



e l e r o

2015

Drives and controls

for intelligent building technology
120 V / 60 Hz version



1 Europe

Germany
Italy
France
Spain
Poland
Sweden

2 Asia

Singapore
India
China

3 Australia

Australia

4 United States

USA

1

Germany

elero GmbH Headquarters

Linsenhofer Straße 65
72660 Beuren/Germany
Phone +49 7025 13-599
Fax +49 7025 13-290
E-mail markus.werner@elero.de

Italy

Division elero Nice S.p.A. Via Callalta 1

31046 Rustignè Oderzo
Phone +39 04 2285 3838
Fax +39 04 2285 3885
E-mail info@elero.de

France

Division elero Nice France S.a.S

305, Avenue de Jouques
Z.I. Les Paluds 2
13685 Aubagne
Phone +33 4 42 62 42 52
Fax +33 4 42 62 42 50
E-mail info@elero.de

1

Spain

Division elero Nice Automatismos España S.A.

Polígono Industrial Expansión No. 6
28935 Móstoles Madrid
Phone +34 9 16 163 300
Fax +34 9 16 163 010
E-mail info@elero.de

Poland

Division elero Nice Polska Sp.z.o.o.

Parzniewska 2a
05-800 Pruszków
Phone +48 22 759 4000
Fax +48 22 759 4021
E-mail info@elero.de

Sweden

elero AB

Ridsögatan 10
21377 Malmö
Phone +46 40 545 725
Fax +46 40 546 518

E-mail info@elero.se

2

Singapore

elero Singapore Pte. Ltd.

No. 2, Ang Mo Kio Street 64
#03-04 Econ Industrial Building
Singapore 569084
Phone +65 6899 9062
Fax +65 6899 9064
E-mail info@elero.com.sg

India

elero Motors & Controls Pvt. Ltd.

elero Motors & Controls Pvt. Ltd.
262, Okhla Industrial Estate – III
New Delhi – 110020
Phone +91 11 4172 4219
E-mail india@elero.com

China

Nice Shanghai Automatic Control Co Ltd

Workshop A5, NO.999,
Huan Cheng Bei Road,
Nangiao Town Fengxian District
201400 Shanghai
Phone +21 60890098
Fax +21 60890724
E-Mail info@niceforyou.com.cn

3

Australia

Division elero Nice Australia

Home Automation PTY LTD

51 Drummond Street
Belmore NSW 2192
Phone +61 2 9787 5411
Fax +61 2 9789 5181
E-mail ben.rocco@elero.com

4

USA

NICE GROUP USA INC.

12625 Wetmore Road Suite 218
78247 San Antonio, TX
Phone +1 210 545 2900
Fax +1 210 545 2915
E-mail info@apollogate.com

Order acceptance and delivery times

During business hours you can reach us on the following number:

	elero GmbH Germany	Nice Group USA Inc.
Phone	+ 49 7025 13-599	+ 1 210 545 2900 ext 223

Outside business hours you can send us a fax or leave a message on our answering machine.

Fax:		
Export sales	+ 49 7025 13-290	+ 1 210 545 2915 ext 221
Reception	+ 49 7025 13-212	

Phone:	
Reception	+ 49 7025 13-01 (mailbox)

E-mail	info@elero.de	info@apollogate.com
---------------	----------------------	----------------------------

You can reach our technical service staff during business hours on the following number:

English	+ 49 7025 13-550	+1 210 545 2900 ext 225
German	+ 49 7025 13-555	
Spanish		+ 1 210 545 2900 ext 226

Visit our website at **www.elero.us** for further information.

Information:

All product information in the catalogue is based on products available on the November 01, 2014.

We reserve the right to change technical specifications, documentation and design of the products.

Our products are only to be installed/commissioned by authorized and qualified persons. There are high risks to objects and persons if the products are installed or commissioned incorrectly.

From a firm of craftsmen to a “global player”

The elero success story began in 1964 with a simple but electrifying idea:

Roller shutters were no longer to be moved by hand, but to “electrically roll” – which is where the company derived its name. With the development of the first tubular drive elero laid the foundation for a “moving” industry. The small firm of craftsmen from southern Germany developed into a company operating internationally and which has repeatedly underlined its reputation as a technology market leader.

elero GmbH is now one of the world's largest manufacturers of drives and controls for roller shutters, sun protection systems, rolling doors and facade technology, as well as a wide range of industrial applications. Production takes place at the main plant in Beuren near Stuttgart and in Pößneck, Thuringia, both in Germany. At international level elero employs ca. 400 staff and has a dense distribution network.

The Italian company Nice S. p. A., a leader in the “home automation” sector, has been the majority shareholder in elero since September 2011. Other shareholders are Paragon Partners and Jochen Lütkemeyer, who at the same time is the managing director of elero. elero is known for its pioneering technological achievements and high-quality products “Made in Germany” – and places the toughest demands on each individual production stage. The entire process is certified to DIN EN ISO 9001 – from the selection of suppliers through to careful final examinations and the dispatch of products.

As a specialist for innovative, customized, user-friendly technology and individualized solutions elero has repeatedly succeeded in setting new standards within the industry over many decades. Thus, for example, the bidirectional hand-held radio transmitter “TempoTel 2” was honored with the Plus X Award in May 2011. It impressed the jury in several areas: “High Quality”, “Operating Comfort” and “Best Product of the Year 2011” in the Residential Technology category.

The regular exchange of findings and know-how between the two business units (drive technology and linear actuator technology) is an integral part of the company philosophy – for only so can joint solutions such as the slat actuator system LIMALine for modern facade architecture, be developed.

Partnership-based dialog and trust-based cooperation with customers are just as important to elero as the product quality. For this reason the company attaches particular significance to individual and needs-oriented communication with its customers in specialist installation firms, the trade and industry.

In the event of questions relating to intelligent, sustainable building automation and industrial applications there is a central customer service department, a technology hotline, as well as regional contact persons in the international sales territories. Meetings and discussions with customers are a source of valuable impetus for new product developments – closely aligned to the needs of customers and the market.



elero headquarters in Beuren

Content

Your direct line	2
History	4
Radio tubular drives	
RevoLine size S (40 mm drives)	7
RevoLine size M (50 mm drives)	13
RevoLine size L (60 mm drives)	27
Drives Type 11 (63 mm drives)	31
Hardwired tubular drives	
RevoLine size S (40 mm drives)	33
RevoLine size M (50 mm drives)	39
RevoLine size L (60 mm drives)	53
Drives Type 11 (63 mm drives)	57
Drives Type 15	61
Manual override tubular drives	
Type 9 MO (50 mm drives)	65
Type 11 MO (63 mm drives)	69
Venetian blind drives	
JA Soft /JAdk	73
Accessories for venetian blind drives	77
Speciality drives	
Box 5	81
DC tubular drives and venetian blind drives	84
DC Solar panels, radio receivers, other accessories	86
Door drives	
Shaft mount drives DFM	89
Chain drives DKM	98
Mechanical accessories	
Drive adapter sets for motors	105
Bearing and tube accessories for tubular drives	115
Inertia brake, sprockets and chains, counterpart support and manual override accessories	129

Door controls	
BoxControl	139
Accessories for BoxControl	145
Radio controls	
Hand-held remote transmitters	151
Wall mount remote transmitters	160
Flush mount radio transmitter	166
Radio remote receiver	170
Radio sensors	172
Hardwired controls	
Wall mount units	181
Sensors	191
DC controllers and switches	199
Switches, push-buttons and keyswitches	202
Electrical accessories	
Cables	203
Installation Cables	206
Plugs & Connectors	207
Flush and Surface mount electrical accessories	209
Drive adapter drawings (Scale 1:1)	213
Lifting capacity tables	253
Linear actuator technology/ louer system drives	257
Terms and conditions of sale	265

Conversion table

Important: All dimensions in this catalogue are Metric except if mentioned otherwise!
Conversions might contain rounding errors!

Conversion table length, weight and torque	Multiply by	To get
Millimeter (mm)	0.03937	Inch (in.)
Centimeter (cm)	0.3937	Inch (in.)
Centimeter (cm)	0.0328	Feet (ft)
Meter (m)	3.28	Feet (ft)
Meter (m)	1.0936	Yards (yd)
Gramm (gr)	0.03527	Ounce (oz)
Gramm (gr)	0.00220	Pound (lb)
Kilogram (Kg)	35.274	Ounce (oz)
Kilogram (Kg)	2.2046	Pound (lb)
Kilogram (Kg)	0.00110	US tons
Newtonmeter (Nm)	8.85	Inch Pound (in. lb.)
Newtonmeter (Nm)	0.7376	Foot Pound (ft. lb.)

Temperature conversion table	
in Centigrades	in Fahrenheit
-40° C	-40° F
-20° C	-4° F
-10° C	-14° F
-0° C	32° F
10° C	50° F
20° C	68° F
30° C	86° F
40° C	104° F
50° C	122° F
60° C	140° F
80° C	176° F
Newtonmeter to Horsepower	= Nm * rpm / 5250

Did you know, conversion between various metric units is easy: Just move the decimal point!

1,000 mm = 100 cm = 1 m

0.001 m = 0.1 cm = 1 mm

1,000 gr = 1 Kg



Radio tubular drives

RevoLine size S (40 mm drives)

RevoLine S drives – Little big drive!

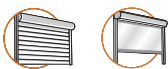
There is scarcely another element that affects interior design to the same extent as blinds and screens. Depending on the material, style and color, the natural incident light allows a room to appear dominant or to seem subdued. In addition, roller blinds protect against the sun and prying eyes. In order to control these effects automatically, the trend is moving towards motorization. In this respect the drive has to fulfil three criteria: small side gap, so that the blinds can be positioned very close to one another, a high motor speed, and, above all, the quietest running noise possible. With its diameter of 35 mm and speeds of up to 84 rpm the RevoLine S drive perfectly fulfils these requirements. A hand-held transmitter allows for precise setting of the end and intermediate positions – even with several drives wired in parallel. In addition, the RevoLine S drive produces very little vibration and is thus extremely quiet. The new “Soft” brake ensures a quiet stop without clicking sounds. Together with electronic limits the drive even reduces the speed towards the end limits for a “soft” approach.

Perfect drive solution for interior shading

Thanks to their small side gap and high speeds the RolTop S and VariEco S are excellently suited to the motorization of blinds. The end positions and two intermediate positions can also be set precisely and comfortably with fast-running versions. S drives for interior blinds are supplied with white motorheads – an additional benefit as no cover is then necessary.

The drive shaft output on the S series is the same as used for the larger M and L series motors. This enables the use of M and L drive adapters on the S series motors as well (with Limit switch crown adapter) for a wider choice of tubes.

RolTop S-915



Radio tubular drives for roller shutters and sun protection systems



RolTop S-915 with white and black/orange motor head

Type: RolTop S-915 (120V/60 Hz)

Application: Roller shutter
Limit switch: Electronic limits with Soft Stop on end position approach on motors with soft brake
Highlights: Smart force measurement
Application protection in up and down direction and reversal upon obstruction
Parallel connection possible
Limits can be adjusted via radio remote control or installation lead, plug-able cable, 2 Intermediate positions can be accurately set and retrieved from Ø = 36 mm inside and up
Fits tube: Silent soft brake up to 5 Nm
Features:
Radio system: Bidirectional 915 MHz radio including routing (alternative 868 MHz available)
Recommended drives: RolTop S3/36-915 (fast-running version)
RolTop S5/19-915, RolTop S8/19-915

Application: Textile sun protection
Limit switch: Electronic limits with Soft Stop on end position approach
Highlights: Smart force measurement
Application protection in up and down direction and reversal upon obstruction
Parallel connection possible
Limits can be adjusted via radio remote control or installation lead, plug-able cable, 2 Intermediate positions can be accurately set and retrieved from Ø = 36 mm inside and up
Fits tube: Silent soft brake
Features:
Radio system: Bidirectional 915 MHz radio including routing (alternative 868 MHz available)
Recommended drives: RolTop S1.5/84-915 (fast-running version)
RolTop S3/36-915 (fast-running version)

Item Number	Type/Item Description
30 226.6806	RolTop S1.5/84-915, 1.5 Nm, 84/rpm
30 228.6806	RolTop S3/36-915, 3 Nm, 36/rpm
30 224.6806	RolTop S5/19-915, 5 Nm, 19/rpm
30 804.6806	RolTop S8/19-915, 8 Nm, 19/rpm

Accessories included:
Connecting cable 2.0 m long, plug-able.



On request included FOC (only on 19 rpm drives), order:
- 99 000.7401: “T”-head for motor to suit older Type 8 installations/replacements.
Restores backwards compatibility to Type 8 motors or brackets.
- or 99 000.7501: RevoLine head for motor enables use of RevoLine brackets.

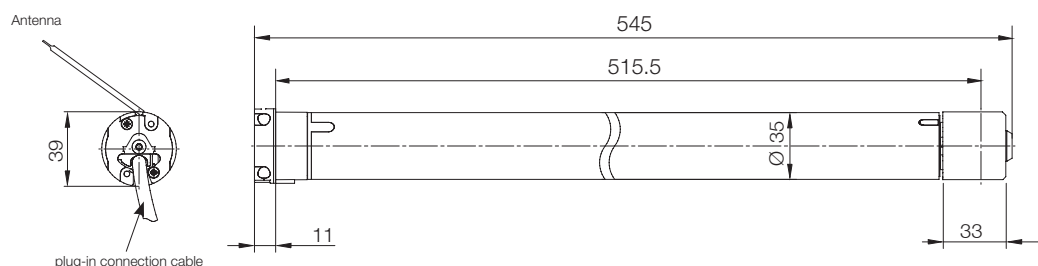
Accessories used with this motor (not included with drive):
- Drive adapter (Page 106)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)



Possible limit switch modes	
Upper limit switch	Lower limit switch
On limit stop	Freely programmable
Freely programmable	On limit stop
On limit stop	On limit stop
Freely programmable	Freely programmable

Technical data and dimensions

Type	RolTop S1.5/84-915	RolTop S3/36-915	RolTop S5/19-915	RolTop S8/19-915
Operating Voltage (V)	1 ~ 120			
Frequency (Hz)	60			
Silent soft brake	●			—
Max. torque (Nm)	1.5	3	5	8
Speed (rpm)	84	36	19	
Current (A)	1.1			
Power (W)	132			
Shaft Ø (mm)	36 inside			
Ingress protection (IP)	44			
Max. limit switch range in Revolutions of the shaft	160	80	40	
Operating mode (KB in min.)	5		5	4
Weight (kg)	1.3			
Temperature range (°C)	-20 to +60			
Conformity	CE  FC  US IC			
Motor head color	White		Black/orange	



Accessories:



Cables
Page 204



Drive adapter sets
Page 106



RevLine Brackets
Page 122



"T"-head Brackets
Page 122



Bracket adapters
Page 122



L-brackets and bearings
Page 117



Radio control units
Page 154



Radio sensors
Page 174

VariEco S-915

Radio tubular drives for roller blinds and sun protection systems



VariEco S-915 with white and black/orange motor head

Type: VariEco S-915 (120V/60 Hz)

Application: Roller shutter
Limit switch: Mechanical limit switches
Fits tube: from Ø = 36 mm inside and up
Features: Silent soft brake, up to 5 Nm
 Limit switch screw accessible from 2 sides
 Plug-able cable
Radio system: Bidirectional 915 MHz radio including routing (alternative 868 MHz available)
Recommended drives: VariEco S3/36-915 (fast-running version)
 VariEco S5/19-915
 VariEco S8/19-915

Application: Textile sun protection (Blind)
Limit switch: Mechanical limit switches
Fits tube: from Ø = 36 mm inside and up
Features: Silent soft brake, up to 5 Nm
 Limit switch screw accessible from 2 sides
 Plug-able cable
Radio system: Bidirectional 915 MHz radio including routing (alternative 868 MHz available)
Recommended drives: VariEco S1.5/84-915 (fast-running version)
 VariEco S3/36-915 (fast-running version)

Item Number	Type/Item Description
30 926.0826	VariEco S1.5/84-915, 1.5 Nm, 84/rpm
30 928.0826	VariEco S3/36-915, 3 Nm, 36/rpm
30 924.0826	VariEco S5/19-915, 5 Nm, 19/rpm
30 854.0826	VariEco S8/19-915, 8 Nm, 19/rpm

Accessories included:
 Connecting cable 2.0 m long, plug-able.

On request included FOC (only on 19 rpm drives), order:
 - 99 000.7401: "T"-head for motor to suit older Type 8 installations/ replacements. Restores backwards compatibility to Type 8 motors or brackets.
 - or 99 000.7501: RevoLine head for motor enables use of RevoLine brackets.




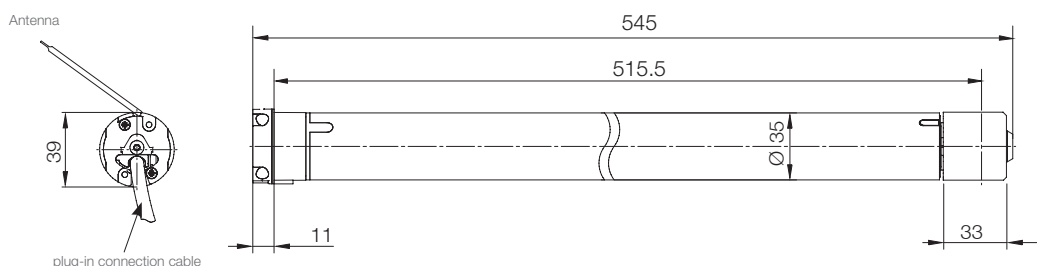
Accessories used with this motor (not included with drive):

- Drive adapter (Page106)
- Wall bracket (motor bearing) (Page116)
- Plugs (Page207)
- Remote transmitters (Page154)

Possible limit switch modes	
Upper limit switch	Lower limit switch
Freely programmable	Freely programmable

Technical data and dimensions

Type	VariEco S1.5/84-915	VariEco S3/36-915	VariEco S5/19-915	VariEco S8/19-915
Operating Voltage (V)	1 ~ 120			
Frequency (Hz)	60			
Silent soft brake	•			—
Max. torque (Nm)	1.5	3	5	8
Speed (rpm)	84	36	19	
Current (A)	1.1			
Power (W)	132			
Shaft Ø (mm)	36 inside			
Ingress protection (IP)	44			
Max. limit switch range in Revolutions of the shaft	42			
Operating mode (KB in min.)	5		4	
Weight (kg)	1.3			
Temperature range (°C)	–20 to +60			
Conformity	CE  FC IC			
Motor head color	White		Black / orange	



Accessories:



Cables
Page 204



Drive adapter sets
Page 106



RevLine Brackets
Page 122



"T"-head Brackets
Page 122



Bracket adapters
Page 122



L-brackets and bearings
Page 117



Radio control units
Page 154



Radio sensors
Page 174

Radio tubular drives

RevoLine size M (50 mm drives)

RevoLine M drives – Powerful drives!

Size M is available from 1.5 to 36 Nm. The standard speed of the RevoLine M drives is 17 rpm with higher speeds available up to 170 rpm. The power output shaft shape is the same with all RevoLine drives and guarantees high power transmission. The drive shaft output further is the same as used for the larger L series motors. This enables the use of L drive adapters on the M series motors as well (with Limit switch crown adapter). All the drives are suited to installation on the left or right side. All M drives with a torque of up to 16 Nm have a silent, wear-free “Soft brake”.

Those who have always assumed that the controller is the only intelligent element in residential automation will now have to think again. The RevoLine RolTop drives have a power learning curve: with each full travel they measure the distance and power required. Thanks to this system the power is then always amended in line with the environmental conditions. Upon obstacle detection, the drive will reverse and drive free of the obstacle. If the shutter is frozen to the side guides/window sill, the drive switches off to protect the drive and shutter from damage.

The RevoLine RolTop also has an intelligent design when it comes to its running times: thanks to torque regulation, only the power actually needed is applied. This reduces the increase in the temperature of the drive with the effect that the running time is extended considerably. This is especially useful for the installer when doing initial commissioning.

RevoLine M
radio drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

RolTop M-915

Radio tubular drives for roller shutters



RolTop M-915 with black/orange motor head

Type: RolTop M-915 (120V/60 Hz)

Application:	Roller shutter and internal roller blind
Limit switch:	Electronic limits with Soft Stop on end position approach (on motors with soft brake)
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction Limits can be adjusted via radio remote control or installation lead Plug-able cable
Fits tube:	from Ø = 46 mm inside and up
Features:	Silent soft brake up to 16 Nm
Radio system:	Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
34 150.6806	RolTop M2/108-915, 2 Nm, 108/rpm
34 170.6806	RolTop M4/70-915, 4 Nm, 70/rpm
34 226.6806	RolTop M7/28-915, 7 Nm, 28/rpm
34 246.6806	RolTop M10/28-915, 10 Nm, 28/rpm
34 228.6806	RolTop M10/17-915, 10 Nm, 17/rpm
34 238.6806	RolTop M16/17-915, 16 Nm, 17/rpm
34 258.6806	RolTop M30/17-915, 30 Nm, 17/rpm
34 268.6806	RolTop M 36/12-915, 36 Nm, 12/rpm

Accessories included:

Connecting cable 2.0 m long, plug-able.




Accessories used with this motor (not included with drive):

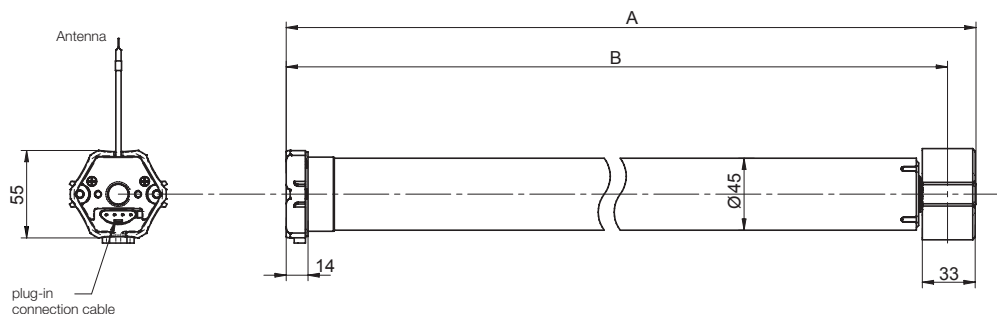
- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)

Possible limit switch modes

Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
torque stop	freely programmable
torque stop	freely programmable

Technical data and dimensions

Type	RoI Top M2/ 108-915	RoI Top M4/ 70-915	RoI Top M7/ 28-915	RoI Top M10/ 28-915	RoI Top M10/ 17-915	RoI Top M16/ 17-915	RoI Top M30/ 17-915	RoI Top M36/ 12-915
Operating Voltage (V)	1 ~ 120							
Frequency (Hz)	60							
Silent soft brake	•						—	
Max. torque (Nm)	2	4	7	10	10	16	30	36
Speed (rpm)	108	70	28		17			12
Current (A)	1.75		1.2	1.75	1.2	1.75		
Power (W)	210		144	210	144	210		
Shaft Ø (mm)	46 inside							
Ingress protection (IP)	44							
Max. limit switch range in Revolutions of the shaft	40							
Operating mode (KB in min.)	4							
Length A (mm)	540		480	540	480	540	530	
Length B (mm)	523		462	523	462	523	513	
Weight (kg)	2.2		1.9	2.2	1.9	2.2		
Temperature range (°C)	-20 to +60							
Conformity	CE   c  us IC							



Accessories:



Cables
Page 204



Drive adapter sets
Page 107



Brackets Page 116



Radio control units
Page 154



Radio sensors
Page 174

RolTop M-915-K



Radio tubular drives for roller shutters – short model



Type: RolTop M-915-K (230 V/60 Hz)

- Application: Roller shutter and internal roller blind
- Limit switch: Electronic limits with Soft Stop on end position approach
- Highlights: Smart force measurement
Application protection in up and down direction and reversal upon obstruction
Limits can be adjusted via radio remote control or installation lead
Plug-able cable
- Fits tube: from Ø = 46 mm inside and up
- Features: Silent soft brake
- Radio system: Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
(1)	RolTop M8-915-K, 8 Nm, 17/rpm (with silent soft brake)

⁽¹⁾ These motors can be built in 230 V/60 Hz on request and quantity orders. Correct type label for 230 V / 60 Hz can only be provided on Quantity orders.

Accessories included:
Connecting cable 2.0 m long, plug-able.

- Accessories used with this motor (not included with drive):
- Drive adapter (Page 107)
 - Wall bracket (motor bearing) (Page 116)
 - Plugs (Page 207)
 - Remote transmitters (Page 154)

Technical Data on request. No UL.

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

RoTop/D+ M-915

Radio tubular drives for roller shutters – Torque mode only motor



No limit setting required!
(requires physical stops in both directions)



Type: RoTop/D+ M-915 (120V/60 Hz)

Application:	Roller shutter
Limit switch:	Electronic limits with Soft Stop on end position approach
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction End limits are self-learning Plug-able cable
Fits tube:	from Ø = 46 mm inside and up
Features:	Silent soft brake up to 16 Nm
Limitations:	Only possible to use with torque stops in both directions.
Radio system:	Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
(1)	RoTop/D+ M10-915, 10 Nm, 17 rpm (with silent soft brake)
(1)	RoTop/D+ M16-915, 16 Nm, 17 rpm (with silent soft brake)
(1)	RoTop/D+ M30-915 (with flat brake)

⁽¹⁾ These motors can be built in 120V/60Hz and 230V/60Hz on request and quantity orders.
Correct type label for 120V/60Hz and 230 V / 60 Hz can only be provided on quantity orders.

Accessories included:

Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 105)
- Wall bracket (motor bearing) (Page 115)
- Plugs (Page 207)
- Remote transmitters (Page 151)

Technical Data on request. No UL.
Certification is possible on quantity orders.

Possible limit switch modes	
Upper limit switch	Lower limit switch
torque stop	torque stop

RevoLine M
radio drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

RolTop/J M-915



Radio tubular drives for special roller shutters with louver function



Type: RolTop/J M-915 (120V/60 Hz)

- Application:

Roller shutter with louver function
- Limit switch:

Electronic limits with Soft Stop on end position approach
- Highlights:

Smart force measurement
Application protection in up and down direction and reversal upon obstruction
Limits can be adjusted via radio remote control or installation lead, plug-able cable
- Fits tube:

from Ø = 46 mm inside and up
- Features:

Silent soft brake up to 16 Nm
Drive suitable for tilt-able roller shutters
Includes special 2nd lower end position for opening shutter to tilt position
Motor has momentary function between the 2 lower end limits.
Motors with Soft brake drive drive slowly between the 2 lower limits for accurate tilting.
- Radio system:

Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
(1)	RolTop/J M10-915, 10 Nm, 17/rpm (with silent soft brake)
(1)	RolTop/J M16-915, 16 Nm, 17/rpm (with silent soft brake)
(1)	RolTop/J M30-915, 30 Nm, 17/rpm (with flat brake)
(1)	RolTop/J M36-915, 30 Nm, 12/rpm (with flat brake)

⁽¹⁾ These motors can be built in 120V/60Hz and 230V/60Hz on request and quantity orders.
Correct type label for 120V/60Hz and 230V/60Hz can only provided on quantity orders.

Accessories included:
Connecting cable 2.0 m long, plug-able.

- Accessories used with this motor (not included with drive):
- Drive adapter (Page 107)
 - Wall bracket (motor bearing) (Page 116)
 - Plugs (Page 207)
 - Remote transmitters (Page 154)

Technical Data on request. No UL. Certification is possible on quantity orders.

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Adapter profiles Lifting capacity tables	Electrical accessories	Hardwired controls	Radio controls	Door controls	Mechanical accessories	Door drives	Speciality drives	Venetian blind drives	Manual override tubular drives	Hardwired tubular drives	RevoLine M radio drives
---	---------------------------	-----------------------	-------------------	---------------	---------------------------	-------------	----------------------	--------------------------	-----------------------------------	-----------------------------	----------------------------

SunTop M-915

Radio tubular drives for sun protection systems



Type: SunTop M-915 (120V/60 Hz)

Application:	Textile sun protection
Limit switch:	Electronic limits
Highlights:	Smart force measurement Blockage detection Up/Down Limits can be adjusted via radio remote control or installation lead Plug-able cable
Fits tube:	from Ø = 46 mm inside and up
Radio system:	Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
34 758.6806	SunTop M30/17-915, 30 Nm, 17/rpm
34 768.6806	SunTop M36/12-915, 36 Nm, 12/rpm






Smaller and high speed versions similar to RolTop can be build with UL approval.

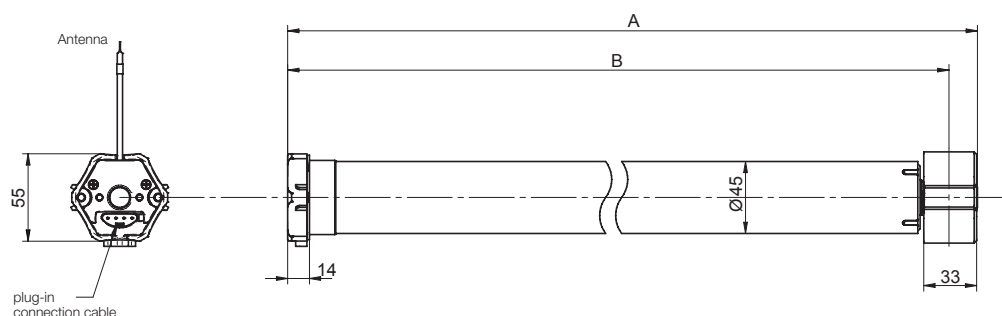
Accessories included:
Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):
- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Technical data and dimensions

Type	SunTop M30/17-915	SunTop M36/12-915
Operating Voltage (V)	1 ~ 120	
Frequency (Hz)	60	
Silent soft brake	–	
Max. torque (Nm)	30	36
Speed (rpm)	17	12
Current (A)	1.75	
Power (W)	210	
Shaft Ø (mm)	46 inside	
Ingress protection (IP)	44	
Max. limit switch range in Revolutions of the shaft	40	
Operating mode (KB in min.)	4	
Length A (mm)	530	
Length B (mm)	513	
Weight (kg)	2.3	
Temperature range (°C)	–20 to +60	
Conformity	    	



Accessories:



Cables
Page 204



Drive adapter sets
Page 107



L-brackets and bearings
Page 123



Radio control units
Page 154



Radio sensors
Page 174

SunTop/Z M-915 RH

Radio tubular drives for roller shutters



Type: SunTop/Z M-915 RH (120V/60 Hz)

Application:	Zip drive system
Limit switch:	Electronic limits with Soft Stop on end position approach (on motors with soft brake)
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction Limits can be adjusted via radio remote control or installation lead Plug-able cable
Fits tube:	from Ø = 46 mm inside and up
Features:	Silent soft brake up to 16 Nm
Radio system:	Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
34 150.6906	SunTop/Z M2/108-915 RH, 2 Nm, 108/rpm
38 674.0096	SunTop/Z M4/70-915 RH, 4 Nm, 70/rpm
38 686.0096	SunTop/Z M7/28-915 RH, 7 Nm, 28/rpm
38 696.0096	SunTop/Z M10/28-915 RH, 10 Nm, 28/rpm
38 724.0096	SunTop/Z M10/17-915 RH, 10 Nm, 17/rpm
38 744.0096	SunTop/Z M16/17-915 RH, 16 Nm, 17/rpm
38 754.0096	SunTop/Z M30/17-915 RH, 30 Nm, 17/rpm
38 764.0096	SunTop/Z M 36/12-915 RH, 36 Nm, 12/rpm

Accessories included:

Connecting cable 2.0 m long, plug-able.




Accessories used with this motor (not included with drive):

- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)

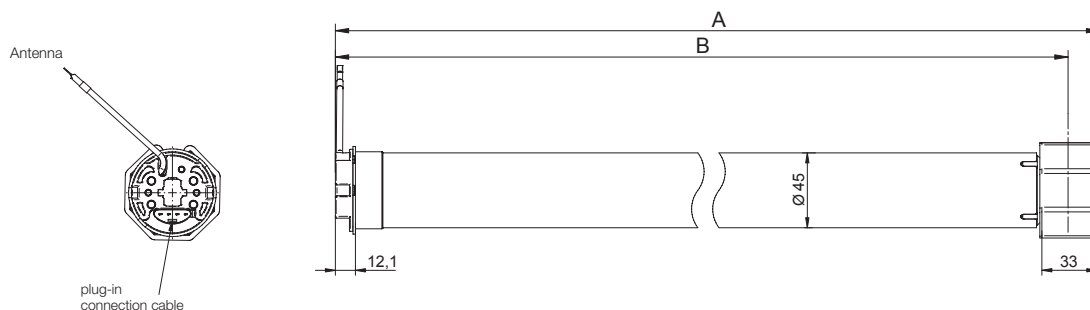
Possible limit switch modes

Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Technical data and dimensions

Type	SunTop/Z M2/108- 915 RH	SunTop/Z M4/70- 915 RH	SunTop/Z M7/28- 915 RH	SunTop/Z M10/28- 915 RH	SunTop/Z M10/17- 915 RH	SunTop/Z M16/17- 915 RH	SunTop/Z M30/17- 915 RH	SunTop/Z M36/12- 915 RH
Operating Voltage (V)	1 ~ 120							
Frequency (Hz)	60							
Silent soft brake	•						-	
Max. torque (Nm)	2	4	7	10	10	16	30	36
Speed (rpm)	108	70	28		17			12
Current (A)	1.75		1.2	1.75	1.2	1.75		
Power (W)	210		144	210	144	210		
Shaft Ø (mm)	46 inside							
Ingress protection (IP)	44							
Max. limit switch range in Revolutions of the shaft	40							
Operating mode (KB in min.)	4							
Length A (mm)	538		478	538	478	538	528	
Length B (mm)	521		460	521	460	521	511	
Weight (kg)	2.2		1.9	2.2	1.9	2.2		
Temperature range (°C)	-20 to +60							
Conformity	CE   c  US • IC							

* UL approval pending



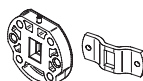
Accessories:



Cables
Page 204



Drive adapter sets
Page 107



Brackets Page 123



Radio control units
Page 154



Radio sensors
Page 174

VariEco M-915



Radio tubular drives for roller shutters and sun protection systems



Type: VariEco M-915 (120V/60Hz)

Application: Roller shutter and textile sun protection
Limit switch: Mechanical limit switches
Fits tube: from Ø = 46 mm and up
Features: Silent soft brake up to 16 Nm
Limit switches feature Quick set mechanism (not on M7/28)
Plug-able cable
Radio system: Bidirectional 915 MHz radio
including routing
(alternative 868 MHz available)

Item Number	Type/Item Description
34 926.0846	VariEco M7/28-915, 7 Nm, 28/rpm
34 936.0826	VariEco M10/28-915, 10 Nm, 28/rpm
34 928.0826	VariEco M10/17-915, 10 Nm, 17/rpm
34 948.0826	VariEco M16/17-915, 16 Nm, 17/rpm
34 958.0826	VariEco M30-915, 30 Nm, 17/rpm

Accessories included:

Connecting cable 2.0 m long, plug-able.



Accessories used with this motor (not included with drive):

- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)

Possible limit switch modes

Upper limit switch	Lower limit switch
freely programmable	freely programmable

Technical data and dimensions

Type	VariEco M7/28-915	VariEco M10/28-915	VariEco M10/17-915	VariEco M16/17-915	VariEco M30-915
Operating Voltage (V)	1 ~ 120				
Frequency (Hz)	60				
Silent soft brake	•				–
Max. torque (Nm)	7	10	10	16	30
Speed (rpm)	28		17		
Current (A)	1.2	1.75	1.2	1.75	
Power (W)	144	210	144	210	
Shaft Ø (mm)	46 inside				
Ingress protection (IP)	44				
Max. limit switch range in Revolutions of the shaft	35				
Operating mode (KB in min.)	5	4	5	4	
Length A (mm)	491	552	491	552	542
Length B (mm)	474	535	474	535	525
Weight (kg)	1.9	2.2	1.9	2.2	
Temperature range (°C)	–20 to +60				
Conformity	CE   IC				

RevoLine M
radio drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

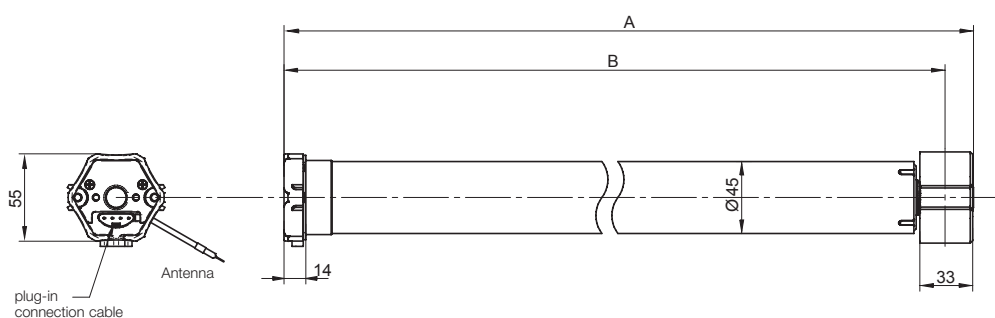
Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables



Accessories:



Cables
Page 204



Drive adapter sets
Page 107



Brackets
Page 123



Radio control units
Page 154



Radio sensors
Page 174

Radio tubular drives

RevoLine size L (60 mm drives)

RevoLine L radio drives – Power packs with lots of sensitivity!

The RevoLine drives move roller shutters and awnings with a high degree of precision and sensitiveness. Torque reduction guarantees a gentle “arrival”, thus lowering the applied force and extending the life-cycle of fabrics.

Size L is available with torques of 48 Nm and 64 Nm. The output shape is the same with all RevoLine drives and guarantees high power transmission. All the drives are suited to installation on the left or right side.

RevoLine L
radio drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

RolTop L-915

Radio tubular drives for roller shutters



Type: RolTop L-915 (230V/60 Hz)

Application:	Roller shutter and small doors
Limit switch:	Electronic limits with Soft Stop on end position approach
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction Limits can be adjusted via radio remote control or installation lead Plug-able cable
Fits tube:	from $\varnothing = 58$ mm inside and up
Radio system:	Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
(1)	RolTop L48-915, 48 Nm, 17/rpm
(1)	RolTop L64-915, 64 Nm, 17/rpm
(1)	RolTop L48-915, 48 Nm, 17/rpm (without reversal upon obstruction)
(1)	RolTop L64-915, 64 Nm, 17/rpm (without reversal upon obstruction)

⁽¹⁾ These motors can be built in 230V/60Hz on request. Correct type label for 230V/60 Hz can only be provided on Quantity orders.

Accessories included:

Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)

Technical Data on request. No UL.

Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60Hz/60 Hz

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

SunTop L-915

Radio tubular drives for sun protections systems



Type: SunTop L-915 (230V/60Hz)

Application:	Textile sun protection
Limit switch:	Electronic limits with Soft Stop on end position approach
Highlights:	Smart force measurement Blockage detection Up/Down Limits can be adjusted via radio remote control or installation lead Plug-able cable
Fits tube:	from Ø = 58 mm inside and up
Radio system:	Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
(1)	SunTop L48-915, 48 Nm, 17 rpm
(1)	SunTop L64-915, 64 Nm, 17 rpm

⁽¹⁾ Motors are indicated on type label as 230V/50Hz with higher torque and lower speed than indicated here.
Correct type label for 230V/60Hz can only be provided on Quantity orders.

Accessories included:

Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)

Technical Data on request. No UL.

Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60HZ/60 Hz

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

RevolLine L
radio drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

VariEco L-915

Radio tubular drives for roller shutters and sun protection systems



Type: VariEco L-915 (230V/60 Hz)

- Application:**
- Roller shutter and textile sun protection
- Limit switch:**
- Mechanical limit switches
- Fits tube:**
- from Ø = 58 mm and up
- Highlights:**
- Plug-able cable
- Radio system:**
- Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
(1)	VariEco L48-915, 48 Nm, 17/rpm
(1)	VariEco L64-915, 64 Nm, 17/rpm

⁽¹⁾ These motors can be built in 230V/60Hz on request.

Accessories included:
Connecting cable 2.0 m long, plug-able.

- Accessories used with this motor (not included with drive):**
- Drive adapter (Page 109)
 - Wall bracket (motor bearing) (Page 116)
 - Plugs (Page 207)
 - Remote transmitters (Page 154)

Technical Data on request. No UL.
Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60HZ.

Possible limit switch modes

Upper limit switch

Lower limit switch

freely programmable

freely programmable

Radio tubular drives

Type 11 (63 mm drives)

CSM-915 drive with integrated radio receiver

The radio-controlled drives are available in various strengths and for all customary shafts with an internal diameter of at least 60 mm.

The drives have a release function to protect the awning fabric and the mechanical parts. One major advantage is seen during installation: With radio-controlled drives there is no need to wire the operating switch. This saves on-site time when installing the drive and ensures that no dirt or dust is produced. This is an important argument with refurbishment work above all.

Type 11 CSM-F-915

The CSM-F-915 type drive unit series were developed especially for open awning systems. The drives are suited to awning systems without a mechanical stop as during installation the engineer sets both the end positions with the aid of the elero installation cable or a selectively trained ProLine-915 radio transmitter: Firstly the roller blind or awning is moved to its upper limit, and this end position is then stored by simultaneously pressing the "Up" and "Down" keys. The lower limit is set in the same manner. Therefore the sun protection systems is ready for operation within a matter of seconds.

Type 11
radio drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Type 11 CSM-915

Radio awning drives with electronic control
and freely programmable end positions



Type: 11 CSM-915 (230V/60Hz)

Application: Textile sun protection
Cassette box awning
(awnings systems with torque stop)

Limit switch: Electronic limits
Highlights: Blockage detection Up/Down
Limits can be adjusted via radio remote control or installation lead, plug-able cable

Fits tube: from Ø = 60 mm inside and up
Radio system: Unidirectional 915 MHz radio

Possible limit switch modes

Upper limit switch Lower limit switch

torque stop	freely programmable
freely programmable	torque stop

Type: 11 CSM-F-915 (230V/60Hz)

Application: Textile sun protection
(awning systems without torque stop)

Limit switch: Electronic limits
Highlights: Blockage detection Up/Down
Limits can be adjusted via radio remote control or installation lead, plug-able cable

Fits tube: from Ø = 60 mm inside and up
Radio system: Unidirectional 915 MHz radio

Possible limit switch modes

Upper limit switch Lower limit switch

freely programmable	freely programmable
---------------------	---------------------

Item Number	Type/Item Description
(1)	11/8 CSM-915, 80 Nm, 14/rpm
(1)	11/9.5 CSM-915, 95 Nm, 14/rpm
(1)	11/8 CSM-F-915, 80 Nm, 14/rpm
(1)	11/9.5 CSM-F-915, 95 Nm, 14/rpm

⁽¹⁾ These motors can be built in 230V/60Hz on request.

Accessories included:

Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)
- Remote transmitters (Page 154)

Technical Data on request. No UL.

Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60HZV/60 Hz

Hardwired tubular drives

RevoLine size S (40 mm drives)

RevoLine S drives – Small but full of power!

With the development of the S drives for the VariEco and RolTop series elero has considerably improved the range of motors for roller shutters and textile blinds. The hardwired drives have a diameter of 35 mm, with torques from 1.5 to 8 Nm and with speeds of up to 84 rpm. Installation is swift and simple with the aid of a pluggable cable and simple limit setting.

Perfect drive solution for indoor shading

Thanks to their small side gap and high speeds the RolTop S and the VariEco S are excellently suited to the motorization of roller blinds. Particularly recommended for the indoor area are drives with a soft brake as these are extremely quiet and thanks to their integrated slow-running mechanism ensure a gentle arrival and greater fabric protection. S drives for indoor blinds are supplied with white motor-heads – a further benefit as covers are then not required. Intelligent accessories and a wide selection of suitable ProLine control devices round off the performance profile of the S drives.

The standard speed of the RevoLine S drives is 19 rpm. The output shape is the same with all RevoLine drives and guarantees high power transmission. The drive shaft output on the S series is the same as used for the larger M and L series motors. This enables the use of M and L drive adapters on the S series motors as well (with Limit switch crown adapter). The drive version with electronic limit switches is designed for roller shutters and textile sun protection.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

RolTop S

Tubular drives for roller shutters and sun protection systems



RolTop S with white and black/orange motor head



Type: RolTop S (120V/60 Hz)

Application: Roller shutter
Limit switch: Electronic limits with Soft Stop on end position approach on motors with soft brake
Highlights: Smart force measurement
 Application protection in up and down direction and reversal upon obstruction
 Parallel connection possible
 Limits can be adjusted via installation lead, plug-able cable,
 from $\varnothing = 36$ mm inside and up
Fits tube: Silent soft brake up to 5 Nm
Features: RolTop S3/36 (fast-running version)
Recommended drives: RolTop S5/19, RolTop S8/19

Application: Textile sun protection
Limit switch: Electronic limits with Soft Stop on end position approach
Highlights: Smart force measurement
 Application protection in up and down direction and reversal upon obstruction
 Parallel connection possible
 Limits can be adjusted via installation lead, plug-able cable
 from $\varnothing = 36$ mm inside and up
Fits tube: Silent soft brake
Features: RolTop S1.5/84 (fast-running version)
Recommended drives: RolTop S3/36 (fast-running version)

Item Number	Type/Item Description
30 225.6001	RolTop S1.5/84, 1.5 Nm, 84/rpm
30 227.6001	RolTop S3/36, 3 Nm, 36/rpm
30 223.6001	RolTop S5/19, 5 Nm, 19/rpm
30 803.6001	RolTop S8/19, 8 Nm, 19/rpm

Accessories included:

Connecting cable 2.0 m long, plug-able.

On request included FOC (only on 19 rpm drives), order:

- 99 000.7401: "T"-head for motor to suit older Type 8 installations/ replacements. Restores backwards compatibility to Type 8 motors or brackets.
- or 99 000.7501: RevoLine head for motor enables use of RevoLine brackets.

Accessories used with this motor (not included with drive):



- Drive adapter (Page 106)
- Wall bracket (motor bearing) (Page 117)
- Plugs (Page 207)

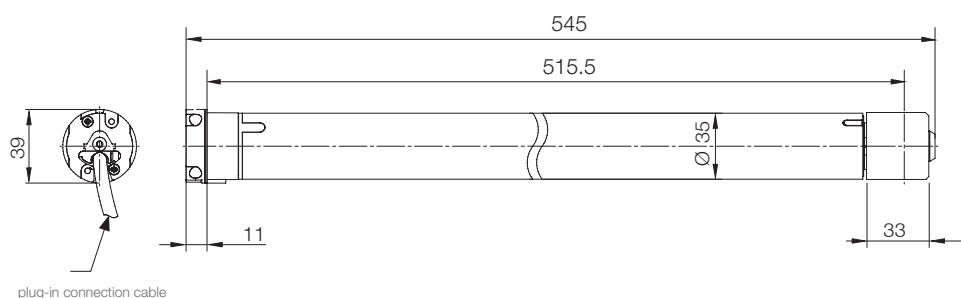


Possible limit switch modes

Upper limit switch	Lower limit switch
torque stop	freely programmable
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable

Technical data and dimensions

Type	RolTop S1.5/84	RolTop S3/36	RolTop S5/19	RolTop S8/19
Operating Voltage (V)	1 ~ 120			
Frequency (Hz)	60			
Silent soft brake	•			–
Max. torque (Nm)	1.5	3	5	8
Speed (rpm)	84	36	19	
Current (A)	1.1			
Power (W)	132			
Shaft Ø (mm)	36 inside			
Ingress protection (IP)	44			
Max. limit switch range in Revolutions of the shaft	160	80	40	
Operating mode (KB in min.)	5		5	4
Weight (kg)	1.3			
Temperature range (°C)	–20 to +60			
Conformity	 			
Motor head color	White		Black/ orange	



Accessories:



Cables
Page 204



Drive adapter sets
Page 106



RevoLine Brackets
Page 122



"T"-head Brackets
Page 117



Bracket adapters
Page 122



L-brackets and bearings
Page 117



Hardwired controllers
Page 182



Switches
Page 202



Sensors
Page 191

VariEco S



Tubular drives for roller shutters and sun protection systems



VariEco S with white and black/orange motor head



Type: VariEco S (120V/60 Hz)

Application: Roller shutter
Limit switch: Mechanical limit switches
Fits tube: from Ø = 36 mm inside and up
Features: Silent soft brake up to 5 Nm
 Limit set screw accessible from 2 sides
 Plug-able cable
Recommended drives: VariEco S3/36 (fast-running version)
 VariEco S5/19
 VariEco S8/19

Application: Textile sun protection (Blind)
Limit switch: Mechanical limit switches
Fits tube: from Ø = 36 mm inside and up
Features: Silent soft brake
 Limit set screw accessible from 2 sides
 Plug-able cable
Recommended drives: VariEco S1.5/84 (fast-running version)
 VariEco S3/36 (fast-running version)

Item Number	Type/Item Description
30 925.3021	VariEco S1.5/84, 1.5 Nm, 84/rpm
30 927.3021	VariEco S3/36, 3 Nm, 36/rpm
30 923.3021	VariEco S5/19, 5 Nm, 19/rpm
30 853.3021	VariEco S8/19, 8 Nm, 19/rpm

Accessories included:

Connecting cable 2.0 m long, plug-able.

On request included FOC (only on 19 rpm drives), order:
 - 99 000.7401: "T"-head for motor to suit older Type 8 installations/ replacements. Restores backwards compatibility to Type 8 motors or brackets.
 - or 99 000.7501: RevoLine head for motor enables use of RevoLine brackets.




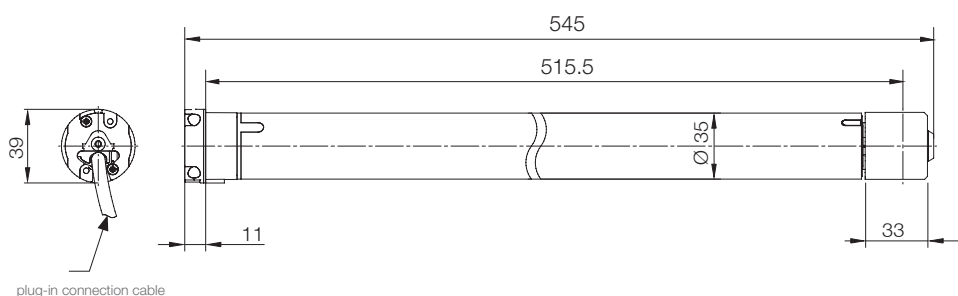
Accessories used with this motor (not included with drive):

- Drive adapter (Page 106)
- Wall bracket (motor bearing) (Page 117)
- Plugs (Page 207)

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	freely programmable

Technical data and dimensions

Type	VariEco S1.5/84	VariEco S3/36	VariEco S5/19	VariEco S8/19
Operating Voltage (V)	1 ~ 120			
Frequency (Hz)	60			
Silent soft brake	•			–
Max. torque (Nm)	1.5	3	5	8
Speed (rpm)	84	36	19	
Current (A)	1.1			
Power (W)	132			
Shaft Ø (mm)	36 inside			
Ingress protection (IP)	44			
Max. limit switch range in Revolutions of the shaft	42			
Operating mode (KB in min.)	5		4	
Weight (kg)	1.3			
Temperature range (°C)	–20 to +60			
Conformity	CE 			
Motor head	White		Black/ orange	



Accessories:



Cables
Page 204



Drive adapter sets
Page 106



Brackets (M)
Page 123



Brackets (S)
Page 122



Bracket adapters
Page 122



L-brackets and bearings
Page 117



Hardwired controllers
Page 182



Switches
Page 202



Sensors
Page 191



Hardwired tubular drives

RevoLine size M (50 mm drives)

RevoLine M – Powerful drives even without radio technology!

elero offers three different models within the RevoLine product line: The Rol for roller shutters and blinds, the Sun for awnings, and the Vari, which may be used in both areas. The extra short version with a length of 405 millimeters further enriches the standard range. All types are available with differing torques and speeds. All in all this results in a product range which offers an intelligent drive solution for every installation situation.

Size M is available with torques from 1.5 to 36 Nm. The standard speed of the RevoLine M drives is 17 rpm. 28 rpm drives are available up to 10 Nm and even 170 rpm motors are available with 1.5 Nm. The output shape is the same with all RevoLine drives and guarantees high power transmission. The drive shaft output on the M series is the same as used for the larger L series motors. This enables the use of L drive adapters on the M series motors as well (with Limit switch crown adapter). All the drives are suited to installation on the left or right side.

All M drives with a torque of up to 16 Nm have a silent, wear-free "Soft brake".

Radio
tubular drives

RevoLine M
hardwired drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

RolTop M

Tubular drives for roller shutters



Type: RolTop M (120V/60 Hz)

Application:	Roller shutter and internal roller blind
Limit switch:	Electronic limits with Soft Stop on end position approach (on motors with soft brake)
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction Limits can be adjusted via radio remote control or installation lead Plug-able cable
Fits tube:	from Ø = 46 mm inside
Features:	Silent soft brake up to 16 Nm

Item Number	Type/Item Description
34 159.6001	RolTop M2/108, 2 Nm, 108min
34 179.6001	RolTop M4/70, 4 Nm, 70/rpm
34 225.6001	RolTop M7/28, 7 Nm, 28/rpm
34 245.6001	RolTop M10/28, 10 Nm, 28/rpm
34 227.6001	RolTop M10/17, 10 Nm, 17/rpm
34 237.6001	RolTop M16/17, 16 Nm, 17/rpm
34 257.6001	RolTop M30/17, 30 Nm, 17/rpm
34 267.6001	RolTop M 36/12, 36 Nm, 12/rpm

Accessories included:



Connecting cable 2.0 m long, plug-able.

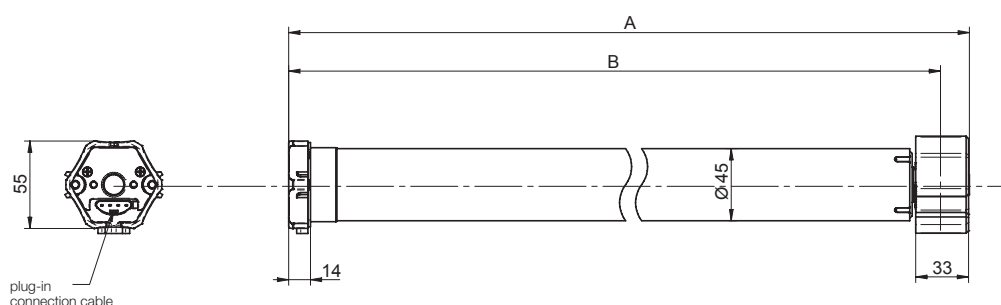
Accessories used with this motor (not included with drive):

- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Technical data and dimensions

Type	RolTop M2/108	RolTop M4/70	RolTop M7/28	RolTop M10/28	RolTop M10/17	RolTop M16/17	RolTop M30/17	RolTop M36/12
Operating Voltage (V)	1 ~ 120							
Frequency (Hz)	60							
Silent soft brake	•						—	
Max. torque (Nm)	2	4	7	10	10	16	30	36
Speed (rpm)	108	70	28		17			12
Current (A)	1.75		1.2	1.75	1.2	1.75		
Power (W)	210		144	210	144	120		
Shaft Ø (mm)	46 inside							
Ingress protection (IP)	44							
Max. limit switch range in Revolutions of the shaft	40							
Operating mode (KB in min.)	4							
Length A (mm)	540		480	540	480	540	530	
Length B (mm)	523		462	523	462	523	513	
Weight (kg)	2.2		1.9	2.2	1.9	2.2		
Temperature range (°C)	−20 to +60							
Conformity	CE   cULus							



Accessories:



Cables
Page 204



Drive adapter sets
Page 106



Brackets
Page 123



Hardwired controllers
Page 182



Switches
Page 202



Sensors
Page 191

RolTop M-K

Roller shutter drives with electronic limits – short models



Type: RolTop M-K (230V/60 Hz)

- Application:**
Roller shutter and internal roller blind
- Limit switch:
Electronic limits with Soft Stop on end position approach
- Highlights:
Smart force measurement
Application protection in up and down direction and reversal upon obstruction
Limits can be adjusted via radio remote control or installation lead
Plug-able cable
- Fits tube:
from Ø = 46 mm inside
- Features:
Silent soft brake
- Radio system:
Bidirectional 915 MHz radio including routing (alternative 868 MHz available)

Item Number	Type/Item Description
(1)	RolTop M8-K, 8 Nm, 17/rpm (with silent soft brake), overall length 405mm

(1) These motors can be built in 230V/60Hz on request and quantity orders. Correct type label for 230 V / 60 Hz can only provided on Quantity orders.

Accessories included:
Connecting cable 2.0 m long, plug-able.

- Accessories used with this motor (not included with drive):**
- Drive adapter (Page 107)
 - Wall bracket (motor bearing) (Page 116)
 - Plugs (Page 207)

Technical Data on request. No UL.

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

RolSmart M-K

Tubular drives for roller shutters – short models



Type: RolSmart M-K (230 V / 60 Hz)

Application:	Roller shutter
Limit switch:	Electronic limits with Soft Stop on end position approach
Highlights:	Smart force measurement Application protection in up and down direction Limits can be adjusted via installation lead Plug-able cable
Fits tube:	from Ø = 46 mm inside
Features:	Silent soft brake

Item Number	Type/Item Description
(1)	RolSmart M8-K, 8 Nm, 17 rpm (with silent soft brake), overall length 405 mm
(1)	RolSmart M16-K, 16 Nm, 14 rpm (with silent soft brake), overall length 520 mm

⁽¹⁾ These motors can be built in 230V/60Hz on request and quantity orders. Correct type label for 230 V / 60 Hz can only be provided on Quantity orders.

Accessories included:

Connecting cable 2.0 m long, pluggable.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Possible limit switch modes	
Upper limit switch	Lower limit switch
torque stop	freely programmable
freely programmable	torque stop
torque stop	torque stop

RolTop/D+ M



Tubular drives for roller shutters – Torque mode only motor



No limit setting required!
(requires torque stop in both directions)



Type: RolTop/D+ M (120V/60 Hz)

Application:	Roller shutter
Limit switch:	Electronic limits with Soft Stop on end position approach
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction End limits are self-learning Plug-able cable
Fits tube:	from Ø = 46 mm inside
Features:	Silent soft brake up to 16 Nm
Limitations:	Only possible to use with torque stops in both directions.

Item Number	Type/Item Description
(1)	RolTop/D+ M10, 10 Nm, 17/rpm (with silent soft brake)
(1)	RolTop/D+ M16, 16 Nm, 17/rpm (with silent soft brake)
(1)	RolTop/D+ M30, 30 Nm, 17/rpm (with flat brake)

(1) These motors can be built in 120V/60Hz and 230V/60Hz on request and quantity orders. UL approval possible on Quantity orders.
Correct type label for 120V/60Hz and 230V/60Hz can only provided on Quantity orders.

Accessories included:
Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):
- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Technical Data on request. No UL.
Certification is possible on quantity orders.

Possible limit switch modes	
Upper limit switch	Lower limit switch
torque stop	torque stop

RolTop/J M

Tubular drives for special roller shutters with louver function



Type: RolTop/J M (120V/60Hz)

- Application:** Roller shutter with louver function
- Limit switch:** Electronic limits with Soft Stop on end position approach
- Highlights:** Smart force measurement
Application protection in up and down direction and reversal upon obstruction
Limits can be adjusted via installation lead, plug-able cable
- Fits tube:** from Ø = 46 mm inside
- Features:** Silent soft brake up to 16 Nm
Drive suitable for tilt-able roller shutters
Includes special 2nd lower end position for opening shutter to tilt position
Motor has momentary function between the 2 lower end limits.
Motors with Soft brake drive drive slowly between the 2 lower limits for accurate tilting.

Item Number	Type/Item Description
(1)	RolTop/J M10, 10 Nm, 17 rpm (with silent soft brake)
(1)	RolTop/J M16, 16 Nm, 17 rpm (with silent soft brake)
(1)	RolTop/J M30, 30 Nm, 17 rpm (with flat brake)
(1)	RolTop/J M36, 36 Nm, 17 rpm (with flat brake)

⁽¹⁾ These motors can be built in 120V/60Hz and 230V/60Hz on request and quantity orders. UL approval possible on Quantity orders.
Correct type label for 120V/60Hz and 230V/60Hz can only be provided on Quantity orders.

Accessories included:

Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Technical Data on request. No UL. Certification is possible on quantity orders.

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Radio tubular drives

RevolLine M hardwired drives

Manual override tubular drives

Venetian blind drives

Speciality drives

Door drives

Mechanical accessories

Door controls

Radio controls

Hardwired controls

Electrical accessories

Adapter profiles Lifting capacity tables

SunTop M

Tubular drives for awnings



Type: SunTop M (120 V/60 Hz)

Application:	Textile sun protection
Limit switch:	Electronic limits
Highlights:	Smart force measurement
	Blockage detection Up/Down
	Limits can be adjusted via installation lead
	Plug-able cable
Fits tube:	from Ø = 46 mm inside

Item Number	Type/Item Description
34 757.6001	SunTop M30/17, 30 Nm, 17/rpm
34 767.6001	SunTop M36/12, 36 Nm, 12/rpm





Smaller and high speed versions similar to RolTop can be build with UL approval.

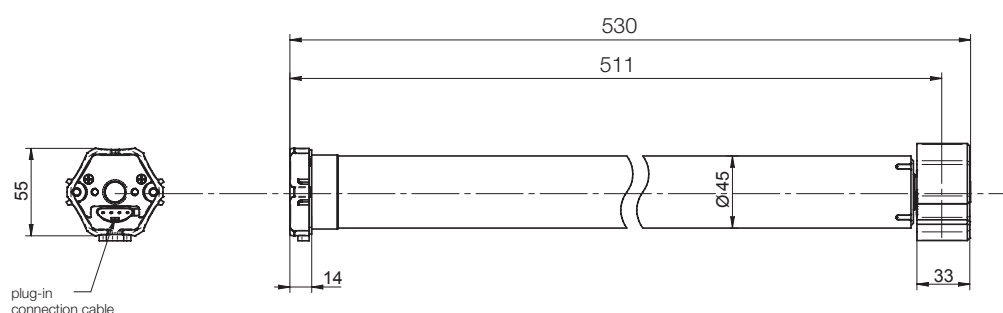
Accessories included:
Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):
- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Technical data and dimensions

Type	SunTop M30/17	SunTop M36/12
Operating Voltage (V)	1 ~ 120	
Frequency (Hz)	60	
Silent soft brake	-	
Max. torque (Nm)	30	36
Speed (rpm)	17	12
Current (A)	1.75	
Power (W)	210	
Shaft Ø (mm)	46 inside	
Ingress protection (IP)	44	
Max. limit switch range in Revolutions of the shaft	40	
Operating mode (KB in min.)	4	
Weight (kg)	2.3	
Temperature range (°C)	-20 to +60	
Conformity	   	



Accessories:



Cables
Page 204



Drive adapter sets
Page 106



L-brackets and bearings
Page 116



Hardwired controllers
Page 182



Switches
Page 202



Sensors
Page 191

SunTop/Z M-RH

Tubular drives for roller shutters



Type: SunTop/Z M RH (120V/60 Hz)

Application:	Zip drive system
Limit switch:	Electronic limits with Soft Stop on end position approach (on motors with soft brake)
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction Limits can be adjusted via radio remote control or installation lead Plug-able cable
Fits tube:	from Ø = 46 mm inside
Features:	Silent soft brake up to 16 Nm

Item Number	Type/Item Description
38 653.0011	SunTop/Z M2/108 RH, 2 Nm, 108/rpm
38 673.0011	SunTop/Z M4/70 RH, 4 Nm, 70/rpm
38 685.0011	SunTop/Z M7/28 RH, 7 Nm, 28/rpm
38 695.0011	SunTop/Z M10/28 RH, 10 Nm, 28/rpm
38 723.0011	SunTop/Z M10/17 RH, 10 Nm, 17/rpm
38 733.0011	SunTop/Z M16/17 RH, 16 Nm, 17/rpm
38 753.0011	SunTop/Z M30/17 RH, 30 Nm, 17/rpm
38 763.0011	SunTop/Z M 36/12 RH, 36 Nm, 12/rpm

Accessories included:



Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

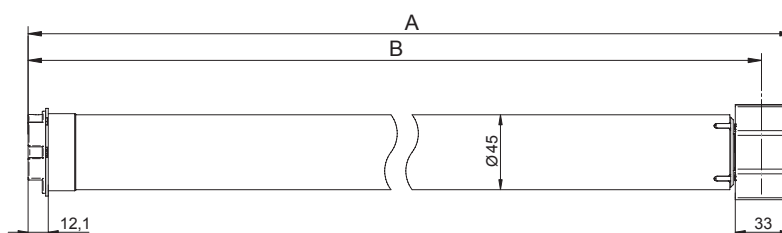
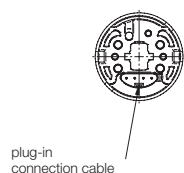
- Drive adapter (Page 107)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Technical data and dimensions

Type	SunTop/Z M2/108 RH	SunTop/Z M4/70 RH	SunTop/Z M7/28 RH	SunTop/Z M10/28 RH	SunTop/Z M10/17 RH	SunTop/Z M16/17 RH	SunTop/Z M30/17 RH	SunTop/Z M36/12 RH
Operating Voltage (V)	1 ~ 120							
Frequency (Hz)	60							
Silent soft brake	•						–	
Max. torque (Nm)	2	4	7	10	10	16	30	36
Speed (rpm)	108	70	28		17			12
Current (A)	1.75		1.2	1.75	1.2	1.75		
Power (W)	210		144	210	144	120		
Shaft Ø (mm)	46 inside							
Ingress protection (IP)	44							
Max. limit switch range in Revolutions of the shaft	40							
Operating mode (KB in min.)	4							
Length A (mm)	538		478	538	478	538	528	
Length B (mm)	521		460	521	460	521	511	
Weight (kg)	2.2		1.9	2.2	1.9	2.2		
Temperature range (°C)	–20 to +60							
Conformity	CE   cRU _{US} IC							

* UL approval pending



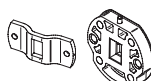
Accessories:



Cables
Page 204



Drive adapter sets
Page 106



Brackets
Page 119



Hardwired controllers
Page 182



Switches
Page 202



Sensors
Page 191

VariEco M

Tubular drives for roller shutters and sun protection systems



Type: VariEco M (120V/60 Hz)

- Application:
- Roller shutter and textile sun protection
- Limit switch:
- Mechanical limit switches
- Fits tube:
- from Ø = 46 mm
- Features:
- Silent soft brake up to 16 Nm
- Plug-able cable

Item Number	Type/Item Description
34 925.3021	VariEco M7/28, 7 Nm, 28/rpm
34 935.3021	VariEco M10/28, 10 Nm, 28/rpm
34 927.3021	VariEco M10/17, 10 Nm, 17/rpm
34 937.3021	VariEco M16/17, 16 Nm, 17/rpm
34 957.3021	VariEco M30 /17, 30 Nm, 17/rpm

Accessories included:
Connecting cable 2.0 m long, plug-able.

- Accessories used with this motor (not included with drive):
- Drive adapter (Page 107)
 - Wall bracket (motor bearing) (Page 116)
 - Plugs (Page 207)



Technical Data on request. No UL. Certification is possible on quantity orders.

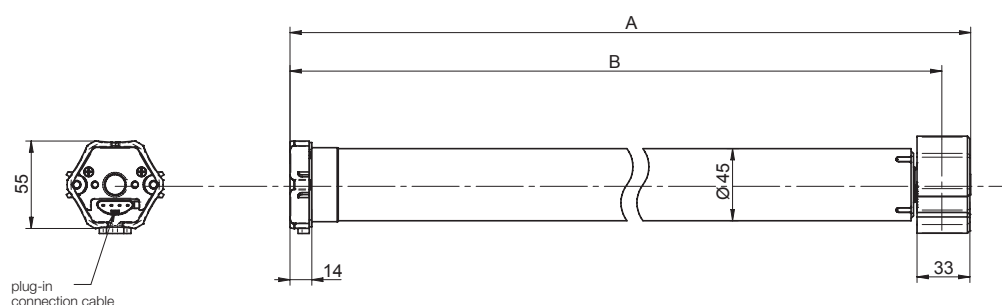
Possible limit switch modes

Upper limit switch Lower limit switch

freely programmable freely programmable

Technical data and dimensions

Type	VariEco M7/28	VariEco M10/28	VariEco M10/17	VariEco M16/17	VariEco M30
Operating Voltage (V)	1 ~ 120				
Frequency (Hz)	60				
Silent soft brake	•				–
Max. torque (Nm)	7	10	10	16	30
Speed (rpm)	28		17		
Current (A)	1.2	1.75	1.2	1.75	
Power (W)	144	210	144	210	
Shaft Ø (mm)	46 inside				
Ingress protection (IP)	44				
Max. limit switch range in Revolutions of the shaft	35				
Operating mode (KB in min.)	5	4	5	4	
Length A (mm)	491	552	491	552	542
Length B (mm)	474	535	474	535	525
Weight (kg)	1.9	2.2	1.9	2.2	
Temperature range (°C)	–20 to +60				
Conformity	CE  				



Accessories:



Cables
Page 204



Drive adapter sets
Page 106



Brackets
Page 116



Hardwired controllers
Page 182



Switches
Page 202



Sensors
Page 191



Hardwired tubular drives

RevoLine size L (60 mm drives)

RevoLine L drives – Power packs with lots of sensitivity!

The RevoLine drives move roller shutters and awnings with a high degree of precision and sensitiveness. Torque reduction guarantees a gentle “arrival”, thus lowering the applied force and extending the life-cycle of fabrics. The output shape is the same with all RevoLine drives and guarantees high power transmission.

Size L is available with torques of 48 Nm and 64 Nm. The output shape is the same with all RevoLine drives and guarantees high power transmission. All the drives are suited to installation on the left or right side.

Radio
tubular drives

RevoLine L
hardwired drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

RolTop L

Tubular drives for roller shutters with electronic limits



Type: RolTop L (230V/60Hz)

Application:	Roller shutter and small doors
Limit switch:	Electronic limits with Soft Stop on end position approach
Highlights:	Smart force measurement Application protection in up and down direction and reversal upon obstruction Limits can be adjusted via installation lead Plug-able cable
Fits tube:	from Ø = 58 mm inside

Item Number	Type/Item Description
(1)	RolTop L48, 48 Nm, 17/rpm
(1)	RolTop L64, 64 Nm, 17/rpm
(1)	RolTop L48, 48 Nm, 17/rpm (without reversal upon obstruction)
(1)	RolTop L64, 64 Nm, 17/rpm (without reversal upon obstruction)

⁽¹⁾ These motors can be built in 230V/60Hz on request. Correct type label for 230V/60Hz can only be provided on Quantity orders.

Accessories included:

Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Technical Data on request. No UL.

Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60HZ.

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

SunTop L

Tubular drives for sun protections systems with electronic limits



Type: SunTop L (230V/60Hz)

Application: Textile sun protection
Limit switch: Electronic limits with Soft Stop on end position approach
Highlights: Smart force measurement
 Blockage detection Up/Down
 Limits can be adjusted via installation lead
 Plug-able cable
Fits tube: from Ø = 58 mm inside

Item Number	Type/Item Description
(1)	SunTop L48, 48 Nm, 17 rpm
(1)	SunTop L64, 64 Nm, 17 rpm

⁽¹⁾ Motors are indicated on type label as 230V/50Hz with higher torque and lower speed than indicated here.
 Correct type label for 230V/60Hz can only be provided on Quantity orders.

Accessories included:

Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):

- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Technical Data on request. No UL.

Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60HZ.

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	torque stop
torque stop	torque stop
freely programmable	freely programmable
torque stop	freely programmable

Radio
tubular drives

RevolLine L
hardwired drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

VariEco L

Tubular drives for roller shutters and sun protection systems



Type: VariEco L (230V/60Hz)

Application: Roller shutter and textile sun protection
Limit switch: Mechanical limit switches
Fits tube: from Ø = 58 mm
Highlights: Plug-able cable

Item Number	Type/Item Description
(1)	VariEco L48, 48 Nm, 17/rpm
(1)	VariEco L64, 64 Nm, 17/rpm

⁽¹⁾ These motors can be built in 230V/60Hz on request. Correct type label for 230V/60Hz can only be provided on Quantity orders.

Accessories included:
Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):
- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Technical Data on request. No UL.
Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60HZ.

Possible limit switch modes

Upper limit switch	Lower limit switch
freely programmable	freely programmable

Hardwired tubular drives Type 11 (63 mm drives)

Type 11

The drives are available in 100 Nm and 120 Nm. The high precision mechanical limit switches are easily accessible and ensure a very high repetitive accuracy. The drive features a plug-able cable which is 2.0 m long.

Type 11 CSM-E

The Type 11 CSM-E is an awning drive with electronic regulation and an integrated release function at the upper end point. Programming is conducted very simply using the installation cable, with visible and audible feedback from the drive.

Important: CSM-E drives may not be connected in parallel with conventional limit switch drives. Please note that with this drive the smallest tube interior diameter is 60 mm.

The connection cable has a length of 2.0 m and is pluggable. Thanks to its RevoLine output the drive can also be used with the RevoLine adapters.

Radio
tubular drives

Type 11
hardwired drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Type 11

Tubular drives with mechanical limit switches for roller shutters and sun protection systems



Type: 11 (120 V/60 Hz)

Application: Roller shutter and textile sun protection
Limit switch: Mechanical limit switches
Fits tube: from Ø = 60 mm inside
Features: Plug-able cable

Item Number	Type/Item Description
31 231.0001	11/4, 40 Nm, 18/rpm
31 241.0001	11/6, 60 Nm, 13/rpm
31 251.0003	11/8, 80 Nm, 14/rpm
31 721.0002	11/10, 100 Nm, 10/rpm

Accessories included:
Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):
- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Possible limit switch modes




Upper limit switch

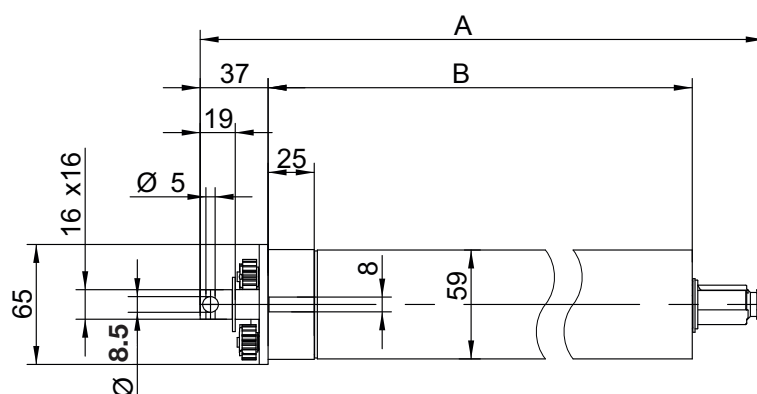
Lower limit switch

freely programmable

freely programmable

Technical data and dimensions

Type	Type 11/4	Type 11/6	Type 11/8	Type 11/10
Operating Voltage (V)	1 ~ 120			
Frequency (Hz)	60			
Max. torque (Nm)	40	60	80	100
Speed (rpm)	18	13	14	10
Current (A)	3.3		3.4	
Power (W)	330		350	
Shaft Ø (mm)	60 inside			
Ingress protection (IP)	44			
Max. limit switch range in Revolutions of the shaft	21			
Operating mode (KB in min.)	4			
Length A (mm)	694			
Length B (mm)	618			
Weight (kg)	4.9			
Temperature range (°C)	-20 to +60			
Conformity	  			



Accessories:



Cables
Page 206



Drive adapter sets
Page 112



Brackets
Page 118



Radio control units
Page 154



Radio receivers
Page 170



Radio sensors
Page 172



Wall mount controllers
Page 182



Hardwired sensors
Page 194



Switches
Page 202

Type 11 CSM-E

Tubular drives for awnings with electronic limits



Type: 11 CSM-E (230V/60 Hz)

Application:	Textile sun protection
Limit switch:	Electronic limits
Highlights:	Smart force measurement
	Blockage detection Up/Down
	Parallel connection possible
	Limits can be adjusted via installation lead
	Plug-able cable
Fits tube:	from Ø = 60 mm inside

Item Number	Type/Item Description
(1)	11/8 CSM-E, 80 Nm, 14/rpm
(1)	11/9.5 CSM-E, 95 Nm, 14/rpm

⁽¹⁾ These motors can be built in 230V/60Hz on request. Correct type label for 230V/60Hz can only be provided on Quantity orders.

Accessories included:
Connecting cable 2.0 m long, plug-able.

Accessories used with this motor (not included with drive):
- Drive adapter (Page 109)
- Wall bracket (motor bearing) (Page 116)
- Plugs (Page 207)

Technical Data on request. No UL.
Note: Motors are designed for 50 Hz and indicated on name plate but will be able to operate on 230V/60HZ.

Possible limit switch modes	
Upper limit switch	Lower limit switch
torque stop	freely programmable
freely programmable	torque stop

Hardwired tubular drive Type 15

elero heavy duty tubular drives have a lot of advantages

Type 15 is the ideal drive for heavy roller shutters, small rolling gates and roller grilles. The drive with 200 Nm is UL approved and easy to install in even the tightest locations.

This drive also finds it's use in oversized awnings and pergolas with plenty of power reserves for piece of wind.

Tip:

Not sure which motor can fit your installation? Use our drive calculation Software to calculate the required torque:

Software for PC

On www.elero.us in the category **Service/Drive computation program**



Software
for Android Smartphones



Software
for iPhone/iPad

Radio
tubular drives

Type 15
hardwired drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Type 15 W

Tubular drives for doors



Tubular drives Type 15 W

Application: Oversized textile sun protection and small doors

Limit switch: Mechanical limits
Highlights: Highly reliable, robust drive
Fits tube: from Ø = 94 mm inside and up

A benefit of these tubular drives is the possibility to use changeable couplings (adapters) for tubes of Ø 98 × 2.0 mm to 168 × 4.0 mm or SW 114 (octagonal). The gearbox with its large dimensions ensures a long service life. Optimum gearing guarantees that the drives are pleasantly quiet when in operation.

The fixing plates of the Type 15 W... drives must be installed at right angles to the fixing area. It is imperative to use the wall bracket pocket item no. 23 100.0001 in case of unevenness.



Item Number	Type/Item Description
32 701.3001	T 15/20 W
23 100.0001	Wall bracket pocket for Type 15 W
13 301.4901	Wall bracket plate for Type 15
13 305.9201	Wall bracket angle plate for Type 15 (Center axis height is equal to Intertia Brake TA 1/2 (24 552.0003))

230 V/ 50 Hz drives with higher torques and manual override are available as well without UL. Drives can also be operated at 60 Hz.

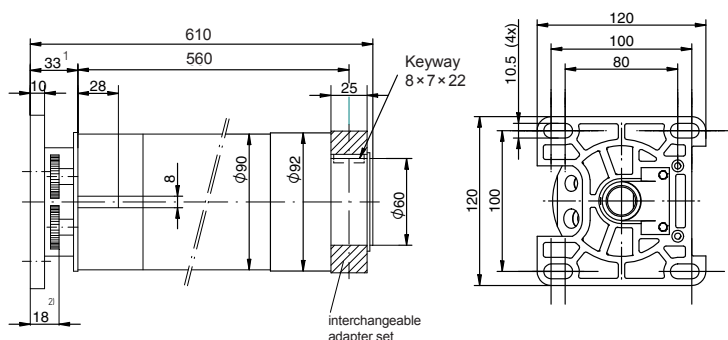
Accessories included:
Connecting cable 3.0 m long.

Exclusive of: drive adapter, wall bracket and switches.

Technical data and dimensions

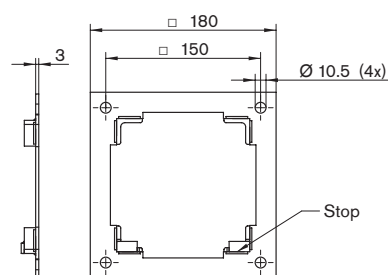
Type	Type 15/20 W
Operating Voltage (V)	1 ~ 120
Rated frequency (Hz)	60
Max. torque (Nm)	200
Speed (rpm)	15
Current (A)	7.2
Power (W)	950
Shaft Ø (mm)	98
Ingress protection (IP)	44
Max. limit switch range in Revolutions of the shaft	12
Operating mode (KB in min.)	5
On/ Off duty cycle $\frac{1}{12} h^{-1}$	1/12
Weight (kg)	13
Temperature range (°C)	-20 to +60
Conformity	CE  

* One door cycle is:
5 revolutions OPEN – 30 sec. pause – CLOSE.



- 1) Lateral space requirements
2) Lateral space requirements in case of overwinding of the limit switch

Wall bracket pocket



Accessories:



Wall bracket pocket
Page 62



Wall bracket plate
Page 62



Wall bracket angle
Page 62



Drive adapter sets
Page 113



Switches
Page 202



Type 9 MO (50 mm drives) with manual override

Optimum operation!

These drives allow for the optimum operation of gates and doors, roller shutters and awnings. The characteristic features are the well-balanced torques of 8 to 50 Nm. Even in the event of a power failure the system may be operated quite simply with an emergency crank handle. The mechanical limit stop is simple to adjust, regardless of whether it is installed on the left or right side. The compact design of the tubular drives is excellently suited to installation in confined spaces and can also be used for roll-down systems. The end position setting is not changed when using the manual override. The safety gear box will not allow any feedback on the crank handle in case power returns to the motor while operating the motor manually.

Radio
tubular drives

Hardwired
tubular drives

Type 9 MO
manual override

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

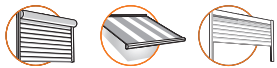
Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Type 9 MO

Tubular drives with manual override (MO)



Type: 9 MO

- Application:**
Limit switch:
Fits tube:
Features:
- Door, roller shutter and textile sun protection**
Mechanical limit switches
from Ø = 47 mm inside
Manual override
Strong and durable motor

Item Number	Type/Item Description
31 031.0003	9/1 MO, 10 Nm, 16/rpm
31 041.0003	9/1.8 MO, 18 Nm, 16/rpm
31 051.0003	9/2.5 MO, 25 Nm, 12/rpm
31 272.0002	9/3 MO, 30 Nm, 12/rpm
31 282.0002	9/4 MO, 40 Nm, 12/rpm







Accessories included:
Connecting cable 2.0 m long.

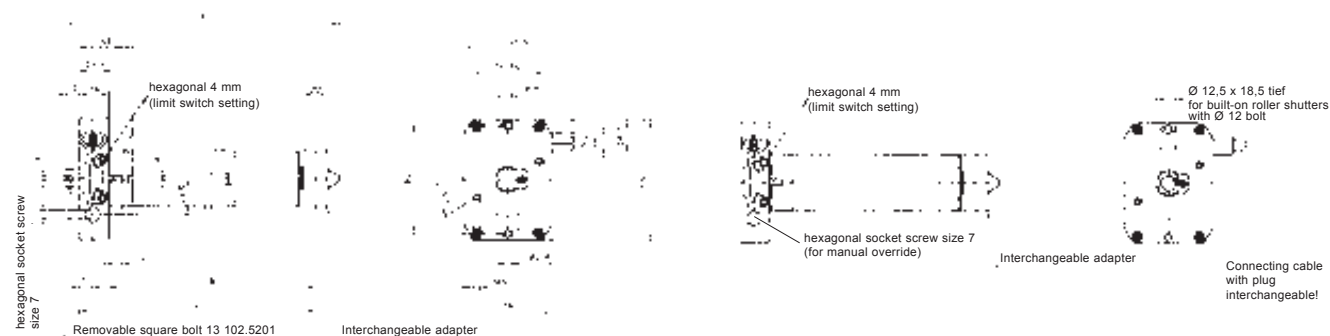
- Accessories used with this motor (not included with drive):**
- Drive adapter (Page 110)
 - Wall bracket (motor bearing) (Page 118)
 - Plugs (Page 207)
 - Switches (Page 202)
 - Crank handle (Page 137)

Possible limit switch modes

Upper limit switch	Lower limit switch
freely programmable	freely programmable

Technical data and dimensions

Type	Type 9/1 MO	Type 9/1.8 MO	Type 9/2.5 MO	Type 9/3 MO	Type 9/4 MO
Operating Voltage (V)	1 ~ 120				
Frequency (Hz)	60				
Max. torque (Nm)	10	18	25	30	40
Speed (rpm)	16		12		
Current (A)	1.8			2.0	
Power (W)	200			240	
Shaft Ø (mm)	47 inside				
Ingress protection (IP)	44				
Max. limit switch range in Revolutions of the shaft	29				
Operating mode (KB in min.)	4				
Length A (mm)	617			651	671
Length B (mm)	559			593	613
Length C (mm)	585			619	639
Weight (kg)	2.75		2.74	3.1	3.25
Temperature range (°C)	-20 to +60				
Conformity	  			  	



Accessories:



Plugs & Connectors
Page 207



Drive adapter sets
Page 110



Mounting plates
and brackets
Page 118



NHK accessories
Page 137



Safety brakes
Page 130



Drive adapter sets
for safety brakes
Page 130



Radio control units
Page 154



Radio receivers
Page 170



Radio sensors
Page 172



Wall mount controllers
Page 182



Hardwired sensors
Page 194



Key switches
Page 202



Type 11 MO (63 mm drives) with manual override

Optimum operation!

These drives allow for the optimum operation of gates and doors, roller shutters, awnings. The characteristic features are the well-balanced torques of 40 to 100 Nm. Even in the event of a power failure the system may be operated quite simply with an emergency crank handle. The mechanical limit stop is simple to adjust, regardless of whether it is installed on the left or right side. The compact design of the tubular drives is excellently suited to installation in confined spaces and can also be used for roll-down systems. The end position setting is not changed when using the manual override.

The safety gear box will not allow any feedback on the crank handle in case power returns to the motor while operating the motor manually.

Radio
tubular drives

Hardwired
tubular drives

Type 11 MO
manual override

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

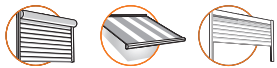
Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Type 11 MO

Tubular drives with manual override (MO)



Type: 11 MO

Application: Door, roller shutter and textile sun protection
Limit switch: Mechanical limit switches
Fits tube: from Ø = 60 mm
Features: Manual override
Strong and durable motor

Item Number	Type/Item Description
31 831.0003	11/4 MO, 40 Nm, 18/rpm
31 841.0003	11/6 MO, 60 Nm, 13/rpm
31 851.0004	11/8 MO, 80 Nm, 14/rpm
31 731.0003	11/10 MO, 100 Nm, 10/rpm

Accessories included:
Connecting cable 2.0 m long.

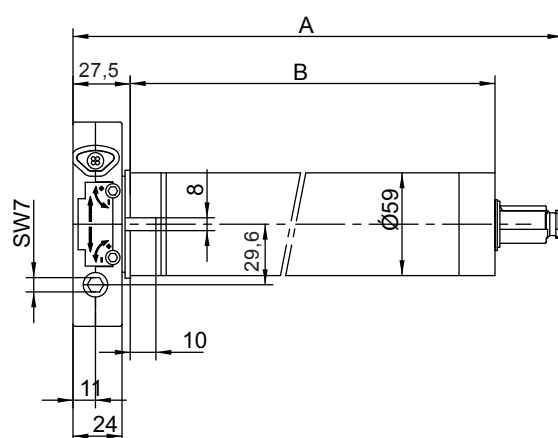
Accessories used with this motor (not included with drive):
- Drive adapter (Page 110)
- Wall bracket (motor bearing) (Page 118)
- Plugs (Page 207)
- Switches (Page 202)
- Crank handle (Page 137)

Possible limit switch modes	
Upper limit switch	Lower limit switch
freely programmable	freely programmable

Technical data and dimensions

Type	Type 11/4 MO	Type 11/6 MO	Type 11/8 MO	Type 11/10 MO
Operating Voltage (V)	1 ~ 120			
Frequency (Hz)	60			
Max. torque (Nm)	40	60	80	100
Speed (rpm)	18	13	14	10
Current (A)	3.3		3.4	
Power (W)	330		350	
Shaft Ø (mm)	60 inside			
Ingress protection (IP)	44			
Max. limit switch range in Revolutions of the shaft	29			
Operating mode (KB in min.)	5		4	
Length A (mm)	673			
Length B (mm)	639			
Weight (kg)	4.35	4.42	5.53	5.54
Temperature range (°C)	-20 to +60			
Conformity	CE cULus		CE cULus	

Drives with larger limit switch range or for 100 V – 250 V/50 or 60 Hz are available on request.



Accessories:



Plugs & Connectors
Page 207



Drive adapter sets
Page 112



Mounting plates
and brackets
Page 118



NHK accessories
Page 137



Safety brakes
Page 130



Drive adapter sets
for safety brakes
Page 130



Radio control units
Page 154



Radio receivers
Page 170



Radio sensors
Page 172



Wall mount controllers
Page 182



Hardwired sensors
Page 194



Key switches
Page 202



Venetian blind drives

JA Soft/JAdk

Automated venetian blinds – reliable and precise!

JA drives are tailored in an optimum manner to the specific requirements of venetian blinds. Their reliability and precision make them maintenance-free “assistants”. They are fitted with thermal overload protection and easy-to-set limit switches. The limit switches for the upper and lower switching points are separate and accessible from outside. The drives are available with torques of 6 to 20 Nm, for all installation positions, and since recently also as a DC version. An indestructible planetary gear, the splash-proof motor housing, and the use of extremely precise individual components ensure the highest quality and a long service life. JA drives with a “Soft” brake guarantee a gentle arrival – without any disturbing clicking noise, something which is a particularly major advantage for the indoor area and in the event of frequent adjustment by building automation systems. External radio receivers are available for integration into radio systems: The Combio-915 JA, Combio-915 JA Pulse and Revio-915 ensure the retrofitting of venetian blinds is child’s play.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Venetian blind drives JA Soft/JAdk



Venetian blind drive JA



JA Soft, JAdk

Type: JA drives (120V/60 Hz)

Application: Venetian blind/Roman shades/
speciality applications

Limit switch: Mechanical limit switches

Features: Silent soft brake
(only JA Soft versions)

Venetian blind drive JA soft

The JA Soft venetian blind drives from elero may be installed on the right or left, and have a silent "Soft brake" without any annoying clicking noise, something which is particularly beneficial in indoor areas and in the event of frequent adjustment by building automation systems.

This compact motor with built in limits is also suited for a wide range of speciality applications. Also frequently used to adjust louver blades and ventilation blades in combination with our LimaLine system (Page 262). The JA drives are suitable for head box 55 × 55 mm or larger.

Soft = Silent soft brake, drive shaft output on both sides
dk = Standard brake system, drive shaft output on both sides

Item Number	Type/Item Description
35 802.6001	JA 08 Soft, 8 Nm, 30/rpm
35 732.6001	JA 12dk, 12 Nm, 30/rpm
(1)	JA 16dk, 16 Nm, 30/rpm

⁽¹⁾ Motors are indicated on type label as 230V/60Hz with higher torque and lower speed than indicated here.
Correct type label for 230V/60Hz can only be provided on Quantity orders.








Accessories included:

Connecting cable 1.9 m with bare wires.

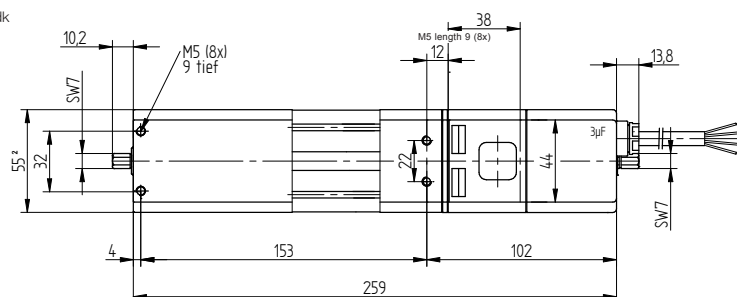
Accessories used with this motor (not included with drive):

- Drive adapter (Page 105)
- Supply side plugs (Page 207)
- Switches (Page 202)

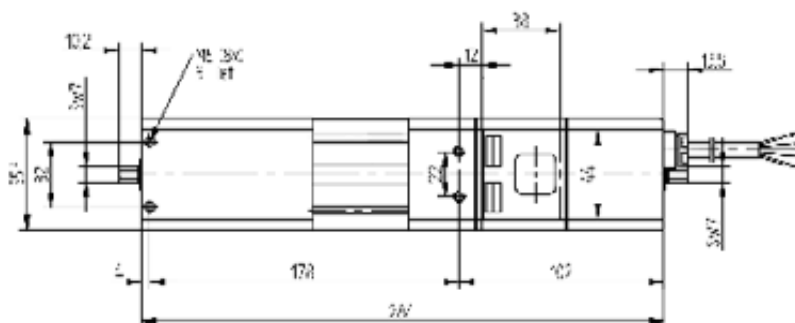
Technical data and dimensions

Type	JA 08 Soft	JA 12dk	JA 16dk
Operating Voltage (V)	1 ~ 120		1 ~ 230
Frequency (Hz)	60		
Silent soft brake	•	–	
Max. torque (Nm)	8	12	16
Speed (rpm)	30		
Current (A)	1.3		1.0
Power (W)	155		230
Shaft (mm)	7 hexagonal		
Ingress protection (IP)	44		
Max. limit switch range in Revolutions of the shaft	85		
Operating mode (KB in min.)	4		
Length (mm)	260		284
Weight (kg)	1.8	1.81	2.23
Temperature range (°C)	–20 to +60		
Conformity	   		  

JA 08 Soft, JA 12 dk



JA 20 dk



Dimension sheets for
Venetian blind drives
JAE and JAdk on
request.

Accessories:



Plugs
Page 207



Assembly kits
Page 80



Damper
Page 79



Spring clips
Page 80



Installation cable with
Hirschmann plug
Page 80



Drive shaft adapters
Page 78



Radio control units
Page 154



Radio receivers
Page 170



Radio sensors
Page 172



Wall mount
controllers
Page 182



Hardwired
sensors
Page 194



Accessories for Venetian blind drives

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Accessories
Venet. blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Drive shaft adapters for Venetian blind drives



1 piece

Item Number	Type/Item Description
16 300.3501	Hexagonal 6.0 mm
16 300.1301	Hexagonal 8.0 mm
16 300.1401	Hexagonal 9.0 mm
16 300.2801	Hexagonal 11.0 mm
16 300.8901	Square 6.0 mm
16 300.1001	Square 8.0 mm
16 300.1101	Square 9.0 mm
16 300.1501	Notch tube Ø 12.0 mm

Drive shaft adapter set

- 2 adapters
- Taptite screws
- Set screws, micro-encapsulated

Item Number	Type/Item Description
26 512.1001	Hexagonal 9.0 mm
26 506.1001	Hexagonal 13.0 mm



Drive shaft adapters, 1 piece, QuickSnap

Item Number	Type/Item Description
16 300.1202	Hexagonal 7.0 mm, short
16 300.0902	Square 7.0 mm, short
16 300.0702	Square 12.0 mm, short
16 300.2402	Square 10.0 mm, short
16 300.1602	Notch tube Ø 14.0 mm, short
16 300.8502	Square 7.0 mm, short with M4 thread

Drive shaft adapter set, QuickSnap

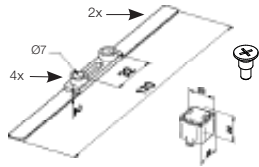
- 2 adapters
- 2 set screws, micro-encapsulated



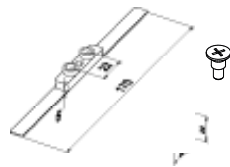
Item Number	Type/Item Description
26 514.0002	Hexagonal 11.0 mm
26 500.1002	Notch tube 14.0 mm, long
26 504.1002	Square 12.0 mm, long
26 513.1002	Square 10.0 mm, long
26 522.0002	Square 7.0 mm, short
26 517.0001	Square 6.0 mm

Mechanical assembly accessories

JA/JAR assembly kit with 2 dampers, 4 screws, safety cut-out right (orange) and assembly instruction

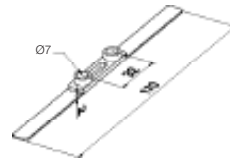


26 520.0002
for 29.5 mm shaft height

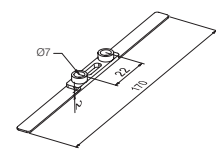


26 521.0002
for 35.5 mm shaft height (Faber)

Dampers



16 101.6001
Height: 2.0 mm
Hole distance: 32.0 mm
For shaft height: 29.5 mm



16 101.6101
Height: 2.0 mm
Hole distance: 22.0 mm
For shaft height: 29.5 mm

Dampers



16 101.6201
Height: 8.0 mm
Hole distance: 32.0 mm
For shaft height: 35.5 mm



16 101.6301
Height: 8.0 mm
Hole distance: 22.0 mm
For shaft height: 29.5 mm

Dampers with fixing knobs



16 103.1801
Height: 2.0 mm
Knob distance: 32.0 mm
For shaft height: 29.5 mm
Use with spring clip 16 302.3201



16 103.1901
Height: 2.0 mm
Knob distance: 22.0 mm
For shaft height: 29.5 mm
Use with spring clip 16 302.3201

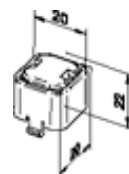
Screws



16 300.7301
Screws for 2.0 mm damper height



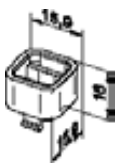
16 300.7401
Screws for 8.0 mm damper height



26 200.1101
Safety cut-out left (white limit)



26 200.3601
Safety cut-out right (orange limit)



16 101.4501
Safety cut-out extension, 10.0 mm



26 200.8101
Extended Safety cut-out right (orange limit) 49 mm high



26 200.8001
Extended Safety cut-out right (orange limit), angled 60 mm high



16 701.4701
Angled cap for Safety cut-out suitable for left and right

Radio tubular drives

Hardwired tubular drives

Manual override tubular drives

Accessories Venet. blind drives

Specialty drives

Door drives

Mechanical accessories

Door controls

Radio controls

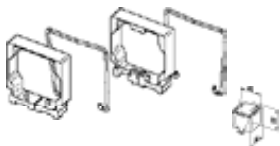
Hardwired controls

Electrical accessories

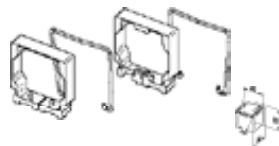
Adapter profiles Lifting capacity tables

Mechanical assembly accessories

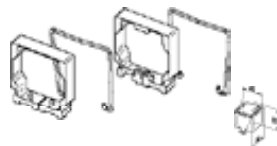
Spring clip fixing kits for Venetian blind drives



26 611.0001
for head box 68 × 66 mm;
shaft height: 35 mm (Griesser)
Set includes:
2 × 16 300.8802 Spring clip
1 × 16 300.8601 Rubber damper
1 × 16 300.8701 Rubber damper
1 × 26 200.3601 Safety cut-off
right



26 612.0001
for head box 58 × 56 mm;
shaft height: 29 mm
Set includes:
2 × 16 302.2001 Spring clip
1 × 16 302.2101 Rubber damper
1 × 16 302.2201 Rubber damper
1 × 26 200.3601 Safety cut-off
right



26 613.0002
Set of 10 for head box
58 × 56 mm; shaft height: 29 mm
Set includes:
2 × 16 302.2001 Spring clip
1 × 16 302.2101 Rubber damper
1 × 16 302.2201 Rubber damper
1 × 26 200.3601 Safety cut-off
right

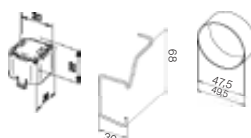


26 529.0001
for head box 55 × 50,
shaft height 29.5 mm
Set includes:
2 × 16 302.3201 Spring clip
1 × 16 103.1801 Rubber damper
with knobs
1 × 16 103.1901 Rubber damper
with knobs
1 × 26 200.3601 Safety cut-off right

Assembly kit JA complete



26 528.0001
for head box 55 × 50,
shaft height 29.5 mm
Set includes:
1 × 16 103.1801 Rubber damper
with knobs
1 × 16 103.1901 Rubber damper
with knobs
1 × 26 200.3601 Safety cut-off
right



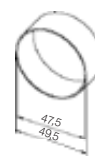
26 527.0001
for head box 55 × 50,
shaft height 29 mm
Containing:
2 × 16 302.3201 spring clip wire
2 × 16 302.8301 rubber damper
1 × safety cut-out orange

Spring clip, wire



16 302.3201
Clamping spring for head
box 55 × 50 mm;
Shaft height 29,5 mm
(2 pieces are required per drive)

Hose piece



16 302.8301
Rubber damper tape for Venetian
blind drives, (2 pieces are
required per drive), use with
spring clip 16 302.3201

Electrical accessories

Hirschmann plugs male



23 846.0001
Stas 3 with clip
(motor side, male)
UL recognized



13 708.6601
Stas 4 for JAR and SMI motors
(motor side, male)



13 701.5301
Stak 3
(power supply side, female)
UL recognized



13 704.9801
Stak 4 for JAR and SMI motors
(power supply side, female)



16 101.0101
Rubber insert to close hole in
head rail to allow Hirschmann
plug and cable trough



13 707.5701
Cable clip for head rail

Speciality drive Box 5

Adapter profiles Lifting capacity tables	Electrical accessories	Hardwired controls	Radio controls	Door controls	Mechanical accessories	Door drives	Speciality drives	Venetian blind drives	Manual override tubular drives	Hardwired tubular drives	Radio tubular drives
---	---------------------------	-----------------------	-------------------	---------------	---------------------------	-------------	----------------------	--------------------------	-----------------------------------	-----------------------------	-------------------------

Box 5

Shaft-mounted drive



Easy to mount, compact, powerful and robust

Retrofit installations in awnings, adjusting automatically ventilating shutters in the conservatory, moving antiglare devices, operating glass screens in green houses – there are many applications, where you can simply apply this robust drive.

It's extremely easy to mount and can be installed directly on a 18 × 18 mm square shaft. Upper and lower limits are simply set by the integrated dials. It doesn't need any kind of maintenance. In case of power supply failure it is possible to use the built-in manual override.

The Box 5 shaft mounted drive for awnings is perfect for retrofit installations in sun protection systems or similar applications.

Item Number	Type/Item Description
41 024.0001	Box 5, 120 V, 40 Nm, 14/rpm
41 014.0001	Box 5, 230 V, 48 Nm, 14/rpm
14 100.8101	Adapter 13 × 13 mm for BOX 5 (reducing bushes)
14.301.0401	Drive belt for Box-5
10.105.0219	Belt tension bearings
10.120.0311	Belt tension bearing Shaft

Accessories included:

Including hardwired connection cable 1.5 mm.
(Cross section 4 × 0.75)

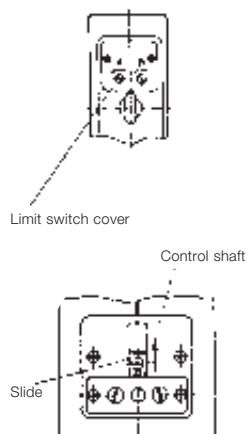
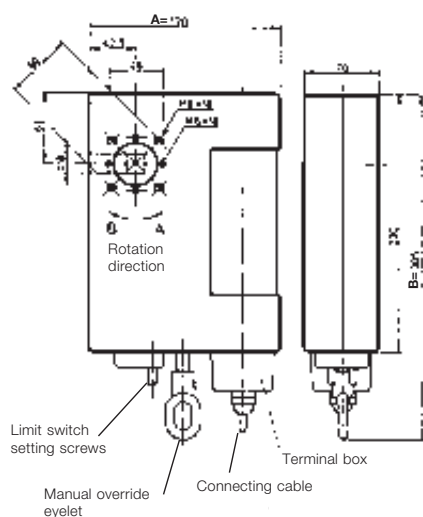
Accessories used with this motor (not included with drive):

- Plugs (Page 207)
- Switches (Page 202)
- Manual override cranks (Page 137)

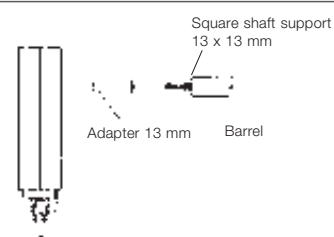
No UL.

Technical data and dimensions

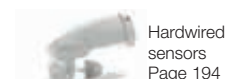
Type	Box 5		Box 5	
Operating Voltage (V)	1 ~ 120		1 ~ 230	
Frequency (Hz)	60			
Max. torque (Nm)	40		48	
Speed (rpm)	13.5			
Current (A)	3.3		2.2	
Power (W)	350		500	
Lateral space requirement (mm)	70			
Ingress protection (IP)	54			
Max. limit switch range in Revolutions of the shaft	21			
Rating (min)	5			
Lifting capacity on the barrel (N):	1,660	48	2,000	48
Barrel-Ø (mm)	1,330	60	1,600	60
	1,260	63	1,520	63
	1,130	70	1,360	70
	960	83	1,150	83
Length A (mm)	170			
Length B (mm)	305			
Weight (kg)	4.83			
Temperature range (°C)	- 20 to + 60			
Conformity	CE			



Installation of the adapter



Accessories:



Solar drive systems 12V DC



Solar drives with mechanical limit switches for roller shutters and textile sun protection



VariEco M-915 DC, JA Soft DC

Type: VariEco M DC/VariEco M-915 DC (12V DC)

Function: Roller shutter and textile sun protection
Limit switch: Mechanical limit switches
Features: Silent soft brake
 Parallel connection without load increase on switch gear is possible
 No special DC pole changing switches required
Fits tube: from Ø = 50 mm

Type: SunTop L DC/SunTop L-915 DC (12V DC)

Function: Textile sun protection
Limit switch: Electronic limits with Soft Stop on end position approach
Features: Smart force measurement
 Blockage detection Up/Down
 Limits can be adjusted via radio remote control (radio version only) or installation lead
 No special DC pole changing switches required
Fits tube: from Ø = 63 mm

Type: JA 10 Soft DC (12V DC)

Function: Roller Blind/Raffstore
Limit switch: Mechanical limit switches
Features: Silent soft brake
 Parallel connection without load increase on switch gear is possible
 No special DC pole changing switches required

Item Number	Type/Item Description
(1)	VariEco M10-915 DC (including unidirectional radio receiver; with silent soft brake)
(1)	VariEco M10 DC (with silent soft brake)
(1)	SunTop L40-915 DC (including unidirectional radio receiver) *
(1)	SunTop L40 DC *
(1)	JA 10 Soft DC (with silent soft brake)
(1)	3.0 m plug-in connecting cable (spare part)

⁽¹⁾ Product under development. Please check with us for availability.

Accessories included:

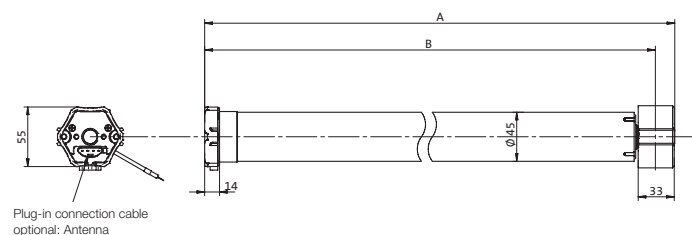
Tubular drives VariEco/SunTop: Connecting cable 3.0 m long, pluggable.
 JA Soft DC: Connecting cable 0.8 m long.

* Please contact us for availability.

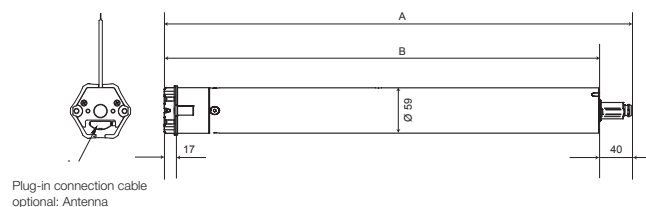
Technical data and dimensions

Type	VariEco M10-915 DC	VariEco M10 DC	SunTop L40-915 DC	SunTop L40-DC	JA 10 Soft DC
Operating Voltage (V DC)	12				
Frequency (Hz)	-				
Silent soft brake	•		-		•
Max. torque (Nm)	10		40		10
Speed (rpm)	14		12		26
Current (A)	3.75		10		9
Power (W)	45		120		108
Shaft Ø (mm)	50		63		-
Ingress protection (IP)	44				
Max. limit switch range in Revolutions of the shaft	35		40		85
Operating mode (KB in min.)	-				
Length A (mm)	491		562		260
Length B (mm)	473.3		522		-
Weight (kg)	1.58		3.78		3.1
Temperature range (°C)	-20 to +60				
Conformity	CE				

VariEco M DC

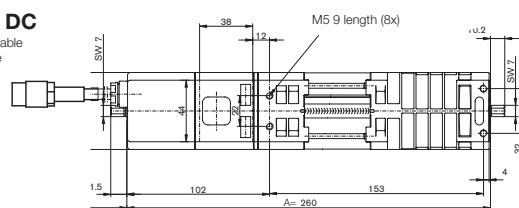


SunTop L DC



JA Soft DC

Connection cable
not pluggable



Accessories:



Cables
Page 204



Drive adapter sets
Page 112



Bearings
Page 116



Drive adapters
Page 78



Assembly kit
and damper
Page 80



Installation cable
Page 206



Power unit DC Solarfrom
Page 86



Radio control units
Page 154

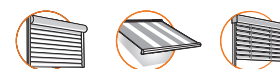


Radio receiver
Page 170



Radio sensors
Page 172

Accessories for solar drive systems



Accessories for solar drive systems



Combio-915 DC, Power unit DC Solar

Radio receiver Combio-915 DC for Venetian blind DC drives

Allows to convert the JA DC drive to a JA DC drive with radio receiver. In this way you have access to the full ProLine unidirectional radio controllers range to operate the motor manually or fully automated. The Combio-915 DC also allows to memorize a default tilt position for easy access by remote or sensors.

The receiver uses 915 MHz unidirectional system (alternative 868 MHz available).

Power unit DC Solar for DC drives

The solar module with the attractive design can be affixed to an awning, for example, without the need for complex installation work; the cables are pluggable. The system also has an easy-to-replace rechargeable battery integrated into the module with an output of 2,300 mAh. The angle of the solar module is adjustable. The housing also has rear ventilation.

Item Number	Type/Item Description
(1)	Combio-915 JA DC (unidirectional radio receiver for Venetian blind DC drives) *
(1)	Power unit DC Solar (solar module, including battery and plug-in connector)
(1)	Spare battery (LiFePO4 13.2V DC 2,300 mAh) spare part
(1)	Plug-in connector power unit/drive spare part
(1)	Installation cable for DC drives (requires external battery)
(1)	3.0 m plug-in connecting cable (spare part)

⁽¹⁾ Product under development. Please check with us for availability.

Accessories included:

Power unit:

Battery, 2 wall brackets, 1 plug-in connector.

Combio-868/915 JA DC:

Installation cables

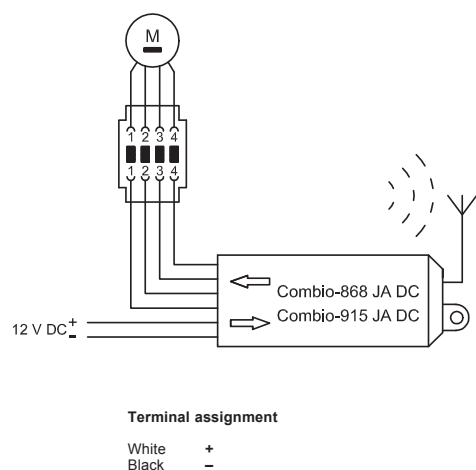
Adhesive tape

* Please contact us for availability.

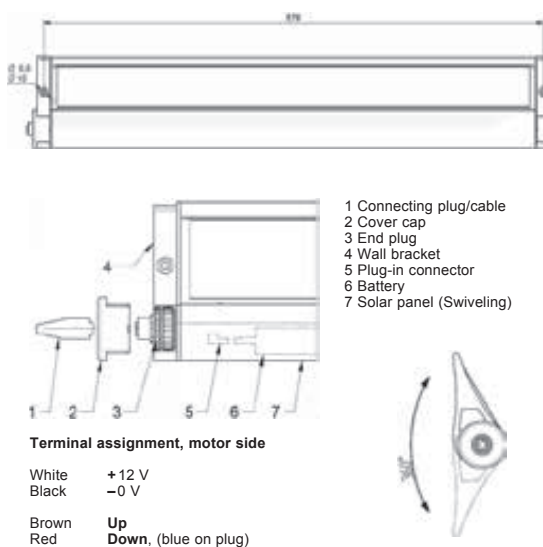
Technical data and dimensions

Type	Combo-915 JA DC	Power unit DC Solar
Operating Voltage (V DC)	12 – 13.5	13.2
Max. torque (Nm)	–	–
Speed (rpm)	–	–
Current (A)	3.75	–
Power (W)	45	–
Maximum switching current (mA)	100	–
Ingress protection (IP)	56	44
Max. memory for transmitter codes	16	–
Operating mode (KB in min.)	–	–
Dimensions (mm)	L 100 × W 40 × H 15	L 610 × W 98 × H 44
Weight (g)	260	1,000
Temperature range (°C)	–20 to +70	–10 to +60
Conformity	CE	

Combo-915 JA DC



Power unit for DC drives



Accessories:



Radio control units
Page 154



Radio sensors
Page 174



Door drives

Door drives to the highest safety level!

Power operated doors offer many advantages, but at the same time conceals some risks. Therefore elero has developed the door drives and associated smart controls.

Drive designation:

D								=	3-phase current switchable 400/230 V 50 Hz
W								=	AC current 230 V
	F							=	Shaft mounted rolling door drive with safety brake
	K							=	Chain drive with plug-in shaft
		M						=	Mechanical limit stop
			ZE					=	Potential-free additional limit switch 'top and bottom'
				...				=	Rated torque in Nm
					...			=	Speed in rpm only for special rotation speeds
						NHK		=	Manual override for crank handle
						NMA		=	Manual override, engaging automatically for various systems
						SHK		=	Haul chain, engaging automatically

Tip:

Not sure which motor can fit your installation? Use our drive calculation Software to calculate the required torque:

Software for PC

On www.elero.us in the category **Service/Drive computation program**



Software
for Android Smartphones



Software
for iPhone/iPad

Single-phase shaft mounted drives/ chain wheel drives



Shaft mounted drives with safety brake
Chain wheel drives without safety brake



WFM SHK, WFM NHK



WFM 140(-ZE) NHK

Shaft mounted drives with safety brake (integrated safety brake) and mechanical limit stop incl. operating capacitor. Incl. crank handle.

Highlights:

- Safety limit switch
- Safety gear (WFM)
- Manual override crank (can be retrofitted for haul chain and NMA system)
- Manual haul chain (can be retrofitted for haul chain and NMA system)

WFM 140(-ZE) SHK

Shaft mounted drives with safety brake (integrated safety brake) and mechanical limit stop incl. operating capacitor. With haul chain (3.0 m round steel chain).

Highlights:

- Safety limit switch
- Safety gear (WFM)
- Manual override crank (can be retrofitted for haul chain and NMA system)
- Manual haul chain (can be retrofitted for haul chain and NMA system)

Note:

The shaft mounted drives W.M 170 ... can only be operated with the BoxControl D 400 and BoxControl compact 3~230V.

Item Number	Type/Item Description
41 011.0061	WFM 140 NHK
41 081.0061	WFM-ZE 140 NHK
41 012.0061	WFM 140 SHK
41 082.0061	WFM-ZE 140 SHK
99 000.2701	Drives in IP 65 version (surcharge)




Accessories included:

WFM/DKM NHK: incl. crank; WFM/DKM SHK: incl. haul chain.

Please select controllers from Controller overview (page 144).

If no elero controller is being used, Connection kit 14 300.9001 (Page 146) is required!

Technical data and dimensions

Type	WFM 140 NHK	WFM-ZE 140 NHK	WFM 140 SHK	WFM-ZE 140 SHK
2 additional, freely usable limit switches		•		•
Integrated haul chain (SHK)			•	•
Rated Voltage (V)		230		
Rated frequency (Hz)		60		
Max. torque (Nm) ⁵⁾		140		
Speed n ² (min ⁻¹)		17		
Rated current (A)		6.7		
Power factor (cos φ)		0.92		
Insulation class		H		
Rated power consumption (kW)		1.4		
Ingress protection (IP)		54 (optional 65)		
Max. limit switch range mech. (centrally set at 9 revolutions)		18		
Rated operating time (S3)		4 min.		
Max. torque for rolling door operation (Nm) ³⁾				
RTB 80 %		–		
RTB 100 %		–		
Coil temperature limiter (°C)		130		
Door cycles per hour  h ⁻¹ ⁴⁾		12		
Temperature range (°C)		– 10 to + 40		
Contin. sound pressure level db (A)		< 70		
Electromagnetic brake		•		
Shaft Ø (mm)		30		
Key width (mm)		8		
Integrated safety brake (Type)		F 40		
Max torque on safety gear (Nm)		884		
Deceleration (g)		< 1.5		
Drive weight (kg)		19		
TÜV Süd certificate no.		5/061		
VDE checked 		–		
VDE EMC checked 		–		

Note: If the drive is to be painted subsequently, then the shaft gaskets must remain free of paint. Other voltages and frequencies upon request.

Drive for vertical lift gates: If the drives are used for vertical lift gates, the specified rated torques must be reduced by 20 %.

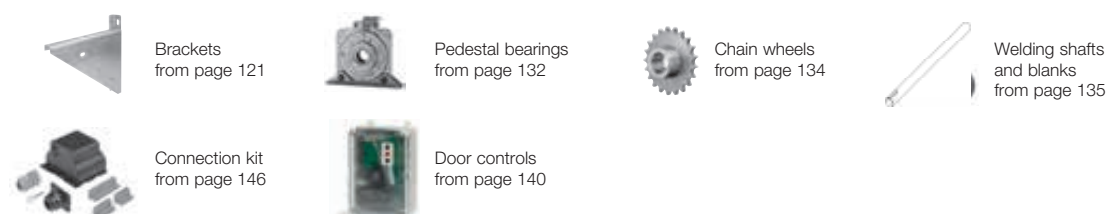
3) Rolling door operation RTB: Rolling door drives with rolling doors are operated dynamically with load change. The S3 operating mode with periodic intermittent

duty in accordance with BS EN is tested at the rated torque related to 10 minutes operating time with the defined duty cycle in %.

4) One door cycle is: 5 revolutions OPEN – 30 sec. pause – CLOSE.

5) The rated torques of the drives are guaranteed from –20 °C to +60 °C/ –4 °F to +140 °F.

Accessories:



3-phase shaft mounted drives with NHK



Shaft mounted drives with safety gear and mechanical limit stop



DFM ... NHK and DFM-ZE ... NHK

Shaft mounted drives with safety gear and mechanical limit stop.

Highlights: Safety limit switch
 Safety gear
 Manual override crank (can be retrofitted for haul chain and NMA system)

Item Number	Type/Item Description
41 091.0061	DFM-ZE 140 NHK
41 101.0061	DFM-ZE 200 NHK
41 121.0061	DFM-ZE 280 NHK
41 131.0061	DFM-ZE 400 NHK
41 141.0061	DFM-ZE 600 NHK
41 591.0061	DFM-ZE 200/32 NHK
41 631.0061	DFM-ZE 400/37 NHK
41 021.0061	DFM 140 NHK
41 031.0061	DFM 200 NHK
41 051.0061	DFM 280 NHK
41 061.0061	DFM 400 NHK
41 071.0061	DFM 600 NHK
41 581.0061	DFM 200/32 NHK
41 621.0061	DFM 400/37 NHK
99 000.2701	Drives in IP 65 version (surcharge)




Accessories included:

incl. emergency crank.

Please select controllers from Controller overview (page 139).

If no elero controller is being used, Connection kit 14 300.9001 (Page 138) is required!

Technical data and dimensions

Type	DFM-ZE 140 NHK	DFM-ZE 200 NHK	DFM-ZE 280 NHK	DFM-ZE 400 NHK	DFM-ZE 600 NHK	DFM-ZE 200/32 NHK	DFM-ZE 400/37 NHK
2 additional, freely usable limit switches	•	•	•	•	•	•	•
Type	DFM 140 NHK	DFM 200 NHK	DFM 280 NHK	DFM 400 NHK	DFM 600 NHK	DFM 200/32 NHK	DFM 400/37 NHK
Rated Voltage (V)	3 ~ 230/400–460						
Rated frequency (Hz)	50						
Max. torque (Nm) ⁵⁾	140	200	280	400	600	200	400
Speed n² (min ⁻¹)	15		16	13		32	37
Rated current (A)	3.2/1.85	4.5/2.6	4.2/2.4	5.2/3.0	5.7/3.3	5.2/3.0	10.0/6.0
Power factor (cos φ)	0.58	0.45	0.6	0.74	0.68	0.8	0.8
Insulation class	H						
Rated power consumption (kW)	0.75	0.8	1.0	1.7	1.9	1.1	2.2
Ingress protection (IP)	54 (optional 65)						
Max. limit switch range mech. (centrally set at 9 revs.)	18						
Rated operating time (S3)	60 %	40 %		60 %	40 %		60 %
Max. torque for rolling door operation (Nm) ³⁾							
RTB 80 %	140	160	240	400	520	160	400
RTB 100 %	120	130	200	320	550	130	320
Coil temperature limiter (°C)	130						
Door cycles per hour  h ⁻¹ ⁴⁾	42	36	40	33	28	54	60
Temperature range (°C)	– 10 to +40						
Contin. sound pressure level db (A)	< 60						
Electromagnetic brake	–		•				
Shaft Ø (mm)	30			40		30	40
Key width (mm)	8			12		8	12
Integrated safety brake (Type)	F 40			F 80		F 40	F 80
Max torque on safety gear (Nm)	884			2,302		884	2,302
Deceleration (g)	< 1.5			< 2.0		< 1.5	< 2.0
Length A (mm)	715			810	835	715	810
Length B (mm)	500			590	615	500	590
Drive weight (kg)	21		22	31		21	31
TÜV-Süd certificate no.	5/061			5/062		5/061	5/062
VDE checked 	•					–	
VDE EMC checked 	•						–

Note: If the drive is to be painted subsequently, then the shaft gaskets must remain free of paint. Other voltages and frequencies upon request.

Drive for vertical lift gates: If the drives are used for vertical lift gates, the specified rated torques must be reduced by 20 %.

3) Rolling door operation RTB: Rolling door drives with rolling doors are operated

dynamically with load change. The S3 operating mode with periodic intermittent duty in accordance with BS EN is tested at the rated torque related to 10 minutes operating time with the defined duty cycle in %.

4) One door cycle is: 5 revolutions OPEN – 30 sec. pause – CLOSE.

5) The rated torques of the drives are guaranteed from –20 °C to +60 °C/ –4 °F to +140 °F.

Accessories:



Welding shafts
and blanks
from page 135



Brackets
from page 121



Connection kit
from page 146

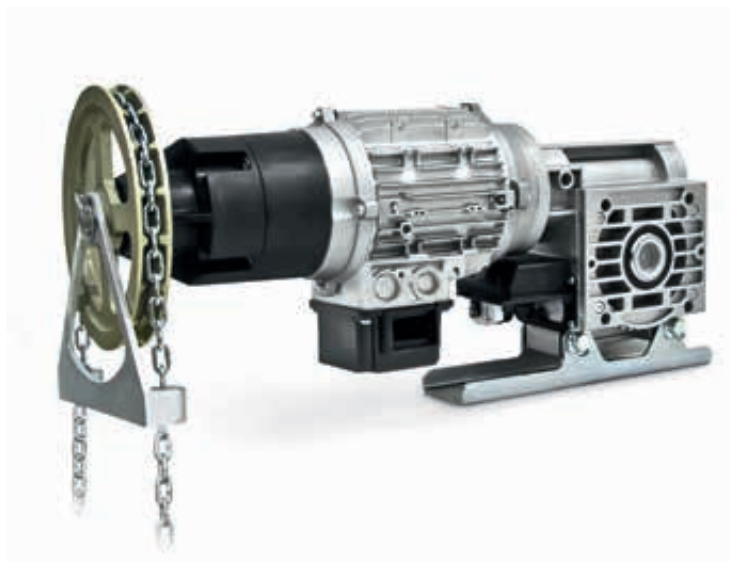


Door controls
from page 140

3-phase shaft mounted drives with SHK



Shaft mounted drives with safety gear and mechanical limit stop



DFM ... SHK and DFM-ZE ... SHK

Shaft mounted drives with safety gear and mechanical limit stop.

Highlights: Safety limit switch
Safety gear
Manual haul chain (can be retrofitted for NMA system)

Item Number	Type/Item Description
41 092.0061	DFM-ZE 140 SHK
41 102.0061	DFM-ZE 200 SHK
41 122.0061	DFM-ZE 280 SHK
41 132.0061	DFM-ZE 400 SHK
41 142.0061	DFM-ZE 600 SHK
41 592.0061	DFM-ZE 200/32 SHK
41 632.0061	DFM-ZE 400/37 SHK
41 022.0061	DFM 140 SHK
41 032.0061	DFM 200 SHK
41 052.0061	DFM 280 SHK
41 062.0061	DFM 400 SHK
41 072.0061	DFM 600 SHK
41 582.0061	DFM 200/32 SHK
41 622.0061	DFM 400/37 SHK
99 000.2701	Drives in IP 65 version (surcharge)



Accessories included:

incl. haul chain.

Please select controllers from Controller overview (page 144).

If no elero controller is being used, Connection kit 14 300.9001 (Page 146) is required!

Technical data and dimensions

Type	DFM-ZE 140 SHK	DFM-ZE 200 SHK	DFM-ZE 280 SHK	DFM-ZE 400 SHK	DFM-ZE 600 SHK	DFM-ZE 200/32 SHK	DFM-ZE 400/37 SHK
2 additional, freely usable limit switches	•	•	•	•	•	•	•
Type	DFM 140 SHK	DFM 200 SHK	DFM 280 SHK	DFM 400 SHK	DFM 600 SHK	DFM 200/32 SHK	DFM 400/37 SHK
Rated Voltage (V)	3 ~ 230/400–460						
Rated frequency (Hz)	60						
Max. torque (Nm) ^{a)}	140	200	280	400	600	200	400
Speed n ² (min ⁻¹)	15		16	13		32	37
Rated current (A)	3.2/1.85	4.5/2.6	4.2/2.4	5.7/3.3	6.9/4.5	5.3/3.0	10.0/6.0
Power factor (cos φ)	0.58	0.45	0.6	0.74	0.68	0.45	0.8
Insulation class	H						
Rated power consumption (kW)	0.75	0.8	1.0	1.7	1.9	1.1	2.2
Ingress protection (IP)	54 (optional 65)						
Max. limit switch range mech. (centrally set at 9 revs.)	18						
Rated operating time (S3)	60 %	40 %		60 %	40 %		60 %
Max. torque for rolling door operation (Nm) ^{a)}							
RTB 80 %	140	160	240	400	520	160	400
RTB 100 %	120	130	200	320	420	130	320
Coil temperature limiter (°C)	130						
Door cycles per hour ^{1) h⁻¹ 4)}	42	36	40	33	28	54	60
Temperature range (°C)	– 10 to + 40						
Contin. sound pressure level db (A)	< 60						
Electromagnetic brake	–		•				
Shaft Ø (mm)	30			40		30	40
Key width (mm)	8			12		8	12
Integrated safety brake (Type)	F 40			F 80		F 40	F 80
Max torque on safety gear (Nm)	884			2,302		884	2,302
Deceleration (g)	< 1.5			< 2.0		< 1.5	< 2.0
Length A (mm)	590						
Drive weight (kg)	21			31		21	31
TÜV-Süd certificate no.	5/061			5/062		5/061	5/062
VDE checked 	•	–	•	•	•	–	
VDE EMC checked 	•						–

Note: If the drive is to be painted subsequently, then the shaft gaskets must remain free of paint. Other voltages and frequencies upon request.

Drive for vertical lift gates: If the drives are used for vertical lift gates, the specified rated torques must be reduced by 20 %.

3) Rolling door operation RTB: Rolling door drives with rolling doors are operated

dynamically with load change. The S3 operating mode with periodic intermittent duty in accordance with BS EN is tested at the rated torque related to 10 minutes operating time with the defined duty cycle in %.

4) One door cycle is: 5 revolutions OPEN – 30 sec. pause – CLOSE.

5) The rated torques of the drives are guaranteed from –20 °C to +60 °C/ –4 °F to +140 °F.

Accessories:



Welding shafts
and blanks
from page 135



Brackets
from page 121



Connection kit
from page 146



Door controls
from page 140

Pole-reversible 3-phase shaft mounted drives & 500 V 3-phase drives



Pole-reversible shaft mounted drives with safety brake and mechanical limit stop



DFM 310-38/19 NHK 3 × 230V/60Hz

Pole-reversible shaft mounted drives with safety gear and mechanical limit stop.

Highlights:

- Safety limit switch
- Safety gear
- Manual override crank (can be retrofitted for haul chain and NMA system)
- Up speed of 32 rpm
- Down speed of 16 rpm

DFM 170 NHK 500V 60Hz

Special drive for 500V 3-phase system.

Highlights:

- Safety limit switch
- Safety gear
- Manual override crank (can be retrofitted for haul chain and NMA system)

Item Number	Type/Item Description
41 021.0061	DFM 170 NHK 500V/60Hz
41 571.0061	DFM 310-38/19 NHK 3 × 230V/60Hz
99 000.2701	Drives in IP 65 version (surcharge)


Accessories included:

including crank handle.

Please select controllers from Controller overview (page 144).

If no elero controller is being used, Connection kit 14 300.9001 (Page 146) is required!

Technical data and dimensions

Type	DFM 170 NHK 500V / 60Hz	DFM 310-38/19 NHK 3 × 230 V / 60 Hz	
		2 pole (opening)	4 pole (closing)
Rated Voltage (V)	3 ~ 500	3 ~ 230	
Rated frequency (Hz)	50		
Max. torque (Nm)	170	310	160
Speed (rpm)	15	39	19
Rated current (A)	1.8	7.5	3.5
Rated power consumption (kW)	0.75	2.3	1.2
Ingress protection (IP)	54 (optional 65)		
Insulation class	H		
Max. limit switch range mech. (centrally set at 9 revolutions)	18		
Duty cycle (S3)	60 %		
Door cycles per hour *	40		
Electromagnetic brake	–	•	
Shaft Ø (mm)	30	40	
Key width (mm)	8	12	
Integrated safety brake (Type)	F 40	F 80	
Max torque on safety gear (Nm)	884	2302	
Deceleration (g)	< 1.5	< 2	
Drive (kg)	21	35	
Temperature range (°C)	– 10 to + 40		
Conformity			

* One door cycle is: 5 revolutions OPEN – 30 sec. pause – CLOSE.

Use of the drives for vertical lift gates etc.: The given rated torque of the drives is to be reduced by 20 %.

Accessories:



Welding shafts
and blanks
from page 135



Brackets
from page 121



Door control
for DFM 170
from page 140



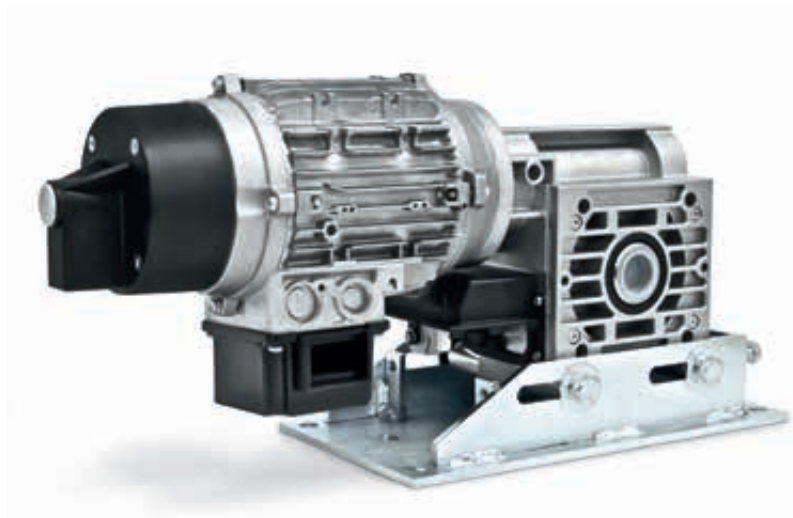
Door control for
DFM 310/38-19
from page 142



Connection kit
from page 146

3-phase chain wheel drives with NHK

Chain wheel drives with mechanical limit stop



DKM ... NHK

Shaft mounted drives with mechanical limit stop.



Highlights: Safety limit switch
 Chain tensioning bracket
 Manual override crank (can be retrofitted for haul chain and NMA system)

Item Number	Type/Item Description
41 271.0061	DKM 140 NHK
41 281.0061	DKM 200 NHK
41 301.0061	DKM 280 NHK
41 311.0061	DKM 400 NHK
41 321.0061	DKM 600 NHK
41 341.0061	DKM-ZE 140 NHK
41 351.0061	DKM-ZE 200 NHK
41 371.0061	DKM-ZE 280 NHK
99 000.2701	Drives in IP 65 version (surcharge)

Accessories included:

incl. crank handle, plug-in shaft and chain tensioning, without chain wheel.
 Please select controllers from Controller overview (page 144).
 If no elero controller is being used, Connection kit 14 300.9001 (Page 146) is required!

Technical data and dimensions

Type	DKM 140 NHK	DKM 200 NHK	DKM 280 NHK	DKM 400 NHK	DKM 600 NHK	DKM-ZE 140 NHK	DKM-ZE 200 NHK	DKM-ZE 280 NHK
2 additional, freely usable limit switches						•	•	•
Rated Voltage (V)	3 ~ 230/400–460							
Rated frequency (Hz)	60							
Max. torque (Nm) ³⁾	140	200	280	400	600	140	200	280
Speed n ² (min ⁻¹)	15.0		16.0	13		15		16
Rated current (A)	3.2/1.85	4.5/2.6	4.2/2.4	5.7/3.3	6.9/4.0	3.2/1.85	4.2/2.6	4.2/2.4
Power factor (cos φ)	0.58	0.45	0.6	0.74	0.68	0.58	0.45	0.6
Insulation class	H							
Rated power consumption (kW)	0.75	0.8	1.0	1.7	1.9	0.75	0.8	1.8
Ingress protection (IP)	54 (optional 65)							
Max. limit switch range mech. (centrally set at 9 revolutions)	18							
Rated operating time (S3)	60 %	40 %		60 %	40 %	60 %	40 %	
Max. torque for rolling door operation (Nm) ³⁾								
RTB 80 %	140	160	240	400	520	140	160	240
RTB 100 %	120	130	200	320	440	120	130	200
Coil temperature limiter (°C)	130							
Door cycles per hour ^{1) h⁻¹ 4)}	35	30	34	28	24			
Temperature range (°C)	– 10 to + 40							
Contin. sound pressure level db (A)	< 60							
Electromagnetic brake	–		•					
Shaft Ø (mm)	30			40		30		
Key width (mm)	8			12		8		
Drive weight (kg)	21		22	31	31	21		22
TÜV-Süd certificate no.	5/061			5/062		5/061		
VDE checked 	•			–	•	•		
VDE EMC checked 	•			–	•	•		

Note: If the drive is to be painted subsequently, then the shaft gaskets must remain free of paint. Other voltages and frequencies upon request.

Drive for vertical lift gates: If the drives are used for vertical lift gates, the specified rated torques must be reduced by 20 %.

3) Rolling door operation RTB: Rolling door drives with rolling doors are operated

dynamically with load change. The S3 operating mode with periodic intermittent duty in accordance with BS EN is tested at the rated torque related to 10 minutes operating time with the defined duty cycle in %.

4) One door cycle is: 5 revolutions OPEN – 30 sec. pause – CLOSE.

5) The rated torques of the drives are guaranteed from –20 °C to +60 °C/ –4 °F to +140 °F.

Accessories:



Brackets
from page 121



Pedestal bearings
from page 132



Chain wheels
from page 134



Welding shafts
and blanks
from page 135



Connection kit
from page 146

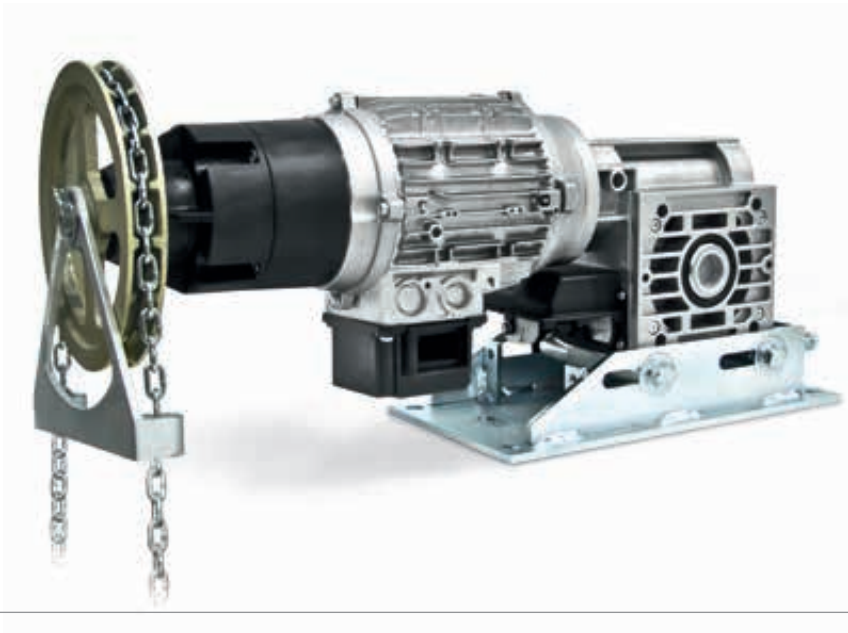


Door controls
from page 140

3-phase chain wheel drives with SHK



Chain wheel drives with mechanical limit stop



DKM ... SHK

Shaft mounted drives with mechanical limit stop.

- Highlights:
- Safety limit switch

Chain tensioning bracket




Manual haul chain (can be retrofitted for haul chain and NMA system)

Item Number	Type/Item Description
41 272.0061	DKM 140 SHK
41 282.0061	DKM 200 SHK
41 302.0061	DKM 280 SHK
41 312.0061	DKM 400 SHK
41 322.0061	DKM 600 SHK
41 342.0061	DKM-ZE 140 SHK
41 352.0061	DKM-ZE 200 SHK
99 000.2701	Drives in IP 65 version (surcharge)

Accessories included:

incl. crank handle, plug-in shaft and chain tensioning, without chain wheel.
Please select controllers from Controller overview (page 144).
If no elero controller is being used, Connection kit 14 300.9001 (Page 146) is required!

Technical data and dimensions

Type	DKM 140 SHK	DKM 200 SHK	DKM 280 SHK	DKM 400 SHK	DKM 600 SHK	DKM-ZE 140 SHK	DKM-ZE 200 SHK
2 additional, freely usable limit switches						•	•
Rated Voltage (V)	3 ~ 230/400–460						
Rated frequency (Hz)	130						
Max. torque (Nm) ⁵⁾	140	200	280	400	600	140	200
Speed n ² (min ⁻¹)	15.0		16.0	13		15.0	
Rated current (A)	3.2/1.85	4.5/2.6	4.2/2.4	5.7/3.3	6.9/4.0	3.2/1.85	4.5/2.6
Power factor (cos ϕ)	0.58	0.45	0.6	0.74	0.68	0.58	0.45
Insulation class	H						
Rated power consumption (kW)	0.75	0.8	1.0	1.7	1.9	0.75	0.8
Ingress protection (IP)	54 (optional 65)						
Max. limit switch range mech. (centrally set at 9 revolutions)	18						
Rated operating time (S3)	60 %	40 %		60 %	40 %	60 %	40 %
Max. torque for rolling door operation (Nm) ³⁾							
RTB 80 %	140	160	240	400	520	140	160
RTB 100 %	120	130	200	320	440	120	130
Coil temperature limiter (°C)	130						
Door cycles per hour  h ⁻¹ ⁴⁾	42	36	40	33	28	28	36
Temperature range (°C)	-10 to +40						
Contin. sound pressure level db (A)	< 60						
Electromagnetic brake	–		•			–	
Shaft Ø (mm)	30			40		30	
Key width (mm)	8			12		8	
TÜV-Süd certificate no.	5/061			5/062		5/061	
VDE checked 	•			–	•	•	
VDE EMC checked 	•			–	•	•	

Note: If the drive is to be painted subsequently, then the shaft gaskets must remain free of paint. Other voltages and frequencies upon request.

Drive for vertical lift gates: If the drives are used for vertical lift gates, the specified rated torques must be reduced by 20 %.

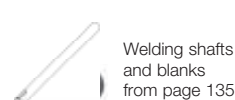
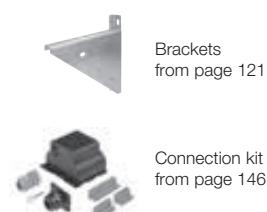
3) Rolling door operation RTB: Rolling door drives with rolling doors are opera-

ted dynamically with load change. The S3 operating mode with periodic intermittent duty in accordance with BS EN is tested at the rated torque related to 10 minutes operating time with the defined duty cycle in %.

4) One door cycle is: 5 revolutions OPEN – 30 sec. pause – CLOSE.

5) The rated torques of the drives are guaranteed from –20 °C to +60 °C/ –4 °F to +140 °F.

Accessories:



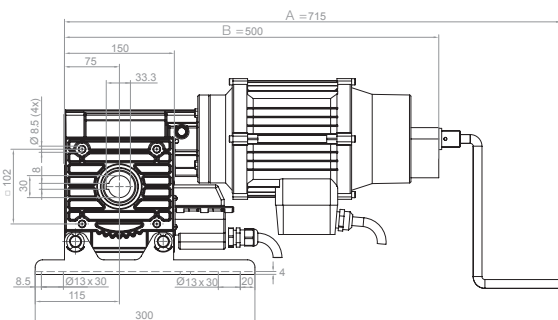
Connection dimensions

Shaft mounted drives

DFM NHK

Drive torque:

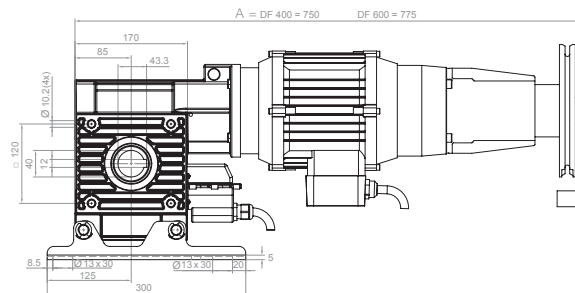
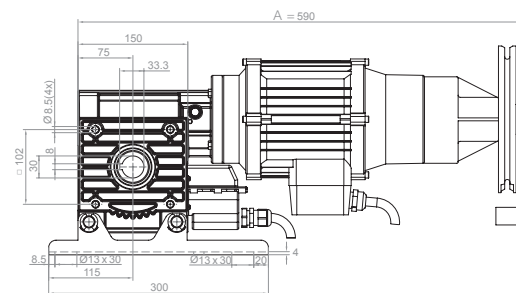
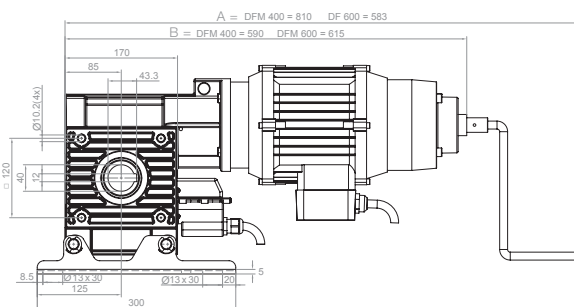
140 Nm
200 Nm
280 Nm



DFM SHK

Drive torque:

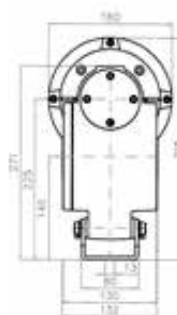
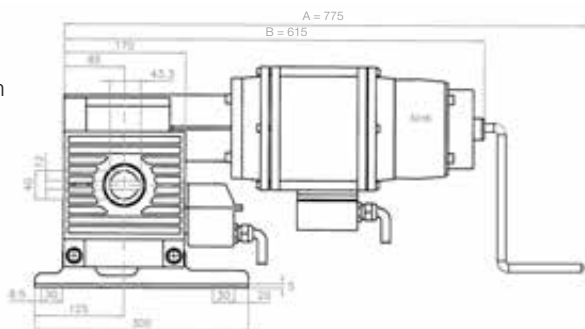
400 Nm
600 Nm



DFM ZE (Pole-reversible)

Drive torque:

310/160 Nm



(for Ø 40 mm welding shaft, min. length of the key 40 mm)

Calculation of the mean lifting speed in cm/second or inch/second.

$$V_m = \frac{D + d \cdot 3.14 \cdot n}{2 \cdot 60}$$

V_m = Result average lift speed
in cm/second or inch/second.

D = Largest tube diameter in cm/inch at the end.

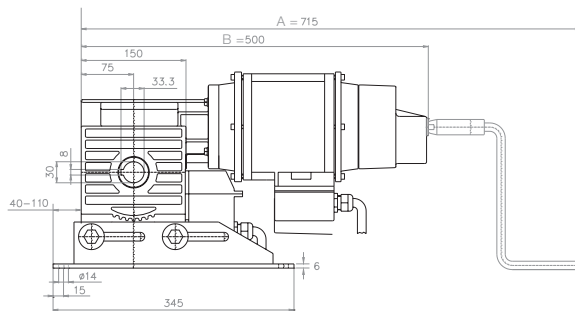
d = Smallest tube diameter (at beginning) in cm/inch.

n = Revolutions per min.

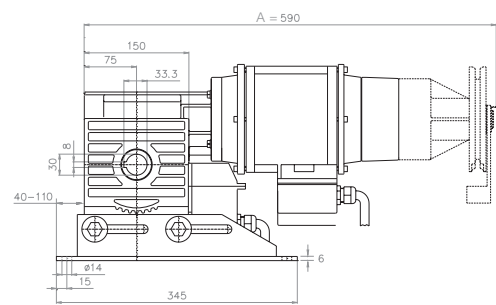
Chain wheel drives

DKM NHK

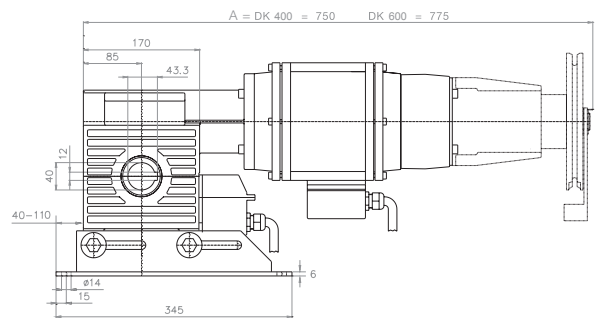
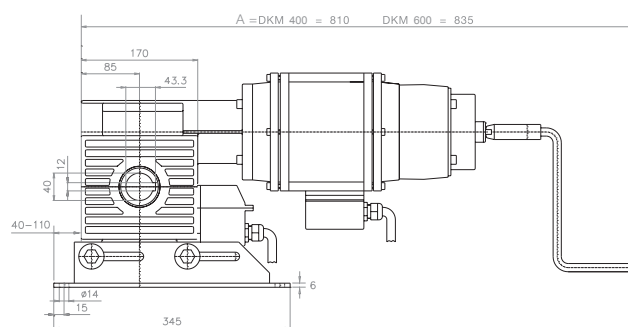
Drive torque:
140 Nm
200 Nm
280 Nm



DKM SHK



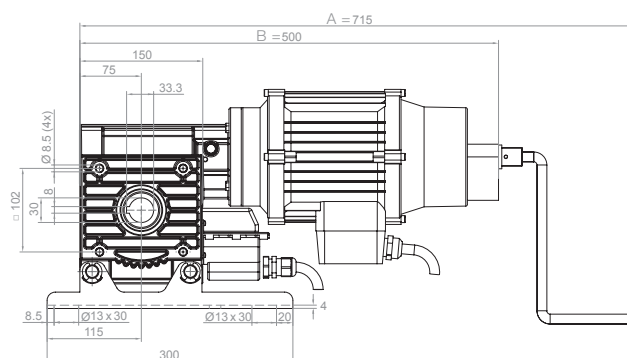
Drive torque:
400 Nm
600 Nm



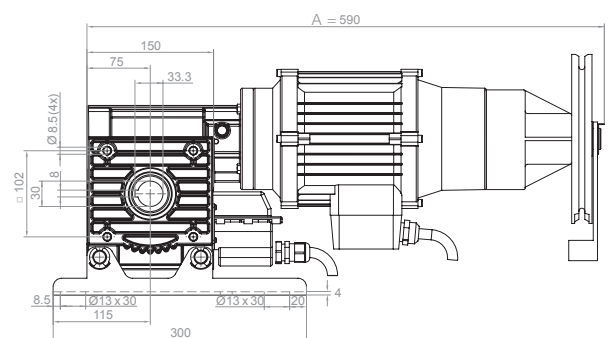
Single-phase shaft mounted drives/chain wheel drives

WFM NHK

Drive torque:
140 Nm



WFM SHK



Radio tubular drives

Hardwired tubular drives

Manual override tubular drives

Venetian blind drives

Specialty drives

Connection dimensions

Mechanical accessories

Door controls

Radio controls

Hardwired controls

Electrical accessories

Adapter profiles
Lifting capacity tables



Drive adapter sets for motors

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

**Mechanical
accessories**

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Drive adapter sets

Drive adapter sets for Revoline S

Note: Profiles of the drive adapter sets in 1:1 scale on page 213.



Notch tubes

Item-Number	Type/Item Description	Drive adapter	Limit switch crown
22 017.0001	Ø 52 × 1.5 mm, Hassinger	13 119.1301	13 111.9501
22 004.0001	Ø 63 × 1.0 mm (Size „M“ Adapter 13 121.3001 Center offset 1.3 mm)	13 116.7101	13 119.4801

Round tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
13 101.5301	Ø 40 × 1.5 mm Limit switch crown only, white		13 101.5301
22 011.0001	Ø 40 × 1.0 mm	13 119.0501	13 107.5901
22 009.0001	Ø 40 × 1.5 mm	13 119.0301	13 120.6501
13 119.0601	Ø 40 × 2.0 mm, Ø 38 × 1.0 mm	13 119.0601	not required
22 015.0001	Ø 42 × 1.0 mm	13 119.1101	13 107.3701
22 071.0001	Ø 50 × 1.5 mm	13 116.2901	13 121.3001
22 016.0001	Ø 50 × 2.0 mm, Italy	13 119.1201	13 113.6701

Profile tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
22 087.0001	38 mm Square Profile tube, Meimo, Regazzi	13 121.4901	13 121.5201
22 079.0001	40 mm Square tube, Griesser	13 120.9901	13 111.5901
22 010.0001	40 mm Octagonal, Alloy tube, Selve (0.8 mm center offset)	13 119.0401	13 120.6401
23 097.0001	Ø 42 mm Aluminum Profile tube, Silent Gliss	13 119.1701	13 120.5901
22 013.0001	Ø 42 × 2 mm Bautex, Sundrape	13 119.0801	13 112.8901
22 083.0001	Ø 43 mm Profile tube, Spain, special production not ex stock (center offset 0.25 mm)	13 121.2301	13 121.2801
22 018.0001	Ø 45 mm Profile tube, Acmeda, Technolight, Ø 44 mm Profile tube, Garattoni (0.25 mm center offset)	13 119.1401	13 121.2801
22 014.0001	45 mm Profile tube ZF 45, Zurflüh-Feller	13 119.0901	13 109.4201
22 068.0001	Ø 47 mm Turkey	13 119.0401	13 101.5301
22 002.0001	Ø 48 mm Profile tube, Griesser, Hüppe	13 119.0101	13 112.8602
22 006.0001	50 mm Octagonal tube, Selve	13 115.9501	13 111.1001
22 007.0001	Ø 50 × 1.5 mm Profile tube Siral	13 116.9901	13 110.4601
22 054.0001	Ø 50 mm Profile tube, aluminum, Latin America		
22 012.0001	Ø 50 mm Notch tube, aluminum	13 119.0701	13 107.9401
22 084.0001	Ø 53 mm Profile tube, Spain (not ex stock)	13 121.1901	13 121.2501
22 008.0001	54 × 0.5 mm Profile tube Zurflüh-Feller	13 116.1001	13 112.5501
22 005.0001	60 mm Octagonal tube, Selve, Döhner	13 116.8301	13 110.4701

For more sizes use:

Item Number	Type/Item Description
13 121.3001	Adapter to use Revoline M Series drive adapters (please refer to page 107) on S Series drives
13 113.6601	Adapter to use Revoline M Series drive adapters (please refer to page 107) on S Series drives This adapter is 7 mm recessed. NOT SUITABLE for VariEco motors. Only suitable for installations with horizontal cable outlet!

Drive adapter sets for RevoLine M

Note: Profiles of the drive adapter sets in 1:1 scale on page 213.



Notch tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
23 041.0001	Ø 57 mm, Ates	13 116.9201	13 119.5001
23 055.0001	Ø 60 mm, AXE, Griesser, Hüppe	13 117.0701	13 112.8501
22 086.0001	Ø 60 mm, Stobag, Meimo	13 121.5901	13 121.8901
23 042.0001	Ø 62 x 0.6 mm, DEPRAT F2000	13 116.9301	13 112.2001
23 031.0001	Ø 63 x 1.0 mm	13 116.7101	13 119.4801
22 019.0001	Ø 63 mm, Giallo - Italy	13 119.4501	13 119.4601
23 018.0001	Ø 70 mm, IMBAC, Ahlquist	13 116.4502	13 119.2801
23 020.0001	Ø 70 mm, flat notch Griesser, Welser	13 116.4602	13 119.2701
23 065.0001	Ø 70 mm	13 117.2701	13 119.5101
23 054.0001	Ø 71 x 1.5 mm	13 117.0601	13 119.5201
23 015.0001	Ø 78 x 1.0 mm / 78 x 1.25 mm, for flat notch and round notch, MHZ	13 114.8701	13 119.2601
23 026.0001	Ø 78 x 1.0 mm, Rau	13 114.8701	13 106.0901
23 040.0001	Ø 78 x 1.0 mm, Döhner	13 116.9101	13 119.4901
22 088.0001	Ø 80 x 1/1.25 mm 3-notch, Welser Optimut	13 121.5401	13 121.5501
23 017.0001	Ø 85 x 1.0 mm	13 114.7601	13 109.1401
23 048.0001	Ø 85 x 1.2 mm, Imbac, Griesser, new	13 117.0001	13 109.5201
23 060.0001	Ø 85 x 1.2 mm, Imbac, Griesser, old	13 117.0001	13 119.2501
22 059.0001	Ø 85 x 1 mm	13 114.7601	13 119.2501
23 089.0001	Ø 86 x 1.2 mm, Krebs	13 121.9101	13 121.9001
23 053.0001	Ø 90 mm, Le-Profil and Ø 89 mm, DEPRAT	13 117.0501	13 111.7501
23 058.0001	Ø 90.5 x 1.25 mm MHZ	13 117.1001	13 114.2601

Round tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
13 116.2901	Ø 50 x 1.5 mm	13 116.2901	not required
13 116.9901	Ø 50 x 1.5 mm, Siral	13 116.9901	not required
23 044.0001	Ø 60 x 1.5 mm and Ø 62 x 2.0 mm	13 116.9501	13 105.6901
23 045.0001	Ø 63 x 1.5 mm	13 116.9601	13 106.9201
23 046.0001	Ø 70 x 1.5 mm	13 116.9701	13 105.8801
23 093.0001	Ø 83 x 1.5 mm (with profile)	13 117.7101	13 109.2201
23 052.0001	Ø 98 x 2.0 mm and Ø 102 x 3.5 mm	13 117.0401	13 114.7501
23 051.0001	Ø 102 x 1.5 mm and Ø 102 x 2.0 mm	13 117.0301	13 114.7301

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Drive
adapter sets

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Drive adapter sets for RevoLine M

Note: Profiles of the drive adapter sets in 1:1 scale on page 213.

Profile tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
13 117.8501	Ø 50 mm, Soprofen	13 117.8501	not required
23 012.0001	50 mm Octagonal, Selve	13 115.9501	13 111.0901
13 121.9301	Ø 51 mm, Hella Top Safe	13 121.9301	not required
13 119.1801	Ø 52 mm, Silent Gliss	13 119.1801	not required
23 091.0001	Ø 53 mm, Deprat	13 117.8301	13 117.8401
13 116.1001	Ø 54 mm, Zurflüh-Feller	13 116.1001	not required
23 039.0001	Ø 55 mm, elero profile tube	13 116.9001	13 102.7801
23 050.0001	Ø 58 mm alu, Termo Perco	13 117.0201	13 109.3801
23 036.0001	60 mm Octagonal, IMBAC	13 116.8301	13 109.3401
23 379.0001	60 mm Octagonal, Selve, Döhner Eckermann	13 116.8301	13 105.5901
23 056.0001	60 mm Octagonal, Bonfante	13 117.0801	13 111.3201
23 047.0001	60 × 0.7 mm Hexagonal, Butzbach, Mäule	13 116.9801	13 105.5601
23 049.0001	Ø 60 mm Alu-Plast, Kittelberger, Ø 63 × 1.5 mm	13 117.0101	13 107.9701
23 043.0001	Ø 62 mm Profile tube Le-Profil, Krülland	13 116.9401	13 105.7101
23 380.0001	Ø 64 mm Profile tube, Zurflüh-Feller	13 114.8301	13 105.6501
23 032.0001	Ø 65 mm, IMBAC, Eckermann, Metallpress	13 116.7401	13 105.6101
23 033.0001	Ø 65 mm, Hoos	13 116.7501	13 106.2201
23 057.0001	Ø 67 × 1.5 mm MHZ	13 117.0901	13 119.5601
23 011.0001	70 mm Octagonal, Selve, Döhner, Eckermann	13 115.9301	13 100.4001
23 059.0001	75 mm Hexagonal, Butzbach, Mäule	13 117.1101	13 105.9701
23 034.0001	Ø 76 × 1.2 mm, Kittelberger, Wiral	13 116.7601	13 112.9201
23 090.0001	78 mm Pentagonal, Meimo	13 117.8001	13 110.5801
23 382.0001	Ø 80 mm, Zurflüh-Feller	13 114.8501	13 111.7701

For more sizes use:

Item Number	Type/Item Description
13 105.6901	Adapter to use RevoLine L Series drive adapters (please refer to page 109) on M Series drives
13 106.9201	Adapter to use Type 11 Series drive adapters (please refer to page 109) on M Series drives

Drive adapter sets for RevoLine L

Note: Profiles of the drive adapter sets in 1:1 scale on page 213.



Notch tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
23 383.0101	Ø 78 × 1.0 mm, MHZ	13 114.8701	13 114.8801
23 070.0001	Ø 78 × 1/1.25 mm Round notch, Döhner, Röchling	13 117.5301	13 117.5401
23 378.0001	Ø 85 × 1.0 mm	13 114.7601	13 114.8001
23 061.0001	Ø 90 mm, Le-Profil, Ø 89 mm Deprat	13 117.0501	13 117.1301
23 377.0001	Ø 95 × 1.2 mm Schmitz (limit switch crown only)		13 114.7701
22 092.0001	90 mm MHZ (notch tube)	13 117.1001	13 113.6201
22 076.0001	Ø 100 × 2 mm Stobag, Meimo	13 119.2901	13 119.3001

Round tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
23 064.0001	Ø 63 × 1.5 mm	13 116.9601	13 117.2601
23 064.0101	Ø 63 × 1.5 mm, with 4 × M6 thread	13 116.9611	13 117.2601
23 067.0001	Ø 70 × 1.5 mm	13 116.9701	13 117.5001
23 067.0101	Ø 70 × 1.5 mm, with 4 × M6 thread	13 116.9711	13 117.5001
23 066.0001	Ø 70 × 2.0 mm	13 117.2801	13 117.2901
23 066.0101	Ø 70 × 2.0 mm, with 4 × M6 thread	13 117.2811	13 117.2901
23 063.0001	Ø 98 × 2.0 mm, Ø 100 × 3.0 mm, Ø 101.6 × 3.6 mm	13 117.0401	13 117.1501
23 063.0101	Ø 98 × 2.0 mm, Ø 100 × 3.0 mm, Ø 101.6 × 3.6 mm with 4 × M6 thread	13 117.0411	13 117.1501
23 062.0001	Ø 102 × 2.0 mm	13 117.0301	13 117.1401
23 062.0101	Ø 102 × 2.0 mm with 4 × M6 thread	13 117.0311	13 117.1401
23 079.0001	Ø 133 × 2.5 mm / Ø 133 × 2.0 mm	13 117.7901	13 117.1501
23 079.0101	Ø 133 × 2.5 mm / Ø 133 × 2.0 mm with 4 × M6 thread	13 117.7911	13 117.1501
22 066.0001	Ø 135 × 2.5 mm	22 066.0101	13 117.1501

Profile tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
23 068.0001	Ø 67 × 1.5 mm, MHZ	13 117.0901	13 117.2601
23 060.0001	70 mm Octagonal, Selve, Eckermann, Roma	13 115.9301	13 117.1201
23 071.0001	75 mm Hexagonal, Butzbach, Mäule	13 117.1101	13 117.7001
23 075.0001	Ø 76 × 1.2 mm, Kittelberger, Wiral	13 116.7601	13 117.7301
23 074.0001	80 mm, Zurflüh-Feller	13 114.8501	13 114.8601
23 073.0001	Ø 83 × 1.5 mm Round profile tube, can also be used for round tube 83 × 1.5 mm	13 117.7101	13 117.7201
23 073.0101	Ø 83 × 1.5 mm Round profile tube with 4 × M6 thread, can also be used for round tube 83 × 1.5 mm	13 117.7111	13 117.7201
23 077.0001	Ø 85 × 1.2 mm, Imbac, Griesser	13 117.0001	13 117.7601
23 092.0001	85 mm Hexagonal Butzbach	13 117.8601	13 117.8701
23 078.0001	102 × 2.0 mm Octagonal, Alulux	13 117.7701	13 117.7801
23 069.0001	102 × 2.5 mm Octagonal, Roma	13 117.5101	13 117.5201
23 072.0001	114 mm Octagonal, Heroal	13 117.5501	13 117.5601
23 076.0001	Ø 128 × 1.5 mm, Alukon	13 117.7401	13 117.7501

For more sizes use:

Item Number	Type/Item Description
13 117.2601	Adapter to use Type 11 Series drive adapters (please refer to page 112) on L Series drives

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Drive
adapter sets

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Drive adapter sets

Drive adapter sets for Type 9 MO

Note: Profiles of the drive adapter sets in 1:1 scale on page 213.



Notch tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
23 510.0001	Ø 62 × 1.5 mm	13 107.6301	13 107.8902
23 530.0001	Ø 63 × 1.0 mm (flat notch)	13 110.7301	13 106.4101
23 583.0001	Ø 63 × 1.0 mm	13 301.5901	13 301.5801
23 547.0001	Ø 70 mm (round notch)	13 110.6601	13 110.6701
23 559.0001	Ø 70 mm	13 105.7401	13 105.7501
23 563.0001	Ø 70 mm Imbac, Ahlquist	13 105.7201	13 105.7301
23 581.0002	Ø 70 × 0.7 mm Decagonal, Perma	13 106.5302	13 106.5402
23 641.0001	Ø 70 mm Griesser	13 109.4901	13 109.5001
23 700.0001	Ø 70 mm Welser	13 110.6101	13 110.6201
23 346.0001	Ø 70 × 1.0 mm (wide notch), MHZ	13 113.3801	13 113.3901
23 560.0001	Ø 74 mm	13 105.6601	13 105.6701
23 580.0001	Ø 78 × 1/1.25 mm	13 106.4901	13 106.5001
23 538.0001	Ø 78 × 1.0 mm Döhner	13 109.9701	13 109.9601
23 540.0001	Ø 78 × 1.0 mm, Crown 23.0 mm wide	13 111.7301	13 106.0901
23 600.0001	Ø 78 × 1.0 mm MHZ	13 301.6701	13 301.6601
23 681.0001	Ø 85 mm	13 301.6901	13 109.1401
23 643.0001	Ø 85 × 1.0 mm Griesser	13 109.5101	13 109.5201
23 360.0001	Ø 90.5 × 1.25 mm (wide notch), MHZ	13 114.2501	13 114.2601

Round tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
13 105.5701	Ø 50 × 1.5 mm	13 105.5701	not required
13 110.7401	Ø 50 × 1.5 mm Siral	13 110.7401	not required
23 578.0002	Ø 62 × 2.0 mm and Ø 60 × 1.5 mm	13 106.4402	13 105.6901
23 585.0001	Ø 63 × 1.5 mm	13 106.9101	13 106.9201
23 546.0001	Ø 70 × 1.5 mm	13 105.8701	13 105.8801
23 373.0001	Ø 102 × 3.5 mm	13 114.7401	13 114.7501
23 372.0001	Ø 102 × 1.5 mm	13 114.7201	13 114.7301

Profile tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
23 301.0001	50 × 0.8 mm Octagonal, Selve	13 111.0801	13 111.0901
23 873.0001	50 × 1.5 mm Octagonal, Rau	13 110.7901	13 110.8001
23 586.0001	Ø 55 mm, elero profile tube	13 102.7701	13 102.7801
23 870.0002	Ø 57 mm, Alu, Ates, MHZ	13 110.8202	13 110.8102
23 834.0001	Ø 58 mm, Termo, Perco	13 109.3701	13 109.3801
23 874.0001	Ø 60 mm, Alu-Plastik, Kittelberger	13 107.6001	13 107.9701
23 333.0001	Ø 60 mm AXE, Griesser, Hüppe, Carros	13 112.8401	13 112.8501
23 555.0001	60 mm Octagonal, Selve, Döhner, Eckermann, Heinzmann	13 105.5801	13 105.5901
23 906.0001	60 mm, Octagonal, Bonfante	13 111.3101	13 111.3201
23 554.0001	60 mm Octagonal, Butzbach, Mäule	13 105.5501	13 105.5601
23 534.0001	60 mm Octagonal, Imbac	13 109.3301	13 109.3401
23 557.0001	60 mm Octagonal, Martin	13 105.6201	13 105.6301
23 562.0001	Ø 62 mm, LeProfil and Krülland	13 105.7001	13 105.7101
23 945.0001	Ø 62 × 0.6 Deprat F2000	13 112.2101	13 112.2001
23 558.0001	Ø 64 mm, Zurflüh-Feller	13 105.6401	13 105.6501
23 522.0001	Ø 65 mm, HOOS	13 106.2101	13 106.2201
23 556.0001	Ø 65 mm, IMBAC, Metalpress, Eckermann	13 105.6001	13 105.6101
23 359.0001	Ø 67 × 1.5 MHZ	13 114.2301	13 114.2401
23 529.0001	70 × 1.0 mm Octagonal, Selve, Döhner, Eckermann,	13 100.3901	13 100.4001
23 320.0001	Ø 71 × 1.5 mm	13 112.3801	13 112.3901
23 548.0001	75 × 1.5 mm Hexagonal, Butzbach, Mäule	13 301.6801	13 105.9701
23 336.0001	Ø 76 × 1.2 mm, Kittelberger	13 112.9101	13 112.9201
23 528.0001	Ø 80 mm, Zurflüh-Feller	13 111.7601	13 111.7701
23 622.0001	Ø 83 × 1.5 mm	13 109.2101	13 109.2201
23 542.0001	Ø 85 mm, LeProfil	13 111.7401	13 111.7501

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Drive
adapter sets

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Drive adapter sets for Type 11 MO and L DC Drives

Note: Profiles of the drive adapter sets in 1:1 scale on page 213.



Notch tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
22 033.0001	Ø 76 × 1.2 mm, Kittelberger, Wiral	13 116.7601	13 103.7201
22 024.0001	Ø 78 × 1.0 mm, MHZ	13 114.8701	13 109.4501
22 049.0001	Ø 78 × 1.0/1.25 mm, Döhner	13 117.5301	13 109.9401
22 057.0001	Ø 78 × 1 mm	13 117.5301	13 103.7901
22 055.0001	Ø 78 × 1.25 mm, round notch Röchling	13 117.5301	13 106.4601
22 039.0001	Ø 85 × 1.2 mm, Imbac from 06.2011	13 117.0001	13 114.1601
22 043.0001	Ø 85 × 1.2 mm, Griesser, Imbac up to 06.2011	13 117.0001	13 107.0101
22 038.0001	Ø 85 × 1.0 mm	13 114.7601	13 108.4201
22 023.0001	Ø 90 mm Le-Profil, Ø 89 mm Deprat	13 117.0501	13 103.1601
22 085.0001	Ø 90.5 × 1.25 mm MHZ	13 117.1001	13 113.6201

Round tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
13 116.9601	Ø 63 × 1.5 mm without thread	13 116.9601	not required
22 025.0001	Ø 63 × 1.5 mm with 4 × M6 thread	13 116.9611	not required
22 044.0001	Ø 70 × 1.5 mm without thread	13 116.9701	13 103.5001
22 026.0001	Ø 70 × 1.5 mm with 4 × M6 thread	13 116.9711	13 103.5001
22 045.0001	Ø 70 × 2.0 mm without thread	13 117.2801	13 114.3401
22 027.0001	Ø 70 × 2.0 mm with 4 × M6 thread	13 117.2811	13 114.3401
22 058.0001	Ø 83 × 1.5 mm without thread	13 117.7101	13 103.3001
22 031.0001	Ø 83 × 1.5 mm with 4 × M6 thread	13 117.7111	13 103.3001
22 046.0001	Ø 98 × 2.0 mm without thread	13 117.0401	13 102.9301
22 022.0001	Ø 98 × 2.0 mm with 4 × M6 thread	13 117.0411	13 102.9301
22 047.0001	Ø 102 × 2.0 mm without thread	13 117.0301	23 447.0101
22 021.0001	Ø 102 × 2.0 mm with 4 × M6 thread	13 117.0311	23 447.0101
22 048.0001	Ø 133 × 2.5 mm/Ø 133 × 2.0 mm without thread	13 117.7901	13 102.9301
22 036.0001	Ø 133 × 2.5 mm/Ø 133 × 2 mm with 4 × M6 thread	13 117.7911	13 102.9301

Profile tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
13 117.0901	Ø 67 × 1.5 mm, MHZ	13 117.0901	not required
22 020.0001	70 mm Octagonal, Selve, Eckermann, Roma	13 115.9301	13 103.6901
22 029.0001	75 mm Hexagonal, Butzbach, Mäule	13 117.1101	13 103.6001
22 032.0001	80 mm, Zurflüh-Feller ZF 80	13 114.8501	13 109.1601
22 058.0001	Ø 83 × 1.5 mm without thread	13 117.7101	13 103.3001
22 031.0001	Ø 83 × 1.5 mm with 4 × M6 thread	13 117.7111	13 103.3001
22 037.0001	85 mm Hexagonal, Butzbach	13 117.8601	13 103.6601
22 035.0001	102 × 2.0 mm Octagonal, Alulux	13 117.7701	13 110.7001
22 028.0001	102 × 2.5 mm Octagonal, Roma	13 117.5101	13 113.4501
22 030.0001	114 mm Octagonal, Heroal	13 117.5501	13 104.1201
22 034.0001	Ø 128 × 1.5 mm, Alukon	13 117.7401	13 112.3401

Drive adapter sets for Type 15 drives



Round tubes

Item Number	Type/Item Description	Drive adapter	Limit switch crown
13 103.5701	Ø 98 × 2.0 mm, drilled with M8 thread	13 103.5701	not required
23 584.0001	Ø 102 × 2.0 mm, drilled with M8 thread	13 100.2701	13 101.4301
23 479.0001	Ø 102 × 1.5 mm, drilled with M8 thread	13 103.5801	13 102.1501
23 475.0001	Ø 108 × 3.6 mm, not drilled	13 103.5201	13 106.8301
23 527.0001	Ø 108 × 3.6 mm, drilled with M8 thread	13 109.1201	13 106.8301
23 698.0001	Ø 127 × 4.0 mm, drilled with M8 thread	13 109.7801	13 109.7901
23 494.0002	Ø 133 × 2.0 mm, drilled with M8 thread	13 103.8202	13 107.4701
23 325.0001	Ø 133 × 2.5 mm, drilled with M8 thread	13 112.7001	13 107.4701
23 697.0001	Ø 133 × 3.0 mm, drilled with M8 thread	13 109.7701	13 109.7601
23 495.0002	Ø 133 × 4.0 mm, not drilled	13 103.3702	13 107.4801
23 495.0101	Ø 133 × 4.0 mm, drilled with M8 thread	13 110.7501	13 107.4801
23 309.0001	Ø 159 × 2.6 mm, drilled with M8 thread	13 111.8901	13 107.4701 & 13 111.8301
23 310.0001	Ø 159 × 4.5 mm, drilled with M8 thread	13 112.2301	13 107.4701 & 13 111.8601
23 027.0001	Ø 168.3 × 4.5 mm and Ø 168 × 4.0 mm, drilled with M8 thread	13 116.5301	13 107.4701 & 13 116.5401
23 456.0001	114 mm Octagonal (side-to-side dimension 125 mm)	13 103.5501	13 104.1101
23 094.0001	114 mm Octagonal for Hörmann with rounded edges and notched on 2 flat sides	13 119.4701	13 104.1101
23 311.0001	Ø 120 mm, Alukon, drilled with M8 thread	13 706.1901	13 706.2001

Drive adapter accessories for RevoLine

Profile tubes

Item Number	Type/Item Description
13 300.9701	RevoLine drive adapter Securing clip (metal), comes partially free of charge with drive adapter (sets) Holds drive adapter firmly in place on drive shaft. Drive adapter needs to be removed from tube to release drive adapter
10 111.0296	RevoLine drive adapter Securing ring (rubber) 12 × 2 mm, comes partially free of charge with drive adapter (sets) Allows releasing drive adapter from drive shaft without removing drive adapter from tube
10 111.0264	RevoLine Securing ring (rubber) 12.1 × 2.7 mm, stronger for more grip, not included with drive adapter

Miscellaneous drive accessories

Item Number	Type/Item Description
23 028.0001	Adapter to fit Somfy Drive wheels on Series M drives from elero

Adjustment aid

Item Number	Type/Item Description
13 308.0001	Flexible adjustment aid with small handle for VariEco, VariEco+ and MO motors
23 601.0201	Flexible adjustment aid with large handle for VariEco and MO motors, available as long stocks last



Bearing and tube accessories for tubular drives

Adapter profiles
Lifting capacity tables

Electrical
accessories

Hardwired
controls

Radio
controls

Door controls

**Bearing and
tube accessories**

Door drives

Speciality
drives

Venetian
blind drives

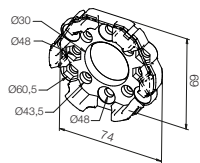
Manual override
tubular drives

Hardwired
tubular drives

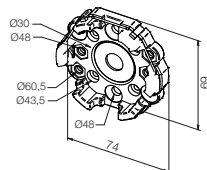
Radio
tubular drives

RevoLine motor bearings for M & L drives

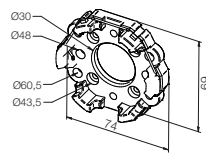
S drive with plate 99 000.7501 & 22 145.0001



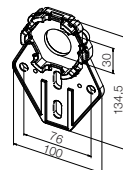
23 003.0001
Standard RevoLine bracket
48/60 mm centers (Alloy)



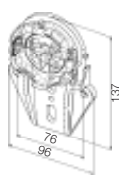
23 003.0201
Standard RevoLine bracket 48/60
mm centers (Alloy) with nuts
4 x M6 and 12.5 mm hole in plastic
center ring



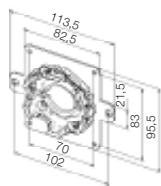
23 003.0301
Extra Strong RevoLine bracket
48/60 mm centers (Alloy)
with M6/M8 thread



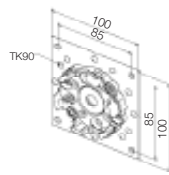
23 004.0001
Universal RevoLine wall bracket
(plastic) Max. 50 Nm



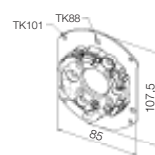
23 615.4401
Disengageable,
max. 30 Nm



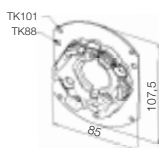
23 615.3601
RevoLine bracket
for SKS system
max. 30 Nm



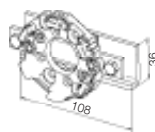
23 615.9901
Standard RevoLine bracket
with universal base plate
(e.g. for VEKA Variant elements)



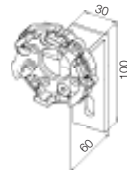
23 615.9001
RevoLine bracket with 88/101 mm
centers with motor bearing
23 003.0001 for Thyssen, Schüco,
Veka, Home systems



23 615.7101
RevoLine bracket
with plastic bearing (max 30 Nm)
for Thyssen, Schüco, Veka, Home
systems

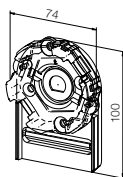


23 615.7201
RevoLine bracket
for clamp fixing over existing roller
bearing support for
retro-fitting, max. 30 Nm



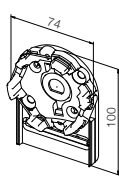
23 615.9101
RevoLine bracket. 60 mm offset for
fixing on existing roller shutter bolts
fixing for retro-fitting/replacing roller
shutter belt pulley, max. 50 Nm

Motor bearing, screwless left



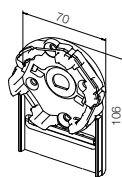
23 615.8201
For built-on roller shutters,
Box size 137 mm
d = 64 – 65.5 mm,
up to max. 30 Nm

Motor bearing, screwless right



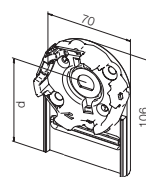
23 615.9201
For built-on roller shutters,
Box size 137 mm
d = 64 – 65.5 mm,
up to max. 30 Nm

Motor bearing, screwless left



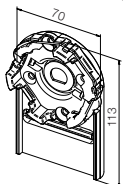
23 615.8301
For built-on roller shutters,
Box size 150 mm
d = 70.7 mm,
up to max. 30 Nm

Motor bearing, screwless right



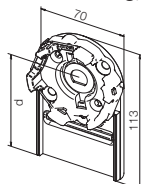
23 615.9301
For built-on roller shutters,
Box size 150 mm
d = 70.7 mm,
up to max. 30 Nm

Motor bearing, screwless left



23 615.8401
For built-on roller shutters,
Box size 165 mm
d = 78.2 – 79.7 mm,
up to max. 30 Nm

Motor bearing, screwless right

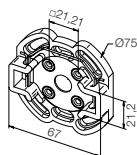


23 615.9401
For built-on roller shutters,
Box size 165 mm
d = 78.2 – 79.7 mm,
up to max. 30 Nm

Wall brackets for "T" head adapter plate

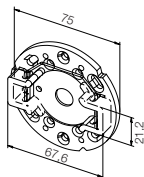
for S drive with plate 99 000.7401, 22 144.0001 & 22 1414.0001

Wall bracket



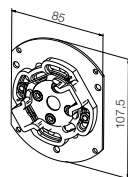
23 322.0001
T-head motor bearing
48/60 mm centers

Motor bearing



23 108.0001
T-head motor bearing
48/60 mm centers

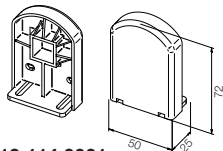
Mounting plate



23 277.0001
T-head motor bearing
(Thyssen, Schüco, Brüggmann)

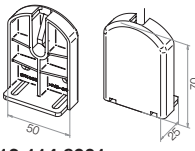
Wall brackets 16 × 16 mm with same style idler bearings and idlers

Drive bearing bracket



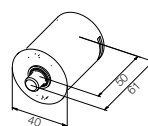
13 114.9001
White
(for 16 × 16 mm motor bolt)
max. 5 Nm

Idler bearing bracket

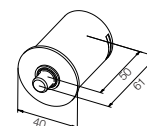


13 114.8901
White

Idler

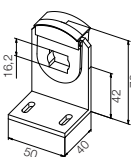


23 013.0001
With movable bolt Ø 10 mm
for tube 40 × 1.0 mm
White



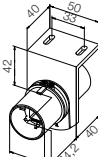
23 013.0002
For 40 × 2.0 mm tube or limit
switch crown. With spring
loaded 10 mm bolt
White

Drive bearing bracket



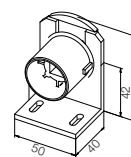
23 095.0001
With square 16 × 16 mm
standard version 42 mm
White

Intermediate fixing support bracket



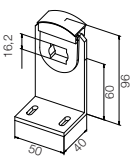
23 203.0001
For 40 × 2 mm tube or limit switch crown, complete.
Up to 5 Nm standard version 42 mm
White

Idler bearing bracket set



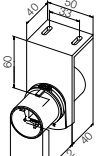
23 096.0001
With outer Ø 35.5 mm
standard version 42 mm
White

Drive bearing bracket



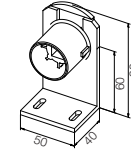
23 095.0101
For 16 × 16 mm motor bolt
extended version 60 mm
White

Intermediate fixing support bracket



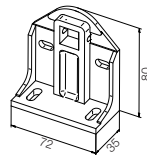
23 203.0101
For 40 × 2 mm tube or limit switch crown, complete. Up to 5 Nm
extended version 60 mm
White

Idler bearing bracket set



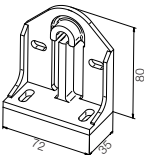
23 096.0101
For 40 × 2 mm tube or limit switch crown with outer Ø 35.5 mm
extended version 60 mm
White

Drive bearing bracket



13 109.1701
Plastic
Motor side, max. 20 Nm
For 16 × 16 mm motor bolt
White

Idler bearing bracket

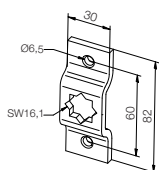


13 109.1801
Plastic
Ø 10 mm,
Idler side
White

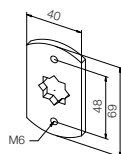
More idlers can be found on page 125. More idler supports can be found on page 126

Wall brackets

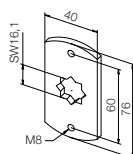
16 × 16 mm, for all motors fitted with 16 × 16 mm motor bolt



13 106.3501
60 mm centers, offset

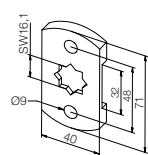


13 103.3901
48 mm centers, flat

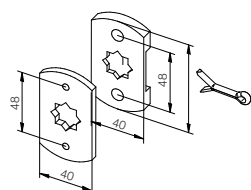


13 103.4001
60 mm centers, flat

Distance plate

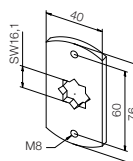


13 110.5601
for 13 103.3901



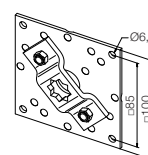
23 109.0001
48 mm centers with plastic
distance plate (contains no.
13 103.3901 and 13 110.5601)

Motor bearing



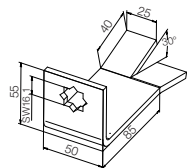
13 103.4001
60 mm centers, flat

Base plate with motor bearing



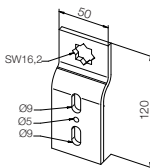
23 833.0001
48/60/85/90 mm centers

Motor bearing



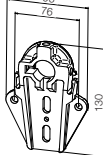
13 300.8501
For plastering into wall,
up to Type 11/8

Star wall brackets



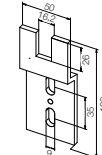
13 301.0801

Universal wall bracket

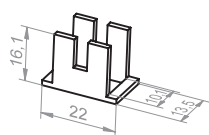


23 428.0002
16 × 16 mm,
max 60 Nm disengageable

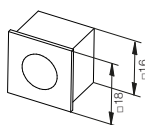
Forked wall bracket



13 300.4801
16 × 16 mm,
max 40 Nm torque

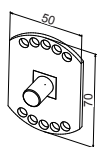


13 108.0201
Adapter to convert almost
all 16 × 16 mm brackets to
10 × 16 mm brackets

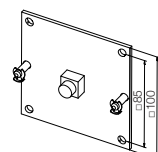


13 301.1901
Bearing support for idlers with Ø
10 mm pin for use in brackets with
16 × 16 mm support

Mounting plate for Type 9–11 MO

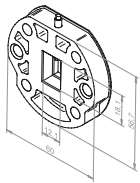


23 687.0201
for Type 9–11 NHK for
installation in pre-mount units

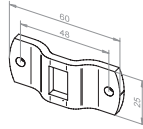


23 800.0001
Mounting plate
for Type 9–11 NHK
motors only

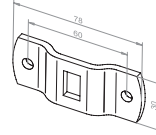
10 × 16 mm, for all motors fitted with 10 × 16 mm motor bolt



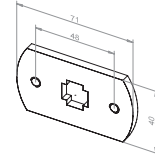
23 986.0001
Clip-in Wall bracket,
48 mm centers



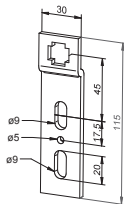
13 300.0801
Wall bracket, Ø 48 mm
centers, M6 thread



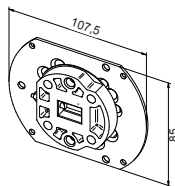
13 106.1701
Wall bracket, Ø 60 mm
centers, M8 thread



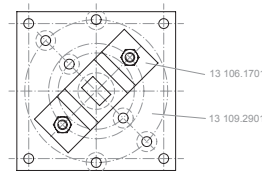
13 301.7001
Flat wall bracket, 48 mm
centers, M6 thread



13 301.4601
Wall bracket cross, closed

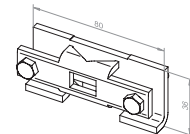


23 276.0001
Mounting plate for motor bearing
(Thyssen, Schüco, Veka, Home)
inc. 23 986.0001

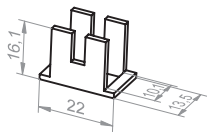


23 832.0001
Base plate 13 190.2901 with
wall bracket 13 106.1701
48/60/90/120 mm centers

Clamp bearing Type 9



23 965.0002
For roller bearing bracket
or for plaster-in brackets



13 108.0201
Adapter to convert almost
all 16 × 16 mm brackets to
10 × 16 mm brackets

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Bearing and
tube accessories

Door controls

Radio
controls

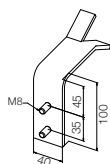
Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

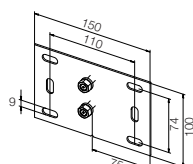
Mounting plates and brackets

Bearing for motor bearing



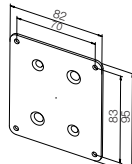
13 300.9202
max. 80 Nm
For plastering into wall

Mounting plate

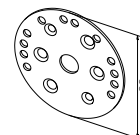


24 554.0001
For wall bracket

Mounting plates

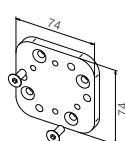


13 302.2601
For Motor bearing
(Stakusit)



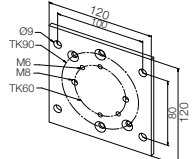
13 302.7801
48/60/78 mm centers
for Weru

Universal adapter plate set



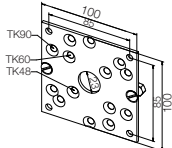
23 687.0401
48/60 mm centers, treaded for
M5 and M6 screws, incl. 2 x
countersunk screws M6 x 14
about 8 mm thick

Mounting plate



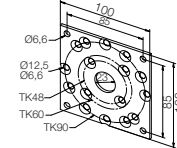
23 457.0001

Universal adapter plate set



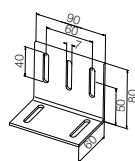
23 687.0501
With 2 countersunk screws
M6 x 16 and nuts

Universal adapter plate

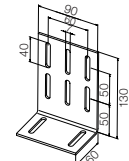


13 109.2902
48/60/85/90 mm centers

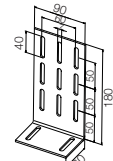
Angle brackets



13 110.5001
80 mm high



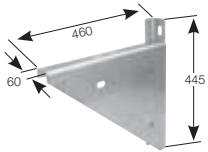
13 110.5101
130 mm high



13 110.5201
180 mm high

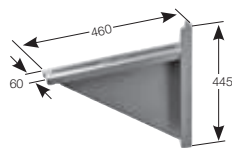
Brackets

Bracket 3 kN right



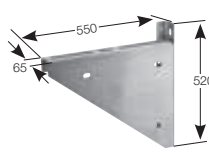
max. load: 3,000 N
24 399.0001
 With 2 hex bolts M 12×50
 and nuts for drives DFM/WFM
 140–280 safety brake TA 1/2 RD

Bracket 3 kN left



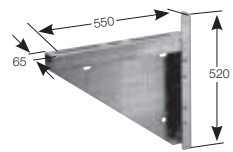
max. load: 3,000 N
24 313.0001
 With 2 hex bolts M 12×50
 and nuts for drives DFM/WFM
 140–280 safety brake TA 1/2 RD

Bracket 5.3 kN right



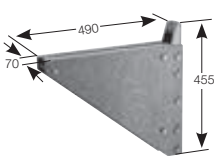
max. load: 5,300 N
24 399.0301
 With 2 hex bolts M 12×50
 and nuts for drives DFM 320–600
 safety brake TA 2/3 RD

Bracket 5.3 kN left



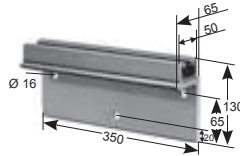
max. load: 5,300 N
24 399.0401
 With 2 hex bolts M 12×50
 and nuts for drives DFM 320–600
 safety brake TA 2/3 RD

Bracket 14 kN left or right



max. load: 14,000 N
14 306.4601
 For drives DFM 320–600 safety
 brake TA 4 RD and
 TA 5 RD

Screw-on angle 5.3 kN



max. load: 5,300 N
24 553.0101
 For pedestal bearing, safety brake
 TA 1/2 RD and TA 2/3 RD

Bracket adapter



24 393.0101
 To replace
 Box 15–40 with DF 140–280



24 394.0101
 To replace
 Box 50–75 with DF 320–600

Bracket adapter for Riexinger brackets



14 302.8501
 To replace
 Box 15–40 with DF 140–280



14 302.8601
 To replace
 Box 50–75 with DF 320–600

Screws for pedestal bearings and safety brakes



14 300.5501
 T-head screw M 10×40 with M 10 nut for fixing
 the pedestal bearing to the screw-on angle
 (item no. 24 553.0101, 2 pieces required)



14 300.5601
 T-head screw M 12×50 with M 12 nut (for
 pedestal bearings Ø 30 and Ø 40 and
 safety brake TA 1/2 RD / TA 2/3 RD on the
 screw-on angle, item no. 24 553.0101)

Notch arrests



23 431.0001
 For tape fixing in notch tubes
 (block = 6 pieces)

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Bearing and
tube accessories

Door controls

Radio
controls

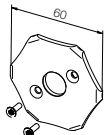
Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

RevoLine S motor

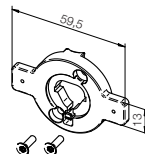
For RevoLine brackets



22 145.0001

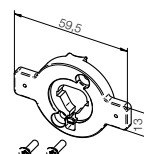
Motor head add-on for use of S motors in RevoLine wall brackets, including fixing screws

For T-head brackets



22 144.0001

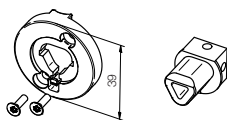
T-motor head add-on white, complete, including fixing screws for RevoLine S



22 141.0001

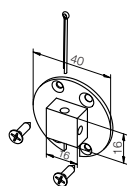
T-motor head add-on orange, complete, including fixing screws for RevoLine S

For 16 x 16 mm brackets



22 143.0001

Round motor head add-on incl. 16 x 16 mm motor bolt and fixing screws, max. 5 Nm



23 367.0001

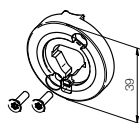
Motor head add-on with bolt 16 x 16 mm including fixing screws



22 143.0101

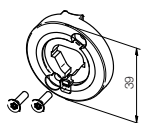
16 x 16 mm Motor bolt only, for retrofitting Motors fitted already with add-on 22 140.0001 or 22 042.0001. Max 5Nm

For custom screw fixing



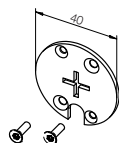
22 140.0001

Round motor head add-on without wings, orange, complete, including fixing screws



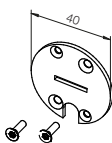
22 042.0001

Round motor head add-on, white, complete, including fixing screws



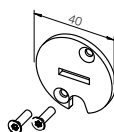
22 064.0001

(Cross slot = 13 mm) For Acmeda and small Faber and Rollease brackets



22 065.0001

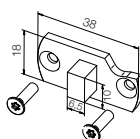
(Slot = 16.4 mm) Both complete, including mounting accessories. Suitable for large Rollease brackets



22 080.0001

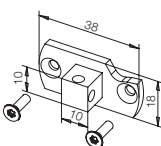
(Slot 15 x 3 mm), Faber-Benthin including mounting accessories

For 3rd Party brackets



23 099.0001

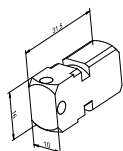
With bolt 10 x 6.5 mm (11 mm high), including fixing screws



22 040.0001

10 x 10 mm, complete, including fixing screws

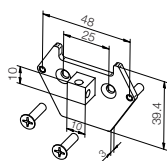
Adapter plates for RevoLine M + L



23 374.7901

Only for RevoLine M RH (Round head).
Motor bolt 16 × 10 mm to suit old
Type 9 or 16 × 10 mm brackets.
Maximum torque 50 Nm

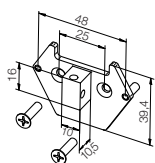
For 10 × 10 mm brackets



23 374.1601

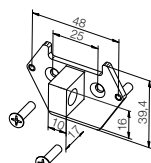
Motor head add-on with motor
bolt 10 × 10 mm, pin 9.5 mm
(max. 30 Nm)

For 10 × 16 mm brackets



23 374.1401

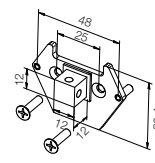
10 × 16,
short pin 10.5 mm
(up to 50 Nm)



23 374.1501

Motor head add-on with motor bolt
10 × 16 mm, pin 17 mm long
(max. 50 Nm)

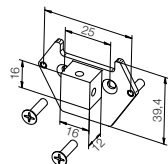
For 12 × 12 mm brackets



23 374.3301

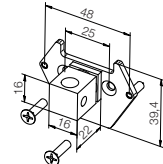
Motor head add-on with
motor bolt 12 × 12 mm,
height: 11.0 mm

For 16 × 16 mm brackets



23 374.2101

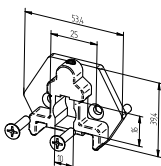
Motor head add-on with
motor bolt 16 × 16 mm,
pin 12 mm



23 374.2501

Motor head add-on with
motor bolt 16 × 16 mm,
pin 22 mm

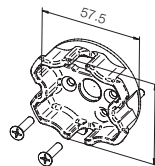
For old Type 9 brackets



23 374.6801

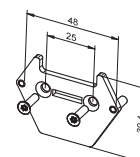
Adapter to fit elero RevoLine M motors into old elero Type 9 bracket system. Maximum torque 30 Nm. This adapter will increase side gap by 12 mm. Also note the availability of special adapter cable to suit Type 9. Motor plug on Page 205

For other manufacturers brackets



23 374.9401

Adapter to fit elero RevoLine M motors into Somfy bracket system. Maximum torque 50 Nm. This adapter will increase side gap by 16 mm



23 374.7301

Adapter to fit elero RevoLine M motors onto Faber Benthin 15 × 3 mm pin brackets. Maximum torque 50 Nm, also refer to Faber-Benthin for maximum bracket torque.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Bearing and
tube accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

General accessories

Roller bearing holder brackets



13 300.8901
for 40 mm wide roller
bearings (next page)



23 853.0001
45 mm wide
for 40 mm wide roller
bearings (next page)



23 852.0001
90 mm wide
for 40 mm wide roller
bearings (next page)



13 300.9001
for 40 mm wide roller
bearings (next page)

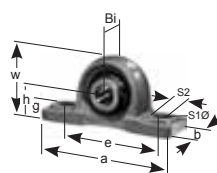
Pedestal bearings



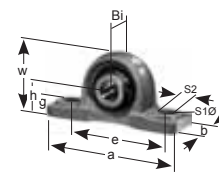
13 300.3601
Ø 17 mm



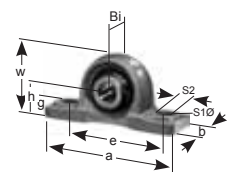
13 300.3701
Ø 20 mm



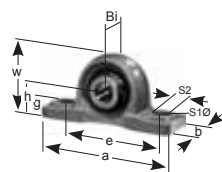
13 300.7701
With set screw fastening
Ø 30 mm



13 305.5401
With set screw fastening
Ø 40 mm



13 300.3901
With set screw fastening
Ø 50 mm



13 305.5501
With set screw fastening
Ø 65 mm

Plate bearings

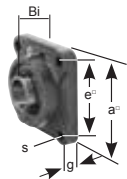


13 300.3001
Ø 17 mm

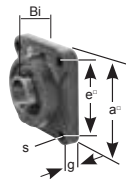


13 300.3101
Ø 20 mm

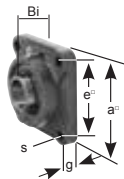
Flange bearings



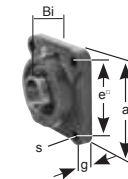
13 300.3201
Ø 30 mm



13 305.5601
Ø 40 mm



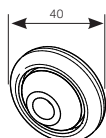
13 300.3401
Ø 50 mm



13 305.5701
Ø 65 mm

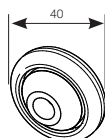
Item Number	h	a	e	b	S1Ø	S2	g	w	Bi	kg
13 300.7701	42.9	165	121	48	17	21	15	84	38.1	1.3
13 305.5401	49.2	184	137	54	17	21	17	100	49.2	2.0
13 300.3901	57.2	206	159	60	20	22	19	114	51.6	2.7
13 305.5501	76.2	265	203	70	25	29	25	150	65.11	5.6
Item Number	a	e	g	SØ	Bi	kg				
13 300.3201	108	83	13	12	38.1	1.1				
13 305.5601	130	102	15	16	49.2	2.0				
13 300.3401	143	111	16	16	51.6	2.5				
13 305.5701	187	149	20	19	65.1	5.5				

Roller bearing



13 300.8601
for pin Ø 10 mm

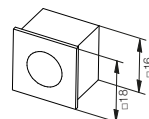
13 300.8701
for pin Ø 13 mm



13 300.8801 for pin Ø 17 mm

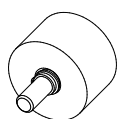
13 301.6101 for pin Ø 18 mm

13 300.4301 for pin Ø 20 mm

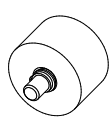


13 301.1901
Bearing support for idlers with
Ø 10 mm pin for use in brackets
with 16 x 16 mm support.
Page 117

40 x 1 mm round tube idlers

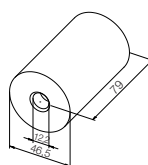


23 653.0001
For tube Ø 40 x 1.0 mm, pin
length 18 mm, Ø 10 mm (Only
available as long stocks last)

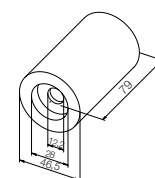


23 653.0101
Suitable for bearing bracket item
no. 23 109.1801, for tube
Ø 40 x 1.0 mm, pin length 12 mm
(Only available as long stocks last)

50 x 1.5 mm round tube idlers



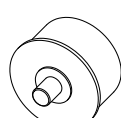
13 105.5401
Idler with 12.2 mm hole for
shutter cassette pin (Only
available as long stocks last)



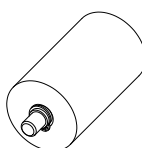
13 106.8401
Idler for 28 mm ball bearing
support (Only available as long
stocks last)



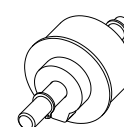
23 574.0001
For tube Ø 50 x 1.5 mm,
pin Ø 10 mm,
pin length 20 mm



23 574.0101
For tube Ø 50 x 1.5 mm,
pin Ø 10 mm,
pin length 12 mm

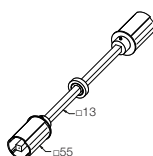


23 573.0101
Extended,
for tube Ø 50 x 1.5 mm,
pin Ø 10 mm, pin length 12 mm
(Only available as long stocks last)

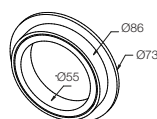


23 470.0001
Adjustable,
for tube Ø 50 x 1.5 mm,
pin Ø 10 mm

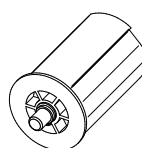
Ø 55 mm elero profile tube accessories



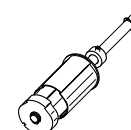
23 401.0001
Central support inc. ball
bearing (shaft adapter)
(Only available as long stocks last)



23 642.0001
Intermediate support ring
(Only available as long stocks last)

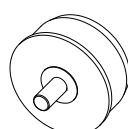


23 587.0101
Extended, for tube Ø 55 mm,
pin Ø 10 mm, pin length 12 mm
(Only available as long stocks last)

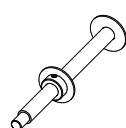


23 512.0001
Adjustable counterpart
support pin Ø 13 mm
(Only available as long stocks last)

Ø 63 x 1.5 mm round and notch tube idlers



23 460.0001
For tube Ø 63 x 1.5 mm, pin
Ø 10 mm, pin length 20 mm
(Only available as long stocks last)

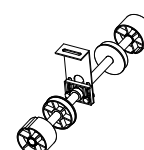


23 408.0001
Steel adjustable counterpart support,
pin Ø 17 mm, round tube only (only
available as long stocks last)

Ø 78 x 1.0 mm notch tube idlers



23 462.0001
For tube Ø 78 x 1.0 mm,
pin Ø 10 mm, pin length 20 mm
(Only available as long stocks last)



23 435.0001
Intermediate fixing support
(Only available as long stocks last)

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Bearing and
tube accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Bearing accessories, anti push-up devices and rigid shaft fastener

Note: For large Idlers / Counterpart support, please refer to page 135 (Welding shaft and welding blanks)

Ø 83 x 1.5 mm round tube accessories



23 413.0001

Steel

Adjustable counterpart support, pin Ø 17 mm (Only available as long stocks last)

Ø 98 x 2.0 mm round tube accessories



23 415.0001

Steel

Adjustable counterpart support, pin Ø 20 mm (Only available as long stocks last)

Clips

Fabric clip



13 301.1601

For round tubes Ø 40 mm outside diameter



13 301.7301

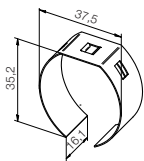
For round tubes 50 mm outside diameter



13 301.6201

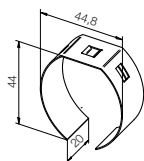
For elero alu profile tube Ø 55 mm

Spring clip



13 301.8201

For 40 mm octagonal tube to support roller shutter fixing spring

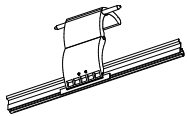


13 301.8501

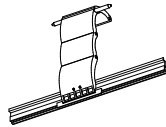
For 50 mm octagonal tube to support roller shutter fixing spring

Anti push-up devices (As long stocks last)

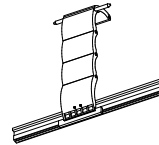
Anti push-up device mini profile



13 301.8901
2 sections

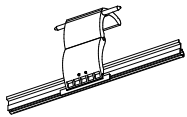


13 301.9101
3 sections

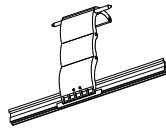


13 301.9201
4 sections

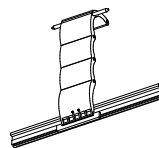
Anti push-up device standard profile



13 301.8801
2 sections
standard profile,
built-in/built-on

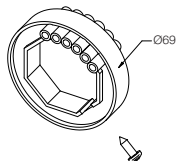


13 301.9001
3 sections
standard profile,
built-in/built-on/new

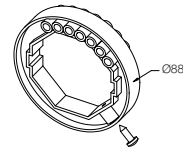


13 301.9201
4 sections
standard profile,
new building

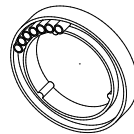
Fixing ring



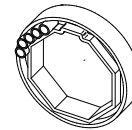
13 301.9401
for 40 mm
octagonal shaft



13 301.9501
for 60 mm
octagonal shaft



13 301.9701
for 65 mm Profile shaft
Hoos, IMBAC, Metalpress,
Eckermann



13 302.1501
for 50 mm
octagonal shaft

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Bearing and
tube accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Anti-push up device MiniClick and MaxiClick

Universal for octagonal tubes, 40, 50, 60 and 70 mm

MiniClick, with twist lock

For mini profiles and octagonal shafts size 40, 50 (0.6 and 0.8 mm) and size 60 (0.6 and 0.9 mm)

Item Number	Type/Item Description
13 309.0001	MiniClick, 1 section
13 309.0101	MiniClick, 2 sections
13 309.0201	MiniClick, 3 sections
13 309.0301	MiniClick, 4 sections
13 309.0401	MiniClick profile insert
13 309.0501	MiniClick profile spacer insert

MaxiClick, with twist lock

For standard profiles and octagonal shaft size 60 (0.9 mm) and size 70 (1.0 / 1.2 und 1.5 mm)

Item Number	Type/Item Description
13 309.1001	MaxiClick, 1 section
13 309.1101	MaxiClick, 2 sections
13 309.1201	MaxiClick, 3 sections
13 309.1401	MaxiClick profile insert
13 309.1501	MaxiClick profile spacer insert



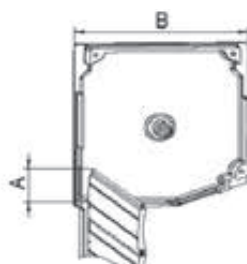
MiniClick selection table

Shaft fastener	By box depth B ¹ (mm)	By Drive torque / length	By Shutter weight	Application range
1 section	115 – 150	Use minimum 1 fastener every 60 cm or 4 Nm drive torque	max. 8 kg per shaft fastener	Mini- / Maxi-Profil ¹
2 sections	155 – 180			
3 sections	185 – 210			
4 sections	215 – 240			

MaxiClick selection table

Shaft fastener	By box depth B ¹ (mm)	Number/ shutter	By Shutter weight	Application range
1 section	125 – 160	Use minimum 1 fastener every 60 cm or 6 Nm drive torque	max. 12 kg per shaft fastener	Mini- / Maxi-Profil ¹
2 sections	160 – 200			
3 sections	200 – 250			

¹ Select MiniClick or MaxiClick by Shaft size.



The top most profile slat should not be exposed by more than 1/2 profile height above the guide rails (A).

Anti-push up will only work if the slats are compressed and can exert upwards pressure against the Anti-push up device.

Inertia brake, sprockets and chains, counterpart support and manual override accessoires

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

**Bearing and
tube accessories**

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Inertia brakes

for left or right hand installation
suitable for built-on roller shutters



24 031.0001

TA0-RD/X

max. torque: 147 Nm

max. operating speed: 22 rpm

with damping and electrical cut-off

Drive adapter sets for Ta0-RD/X (2 pieces required)



Notch tubes

Item Number	Type/Item Description
13 116.9201	Ø 57 mm, Ates
13 117.0701	Ø 60 mm, AXE, Griesser, Hüppe
13 116.9301	Ø 62 x 0.6 mm, DEPRAT F 2000
13 116.7101	Ø 63 x 1.0 mm
13 116.4502	Ø 70 mm, IMBAC, Ahlquist
13 116.4602	Ø 70 mm, Griesser
13 117.2701	Ø 70 mm
13 117.0601	Ø 71 x 1.5 mm
13 114.8701	Ø 78 x 1.0 mm / 78 x 1.25 mm, flat notch MHZ
13 116.9101	Ø 78 x 1.0 mm, Döhner
13 117.5301	Ø 78 x 1.0 mm 1.25 mm
13 114.7601	Ø 85 x 1.0 mm
13 117.0001	Ø 85 x 1.2 mm, IMBAC-Neu, Griesser
13 117.0501	Ø 90 mm, Le Profil and Ø 89 mm, DEPRAT

Drive adapter sets for Ta0-RD/X (2 pieces required)



Round tubes

Item Number	Type/Item Description
13 116.2901	Ø 50 x 1.5 mm
13 116.9901	Ø 50 x 1.5 mm, Siral
13 116.9501	Ø 60 x 1.5 mm and Ø 62 x 2.0 mm
13 116.9601	Ø 63 x 1.5 mm
13 116.9701	Ø 70 x 1.5 mm
13 117.2801	Ø 70 x 2.0 mm
13 117.7101	Ø 83 x 1.5 mm (round and profile tube)
13 117.0301	Ø 102 x 1.5 mm and Ø 102 x 2.0 mm
13 117.0401	Ø 102 x 3.5 mm and Ø 98 x 2.0 mm
13 117.7901	Ø 133 x 2.5 mm and Ø 133 x 2.0 mm

Profile tubes

Item Number	Type/Item Description
13 117.8501	Ø 50 mm, Soprofen
13 115.9501	50 mm Octagonal, Selve
13 117.8301	Ø 53 mm, Deprat
13 116.1001	Ø 54 mm, Zurflüh-Feller
13 116.9001	Ø 55 mm, elero profile tube
13 117.0201	Ø 58 x 1.5 mm Alu, Termo Perco
13 116.8301	60 mm Octagonal, IMBAC
13 117.0801	60 mm Octagonal, Bonfante
13 116.9801	60 x 0.7 mm Octagonal, Butzbach, Mäule
13 117.0101	Ø 60 mm, Alu-Plast, Kittelberger, Ø 63 x 1.5 mm EHAGE
13 116.9401	Ø 62 mm Le-Profil, Krülland
13 114.8301	Ø 64 mm, Zurflüh-Feller
13 116.7401	Ø 65 mm, IMBAC, Eckermann, Metallpress
13 116.7501	Ø 65 mm, Hoos
13 117.0901	Ø 67 x 1.5 mm, MHZ
13 115.9301	70 mm Octagonal, Selve, Döhner, Eckermann
13 117.1101	75 mm Hexagonal, Butzbach, Mäule
13 116.7601	Ø 76 x 1.2 mm, Kittelberger, Wiral
13 117.8001	78 mm Pentagonal, Meimo
13 114.8501	Ø 80 mm, Zurflüh-Feller
13 117.8601	80 mm Hexagonal, Butzbach
13 117.7701	102 x 2.0 mm Octagonal, Alulux
13 117.5101	102 x 2.5 mm Octagonal, Roma
13 117.5501	114 mm Octagonal, Heroal
13 117.7401	Ø 128 x 1.5 mm, Alukon profile tube
23 601.0201	Flexible adjustment aid

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Inertia brakes

Door controls

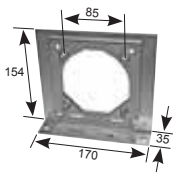
Radio
controls

Hardwired
controls

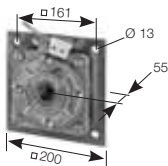
Electrical
accessories

Adapter profiles
Lifting capacity tables

with electrical switch off,
IP 65, TÜV-Süd certified



24 040.0001
Pedestal bearing console
complete for TA0-RD/X



24 541.0002
TA 1/2 RD with bracket for wall mounting Ø 30 mm
max. torque : 332 Nm
max. operating speed: 22 rpm
test number: 02165

**Inertia brake TA 1/2 RD
Ø 30 mm**



24 552.0003
max. torque: 332 Nm
max. operating speed: 22 rpm
test number: 02165

**Inertia brake TA 2/3 RD
Ø 40 mm**



24 553.0003
max. torque: 552 Nm
max. operating speed: 22 rpm
test number: 02166

**Inertia brake TA 4-RD
Ø 50 mm**

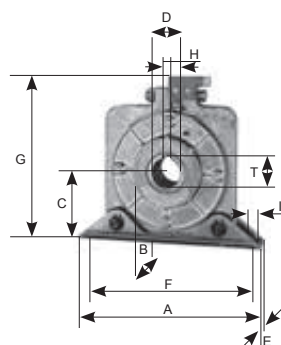


24 530.0001
max. torque: 1063 Nm
max. operating speed: 18 rpm
test number: 02168

**Inertia brake TA 5-RD
Ø 50 mm**



24 531.0001
max. torque: 1943 Nm
max. operating speed: 12 rpm
test number: 02169



Item Number	Name	A	B	C	D ^{H7}	E	F	G	H ^{J9}	I	T	kg
24 552.0003	TA 1/2 RD	210	44	80	30	38	180	185	8	12	33.3	4.5
24 553.0003	TA 2/3 RD	260	50	100	40	45	230	225	12	14	43.3	8
24 530.0001	TA 4 RD	340	78	150	50	75	300	320	14	22	53.8	23
24 531.0001	TA 5 RD	390	88	180	65	90	340	380	18	22	69.4	37

Choice of safety brake

	24 541.0002 TA 1/2 – RD	24 552.0003 TA 1/2 – RD	24 553.0003 TA 2/3 – RD	24 530.0001 TA 4 – RD	24 531.0001 TA 5 – RD
Door size (h x w mm)	3,000 x 3,000		5,000 x 5,000	5,000 x 4,000	5,000 x 7,000
max. shafts Ø mm					
108.0 x 4.0	475				
133.0 x 4.0	450		660		
168.3 x 4.5	370		580	980	
193.7 x 5.4	325		500	925	
219.1 x 5.9	282		470	830	
244.5 x 5.9	246		420	720	
298.5 x 8.0	190		330	610	1,110
323.9 x 8.0			290	560	980
355.6 x 8.0				500	950

These data relate to the complete door weight in kg.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Inertia brakes

Door controls

Radio
controls

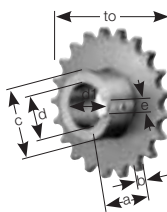
Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Sprocket with hub

3/4 × 7/16"



Item Number	Tooth count	to	a	b	c	d	d1	e	For reduction
24 918.0001	20	121.8	35	11.1	80	30	33.3	8	1:1
24 919.0101	40	242.8	40	11.1	100	40	43.3	12	2:1
24 919.0201	50	303.4	61	11.1	110	40	43.3	12	2.5:1
24 919.0301	60	364.0	61	11.1	110	40	43.3	12	3:1
24 920.0101	50	303.4	61	11.1	110	50	53.8	14	2.5:1
24 920.0201	60	364.0	61	11.1	110	50	53.8	14	3:1

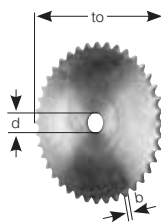
with set screw fastening
see page 135, example b)

1" × 17.02

Item Number	Tooth count	to	a	b	c	d	d1	e	For Reduction
24 919.0401	19	154.4	45	15.3	128	40	43.3	12	1:1
24 920.0301	19	154.4	45	15.3	128	50	53.8	14	1:1
24 920.0401	38	307.6	50	15.3	140	50	53.8	14	2:1
24 920.0501	48	388.4	68	15.3	140	50	53.8	14	2.53:1
24 921.0101	38	307.6	50	15.3	110	65	69.4	18	2:1
24 921.0201	48	388.4	68	15.3	110	65	69.4	18	2.53:1
24 921.0301	57	461.0	68	15.3	110	65	69.4	18	3:1

Sprocket

3/4 × 7/16"



Item Number	Tooth count	to	b	d	For reduction
14 110.4401	20	121.8	11.1	30	1:1
14 110.4501	40	242.8	11.1	40	2:1
14 110.4601	50	303.4	11.1	40	2.5:1
14 110.4701	60	364.0	11.1	40	3:1
14 110.4801	50	303.4	11.1	50	2.5:1
14 110.4901	60	364.0	11.1	50	3:1

for welding to the winding shaft
see page 135, example c)

1" × 17.02 chain

Item Number	Tooth count	to	b	d	For reduction
14 110.5001	19	154.4	15.3	40	1:1
14 110.5101	19	154.4	15.3	50	1:1
14 110.5201	38	307.6	15.3	50	2:1
14 110.5301	48	388.4	15.3	50	2.53:1
14 110.5401	38	307.6	15.3	65	2:1
14 110.5501	48	388.4	15.3	65	2.53:1
14 110.7701	57	461.0	15.3	65	3:1

Note: EN 12604 requires drive chains to have a safety factor of at least 6.

Chains



Item Number	Type/Item Description
14 300.1801	Chain 3/4 x 7/16", breaking load 29,000 N
14 300.1601	Chain joint 3/4 x 7/16"
14 300.1901	Chain 1" x 17.02, breaking load 60,000 N
14 300.1701	Chain joint 1" x 17.02

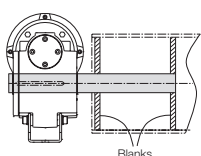
Welding shafts

Item Number	Shaft Ø	Key	Length
24 045.0001	30 mm	8 x 7 x 50 mm	500 mm
	a) for DFM/WFM 140 – 280 d) Safety brake TA ½	b) Chain wheel with hub	
24 334.0201	30 mm	8 x 7 x 40 mm	200 mm
	Used to convert DFM drive to chain wheel drive (DKM). Different bracket also required. Please refer to page 121. a) for DFM/ WFM 140 – 280 d) Safety Brake TA ½		
	NOTE: Only use short version if long version is not suitable. Short version needs to be placed more accurately.		
24 045.0101	40 mm	12 x 8 x 60 mm	500 mm
	a) for DFM/WFM 310 – 280 d) Safety brake TA ¾	b) Chain wheel with hub	
24 348.0201	40 mm	12 x 8 x 40 mm	200 mm
	Used to convert DFM drive to chain wheel drive (DKM). Different bracket also required. Please refer to page 121. a) for DFM/ WFM 310 – 600 d) Safety brake TA ¾		
	NOTE: Only use short version if long version is not suitable. Short version needs to be placed more accurately.		
24 045.0201	50 mm	14 x 9 x 60 mm	600 mm
	d) for Safety brake TA 4	b) Chain wheel with hub	
24 045.0301	65 mm	14 x 9 x 60 mm	600 mm
	d) for Safety brake TA 5	b) Chain wheel with hub	

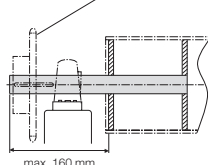
Welding shaft bearing side

Item Number	Shaft Ø	Length
14 110.8001	30 mm	500 mm
14 110.8101	40 mm	500 mm
14 110.8201	50 mm	600 mm
14 110.8301	65 mm	600 mm
	a) for pedestal/flange bearing c) Full chain wheel	

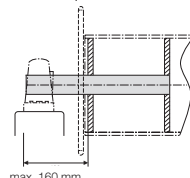
a) Drive side:



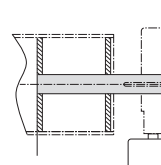
b) Drive side:
with chain wheel with hub



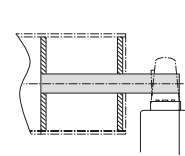
c) Drive side: with full chain wheel



d) Bearing side:
with safety brake



e) Bearing side:



Blanks



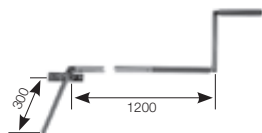
Note: 2 blanks required per welding shaft.

for welding shafts and counterpart supports

Item Number	For shaft Ø (mm)	Blanks-Ø (mm)	Thickness (mm)	Hole Ø (mm)
13 117.6001	98 × 2; 100 × 3; 101.6 × 3,6	93.0	4	30
14 110.3301	108.0 × 3.6	99.0	4	30
14 110.3201	133.0 × 4.0	124.0	6	30
13 117.6101	133.0 × 2.0	128.5	6	30
13 117.6201	159.0 × 4.5	149.0	6	30
13 119.7601	159.0 × 2.6	153.0	6	30
14 110.5401	168.3 × 4.5	158.5	6	30
14 110.6001	168.3 × 3.0	161.5	6	30
14 110.9501	193.7 × 5.4	181.5	6	30
14 110.9601	193.7 × 3.0	187.0	6	30
13 104.6101	133.0 × 4.0	124.0	6	40
14 102.4201	133.0 × 2.0	128.5	6	40
13 117.6201	159.0 × 4.5	149.0	6	40
13 102.6001	159.0 × 2.6	153.0	6	40
13 102.6201	168.3 × 4.5	158.5	6	40
14 102.6701	168.3 × 3.0	161.5	6	40
14 102.6201	193.7 × 5.4	181.5	8	40
14 101.9401	193.7 × 3.0	187.0	8	40
14 110.6101	219.1 × 5.9	206.0	8	40
14 110.6201	244.5 × 6.3	231.0	8	40
14 101.7701	133.0 × 4.0	124.0	6	50
14 101.7501	133.0 × 2.0	128.5	6	50
14 101.8301	159.0 × 4.5	149.0	6	50
14 110.5801	159.0 × 2.6	153.0	6	50
14 101.8701	168.3 × 4.5	158.5	6	50
14 100.5701	168.3 × 3.0	161.5	6	50
14 101.8901	193.7 × 5.4	181.5	8	50
14 110.3401	219.1 × 5.9	206.0	8	50
14 110.3501	244.5 × 6.3	231.0	8	50
14 110.3601	273.0 × 6.3	259.0	8	50
14 110.3701	298.5 × 7.1	283.0	8	50
14 110.7101	193.9 × 5.4	181.5	8	65
14 110.7201	219.6 × 5.9	206.0	8	65
14 110.7301	244.5 × 6.3	231.0	8	65
14 110.3801	273.0 × 6.3	259.0	8	65
14 110.3901	298.5 × 7.1	283.0	8	65
14 110.4001	318.0 × 7.5	302.0	8	65
14 110.4101	323.9 × 7.1	308.0	8	65
14 110.4201	355.6 × 8.0	338.0	8	65
14 110.4301	368.0 × 8.0	351.0	8	65

Accessories Type 9 MO and Type 11 MO

Crank handle



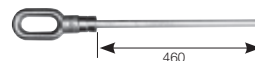
23 764.0002
Hinged crank handle with link bearing (45°) and 7.0 mm hexagonal



23 731.0002
Link bearing with awning eyelet



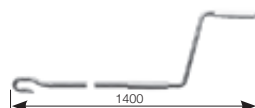
23 771.0002
7.0 mm hexagonal with awning eyelet
Length: 180 mm



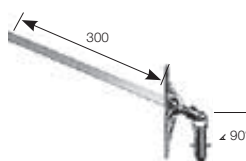
23 771.0102
7.0 mm hexagonal with awning eyelet
Length: 460 mm



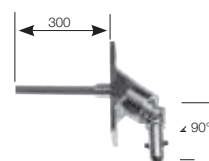
23 771.0301
7.0 mm hexagonal with awning eyelet
Length: 600 mm



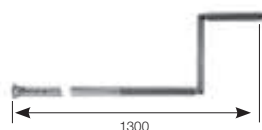
12 300.0901
Crank handle with awning hook
Length: 1.4 m



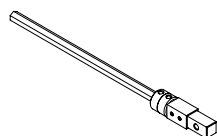
23 772.0002
Link bearing (45°) for crank handle with adapter cone



23 342.0001
Link bearing (90°) for crank handle with adapter cone



23 773.0001
Hinged crank handle with adapter cone



23 199.5701
MO to NMA system adapter shaft for Type 9 MO and Type 11 MO Motors.
For use with Base kit
NMA 23 199.9501 (page 138)

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Welding blanks
manual override

Door controls

Radio
controls

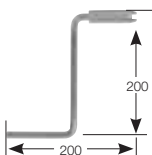
Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

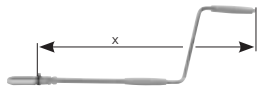
Manual override accessories for DFM/DKM NHK drives

Crank handle



14 302.9501
Standard crank handle
(Comes as standard with
D-M/ W.M NHK Motor)

Crank handle with cardan joint for D.M and W.M NHK drives



24 334.0501
 $x = 0.55 \text{ m}$
24 334.0701
 $x = 1.35 \text{ m}$

Haul chain (SHK) attachment to convert NHK to SHK drives



24 318.0201
For DFM/WFM/DKM/WKM
100–350 NHK with 3.0 m
round steel chain (approx. 1.4 m
suspended)



24 376.0201
For DFM/DKM 400–750 NHK
with 3.0 m round steel chain
(approx. 1.4 m suspended)



14 300.8901
3.0 m round steel chain DIN 766
A4 x 16 mm for extending reach
of SHK attachment. Can be shor-
tened. 1 closing link (14 300.9001)
required per extension



14 300.9001
Closing link

NMA Accessories



24 043.0001
Adaptor Set for DFM/DKM/ WFM
140–280 SHK includes angle drive,
item no. 23 030.0001 Note: hand
forces might be too high on 280 Nm
drive. For use with Base kit NMA
23 199.9501



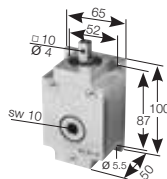
24 042.0001
Adaptor Set for DFM/DKM
310–600 SHK includes angle
drive, item no. 23 030.0001
For use with Base kit NMA
23 199.9501



14 110.2601
NMA adapter for vertically instal-
led DFM/DKM/WFM 140–600
SHK. For use with Base kit NMA
23 199.9501



23 081.0001
Drive shaft extendable from 1.7 to
3.0 m with 2 cardan joints and square
support on both ends for Angle gear
drive and NMA adoption. Included also
in Base kit NMA 23 199.9501



23 030.0001
Angle gear drive. Included also in
Base kit NMA 23 199.9501 and
adaptor set 24 042.0001.



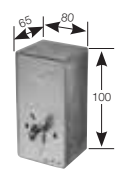
13 305.8001
Crank handle for angle drive
Length 0.2 m. Included also in
Base kit NMA 23 199.9501.

Base kit NMA



23 199.9501
Consisting of:
Angle gear drive 23 030.0001/
drive shaft 23 081.0001/crank
handle 13 305.8001

A.P. KeyBox

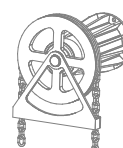


23 080.0001
With integrated crank handle, key
switch (dead man safety) and 0.50 m
long connecting shaft 10 mm hexa-
gonal. To operate NMA motors from
outside manually and electrically.
Requires NMA Base kit 23 199.9501

NMA attachment to convert DFM/ DKM/ WFM NHK drives to NMA drives



24 318.0101
SHK add-on without chain and wheel
for NHK drives to convert to NMA
system. For DFM/WFM/DKM/WKM
140–280



24 376.0001
SHK add-on without chain and wheel
for NHK drives to convert to NMA
system. For DFM/WFM/DKM/WKM
310–600

BoxControl

Intelligent door controllers – safety first!

A push of a button is sufficient to operate motorized rolling garage doors, roller grilles or smaller industrial doors reliably and quietly. The DoorControl and SafeControl door controllers have been specially developed for single-phase shaft tube drives with mechanical limit stop and conform to the European standards EN 12453 and EN 12445 "Safety in use of power operated doors". Of course, both controllers are CE compliant and certified by the TÜV.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

BoxControl



BoxControl-M D 400, BoxControl R D 500 and BoxControl-M compact



BoxControl-M D 400 / R D 500, BoxControl-M compact

The modular drive control system for sectional doors, rolling doors and roller grilles

The BoxControl-M D 400 (or BoxControl R D 500 for 440–500V systems) controller may be used only to control rolling doors, sectional doors and vertical lift gates equipped with elero three-phase drives. The original elero control cable and motor cable must be used. Other use, or use beyond this is not considered to be use for intended purpose. The controller is not approved for door products with fire and smoke protection characteristics. With the (required to function) BoxCard modules this controller can function as simplistic door controller and as door controller with plenty of functions to fulfill most demands.

Simple drive control for rolling and sectional doors

BoxControl-M compact D 230 for DFM/DKM-, WFM/WKM 170 drives and BoxControl-M Compact D 400 for DFM/DKM drives, with dead man mode.

Item Number	Type/Item Description
24 119.0004	BoxControl-M D 400 ¹
24 190.0004	BoxControl R D 500 ¹
24 136.0001	BoxCard-M basic (dead man mode) ²
24 144.0002	BoxCard-M plus (pulse control) ²
24 176.0001	BoxCard-M premium (automatic control) ²
24 199.1101	BoxControl-M compact D 400
24 198.1101	BoxControl-M compact D 230

Accessories included:

BoxControl-M D 400: incl. 3 cable entry diaphragms, without mains lead.

BoxControl-M Compact: with 1.0 m long connected motor and control cables, without mains unit.

¹ Accessories required:

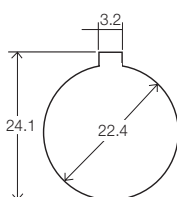
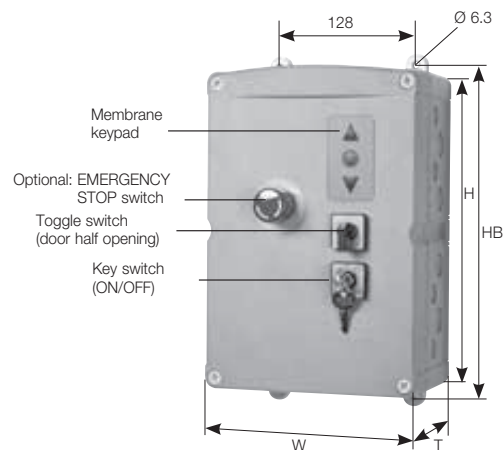
- BoxCard plug-in module (Page 140)
- Cable connectors or cable sets (Page 146)

² For overview of functionality please refer to Page 144

Technical data and dimensions

Type	BoxControl-M D 400	BoxControl R D 500	BoxControl-M compact D 230/400
Rated voltage	3 ~ 400 V/N/PE; 3 ~ 400 V/PE; 3 ~ 230 V/N/PE; 3 ~ 230 V/PE (1 ~ 230 V/PE only M D 400)	3 ~ 440 ~ 500 V/N/PE; 3 ~ 440 ~ 500 V/PE; 3 ~ 230 V/N/PE; 3 ~ 230 V/PE (1 ~ 230 V/PE only M D 400)	3 ~ 230 V (1 ~ 230 V/PE) and 3 ~ 400 V/PE
Rated frequency (Hz)	50/60		
On-site fuse protection (A)	10 A 3-pole (CEE-type connector, 16 A, clockwise rotating field)		8
Control voltage	24 V DC		
Fuse for external units (AT)	2		–
Power supply for external units max.	24 V DC/250 mA		–
Max. motor power AC 3	400 V 2 kW/230 V 2 kW		400 V 3 kW/230 V 4 kW
Contactor	Mechanically locked		
Contactor status display	LED "OPEN" and "CLOSE"		–
Integrated brake relay	Yes		–
Ingress protection (IP)	65 (cable glands installed vertically downwards)		65
Temperature range (°C)	–10 to +40		–10 to +40
Dimensions (mm)	H 275 × W 190 × T 110 (HB 310 with screwed connections)		H 180 × W 182 × T 85
Weight (g)	4,200		–
VDE checked	DIN EN 50178; DIN EN 60204-1; DIN EN 12453		–

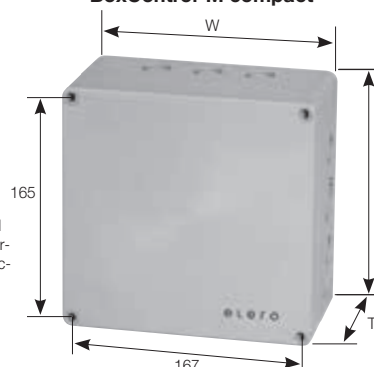
BoxControl-M D 400



Drilled hole dimensions for the switching devices. It is essential that these dimensions are observed because of the IP 65 protection class!

The switching devices shown above can be retrofitted at these positions. On the inner face of the cover these positions are marked. Please observe the drilled hole dimensions.

BoxControl-M compact



Housing fastening:
below the cover screws
Hole diameter = 5 mm

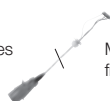
Accessories:



BoxCard-M
from page 140



Motor and control cables
from page 146



Mains lead
from page 146



Connection sets
from page 146



Device switches
from page 147



Hand-held radio transmitter
from page 148



Door-edge
security system
from page 148



One way light barrier
from page 149



Push button
from page 147



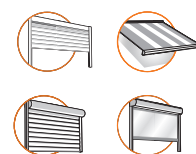
Radio module
from page 148



Rod antenna
from page 148

BoxControl for pole-reversible drives

BoxControl-M D 400/2 P



The modular drive control system for sectional doors, rolling doors and roller grilles

The BoxControl-M D 400/2 P controller may be used only to control rolling doors, equipped with elero DFM 310/38–19 drives. The original elero control cable and motor cable must be used. Other use, or use beyond this is not considered to be use for intended purpose. The controller is not approved for door products with fire and smoke protection characteristics.

The BoxControl-M D 400/2 P must be extended with the following: BoxCard-M basic, BoxCard-M plus or BoxCard-M premium and plug-in control cable and plug-in motor cable.

Control selection table for BoxControl on page 144!

Item Number	Type/Item Description
24 196.0001	BoxControl-M D 400/2 P for pole-reversible drives ¹
24 136.0001	BoxCard-M basic (dead man mode) ²
24 144.0002	BoxCard-M plus (pulse control) ²
24 176.0001	BoxCard-M premium (automatic control) ²

Accessories included:

BoxControl-M D 400/BoxControl-M D 400/2 P: incl. 3 cable entry diaphragms, without mains lead.

- ¹ Accessories required:
- BoxCard plug-in module (Page 142)
 - Cable connectors or cable sets (Page 146)

² For overview of functionality please refer to Page 144

Technical data and dimensions

Type	BoxControl-M D 400/2 P
Rated voltage	3 ~ 400 V/N/PE; 3 ~ 400 V/PE; 3 ~ 230 V/N/PE; 3 ~ 230 V/PE
Rated frequency (Hz)	50/60
On-site fuse protection (A)	10 A 3-pole (CEE-type connector, 16 A, clockwise rotating field)
Control voltage	24 V DC
Fuse for external units (AT)	2
Power supply for external units max.	24 V DC/250 mA
Max. motor power AC 3	400 V 2.3 kW/230 V 2.3 kW
Contactor	Mechanically locked
Contactor status display	LED "OPEN" and "CLOSE"
Integrated brake relay	Yes
Ingress protection (IP)	65 (cable glands installed vertically downwards)
Temperature range (°C)	-10 to +40
Dimensions (mm)	H 275 × W 190 × T 110 (HB 310 with screwed connections)
Weight (g)	4,200
VDE checked	DIN EN 50178; DIN EN 60204-1; DIN EN 12453

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

BoxControl

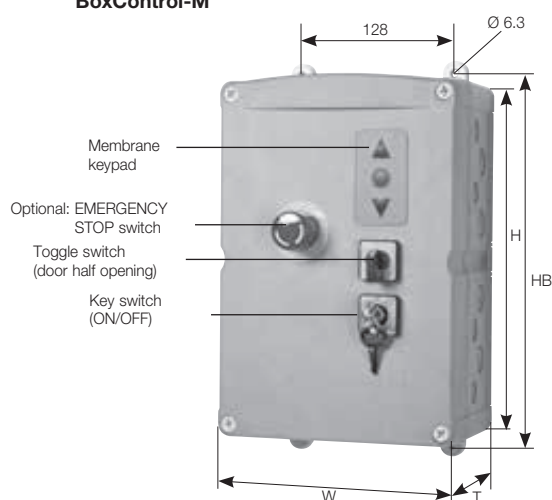
Radio
controls

Hardwired
controls

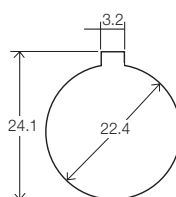
Electrical
accessories

Adapter profiles
Lifting capacity tables

BoxControl-M



Drilled hole dimensions for the switching devices. It is essential that these dimensions are observed because of the IP 65 protection class!

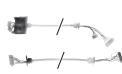


The switching devices shown above can be retrofitted at these positions. On the inner face of the cover these positions are marked. Please observe the drilled hole dimensions.

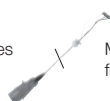
Accessories:



BoxCard-M
from page 140



Motor and control cables
from page 146



Mains lead
from page 146



Connection sets
from page 146



Device switches
from page 147



Hand-held radio transmitter
from page 148



Door-edge
security system
from page 148



One way light barrier
from page 149



Push button
from page 147



Radio module
from page 148



Rod antenna
from page 148

Controller selection table

Controller selection for BoxControl and MasterControl

	BoxControl-M compact	BoxControl-M D 400 or R D 500 with plug-in modules		
		basic	plus	*2) premium
Recommendations for doors shown below *1)				
Doors with occasional use, warehouses etc. Control without maintained mode (dead-man)	•	•		
Doors for commercial and industrial halls etc. Pulse signal control with or without sight of door (maintained mode)			•	
Rolling doors for underground garages etc. Automatic control/single lane traffic with red/green traffic light				•
Rolling doors or roller grilles with ingress protection for underground garages etc. Automatic control/single lane traffic with red traffic light				•

Features				
Two-way traffic control system with request store				•
Automatic closing with traffic light function				•
Testing the opto-electrical door edge security system Item no.: 24 275.0001 or door-edge security system with 8.2 kΩ resistance evaluation			•	•
Testing of the ingress protection external via 'Light barrier test unit', item no.: 17 700.5401				•
Connection of 'CLOSE' light barrier			•	•
Garage light connection				•
Slot for radio module item no.: 17 700.4301/24 147.0001			•	•
Connection of digital timer item no.: 14 701.9902				•
Slot for Rex 2000 timer item no.: 17 800.3001				•
Door cycle counter			•	•
Maintenance interval counter			•	•
Slot for emergency key switch (dead-man's safety system)			•	
Fault or error message				•
Inspection control system			•	•

Legend:

*1) Be sure to follow EN 12453!

§ 5.5. Table 1 – Follow the „Minimum protection levels for security of main door-edge“!
Maintained mode only if this represents no risk of injury or damage.
Connection of protection systems is essential.

*2) Ingress protection with testing for roller griller can be connected.
Item no.: 17 700.5401 light barriers test unit for 2 one-way light barriers item no.: 24 961.0001 or light barrier requirements:
Voltage 24V DC; Power consumption ≤ 1,5VA
Standby delay ≤ 250 ms

Electrical accessories, accessories for BoxControl

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

**Accessories
BoxControl**

Radio
controls

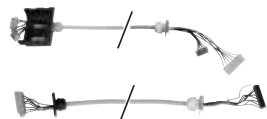
Hardwired
controls

Electrical
accessories

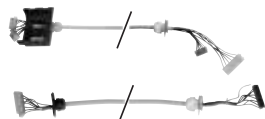
Adapter profiles
Lifting capacity tables

Motor and control cables

for DFM/DKM and WFM/WKM drives without additional limit switches (without -ZE)



24 172.1501
with plug-in screws and plug-in terminals on both sides; Length 5.0 m

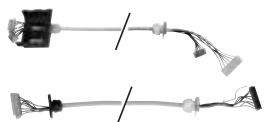


24 172.1801
with plug-in screws and plug-in terminals on both sides; Length 8.0 m



24 172.2001
with plug-in screws and plug-in terminals on both sides; Length 10.0 m

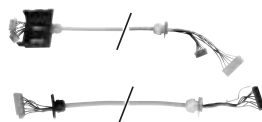
for DFM/DKM ZE and WFM/WKM 170-ZE drives with additional limit switches (ending in -ZE)



24 172.0501
with plug-in screws and plug-in terminals on both sides; Length 5.0 m

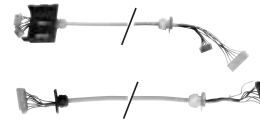


24 172.0801
with plug-in screws and plug-in terminals on both sides; Length 8.0 m



24 172.1001
with plug-in screws and plug-in terminals on both sides; Length 10.0 m

for pole-reversible ZE drive



24 197.0501
with plug-in screws and plug-in terminals on both sides; Length 5.0 m

Mains cable

for BoxControl-M D 400 and D 400/2P



24 172.0001
Mains lead with CEE plug 16 A with plug-in screws and plug-in terminals. Length 1.5 m

for BoxControl-M D 400



24 600.9001
Mains lead with earthed Schuko (German) plug, 1 × 230 V with plug-in screws and plug-in terminals. Length 1.5 m

for BoxControl-M compact



24 177.0001
Mains lead with CEE plug 16 A, 3 × 400 V. Length 1.5 m



24 600.9101
Mains lead with earthed Schuko (German) plug, 1 × 230 V. Length 1.5 m

Connection sets

for BoxControl for deliveries without connecting cables



24 119.8301
1 × plug-in terminal with 1 × plug in screw



24 119.8401
2 × plug-in terminal with 2 × plug in screw

Connection kit for WFM, DFM/DKM drives



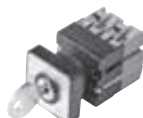
14 300.9001
Required for 3rd party controllers

Device switches

for retrofit installation in the housing cover



24 119.8601
EMERGENCY STOP
(shut down button), includes
connection strands



24 119.8701
Key switch ON-OFF
(Automatic on/off switching),
includes connection strands



24 119.8801
Selection switch S/W
(half door opening), includes
connection strands

External switches

Surface mount push-button



14 701.2401
Single pole, Push-button

Push buttons



14 701.2501
Push-button UP-DOWN surface
mount, water-protected, IP 54



14 701.2901
Push-button UP-STOP-DOWN
surface mount, water-protected,
IP 54

Surface mount combined key
and pushbutton switch, IP 55



14 701.4501
Key switch UP-DOWN,
momentary on both sides and
pushbutton STOP; UL listed

Flush mount combined key and
pushbutton switch, IP 55



14 701.4801
Key switch UP-DOWN,
momentary on both sides and
push-button STOP; UL listed



14 703.1301
Pull switch (momentary contact),
surface mount,
aluminum housing



14 703.2601
Lockable main switch, surface
mount, 3-pole 400V 4 kW



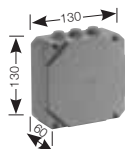
14 703.2701
Emergency shut down button,
surface mount, UL listed

Electrical accessories

Radio remote control 868.8 MHz

Warning: Not legal to use in USA and Canada, for export only!

Radio receiver in housing 2-command 868.8 MHz



17 700.4201

For follow-on control power supply, 230 V AC op. modes: Push-button mode switch mode, on/off timer mode switch-off delay up to 250 sec.

Radio module FM 868.8 MHz, 2-command



17 700.4301

Can be plugged into BoxCard plus and premium DoorControl 24 180.0101, usable in MasterControl and SafeControl

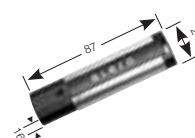
Rod antenna FM 868.8 MHz



17 700.4901

External antenna for radio receiver 17 700.4201 and for the radio module 17 700.4301 50 Ohm – coaxial cable (10 m)

Hand-held radio transmitter 4-command 868.8 MHz



17 700.3701

Range up to 50 m, depending on environment, safe "SOMLOQ" Rolling code system, 3 V Battery, CR 2032 Size: 87 × 24 × 16 mm

Wall mount holder

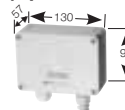


17 700.3901

For hand-held radio transmitter 17 700.3701

Safety devices for crushing, shearing and ingress points

Door-edge security system (Opto-electronic safety edge)



14 705.9002

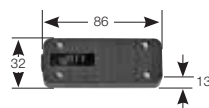
Evaluation device for mains voltage 230 V/50 Hz, switching contact, potential-free (in plastic housing IP 66)



24 275.0001

Transmitter, cable length 1.0 m receiver, cable length 10.5 m range from 1.0 – 8.0 m max, Ø 11 mm

Connection box (on blind)



23 173.0002

With strain relief for spiral cable integrated plug on/screw type terminals incl. screwdriver



14 705.2801

Spiral cable 3 × 0.5 mm² extendable from 0.9 – 3.0 m



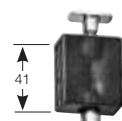
14 706.2601

Safety edge rubber hollow double profile with seal flap



14 701.0602

1.5 m Aluminum C-rail for safety edge rubber



23 255.0002

Stoppers (pair)

Safety for crushing, shearing and ingress points

Reflection light barrier with polarizer IP 67



24 960.0201

Accessories: Reflector, angle bracket, screw connections and fixing screws for the support brackets
Range: 0.50 ... 15 m; Operating voltage: 15 – 45 V DC or 24 V AC; Ready to operate: < 100 ms;
Rated current: max. 30 mA/24V

Note:

The reflectors for the reflection light barriers can fog up outdoors due to weather effects, frost etc, thus drastically reducing their range.
Recommendation: One-way light barriers are suitable outdoors even in tough conditions.

Weather protection hoods



14 306.8501

for reflection light barriers or one-way light barriers



14 306.8601

for reflectors

One way light barrier IP 67



24 961.0001

Set: Transmitter, receiver and bracket. Plastic housing.
Operating temperature: –25°C to +55°C. Ingress protection: IP67.
Range: max. 50 m; Operating voltage: 20–230 V AC/DC Changeover relay rated at 230V AC/3A and 30V DC/3A. Delay time and holding time can be adjusted independently 0–10 seconds. UL listed.

One way "Twin-Safe" light barrier

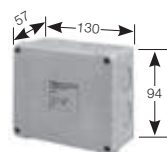


24 960.0301

Accessories: Angle bracket

Ingress protection: IP 67
Range: 1.0 – 20 m
Operating voltage: 10 – 30 V DC
Opening angle: < 4°
Rated current: 70 mA
Changeover relay rated 48V AC/DC / 0.5A
Operating temperature: –25°C to +55°C

Light barrier test unit for pull up protection



17 700.5401

Functions only with BoxCard Premium for 2 one-way light barriers item no. 24 961.0001 or 24 960.0301

Timers and traffic lights

Rex 2000 plug-in weekly timer



17 800.3002

Only suitable for BoxCard premium

LED lamp E27 25 mA; 1 × 230 V 50/60 Hz



14 700.3801 Lamp red
14 700.3901 Lamp green

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Accessories
BoxControl

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables



Radio control units for roller shutters and sun protection systems

ProLine – a range of controls to meet every need

The name “ProLine” stands for a range of control devices that can be used for a variety of applications in the home. Radio control hand-held transmitters, as well as wall-mounted transmitters, sensors and external radio receivers. The modular design of the units ensure universal, simple programming and intuitive operation. With devices which are to be deployed in the “visible” living area great significance was attached to a modern, yet timeless design. The radio controls “communicate” on the interference free radio frequency 915 MHz.

ProLine 2 – the bidirectional radio control system “with brains”

Roller shutters, awnings, roller blinds and venetian blinds may be controlled more reliably, more capably and in a more transparent manner with ProLine 2, the bidirectional radio control system from elero. Most systems on the market are unidirectional which are not providing all these features. At the heart of the technology (915 MHz) are bidirectional transceivers which not only receive signals but can also confirm and transmit these. In addition, radio commands are forwarded to radio receivers which otherwise might be out of range (routing functionality). Another decisive advantage over other radio control systems is the fact that the user can directly see the status of signal processing on the hand-held transmitter. As soon as a command has been performed, it receives a feedback signal and thus always knows what's happening.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Centero

Centralized building automation from elero



Centero Server, Centero Transmitter Stick

Simple and intuitive operation of your building technology

Further advantages:

Taught-in devices automatically appear in the app, may be renamed, grouped or assigned icons.

Even more living comfort thanks to individual scene modes and automatic controls.

Various users can access the Centero at the same time with their smartphones or tablets. There is no limit how many users can be established.

Transmitter stick with 15 channels is included in the Centero Base set. 2 transmitter sticks (sold separately) can be connected directly to the Centero unit. Up to 10 Centero transmitter sticks can be connected via USB Hub to create a controller with up to 150 channels.

More information can be found on: www.centero-elero.com

Item Number	Type/Item Description
28 795.0901	Centero Server & Centero Transmitter Stick-915 ¹
28 785.0001	Centero Base set only (no function without transmitter stick!)
22 125.0901	Centero Transmitter Stick-915
28 799.0001	Centero Power Pack

Accessories included:

¹ Euro Plug adapter, Power cable adapter for World wide use, Power cable with Euro Plug, Ethernet cable, USB Extension cable.

Download the app! (Includes Demo mode)





Software
for Android Smartphones



Software
for iPhone

Technical data and dimensions

Type	Centero Server	Centero Transmitter Stick
Operating Voltage (V DC)	100 – 240	
Frequency (Hz)	50 – 60	
Power (W)	5 (20 max.)	
Transmission power (mW)		10
Ingress protection (IP)		20
Temperature range (°C)		0 to +55
Radio frequency (MHz)		915
Dimensions (mm)	L 95 x B 65 x H 49	
Weight (g)	200	7
Number of channels		15
Unidirectional radio		–
Bidirectional radio		•
I/O	USB 2.0, LAN, WLAN	USB 2.0
There are different regulations in other countries. Alternative is available:		
Radio frequency (MHz)		868
Conformity	CE 	CE 

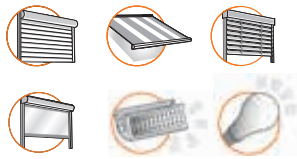
* Approval pending, please check with us.

Connection of Centero and integration into Home Network



TempoTel 2

ProLine 2 hand-held transmitter



Hand-held remote for maximum user comfort

10+1-channel hand-held transmitter with illuminated display menu navigation operated using a joystick. The menu with different languages is intuitive in its operation:
It is possible to activate the Astro and holiday program or the daily and weekly switch program. The TempoTel 2 has ten individual channels, two group channels and one master channel. It is possible to assign individual names to each channel.

Navigation through the menu in the display is comfortable thanks to the use of a joystick and the menu keys. Large UP, STOP and DOWN keys simplify intuitive operation. A luminous fringe visualizes trans-


mission and feedback commands. The selection switch serves to change from automatic to manual mode. Battery low indicator makes sure batteries are replaced in time and no settings are lost. The standard batteries may be replaced quite easily.

In addition to the functionality, design aspects are also important: The hand-held transmitters in the ProLine 2 line are available in white, silver or titanium grey, and sit well in the hand. Transmission-secure radio frequency 915 MHz.

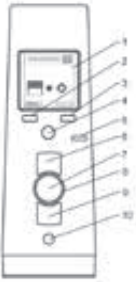

Item Number	Type/Item Description
28 265.0901	TempoTel 2 white
28 266.0901	TempoTel 2 silver
28 267.0901	TempoTel 2 titanium grey

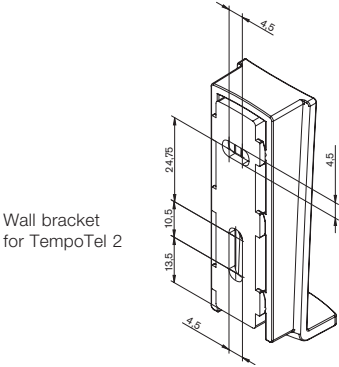
Accessories included:
Magnetic wall bracket,
batteries and mounting material
(packed ready to mount in display package).

Technical data and dimensions

Type	TempoTel 2
Operating Voltage (V DC)	3
Battery type	2 x LR06 (AA, Mignon)
Ingress protection (IP)	20
Temperature range (°C)	0 to +55
Radio frequency (MHz)	915
Available colors	white, silver, titanium grey
Dimensions (mm) (hand-held transmitter)	L 150 x W 51 x H 26
Weight (g) including batteries	140
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	FC  *

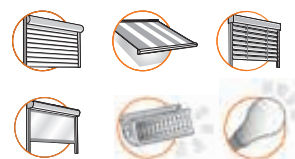
* Approval pending, please check with us.

Front of view TempoTel 2	Back of view TempoTel 2
	
<ul style="list-style-type: none">1 Display2 Left menu button3 Right menu button4 Joystick5 Operating mode indicator6 UP button7 STOP button8 Status indicator9 DOWN button10 Select button	<ul style="list-style-type: none">11 Learn button P12 DIP switch 1 (for experts)13 DIP switch 2 (for experts)



MultiTel 2 / VarioTel 2

ProLine 2 hand-held transmitter



VarioTel 2, MultiTel 2



MultiTel 2 – One hand-held radio transmitter, many different possibilities for use

The MultiTel 2 is a 15-channel hand-held transmitter for the control of roller shutters and sun protection systems as well as heating systems. The MultiTel 2 has 15 individual channels, 5 group channels and one master channel. Once individual channels are programmed, they are contained automatically within the Master channel, making programming a swift process.

Operation is just as easy as it is with all other hand-held transmitters in the ProLine 2 family. Sun automation can be easily switched on and off with the selection button. Executed commands are visualized using easily understandable display symbols and an LED display. Application icons can be selected depending on application type for easy recognition. Icons even indicate approximate position of application. In addition the MultiTel 2 is equipped with multi-line text fields that may be freely edited – a true benefit in terms of operating comfort!

VarioTel 2 – The group hand-held transmitter


Five-channel hand-held transmitter which controls individual channels or a master channel. The channels may be trained independently of one another. Once individual channels are programmed, they are contained automatically within the Master channel, making programming a swift process. With the aid of the select button it is possible to select an individual channel or the group channel. In addition, the channel select button also allows to switch the trained receivers from manual to automatic mode.

Item Number	Type/Item Description
28 255.0901	MultiTel 2 white (only bidirectional)
28 256.0901	MultiTel 2 silver (only bidirectional)
28 257.0901	MultiTel 2 titanium grey (only bidirectional)
28 245.0901	VarioTel 2 white
28 246.0901	VarioTel 2 silver
28 247.0901	VarioTel 2 titanium grey

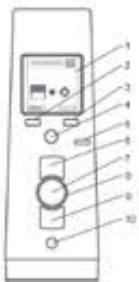


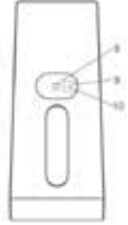
Accessories included:

Magnetic wall bracket,
batteries and mounting material
(packed ready to mount in display package).

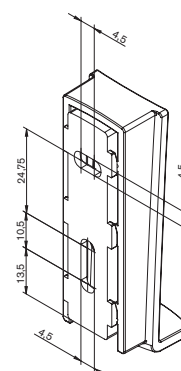
Technical data and dimensions

Type	MultiTel 2	VarioTel 2
Operating Voltage (V DC)	3	
Battery type	2 × LR06 (AA, Mignon)	
Ingress protection (IP)	20	
Temperature range (°C)	0 to +55	
Radio frequency (MHz)	915	
Available colors	white, silver, titanium grey	
Dimensions (mm) (hand-held transmitter)	L 150 × W 51 × H 26	L 120 × W 51 × H 26
Weight (g) including batteries	140	120
There are different regulations in other countries. Alternative is available:		
Radio frequency (MHz)	867, 868	
Conformity		

* Approval pending for MultiTel 2, please check with us.

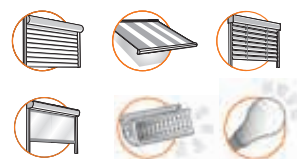
Front of view MultiTel 2		Back of view MultiTel 2	
	<ol style="list-style-type: none"> 1 Display 2 Left menu button 3 Right menu button 4 Joystick 5 Operating mode indicator 6 UP button 7 STOP button 8 Status indicator 9 DOWN button 10 Select button 		<ol style="list-style-type: none"> 11 Learn button P 12 DIP switch 1 (for experts) 13 DIP switch 2 (for experts)
Front of view VarioTel 2		Back of view VarioTel 2	
	<ol style="list-style-type: none"> 1 Channels 2 Operating mode indicator 3 UP button 4 STOP button 5 Status indicator 6 DOWN button 7 Select button 		<ol style="list-style-type: none"> 8 Learn button P 9 DIP switch 1 (for experts) 10 DIP switch 2 (for experts)

Wall bracket
for MultiTel 2
and VarioTel 2



LumeroTel 2 / MonoTel 2 / SoloTel 2

ProLine 2 hand-held transmitters



LumeroTel 2, MonoTel 2 and SoloTel 2

LumeroTel 2

A single-channel hand-held transmitter with an additional select button to switch from manual to automatic sun operation. An automatic LED display on the right-hand side shows whether the automatic mode is activated.

MonoTel 2

A single-channel hand-held transmitter with three main operating buttons (Up, Stop, Down) with which intermediate and ventilation positions may also be programmed. If the command has been successfully performed, the LED lights up green.

SoloTel 2


With its large operating keys (Up, Stop, Down) the one-channel hand-held and wall-mounted transmitter is a simple automation solution in uni- and bidirectional radio systems. Intermediate and ventilation positions may also be programmed with this transmitter.

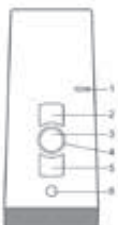
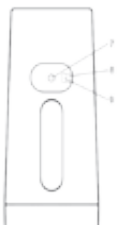
Item Number	Type/Item Description
28 225.0901	LumeroTel 2 white
28 226.0901	LumeroTel 2 silver
28 227.0901	LumeroTel 2 titanium grey
28 205.0901	MonoTel 2 white
28 206.0901	MonoTel 2 silver
28 207.0901	MonoTel 2 titanium grey
28 600.0906	SoloTel 2 white
28 620.0906	SoloTel 2 black
28 640.0906	SoloTel 2 silver

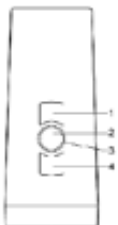
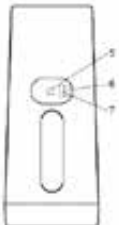
Accessories included:

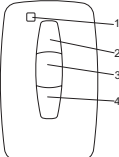
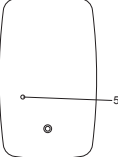
Magnetic wall bracket,
batteries and mounting material.

Technical data and dimensions

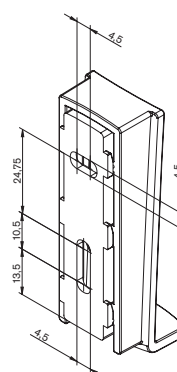
Type	LumeroTel 2	MonoTel 2	SoloTel 2
Operating Voltage (V DC)	3		
Battery type	2 × LR06 (AA, Mignon)	1 × CR 2032	
Ingress protection (IP)	20		
Temperature range (°C)	0 to +55		
Radio frequency (MHz)	915		
Available colors	white, silver, titanium grey	white, silver, black	
Dimensions (mm) (hand-held transmitter)	L 120 × W 51 × H 26	L 85 × W 85 × H 18	
Weight (g) incl. batteries	120	45	
There are different regulations in other countries. Alternative is available:			
Radio frequency (MHz)	867, 868		
Conformity			–

Front of view LumeroTel 2	Back of view LumeroTel 2
 <ul style="list-style-type: none"> 1 Operating mode indicator 2 UP button 3 STOP button 4 Status indicator 5 DOWN button 6 Select button 	 <ul style="list-style-type: none"> 7 Learn button P 8 DIP switch 1 (for experts) 9 DIP switch 2 (for experts)

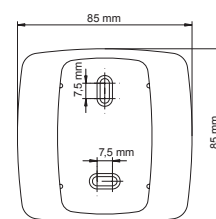
Front of view MonoTel 2	Back of view MonoTel 2
 <ul style="list-style-type: none"> 1 UP button 2 STOP button 3 Status indicator 4 DOWN button 	 <ul style="list-style-type: none"> 5 Learn button P 6 DIP switch 1 (for experts) 7 DIP switch 2 (for experts)

Front of view SoloTel 2	Back of view SoloTel 2
 <ul style="list-style-type: none"> 1 Status indicator 2 UP button 3 STOP button 4 DOWN button 	 <ul style="list-style-type: none"> 5 Learn button P

Wall bracket
for LumeroTel 2
and MonoTel 2



Wall bracket
for SoloTel 2



Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Door controls

Hand-held
transmitters

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

AstroTec-915 / AstroTec-915 bidi

Timer as comfort wall mount transmitter



Timer as comfort wall transmitter

The comfortable wall-mounted radio transmitter with an integrated timer is easy and convenient to operate at the push of a button. It may be used as a central unit or individual control unit.

The integrated Astro timer switch ensures optimum opening and closing times throughout the course of the whole year thanks to constant alignment to the times at which the sun rises and sets at your location (adjustable). May be used as an individual, group or central control device.

The AstroTec-915/-915 bidi, delivered from the factory with current date and time settings (GMT), automatically controls the drive at the astro times

(sunrise and sundown). The AstroTec-915/-915 bidi can be operated manually at any time. The easy-to-install light sensor allows the Astro-Tec-915/-915bidi to be extended to include a convenient sunshade function (shading plants and furniture). The light sensor Lumo is not included in the accessories.


AstroTec-915 will only work with unidirectional transmitters and receivers.

Item Number	Type/Item Description
28 320.0901	AstroTec-915 white (only unidirectional)

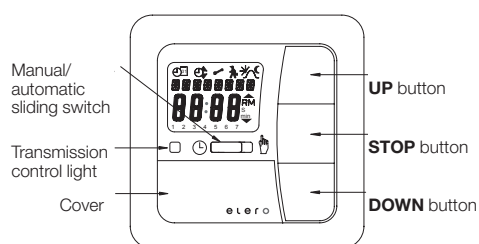
⁽¹⁾ Bidirectional version available on request and Quantity orders only. FCC certification possible on Quantity orders only.

- Accessories included:**
- Batteries
 - Wall bracket, 2 wall plugs (Ø 6 mm)
 - 2 screws (Spax 4 x 35)

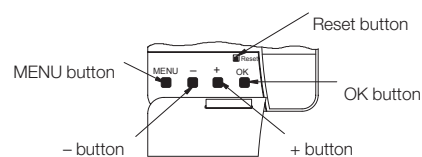
Technical data and dimensions

Type	AstroTec-915
Operating Voltage (V DC)	3
Battery type	2 × LR 03 (AAA)
Ingress protection (IP)	20
Temperature range (°C)	0 to +55
Radio frequency (MHz)	915
Dimensions (mm)	L 85 × W 85 × H 28
Type of installation	Wall-mounted
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	FC  *

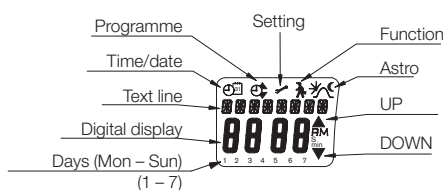
* Approval pending, please check with us.



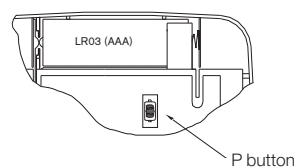
Buttons under the cover



Explanation of displays and symbols



Back of device

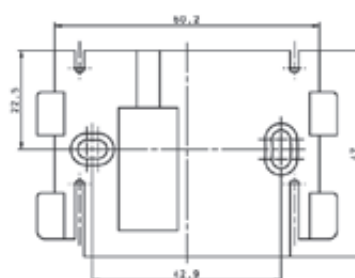


Accessories:



Lumo
Light and twilight sensor
Page 192

Wall holder:



MemoTec-915

Intelligent comfort wall mount transmitter



Intelligent comfort transmitter with daily or weekly switching time

With the MemoTec-915 fixed daily or weekly switching times can be programmed easily with just the press of a button. It is possible to switch from automatic to manual operation at any time while still maintaining the switching times in the memory.


The MemoTec-915 operates your drive at the programmed switching times. The MemoTec-915 device is characterized by its user-friendly operation.

Item Number	Type/Item Description
28 300.0901	MemoTec-915 white (only unidirectional)

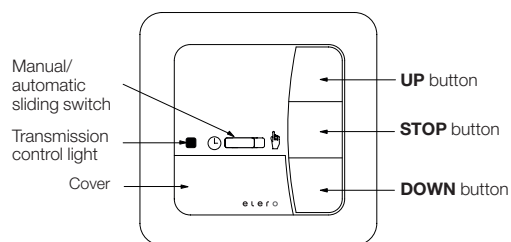
Accessories included:

Batteries
Wall bracket
2 wall plugs (Ø 6 mm)
2 screws (Spax 4 x 36)

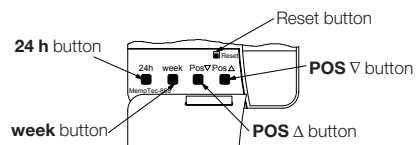
Technical data and dimensions

Type	MemoTec-915
Operating Voltage (V DC)	3
Battery type	2 x LR 03 (AAA)
Ingress protection (IP)	20
Temperature range (°C)	0 to +55
Radio frequency (MHz)	915
Dimensions (mm)	L 85 x W 85 x H 28
Type of installation	Wall-mounted
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	FC  *

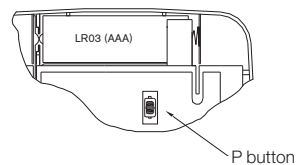
* Approval pending, please check with us.



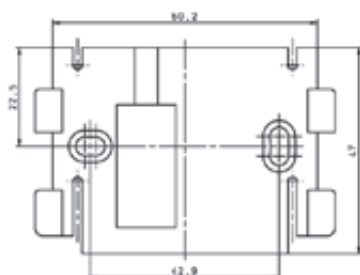
Buttons under the cover



Back of device



Wall holder:



UniTec-915

Wall mount transmitter with manual/automatic switching



UniTec-915

The UniTec-915 is a 1-channel wall-mounted transmitter with the manual/automatic push button. The UniTec-915 is used together with a radio drive. It can be used unidirectionally (compatible with the existing ProLine program) or bidirectionally.

The UniTec-915 can be operated manually at any time. This device is characterized by simple operation and large control buttons.

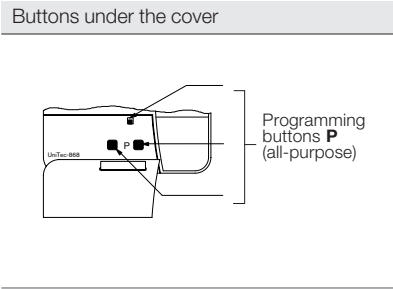
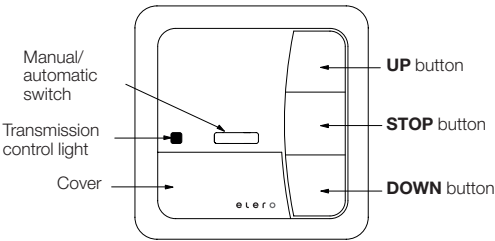
Item Number	Type/Item Description
28 330.0906	UniTec-915 white (uni- and bidirectional)

Accessories included:	Wall bracket
ProLine frame	2 wall plugs (Ø 6 mm)
Battery	2 screws (4 x 35)

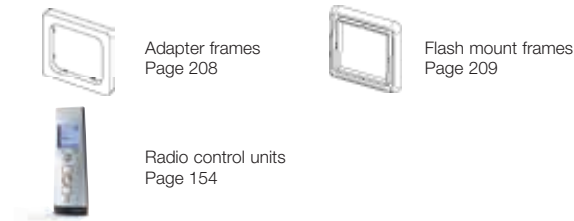
Technical data and dimensions

Type	UniTec-915
Operating Voltage (V DC)	3
Battery type	CR 2032
Ingress protection (IP)	20
Temperature range (°C)	0 to +50
Radio frequency (MHz)	915
Dimensions (mm)	L 54 × W 54 × H 22 L 81 × W 81 × H 22 (with frame)
Type of installation	Wall mounted
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	CE *

* Approval pending, please check with us.

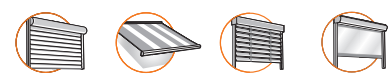


Accessories:



Invio-915

Flush mount radio transmitter



Flush mount radio transmitter

The Invio-915 radio transmitter, which is only a few centimeters across, can be easily mounted in a flush mount switch box. It is also suitable for the automation of already radio controlled shutters or blinds because it can be fitted quickly and easily. Thanks to radio technology, wiring between the control device and the drives is not necessary, only power for the drives must be connected. The Invio-915 radio transmitter can be set to operate with all the radio receivers in the ProLine range from elero.

It is also possible to use the Invio-915 to interface to a higher-level controller, for instance from a ProLine controller, Building Management system, Audio and Visual system or an alarm system to the respective receiver. For example: if an attempt to break in triggers an alarm, the


shutters could be automatically closed. In this way, it is not only possible to use the Invio-915 to implement a controller that matches the line of switches, the security of the house or apartment can also be improved.

The Invio-915 radio transmitter from elero can be combined with switches for blinds from all common lines of designs and, from there, reliably transmit to any radio receiver in the ProLine range.

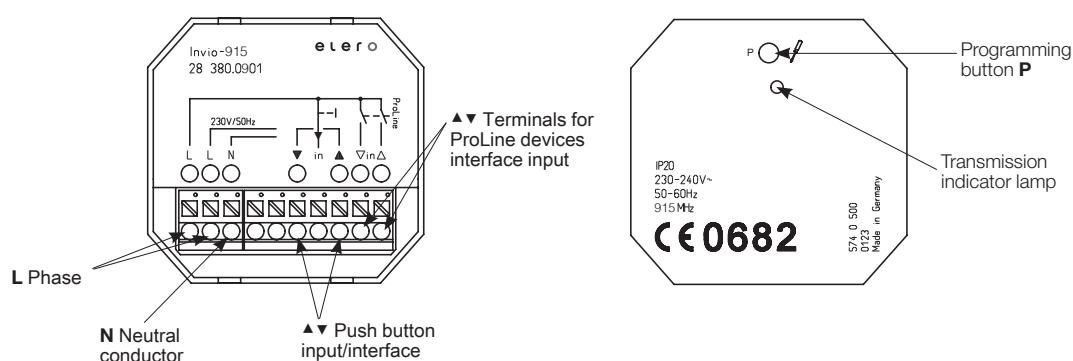
Note: only available in 230V.

Item Number	Type/Item Description
28 380.0901	Invio-915 (only unidirectional)

Technical data and dimensions

Type	Invio-915
Operating Voltage (V)	1 ~ 230 – 240
Frequency (Hz)	50 – 60
Ingress protection (IP)	20
Temperature range (°C)	0 to +55
Type of installation	Flush mount: Requires at least Ø 58 mm flush mount box, 23 mm deep Surface mount: possible in suitable surface mount box
Radio frequency (MHz)	915
Dimensions (mm)	L 50 × W 48 × H 22
Weight (g)	52
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	 *

* Approval pending, please check with us.



Accessories:



Interlocked blind/
shutter switches
Page 202



Flush mount housings
Page 209

VarioTec-915

Motor or master/group control unit



VarioTec-915

Control unit with integrated radio receiver


The VarioTec-915 is an All-in-one solution: It can be used as master, group or motor controller. It can be used on roller blinds, roller shutters, venetian blinds, awnings and more.

You can operate it by integrated operating buttons, via large range of radio remote controllers and via the potential free inputs via most other ProLine devices to create large style installations and group setups as well as 3rd Party controllers (BMCS, AV-systems, designer, switches and more).

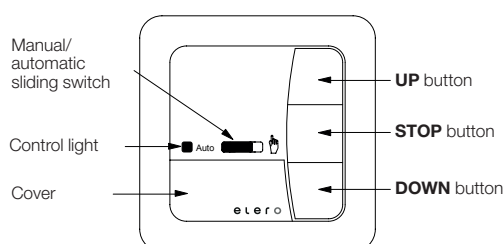
VarioTec-915 is available as a JA (for venetian blinds and tiltable applications) and RM version (for any other applications). Currently this device is only operating on the unidirectional frequency.

Item Number	Type/Item Description
28 340.0801	VarioTec-915 RM Set white (with ProLine frame)
28 350.0801	VarioTec-915 JA Set white (with ProLine frame)
28 341.2201	VarioTec-868 RM operating unit only, white (as spare, or for upgrading a standard VarioTec)
28 352.2201	VarioTec-868 JA operating unit only, white (as spare, or for upgrading a standard VarioTec)
28 061.4101	Mains unit only (as spare)

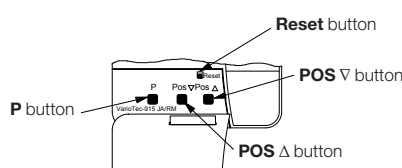
Technical data and dimensions

Type	VarioTec-915 RM/JA
Operating Voltage (V)	1 ~ 120
Frequency (Hz)	50 – 60
Maximum switching current (A) (250V AC at $\cos \varphi = 1$)	5
Ingress protection (IP)	20
Protection class (only after correct installation)	II
Temperature range (°C)	0 to +55
Radio frequency (MHz)	915
Available colors	white, ivory
Type of installation	Flush mount: requires at least Ø 58 mm flush mount box, 35 mm deep Surface mount: possible in suitable surface mount box
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	FC  *

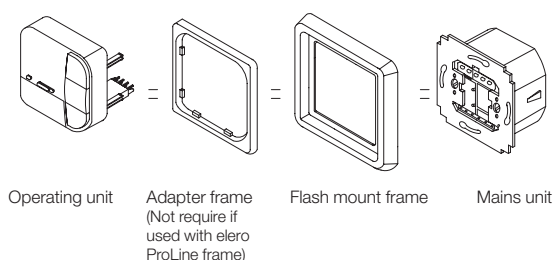
* Approval pending, please check with us.



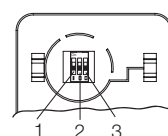
Buttons under the cover



Installation



Encoding switch (located on back of device)



- 1 Upper position** – Alarm signal function OFF
Lower position – Alarm signal function ON
- 2 Upper position** – Group controller
Lower position – Driver controller
- 3 Upper position** – Without function
Lower position – Default setting
JA/RM operation

Accessories:



Frame adapters
from page 208



Flash mount frames
from page 209



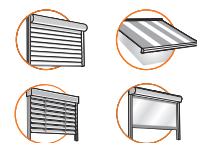
Flush mount housings
from page 209



Surface mount housings
from page 209

Combio-915 JA/Combio-915 RevoLine

Radio receiver for Venetian blind drives and roller shutters



Combio-915 JA

Combio-915 JA

The Combio-915 JA is suitable for the use with Venetian blind drives. It has a pulse mode for precise tilting of Venetian blind slats. The transmitter can be used to save an intermediate position and a tilting position of the slats.

Combio-915 RevoLine



The Combio-915 RevoLine is suitable for the use with tubular motors for roller shutters and sun protection systems. If a command is sent, the receiver immediately changes over to the maintained mode. The transmitter can be used to program an intermediate position.

For sun protection systems it is possible to additionally program a fabric tautening position. For roller shutters it is possible to program a ventilation position.

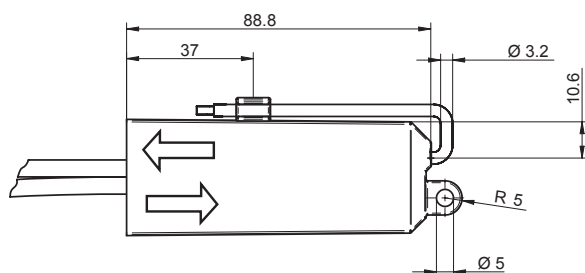
All variants of the Combio-915 are suitable for the use with uni- and bidirectional radio systems.

Item Number	Type/Item Description
28 500.0806	Combio-915 JA
28 525.0806	Combio-915 RevoLine
16 302.3701	Mounting clamp
16 101.0101	Cable bushing for plug guiding
13 707.5701	Cable clip

Technical data and dimensions

Type	Combio-915 JA	Combio-915 RevoLine
Operating Voltage (V)	100–240	
Frequency (Hz)	50–60	
Max. connected power (W)	450	
Ingress protection (IP)	56	
Temperature range (°C)	–20 to +70	
Radio frequency (MHz)	915	
Power supply cable (m)	white, 0.5 m (1.7 ft)	
Motor side cable (m)	white, 2 m (6.5 ft)	
Dimensions (mm)	L 100 × W 40 × H 15	
Installation space (mm)	L 100 × W 44 × H 19	
Weight (g)	306	
Immediately latching for 2 min.	–	•
Latching after 2 seconds for 3 min.	•	–
There are different regulations in other countries. Alternative is available:		
Radio frequency (MHz)	876, 868	
Conformity	 	

Combio-915 JA, Combio-915 RevoLine



Accessories:



Mounting clamp



Cable bushing for plug guiding



Cable clip

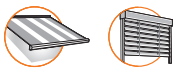


Radio control units
Page 154



Radio sensors
Page 172

Sensero-915 AC/Sensero-915 AC Plus



The innovative radio weather sensors



Sensero-915 AC Plus, Sensero-915 AC

Sun, twilight, wind and rain – precise measurement and transmission

The weather sensor has light, twilight and wind functions. What is new is that the wind is measured using an airflow sensor on the underside of the device. Thus, sidewinds and updrafts can also be detected. Thanks to its tiltable wallbracket, the Sensero-915 AC can be mounted on a facade or on a roof. Furthermore, it can be mounted on top of a mast. In addition, the Sensero-915 AC Plus has an integrated rain sensor that sends a signal to the radio receiver in order to retract the awning if it starts to rain. The Sensero-915 AC requires only a 230 V/50 – 60Hz power supply. Control signals are

transmitted via radio (915 MHz) to a radio drive or an external receiver. The sun protection system can also be operated using a hand-held transmitter.

Note:

The device will only work in connection with compatible radio receivers from the range of the elero radio system. Manual operation of the system is carried out with a hand-held/wall transmitter. This item is not included in the scope of delivery. Only available in 230 V.

Item Number	Type/Item Description
28 890.0906	Sensero-915 AC (uni- and bidirectional)
28 900.0906	Sensero-915 AC Plus (uni- and bidirectional)
24 269.0202	Pole and corner adapter (Ø 60 – 80 mm)

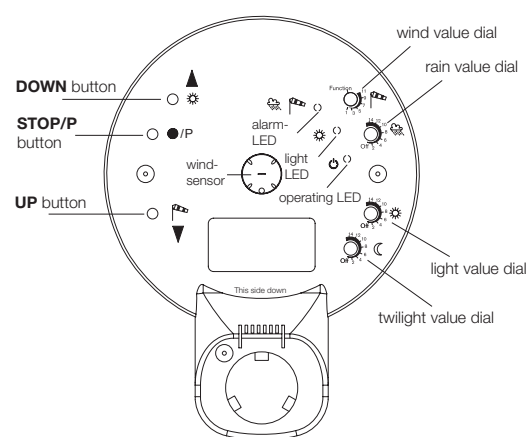
Accessories included:

Mounting material

Technical data and dimensions

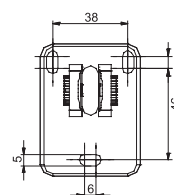
Type	Sensero-915 AC	Sensero-915 AC Plus
Operating Voltage (V)	1 ~ 230	
Frequency (Hz)	50 – 60	
Ingress protection (IP)	44	
Temperature range (°C)	-20 to +60	
Radio frequency (MHz)	915	
Detection angle (°) (Light/twilight sensor)	150	
Dimensions (mm)	L 205 × W 125 × H 105	
Weight (g)	600	610
Wind-, light sensor	•	•
Rain sensor	–	•
There are different regulations in other countries. Alternative is available:		
Radio frequency (MHz)	868	
Conformity	CE *	

* Approval pending, please check with us.



Mounting options

	Wall bracket The device can be fastened to the upper side of the roof or to the facade using the tilting wall bracket.
	Pole support As an alternative, mount the device to a pole of 27 mm diameter.
	Pole or corner support Use the corner or pole support to attach the device to the corner of the facade or to the pole. Optional accessory (Item no. 24 269.0202)



Wall bracket:

The device can be fastened to the upper side of the roof or to the facade using the tilting wall bracket.

Accessories:



Pole and corner adapter

Aero-915 Plus

Solar powered light and wind sensor for awnings and venetian blinds



Aero-915 Plus: Light and wind sensor

The Aero-915 Plus is a wireless light/wind control unit for venetian blinds, blinds and awnings.

Integrated solar cells provide the power to run the unit. Radio signals are transmitted between the Aero-915 and the receiver.

The Aero-915 Plus is fitted with an additional battery and an additional solar cell for longer performance. Awnings can be used when it is dark in order to protect against prying eyes.

Important!

The Aero-915 Plus only operates in connection with elero 915 ProLine 2 and Proline radio receivers.

Item Number	Type/Item Description
28 480.0906	Aero-915 Plus (uni- and bidirectional)
24 269.0202	Pole and corner adapter (60 – 80 mm)

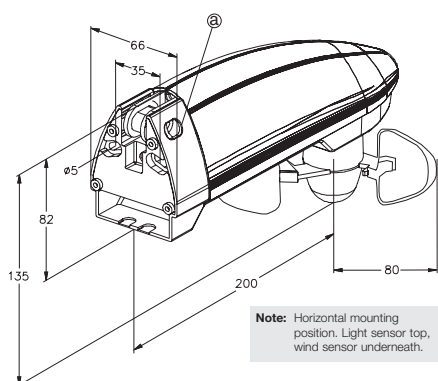
Accessories included:

Mounting material

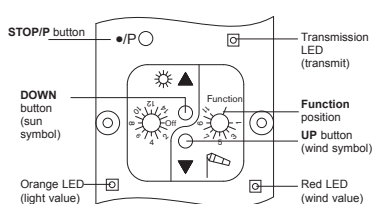
Technical data and dimensions

Type	Aero-915 Plus
Power supply	Solar
Ingress protection (IP)	43
Temperature range (°C)	-20 to +60
Radio frequency (MHz)	915
Detection angle (°) (Light/wind sensor)	150
Standby (h)	~ 24
Dimensions (mm)	L 280 × W 130 × H 130
Weight (g)	380
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	CE *

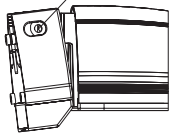
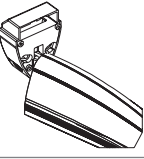
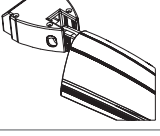
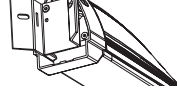
* Approval pending, please check with us.



Aero-915



Mounting options

	The Aero-915 Plus can be fastened to the upper side of the roof or to the facade using the hinged wall bracket. The wall bracket can be swiveled between -5° and 180°. Secure the required position once it has been set (see screw a).
	Wall bracket hinged at 180°
	Wall bracket hinged at 90°
	Pole and corner mounting Optional accessory (Item no. 24 269.0202)

Accessories:



Pole and corner adapter

Protero-915



Battery operated, wireless vibration sensor for retractable arm awnings



Battery-operated, wireless vibration sensor

It is attached to the drop profile on retractable arm awnings. The Protero-915 detects vibrations, e.g. caused by the wind getting up.

The wind sensitivity can be adjusted in 10 stages by a threshold switch. The sensitivity can be set to $\pm 1^\circ$ or $\pm 5^\circ$. The awning is retracted if the Protero-915 detects that one of the set threshold values has been reached or exceeded.

The Protero-915 only operates in combination with compatible radio receivers from the elero ProLine-915 radio system with production date after October 2014.

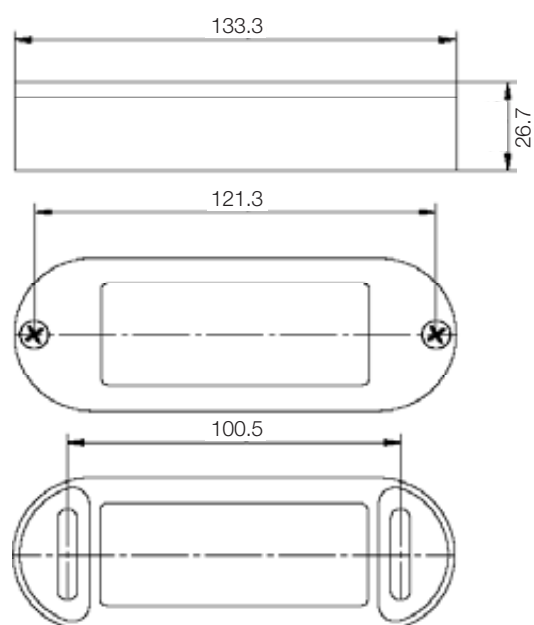
- SunTop-915 radio tubular motor, Radio version 25
- VariEco-915 radio tubular motor, Radio version 20
- Combio-915 RM external radio receiver, Radio version 79

The Protero-915 may only be programmed for the receiver on the same awning. Manual operation of the system is carried out with a hand-held/wall transmitter. This item is not included in the scope of delivery.

Item Number	Type/Item Description
28 960.0906	Protero-915 traffic white
28 961.0906	Protero-915 traffic grey

Technical data and dimensions

Type	Protero-915
Operating Voltage (V)	3
Battery type	2 x LR03 (AAA)
Ingress protection (IP)	54
Temperature range (°C)	-20 to +60
Radio frequency (MHz)	915
Available colors	traffic white, traffic grey
Dimensions (mm)	L 133.3 x W 46.5 x H 26.7
Weight (g)	186
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	868


Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
sensors

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

Lumero-915



Solar powered, radio operated light sensor for awnings and venetian blinds



Lightsensor for shading systems

The Lumero-915 is a wireless sun sensor for your shade system (roller shutters, awnings, venetian blinds). Integrated solar cells enable autonomous function of the device.

Attached systems will automatically move according to sun intensity. The sun automation can be switched off on a number of remote controllers as well.

Note: The Lumero-915 only operates in combination with radio receivers from the elero ProLine and ProLine 2 radio system.

Manual operation of the system is carried out with a manual/wall transmitter. This item is not included in the scope of delivery.


Bidi operation only with receivers
– with version 75 (Combio-868) or higher
– with Version 21 (RoTop-868) or higher
– with manufacturing date 05/2012

Item Number	Type/Item Description
28 680.0906	Lumero-915 (uni- and bidirectional)

Accessories included:

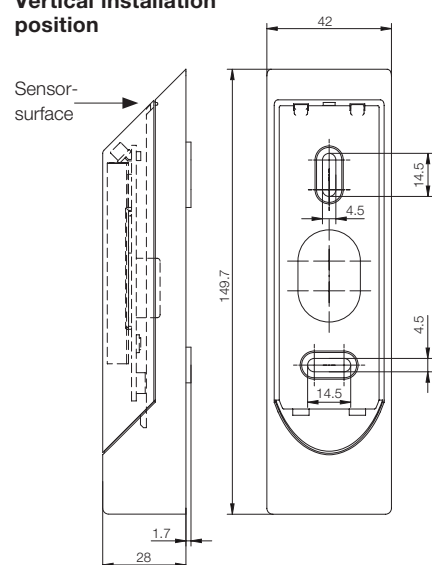
Mounting material

Technical data and dimensions

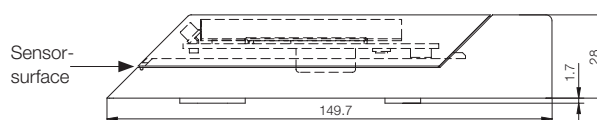
Type	Lumero-915
Power supply	Solar
Ingress protection (IP)	54
Temperature range (°C)	-20 to +60
Radio frequency (MHz)	915
Detection angle (°)	190
Dimensions in (mm)	L 149.7 × W 42 × H 28
Weight (g)	75
Standby (h)	~1
There are different regulations in other countries. Alternative is available:	
Radio frequency (MHz)	867, 868
Conformity	FC  *

* Approval pending, please check with us.

Vertical installation position



Horizontal installation position



Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Door controls

Radio
sensors

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables



Hardwired control units for roller shutters and sun protection systems

Control solutions for each installation site

Control systems should be smart, reliable and offer combination flexibility. In addition the smart devices should be as user friendly as possible.

Whether roller shutters, venetian blinds or awnings, control via button, automation via sensors or with a smart timer: One of the elero hardwired controllers will surely offer a suitable solution.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Adapter profiles
Lifting capacity tables

AeroTec

Control unit for awnings and venetian blinds



The AeroTec is the perfect weather station for every sun protection system

When used in combination with sensors, this control unit ensures fully automatic operation of the system according to the weather conditions. The AeroTec controller may be used to operate sun protection systems only. This device may only be used in connection with equipment from other manufacturers following consultation with your local distributor.

By using the adapter frames available it is possible to integrate the AeroTec into existing switch design of a number of manufacturers.

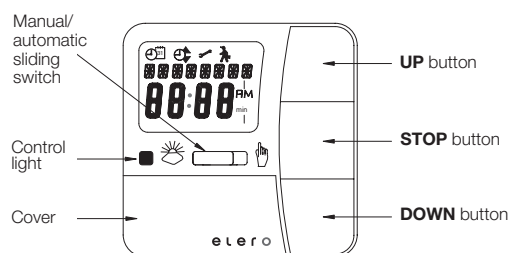
The AeroTec timer is pre-programmed ex works and operates your sun protection system on the basis of sunlight intensity and wind speed. The AeroTec controller can be operated manually at any time. This device runs on battery power, meaning it can even be programmed if the operating device has been removed or is not powered up.

The unit can be used as master, group or motor control unit. You can operate it by integrated operating buttons and via the potential free inputs via most other ProLine devices as well as 3rd Party controllers (BMCS, AV-systems, designer, switches and more) to create large style installations and group setups.

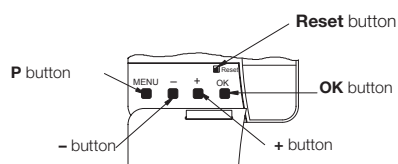
Item Number	Type/Item Description
28 140.3001	AeroTec Set white (with ProLine frame)
28 061.4101	Mains unit only (as spare)
28 141.2001	AeroTec operating unit only white (Spare part)
28 141.2011	AeroTec operating unit only, beige (Spare part)

Technical data and dimensions

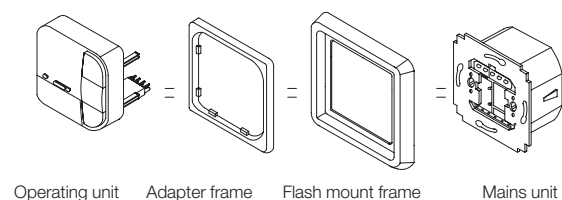
Type	AeroTec
Operating Voltage (V)	1 ~ 120
Frequency (Hz)	50 – 60
Maximum switching current (250 V AC at $\cos \varphi = 1$)	5
Battery type	1 x CR 2032
Ingress protection (IP)	20
Protection class (only after correct installation)	II
Temperature range (°C)	0 to +55
Available colors	white, ivory
Type of installation	Flush mount: Requires at least Ø 58 mm flush mount box, 35 mm deep Surface mount: possible in suitable surface mount box



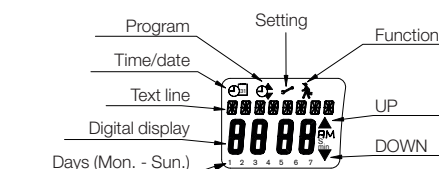
Buttons under the cover



Installation



Explanation of displays and symbols



Accessories:



Frame adapters
Page 208



Flash mount frames
Page 209



Flush mount housings
Page 209



Surface mount housings
Page 209



Aero
Page 194



Ventero
Page 194



Aquero
Page 196



Lumero
Page 192

AstroTec

Timer



AstroTec: The convenient timer

Suitable as a master, group or motor control unit.

The integrated timer ensures optimum opening and closing times throughout the entire year thanks to constant adjustment to the times for sunset and sunrise. Together with the Lumo or Lumero, roller shutters are turned into the perfect sun protection.

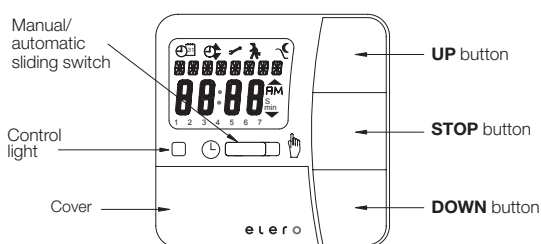
Connectable light sensor (sun/twilight function) can be found on page 192. By using the adapter frames available it is possible to integrate the AstroTec into existing switch design of a number of manufacturers.

You can operate it by integrated operating buttons and via the potential free inputs via most other ProLine devices as well as 3rd Party controllers (BMCS, AV-systems, designer, switches and more) to create large style installations and group setups.

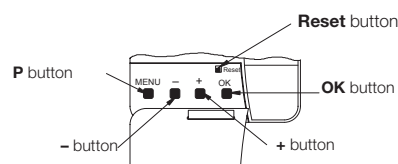
Item Number	Type/Item Description
28 060.3001	AstroTec Set white (with ProLine frame)
28 061.4101	Mains unit only (as spare)
28 061.2001	AstroTec operating unit only white (Spare part)
28 061.2011	AstroTec operating unit only, beige (Spare part)

Technical data and dimensions

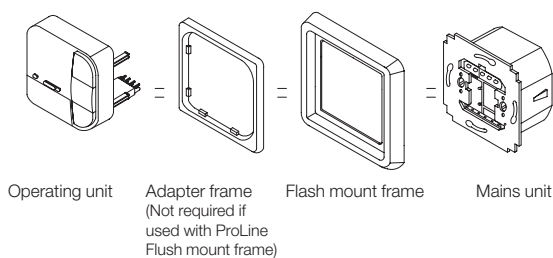
Type	AstroTec
Operating Voltage (V)	1 ~ 120
Frequency (Hz)	50 – 60
Maximum switching current (A) (250 V AC at $\cos \varphi = 1$)	5
Battery type	1 x CR 2032
Ingress protection (IP)	20
Protection class (after correct installation)	II
Temperature range (°C)	0 to +55
Available colors	white, ivory
Type of installation	Flush mount: Requires at least Ø 58 mm flush mount box, 35 mm deep Surface mount: possible in suitable surface mount box



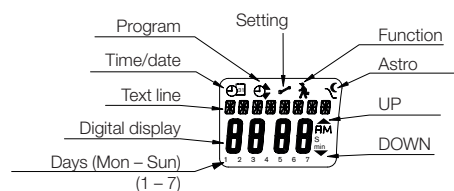
Buttons under the cover



Installation



Explanation of displays and symbols



Accessories:



Frame adapters to adapt to existing designs
Page 208



Flash mount frames
Page 209



Flush mount housings
Page 209



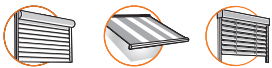
Surface mount housings
Page 209



Lumo
Light and twilight sensor
Page 192

VarioTec

Motor or central/group control unit



VarioTec, UniClic frame

The variable control unit

The VarioTec control is an “all-rounder”. It may be used with all roller shutter and sun protection systems as a master, group or motor controller.

VarioTec can control the motor either via the built in operating buttons or via interface inputs at the rear. It also can be used as a group controller. The large operating buttons make operation easy and the interface inputs enable it to be used to create a wide variety of various group setups and interface it with various systems.

The VarioTec is an All-in-One solution: It can be used as master, group or motor controller. It can be used on roller blinds, roller shutters, venetian blinds, awnings and more.

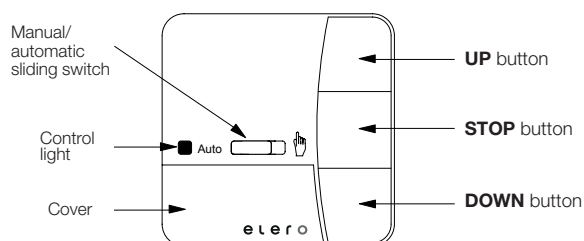
You can operate it by integrated operating buttons and via the potential free inputs via most other ProLine devices as well as 3rd Party controllers (BMCS, AV-systems, designer, switches and more) to create large style installations and group setups.

VarioTec is suitable for use as a JA (for venetian blinds and tiltable applications) and RM controller (for any other applications). Also available as VarioTec-915 with built in Radio receiver! (Please refer to page 168).

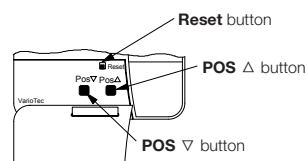
Item Number	Type/Item Description
28 120.3001	VarioTec Set white (with ProLine frame)
28 061.4101	Mains unit only (as spare)
28 121.2001	VarioTec operating unit only white (Spare part)
28 121.2011	VarioTec operating unit only, beige (Spare part)

Technical data and dimensions

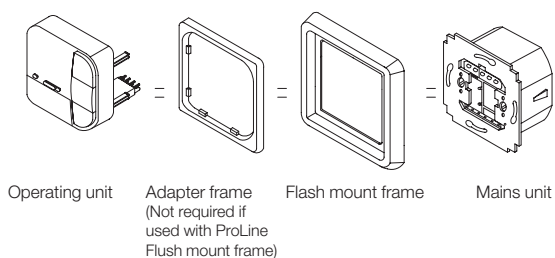
Type	VarioTec
Operating Voltage (V)	1 ~ 120
Frequency (Hz)	50 – 60
Maximum switching current (A) (250 V AC at $\cos \varphi \approx 1$)	5
Ingress protection (IP)	20
Protection class (after correct installation)	II
Temperature range (°C)	0 to +55
Available colors	white, ivory
Type of installation	Flush mount: Requires at least Ø 58 mm flush mount box, 35 mm deep Surface mount: Possible in suitable surface mount box



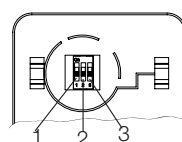
Buttons under the cover



Installation



Encoding switch (located on back of device)



- 1 Upper position (on)** – Alarm signal function OFF
Lower position – Alarm signal function ON (default)
- 2 Upper position (on)** – Group controller
Lower position – Driver controller (default)
- 3 Upper position (on)** – JA mode
(for venetian blinds)
Lower position – RM mode (most other applications, default)

Accessories:



Frame adapters
Page 208



Flash mount frames
Page 209



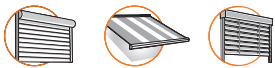
Flush mount housings
Page 209



Surface mount housings
Page 209

MonoTec

Comfort control switch



The intelligent switch

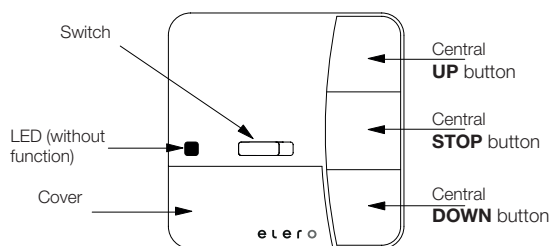
The MonoTec is a central pushbutton switch for the ProLine hard-wired controller range and can be used to operate two groups centrally or separately. The MonoTec must not be used for connecting a motor directly.

This device may only be used in connection with equipment from other manufacturers following consultation with your local retailer.

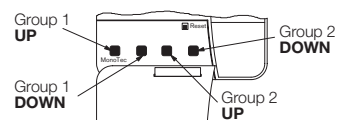
Item Number	Type/Item Description
28 100.0001	MonoTec Set white (with ProLine frame)
28 101.0001	MonoTec white (without ProLine frame)
28 101.0011	MonoTec ivory (without ProLine frame)

Technical data and dimensions

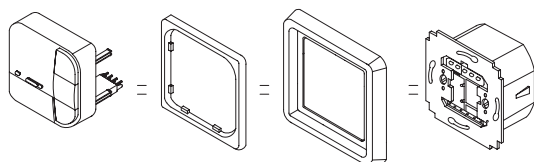
Type	MonoTec
Ingress protection (IP)	20
Protection class (after correct installation)	II
Temperature range (°C)	0 to +55
Available colors	white, ivory
Type of installation	Flush mount: Requires at least Ø 58 mm flush mount box, 35 mm deep Surface mount: Possible in suitable surface mount box



Buttons under the cover



Installation



Operating unit Adapter frame Flash mount frame Operating unit support

Accessories:



Frame adapters
Page 208



Flash mount frames
Page 209



Flush mount housings
Page 209



Surface mount housings
Page 209

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
control units

Electrical
accessories

Adapter profiles
Lifting capacity tables



Sensor technology for hardwired controls

The ideal brand for all weather conditions

The roller shutters, venetian blinds or awnings can be easily automated with sensors: They register the actual weather conditions, of sunlight, rain, temperature and wind velocity, and then activate the drive accordingly.

This enables you to protect yourself from damp and frost, avoid damage from storm gusts and offers patios, conservatory or homes the ideal sun protection.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
sensors

Electrical
accessories

Adapter profiles
Lifting capacity tables

Sensors

Sensors for light, twilight and temperature



Lumo, Lumero, Room thermostat

Lumo

The Lumo light sensor can be easily connected to the AstroTec/ AstroTec-868 to form a user-friendly sun protection system (to provide shade for plants and furniture).
If the pre-set sunlight value is exceeded, "SUN" will appear in the display (Example for AstroTec). The shutter curtain will move down automatically until the Lumo light sensor is shaded. The shutter curtain will then stop and adjust itself until the light sensor is uncovered again. If an intermediate position is programmed, the shutter curtain will stop at this position.
The device is designed to be fitted on the inside of the window pane.
Recommended for use with: AstroTec and AstroTec-915 controller.
Possible to use with: AeroTec controller.

Note:
None of the sensors will work without connection to a suitable controller.

Lumero

The Lumero is a light and twilight sensor for outdoor installation. It may be affixed quite simply with a bracket. It is protected against reverse polarity.

Recommended for use with: AeroTec controller. Possible to use with: AstroTec and AstroTec-915 controller.

Room thermostat

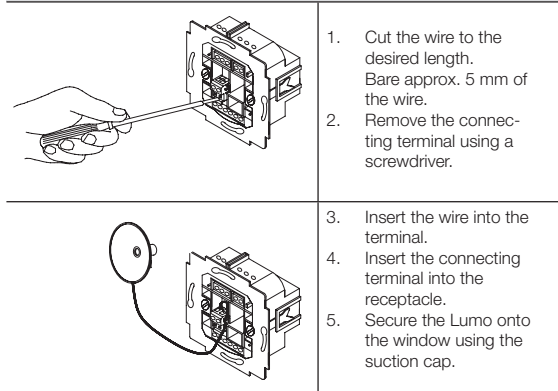
for external connection. Possible to use in conjunction with Aero, Lumero and Lumo to deactivate the sun sensor automatically if temperature (in room) is too low. This allows for energy savings by using the sun to heat up your room during cold days.

Item Number	Type/Item Description
28 080.0001	Lumo white with 2 m cable length
28 090.0001	Lumo white with 10 m cable length
28 180.0001	Lumero
13 803.4801	Room thermostat

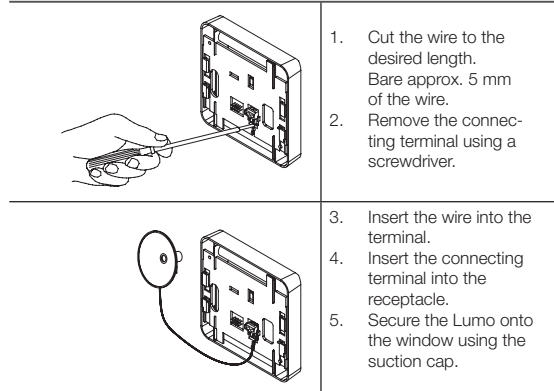
Technical data and dimensions

Type	Lumo	Lumero	Room thermostat
Ingress protection (IP)	20		
Temperature range (°C)	0 to +55	-25 to +60	0 to +55
Dimensions (mm)	Ø 46 × 22	L 82 × W 27 × H 38	L 75 × W 75 × H 25
Weight (g) incl. battery	17	58	76
Cable length (m)	2.0 or 10.0	-	

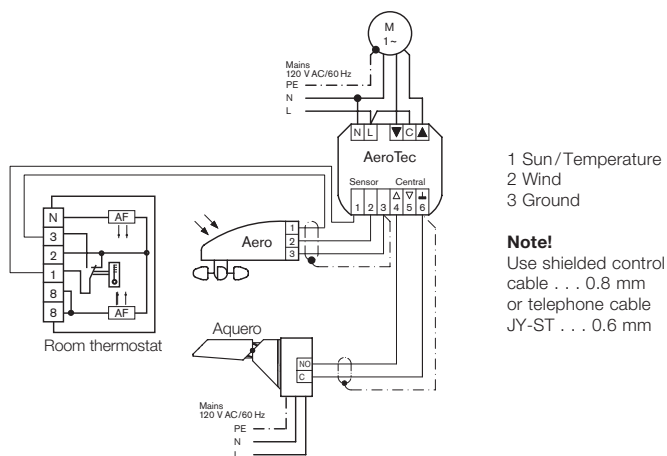
Connecting the Lumo to the AstroTec



Fitting the Lumo into the AstroTec-868

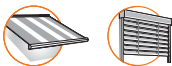


Explanation of terminals Aero



Aero/Ventero

Sun and wind sensors



Aero, Ventero

Aero: Light and wind sensor

The Aero is the sensor for the AeroTec device from elero.

The Aero is a sensor unit which relays weather data (sun and wind values) to AeroTec for further evaluation to control the motor accordingly.

Note:

None of the sensors will work without connection to a suitable controller.

Ventero: Wind sensor

The Ventero is the sensor for the AeroTec device from elero.

The Ventero is a wind sensor which relays wind data to AeroTec for further evaluation to control the motor accordingly.
If the set trigger value on the AeroTec or AeroControl has been exceeded the connected system will retract to protect the application.

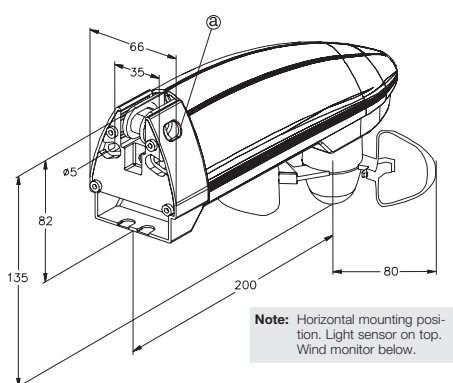
Item Number	Type/Item Description
28 160.0001	Aero white
28 161.0001	Aero transparent
28 170.0001	Ventero white
24 269.0202	Pole and corner adapter (Ø 60 – 80 mm)

Accessories included:

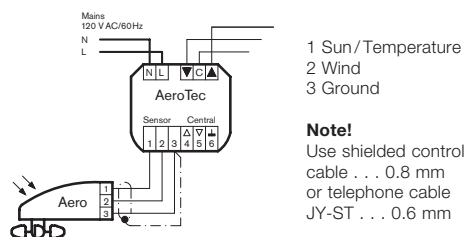
Mounting material

Technical data and dimensions

Type	Aero	Ventero
Ingress protection (IP)	43	
Temperature range (°C)	-25 to +60	
Pole support	Ø 60 – 80 mm (optional accessory)	
Detection angle (°)	150	
Dimensions (mm)	L 280 × W 130 × H 130	
Weight (g)	290	286



Explanation of terminals Aero



Mounting options

	The Aero/Ventero can be fastened to the upper side of the roof or to the facade using the hinged wall bracket. The wall bracket can be swiveled between -5° and 180°. Secure the required position once it has been set (see screw a).
	Wall bracket hinged at 90°
	Wall bracket hinged at 180°
	Pole and corner mounting Optional accessory (item no. 24 269.0202)

Accessories:



Pole and corner adapter

Aquero

Rain sensor



Rain sensor

This rain sensor is connected to the AeroTec (page 182) that automatically retracts the sun protection system if it starts to rain. Precipitation is measured at intervals via the sensor surfaces and compared to the preset value.

The Aquero reacts to rain and snow. The response threshold for the Aquero is preset in the factory but can be adjusted.

If the value is exceeded, the awning or the blind is retracted. Appropriate control devices (e.g. AeroTec) or even 3rd Party devices can be controlled via the potential-free changeover contact.

Item Number	Type/Item Description
28 690.0001	Aquero

Accessories included:

Mounting material

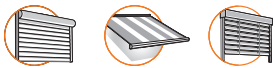


DC controllers and switches

Adapter profiles Lifting capacity tables	Electrical accessories	DC controllers and switches	Radio controls	Door controls	Mechanical accessories	Door drives	Speciality drives	Venetian blind drives	Manual override tubular drives	Hardwired tubular drives	Radio tubular drives
---	---------------------------	--------------------------------	-------------------	---------------	---------------------------	-------------	----------------------	--------------------------	-----------------------------------	-----------------------------	-------------------------

Control Unit DC

DC controller



Control of 24V DC drives with elero ProLine devices or commercial interlocked venetian blinds push-buttons

The Control Unit DC can be controlled by the following controllers:

- AstroTec
- VarioTec-915 JA
- VarioTec-915 RM
- AeroTec
- VarioTec
- Revio-915 P
- Any interlocked switch or push-button

These devices have a potential-free relay output.
You can also connect an interlocked push button instead of a ProLine device for controlling the Control Unit DC.

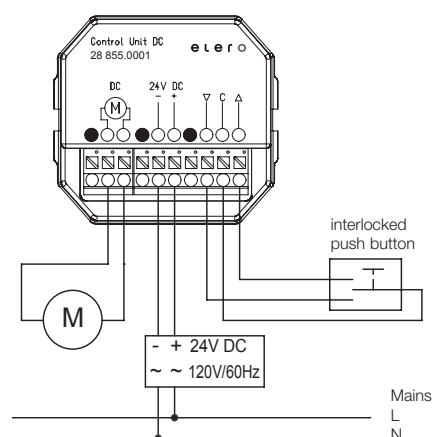
This controller is a relay unit only, no latching functionality. External power Supply (24V DC) required for operation of device and motor.

Item Number	Type/Item Description
28 855.0001	Control Unit DC

Technical data and dimensions

Type	Control Unit DC
Operating Voltage (V)	24 V DC, $\pm 10\%$
Control voltage	24 V DC, $\pm 10\%$
Current consumption (mA)	25
Switching capacity (A)	3
Temperature range (°C)	0 to +55
Ingress protection (IP)	20
Dimensions (mm)	L 52 x W 49 x H 29
Type of installation	Suitable for flush mount housings $\varnothing 60$ mm or suitable boxes

Connection example



Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

DC controllers
and switches

Electrical
accessories

Adapter profiles
Lifting capacity tables

Switches and push-buttons

Interlocked switches/push buttons for single-phase motors, flush mount



24 051.0001
Venetian blind switch
Jung CD 500
alpine white



24 222.0001
Interlocked venetian
push-button Jung CD 500
alpine white



14 701.1701
Switch
surface mount,
water-protected



14 701.2101
Push-button
surface mount,
water-protected

Interlocked switches/push buttons for single-phase motors



23 250.0001
Cord push-button
alpine white



23 251.0001
Cord switch
alpine white



23 252.0001
Universal push-button
alpine white



23 253.0001
Universal switch
alpine white

Rotary switch 2-pole



13 701.3401
Flash mount for connecting
2 motors (can be used as
switch or push-button)

Surface mount key switch



14 701.3301
with latched position on both
sides and cover lock,
IP 54, UL listed



14 701.3601
momentary on both sides
and cover lock,
IP 54, UL listed



14 701.3801
momentary on one side
single pole, and cover lock,
IP 54, UL listed

Flush mount key switch



14 701.3901
with latched position on both
sides and cover lock,
IP 54, UL listed



14 701.4201
momentary on both sides
and cover lock,
IP 54, UL listed



14 701.4401
momentary on one side
and latching on the other,
cover lock, IP 54, UL listed

Electrical accessories

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

**Electrical
accessories**

Adapter profiles
Lifting capacity tables

UL cables for RevoLine drives

Note: It is not possible to return connecting cables.



Special cable lengths. Surcharge in exchange for standard cable

Item Number	Type/Item Description
99 000.0101	Rebate number for ordering Motor without connection cable
99 000.8501	2.0 m RevoLine UL cable (comes as standard with UL motors)
99 000.8601	3.0 m RevoLine UL cable
99 000.8701	5.0 m RevoLine UL cable

Special cable lengths

Item Number	Type/Item Description
23 395.3201	2.0 m RevoLine UL cable
23 395.3301	3.0 m RevoLine UL cable
23 395.3401	5.0 m RevoLine UL cable

Cables and accessories for RevoLine drives, not UL listed



Special cable lengths. Surcharge in exchange for (standard cable 2.0 m)

Item Number	Type/Item Description
99 000.0101	Rebate number for ordering Motor without connection cable
99 000.4101	2.0 m plug-in RevoLine cable (comes with drive as standard)
99 000.4201	3.0 m plug-in RevoLine cable
99 000.4301	5.0 m plug-in RevoLine cable
99 000.4401	10.0 m plug-in RevoLine cable
99 000.4801	20.0 m plug-in RevoLine cable
99 000.4501	0.4 m plug-in RevoLine cable cable with Hirschmann plug
99 000.4601	3.0 m plug-in RevoLine cable with universal push button (middle) and earthed plug

Connecting cables without drive for RevoLine

Item Number	Type/Item Description
23 395.0201	2.0 m plug-in RevoLine cable
23 395.0301	3.0 m plug-in RevoLine cable
23 395.0401	5.0 m plug-in RevoLine cable
23 395.0501	10.0 m plug-in RevoLine cable
23 395.0601	20.0 m plug-in RevoLine cable
23 395.0101	0.4 m plug-in RevoLine cable with Hirschmann plug
23 395.0801	2.0 m plug-in RevoLine cable with Hirschmann plug
23 395.0701	3.0 m plug-in RevoLine cable with universal push button 23 251.0001 (centered) and earthed plug
23 394.2001	0.4 m RevoLine cable black with Hirschmann plug

Special cable lengths in black. Surcharge in exchange with standard cable

Item Number	Type/Item Description
99 000.5501	0.4 m plug-in RevoLine cable with Hirschmann plug STAS 3
99 000.7701	2.0 m plug-in RevoLine cable with Hirschmann plug STAS 3
99 000.6001	2.0 m plug-in RevoLine cable (Free of charge, optional replacement)
99 000.5701	3.0 m plug-in RevoLine cable (Free of charge, optional replacement)
99 000.5801	5.0 m plug-in RevoLine cable (Free of charge, optional replacement)
99 000.5901	5.0 m plug-in RevoLine cable (Free of charge, optional replacement)

Special cable lengths in black

Item Number	Type/Item Description
23 395.2101	0.4 m plug-in RevoLine cable with Hirschmann plug STAS 3
23 395.2201	2.0 m plug-in RevoLine cable
23 395.2301	3.0 m plug-in RevoLine cable
23 395.2401	5.0 m plug-in RevoLine cable
23 395.2801	6.0 m plug-in RevoLine cable
23 395.2501	10.0 m plug-in RevoLine cable

Cable extensions and special leads

Item Number	Type/Item Description
23 615.2401	0.2 m plug-in RevoLine cable with plug socket to accept Type 9–11 motor plug (for retro-fit)
26 617.0001	0.1 m Cable extension Hirschmann STAS3 to STAK3, black. NOTE: This is a special switch cable, turning Pin 2 to 3 and vice versa (Switching run-direction)
26 617.0101	1.25 m Cable extension Hirschmann STAS3 to STAK3, black
26 617.0201	2.5 m Cable extension Hirschmann STAS3 to STAK3, black
26 618.2201	2.2 m Cable extension Hirschmann STAK3 only, black. Open wires, prepared for connection
26 618.0201	2.5 m Cable extension Hirschmann STAK3 only, black
26 618.0501	5.0 m Cable extension Hirschmann STAK3 only, black
26 618.1501	5.0 m Cable extension Hirschmann STAK3 only, black. Open wires, prepared for connection
26 618.0601	6.0 m Cable extension Hirschmann STAK3 only, black
26 618.0901	9.2 m Cable extension Hirschmann STAK3 only, black. Open wires, prepared for connection
26 618.1001	10.0 m Cable extension Hirschmann STAK3 only, black
26 618.1001	10.0 m Cable extension Hirschmann STAK3 only, black. Open wires, prepared for connection

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Cables and
accessories

Adapter profiles
Lifting capacity tables

Cables and accessories for Type 9 MO, Type 11 and Type 11 MO, not UL listed 230 V Motors

Note: 2 blanks required per welding shaft.



Special cable lengths in combination with the drive (standard 2.0 m) for Type 9 and Type 11

Item Number	Type/Item Description
99 000.0001	2.0 m plug-in Type 9 – 11 cable (comes with drive as standard)
99 000.0201	3.0 m plug-in Type 9 – 11 cable
99 000.0301	5.0 m plug-in Type 9 – 11 cable
99 000.0401	10.0 m plug-in Type 9 – 11 cable
99 000.0501	0.4 m plug-in Type 9 – 11 cable with Hirschmann plug

Connecting cables without drive

Item Number	Type/Item Description
23 615.0201	2.0 m plug-in Type 9 – 11 cable
23 615.0301	3.0 m plug-in Type 9 – 11 cable
23 615.0401	5.0 m plug-in Type 9 – 11 cable
23 615.0501	10.0 m plug-in Type 9 – 11 cable
23 615.0601	20.0 m plug-in Type 9 – 11 cable
23 615.0101	0.4 m plug-in Type 9 – 11 cable with Hirschmann plug

Installation cables for 120 V and 230 V tube drives and JA drives



23 245.0001
Installation cable with 4-pole Quick connectors on motor side, open wire for power supply (to connect local plug to). 120 V/North American cable colors. (Also suitable for 230 V)



23 243.0002
Installation cable with 5-pole quick connector on motor side and German Schuko plug 230 V/European cable colors (Also suitable for 120 V)



23 246.0001
Installation cable with Hirschmann plug and German Schuko plug. 230 V/European cable colors (Also suitable for 120 V)



23 279.0001
Assembly cable for DC-drives

Electrical accessories

Hirschmann plugs male



23 846.0001
Stas 3 with clip
(motor side, male)
UL recognized



13 708.6601
Stas 4 for JAR and SMI motors
(motor side, male)

Hirschmann plugs female



13 701.5301
Stak 3
(power supply side, female)
UL recognized



13 704.9801
Stak 4 for JAR and SMI motors
(power supply side, female)

Note: It is not possible to return connecting cables.

QuickConnect



23 395.2701
QuickConnect,
the fast connection system
IP 65 UL recognized



23 395.4701
QuickConnect, set of 10

23 395.2601
QuickConnect with MiniPlug
IP 65, for None-UL RevoluLine
drives

Note:
Assembly and disassembly only in the
de-energized state! The connections to
the 120 V/230 V mains must be made
by authorized specialist personnel.



Item Number	Type/Item Description
13 702.8801	Low Voltage cable, 2 x 2 x 0.6 mm screened type JY-ST-Y for ProLine control input wiring
13 701.7901	Cable 3 x 0.75 mm ² type H05RN-F 3G, white, similar RAL 9001
13 803.0201	Cable 3 x 0.75 mm ² type H05RR-F 3G, black
13 702.5001	Original elero Motor cable, 4 x 0.75 mm ² , white
13 702.0901	Original elero Motor cable, 4 x 0.75 mm ² , black
16 700.2902	Original elero Motor cable, 5 x 0.75 mm ² , black
14 705.2901	Cable 5 x 1 mm ² (Mains connection cable for BoxControl and BoxControl Compact)
14 305.0301	Cable YSLY-Z 6 x 0.5 mm ² , grey (Control cable for Door drives)
14 705.3101	Cable 8 x 1 mm ² , grey (Motor connection cable for Door drives with brake)
14 305.0201	Cable 12 x 0.5 mm ² , grey (Control cable for Door drives with ZE)

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

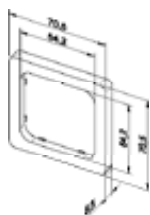
Hardwired
controls

Cables and
accessories

Adapter profiles
Lifting capacity tables

Adapter frames for ProLine control units

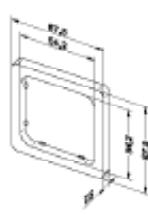
Refer to Page 210 for 1:1 scaled drawings



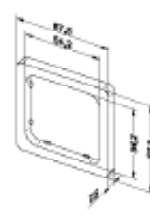
14 303.0501
White, suitable for:
– Jung topline



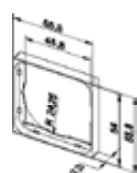
14 303.0601
Ivory, suitable for:
– Jung topline



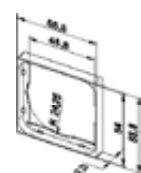
14 303.0101
White, suitable for:
– Jung CD 500
– Jung ST 550



14 303.0201
Ivory, suitable for:
– Jung CD 500
– Jung ST 550



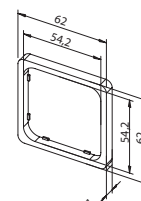
14 303.7601
White, suitable for*:
– Jung A 500 and AS 500
– AS Universal
– Jung A Plus



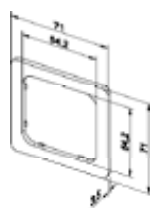
14 303.8601
Ivory, suitable for:
– Jung A 500 and AS 500



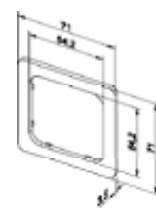
14 303.1101
White, suitable for:
– Gira F100 (before 2007)



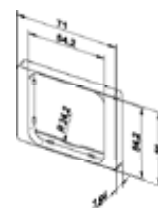
14 303.1201
Ivory, suitable for:
– Gira F100 (before 2007)



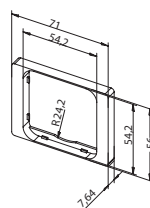
14 303.1301
White, suitable for:
– Gira Standard
– Gira S-Color
– Gira F100 (after 2007)



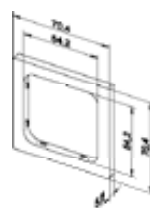
14 303.1401
Ivory, suitable for:
– Gira Standard
– Gira F100 (after 2007)



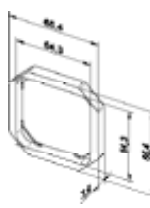
14 303.1501
White, suitable for:
– Berker Arsys



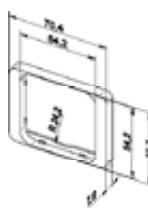
14 303.1601
Ivory, suitable for:
– Berker Arsys



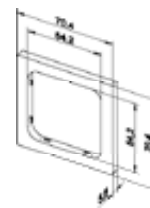
14 303.0701
White, suitable for:
– Merten Octocolor



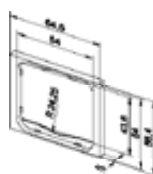
14 303.0801
Ivory, suitable for:
– Merten Octocolor



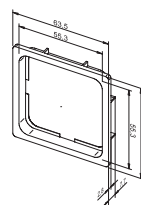
14 303.0901
White, suitable for:
– Busch-Jaeger alpha-nea



14 303.1701
White, suitable for:
– Peha Tangenta
– Peha Dialog



14 303.7401
White, suitable for:
– Legrand Sagane



14 306.7601
Frame adapter
BJ Solo, Future, Davos

No adapter frame is required for the following switch ranges:

- Busch-Jaeger Duro 2000 SI
- Busch-Jaeger Reflex SI

With system-inherent variations concerning the fit:
– Merten M1
– Merten Atelier
Slight variations of the color and surface structure are possible.

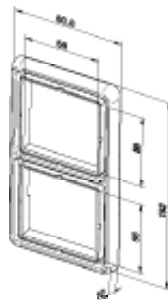
*** also suitable for:**

- Gira Standard 55
- Gira E2
- Gira Event
- Gira Esprit
- Berker S1 and B1
- Merten M-Plan
- Merten M-Smart
- Merten M

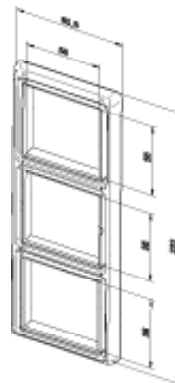
Adapter frames and housings for ProLine control units



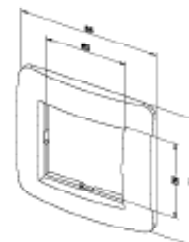
14 803.3901
White, suitable for:
Jung CD 500 1-gang



14 803.4201
White, suitable for:
Jung CD 500 2-gang



14 803.4501
White, suitable for:
Jung CD 500 3-gang



18 100.0001
White, suitable for:
ProLine frame 1-gang

14 803.4001
Ivory, suitable for:
Jung CD 500 1-gang

14 803.4301
Ivory, suitable for:
Jung CD 500 2-gang

14 803.4601
Ivory, suitable for:
Jung CD 500 3-gang

14 803.4101
Brown, suitable for:
Jung CD 500 1-gang

14 803.4401
Brown, suitable for:
Jung CD 500 2-gang

14 803.4701
Brown, suitable for:
Jung CD 5003-gang

Surface and flush mount housings



24 752.0002
Surface mount housing white,
Jung LS 990 can be combined
with Jung-topline adapter frame
(14 303.0501)



24 752.1301
Base for surface mount
housing, white incl. 4 cable feed
troughs for more depth



24 843.0104
Surface mount housing ivory,
Jung LS 990 can be combined
with Jung-topline adapter frame
(14 303.0601)



24 843.1301
Base for surface mount
housing, ivory incl. 4 cable
feed troughs for more depth



13 701.5101
Flush mount housing deep version



14 305.7401
Round flush mount housing for hollow
walls and panel mount with attach-
ment clamps. Suitable for all flush
mount ProLine controllers



14 305.7501
Round flush mount housing for hollow walls
and panel mount with attachment clamps.
Deep version for more wiring space. Suitable
for all flush mount ProLine controllers



13 702.6201
Flush mount box for 1-way and
2-way controller
Dimensions: 100 x 100 mm



13 302.5601
Surface mount housing
(85 x 85 x 37 mm) for sequencing
relay or central control unit for 2
single-phase motor



13 702.6301
Surface mount box for 1-way and
2-way controller (can fit up to 4)
and other controllers
Dimensions: 104 x 120 x 40 mm

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Door controls

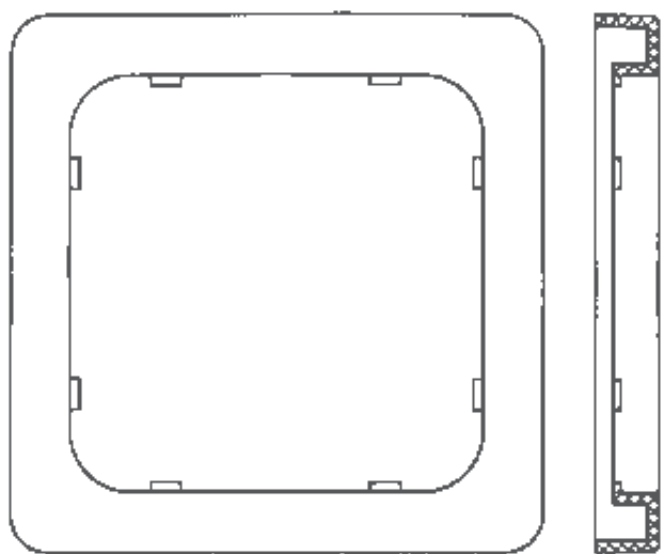
Radio
controls

Hardwired
controls

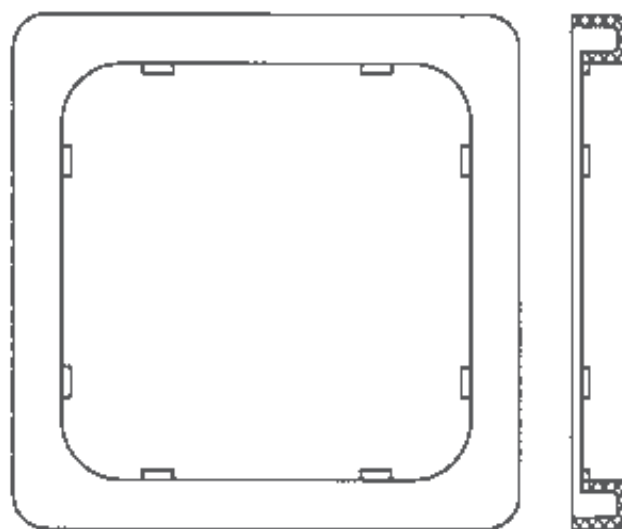
Adapter frames
and housings

Adapter profiles
Lifting capacity tables

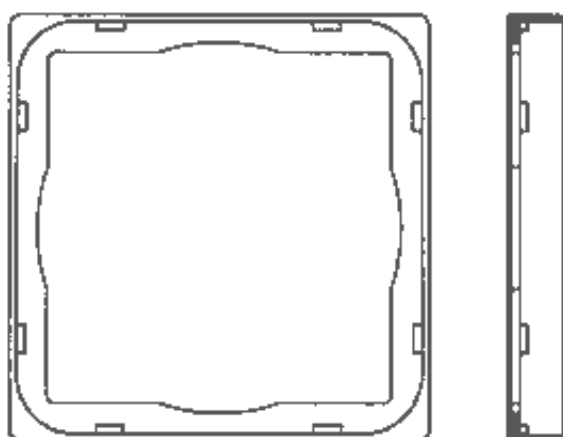
Profiles of the adapter frame 1:1 scale



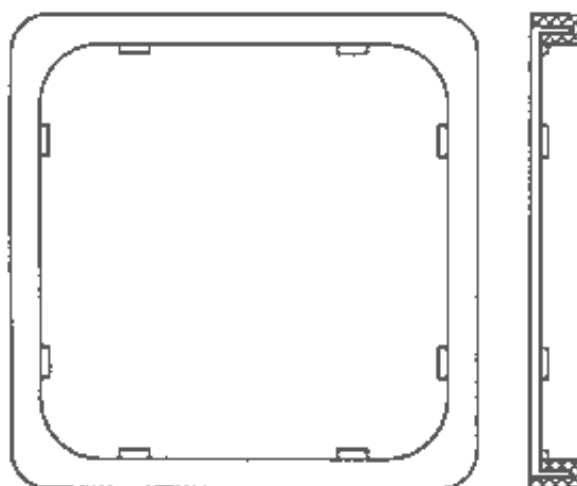
14 303.0501 alpine white
14 303.0601 white



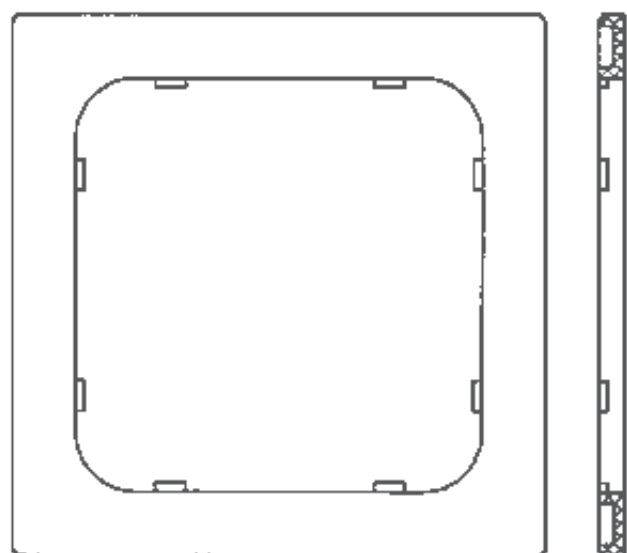
14 303.0101 alpine white
14 303.0201 white



14 303.7601 alpine white
14 303.8601 white



14 303.1101 alpine white
14 303.1201 white

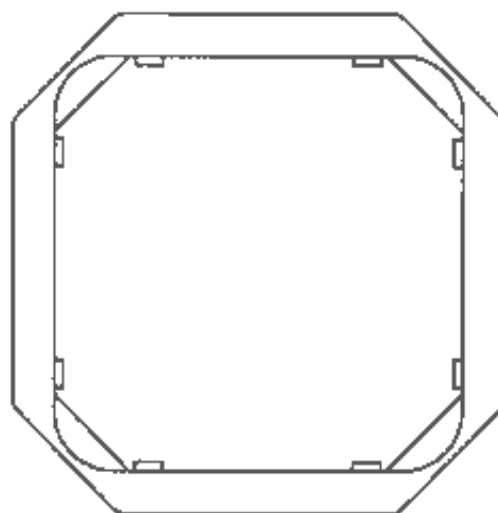


14 303.1301 alpine white
14 303.1401 white

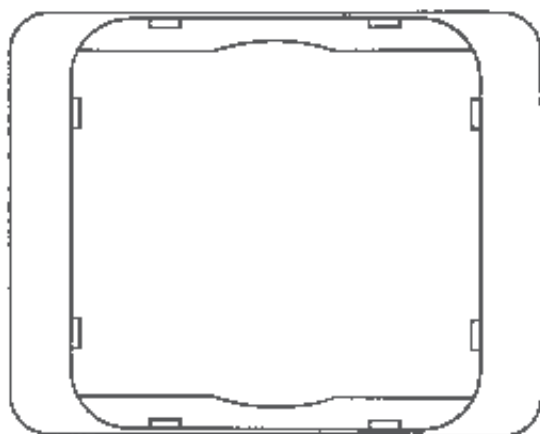
Profiles of the adapter frame 1:1 scale



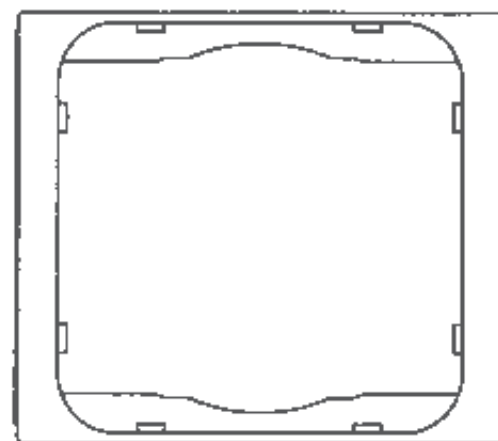
14 303.1501 alpine white
14 303.1601 white



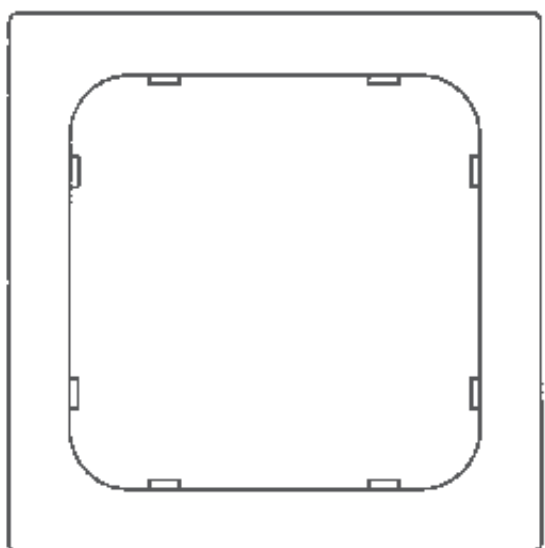
14 303.0701 alpine white
14 303.0801 white



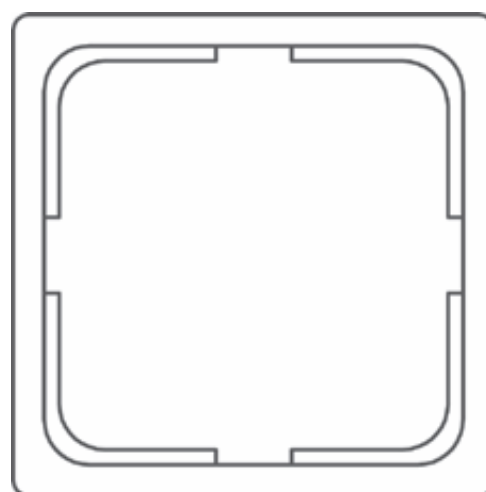
14 303.0901 alpine white



14 303.7401 alpine white



14 303.1701 alpine white



14 306.7601 alpine white

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Profiles of the
adapter frame

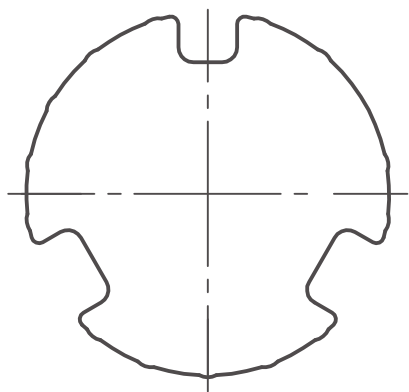
Adapter profiles
Lifting capacity tables



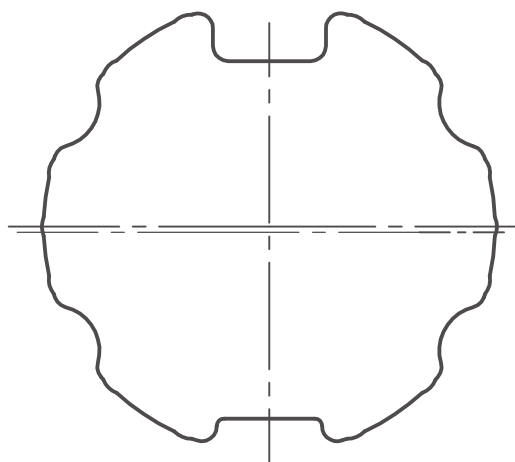
Drive adapter drawings (Scale 1:1)

Adapter profiles Lifting capacity tables	Electrical Accessories	Hardwired controllers	Radio controllers	DoorController	Mechanical accessories	Door drives	Speciality drives	Venetian blind drives	Manual override tubular drives	Hardwired tubular drives	Radio tubular drives
---	---------------------------	--------------------------	----------------------	----------------	---------------------------	-------------	----------------------	--------------------------	-----------------------------------	-----------------------------	-------------------------

Profiles of the drive adapters (notch tubes) in 1:1 scale

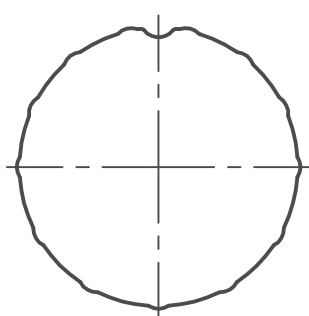


22 017.0001
Ø 52 × 1.5 mm, Hassinger

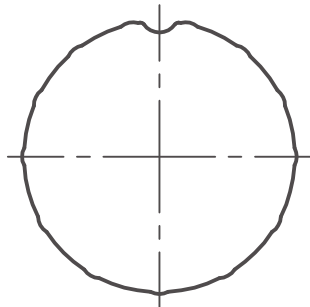


22 004.0001
Ø 63 × 1.0 mm

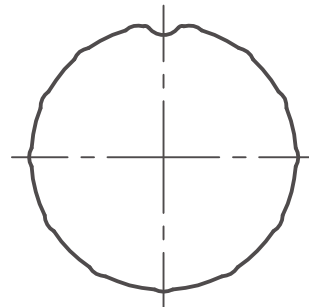
Profiles of the drive adapters (round tubes) in 1:1 scale



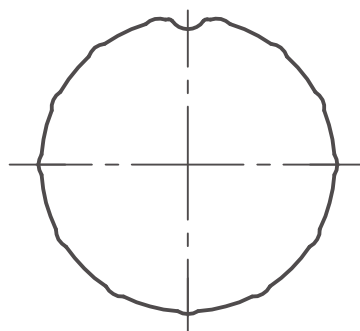
22 011.0001
Ø 40 × 1.0 mm



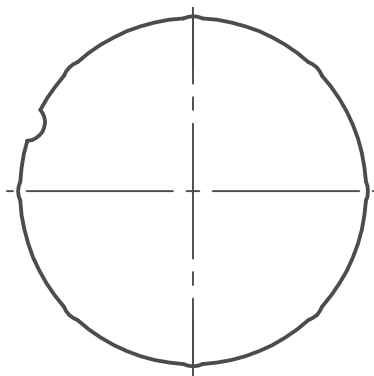
22 009.0001
Ø 40 × 1.5 mm



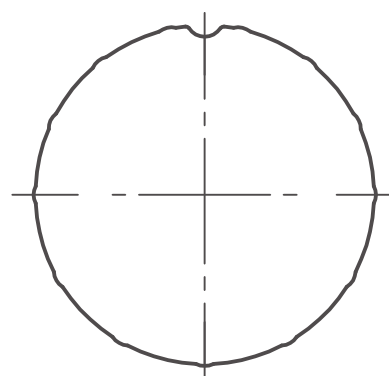
13 119.0601
Ø 40 × 2.0 mm, Ø 38 × 1.0 mm



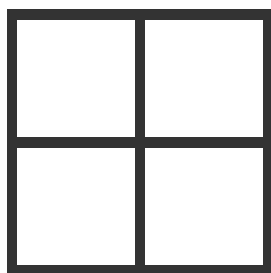
22 015.0001
Ø 42 × 1.0 mm



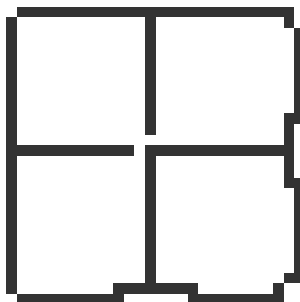
22 071.0001
Ø 50 × 1.5 mm



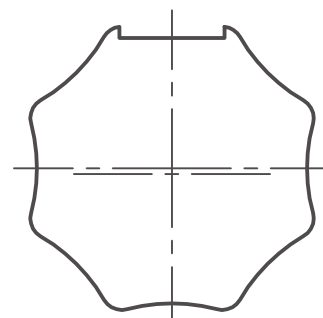
22 016.0001
Ø 50 × 2.0 mm, Italy



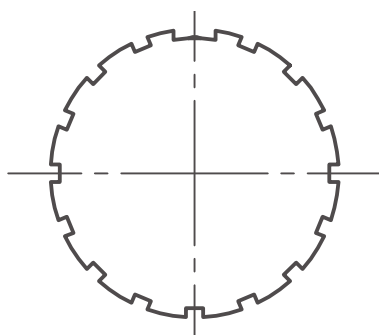
22 087.0001
38 mm Square Profile tube, Meimo, Regazzi



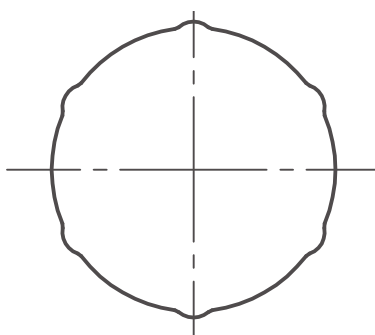
22 079.0001
40 mm Square tube, Griesser



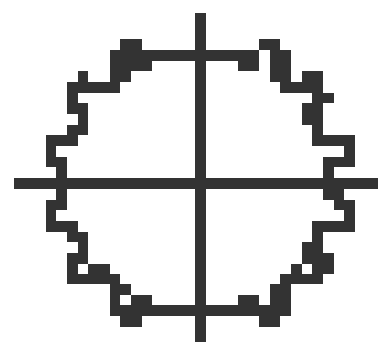
22 010.0001
40 mm Octagonal, Alloy tube, Selve



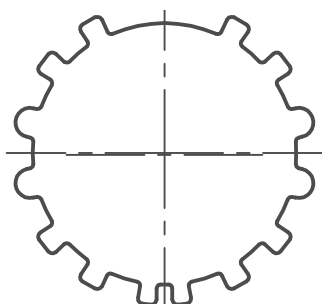
23 097.0001
Ø 42 mm Aluminum Profile tube, Silent Gliss



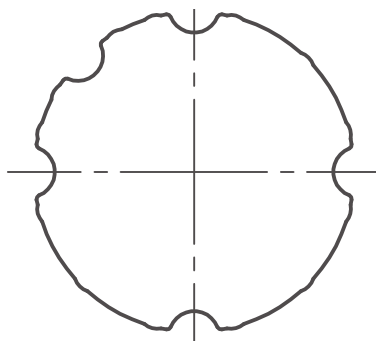
22 013.0001
Ø 42 x 2 mm Bautex, Sundrape



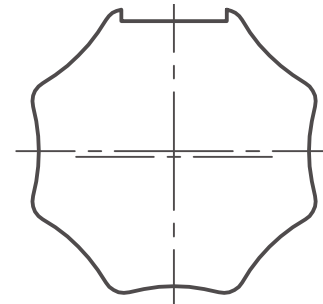
22 083.0001
Ø 43 mm Profile tube, Spain



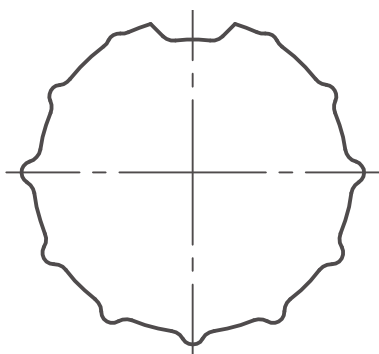
22 018.0001
Ø 45 mm Profile tube, Acmeda, Technolight,
Ø 44 mm Profile tube, Garattoni



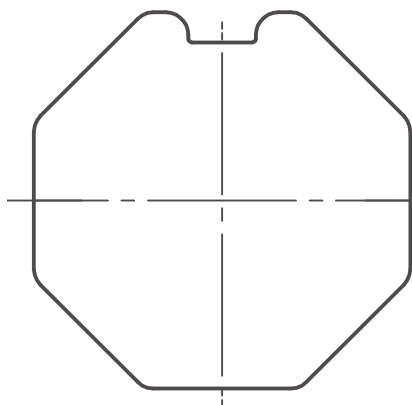
22 014.0001
45 mm Profile tube ZF 45, Zurflüh-Feller



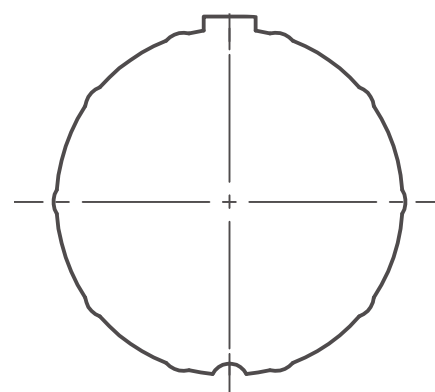
22 068.0001
Ø 47 mm Turkey



22 002.0001
Ø 48 mm Profile tube, Griesser, Hüppe



22 006.0001
50 mm Octagonal tube, Selve



22 007.0001
Ø 50 x 1.5 mm Siral

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

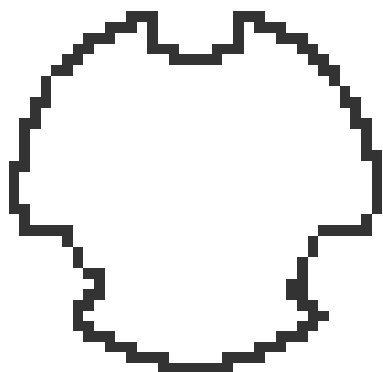
Radio
controllers

Hardwired
controllers

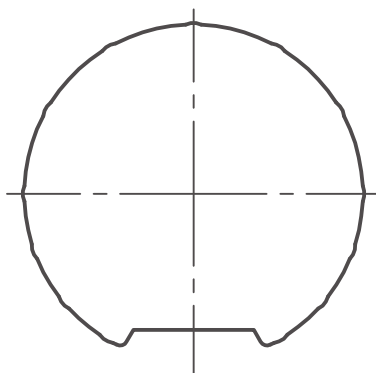
Electrical
Accessories

Adapter profiles

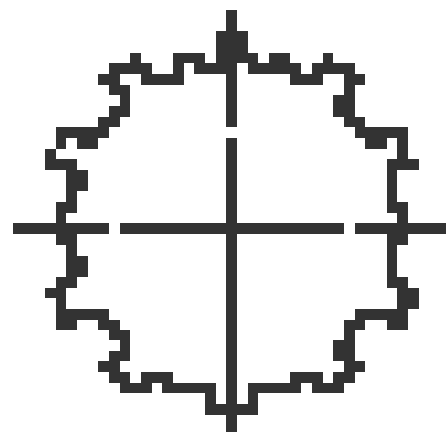
Profiles of the drive adapters (round tubes) in 1:1 scale



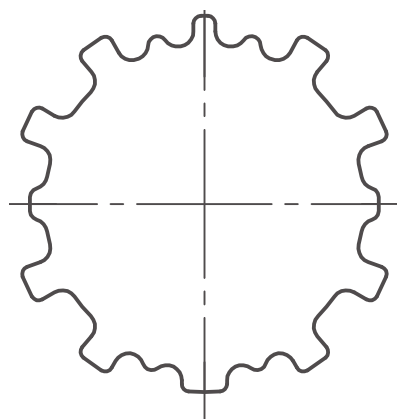
22 054.0001
Ø 50 mm ALU, Latin America



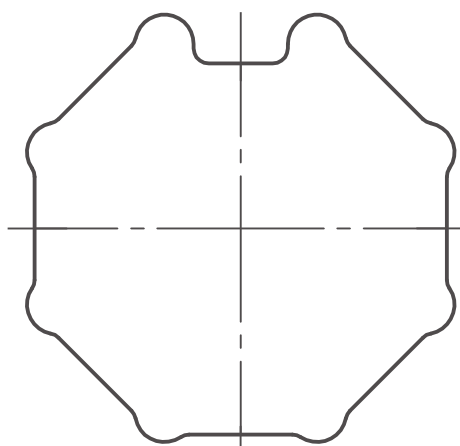
22 012.0001
Ø 50 mm ALU



22 084.0001
Ø 53 mm, Spain

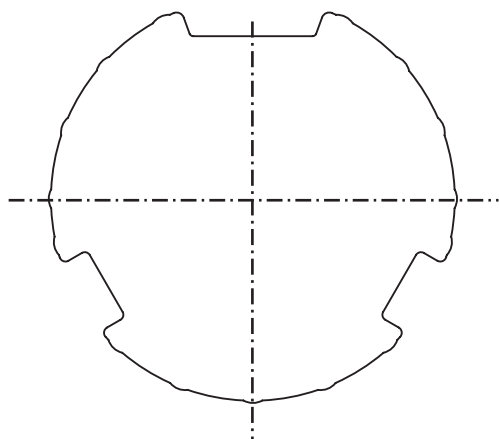


22 008.0001
54 x 0.5 mm Zurflüh-Feller

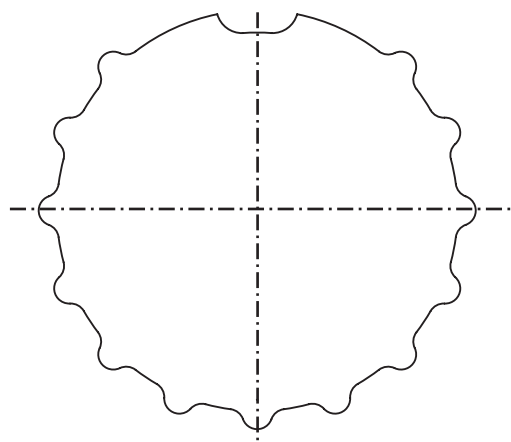


22 005.0001
60 mm Octagonal, Selve, Döhner

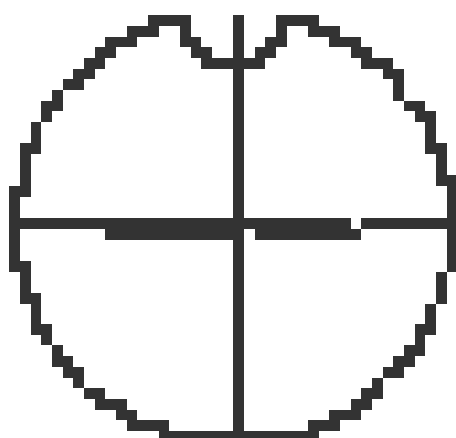
Profiles of the drive adapters (notch tubes) in 1:1 scale



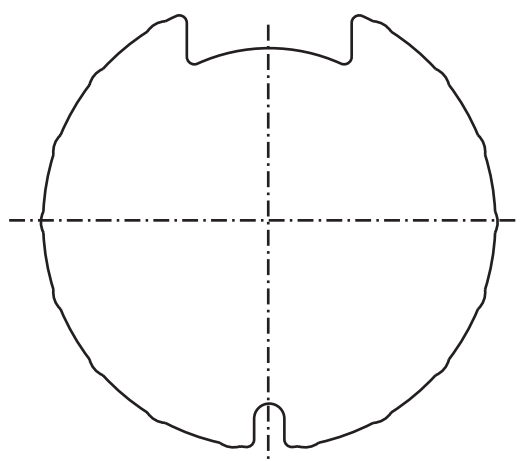
22 041.0001
Ø 57 mm, Ates



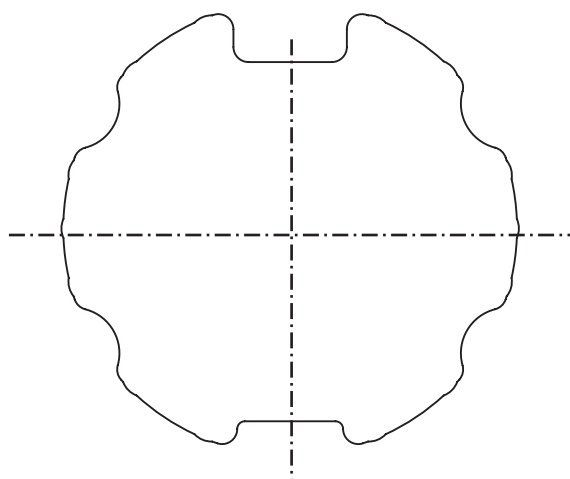
23 055.0001
Ø 60 mm, AXE, Griesser, Hüppe



22 086.0001
Ø 60 mm, Stobag, Meimo

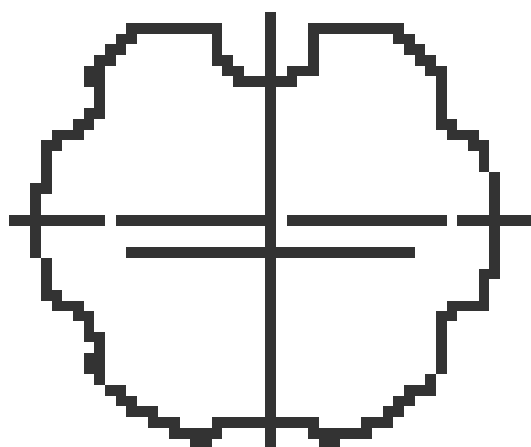


23 042.0001
Ø 62 x 0.6 mm DEPRAT, F2000

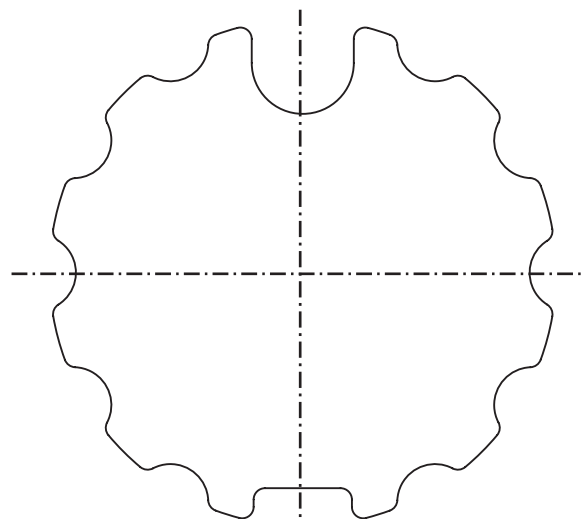


23 031.0001
Ø 63 x 1.0 mm

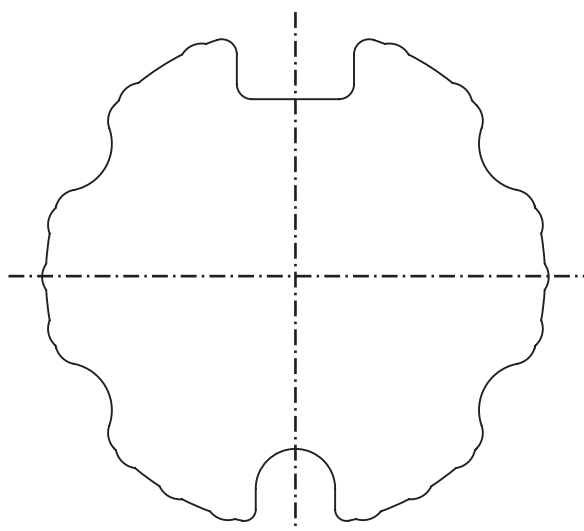
Profiles of the drive adapters (notch tubes) in 1:1 scale



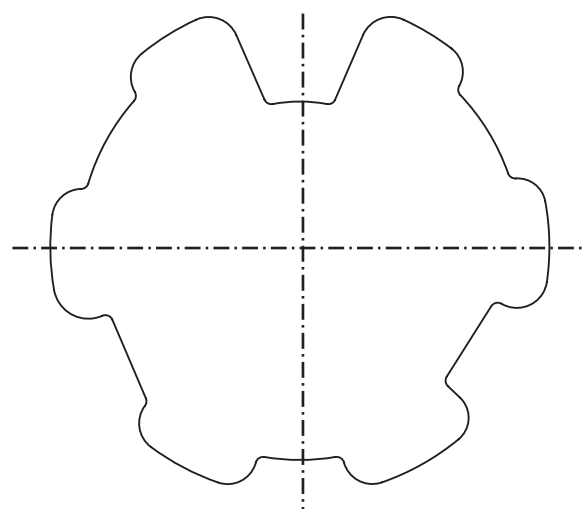
22 019.0001
Ø 63 mm Giallo - Italy



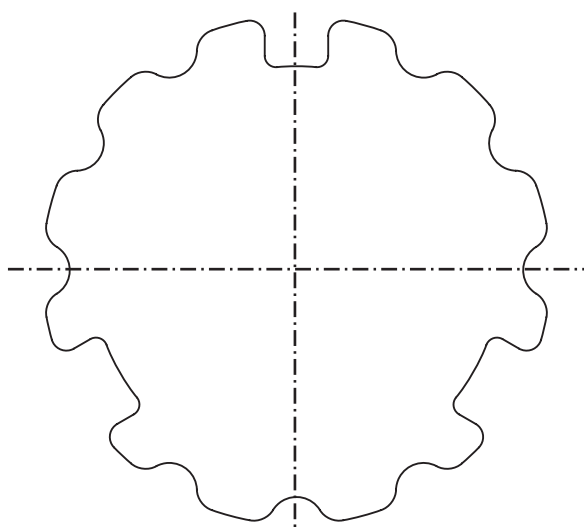
23 018.0001
Ø 70 mm, IMBAC, Ahlquist



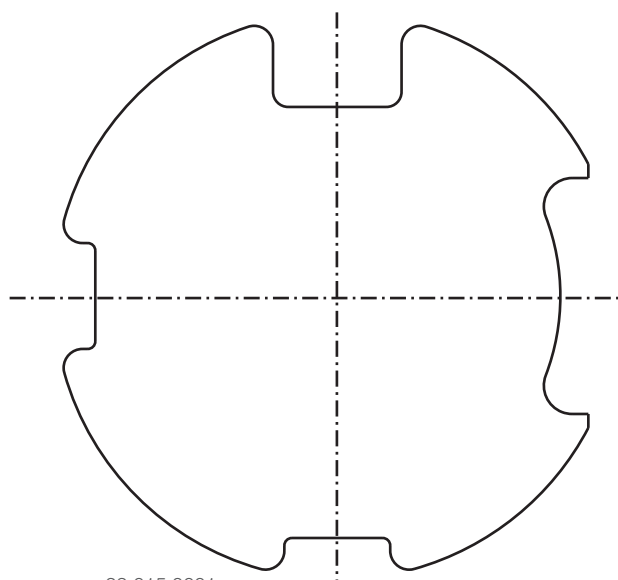
23 020.0001
Ø 70 mm, flat notch Griesser, Welser



23 065.0001
Ø 70 mm

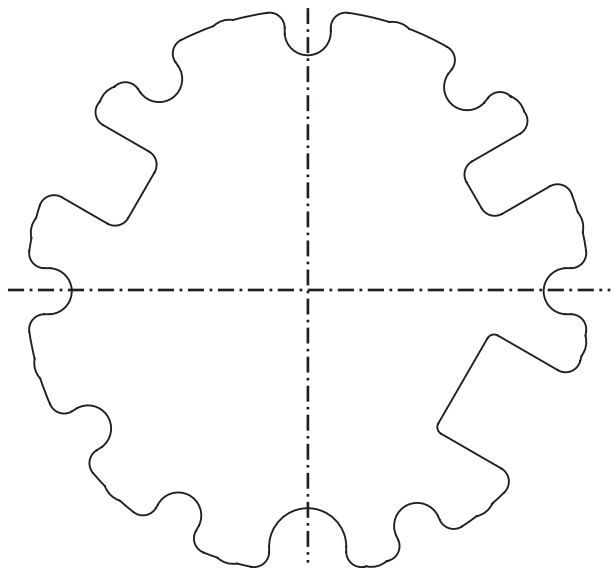


23 054.0001
Ø 71 × 1.5 mm

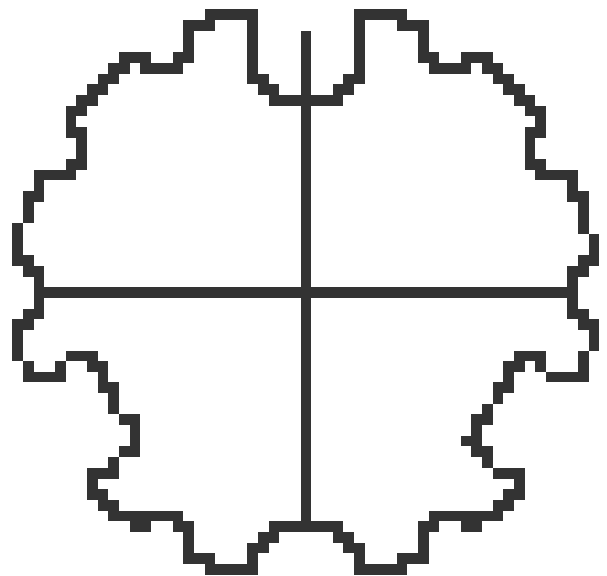


23 015.0001
Ø 78 × 1.0 mm / 78 × 1.25 mm,
for flat notch and round notch, MHZ

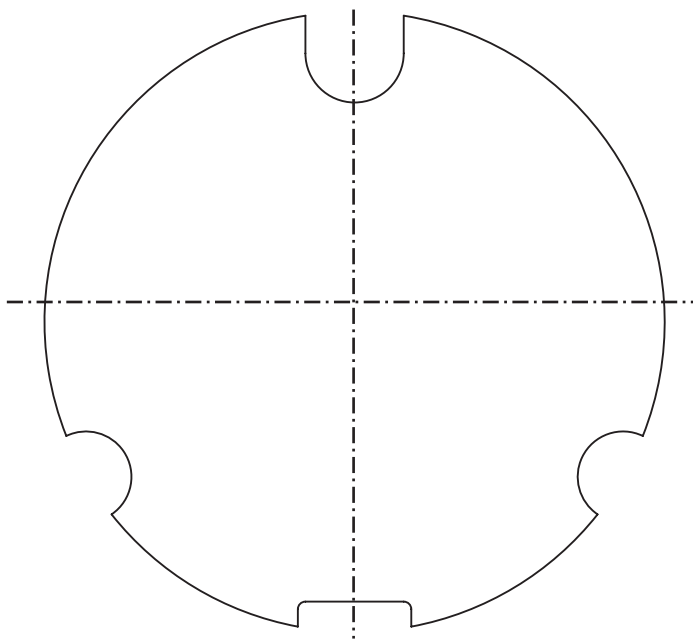
23 026.0001
Ø 78 × 1.0 mm, Rau



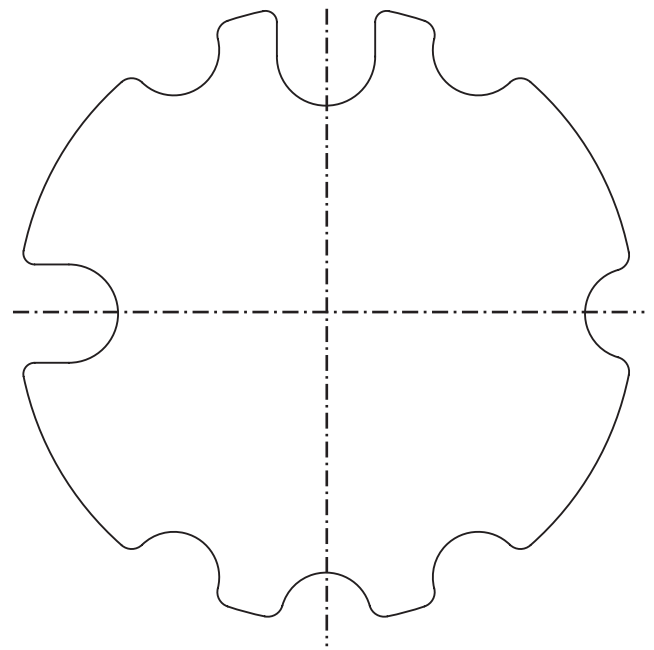
23 040.0001
Ø 78 x 1.0 mm, Döhner



22 088.0001
Ø 80 x 1/1.25 mm
3-notch, Welser Optinut



23 017.0001
Ø 85 x 1.0 mm



23 048.0001
Ø 85 x 1.2 mm,
Imbac, Griesser, new

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

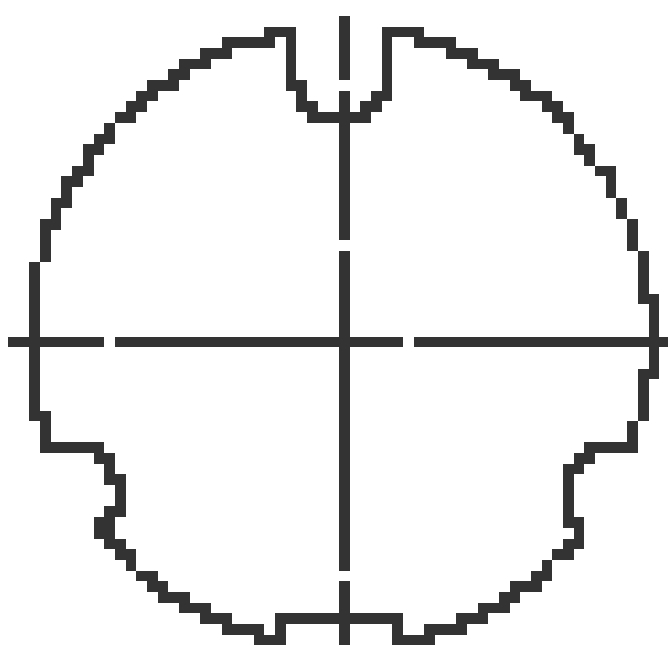
Radio
controllers

Hardwired
controllers

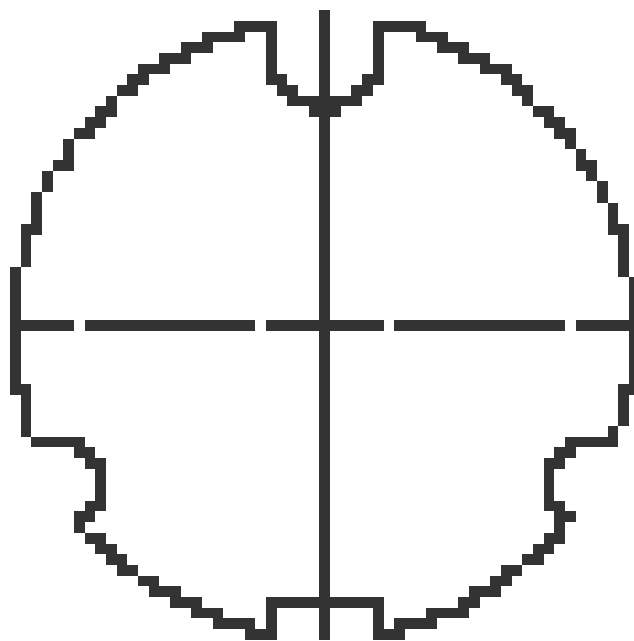
Electrical
Accessories

Adapter profiles

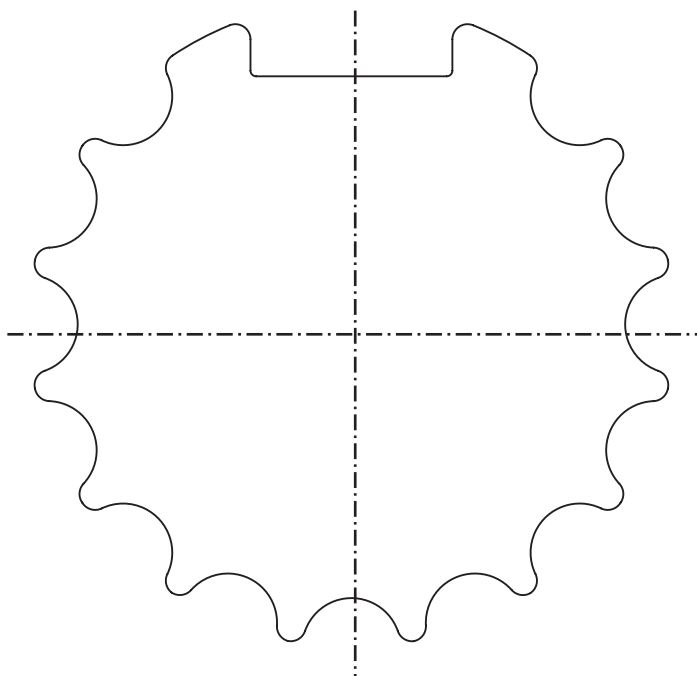
Profiles of the drive adapters (notch tubes) in 1:1 scale



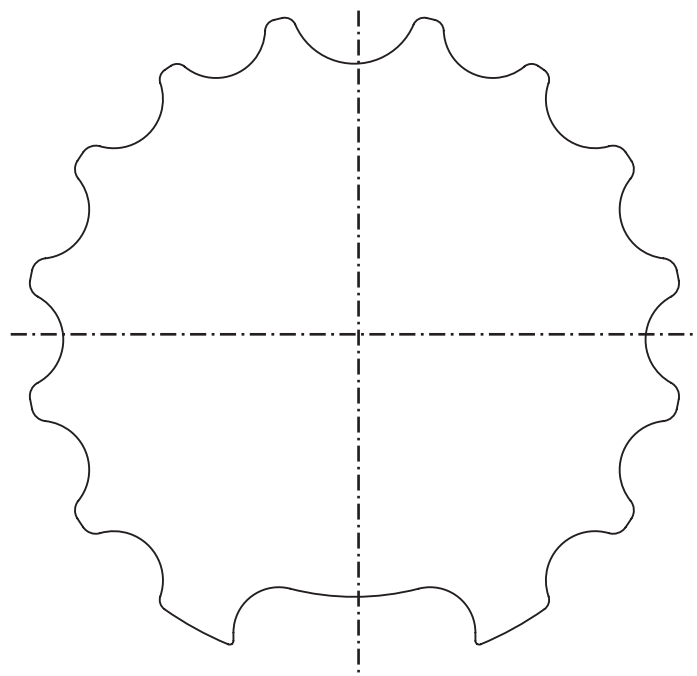
22 059.0001
Ø 85 × 1 mm



23 089.0001
Ø 86 × 1.2 mm, Krebs

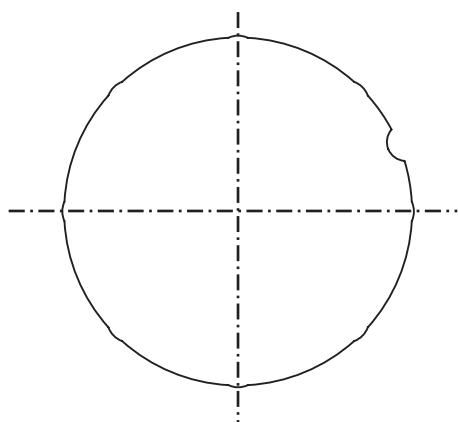


23 053.0001
Ø 90 mm, Le-Profil
Ø 89 mm, DEPRAT

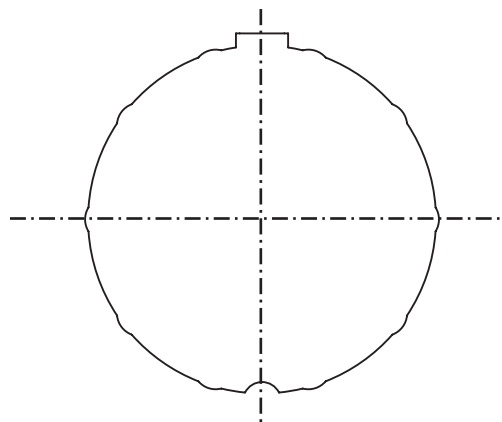


23 058.0001
Ø 90.5 × 1.25 mm MHZ

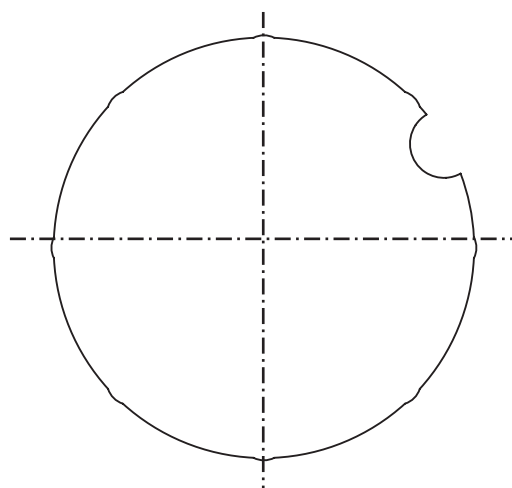
Profiles of the drive adapters (round tubes) in 1:1 scale



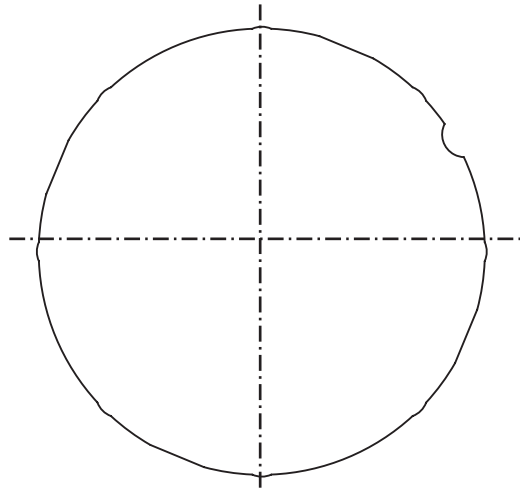
13 116.2901
Ø 50 × 1.5 mm



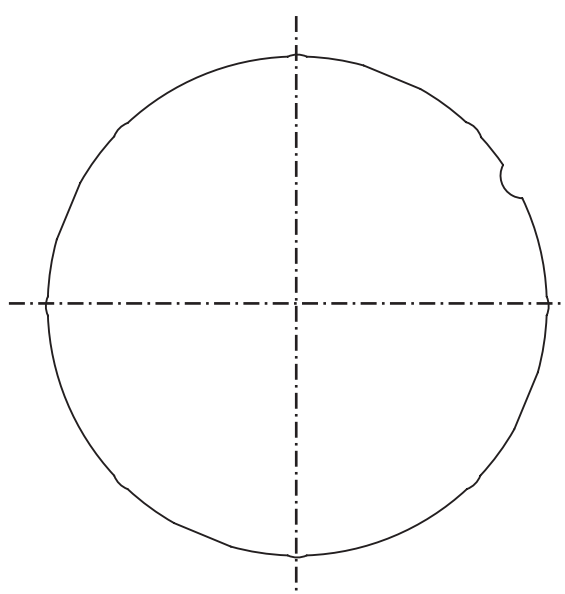
13 116.9901
Ø 50 × 1.5 mm Siral



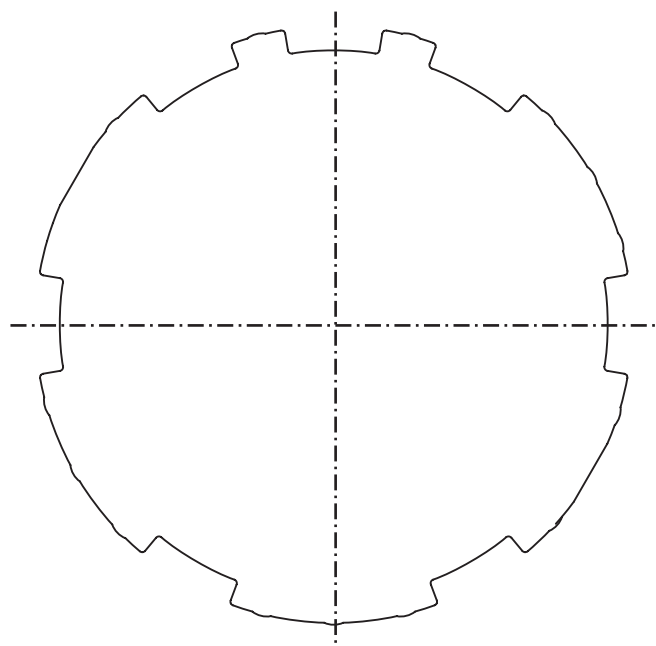
23 044.0001
Ø 60 × 1.5 mm and Ø 62 × 2.0 mm



23 045.0001
Ø 63 × 1.5 mm



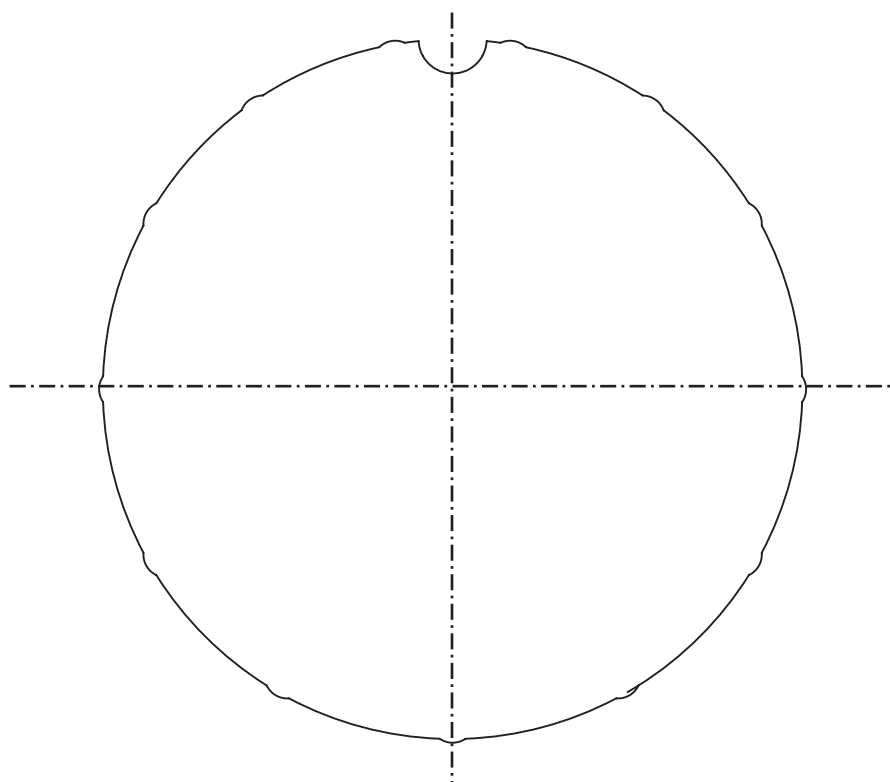
23 046.0001
Ø 70 × 1.5 mm



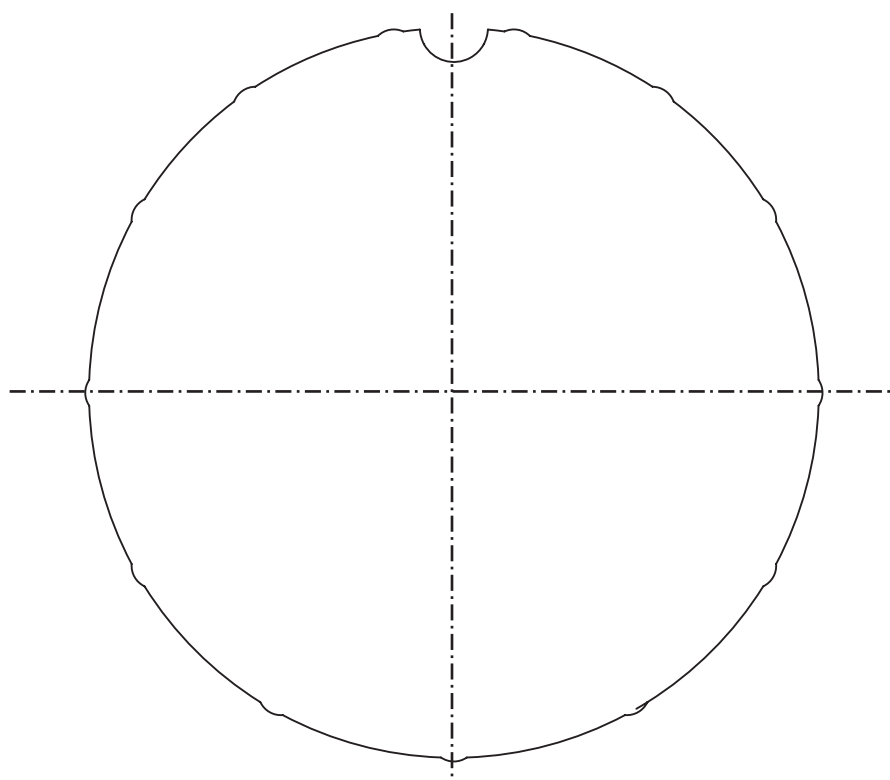
23 093.0001
Ø 83 × 1.5 mm

Radio tubular drives
Hardwired tubular drives
Manual override tubular drives
Venetian blind drives
Speciality drives
Door drives
Mechanical accessories
DoorController
Radio controllers
Hardwired controllers
Electrical Accessories
Adapter profiles

Profiles of the drive adapters (round tubes) in 1:1 scale

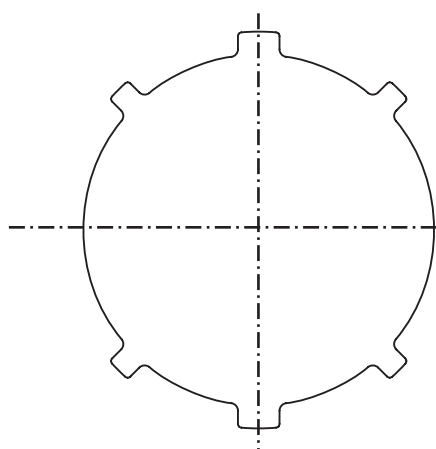


23 052.0001
Ø 102 × 3.5 mm and Ø 98 × 2.0 mm

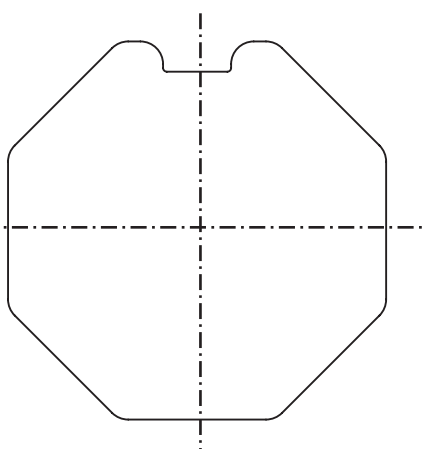


23 051.0001
Ø 102 × 1.5 mm and Ø 102 × 2.0 mm

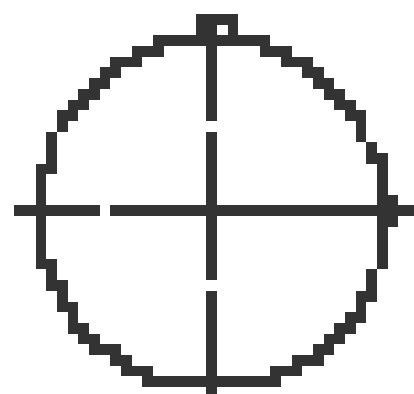
Profiles of the drive adapters (profiles tubes) in 1:1 scale



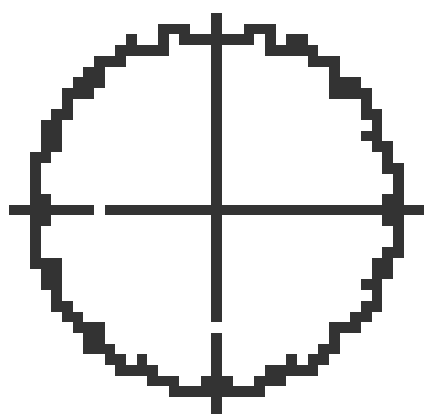
13 117.8501
Ø 50 mm Soprofen



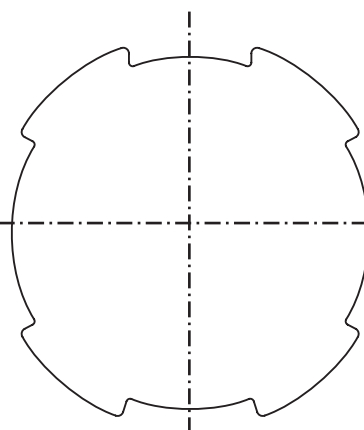
23 012.0001
50 mm Octagonal, Selve



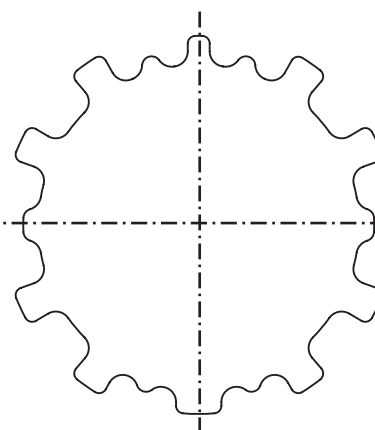
13 121.9301
Ø 51 mm, Hella Top Safe



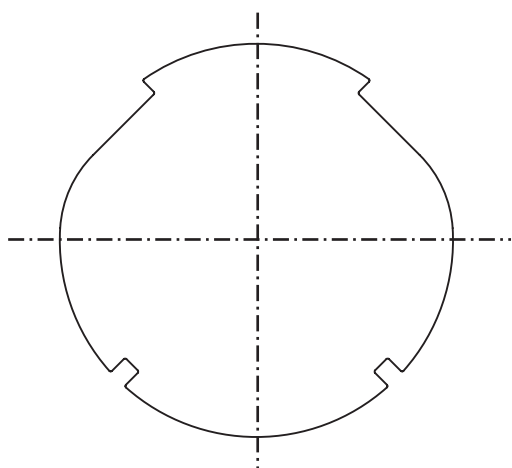
13 119.1801
Ø 52 mm, Silent Gliss



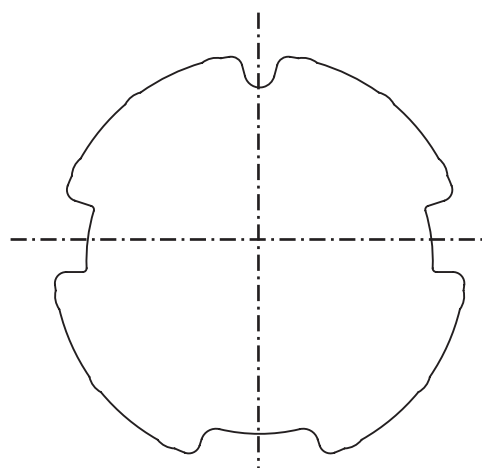
23 091.0001
Ø 53 mm Deprat



13 116.1001
Ø 54 mm Zurflüh-Feller



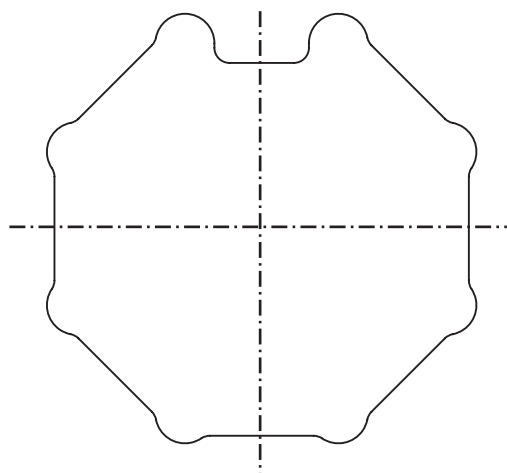
23 039.0001
Ø 55 mm, elero profile tube



23 050.0001
Ø 58 mm Alu, Termo Perco

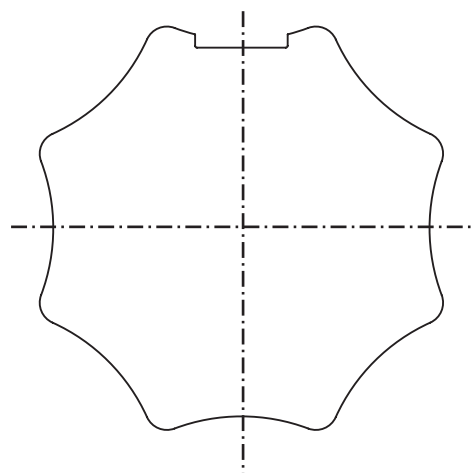
Radio tubular drives
Hardwired tubular drives
Manual override tubular drives
Venetian blind drives
Speciality drives
Door drives
Mechanical accessories
DoorController
Radio controllers
Hardwired controllers
Electrical Accessories
Adapter profiles

Profiles of the drive adapters (profiles tubes) in 1:1 scale

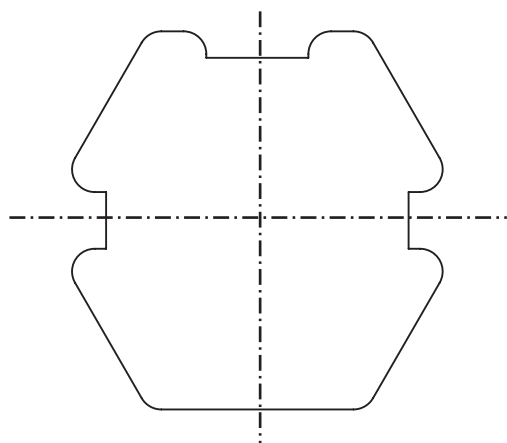


23 036.0001
60 mm Octagonal,
IMBAC

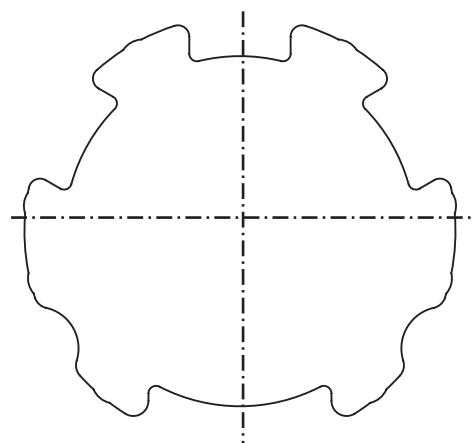
23 379.0001
60 mm Octagonal, Selve,
Döhner Eckermann



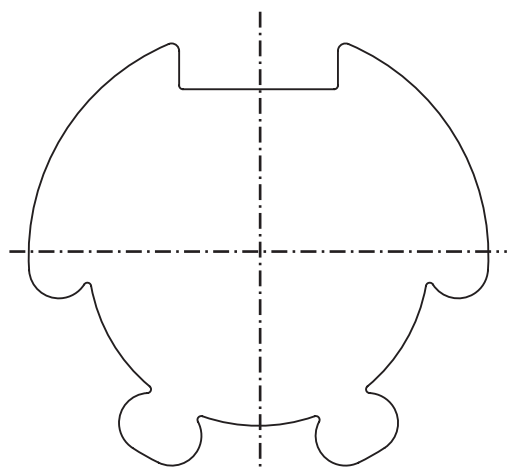
23 056.0001
60 mm Octagonal,
Bonfante



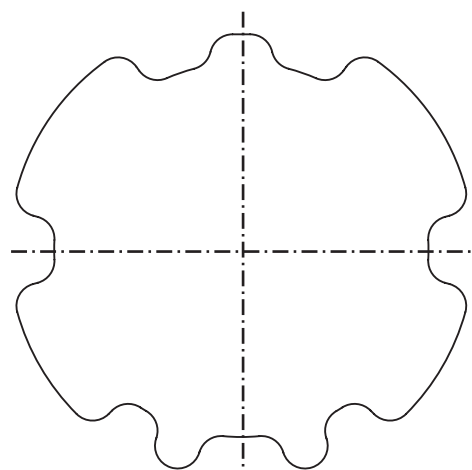
23 047.0001
60 x 0.7 mm Hexagonal, Butzbach, Mäule



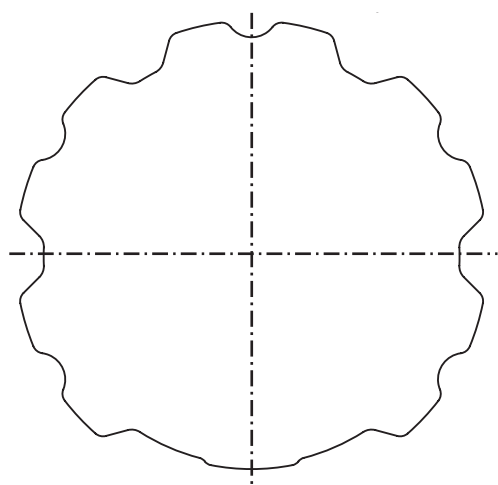
23 049.0001
Ø 60, Alu-Plast, Kittelberger,
Ø 63 x 1.5 mm



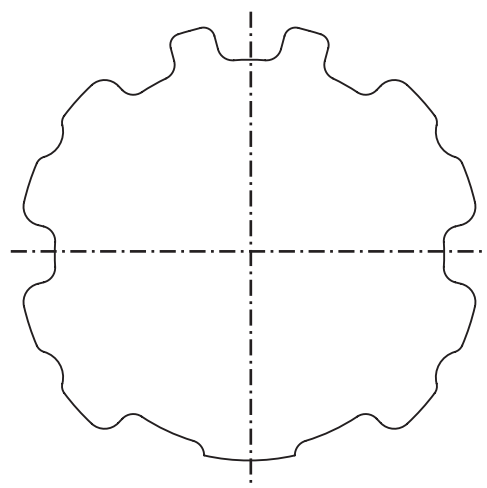
23 043.0001
Ø 62 mm Le Profil, Krülland



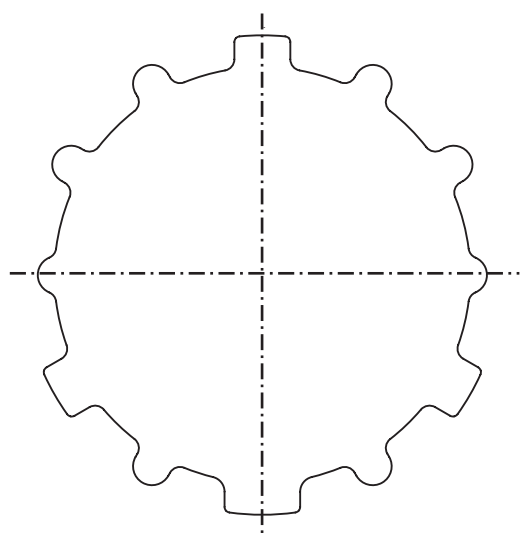
23 380.0001
Ø 64 mm Zurflüh-Feller



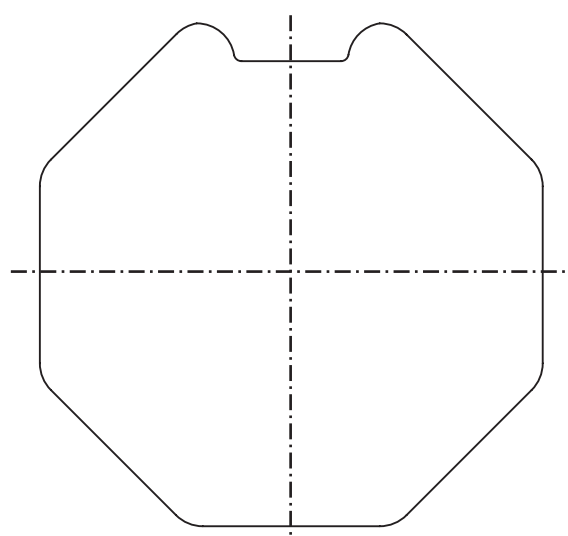
23 032.0001
Ø 65 mm IMBAC, Eckermann, Metallpress



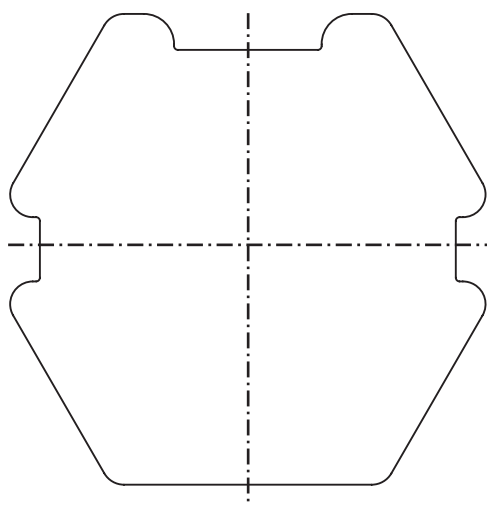
23 033.0001
Ø 65 mm Hoos



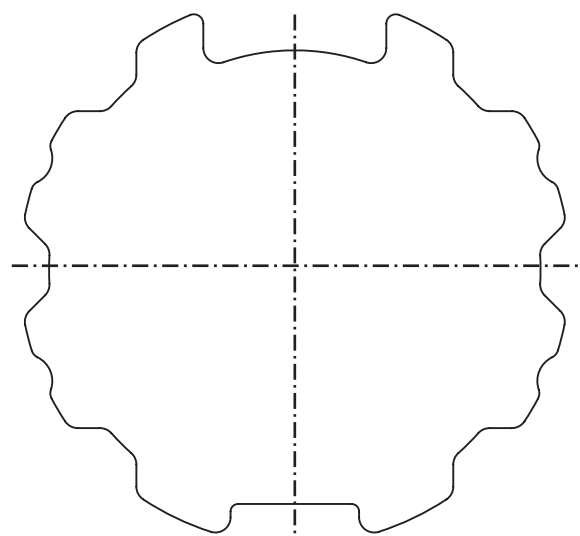
23 057.0001
Ø 67 x 1.5 mm MHZ



23 011.1001
70 mm Octagonal,
Selve, Döhner, Eckermann



23 059.0001
75 mm Hexagonal, Butzbach, Mäule



23 034.0001
Ø 76 x 1.2 mm Kittelberger, Wiral

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

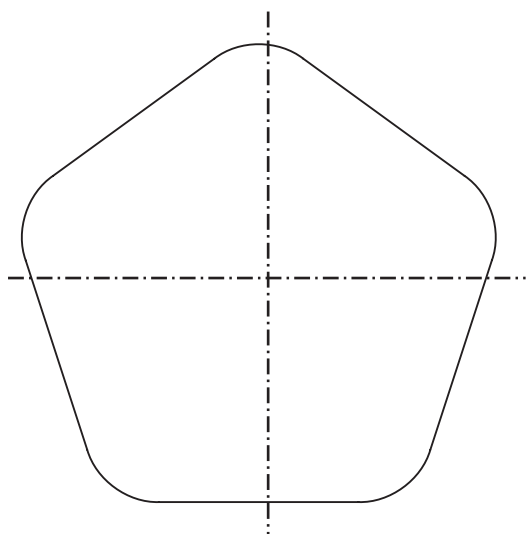
Radio
controllers

Hardwired
controllers

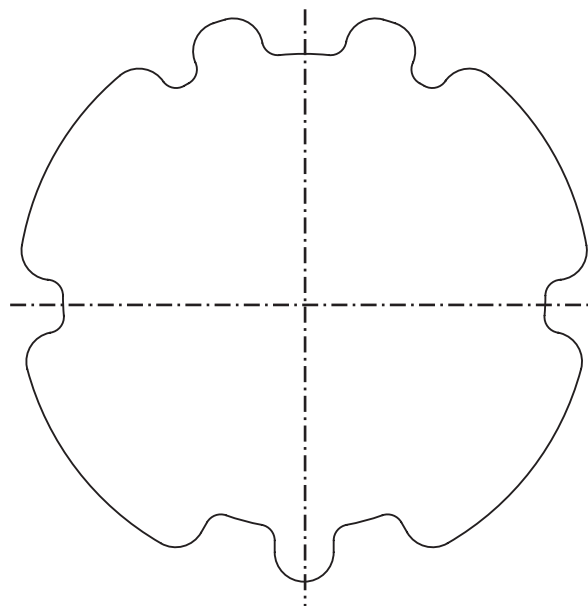
Electrical
Accessories

Adapter profiles

Profiles of the drive adapters (profiles tubes) in 1:1 scale

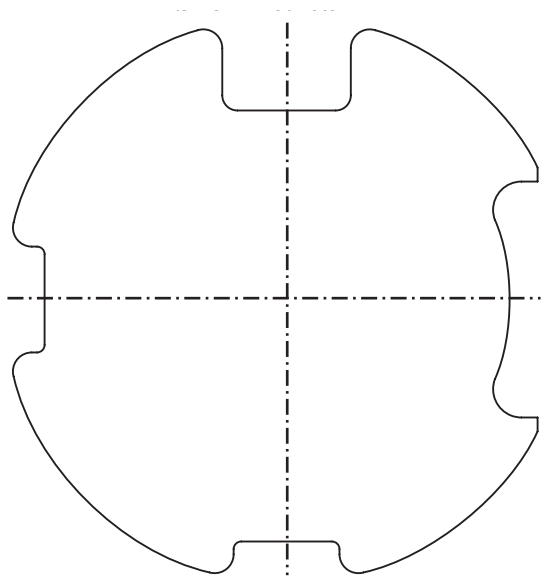


23 090.0001
78 mm Pentagonal, Meimo

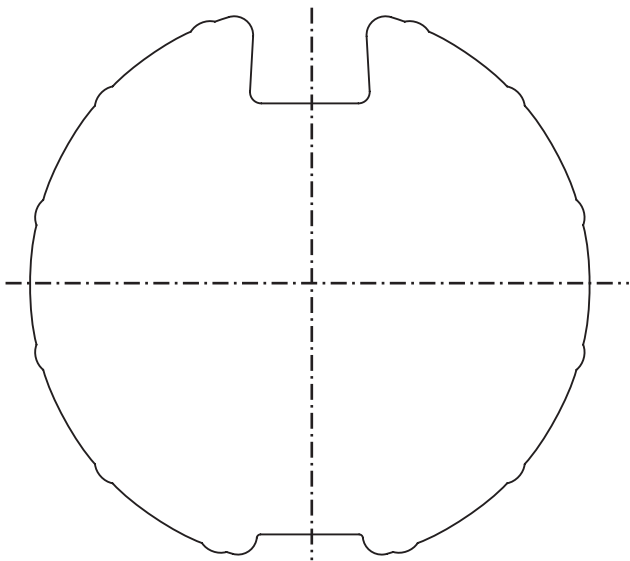


23 382.0001
Ø 80 mm Zurflüh-Feller

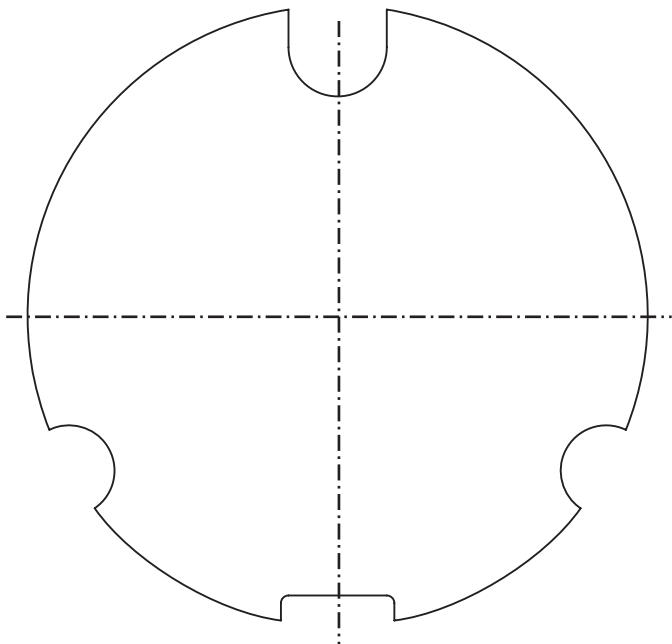
Profiles of the drive adapters (notch tubes) in 1:1 scale



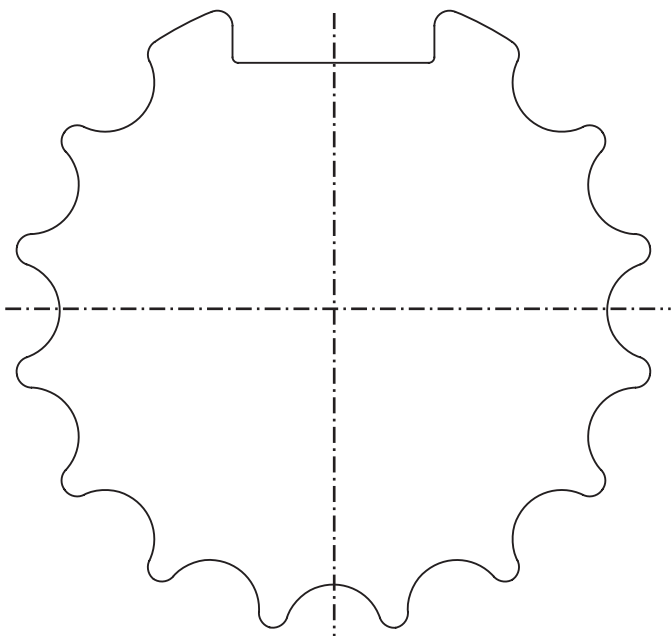
23 383.0001
Ø 78 x 1.0 mm, flat notch MHZ



23 070.0001
Ø 78 x 1/1.25 mm Round notch, Döhner, Röchling



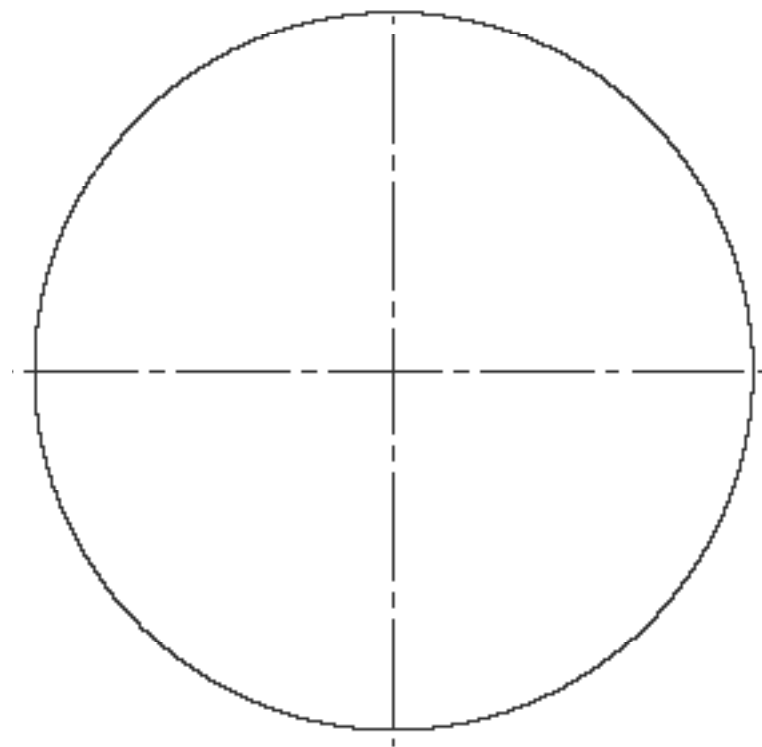
23 378.0001
Ø 85 x 1.0 mm



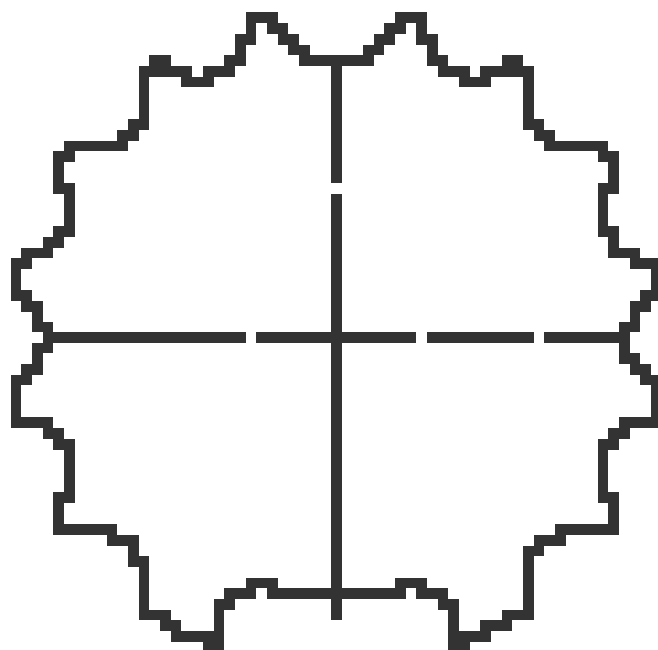
23 061.0001
Ø 90, Le-Profil
Ø 89, Deprat

Radio tubular drives
Hardwired tubular drives
Manual override tubular drives
Venetian blind drives
Speciality drives
Door drives
Mechanical accessories
DoorController
Radio controllers
Hardwired controllers
Electrical Accessories
Adapter profiles

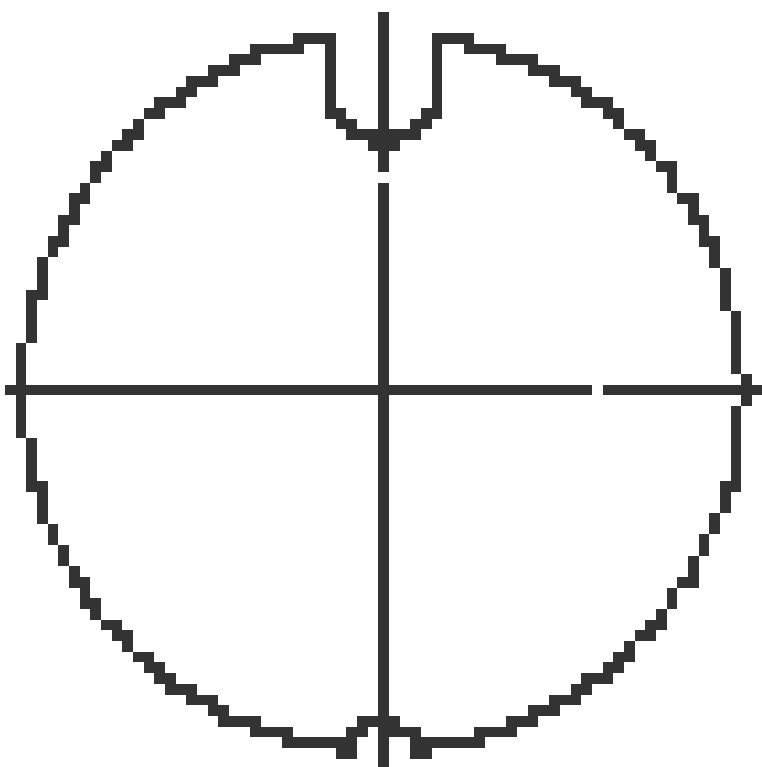
Profiles of the drive adapters (notch tubes) in 1:1 scale



13 114.7701
Ø 95 × 1.2 mm Schmitz
(limit switch crown only)

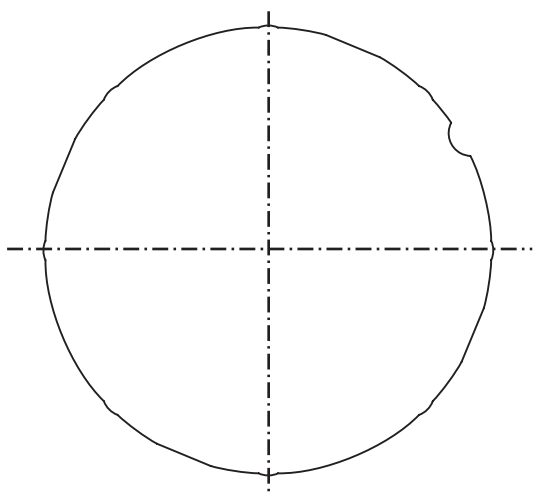


22 092.0001
90 mm MHZ

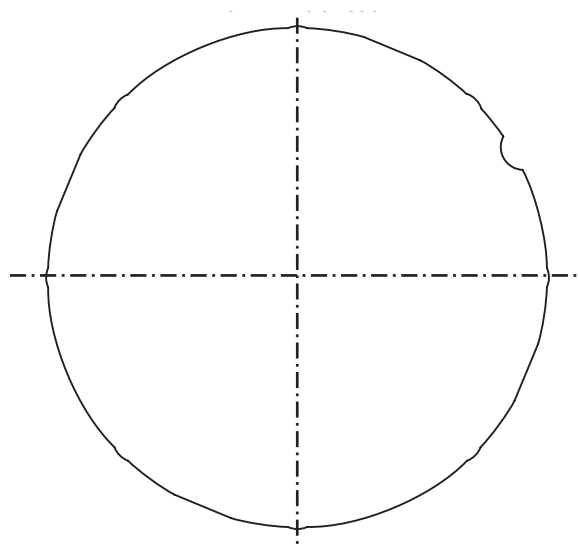


22 076.0001
Ø 100 × 2 mm Stobag, Meimo

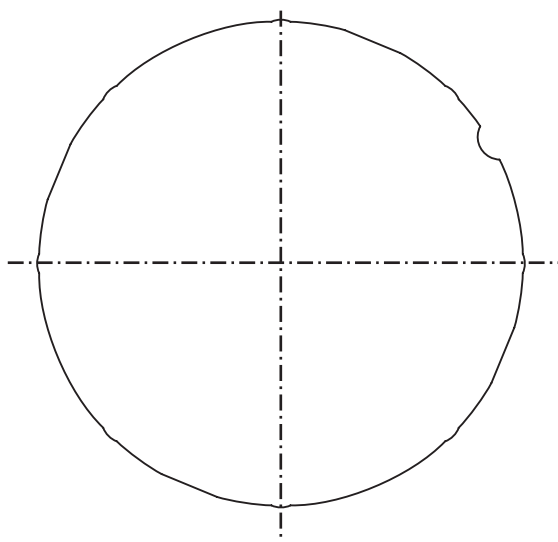
Profiles of the drive adapters (round tubes) in 1:1 scale



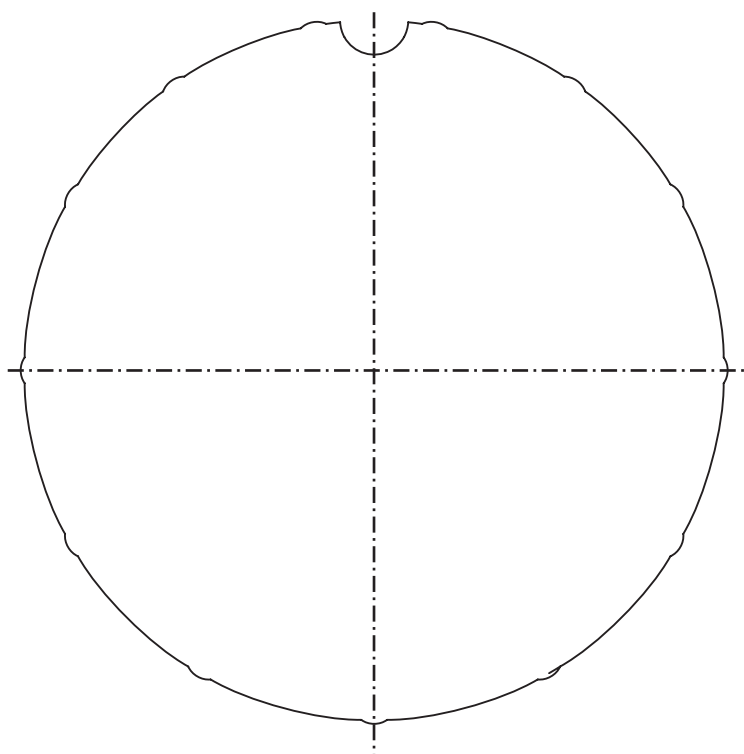
23 064.0001 / 23 064.0101
Ø 63 × 1.5 mm with 4 × M6 thread



23 067.0001 / 23 067.0101
Ø 70 × 1.5 mm with 4 × M6 thread



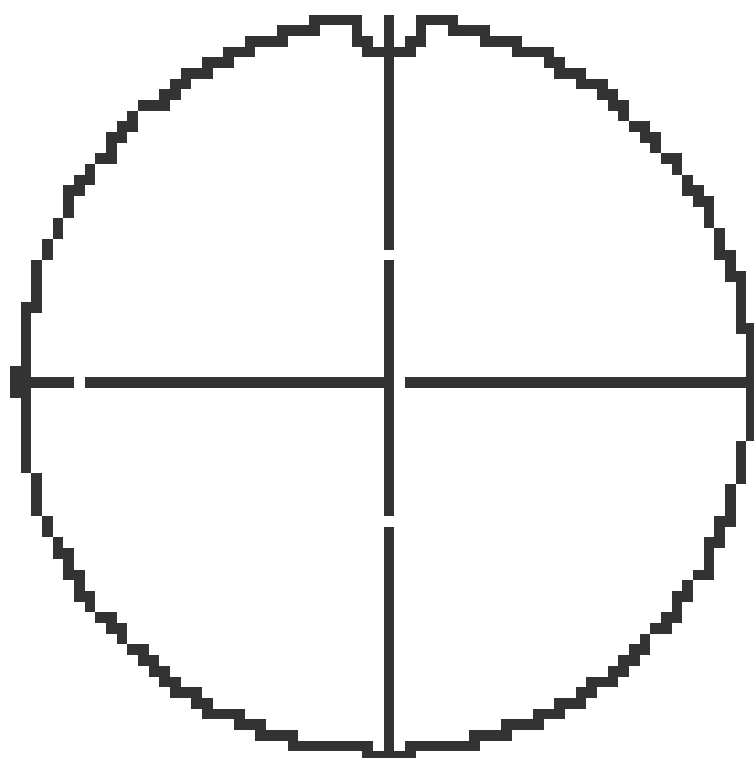
23 066.0001 / 23 066.0101
Ø 70 × 2.0 mm with 4 × M6 thread



23 063.0001 / 23 063.0101
Ø 98 × 2.0 mm; 100 × 3.0 mm; 101.6 × 3.6 mm with 4 × M6 thread

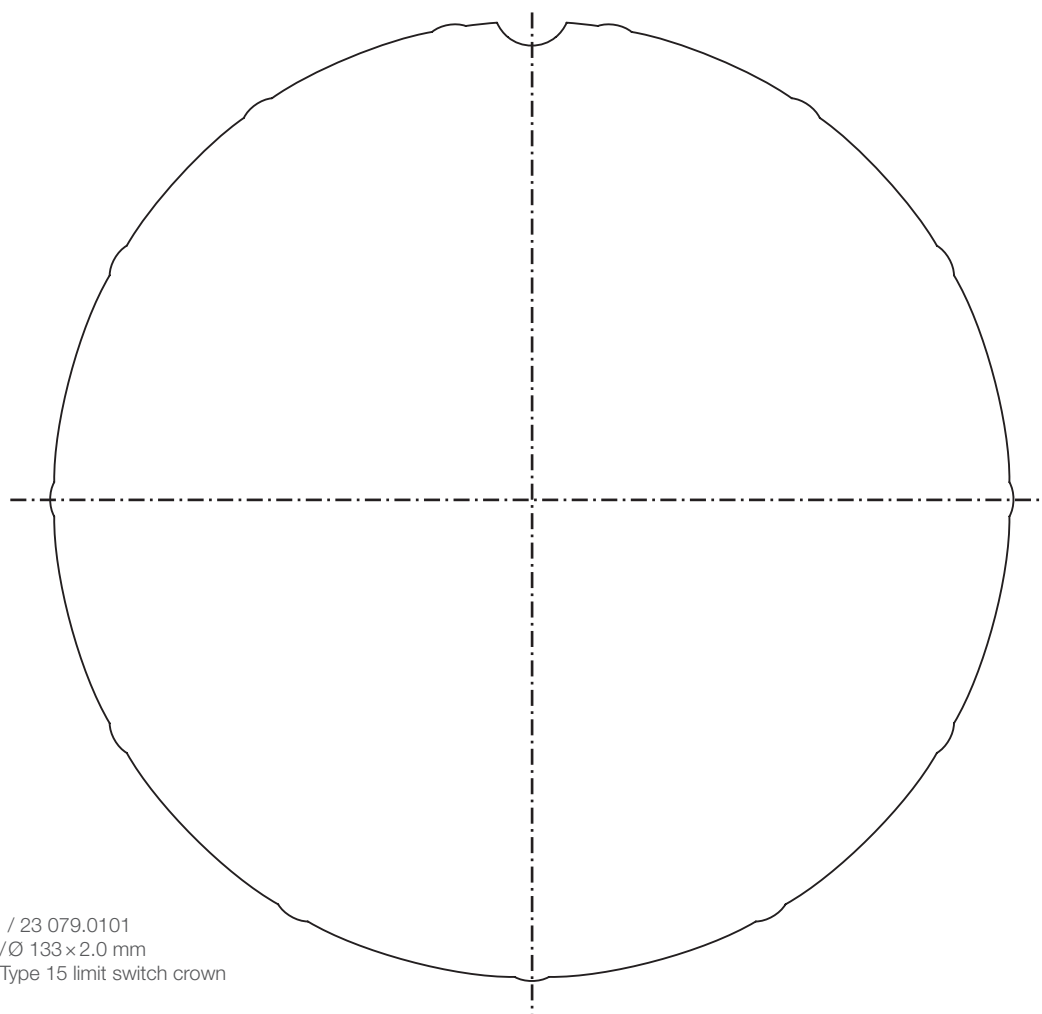
Radio tubular drives
Hardwired tubular drives
Manual override tubular drives
Venetian blind drives
Specialty drives
Door drives
Mechanical accessories
DoorController
Radio controllers
Hardwired controllers
Electrical Accessories
Adapter profiles

Profiles of the drive adapters (round tubes) in 1:1 scale

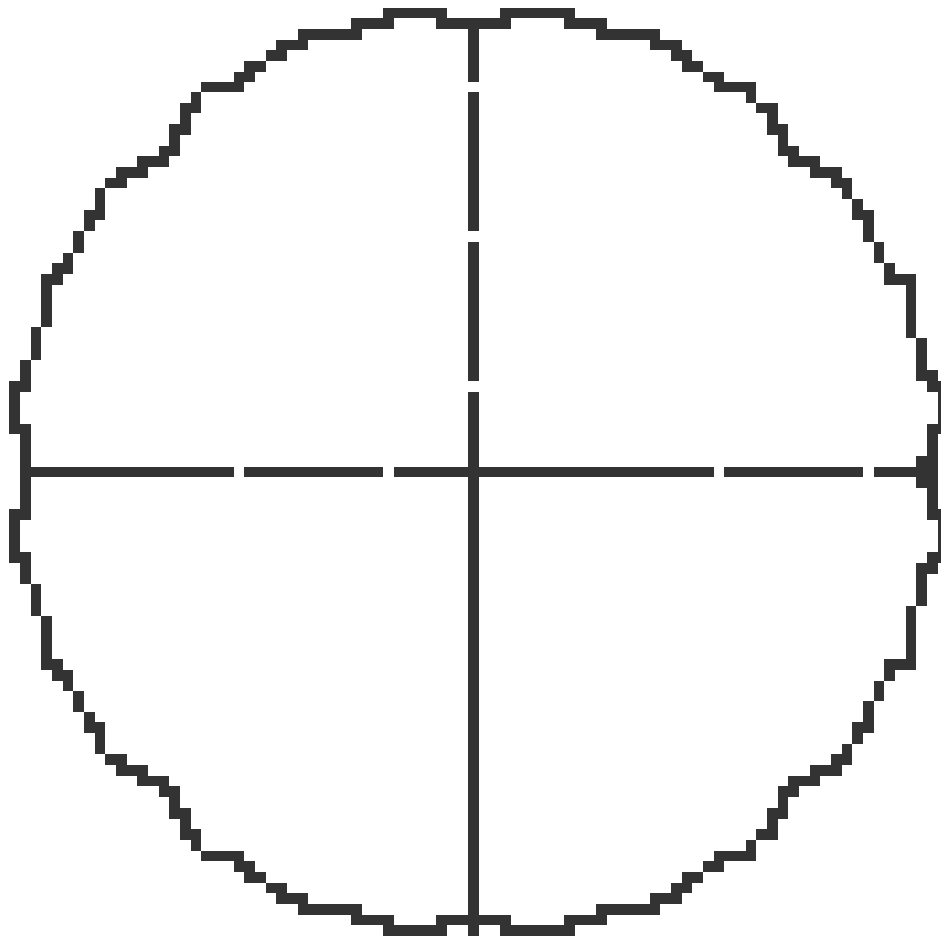


23 062.0001
Ø 102 × 2.0 mm

23 062.0101
Ø 102 × 2.0 mm with 4 × M6 thread

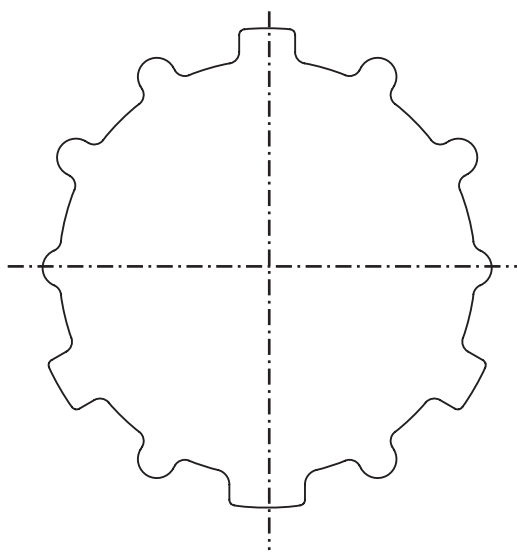


23 079.0001 / 23 079.0101
Ø 133 × 2.5 m / Ø 133 × 2.0 mm
with 4 × M6 thread plus Type 15 limit switch crown

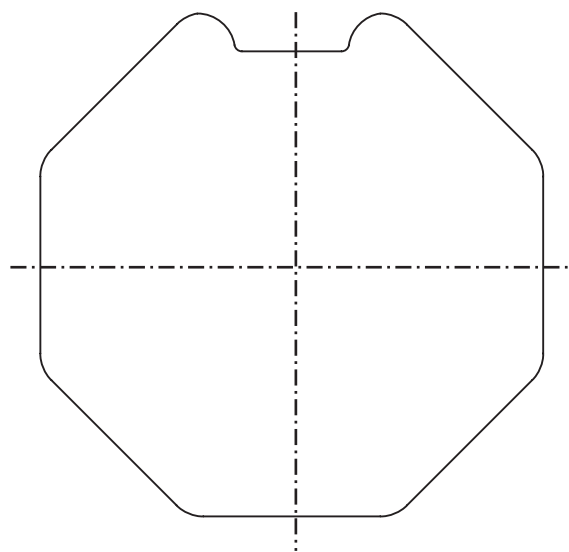


22 066.0001
Ø 135 x 2.5 mm

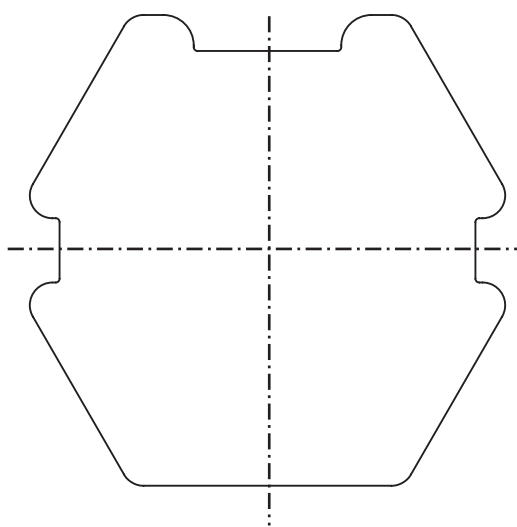
Profiles of the drive adapters (profile tubes) in 1:1 scale



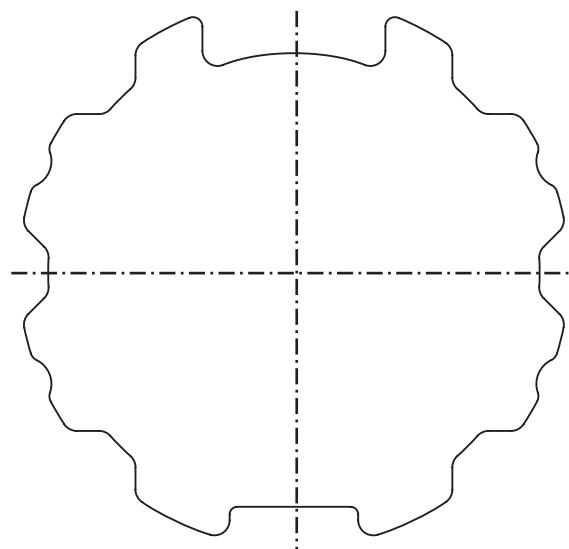
23 068.0001
Ø 67 × 1.5 mm MHZ



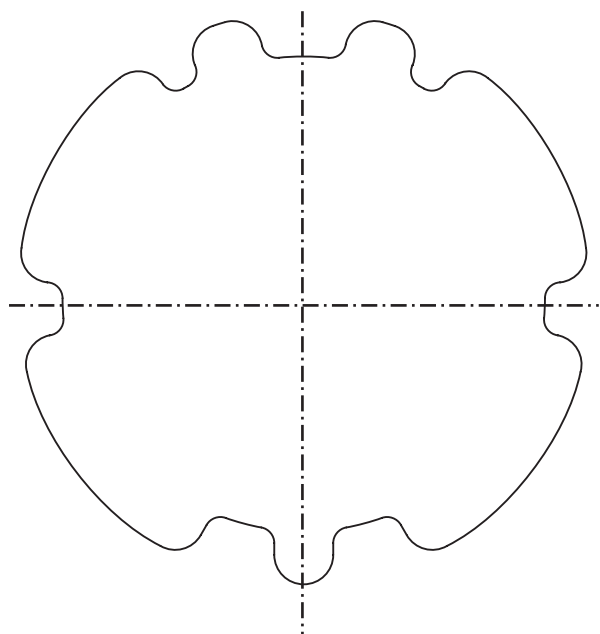
23 060.0001
octagonal 70 × 1.25 mm
Selve, Eckermann, Roma



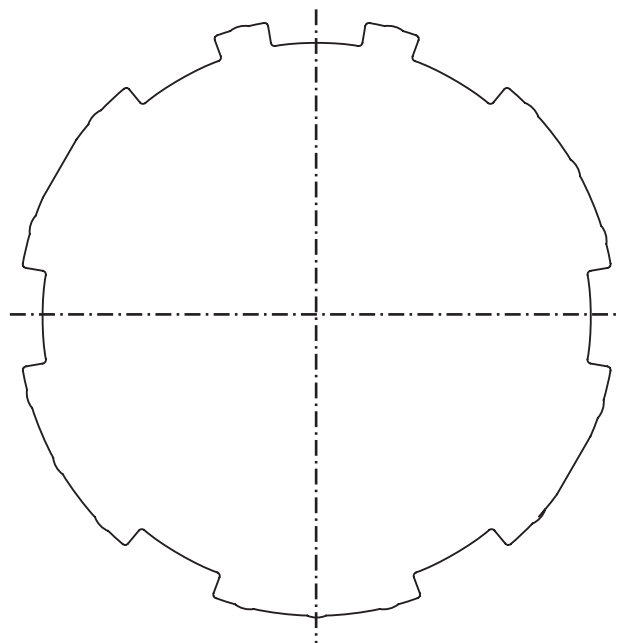
23 071.0001
hexagonal, Ø 75 mm Butzbach, Mäule



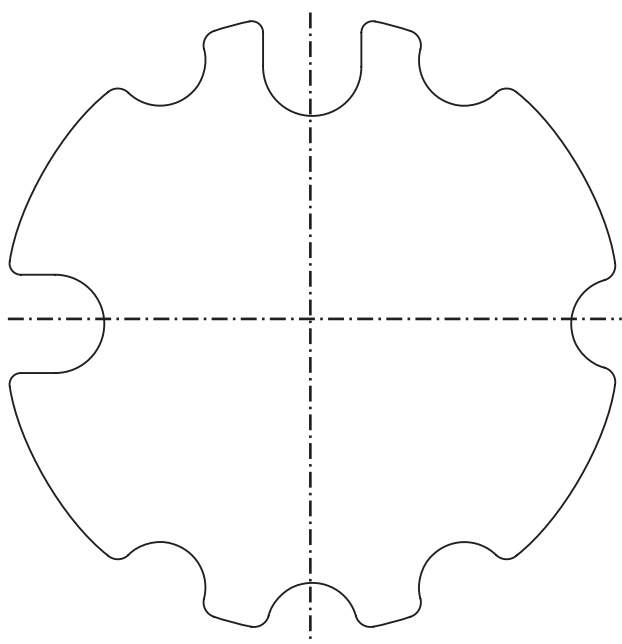
23 075.0001
Ø 76 × 1.2 mm Kittelberger, Wiral



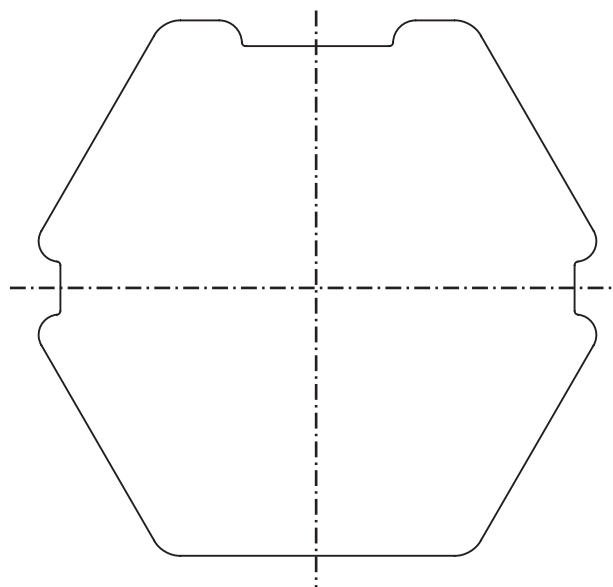
23 074.0001
Ø 80 mm Zurflüh-Feller



23 073.0001 / 23 073.0101
Ø 83 x 1.5 mm with 4 x M6 thread



23 077.0001
Ø 85 x 1.2 mm Imbac, Griesser



23 092.0001
hexagonal, Ø 85 mm Butzbach

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

DoorController

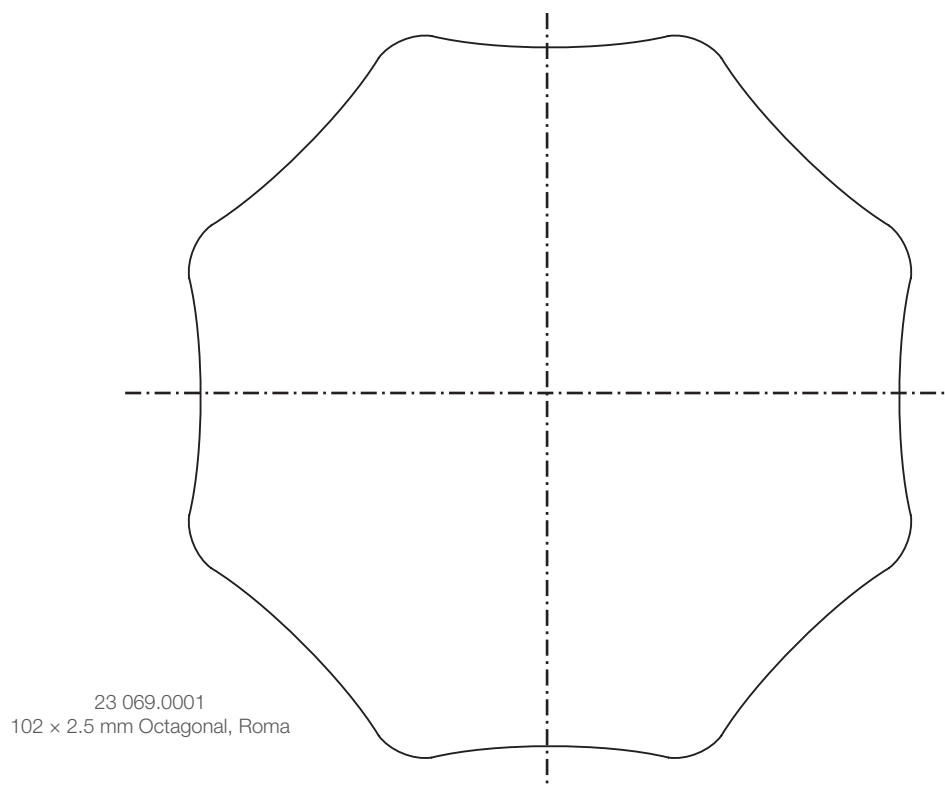
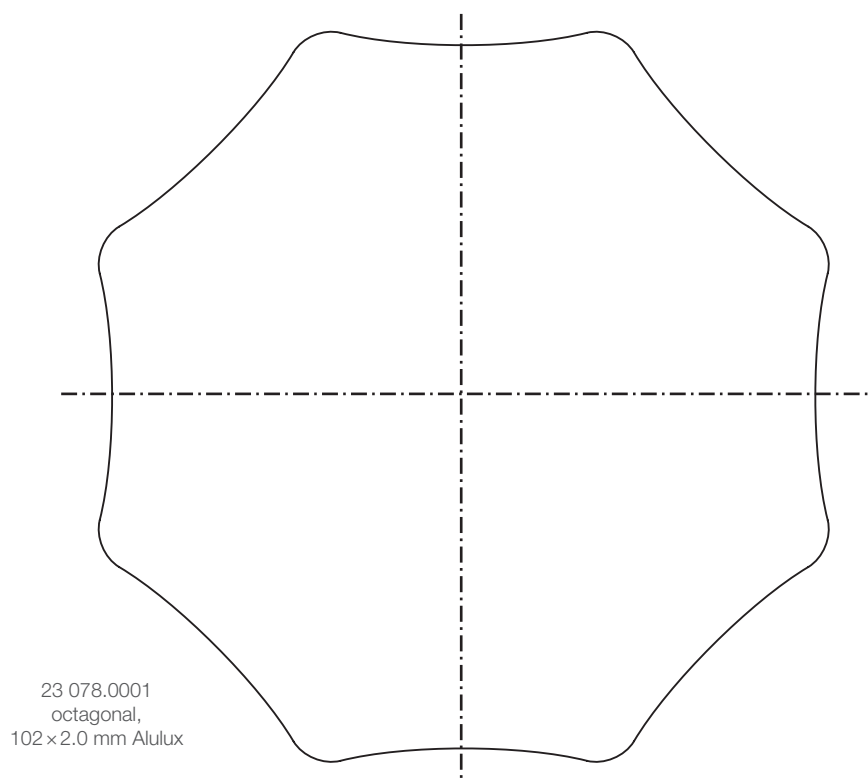
Radio
controllers

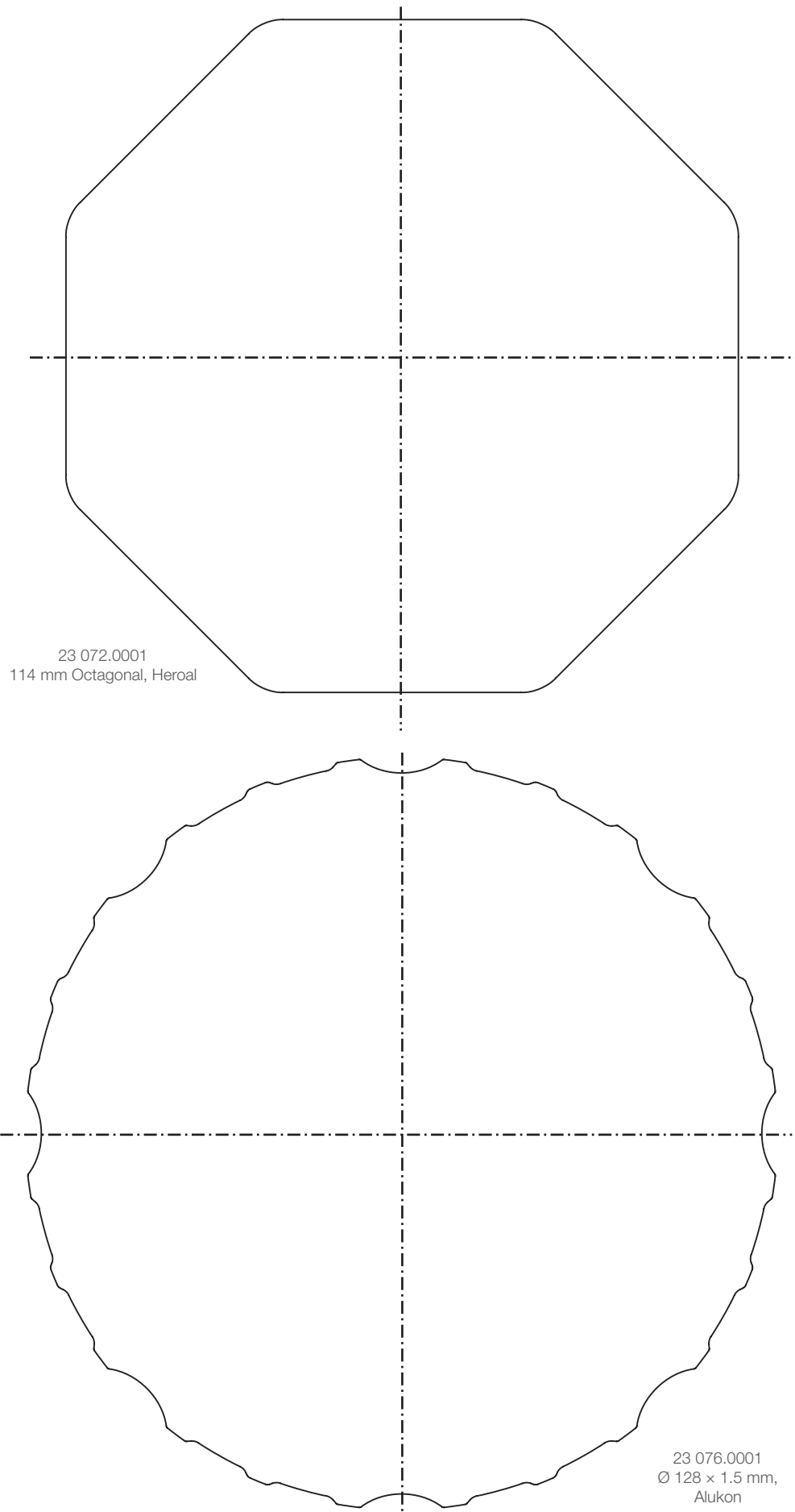
Hardwired
controllers

Electrical
Accessories

Adapter profiles

Profiles of the drive adapters (profile tubes) in 1:1 scale





Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

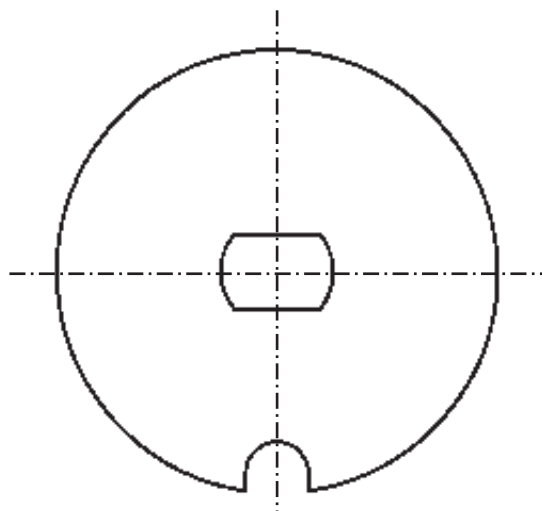
Radio
controllers

Hardwired
controllers

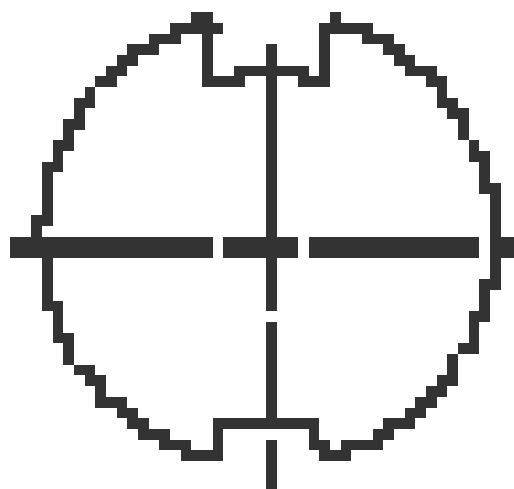
Electrical
Accessories

Adapter profiles

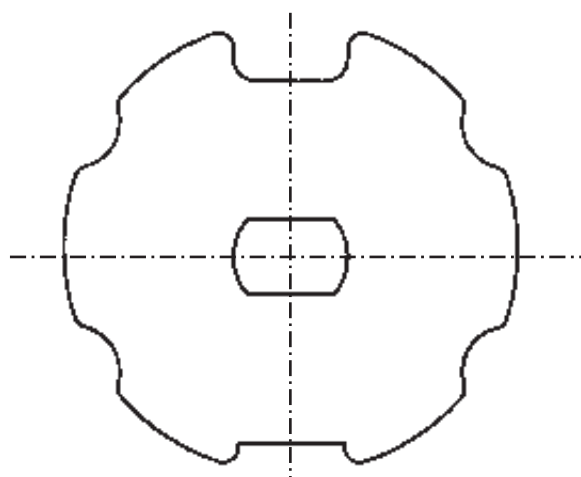
Profiles of the drive adapters (notch tubes) in 1:1 scale



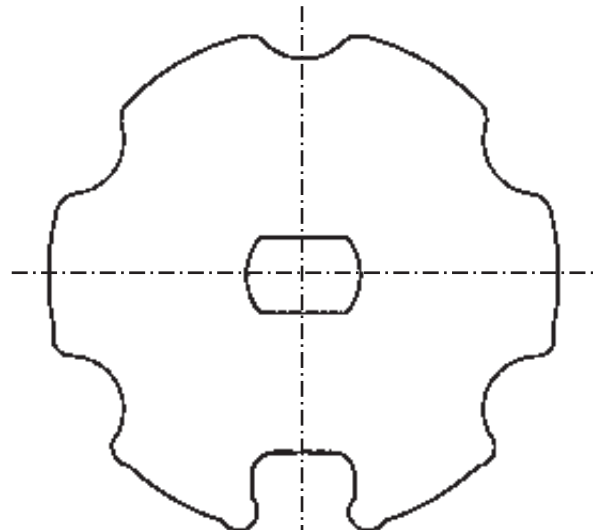
23 510.0001
Ø 62 × 1.5 mm



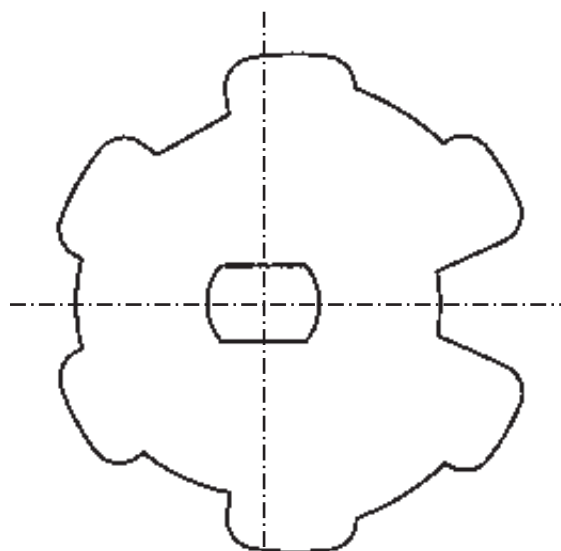
23 530.0001
Ø 63 × 1.0 mm (flat notch)



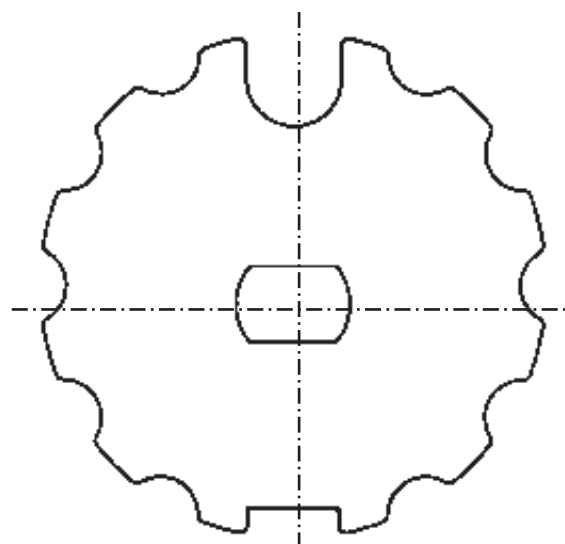
23 583.0001
Ø 63 × 1.0 mm



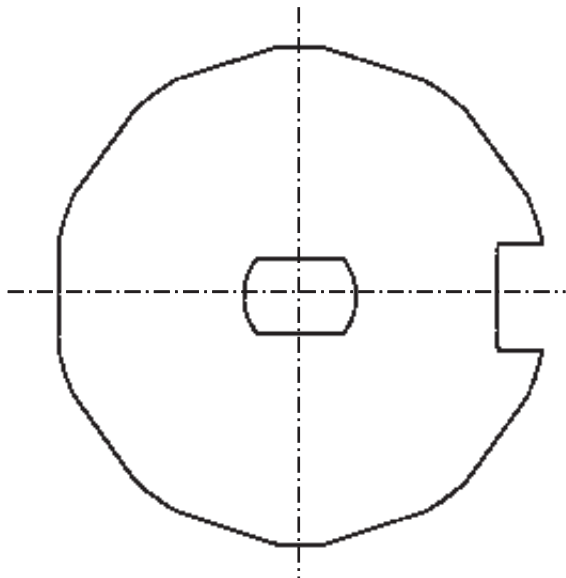
23 547.0001
Ø 70 mm (round notch)



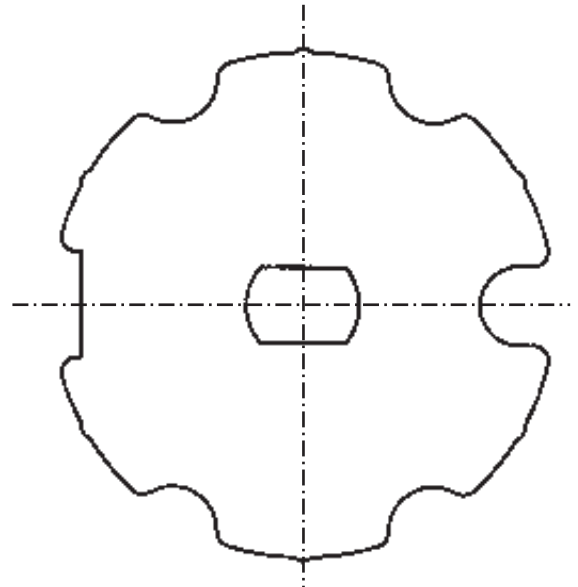
23 559.0001
Ø 70 mm



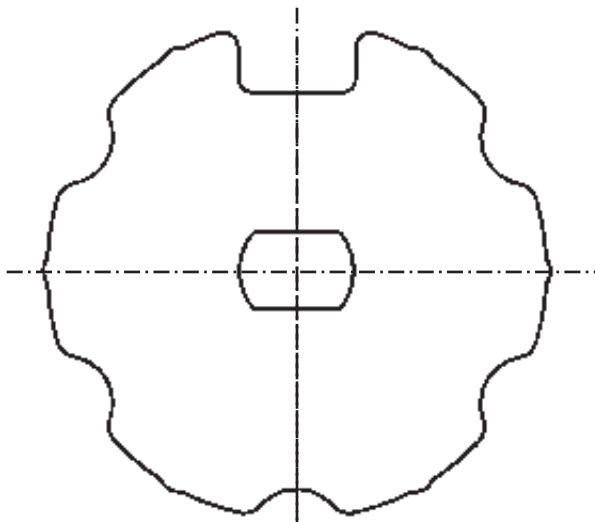
23 563.0001
Ø 70 mm Imbac, Ahlquist



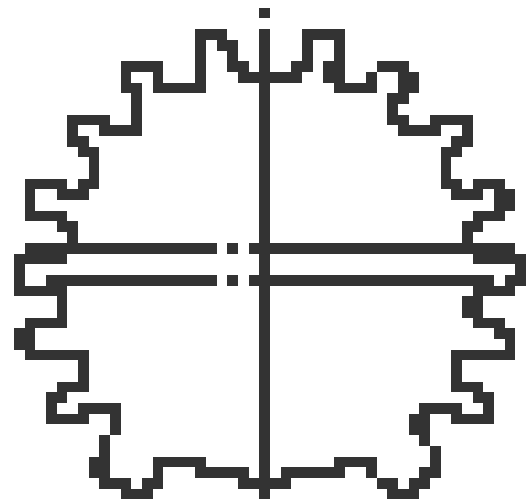
23 581.0002
Ø 70 x 0.7 mm Decagonal, Perma



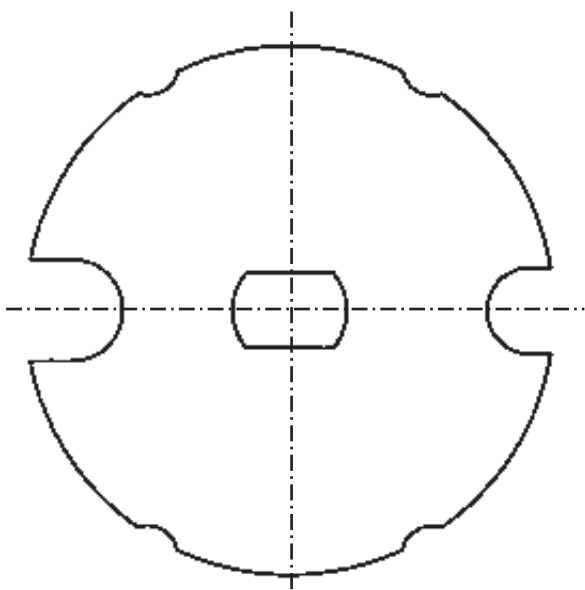
23 641.0001
Ø 70 mm Griesser



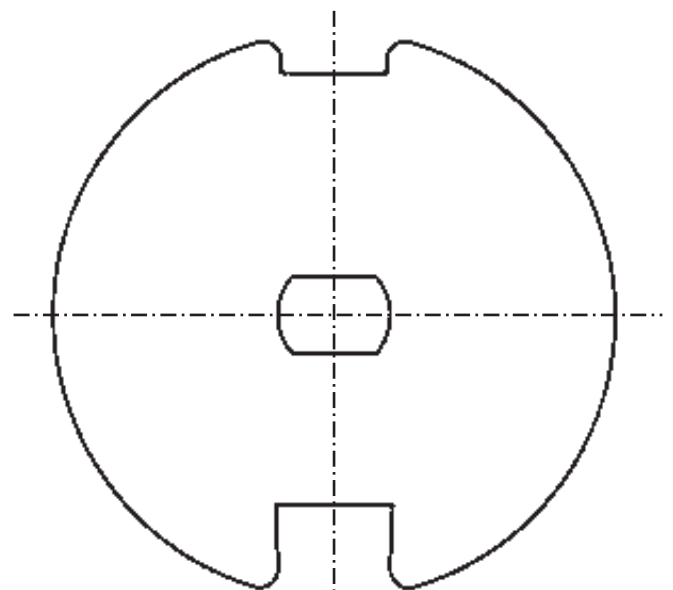
23 700.0001
Ø 70 mm Welser



23 346.0001
Ø 70 x 1.0 mm (wide notch), MHZ



23 560.0001
Ø 74 mm



23 580.0001
Ø 78 x 1.0 mm / Ø 78 x 1.25 mm

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

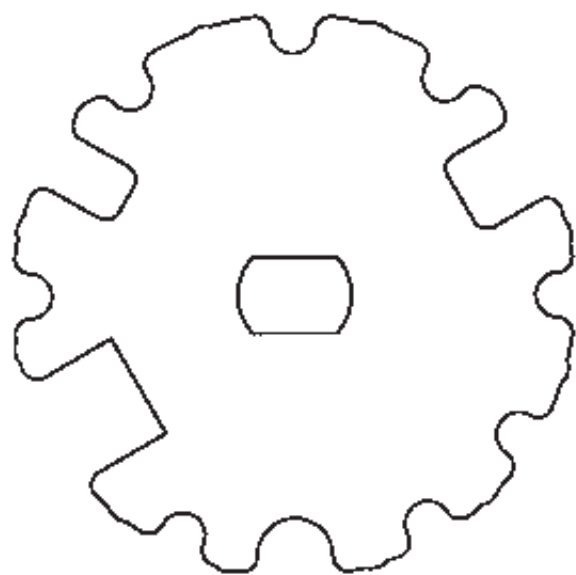
Radio
controllers

Hardwired
controllers

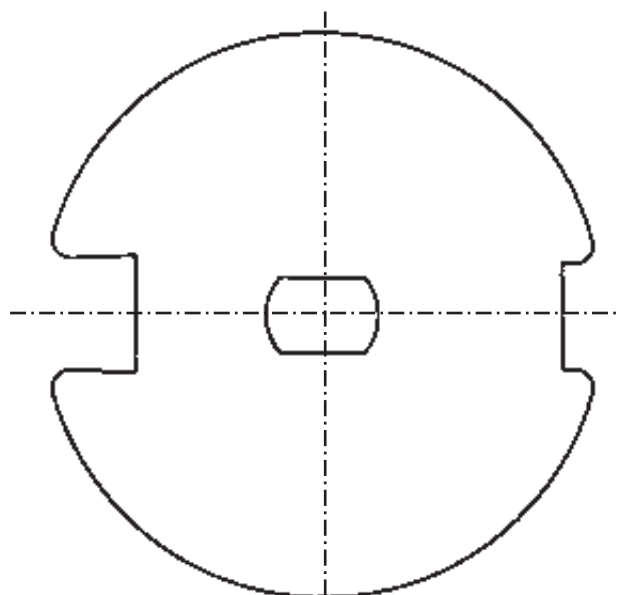
Electrical
Accessories

Adapter profiles

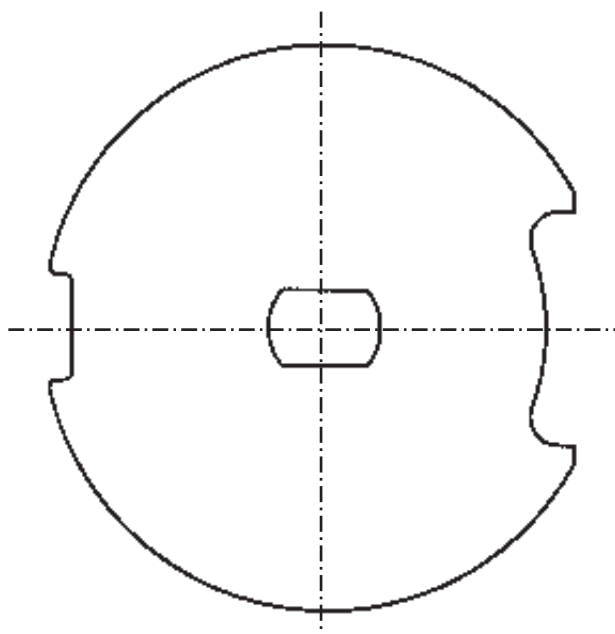
Profiles of the drive adapters (notch tubes) in 1:1 scale



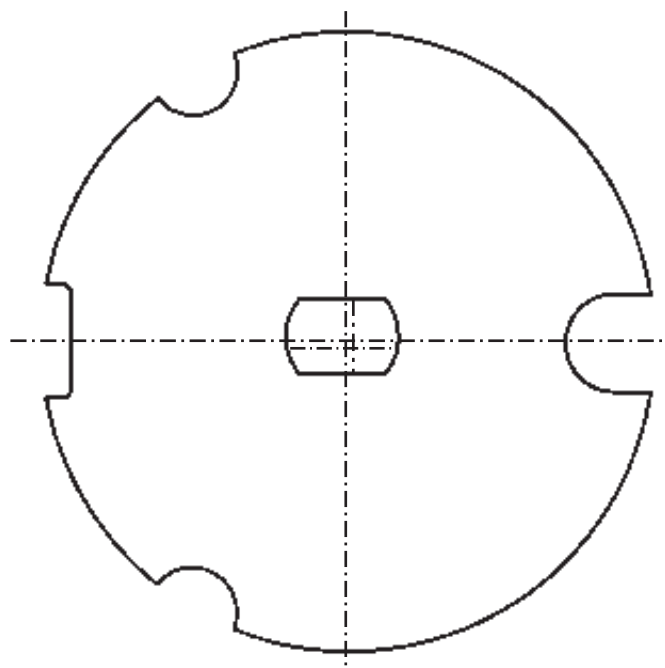
23 538.0001
Ø 78 × 1.0 mm Döhner



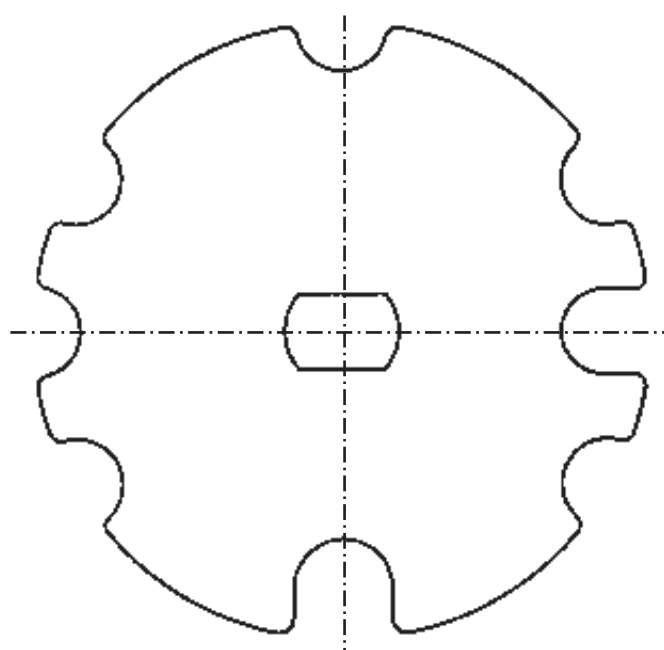
23 540.0001
Ø 78 × 1.0 mm, Crown 23.0 mm wide



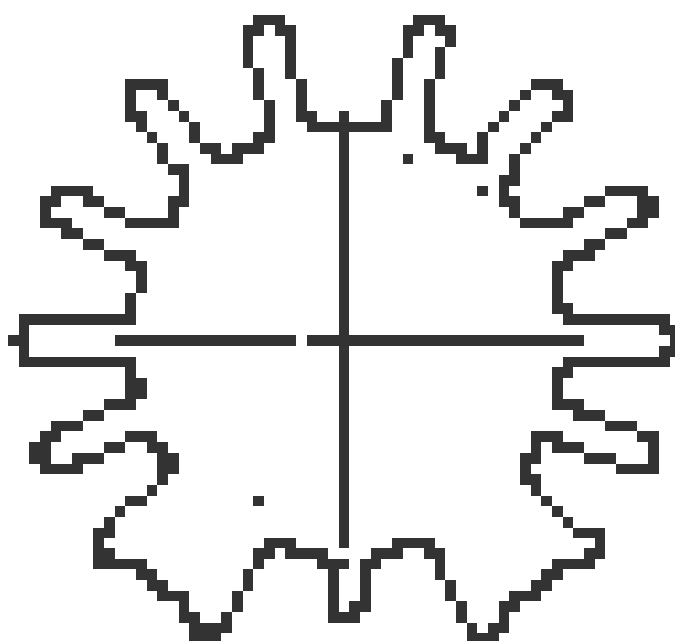
23 600.0001
Ø 78 × 1.0 mm MHZ



23 681.0001
Ø 85 mm

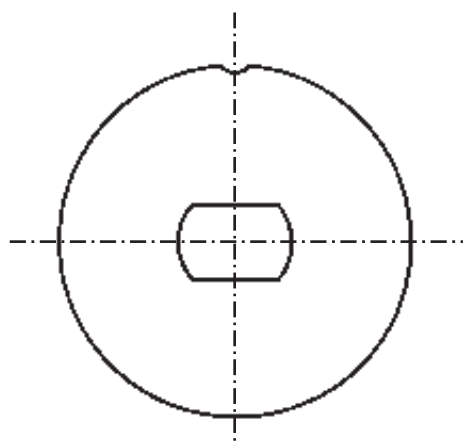


23 643.0001
Ø 85 x 1.0 mm Griesser

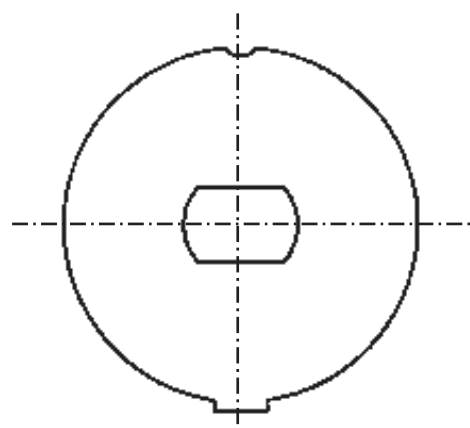


23 360.0001
Ø 90.5 x 1.25 mm (wide notch), MHZ

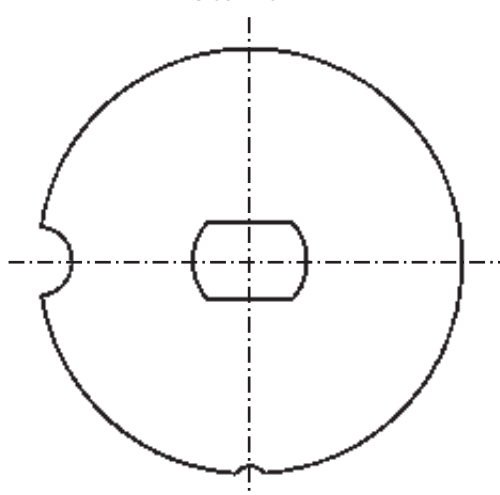
Profiles of the drive adapters (round tubes) in 1:1 scale



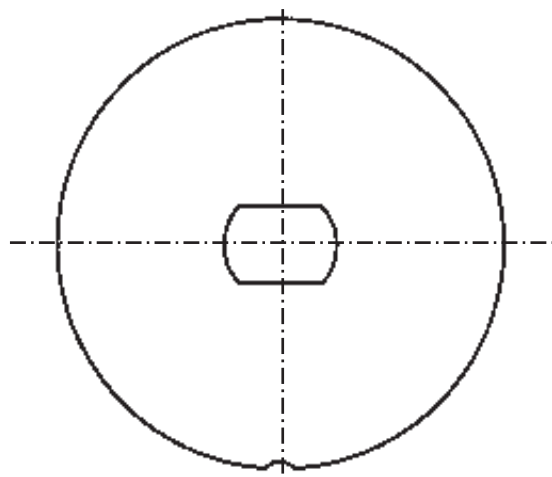
13 105.5701
Ø 50 x 1.5 mm



13 110.7401
50 x 1.5 mm Siral



23 578.0002
Ø 60 x 2.0 mm; Ø 60 x 1.5 mm



23 585.0001
Ø 63 x 1.5 mm

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Specialty
drives

Door drives

Mechanical
accessories

DoorController

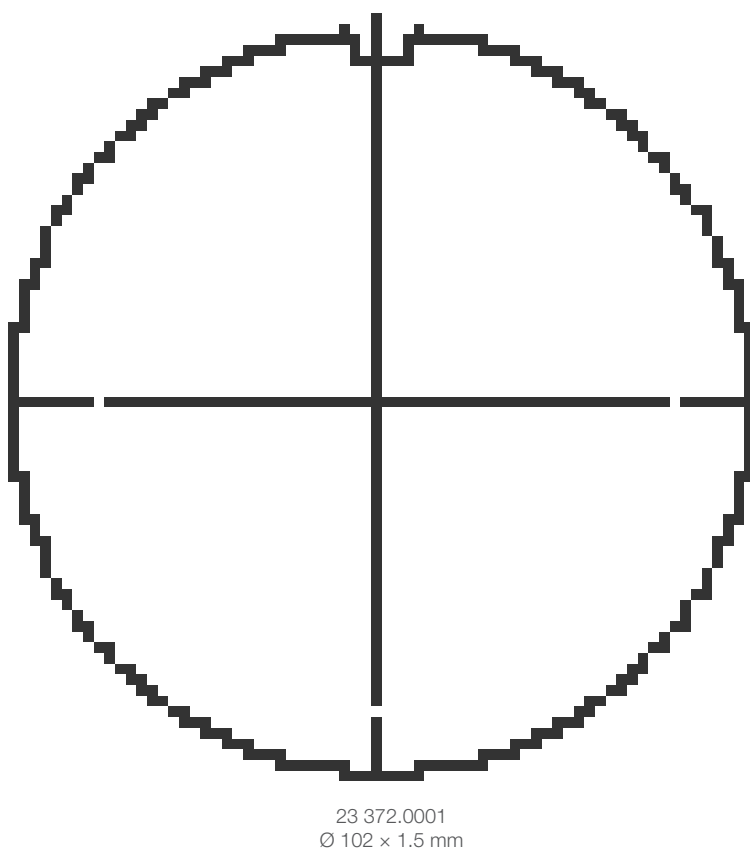
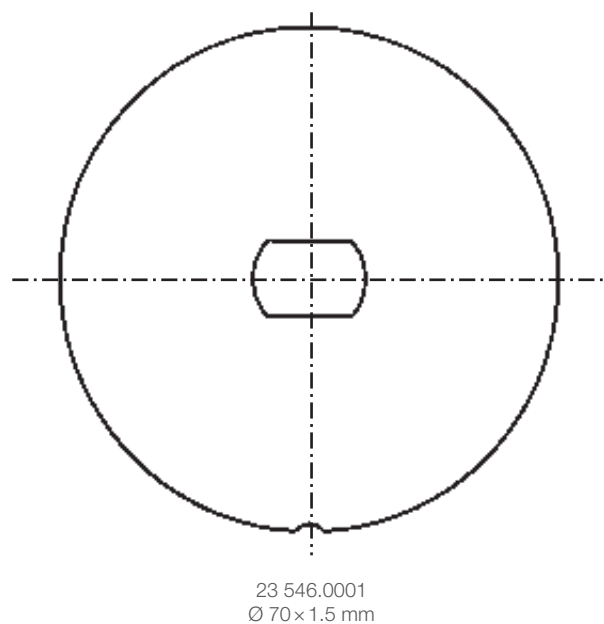
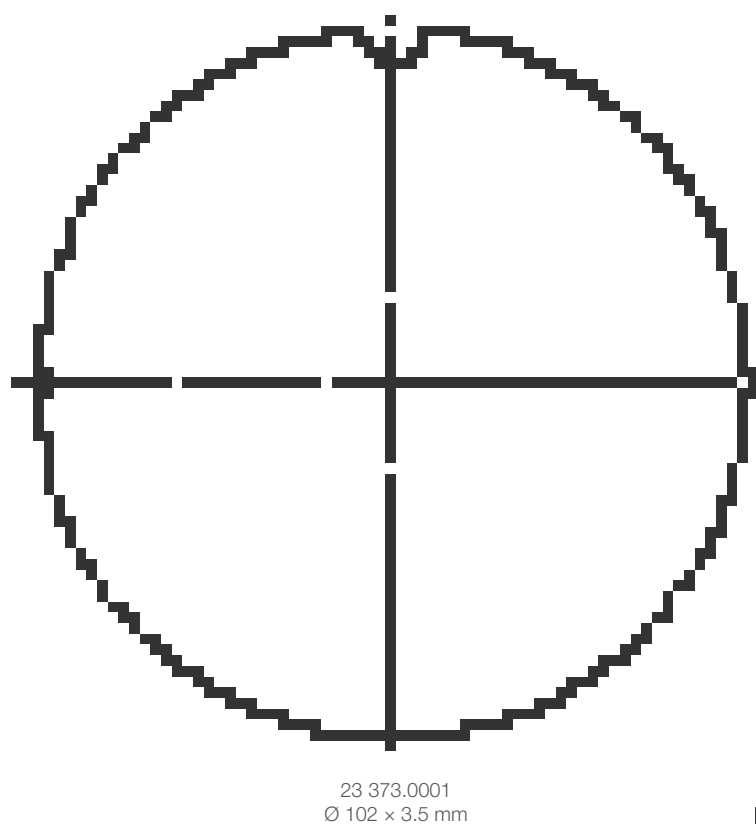
Radio
controllers

Hardwired
controllers

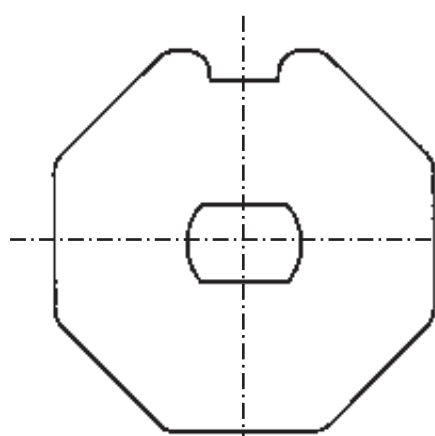
Electrical
Accessories

Adapter profiles

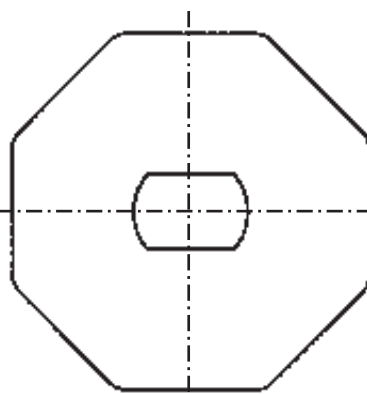
Profiles of the drive adapters (round tubes) in 1:1 scale



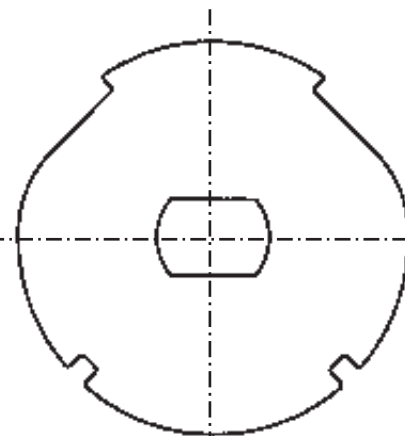
Profiles of the drive adapters (profile tubes) in 1:1 scale



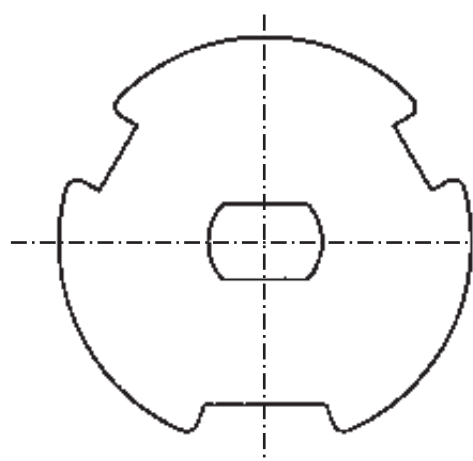
23 301.0001
50 x 0.8 mm Octagonal, Selve



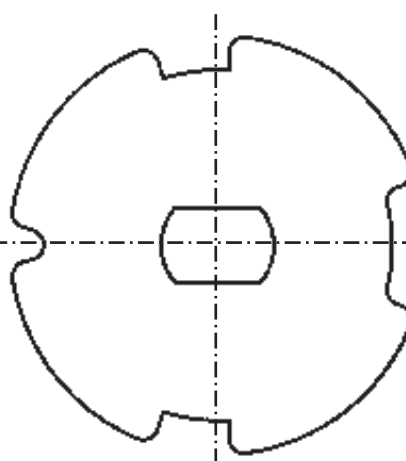
23 873.0001
50 x 1.5 mm octagonal, Rau



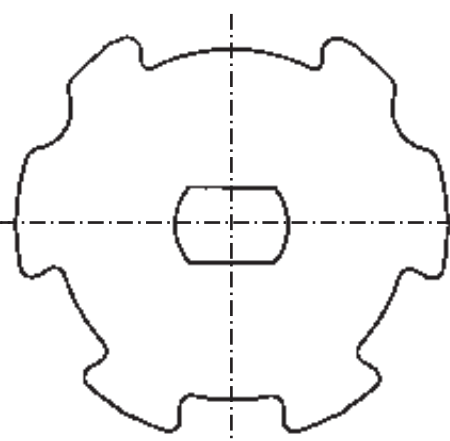
23 586.0001
Ø 55 mm, elero profile tube



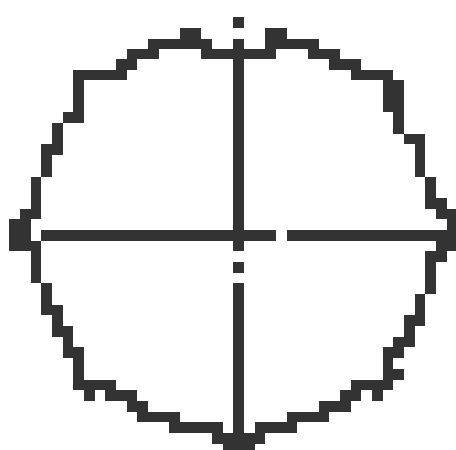
23 870.0002
Ø 57 mm, Alu, Ates, MHZ



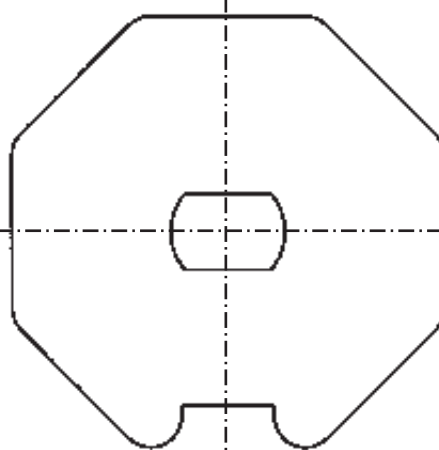
23 834.0001
Ø 58 mm Thermo Perco



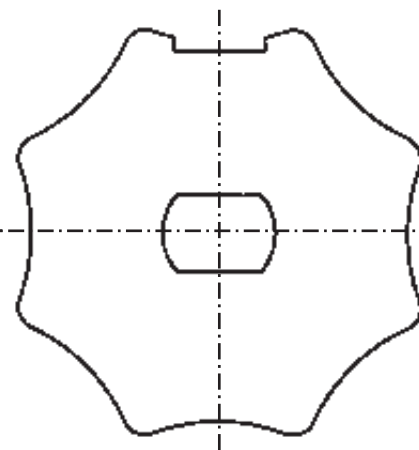
23 874.0001
Ø 60 mm, Alu-Plastik, Kittelberger



23 333.0001
Ø 60 mm AXE, Griesser, Hüppe, Carros



23 555.0001
60 mm, octagonal
Döhner, Selve, Eckermann, Heinzmann

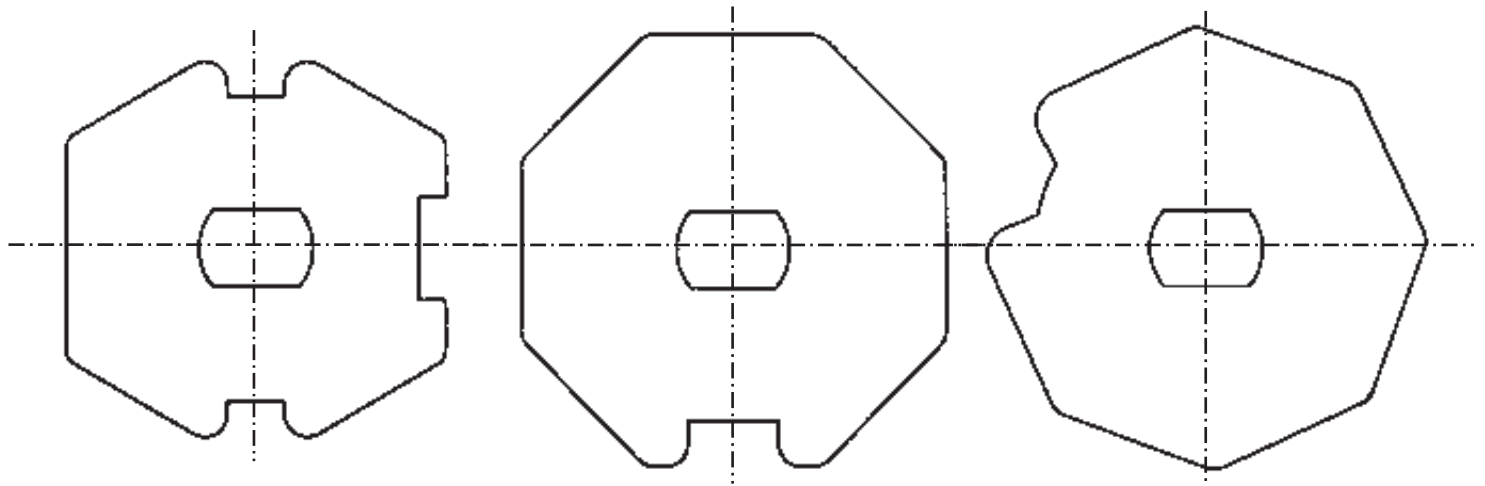


23 906.0001
Ø 60 mm, octagonal Bonfante

Radio tubular drives
Hardwired tubular drives
Manual override tubular drives
Venetian blind drives
Speciality drives
Door drives
Mechanical accessories
DoorController
Radio controllers
Hardwired controllers
Electrical Accessories
Adapter profiles

Profiles of the drive adapters for Type 9 MO

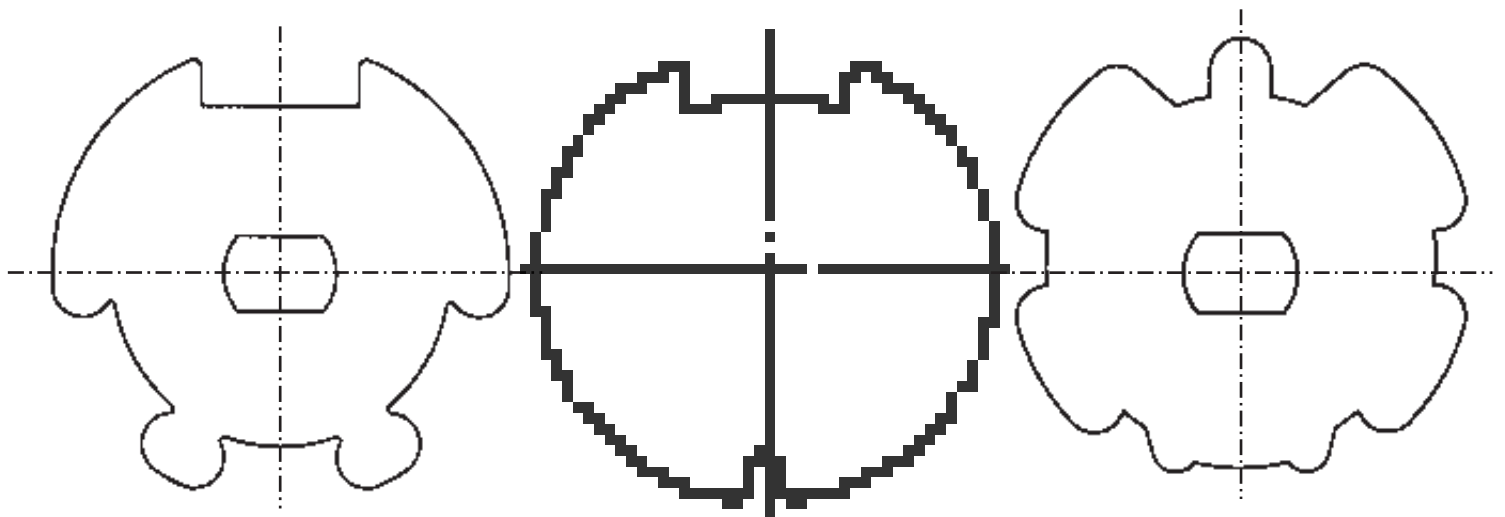
Profiles of the drive adapters (profile tubes) in 1:1 scale



23 554.0001
60 mm, hexagonal Butzbach, Mäule

23 534.0001
60 mm, octagonal Imbac

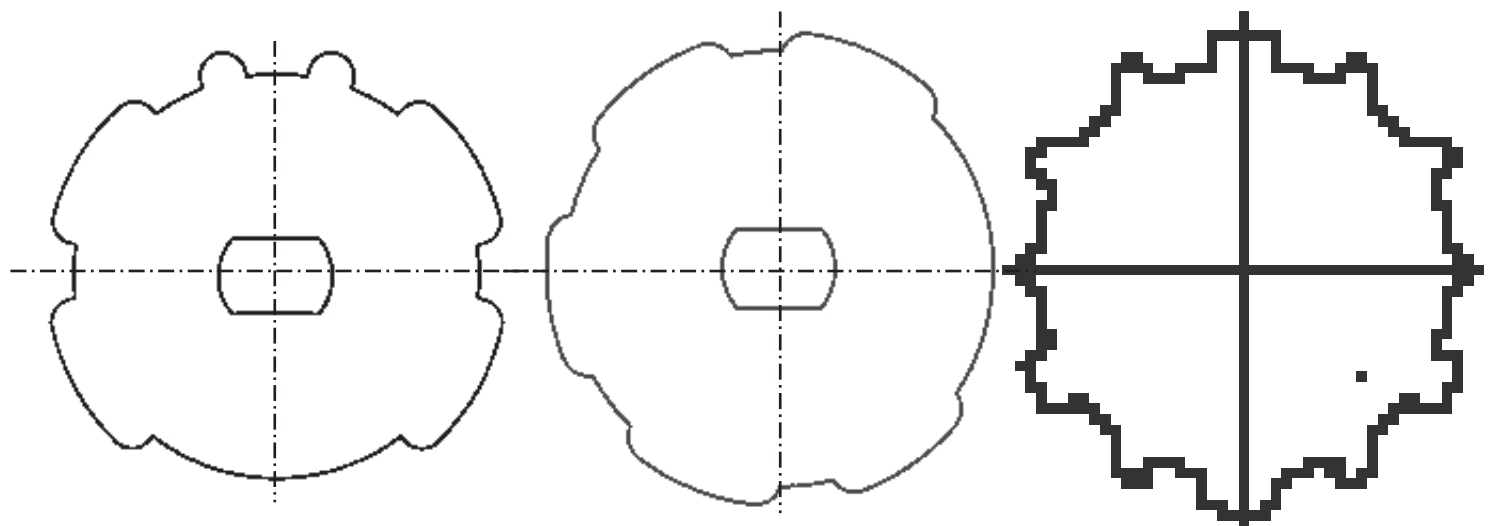
23 557.0001
60 mm, octagonal Martin



23 562.0001
Ø 62 mm Le Profil, Krülland

23 945.0001
Ø 62 x 0.6 mm Deprat F2000

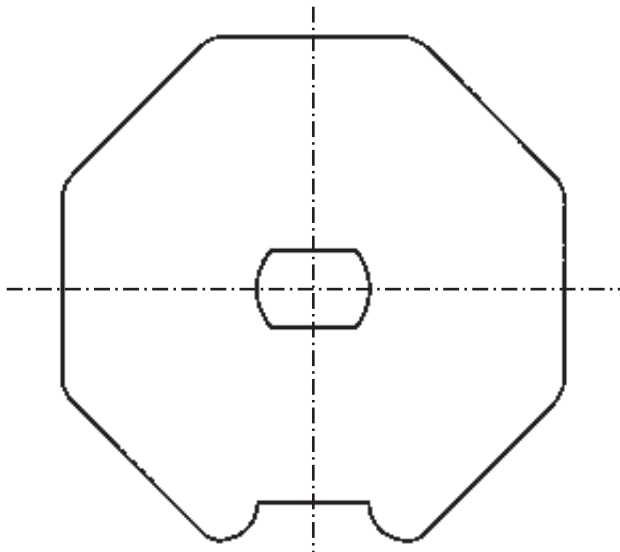
23 558.0001
Ø 64 mm Zurflüh-Feller



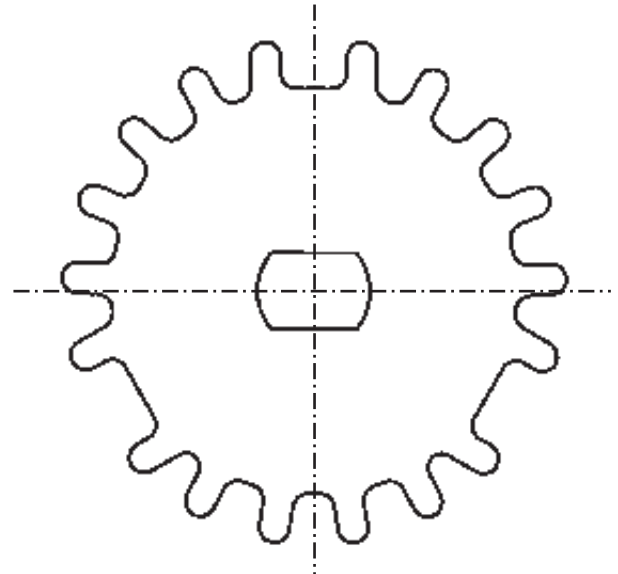
23 522.0001
Ø 65 mm Hoos

23 556.0001
Ø 65 mm Imbac, Metallpress, Eckermann

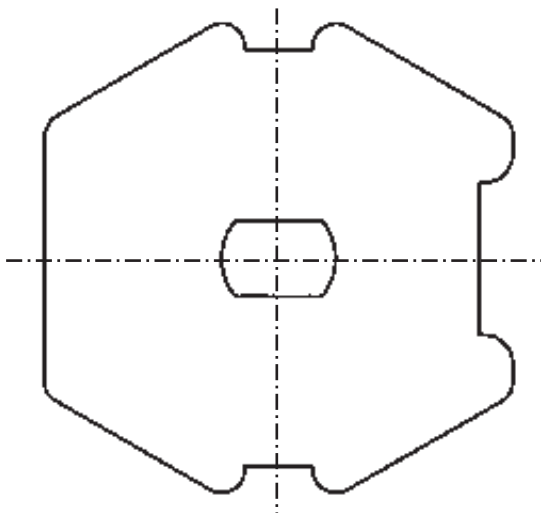
23 359.0001
Ø 67 x 1.5 MHz



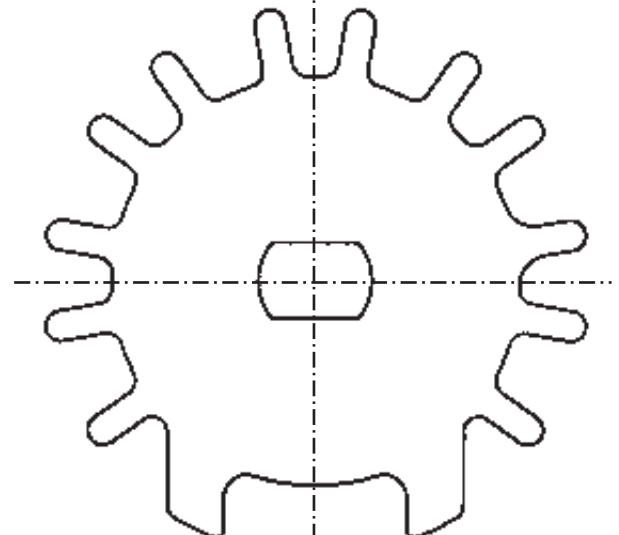
23 529.0001
70 × 1.0 mm, octagonal Selve, Eckermann



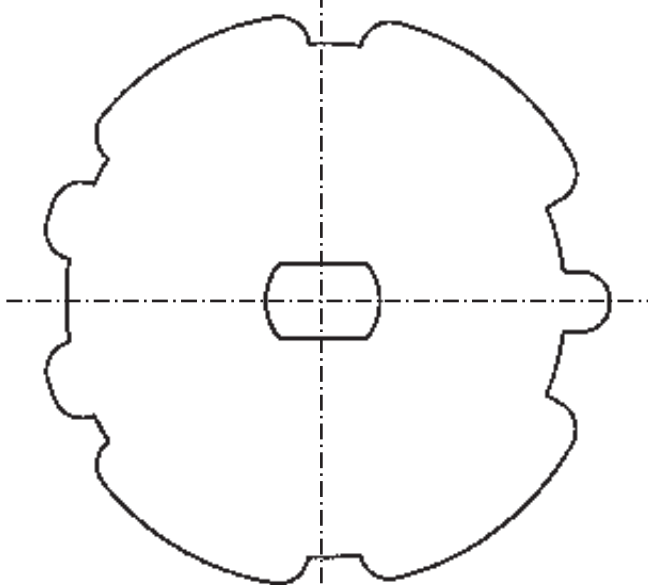
23 320.0001
Ø 71 × 1.5 mm



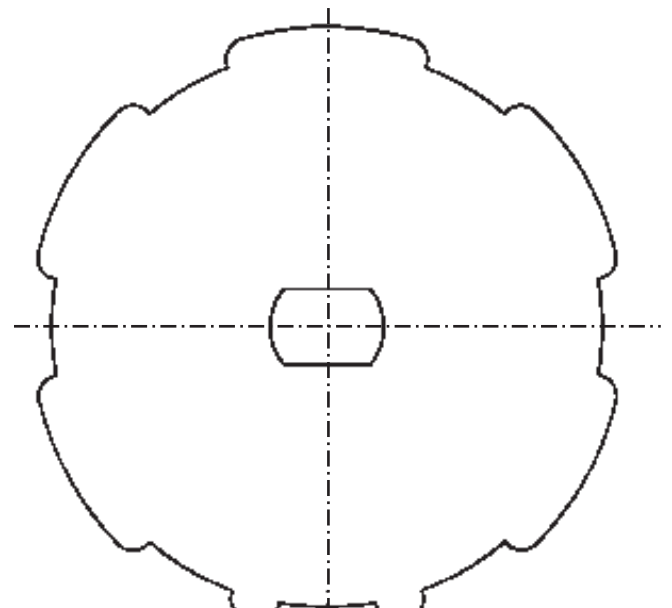
23 548.0001
75 × 1.5 mm Hexagonal, Butzbach, Mäule



23 336.0001
Ø 76 × 1.2 mm Kittelberger



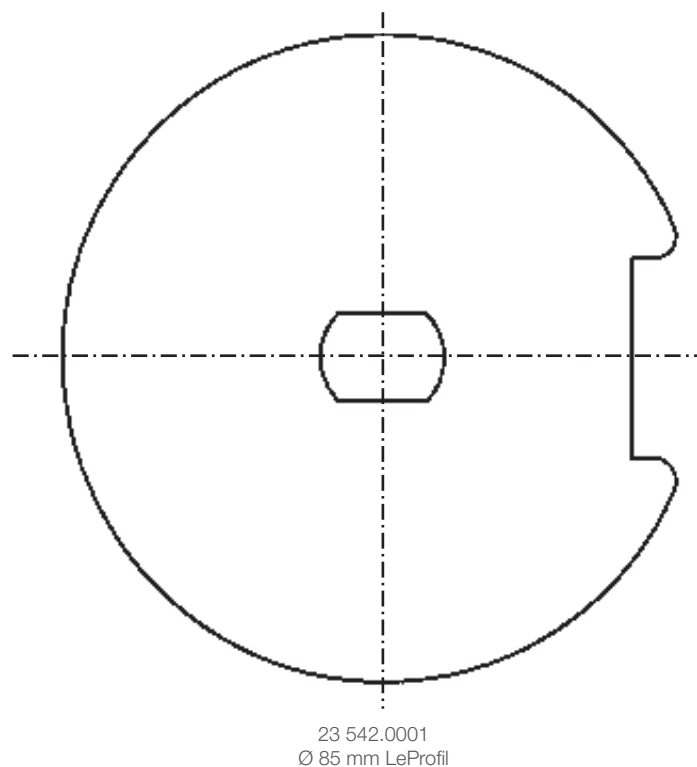
23 528.0001
Ø 80 mm Zurflüh-Feller



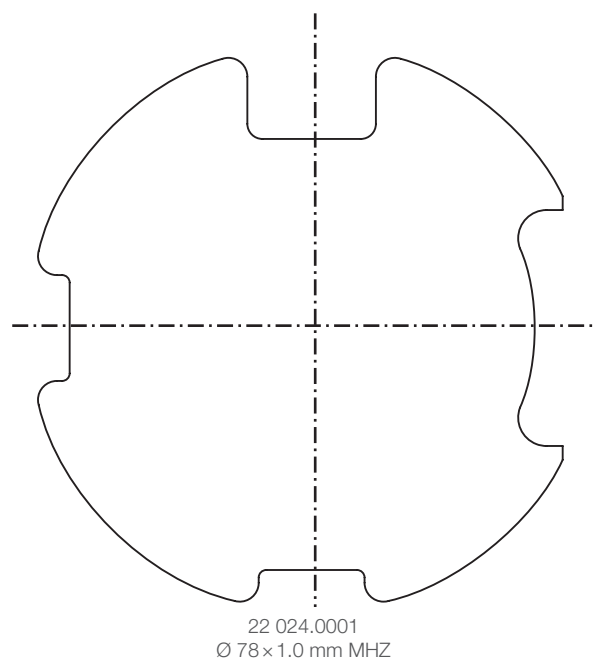
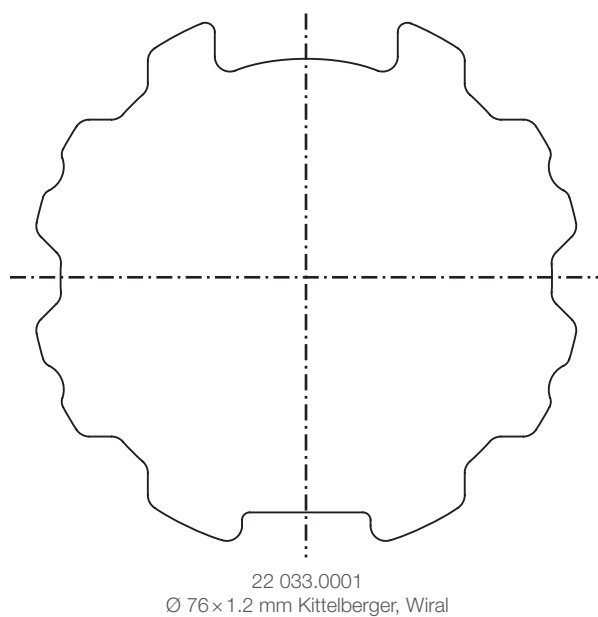
23 622.0001
Ø 83 × 1.5 mm

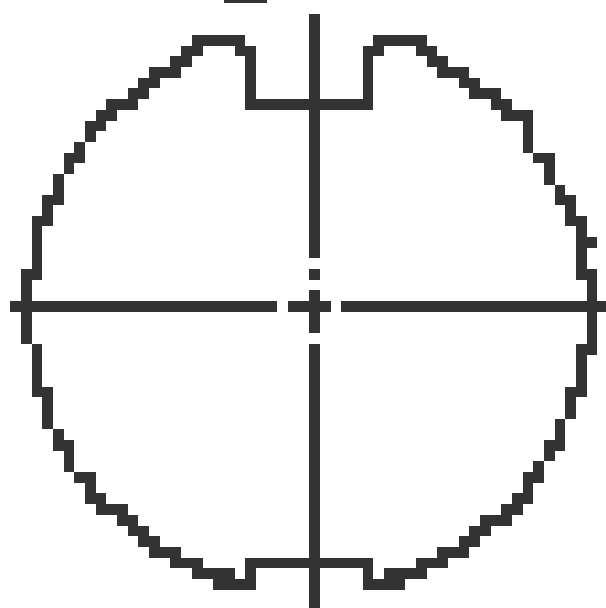
Radio tubular drives
Hardwired tubular drives
Manual override tubular drives
Venetian blind drives
Speciality drives
Door drives
Mechanical accessories
DoorController
Radio controllers
Hardwired controllers
Electrical Accessories
Adapter profiles

Profiles of the drive adapters Type 9 MO (profile tubes) in 1:1 scale

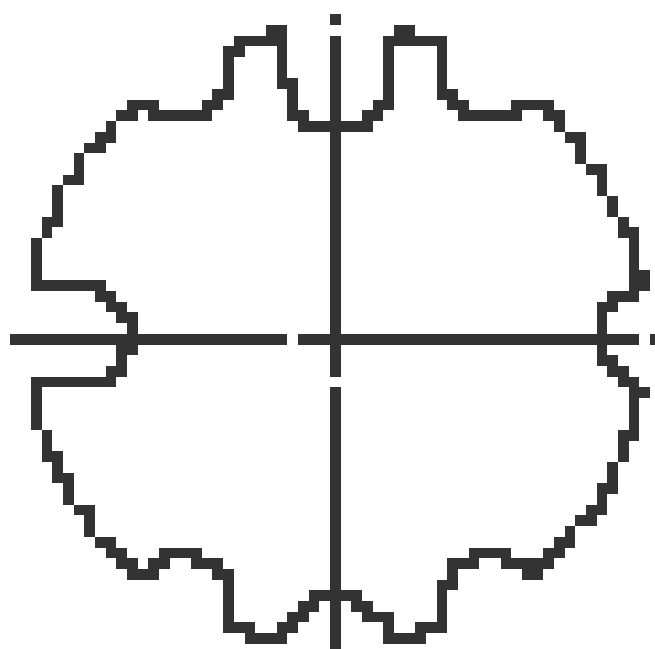


Profiles of the drive adapters Type 11 MO/L DC Drives (notch tubes) in 1:1 scale

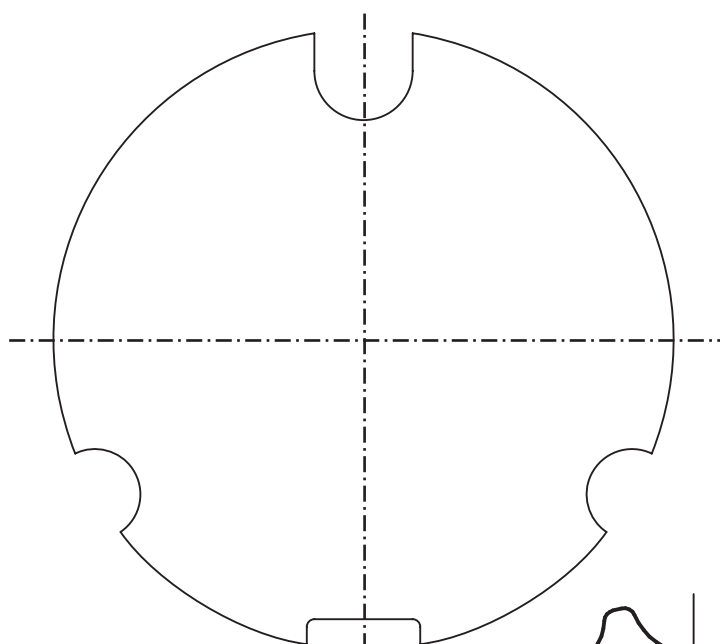




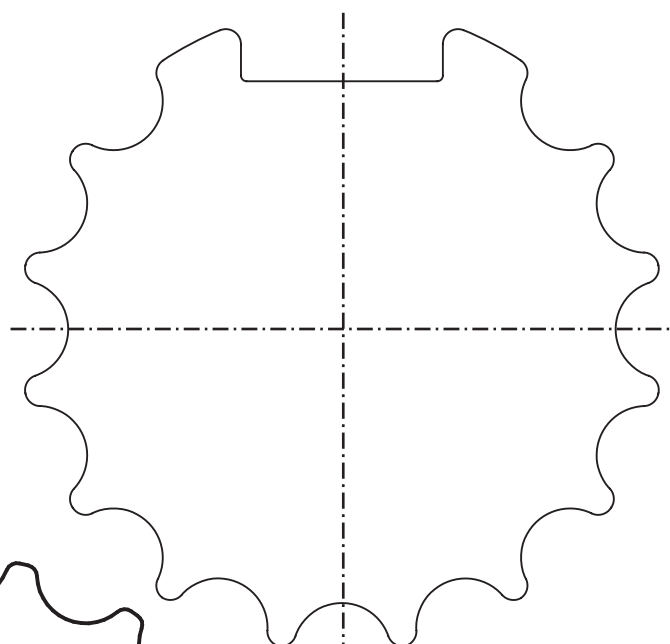
22 049.0001 Ø 78 x 1.0 / 1.25 mm, Döhner
22 057.0001 Ø 78 x 1 mm
22 055.0001 Ø 78 x 1.25 mm,
round notch Röchling



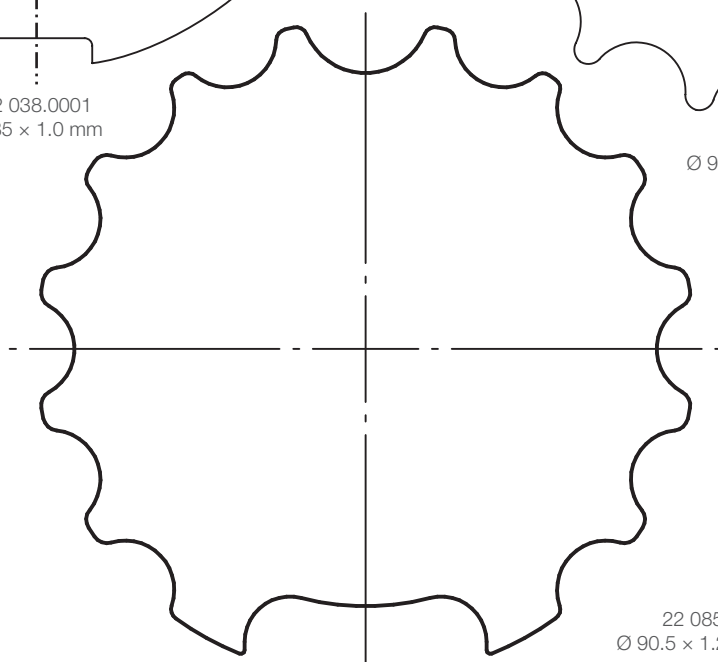
22 039.0001
Ø 85 x 1.2 mm, Imbac from 06.2011
22 043.0001
Ø 85 x 1.2 mm, Griesser, Imbac up to 06.2011



22 038.0001
Ø 85 x 1.0 mm



22 023.0001
Ø 90 mm Le-Profil, Ø 89 mm Deprat



22 085.0001
Ø 90.5 x 1.25 mm MHZ

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

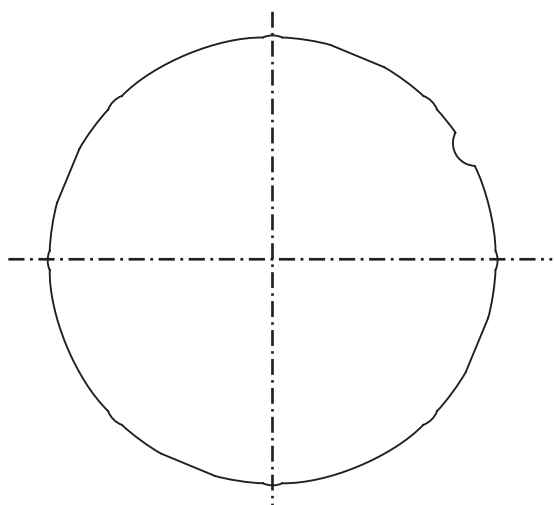
Radio
controllers

Hardwired
controllers

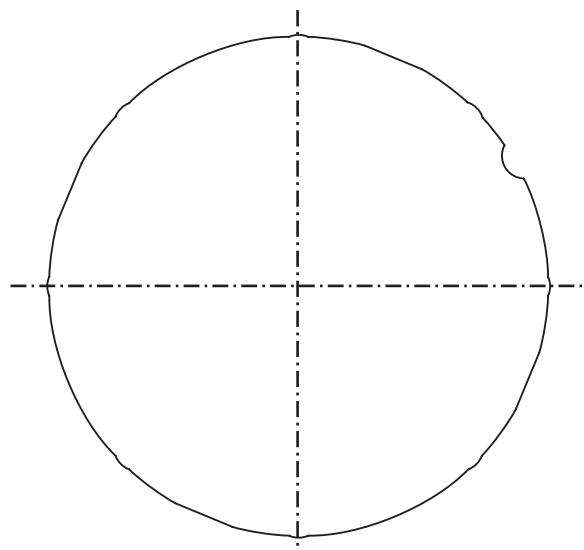
Electrical
Accessories

Adapter profiles

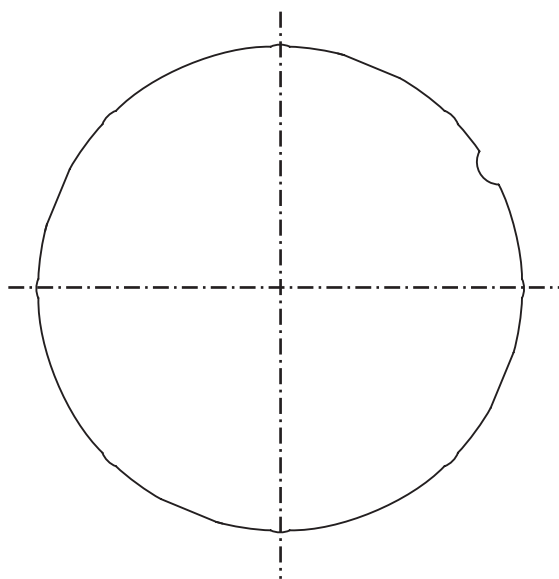
Profiles of the drive adapters (round tubes) in 1:1 scale



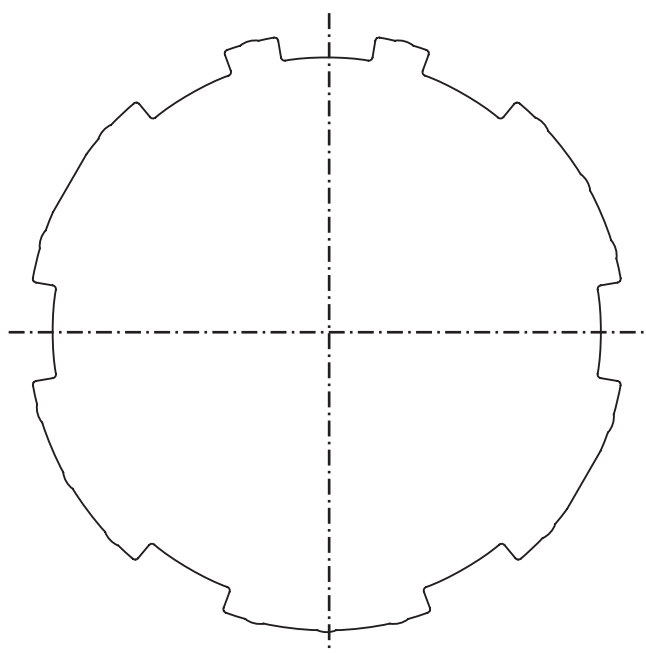
13 116.9601
Ø 63 × 1.5 mm without thread
22 025.0001
Ø 63 × 1.5 mm with 4 × M6 thread



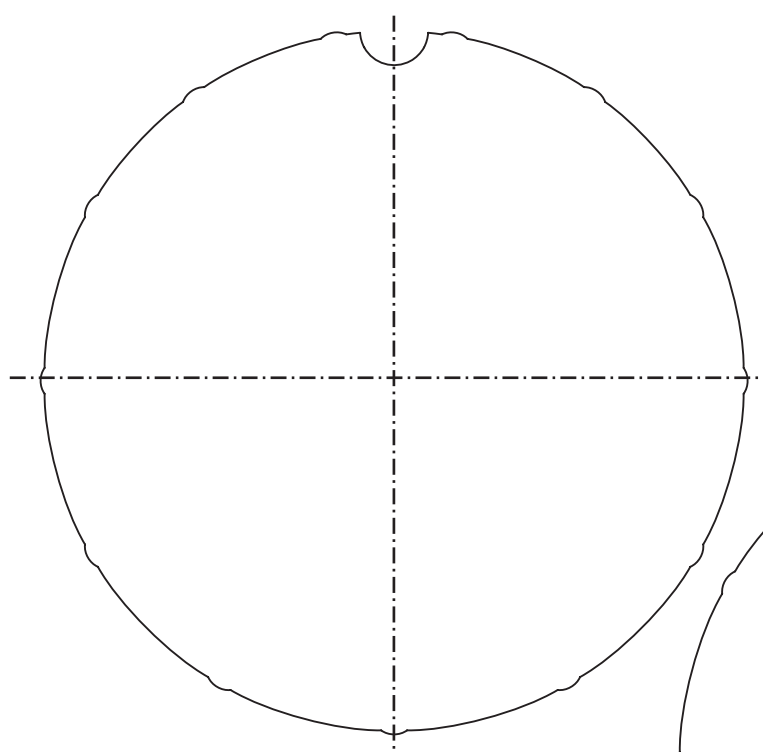
22 044.0001
Ø 70 × 1.5 mm without thread
22 026.0001
Ø 70 × 1.5 mm with 4 × M6 thread



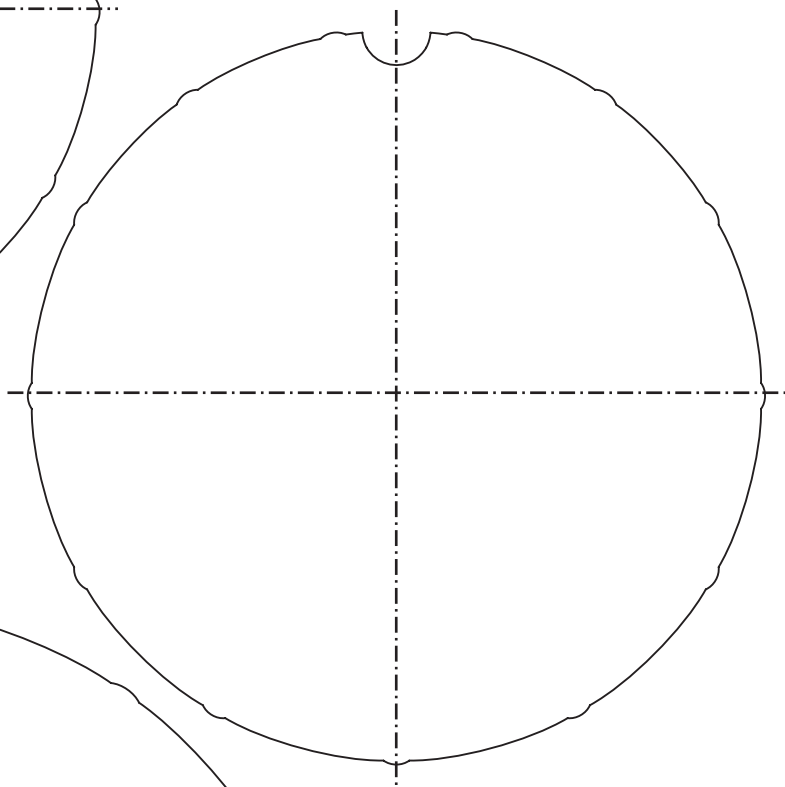
22 045.0001
Ø 70 × 2.0 mm without thread
22 027.0001
Ø 70 × 2.0 mm with 4 × M6 thread



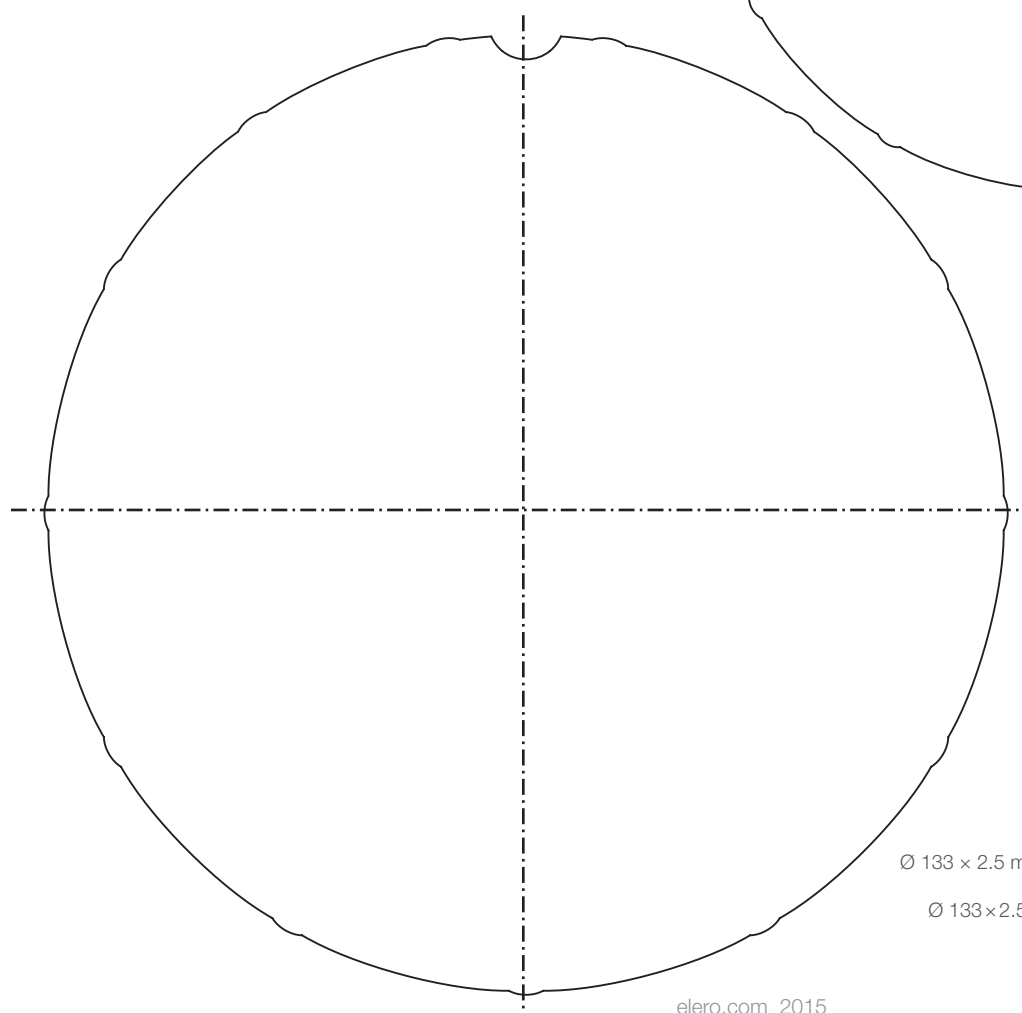
22 058.0001
Ø 83 × 1.5 mm without thread
22 031.0001
Ø 83 × 1.5 mm with 4 × M6 thread



22 046.0001
 $\varnothing 98 \times 2.0$ mm without thread
 22 022.0001
 $\varnothing 98 \times 2.0$ mm with 4 \times M6 thread



22 047.0001
 $\varnothing 102 \times 2.0$ mm without thread
 22 021.0001
 $\varnothing 102 \times 2.0$ mm with 4 \times M6 thread



22 048.0001
 $\varnothing 133 \times 2.5$ mm/ $\varnothing 133 \times 2.0$ mm without thread
 22 036.0001
 $\varnothing 133 \times 2.5$; $\varnothing 133 \times 2.0$ with 4 \times M6 thread

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

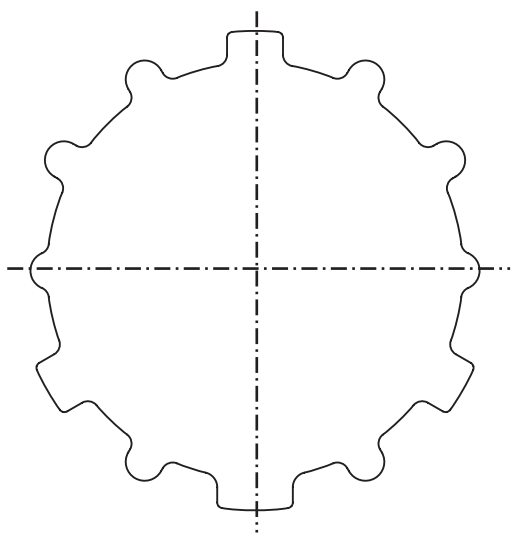
Radio
controllers

Hardwired
controllers

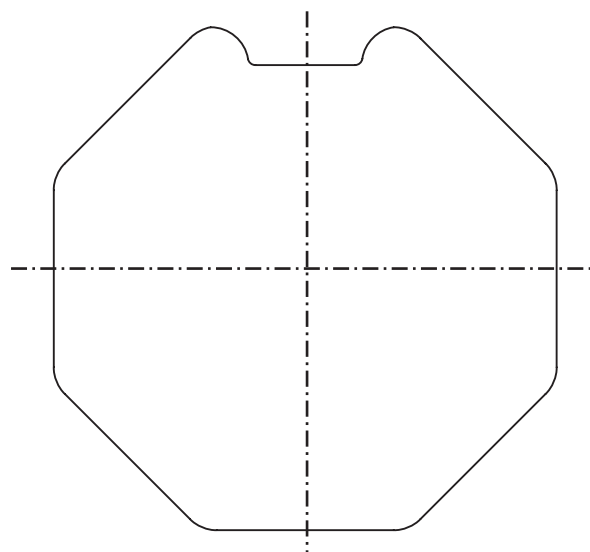
Electrical
Accessories

Adapter profiles

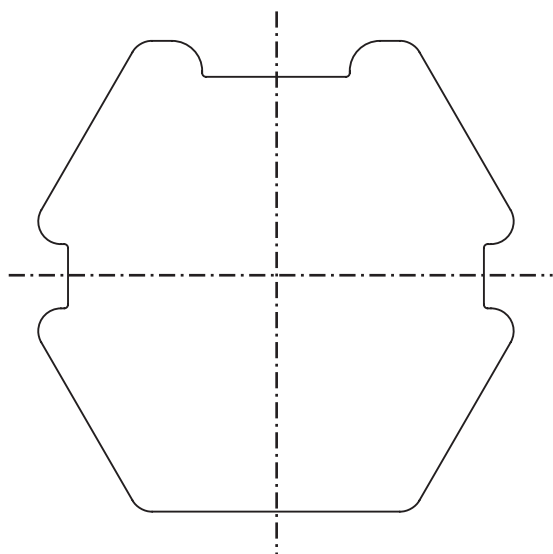
Profiles of the drive adapters (profile tubes) in 1:1 scale



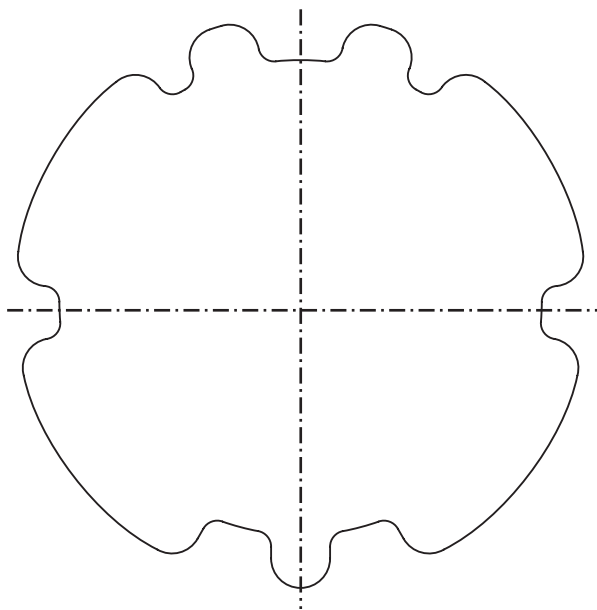
13 117.0901
Ø 67 × 1.5 mm MHZ



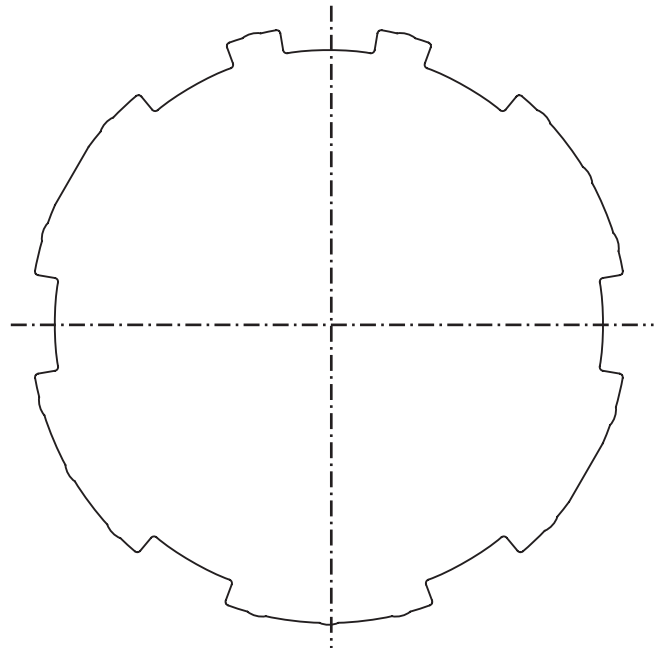
22 020.0001
70 mm Octagonal, Selve, Eckermann, Roma



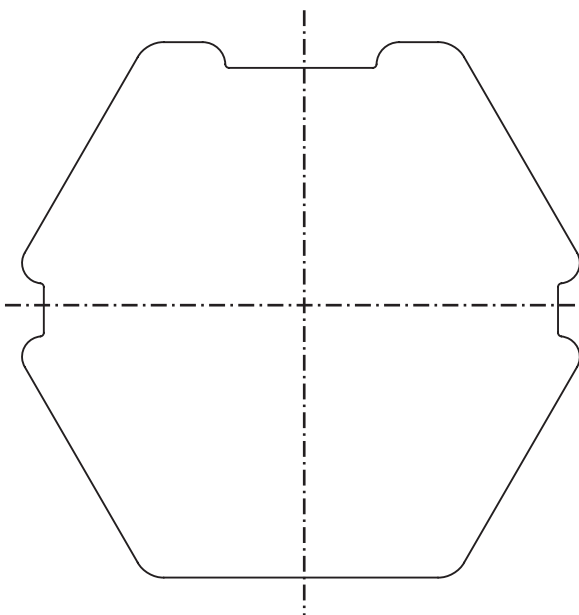
22 029.0001
75 mm Hexagonal, Butzbach, Mäule



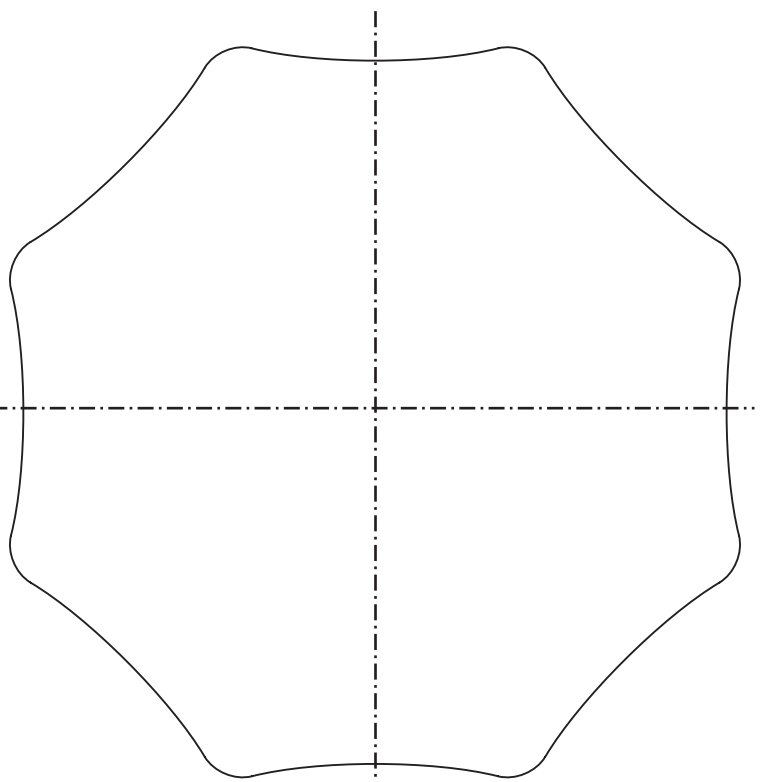
22 032.0001
80 mm, Zurflüh-Feller ZF 80



22 058.0001
Ø 83 x 1.5 mm without thread
22 031.0001
Ø 83 x 1.5 mm with 4 x M6 thread



22 037.0001
85 mm Hexagonal, Butzbach



22 035.0001
102 x 2.0 mm Octagonal, Alulux

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

DoorController

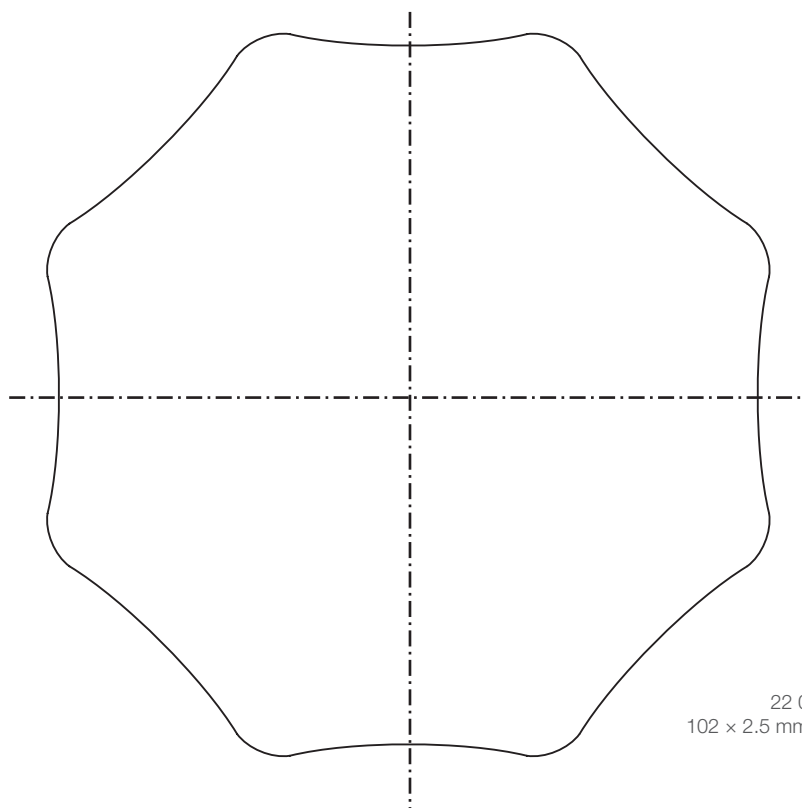
Radio
controllers

Hardwired
controllers

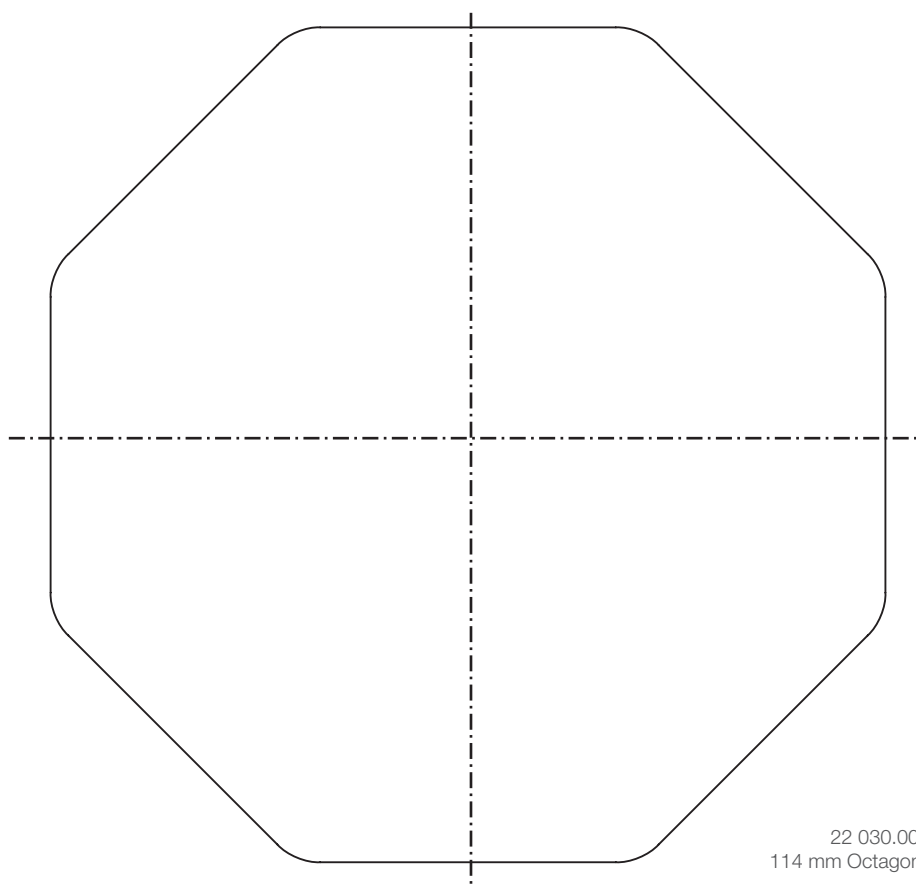
Electrical
Accessories

Adapter profiles

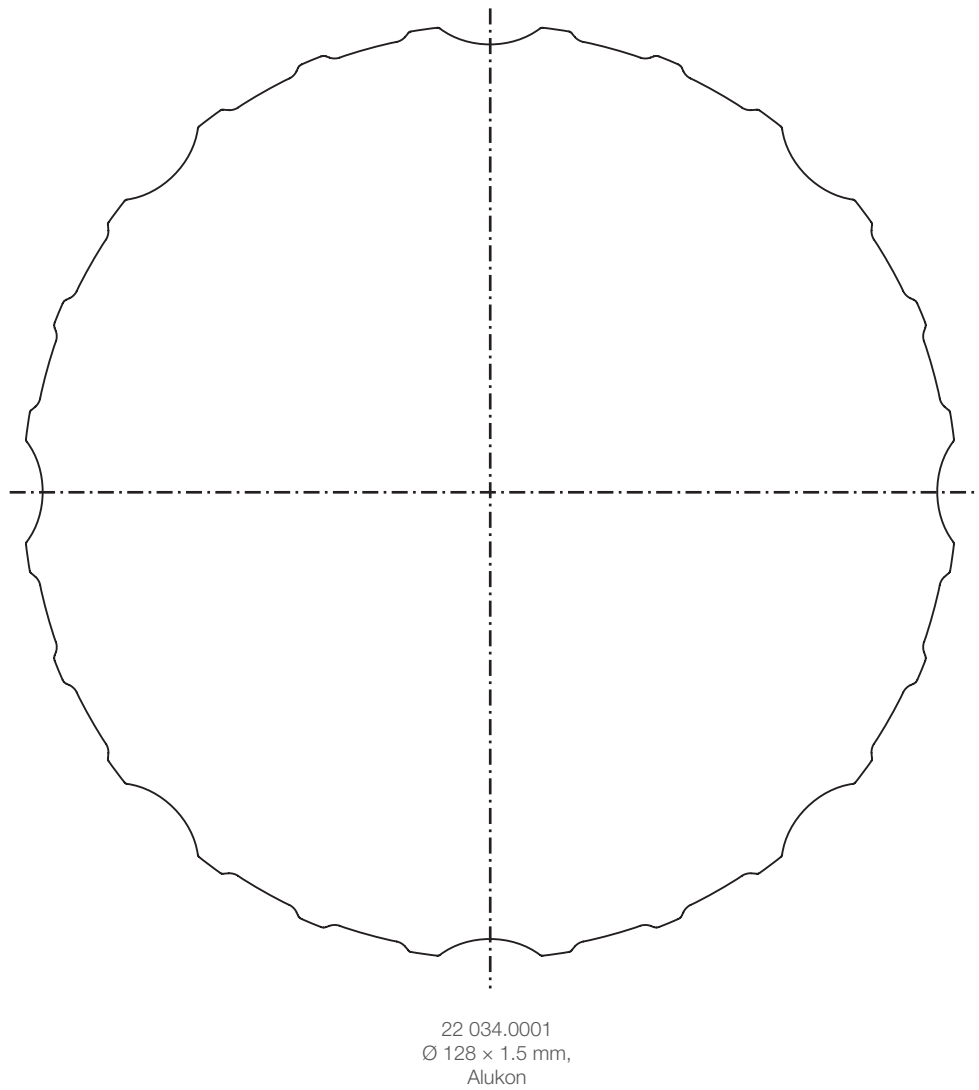
Profiles of the drive adapters (profile tubes) in 1:1 scale



22 028.0001
102 x 2.5 mm Octagonal, Roma



22 030.0001
114 mm Octagonal, Heroal





Lifting capacity tables

Important note:

Please observe maximum loading and maximum span of tubing used.
Tube specifications need to be obtained from manufacturer of tubing.

For more accurate drive calculation we recommend the use of our drive calculation software found on our website: www.elero.us – Service area.

Software for PC

On www.elero.us in the category **Service/Drive computation program**



Software
for Android Smartphones



Software
for iPhone/iPad

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Lifting
capacity tables

Lifting capacity tables

Roller Shutter

RoITop/RoITop-915
VariEco/VariEco-915/
Type 9 (MO)/Type 11 (MO)

Drive torque [Nm]	Octagonal tube dimension [mm]	Roller Shutter height Slat thickness					
		1.5 m			2.5 m		
		8	11	14	8	11	14
3	40	8	–	–	7	–	–
5	40	14	–	–	12	–	–
8	40	22	–	–	19	–	–
7	60	–	15	14	–	13	12
10	60	–	21	19	–	19	17
16	60	–	33	31	–	29	27
30	60	–	63	58	–	55	50
36	60	–	75	69	–	66	60
40	60	–	84	77	–	74	67
40	70	–	–	72	–	–	64
60	70	–	–	108	–	–	97
80	70	–	–	144	–	–	129
100	70	–	–	181	–	–	161

All values include a 15 % friction value.

Roller Blinds

RoITop/RoITop-915 (internal blinds)
SunTop/SunTop-915 (external blinds)
VariEco/VariEco-915/
Type 9 (NHK)/Type 11 (MO)

Drive torque [Nm]	Round-/ notch tube Ø [mm]			Lifting capacity on shaft [kg]		
1.5	42			7		
3	42			14		
5	42			24		
8	42			38		
10	50	78	85	40	26	24
20	50	78	85	80	51	47
30	–	78	85	–	77	71
40	–	78	85	–	103	94
40	–	78	85	–	103	94
60	–	78	85	–	154	141
80	–	78	85	–	205	188
100	–	78	85	–	256	235

Calculation of average lift speed in cm/second.

$$V_m = \frac{D + d \cdot 3.14 \cdot n}{2 \cdot 60}$$

V_m = Result average lift speed in cm/second.
D = Largest tube diameter (at end) in cm.
d = Smallest Tube diameter (at start) in cm.
n = Speed in rpm.

Lifting capacity table for awnings

SunTop / SunTop-915
VariEco / VariEco-915
Type 9 (MO) / Type 11 (MO)

			Open retractable arm awnings, max. no. of arms on the retractable arm awings		
Drive torque [Nm]	Shaft-Ø [mm]	Lifting capacity at the shaft [kg]	20 kg per arm	25 kg per arm	30 kg per arm
30	50	120	4	4	2
	78	77	2	2	2
	85	71	2	2	2
36	50	144	4	4	2
	78	92	2	2	2
	85	84	2	2	2
40	50	160	6	4	4
	78	103	4	2	2
	85	94	4	2	2
60	78	154	6	4	4
	85	141	4	4	4
80	78	205	6	6	4
	85	188	6	6	4
100	78	256	8	8	6
	85	235	8	6	6

The drives for markisolettes, conservatory shading, fabric tension system etc. will need to be determined separately for your system.

Radio
tubular drives

Hardwired
tubular drives

Manual override
tubular drives

Venetian
blind drives

Speciality
drives

Door drives

Mechanical
accessories

Door controls

Radio
controls

Hardwired
controls

Electrical
accessories

Lifting
capacity tables



Linear actuator technology/ louver system drives

50 years experience in constructing motors

Decades of experience



elero building in Pößneck/Thuringia

elero Linear Drive Technology is a business unit of elero GmbH, one of the most important manufacturers of electric drives and controls for roller shutters, sun protection systems and doors. elero Linearantriebstechnik is well-known for customer dialogue, innovation and highest quality standards.

The company offers

- A wide range of electric push-rod actuators (linear actuators)
- The linear actuator solution for individual requirements – also in small quantities
- Short delivery times
- Highest quality and an optimum price/performance ratio

With 50 years experience in constructing motors, elero develops and manufactures reliable actuators with extremely compact design meeting the requirements especially in the mechanical engineering and plant manufacturing sectors. elero actuators for permanent outside use combine extreme robustness with elegance and are therefore ideally suitable for actuator solutions in the modern facade architecture.

elero, the name which stands for high-quality electric precision linear actuators. Our products are based on 50 years of experience in the construction of electric motors. Manufacturing high-quality products is part of our philosophy. We achieve this level of quality by applying a sophisticated quality control system complying with the requirements of the international DIN ISO EN 9001 standard.

Compared to their pneumatic and hydraulic "colleagues" electric linear actuators have many assets:

- constant stroke speed
- no loss of oil
- mechanical self-locking
- almost maintenance free
- many speed variants
- exact positioning capability

If you are looking to combine energy efficiency, reliability and a long life expectancy, elero drives are the one to look for. We regard ourselves as being not just a supplier of linear actuators, but also a partner for the successful implementation of your ideas. Your requirements of our products are the measure of our quality.

Following an overview of our most common drives. More drives in more details can be found on: www.elero-linear.com

Overview

Piccolo (Industry/Facade)

The linear actuator for louver adjustments in commercial architecture

Features:

- with its particularly slim construction, Piccolo can easily be integrated into a variety of modern facade styles
- space-saving linear actuator with innovative design for the adjustment of photovoltaic louvers and large louvers made of glass, aluminum or stainless steel
- thanks to the weather-resistant construction, the mounting position is flexible
- integrated, easily adjustable limit switches



	Piccolo 0	Piccolo XL	
Load (N)	100 – 1,800	1,200	
Stroke speed (mm/s)	approx. 2 – 16	approx. 6	approx. 5
Stroke length (mm) ¹	75 – 800	max. 600	
Operating voltage	12 V DC/ 24 V DC	230 V 1 AC 50 Hz ²	24 V DC
Rating (min)	5 min	S2/5 min	S3/15 %
Temperature range (°C)	–20 to +80		
Connecting cable length (m)	2		
Protection type	IP 67	IP 65	
Mounting position	flexible		
Housing diameter (mm)	35	48	
Housing + fasteners	stainl. steel 1.4571 / anodized aluminum	stainless steel 1.4301	

Veco (Industry/Facade)

The economic solution for modern facade architecture

Features:

- the aluminum housing, electronic limit switches for individual stroke adjustment and the flexible mounting position highlight the efficiency and the economical characteristics of this actuator
- integration into building facades, for the adjustment of sun protection louvers, photovoltaic panels, daylighting systems
- slim and cylindrical actuator design



	Veco
Load (N)	1,600
Stroke speed (mm/s)	approx. 5
Stroke length (mm)¹	max. 300
Operating voltage	230 V 1 AC, 50 Hz ²
Rating (min)	S2/5 min
Temperature range (°C)	–20 to +60
Connecting cable length (m)	2
Protection type	IP 65
Limit switches	electronic limit switches
Mounting position	flexible
Fixing on piston and housing end	articulated lug
Housing diameter (mm)	50
Housing + fasteners	anodized aluminum

¹ Stroke lengths available in steps of 100 mm.

² All AC data (Stroke speed and power) based on 50Hz.

Drives can be operated on 60Hz as well, however Power is about 20% less and speed about 20% higher. Please contact us for detailed technical data.

Linear actuator technology


Econom (Industry/Facade)

The linear actuators of the Econom series have the following outstanding features

Features:

- can be used for lifting platforms, locking devices, tilting devices, slat adjustment, points switching and many other applications
- steel or stainless steel versions
- high static and dynamic load capacity
- almost maintenance-free, low-noise operation, robust



	Econom 0 UL	Econom 0	Econom 01	Econom 1	Econom 2
Load (N)	100 – 3,000	100 – 3,000	500 – 5,000	900 – 10,000	5,000 – 20,000
Stroke speed (mm/s)	0.6 – 70 (6 mm/sec on facade model)	0.6 – 70	0.7 – 90	0.5 – 70	1.0 – 45
Stroke length (mm)	50 – 400	max. 400	max. 750		
Operating voltage	120V/60 Hz	24 V DC/230 V 1 AC ¹ /400 V 3 AC ¹			400 V 3 AC ¹
Rating (min)	S3/15 %; S1/100 %				S3/15 %; S3/60 %
Temperature range (°C)	–20 to +80				
Connecting cable length (m)	1.50				
Protection type	IP 65s	IP 54 or IP 65		IP 54 or IP 65s	
Mounting position	flexible		vertical, piston rod downwards		
Limit switches	adjustable, with status signal				
Housing	black primer coating, alternatively in stainless steel				
Certification		–	–	–	–

Agron (Agricultural)

Electromechanical linear actuator for electrically operated positioning

Features:

- Compact design
- Maintenance-free
- Ingress protection IP69K
- Precise distance measurement
- High reliability
- Multiple mounting possibilities
- Integrated absolute encoder, LIN-Bus control



	Agron
Load (N)	200 / 400
Stroke speed (mm/s)	approx. 10 / approx. 20
Stroke length (mm)	100 / 150
Operating voltage	12 V DC
Rating (min)	S3/15 %
Temperature range (°C)	–20 to +60
Connecting cable length (m)	1.5
Protection type	69K
Mounting position	flexible
Housing diameter (mm)	35 x 57
Housing + fasteners	Aluminum anodized/Plastics PA

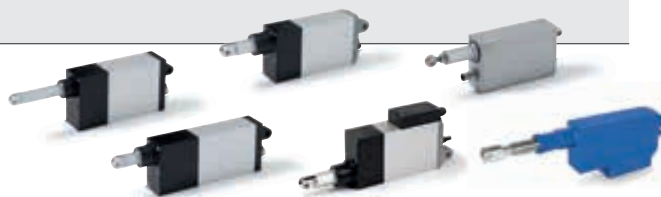
¹ All AC data (Stroke speed and power) based on 50 Hz. Drives can be operated on 60 Hz as well, however Power is about 20 % less and speed about 20 % higher. Please contact us for detailed technical data.

Junior (Industry)

Some outstanding features of this linear actuator

Features:

- versatile push rod drive with compact design for easy mounting
- reliable use for gas adjustment, access equipment, points switching, tilting devices, hatch actuation and valve and slider operation
- Easy control, Start up ramp



	Junior 0E	Junior 1E-VA	Junior 1	Junior 1S	Junior 2 (PLDC)	Junior 2 (24V)	Junior 2 (230 V)	Junior 2 MSP
Load (N)	150 – 550		50 – 2,000	150 – 4,000	5,000	200 – 10,000	50 – 5,000	1,000 – 10,000
Stroke speed (mm/s)	1.6 – 30		1.3 – 70	0.9 – 57	3.0	1.2 – 85	2.5 – 70	1.2 – 19
Stroke length (mm)	max. 200				100–350	max. 350		
Operating voltage	24 V DC				12 V DC	24 V DC	230 V AC¹	24 V DC
Voltage of the digital inputs and outputs	24 V DC		–		–	– 24 V DC		
Rating (min)	S3/15 %; S3/40 %; S1/100 %		S3/40 %; S3/60 %; S1/100 %		S3/15 %;	S3/40 %; S3/60 %; S1/100 %	S2/5 min	S3/15 %
Temperature range (°C)	–20 to + ss50	– 10 to + 50			–10 to + 60	– 10 to + 50		
Connecting cable length (m)	plug contact	1.50			1.50	1.50		
Protection type	IP 54	IP 65	IP 54		69 K/IP 54	IP 54		
Limit switches	electronic limit switches		mechanical limit switches		internal, adjustable	mechanical limit switches		
Housing	aluminum	stainless steel 1.4301	alu/plastic					
Overcurrent protection	yes		no		yes	no		

Kompakt (Industry)

The compact push-rod actuator

Features:

- tailor-made and extremely compact design thanks to special elero technology
- versatile push rod drive for locking devices (rolling doors), tilting devices, operable windows, lifting platforms and many other applications
- adjustable limit switches with status signal
- torsion-lock piston rod



	Kompakt	
Load (N)	400 – 15,000	
Stroke speed (mm/s)	1.5 – 65	
Stroke length (mm)	max. 500	max. 1,000
Operating voltage	400 V 3 AC ¹ or 24 V DC	
Control voltage	–	24 V DC
Rating (min)	S3/15%; S1/100%	
Temperature range (°C)	–10 to +50	
Connecting cable length (m)	1.50	
Protection type	IP 54	
Limit switches	mechanical limit switches	electronic limit switches
Housing	aluminum/plastic	

¹ All AC data (Stroke speed and power) based on 50Hz. Drives can be operated on 60Hz as well, however Power is about 20% less and speed about 20% higher. Please contact us for detailed technical data.

Linear actuator technology

LIMAline (Facade)

The louver actuator system for maximum architectural freedom

Features:

- makes top technology invisible in the facade architecture
- operates vertically and horizontally facade louvers of different materials
- shading, darkening, light deflection and sun position tracking are possible
- rotary movements of up to 360° allow for many design possibilities on the facade
- fits into fixed structures starting from 50 mm width
- all the actuator components are maintenance-free and resistant to corrosion
- For more information:

www.elero-linear.com / Service / Downloads / Products for facade construction/LIMAline / Facade Catalog LIMAline



	LIMAline
Rotation angle (°)	up to 360
Weight (kg)	0.33
Operation time (sec.)	65
Pause time (sec.)	180
Temperature range (°C)	-20 to +60
Speed profile shaft (min ⁻¹)	max. 30
Transmission ratio	i = 28
Mounting position	flexible
Housing	plastic
Profile bush	anodized aluminum
Profile shaft	stainless steel
Lifetime	10,000 x 180° cycles (right and left)

Lockmaster (Industry/Facade)

The electromechanical linear actuator for locking mechanisms

Features:

- applications under extreme ambient conditions (outdoors), in underground sewer systems, underwater
- for simple locking functions: locking of manhole covers, for access systems and doors, for increased security in buildings through the integration into centralized building management systems, locking of machine and plant components
- maintenance-free operation allows the use under extreme ambient conditions and in areas with limited accessibility



	Lockmaster
Load (N)	50
Stroke speed (mm/s)	30
Stroke length (mm)	50
Operating voltage	230 V 1 AC; 50 Hz ¹
Rating (min)	S2/1.0
Temperature range (°C)	-20 to +80
Protection type	IP 67 at 0.1 bar (equivalent to a water depth of 1.0 m)
Limit switches	preset, no adjustment necessary
Mounting position	flexible
Fixing on piston end	clevis end
Housing diameter (mm)	61.5
Housing length	168
Housing + fasteners	stainless steel 1.4301

¹ All AC data (Stroke speed and power) based on 50 Hz. Drives can be operated on 60 Hz as well, however Power is about 20 % less and speed about 20 % higher. Please contact us for detailed technical data.

Herkules (Industry)

The linear actuators of the Herkules series have the following outstanding features

Features:

- suitable for heavy-duty applications
- protection against dirt, dust and other environmental influences
- combination of high pushing/pulling forces and low space requirement
- for lifting platforms, locking devices, tilting devices, slat adjustment, points switching and many other applications
- low maintenance lubrication system



	Herkules 01	Herkules 1
Load (N)	14,000 – 30,000	28,000 – 50,000
Stroke speed (mm/s)	1 – 9	
Stroke length (mm)	up to 275	up to 320
Operating voltage	400 V 3 AC 50 Hz ¹	
Rating (min)	S3/ 15 %	
Temperature range (°C)	–20 to +50	
Connecting cable length (m)	1.50	
Protection type	IP 54	
Housing	galvanized, chromed	

Insolis (Solar/Photovoltaic systems)

The actuator series for solar photovoltaic systems

Features:

- extremely high static loads compared to required dynamic loads
- corrosion resistance against environmental influences over long periods
- modular system, flexible integration into existing and new systems
- option for Insolis 3: electronically programmable limit switches with integrated overload protection



	Insolis 2	Insolis 3
Dynamic load peak (N)	5,000	10,000
Static load peak (N)	15,000	up to 60,000
Stroke speed (mm/s)	2.5 DC / 4.5 AC	1.5
Stroke lengths (mm)	500 – 1,000	600 / 800 / 1,000
Operating voltage	24 V DC / 230 V AC ¹	
Rated current	3.3 A DC / 1.3 A AC	4.5 A DC / 0.8 A AC
Power	79 W / 290 VA	108 W / 185 VA
Rating (min)	KB ² 12 / KB ² 8	KB ² 12
Fixing on piston end	joint rod head	
Fixing on housing end	pivot	
Temperature range (°C)	–20 to +60	
Connecting cable length (m)	1.50	
Protection type	IP 65	
Mounting position	cable glands always facing downwards	
Housing	anodized aluminum	
Special features	self-locking ability	

Vario (Industry)

The linear actuators of the Vario series have the following outstanding features

Features:

- combination of high performance and low space requirement
- flexible concept thanks to a versatile modular system
- optimum protection against dirt, dust and other environmental influences
- robust construction, for special machine construction, materials handling technology, overhead catenary construction, shipbuilding or communications engineering



	Vario 1	Vario 2
Load (kN)	4 – 50	10 – 100
Stroke speed (mm/s)	1 – 70	
Stroke length (mm)	max. 800	max. 1,000
Operating voltage	400 V 3 AC, 50 Hz	400 V 3 AC, 50 Hz
Control voltage electronic limit switches	24 V DC or 230 V AC ¹ (to be selected depending on the contactors or PLC)	
Voltage supply analogue output	24 V DC / 20 mA	
Rating (min)	S3/ 15 %	
Temperature range (°C)	–10 to +50	
Connecting cable length (m)	1.50	
Protection type	IP 54	
Housing	black primer coating	

¹ All AC data (Stroke speed and power) based on 50 Hz. Drives can be operated on 60 Hz as well, however Power is about 20 % less and speed about 20 % higher. Please contact us for detailed technical data.

³ short-time rating



Terms and conditions of sale

Terms and conditions of sale for purchases through elero Germany

Different Terms & conditions apply if purchased through Nice Group USA Inc. Please request if required from Nice Group USA Inc.

§ 1 Scope of validity

1. Our terms and conditions of sales apply exclusively. They apply for this and all future transactions with the ordering party unless otherwise expressly agreed between the parties. We do not recognize conflicting or differing terms and conditions of the customer. The business terms and conditions of the ordering party or of third parties have no validity irrespective of whether this validity is specifically rejected or is taken into account in correspondence, or correspondence contains or refers to the terms and conditions of the ordering party or a third party. Exceptions must be agreed in writing between the parties.
2. Unless otherwise stated in the contract terms, the terminology and definitions of INCOTERMS 2000 apply.

§ 2 Contract signing

1. Our quotations are non-binding. Technical descriptions and other details in brochures and other information are non-binding unless they are expressly identified as binding.
2. We reserve our copyrights and title rights to samples and brochures, technical descriptions, calculations and other documents. These may not be made accessible to third parties without written approval.
3. The acceptance declaration and all confirmations require the written form to be valid.
4. If the order is to qualify as an offer according to § 145 of the German Civil Code (BGB) we can accept this within 12 working days.
5. Details in samples, brochures, technical descriptions and in public announcements on our part, by manufacturers and their agents (§ 434 para. 1 p. 3 BGB) are an inherent part of the performance description when expressly taken into account in the contract.
6. With the exception of the managing director and sales manager our (sales) employees are not authorized to make verbal side agreements which differ from these terms and conditions or to give verbal assurances which transcend the content of the written contract.

§ 3 Prices and sales conditions

1. The agreed prices apply. These are understood to be "ex works" plus packaging, statutory VAT, duty in the case of exports plus fees and other public levies and additional payments, e.g. for insurance. The statutory VAT is itemized separately in the invoice at the valid rate at the time of billing.
2. If substantial cost elements vary before the day of the delivery, a price increase is possible if the delivery or performance is more than four months after the contract signing. The price increase shall take place taking into account the mutual interests of the contract parties.
3. Invoice amounts are
within eight days – 3 % discount,
within 14 days – 2 % discount and
within 30 days net
of receipt of the goods. The invoice shall be paid in cash or by bank transfer. It is considered as having been paid once we have received the amount without extra cost.
4. Other payment methods require our written consent. The costs arising on either side shall be paid by the ordering party. Payment by exchange is not admissible. Checks are valid only after payment has been transferred.
5. The ordering party has a right to offsetting or retention only in the case of undisputed or legally verified debts or accounts.

§ 4 Delivery and duties of cooperation

1. The scope of our duty to deliver is exclusively defined by the respective contract. We reserve the right to make changes to construction, form and color as a result of technical improvement or legal requirements, provided such changes are not substantial or otherwise unreasonable for the ordering party.
2. We are entitled to partial delivery if
– the partial delivery can be used by the ordering party within the context of the contractually designated purpose,
– the delivery of the remainder of the goods ordered is guaranteed and
– the ordering party is not faced with considerable secondary or additional costs as a result.
3. Deliveries shall be carried out "ex works" unless otherwise agreed in writing between the parties.
4. The delivery dates are agreed in principle subject to the cooperation of the ordering party in accordance with the contract. Dates and deadlines set for deliveries and performances always apply as approximate unless agreed as "final". Compliance with our delivery duty assumes that the ordering party fulfils its obligations promptly and properly.
5. If our suppliers deliver incorrectly or fail to deliver on time, even though we have issued orders to reliable suppliers which cover the demand at least, we shall be exempt from our performance obligation and may withdraw from the contract unless the delivery delay is only temporary.
6. If it transpires after the signing of the contract that the ordering party has no guarantee of creditworthiness and our payments are threatened we are entitled to

refuse delivery until the ordering party makes payment or provides assurance thereof. If the payment or security provision is not provided within 12 working days after a request has been made, we are entitled to withdraw from the contract.

7. If the ordering party falls behind with acceptance or collection or is responsible for a delay in dispatch or delivery we are entitled, without prejudice to further claims, to demand a fixed cost amounting to the standard local costs of storage, irrespective of whether the goods are stored by us or a third party. The burden of proof that less or no damage was caused lies with the ordering party.

§ 5 Delay in delivery

1. If the date for the delivery agreed with the ordering party cannot be complied with for reasons beyond our control, particularly operating interruptions of any kind, difficulties in the procurement of materials or energy, transport delays, strikes, legal lockouts, shortages of workforce, shortages of energy or raw materials, difficulties in the procurement of the required official approvals and/or official measures within our sphere or in the sphere of our supplier, the delivery period shall be extended by the duration of the obstacle plus an appropriate lead time.
2. If the circumstances delaying the delivery last for a month after the agreed delivery deadline, either party may withdraw from the contract. Further claims due to delivery times being exceeded for reasons which are not unintentional or are due to gross negligence on our part are excluded. Damage claims are limited to the contract-typical foreseeable damage.

§ 6 Place of fulfilment and transfer of risk

The place of fulfilment for all obligations from the contract relationship in the case of orders in the field of drive technology is our registered office in 72660 Beuren, and for orders in linear technology it is our registered office in 07381 Pößneck.

§ 7 Packing

We pack all goods appropriately. The costs for the disposal of transport and sales packaging shall be borne by the ordering party.

§ 8 Dispatch

1. If dispatch is agreed between the parties the risk of the loss of the subject of the delivery transfers to the ordering party at the latest with hand-over of the subject of the delivery to the shipper, freight carrier or other third party appointed for the delivery. This applies equally if we have made part-deliveries and have also taken on other performances.
2. If the delivery or hand-over is delayed due to circumstances for which the ordering party is responsible, the risk transfers to the ordering party from the day on which the subject of the delivery is ready for dispatch and we have indicated this to the ordering party.
3. Storage costs after the transfer of the risk shall be paid for by the ordering party. If stored by us, the storage costs are 0.5% of the invoice amount for the subjects of the delivery being stored per week of delay. We reserve the right of assertion and proof of greater or lesser storage costs.
4. The shipment is insured against theft, breakage, transport, fire and water damage or other risks by us only at the express preference and cost of the ordering party.

§ 9 Material defect

1. The ordering party is subject with reference to material defect to the legal obligation to inspect and report defects according to § 377 HGB.
2. Wear and tear on batteries, battery packs and other consumables is not included as material defect. The legal warranty for the normal, generally-expected quality and as-intended usability of these articles is not affected hereby. If we provide a guarantee for certain products which transcends the legal liability for defects, particularly an extended period for defect-related cost-free replacement of materials, these do not count as wear or tear articles.
3. The ordering party cannot derive rights from material defects which do not or do not substantially affect the value and fitness for use as intended.
4. If the items exhibit a material defect at the time of the transfer of risk, we are entitled and obliged to offer supplementary performance. Supplementary performance shall, at our discretion, be in the form of repair or replacement.
5. If the supplementary performance fails, does not take place within a suitable period set by the ordering party or is refused, the ordering party is entitled at its discretion to withdraw from the contract, to demand a lowering (reduction) of the purchase price appropriate to the defect and value or, within the limits of the following conditions, compensation in place of performance.
6. Should a material defect lead to damage according to the legal provisions, we are liable insofar as this relates to personal damage, for damage under the product liability law or damage caused by intent or gross neglect.
7. If the damage is based on a culpable violation of a substantial contractual duty or a "cardinal duty" we are liable, with exception of the cases in section 3, only for foreseeable, contract-typical damage.
8. Further contract- and tort-related claims of the ordering party are excluded. We are particularly not liable for the cases named in para. 6, for damage which has not resulted from the subject of the delivery itself or for lost profit or other damage to the assets of the ordering party.

§ 10 Other damage liability

1. The provisions in § 9 para. 6-8 also apply for damage claims due to other obligatory duties. In the event of the violation of a contractual duty or a performance obstacle existing at the time of the contract signing (§§ 311 para. 2, 311a BGB) our compensatory duty is limited to the negative interest.
2. Our tort liability is subject to the provisions in § 9 para. 6-8.
3. Insofar as our liability is excluded or limited, this also applies for personal liability of our employees, staff, colleagues, agents and vicarious agents.

§ 11 Retention of title

1. The title of the goods supplied is retained until our total accounts against the ordering party from the business relationship including future accounts arising from contracts signed at the same time or later have been settled. The same applies when accounts are made in a running invoice and the balance is brought forward and acknowledged. Title transfers to the ordering party when the total liabilities for whatever reason have been settled. We are obliged to release our securities insofar as their value exceeds our accounts by more than 10 %.
2. The ordering party is entitled to sell or process the goods in a proper business transaction. This right is cancelled on cessation of payment or application for or commencement of an insolvency process. Any processing is carried out by the ordering party on our behalf without our being obligated in any way. In the event of processing, joining or mixing the reserved products with other products we automatically receive shared ownership of the new item at a value in the event of processing, in relation of the value (= gross invoice value including side costs and taxes) of the reserved products to the value of the new item, and in the event of processing, joining or mixing the reserved products with other products, in relation of the value of reserved products to the value of the other products.
3. The ordering party herewith cedes to us all accounts derived from the resale of the goods. The ordering party is also authorized to collect these accounts after cessation. Our authorization to collect the accounts ourselves is unaffected by this. However we shall make no use of this right, provided the ordering party meets its payment and other obligations. On request the ordering party shall disclose to us the ceded accounts and their debtors plus all details required for collections, provide us with the related documents and instruct the debtors of the cessation.

4. In the event of contract-infringing behavior on the part of the ordering party, particularly payment arrears, we are entitled to withdraw from the contract and take back the goods. For the purpose of taking back the goods the ordering party herewith irrevocably consents to our entering its business and storage premises and taking the goods away.
5. While we still have title, the ordering party may neither offer for security nor pledge the goods or items manufactured from said goods without our consent.
6. In the case of pledging and other third party interventions the ordering party shall notify us in writing. The ordering party is not permitted to make any agreements with its receivers which might affect our rights.
7. We are obliged to release the security due us at the request of the ordering party and at our discretion insofar as the realizable value of the security exceeds the claim to be secured by more than 10 % or its nominal value by more than 50 %.

§ 12 Final provisions

1. The invalidity of individual provisions shall not affect the validity of the remainder.
2. If the ordering party is a merchant, the legal venue for all disputes is the registered office of elero GmbH in 72660 Beuren. The legal venue is not exclusive.
3. German law applies to the exclusion of the UN purchasing law (CISG).
4. We refer to the fact, in accordance with the provisions of the German data protection act, that we store personal data about the ordering party (name, address) by EDP for internal purposes only.

elero GmbH

Antriebstechnik
Linsenhofer Str. 65
72660 Beuren / Germany

Phone +49 7025 13-01
Fax +49 7025 13-212

Managing Director
Jochen Lütkemeyer
Local Court Stuttgart: HRB 222367

Status 01.01.2015

elero

elero GmbH
Linsenhofer Str. 65
72660 Beuren
Germany
info@elero.de
www.elero.com

NICE GROUP USA INC.
12625 Wetmore Road Suite 218
78247 San Antonio, TX, USA
T +1 210 545 2900
F +1 210 545 2915
E info@us.niceforyou.com

TheNICEGroup

EN-13 600.9201/0215