



## 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 78. 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 88.
- 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
- Maximum RL - Please inquire
- Non standard RL's available
- To be used in horizontal positions  $\pm 5$  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 76-86
- **Environmental Considerations:** page 72
- **Optional Extras:** page 61 and back cover
- **Electrical Connection Diagrams:** pages 94-96.

### **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 88.
- 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 page 80.)	
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

= Optional extras

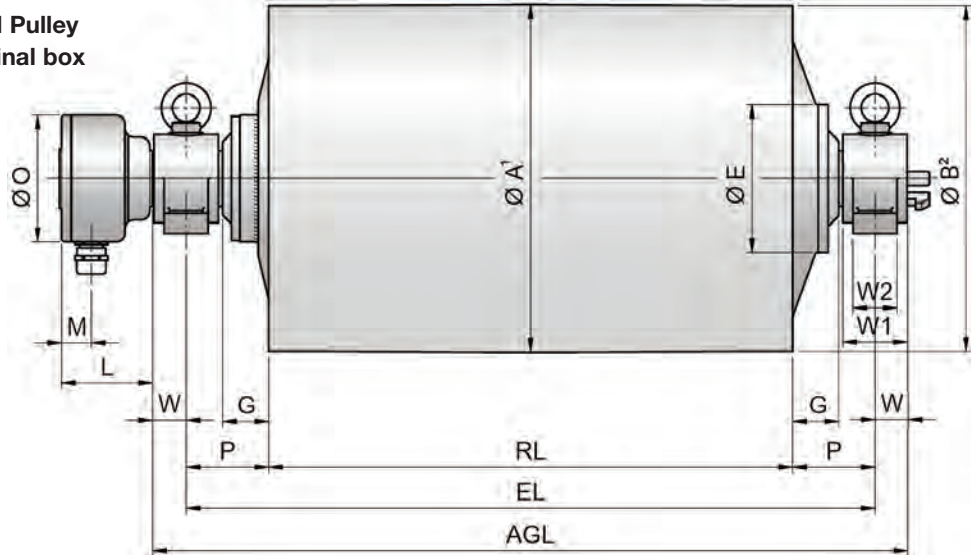
= An option with certain limitations. Please refer to Technical precautions pages 76-86!

= Fitted as standard

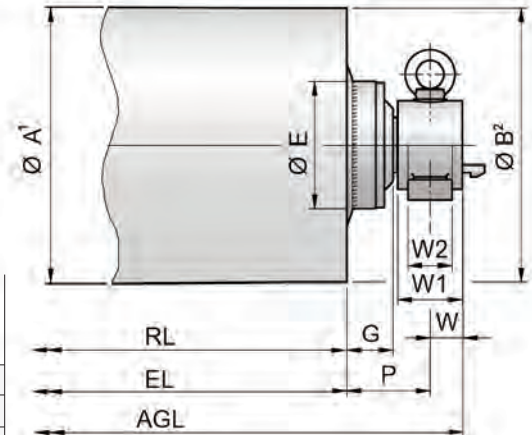


# Motorized Pulley 630M & 630H, Ø 24.80 in. (630 mm)

Motorized Pulley with terminal box

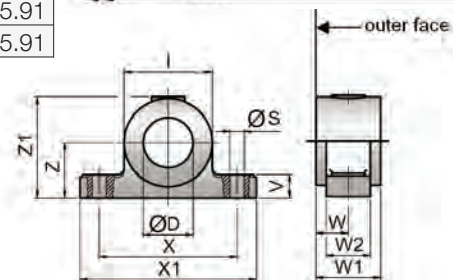


Idler Pulley<sup>3</sup>  
UT500H / UT502H



Model	Motorized Pulleys or Idler Pulleys									
	A in	B in	C in	D <sup>4</sup> in	E in	G in	L in	M in	O in	P in
630M	24.80	24.65	-	2.56	7.56	3.74	3.94	1.42	6.14	5.91
630H	24.80	24.65	-	3.54	10.55	3.46	6.50	2.13	9.06	5.91
UT500H	19.72	19.72	-	2.56	9.25	3.74	-	-	-	5.91
UT502H	19.72	19.72	-	3.54	8.90	3.35	-	-	-	5.91

- 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 Idler pulley shown is non-crowned version.
- 4 D dimension is shaft diameter.



Mounting brackets\*

Motorized Pulleys & Idler Pulleys Model	Material	Bracket Size*	Dimensions											Weight lbs
			D in	I in	S in	V in	W in	W1 in	W2 in	X in	X1 in	Z in	Z1 in	
630M & UT500H	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	17.64
630H & UT502H	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	41.89

\* Type AL bracket has gib key. Type ALO has no gib key. See position 69 on page 64.



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

Motor		No. Gear Stages	Model	Nominal belt speed <sup>1</sup> at Full Load 60 Hz fpm	Actual belt speed <sup>1</sup> at Full Load 60 Hz fpm	Belt Pull <sup>2</sup> lbs	Max. Radial Load <sup>3</sup> T1 + T2 lbs	Min. RL in	RL Dimension inches (RL>78.74" available on request) Weight in lbs <sup>5</sup>										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 <sup>4</sup>	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			10,300	29.53	927	949	970	992	1014	1039	1061			1084	1106	See Note <sup>4</sup>	AL65 & ALO65												
	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					10,300	29.53	960	982	1006	1027	1049			1074	1096			1119	1141	See Note <sup>4</sup>	AL65 & ALO65								
				300 384 480 600 768	313 401 526 586 730	2003 1574 1199 1075 863																													
20	4	2	630M	300 384 480 600 768	313 401 526 586 730	2003 1574 1199 1075 863							10,300	29.53	984	1006	1030			1052	1074			1099	1120			1143	1165	See Note <sup>4</sup>	AL65 & ALO65				
				384 480 600 768	400 526 586 730	1959 1478 1327 1064																													
25	4	2	630M	384 480 600 768	400 526 586 730	1959 1478 1327 1064									10,300	29.53	1006			1028	1052			1074	1096			1121	1142			1165	1187	See Note <sup>4</sup>	AL65 & ALO65
				600 768	627 800	1473 1155																													
30	2	2	630M	600 768	627 800	1473 1155	10,300	29.53									1006	1028	1052	1074	1096			1121	1142			1165	1187			See Note <sup>4</sup>	AL65 & ALO65		

Motor		No. Gear Stages	Model	Nominal belt speed <sup>1</sup> at Full Load 60 Hz fpm	Actual belt speed <sup>1</sup> at Full Load 60 Hz fpm	Belt Pull <sup>2</sup> lbs	Max. Radial Load <sup>3</sup> T1 + T2 lbs	Min. RL in	RL Dimension inches (RL>78.74" available on request) Weight in lbs <sup>5</sup>								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	See Note <sup>4</sup>	AL90 & ALO90																
				240 300 384 480 600 768	247 314 408 492 639 783	5107 4018 3093 2563 1975 1611																												
40	8	2	630H	240 300 384 480 600 768	247 314 408 492 639 783	5107 4018 3093 2563 1975 1611			16,600	37.40	1863	1894	1923	1955	1983	2007			2039	2069	See Note <sup>4</sup>	AL90 & ALO90												
				300 384 480 600 768	330 418 544 656 851	4723 3717 2861 2370 1828																												
50	6	2	630H	300 384 480 600 768	330 418 544 656 851	4723 3717 2861 2370 1828					16,600	37.40	1863	1894	1923	1955			1983	2007			2039	2069	See Note <sup>4</sup>	AL90 & ALO90								
				480 600 768	493 627 815 984	3830 3013 2321 1922																												
61	4	2	630H	480 600 768 960	493 627 815 984	3830 3013 2321 1922							16,600	37.40	1907	1939			1967	1999			2027	2051			2083	2114	See Note <sup>4</sup>	AL90 & ALO90				
				600 768 960	627 815 984	3683 2836 2349																												
75	4	2	630H	600 768 960	627 815 984	3683 2836 2349									16,600	37.40			1907	1919			1967	1999			2027	2051			2083	2114	See Note <sup>4</sup>	AL90 & ALO90

Idler Pulley				Model UT500H	10,300	29.53	578	600	638	658	677	697	716	735	See Note <sup>4</sup>	AL65 & ALO65
				Model UT502H	22,000	29.53	669	691	711	733	753	775	797	818		

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 77. 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 78.

4 Additional Motorized Pulley and Idler 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.

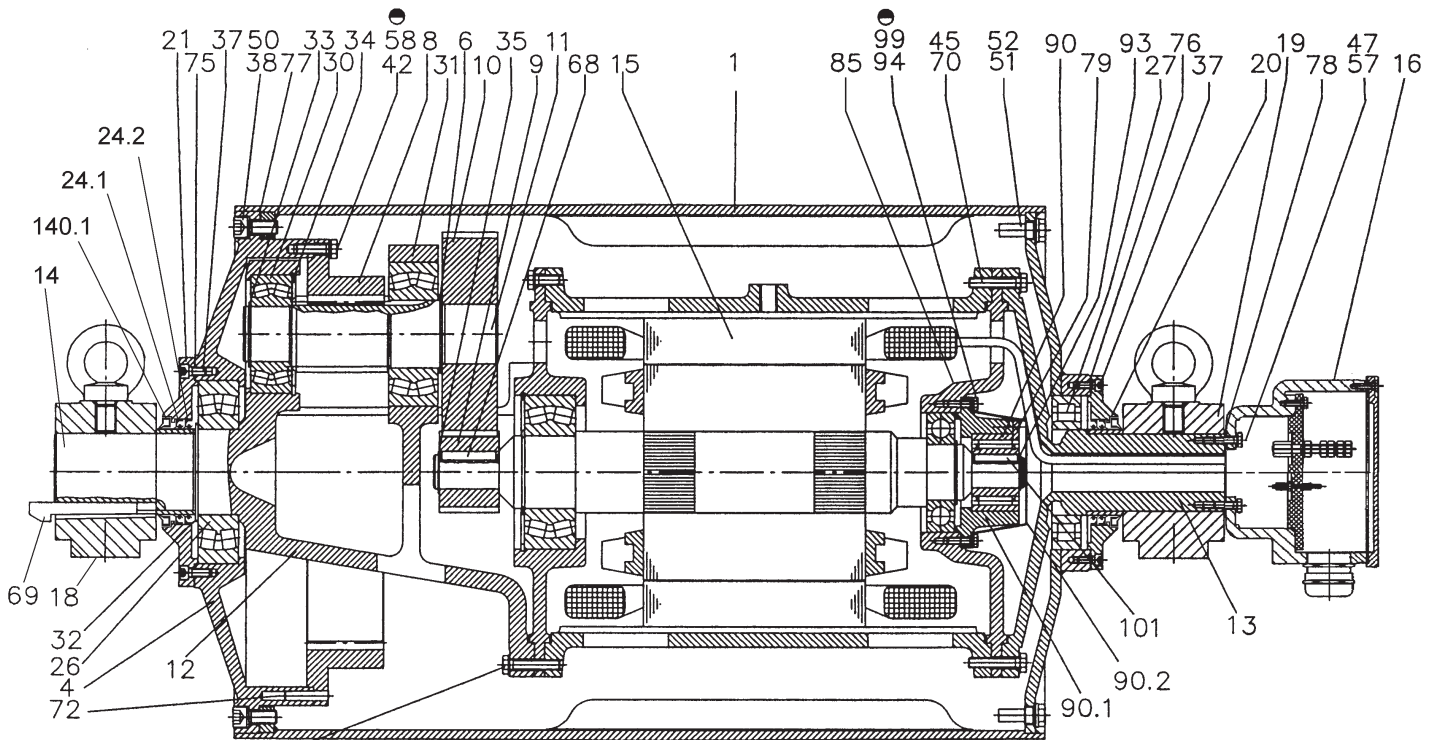
5 All weights shown above are for pulleys "fully lagged" with 3/8" thick rubber. For model 630H "partially lagged" pulleys add 4% to 7% to the weights shown above. See page 80 for "partial lagging." To calculate unlagged pulley weight subtract 1.2 lbs/in of Roller Length from above.



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

## Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	24.4	Shaft oil seal inner (lab option)	76	Gasket
4	End housing with geared rim	26	Bearing	77	Gasket
6	Distance washer (630H)	27	Bearing	78	Gasket
8	Geared rim	30	Bearing	79	Holding plate
9	Rotor pinion	31	Bearing	85	Motor flange for backstop/brake
10	Input wheel	32	Retaining ring	90	Backstop
11	Output pinion	33	Retaining ring	90.1	Backstop housing
12	Gear box including rear shaft	34	Retaining ring	90.2	Backstop cover
13	Front shaft	35	Retaining ring	93	Retaining ring
14	Rear shaft	37	Hexagon socket screw	94	Hexagon head screw
15	Stator complete	38	Hexagon socket screw	99	Spring washer
15.1	Rotor	42	Hexagon head screw	101	Key
16	Terminal box complete	44	Hexagon head screw	123	Grease nipple
17	Nipple (630M only)	45	Hexagon head screw	130	Brake shaft
18	Mounting bracket rear side	47	Hexagon head screw	131	Mounting bracket bearing cover
18.1	Mtg bracket rear side (lab option)	50	Washer	132	Roller bearing
19	Mounting bracket front side	51	Gasket	133	Brake shaft seal
19.1	Mtg bracket front side (lab option)	52	Magnetic oil plug	134	Brake shaft seal
20	Cover - front side	57	Washer	135	Retaining ring
20.1	Cover with labyrinth groove	58	Spring washer	136	Bolts - bearing cover
21	Cover - rear side	68	Key	137	Spring lock washer
21.1	Cover with labyrinth groove	69	Gib key	138	Key
23	Rear flange	70	Waved spring washer	139	Retaining ring
24.1	Shaft oil seal outer	72	Grooved pin	140	Key
24.2	Shaft oil seal inner	73	Set screw	140.1	Deflection seal (future)
24.3	Shaft oil seal outer (lab option)	75	Gasket		



Backstop Option

● bolt fitted with glue  
Omnifit or Loctite



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

## Sectional drawings

