



Motorized Pulley 500H, Ø 19.72 in. (501 mm)

Our 19.72" diameter Motorized Pulley range offers strong performance BULK applications:

Choose the appropriate pulley motor and speed combination, always checking estimated belt tension (radial load.) See page 82. The actual radial load must be less than the maximum allowable radial load shown in this catalog.

Be aware of increased belt tensions required to drive multi-ply thick heavy belts and/or larger belt widths.

If the 19.72" diameter model is not strong enough to resist estimated belt tension, then select 24.80" diameter model.

Heavy duty

500H has strong internal components, with gearbox, shaft, and bearings designed for tough, irregular, and extreme operating conditions.

STANDARD SPECIFICATION of Motorized Pulley

- Crowned mild steel 19.72" diameter steel shell painted yellow at a minimum thickness of 2.4 mils
- Bolted powder coated cast iron bearing housings and covers, all painted yellow at a minimum thickness of 2.4 mils
- Mild steel shafts
- Shaft sealing system - degree of protection IP66/67 (EN60034-5.) See page 37.
- Cast iron terminal box for painted yellow at min.thickness of 2.4 mils
- 3-phase induction motors with thermal protector
- Voltage: All common voltages available. Please specify.
- Motor winding insulation Class F
- Dynamically balanced rotor
- Two oil plugs each fitted with a magnet to filter the oil
- Yellow painted mounting brackets (AL65 & ALO65) included with 500H
- Oil change recommended every 10,000 operational hours
- Minimum RL. Refer to page 49
- Maximum RL - Please inquire
- Non standard RL's available
- To be used in horizontal positions ± 5 degree only

Please note:

- **Noise-sensitive Areas:** High speed 2-pole motors can cause higher noise levels and are not recommended for noise-sensitive areas
- **Technical Precautions for Design, Installation, and Maintenance:** pages 80-90
- **Environmental Considerations:** pages 78-79
- **Optional Extras:** page 47
- **Electrical Connection Diagrams:** pages 94-101

SEMI-RUST-FREE options

TS11

- Polyurethane painted mild steel shell at minimum thickness of 4.7 mils
- Polyurethane painted cast iron end housings at minimum thickness of 4.7 mils
- Stainless steel covers with labyrinth grooves – AISI 304 range
- Nitrided shaft sleeves
- Zinc-plated oil plugs - each with magnet
- Zinc-plated exterior bolts
- Shaft sealing system – degree of protection P66/67 (EN60034-5) See pg 37.
- Polyurethane painted terminal box at minimum thickness of 4.7 mils
- Nickel plated mounting brackets with labyrinth grooves

TS12

- As TS11, but without regreasable seals.
- Covers - standard

Please note:

- FDA & USDA food grade recognized oil and grease are not included in TS11 & TS12, but available on request

Please specify required TS-number when ordering Stainless Steel options.



OPTIONAL EXTRAS

Motorized Pulley 500H

Specification	Availability
Semi-rust-free option TS11 with regreasable labyrinth seals	x
Semi-rust-free option TS12 with standard seals	x
Regreasable labyrinth seals	x
Dust explosion proof Motorized Pulleys - ATEX 95 - Zone 22 - for applications handling of dusty grain etc. According to European Directive 94/9/EC.	x
Standard black rubber lagging (See pages 82-83.)	
3/8" full smooth lagging - Hardness 60 ±5 Shore A	o
3/8" full diamond lagging - Hardness 60 ±5 Shore A	o
3/8" partial smooth lagging - Hardness 60 ±5 Shore A	o
White smooth rubber lagging (FDA listed) - Oil, fat & grease resistant	o
Special lagging - e.g. hot vulcanized, partial, and ceramic (See page 80.)	o
External brake shaft (for mechanical brake by others)	x
Mechanical backstop Min. RL = 29.53" for 500H	x
Insulation class F with standard oil: (allowable ambient temperature: -13°F/+104°F)	Std.
Insulation class H with synthetic oil: (allowable ambient temperature: -13°F/+120°F)	x
Parallel shell	x
Thermal protection switch	Std.
Temperature monitoring device (PT100 RTD)	x
Thermal protection switch and temperature monitoring device (PT100 RTD)	x
Voltage: Single voltage (460) stator (Y winding) wired for 460v/3ph/60 Hz at terminal box	Std.
IP66/67 Standard yellow powder coated cast iron terminal box	Std.
Special voltage motors	x
CSA approved motors	x
Special zinc-rich epoxy paint	x

x = Optional extras

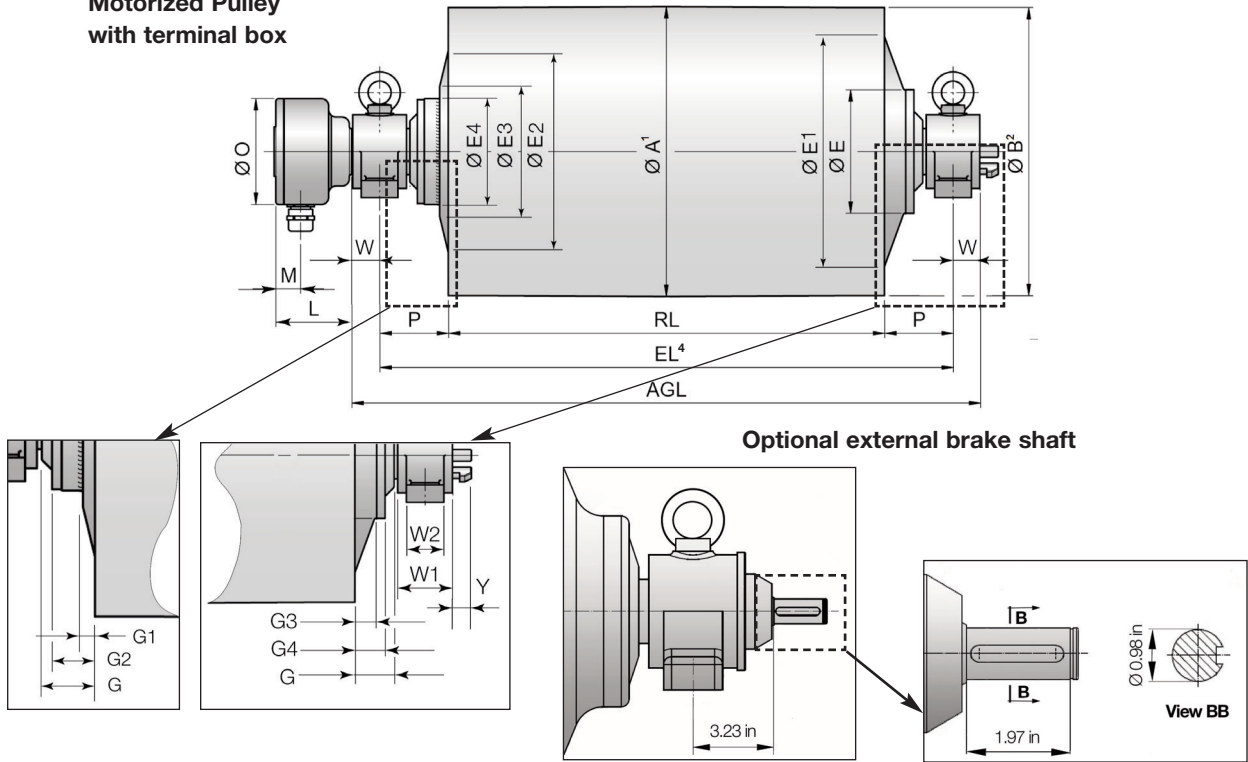
o = An option with certain limitations. Please refer to Technical precautions pages 80-90.

Std. = Fitted as standard



Motorized Pulley 500H, Ø 19.72 in. (501 mm)

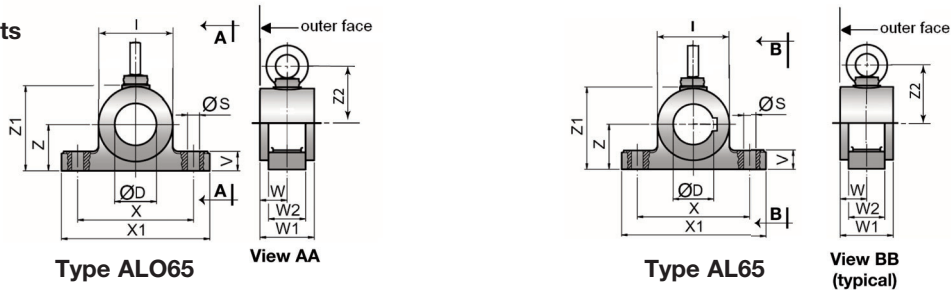
Motorized Pulley with terminal box



Model	Dimensions																	
	A	B	D³	E	E¹	E²	E³	E⁴	G	G¹	G²	G³	G⁴	L	M	O	P	Y
	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in
500H	19.72	19.57	2.56	7.56	16.73	15.83	9.45	7.62	3.74	0.9	3.35	1.57	3.35	3.94	1.44	6.14	5.91	2.0
500H (30 & 40 HP)	19.72	19.57	2.56	7.56	16.73	15.83	9.45	7.62	3.74	0.9	3.35	1.57	3.35	6.50	2.13	9.06	5.91	2.0

- 1 A dimension is outer diameter of unlagged pulley shell at pulley centerline.
- 2 B dimension is outer diameter of unlagged pulley shell at each end of shell.
- 3 D dimension is shaft diameter.
- 4 EL = mounting centers.

Mounting brackets



Motorized Pulleys	Material	Bracket Type	Dimensions												Weight	
			D	I	S	V	W	W¹	W²	X	X¹	Z	Z¹	Z²		
Model			in	in	in	in	in	in	in	in	in	in	in	in	in	lbs
500H	Cast iron	AL65 / ALO65	2.56	4.53	0.91	1.34	1.85	3.54	2.36	7.09	9.45	3.15	5.55	3.65	17.64	



Motorized Pulley 500H, Ø 19.72 in. (501 mm)

60 Hz

Motor			Model	Nominal belt speed ¹ at Full Load 60 Hz fpm	Actual belt speed ¹ at Full Load 60 Hz fpm	Belt Pull ² lbs	Max. Radial Load ³ T1 + T2 lbs	Min. RL in	RL Dimension inches (RL>78.74" available on request) Weight in lbs ⁵										Type of Bracket			
Power HP	No. of Poles	No. Gear Stages							29.53	31.50	33.46	35.43	37.40	39.37	41.34	43.31	45.28	longer than 45.28				
7.5	8	2	500H	120* 150* 192	126 161 211	1839 1442 1097	10,340	29.53													See Foot-note ⁴ AL65& ALO65	
	6	2	500H	240 300 384 480 600	281 313 390 476 626	823 739 592 486 369			775	797	819	839	861	878	897	916	936					
10	8	2	500H	120* 150 192	126 161 211	2509 1966 1496																
	6	2	500H	240 300 384 480 600	281 313 390 476 626	1122 1007 807 662 504			797	819	841	861	883	898	917	936	956					
15	6	2	500H	192 240 300 384 480 600	214 281 313 390 476 626	2163 1645 1477 1185 970 739			819	841	863	883	905	920	939	958	978					
20	4	2	500H	240* 300 384 480 600 760	251 321 421 469 585 715	2509 1966 1496 1343 1077 882			844	863	881	900	918	940	959	978	999					
25	4	2	500H	300 384 480 600 760	321 421 469 585 715	2425 1845 1656 1328 1089			866	885	903	922	940	962	981	1000	1020					
30	4	2	500H	300 384	321 421	2877 2210																
	2			480* 600* 760	502 642 843	1839 1442 1097			29.53	866	885	903	922	940	959	978	997	1017				
40	4	2	500H	384 480 600 760	421 469 585 715	2925 2626 2105 1722			33.46	-	-	1090	1109	1127	1146	1165	1184	1204				

- 1 Use "nominal belt speed" to specify pulley. "Actual belt speed" is presented (for pulley lagged with 3/8" thick material) to assist with process design calculations. See Technical Precautions page 81. Note that "actual belt speed" decreases when lagging is not used due to decreased pulley diameter.
 - 2 Belt pull value allows for gearbox loss.
 - 3 Pulley must not be subjected to radial load exceeding "Maximum radial load" defined above. See "Belt Tension" section in Technical Precautions, page 82.
 - 4 Additional Motorized Pulley weight, specified per Roller Length: $45.28 \leq RL \leq 78.74$ " Wt = 9.8 lbs/in.
 - 5 All weights shown above include mounting brackets and are for pulleys "fully lagged" with 3/8" thick material (i.e. rubber for 7.5 - 30 HP and solid ceramic for 40 HP). For "partially lagged" pulleys add 6% to 10% to the weights shown above. See pages 45, 82, & 83 for "partial lagging." To calculate unlagged pulley weight subtract 0.9 lbs/in of Roller Length from above.
- * External brake shaft option is not available in these belt speeds.

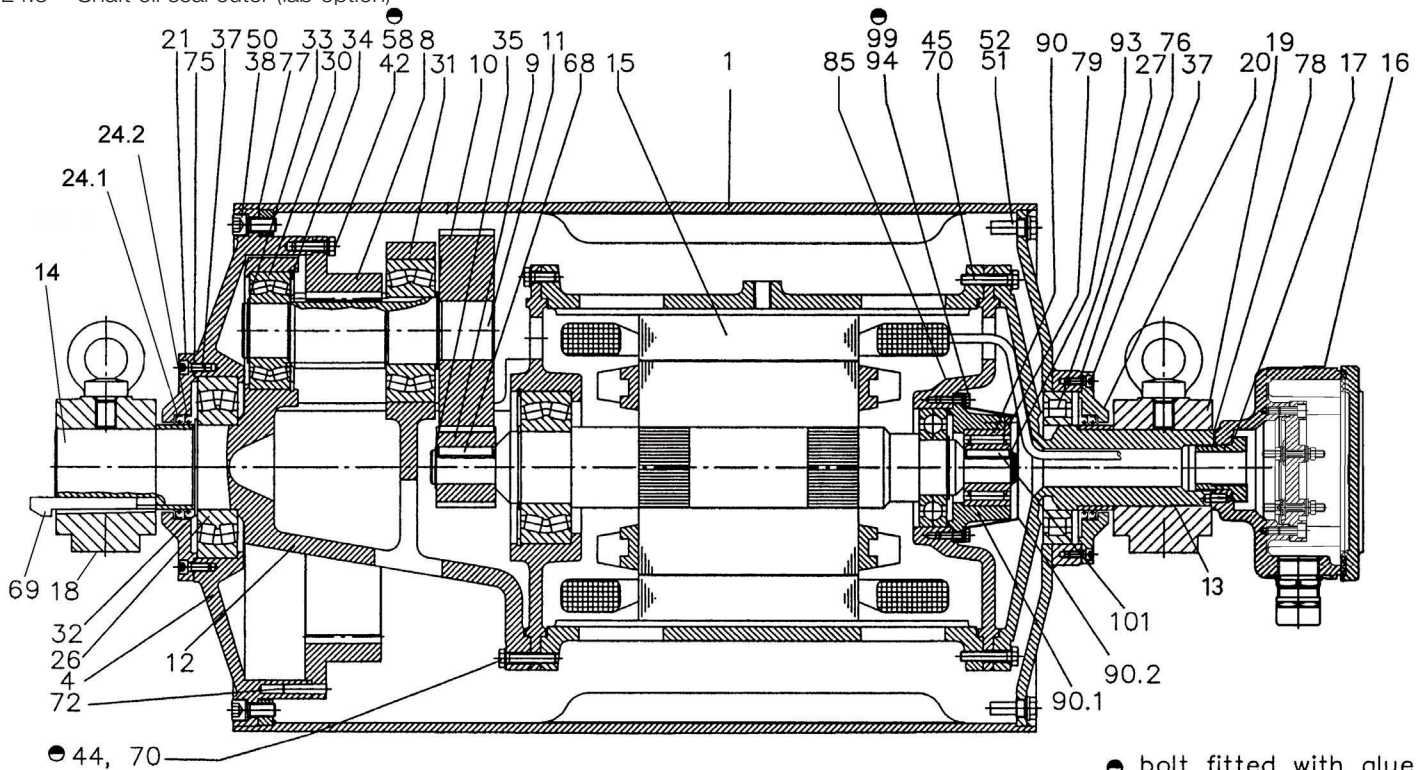
Rulmeca offers return, snub, and idler pulleys with dimensions to match our Motorized Pulleys on request.



Motorized Pulley 500H, Ø 19.72 in. (501 mm)

Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	24.4	Shaft oil seal inner (lab option)	77	Gasket
4	End housing with geared rim	26	Bearing	78	Gasket
8	Geared rim	27	Bearing	79	Holding plate
9	Rotor pinion	30	Bearing	85	Motor flange for backstop/brake
10	Input wheel	31	Bearing	90	Backstop
11	Output pinion	32	Retaining ring	90.1	Backstop housing
12	Gear box including rear shaft	33	Retaining ring	90.2	Backstop cover
13	Front shaft	34	Retaining ring	93	Backstop retaining ring
14	Rear shaft	35	Retaining ring	94	Backstop hex head screw
15	Stator complete	37	Hexagon socket screw	99	Backstop spring washer
15.1	Rotor	38	Hexagon socket screw	101	Backstop key
16	Terminal box complete	42	Hexagon head screw	123	Grease nipple
17	Nipple	44	Hexagon head screw	130	Brake shaft
18	Mounting brackets rear side	45	Hexagon head screw	131	Mounting bracket bearing cover
18.1	Mounting bracket w/lab rear side	50	Washer	132	Roller bearing
19	Mounting bracket front side	51	Gasket	133	Brake shaft seal
19.1	Mounting brackets w/lab front side	52	Magnetic oil plug	134	Brake shaft seal
20	Cover – front side	58	Spring washer	135	Retaining ring
20.1	Cover with labyrinth groove	68	Key	136	Bolts - bearing cover
21	Cover – rear side	69	Gib key	137	Spring lock washer
22.1	Cover with labyrinth groove	70	Waved spring washer	138	Key
23	Rear flange	72	Grooved pin	139	Retaining ring
24.1	Shaft oil seal outer	73	Set screw	140	Key
24.2	Shaft oil seal inner	75	Gasket		
24.3	Shaft oil seal outer (lab option)	76	Gasket		



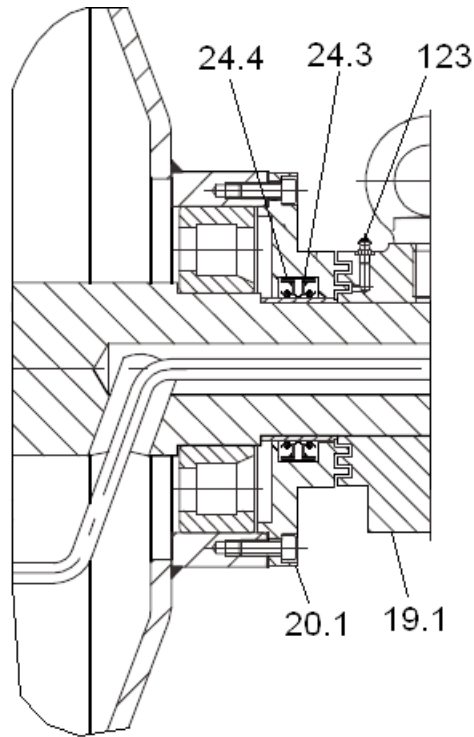
Cross sectional drawing shows optional backstop.



Motorized Pulley 500H, Ø 19.72 in. (501 mm)

Sectional drawings (See parts list on page 50.)

Labyrinth Seal Option



External Brake Shaft Option

