

**Procon**  
Trommelmotoren

## Technical data

### Drum Motor PT 113 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 <sup>-1</sup>		A	m/s	N	Nm
110	905	6	0,71	0,067	1642	92,8
140	905	6	0,73	0,085	1647	93,1
175	905	6	0,80	0,10	1400	79,1
				0,13	1346	76,1
				0,16	1094	61,8
				0,20	875	49,4
				0,25	700	39,6
				0,33	530	30,0
200	1280	4	0,75	0,40	438	24,7
				0,50	350	19,8
				0,10	2000	113,0
				0,125	2000	113,0
250	1280	4	0,86	0,125	2000	113,0
300	1280	4	1,00	0,16	1875	106,0
				0,20	1500	84,8
				0,25	1200	67,8
				0,32	938	53,0
				0,40	750	42,4
				0,50	600	33,9
				0,63	477	27,0
				0,80	375	21,2
				0,20	1500	84,8
300	2840	2	0,90	0,20	1500	84,8
375	2840	2	1,03	0,25	1500	84,8
				0,32	1172	66,2
				0,40	938	53,0
				0,50	750	42,4
				0,63	595	33,6
				0,80	469	26,5
				1,00	375	21,2
				1,25	300	17,0
1,60	234	13,2				

## 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 113 X2 Beta

## Power and speed

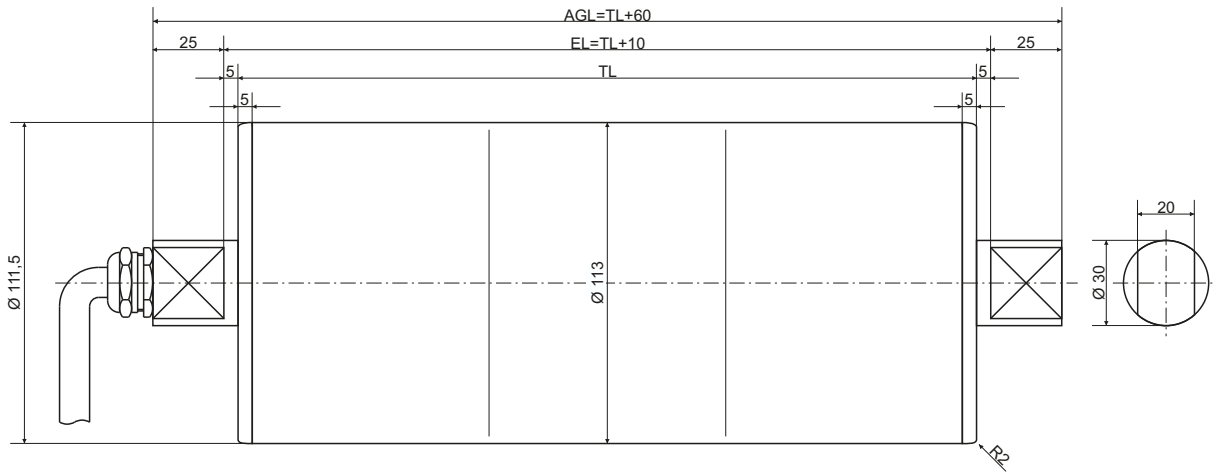


Power P	Revolutions n	Poles p	Current 400 V/50 Hz	Belt speed v	Belt pull F	Torque T
Watt	min <sup>-1</sup>		A	m/s	N	Nm
110	905	6	0,71	0,067	1642	92,8
140	905	6	0,73	0,085	1647	93,1
				0,10	1400	79,1
				0,13	1076	60,8
				0,16	875	49,4
				0,20	700	39,6
				0,25	560	31,6
				0,33	424	24,0
				0,40	350	19,8
				0,50	280	15,8
				200	1280	4
250	1280	4	0,86	0,125	2000	113,0
				0,16	1562	88,3
				0,20	1250	70,6
				0,25	1000	56,5
				0,32	781	44,1
				0,40	625	35,3
				0,50	500	28,3
				0,63	397	22,4
				0,80	313	17,7
				300	2840	2
0,25	1200	67,8				
0,32	938	53,0				
0,40	750	42,4				
0,50	600	33,9				
0,63	476	26,9				
0,80	375	21,2				
1,00	300	17,0				
1,25	240	13,6				
1,60	188	10,6				

## 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.

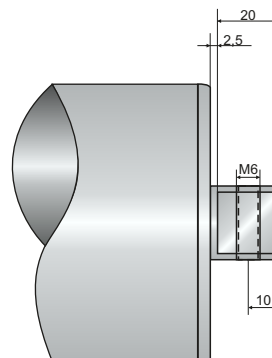
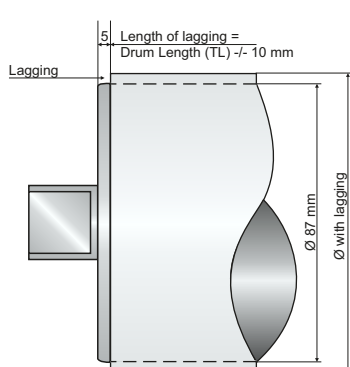
Drum motors from **Series Beta** can always be used in normal belt conveyors.



Standard length (TL mm)	310	360	410	460	510	560	610	660	710	760	810	860	910	960	1010
<b>Weight (1) (in kg)</b>	16,5	17,2	17,8	18,5	19,2	19,9	20,5	21,2	21,9	22,6	23,2	23,9	24,6	25,3	26,0
<b>Weight (2) (in kg)</b>	17,9	18,6	19,2	19,9	20,6	21,0	21,9	22,6	23,3	24,0	24,6	25,3	26,0	26,7	27,4

(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.

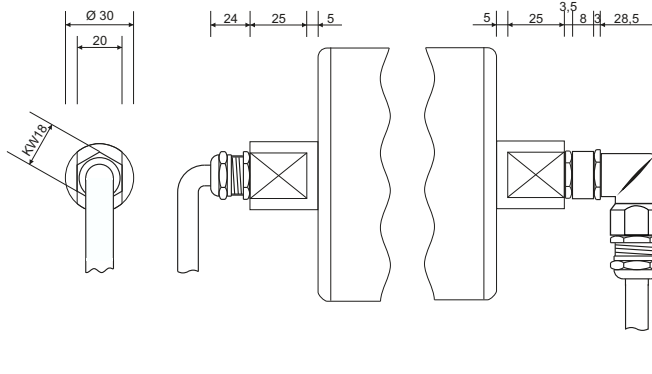
# Drum motor PT 113 X2 Alpha and Beta

## Electrical connection



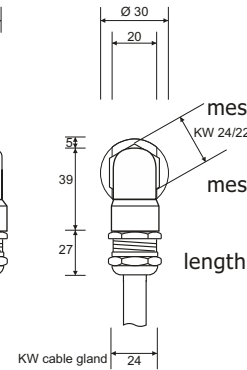
### Type 1 EMC

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



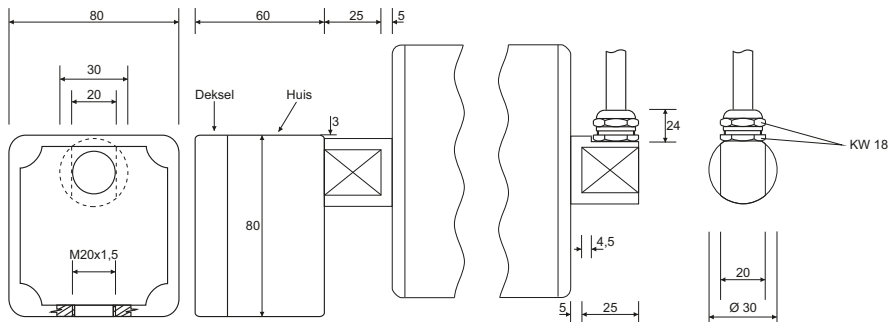
### Type 2 EMC

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)



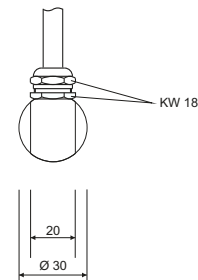
### Type 4 Aluminum

Junction box  
aluminum  
powdercoating  
green - RAL 5021.



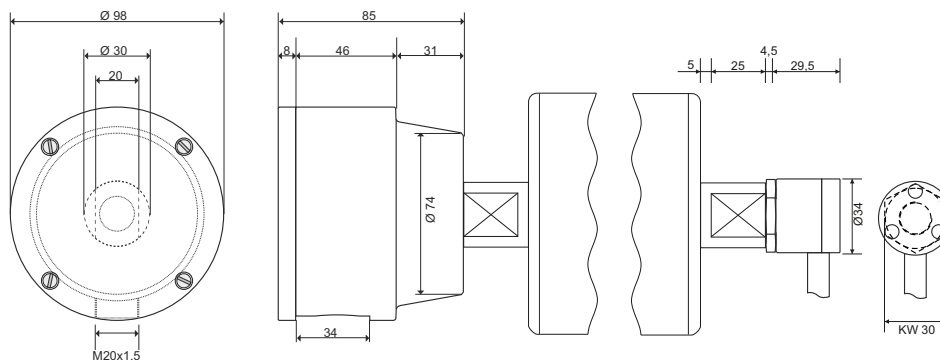
### Type 3 EMC

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 113 X2

## 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 113 mm, steel, crowned
- Shortest length (TL) 310 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.

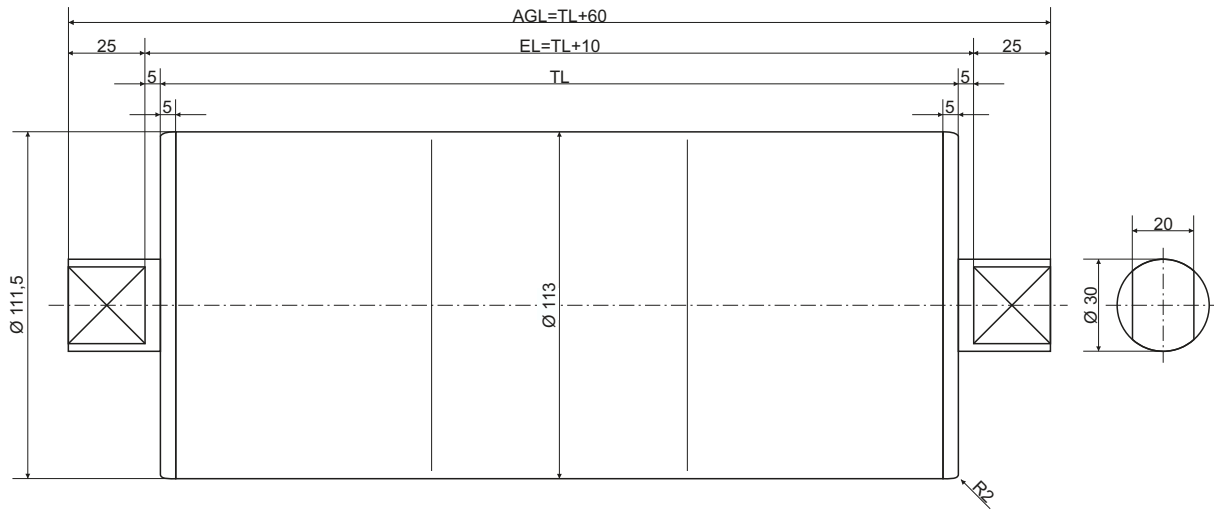
### Special execution

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.



<b>Standard length (TL mm)</b>	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960	1010
<b>Weight (1) (in kg)</b>	5,6	6,2	6,8	7,4	8,0	8,7	9,3	9,9	10,5	11,1	11,7	12,3	12,9	13,5	14,1	14,7
<b>Weight (2) (in kg)</b>	7,0	7,6	8,2	8,8	9,4	10,1	10,7	11,3	11,9	12,5	13,1	13,7	14,3	14,9	15,5	16,1

(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 113X exactly match those of the drum motor PT 113X2, making conveyor design easy and build simple.

#### 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.

#### Enclosure

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