



## 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 94-100



# 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

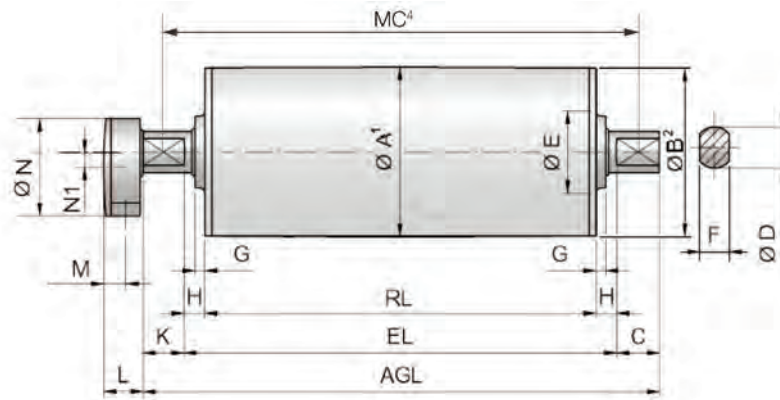
o = An option with certain limitations. Please refer to Technical precautions pages 80-90.

Std. = Fitted as standard

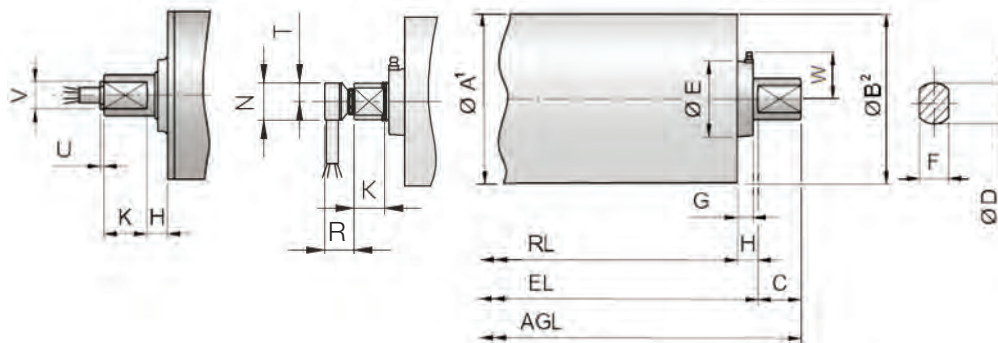


# Motorized Pulley 165LS, Ø 6.49 in. (165 mm)

Motorized Pulley with Terminal Box

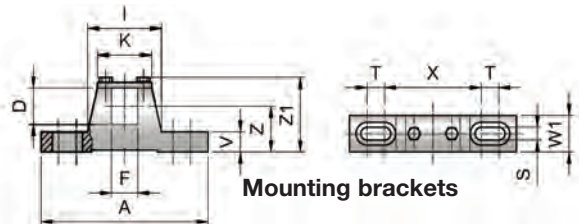


Straight connector    Elbow connector    TS8N version<sup>3</sup>



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		
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	2473		
				30	30	512																	
	4	3	165LS	38	37	414	2473		64	67	70	73	76	78	81	84	88					1708	2473
				48	48	328																	
				60	59	265																	
				76	77	202																	
1.00	4	3	165LS	120	123	126	2473		70	74	77	80	82	84	88	91	94			1708	2473		
				150	152	102																	
				192	199	78																	
	2	165LS	240	251	62	1708	75	78	81	84	87	89	92	95	99	1708	2473						
			38	38	810																		
			48	48	664																		
1.50	4	3	165LS	60	66	730	2473	75	78	81	84	87	89	92	95			99	1708	2473			
				76	81	569																	
				96	99	467																	
	2	165LS	120	123	378	1708	77	80	83	87	89	91	94	98	101	1596	2473						
			150	161	288																		
			192	203	228																		
2.00	2	3	165LS	240	257	180	2473	77	80	83	87	89	91	94	98			101	1596	2473			
				300	318	145																	
				384	416	111																	
	2	165LS	480	525	88	1596	84	87	91	93	95	98	102	105	1596	2473							
			600	646	74																		
			120	132	717																		
3.00	2	3	165LS	150	161	588	2473	17.72	-	84	87	91	93	95			98	102	105	1596	2473		
				192	192	466																	
				240	250	378																	
	2	165LS	300	302	314	1708	384	417	227	1955													
			480	527	180																		
			600	648	146																		

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.

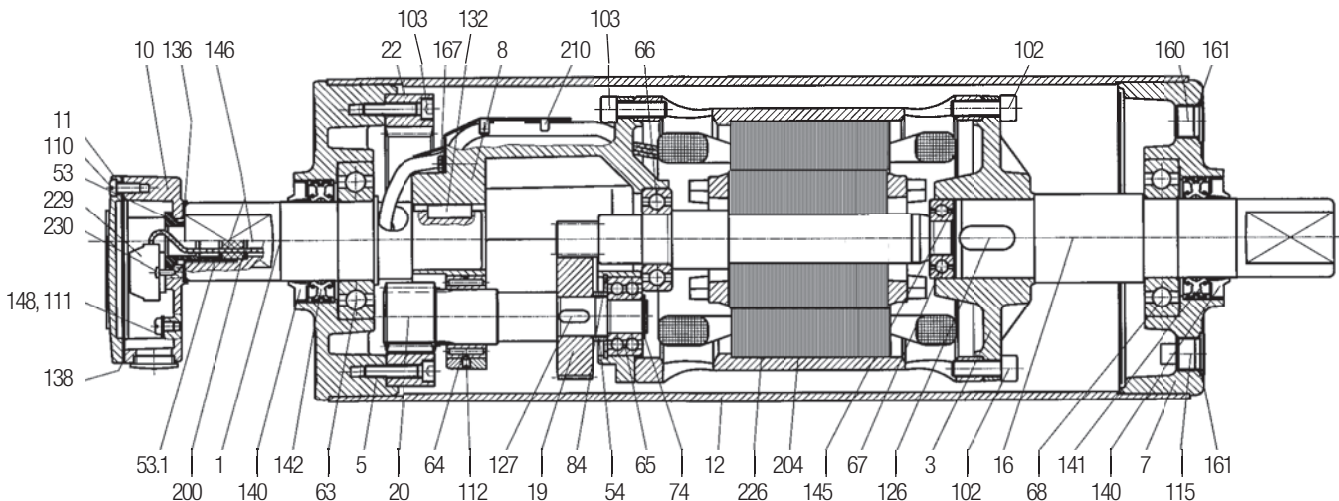


# Motorized Pulley 165LS, Ø 6.49 in. (165 mm)

## Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Front shaft	53	Terminal box nipple	102	Screw
3	Rear flange	53.1	Cable seal nipple	103	Screw
5	Bearing housing complete with geared rim	55	Spacer bushing	110	Screw
7	Bearing housing complete	56	Spacer bushing	111	Screw
8	Gearbox	63	Ball bearing	112	Socket set screw
10	Terminal box – bottom part	64	Needle bearing	113	Screw
11	Terminal box cover	65-70	Ball bearing	114	Socket set screw
12	Shell	71	Inner race	115	Oil plug with magnet
16	Rear shaft	73	Locking ring	126	Key
19	Input wheel	74	Locking ring	127	Key
20	Output pinion	74	Locking ring	131	Key
22	Geared rim	81	Locking ring	132	Key
23	Intermediate pinion shaft	84	Locking ring	136	O-ring/Rubber seal
24	Intermediate wheel	85	Locking ring	138	Rubber seal
31	Labyrinth seal cover	86	Locking ring		
		93	Elbow or straight connector		

2-stage gearbox





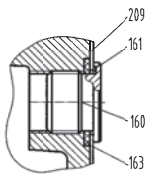
# Motorized Pulley 165LS, Ø 6.49 in. (165 mm)

## Spare parts list and sectional drawings

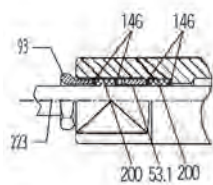
Pos.	Description	Pos.	Description	Pos.	Description
139	Grease nipple	156	Rectifier (not shown)	209	Stainless steel cover – oil plug end
140	Deflection seal	160	Oil plug	210	Fixing guard
141	Double lip seal	161	O-ring	223	Cable
142	Double lip seal	163	O-ring	226	Stator complete
143	O-ring	167	Screw	229	Terminal block
145	Distance washer	200	Rubber seal	230	Screw
146	Washer	204	Rotor complete with pinion	240	Distance ring
148	Washer	206	Insulated sleeve for wire protection		
150	Electromagnetic brake	208	Stainless steel cover – gear end		
150.1	Friction disc				

TS8N end housing

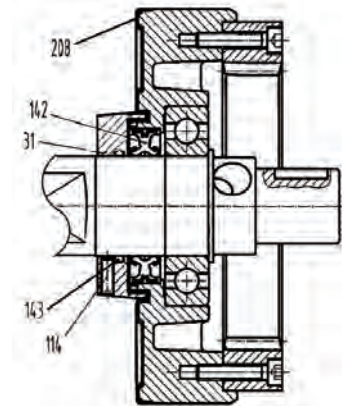
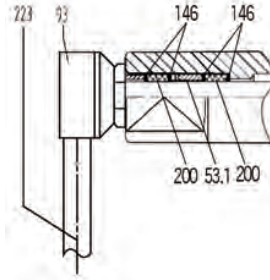
Oil plug



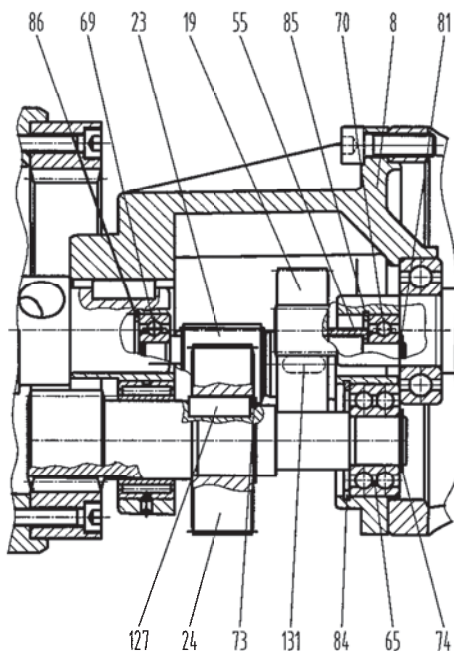
Straight cable connection



Elbow cable connection



3-stage gearbox



Electromagnetic brake

