

Trommelmotoren / *Drummotors*

TM 500A60



KRAUTER®

ELEKTROMASCHINEN

TYPE TM 500A60	Power kW	Beltspeed m/s at 50 Hz						Min. L mm Design A	Min. L mm Design B	Full load curr. 400 V - 50 Hz I = ... A	Weight kg L=850	
		Beltpull N										
230 Z 230 ZV	22,0	4,40 4750 3,20 6530	3,80 5500 2,70 7740					700	750	39,0	393	
225 Z 225 ZV	18,5	4,40 3990 2,70 6505	3,80 4625	3,20 5490				700	750	32,5	393	
220 Z 220 ZV	15,0	2,70 5275 2,00 7125	2,30 6195 1,60 8905					650	700	26,0	383	
415 415 Z 415 ZV	11,0	4,70 2225 2,20 4750 1,60 6530	3,40 3075 1,90 5500 1,30 8040	2,70 3870				650	700	21,0	383	
410 410 Z 410 ZV	7,5	4,70 1515 1,40 5090 1,00 7125	3,40 2095 1,20 5940 0,80 8905	2,90 2455	2,10 3395	1,60 4455		600	650	14,5	368	
475 475 Z	5,5	4,70 1110 1,00 5225	3,40 1535 0,80 6530	3,20 1635	2,90 1800	2,10 2490	1,60 3265	1,20 4355	600	650	12,0	363
455 455 Z	4,0	4,70 810 1,00 3800	3,40 1120 0,80 4750	3,20 1190	2,90 1310	2,10 1810	1,60 2375	1,20 3165	600	650	9,5	358
655 655 Z 655 ZV	4,0	1,90 2000 0,75 5065 0,55 6910	1,40 2715 0,65 5845						600	650	9,2	363
640 640 Z	3,0	2,10 1355 0,75 3800	1,90 1500 0,65 4385	1,40 2035 0,55 5180	1,10 2590	0,80 3565			600	650	7,0	358
840 840 ZV	3,0	1,60 1780 0,40 7125							600	650	8,7	363
830 830 Z	2,2	1,60 1305 0,50 4180	1,40 1495 0,40 5225	1,00 2090	0,80 2615	0,60 3485			600	650	8,0	358
1230 1230 ZV	2,2	0,70 2985 0,33 6335	0,25 8360						600	650	8,2	368
1220 1220 Z	1,5	1,10 1295 0,38 3750	0,95 1500 0,33 4320	0,70 2035 0,25 5700	0,55 2590	0,40 3565			600	650	5,1	363

Available standard facewidth's: 600 - 650 - 700 - 750 - 800 - 850 - 900 - 950 - 1000 - 1050 - 1100 - 1150 - 1400 - 1600 mm

When an electro-mechanical brake is fitted, the minimum facewidth is increased by 150 mm

When a backstop is fitted in a 2-pole Drummotor, the minimum facewidth is increased by 50 mm

The total weight of a Drummotor grows approx. 19 kg. per 100 mm

Available torque: (Beltpull N x drum diameter m) / 2 Nm

TYPE TM 500A60	Power kW	Beltspeed m/s at 50 Hz Beltpull N	Min. L mm Design A	Min. L mm Design B	Full load curr. 400 V - 50 Hz I = ... A	Weight kg L=650
410/220 410/220 Z	7,5/15,0	2,70/5,40 ²⁶⁴⁰ 2,20/4,40 ₃₂₄₀ 1,90/3,80 1,60/3,20 1,30/2,60 _{3750 4455 5480}	650	700	14,2/28,5	363

Available standard facewidth's: 650 - 700 - 750 - 800 - 850 - 900 - 950 - 1000 - 1050 - 1100 - 1150 - 1400 - 1600 mm

For facewidth's above 1000 mm contact the engineering department for calculation of reinforced shaft

When an electro-mechanical brake is fitted, the minimum facewidth is increased by 150 mm

When a backstop is fitted in a 2-pole Drummotor, the minimum facewidth is increased by 50 mm

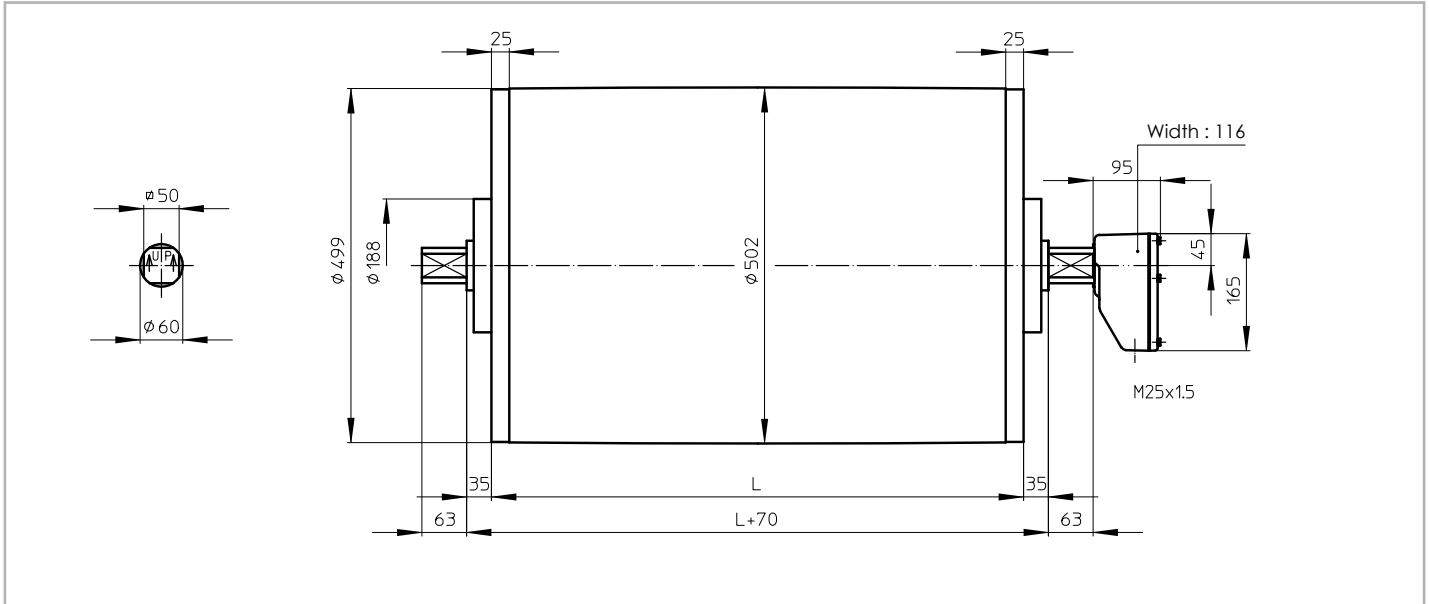
The total weight of a Drummotor grows approx. 19 kg. per 100 mm

Available torque: (Beltpull N x drum diameter m) / 2 Nm

Dimensions Drummotors

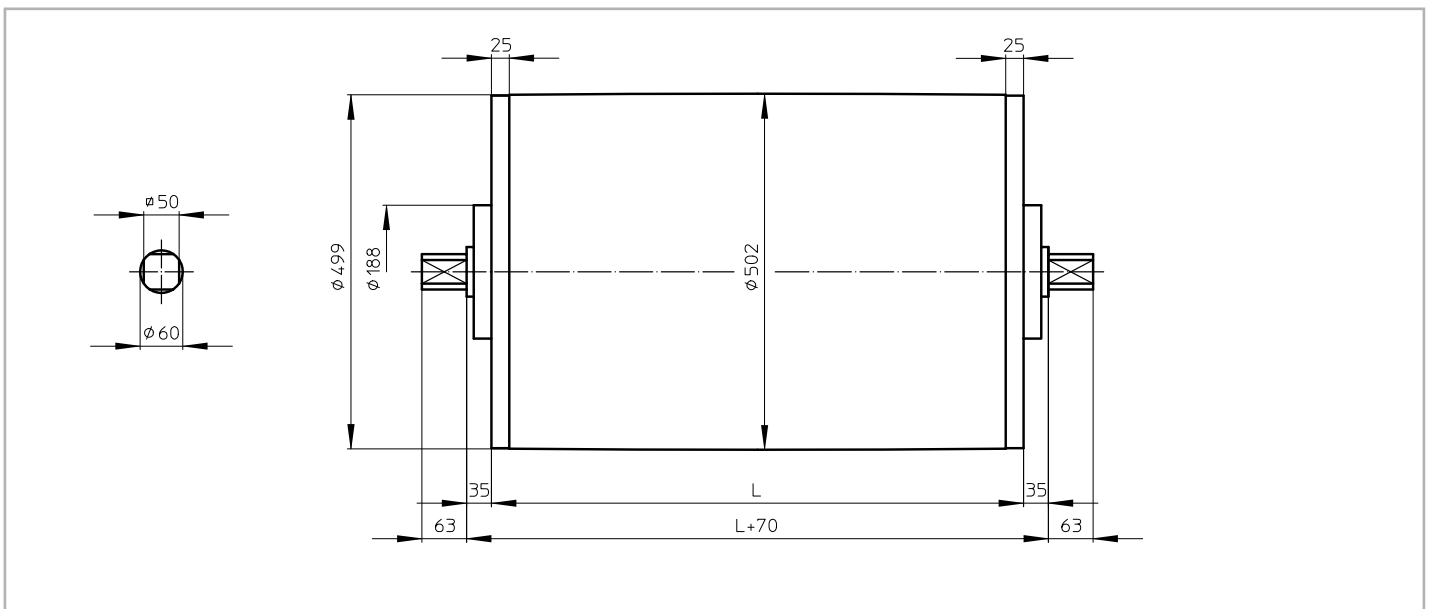
TM 500A60

TM 500A60, mild steel Drummotor with cast iron junctionbox



KT 500A60

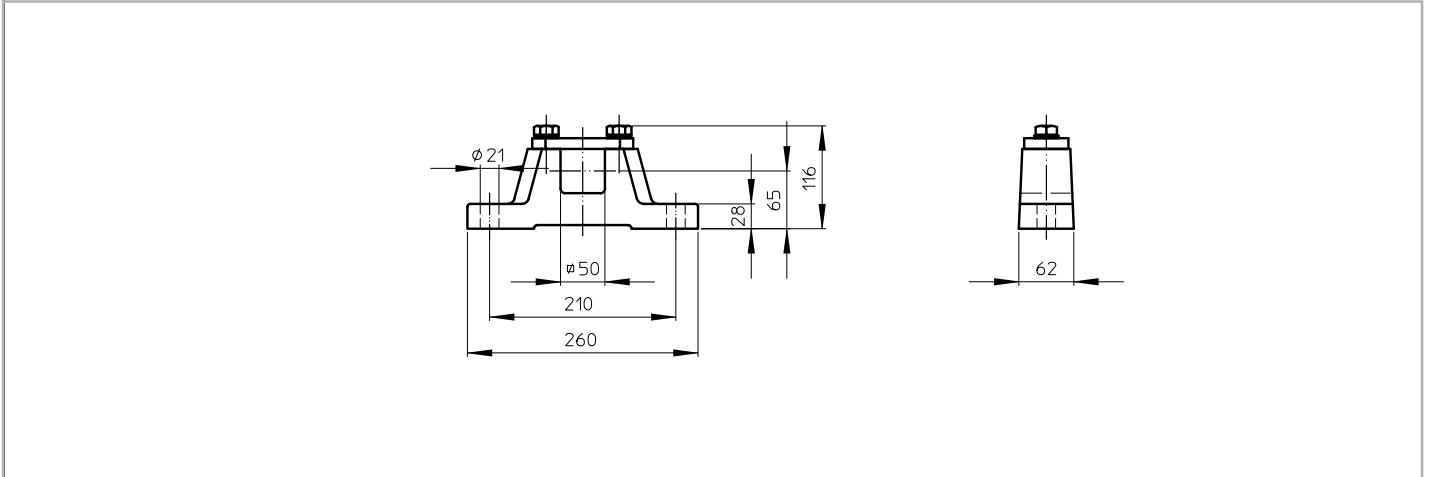
KT 500A60, mild steel Taildrum



Dimensions bracket / Cable exit

AB 60

AB 60, cast iron or stainless steel bracket
Weight: 11,5 kg per pair



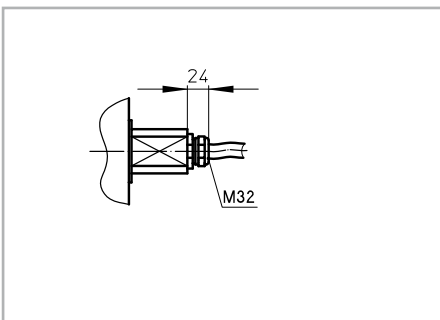
Standard design of a TM 500A60 is with a cast iron junctionbox. For stainless steel design, this can be either a cast iron PU coated or stainless steel junctionbox.

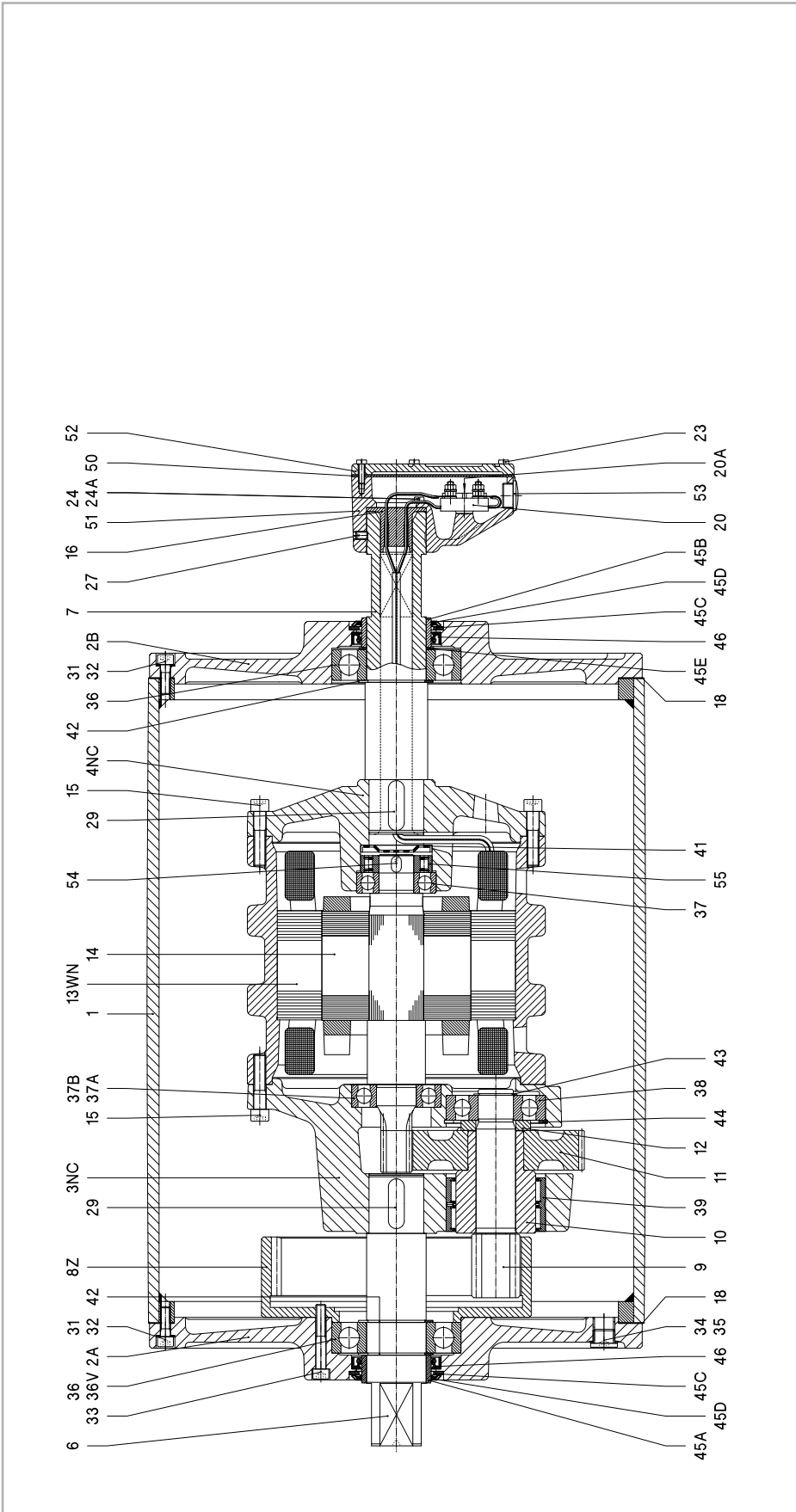
On request a Drummotor can be fitted with a cable. In this case it is important to know the available voltage (preferably 1 voltage), the length of the cable, whether the cable is shielded or not and the type of cable exit.

The available cable exit is shown below.

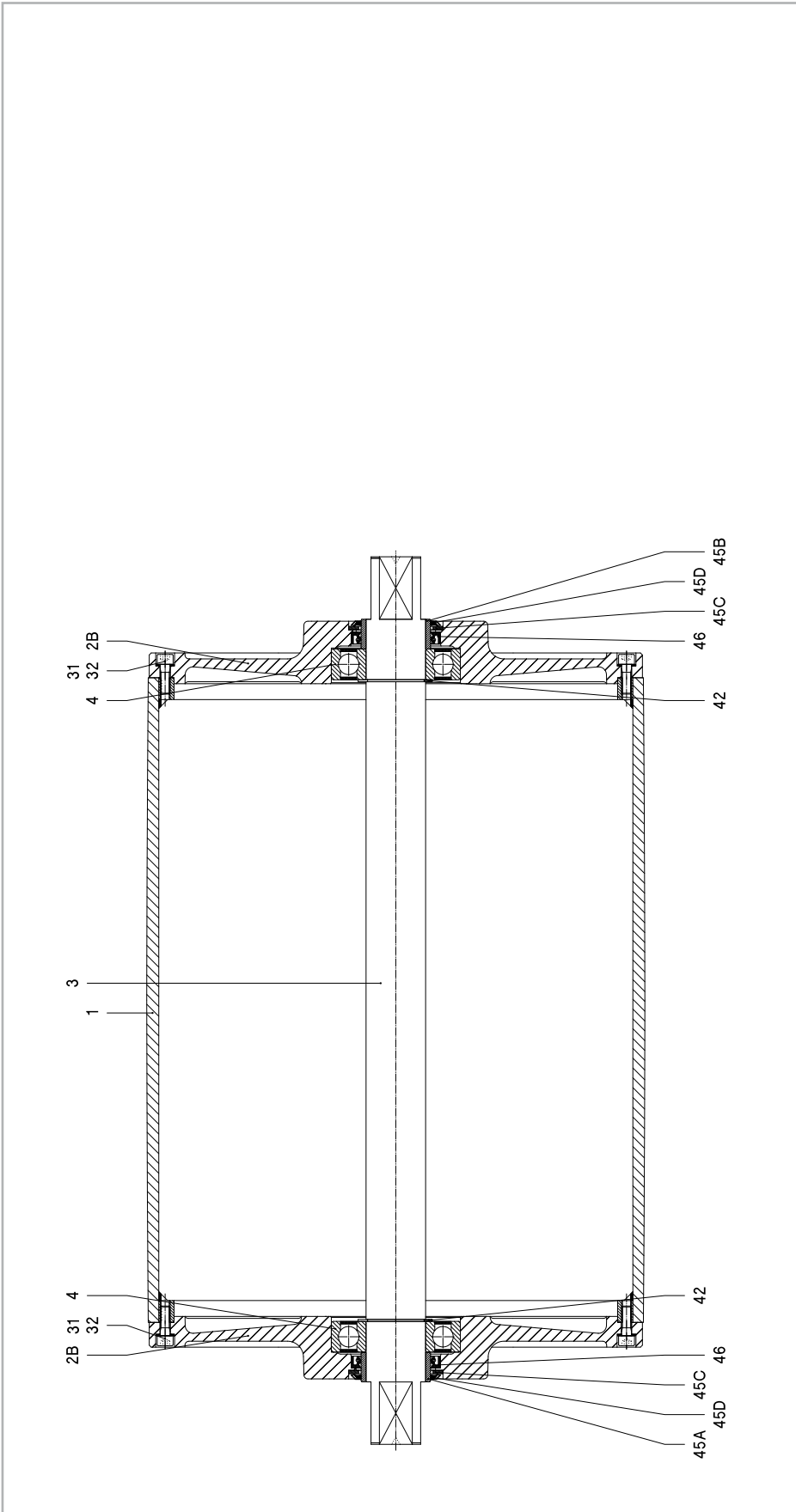
Option 1

Straight cable exit with cable gland





1	Shell	13WN	Stator	29	Key	38	Ballbearing	46	Oilseal
2A	Endflange	14	Rotor	31	Int. hex screw	39	Needlebearing	50	Seal
2B	Endflange	15	Int. hex screw	32	Washer	41	Disc	51	Junctionbox
3NC	Gearhousing	16	Cable passage	33	Int. hex screw	42	Circlip	52	Junctionbox cover
4NC	Motoflange	18	Gasket	34	Fillerplug	43	Circlip	53	Stopping plug
6	Shaftend	20	Terminalboard	35	Washer	44	Circlip	54	Key
7	Hollow shaft	20A	Cyl. head screw	36	Ballbearing	45A	Bearing race	55	Backstop
8Z	Internal gear	23	Cyl. head screw	36V	Cyl. roller bearing	45B	Bearing race	57	Dataplate
9/10	Pinion with bush	24	Cyl. head screw	37	Ballbearing	45C	Shim plated		
11	Gear	24A	Toothed lock washer	37A	Ballbearing	45D	Gammaring		
12	Distance ring	27	Setscrew	37B	Spherical bearing	45E	Shim		



- 1 Shell
- 2B Endflange
- 3 Shaft
- 4 Ballbearing
- 31 Int. hex screw
- 32 Washer
- 42 Circlip
- 45B Bearing race
- 45C Shim plated
- 45D Gammaring
- 46 Oliseal

Material

The external parts of the Drummotor are made from mild steel and cast iron. Depending on the application it is also possible to manufacture in stainless steel (complete or part). You can choose between stainless steel 304 (general food industry) and stainless steel 316 (salt water applications).

Backstop - Brake

If an inclined belt conveyor is stopped fully loaded, it could run backwards.

To prevent this we can install a backstop. One of the bearings in the Drummotor is replaced by a one way bearing. The way this bearing is installed determines the direction of rotation of the drum. TBRH indicates a cw rotation and TBLH ccw.

In situations where a Drummotor needs to be able to drive in both directions it is not possible to use a backstop. In this case we use a brake. When an declined belt or a horizontal belt needs to be stopped quickly to pick or place items a brake is the best solution.

Inclined position

Sometimes a Drummotor needs to be installed on an inclined or even vertical position. This is possible, but we need to make adjustments to the oil level in the drum as the oil will flow to the lower side of the Drummotor causing the top bearing to run without lubrication. To prevent problems we will need to know the installation angle so we can fill the drum with extra oil and fit a double sealed bearing on the upper side.

Thermal protection

A Krauter Drummotor can be fitted with thermal protection. This consists of either a thermistor (PTC) or bi-metal (klixon). We install these on each phase of the electric motor.

Encoder - Sensor bearing

In certain applications it is required to measure the speed or position of a conveyor belt. For this type of application we can install an encoder or sensor bearing to accurately measure rotational speed of the Drummotor.

The accuracy needed will determine the type of encoder or sensor used.

Lagging

The power produced by the Drummotor has to be transferred to the belt and lagging is used to give more friction between the Drummotor and the conveyor belt. Krauter can fit your Drummotor with different kinds of lagging.

There is a difference between cold and hot vulcanised lagging. Cold vulcanised means the lagging is glued to the Drummotor usually in sheet form and the join 'welded' together. Hot vulcanising is a process where the shell is wrapped around with thin layers of rubber. The shell with the rubber is then baked in an autoclave fusing the layers together creating a seamless finish.

It is possible to cut grooves (e.g chevron or diamond) in the lagging.

Sprockets

Do you wish to use a Drummotor to drive modular belts? Krauter can help you! Fitting sprockets suitable for various types of modular belts is a simple solution. The Drummotor is manufactured with a cylindrical shell and machined with a patented 'keying' system. The sprockets are simply 'slid' on and locked securely into position.

Options

Sealings for mild steel Drummotors

RB sealing - IP 66



This is Krauter's standard sealing. This type of sealing will work in most conditions.

RBS sealing - IP 66



This sealing is specifically designed for those applications where high water pressure is used for cleaning.

HD sealing - IP 66



This sealing is designed for abrasive applications, like sand, gravel and soil.

Sealings for stainless steel Drummotors

CR sealing - IP 66



This is our standard sealing for stainless steel Drummotors, a very effective, multi labyrinth sealing.

UW sealing - IP 68



This sealing is suitable for under water applications. The maximum depth is approx 2,5 m.

Options

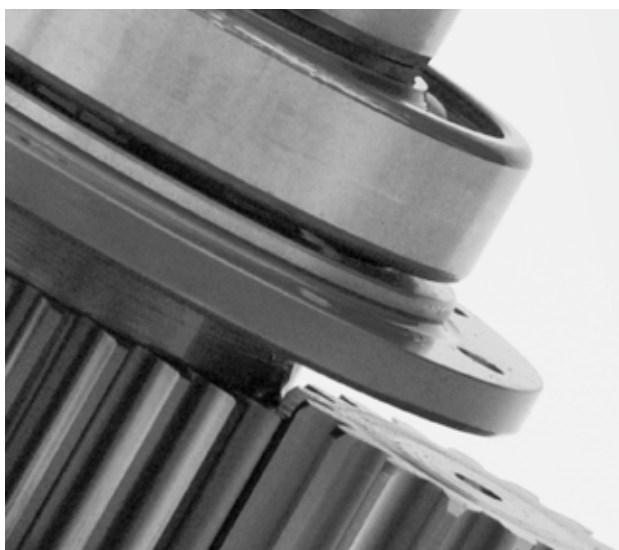
Specification	Standard	Optional
Construction		
Shafts and bolts	Mild steel	Stainless steel
Endflanges	Cast iron	Stainless steel
Shell	Mild steel	Stainless steel
Junctionbox	Cast iron	Cast iron PU coated or stainless steel
Cable		Shielded or non-shielded
Sealing mild steel	RB	RBS, HD
Sealing stainless steel	CR	UW
Shell		
Crowned	•	
Cylindrical		•
Balanced		•
Lagging, cold vulcanised		•
Lagging, hot vulcanised		•
Lagging, FDA approved		•
Fitted with grooves, patterns		•
Sprockets		•
Electro motor		
Three-phase asynchronous	•	
Power supply (P < 3 kW)	230/400 V - 50 Hz	Other voltages and frequencies on request
Power supply (P ≥ 3 kW)	400/690 V - 50 Hz	Other voltages and frequencies on request
Twin drive (double power)		•
Insulation class	F	H
Thermal protection		Bi-metal or thermistor
Run by frequency inverter	•	
Other options		
Food grade oil		•
Backstop, mechanical		•
Brake, electro mechanical		•
Clutch brake, electro mechanical		•
Inclined or vertical position		•
Other facewidth's		•
Different shaft designs		•
Encoder or sensor bearing in Drummotor		•
Encoder or sensor bearing in Taildrum		•
Certificates		
CE	•	
UL		•
CSA		•
ATEX zone 22, dust		•

Our products, an overview

Drum motor type	TM 100B25	TM 113B25	TM 127.25	TM 138.25	TM 160.25	TM 160.30	TM 215.30	TM 215.40
Drum diameter (mm)	100	113	127	138	160	160	215	215
Shaft diameter (mm)	25	25	25	25	25	30	30	40
Power (kW)	0.05-0.37	0.04-0.55	0.10-1.1	0.10-1.1	0.10-0.75	0.10-2.2	0.10-2.2	0.37-5.5
Speed (m/s)	0.007-3.60	0.008-4.40	0.008-2.60	0.009-2.80	0.13-3.30	0.06-4.00	0.08-5.30	0.12-4.70

Drum motor type	TM 215B50	TM 273.40	TM 315.40	TM 315.50	TM 400A50	TM 400.60	TM 500A60	TM 500A75
Drum diameter (mm)	215	273	315	315	400	400	500	500
Shaft diameter (mm)	50	40	40	50	50	60	60	75
Power (kW)	1.5-4.0	0.37-5.5	0.37-5.5	1.1-11	1.1-11	1.5-22	1.5-22	11-30
Speed (m/s)	0.18-0.31	0.17-5.00	0.18-5.20	0.16-4.40	0.20-4.80	0.20-4.60	0.25-4.70	0.80-3.20

Drum motor type	TM 620A75	TM 630A100	TM 800A100	TM 800A130
Drum diameter (mm)	620	630	800	800
Shaft diameter (mm)	75	100	100	130
Power (kW)	11-30	22-55	22-55	55-132
Speed (m/s)	1.00-3.90	1.00-4.00	1.25-5.10	1.60-4.50



Design benefits

- Robust, industrial design
- Fully enclosed
- Oil filled
- Well-sized gears and bearings

Installation advantages

- Easy to install
- Compact and reliable
- Easy to clean
- Virtually maintenance free
- Low Life Cycle Costs



Trommelmotoren / *Drummotors*

TM 500A75



KRAUTER®

ELEKTROMASCHINEN

TYPE TM 500A75	Power kW	Beltspeed m/s at 50 Hz				Min. L mm Design A	Full load curr. 400 V - 50 Hz I = ... A	Weight kg L=850
		3,20 8905	2,50 11400	2,00 14250	1,60 13065			
440 Z	30,0	3,20 8905	2,50 11400	2,00 14250	1,60 13065	950	52,0	600 (L=950)
430 Z	22,0	3,20 6530	2,50 8360	2,00 10450	1,60 13065	850	37,0	500
425 Z	18,5	3,20 5490	2,50 7030	2,00 8790	1,60 10985	850	32,0	490
620 Z	15,0	2,10 6785	1,70 8380	1,30 10960	1,00 14250	850	31,5	500
815 Z	11,0	1,60 6530	1,25 8360	1,00 10450	0,80 13065	850	26,0	500

Available standard facewidth's: 850 - 900 - 950 - 1000 - 1050 - 1100 - 1150 - 1400 - 1600 mm

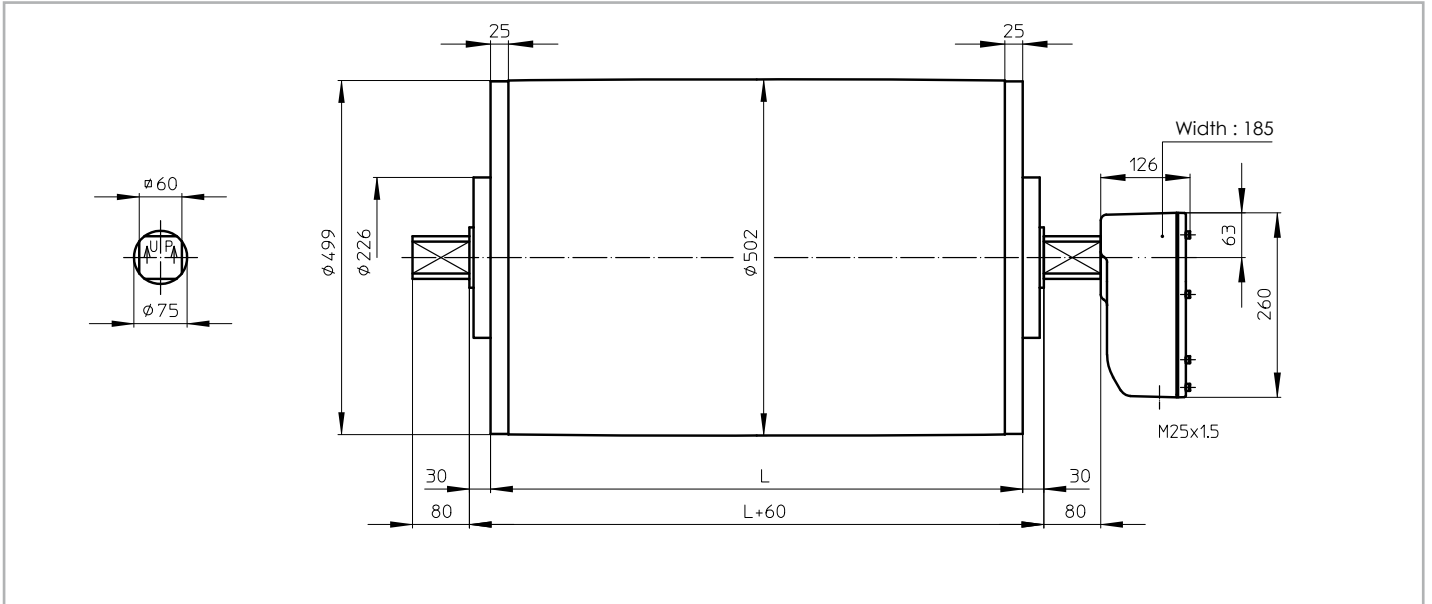
When an electro-mechanical brake is fitted, the minimum facewidth is increased by 150 mm

The total weight of a Drummotor grows approx. 25.7 kg per 100 mm

Available torque: (Beltpull N x drum diameter m) / 2 Nm

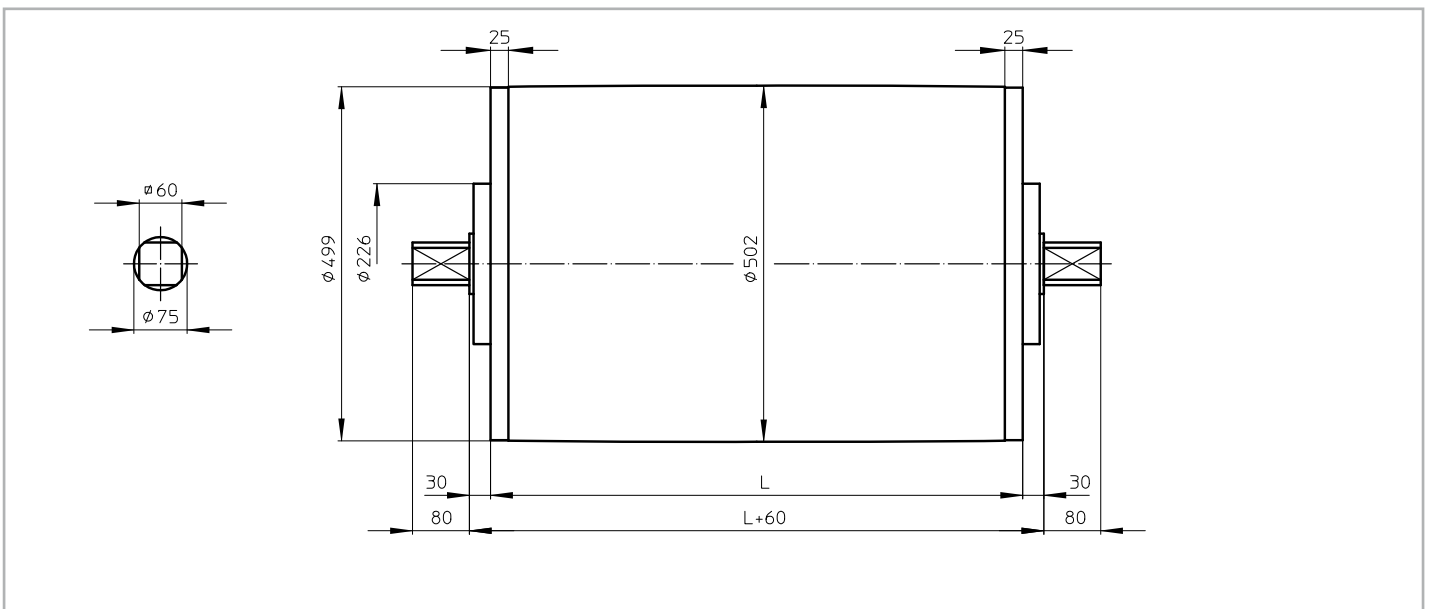
TM 500A75

TM 500A75, mild steel Drummotor with cast iron junctionbox



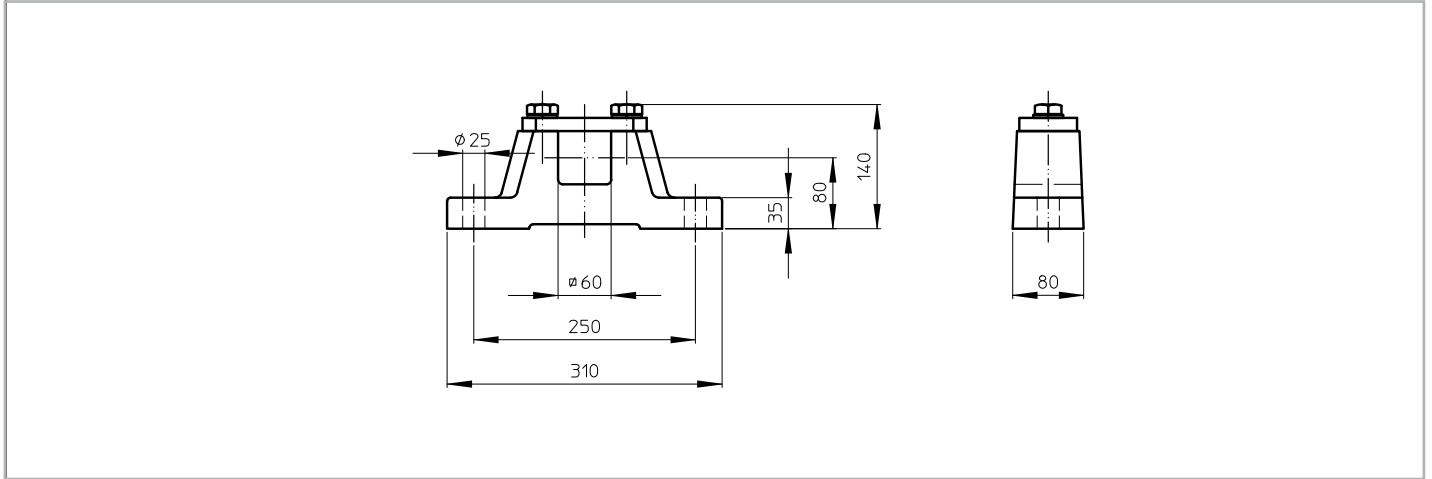
KT 500A75

KT 500A75, mild steel Taildrum



AB 75

AB 75, cast iron or stainless steel bracket
Weight: 22 kg per pair



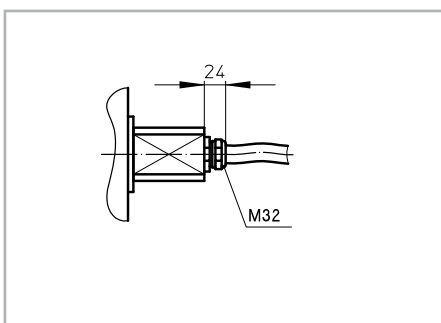
Standard design of a TM 500A75 is with a cast iron junctionbox. For stainless steel design, this can be either a cast iron PU coated or stainless steel junctionbox.

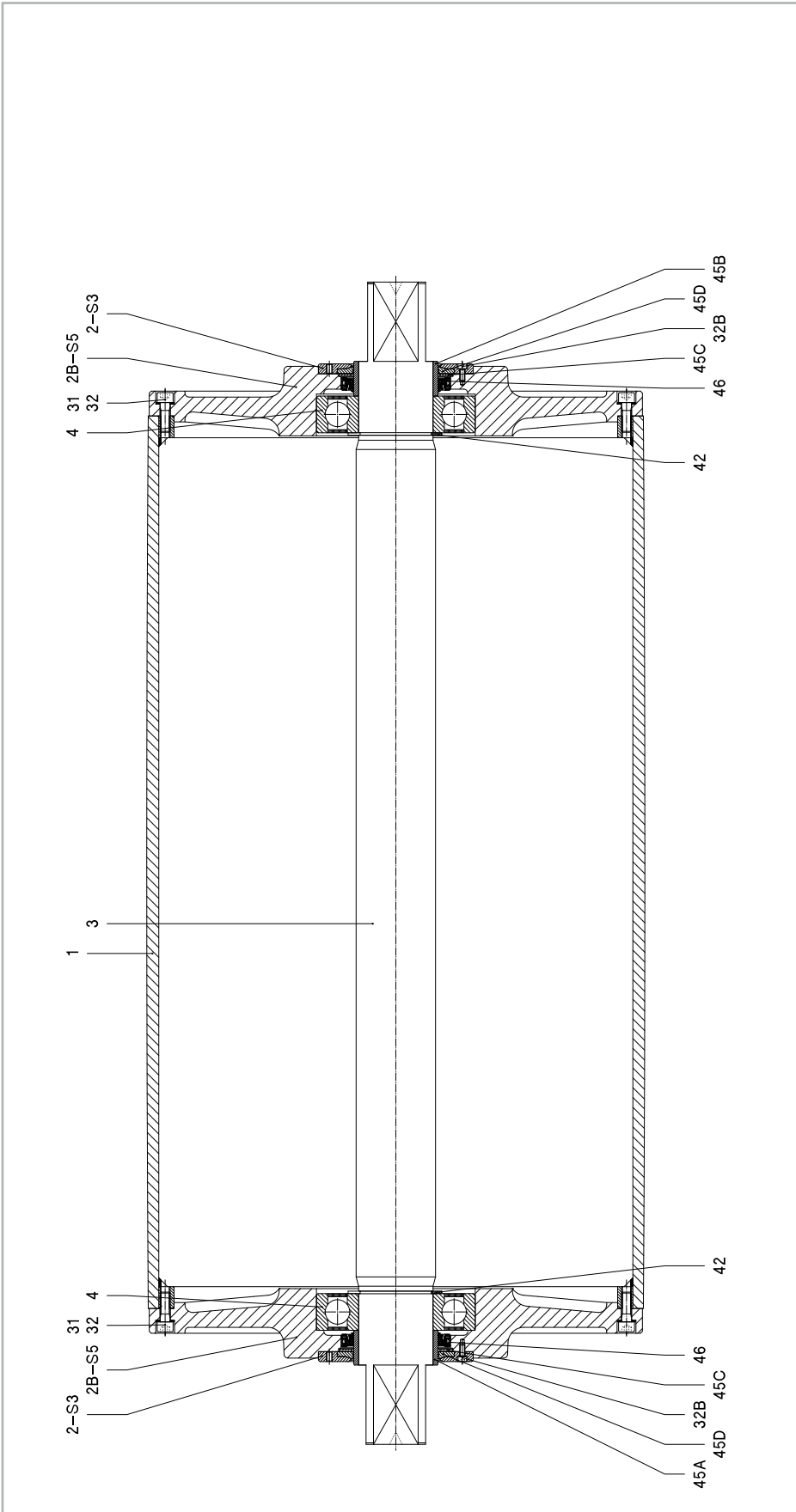
On request a Drummotor can be fitted with a cable. In this case it is important to know the available voltage (preferably 1 voltage), the length of the cable, whether the cable is shielded or not and the type of cable exit.

The available cable exit is shown below.

Option 1

Straight cable exit with cable gland





- | | | | |
|-------|----------------|-----|----------------|
| 1 | Shell | 32B | Int. hex screw |
| 2B-S5 | Endflange | 42 | Circclip |
| 2-S3 | Endplate | 45B | Bearing race |
| 3 | Shaft | 45C | Shim plated |
| 4 | Ballbearing | 45D | Wiper |
| 31 | Int. hex screw | 46 | Cassette seal |
| 32 | Washer | | |

Options

Material

The external parts of the Drummotor are made from mild steel and cast iron. Depending on the application it is also possible to manufacture in stainless steel (complete or part). You can choose between stainless steel 304 (general food industry) and stainless steel 316 (salt water applications).

Backstop - Brake

If an inclined belt conveyor is stopped fully loaded, it could run backwards.

To prevent this we can install a backstop. One of the bearings in the Drummotor is replaced by a one way bearing. The way this bearing is installed determines the direction of rotation of the drum. TBRH indicates a cw rotation and TBLH ccw.

In situations where a Drummotor needs to be able to drive in both directions it is not possible to use a backstop. In this case we use a brake. When an declined belt or a horizontal belt needs to be stopped quickly to pick or place items a brake is the best solution.

Inclined position

Sometimes a Drummotor needs to be installed on an inclined or even vertical position. This is possible, but we need to make adjustments to the oil level in the drum as the oil will flow to the lower side of the Drummotor causing the top bearing to run without lubrication. To prevent problems we will need to know the installation angle so we can fill the drum with extra oil and fit a double sealed bearing on the upper side.

Thermal protection

A Krauter Drummotor can be fitted with thermal protection. This consists of either a thermistor (PTC) or bi-metal (klixon). We install these on each phase of the electric motor.

Encoder - Sensor bearing

In certain applications it is required to measure the speed or position of a conveyor belt. For this type of application we can install an encoder or sensor bearing to accurately measure rotational speed of the Drummotor.

The accuracy needed will determine the type of encoder or sensor used.

Lagging

The power produced by the Drummotor has to be transferred to the belt and lagging is used to give more friction between the Drummotor and the conveyor belt. Krauter can fit your Drummotor with different kinds of lagging.

There is a difference between cold and hot vulcanised lagging. Cold vulcanised means the lagging is glued to the Drummotor usually in sheet form and the join 'welded' together. Hot vulcanising is a process where the shell is wrapped around with thin layers of rubber. The shell with the rubber is then baked in an autoclave fusing the layers together creating a seamless finish.

It is possible to cut grooves (e.g chevron or diamond) in the lagging.

Sprockets

Do you wish to use a Drummotor to drive modular belts? Krauter can help you! Fitting sprockets suitable for various types of modular belts is a simple solution. The Drummotor is manufactured with a cylindrical shell and machined with a patented 'keying' system. The sprockets are simply 'slid' on and locked securely into position.

Options

Sealings for mild steel Drummotors

RB sealing - IP 66



This is Krauter's standard sealing. This type of sealing will work in most conditions.

RBS sealing - IP 66



This sealing is specifically designed for those applications where high water pressure is used for cleaning.

HD sealing - IP 66

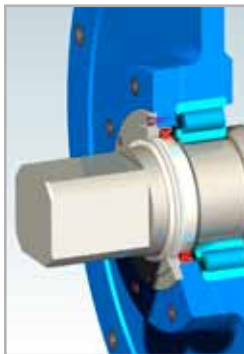


This sealing is designed for abrasive applications, like sand, gravel and soil.

HDW sealing - IP 66



HDLR sealing - IP 66



These sealings are designed for extreme abrasive conditions. Choice of seal depends on the material to be conveyed.

Sealings for stainless steel Drummotors

CR sealing - IP 66



This is our standard sealing for stainless steel Drummotors, a very effective, multi labyrinth sealing.

UW sealing - IP 68



This sealing is suitable for under water applications. The maximum depth is approx 2,5 m.

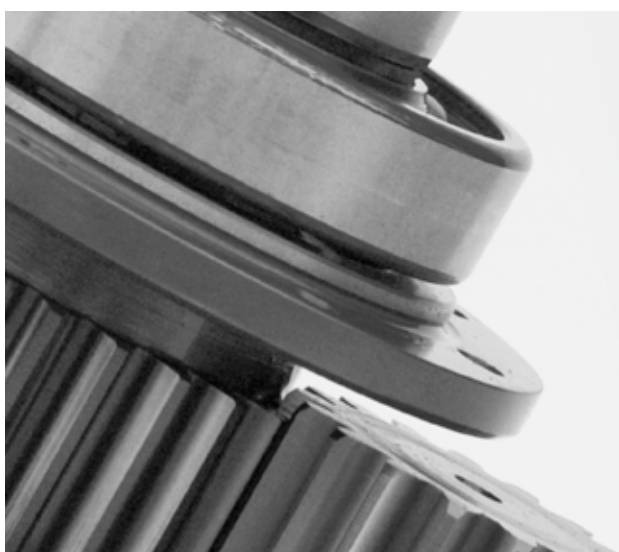
Specification	Standard	Optional
Construction		
Shafts and bolts	Mild steel	Stainless steel
Endflanges	Cast iron	Stainless steel
Shell	Mild steel	Stainless steel
Junctionbox	Cast iron	Cast iron PU coated or stainless steel
Cable		Shielded or non-shielded
Sealing mild steel	RB, HDW, HDLR	RBS, HD
Sealing stainless steel	CR	UW
Shell		
Crowned	•	
Cylindrical		•
Balanced		•
Lagging, cold vulcanised		•
Lagging, hot vulcanised		•
Lagging, FDA approved		•
Fitted with grooves, patterns		•
Sprockets		•
Electro motor		
Three-phase asynchronous	•	
Power supply	400/690 V - 50 Hz	Other voltages and frequencies on request
Twin drive (double power)		•
Insulation class	F	H
Thermal protection		Bi-metal or thermistor
Run by frequency inverter	•	
Other options		
Food grade oil		•
Backstop, mechanical		•
Brake, electro mechanical		•
Clutch brake, electro mechanical		•
Inclined or vertical position		•
Other facewidth's		•
Different shaft designs		•
Encoder or sensor bearing in Drummotor		•
Encoder or sensor bearing in Taildrum		•
Certificates		
CE	•	
UL		•
CSA		•
ATEX zone 22, dust		•

Our products, an overview

Drum motor type	TM 100B25	TM 113B25	TM 127.25	TM 138.25	TM 160.25	TM 160.30	TM 215.30	TM 215.40
Drum diameter (mm)	100	113	127	138	160	160	215	215
Shaft diameter (mm)	25	25	25	25	25	30	30	40
Power (kW)	0.05-0.37	0.04-0.55	0.10-1.1	0.10-1.1	0.10-0.75	0.10-2.2	0.10-2.2	0.37-5.5
Speed (m/s)	0.007-3.60	0.008-4.40	0.008-2.60	0.009-2.80	0.13-3.30	0.06-4.00	0.08-5.30	0.12-4.70

Drum motor type	TM 215B50	TM 273.40	TM 315.40	TM 315.50	TM 400A50	TM 400.60	TM 500A60	TM 500A75
Drum diameter (mm)	215	273	315	315	400	400	500	500
Shaft diameter (mm)	50	40	40	50	50	60	60	75
Power (kW)	1.5-4.0	0.37-5.5	0.37-5.5	1.1-11	1.1-11	1.5-22	1.5-22	11-30
Speed (m/s)	0.18-0.31	0.17-5.00	0.18-5.20	0.16-4.40	0.20-4.80	0.20-4.60	0.25-4.70	0.80-3.20

Drum motor type	TM 620A75	TM 630A100	TM 800A100	TM 800A130
Drum diameter (mm)	620	630	800	800
Shaft diameter (mm)	75	100	100	130
Power (kW)	11-30	22-55	22-55	55-132
Speed (m/s)	1.00-3.90	1.00-4.00	1.25-5.10	1.60-4.50



Design benefits

- Robust, industrial design
- Fully enclosed
- Oil filled
- Well-sized gears and bearings

Installation advantages

- Easy to install
- Compact and reliable
- Easy to clean
- Virtually maintenance free
- Low Life Cycle Costs



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