



Motorized Pulley 165E, Ø 6.49 in. (165 mm)

Motorized Pulley 165E, 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 15.75" 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 165E 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 H
- Dynamically balanced rotor
- Oil change recommended every 50,000 operational hours for synthetic oil (or 20,000 operational hours for mineral oil.)
- Maximum RL 70.87"
- Non standard RL lengths available.
- To be used in the horizontal position only.

STAINLESS STEEL options

TS7N

- 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 78-98.
- **Environmental Considerations:** page 76-77.
- **Optional Extras:** pg 13 and back cover
- **Electrical Connection Diagrams:** pages 92-98.



OPTIONAL EXTRAS

Motorized Pulley 165E

Specification	Availability	
Total stainless steel option AISI 304 range	TS7N 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.		o
Total acid resistant stainless steel option - AISI 316		x
Black rubber lagging - Standard specifications (See page 82-83.) 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)		x
Insulation class H with synthetic oil: (Allowable ambient temperature: -13°F/+120°F)		Std.
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 86 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 (Y winding) wired for 230v/3ph/60 Hz at terminal box		x
Special voltage motors		x
CSA approved motors		x

x = Optional extra's

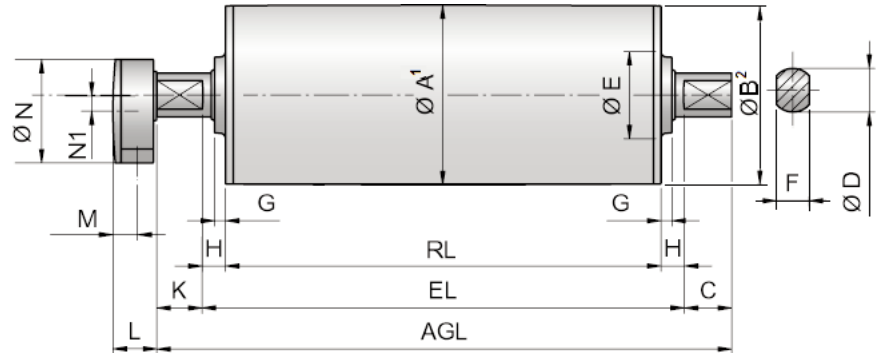
o = An option with certain limitations. Please refer to Technical precautions pages 78-98!

Std. = Fitted as standard



Motorized Pulley 165E, Ø 6.49 in. (165 mm)

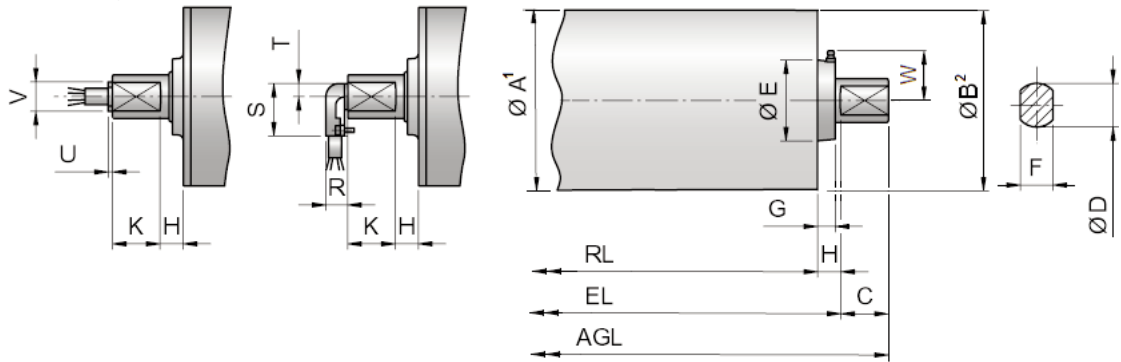
Motorized Pulley with Terminal Box



Motorized Pulley with cable straight connector

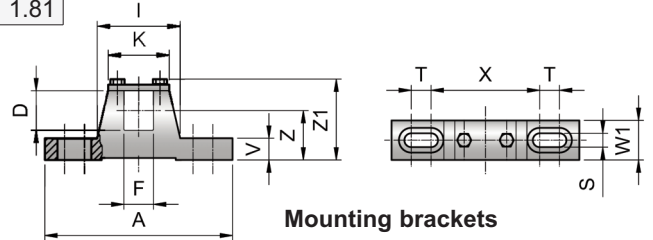
Elbow connector (not for TS7N)

Idler Pulley³ TS7N version



Model	Motorized Pulley or idler Pulley (UT)										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	R in	S in	T in
165E	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	0.79	1.89	0.47
UT165E	6.49	6.49	1.71	1.57	2.95	1.18	0.65	0.85	—	1.81									

- 1 A dimension is outer diameter of unlagged pulley shell at pulley centerline.
- 2 B dimension is outer diameter of unlagged pulley shell at each end of shell.
- 3 Idler pulley shown is non-crowned TS7N version with regreasable seals.



Motorized Pulleys	Material	Bracket Size	Part Number	Dimensions													Weight lbs
				A in	D in	F in	I in	K in	S in	T in	V in	W1 in	X in	Z in	Z1 in		
165E	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 165E, Ø 6.49 in. (165 mm)

60 Hz

Motor		No. Gear Stages	Model	Nominal belt speed ¹ at Full Load 60 Hz fpm	Actual belt speed ¹ at Full Load 60 Hz fpm	Belt Pull ² lbs	Max. Radial Load ³ T1 + T2 lbs	Min. RL in	RL Dimension inches (RL _{max} = 70.87")										Type of Bracket		
Power HP	No. of Poles								Weight in lbs ⁵												
									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	165E	12	14	351	2,097	15.75	66	69	72	76	78	80	83	87	90				
				14	16	288															
				18	20	233															
0.50	6	3	165E	24	25	624	2,097	15.75	68	71	75	78	80	83	86	89	92				
				30	30	512															
	4	3	165E	38	37	414															
				48	48	328															
		2	165E	60	59	265															
				76	77	202															
96	98	160																			
1.00	4	3	165E	120	123	126	2,097	15.75	70	74	77	80	82	84	88	91	94				
				150	152	102															
				192	199	78															
	2	165E	240	251	62	1,955															
			38	38	810	2,097	15.75	70	74	77	80	82	84	88	91	94					
			48	48	664																
60	59	537																			
76	77	409																			
96	98	325																			
1.50	4	3	165E	240	251	125	2,097	15.75	75	78	81	84	87	89	92	95	99				
				60	66	730															
				76	81	569															
	2	165E	96	99	467	2,097	15.75	75	78	81	84	87	89	92	95	99					
			120	123	378																
			150	161	288																
192	203	228																			
2.00	2	3	165E	240	257	180	2,097	15.75	77	80	83	87	89	91	94	98	101				
				300	318	145															1,955
				384	416	111															1,562
	2	165E	480	525	88	1,562	15.75	77	80	83	87	89	91	94	98	101					
			600	646	74																
			768	787	88																
3.00	2	3	165E	120	132	717	2,097	17.72	-	84	87	91	93	95	98	102	105				
				150	161	588															
				192	192	466															
	2	165E	240	250	378	1,955	17.72	-	84	87	91	93	95	98	102	105					
			300	302	314																
			384	417	227																
480	527	180	1,562	17.72	-	84	87	91	93	95	98	102	105								
600	648	146																			
768	783	121																			

Standard RL →

Idler Pulley	Model UT165E	2,097	15.75	33	35	39	43	45	47	50	54	58	See Foot-note ⁴	KL41-HD 6YA0K
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- 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 79. Note that "actual belt speed" decreases when lagging is not used due to decreased pulley diameter.
- Belt pull value allows for gearbox loss.
- Pulley must not be subjected to radial load exceeding "Maximum radial load" defined above. See "Belt Tension" section in Technical Precautions, page 80.
- Additional Motorized Pulley and Idler 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 and do not include mounting brackets. To calculate unlagged pulley weight subtract 0.1 lbs/in of Roller Length from above.

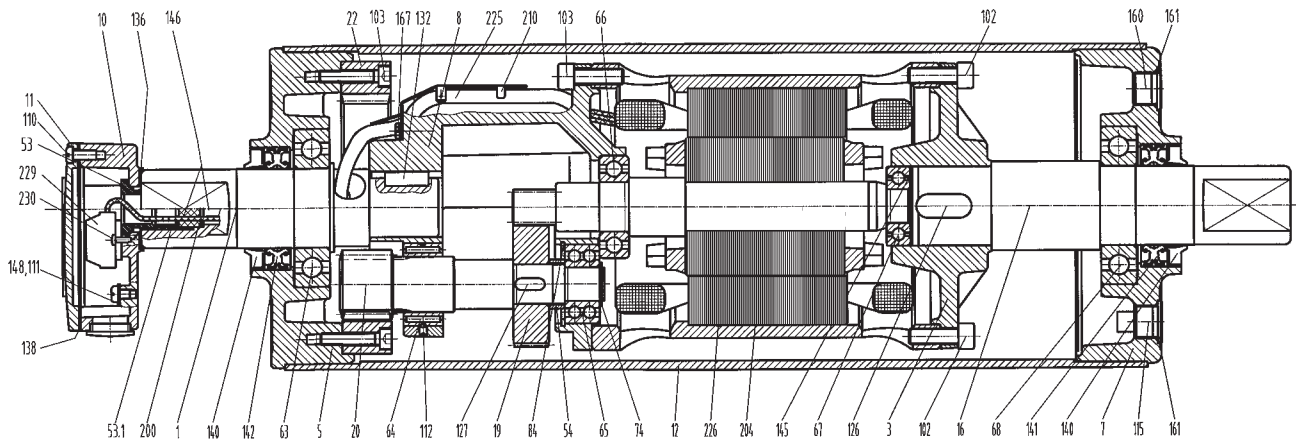


Motorized Pulley 165E, Ø 6.49 in. (165 mm)

Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Front shaft	53	Cable seal nipple (cable option)	102	Screw
3	Rear flange	53.1	Nipple (terminal box)	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

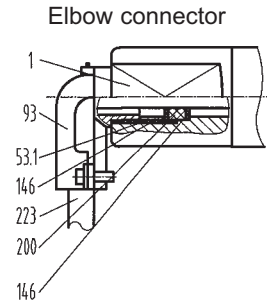
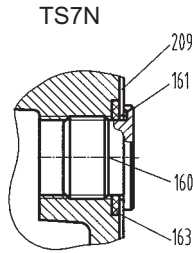




Motorized Pulley 165E, Ø 6.49 in. (165 mm)

Spare parts list and sectional drawings

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



TS7N with cable connection

3-stage gearbox

Electromagnetic brake

