



## Motorized Pulley 165LS

Ø 6.50 in. (165 mm), helical steel gearbox

### Product description

This Motorized Pulley is ideal for longer or inclined heavy duty unit handling and food processing conveyors.

### Characteristics

- Asynchronous 3 phase AC induction motor
- Integral motor protection
- Hardened steel helical gearbox
- Low noise operation
- Reversible operation

### Applications

- Package handling conveyors with frequent use
- Logistics applications
- Dynamic weighing equipment
- Telescopic conveyors
- Agricultural conveyors
- Food processing equipment
- Positive drive and modular belt conveyors
- Dry, humid and wash down applications

### Technical data

<b>Type of Motor</b>	Asynchronous squirrel-cage, IEC 34 (VDE 0530)
<b>Insulation class of motor windings</b>	Class F, IEC 34 (VDE 0530)
<b>Available power supplies*</b>	115v/1ph/60Hz, 230v/1ph/60Hz, 230v/3ph/60Hz, 460v/3ph/60Hz
<b>Seal protection rating (standard)</b>	IP66
<b>Seal protection rating (optional)</b>	IP69
<b>Thermal protection</b>	Bimetallic contact
<b>Allowable ambient temp, 3-ph motor</b>	-13° F to +104° F
<b>Max. Roller length (RL)</b>	70.87 in

\* Other power supply voltages and frequencies are available.



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## Materials

Component	Version	Aluminum	Steel	Stainless steel
<b>Shell</b>	Crowned	-	Std	Opt
	Cylindrical	-	Std	Opt
	Cylindrical with key (for sprockets)	-	Opt	Opt
	Special profiles	-	Opt	Opt
<b>End housing</b>	Standard	Std	-	Opt
<b>Shaft</b>	Standard	-	Std	Opt
	Cross-drilled and threaded, M6	-	Opt	Opt
<b>Electrical termination</b>	Power cord, straight ss connector	-	-	Std
	Power cord, elbow ss connector	-	-	Std
	Terminal box	Std	-	Opt

## Options

- Rubber lagging for standard belts
- Profiled lagging for positive drive belts
- Profiled ss shells for positive drive belts
- Mechanical backstop
- Special smooth stainless steel end housings, slotted screw oil plugs, Viton® shaft seals and PTFE deflection seals (option TS8N) for IP69 sealing.
- Special smooth stainless steel end housings, slotted screw oil plugs, labyrinth seals (option TS7N) for IP66 sealing.
- Electromagnetic brake
- Rectifier
- Encoder
- Food grade oil (EU, FDA and USDA)
- Non-horizontal mounting (more than  $\pm 5^\circ$ )

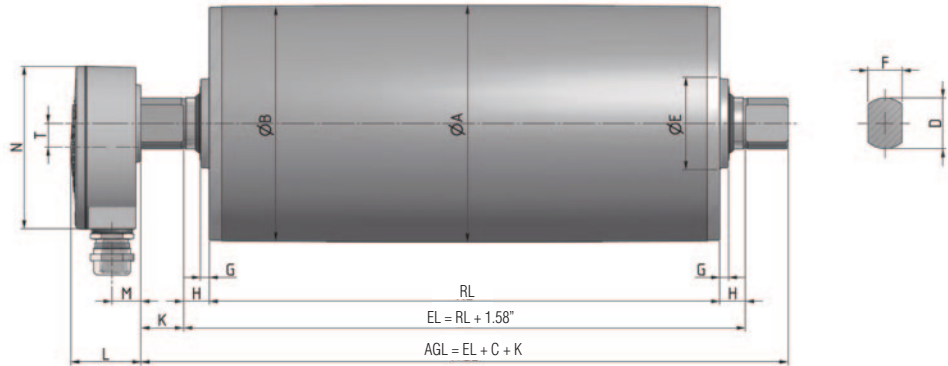
## Power Cord Specifications

- Standard, shielded, 10 feet long
- Other types & lengths available upon request

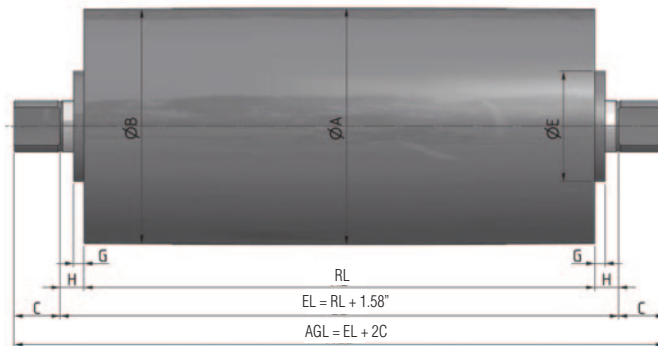


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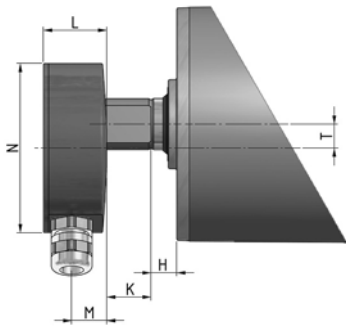
Ø 6.50 in. (165 mm), helical steel gearbox



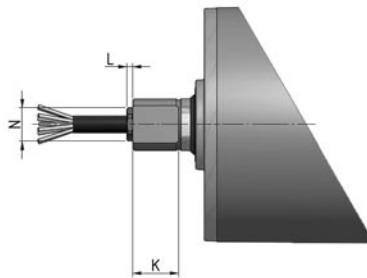
Standard Motorized Pulley with aluminum terminal box



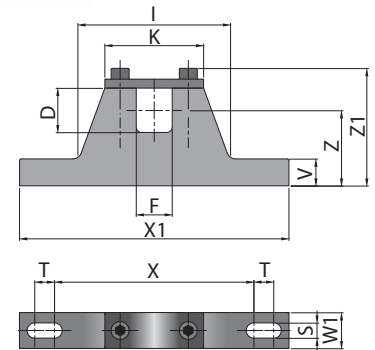
Idler Pulley in stainless steel



Terminal box in stainless steel.

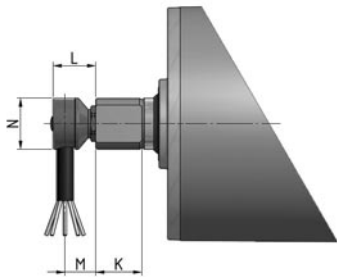


Straight connector in stainless steel.

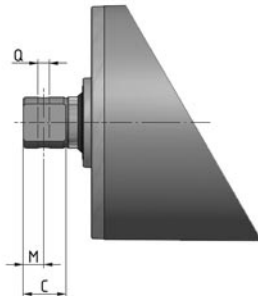


MC = Mounting bracket center-to-center spacing =  $RL + 3.15$ \"/>

Mounting bracket



Elbow connector in stainless steel.



Shaft, cross-drilled and threaded.

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Dimensions for Motorized Pulley 165LS												
Type/Option	A in	B in	C in	D in	E in	F in	G in	H in	K in	L in	M in	N in
Standard version with aluminum terminal box	6.50	6.44	1.77	1.57	3.15	1.18	0.39	0.79	1.77	1.61	0.67	3.74
Terminal box in stainless steel									1.77	1.46	0.81	3.90
Idler pulley in stainless steel					2.54		0.31		1.77			
Straight connector in stainless steel									1.85	0.16		1.06
Elbow connector in stainless steel									1.85	0.98	0.71	1.18
Cross-drilled and threaded shaft									1.85		0.93	

## Revised Dimensions for options

The following options increase the minimum roller length (RL)

Option	Optional RL min.
Electromagnetic brake	Standard RL min + 1.97in
Encoder - SKF	Standard RL min + 0 in
Encoder - RLS	Standard RL min +1.97in

Dimensions, materials, and weights for Mounting Brackets																
Motorized Pulley	Standard Material	Optional Material	D in	F in	I in	K in	S in	T in	V in	W1 in	X in	X1 in	Z in	Z1 in	Thread	Wt lbs
165LS	Cast iron with black powder	Stainless steel	1.57	1.18	3.31	2.44	0.55	0.79	0.87	1.57	4.33	7.48	1.97	3.27	M8	4.4

Standard weights for Motorized Pulley 165LS															
Power HP	Poles	Standard weight [lbs] for standard RL [in]													
		13.78	15.75	17.72	19.69	21.65	23.62	25.59	27.56	29.53	31.50	33.46	35.43	37.40	39.37
0.50	6	---	66.0	69.5	73.0	75.0	77.0	79.5	82.5	86.0	88.0	90.5	93.5	97.0	99.0
	4	57.5	61.5	65.0	68.5	84.0	73.0	75.0	78.5	81.5	84.0	86.0	89.5	92.5	95.0
1.00	6	---	73.0	76.0	79.5	81.5	38.0	86.0	89.5	92.5	95.0	97.0	100.5	103.5	106.0
	4	---	68.5	71.5	75.0	77.0	79.5	81.5	85.0	88.0	90.5	92.5	96.0	99.0	101.5
1.50	4	---	75.0.	78.5	81.5	84.0	86.0	88.0	91.5	95.0	97.0	99.0	102.5	106.0	108.0
	2	---	73.0	76.0	79.5	81.5	84.0	86.0	89.5	92.5	95.0	97.0	100.5	103.5	106.0
2.00	2	---	75.0	78.5	81.5	84.0	86.0	88.0	91.5	95.0	97.0	99.0	102.5	106.0	108.0
3.00	2	---	81.5	82.5	84.0	86.0	88.0	90.5	93.5	97.0	99.0	101.5	104.5	108.0	110.0



# Motorized Pulley 165LS

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Power & Speed Combinations: 3 phase									
Power HP	Poles (rpm)	FLA (amps) <sup>1</sup>	No. Gear Stages	Gear Ratio	Nominal belt speed at Full Load 60 Hz fpm <sup>2</sup>	Actual belt speed at Full Load 60 Hz fpm <sup>2</sup>	Belt Pull lbs	Max. Radial Load T1 + T2 lbs <sup>3</sup>	RL in
0.15	12 (570)	1.9/ 0.9	3	75.03	12	13	358	2500	min 15.75 max 78.74
				61.56	14	16	294		
				49.75	18	19	238		
			2	37.93	24	26	181		
0.50	6 (1135)	1.7/ 1.0	3	75.03	24	26	606	4300	min 15.75 max 78.74
				61.56	30	31	497		
				49.75	38	39	402		
	4 (1690)	2.0/ 1.0	3	61.56	48	47	334	2500	min 13.78 max 78.74
				49.75	60	58	270		
				37.93	76	76	206		
				30.05	96	95	163		
			2	23.76	120	121	129	1700	
				19.20	150	149	104		
				14.64	192	196	79		
				11.60	240	247	63		
1.00	6 (1155)	4.8/ 2.4	3	61.56	30	32	990	4300	min 15.75 max 78.74
				46.23	38	42	743		
	4 (1720)	3.6/ 1.8	3	61.56	48	47	665	2500	min 15.75 max 78.74
				49.75	60	59	537		
				37.93	76	77	409		
				30.05	96	97	324		
			2	23.76	120	123	257	1700	
				19.20	150	152	207		
				14.64	192	200	158		
				11.60	240	252	125		
1.50	4 (1725)	5.0/ 2.5	3	61.56	48	48	972	2500	min 15.75 max 78.74
				46.23	60	63	730		
				37.93	76	77	599		
	2 (3450)	4.2/ 2.1	3	61.56	96	95	486	2500	min 15.75 max 78.74
				49.75	120	118	393		
				37.93	150	154	299		
				30.05	192	195	237		
			2	23.76	240	247	188	1700	
				19.20	300	305	152		
				14.64	392	400	116		
				11.60	480	505	92		
				9.43	600	621	74		

Refer to page 65 for all footnotes cited on page 64.

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Power & Speed Combinations: 3 phase										
Power HP	Poles (rpm)	FLA (amps) <sup>1</sup>	No. Gear Stages	Gear Ratio	Nominal belt speed at Full Load 60 Hz fpm <sup>2</sup>	Actual belt speed at Full Load 60 Hz fpm <sup>2</sup>	Belt Pull lbs	Max. Radial Load T1 + T2 lbs <sup>3</sup>	RL in	
2.00	2 (3475)	5.7/ 2.8	3	75.03	76	75	815	2500	min 15.75 max 78.74	
				61.56	96	96	658			
				46.23	120	128	494			
				37.93	150	156	405			
				30.05	192	196	321			
			2	23.76	240	248	254	1700		
				19.20	300	307	205			
				14.64	384	403	156			
				11.60	480	509	124			
				9.43	600	626	101			
7.80	768	757	83	1600						
3.00	2 (3460)	8.0/ 4.0	3	46.23	120	127	728	2500	min 16.93 max 78.74	
				37.93	150	155	597			
				30.05	192	196	473			
				24.43	240	240	385			
			2	20.21	300	291	318	1700		
				14.64	392	401	230			
				11.60	480	506	183			
				9.43	600	623	148			
				7.80	768	753	123			1600

- 1 FLA = full load amps at 230volts and 460 volts, respectively.
- 2 Use "Nominal Speed" to specify pulley. "Actual belt speed" is presented (for unlagged pulley) to assist with process design calculations. See "Actual Speed vs Nominal Speed" section in Technical Precautions. Note that actual belt speed increases when lagging is used due to increased pulley diameter.
- 3 Pulley must not be subjected to radial load exceeding "Maximum Radial Load" defined above. See "Belt Tension" section in Technical Precautions.



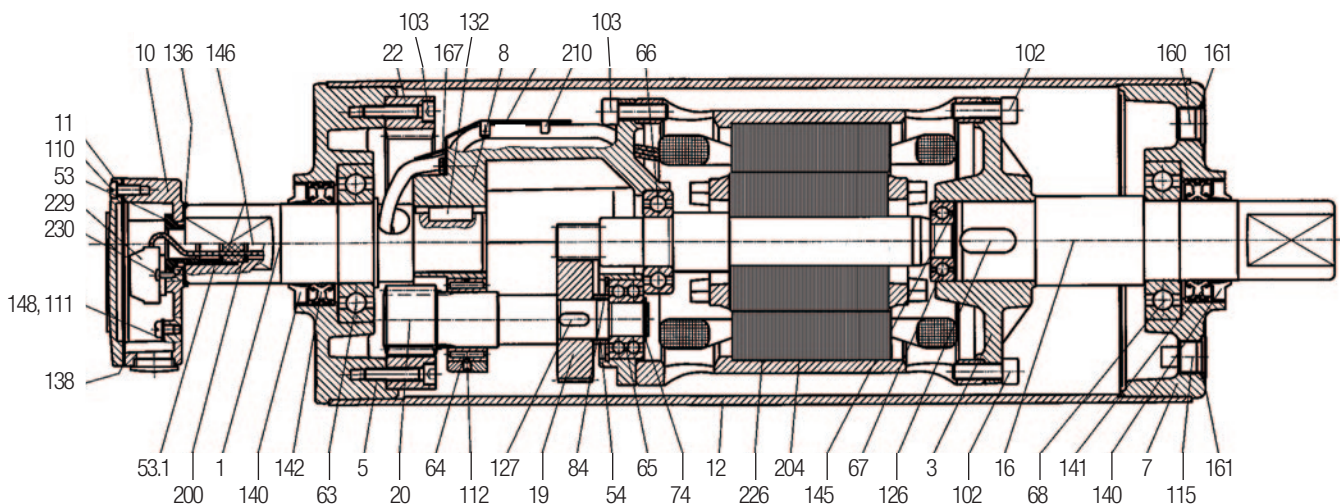
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## Spare Parts List and Sectional Drawings

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	140	Deflection seal
24	Intermediate wheel	86	Locking ring	141	Double lip seal
31	Labyrinth seal cover	93	Elbow or straight connector	142	Double lip seal
		102	Screw	145	Distance washer

### 165LS Standard: 2 stage gearbox with terminal box



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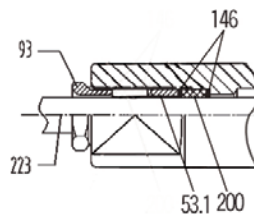
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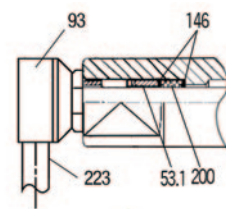
## Spare Parts List and Sectional Drawings (cont.)

146	Washer	209	Stainless steel cover - oil plug end	229	Terminal block
148	Washer	210	Fixing guard	230	Screw
150	Electromagnetic brake	223	Cable	240	Distance ring
150.1	Friction disc	226	Stator complete		
156	Rectifier (not shown)				
160	Oil plug				
161	O-ring				
163	O-ring				
167	Screw				
200	Rubber seal				
204	Rotor complete with pinion				
206	Insulated sleeve for wire protection				
208	Stainless steel cover - gear end				

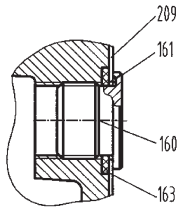
**Standard straight cable connection**



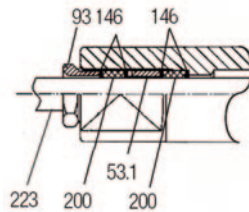
**Standard elbow cable connection**



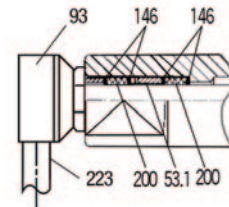
**Stainless steel option oil plug**



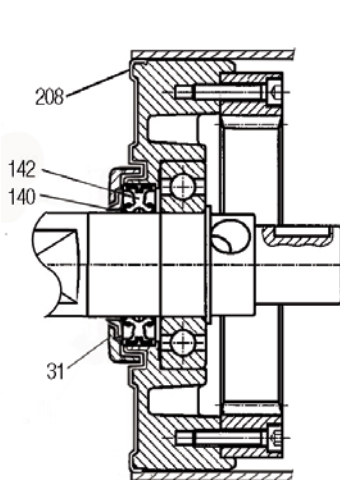
**Stainless steel option with straight cable connection**



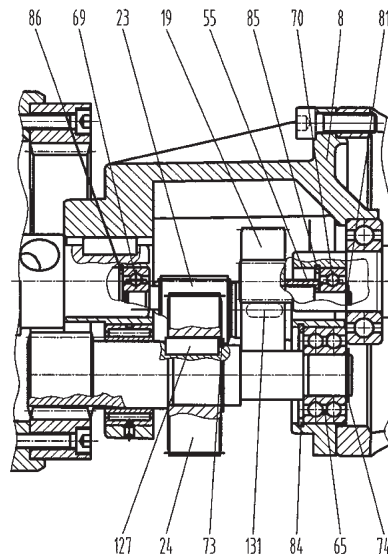
**Stainless steel option with elbow cable connection**



**Stainless steel end housing**



**3-stage gearbox**



**Electromagnetic brake**

