

# Motorized Pulley 113LS

Superior tough and powerful drive for high use light and medium duty conveyors

## Product description

This Motorized Pulley has been designed specifically for applications that require a strong drive.

### Characteristics

- Salt water resistant aluminum bearing housing
- Three phase alternating current induction motor
- 3-phase dual voltage standard
- Integral motor protection
- Hardened steel helical gear type
- Low noise operation
- Maintenance free
- Lifetime lubrication
- Reversible operation
- Reinforced internal shaft for RL exceeding 800 mm

### Applications

- Heavy and frequent use Conveyors
- Conveyors for check-in at airports
- Packaging equipment
- Weighing Machines
- Metal detector
- Pharmaceutical industries
- Food processing
- Plastic or modular belt applications
- Dry, damp and wash down applications

Technical data	
<b>Motor data</b>	
Type of Motor	Asynchronous squirrel-cage, IEC 34 (VDE 0530)
Insulation class of motor windings	Class F, IEC 34 (VDE 0530)
Derated windings (20% power reduction)	On request for applications without belt
Voltage	230/400 V $\pm$ 5% (IEC 34/38) single voltage Dual voltage or special voltage on request
Frequency	50/60 Hz
Internal shaft sealing system	Double-lipped of nitrile rubber, NBR
Protection rate	IP66
Thermal protection	Bimetallic Contact
Ambient temperature, 3-phase motor	+5 to +40 °C
<b>General technical data</b>	
Max. Roller length (RL)	1200 mm

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





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### Materials

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

Components	Version	Material				
		Aluminium	Steel	Stainless Steel	Brass/Nickel	Polymer
Shell	Crowned		Std	TS8N		
	Cylindrical		Std	TS8N		
	Cylindrical + key (for sprockets)		Std	TS8N		
	Special crowns and grooves		Std	TS8N		
End housing	Standard	Std		TS8N		
	With V-grooves			TS8N		
	With O-grooves			TS8N		
Shaft	Standard			Std		
	Cross-drilled and threaded, M8			Std		
Electrical connection	Straight connector			TS8N	Std	
	Elbow connector			TS8N		Std
	Terminal box	Std		TS8N		

Please contact Rulmeca for further versions.

**TS8N Version** - End Caps in stainless steel with PTFE lip seals.

### Options

- Rubber Lagging for standard belts
- Profiled lagging for plastic modular belts
- Profiled lagging for thermoplastic belts
- Sprockets for plastic modular belts
- Backstop / Anti run-back bearing
- Electromagnetic brake
- Rectifiers
- Encoder
- Food-grade Oil (EU, FDA and USDA)
- Non-horizontal mounting (more than  $\pm 5^\circ$ )

**Note:** The combination of encoder and electromagnetic brake is not possible.

### Accessories

- Mounting brackets
- Idler Pulleys
- Rollers for conveyors
- Shaft caps
- Frequency Converters

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**Technical data for Motorized Pulley 113LS - 3-phase - 50Hz**

Rated Power [kW]	Poles n.	Gear Stages n.	Gear Ratio i	Rated speed of the shell [m/s]	Rated revolutions of the shell [min <sup>-1</sup> ]	Rated torque of Motorized pulley [Nm]	Rated tangential force [N]	Max. belt tension T1+T2 [N]	Min. length RL [mm]
0,035	12	3	42,66	0,05	8,3	38,4	679	6550	250
			36,35	0,06	9,7	32,7	579		
			31,36	0,07	11,3	28,2	499		
0,07	12	3	42,66	0,05	8,3	76,8	1358	6550	300
			36,35	0,06	9,7	65,4	1157		
			31,36	0,07	11,3	56,4	999		
0,08	8	3	42,66	0,09	15,9	45,5	806	6550	250
			42,66	0,11	20,3	44,7	792		
			36,35	0,13	23,8	38,1	675		
			31,36	0,16	27,6	32,9	582		
			27,32	0,18	31,7	28,7	507		
			23,99	0,22	36,1	25,2	445		
			21,18	0,25	40,8	22,2	393		
			15,17	0,32	57,0	15,9	282		
			12,92	0,40	66,9	13,6	240		
			11,15	0,45	77,6	11,7	207		
0,15	8	3	42,66	0,09	15,9	85,6	1516	6550	300
			36,35	0,11	18,7	73,0	1291		
			31,36	0,13	21,6	62,9	1114		
			42,66	0,18	32,1	42,4	750		
			36,35	0,22	37,7	36,1	639		
	4	3	42,66	0,25	43,7	31,1	551	6550	250
			27,32	0,30	50,1	27,1	480		
			23,99	0,32	57,1	23,8	422		
			21,18	0,38	64,7	21,0	372		
			15,17	0,50	90,3	15,1	267		
2	2	12,92	0,63	106,0	12,8	227	4550	250	
		11,15	0,70	122,9	11,1	196			
		3400							
0,20	6	3	42,66	0,13	21,4	84,6	1497	6550	300
			36,35	0,14	25,2	72,1	1276		
			31,36	0,16	29,2	62,2	1101		
			27,32	0,20	33,5	54,2	959		
			23,99	0,22	38,1	47,6	842		
		2	21,18	0,25	43,2	42,0	744	4550	300
			15,17	0,35	60,3	30,1	532		
			12,92	0,40	70,8	25,6	454		
			11,15	0,50	82,1	22,1	391		
			3400						
0,24	2	3	42,66	0,38	64,5	33,8	598	4550	250
			36,35	0,45	75,7	28,8	509		
			31,36	0,50	87,7	24,2	439		
			27,32	0,60	100,7	21,6	383	3400	
			23,99	0,70	114,6	19,0	333		
			21,18	0,80	129,8	16,8	297		



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0,24	2	2	15,17	1,10	181,3	12,0	213	3400	250				
			12,92	1,25	212,8	10,2	181						
			11,15	1,50	246,6	8,8	156						
0,30	4	3	42,66	0,20	32,6	83,5	1479	6550	300				
			36,35	0,22	38,2	71,2	1260						
			31,36	0,25	44,3	61,4	1087						
			27,32	0,30	50,9	53,5	947						
			23,99	0,35	57,9	47,0	824						
			21,18	0,38	65,6	41,5	734						
		2	15,17	0,50	91,6	29,7	526	4550					
			12,92	0,63	107,6	25,3	448						
			11,15	0,70	124,7	21,8	386						
			0,37	4	3	42,66	0,18			31,9	105,4	1865	6550
						36,35	0,22			37,4	89,8	1589	
						31,36	0,25			43,3	77,5	1371	
27,32	0,30	49,7				67,5	1194						
23,99	0,32	56,7				59,2	1094						
21,18	0,38	64,2				52,3	926						
2	3	15,17	0,50	89,6	37,5	663	4550						
		12,92	0,60	105,2	31,9	565							
		11,15	0,70	121,9	27,5	487							
		0,37	2	3	21,18	0,80		134,8	24,9	441	3400		
					15,17	1,10		188,3	17,8	316			
					12,92	1,25		221,0	15,2	269			
11,15	1,50				256,1	13,1	232						

### Standard weights for Motorized Pulley 113LS

P <sub>N</sub> [kW]	n <sub>p</sub>	standard weight [kg] for standard RL [mm]														
		250	260	300	310	360	410	460	510	560	610	660	710	810	910	1010
0,04	12	7,20	7,35	7,95	8,10	8,85	9,60	10,35	11,10	11,85	12,60	13,35	14,10	18,80	20,30	21,80
0,07	12	---	---	10,10	10,25	11,00	11,75	12,50	13,25	14,00	14,75	15,50	16,25	20,95	22,45	23,95
0,08	8	7,20	7,35	7,95	8,10	8,85	9,60	10,35	11,10	11,85	12,60	13,35	14,10	18,80	20,30	21,80
0,10	6	7,20	7,35	7,95	8,10	8,85	9,60	10,35	11,10	11,85	12,60	13,35	14,10	18,80	20,30	21,80
0,15	8	---	---	10,10	10,25	11,00	11,75	12,50	13,25	14,00	14,75	15,50	16,25	20,95	22,45	23,95
	4	7,20	7,35	7,95	8,10	8,85	9,60	10,35	11,10	11,85	12,60	13,35	14,10	18,80	20,30	21,80
0,20	6	7,20	7,35	7,95	8,10	8,85	9,60	10,35	11,10	11,85	12,60	13,35	14,10	18,80	20,30	21,80
0,24	2	7,20	7,35	7,95	8,10	8,85	9,60	10,35	11,10	11,85	12,60	13,35	14,10	18,80	20,30	21,80
0,30	4	---	---	10,10	10,25	11,00	11,75	12,50	13,25	14,00	14,75	15,50	16,25	20,95	22,45	23,95
0,37	4	---	---	10,10	10,25	11,00	11,75	12,50	13,25	14,00	14,75	15,50	16,25	20,95	22,45	23,95
	2	---	---	10,10	10,25	11,00	11,75	12,50	13,25	14,00	14,75	15,50	16,25	20,95	22,45	23,95

Other RL dimension within the min & max RL available on request.

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### Cable specification

Available cable options:

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

Available lengths: 1 / 3 / 5 m.

### Min.Length with option

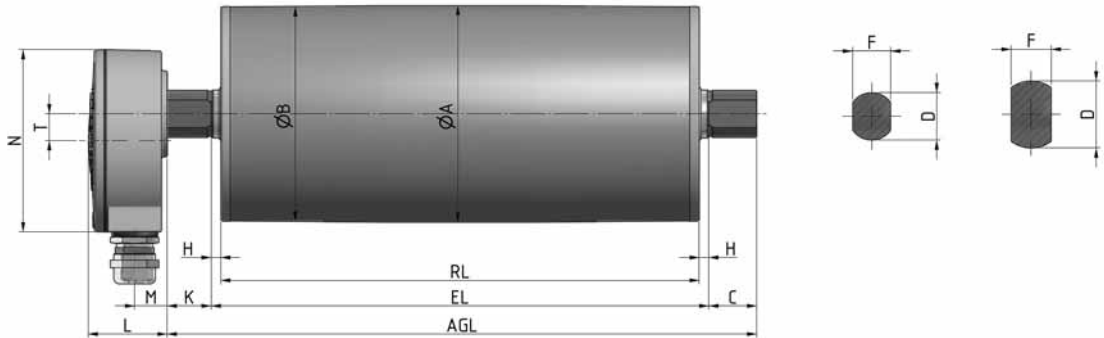
The following options increase the minimum length of the motorized pulley.

Option	RL min with option mm
Brake	RL min + 50 mm
Encoder SKF	RL min + 0 mm
Encoder RLS	RL min +50 mm



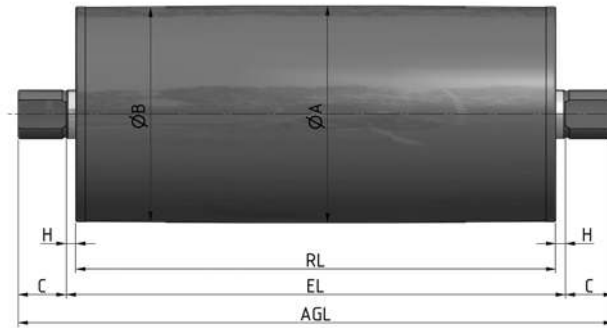
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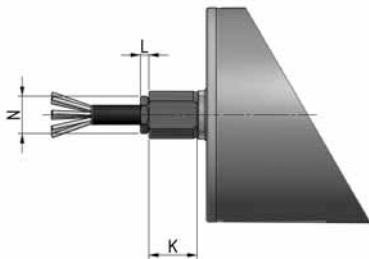


Motorized pulley standard version with aluminium Terminal box.

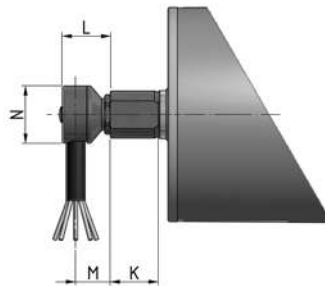
Shaft Cap.



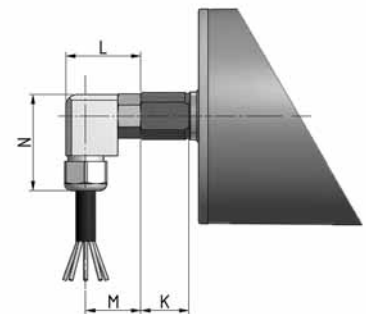
Idler Pulley in stainless Steel (TS8N).



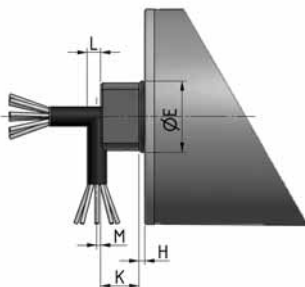
Straight connector in stainless steel.



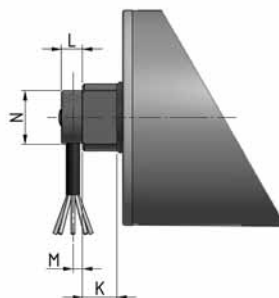
Elbow connector in stainless steel.



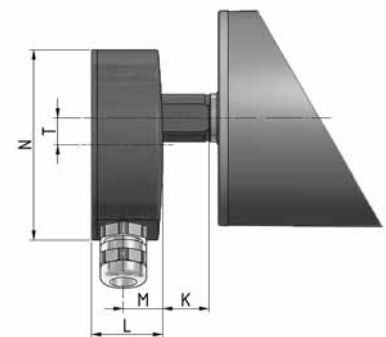
Elbow connector in polyamide.



Straight/Elbow connector with shaft cap in stainless steel.



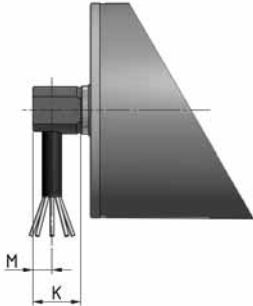
Elbow connector with shaft cap in stainless steel.



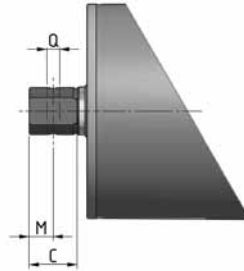
Terminal box in stainless steel.

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Cable connector 90° with threaded shaft.



Shaft, cross-drilled and threaded.

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
Motorized pulley 113LS standard version with aluminium terminal box	113	111,5	25	25		20		5	23	41	17	95		14
Terminal Box in Stainless steel									23	37	20,5	99		14
Straight Connector in stainless steel									25	4,5		19,5		
Elbow Connector in Stainless steel									25	25	18	30		
Elbow connector in Polyamide									25	39	28,5	50		
Cable connector 90° with threaded shaft									25		10			
Shaft, cross-drilled and threaded									25		12,5		M8	
Straight/Elbow connector with shaft cap in stainless steel			20	35	37	21		3	20	7	2	35		
Elbow connector with shaft cap in stainless steel									18	11	4	28		