



## Motorized Pulley 165LS, Ø 6.49 in. (165 mm)

Motorized Pulley 165LS, with machined helical gearbox, performs with a gearbox efficiency of 95% of nominal power, in a compact diameter of 6.49 inches. With a minimum roller length (RL) of 13.78" and powers ranging from 0.15 to 3.0 HP, this Motorized Pulley is suitable for most small diameter applications. These include:

- Light agricultural conveyors
- Light C & D debris conveyors
- Mobile and portable conveyors

Motorized Pulley 165LS features a standard enclosure class of IP66/67 and is also available in stainless steel for wash down applications.

### STANDARD SPECIFICATION of Motorized Pulley

- Crowned mild steel 6.49" shell treated with anti-rust wax
- Die cast aluminum bearing housing
- Mild steel shaft treated with anti-rust wax
- Die cast lightweight aluminum gearbox housing
- Sealing system – degree of protection IP66/67 (EN60034-5.) See page 37.
- Compact die cast aluminum terminal box with WAGO connectors
- Voltage: All common voltages available. Please specify.
- Three phase induction motor
- One out of two oil plugs is fitted with a magnet to filter the oil.
- Motor winding insulation class F
- Dynamically balanced rotor
- Oil change recommended every 50,000 operational hours for synthetic oil and 10,000 operational hours for standard oil.
- Maximum RL 70.87"
- Non standard RL lengths available
- Single phase is available in 0.50 and 1.50 HP, supplied with a running capacitor
- To be used in the horizontal position only.

### STAINLESS STEEL options

#### TS8N

- Stainless steel shell – AISI 304 range
- Stainless steel shafts – AISI 303 range
- Stainless steel covered aluminum bearing housings – AISI 304 range
- Stainless steel oil plugs with magnet – AISI 304 range
- Compact stainless steel terminal box – AISI 304 range
- Alternatively, straight stainless steel connector – AISI 303 range with power cord.
- Regreasable stainless steel seals – AISI 303 range
- Degree of protection IP66/67 (EN60034-5.) See page 37.
- FDA & USDA food grade grease
- Option: FDA & USDA food grade recognized oil.
- Special mounting brackets are available.

#### 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 80-90
- **Environmental Considerations:** pages 78-79
- **Optional Extras:** pg 13
- **Electrical Connection Diagrams:** pages 94-101



## OPTIONAL EXTRAS

### Motorized Pulley 165LS

Specification	Availability	
Total stainless steel option AISI 304 range	TS8N with regreasable labyrinth seals	x
Food grade oil & grease - FDA & USDA recognized		x
Dust explosion proof Motorized Pulleys - ATEX 95 - Zone 22 - for applications handling dusty grain etc. According to European Directive 94/9/EC.		x
Total acid resistant stainless steel option - AISI 316		x
Black rubber lagging - Standard specifications (See page 80.) 1/8" smooth lagging - Hardness 60 ±5 Shore A		o
White smooth rubber lagging (FDA). Oil, fat & grease resistant		o
Special lagging (e.g. hot vulcanized)		o
Electromagnetic brake	Min. RL increases by 1.97"	x
Mechanical backstop	Min. RL does not increase with backstop option	x
Modified for vertical mounting		o
Modified for mounting between 5° and 90° (e.g. for magnetic separators)		o
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
Special motors for applications with no belt contact		o
Low noise drives for noise sensitive areas		x
Parallel shell		x
Thermal protector		Std.
IP66/67 Compact unpainted aluminum terminal box		Std.
IP66/67 Compact stainless steel terminal box- AISI 304 or 316 range		x
Straight or elbow connector with standard power cord		x
Straight connector with screened power cord	(See page 77 for VFD precautions)	x
Straight connector with standard power cord	(Stainless steel in AISI 304 range)	x
Voltage: single voltage (460) stator (Y winding) wired for 460v/3ph/60 Hz at terminal box		Std.
single voltage (230) stator (YY winding) wired for 230v/3ph/60 Hz at terminal box		x
2 speed motors		x
Special voltage motors		x
Single phase motors		o
CSA approved motors		x

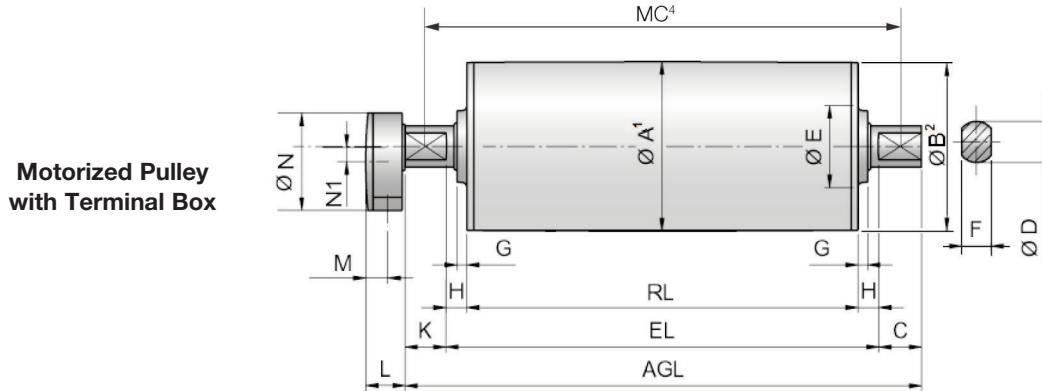
x = Optional extras

o = An option with certain limitations. Please refer to Technical precautions pages 80-90.

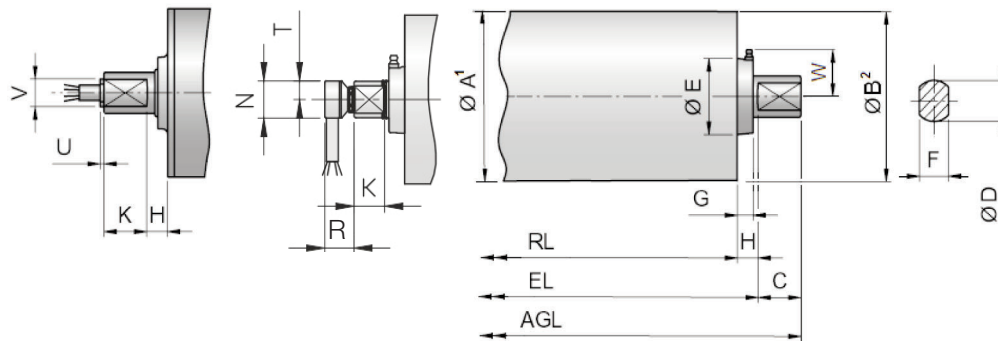
Std. = Fitted as standard



# Motorized Pulley 165LS, Ø 6.49 in. (165 mm)

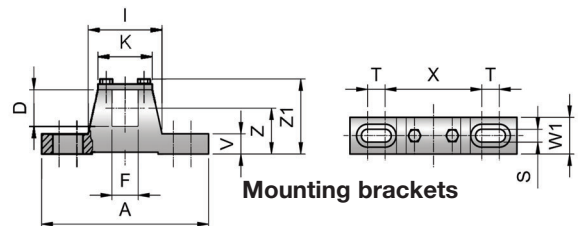


Straight connector    Elbow connector    TS8N version<sup>3</sup>



Version	Dimensions										Compact terminal box				Straight connector		Elbow connector		
	A in	B in	C in	D in	E in	F in	G in	H in	K in	W in	L in	M in	N in	N1 in	U in	V in	N in	R in	T in
Standard	6.49	6.44	1.71	1.57	3.15	1.18	0.39	0.85	1.63	-	1.61	0.95	3.74	0.55	0.16	1.06	1.18	0.98	0.59
TS8N	6.49	6.44	1.71	1.57	2.95	1.18	0.65	0.85	-	1.81	1.61	0.95	3.74	0.55	0.16	1.06	1.18	0.98	0.59

- 1 A dimension is outer diameter of crowned unlagged pulley shell at pulley centerline.
- 2 B dimension is outer diameter of crowned unlagged pulley shell at each end of shell.
- 3 Pulley shown is TS8N version with regreasable seals.
- 4 Mounting centers = MC = RL + W1



Motorized Pulleys	Material	Bracket Size	Part Number	Dimensions													Weight
				A in	D in	F in	I in	K in	S in	T in	V in	W1 in	X in	Z in	Z1 in	lbs	
165LS	Steel painted	KL41-HD	6YA0K	7.48	1.57	1.18	3.31	2.44	0.55	0.79	0.87	1.57	4.33	1.97	3.27	4.63	
	Steel Ni plated		6YA0W														
	Stainless steel		6YA0U														



# Motorized Pulley 165LS, Ø 6.49 in. (165 mm)

# 60 Hz

Motor		No. Gear Stages	Model	Nominal belt speed <sup>1</sup> at Full Load 60 Hz fpm	Actual belt speed <sup>1</sup> at Full Load 60 Hz fpm	Belt Pull <sup>2</sup> lbs	Max. Radial Load <sup>3</sup> T1 + T2 lbs	Min. RL in	RL Dimension inches (RL <sub>max</sub> = 70.87") Weight in lbs <sup>5</sup>										Type of Bracket						
Power HP	No. of Poles								15.75	17.72	19.69	21.65	23.62	25.59	27.56	29.53	31.50	longer than 31.50							
0.15	12	3	165LS	12	14	351	2473	15.75	66	69	72	76	78	80	83	87	90	See Foot-note <sup>4</sup>	KL41-HD 6YA0K						
				14	16	288																			
				18	20	233																			
0.50	6	3	165LS	24	25	624	4271		68	71	75	78	80	83	86	89	92			1708					
				30	30	512																			
	4	3	165LS	38	37	414	2473		64	67	70	73	76	78	81	84	88								
				48	48	328																			
				60	59	265																			
				76	77	202																			
1.00	4	3	165LS	76	77	409	2473		70	74	77	80	82	84	88	91	94								
				96	98	325																			
				120	123	256																			
	2	165LS	150	152	207	1708	75	78	81	84	87	89	92	95	99										
			192	199	158																				
			240	251	125																				
1.50	4	3	165LS	60	66	730	2473	77	80	83	87	89	91	94	98	101									
				76	81	569																			
				96	99	467																			
	2	165LS	120	123	378	1708	77										80	83	87	89	91	94	98	101	
			150	161	288																				
			192	203	228																				
2.00	2	3	165LS	240	257	180	2473	77	80	83	87	89	91	94	98	101									
				300	318	145																			
				384	416	111																			
	2	165LS	480	525	88	1596	77										80	83	87	89	91	94	98	101	
			600	646	74																				
			600	651	105																				
3.00	2	3	165LS	120	132	717	2473	17.72	-	84	87	91	93	95	98	102	105								
				150	161	588																			
				192	192	466																			
	2	165LS	240	250	378	1708	77											80	83	87	89	91	94	98	101
			300	302	314																				
			384	417	227																				
2	165LS	480	527	180	1955	77	80	83	87	89	91	94	98	101											
		600	648	146																					
		768	783	121																					

Standard RL →

- Use "nominal belt speed" to specify pulley. "Actual belt speed" is presented (for pulley lagged with 1/8" thick rubber) to assist with process design calculations. See Technical Precautions page 81. Note that "actual belt speed" decreases when lagging is not used due to decreased pulley diameter.
- Belt pull value allows for gearbox loss on a lagged pulley.
- Pulley must not be subjected to radial load exceeding "Maximum radial load" defined above. See "Belt Tension" section in Technical Precautions, page 82.
- Additional Motorized Pulley weight, specified per inch of Roller Length:
  - 31.50" ≤ RL < 45.28" Wt = 1.5 lbs/in
  - 45.28" ≤ RL < 64.96" Wt = 2.1 lbs/in
  - 64.96" ≤ RL < 70.87" Wt = 2.9 lbs/in
- All weights shown above are for pulleys with 1/8" thick rubber lagging. To calculate unlagged pulley weight subtract 0.1 lbs/in of Roller Length from above.

Rulmeca offers return, snub, and idler pulleys with dimensions to match our Motorized Pulleys on request.

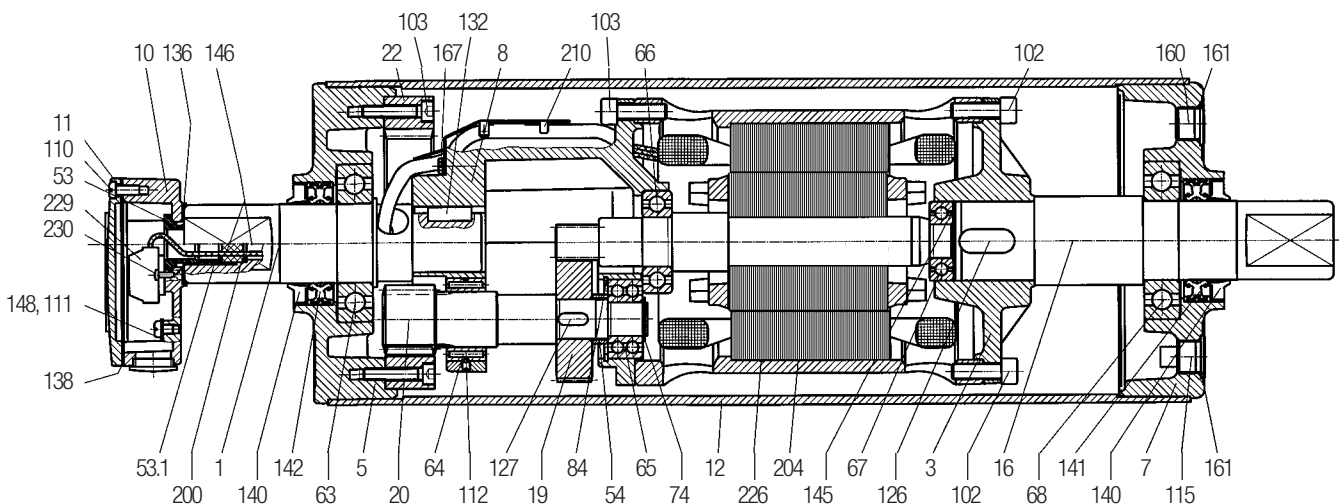


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## Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Front shaft	53	Terminal box nipple	103	Screw
3	Rear flange	53.1	Cable seal nipple	110	Screw
5	Bearing housing complete with geared rim	55	Spacer bushing	111	Screw
7	Bearing housing complete	56	Spacer bushing	112	Socket set screw
8	Gearbox	63	Ball bearing	113	Screw
10	Terminal box – bottom part	64	Needle bearing	115	Oil plug with magnet
11	Terminal box cover	65-70	Ball bearing	126	Key
12	Shell	71	Inner race	127	Key
16	Rear shaft	73	Locking ring	131	Key
19	Input wheel	74	Locking ring	132	Key
20	Output pinion	81	Locking ring	136	O-ring/Rubber seal
22	Geared rim	84	Locking ring	138	Rubber seal
23	Intermediate pinion shaft	85	Locking ring		
24	Intermediate wheel	86	Locking ring		
31	Labyrinth seal cover	93	Elbow or straight connector		
		102	Screw		

2-stage gearbox





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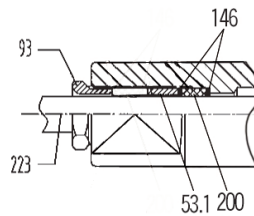
## Spare parts list and sectional drawings

Pos.	Description
140	Deflection seal
141	Double lip seal
142	Double lip seal
145	Distance washer
146	Washer
148	Washer
150	Electromagnetic brake
150.1	Friction disc
156	Rectifier (not shown)
160	Oil plug
161	O-ring
167	Screw
200	Rubber seal
204	Rotor complete with pinion
206	Insulated sleeve for wire protection

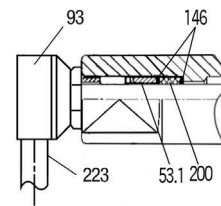
Pos.	Description
208	Stainless steel cover – gear end
209	Stainless steel cover – oil plug end
210	Fixing guard
223	Cable

Pos.	Description
226	Stator complete
229	Terminal block
230	Screw
240	Distance ring

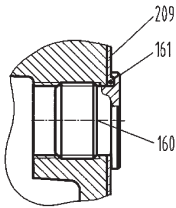
Standard straight cable connection



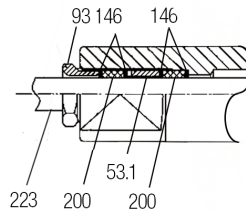
Standard elbow cable connection



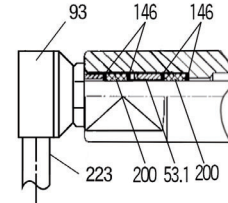
Stainless steel option oil plug



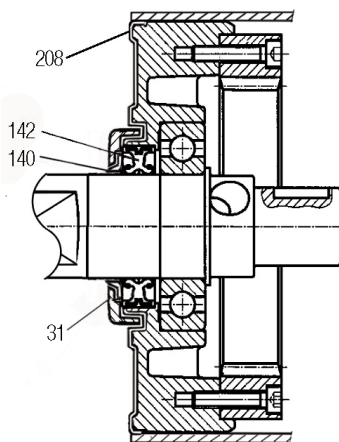
Stainless steel option with straight cable connection



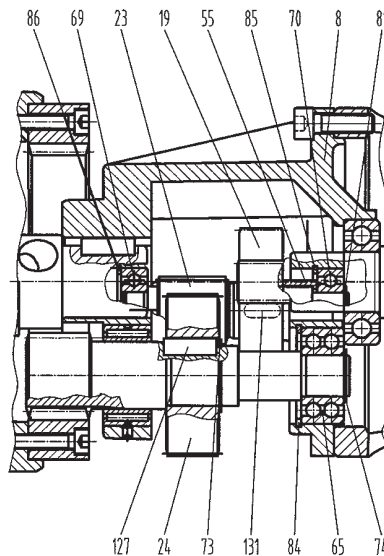
Stainless steel option with elbow cable connection



Stainless steel end housing



3-stage gearbox



Electromagnetic brake

