

Procon
Trommelmotoren

Technical data

Drum Motor PT 138 X2

Catalogue in brief:

- * Power and speed
- * Dimensions
- * Electrical connections
- * General description
- * Matching tail drum



Power P	Revolutions n	poles p	Current 400 V/50 Hz	Belt speed v	Belt pull F	Torque T
Watt	min ⁻¹		A	m/s	N	Nm
370	1290	4	1,35	0,125	2960	204,2
440	1290	4	1,56	0,160	2750	189,8
550	1290	4	1,7	0,200	2750	189,8
				0,250	2200	151,8
				0,320	1719	118,6
				0,400	1375	94,9
				0,500	1100	75,9
				0,630	873	60,2
				0,800	688	47,5
				1,000	550	38,0
550	2810	2	1,8	0,250	2200	151,8
750	2810	2	2,1	0,320	2344	161,7
				0,400	1875	129,4
				0,500	1500	103,5
				0,630	1190	82,1
				0,800	938	64,7
				1,000	750	51,8
				1,250	600	41,4
				1,600	469	32,4
			2,000	375	25,9	

(Belt speeds are at 50 Hz.)

Series Alpha

Drum motors from **Series Alpha** are used in belt conveyors where the belt is in direct contact with the drum and covers it for at least $\frac{3}{4}$ of its length. The heat, generated inside the drum motor, is dissipated by the belt. The power-ratings (net output) of the **Series Alpha** Drum motors, listed in the table above, are optimized for these applications where an optimal heat dissipation is practice.

If heat dissipation is limited, a Drum motor from **Series Beta** is to be used.

For example when a lagging is applied to the drum or if sprockets are fitted. Also when powering a rotating brush and in various other applications where the belt doesn't touch the drum, as well as in cyclic mode, a motor from **Series Beta** is the right choice.

Drum motor PT 138 X2 Beta

Power and speed



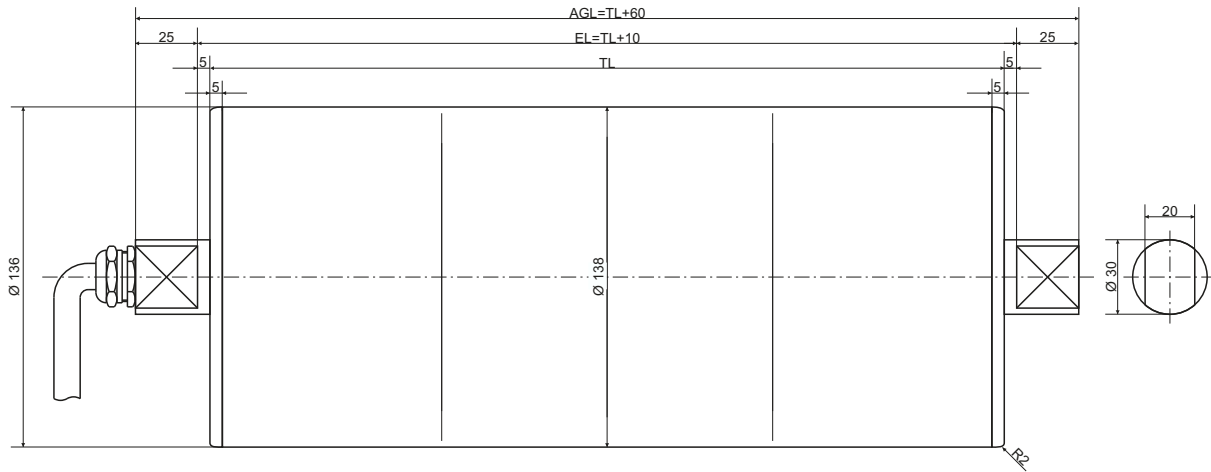
Power P	Revolutions n	Poles p	Current 400 V/50 Hz	Belt speed v	Belt pull F	Torque T
Watt	min ⁻¹		A	m/s	N	Nm
370	1290	4	1,35	0,125	2960	204,2
440	1290	4	1,56	0,160	2750	189,8
				0,200	2200	151,8
				0,250	1760	121,4
				0,320	1375	94,9
				0,400	1100	75,9
				0,500	880	60,7
				0,630	698	48,2
				0,800	550	38,0
				1,000	440	30,4
				550	2810	2
750	2810	2	2,1	0,320	2344	161,7
				0,400	1875	129,4
				0,500	1500	103,5
				0,630	1190	82,1
				0,800	938	64,7
				1,000	750	51,8
				1,250	600	41,4
				1,600	469	32,4
				2,000	375	25,9

(Belt speeds are at 50 Hz.)

Series Beta

The power ratings (net output, see table above) of drum motors from **Series Beta** are optimized for applications where heat dissipation is limited. For example when a lagging is applied to the drum or if the belt isn't in contact with the drum. This is the case when driving hinged conveyor belts or positive drive belts with sprockets. Drum motors from **Series Beta** are also used in cyclic mode and reverser operation as well as in places with an elevated ambient temperature.

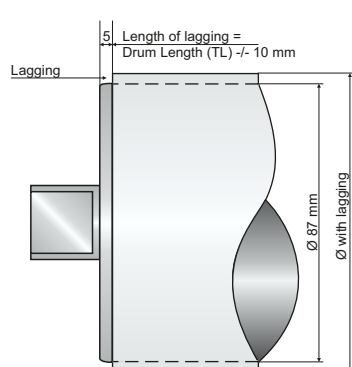
Drum motors from **Series Beta** can always be used in normal belt conveyors.



Standard length (TL mm)	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
Weight (1) (in kg)	23,3	24,2	25,1	26,0	26,9	27,8	28,7	29,6	30,5	31,4	32,3	33,2	34,1	35,0
Weight (2) (in kg)	25,3	26,2	27,1	28,0	28,9	29,8	30,7	31,6	32,5	33,4	34,3	35,2	36,1	37,0

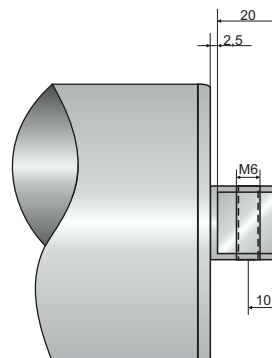
(1) Weight: Drum steel, flanges aluminum

(2) Weight: Drum and flanges Stainless Steel



Lagging (Optional)

To increase friction between the drum and the belt, a rubber lagging can be applied to the drum. Many sorts are available, depending on the application a choice can be made. By lagging the drum, the diameter increases, which effects the belt speed.



Threaded hole in the shaft (Optional)

To adjust the running of the belt, a threaded hole can be made in the shaft on the opposite side of electrical connection. Matching supports are available, see chapter 2 of the catalogue.



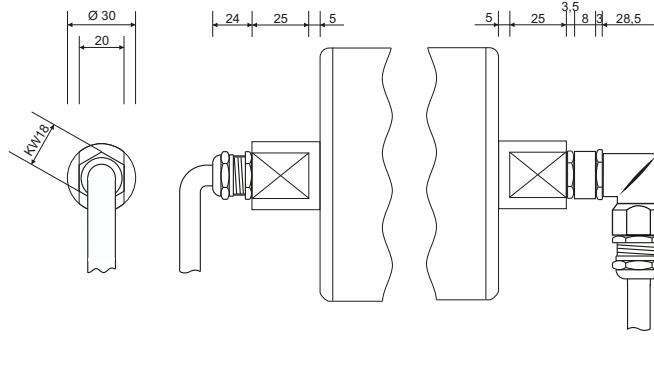
Drum motor PT 138 X2 Alpha and Beta

Electrical connection



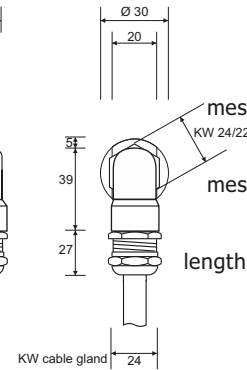
Type 1 EMC

Cable gland
messing-nickel plated
M16 x 1,5
Kabel Ø 10 mm
Length 1,5 m (standard)



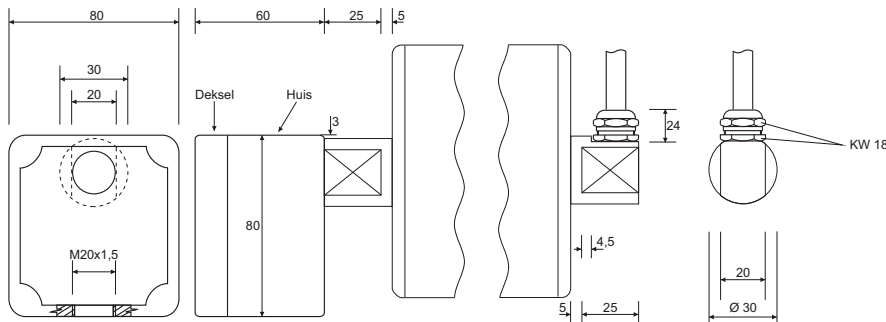
Type 2 EMC

Reducer M16/M20
messing-nickel plated
Elbow connector
zinc plated
M20 x 1,5
Counter nut
messing-nickel plated
M20 x 1,5
Cable gland
messing-nickel plated
M20 x 1,5
Cable Ø 10 mm
length 1,5 m (standard)



Type 4 Aluminum

Junction box
aluminum
powdercoating
green - RAL 5021.

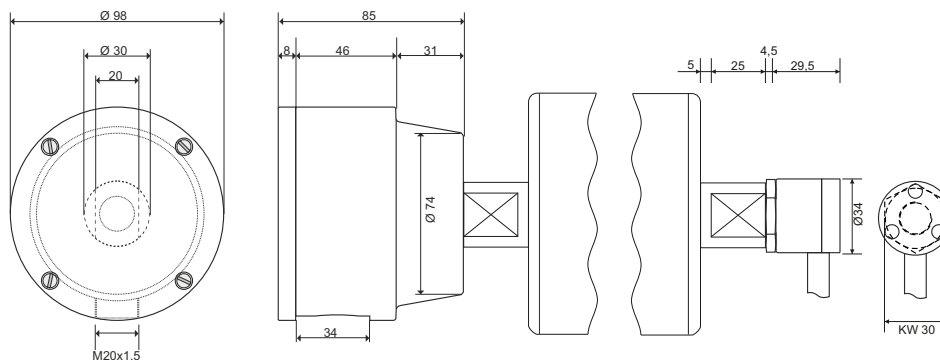


Type 3 EMC

Cable gland
messing-nickel plated
M16 x 1,5
Cable Ø 10 mm
Length 1,5 m (standard)

Type 4 Poly

Junction box
concentric design
PE 1000, white



Type 5 Angular Cable exit, robust, St. St.

Angular cable exit Stainless Steel
Diameter 34 mm
Counter nut St.St. M16 x 1,5
Cable Ø 10 mm
Length 1,5 m (standard)

Drum motor PT 138 X

General description



The latest X-Series

The youngest generation Procon Drum Motors house a -for drum motors- unique transmission- and sealing concept. The new seal offers a reliable and durable protection against leakage.

Because of the revolutionary design of the transmission, an optimal lubrication is guaranteed, even if placed other than horizontal. This offers many new possibilities for application.

All Procon Drum motors are maintenance free.

Standard execution drum motor PT 113 X

- Drum shell Ø 138 mm, steel, crowned
- Shortest length (TL) 370 mm
- Flanges aluminum, shafts Stainless Steel
- Enclosure IP 66
- Electrical connection type 1 EMC met 1,5 m. screened cable
- Thermal protection (bi-metal)
- connection to 230/400 V - 50 Hz - 3 phase
- Steel gears, hardened and machine-cut
- full synthetic, high performance lubricant (grease), maintenance free.

Stainless Steel

Procon drum motors are also available in stainless steel (shafts, flanges and shell) with the same lead time. Crowned shells as well as cylindrical ones.

Type 1, 3 and 5 electrical connections are also available in stainless steel.

Lagging

The drum may be rubber coated to increase friction. Mostly a 4 mm white, oil & fat resistant lagging is used.

If required one or more tracking grooves can be made in the lagging.

Also special laggings are available such as hot-vulcanised Polyurethane- and Nitrile rubber.

It is to be considered that the total diameter increases when a lagging is applied. Please also refer to page 4.9 general catalogue

General recommendations

Drum motors are, unless specifically stated, designed to drive a conveyor belt, where $\frac{3}{4}$ of the length of the motor is covered by the belt (Series Alpha). The motor must drive the belt without slipping. The belt dissipates the heat of the motor.

For applications without the belt covering the motor, special motors are available (Series Beta).

The drum motor must be secured in the conveyor frame.

Shown data correspond to matter of fact at printing. Technical alterations may be made without prior notification.

Voltages

- | | | | |
|-------|-------------------|---|-------------------|
| Star | 360 - 440 V/50 Hz | - | 380 - 460 V/60 Hz |
| Delta | 200 - 230 V/50 Hz | - | 220 - 270 V/60 Hz |

Procon drum motors are a-synchronous alternating current motors. Special voltages (for export) are available.

Normally connection in star and delta is possible. An exception to this is type 4 (aluminum junction box). Here the voltage (230 V OR 400 V) must be known when ordering.

All Procon drum motors can be operated with a single phase frequency convertor. Also, refer to page 4.8 - general catalogue.

Food quality lubrication

Procon drum motors can be delivered with a lubricant (grease) to USDA-H1 norm. All lubricants used by Procon are full-synthetic and maintenance free.

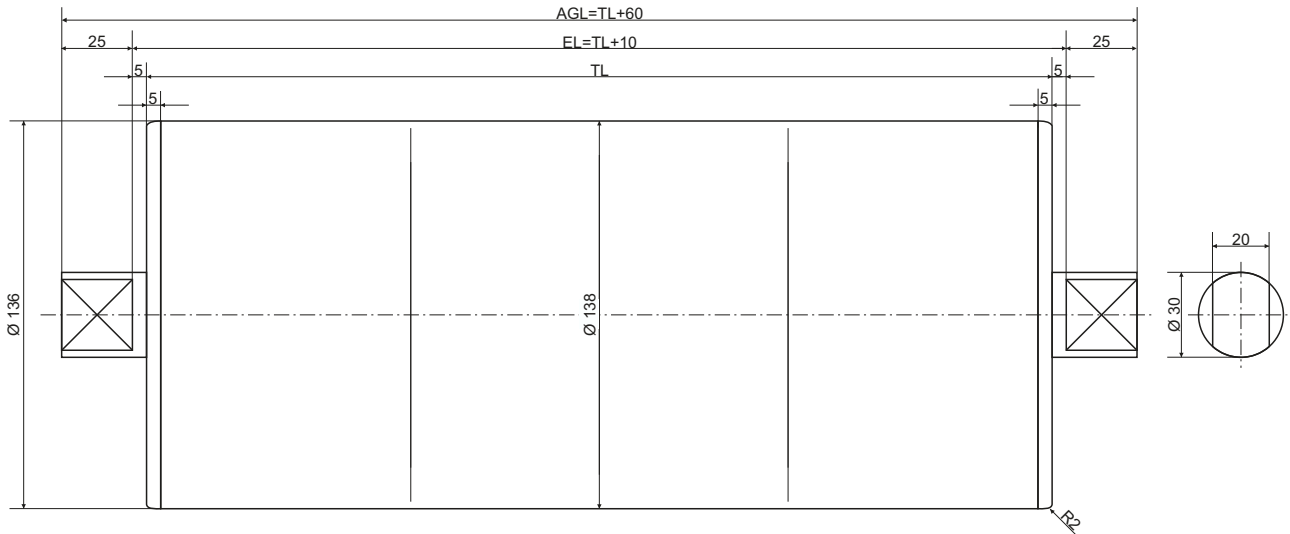
Special execution

The application of Procon drum motors is versatile. The number of variants is large.

Below a few possibilities:

- Special lengths – also over 1000 mm length
- Installation of an encoder or el./magn. brake
- Special motors for no-belt applications
- Special motors for countries with different voltages (export)
- Special shells e.g. with welded sprockets
- Special flanges with threaded holes
- Drum motor as brush-drive or as pallet-drive

If you have an application for a drum motor, please contact us for further information.



Standard length (TL mm)	320	370	420	470	520	570	620	670	720	770	820	870	920	970	1020
Weight (1) (in kg)	7,3	8,1	8,9	9,7	10,5	11,3	12,1	12,9	13,7	14,5	15,3	16,1	16,9	17,7	18,5
Weight (2) (in kg)	9,3	10,1	10,9	11,7	12,5	13,3	14,1	14,9	15,7	16,5	17,3	18,1	18,9	19,7	20,5

(1) Weight: Drum steel, flanges aluminum

(2) Weight: Drum and flanges Stainless Steel

General

Procon tail drums offer a meaningful completion to the drum motor program.
The outer dimensions of the tail drum PU 138X exactly match those of the drum motor PT 138X2, making conveyor design easy and build simple.

Enclosure

Procon tail drums are equipped with a robust sealing to IP 66 (VDE 0470) standard.

Features

The shafts of the Procon tail drums are Stainless Steel.
To tighten the belt and to adjust it, in the shafts a threaded hole can be made (optional).

As standard the flanges are aluminum and the shell is mild steel, crowned for optimal belt steering. Both are also available in stainless steel (standard option).

Cylindrical shells are available.