



Motorized Pulley 800M & 800H, Ø 31.50 in. (800 mm)

Our 31.50" 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 800M is not strong enough to resist estimated belt tension, then select 800H.

M for Medium duty

A solid 2-stage gearbox enables the 800M to handle irregular loadings in harsh operating conditions. 800M uses motor and gearbox from 630H. Note that 800M outer dimensions do not match 800H

H for Heavy duty

800H 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 31.50" 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 67
- 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 76-86
- **Environmental Considerations:** page 72
- **Optional Extras:** page 65 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 800M & 800H

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 = 37.40" for 800M	x
	Min. RL = 45.28" for 800H ≤ 100 HP	x
	Min. RL = 55.12" for 800H > 100 HP	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

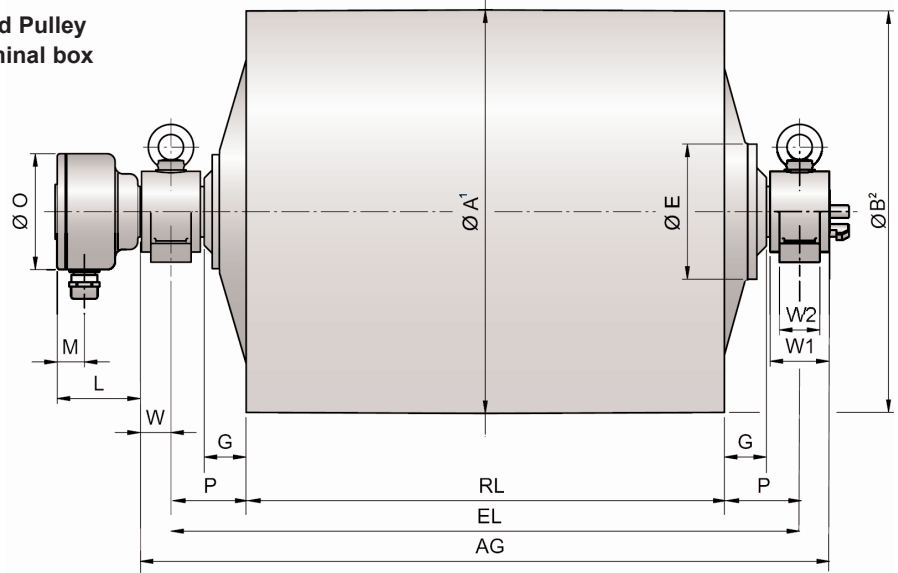
o = An option with certain limitations. Please refer to Technical precautions pages 76-86

Std. = Fitted as standard

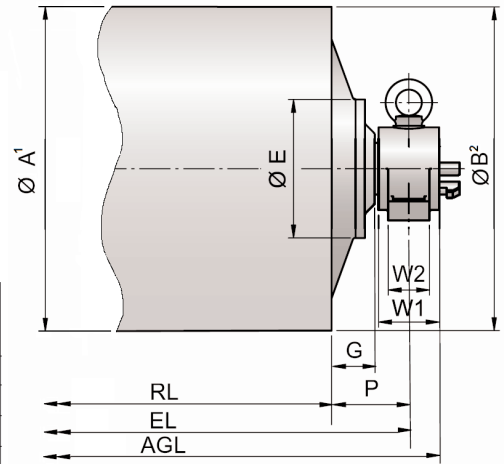


Motorized Pulley 800M & 800H, Ø 31.50 in. (800 mm)

Motorized Pulley with terminal box

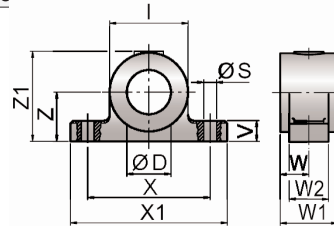


Idler Pulley³
UT630M / UT630H



Model	Motorized Pulleys or Idler Pulleys										
	A in	B in	C in	D ⁴ in	E in	G in	L in	M in	O in	P in	
800M	31.50	31.34	-	3.54	10.55	3.46	6.50	2.13	9.06	5.91	
800H	31.50	31.34	-	4.72	12.99	3.15	7.87	2.44	10.24	5.91	
UT630M	24.80	24.80	-	3.54	8.90	3.35	-	-	-	5.91	
UT630H	24.80	24.80	-	4.72	12.99	2.95	-	-	-	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	
800M & UT630M	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
800H & UT630H	Cast steel	AL120/ALO120	4.72	7.87	1.30	1.97	3.74	6.30	4.72	11.81	14.57	4.33	8.39	83.78

* Type AL bracket has gib key. Type ALO has no gib key. See position 69 on page 68.



Motorized Pulley 800M, 800H, 800HD, Ø 31.50 in. (800 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	53.15	longer than 53.15	
30	8	2	800M	300 384 480 600 768	312 396 515 621 806	2966 2333 1797 1489 1148	16,500	37.40	2118	2150	2179	2211	2241	2266	2291	2323	2354	See Note ⁴	AL90 & ALO90
40	8	2	800M	300 384 480 600 768	312 396 515 621 806	4045 3182 2451 2030 1565	22,000	37.40	2207	2239	2268	2300	2329	2354	2379	2411	2443		
50	6	2	800M	384 480 600 768 960	416 528 686 828 1075	3741 2944 2267 1877 1448	22,000	37.40	2207	2239	2268	2300	2329	2354	2379	2411	2443		
61	4	2	800M	600 768 960	614 786 983	3034 2386 1838	19,900	37.40	2251	2282	2312	2343	2373	2398	2423	2455	2486		
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								55.12	57.09	59.06	61.02	62.99	64.96	66.93	68.90	70.87	longer than 70.87	
75	**	3	800HD	192 240 300	**	**	**	51.18*	*	*	*	**	**	**	**	**	**	See Note ⁴	AL90 & ALO90
	8	2	800H	384	380	6087	45,000	55.12											
	6	2	800H	480 600 768 960 1064	507 617 740 879 1036	4565 3749 3124 2630 2231	45,000	45.28	4823	4881	4939	4997	5055	5114	5172	5230	5288		
100	8	3	800HD	240	**	**	**	61.02	-	-	-	**	**	**	**	**	**	See Note ⁴	AL90 & ALO90
	6	2	800H	300	**	**	**	51.18*	*	*	*	**	**	**	**	**	**		
	8	2	800H	384	380	8300	45,000	55.12											
122	**	3	800HD	300 384	**	**	**	61.02	-	-	-	**	**	**	**	**	**	See Note ⁴	AL90 & ALO90
	6	2	800H	480 600 768 960 1064	507 617 740 879 1036	7470 6134 5111 4260 3587 3043	45,000	55.12	4933	4991	5049	5108	5166	5224	5282	5340	5398		
	**	3	800HD	384 480 600	**	**	**	**	61.02	-	-	-	**	**	**	**	**		
150	**	3	800HD	384 480 600	**	**	**	61.02	-	-	-	**	**	**	**	**	**	See Note ⁴	AL90 & ALO90
	4	2	800H	768 960 1064	760 926 1111	6087 4998 4165	40,500	55.12	4878	4936	4994	5052	5111	5169	5227	5285	5343		
180	**	3	800HD	480 600	**	**	**	61.02	-	-	-	**	**	**	**	**	**	See Note ⁴	AL90 & ALO90
	4	2	800H	768 960 1064	760 926 1111	7304 5997 4998	40,500	55.12	4966	5024	5062	5141	5199	5257	5315	5373	5431		
Idler Pulley				Model UT630M			22,000	29.53	765	788	810	832	852	874	897	919	941	See Note ⁴	AL90 & ALO90
				Model UT630H			45,000	45.28	1608	1643	1678	1713	1749	1784	1819	1854	1889		

- 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 weight: Model 800M: 53.15" ≤ RL ≤ 78.74" Wt = 16.1 lbs/in; Model 800H & 800HD: 66.93" ≤ RL ≤ 78.74" Wt = 31.5 lbs/in. Additional Idler Pulley weight: Model UT630M: 53.15" ≤ RL ≤ 78.74" Wt = 11.2 lbs/in; Model UT630H: 66.93" ≤ RL ≤ 78.74" Wt = 18.0 lbs/in.
 - 5 All weights shown above are for pulleys "fully lagged" with 3/8" thick rubber. For "partially lagged" model 800M pulleys add 5% to 8% (for 800H pulleys add 3% to 4%) to the weights shown above. See page 80 for "partial lagging." To calculate unlagged pulley weight subtract 0.9 lbs/in of Roller Length from above.
- * Special "Short Roller Length" Option.
** Available September 2007.