



Motorized Pulley 320L, 320M & 320H, Ø 320 mm

To match your requirements in diameter 320 mm, our product range offers three different loading performances for your BULK applications:

- L for Light-duty
- M for Medium-duty
- H for Heavy-duty

You have a choice.

Therefore, it is important to notice the differences to choose the right type of Pulley for the right application based on estimated belt tension (radial load) = T1+T2. The actual radial load **MUST** be **LESS** than the max. allowable radial load shown in this catalogue.

Be aware of increased belt tensions using multi-ply thick heavy belts and/or larger belt widths.

If you do not find the belt tension needed in this diameter, you might have to choose a larger one.

L for Light-duty

320L is meant for applications with regular and constant operating conditions. Max. allowable radial load has to be respected; therefore it is advisable to rubber lag these Pulleys to increase grip and to limit belt tension.

Typical applications are portable conveyors and cross-belt & take-away conveyors in mobile crushers & screeners, but 320L should NOT be used for e.g. feeder conveyors. (Motor/gearbox origin from 220M).

M for Medium-duty

The internal parts of 320M are designed for TOUGH and IRREGULAR working conditions - e.g. in crusher & screening applications, asphalt, cement and concrete plants etc.

H for Heavy-duty

Due to a solid 3-stage gearbox, Ø 50 mm shafts, matching bearings etc, 320H provides the necessary forces needed for low speeds combined with high power, and is designed to handle irregular loadings in BRUTAL conditions.

STANDARD SPECIFICATION of Motorized Pulley

- Crowned mild steel Ø 320 mm steel shell treated with anti-rust wax
- Powder coated cast iron bearing housings
- Mild steel shafts treated with anti-rust wax
- Shaft sealing system – degree of protection IP66/67 (EN60034-5)
- Compact powder coated die cast aluminium terminal box ≤=4.0 kW
- Larger Powder coated die cast aluminium terminal box ≥=5.5 kW
- 3-phase induction motors with thermal protector
- Voltage: Wide range & dual voltage (Star/Delta). Most common voltages available. Please specify!
- Motor winding insulation Class F
- Dynamically balanced rotor
- One out of two oil plugs fitted with a magnet to filter the oil – 320L
- Two oil plugs fitted with a magnet to filter the oil – 320M & 320H
- Oil change recommended every 10,000 operational hours
- Minimum RL. Please refer to pages 33-34
- Maximum RL – Please inquire!
- Non standard RL's available
- To be used in horizontal positions ± 5 degree only!

Please note:

- Straight or elbow connector available
- Parallel shell available. Diameter equal to dimension Ø A
- Two speed motors on request
- Special speed available on request
- Motorized Pulleys for non-horizontal positions available on request
- The high speed of 2-pole motors can cause higher noise levels and are therefore not recommended in noise sensitive areas
- Environmental considerations: page 72
- Technical precautions: pages 76-86
- Optional extras: page 31 and back cover
- Connection Diagrams: pages 94-96.

STAINLESS STEEL options

TS9N

- Stainless steel shell – AISI 304 range
- Stainless steel shafts – AISI 303/4 range
- Stainless steel covered bearing housings – AISI 316 range
- Stainless steel oil plugs – AISI 304 range – one out of two with magnet
- Stainless steel exterior bolts – AISI 304 range
- Re-greasable labyrinth seals with grease nipples in stainless steel – AISI 304 range
- Shaft sealing system – degree of protection IP66/67 (EN60034-5).

TS10N

- As TS9N, but WITHOUT re-greasable labyrinth seals.

SEMI-RUST-FREE options

TS11N

- As TS9N, but with crowned mild steel Ø 320 mm steel shell treated with anti-rust wax.

TS12N

- As TS10N, but with crowned mild steel Ø 320 mm steel shell treated with anti-rust wax.

Other Options:

- FDA & USDA food grade recognized oil and grease are NOT included in TS9N to TS12N, but available on request
- Complete Motorized Pulleys in acid resistant stainless steel – AISI 316 range – on request.

Electrical connection options:

- Salt water resistant powder coated aluminium terminal box with zinc plated exterior bolts
- Stainless steel terminal box – AISI 304 range (max. 4 kW)
- Straight stainless steel connector with flying lead – AISI 304 range.

Please specify required TS-number when ordering!



OPTIONAL EXTRAS

Motorized Pulley 320L, 320M & 320H

Specification	320L	320M & 320H
Total stainless steel option AISI 304 range TS9N Re-greasable labyrinth seals!	x	x
Total stainless steel option AISI 304 range TS10N Standard seals!	x	x
Semi-rust-free option TS11N Re-greasable labyrinth seals!	x	x
Semi-rust-free option TS12N Standard seals!	x	x
Food grade oil & grease - FDA & USDA recognized - available on request	x	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!	On request!
TOTAL acid resistant stainless steel option - AISI 316	x	x
Re-greasable labyrinth seals - mild steel	x	x
Black rubber lagging - STANDARD specifications: - Smooth lagging - Hardness 60 ±5 Shore A - Diamond lagging - Hardness 60 ±5 Shore A	o 5/8 mm 6/8 mm	o 5/8 mm 6/8 mm
White smooth rubber lagging (FDA). Oil, fat & grease resistant	x	x
SPECIAL lagging available on request - e.g. hot vulcanized, ceramic etc.	x	x
Electromagnetic brake Min. RL dimensions increases by (mm)	x 100	x 100
Mechanical backstop Min. RL dimensions increases by (mm)	x	x 50
Modified for vertical mounting	o	o
Modified for mounting between 5° - ≤ 90° - e.g. for magnetic separators	o	o
Insulation class F - Allowable ambient temperature: -25°C-+40°C	Std.	Std.
Insulation class H with synthetic oil	x	x
SPECIAL motors for applications with NO belt contact	x	x
Low noise drives for noise sensitive areas	x	x
Parallel shell	x	x
Thermal protector	Std.	Std.
IP66/67 Compact powder coated aluminium terminal box - food grade approved	Std.	Std. ≤ 4.0 kW
IP66/67 Compact stainless steel - AISI 304 or 316 range - terminal box	x	≤ 4.0 kW
IP66/67 Larger powder coated aluminium terminal box - food grade approved		Std. ≥ 5.5 kW
Straight or elbow connector with flying lead	x	≤ 4.0 kW
Straight connector with flying lead - Stainless steel - AISI 304 range -	x	≤ 4.0 kW
Shaft sealing system - degree of protection IP66/67 (EN60034-5)	Std.	Std.
Screened cables - a MUST together with Frequency Converters	x	x
2 speed motors	x	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.	Std.
Special voltages - 50 and/or 60 Hz Please specify!	x	x
Dual voltage - delta/star - connection possibility!	Std.	Std.
CSA approved motors - available on request only!	x	x

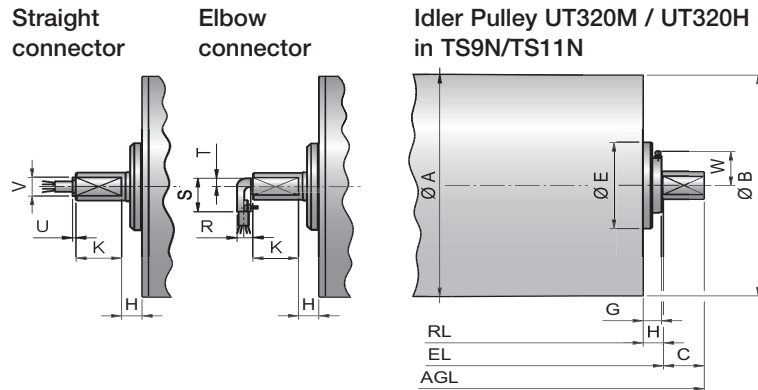
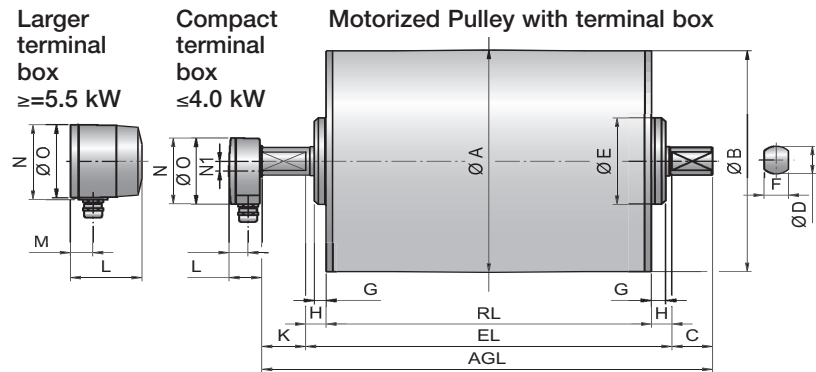
x = Optional extra's

o = An option with certain limitations. Please refer to Technical precautions pages 76-86!

Std. = Fitted as standard

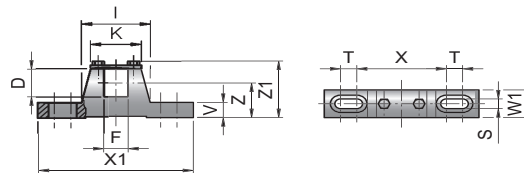


Motorized Pulley 320L, 320M & 320H, Ø 320 mm



Type	Motorized Pulley or idler Pulley (UT)											Compact terminal box <4.0 kW				Larger terminal box >5.5 kW				Straight connector <4.0 kW		Elbow connector <4.0 kW		
	A	B	C	D	E	F	G	TS9/11	H	K	W	L	M	N	N1	L	M	N	O	U	V	R	S	T
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
320L	323	319	50	40	96	30	15	19	25	54	-	41	24	95	14	-	-	-	-	4	27	20	48	12
320M	321	319	50	40	125	30	17.5	22.5	25	54	-	41	24	95	14	87	27	107	105	4	27	20	48	12
320H	321	319	50	50	148	40	11	20.5	25	55	-	41	24	95	14	87	27	107	105	4	27	20	48	12
UT320M	321	319	50	40	125	30	14.5	22.5	25	-	52	→ Idler Pulley shown in TS9N/TS11N version with re-greasable seals												
UT320H	321	319	50	50	148	40	11	20.5	25	-	52	→ Idler Pulley shown in TS9N/TS11N version with re-greasable seals												

Mounting brackets KL41, KL41-HD & KL42



Motorized Pulleys Type	Material	Bracket description	Dimensions													Weight kg
			D	F	I	K	S	T	V	W1	X	X1	Z	Z1		
			mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
320L & 320M	Spheroidal cast iron	KL41	40	30	84	62	14	20	22	40	110	190	50	83	1.9	
	Steel	KL41-HD	40	30	84	62	14	20	22	40	110	190	50	83	2.1	
320H	Steel	KL42	50	40	121	90	18	30	25	50	150	250	70	110	4.5	



Motorized Pulley 320L, Ø 320 mm

50 Hz

Power kW/HP	Motor		Nominal belt speed at Full Load 50Hz m/sec	Torque Nm	Belt Pull N	Max. Radial Load T1+T2 N	Special min. RL	Type	Weight in kg for STANDARD width											Type of Bracket
	No. of Poles	Gear stages							Dimension RL in mm (RL >2000 mm available on request)											
									400	450	500	550	600	650	700	750	800	850	per 50 mm up to 2000	
0.75/ 1.00	8	2	0.32	356	2218	11500	450	320L	400	450	500	550	600	650	700	750	800	850	4 kg	KL41
			0.40	285	1776															
			0.50	228	1421															
			0.63	181	1128															
			0.80	142	885															
			1.00	114	710															
			1.25	92	573															
1.10/ 1.50	4	2	0.63	265	1651	11500	400	320L	400	450	500	550	600	650	700	750	800	850	4 kg	KL41
			0.80	209	1302															
			1.00	167	1040															
			1.25	134	835															
			1.60	105	654															
			2.00	84	524															
			2.50	67	417															
1.50/ 2.00	4	2	0.63	362	2255	11500	400	320L	400	450	500	550	600	650	700	750	800	850	4 kg	KL41
			0.80	285	1776															
			1.00	228	1421															
			1.25	182	1134															
			1.60	143	891															
			2.00	114	710															
			2.50	92	573															
2.20/ 3.00	4	2	0.80	418	2604	11500	450	320L	400	450	500	550	600	650	700	750	800	850	4 kg	KL41
			1.00	334	2081															
			1.25	265	1651															
			1.60	209	1302															
			2.00	167	1040															
			2.50	134	835															
			3.00/ 4.00	4	2															
1.60	285	1776																		
2.00	228	1421																		
2.50	182	1134																		
4.00/ 5.50	2	2				1.60	380	2368	11500	500	320L	400	450	500	550	600	650	700	750	800
			2.00	304	1894															
			2.50	243	1514															

Motorized Pulley 320M & 320H, Ø 320 mm

50 Hz

Power kW/HP	Motor		Nominal belt speed at Full Load 50Hz m/sec	Torque Nm	Belt Pull N	Max. Radial Load T1+T2 N	Special min. RL	Type	Weight in kg for STANDARD width											Type of Bracket																																
	No. of Poles	Gear stages							Dimension RL in mm (RL >2000 mm available on request)																																											
									450	500	550	600	650	700	750	800	850	per 50 mm up to 2000																																		
0.75/ 1.00	12	3	0.13	876	5475	35000	550	320H	400	450	500	550	600	650	700	750	800	850	5 kg	KL42																																
		2	0.16	712	4453	20000	500	320M													400	450	500	550	600	650	700	750	800	850	4 kg	KL41																				
			0.20	570	3562																																															
	0.25		456	2841																																																
	0.32		356	2218																																																
	1.10/ 1.50	12	3	0.40	285	1776	20000	500													320M	400	450	500	550	600	650	700	750	800	850	4 kg	KL41																			
				0.50	228	1421																																														
0.63			181	1128																																																
8		2	3	0.80	142	885			35000	550	320H	400	450	500	550	600	650	700	750	800														850	5 kg	KL42																
				0.13	1286	8039																																														
		2	2	2	0.16	1045																															6531	20000	500	320M	400	450	500	550	600	650	700	750	800	850	4 kg	KL41
					0.20	836																															5225															
					0.25	669																															4181															
					0.32	522																															3252															
					0.40	418																															2604															
					0.50	334																															2081															
0.63	265	1651																																																		
0.80	209	1302																																																		
1.00	167	1040																																																		
1.25	134	835																																																		

Idler Pulley		20000	450	UT320M	50	54	58	62	66	70	74	78	82	4 kg	KL41-HD
		35000	450	UT320H	50	61	65	69	73	77	81	85	89	4 kg	KL42



Motorized Pulley 320M & 320H, Ø 320 mm

50 Hz

Motor			Nominal belt speed at Full Load 50Hz m/sec	Torque Nm	Belt Pull N	Max. Radial Load T1+T2 N	Special min. RL	Type	Weight in kg for STANDARD width										Type of Bracket					
Power kW/HP	No. of Poles	Gear stages							Dimension RL in mm (RL >2000 mm available on request)															
									450	500	550	600	650	700	750	800	850	per 50 mm up to 2000						
1.50/ 2.00	8	3	0.16	1425	8906	35000	550	320H	Hatched	Hatched	135	139	144	149	154	159	164	5 kg	KL42					
			0.20	1140	7125																			
		0.25	912	5700																				
	2.20/ 3.00	8	3	0.32	712		4436	20000			500	320M	Hatched	Hatched	110	114	118	122	126	130	134	138	4 kg	KL41
				0.40	570		3551																	
			0.50	456	2841																			
		2.20/ 3.00	4	2	0.63		362				2255	20000			500	320M	Hatched	Hatched	100	104	108	112	116	120
0.80					285	1776																		
1.00				228	1421																			
3.00/ 4.00			6	3	1.25	182	1134		35000	550	320H				Hatched	Hatched			135	139	144	149	154	159
	1.60				209	1302																		
	2.00			167	1040																			
	3.00/ 4.00		4	2	2.50	134	835	20000		500	320M		Hatched	Hatched					100	104	108	112	116	120
		0.25			1824	11400																		
		0.32		1425	8906																			
		4.00/ 5.50	6	3	0.40	1140	7125			35000	550	320H					Hatched	Hatched	135	139	144	149	154	159
0.50					912	5700																		
0.63				727	4525																			
4.00/ 5.50			4	2	0.80	570	3562		20000		500	320M			Hatched	Hatched			110	114	118	122	126	130
	1.00				456	2841																		
	1.25			362	2255																			
	5.50/ 7.50		6	3	1.60	285	1776	35000			550	320H	Hatched	Hatched					135	139	144	149	154	159
		2.00			228	1421																		
		2.50		182	1134																			
		5.50/ 7.50	4	2	0.32	1900	11875			20000	500	320M					Hatched	Hatched	110	114	118	122	126	130
0.40					1520	9499																		
0.50				1216	7600																			
7.50/ 10.00			6	3	0.63	965	6031		35000		550	320H			Hatched	Hatched			135	139	144	149	154	159
	0.80				760	4735																		
	1.00			608	3788																			
	7.50/ 10.00		4	2	1.25	486	3028	20000			500	320M	Hatched	Hatched					110	114	118	122	126	130
		1.60			380	2368																		
		2.00		304	1894																			
		7.50/ 10.00	6	3	2.50	243	1514			35000	550	320H					Hatched	Hatched	135	139	144	149	154	159
0.40					2090	13062																		
0.50				1672	10450																			
7.50/ 10.00			4	2	0.63	1327	8294		20000		500	320M			Hatched	Hatched			110	114	118	122	126	130
	0.80				1045	6531																		
	1.00			836	5225																			
	7.50/ 10.00		6	3	1.25	671	4180	35000			550	320H	Hatched	Hatched					135	139	144	149	154	159
		1.60			524	3259																		
		2.00		304	2604																			
		7.50/ 10.00	4	2	2.50	334	2081			20000	500	320M					Hatched	Hatched	140	144	148	152	156	160
0.80					1424	8909																		
1.00				1140	7125																			
7.50/ 10.00			6	3	1.25	911	5700		35000		550	320H			Hatched	Hatched			135	139	144	149	154	159
	1.60				712	4453																		
	2.00			570	3562																			
	7.50/ 10.00		4	2	2.50	456	2850	20000			500	320M	Hatched	Hatched					140	144	148	152	156	160
		0.80			1424	8909																		
		1.00		1140	7125																			

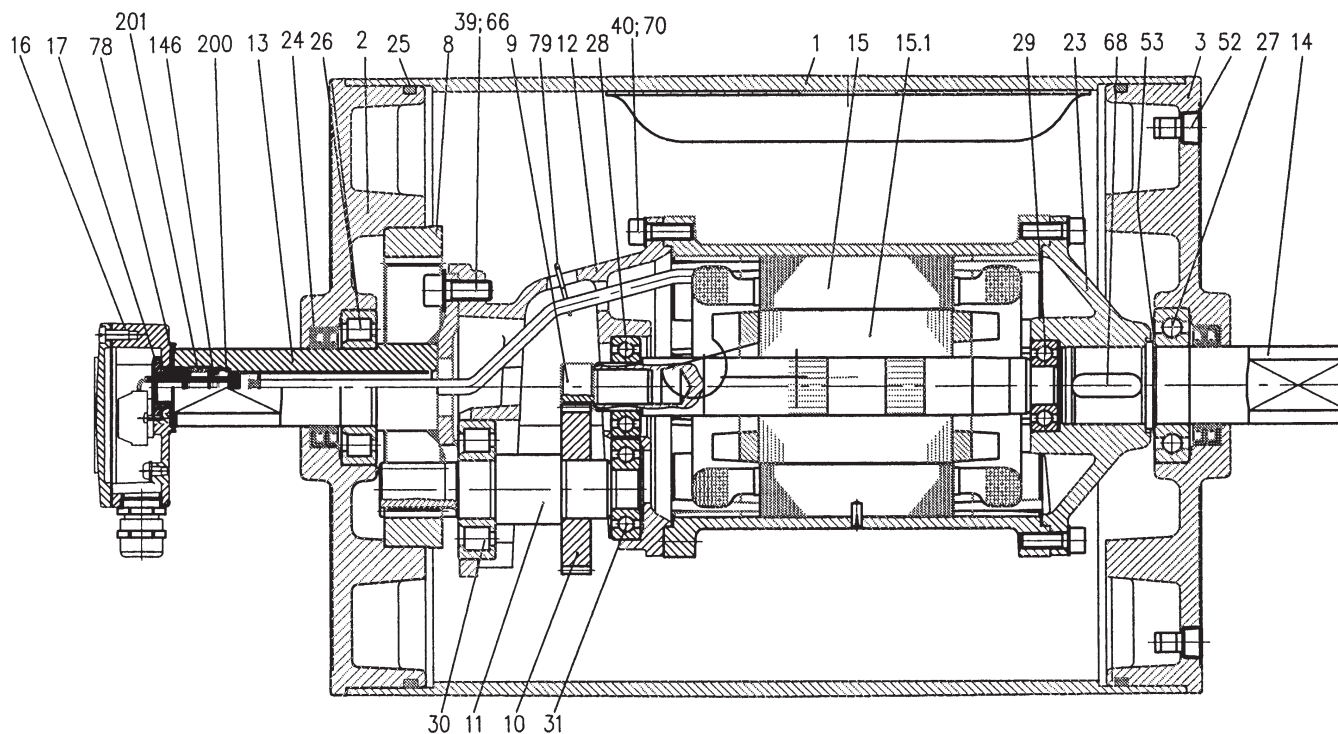
Idler Pulley		20000	450	UT320M	50	54	58	62	66	70	74	78	82	4 kg	KL41-HD
		35000	450	UT320H	Hatched	61	65	69	73	77	81	85	89	4 kg	KL42



Motorized Pulley 320L, Ø 320 mm

Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	24	2 Dust lip seals each side	78	Gasket
2	End housing with geared rim	24	1 Double lip seal for labyrinth option	79	Holding clip or plastic tie
3	End housing	25	O-ring	85	Intermediate flange for backstop
8	Geared rim	26	Bearing	85.1	Intermediate flange for brake assembly
9	Rotor pinion	27	Bearing	91	Electromagnetic brake
10	Input wheel	28	Bearing	93	Retaining ring
11	Output pinion	29	Bearing (Backstop solution: One-way-bearing)	95	Straight connector
12	Gear box	30	Bearing	96	Elbow connector
13	Front shaft	31	Bearing	101	Key
14	Rear shaft	39	Hexagon socket screw	104	Distance washer
15	Stator complete	40	Hexagon socket screw	120	Labyrinth cover
15.1	Rotor	52	Magnetic oil plug	121	Set screw
16	Terminal box complete	53	Distance washer	122	O-ring
17	Nipple	53.1	Compression nipple	123	Grease nipple
20	Cover	59	Countersunk head screw	143	O-ring
20.1	Cover with labyrinth groove	66	Waved spring washer	146	Special shaped compression washer
23	Rear flange	68	Key	200	Rubber seal
23.1	Rear flange for backstop	70	Toothed washer		
32.2	Rear flange for electromagnetic brake				

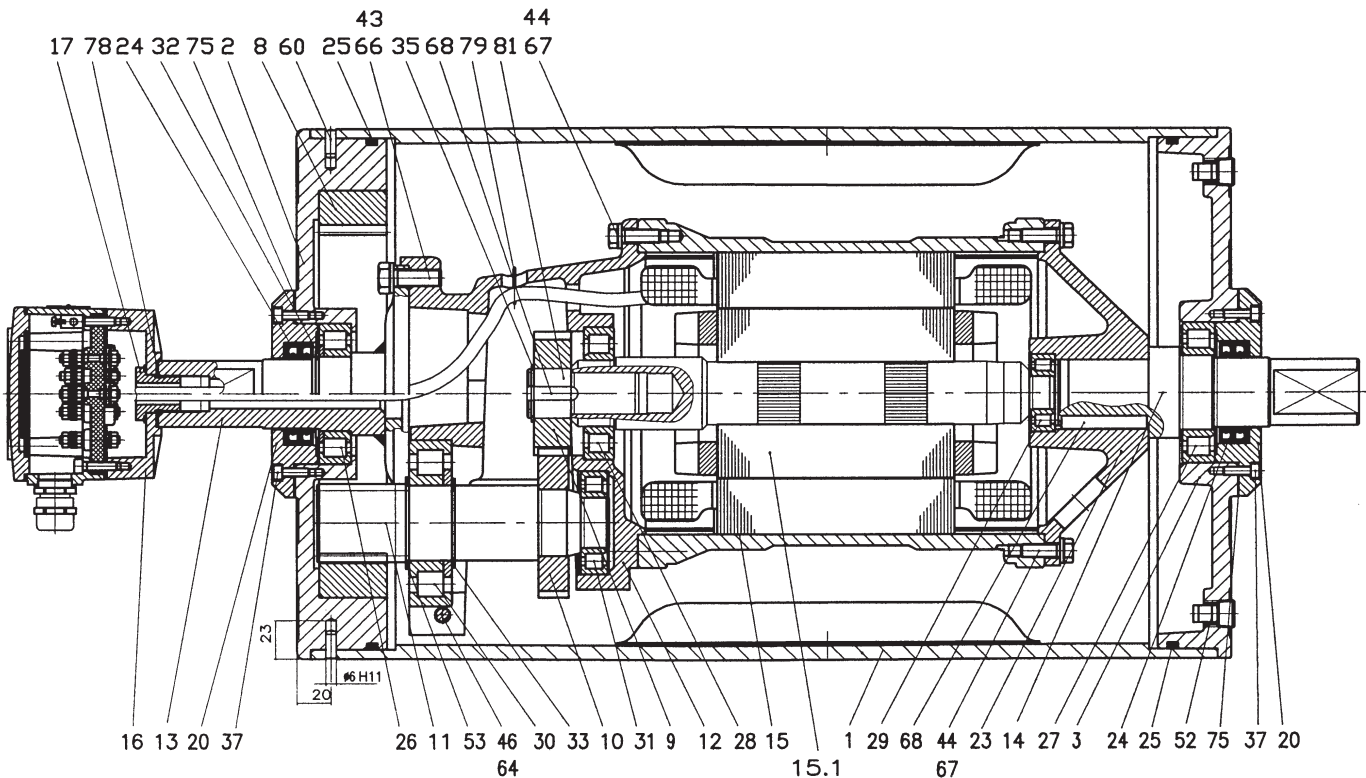




Motorized Pulley 320M, Ø 320 mm

Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	29	Bearing	78	Gasket
2	End housing with geared rim	30	Bearing	79	Holding clip or plastic tie
3	End housing	30	Bearing	85	Intermediate flange for backstop
8	Geared rim	31	Bearing	85.1	Intermediate flange for brake assembly
9	Rotor pinion	32	Retaining ring	91	Electromagnetic brake
10	Input wheel	33	Retaining ring	93	Retaining ring
11	Output pinion	35	Retaining ring	94	Hexagon head screw
12	Gear box	37	Hexagon socket screw	95	Straight connector
13	Front shaft	43	Hexagon socket screw	96	Elbow connector
14	Rear shaft	44	Hexagon socket screw	99	Waved spring washer
15	Stator complete	45	Hexagon head screw	101	Key
15.1	Rotor	46	Hexagon head screw	104	Distance washer
16	Terminal box complete	49	Washer	120	Labyrinth cover
17	Nipple	52	Magnetic oil plug	121	Set screw
20	Cover	53	Distance washer	122	O-ring
20.1	Cover with labyrinth groove	53.1	Compression nipple	123	Grease nipple
23	Rear flange	60	Parallel pin	143	O-ring
23.1	Rear flange for backstop/Brake	64	Prevailing torque type hexagon nut	146	Special shaped compression washer
24	2 Dust lip seals each side	66	Waved spring washer	200	Rubber seal
25	O-ring	67	Waved spring washer		
26	Bearing	68	Key		
27	Bearing	70	Waved spring washer		
28	Bearing	75	Gasket		

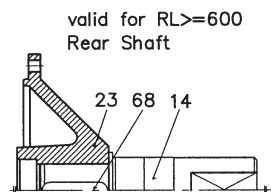
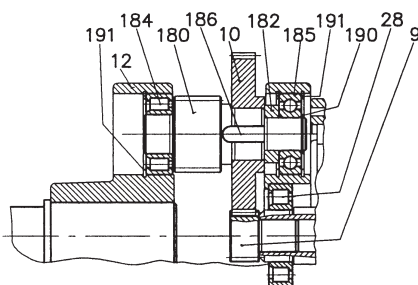




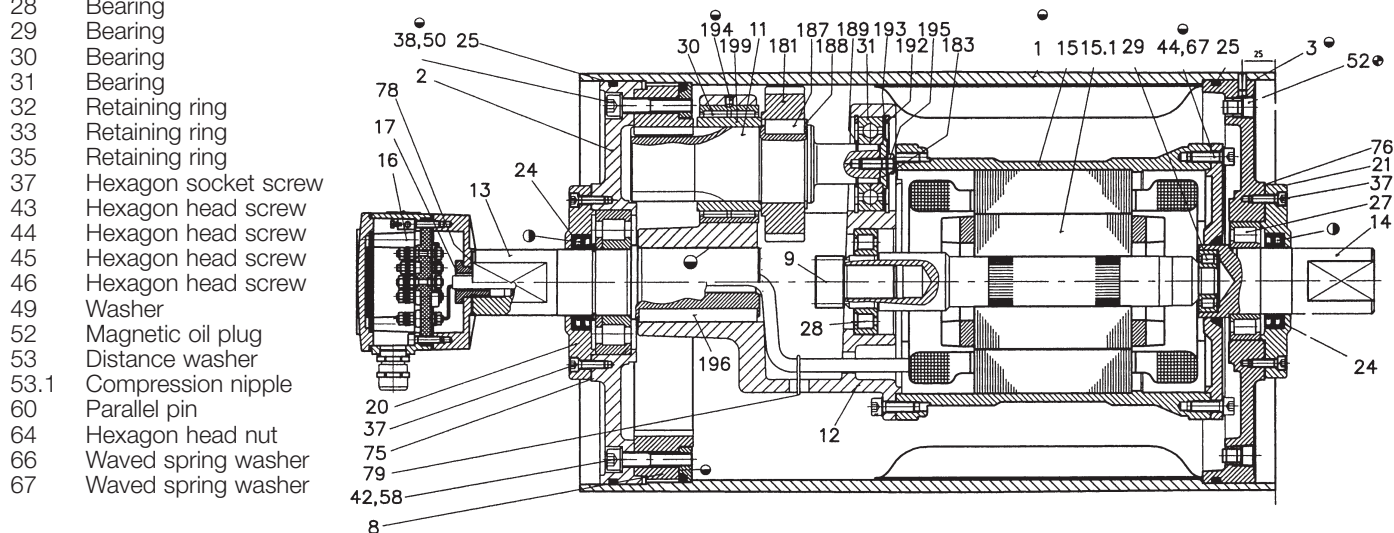
Motorized Pulley 320H, Ø 320 mm

Spare parts list and sectional drawings

Pos.	Description	Pos.	Description	Pos.	Description
1	Shell	68	Key	123	Grease nipple
2	End housing with geared rim	70	Waved spring washer	143	O-ring
3	End housing	73	Set screw	146	Special compression washer
8	Geared rim	75	Gasket	180	Intermediate pinion shaft
9	Rotor pinion	78	Gasket	181	Intermediate pinion
10	Input wheel	79	Holding clip or plastic tie	182	Distance bushing
11	Output pinion	80	Hexagon head screw	183	Washer
12	Gear box	84	Rear flange for brake	184	Roller bearing
13	Front shaft	85	Intermediate flange for backstop	185	Roller bearing
14	Rear shaft	85.1	Intermediate flange for brake assembly	186	Key
15	Stator complete	90	Backstop	187	Key
15.1	Rotor	91	Electromagnetic brake	188	Retaining ring
16	Terminal box complete	93	Retaining ring	190	Retaining ring
17	Nipple	94	Hexagon head screw	191	Retaining ring
20	Cover front side	95	Straight connector	192	Retaining ring
20.1	Cover with labyrinth groove	96	Elbow connector	193	Distance washer
21	Cover - rear side	99	Waved spring washer	194	Set screw
21.1	Cover with labyrinth groove	101	Key	195	Prevailing torque type hexagon nut
23	Rear flange	104	Distance washer	196	Key
23.1	Rear flange for brake option	120	Labyrinth cover	197	Retaining ring
24	2 Dust lip seals each side	121	Set screw	198	Distance ring
25	O-ring	122	O-ring	200	Rubber seal
26	Bearing				
27	Bearing				
28	Bearing				
29	Bearing				
30	Bearing				
31	Bearing				
32	Retaining ring				
33	Retaining ring				
35	Retaining ring				
37	Hexagon socket screw				
43	Hexagon head screw				
44	Hexagon head screw				
45	Hexagon head screw				
46	Hexagon head screw				
49	Washer				
52	Magnetic oil plug				
53	Distance washer				
53.1	Compression nipple				
60	Parallel pin				
64	Hexagon head nut				
66	Waved spring washer				
67	Waved spring washer				



- sealed with plumber plastic tape
- fitted with metal glue
- filled with grease

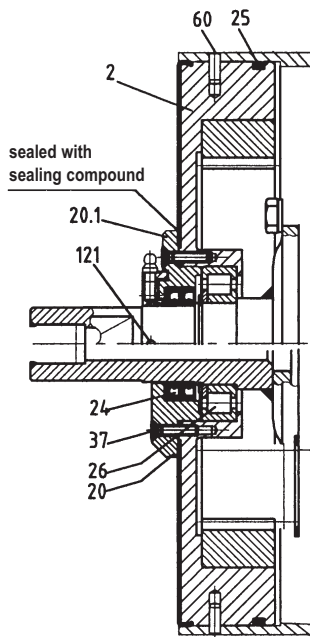
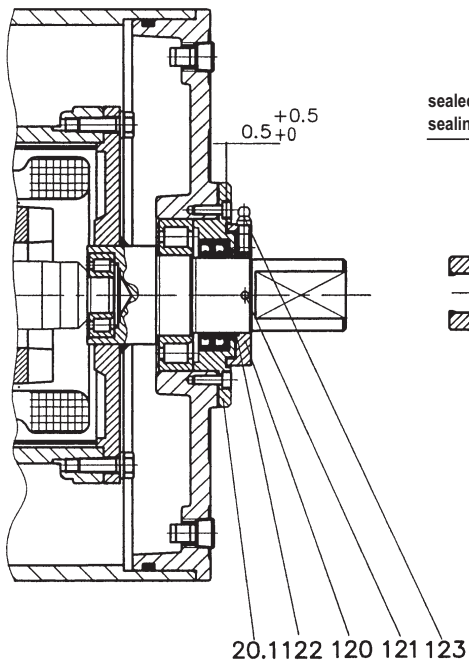




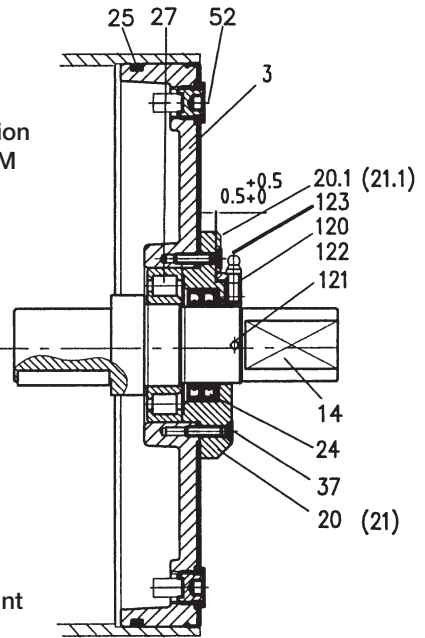
Motorized Pulley 320L, 320M & 320H, Ø 320 mm

Sectional drawings

Re-greasable
Labyrinth Option



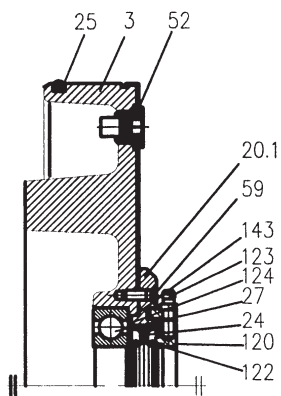
TS9N
Labyrinth Option
valid for 320M



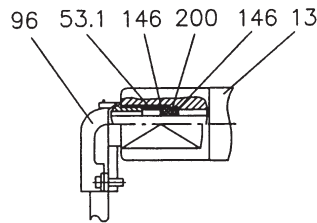
TS10N
without labyrinth

Stainless Steel Option

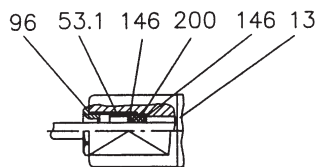
320L TS9N



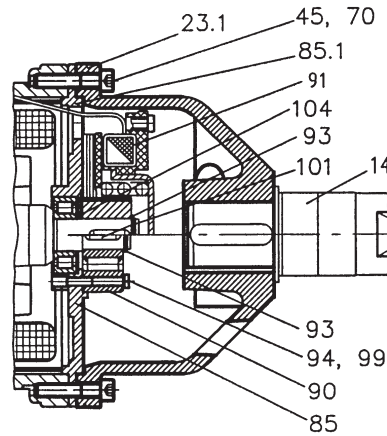
Elbow Connector



Straight Connector



Electromagnetic Brake Option



Backstop Option