		0.59	0.69	133.4	5	87							
			0.12	4	2.5/0.9	3	63.4	0.10	0.12			16.8	57	1000	2000	min 256 max 1212
							48.4	0.13	0.15			21.9	45	800		
37.3	0.17	0.20					28.6	34	600							
28.6	0.22	0.26					37.0	26	462							
24.9	0.26	0.31					43.8	22	387							
21.9	0.31	0.36					52.2	19	333							
2	14.9	0.43				0.50	72.4	14	240							
	11.3	0.59				0.59	99.3	10	174							
	9.9	0.69				0.81	116.2	9	148							
	0.15	4				2.7/1.5	3	63.4	0.10	0.12	16.8	71	1000	2000		
48.4			0.13	0.15	21.9			56	1000							
37.3			0.17	0.20	28.6			43	750							
28.6			0.22	0.26	37.0			33	578							
24.9			0.26	0.31	43.8			28	484							
21.9			0.31	0.36	52.2			24	416							
2			14.9	0.43	0.50		72.4	18	300							
			11.3	0.59	0.59		99.3	13	218							
			9.9	0.69	0.81		116.2	11	185							
			0.18	4	2.9/2.3		3	37.3	0.17	0.20	28.6	51	900		2000	min 276 max 1212
28.6	0.22	0.26				37.0		39	692							
24.9	0.26	0.31				43.8		33	581							
21.9	0.31	0.36				52.2		29	500							
2	14.9	0.43				0.50	72.4	21	360							
	11.3	0.59				0.69	99.3	15	261							
	9.9	0.69				0.81	116.2	13	222							
	8.7	0.77				0.91	129.6	11	198							
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	0.25	4				4.6/1.9	3	28.6	0.22	0.26	37.0	55	962	2000		
24.9			0.26	0.31	43.8			46	806							
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2			14.9	0.43	0.50		72.4	29	500							
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			9.9	0.69	0.81		116.2	18	309							
			8.7	0.77	0.91		129.6	16	275							
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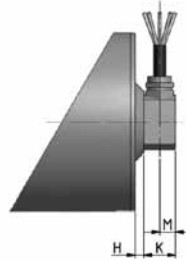
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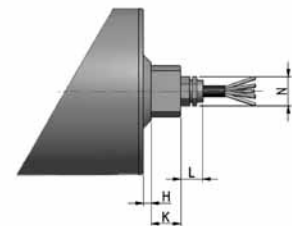
Drum motor Standard Version



Elbow connector in aluminium



Cable connection 90°



Straight connector

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Type/Option	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	L mm	M mm	N mm	Q mm	T mm
Drum Motor Standard EL=11 Version	113,6	112,6	20	35	50	21		5,5	20		8			
Drum Motor Alternative EL=6 Version	113,6	112,6	20	35	50	21		3	20		8			
Elbow connector in aluminium									20	18	12	48		
Cable connection 90°									20		10			
Straight Connector									20	15		20		

Average weights for drum motor & idler type 113LP

RL [mm]	300	350	400	450	500	550	600	650	700	750	800	+50mm up to	1200
all motors	6.8	7.2	7.5	7.9	8.2	8.6	8.9	9.3	9.6	11.0	11.4	+0.45 kg up to	14.9
idler 80LP	2.0	2.4	2.8	3.2	3.6	4.0	4.4	4.8	5.2	5.6	6.0	+0.35 kg up to	8.8

- Weights are orientative due to different shell executions and motor powers