



## Motorized Pulley 500L, 500M & 500H, Ø 500 mm

To match your requirements in diameter 500 mm, our product range offers three different loading performances for your **BULK** applications:

- **L** for Light-duty
- **M** for Medium-duty
- **H** for Heavy-duty

You have a choice.

Therefore, it is important to notice the differences to choose the right type of pulley for the right application based on estimated belt tension (radial load) = T1+T2. The actual radial load **MUST** be **LESS** than the max. allowable radial load shown in this catalogue.

Be aware of increased belt tensions using **multi-ply thick heavy belts** and/or larger belt widths.

If you do not find the belt tension needed in this diameter, you might have to choose a larger one.

### L for Light-duty

500L is meant for similar applications as 400M **except** for the fact that the belt requires a larger pulley diameter. (Motor/gearbox origin from 400M).

500L are typically used in grain storage, cement, steel, fertilizer and heavy mobile crushing & screening applications.

As to outer dimensions, 500L cannot replace 500H (Former TM500/TM501).

### M for Medium-duty

Using a solid and robust 3-stage gearbox, 500M provides the necessary torque & belt pull needed for low speeds combined with high power for irregular loadings.

(Motor/gearbox origin from 400H).

As to outer dimensions, 500M cannot replace 500H (Former TM500/TM501).

### H for Heavy-duty

The construction of 500H is the heaviest of this particular range with internal parts such as gearbox, Ø 65 mm shaft, matching bearings etc. are designed for tough, irregular, extreme and brutal working conditions.

### STANDARD SPECIFICATION of Motorized Pulley

- Crowned mild steel Ø 500 mm steel shell painted yellow – min. layer of 60 µm
- Bolted powder coated cast iron bearing housings and covers, all painted yellow – min. layer of 60 µm
- Mild steel shafts
- Shaft sealing system - degree of protection IP66/67(EN60034-5)
- Cast iron terminal box painted yellow – min. layer of 60 µm
- 3-phase induction motors with thermal protector
- 3-phase single voltage. Most 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
- Black painted brackets – KL60 for 500L and 500M available on request
- Yellow painted graphite cast iron mounting brackets – 500H only!
- Oil change recommended every 20.000 operational hours
- Minimum RL Please refer to page 53/59
- Maximum RL – Please inquire!
- Non standard RL's available
- To be used in horizontal positions ±5 degree only!
- Nitrided shaft sleeves

#### Please note:

- Special speeds available on request.
- Motorized Pulleys for non-horizontal positions available on request
- Parallel shell available. Diameter equal to dimension Ø A

### SEMI-RUST-FREE options

#### TS11 – (500L & 500M)

- Painted mild steel shell – min. layer of 120 µm
- Stainless steel shafts – AISI 303-4 range
- Painted cast iron end housings – min. layer of 120 µm
- Regreasable covers with labyrinth grooves and grease nipples in stainless steel – AISI 304 range
- Zinc-plated oil plugs
- Zinc-plated exterior bolts
- Shaft sealing system – degree of protection IP66/67 (EN60034-5)
- Painted terminal box – min. thickness layer of 120 µm

#### TS11 – (500H)

- Painted mild steel shell – min. layer of 120 µm
- Painted cast iron end housings – min. layer of 120 µm
- Stainless steel covers with labyrinth grooves – AISI 304 range
- Zinc-plated oil plugs – each with magnet
- Zinc-plated exterior bolts
- Shaft sealing system – degree of protection P66/67 (EN60034-5)
- Painted terminal box – min. layer of 120 µm
- Nickel plated mounting brackets with labyrinth grooves

#### TS12

- As TS11, but without re-greasable seals.
- Covers - standard

#### Please note:

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

**When ordering, please specify the required voltage, electrical connection and eventual TS-number, options, brackets and idler pulleys.**

- Environmental considerations: page 77-78
- Technical precautions: pages 81-92
- Optional extras: page 51 and back cover
- Connection Diagrams: page 100.



## OPTIONAL EXTRAS

### Motorized Pulley 500L, 500M & 500H

Specification		500L	500M & 500H
Semi-rust-free option	Re-greasable labyrinth seals!	TS11	TS11
Semi-rust-free option	Standard seals!	TS12	TS12
Dust explosion proof Motorized Pulleys - ATEX 95 - Zone 22 - for applications handling of dusty grain etc. According to European Directive 94/9/EC.		On request!	On request!
Black rubber lagging - STANDARD specifications:		o	o
- Smooth lagging - Hardness 60 ±5 Shore A		8 mm	8 mm
- Diamond lagging - Hardness 60 ±5 Shore A		8 mm	8 mm
White smooth rubber lagging (FDA). Oil, fat & grease resistant		x	x
SPECIAL lagging available on request - e.g. hot vulcanized, ceramic etc.		x	x
Electromagnetic brake		x	x
Min. RL dimensions increases by (mm)		100	100
Mechanical backstop	500L from RL750mm & 500M from RL800 mm	x	x
Insulation class F - Allowable ambient temperature: -25°C - +40°C		Std.	Std.
Insulation class H with synthetic oil		x	x
Parallel shell		x	x
Thermal protector		Std.	Std.
IP66/67 cast iron terminal box painted yellow		Std.	Std.
Shaft sealing system - degree of protection IP66/67 (EN60034-5)		Std.	Std.
3-phase single voltage (3 x 400V) or (3 x 690V), 50 Hz, with +/-10% tolerance - DIN IEC 38		Std.	Std.
Special voltages - 50 and/or 60Hz Please specify!		x	x
Dual voltage - delta/star - connection possibility!		x	x
CSA approved motors - available on request only!		x	x

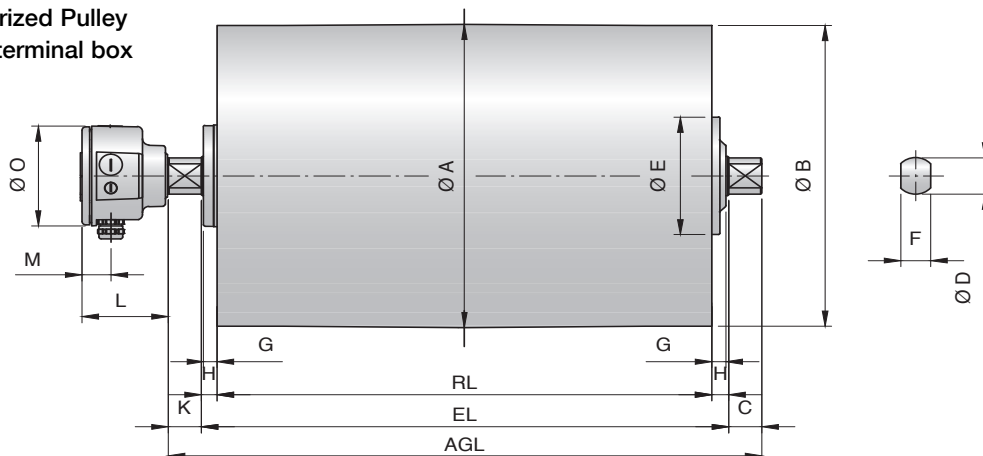
**x** = Optional extra's

**o** = An option with certain limitations. Please refer to Technical precautions pages 81-92!

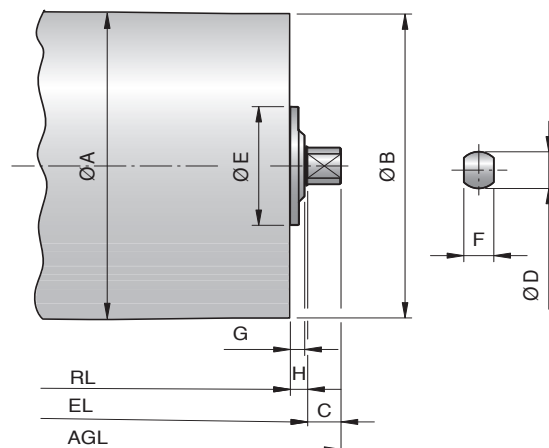
**Std.** = Fitted as standard

# Motorized Pulley 500L & 500M, Ø 500 mm

Motorized Pulley with terminal box

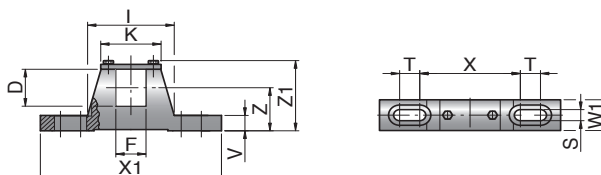


Idler Pulley UT400M & UT400H



Type	Motorized Pulley or Idler Pulley (UT)										Larger terminal box			
	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	K mm	L mm	M mm	N mm	O mm	
500L & 500M	501	497	50	60	194	45	23	25	50	131	46	-	165	
UT400M & UT400H	404	400	50	60	168	45	20	25	-					

Mounting bracket KL60



Motorized Pulleys & Idler Pulleys (UT) Type	Material	Bracket description	Dimensions												Weight kg
			D mm	F mm	I mm	K mm	S mm	T mm	V mm	W1 mm	X mm	X1 mm	Z mm	Z1 mm	
500L & 500M and UT400M & UT400H	Steel	KL60	60	45	130	90	18	30	25	50	150	270	70	115	4.8



# Motorized Pulley 500L & 500M, Ø 500 mm

# 50 Hz

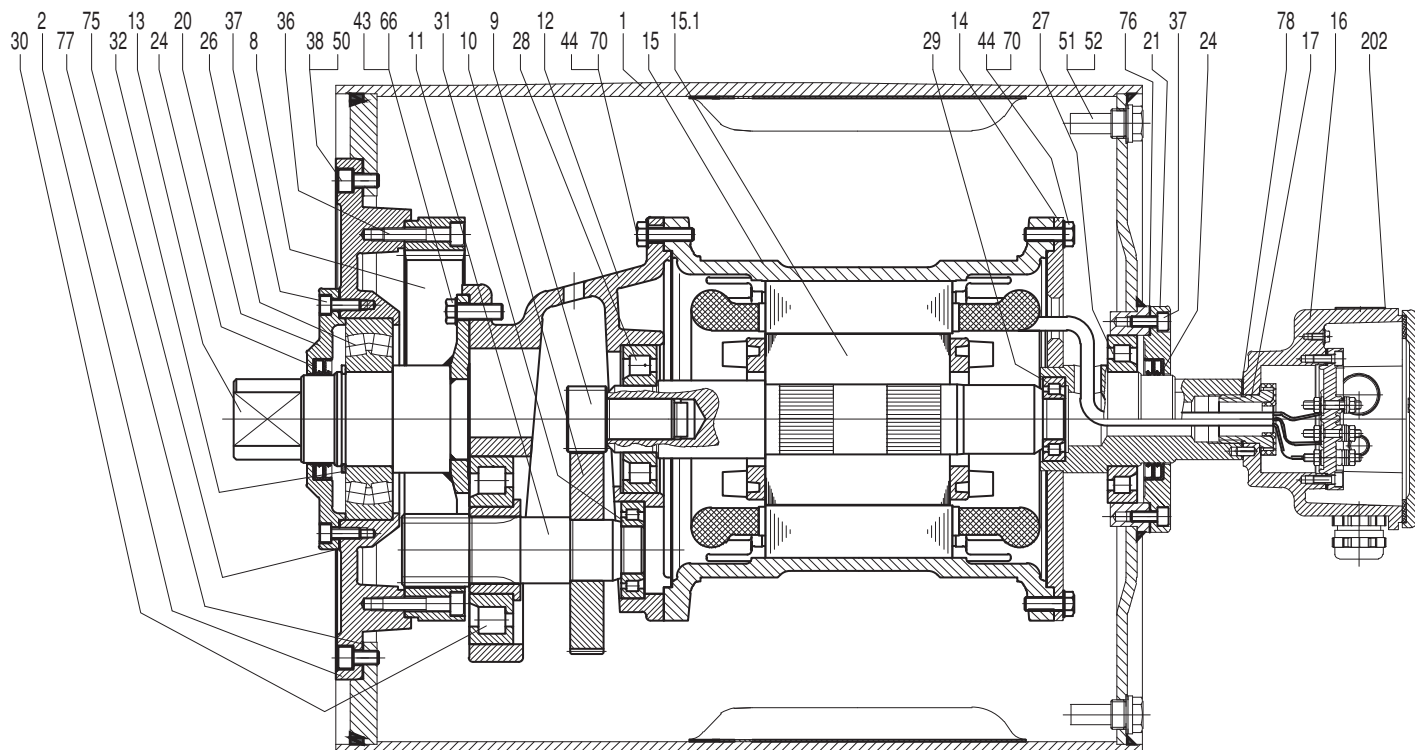
Motor			Nominal belt speed at Full Load 50Hz m/sec	Torque Nm	Belt Pull N	Max. Radial Load T1+T2 N	Special min. RL	Type	Weight in kg for STANDARD width										per 50 mm up to 2000	Type of Bracket	
Power kW/HP	No. of Poles	Gear stages							Dimension RL in mm (RL >2000 mm available on request)												
									600	650	700	750	800	850	900	950	1000				
2.20/3.00	8	3	0.20	2613	10542	42200	650	500M		258	265	272	279	286	293	300	307	7 kg	KL60		
			0.25	2090	8360																
			0.32	1633	6532																
		2	0.40	1306	5224	35000	600	500L	216	223	230	237	244	251	258	265	272				
			0.50	1045	4180																
			0.63	829	3316																
4.00/5.50	8	3	0.32	2969	11876	42200	650	500M		267	274	281	288	295	302	309	316	7kg	KL60		
			0.40	2375	9500																
			0.50	1900	7600																
		2	0.63	1508	6032	35000	600	500L	225	232	239	246	253	260	267	274	281				
			0.80	1188	4752																
			1.00	950	3800																
		5.50/7.50	4	3	0.50	2612	10448	42200	650	500M		258	265	272	279	286	293	300	307	7 kg	KL60
					0.63	2073	8292														
					0.80	1632	6528														
				2	1.00	1306	5214	35000	600	500L	216	223	230	237	244	251	258	265	272		
					1.25	1045	4180														
					1.60	816	3264														
7.50/10.00	6			3	0.63	2827	11308	42200	710	500M				278	285	292	299	306	313	7 kg	KL60
					0.80	2226	8904														
					1.00	1781	7124														
				4	1.25	1425	5700	35000	600	500L	222	229	236	243	250	257	264	271	278		
					1.60	1113	4452														
					2.00	891	3564														
	11.00/15.00	4	3	1.00	2612	10448	42200	710	500M				290	297	304	311	318	325	7 kg	KL60	
				1.25	2090	8630															
				1.60	1633	6532															
			2	2.00	1306	5224	35000	660	500L				255	262	269	276	283	290			
				2.50	1045	4180															
				3.15	829	3316															
15.00/20.00		2	3	1.25	2850	11400	42200	710	500M				290	297	304	311	318	325	7 kg	KL60	
				1.60	2227	8908															
				2.00	1782	7128															
			2	2.50	1425	5700	35000	660	500L				255	262	269	276	283	290			
				3.15	1131	4524															

Idler Pulley	40500	600	UT400M	113	119	126	132	138	142	148	154	160	7 kg	KL60
		50000	650	UT400H		124	131	137	143	147	153	159	165	7 kg

# Motorized Pulley 500L, Ø 500 mm

## Spare parts list and sectional drawings

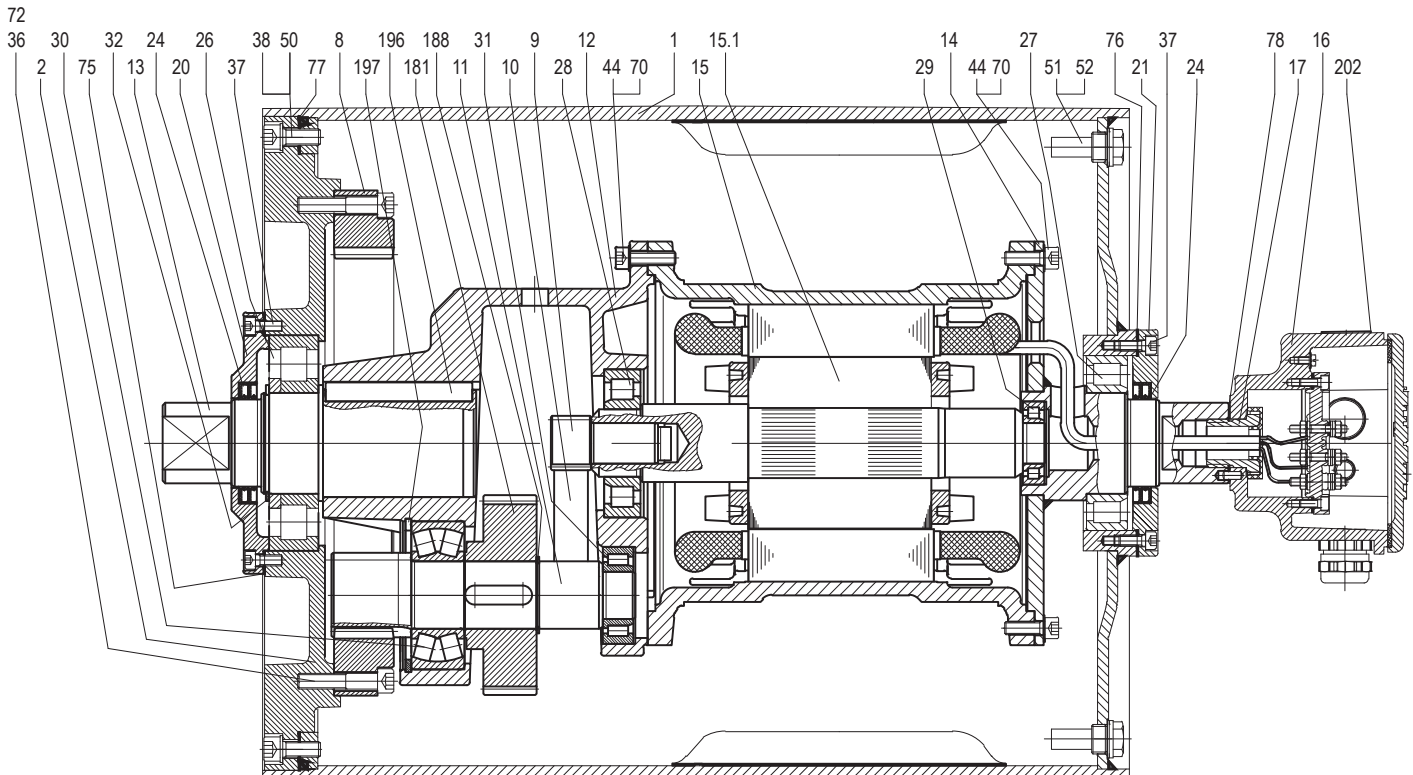
Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	27	Bearing	75	Gasket
2	End housing with geared rim	28	Bearing	76	Gasket
8	Geared rim	29	Bearing	77	Gasket
9	Rotor pinion	30	Bearing	78	Gasket
10	Input wheel	31	Bearing	85	Intermediate flange
11	Output pinion	32	Retaining ring	90	Backstop
12	Gear box – cast aluminium	36	Hexagon socket screw	91	Electromagnetic brake
13	Rear shaft	37	Hexagon socket screw	93	Retaining ring
14	Front shaft	38	Hexagon socket screw	94	Hexagon head screw
15	Stator complete	43	Hexagon socket screw	99	Waved spring washer
15.1	Rotor	44	Hexagon socket screw	101	Key
16	Terminal box complete	45	Hexagon screw	104	Distance washer
17	Nipple	50	Waved washer	120	Labyrinth cover
20	Cover – gear side	51	Gasket	121	Fixing bolt
20.1	Cover with labyrinth groove	52	Magnetic oil plug	122	O-ring
21	Cover – front side	53	Distance washer	123	Grease nipple
21.1	Cover with labyrinth groove	66	Waved washer	202	Motor data plate
24	2 Dust lip seals each side	70	Toothed washer		
26	Bearing	73	Set screw		



# Motorized Pulley 500M, Ø 500 mm

## Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	29	Bearing	91	Electromagnetic brake
2	End housing with geared rim	30	Bearing	93	Retaining ring
3	End housing	31	Bearing	94	Hexagon head screw
8	Geared rim	32	Retaining ring	99	Waved spring washer
9	Rotor pinion	36	Hexagon socket screw	101	Key
10	Input wheel	37	Hexagon socket screw	104	Distance washer
11	Output pinion	38	Hexagon socket screw	120	Labyrinth cover
12	Gear box – graphite cast iron	44	Hexagon socket screw	121	Fixing bolt
13	Rear shaft	50	Washer	122	O-ring
14	Front shaft	51	Gasket	123	Grease nipple
15	Stator complete	52	Magnetic oil plug	180	Intermediate pinion shaft
15.1	Rotor	53	Distance washer	181	Intermediate pinion
16	Terminal box complete	70	Toothed washer	182	Distance washer
17	Nipple	72	Toothed washer	184	Bearing
20	Cover rear side	73	Set screw	185	Bearing
20.1	Cover with labyrinth groove	75	Gasket	186	Key
21	Cover front side	76	Gasket	187	Key
21.1	Cover with labyrinth groove	77	Gasket	188	Retaining ring
24	2 Dust lip seals	78	Gasket	191	Retaining ring
26	Bearing	85	Intermediate flange for brake + backstop	196	Key
27	Bearing	90	Backstop	197	Retaining ring
28	Bearing			202	Motor data plate





# Motorized Pulley 500L & 500M, Ø 500 mm

## Sectional drawings

