Motorized Pulley 630M & 630H, Ø 24.80 in. (630 mm)

Our 24.80" diameter Motorized Pulley range offers two different performance levels for BULK applications:

- M for Medium duty
- H for Heavy duty

It is important to note the product differences and choose the appropriate pulley based on 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 24.80" diameter model is not strong enough to resist estimated belt tension, then select 31.50" diameter model.

M for Medium duty

A solid 2-stage gearbox enables the 630M to handle irregular loadings in harsh operating conditions. 630M uses motor and gearbox from 500H. Note that 630M outer dimensions do not match 630H

H for Heavy duty

630H has stronger internal components with gearbox, shaft, and bearings designed for tough, irregular, and extreme operating conditions.

STANDARD SPECIFICATION of Motorized Pulley

- Crowned mild steel 24.80" 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 (AL & ALO) included with pulley
- Oil change recommended every 10,000 operational hours
- Minimum RL. Refer to pages 63-64
- 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 61
- **Electrical Connection Diagrams:** pages 94-100

SEMI-RUST-FREE options

TS11

- Painted mild steel shell at minimum thickness of 4.7 mils
- Painted cast iron end housings at minimum thickness of 4.7 mils
- Stainless steel bearing 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.
- 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.

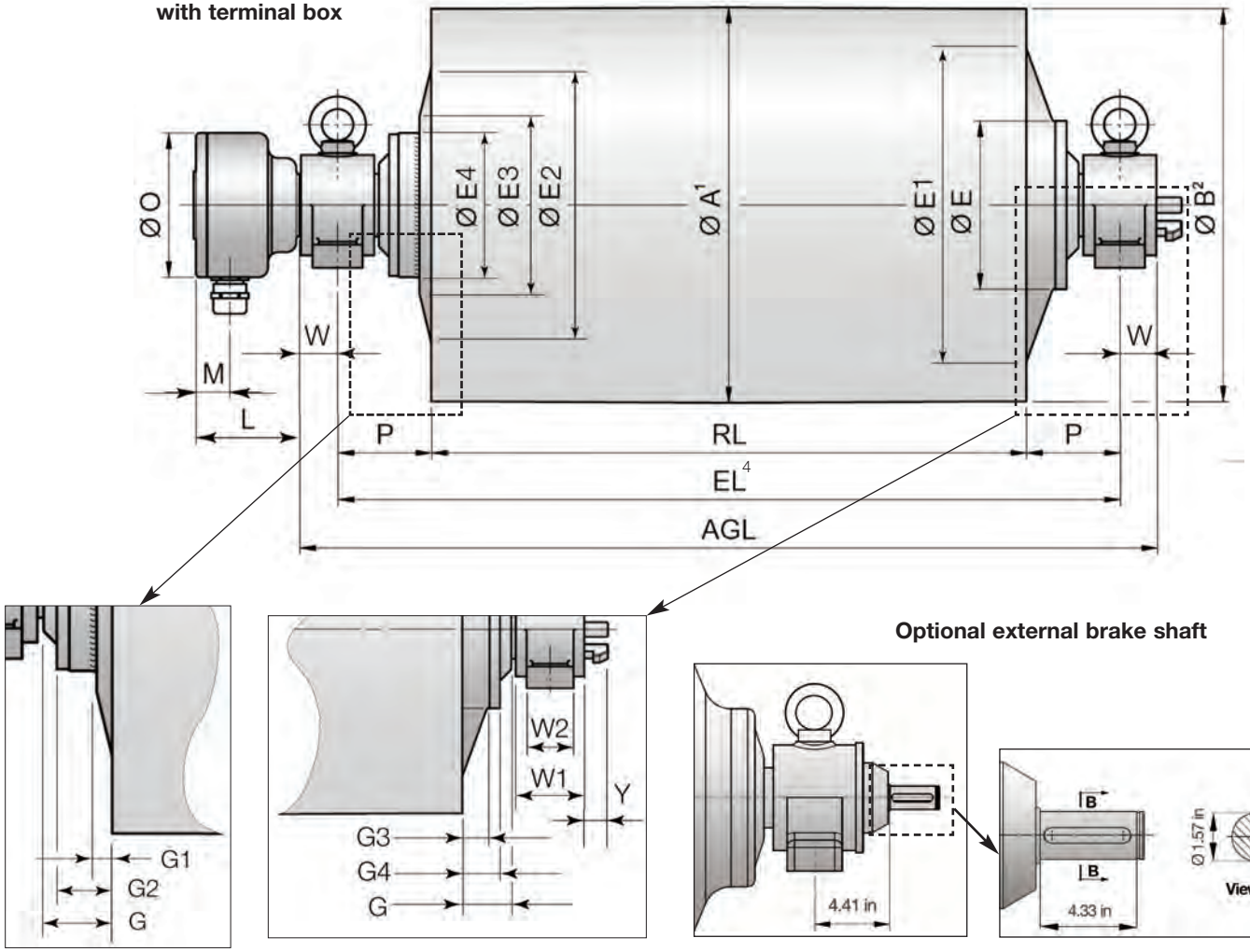
OPTIONAL EXTRAS
Motorized Pulley 630M & 630H

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 630M	x
	Min. RL = 37.40" for 630H	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 protector		Std.
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

x = Optional extras
o = An option with certain limitations. Please refer to Technical precautions pages 80-90.
Std. = Fitted as standard

Motorized Pulley 630M & 630H, Ø 24.80 in. (630 mm)

Motorized Pulley with terminal box

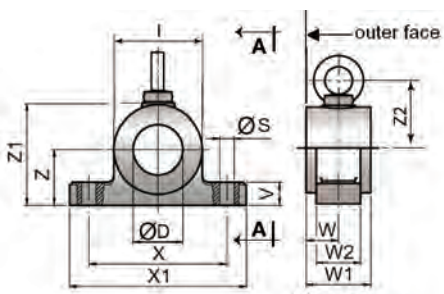


	Dimensions[5]																	
	A	B	D[3]	E	E1	E2	E3	E4	G	G1	G2	G3	G4	L	M	O	P	Y
Model	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in	in
630M	24.80	24.65	2.56	7.56	21.85	20.91	10.79	7.68	3.74	0.87	3.35	1.67	3.35	3.94	1.42	6.14	5.91	2.0
630M (30 HP)	24.80	24.65	3.54	7.56	21.85	20.91	10.79	7.68	3.74	0.87	3.35	1.67	3.35	6.50	2.13	9.06	5.91	2.0
630H	24.80	24.65	3.54	10.55	17.56	15.79	12.48	8.94	3.46	1.00	2.05	1.97	2.64	6.50	2.13	9.06	5.91	2.0

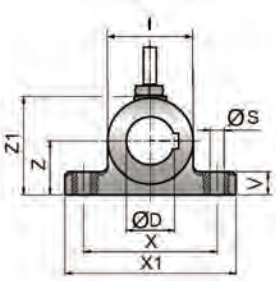
1 A dimension is outer diameter of unlagged pulley shell at pulley centerline.
2 B dimension is outer diameter of unlagged pulley shell at each end of shell.
3 D dimension is shaft diameter.
4 EL = mounting centers.
5 Dimensions E, E1, E2, E3, E4, G, and G3 may vary +/- 0.25 in because they do not all refer to machined parts. G dimension does not apply to lab seals (see pg 64).

Motorized Pulley 630M & 630H, Ø 24.80 in. (630 mm) 60 Hz

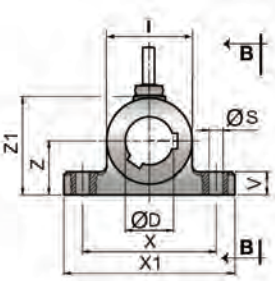
Mounting Brackets



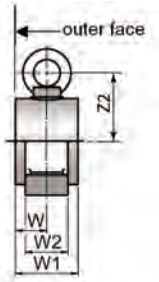
Type ALO65/ALO90 View AA



Type AL65



Type AL90



View BB (typical)

Motorized Pulleys	Material	Bracket	Dimensions												Weight
		Type	D	I	S	V	W	W1	W3	X	X1	Z	Z1	Z2	
Model			in	in	in	in	in	in	in	in	in	in	in	in	lbs
620M	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
630M (30 HP), 630H	Cast steel	AL90 / ALO90	3.54	6.30	1.02	1.65	2.40	4.61	3.15	9.84	12.60	3.94	7.20	5.14	41.89

Motor		No. Gear Stages	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								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	630M	150 192 240	157 200 267	1473 1155 866	10,300	29.53	907	929	951	972	994	1019	1041	1064	1086	See Note[4]	AL65 & ALO65
	6	2	630M	300 384 480 600 768	351 390 487 594 782	659 591 475 388 296													
10	8	2	630M	150 192 240	157 200 267	2009 1574 1181			927	949	970	992	1014	1039	1061	1084	1106		
	6	2	630M	300 384 480 600 768	351 390 487 594 782	899 807 647 530 404													
15	6	2	630M	240 300 384 480 600 768	267 351 390 487 594 782	1733 1318 1183 949 777 591			960	982	1006	1027	1049	1074	1096	1119	1141		
20	4	2	630M	300 384 480 600 768	313 401 526 586 730	2003 1574 1199 1075 863			984	1006	1030	1052	1074	1099	1120	1143	1165		
25	4	2	630M	384 480 600 768	400 526 586 730	1959 1478 1327 1064			1006	1028	1052	1074	1096	1121	1142	1165	1187		
30	2	2	630M	600 768	627 800	1473 1155			1006	1028	1052	1074	1096	1121	1142	1165	1187		

1 Use "nominal belt speed" to specify pulley. "Actual belt speed" is presented (for pulley lagged with 3/8" thick rubber) 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: Model 630M: 45.28"≤ RL ≤ 78.74" Wt = 11.2 lbs/in; Model 630H: 51.18"≤ RL ≤ 78.74" Wt = 15.8 lbs/in.

5 All weights shown above are for pulleys "fully lagged" with 3/8" thick rubber. For model 630H "partially lagged" pulleys add 4% to 7% to the weights shown above. See pages 45, 82, and 83 for "partial lagging." To calculate unlagged pulley weight subtract 1.2 lbs/in of Roller Length from above.

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

Motorized Pulley 630M & 630H, Ø 24.80 in. (630 mm) 60 Hz

Motor		No. Gear Stages	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								37.40	39.37	41.34	43.31	45.28	47.24	49.21	51.18	longer than 51.18	
30	8	2	630H	240 300 384 480 600 768	247 314 408 492 639 783	3745 2946 2268 1879 1449 1182	16,600	37.40	1819	1850	1879	1910	1939	1963	1995	2025		
40	8	2	630H	240 300 384 480 600 768	247 314 408 492 639 783	5107 4018 3093 2563 1975 1611	22,000	37.40	1863	1894	1923	1955	1983	2007	2039	2069		
50	6	2	630H	300 384 480 600 768	330 418 544 656 851	4723 3717 2861 2370 1828	22,000	37.40	1863	1894	1923	1955	1983	2007	2039	2069	See Note[4]	AL90 & ALO90
61	4	2	630H	480 600 768 960	493 627 815 984	3830 3013 2321 1922	19,900	37.40	1907	1939	1967	1999	2027	2051	2083	2114		
75	4	2	630H	600 768 960	627 815 984	3683 2836 2349	19,900	37.40	1907	1919	1967	1999	2027	2051	2083	2114		

1 Use "nominal belt speed" to specify pulley. "Actual belt speed" is presented (for pulley lagged with 3/8" thick rubber) 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.

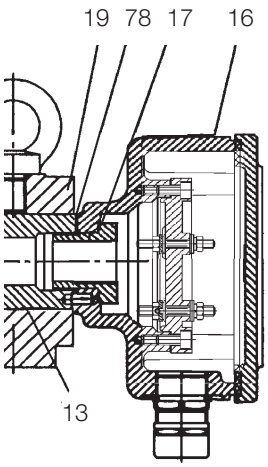
3 Pulley must not be subjected to radial load exceeding "Maximum radial load" defined above. See "Belt Tension" section in Technical Precautions, page 82.

4 Additional Motorized Pulley: Model 630M: 45.28"≤ RL ≤ 78.74" Wt = 11.2 lbs/in; Model 630H: 51.18"≤ RL ≤ 78.74" Wt = 15.8 lbs/in.

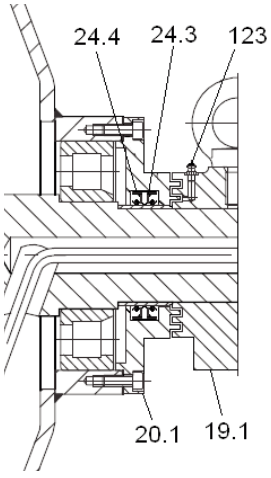
5 All weights shown above are for pulleys "fully lagged" with 3/8" thick rubber. For model 630H "partially lagged" pulleys add 4% to 7% to the weights shown above. See pages 45, 82, and 83 for "partial lagging." To calculate unlagged pulley weight subtract 1.2 lbs/in of Roller Length from above.

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

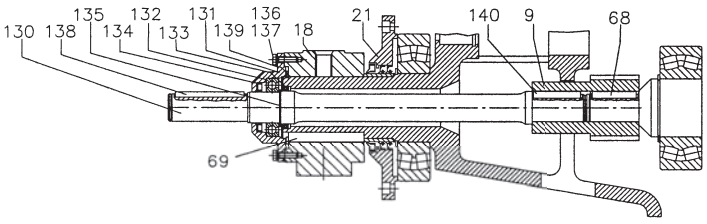
Terminal Box (valid for 630M)



Labyrinth Seal Option



External Brake Shaft Option



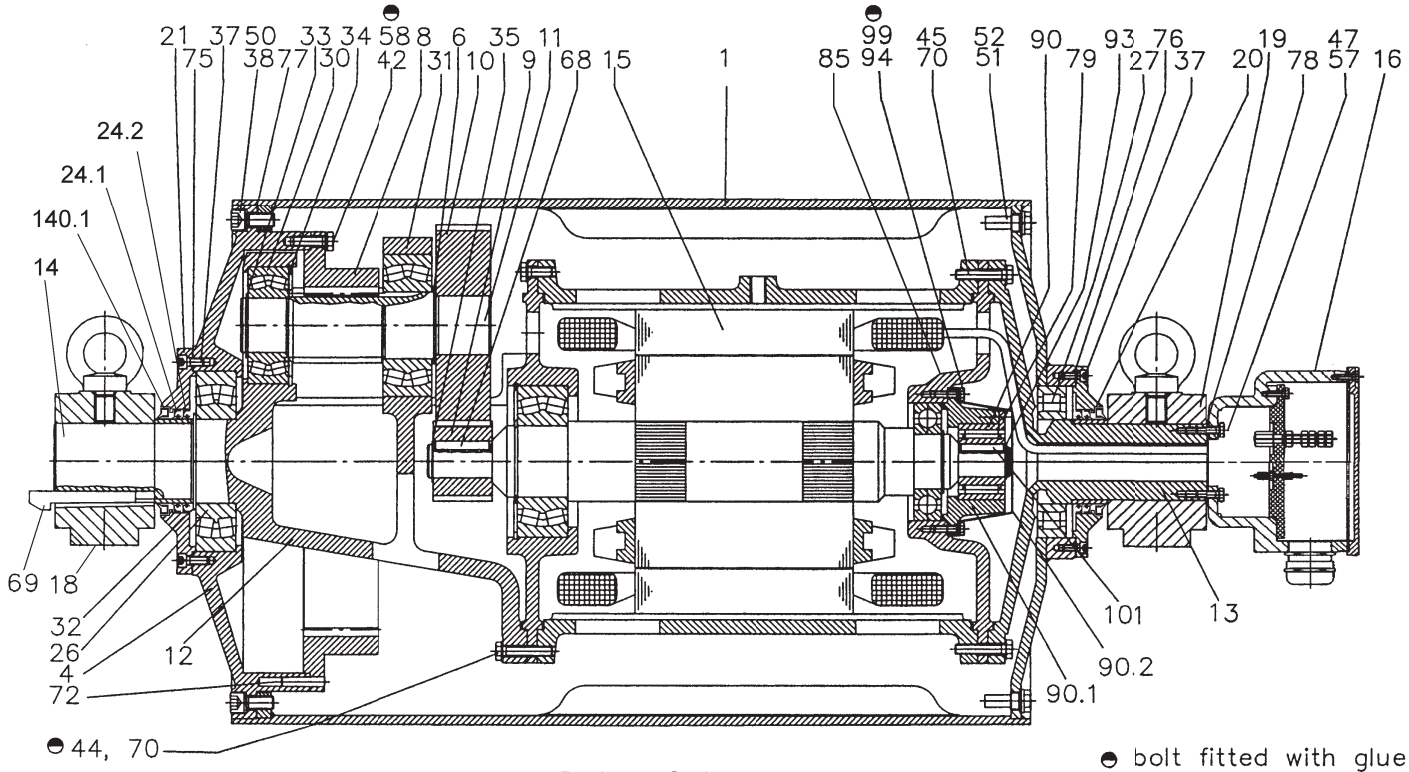
Motorized Pulley 630M & 630H, Ø 24.80 in. (630 mm)

Spare parts list and sectional drawings

Pos.	Description
1	Shell
4	End housing with geared rim
6	Distance washer (630H)
8	Geared rim
9	Rotor pinion
10	Input wheel
11	Output pinion
12	Gear box including rear shaft
13	Front shaft
14	Rear shaft
15	Stator complete
15.1	Rotor
16	Terminal box complete
17	Nipple (630M only)
18	Mounting bracket rear side
18.1	Mtg bracket rear side (lab option)
19	Mounting bracket front side
19.1	Mtg bracket front side (lab option)
20	Cover – front side
20.1	Cover with labyrinth groove
21	Cover – rear side
21.1	Cover with labyrinth groove
23	Rear flange
24.1	Shaft oil seal outer
24.2	Shaft oil seal inner
24.3	Shaft oil seal outer (lab option)

Pos.	Description
24.4	Shaft oil seal inner (lab option)
26	Bearing
27	Bearing
30	Bearing
31	Bearing
32	Retaining ring
33	Retaining ring
34	Retaining ring
35	Retaining ring
37	Hexagon socket screw
38	Hexagon socket screw
42	Hexagon head screw
44	Hexagon head screw
45	Hexagon head screw
47	Hexagon head screw
50	Washer
51	Gasket
52	Magnetic oil plug
57	Washer
58	Spring washer
68	Key
69	Gib key
70	Waved spring washer
72	Grooved pin
73	Set screw
75	Gasket

Pos.	Description
76	Gasket
77	Gasket
78	Gasket
79	Holding plate
85	Motor flange for backstop/brake
90	Backstop
90.1	Backstop housing
90.2	Backstop cover
93	Retaining ring
94	Hexagon head screw
99	Spring washer
101	Key
123	Grease nipple
130	Brake shaft
131	Mounting bracket bearing cover
132	Roller bearing
133	Brake shaft seal
134	Brake shaft seal
135	Retaining ring
136	Bolts - bearing cover
137	Spring lock washer
138	Key
139	Retaining ring
140	Key
140.1	Deflection seal (future)



Backstop Option

● bolt fitted with glue Omnifit or Loctite