

Motorized Pulley 165LS

Solid powerful drive for high use conveyors



Product description

Motorized pulley very robust and able to provide high torques and withstand high radial loads.

Characteristics

- Salt water resistant aluminum bearing housing
- Induction motor three phases alternating current
- Dual power supply
- Integral motor protection
- Steel- hardened helical spur gear
- Low noise operation
- Maintenance free
- Lifetime lubrication
- Reversible operation

Applications

- Conveyors for heavy and frequent use
- Logistics applications
- Airport and postal conveyors
- Warehouse loading conveyors
- Telescopic conveyors
- Agricultural plants
- Manufacturing of food processes
- Modular belts, steel or plastic applications
- Dry, damp and frequent wash applications

| Technical data | |
|--|--|
| Motor data | |
| Type of Motor | Asynchronous squirrel-cage, IEC 34 (VDE 0530) |
| Insulation class of motor windings | Class F, IEC 34 (VDE 0530) |
| Derated windings (20% power reduction) | On request for applications without belt |
| Voltage | 230/400 V \pm 5% (IEC 34/38) Special voltage on request |
| Frequency | 50/60 Hz |
| Internal shaft sealing system | Double-lipped FPM or nitrile rubber, NBR |
| Protection rate | IP66 |
| Thermal protection | Bimetallic Contact |
| Ambient temperature, 3-phase motor | -25 to +40 °C |
| General technical data | |
| Max. Roller length (RL) | 1800 mm |

All data and values declared in the catalogue refer to operation with a frequency of 50 Hz.





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Materials

The following Motorized Pulley components are available in different versions, as shown in the below chart, with further options for the material type as indicated.

| Components | Version | Materiale | | | | |
|-----------------------|-----------------------------------|-----------|-------|-----------------|--------------|---------|
| | | Aluminium | Steel | Stainless steel | Brass/Nickel | Polymer |
| Shell | Crowned | | Std | TS8N | | |
| | Cylindrical | | Std | TS8N | | |
| | Cylindrical + key (for sprockets) | | Std | TS8N | | |
| | Special crowns and grooves | | Std | TS8N | | |
| End housing | Standard | Std | | TS8N | | |
| | With V-grooves | | Std | TS8N | | |
| | With O-grooves | | Std | TS8N | | |
| | With chain sprockets | | Std | TS8N | | |
| Shaft | Standard | | Std | TS8N | | |
| | Cross-drilled and threaded, M10 | | Std | TS8N | | |
| Electrical connection | Straight connector | | | TS8N | Std | |
| | Elbow connector | | | TS8N | | Std |
| | Terminal box | Std | | TS8N | | |

Please contact Rulmecca for further versions.

TS8N Version - End Caps in stainless steel with PTFE lip seals.

Options

- Rubber Lagging for standard belts
- Profiled lagging for plastic modular belts
- Profiled lagging for thermoplastic belts
- Sprockets for plastic modular belts
- Backstop / Anti run-back bearings
- Electromagnetic brake
- Rectifiers
- Encoder
- Food-grade Oil (EU, FDA and USDA)
- Non-horizontal mounting (more than $\pm 5^\circ$)
- Dual speed motor
- Version TS7N - as TS8N but with re-greasable labyrinth seals

Note: The combination of encoder and electromagnetic brake is not possible.

Accessories

- Mounting brackets
- Idler Pulleys
- Rollers for conveyors
- Frequency Converters

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Technical data for motorized pulley 165LS - 3 phase - 50Hz

| Rated power [kW] | Poles n. | Gear stages n. | Gear ratio i | Rated speed of the shell [m/s] | Rated revolutions of the shell [min ⁻¹] | Rated torque of Motorized pulley [Nm] | Rated tangential force [N] | Max. belt tension T1+T2 [N] | Min. length RL [mm] | |
|---------------------|-------------|-------------------|-----------------|-----------------------------------|--|--|-------------------------------|--------------------------------|------------------------|------|
| 0,37 | 6 | 3 | 61,56 | 0,13 | 14,9 | 236 | 2865 | 19000 | 400 | |
| | | | 49,75 | 0,16 | 18,5 | 194 | 2350 | | | |
| | 4 | 3 | 61,56 | 0,20 | 22,3 | 158 | 1910 | 11000 | 350 | |
| | | | 49,75 | 0,25 | 27,6 | 128 | 1545 | | | |
| | | | 37,93 | 0,32 | 36,3 | 97 | 1175 | | | |
| | | | 30,05 | 0,40 | 45,8 | 77 | 930 | | | |
| | | | 23,76 | 0,50 | 57,9 | 61 | 735 | | | |
| | | | 19,20 | 0,63 | 71,6 | 49 | 595 | | | |
| | | | 14,64 | 0,80 | 93,9 | 38 | 455 | | | |
| | | | 11,60 | 1,00 | 118,5 | 30 | 360 | | | 7600 |
| 0,75 | 6 | 3 | 46,23 | 0,16 | 20,4 | 340 | 4100 | 19000 | 400 | |
| | 4 | 3 | 61,56 | 0,20 | 22,8 | 304 | 3685 | 11000 | 400 | |
| | | | 49,75 | 0,25 | 28,2 | 246 | 2980 | | | |
| | | | 37,93 | 0,32 | 37,0 | 187 | 2270 | | | |
| | | | 30,05 | 0,40 | 46,8 | 148 | 1800 | | | |
| | | 2 | 23,76 | 0,50 | 59,1 | 117 | 1425 | | | |
| | | | 19,20 | 0,63 | 73,2 | 95 | 1150 | | | |
| | | | 14,64 | 0,80 | 96,0 | 72 | 880 | | | |
| | | | 11,60 | 1,00 | 121,1 | 57 | 695 | | | 7600 |
| | 1,10 | 4 | 3 | 46,23 | 0,25 | 30,7 | 325 | 3940 | 11000 | 400 |
| 37,93 | | | | 0,32 | 37,4 | 267 | 3230 | | | |
| 2 | | 2 | 61,56 | 0,40 | 46,0 | 222 | 2695 | 11000 | 400 | |
| | | | 49,75 | 0,50 | 56,9 | 180 | 2180 | | | |
| | | | 37,93 | 0,63 | 74,6 | 137 | 1660 | | | |
| | | | 30,05 | 0,80 | 94,2 | 108 | 1315 | | | |
| | | 2 | 23,76 | 1,00 | 119,1 | 86 | 1040 | | 7600 | 400 |
| | | | 19,20 | 1,25 | 147,4 | 69 | 840 | | | |
| | | | 14,64 | 1,60 | 193,3 | 53 | 640 | | | |
| | | | 11,60 | 2,00 | 244,0 | 42 | 510 | | | |
| 9,43 | 2,50 | 300,1 | 34 | 415 | 400 | | | | | |
| 1,50 | 2 | 3 | 46,23 | 0,50 | 61,6 | 237 | 2880 | 11000 | 400 | |
| | | | 37,93 | 0,63 | 75,1 | 195 | 2360 | | | |
| | | | 30,05 | 0,80 | 94,8 | 154 | 1870 | | | |
| | | 2 | 23,76 | 1,00 | 119,9 | 121 | 1465 | 7600 | 400 | |
| | | | 19,20 | 1,25 | 148,4 | 98 | 1185 | | | |
| | | | 14,64 | 1,60 | 194,7 | 74 | 900 | | | |
| | | | 11,60 | 2,00 | 245,7 | 59 | 715 | | | |
| | | | 9,43 | 2,50 | 302,2 | 48 | 580 | | | |
| | | | 7,80 | 3,15 | 365,4 | 40 | 480 | | | 7100 |



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Technical data for Motorized pulley 165LS - 3phase - 50Hz

| Rated power [kW] | Poles n. | Gear stages n. | Gear ratio i | Rated speed of the shell [m/s] | Rated revolutions of the shell [min ⁻¹] | Rated torque of Motorized pulley [Nm] | rated tangential force [N] | Max. belt tension T1+T2 [N] | Min. length RL [mm] |
|---------------------|-------------|-------------------|-----------------|-----------------------------------|--|--|-------------------------------|-----------------------------------|------------------------|
| 2,20 | 2 | 3 | 46,23 | 0,50 | 61,9 | 330 | 3990 | 11000 | 430 |
| | | | 37,93 | 0,63 | 75,4 | 270 | 3280 | | |
| | | | 30,05 | 0,80 | 95,2 | 215 | 2600 | | |
| | | | 12,43 | 1,00 | 230,1 | 175 | 2110 | | |
| | | 2 | 7600 | 20,21 | 1,25 | 141,5 | 145 | 1750 | 430 |
| | | | | 14,64 | 1,60 | 195,4 | 105 | 1270 | |
| | | | | 11,60 | 2,00 | 246,6 | 84 | 1010 | |
| | | | | 9,43 | 2,50 | 303,3 | 68 | 820 | |
| 7,80 | 3,15 | 366,7 | 55 | 675 | 7100 | 430 | | | |

Standard weights for Motorized pulley 165LS

| Rated power [kW] | Poles n. | Standard weight [kg] for standard RL [mm] | | | | | | | | | | | | | |
|---------------------|-------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 |
| 0,37 | 6 | --- | 30,0 | 31,5 | 33,0 | 34,0 | 35,0 | 36,0 | 37,5 | 39,0 | 40,0 | 41,0 | 42,5 | 44,0 | 45,0 |
| | 4 | 26,0 | 28,0 | 29,5 | 31,0 | 32,0 | 33,0 | 34,0 | 35,5 | 37,0 | 38,0 | 39,0 | 40,5 | 42,0 | 43,0 |
| 0,75 | 6 | --- | 33,0 | 34,5 | 36,0 | 37,0 | 38,0 | 39,0 | 40,5 | 42,0 | 43,0 | 44,0 | 45,5 | 47,0 | 48,0 |
| | 4 | --- | 31,0 | 32,5 | 34,0 | 35,0 | 36,0 | 37,0 | 38,5 | 40,0 | 41,0 | 42,0 | 43,5 | 45,0 | 46,0 |
| 1,10 | 4 | --- | 34,0 | 35,5 | 37,0 | 38,0 | 39,0 | 40,0 | 41,5 | 43,0 | 44,0 | 45,0 | 46,5 | 48,0 | 49,0 |
| | 2 | --- | 33,0 | 34,5 | 36,0 | 37,0 | 38,0 | 39,0 | 40,5 | 42,0 | 43,0 | 44,0 | 45,5 | 47,0 | 48,0 |
| 1,50 | 2 | --- | 34,0 | 35,5 | 37,0 | 38,0 | 39,0 | 40,0 | 41,5 | 43,0 | 44,0 | 45,0 | 46,5 | 48,0 | 49,0 |
| 2,20 | 2 | --- | 37,0 | 37,5 | 38,0 | 39,0 | 40,0 | 41,0 | 42,5 | 44,0 | 45,0 | 46,0 | 47,5 | 49,0 | 50,0 |

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Cable Specification

Available cable options:

- Standard, screened
- Standard, unscreened
- Halogen-free, screened
- Halogen-free, unscreened

Available lengths: 1 / 3 / 5 m.

Min.Length with Option

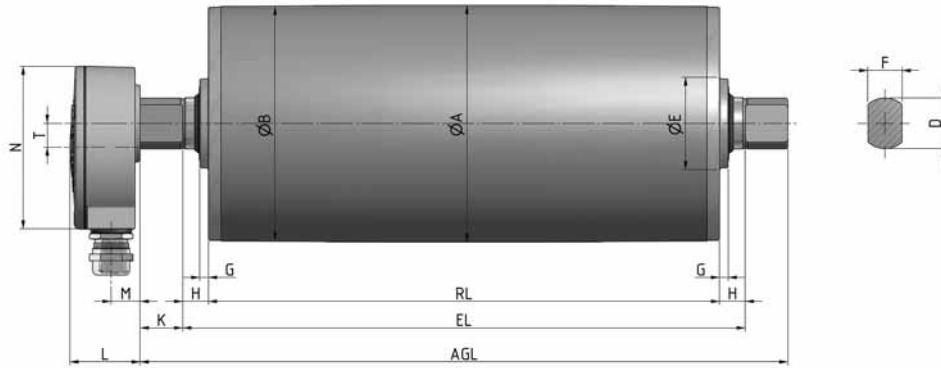
The following options increase the minimum length of the motorized pulley.

| Option | RL min. with option mm |
|-------------|------------------------|
| Brake | RL min. + 50 mm |
| Encoder SKF | RL min. + 0 mm |
| Encoder RLS | RL min. + 50 mm |

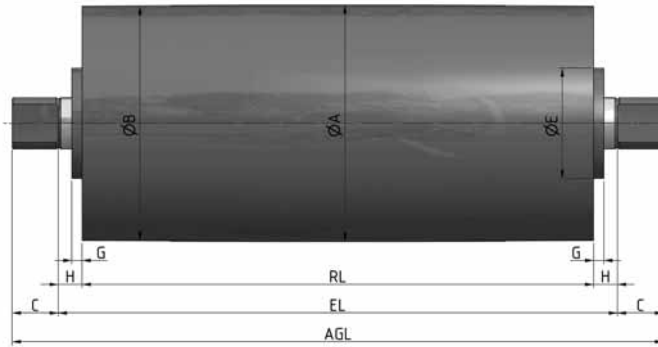


Motorized Pulley 165LS

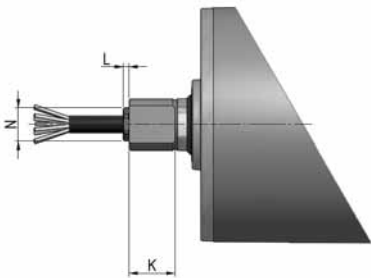
Solid powerful drive for high use conveyors



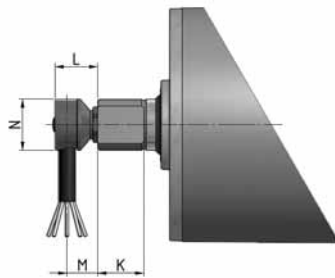
Motorized pulley standard version with Terminal box in aluminium.



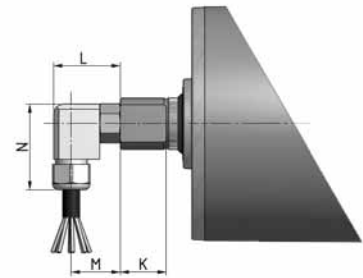
Idler pulley in stainless steel (TS).



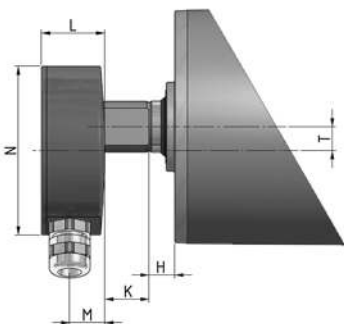
Straight connector in brass or in stainless steel.



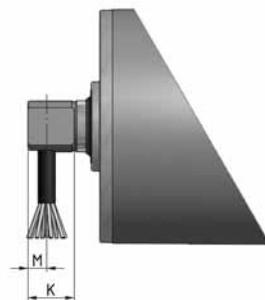
Elbow connector in stainless steel.



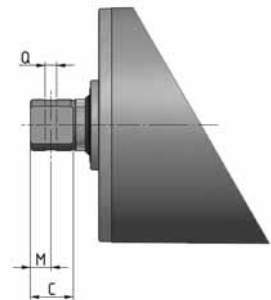
Elbow connector in polyamide.



Terminal box in stainless steel.



Cable connector 90° with threaded shaft.



Shaft, cross-drilled and threaded.

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| Type/Option | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | K mm | L mm | M mm | N mm | Q mm | T mm |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Motorized Pulley 165LS Standard version with Terminal Box in Aluminium | 165 | 163,5 | 45 | 40 | 80 | 30 | 10 | 20 | 45 | 41 | 17 | 95 | | 14 |
| Terminal Box in Stainless steel | | | | | | | | | 45 | 37 | 20,5 | 99 | | 14 |
| Idler Pulley in stainless steel (TS) | | | | | 64,5 | | 8 | | 47 | | | | | |
| Straight connector in brass or stainless steel | | | | | | | | | 47 | 4 | | 27 | | |
| Elbow connector in stainless steel | | | | | | | | | 47 | 25 | 18 | 30 | | |
| Elbow connector in Polyamide | | | | | | | | | 47 | 39 | 29 | 50 | | |
| Cable Connector 90° with threaded shaft | | | | | | | | | 47 | | 8-11 | | | |
| Cross-drilled and threaded shaft | | | | | | | | | 47 | | 23,5 | | M10 | |