LAT®

CONVEYOR DRUM MOTORS

2010 Catalogue

North America

CONVEYOR DRUM MOTORS

Oil-cooled, totally enclosed, dust/ wash-down proof according to protecting system IP65 / IP66 (DIN EN 60529) with intergrated three phase squirrel cage motor, planetary gear for TM 60 / 80 and helical gear for TM 82 / 800 drum motors.

LAT CATALOGUE® 2010

Edition 2010

Terms of delivery
Our standard terms of delivery and payment terms regulate the supply of goods. In order to continue development and improvement of the product, LAT® reserve the right to carry out design changes without notice.

We reserve the right to change ratings, data dimensions and weights without prior notice due to further development.

Drawings are not binding.

Equipment must be installed according to our installation instructions and applicable local and national safety regulations.

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Technical commentary

Operation Voltage

The motors are supplied for the standard voltages 230V, 460V or 575V at 60 Hz.
Motors for systems with different voltages and frequencies are available. When ordering, please state type of starting method (direct–on–line or with frequency converter).

Frequency

All statements in lists are related to main frequency of 60 Hz. At different frequencies the belt speed changes according to the change in frequency.

Insulation of the motor windings

Windings and insulation of the LAT® conveyor drum motors correspond to insulation-class F according to VDE 0530 (max. Temp. 155°C)

Drum coatings

A standard LAT® drum motor is always supplied without rubber coating.
On request we can supply them with rubber or ceramic coatings as far as this is possible in respect of heat appearance.

Rubber coatings

LAT® conveyor drum motors can be supplied with various rubber coatings. The exact coating thickness is fixed according to the drum diameter

Rubber coating:
Cold glued:
- 3-4 mm smooth at TM111 - TM160
- 5 mm smooth from TM165
- 8 mm diamond profile from TM165
- 10 mm diamond profile from TM415

Hot vulcanized optional.

Ceramic friction coatings

LAT® conveyor drum motors can also be supplied with friction coatings. The ceramic friction coating will be fixed onto the drum shell and has a thickness of around 3 to 5 mm.

Frequence Drives

All LAT motors are capable to run with a frequency drive. Fequency range of running these motors safely is 20 – 70Hz.

Motor protection

Optional drum motors can be supplied with a winding thermostat (WT) or temperature probes (PTC) in order to protect the motor winding against any abnormal temperature rise.

Conveyor drum motors as dual speed motors

By using of a dual – pole motor the conveyor can be driven with 2 different belt speeds. If you want a dual – pole motor we need some details about the belt – pull, the belt speed as well as the existing voltage.

Drum shell

LAT® conveyor drum motors are designed with a crowned shell profile. The corresponding measurements can be taken from the measurement sheets (measurements D2 and D1).

Special options

Thermal protection of the winding by the insertion of winding protection contacts (WT) or thermistor temperature probe (PTC)
Rust or acid protecting coating of the metal parts
Pole change (double or tripled)
Higher temperature of environment (normal up to 40°C)
Rubber lagging or ceramic friction
Drum shell cylindrical
Round shafts or other dimensions
Labyrinth seal or IP67 sealing system
Backstop or Electro-magnetic brake
Incremental encode
Profiled rubber lagging for modular belting
Stainless steel sprockets to run modular belting

Quotation/ inquiry form for LAT® drum motors

Customer's Address:

Company name / Contact:

Phone: Fax:

Email:

Check list :

Drum motor type :

Quantity :

Diameter D[Inches] :

Drum shell : ○ crowned ○ cylindric

Drum length L [Inches] :

Power P [HP] :

Belt speed V [FPM] :

Protection class : ○ IP65 ○ IP66 ○ IP67

Iso class : F_____ H:_____

Voltage V : 230 _____ 460_____ 575_____ 230V (50Hz)_____ 400V(50Hz)____
Other:_____

No. of phases : ○ three-phase ○ single-phase (110V) (select models only)

Frequency Hz : 50:_____ 60:_____

Operating with a Frequency Drive (VFD) : ○ yes ○ no

Shaft dimensions [Inches] :

d:	e:	f:	b:

Between frame dimension EL [Inches] :

Direction of mounting flats : ○ vertical (Standard) ○ horizontal ○ Special (please provide details)

Type of connection : ○ terminal box ○ cable with 90 degree elbow connector
○ cable straight connector ○ variable cable gland

Length of cable [Ft] :

Electromagnetic brake : ○ yes ○ no

Mechanical backstop : ○ yes ○ no

Direction of rotation when using A back stop (viewed on from power end) : ○ counter clockwise ○ clockwise

Reverse operation : ○ yes ○ no

*Rubber lagging : ○ yes ○ no

Material of drumshell : ○ mild steel ○ stainless steel

Material of shafts : ○ mild steel ○ stainless steel

Material of endcaps : ○ mild steel ○ stainless steel
○ seawater resistant aluminium ○ cast-iron

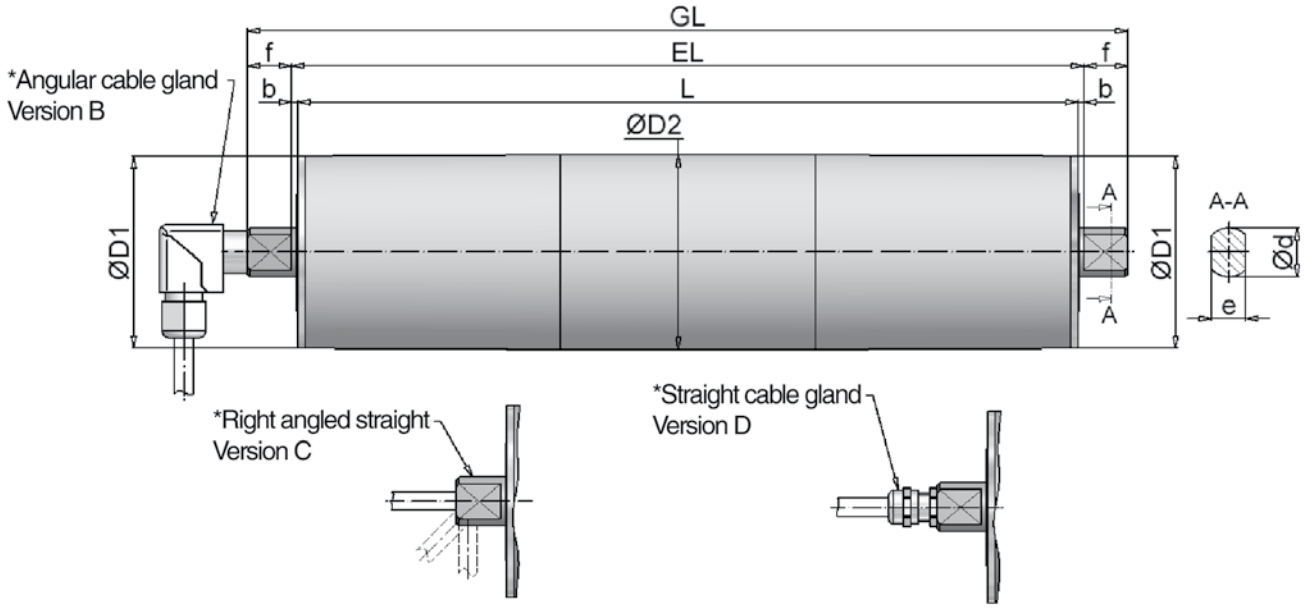
Mounting brackets for above drum motor : ○ yes ○ no

Idler : ○ yes ○no

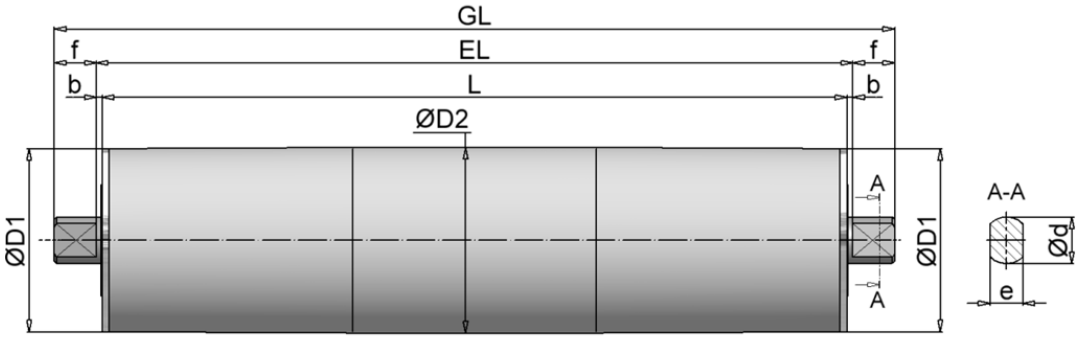
Extras:
e.g. quality of oil

*Special design of rubber coating: please specify

TM60 - Drum Motor



UT60 - Idler



All dimensions in inches

Drum Motor										standard IP65		optional IP66	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
2.36	TM 60.1	2.42	2.46	–	–	0.79	0.55	0.71	–	0.098	L + 0.196	0.098	L + 0.196

Idler													
2.36	UT 60.1	2.42	2.46			0.79	0.55	0.71		0.098	L + 0.196	0.098	L + 0.196

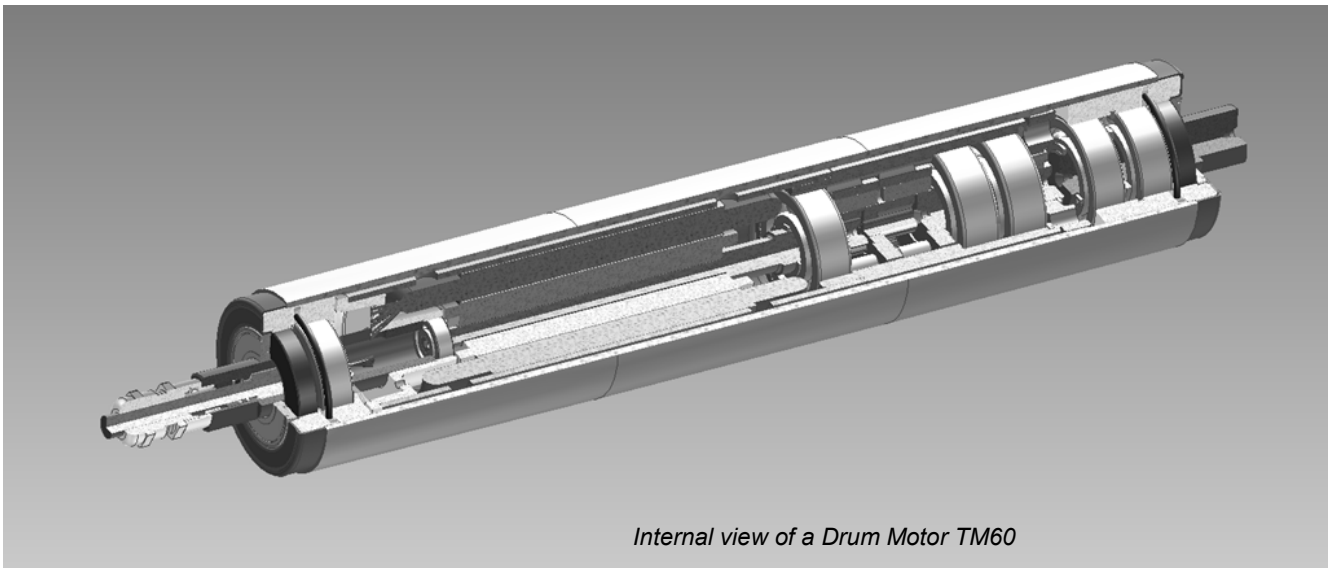
* Standard with 3' cable
** Diameter for flat face drum design

Performance data for TM60.1

Type	Power	Belt speed @ 60Hz	Belt pull	Drum torque	Nominal Load for 460V / 60Hz	Drum length L min.	Weight
	P2	v	F	T2			L=17.72“
	[HP]	(FPM)	[Lbs.]	[Lbs-Ft]	[A]	[Inches]	[Lbs.]
TM60.1	**0,04** 4-pole	21	78	8	0.19	13.98 for IP65 14.37 for IP66	13
		26	60	6			
		33	49	5			
		35	46	4			
		42	38	4			
		52	31	3			
		139	11	2			
		179	9	1			
		217	7	1			
TM60.1	**0,1** 2-pole	43	100	10	0.24	13.98 for IP65 14.37 for IP66	13
		54	77	8			
		66	64	7			
		71	59	6			
		87	49	5			
		104	40	4			
		285	15	2			
		370	11	1			
		448	9	1			

- Alternative speeds available upon request
- Mentioned weight includes oil
- Weight increases by 1.1Lbs. every additional 3.94” in additional length over 17.72”

Standard width [L in In.] : 13.97, 14.37, 15.75, 17.72, 19.69, 21.65, 23.62, 25.59, 27.56, 29.53, 31.50”
Over 33.46 re-inforced shaft will be used.
Please contact us for max. length.



Internal view of a Drum Motor TM60

Design and options

Standard design:

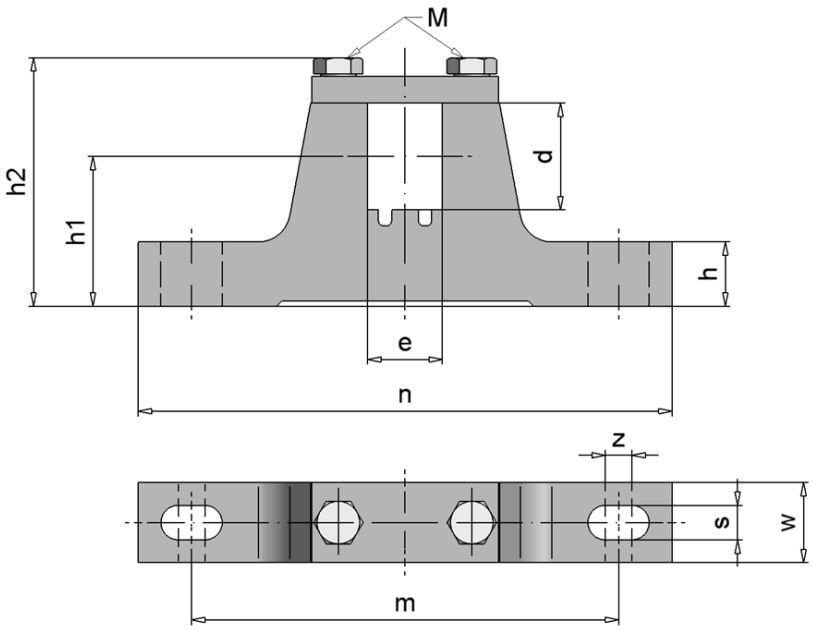
- Mild steel crowned
- End housings made of aluminium
- Mild steel shafts
- Planetary steel gears
- 90 degree cable connector with 3’ cable

Options:

- Straight cable connector with 3’ cable
- Sprockets for chain
- Flat faced drum shell, coated, zinc plated (customized)
- Stainless steel design
- Stainless steel mounting brackets
- IP66
- Screened cable for frequency drive use
- Sprockets for modular belt conveyor
- Vertical mounting (needs to be stated upon ordering)
- Food grade oil
- Food grade lagging
- Drum Motor as cartridge
- Single phase motor on request

Other designs available upon request.

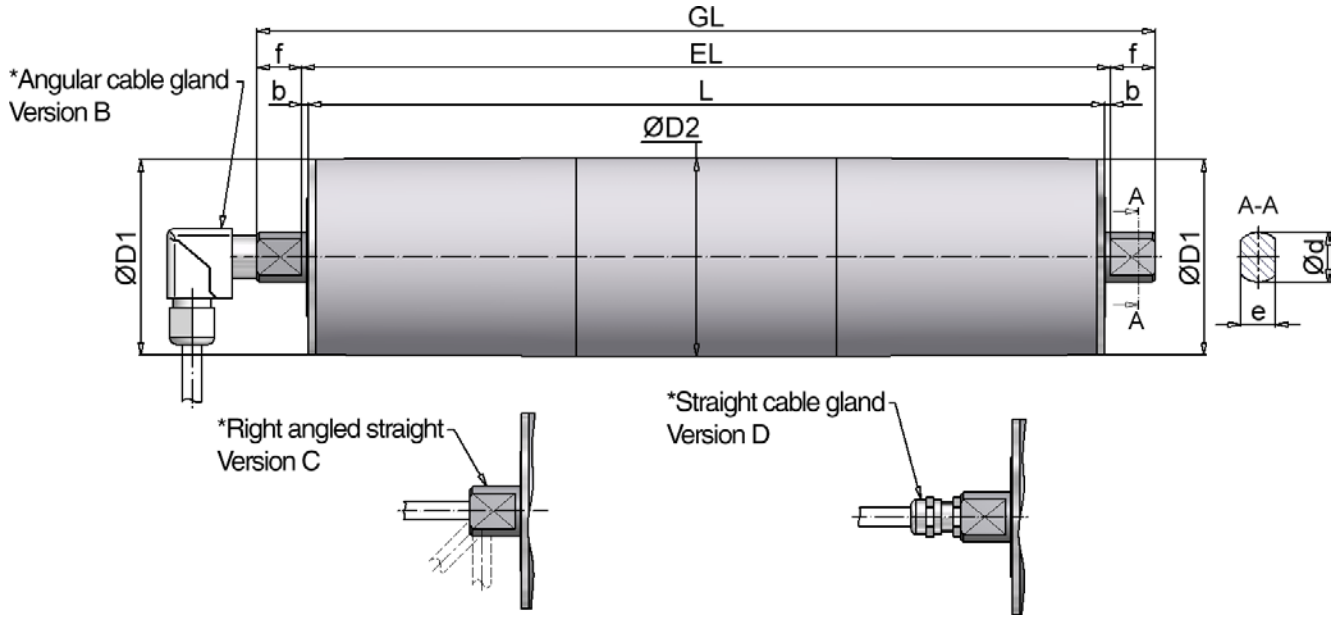
Mounting bracket for LAT® Drum Motor and Idler Type 60:



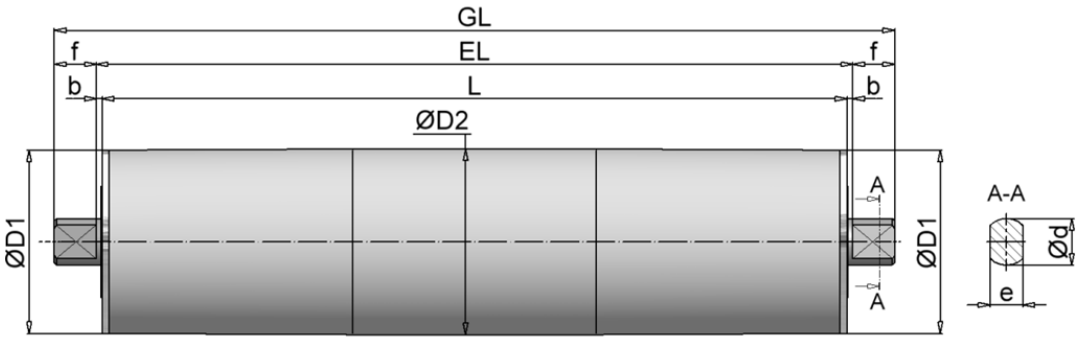
Dimensions in inches

drum type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	Lbs
TM/Idler 60.1	EL20/14	0.79	0.55	0.47	1.1	1.85	3.15	3.94	0.25	0.59	0.19	M5	Steel or St.Steel	0,55

TM 80 - Drum Motor



UT 80 - Idler



All dimensions in inches

Drum Motor										Standard IP65		optional IP66	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
3.15	TM 80.1	3.09	3.13	–	–	0.79	0.55	0.71	–	0.098	L + 0.196	0.098	L + 0.196

Idler													
3.15	UT 80.1	3.09	3.13			0.79	0.55	0.71		0.098	L + 0.196	0.098	L + 0.196

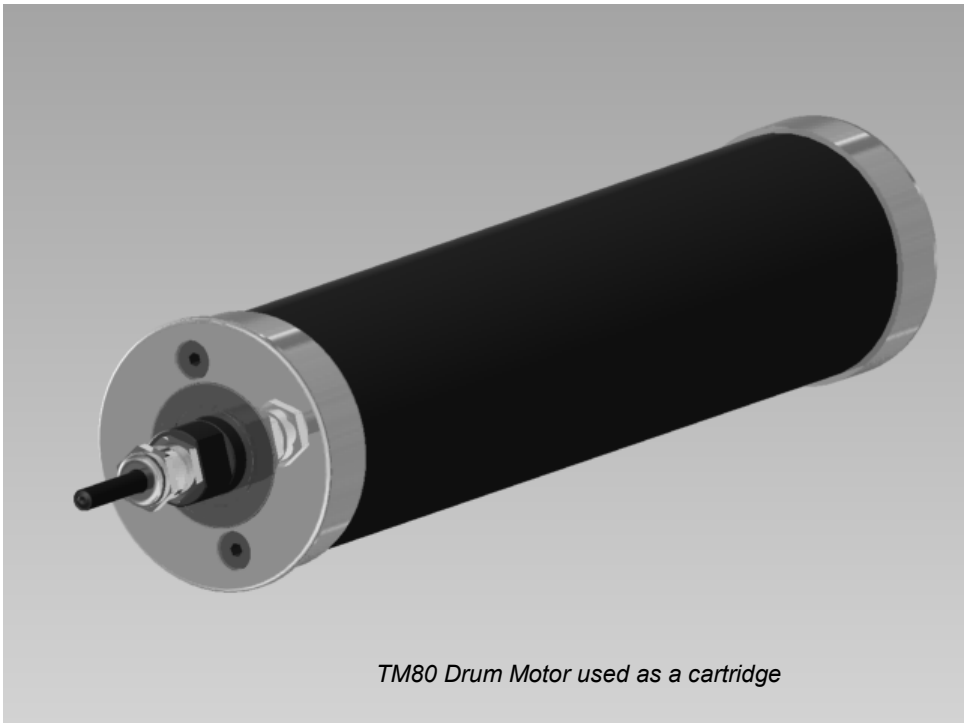
* Standard with 3' cable
** Diameter for flat face drum design

Perfomance data for TM80.1

Typ	Power	Belt speed	Belt pull	Drum torque	Full Load @ 460V / 60Hz	Drum length L min.	Weight
	P2	v	F	T2			L= 13.75“
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[Lbs]
TM80.1	**0,08** 4-pole	26	121	16	0,30	12.60 for IP65 13.00 for IP66	18
		33	93	13			
		42	77	10			
		45	71	10			
		54	59	8			
		66	49	7			
		177	18	2			
		231	14	1			
		278	11	1			
TM80.1	**0,16** 2-pole	57	112	15	0,35	12.60 for IP65 13.00 for IP66	18
		73	86	11			
		90	71	10			
		97	66	9			
		118	54	7			
		141	45	6			
		384	17	2			
		503	13	1			
		607	11	1			

- Alternative speeds available upon request
- Indication of weight including oil
- Weight increases approx. 1.1 Lbs. for every 3.94” in additional length over 13.75”

Standard width [L in In.] : 12.60, 13.00, 13.78, 15.75, 17.71, 19.69, 21.65, 23,62, 25.59, 27.56, 25.53, 31.50, 33.46, 35.43, 39.37.
Over 39.37 a re-inforced shaft will be used.
Please contact us for max. length.



TM80 Drum Motor used as a cartridge

Design and options

Standard configuration:

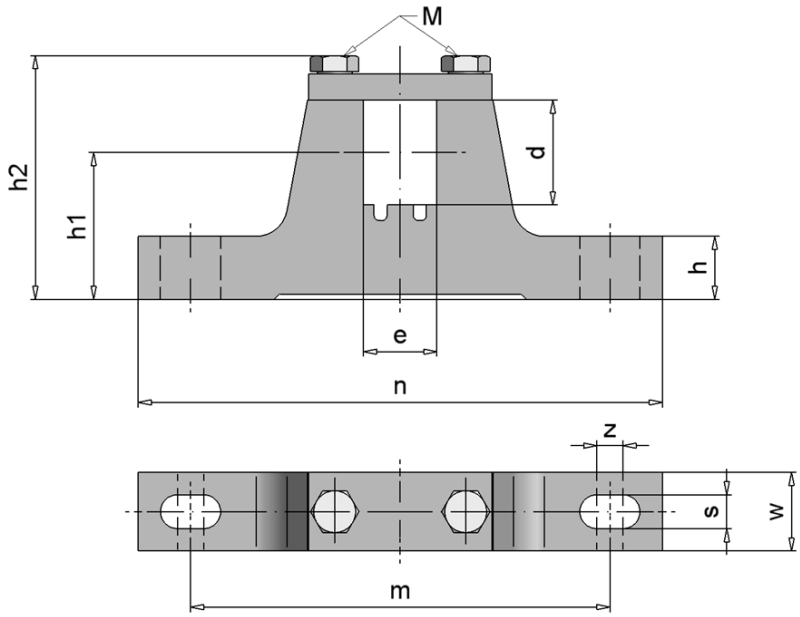
- Mild steel crowned shell
- End housings made of aluminium
- Mild steel shafts
- Planetary gear with steel toothing
- 90 degree elbow connector with 3’ cable

Options:

- Straight cable gland with 3’ cable
- Sprocket for chain
- Flat faced drum shell, coated, zinc plated (customized)
- Stainless steel design
- Stainless steel mounting brackets
- IP66
- Frequency inverter duty windings
- Sprockets for modular belt conveyor
- Vertical mounting (needs to be stated upon ordering)
- Food grade oil
- Food grade lagging
- Drum Motor as cartridge
- Single phase motors on request

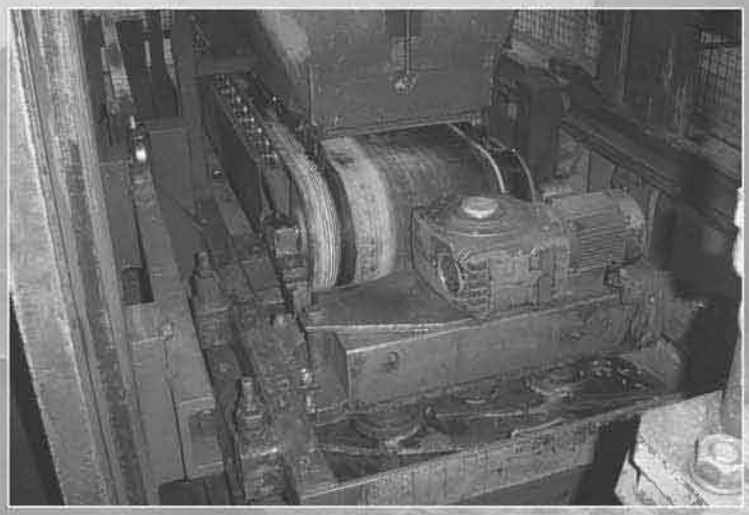
Other designs available upon request.

Mounting bracket for LAT® Drum Motor and Idler Type 80:

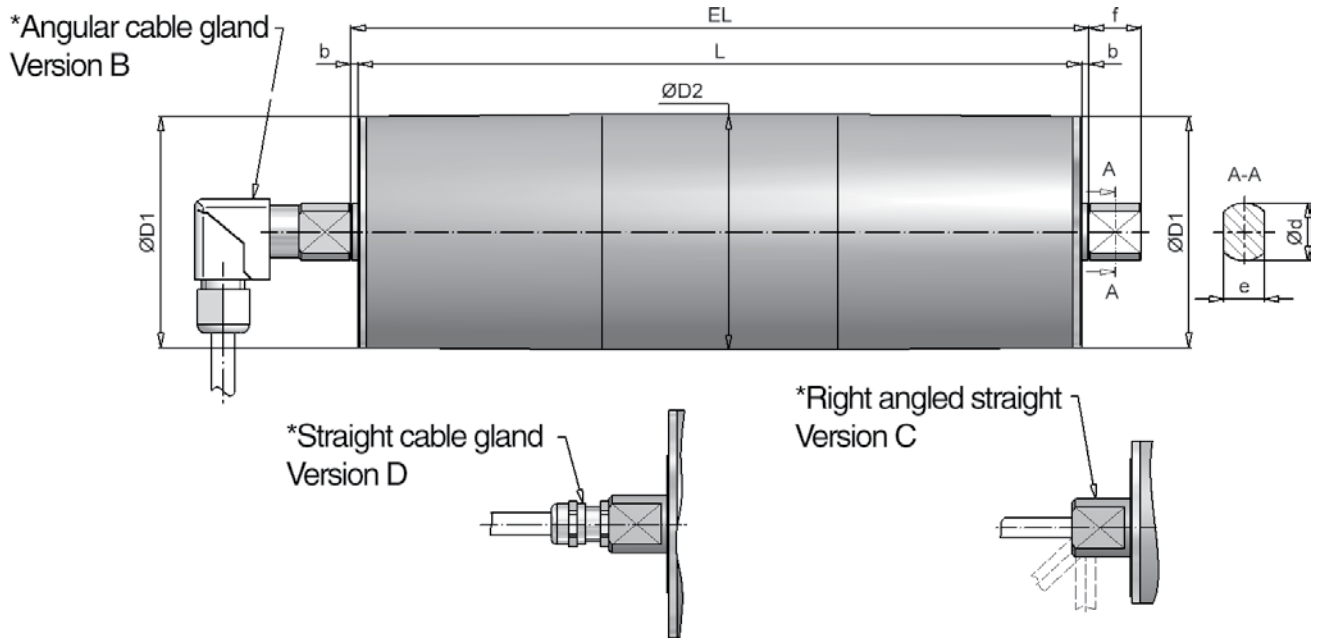


All dimensions in inches

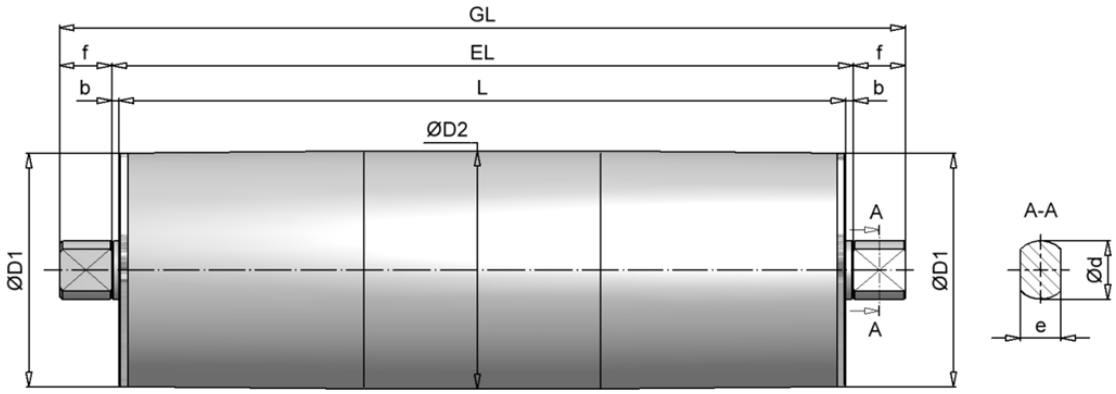
Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs
TM/ Idler 80.1	EL20/14	0.79	0.55	0.47	1.10	1.85	3.15	3.94	0.25	0.59	0.19	M5	Steel or St. Steel	0.55



TM 82 - Drum Motor



UT 82 - Idler



All dimensions in inches

Drum Motor										Standard IP66	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**Ød**	**e**	**f**	**f1**	**b**	**EL**
82	TM 82.1	3.15	3.21	–	–	0.79	0.55	0.71	–	0.098	L + 0.196
Idler											
82	UT 82.1	3.15	3.21	–	–	0.79	0.55	0.71	–	0.098	L + 0.196

* Standard with 3' cable
** Diameter for flat face drum design

Performance data for TM82.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 9.84“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM82.1	**0,02** 8-pole (Optional)	12	85	11	0,46	9.84	10
		16	58	8			
		21	48	7			
		28	33	4			
		42	23	3			
		52	18	2			
TM82.1	**0,054** 4-pole	23	88	12	0,23	7.87 for IP65 8.07 for IP66	8
		35	62	8			
		42	50	7			
		61	34	4			
		87	24	3			
		108	20	2			
TM82.1	**0,1** 2-pole	47	78	10	0,20	7.87 for IP65 8.07 for IP66	8
		68	54	7			
		85	44	6			
		122	30	4			
		177	21	3			
		217	17	2			
TM82.1	**0,1** 4-pole	24	155	21	0,37	9.84	10
		35	108	15			
		42	88	12			
		61	60	8			
		87	42	6			
		109	34	4			
TM82.1	**0,16** 2-pole	47	145	19	0,31	9.84	10
		68	126	17			
		85	88	12			
		123	72	10			
		177	49	7			
		217	34	4			

Alternative speeds available upon request
Indication of weight includes oil
Weight increases approx.1.76Lbs. for every 3.94” of additional length over 9.84”
Standard width [L in In.] : 7.78, 9.84, 11.81, 13.78, 15.75, 17.72, 19.69, 23.62, 25.59, 27.56,29.53, 31.50
Over 31.50 please contact us.

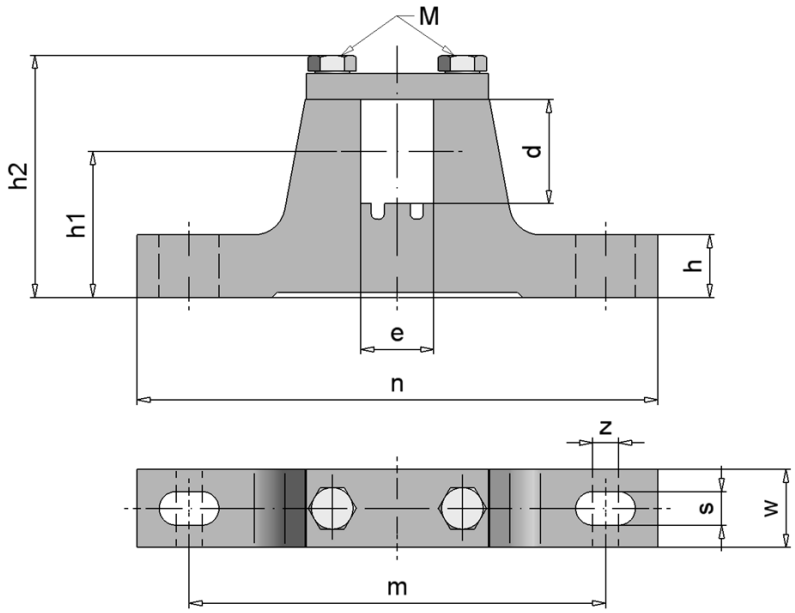
Design types and options

Standard configuration:
Mild steel crowned shell
End housings made of aluminium
Shafts made of steel with rust protection
Helical steel gears
90 degree elbow connector with 3’ cable

Options:
Internal brake
Terminal box or straight cable connector or right angled Straight cable connector with 3’ cable
Backstop
Encoder bearing
Flat faced drum shell, coated, zinc plated
Stainless steel design
Stainless steel mounting brackets
Thermal contact
IP67
Suitable for frequency converter use
Sprockets for modular belt conveyor belts
Profiled rubber lagging
Terminal box design in stainless steel
Vertical mounting (needs to be stated upon ordering)
Food grade oil
Food grade lagging
Drum Motor as cartridge
Single phase motors on request

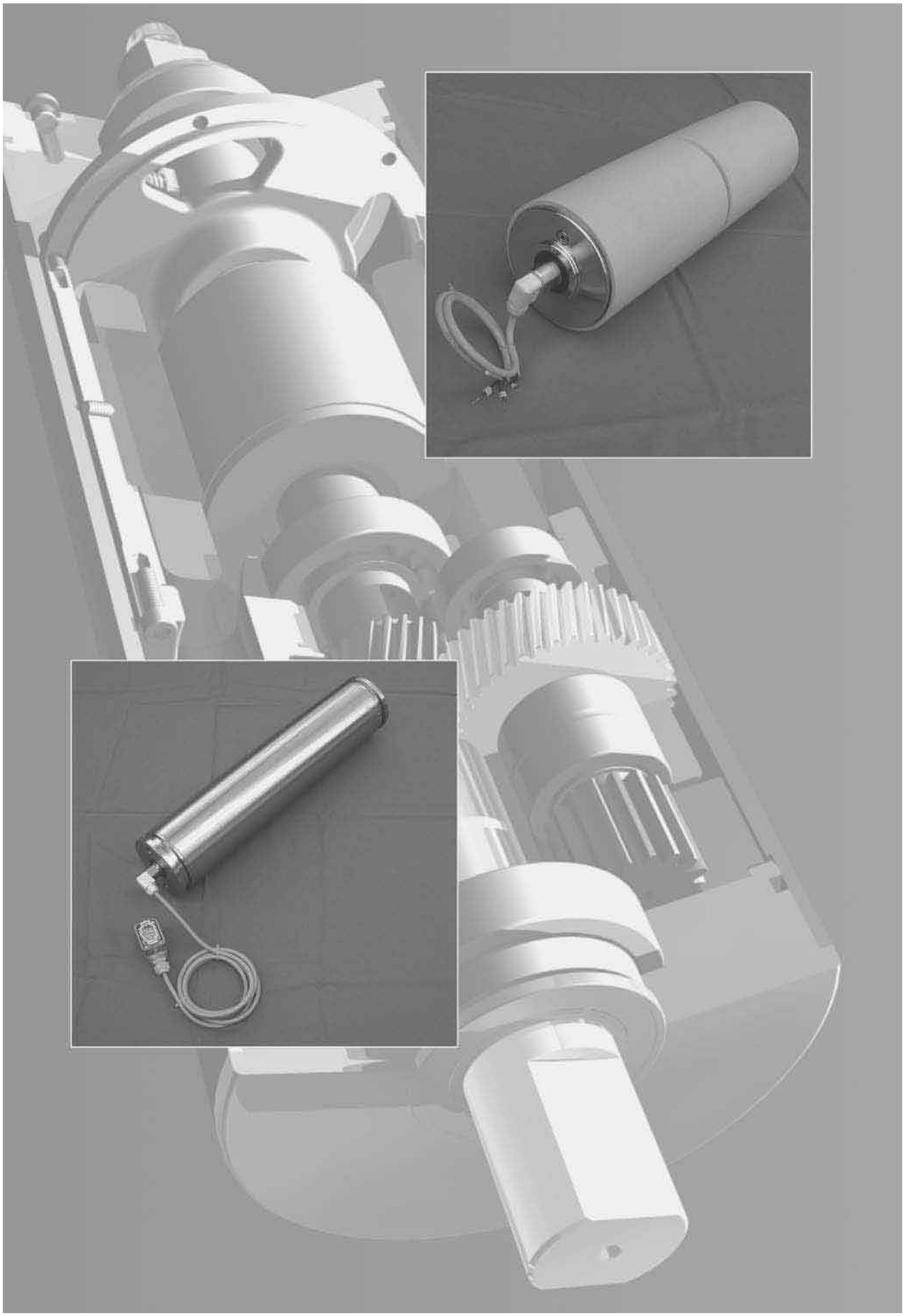
Other designs available upon request.

Mounting brackets for LAT® Drum Motor and Idler Type 82:

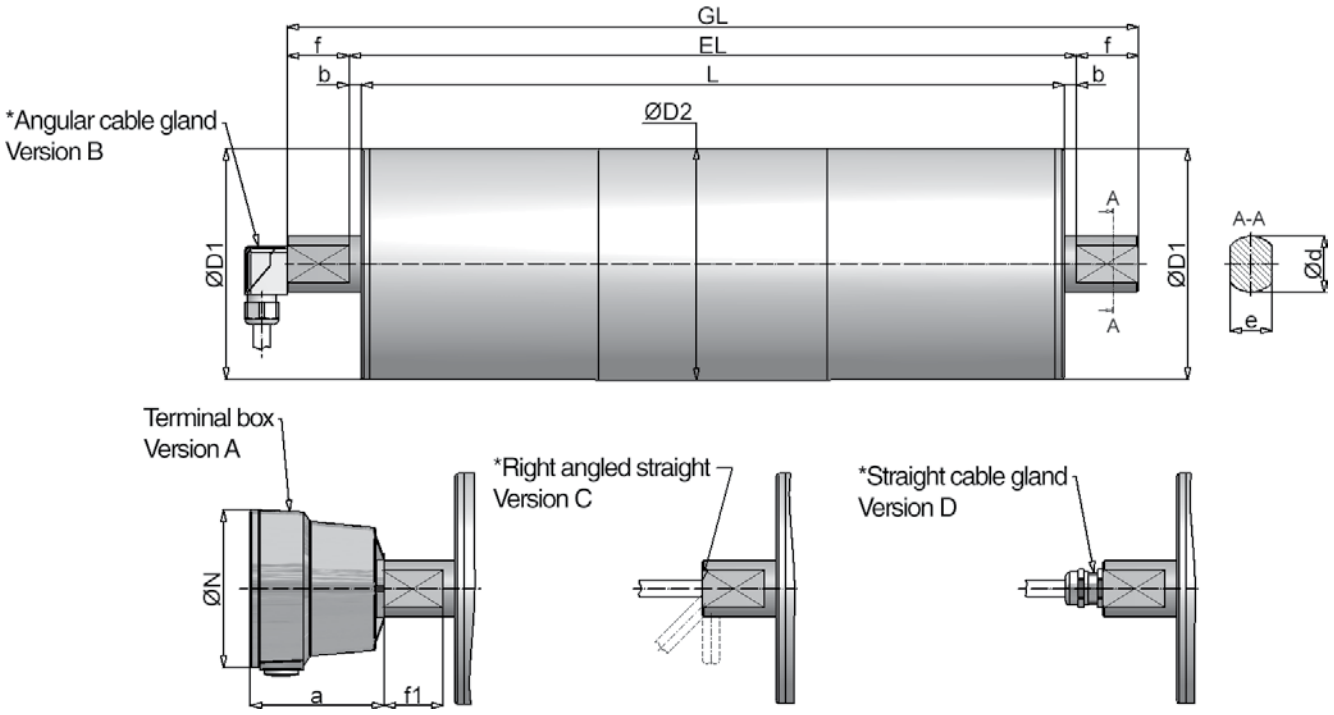


All dimensions in inches

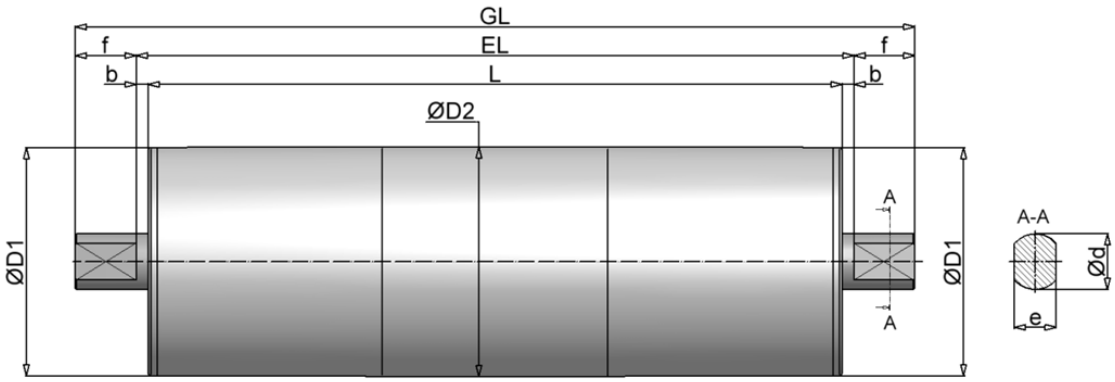
Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. lbs
TM/ Idler 82.1	EL20/14	0.79	0.55	0.47	1.10	1.85	3.15	3.94	0.25	0.59	0.19	M5	Steel	0,55



TM 111 - Drum Motor



UT 111 - Idler



All dimensions in inches

Drum Motor										Standard IP66	
Size	**Typ**	**ØD1**	**ØD2****	**a**	**ØN**	**Ød**	**e**	**f**	**f1**	**b*****	**EL**
111	TM 111.1	4.43	4.47	3.74	4.41	0.98	0.79	0.98	0.90	0.196 (0.15)	L + 0.392 (0.30)

Idler											
111	UT 111.1	4.43	4.47	-	-	0.98	0.79	0.98		0.196	L + 0.392

* Standard with 3' cable
** Diameter for flat face drum design
*** Dimensions in brackets belong to design in stainless steel

Performance data for TM111.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 9.84“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM111.1	**0,10** 8-pole	21	179	33	0,45	10.24	28
		28	146	27			
		33	122	23			
		37	103	19			
		45	87	16			
		54	75	14			
		61	64	12			
		66	61	11			
		80	50	9			
		97	41	7			
		113	35	6			
		134	30	6			
		156	25	4			
		181	22	4			
TM111.1	**0,16** 6-pole	33	197	37	0,57	10.24	28
		40	161	30			
		47	134	25			
		57	113	21			
		66	96	18			
		78	83	15			
		90	71	13			
		94	67	12			
		116	55	10			
		139	46	9			
		165	38	7			
		194	32	6			
		227	28	5			
		262	24	4			
TM111.1	**0,25** 4-pole	50	190	35	0,68	10.24	28
		61	155	29			
		73	129	24			
		87	109	20			
		104	93	17			
		120	79	15			
		139	68	13			
		149	65	12			
		179	53	9			
		217	44	8			
		257	37	6			
		302	31	6			
		352	27	5			
		408	23	4			

Performance data for TM111.1

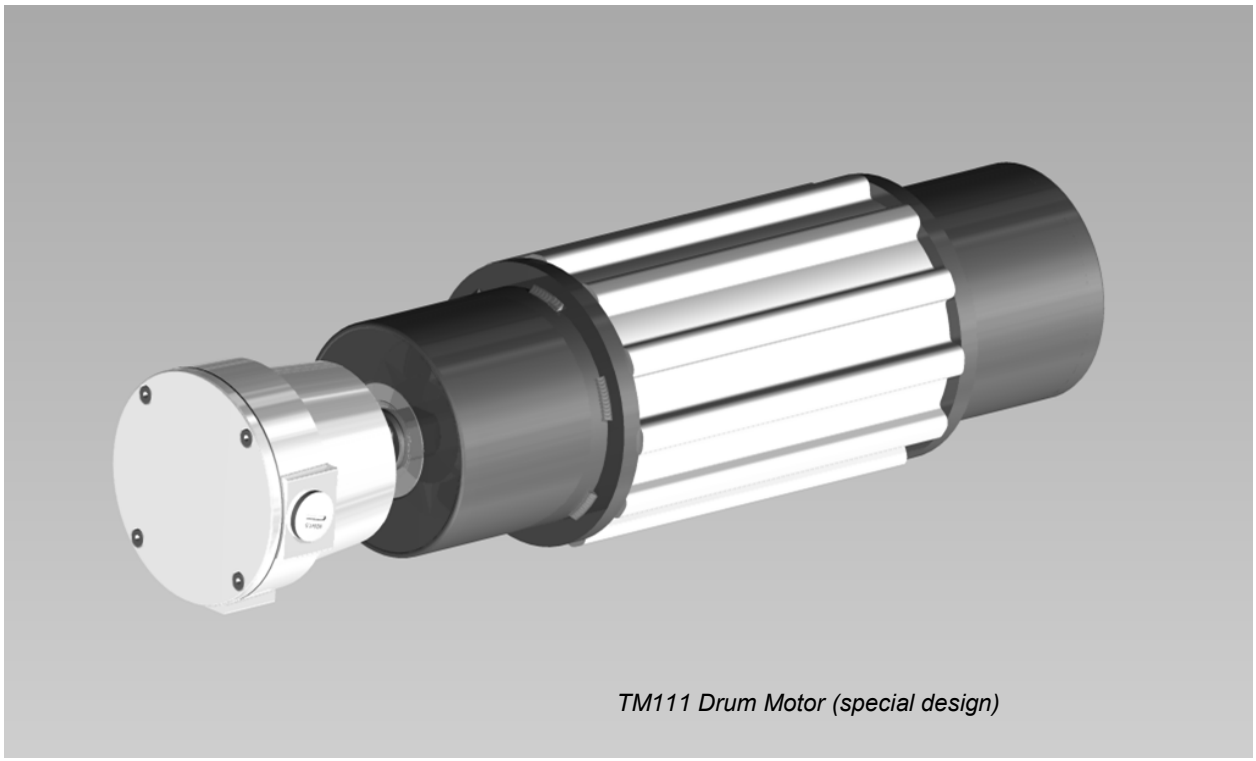
Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 9.84“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM111.1	**0,34** 4-pole	50	264	49	0,94	10.24	28
		61	216	40			
		73	179	33			
		87	151	28			
		104	129	24			
		120	110	21			
		139	95	18			
		149	90	17			
		179	74	14			
		217	61	11			
		257	51	10			
		302	44	8			
		352	38	7			
		408	32	6			
TM111.1	**0,40** 4-pole	50	317	59	1,10	11.02	30
		61	259	48			
		73	215	40			
		87	182	34			
		104	155	29			
		120	132	24			
		139	114	21			
		149	108	20			
		179	88	16			
		217	73	14			
		257	62	12			
		302	53	10			
		352	45	8			
		408	39	7			
TM111.1	**0,50** 2-pole	101	195	36	0,95	10.24	28
		122	160	30			
		149	133	18			
		175	112	21			
		205	95	18			
		241	82	15			
		278	70	13			
		295	66	12			
		361	54	10			
		434	45	8			
		514	38	7			
		604	33	6			
		705	28	5			
		819	24	4			

Performance data for TM111.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight
	P2	v	F	T2			L = 15.75“ min.
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM111.1	**0,75** 2-pole	99	292	55	1,26	11.02	30
		123	239	44			
		146	199	37			
		175	168	31			
		205	142	27			
		238	122	23			
		276	105	20			
		293	100	18			
		359	81	15			
		430	68	13			
		510	57	10			
		599	49	9			
		701	42	8			
		812	36	7			

- Alternative data and speeds available upon request
- Weight includes oil
- Weight increases by approx. 2.2 for 3.94” add. length
- With brake mounting L min. dimension raises up 2.56”

Standard width [L in Inches] : 10.24, 11.02, 11.81, 15.75 …... 31.50.
Over 31.50” reinforced shaft will be used.
Consult us for max. length



TM111 Drum Motor (special design)

Design types and options

Standard configuration:

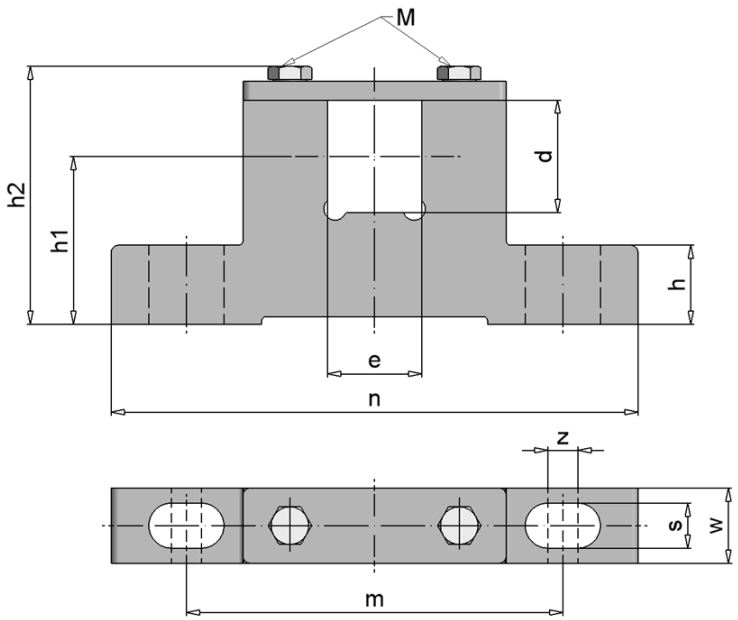
- Mild steel crowned shell
- End housings made of aluminium
- Mild steel shafts
- Helical steel gear
- Angular cable gland (with 3’ cable)

Options:

- Internal brake
- Terminal box
- Straight cable gland / right angled - straight with 3’ cable
- Back stop
- Sprocket / toothed belt disc
- **Encoder bearing**
- Flat faced drum shell, coated, zinc plated
- (customized)
- stainless steel design
- Thermal contact
- IP67
- Frequency inverter duty windings (inform us if frequency inverter is going to be used)
- Sprocket or Profiled lagging for modular belting
- Special grooved rubber lagging
- Terminal box design in stainless steel
- Vertical mounting (needs to be stated upon ordering)
- Food grade oil
- Food grade lagging
- Drum Motor as cartridge
- Single phase motors on request

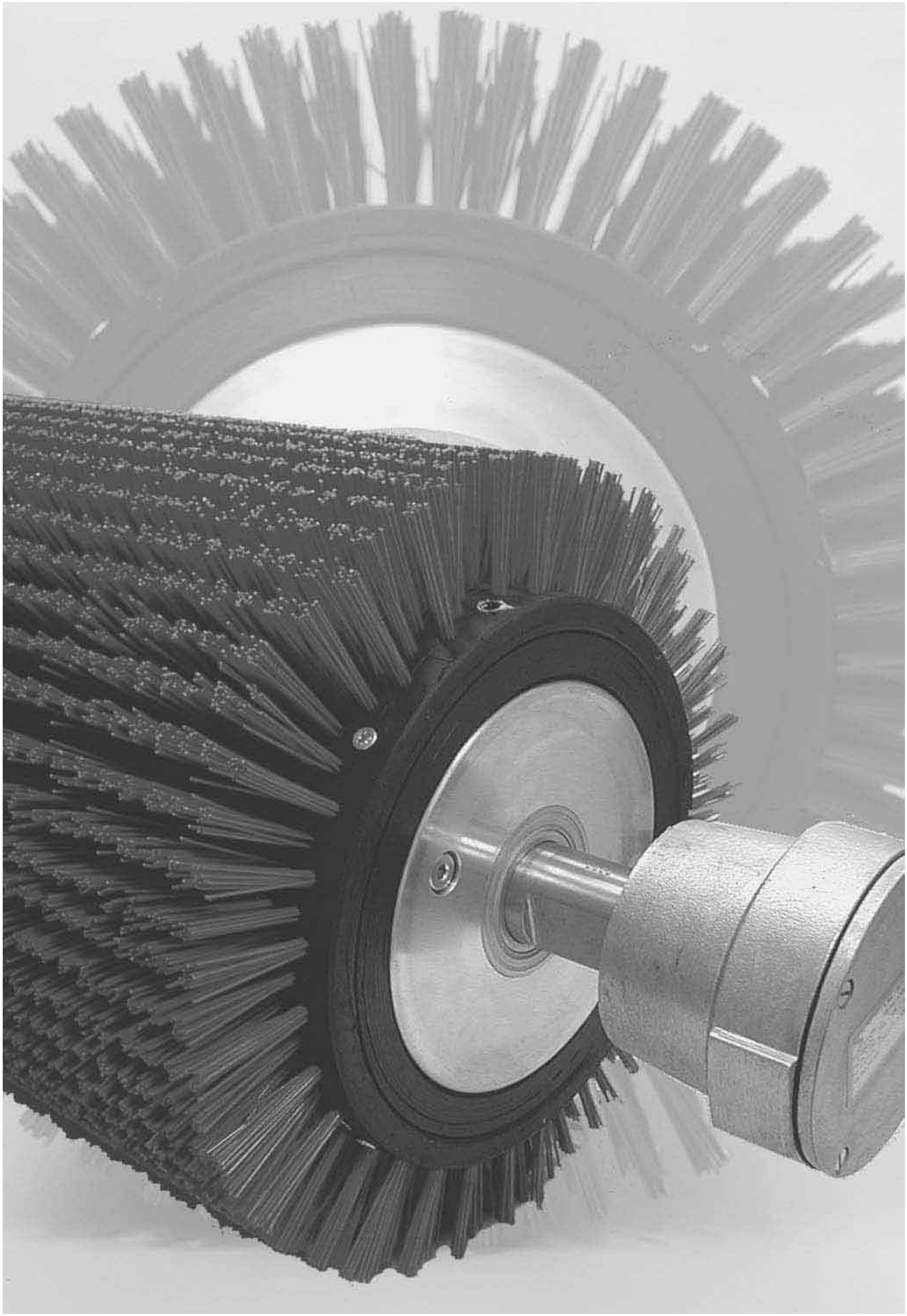
Other designs available upon request.

Mounting bracket for LAT® Drum Motor and Idler Type 111:

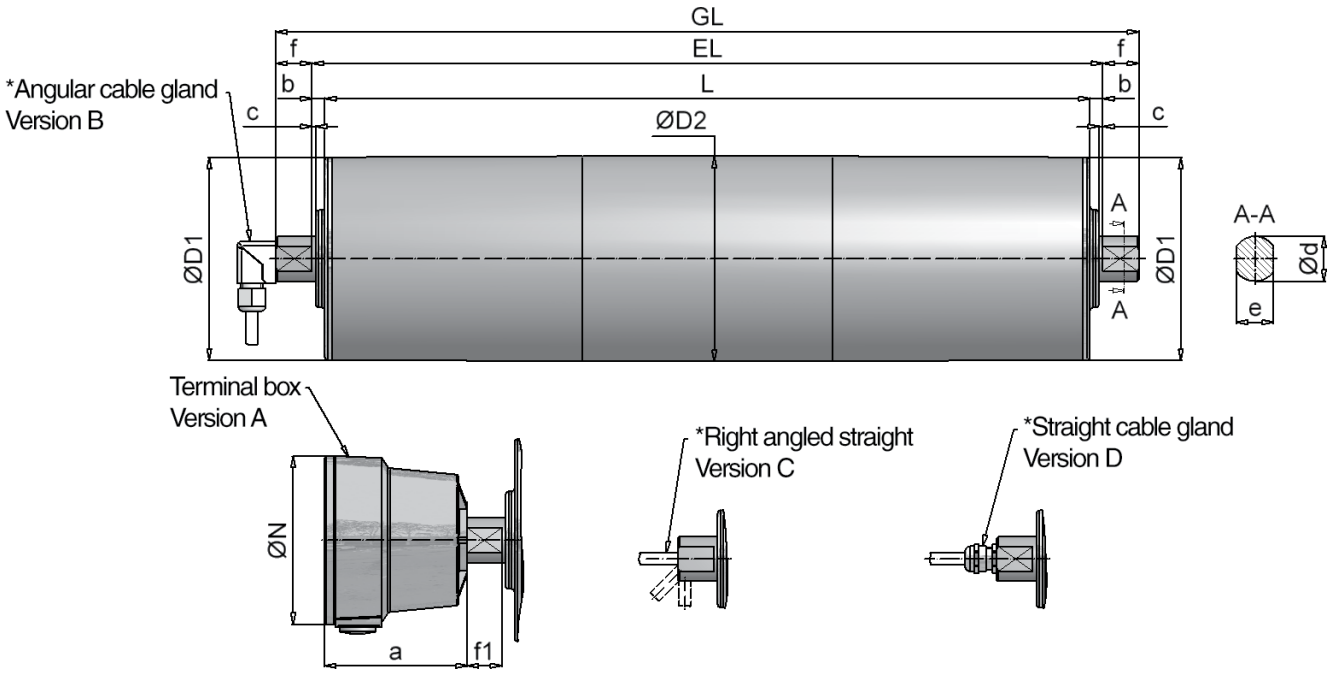


Dimensions in inches

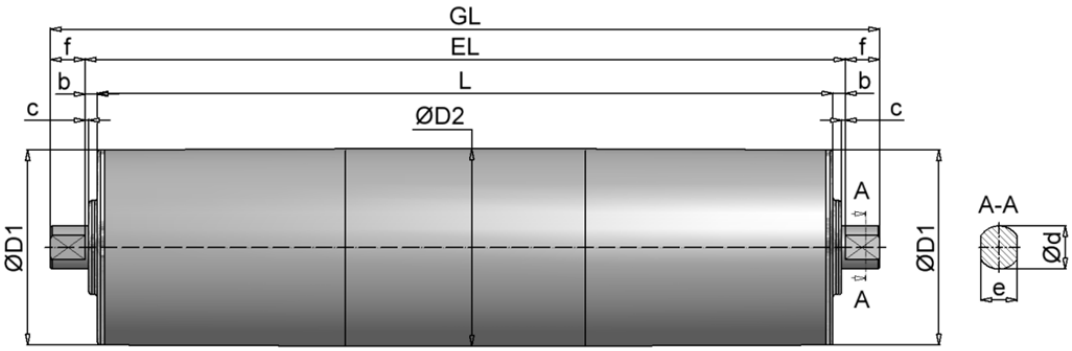
Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs.
TM/ Idler 111.1	EL25/20	0.98	0.79	0.83	1.75	2.60	3.94	5.51	0.47	0.79	0.31	M6	Steel or SS Steel	1.54
TM/ Idler 111.0	EL30/25	1.18	0.98	0.83	1.75	2.70	3.94	5.51	0.47	0.79	0.31	M6		1.54



TM 135 – Drum Motor



UT 135 - Idler



Dimensions in inches

Drum Motor											Standard IP65		optional IP66	
Size	**Type**	**ØD1**	**ØD2***	**a**	**ØN**	**c**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
135	TM 135.1	5.35	5.41	3.74	4.41	0.10	1.18	0.98	0.94	0.94	0.335	L + 0.67	0.57	L + 1.14

Idler														
135	UT 135.1	5.35	5.41			0.10	1.18	0.98	0.94		0.335	L + 0.67	0.57	L + 1.14

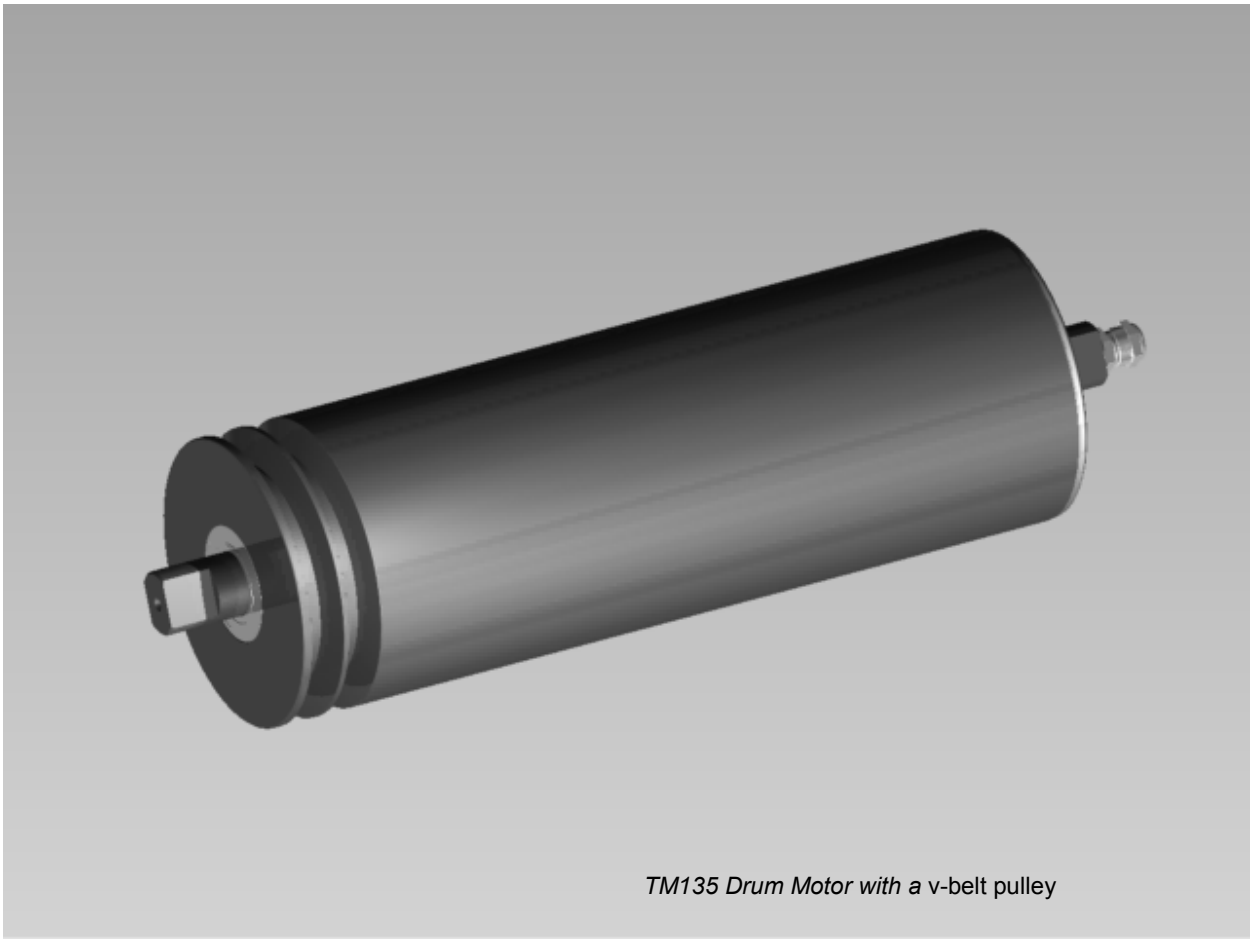
* Standard with 3' cable
** Diameter flat face drum design

Performance data for TM135.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 15.75“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM135.1	**0.12** 8-pole	12	430	97	0,50	12.20	41
		14	341	77			
		19	263	44			
		24	209	46			
		28	172	38			
		35	135	30			
		45	105	24			
		59	83	18			
TM135.1	**0.16** 4-pole	24	271	60	0,40	12.20	41
		31	215	48			
		38	166	27			
		50	131	30			
		59	108	24			
		76	85	19			
		97	66	15			
		122	52	12			
TM135.1	**0.25** 4-pole	24	412	92	0,55	12.20	41
		028	326	73			
		38	252	56			
		47	200	50			
		59	165	37			
		73	129	29			
		94	101	23			
		120	79	18			
TM135.1	**0.33** 4-pole	28	457	103	0,80	12.20	41
		38	352	79			
		47	279	63			
		57	230	52			
		73	181	41			
		94	141	32			
		120	111	25			
TM135.1	**0.5** 4-pole	38	518	116	1,10	12.20	41
		47	410	92			
		59	339	76			
		73	266	60			
		94	207	46			
		120	163	36			
TM135.1	**0,75** 4-pole	57	513	116	1,60	12.20	41
		73	402	90			
		92	314	70			
		118	246	55			
TM135.1	**1.0** 2-pole	75	534	119	1,90	12.20	41
		94	423	95			
		113	350	78			
		144	274	64			
		186	214	48			
		238	168	38			

Performance data for TM135.1

Additional data and speeds available upon request
Weight includes oil
Weight increases by approx. 4.5Lbs for every 3.94” add. length
• With brake L min. dimension increases by 2.17”
Standard width [L in Inches] : 12.20, 13.78, 15.75 ..... 53.15
Over 53.12” reinforced shaft will be used.
Consult us for max. length.



TM135 Drum Motor with a v-belt pulley

Design types and options

Standard design:

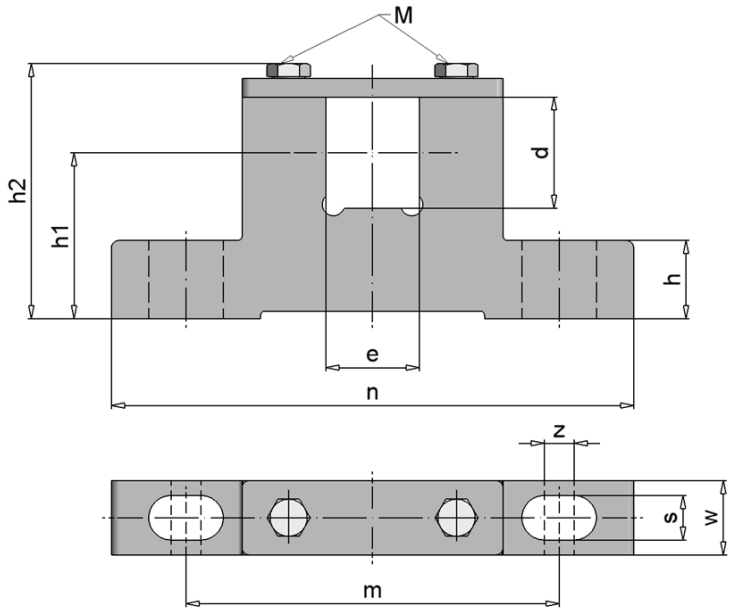
- Mild steel crowned drum shell
- End housings made of aluminium
- Mild steel shafts
- Helical steel gear
- Angular cable gland with 3’ cable

Options:

- Internal brake
- Terminal box
- Straight cable gland / right angled - straight with 3’ cable
- Back stop
- Sprocket / toothed belt disc
- **Encoder bearing**
- Flat faced drum shell, coated, zinc plated
- (customized)
- Stainless steel design
- Thermal contact
- IP67
- Frequency inverter windings (inform us if frequency inverter is going to be used)
- Sprockets or Profiled lagging for modular belting
- Special grooved rubber lagging
- Terminal box design in stainless steel
- Vertical mounting (needs to be stated upon ordering)
- Food grade oil
- Food grade lagging
- Single phase motors on request

Other designs available upon request.

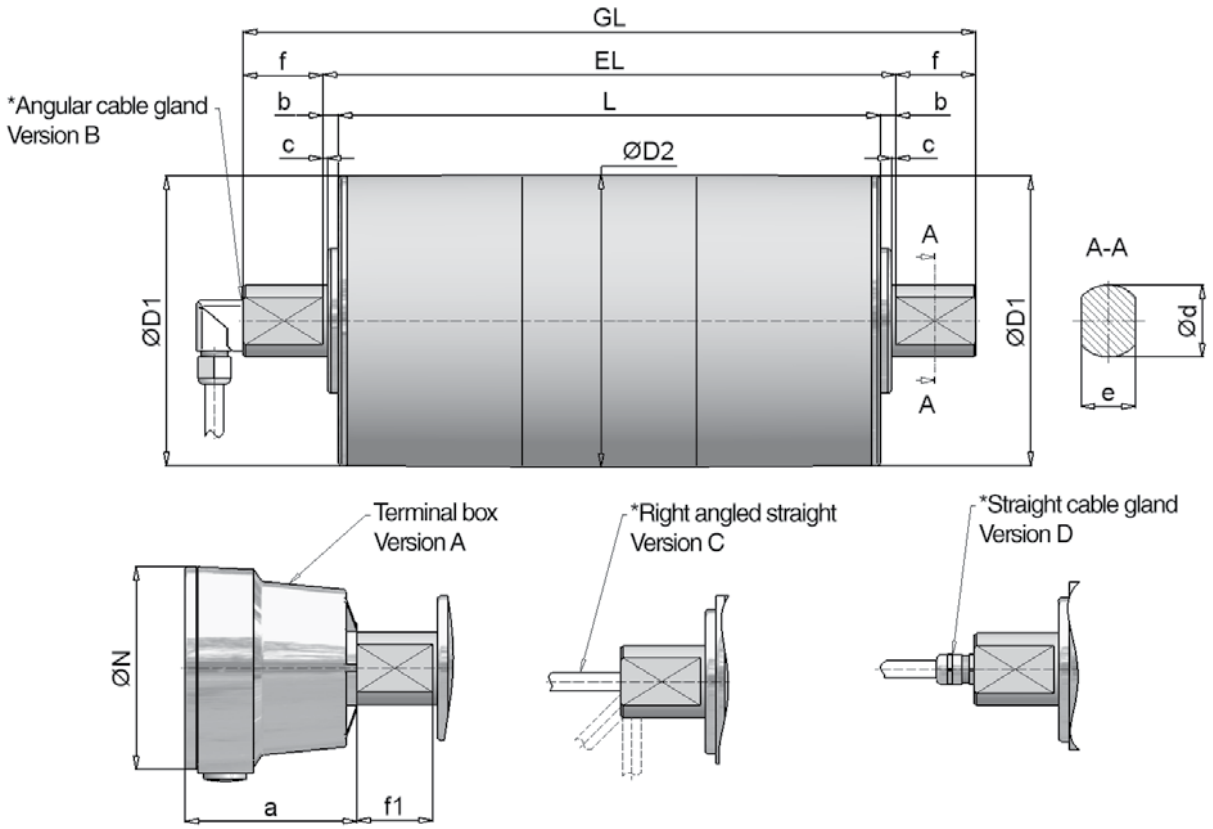
Mounting bracket for LAT® Drum Motor and Idler Type 135:



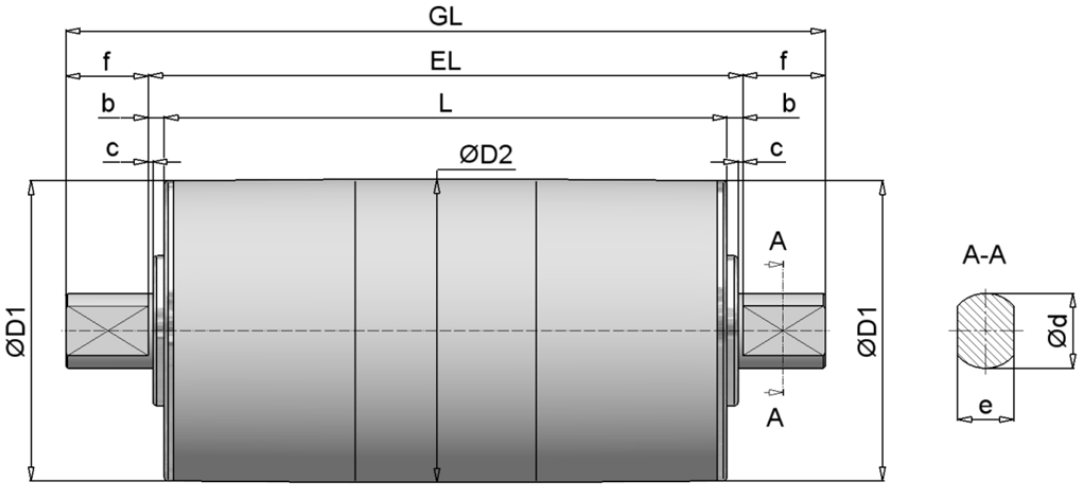
Dimensions in inches

Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs.
TM/ Idler 135.1	EL30/25	1.18	0.98	0.83	1.75	2.70	3.94	5.11	0.47	0.94	0.31	M6	Steel or SS steel	1.54

TM 160 – Drum Motor



UT 160 - Idler



Dimensions in inches

Drum Motor											Standard IP65		optional IP66	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**c**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
160	TM 160.0	6.30	6.36	3.70	4.41	0.06	1.57	1.18	1.73	1.73	0.335	L + 0.67	0.57	L + 1.14

Idler														
160	UT 160.0	6.30	6.36			0.06	1.57	1.18	1.73		0.335	L + .67	0.57	L + 1.14

* With 3' cable
** Diameter flat face drum design

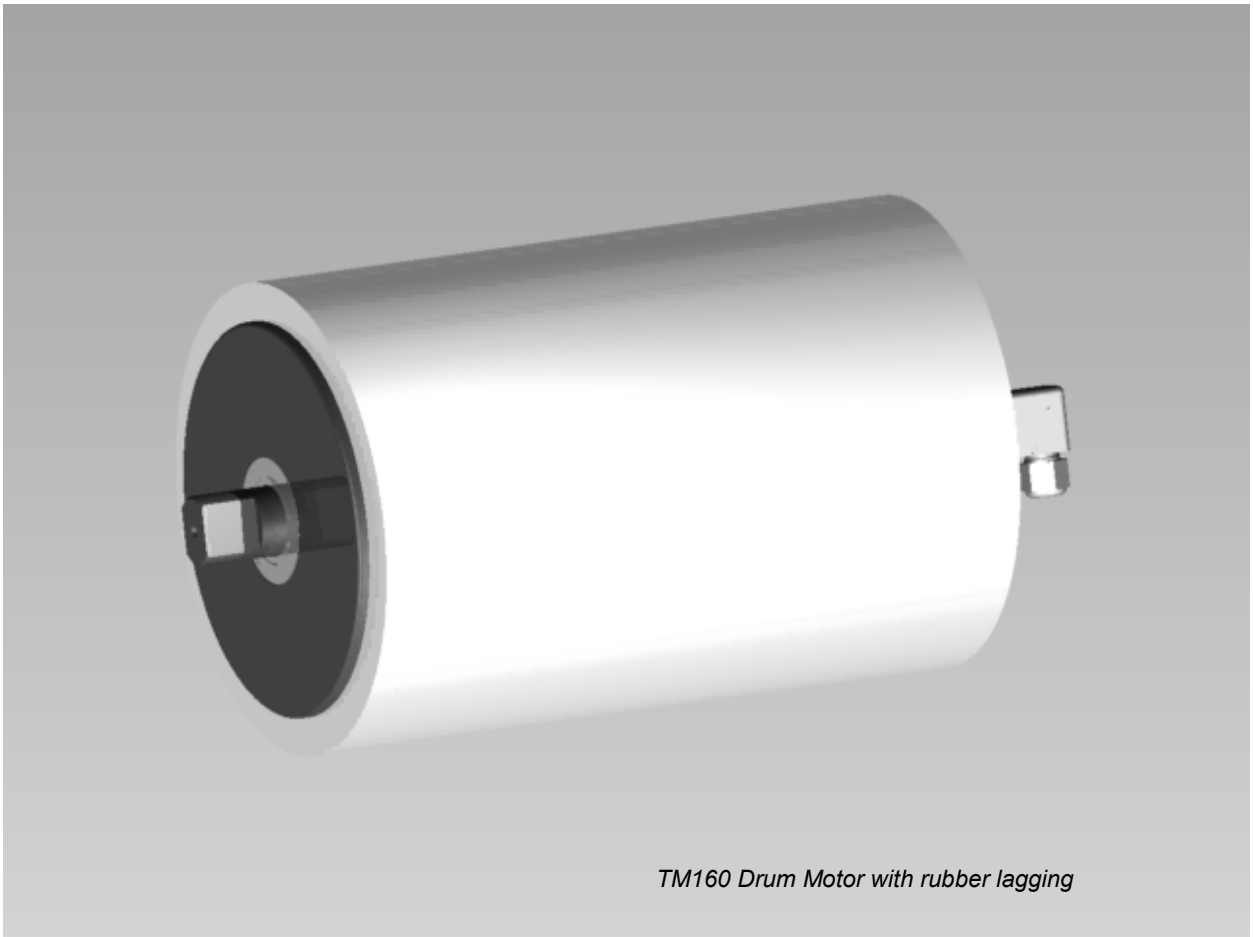
Performance data for TM160.0

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 15.75“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM160.0	**0.12** 8-pole	14	364	97	0,50	12.60	66
		17	288	77			
		21	222	59			
		26	176	46			
		33	146	38			
		42	114	30			
		54	89	24			
		68	70	18			
TM160.0	**0,16** 4-pole	28	229	60	0,40	12.60	66
		35	181	50			
		45	140	37			
		57	111	30			
		68	92	24			
		90	72	19			
		113	56	15			
		144	44	12			
TM160.0	**0.25** 4-pole	28	348	92	0,55	12.60	66
		35	276	73			
		45	213	56			
		57	169	45			
		68	139	37			
		87	109	29			
		111	85	23			
		144	68	18			
TM160.0	**0.33** 4-pole	35	386	103	0,80	12.60	66
		45	298	79			
		57	236	63			
		68	195	52			
		87	153	41			
		111	119	32			
		142	94	25			
TM160.0	**0.5** 4-pole	45	438	116	1,10	12.60	66
		57	347	92			
		68	287	76			
		87	225	60			
		111	175	46			
		144	173	39			
TM160.0	**0.75** 4-pole	68	434	115	1,60	12.60	66
		85	340	90			
		111	265	70			
		142	208	55			
TM160.0	**1.0** 2-pole	87	452	119	1,90	12.60	70
		111	358	95			
		135	296	78			
		172	232	61			
		219	181	48			
		281	142	38			

Performance data for TM160.0

- Alternative data and speeds available upon request
- Weight includes oil (ready for operating)
- Weight increases by approx. 7Lbs for 3.94”add. length
- With brake L min. dimension raises up 2.17”

Standard width [L in inches: 12.60, 13.78, 15.75 ……. 53.15
Over 53.15” reinforced shaft will be used.



TM160 Drum Motor with rubber lagging

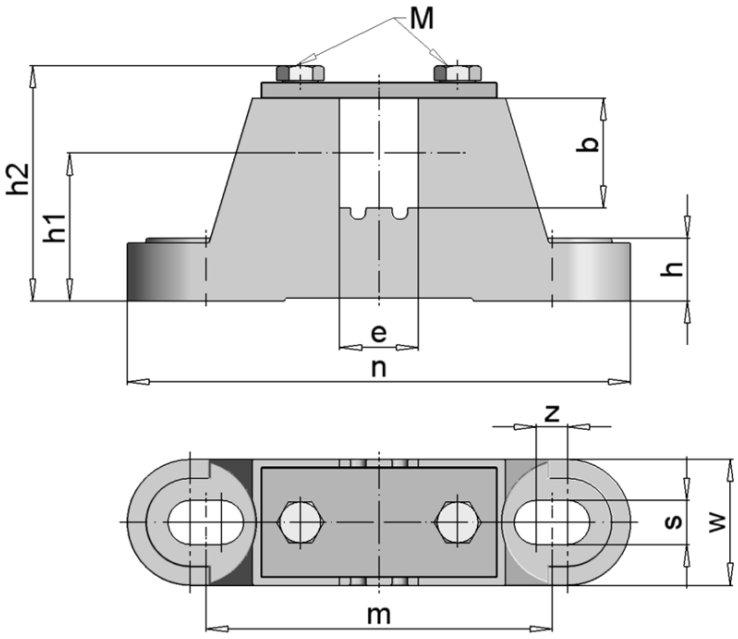
Design types and options

Standard configuration:
Mild steel crowned shell
End housings made of aluminium
Mild steel shafts
Helical steel gears
Angular cable gland with 3' cable

Options:
Internal brake
Terminal box
Straight cable gland / right angled - straight with 3' cable
Back stop
Sprocket / toothed belt disc
Encoder bearing
Flat faced drum shell, coated, zinc plated
(customized)
Stainless steel design
Thermal contact
IP67
Frequency inverter duty windings (inform us if frequency inverter is going to be used)
Sprockets or Profiled lagging for modular modular
Special grooved rubber lagging
Terminal box design in stainless steel
Vertical mounting (needs to be stated upon ordering)
Food grade oil
Food grade lagging
Single phase motors on request

Other designs available upon request.

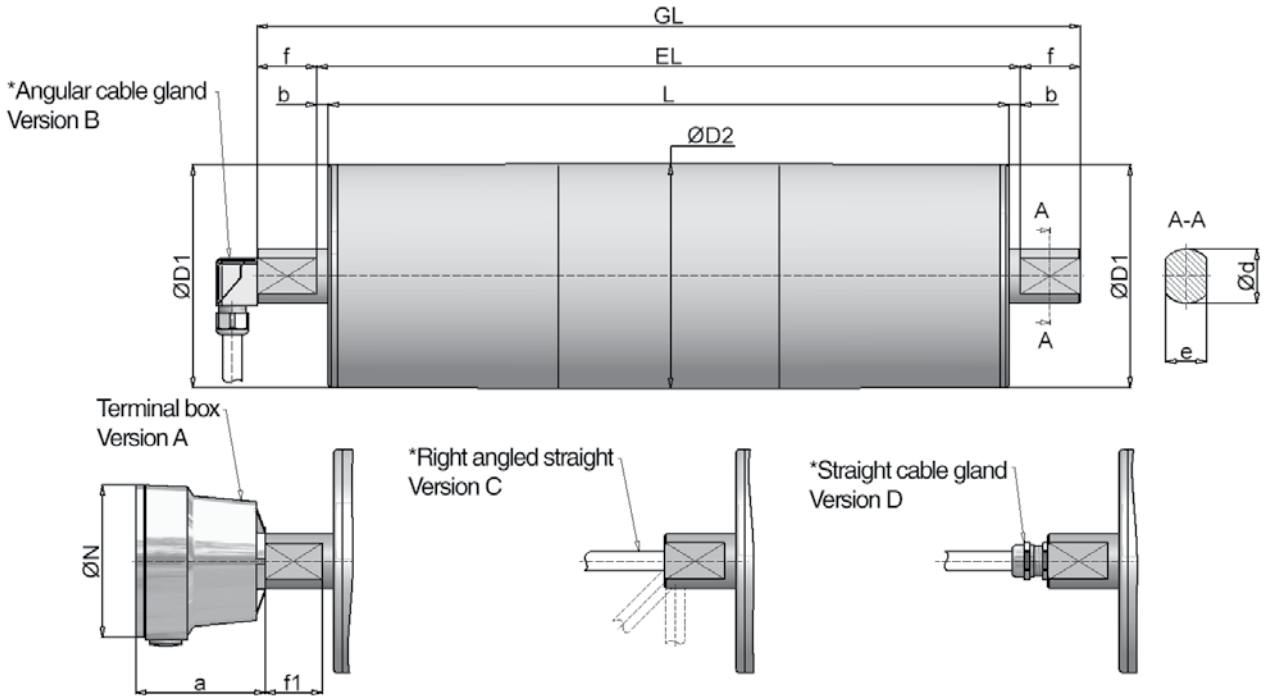
Mounting bracket for LAT® Drum Motor and Idler Type 160:



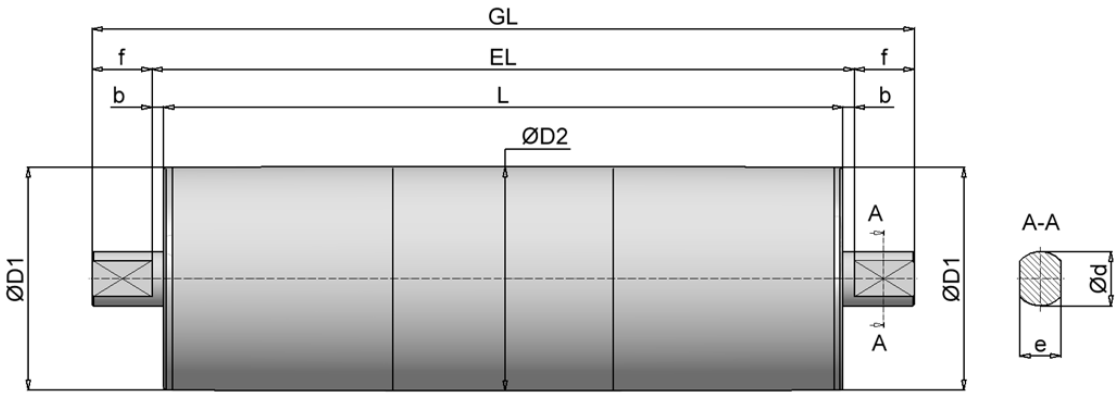
Dimensions in inches

Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material material	ca. Lbs.
TM/ Idler 160.0	EL40/30 A	1.57	1.18	0.98	1.85	3.09	4.33	6.30	0.55	1.57	0.39	M8	Cast iron SS Steel	3.3

TM 165 – Drum Motor



UT 165 - Idler



Dimensions in inches

Drum Motor										Standard IP66	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**Ød**	**e**	**f**	**f1**	**b**	**EL**
165	TM 165.1	6.46	6.50	3.74	4.41	1.57	1.18	1.73	1.73	0.335	L + 0.67

Idler											
165	UT 165.1	6.46	6.50			1.57	1.18	1.73		0.335	L + 0.67

* With 3' cable
** Diameter for flat face drum design

Performance data for TM165.1

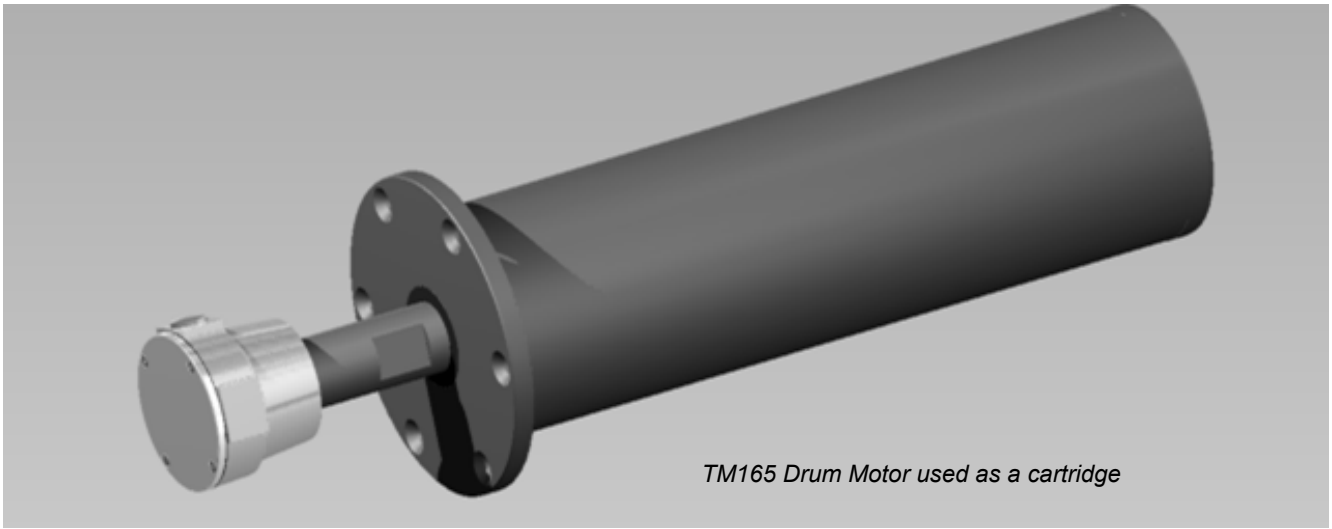
Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 19.69" min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM165.1	**0.5** 8-pole	45	430	117	1,50	15.75	97
		57	354	96			
		66	1315	80			
		78	250	68			
		92	231	58			
		109	182	49			
		127	153	41			
		156	126	34			
		186	106	29			
		219	89	24			
		257	76	21			
		295	65	17			
TM165.1	**1.0** 6-pole	59	662	186	2,20	15.75	97
		73	546	147			
		87	456	123			
		104	385	104			
		120	328	89			
		142	281	76			
		166	237	64			
		205	195	52			
		245	163	44			
		290	138	38			
		340	117	32			
		396	100	27			
TM165.1	**1.50** 4-pole	92	639	173	3,00	15.75	97
		111	526	142			
		132	439	119			
		158	371	100			
		184	316	83			
		215	271	73			
		255	228	62			
		312	188	51			
		373	157	43			
		439	133	27			
		517	113	30			
		604	97	26			
TM165.1	**2.0** 4-pole	132	597	162	3,60	16.73	103
		158	505	136			
		184	430	117			
		217	368	100			
		257	310	84			
		312	255	69			
		373	213	58			
		441	180	49			
		519	154	41			
		607	131	35			

Performance data for TM165.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight
	P2	v	F	T2			L = 19.69“ min.
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM165.1	**3.0** 2-pole	184	631	170	4,30	16.73	103
		224	519	141			
		269	434	117			
		319	367	100			
		373	312	85			
		437	267	72			
		519	225	61			
		630	185	50			
		753	155	42			
		892	131	35			
		1045	112	30			
		1222	96	26			
TM165.1	**4.0** 2-pole	184	868	235	6,80	19.37	106
		222	174	193			
		267	597	162			
		316	505	136			
		371	430	117			
		432	368	100			
		514	308	84			
		623	255	69			
		746	213	58			
		883	180	49			
		1036	156	41			
		1210	131	35			

- Alternative data and speeds available upon request
- Weight includes oil (ready for operating)
- Weight increases by approx. 7Lbs for every 3.94”
- over min.19.69”
- With brake L min. dimension increases by 4.33”

Standard width [L in Inches] : 15.75, 16.73, 17.72, 19.69 … 51.18
Over 51.18” reinforced shaft will be used.



TM165 Drum Motor used as a cartridge

Design types and options

Standard configuration:

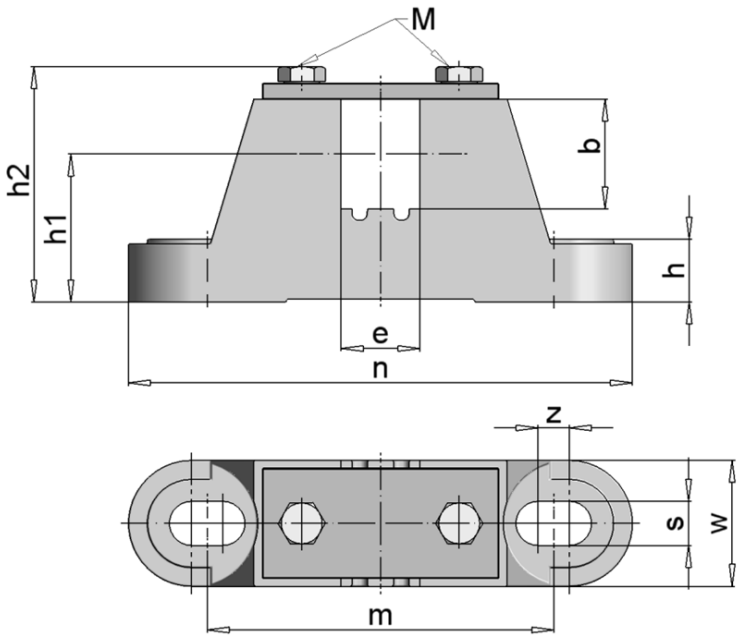
- Mild steel crowned shell
- End housings made of aluminium
- Mild steel shafts
- Helical steel gear
- Angular cable gland with 3’ cable

Options:

- Internal brake
- Terminal box
- Straight cable gland / right angled - straight with 3’ cable
- Back stop
- Sprocket / toothed belt disc
- **Encoder bearing**
- Falt faced drum shell, coated, zinc plated
- (customized)
- Stainless steel design
- Thermal Overload contact
- IP67
- Frequency inverter duty windings (inform us if frequency inverter is going to be used)
- Sprockets or Profiled lagging for modular belting
- Special grooved rubber lagging
- Terminal box design in stainless steel
- Vertical mounting (needs to be stated upon ordering)
- Food grade oil
- Food grade lagging
- Single phase motors on request

Other designs available upon request.

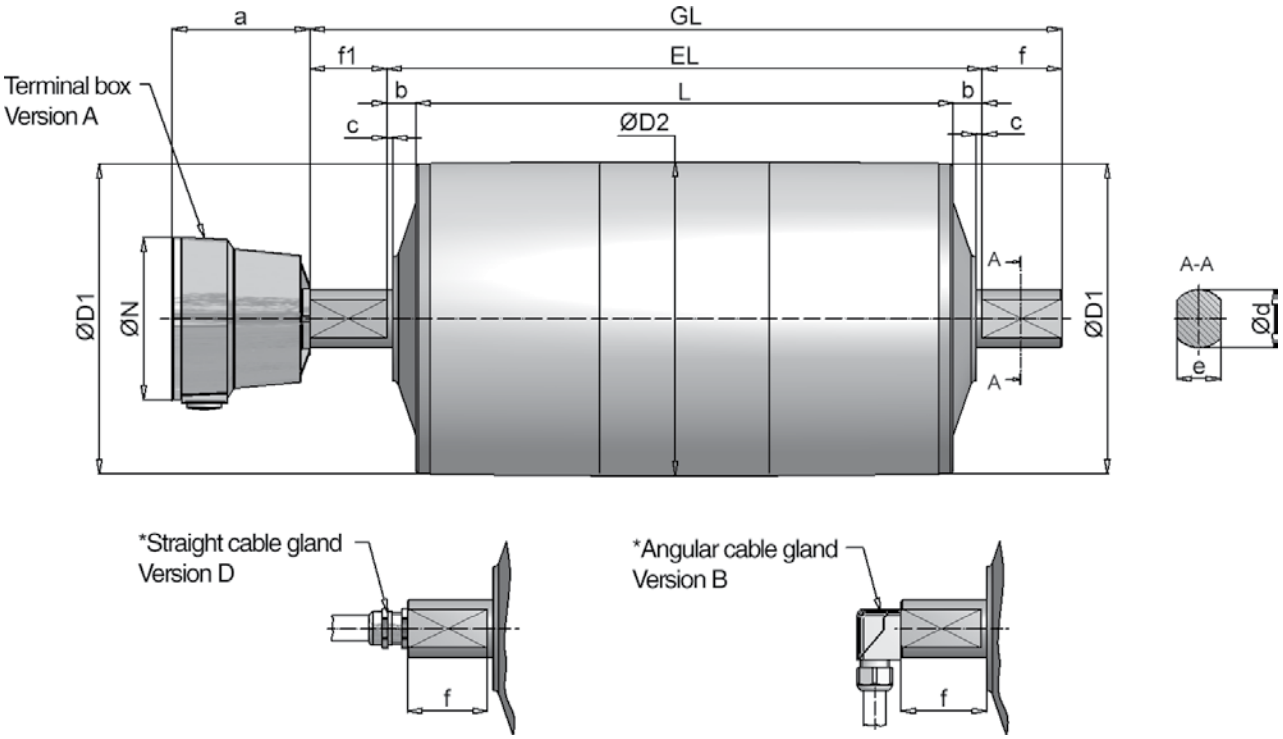
Mounting bracket for LAT® Drum Motor and Idler Type 165:



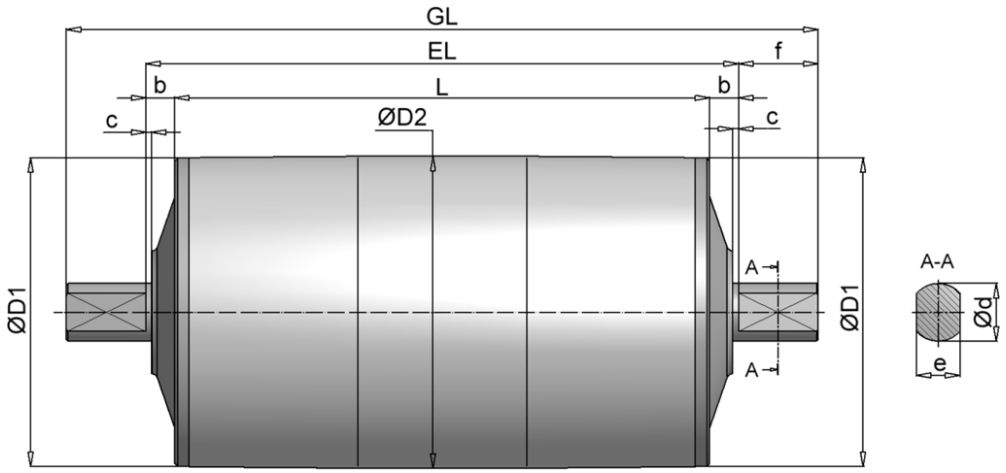
Dimensions in inches

Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs.
TM/ Idler 165.1	EL40/30 A	1.57	1.18	0.98	1.85	3.09	4.33	6.30	0.55	1.57	0.39	M8	Cast iron or SS Steel	3.3

TM 216 – Drum Motor



UT 216 - Idler



Dimensions in inches

Drum Motor											Standard IP65		optional IP66		optional IP67	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**c**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**	**b**	**EL**
216	TM 216.0	8.40	8.50	3.74	4.41	0.12	1.38	0.98	1.57	1.57	0.59	L + 1.18	0.59	L + 1.18	1.22	L + 2.44
216	TM 216.1	8.40	8.50			0.12	1.57	1.18	2.16	2.16	0.79	L + 1.57	0.79	L + 1.58	1.46	L + 2.92

Idler																
216	UT 216.0	8.40	8.50			0.12	1.38	0.98	1.57		0.59	L + 1.18	0.59	L + 1.18	1.22	L + 2.44
216	UT 216.1	8.40	8.50			0.12	1.57	1.18	2.16		0.79	L + 1.57	0.79	L + 1.58	1.46	L + 2.92

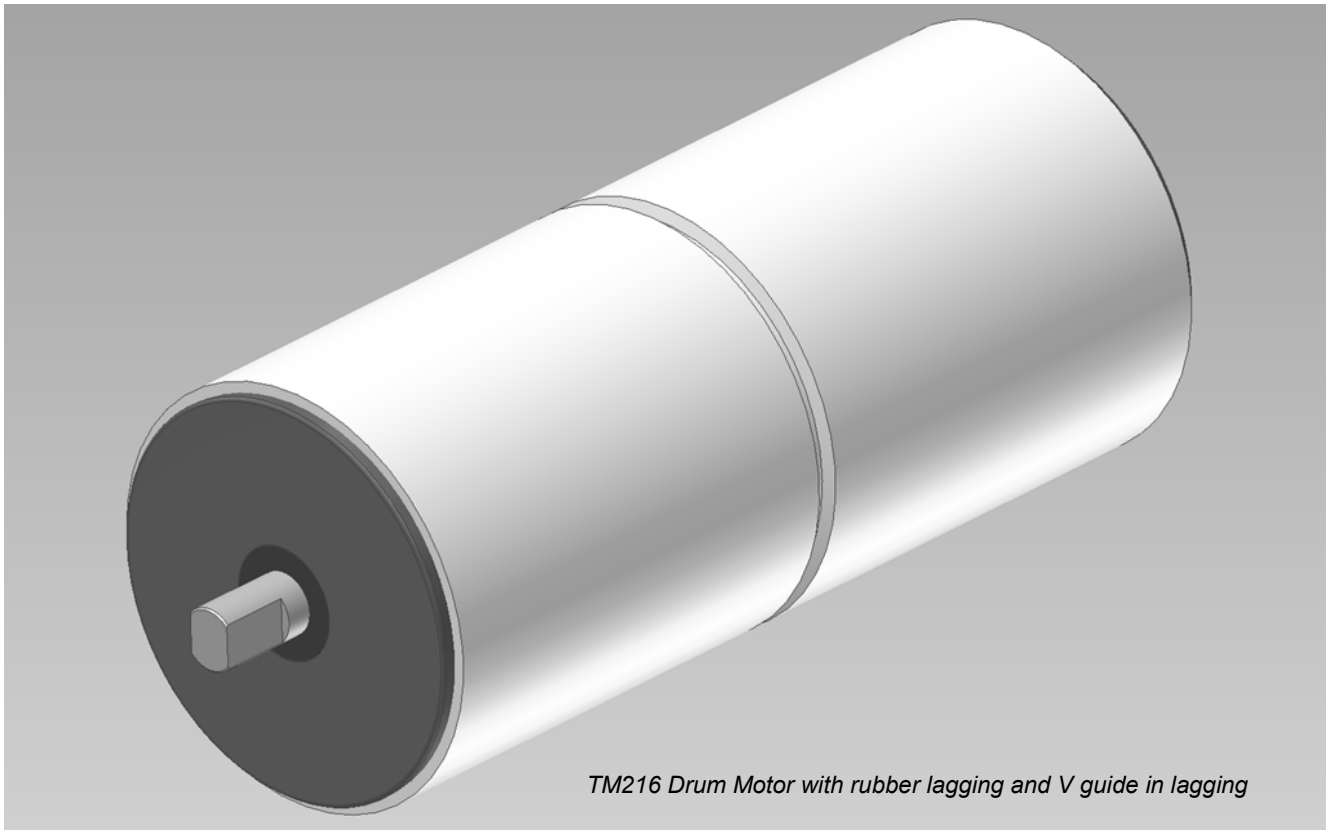
* With 3' cable
** Diameter for flat face drum design

Performance data for TM216.0 - TM216.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight
	P2	v	F	T2			L = 19.69“ min.
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM216.0	**0.5** 8-pole	59	328	117	1,50	15.75	110
		73	270	96			
		87	226	80			
		104	191	68			
		120	163	58			
		142	139	49			
		168	117	41			
		203	96	34			
		243	81	29			
		288	68	24			
		337	58	21			
		394	50	18			
TM216.0	**1.0** 6-pole	79	506	179	2,20	15.75	110
		94	417	148			
		113	348	123			
		135	294	104			
		158	251	89			
		186	214	76			
		219	181	64			
		267	149	52			
		321	124	44			
		378	105	38			
		444	89	32			
		519	77	27			
TM216.1	**2.0** 4-pole	78	1035	367	3,20	16.54	125
		87	903	320			
		113	705	249			
		142	563	199			
		203	393	139			
		276	288	102			121
		316	251	89			
		406	196	69			
		510	156	55			
TM216.1	**3.0** 4-pole	111	1052	372	4,80	16.54	130
		139	840	298			
		198	587	208			
		271	429	152			
		311	374	133			
		399	292	103			125
		500	233	83			
TM216.1	**4.0** 4-pole	201	797	283	6,60	17.72	130
		274	583	207			
		314	509	180			125
		401	397	141			
		503	317	112			

Performance data for TM216.0 - TM216.1

Alternative data and speeds available upon request
Weight includes oil (ready for operating)
Weight increases by approx. 11Lbs every 3.94”add. length
With brake L min. dimension increases by 3.94”
Standard width [L in Inches] : 15.75, 16.54, 17.72, 19.69 … 53.15
Over 53.15” reinforced shaft will be used.



TM216 Drum Motor with rubber lagging and V guide in lagging

Design types and options

Standard configuration:

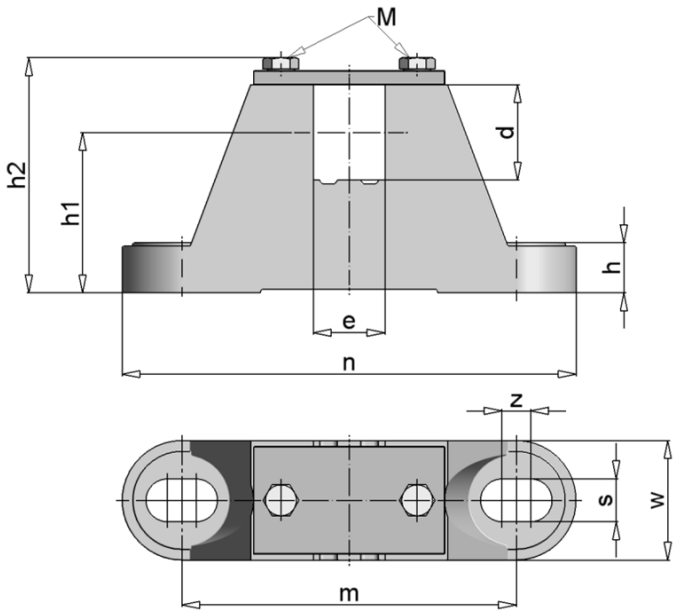
- Mild steel crowned shell
- End housings made of cast iron
- Mild steel shafts
- Helical steel gear
- Terminal box

Options:

- Internal brake
- Angular cable gland / straight cable gland with 3' cable
- Backstop
- Sprocket / toothed belt disc
- **Encoder bearing**
- Flat faced drum shell, coated, zinc plated
- (customized)
- Stainless steel design
- Thermal Overload contact
- IP67
- Frequency inverter duty windings (inform us if frequency inverter is going to be used)
- Sprocket or Profiled lagging for modular belting
- Special grooved lagging
- Terminal box design in stainless steel
- Vertical mounting (needs to be stated upon ordering)
- Food grade oil
- Food grade lagging

Other designs available upon request.

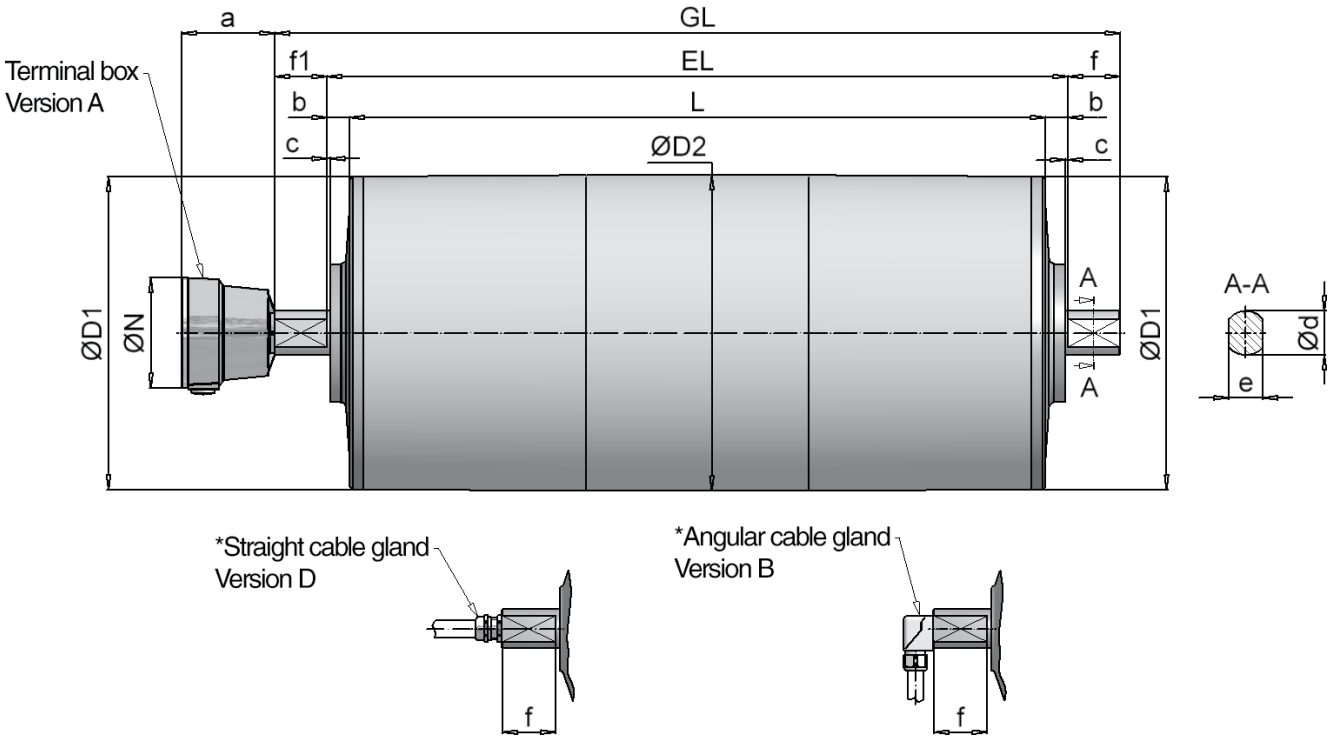
Mounting bracket for LAT® Drum Motor and Idler TM 216:



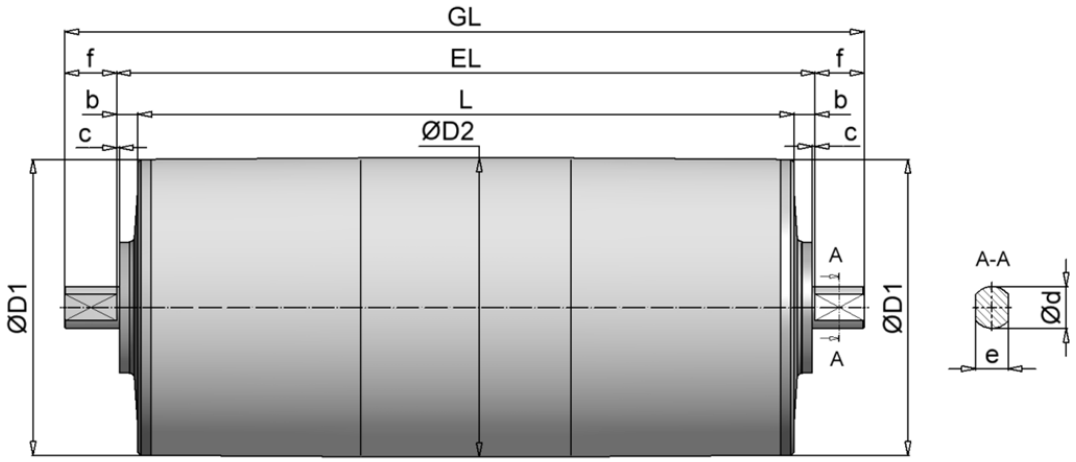
Dimensions in inches

Type	Mounting brackets	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs.
TM/Idler 216.0	EL35/25	1.38	0.98	0.79	1.85	2.99	4.33	6.30	0.55	1.57	0.39	M8	Cast iron or SS Steel	3.3
TM/Idler 216.1	EL40/30 B	1.57	1.18	0.83	2.64	4.04	5.51	7.48	0.71	1.97	0.47	M8		6

TM 321 – Drum Motor



UT 321 - Idler



Dimensions in inches

Drum Motor											Standard IP66		optional IP67	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**c**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
321	TM 321.0	12.52	12.64	3.74	4.41	0.12	1.57	1.18	2.17	2.17	0.79	L + 1.57	1.77	L + 1.54
321	TM 321.1	12.52	12.64			0.12	1.77	1.38	2.09	2.09	0.87	L + 1.73	1.69	L + 3.38

Idler														
321	UT 321.0	12.52	12.64			0.12	1.57	1.18	2.17		0.79	L + 1.57	1.77	L + 1.54
321	UT 321.1	12.52	12.64			0.12	1.77	1.38	2.09		0.87	L + 1.73	1.69	L + 3.38

* With 3' cable
** Diameter for flat face drum design

Performance data for TM321.0 - TM321.1

Type	Power P2 [HP]	Belt speed v [FPM]	Belt pull F [Lbs]	Drum torque T2 [Lbs-Ft]	Nominal load @ 460V / 60Hz [A]	Drum length L min. [Inches]	Weight L = 23.62" min. [lbs]
TM321.0	**2.0** 4-pole	113	696	367	3,20	20.47	209
		132	607	320			
		168	474	249			
		210	379	199			
		262	305	161			
		300	265	139			
		411	194	102			
		472	169	89			
		552	144	76			
TM321.1	**3.0** 4-pole	92	1269	665	4,80	21.65	264
		113	1033	544			
TM321.0		165	708	372			220
		205	566	298			
		257	455	240			
		295	395	208			
		404	289	152			
		462	252	133			
		542	215	114			
TM321.1	**4.0** 4-pole	142	1121	590	6,60	21.65	275
		175	916	482			
TM321.0		198	801	422			231
		257	618	326			
		324	537	283			
		406	393	207			
		465	342	180			
TM321.1	**5.5** 4-pole	177	1229	647	9,00	21.65	286
TM321.0		255	850	437			242
		314	679	357			
		392	542	285			
		479	442	233			
TM321.1	**7.5** 4-pole	245	1187	625	11,50	26.77	308
		302	969	510			
		389	747	393			
		481	606	319			
		632	461	243			
		774	377	198			
TM321.1	**10** 4-pole	389	1019	536	15,50	26.77	330
		481	827	435			
		632	630	331			
		774	514	271			

- Alternative data and speeds available
- upon request
- indication of weight incl. oil filling (ready for operating)
- Weight increases by approx. 14Lbs for every 3.94"
- With brake L min. dimension increases 5.12"

Standard width [L in Inches]: 20.47, 21.65, 23.62, 26.77 … 62.99
From 62.99 and over reinforced shaft will be used
Consult us for max. length.

Design types and options

Standard configuration:

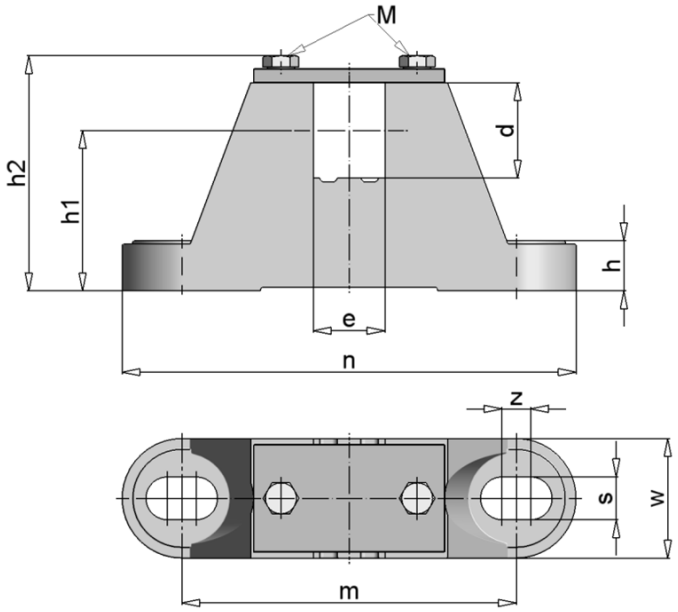
- Mild steel crowned shell
- End housings made of cast iron
- Mild steel shafts
- Helical steel gear for quite operation
- Terminal box

Options:

- Internal brake
- Straight cable gland / angular cable gland with 1m
- cable
- Back stop
- Sprocket / toothed belt disc
- Flat faced drum shell, rubbercoated, zinc plated
- (customised)
- Stainless steel design
- Thermal Overload contact
- IP66 or 67
- Frequency inverter duty windings (inform us if frequency inverter is going to be used)
- Terminal box design in stainless steel
- Vertical mounting (needs to be stated upon ordering)
- Food grade lagging
- Food grade oil

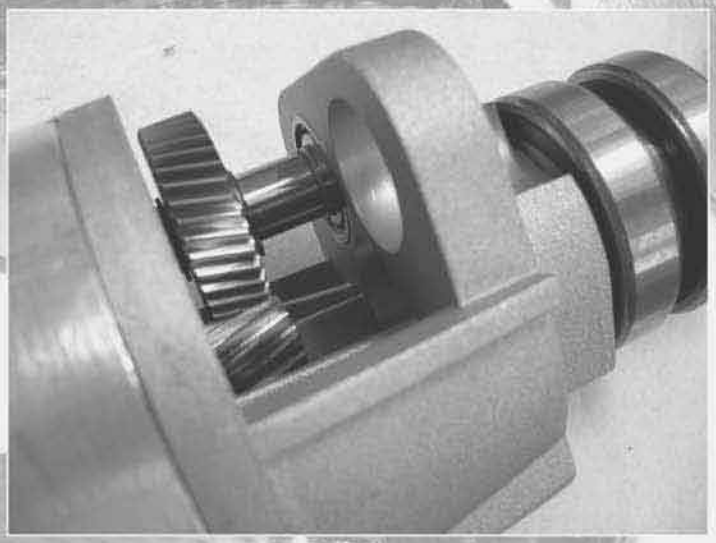
Other designs on customer request possible.

Mounting bracket for LAT® Drum Motor and Idler TM321:

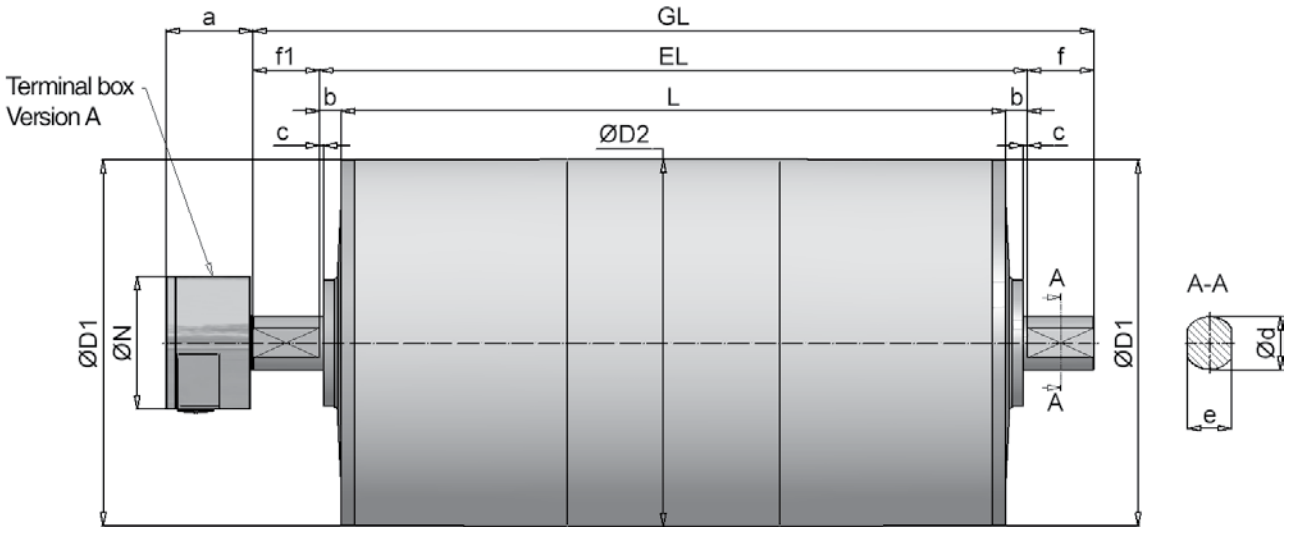


Dimensions in inches

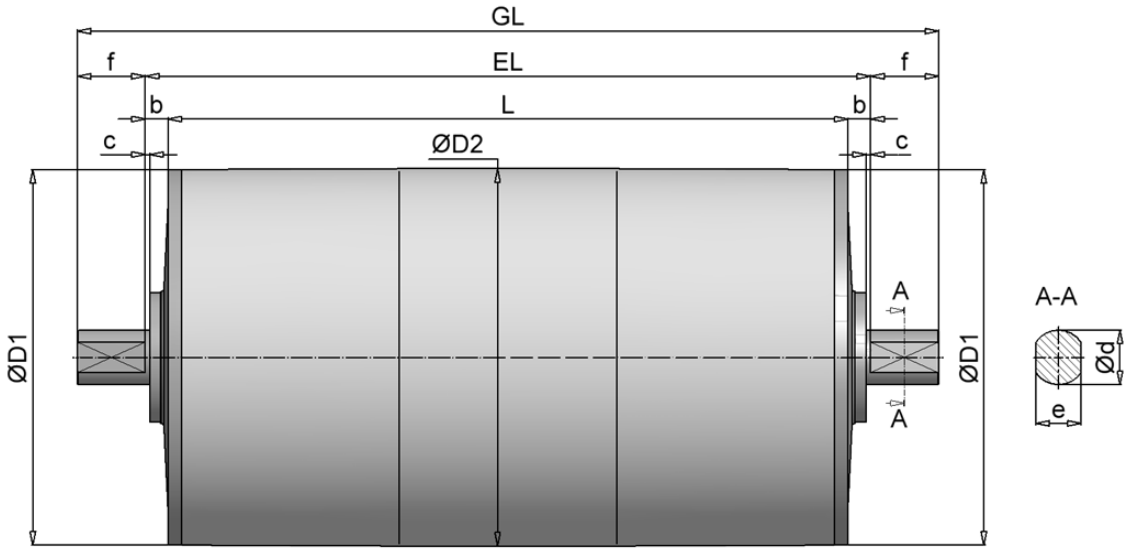
Type	Mounting bracket	d	e	h	h1	h2	M	n	s	w	z	M	Material	ca. Lbs.
TM/Idler 321.0	EL40/30 B	1.57	1.18	0.83	2.64	4.04	5.51	7.48	0.71	1.97	0.47	M8	Cast iron or SS Steel	6
TM/Idler 321.1	EL45/35	1.89	1.38	0.83	2.64	4.13	5.51	7.48	0.71	1.97	0.47	M8		6



TM 415 – Drum Motor



UT 415 - Idler



Dimensions in inches

Drum Motor											Standard IP66		optional IP67	
Size	**Typ**	**ØD1**	**ØD2****	**a**	**ØN**	**c**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
415	TM 415.0	16.26	16.39	3.70	4.41	0.12	1.77	1.38	2.09	2.09	0.865	L + 1.73	1.26	L + 2.52
415	TM 415.1	16.26	16.39	3.94	5.91	0.20	2.36	1.97	2.95	2.95	0.985	L + 1.97	1.38	L + 2.76

Idler														
415	UT 415.0	16.26	16.39			0.12	1.77	1.38	2.09		0.865	L + 1.73	1.26	L + 2.52
415	UT 415.1	16.26	16.39			0.20	2.36	1.97	2.95		0.985	L + 1.97	1.38	L + 2.76

** Diameter for flat face drum design

Performance data for TM415.0 - TM415.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 29.53“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM415.0	**4.0** 4-pole	184	867	590	3,20	21.65	352
		224	708	482			
		312	512	348			
		380	418	285			
TM415.1	**5.5** 4-pole	142	1501	1022	9,00	29.53	605
		198	1067	727			
TM415.0		224	950	647		21.65	374
		309	687	468			
		378	561	382			
		491	432	294			
TM415.1	**7.5** 4-pole	205	1426	971	11,50	29.53	638
		245	1186	806			
		304	959	653			
		368	794	541			
		406	720	490			
		512	570	388			
TM415.1	**10** 4-pole	245	1615	1099	15,50	29.53	660
		304	1308	890			
		368	1082	737			
		406	981	668			
		512	777	529			
TM415.1	**15** 4-pole	302	1756	1196	21,00	29.53	704
		366	1543	989			
		404	1318	897			
		510	1043	710			
TM415.1	**20** 4-pole	404	1976	1345	29,50	29.53	792
		510	1564	1065			

- Alternative data and speeds avaiable on request
- Weight includes oil (ready for operating)
- Weight increases by approx. 22Lbs for every 3.94”
- With brake L min. dimension increases by 7.87”

Standard width [L in Inches] : 21.65, 23.62, 25.59 … 55.12
Over 55.12” reinforced shaft will be used.
Consult us for max. lenght.

Design types and options

Standard design:

- Mild steel crowned shell
- End housings made of cast iron
- Mild steel shafts
- Helical steel gearsfor quite oporation
- Terminal box

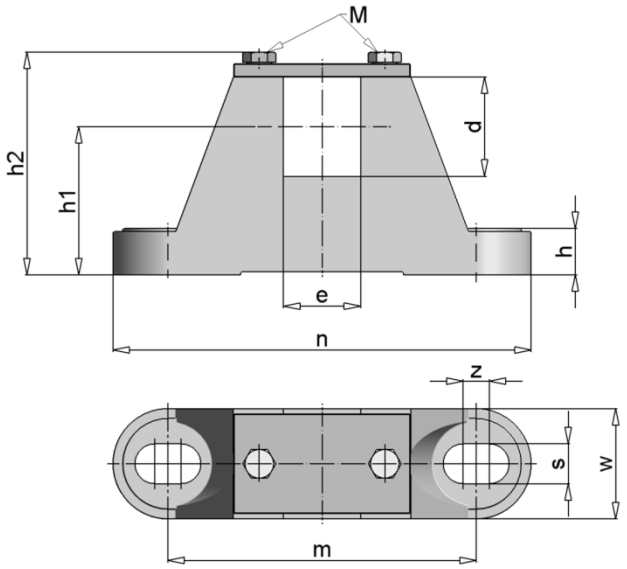
Options:

- Internal brake
- Back stop
- Sprocket / toothed belt disc
- Flat faced drum shell, rubbercoated, zinc plated
- Stainless steel design
- Thermal Overload contact
- IP66 or 67
- Frequency inverter duty winding (inform us if frequency inverter is going to be used)
- Grooved rubber lagging
- Terminal box design in stainless steel
- Vertical mounting (needs to be stated upon order)
- Food grade oil
- Food grade lagging

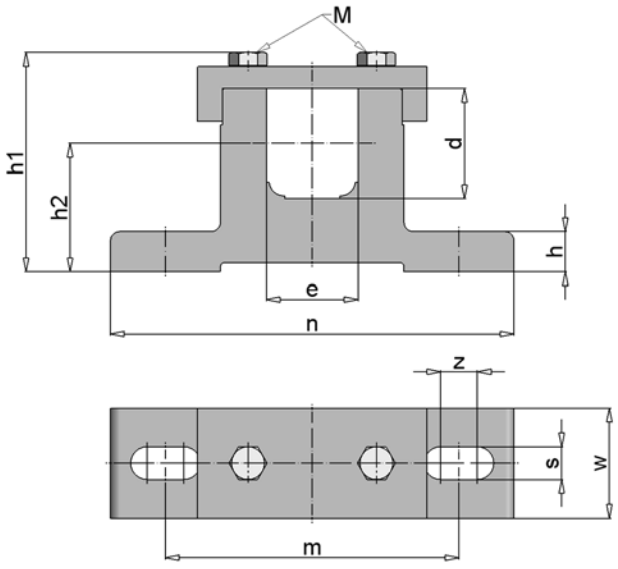
Other designs available upon request.

Mounting bracket for LAT® Drum Motor and Idler Type 415:

EL 45/35

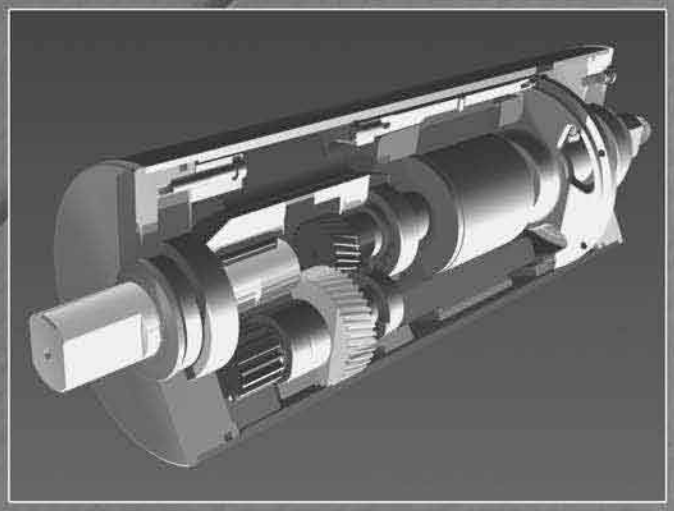


EL 60/50

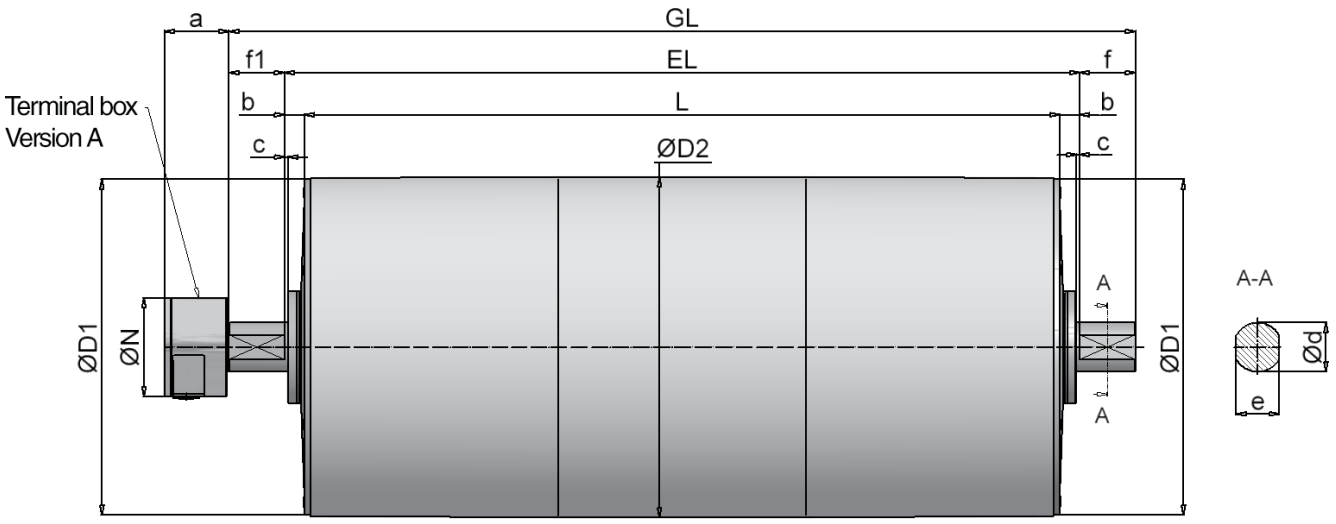


Dimensions in inches

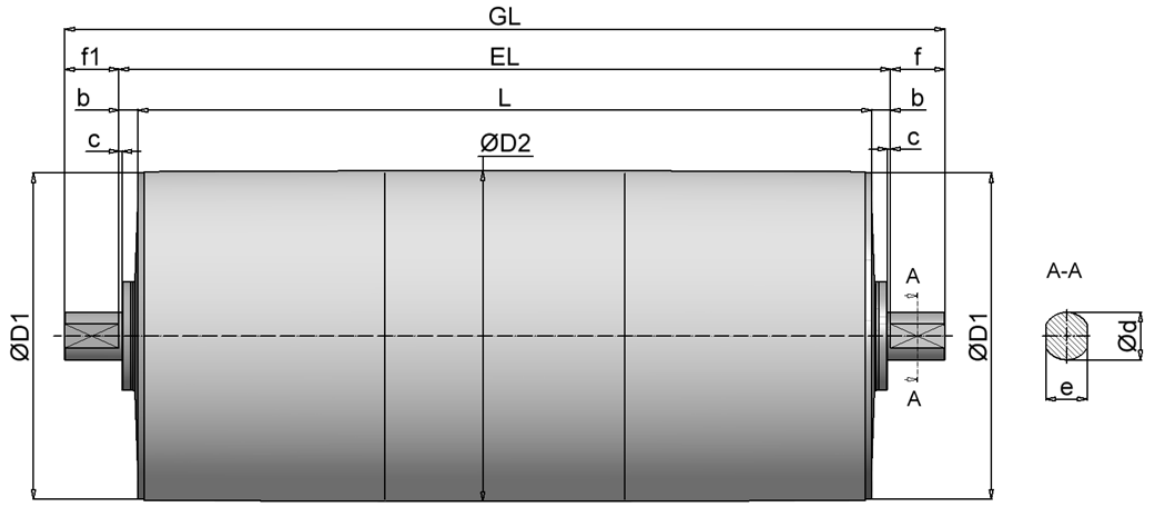
Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs.
TM/ Idler 415.0	EL45/35	1.77	1.38	0.83	2.64	4.13	5.51	7.48	0.71	1.97	0.47	M8	Cast iron or SS Steel	6
TM/ Idler 415.1	EL60/50	2.36	1.97	0.87	2.76	4.70	6.30	220	0.71	2.36	0.79	M12	Steel or SS Steel	11



TM 518 – Drum Motor



UT 518 - Idler



Dimensions in inches

Drum Motor											Standard IP65		optional IP66/67	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**c**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
518	TM 518.0	20.28	20.39	3.94	5.91	0.20	2.36	1.97	2.95	2.95	0.985	L + 1.97	1.38	L + 1.76
518	TM 518.1	20.28	20.39			0.20	2.95	2.56	3.35	3.35	1.18	L + 2.36	1.77	L + 3.54

Idler														
518	UT 518.0	20.28	20.39			0.20	2.36	1.97	2.95		0.985	L + 1.97	1.38	L + 1.76
518	UT 518.1	20.28	20.39			0.20	2.95	2.56	3.35		1.18	L + 1.18	1.77	L + 3.54

** Diameter for flat face drum design

Performance data for TM518.0 - TM518.1

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 37.40“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM518.1	**5.5** 4-pole	120	1756	1493	9,00	29.53	770
		149	1438	1222			
TM518.1	**7.5** 4-pole	125	2348	1995	11,50	32.28	792
		151	1922	1634			
		198	1471	1250			
TM518.0		255	1143	971		29.53	737
		307	948	806			
		380	768	653			
TM518.1	**10** 4-pole	151	2621	2228	15,50	32.28	825
		198	2006	1705			
		253	1576	1339			
		309	1290	1097			
		366	1089	926			
TM518.0		380	1048	890		29.53	748
		458	867	737			
		505	786	668			
TM518.1	**15** 4-pole	196	2694	2289	21,00	32.28	1016
		250	2116	1798			
		307	1733	1472			
		363	1463	1243			
		401	1326	1127			
		491	1083	921			
TM518.1	**20** 4-pole	309	2581	2193	29,50	31.50	986
		366	2179	1851			
		404	1975	1679			
		493	1613	1371			
TM518.1	**25** 4-pole	375	2623	2229	37,00	33.46	1034
		413	2378	2021			
		505	1942	1651			
TM518.1	**30** 4-pole	413	2828	2404	43,50	33.46	1034
		505	2310	1963			

- Alternative data and speeds available on request
- Weight includes oil (ready for operating)
- Additional weight: approx. 22Lbs for every 3.94” add. length
- With brake L min. dimension ioncreases by 7.87”

Standard width [L in Inches] : 29.53, 31.50, 32.28, 33.46 ..... 62.99,
From 62.00” and over reinforced shaft will be used.
Please contact us for max. length.

Design types and options

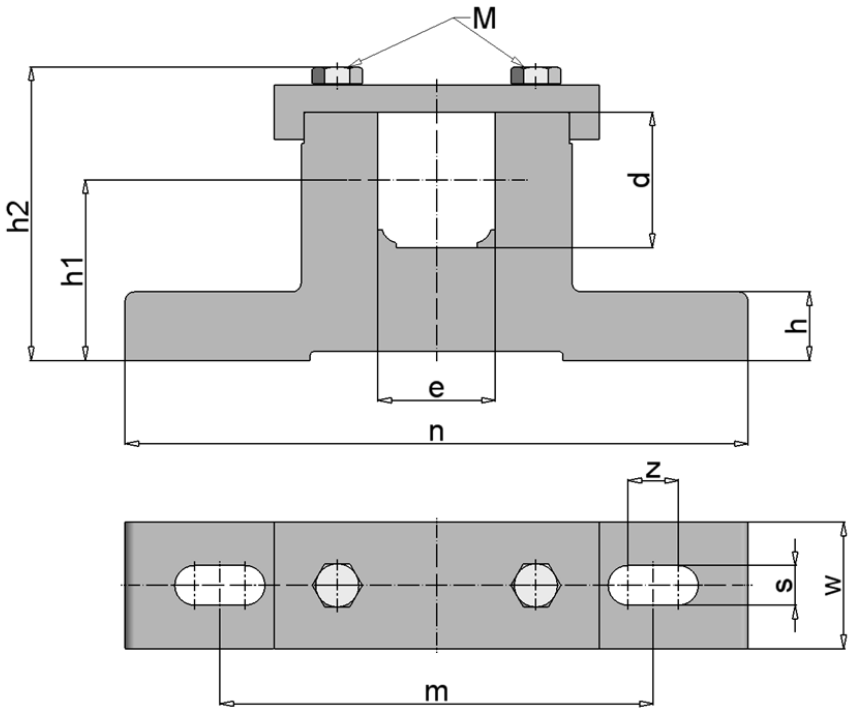
Standard configuration:

- Mild steel crowned shell
- End housings made of cast iron
- Mild steel shafts
- Helical steel gears
- Terminal box

Options:

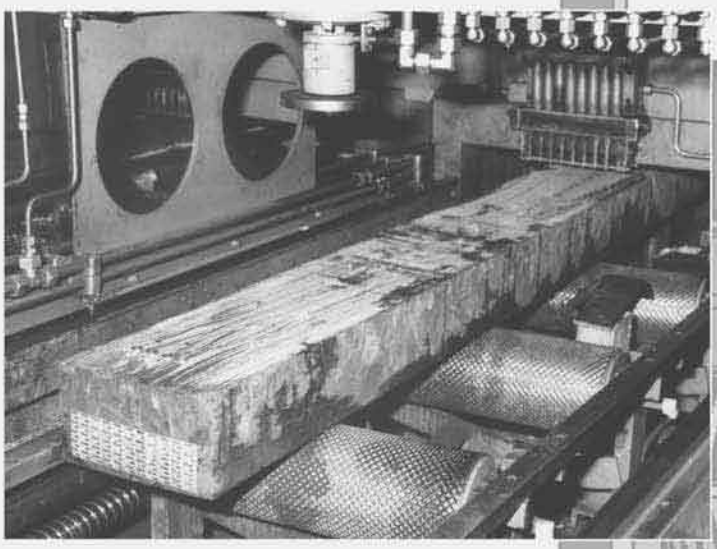
- Internal brake
- Back stop
- Sprocket / toothed belt disc
- Flat faced drum shell, rubber coated, zinc plated
- (customized)
- Stainless steel design
- Thermal Overload contact
- IP66 or 67
- Frequency inverter duty windings (inform us if frequency inverter is going to be used)
- Special Grooved rubber lagging
- Terminal box design in stainless steel
- Vertical mounting(needs to be stated upon order)
- Food grade lagging
- Food grade oil
- Other designs on customer request possible

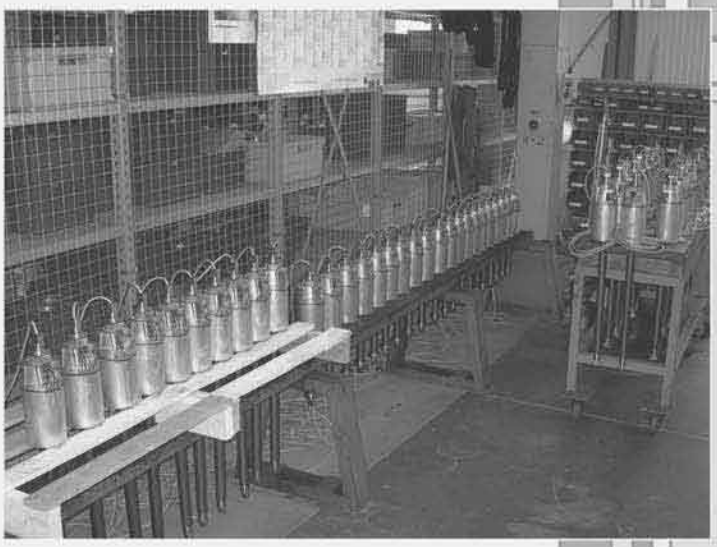
Mounting bracket for LAT® Drum Motor and Idler Type 518:



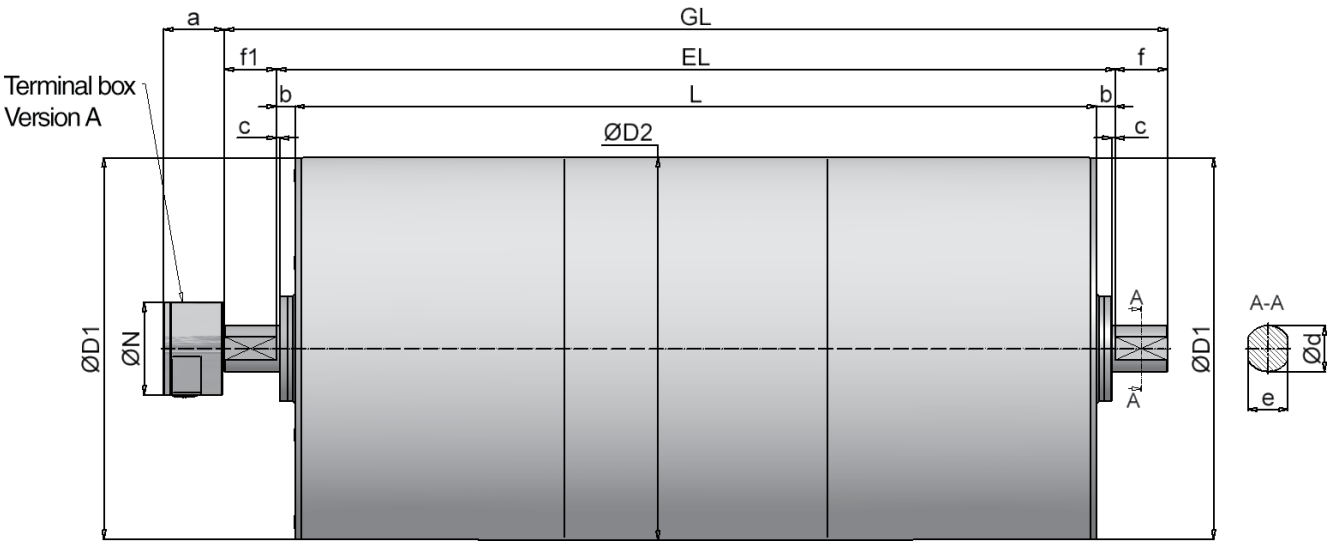
Dimensions in inches

Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs
TM/ Idler 518.0	EL60/50	2.36	1.97	0.87	2.76	4.70	6.30	8.66	0.71	2.36	0.79	M12	Steel or SS Steel	11
TM/ Idler 518.1	EL75/65	2.95	2.56	1.50	3.94	6.40	9.45	13.58	0.87	2.76	1.10	M16		29.76

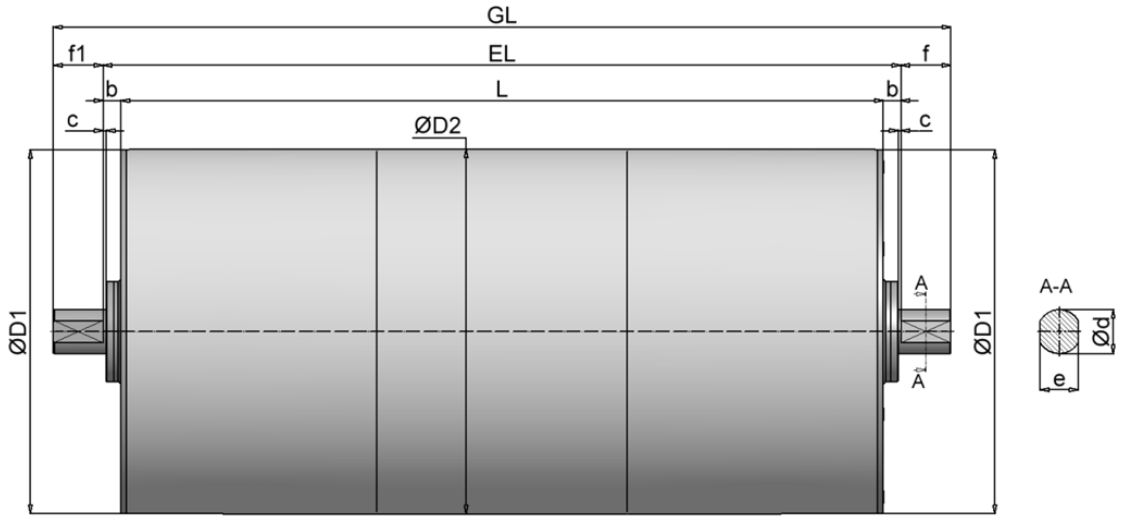




TM 620 – Drum Motor



UT 620 - Idler



Dimensions in inches

Drum Motor											Standard IP65		optional IP66	
Size	**Type**	**ØD1**	**ØD2****	**a**	**ØN**	**c**	**Ød**	**e**	**f**	**f1**	**b**	**EL**	**b**	**EL**
620	TM 620.0	24.33	24.41	3.94	5.91	0.20	2.95	2.56	3.35	3.35	1.18	L + 2.36	2.36	L + 4.72

Idler														
620	UT 620.0	24.33	24.41			0.20	2.95	2.56	3.35		1.18	L + 2.36	2.36	L + 4.72

** Diameter for flat face drum design

Performance data for TM620.0

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight L = 37.40“ min.
	P2	v	F	T2			
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM620.0	**10** 4-pole	182	2190	2228	15,50	33.28	1144
		238	1676	1705			
		302	1317	1339			
TM620.0	**15** 4-pole	236	2250	2289	21,00	33.28	1166
		300	1768	1798			
		366	1447	1472			
		434	1222	1243			
		479	1108	1127			
		585	904	921			
TM620.0	**20** 4-pole	368	2156	2193	29,50	31.50	1221
		437	1820	1851			
		481	1650	1679			
		590	1348	1371			
TM620.0	**25** 4-pole	448	2191	2229	37,00	33.46	1309
		493	1987	2021			
		604	1623	1651			
TM620.0	**30** 4-pole	493	2363	2404	43,50	33.46	1320
		604	1930	1963			

- Alternative data and speeds available upon request
- Weight includes oil (ready for operating)
- Weight increases approx. 55Lbs for every 3.94” add. length
- With break L min. dimension increases by 7.87”

Standard width [L in Inches] : 31.50, 37.40, 33.46 … 66.93,
For 66.93” and over reinforced shaft will be used
For max. lengths consult us.

Design types and options

Standard configuration:

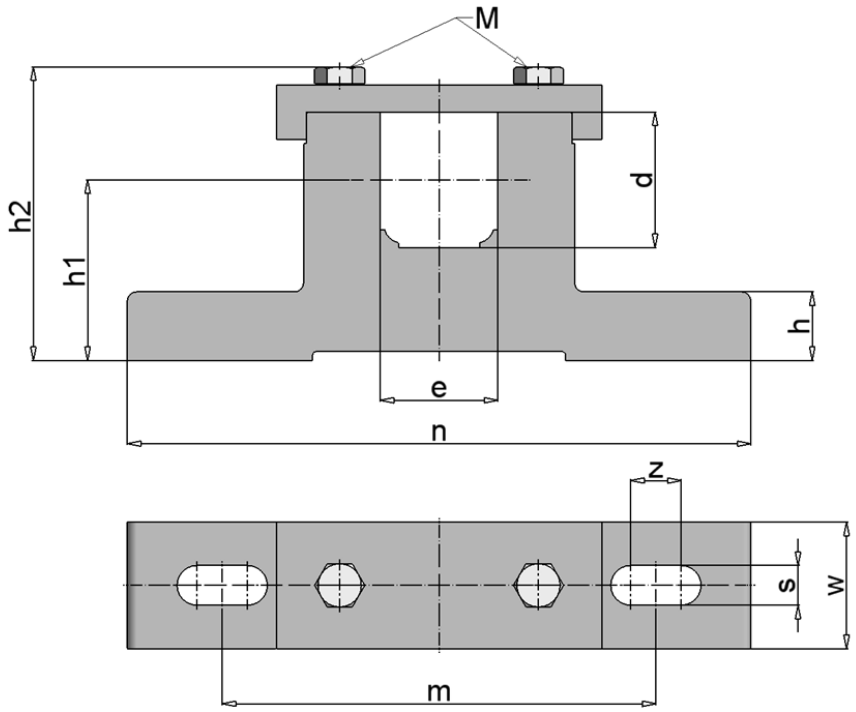
- Mild steel crowned shell
- End housings made of steel
- Mild steel shafts
- Helical steel gears
- Terminal box

Options:

- Internal brake
- Back stop
- Sprocket / toothed belt disc
- Flat faced drum shell, rubber coated, zinc plated
- (customized)
- Stainless steel design
- Thermal Overload contact
- IP66 or 67
- Frequency inverter duty windings (inform us if frequency inverter is going to be used)
- Terminal box design in stainless steel
- Vertical mounting (needs to be stated upon order)
- Food grade lagging
- Food grade oil

Other designs available upon request

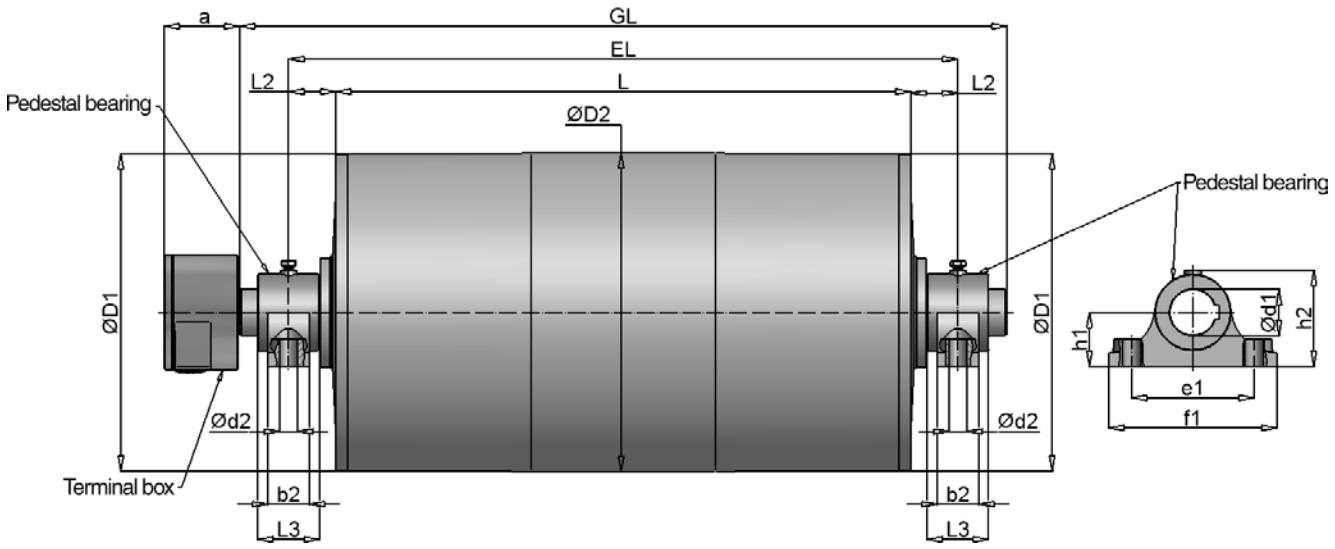
Mounting bracket for LAT® Drum Motor / Guide Drum 620:



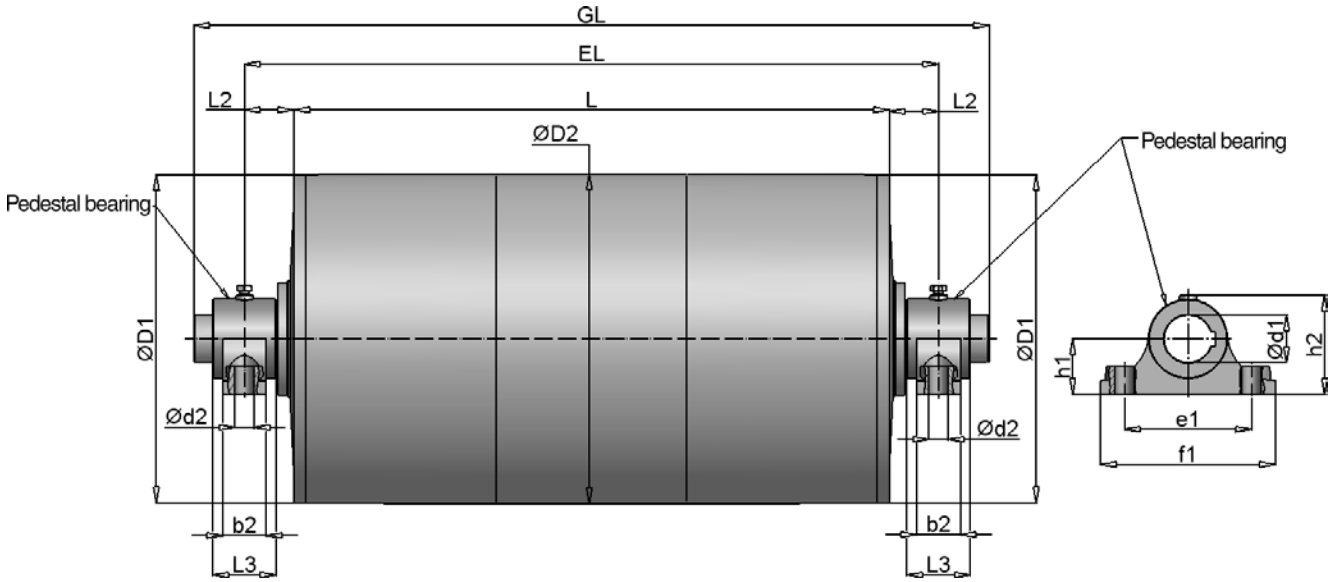
Dimensions in inches

Type	Mounting bracket	d	e	h	h1	h2	m	n	s	w	z	M	Material	ca. Lbs.
TM/ Idler 620.0	EL75/65	2.95	2.56	1.50	3.94	6.40	9.45	13.58	0.87	2.76	1.10	M16	Steel or Stainless	30

TM 630 – Drum Motor



UT 630 - Idler



Dimensions in inches

Drum Motor														IP66	IP67
Size	**Type**	**ØD1**	**ØD2**	**A**	**b2**	**Ød1**	**Ød2**	**e1**	**f1**	**h1**	**h2**	**L2**	**L3**	**EL**	**EL**
630	TM 630.1	24.65	24.80	6.50	3.15	3.54	1.02	9.84	12.60	3.94	7.20	5.91	4.61	L + 11.81	L + 11.81

Idler															
630	UT 630.1	24.65	24.80	-	3.15	3.54	1.02	9.84	12.60	3.94	7.20	5.91	4.61	----	L + 11.81

Performance data for TM 630

Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight
	P2	v	F	T2			L = 37.40“ min.
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM630.1	**40** 8-pole	295	5123	5295	57,00	37.40	1815
		378	4003	4137			
		472	3202	3310			
		590	2561	2647			
		743	2033	2101			
TM630.1	**50** 6-pole	378	4939	5104	70,00	37.40	1815
		472	3950	4082			
		590	3159	3265			
		743	2507	2591			
TM630.1	**60** 4-pole	590	3842	3971	85,00	37.40	1859
		743	3049	3152			
		944	2402	2482			
TM630.1	**75** 4-pole	590	4699	4856	105,00	37.40	1859
		743	3727	3852			
		944	2935	3035			

- Alternative data and speeds available upon request
- Weight incl. oil filling (ready for operating)
- Additional weight: approx. 55Lbs. for 3.94” add. length

Normal width (L in Inches): 37.40, 39.37, 41.33, ... 78.74
Lengths over 78.74 will have re-inforced shaft
Please consult us as to max. length.

Design types and options

Standard configuration:

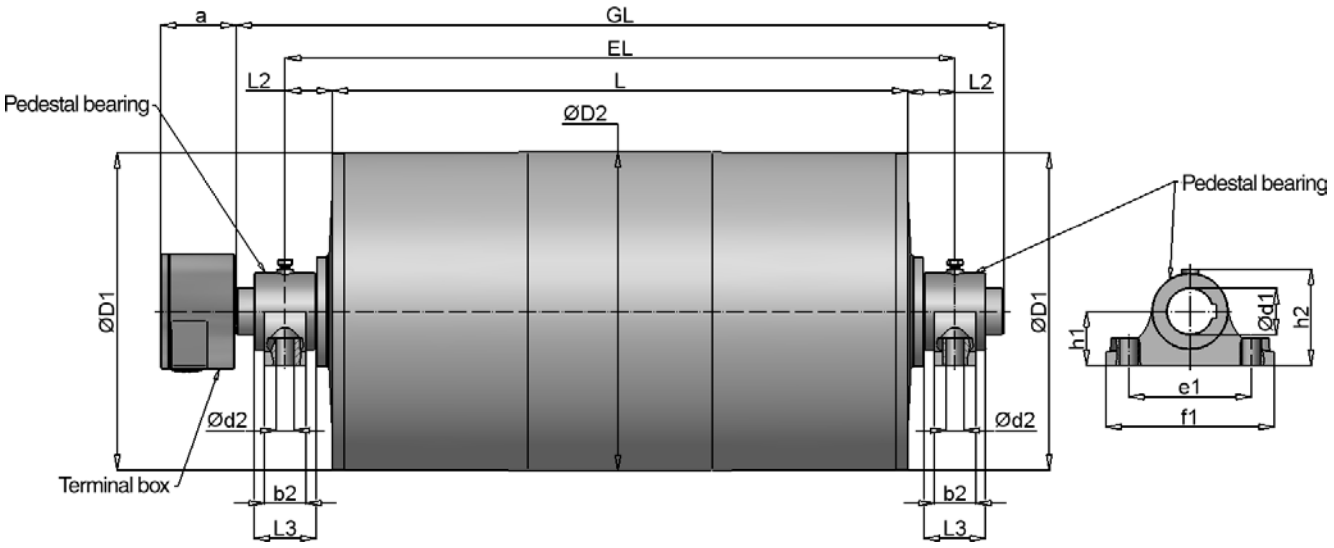
- Mild steel crowned shell
- Bolt on end housings made of steel or cast iron
- IP66 or 67
- Mild steel shafts
- Helical steel gears
- Terminal box
- Pedestal bearing made of cast iron (mounted standard)
- Thermal Overload contact

Options:

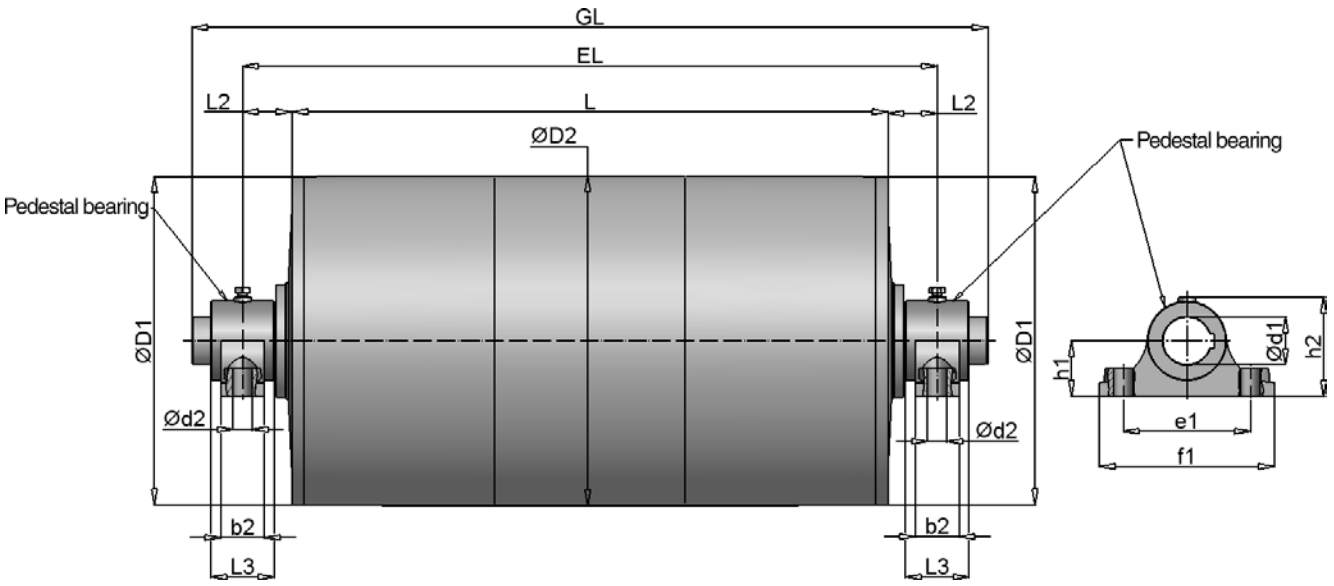
- Back stop
- Flat faced drum shell, rubber coated, zinc plated
- (customized)
- Stainless options
- Special lagging available on request
- External brake shaft for connection to mechanical brake

Other designs available upon request.

TM 800 – Drum Motor



UT 800 - Idler



Dimensions in inches

Drum Motor														IP66	IP67
Size	**Type**	**ØD1**	**ØD2**	**a**	**b2**	**Ød1**	**Ød2**	**e1**	**f1**	**h1**	**h2**	**L2**	**L3**	**EL**	**EL**
800	TM 800.0	31.32	31.50	6.50	3.15	3.54	1.02	9.84	12.60	3.94	7.20	5.91	4.61	----	L + 11.81
800	TM 800.1	31.32	31.50	7.87	4.72	4.72	1.30	11.81	14.75	4.33	8.39	5.91	6.30	----	L + 11.81

Idler															
800	UT 800.0	24.65	630	-	3.15	3.54	1.02	9.84	12.60	3.94	7.20	5.91	4.61	----	L + 11.81
800	UT 800.1	24.65	630	-	4.72	4.72	1.30	11.81	14.57	4.33	8.39	5.91	6.30	----	L + 11.81

Performance data for TM 800

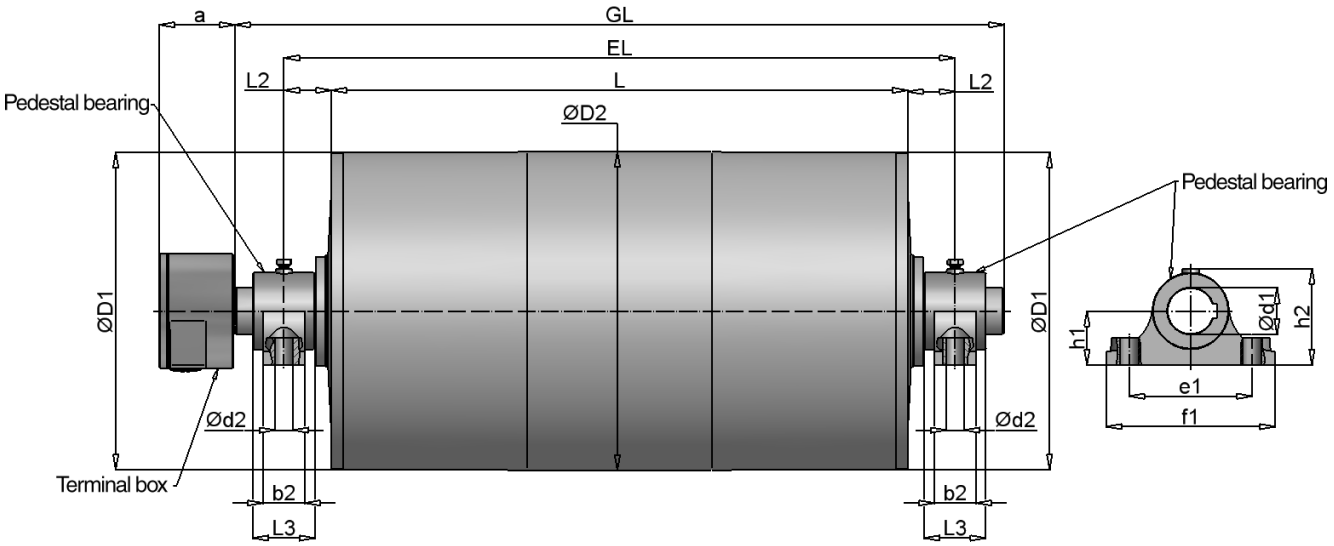
Type	Power	Belt speed	Belt pull	Drum torque	Nominal load @ 460V / 60Hz	Drum length L min.	Weight
	P2	v	F	T2			L = 55.12“ min.
	[HP]	[FPM]	[Lbs]	[Lbs-Ft]	[A]	[Inches]	[lbs]
TM 800.0	**30** 8-pole	236	3759	4933	42	37.40	2057
		378	2935	3852			
		472	2348	3082			
		590	1879	2466			
		743	1491	1957			
TM 800.0	**40** 8-pole	378	4002	5253	56	37.40	2145
		472	3202	4203			
		590	2562	3362			
		743	2033	2668			
TM 800.0	**50** 6-pole	472	3951	5185	70	37.40	2145
		590	3160	4147			
		743	2508	3291			
		944	1974	2593			
TM 800.0	**60** 4-pole	743	3049	4002	84	37.40	2189
		944	2402	3152			
TM 800.0	**75** 4-pole	944	2935	3852	95	37.40	2189
TM 800.1	8-pole	378	7335	9627	95	55.12	4730
	75 6-pole	472	5873	7708			
		590	4698	6166			
		743	3729	4895			
		944	2937	3854			
		1062	2610	3425			
TM 800.1	**100** 6-pole	473	8005	10506	134	55.12	4730
		590	6404	8405			
		743	5083	6671			
		944	4058	5253			
		1062	3558	4670			
TM 800.1	**121** 6-pole	590	7685	10086	158	55.12	4840
		743	6099	8003			
		944	4803	6304			
		1062	4270	5604			
TM 800.1	**148** 4-pole	743	7454	9784	196	55.12	4785
		944	5870	7712			
		1062	5207	6834			
TM 800.1	**177** 4-pole	944	7045	9246	238	55.12	4873
		1062	6262	8218			

- Alternative data and speeds available upon request
- Weight includes oil (ready for operating)
- Weight increase for up to 60HP approx. 55Lbs, over 60HP approx. 110Lbs for every 3.94” over min. Length

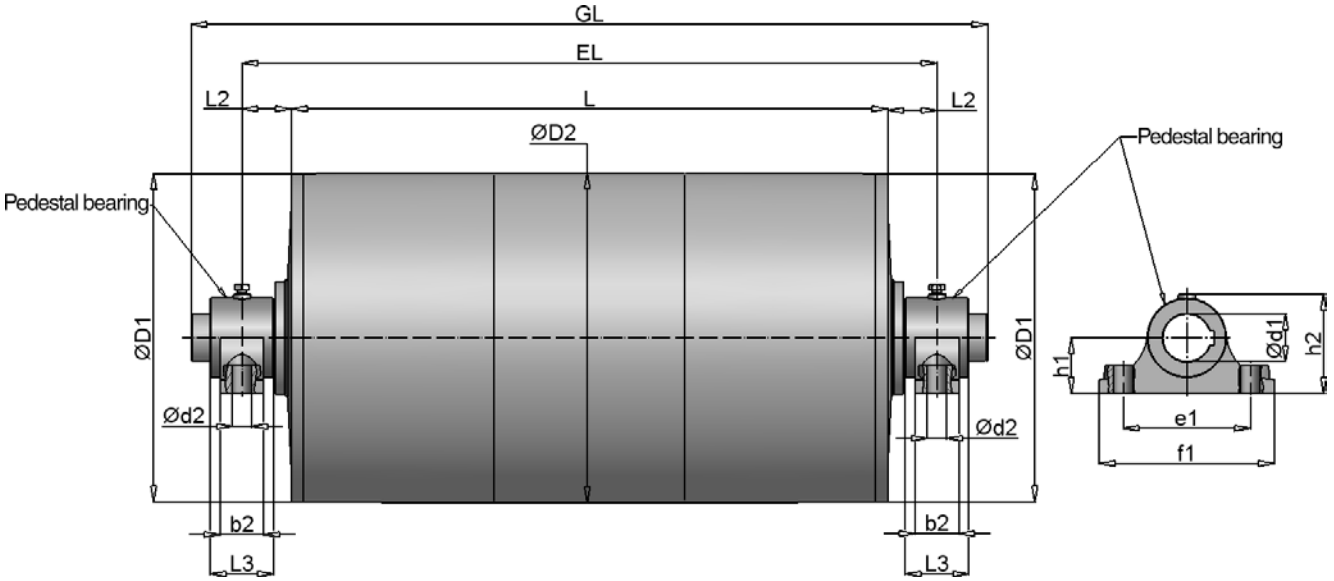
Standard width [L in Inches] : 37.40, 39.37, 41.34 … 78.74
Over 78.74” reinforced shaft will be used
Contact us for max. Length

Design types and options as TM 630

TM 160 - TM 620 – Drum Motor (Pedestal bearing)



UT 160 - UT 620 - Idler (Pedestal bearing)

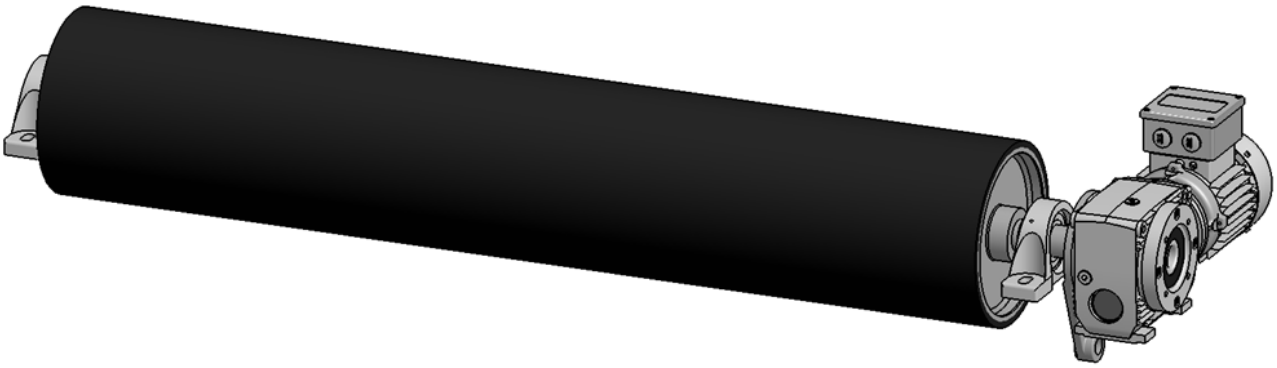


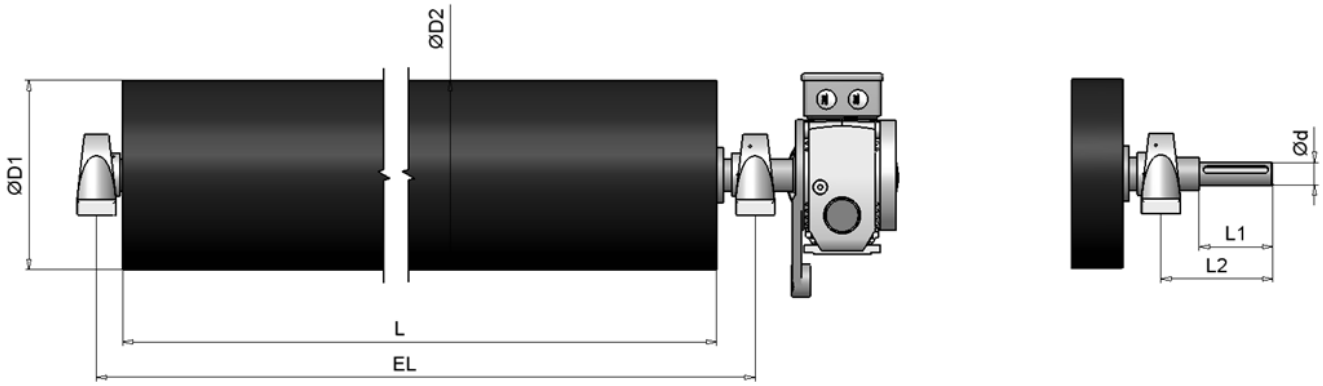
Selection charts TM with pedestal bearing TM 160L - TM 620L
All measurements are in Inches.

Drum Motor														IP65	IP66/67
Size	Typ	ØD2	ØD1	a	b2	Ød1	Ød2	e1	f1	h1	h2	L2	L3	EL	EL
160	TM 160.0	6.36	6.30	3.74	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.52	2.36	L + 3.03	L + 4.09
Idler															
160	TM 160.0	6.36	6.30	3.74	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.52	2.36	L + 3.03	L + 4.09
Drum Motor															
165	TM 165.1	6.50	6.47	3.74	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.52	2.36	L + 3.03	L + 4.09
Idler															
165	TM 160.1	6.50	6.47	-	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.52	2.36	L + 3.03	L + 4.09
Drum Motor															
216	TM 216.0	8.50	8.41	3.74	1.77	1.38	0.59	4.72	6.30	1.97	3.74	1.52	2.36	L + 3.54	L + 4.80
216	TM 216.1	8.50	8.41	3.74	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.97	2.36	L + 3.94	L + 5.28
Idler															
216	TM 216.0	216	213,5	-	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.52	2.36	L + 3.54	L + 4.80
216	TM 216.1	216	213,5	-	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.97	2.36	L + 3.94	L + 5.28
Drum Motor															
321	TM 321.0	12.64	12.5	3.74	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.97	2.36	L + 3.94	L + 5.90
321	TM 321.1	12.64	12.5	3.74	1.97	1.77	0.75	5.51	7.48	2.36	4.33	2.24	2.75	L + 4.49	L + 6.14
Idler															
321	TM 321.0	12.64	12.5	-	1.77	1.57	0.59	4.72	6.30	1.97	3.74	1.97	2.36	L + 3.94	L + 5.90
321	TM 321.1	12.64	12.5	-	1.97	1.77	0.75	5.51	7.48	2.36	4.33	2.24	2.75	L + 4.49	L + 6.14
Drum Motor															
415	TM 415.0	16.34	16.26	3.94	1.97	1.77	0.75	5.51	7.48	2.36	4.33	2.24	2.75	L + 4.49	L + 6.14
415	TM 415.1	16.34	16.26	3.94	2.16	2.36	0.94	16.30	8.66	2.75	4.92	2.44	3.15	L + 4.88	L + 7.64
Idler															
415	TM 415.0	16.34	16.26	-	1.97	1.77	0.75	5.51	7.48	2.36	4.33	2.24	2.75	L + 4.49	L + 6.14
415	TM 415.1	16.34	16.26	-	2.16	2.36	0.94	16.30	8.66	2.75	4.92	2.44	3.15	L + 4.88	L + 7.64
Drum Motor															
518	TM 518.0	20.39	20.20	3.94	2.16	2.36	0.94	16.30	8.66	2.75	4.92	2.44	3.15	L + 4.88	L + 7.64
518	TM 518.1	20.39	20.20	3.94	2.75	2.95	1.10	8.27	10.63	3.54	6.50	3.15	3.94	L + 6.30	L + 8.66
Idler															
518	TM 518.0	20.39	20.20	-	2.16	2.36	0.94	16.30	8.66	2.75	4.92	2.44	3.15	L + 4.88	L + 7.64
518	TM 518.1	20.39	20.20	-	2.75	2.95	1.10	8.27	10.63	3.54	6.50	3.15	3.94	L + 6.30	L + 8.66
Drum Motor															
620	TM 620.0	24.41	24.33	3.94	2.75	2.95	1.10	8.27	10.63	3.54	6.50	3.15	3.94	L + 6.30	L + 8.66
Idler															
620	TM 620.0	24.41	24.33	-	2.75	2.95	1.10	8.27	10.63	3.54	6.50	3.15	3.94	L + 6.30	L + 8.66

Driving a drum for combination with parallel shaft, helical bevel, and worm gear

Enquiry for Tail Pulley





Driving Drum											
Size	**Type**	**D2 [In]**	**D1 [In]**	**L [In]**	**EL [In]**	**Ød [In]**	**L1 [In]**	**L2 [In]**	**n [FPM]**	**T [Lbs-Ft]**	**remarks**
111	AT-111	4.47	4.43								
135	AT-135	5.41	5.35								
165	AT-165	6.50	6.46								
216	AT-216	8.50	8.41								
321	AT-321	12.64	12.52								
415	AT-415	16.34	16.26								
518	AT-518	20.39	20.20								
620	AT-620	24.41	24.33								

Remaining dimensions available on customer request

Features of driving drum:
- Drum end caps welded together with output shaft and drum shell.
- Dimension of input shaft suitable to all gear motors
- Shaft extension in rust proof design
- Crowned shell with rust proof covering
- High quality pedestal bearing
- Drum end caps and pedestal bearing painted

The gear motors are available from our gearbox manufacturer, Himmel.
Upon request we can supply a complete frame to mount the tail pulley.

Supplementary Options

TM Typ TM type	60	80	82	111	135	160	165	216	321	415	518	620	630	800
Mechanical Back Stop	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Electromagnetic Brake			X	X	X	X	X	X	X	X	X	X	X	X
Thermal Overload		X	X	X	X	X	X	X	X	X	X	X	X	X
Stainless Steel version	X	X	X	X	X	X	X	X	On request					
Black rubber lagging		X	X	X	X	X	X	X	X	X	X	X	X	X
White rubber lagging - Food applications		X	X	X	X	X	X	X						
Zinc coated (galvanic) drum	X	X	X	X	X	X	X	X	X	X	X	X		
Two speed motor								X	X	X	X	X		
Labyrinth sealing system IP 66	X	X	Standard	Standard	X	X	Standard	X	Standard	Standard	Standard	X		
Cable	Standard	Standard	Standard	Standard	Standard	Standard	Standard	X	X					
Terminal box				X	X	X	X	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Pedestal bearing	Dimensions on page 60					X	X	X	X	X	X	X	X	X
Standard mounting Brackets	X	X	X	X	X	X	X	X	X	X	X	X		

Operation voltages

For the design of the motor winding we require information on operating voltage and starting method. The standard winding design for drum motors is as following:
230V, 460V or 575V – 3ph – 60Hz.
If dual voltage is required please indicate this.
Special voltages and frequencies can also be supplied upon request.

Connection

Check whether the voltage and connections of the supplied equipment comply with the available voltage on the place of installation. If the above does not match, the connections on the terminal block should be changed. By opening the terminal box cover, the terminal block is accessible.
All LAT® conveyor drum motors must be fitted with a ground terminal (VDE 0530).

Special notice

Screened cable should be used when the drum motor is supplied with Encoder, Brake or connected to a Frequency Drive.

Motor protection

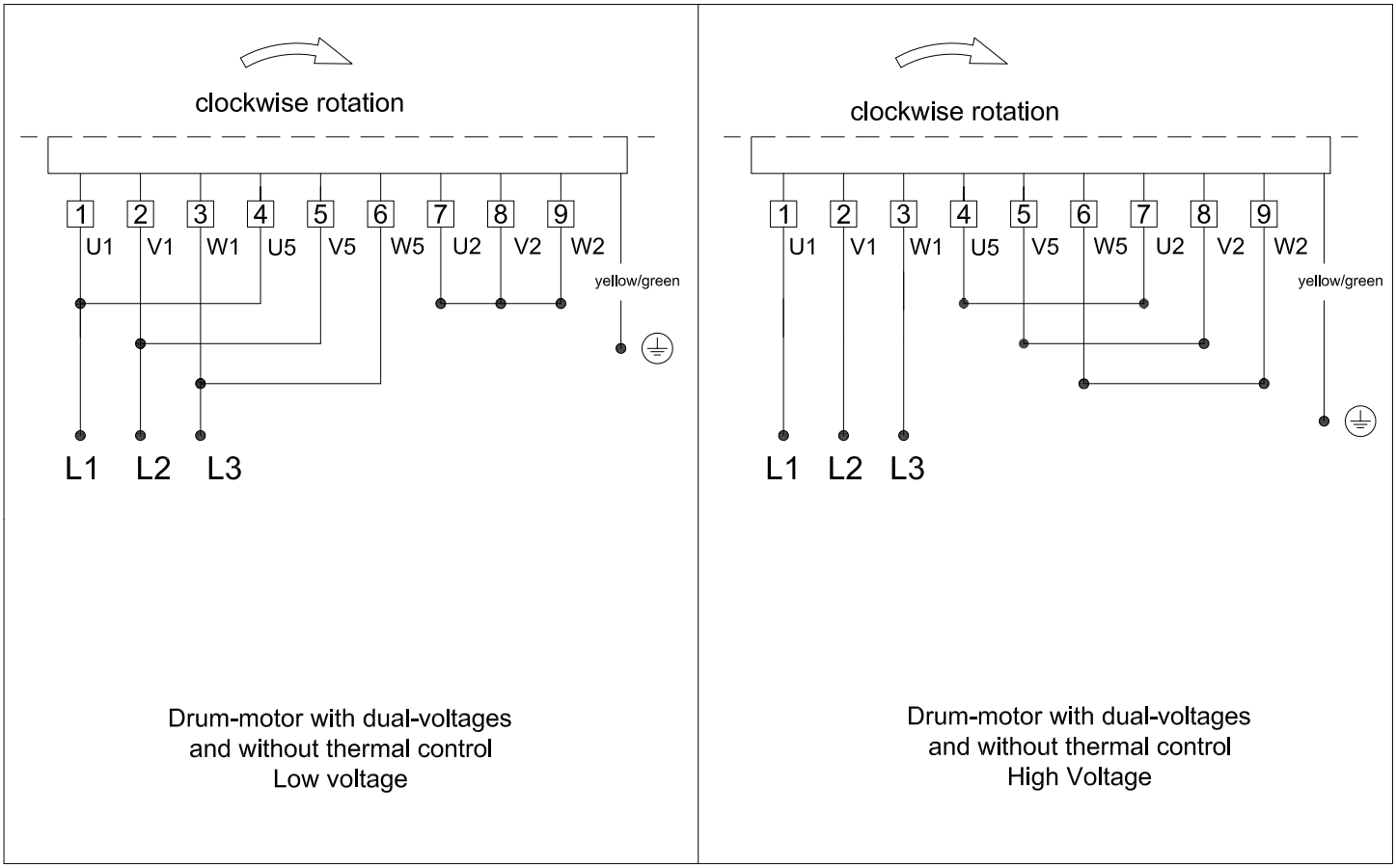
Fuses are not made for motor protection, they are especially for line protection against short circuit. For the protection of the windings of a 3 phase motor, given thermal overload through locked rotor and 2 phase running, there is a choice on request of the following protection types mentioned below:

Thermistor (internal) (PTC) in combination with a trip device.

Winding thermostats (internal) (WT) that opens or closes in the stator windings, which disconnects the motor on overload via a relay. This relay does not protect against locked rotor, for this case, in addition, motor protection switches are to be provided.

Motor protection switch (external) with bi-metal contacts, which opens within admissible current input.

Wire diagram for dual voltage motors 230/460V - 3ph - 60Hz

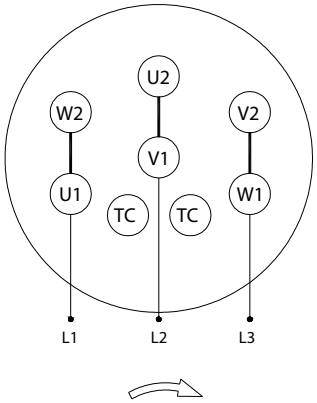
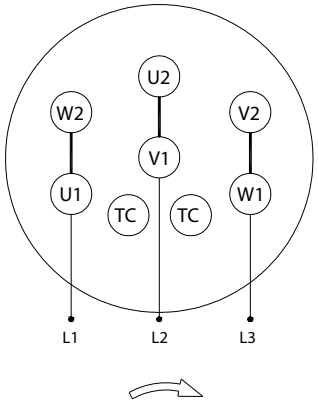
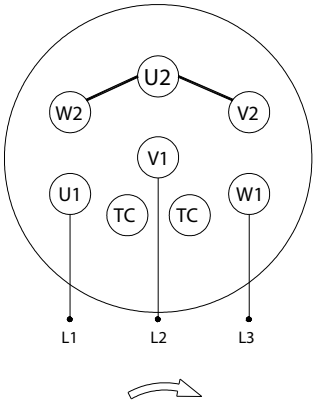


Drum-motor with dual-voltages
and without thermal control
Low voltage

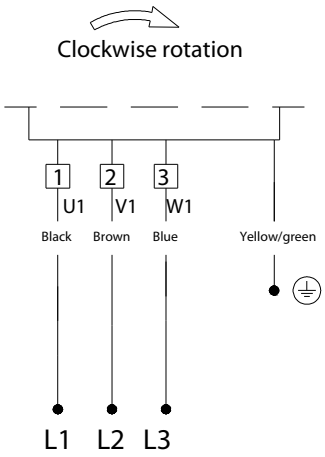
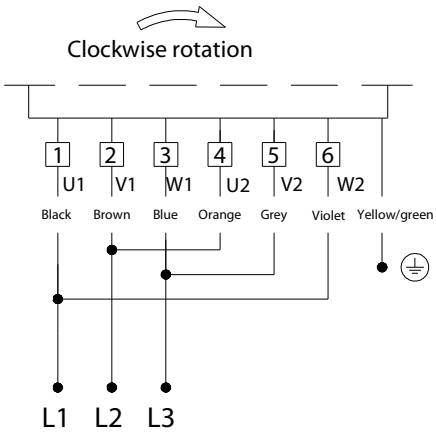
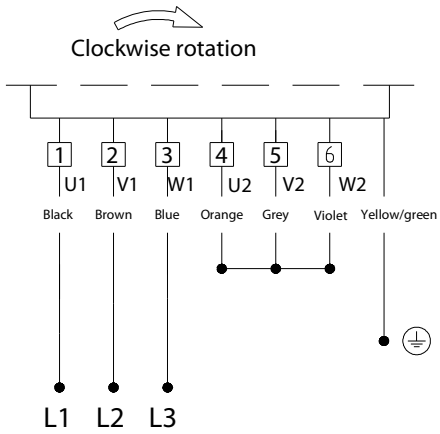
Drum-motor with dual-voltages
and without thermal control
High Voltage

Wiring

Standard wiring diagrams for three-phase drummotors

Wire diagram for 230, 460 or 575V 3ph - 60Hz	Wire diagrams for 230/400V 3ph - 50Hz	
	(Low Voltage)	(High Voltage)
		
Clockwise rotation Drum-motor	Clockwise rotation Drum-motor	Clockwise rotation Drum-motor

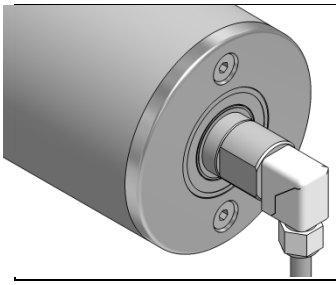
Electric connector drum motor with cable connection 3 ~ motor

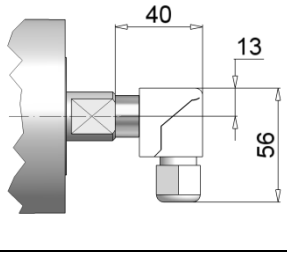
		
Drum-motor with single voltage and without thermal control	Drum-motor with dual-voltages Low voltage	Drum-motor with dual-voltages High voltage

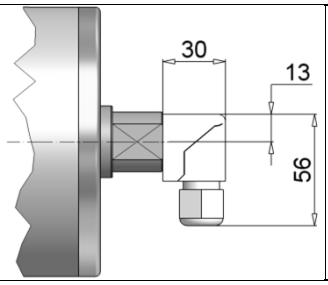
Electrical connections options (measurements are in mm)

	TM 60 – TM 82	TM 111 – TM 165	TM 216 – …

Type B: 3' Cable with *90 degree plastic elbow connector*

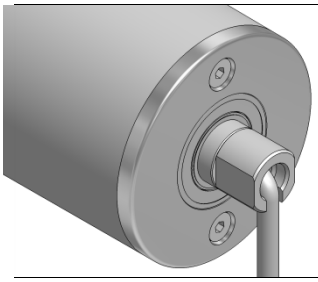




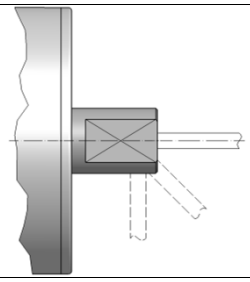


on request

Type C: V*ariable cable design, pull release inside with 3' cable*

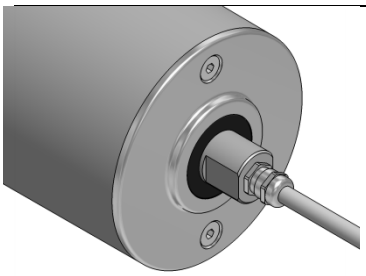


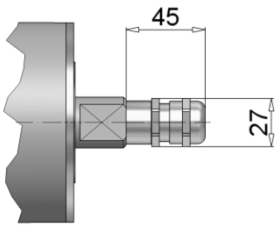
on request

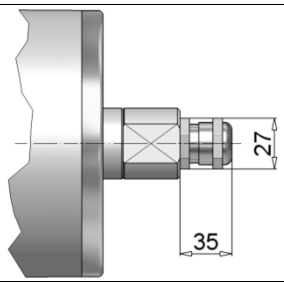


on request

Type D: 3' Cable with s*traight cable connector*

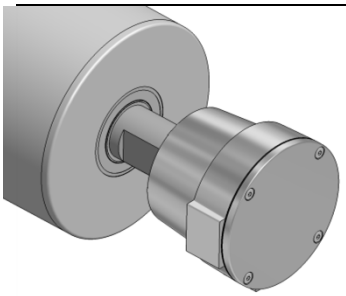




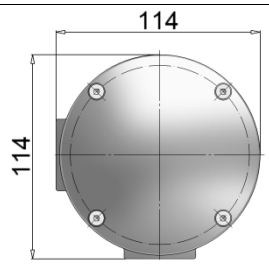


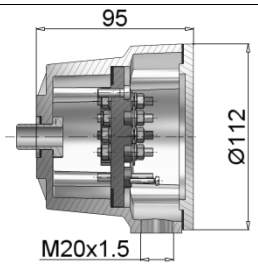
on request

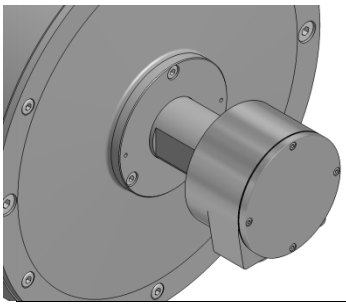
Type A: T*erminal box*



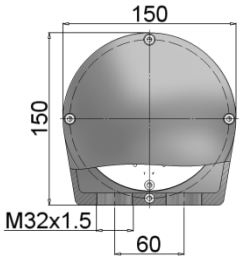
TM 111 – TM 415

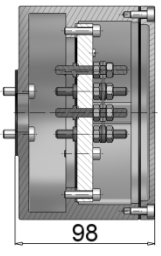






TM 415 – TM 620

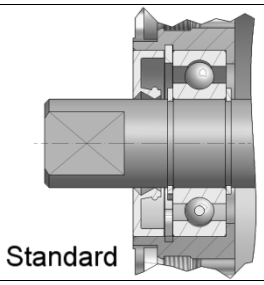
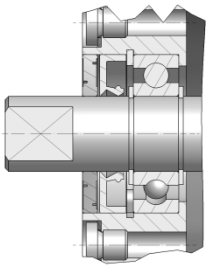
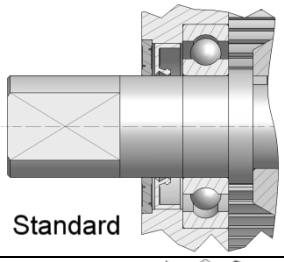
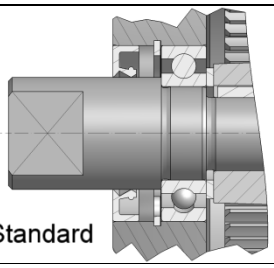
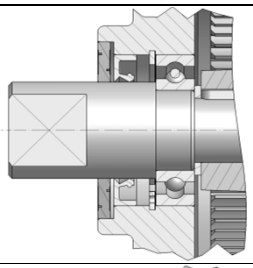
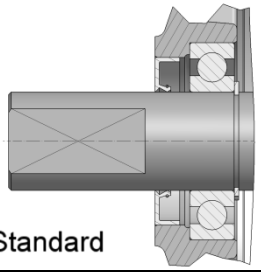
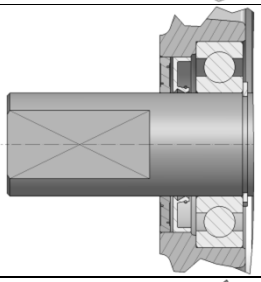
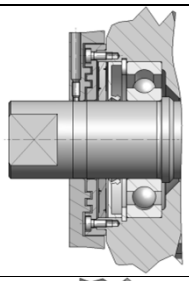
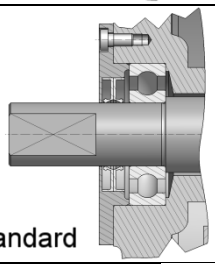
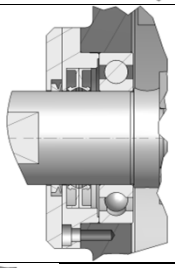
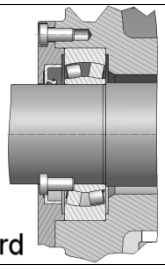
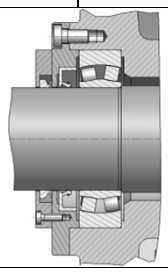




Important note: Screened cable should be used when the drum motor is supplied with encoder, brake, or connected to a Frequency Drive.

Sealings

Sealings options:

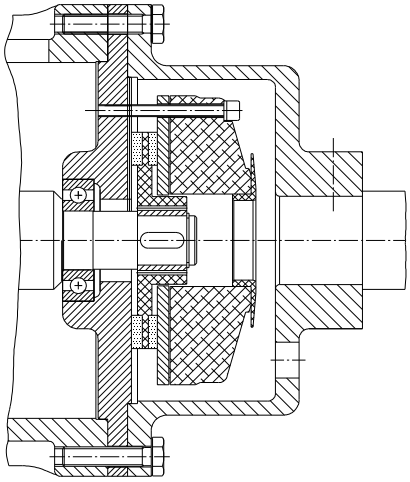
	IP 65	IP 66	IP 67
TM60 - TM80	 Standard		*on request*
TM82 / TM111 / TM165 /TM216.0	-	 Standard	*on request*
TM135 / TM160	 Standard		*on request*
TM216.1	 Standard		
TM321 / TM415 / TM518.0	-	 Standard	
TM518.1 / TM620	 Standard		

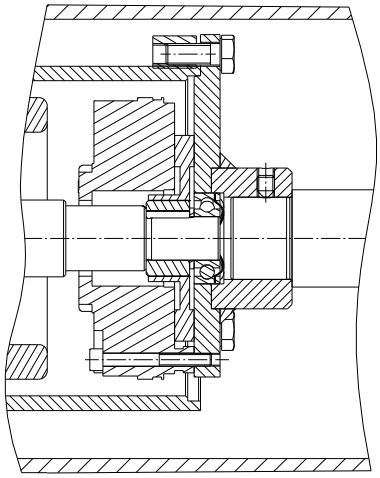
Conveyor drum motors with electromagnetic brake

Conveyor drum motor TM 82 up to 620 with enclosed brake

The integrated spring pressure brake is especially for application in oil environment.

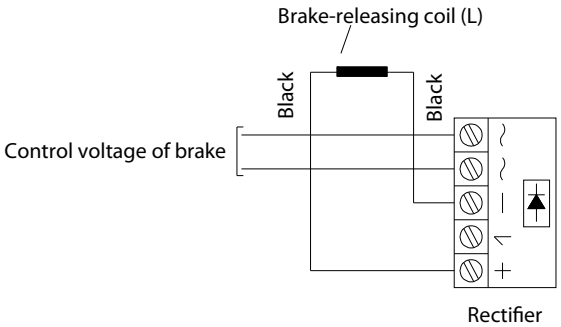
The duty cycle and the braking mass determine the brake size. Due to safety regulations spring pressure brakes are installed, so in case of current failure or disconnection the motor will immediately brake, by spring force. With engagement of the motor the brake will also release. For every motor and brake there is a characteristic connection box available. The brake will be supplied with alternating current. Generally with 230V, 50Hz; The external mounted rectifier supplies the winding of the brake with direct current.



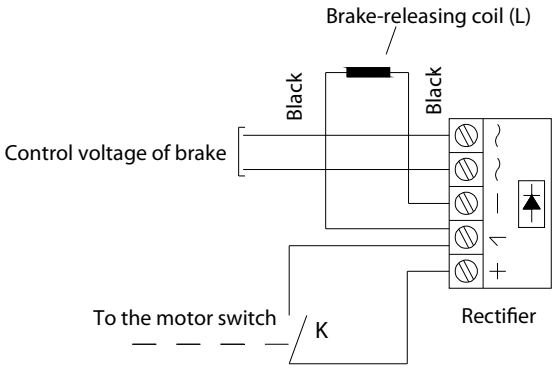


Standard Wiring diagram for brake rectifier

Brake to be switched by AC only!



With contact K: brake is switched both AC and DC!



Internal Backstop

Conveyor drum motors with internal backstop

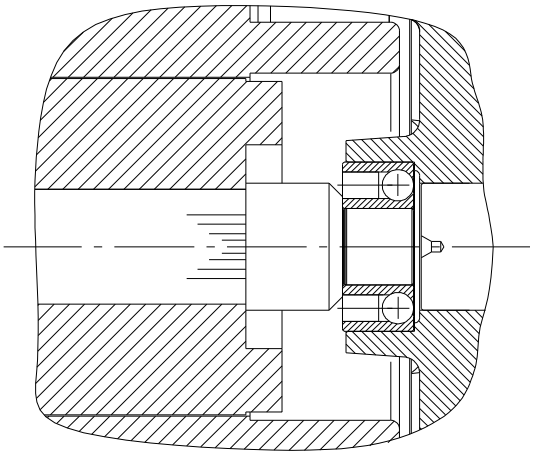
Universal

All LAT® conveyor drum motors can be supplied with internal backstop. The small types with one-way roller bearings or free running backstop and the larger once with centrifugal backstop. This will for incline conveyors prevent the load to roll backward when motor is not operating. The backstop is fully maintenance free.

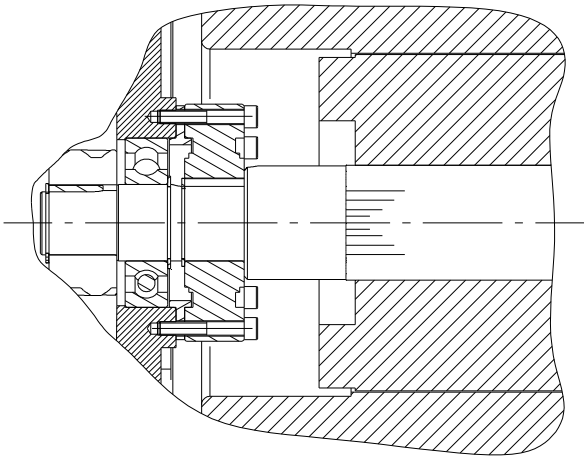
Direction of rotation

An arrow on the endshield indicates the direction of rotation. Do not try to run the motor against backstop!
If motor is not running the proper way disconnect the power ASAP from the motor, so the back stop does not get damaged.
Change two phases to get the proper rotation for the motor and turn on the power to the motor.

Samples of applications



Application for power more than 5.0HP



Application for power more than 7.5HP

Spare Parts List

Pos.	Part description
1	Drum shell
2	End housing
3	End housing
4	Gear box
5	Bearing cover
6	Bearing cover
7	Labyrinth seal
8	V – ring seal
9	Labyrinth seal
10	Pedestal bearing
11	Pedestal bearing
12	Intermediate ring
13	Stator housing
14	Cover for brake
15	Terminal box
16	Terminal box-cover
17	Pinion 1. stage
18	Helical gear 1. stage
19	Pinion shaft 2.stage
20	Helical gear 2.stage
21	Pinion shaft 3. stage
22	Hollow shaft 3. stage
23	Rotor complete
24	Output shaft
25	Connection shaft
27	Connection head
29	Distance ring
31	Distance ring
34	Washer for reverse lock
35	Stator complete
36	Motor endshield
37	Endshield for brake
38	Endshield
42	Rotor complete for brake
43	Rotor complete for reverse lock
47	O-Ring
50	Shaft seal
51	Shaft seal
60	Bearing
61	Bearing
63	Bearing
64	Bearing
65	Bearing

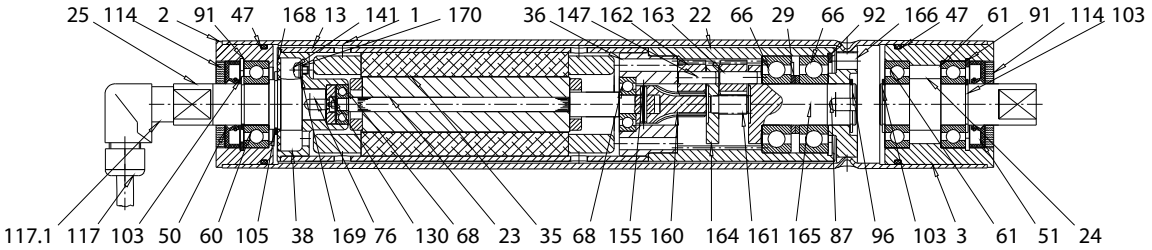
Pos.	Part description
66	Bearing
68	Bearing
71	Bearing
75	Supporting ring
76	Key
77	Key
78	Key
79	Key
80	Key
81	Key
83	Key for brake
85	Key for Backstop
87	Key
90	Circlip
91	Circlip
92	Circlip
93	Circlip
94	Circlip
95	Circlip
96	Circlip
97	Circlip for brake
98	Circlip
99	Circlip
100	Circlip
102	Circlip
103	Circlip
104	Circlip for backstop
105	Circlip
106	Friction disk for brake
107	Driver for brake
108	Brake complete
110	Back stop
111	Terminal board
112	Gasket
113	Gasket
114	Nilos-Ring
115	Bolts for terminal box
116	Cable gland
117	Cable gland
117.1	Reducing nipple
118	Seal for cable
119	Pressure bushing
120	Shim ring for cable seal

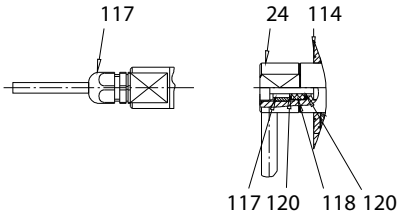
Pos.	Part description
122	Copper shim
123	Copper shim
125	Screw
126	Screw
127	Screw
128	Grub screw
129	Screw
132	Screw
134	Grub screw
135	Screw
136	Screw
138	Grub screw
139	Screw
140	Screw
141	Screw
142	Screw
143	Locking screw
144	Screw
147	Cylindrical pin
150	Grub screw
151	Shim ring
152	Shim ring
153	Grounding plate
154	Adapter sleeve
155	Adapter sleeve
156	Distance ring
159	Gasket
160	Sun gear 1. stage
161	Sun gear 2. stage
162	Planetary gear 1. stage
163	Planetary gear 2. stage
164	Pinion cage 1. stage
165	Pinion cage 1. stage
166	Driving cam
167	Washer
168	Cover disk for cable
169	Snap ring
170	Washer
171	Locking screw
172	Bearing spacer
174	Cover disk stainless steal

In case that you need spare parts it is necessary supply with the motor number. You will find this number on the type plate or/and on the end of one shaft.

Sectional View: TM60 - TM111

TM60.1 / TM80.1

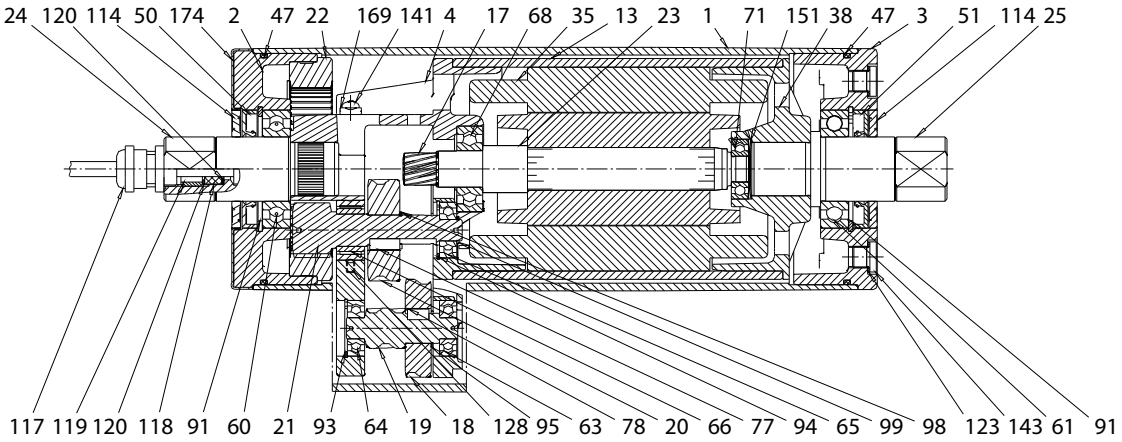


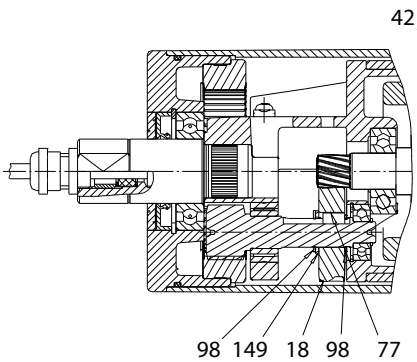


Version D
Cable entry

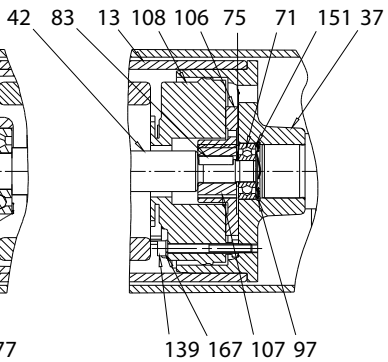
Version C
Cable entry

TM 82.1 - TM111.1

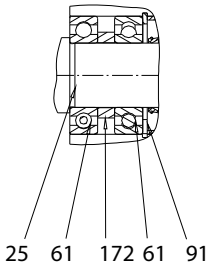




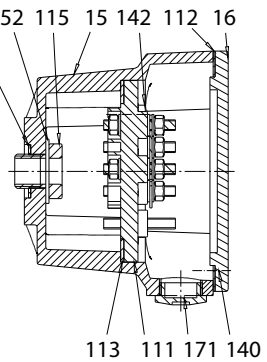
2-stage gear



Internal brake



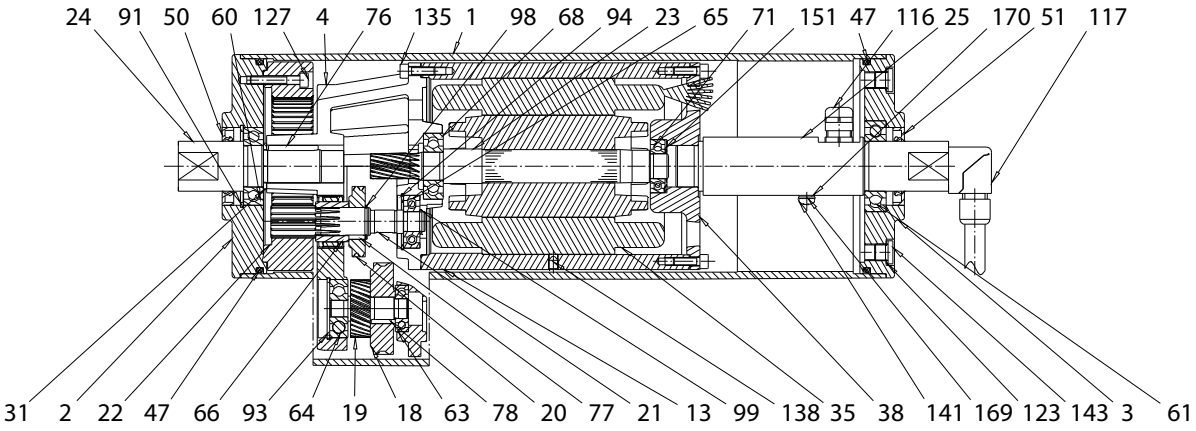
Design with twin-bearing

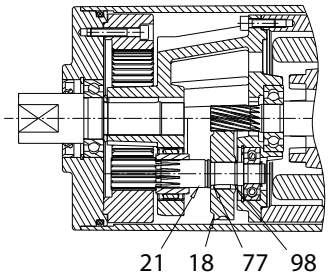


Terminal box

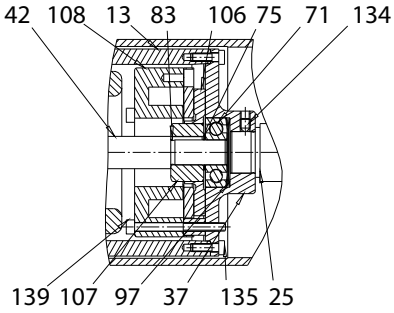
Sectional View: TM135

TM135.1

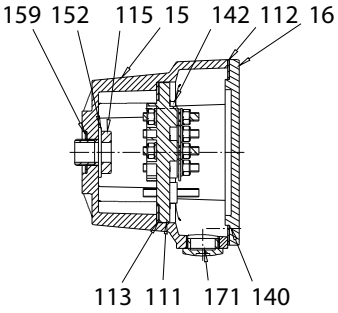




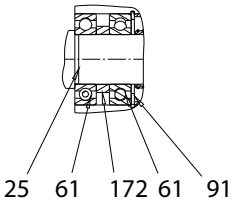
2-stage gear



Internal brake

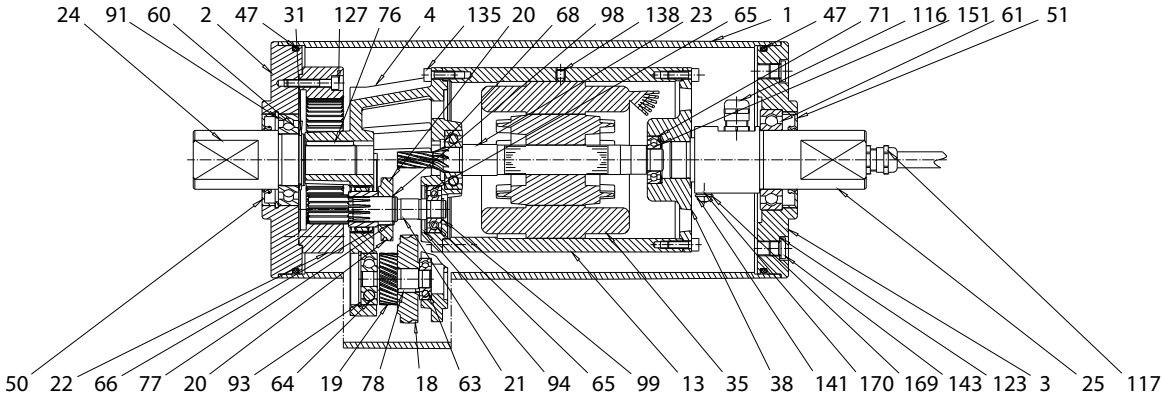


Terminal box

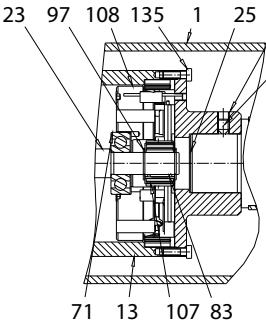


Design with twin-bearing

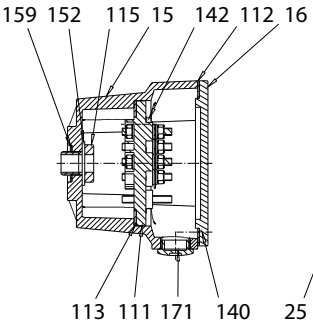
TM160.0



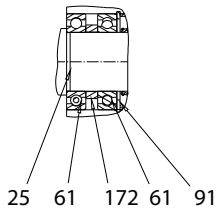
2-stage gear



Internal brake



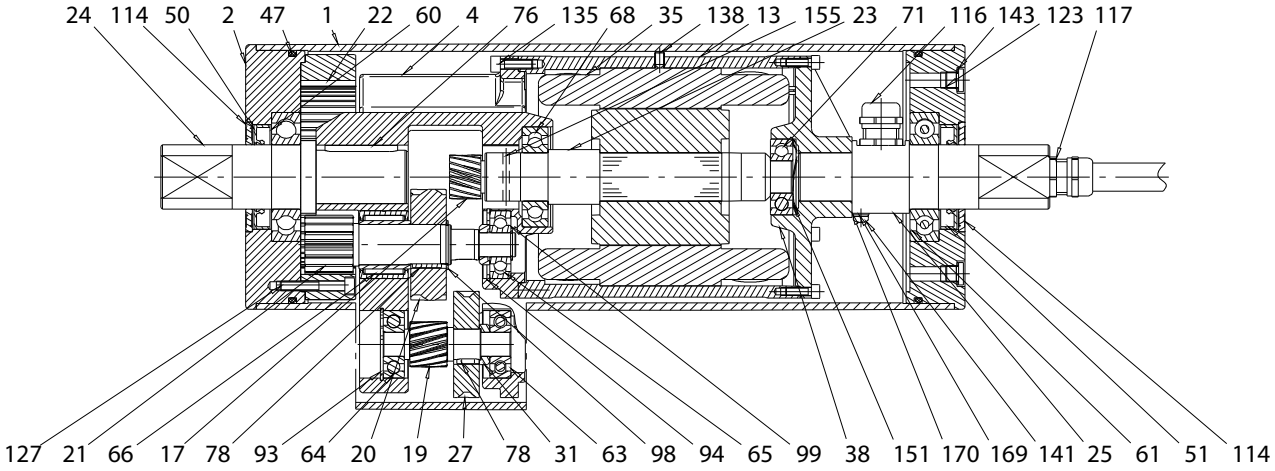
Terminal box

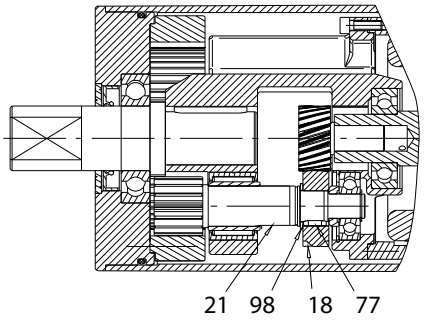


Design with twin-bearing

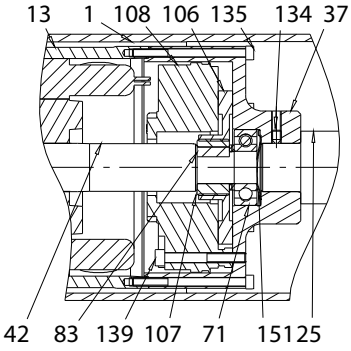
Sectional View: TM165 / TM 216.0

TM165.1 / TM216.0

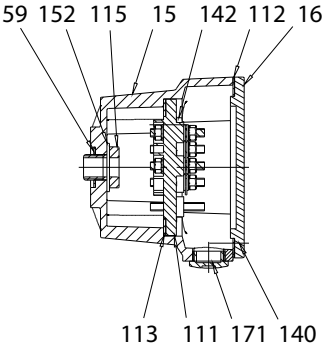




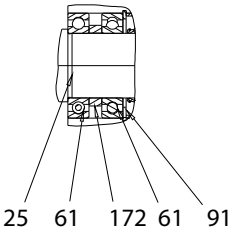
2-stage gear



internal brake



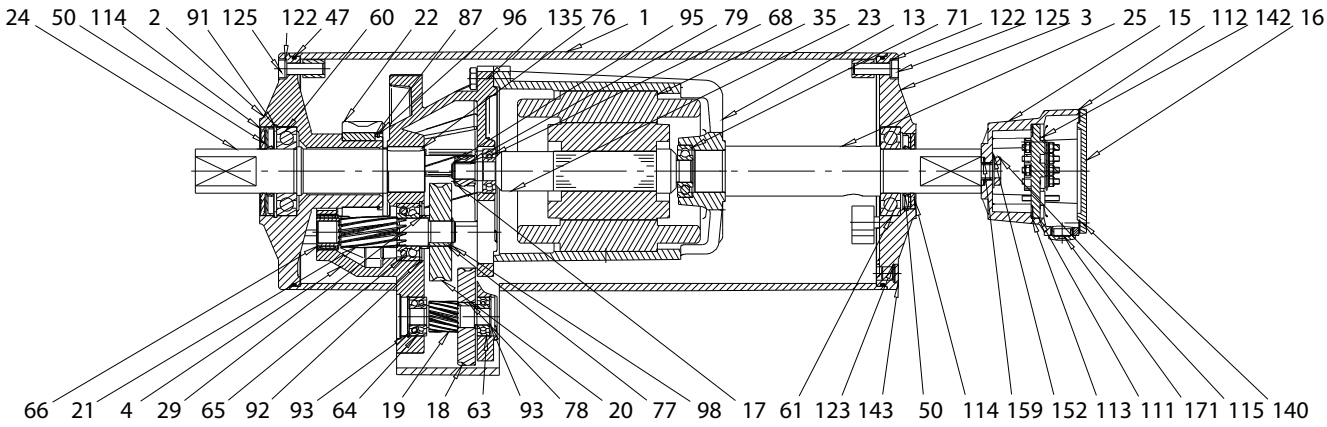
Terminal box

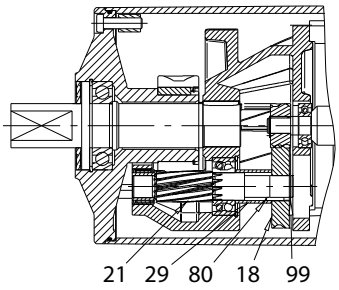


Design with twin-bearing

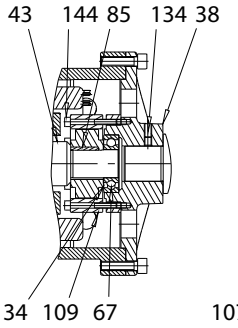
Sectional View: TM216

TM216.1

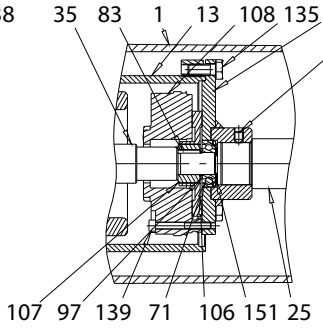




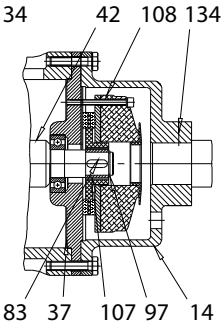
2-stage gear



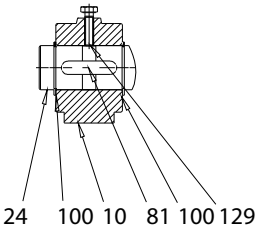
Backstop



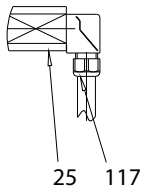
internal brake
(Version 1)



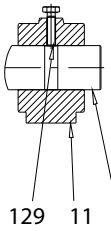
internal brake
(Version 2)



Pedestal bearing



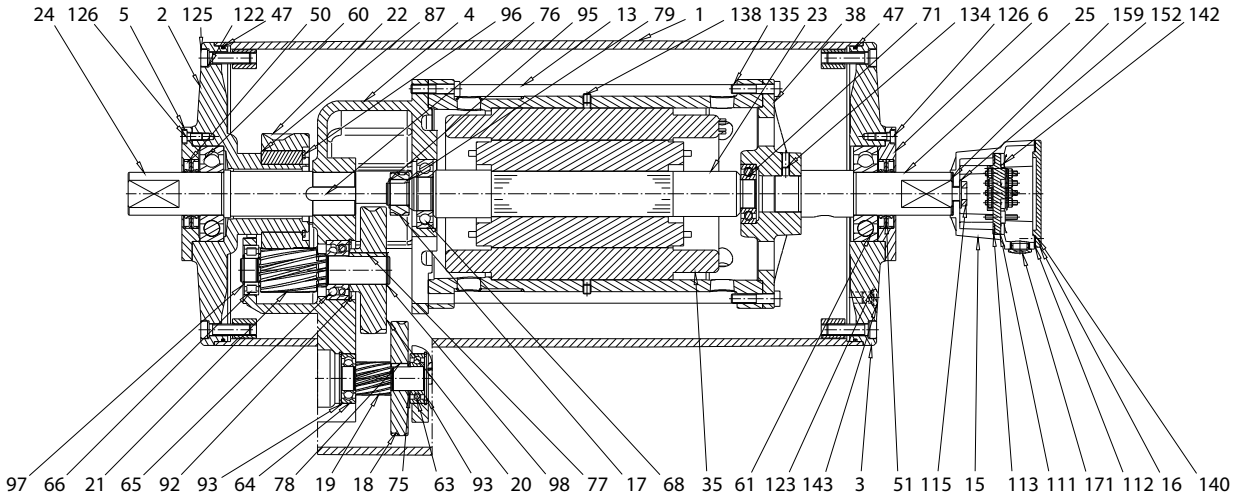
Version B-D
Cable entry

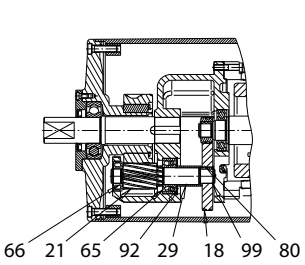


Pedestal bearing

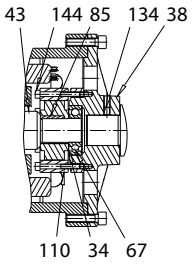
Sectional View: TM321 / TM415.0

TM321.0 / TM321.1 / TM415.0

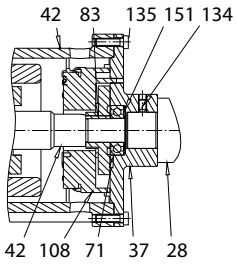




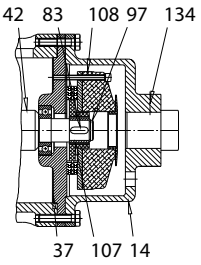
2-stage gear



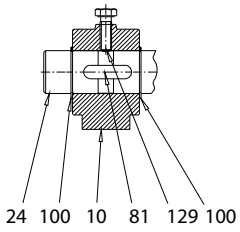
Backstop



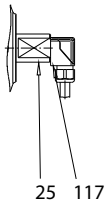
internal brake
(Version 1)



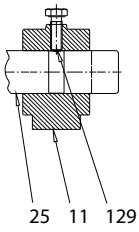
internal brake
(Version 2)



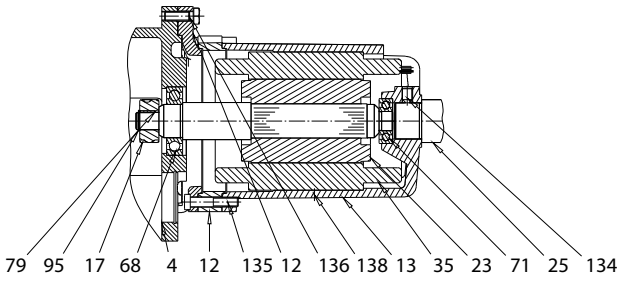
Pedestal bearing



Version B-D
Cable entry



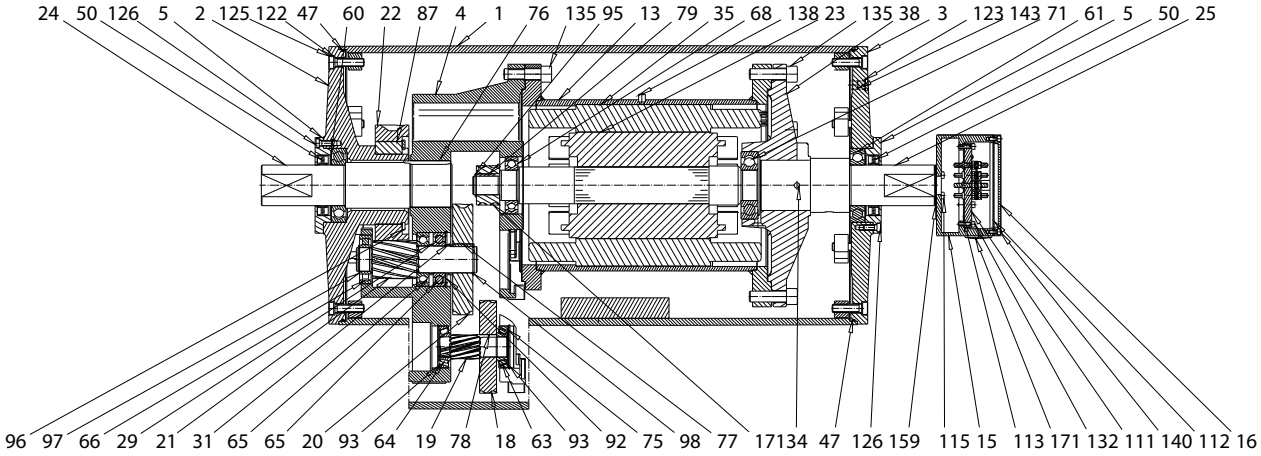
Pedestal bearing

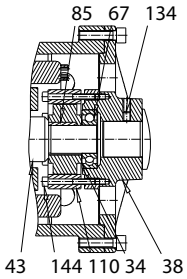


design TM321.0 (TM216 motor)

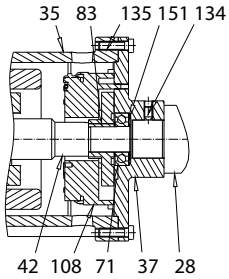
Sectional View: TM415 / TM518.0

TM415.1 / TM518.0

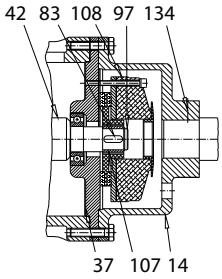




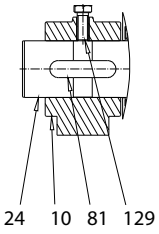
Backstop



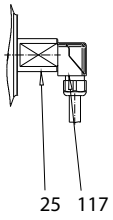
Internal brake
(Version 1)



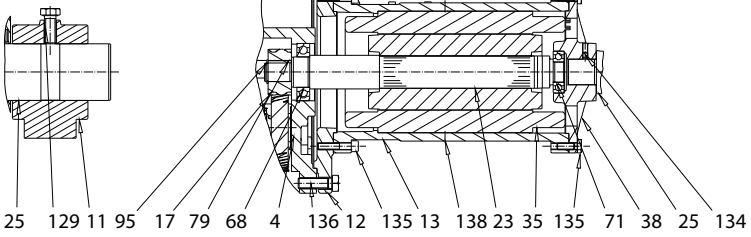
Internal brake
(Version 2)



Pedestal bearing



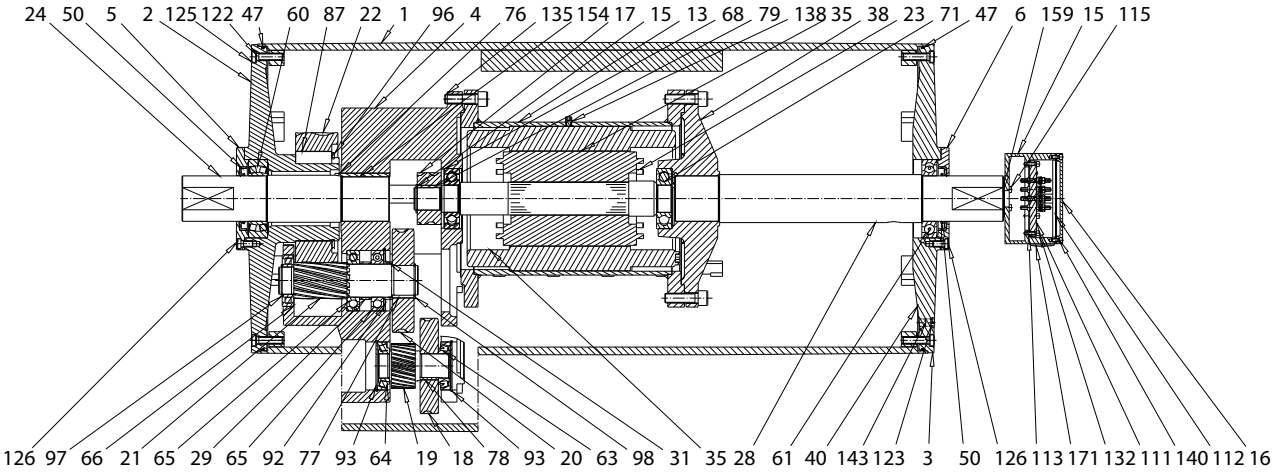
Version B-D
Cable entry

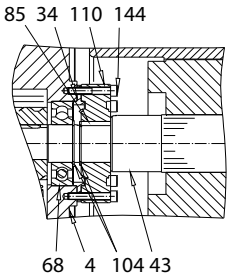


Pedestal bearing

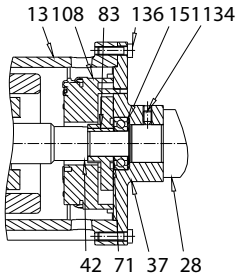
Sectional View: TM518

TM518.1

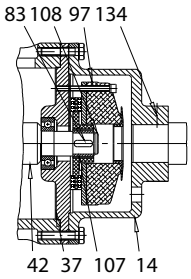




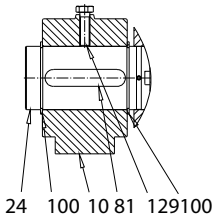
Backstop



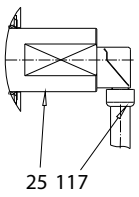
Internal brake
(Version 1)



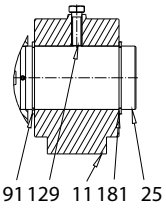
Internal brake
(Version 2)



Pedestal bearing

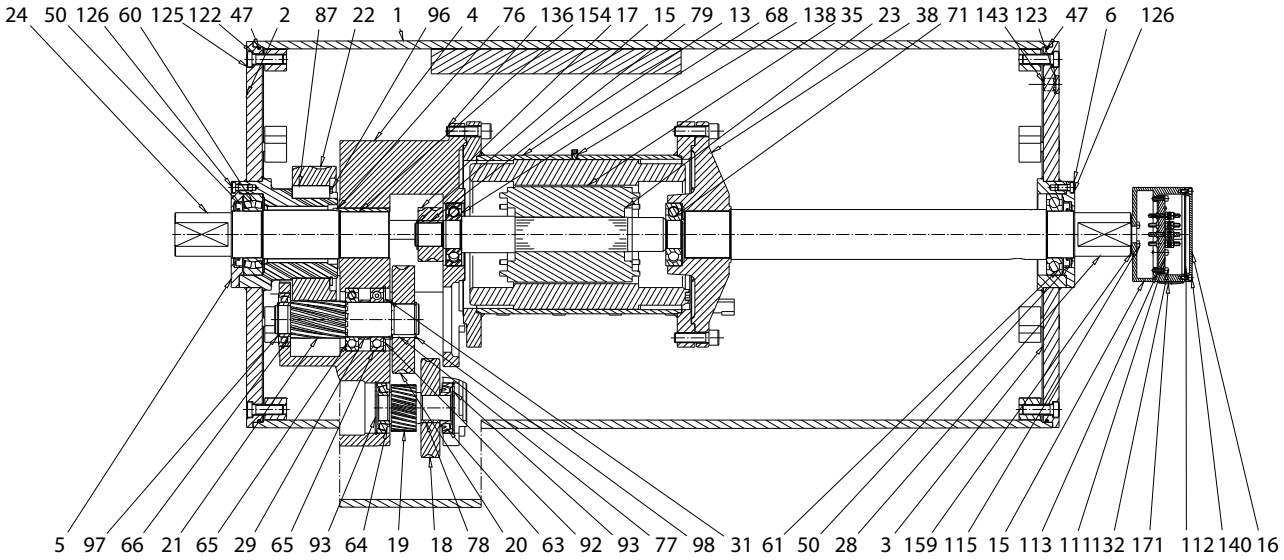


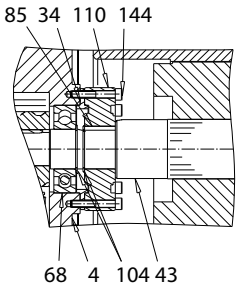
Version B-D
Cable entry



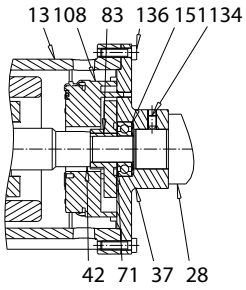
Pedestal bearing

TM620.0

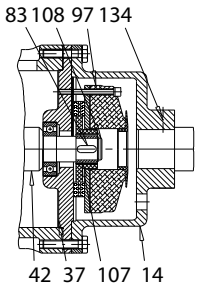




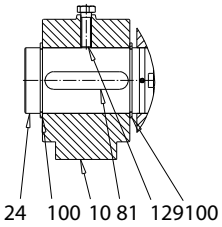
Backstop



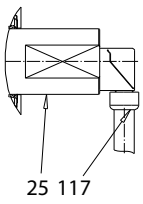
internal brake
(Version 1)



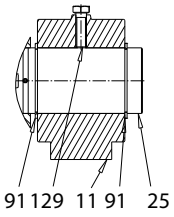
internal brake
(Version 2)



Pedestal bearing



Version B-D
Cable entry



Pedestal bearing

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