



Motorized Pulley 113LS

Ø 4.53 in. (113 mm), helical steel gearbox

Product description

This Motorized Pulley is ideal for light duty industrial applications.

Characteristics

- Asynchronous 3 phase AC induction motor
- Integral motor protection
- Hardened steel helical gearbox
- Low noise operation
- Reversible operation
- Motorized Pulleys with RL greater than 31.50 inches have reinforced shaft.

Applications

- Package handling conveyors with frequent use
- Airport luggage check-in conveyors
- Dynamic weighing equipment
- Metal detectors
- Pharmaceutical equipment
- Food processing equipment
- Positive drive and modular belt conveyors
- Dry, humid and wash down applications

Technical data

Type of Motor	Asynchronous squirrel-cage, IEC 34 (VDE 0530)
Insulation class of motor windings	Class F, IEC 34 (VDE 0530)
Available power supplies*	230v/3ph/60Hz, 460v/3ph/60Hz
Seal protection rating (standard)	IP66
Seal protection rating (optional)	IP69
Thermal protection	Bimetallic contact
Allowable ambient temp, 3-ph motor	+41° F to +104° F
Max. Roller length (RL)	55.12 in

* Other power supply voltages and frequencies are available.



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Materials

Component	Version	Aluminum	Steel	Stainless steel
Shell	Crowned	-	Opt	Std
	Cylindrical	-	Opt	Std
	Cylindrical with key (for sprockets)	-	Opt	Opt
	Special profiles	-	Opt	Opt
End housing	Standard	Std	-	Opt
Shaft	Standard	-	-	Std
	Cross-drilled and threaded, M6	-	-	Opt
Electrical termination	Power cord w/straight ss connector	-	-	Std
	Power cord w/elbow ss connector	-	-	Std
	Power cord w/shaft cap & ss elbw connector	-	-	Std
	Terminal box	Std	-	Opt

Options

- Rubber lagging for standard belts
- Profiled lagging for positive drive belts
- Profiled ss shells for positive drive belts
- Mechanical backstop
- Special smooth stainless steel end housings, slotted screw oil plugs, Viton® shaft seals and PTFE deflection seals

(option TS8N) for IP69 sealing.

- Electromagnetic brake
- Rectifier
- Encoder
- Food grade oil (EU, FDA and USDA)
- Non-horizontal mounting (more than ± 5°)

Power Cord Specifications

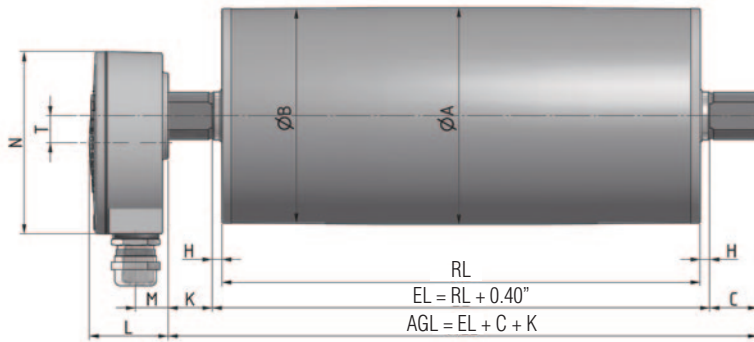
- Standard, shielded, 10 feet long

- Other types & lengths available upon request

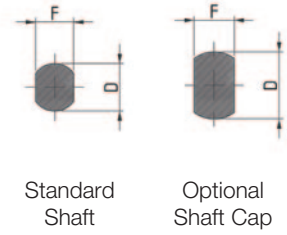


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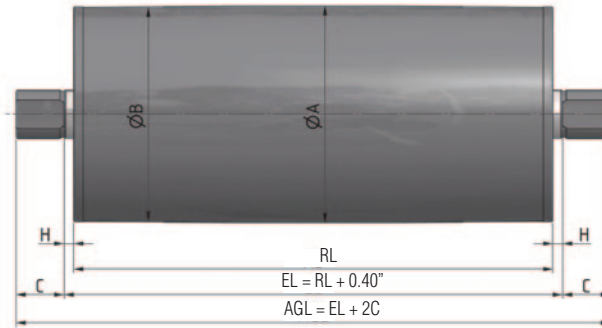


Standard Motorized Pulley with aluminum terminal box

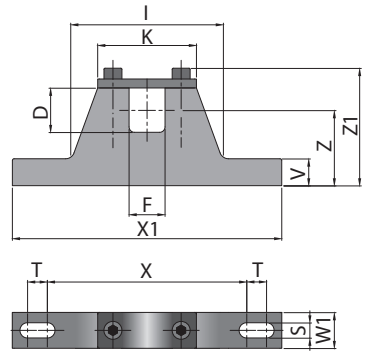


Standard Shaft

Optional Shaft Cap

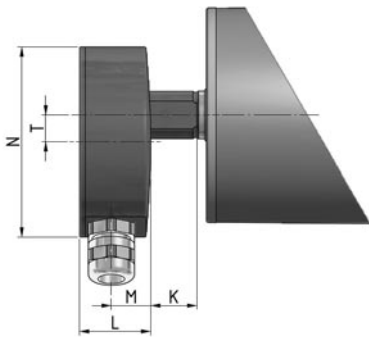


Idler Pulley.

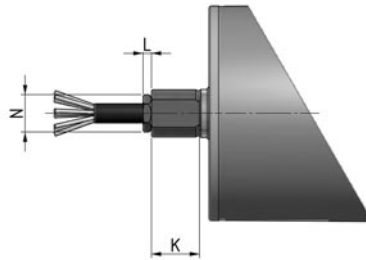


MC = Mounting bracket center-to-center spacing = $RL + 1.19$ "

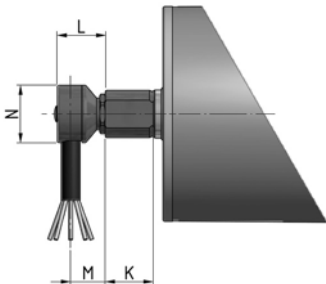
Mounting bracket



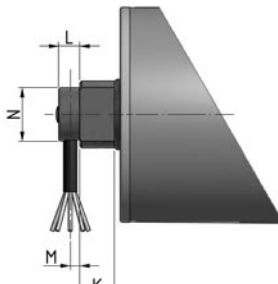
Terminal box in stainless steel.



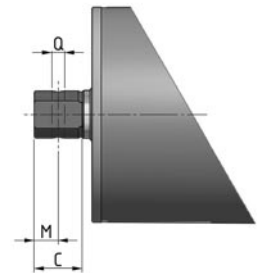
Straight connector in stainless steel.



Elbow connector in stainless steel.



Elbow connector with shaft cap in stainless steel.



Shaft, cross-drilled and threaded.

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Dimensions for Motorized Pulley 113LS														
Type/Option	A in	B in	C in	D in	E in	F in	G in	H in	K in	L in	M in	N in	Q in	T in
Standard shaft with aluminum terminal box	4.45	4.39	0.98	0.98		0.79		0.20	0.91	1.61	0.67	3.74		0.55
Terminal box in stainless steel									0.91	1.46	0.81	3.9		0.55
Standard shaft with ss straight connector									0.98	0.18		0.77		
Standard shaft with ss elbow connector									0.98	0.98	0.71	1.18		
Cross-drilled and threaded shaft								0.12	0.71	0.13	0.16	1.1		

Revised Dimensions for options

The following options increase the minimum roller length (RL)

Option	Optional RL min.
Electromagnetic brake	Standard RL min + 1.97in
Encoder - SKF	Standard RL min + 0 in
Encoder - RLS	Standard RL min +1.97in

Dimensions, materials, and weights for Mounting Brackets

Motorized Pulley	Standard Material	Optional Material	D in	F in	I in	K in	S in	T in	V in	W1 in	X in	X1 in	Z in	Z1 in	Thread	Wt lbs
113LS	Aluminum	Stainless steel	0.98	0.79	3.35	2.17	0.33	0.43	0.59	0.79	4.33	5.91	1.65	2.60	M6	1.1/2.0

Standard weights for Motorized Pulley 113LS

Power HP	Poles	standard weight [lbs] for standard RL [in]													
		9.84	11.81	13.78	15.75	17.72	19.69	21.65	23.62	25.59	27.56	31.50	35.43	39.37	
0.05	12	16.0	17.5	19.5	21.0	23.0	24.5	26.0	28.0	29.5	31.0	41.5	45.0	48.0	
0.09	12	---	22.0	24.0	26.0	27.5	29.0	31.0	32.5	34.0	36.0	46.0	49.5	53.0	
0.11	8	16.0	17.5	19.5	21.0	23.0	24.5	26.0	28.0	29.5	31.0	41.5	45.0	48.0	
0.13	6	16.0	17.5	19.5	21.0	23.0	24.5	26.0	28.0	29.5	31.0	41.5	45.0	48.0	
0.20	8	---	22.0	24.0	26.0	27.5	29.0	31.0	32.5	34.0	36.0	46.0	49.5	53.0	
	4	16.0	17.5	19.5	21.0	23.0	24.5	26.0	28.0	29.5	31.0	41.5	45.0	48.0	
0.27	6	16.0	17.5	19.5	21.0	23.0	24.5	26.0	28.0	29.5	31.0	41.5	45.0	48.0	
0.32	2	16.0	17.5	19.5	21.0	23.0	24.5	26.0	28.0	29.5	31.0	41.5	45.0	48.0	
0.40	4	---	22.0	24.0	26.0	27.5	29.0	31.06	32.5	34.0	36.0	46.0	49.5	53.0	
0.50	4	---	22.0	24.0	26.0	27.5	29.0	31.0	32.5	34.0	36.0	46.0	49.5	53.0	
	2	---	22.0	24.0	26.0	27.5	29.0	31.0	32.5	34.0	36.0	46.0	49.5	53.0	
0.75	4	---	22.0	24.0	26.0	27.5	29.0	31.0	32.5	34.0	36.0	46.0	49.5	53.0	
	2	---	22.0	24.0	26.0	27.5	29.0	31.0	32.5	34.0	36.0	46.0	49.5	53.0	



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Power & Speed Combinations: 3 phase									
Power HP	Poles (rpm)	FLA (amps) ¹	No. Gear Stages	Gear Ratio	Nominal belt speed at Full Load 60 Hz fpm ²	Actual belt speed at Full Load 60 Hz fpm ²	Belt Pull lbs	Max. Radial Load T1 + T2 lbs ³	RL in
0.05	12 (540)	0.88/0.47	3	42.66	12	15	100	1470	min 9.84 max 55.12
				36.35	14	17	85		
				31.36	18	20	73		
0.09	12 (520)	1.11/0.63	3	42.66	12	14	207	1470	min 11.81 max 55.12
				36.35	14	17	177		
				31.36	18	19	152		
0.11	8 (825)	0.97/0.56	3	42.66	24	23	149	1470	min 9.84 max 55.12
0.13	6 (1100)	0.87/0.44	3	42.66	26	30	140	1470	
				36.35	30	35	119		
				31.36	38	41	103		
				27.32	48	47	90		
				23.99	52	53	79		
				21.18	60	60	70		
0.20	8 (810)	1.47/0.78	3	42.66	24	22	285	1470	
				36.35	26	26	243		
				31.36	30	30	210		
0.20	4 (1700)	1.02/0.55	3	42.66	48	46	136	1470	
				36.35	52	54	116		
				31.36	60	63	100		
				27.32	72	72	87		
				23.99	76	83	76		
				21.18	90	93	67		
				15.17	120	131	48		
0.25	6 (1120)	1.40/0.70	2	12.92	96	101	83	1020	
				11.15	120	117	72		
				15.17	76	86	98		
0.25	6 (1120)	1.40/0.70	3	42.66	30	31	275	1470	
				31.36	38	42	202		
				27.32	48	48	176		
				23.99	52	54	155		
				21.18	60	62	137		
				15.17	76	86	98		

Refer to page 49 for all footnotes cited on page 48.

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Power & Speed Combinations: 3 phase									
Power HP	Poles (rpm)	FLA (amps) ¹	No. Gear Stages	Gear Ratio	Nominal belt speed at Full Load 60 Hz fpm ²	Actual belt speed at Full Load 60 Hz fpm ²	Belt Pull lbs	Max. Radial Load T1 + T2 lbs ³	RL in
0.33	2 (3430)	1.12/0.57	3	42.66	90	94	108	1020	min 9.84 max 55.12
				36.35	96	110	92		
				31.36	120	127	79		
				27.32	150	146	69		
			2	23.99	165	167	61	770	
				21.18	192	189	53		
				15.17	240	263	38		
				12.92	300	309	33		
11.15	384	358	28						
0.40	4 (1700)	1.66/0.87	3	42.66	48	46	272	1470	min 11.81 max 55.12
				36.35	52	54	232		
				31.36	60	63	200		
				27.32	72	72	174		
			2	23.99	76	83	153	1020	
				21.18	90	93	135		
				15.17	120	131	97		
				12.92	150	153	82		
11.15	192	178	71	770					
0.50	4 (1680)	2.03/1.01	3	42.66	48	46	339	1470	min 11.81 max 55.12
				36.35	52	54	289		
				31.36	60	62	249		
			2	27.32	72	72	217	1020	
				23.99	76	82	191		
				21.18	90	92	168		
	2 (3470)	1.51/0.76	3	15.17	120	129	121	770	
				12.92	150	151	103		
				11.15	165	175	89		
			2	21.18	192	191	82	770	
				15.17	240	266	58		
				12.92	300	313	50		
11.15	384	362	43						
0.75	2 (3440)	2.20/1.09	3	42.66	90	94	246	1020	min 11.81 max 55.12
				36.35	96	110	210		
				31.36	120	128	181		
				27.32	150	147	158		
				23.99	165	167	138		
			2	21.18	192	189	122	770	
				15.17	240	264	88		
				12.92	300	310	75		
				11.15	384	359	64		

- 1 FLA = full load amps at 230volts and 460 volts, respectively.
- 2 Use "Nominal Speed" to specify pulley. "Actual belt speed" is presented (for unlagged pulley) to assist with process design calculations. See "Actual Speed vs Nominal Speed" section in Technical Precautions. Note that actual belt speed increases when lagging is used due to increased pulley diameter.
- 3 Pulley must not be subjected to radial load exceeding "Maximum Radial Load" defined above. See "Belt Tension" section in Technical Precautions.



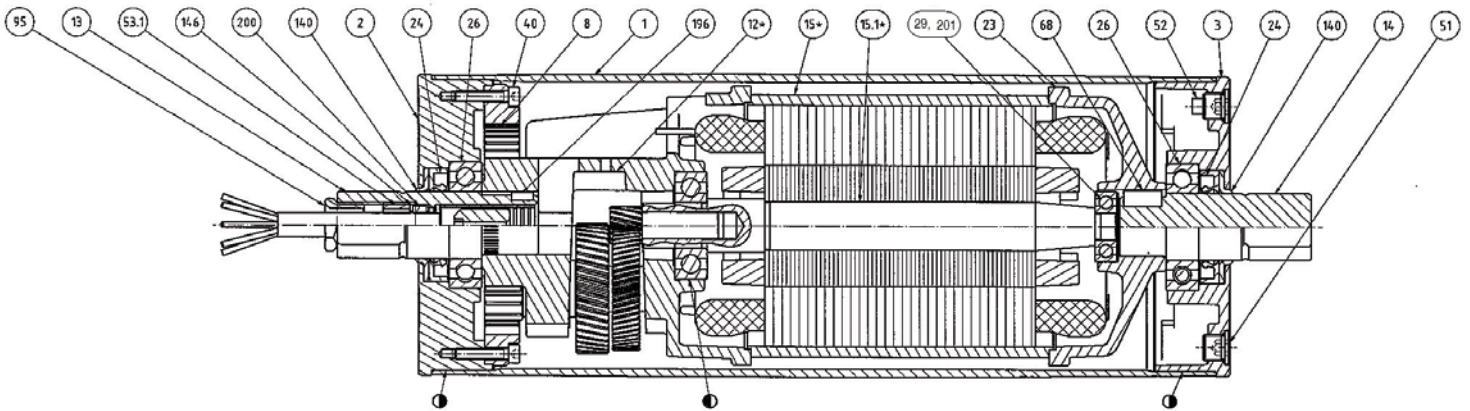
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Spare Parts List and Sectional Drawings

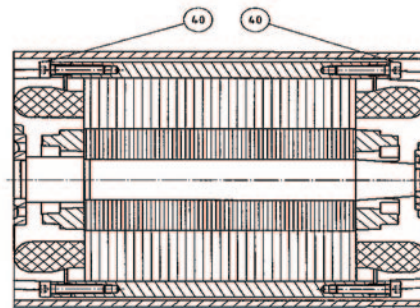
1	Pulley shell	15.1*	Rotor assembly	53.1	Pressure nipple
2	Bearing housing	23	Rear flange	68	Key
3	Bearing housing	24	Double lip seal	95	Straight connector
8	Geared rim	26	Ball bearing	140	Deflection seal
12*	Gearbox (3 stage shown)	29	Ball bearing	146	Washer
13	Front shaft	40	Hexagon socket screw	196	Key
14	Rear shaft	51	Oil plug	200	Rubber seal
15*	Stator	52	Oil plug with magnet	201	Encoder (if applicable)

113LS Standard: 3 stage gearbox with power cord



* Variable parts for other speeds and powers

Motor stator cross section



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Spare Parts List and Sectional Drawings

1	Front shaft	103	Screw	148	Washer
5	Bearing housing complete with geared rim	110	Screw	200	Rubber seal
10	Terminal box - bottom part	111	Screw	229	WAGO clamp terminals
11	Terminal box cover	136	O-ring/Rubber seal	230	Fixing bolts
53	Cable side nipple (cable option)	138	Rubber seal		
53.1	Nipple (terminal box)	140	Deflection seal		
63	Ball bearing	142	Double lip seal		
		146	Washer		

113LS Standard: with terminal box

