

MOTORIZED PULLEYS FOR BELT CONVEYORS BULK HANDLING

GENERAL CATALOGUE

Moving ahead.





Abrasive sand, stone and gravel distribution. Motorized Pulley features: Reliable, compact, NO maintenance, IP66/67 seals



Sand, stone & gravel application featuring reliability day in and day out working 24 hours per day - 365 days per year.



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

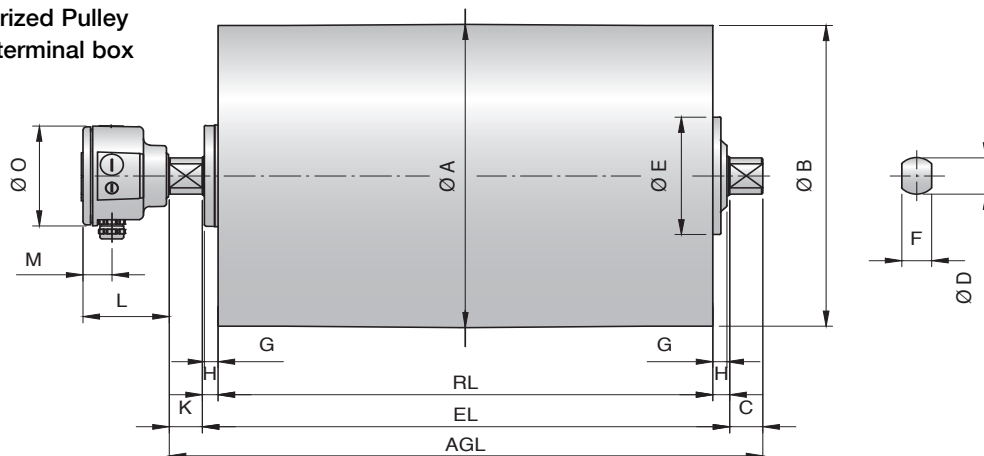
x = Optional extra's

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

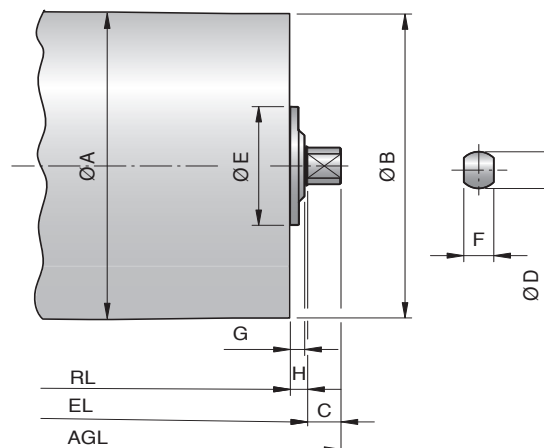
Std. = Fitted as standard

Motorized Pulley 500L & 500M, Ø 500 mm

Motorized Pulley
with terminal box

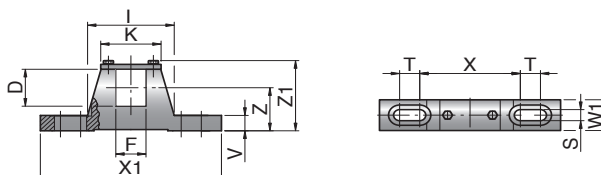


Idler Pulley
UT400M & UT400H



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

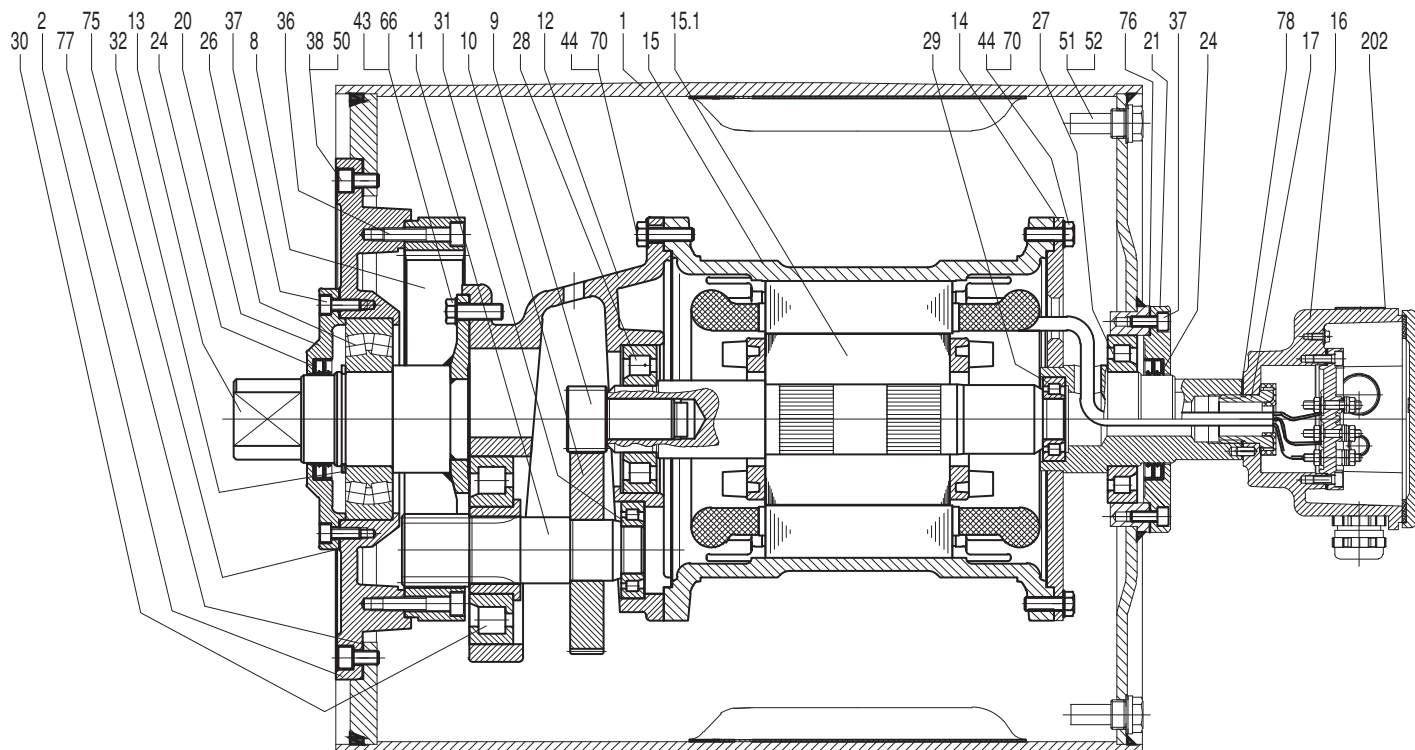


Motorized Pulleys & Idler Pulleys (UT) Type	Material	Bracket description	Dimensions												Weight kg
			D mm	F mm	I mm	K mm	S mm	T mm	V mm	W1 mm	X mm	X1 mm	Z mm	Z1 mm	
500L & 500M and UT400M & UT400H	Steel	KL60	60	45	130	90	18	30	25	50	150	270	70	115	4.8

Motorized Pulley 500L, Ø 500 mm

Spare parts list and sectional drawings

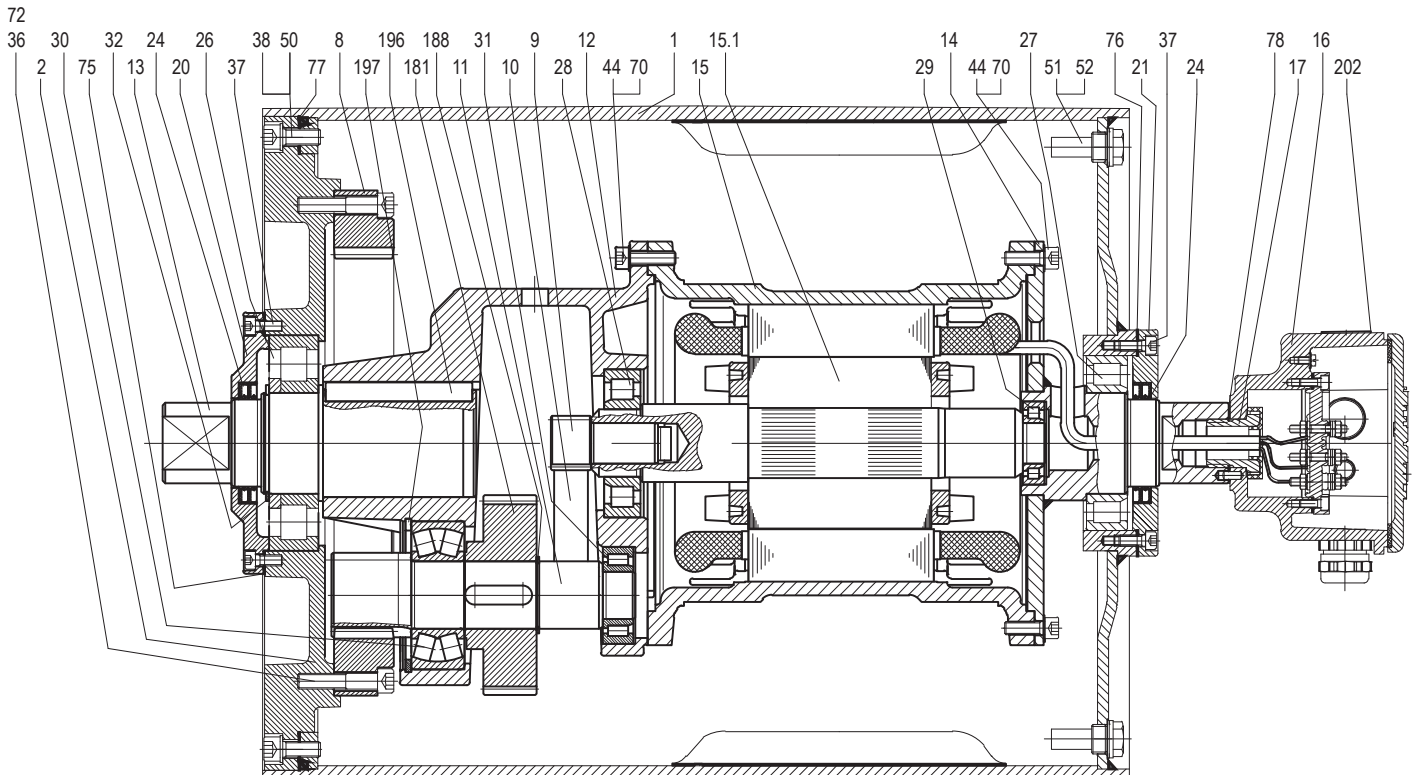
Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	27	Bearing	75	Gasket
2	End housing with geared rim	28	Bearing	76	Gasket
8	Geared rim	29	Bearing	77	Gasket
9	Rotor pinion	30	Bearing	78	Gasket
10	Input wheel	31	Bearing	85	Intermediate flange
11	Output pinion	32	Retaining ring	90	Backstop
12	Gear 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

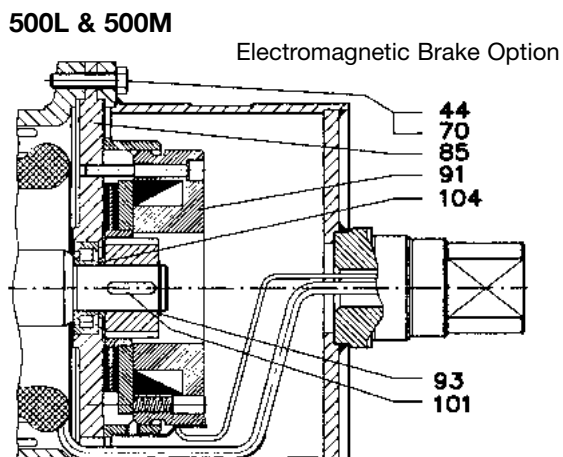
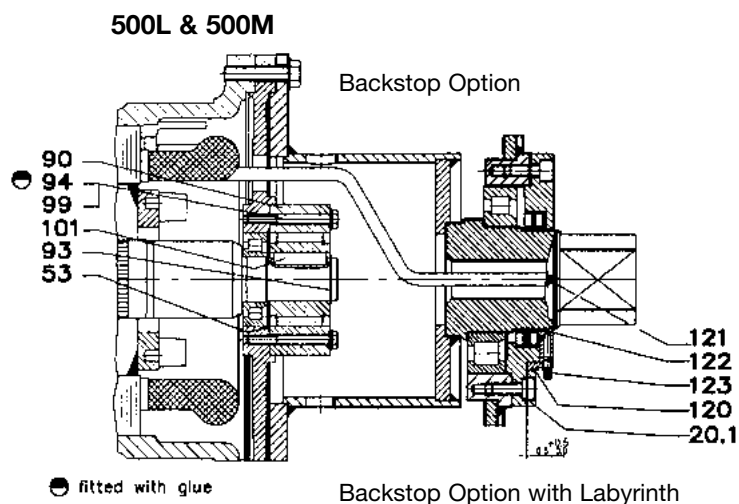
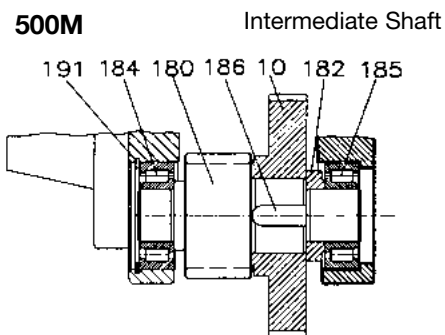
Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	29	Bearing	91	Electromagnetic brake
2	End housing with geared rim	30	Bearing	93	Retaining ring
3	End housing	31	Bearing	94	Hexagon head screw
8	Geared rim	32	Retaining ring	99	Waved spring washer
9	Rotor pinion	36	Hexagon socket screw	101	Key
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





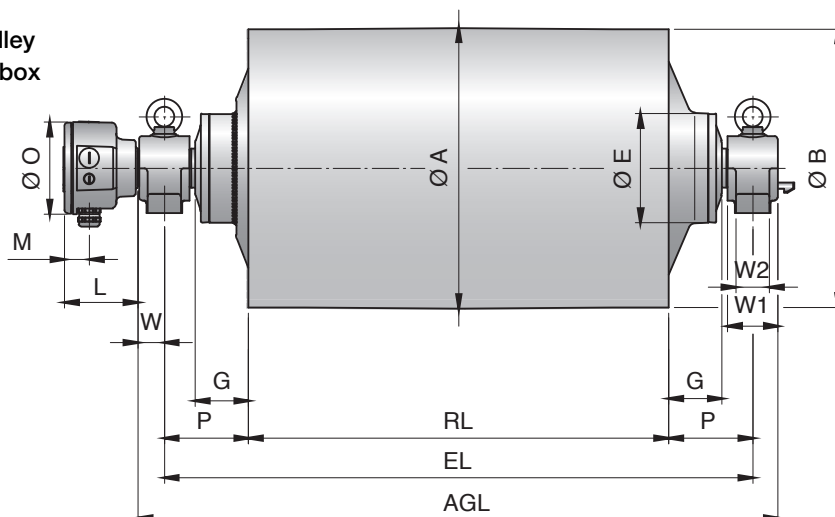
Fertilizer - 35 year old drive and still working round the clock!



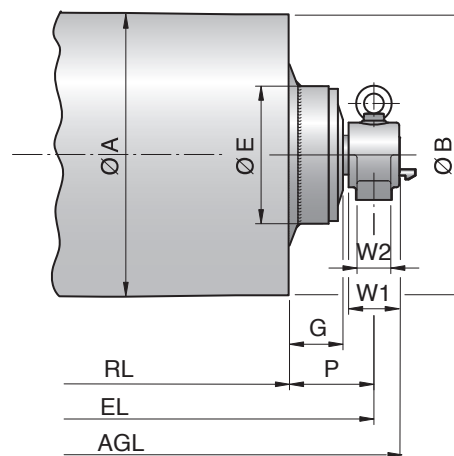
Limestone application. Features: Compact, robust, reliable, NO maintenance. The right choice by experience!

Motorized Pulley 500H, Ø 500 mm

Motorized Pulley with terminal box



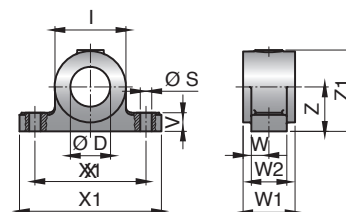
Idler Pulley UT500H



Type	A mm	B mm	C mm	D mm	E mm	G mm	L mm	M mm	O mm	P mm
500H	501	497	-	65	192	95	131	46	165	150
500H (22 & 30kW)	521*	517*	-	65	235	95	166	54	230	150
UT500H	501	497	-	65	235	95	-	-	-	150

* including ceramic lagging

Mounting bracket AL65 & ALO65



Motorized Pulleys & Idler Pulleys (UT) Type	Material	Bracket description	Dimensions												Weight kg
			D mm	I mm	S mm	V mm	W mm	W1 mm	W2 mm	X mm	X1 mm	Z mm	Z1 mm		
500H & UT500H	Spheroidal cast iron	AL65 / ALO65	65	115	23	34	45	90	60	180	240	80	141	8.0	



Motorized Pulley 500H, 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	Min. RL	Type	Weight in kg for STANDARD width										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	per 50 mm up to 2000		
5.50/ 7.50	8	2	0.50	2612	10427	46000	750	500H											8 kg	AL65 / ALO65
			0.63	2073	8276															
			0.80	1632	6515															
	6	2	1.00	1306	5214															
			1.25	1045	4172															
			1.60	816	3258															
			2.00	653	2607															
			2.50	522	2084															
7.50/ 10.00	8	2	0.63	2827	11285	46000	750	500H											8 kg	AL65 / ALO65
			0.80	2226	8887															
			1.00	1780	7106															
	6	2	1.25	1424	5685															
			1.60	1113	4443															
			2.00	890	3553															
			2.50	712	2843															
11.0/ 15.0	6	2	1.00	2611	10423	46000	750	500H											8 kg	AL65 / ALO65
			1.25	2089	8340															
			1.60	1632	6515															
			2.00	1306	5214															
			2.50	1045	4172															
15.0 15.0/ 20.0	4	2	1.00	3644	14450	46000	750	500H											8 kg	AL65 / ALO65
			1.25	2850	11377															
			1.60	2226	8886															
	4	2	2.00	1781	7110															
			2.50	1425	5689															
			3.15	1131	4515															
18.5 25.0	4	2	1.25	3596	14356	46000	750	500H											8 kg	AL65 / ALO65
			1.60	2746	10962															
			2.00	2197	8771															
			2.50	1757	7014															
			3.15	1395	5569															
22.0/ 30.0	4	2	1.60	3444	13750	46000	850	500H											8 kg	AL65 / ALO65
			2.00	2611	10423															
	2	2	2.50	2089	8340															
			3.15	1600	6385															
1*) 30.0/ 40.0	4	2	1.60	4236	16977	46000	850	500H											27 kg	AL65 / ALO65
			2.00	3801	15236															
			2.50	3049	12222															
			3.15	2498	10012															
			4.00	1901	7618															

1*) Please note the 30kW motor will be delivered with 10mm bonded ceramic lagging!

Idler Pulley	46000	600	UT500H							212	220	229	237	246	255	8 kg	AL65 / ALO65

Sectional drawings: please refer to pages 68-70!