



Motorized Pulley 138E, Ø 138 mm

Motorized Pulley 138E, with machined helical gear box, performs an efficiency, in a compact diameter of 138 mm only. With a min RL of 300 mm and powers ranging from 0.10 to 1.0kW this size of motorized pulley is suitable for most duties requiring such a small diameter - e.g.:

- Light agriculture and bulk solids handling conveyors
- Mobile or portable conveyors
- As a drive unit for brush cleaners etc.

Motorized pulley 138E has standard IP66/67 enclosure and is available in complete stainless steel execution for wash down application.

For the choice of the Motorized Pulley it is very important to know or to calculate the belt tension T1+T2 (radial load). This **MUST NOT OVERCOME** the "max. radial load" allowed as shown in the catalogue. Be careful to very high belt tensions when using thick, heavy and/or large belts.

If the type 138E cannot provide the necessary max. radial load T1+T2, you have to choose a Motorized Pulley with a bigger diameter.

STANDARD SPECIFICATION of motorized pulley

- Crowned mild steel shell, outside diameter 138mm.
- Mild steel shafts.
- Shell and shafts treated with anti-rust wax.
- Die cast aluminium bearing houses.
- Gearbox from die cast aluminium 2- and 3-stages.
- Sealing system-degree of protection IP66/67 (EN60034-5).
- Die cast aluminium terminal box with WAGO clamp.
Voltage: most common globally used voltages available. Please specify!
- 3-phase induction motor with one rated voltage – either low or high voltage
- Available in both 50Hz or 60Hz.
- Star connection (Delta connection on request).
- Motor windings with insulation class F (insulation class H on request).
- Dynamical balanced rotor.
- Two oil plugs (one with magnet).
- Minimum roller length (RL) 300mm (0.75kW: min RL 320mm).
- Max. RL 1800mm (from RL800 with reinforced shaft, from RL1000 plus reinforced shell).
- Standard mineral oil ISOVG150 (synthetic oil ISOVG220 on request).
- Oil change recommended every 20.000 operational hours.
- Single phase AC motors available in 0.20, 0.37 and 0.55kW, supplied with all necessary run and start capacitors (if needed) together with current depending relay.
- Without start capacitor the starting torque is 70% of the nominal torque only
- Horizontal installation (angled and vertical installation on request)

STAINLESS STEEL

execution TS 7N

- Crowned stainless steel shell (AISI304), outside diameter 138 mm.
- Stainless steel shafts (AISI303/304).
- Stainless steel covered - ASI 304 - aluminium bearing housing
- Re-greasable labyrinth seals (AISI304).
- FDA & USDA food grade grease
- Option: FDA & USDA food grade recognized oil.
- Fully stainless steel (AISI304) terminal box.
- Fully stainless steel (AISI304) straight connector.
- Two stainless steel oil plugs (one with magnet).

TS7N - solid housing

- As TS7N but with massive stainless steel bearing housing

TS8N

- As TS7N but with non-re-greasable labyrinth seals

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

- Environmental consideration: page 77
- Technical precautions: page 81-92,
- Optional extras: page 9 and back cover,
- Connection diagram: page 98-99,



OPTIONAL EXTRAS

Motorized Pulley 138E

Specifications

138E

| | | |
|---|-------------------------------|-------------|
| Total stainless steel option AISI 304 range | Re-greasable labyrinth seals! | x |
| Food grade oil & grease - FDA & USDA recognized - available on request | | x |
| 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! |
| TOTAL acid resistant stainless steel option - AISI 316 | | x |
| Black rubber lagging - STANDARD specifications: - Smooth lagging - Hardness 60 ±5 Shore A - Diamond lagging - Hardness 60 ±5 Shore A | | o |
| White smooth rubber lagging (FDA). Oil, fat & grease resistant | | o |
| SPECIAL lagging available on request - e.g. hot vulcanized etc. | | o |
| Single phase motors available on request | | x |
| Electromagnetic brake | | x |
| Min. RL dimensions by (mm) | | 50 |
| Mechanical backstop | | x |
| Modified for vertical mounting | | o |
| Modified for mounting between 5° - ≤90° - e.g. for magnetic separators | | o |
| Insulation class F - Allowable ambient temperature: -25°C/+40°C | | Std. |
| Insulation class H with synthetic oil - Allowable ambient temperature: -25°C/+40°C | | x |
| Low noise drives for noise sensitive areas | | x |
| Parallel shell | | x |
| Thermal protector | | Std. |
| IP66/67 Compact stainless steel - AISI 304 or 316 range - terminal box | | x |
| Straight or elbow connector with flying lead | | x |
| Straight connector with flying lead - Stainless steel - AISI 304 range | | x |
| Shaft sealing system - degree of protection IP66/67 (EN60034-5) | | Std. |
| Screened cables - a MUST together with Frequency Converters | | x |
| Euro wide range voltage (3x220-240V / 380-415V 50 Hz) with +/-10% tolerance - DIN IEC 38 or (3x380-400V / 660-690V 50 Hz) | | Std. |
| Special voltages - 50 and/or 60 Hz Please specify! | | x |
| CSA approved motors - available on request only! | | x |

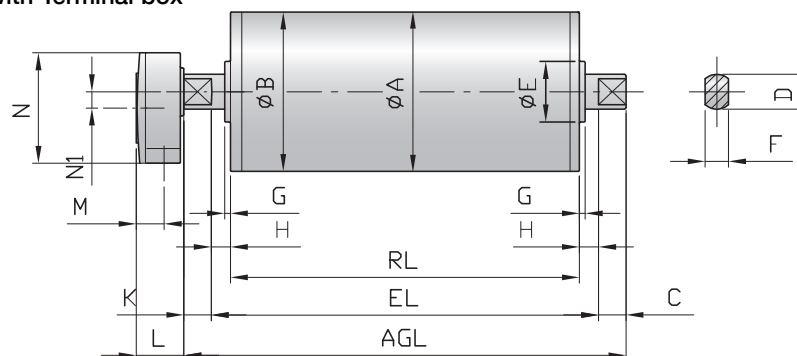
X = Optional extras

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

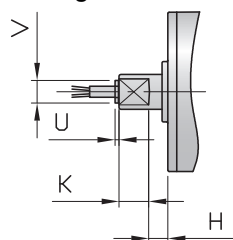
Std. = Fitted as standard

Motorized Pulley 138E, Ø 138 mm

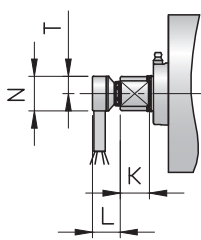
Motorized Pulley with Terminal box



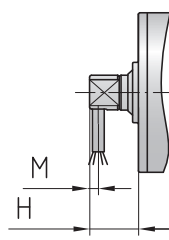
Motorized Pulley with cable Straight connector



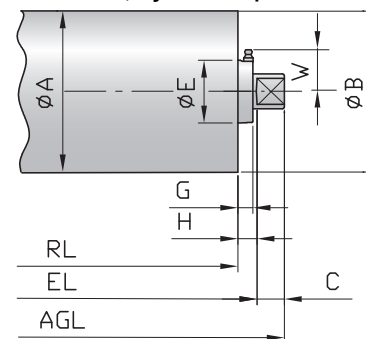
Elbow connector



Front shaft with cable slot



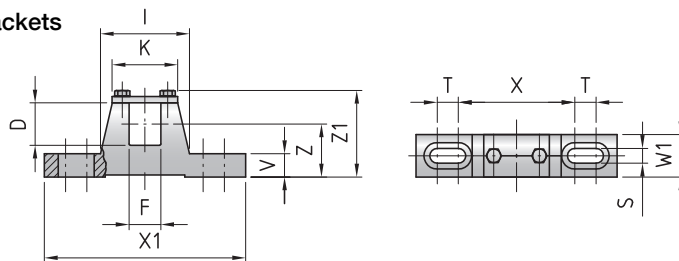
Idler pulley stainless steel version; cylindric option



Standard measurements

| Type / Option | Ref. | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | K mm | W mm | L mm | M mm | N mm | N1 mm | U mm | V mm | R mm | S mm | T mm | |
|--------------------------------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|------|--|
| 138E (UT138E) / Terminal box | | 138.5 | 137 | 23.5 | 30 | 54 | 20 | 5 | 16.5 | 23.5 | 36 | 41 | 24 | 95 | 14 | | | | | | |
| SS version (regreasable seals) | | | | | 64.5 | | 20 | 13.5 | | | | | 36 | | 3.5 | 19.5 | | | | | |
| Straight connector | | | | | | | | | 16.5 | 25.5 | | 3.5 | | | | 3.5 | 19.5 | | | | |
| Elbow connector | | | | | | | | | 16.5 | 25.5 | | 20 | | | | | | 20 | 48 | 12 | |
| Front shaft with cable slot | | | | | | | | | | 25.5 | | | 8-11 | | | | | | | | |

Mounting brackets KL30



| Motorized Pulley | Material | 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 |
| 138E | Cast iron | 30 | 20 | 86 | 57 | 11 | 17 | 12 | 24 | 110 | 180 | 44.5 | 72 | 0.7 |



Motorized pulley 138E – Ø 138 mm

50 Hz

| Motor | | | Nominal belt speed at Full Load 50Hz m/sec | Torque Nm | Belt Pull N | Max. Radial Load T1+T2 N | Weight in kg for STANDARD width | | | | | | | | | | | | | | | | | Type of Bracket |
|-------------|--------------|-------------|--|-----------|-------------|--------------------------|---------------------------------|------|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|------|----------------------|-----------------|
| Power kW/HP | No. of Poles | Gear stages | | | | | Dimension RL in mm | | | | | | | | | | | | | | | | | |
| | | | | | | | 300 | 320 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | per 50 mm up to 1800 | |
| 0.10/0.13 | 12 | 3 | 0.04 | 159 | 2295 | 4740 | 14 | 14.5 | 15 | 16 | 17 | 18 | 19 | 20 | 21.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | Available on request | KL30 |
| | | | 0.05 | 138 | 1990 | | | | | | | | | | | | | | | | | | | |
| | | | 0.06 | 111 | 1600 | | | | | | | | | | | | | | | | | | | |
| 0.18/0.25 | 8 | 3 | 0.10 | 163 | 2350 | 4740 | 14 | 14.5 | 15 | 16 | 17 | 18 | 19 | 20 | 21.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | Available on request | KL30 |
| | | | 0.10 | 131 | 1890 | | | | | | | | | | | | | | | | | | | |
| | | | 0.13 | 108 | 1555 | | | | | | | | | | | | | | | | | | | |
| 0.24/0.33 | 6 | 3 | 0.16 | 73 | 1050 | 4740 | 14 | 14.5 | 15 | 16 | 17 | 18 | 19 | 20 | 21.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | Available on request | KL30 |
| | | | 0.20 | 62 | 890 | | | | | | | | | | | | | | | | | | | |
| | | | 0.20 | 62 | 890 | | | | | | | | | | | | | | | | | | | |
| 0.37/0.50 | 6 | 3 | 0.25 | 50 | 720 | 4740 | 14 | 14.5 | 15 | 16 | 17 | 18 | 19 | 20 | 21.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | Available on request | KL30 |
| | | | 0.13 | 168 | 2425 | | | | | | | | | | | | | | | | | | | |
| | | | 0.16 | 153 | 2205 | | | | | | | | | | | | | | | | | | | |
| 0.55/0.75 | 2 | 3 | 0.20 | 126 | 1815 | 4250 | 14 | 14.5 | 15 | 16 | 17 | 18 | 19 | 20 | 21.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | Available on request | KL30 |
| | | | 0.25 | 104 | 1500 | | | | | | | | | | | | | | | | | | | |
| | | | 0.32 | 70 | 1010 | | | | | | | | | | | | | | | | | | | |
| 0.75/1.00 | 4 | 2 | 0.40 | 60 | 865 | 4740 | 14 | 14.5 | 15 | 16 | 17 | 18 | 19 | 20 | 21.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | Available on request | KL30 |
| | | | 0.50 | 48 | 690 | | | | | | | | | | | | | | | | | | | |
| | | | 0.63 | 40 | 575 | | | | | | | | | | | | | | | | | | | |
| 1.00/1.34 | 2 | 3 | 0.80 | 30 | 430 | 3690 | 14 | 14.5 | 15 | 16 | 17 | 18 | 19 | 20 | 21.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | Available on request | KL30 |
| | | | 1.25 | 33 | 475 | | | | | | | | | | | | | | | | | | | |
| | | | 1.60 | 24 | 345 | | | | | | | | | | | | | | | | | | | |

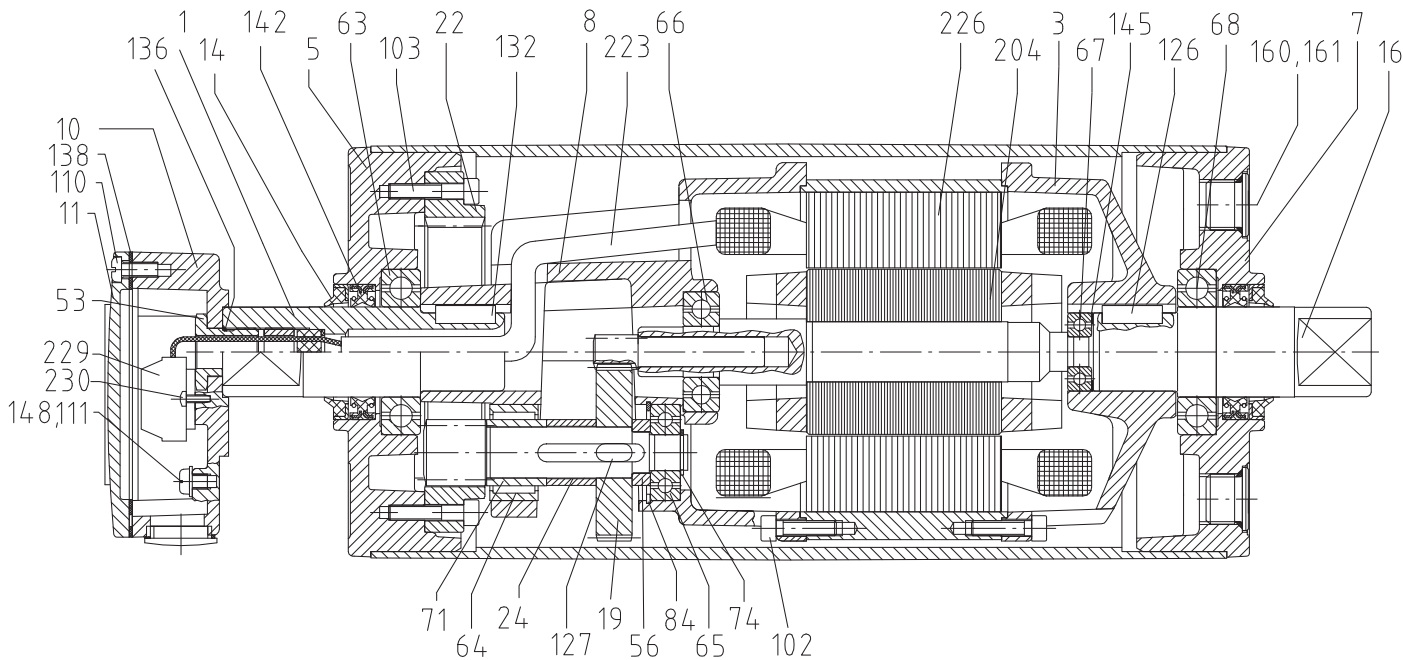
| Motor | Max. Radial Load T1+T2 N | Weight in kg for STANDARD width | | | | | | | | | | | | | | | | | Type of Bracket | |
|----------------------------|--------------------------|---------------------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|-----|------|----------------------|-----------------|------|
| | | Dimension RL in mm | | | | | | | | | | | | | | | | | | |
| | | 300 | 320 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | per 50 mm up to 1800 | | |
| Idler Pulley UT138E | 4740 | 6.5 | 7 | 7.5 | 8.5 | 9.5 | 10.5 | 11.5 | 12.5 | 13.5 | 14.5 | 15.5 | 16.5 | 18.5 | 19.5 | 20 | 21.5 | Available on request | | KL30 |

Motorized Pulley 138E

Spare Parts List and sectional drawings

| Pos. | Description | Pos. | Description | Pos. | Description |
|------|--|-------|----------------------------------|------|----------------------|
| 1 | Front shaft | 31 | Labyrinth seal cover | 110 | Screw |
| 3 | Rear flange | 53 | Nipple (terminal box) | 111 | Screw |
| 5 | Bearing housing complete with geared rim | 53.1 | Cable seal nipple (cable option) | 113 | Screw |
| 7 | Bearing housing complete | 55 | Spacer bushing | 114 | Socket set screw |
| 8 | Gearbox | 56 | Spacer bushing | 115 | Oil plug with magnet |
| 10 | Terminal box – bottom part | 63 | Ball bearing | 126 | Key |
| 11 | Terminal box cover | 64 | Needle bearing | 127 | Key |
| 12 | Shell | 65-70 | Ball bearing | 131 | Key |
| 16 | Rear shaft | 71 | Inner race | 132 | Key |
| 19 | Input wheel | 74 | Locking ring | 136 | O-ring/Rubber seal |
| 20 | Output pinion | 84 | Locking ring | 138 | Rubber seal |
| 22 | Geared rim | 86 | Locking ring | 139 | Grease nipple |
| 23 | Intermediate pinion shaft | 93 | Elbow or straight connector | 140 | Deflection seal |
| 24 | Intermediate wheel | 102 | Screw | 142 | Double lip s |
| | | 103 | Screw | 143 | O-ring |

2-stage gearbox

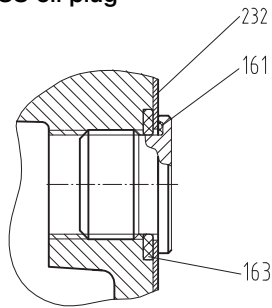


Motorized Pulley 138E

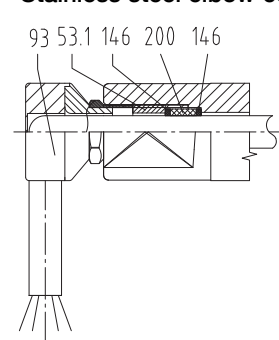
Spare Parts List and sectional drawings

| Pos. | Description | Pos. | Description | Pos. | Description |
|-------|-----------------------|------|---------------------------------------|------|----------------------|
| 145 | Distance washer | 161 | O-ring | 210 | Fixing guard |
| 146 | Washer | 163 | O-ring | 223 | Cable |
| 148 | Washer | 167 | Screw | 226 | Stator complete |
| 150 | Electromagnetic brake | 200 | Rubber seal | 229 | WAGO clamp terminals |
| 150.1 | Friction disc | 204 | Rotor complete with pinion | 230 | Fixing bolts |
| 156 | Rectifier (not shown) | 208 | Bearing housing with labyrinth groove | 240 | Distance ring |
| 160 | Oil plug | | | | |

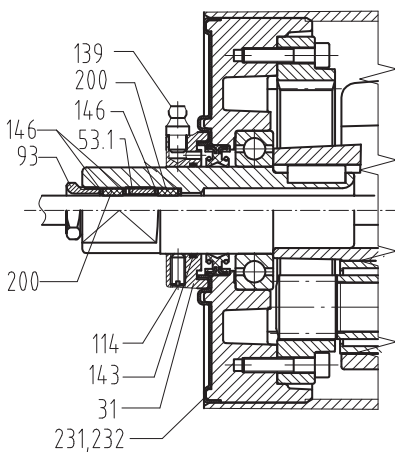
SS oil plug



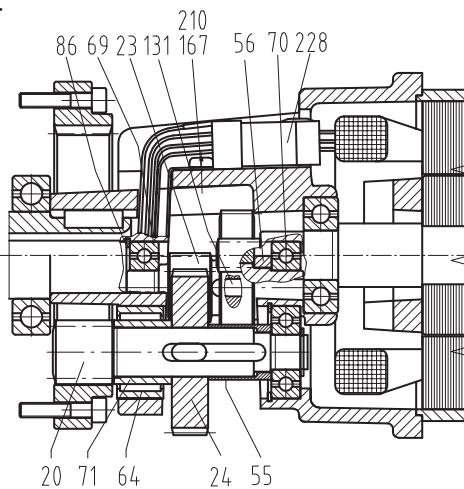
Stainless steel elbow connector



Labyrinth option
Cable version with straight connector



3-stage gearbox



Electromagnetic brake

