ECO ETS
Electromotive drive

■ SYSTEM TECHNOLOGY FOR THE DOOR

ECO

1. Force - up to 250 kg / EN 7

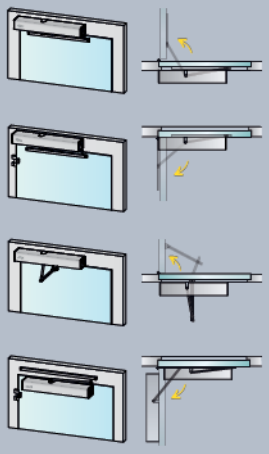
The ECO ETS has a strong power unit that safely opens and closes door leafs up to 250 kg in weight and up to 1.600 mm in width (EN 7)

This provides secure automation for external doors that may experience strong wind loads as well as heavy fire protection doors

The robust chassis and gear unit combined with the open stop secures the ETS against the manual application of force, e.g. improper use or vandalism.

In addition to these parameters, the ETS, with its new electromotive power unit, is extremely quiet and has a well engineered, harmonious movement. It is these properties that make the ETS such an all-rounder for public buildings, hospitals, elderly homes and clinics.

2. Model with slide rail on hinge side and hinge-opposite side / also fire protection!



The ETS can be combined as follows:

Lintel installation with standard arm, hinge-opposite side push

Lintel installation with slide rail, hinge-opposite side push

Lintel installation with slide rail, hinge side pull

Door assembly with slide rail (for special applications)

All mounting options are available in both standard and fire protection variations.

This gives planners and architects a comprehensive range of design options with sliding rails for all assembly applications, whether that is hinge side or hinge-opposite side, T0 or fire or smoke protection!

For door manufacturers it also opens up new possibilities for the production of fire or smoke protection doors.

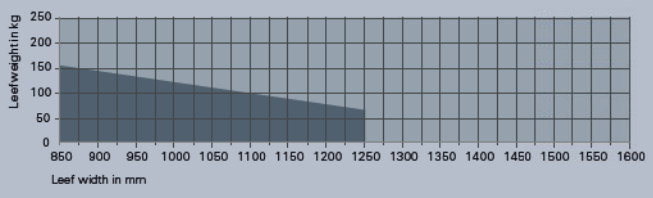
3. Low energy and full power in a single power unit

The ETS can use the same power unit for 2 functions:

Low energy and full power
The full power setting enables, for example, heavy doors in frequent use in public buildings to be automated with fast movement sequences. This requires the use of sensor strips to monitor the movement area.

The low energy setting is specially designed for private homes or office and working areas with less frequent public access. Sensor strips are not needed here, but there are restrictions on door weight and speed of movement.

Each type of operation is easy to set on site, and can therefore also be altered at a later date.



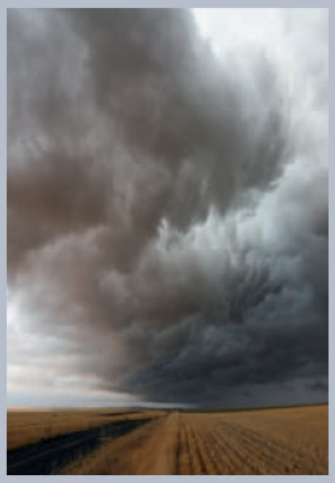
4. Fire and smoke protection / Inverse function / Interlock function

The ETS model ETS 64-R is approved as a hold-open device for fire and smoke protection doors. In combination with a lintel switch it triggers the fire protection closer in the case of an alarm (smoke activated) or power failure.

The inverse function is specially designed for removing smoke from a building. Here the fire or smoke protection function is reversed when an alarm is activated, i.e. the door opens automatically to allow the smoke to escape. This is also the case in the event of a power failure. The inverse function is pre-installed in the ETS and therefore can also be set on site.

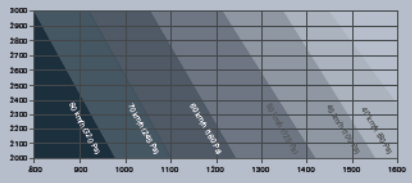
The interlock function regulates the complex automation sequences of double doors in safety areas (controlled and directional flow control).

5. Wind load compensation

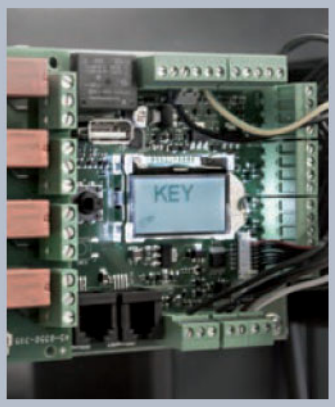


The wind load regulation serves to adapt the smooth operation of external doors to varying air pressure conditions (up to gale force 9). The power unit identifies any brief increase in wind load (e.g. strong gusts). The controls then calculate the additional power required to strengthen or brake the power unit so that the leaf can continue to move almost without interruption.

The strength of the wind load depends on the size of the door and the type of arm used. For outward opening doors in areas subject to high wind loads on a regular basis (e.g. coastal areas) the normal arm (hinge-opposite side push) should be used.



6. Simple assembly and service



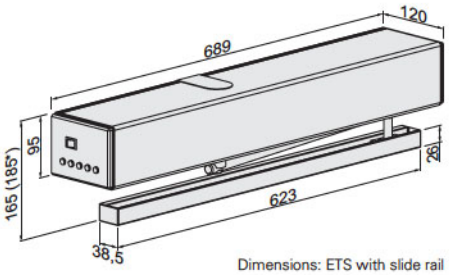
The ETS has a simple, user-friendly setting function for all parameters. This is provided by the display panel with joystick function on the control board. A menu style checklist makes it easy to configure the initial operation on site. All parameters can also be configured at a later date or to suit any new operational requirements (password protected) with no need for an external control module or laptop.

This makes the ETS particularly interesting for assembly and service companies, who do not want to have to use a specific external programming device or special software for every type of drive.

Performance criteria		ETS 73	ETS 64-R
Closing force (continuously adjustable)	Size acc. to EN	3 – 7	4 – 6
Door width acc. to EN	Interior doors ≤ 1.600 mm	■	
	Fire protection doors ≤ 1.400 mm		■
Dimensions (incl. mounting plate)	Length in mm Depth in mm Height in mm	690 120 95	690 120 95
Hinge side with slide rail		■	■
Hinge-opposite side with slide rail		■	■
Hinge-opposite side with standard arm		■	■
DIN left / right		■	■
Opening speed adjustable		■	■
Closing speed adjustable when mains operated, fixed when power failure		■	■
Hold-open time adjustable		0 - 60s	
Driving power adjustable		■	■
Max. door opening angle		105°	
Tested acc. to EN		DIN 18650 EN 16005	DIN 18263-4 DIN 18650 EN 16005
Suitable for fire- and smoke control doors		-	F
Certified according to EU-Directive		CE	

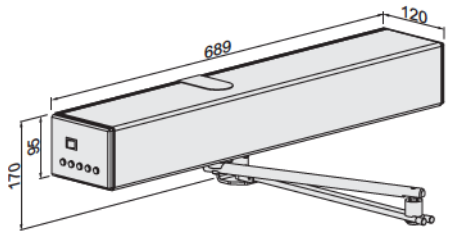
■ Yes
- No
◘ Option

Steel door | Wooden door | Profile frame door



Dimensions: ETS with slide rail

* In the case of rebated doors please use the long pins (included in delivery)



Dimensions: ETS with standard arm

ECO ETS ▪ Motorised opening – controlled closing

The new ETS from ECO is a powerful, silent, electromotive drive system for heavy internal and external doors up to 250 kg.

Models and functions:

- Slide rail push (hinge-opposite side) and pull (hinge side)
- Standard arm push (hinge-opposite side)
- 1 and 2 leaf systems with total coverage
- Adjustable closing force (with power-free function)
- Simple operation via button in side panel (Automatic- Continuous- Hand- Exit- Night)
- Push + Go function, gentle response
- Impact force and open position adjustable
- Impact delay adjustable (motor lock, closing sequence)
- Plug + Play, operation of functions with LCD display.
- Low energy operation without security sensors

Article numbers

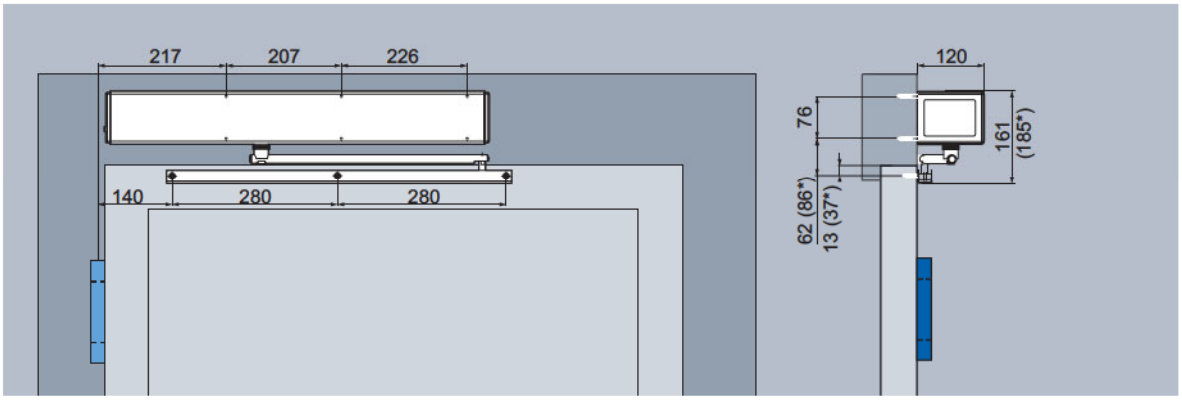
Drive without arms	Colour	Article number
ETS 73	Stainless steel	358501548011000
ETS 64-R	Stainless steel	358501548021000
ETS 64-R (Hinge-opposite side push)	Stainless steel	358501548023000

Standard arm for ETS (up to 250 mm recess depth)	Colour	Article number
NG-ETS	Stainless steel	358501547110020

ETS	Colour	Article number
GS-ETS	Stainless steel	358501547120010

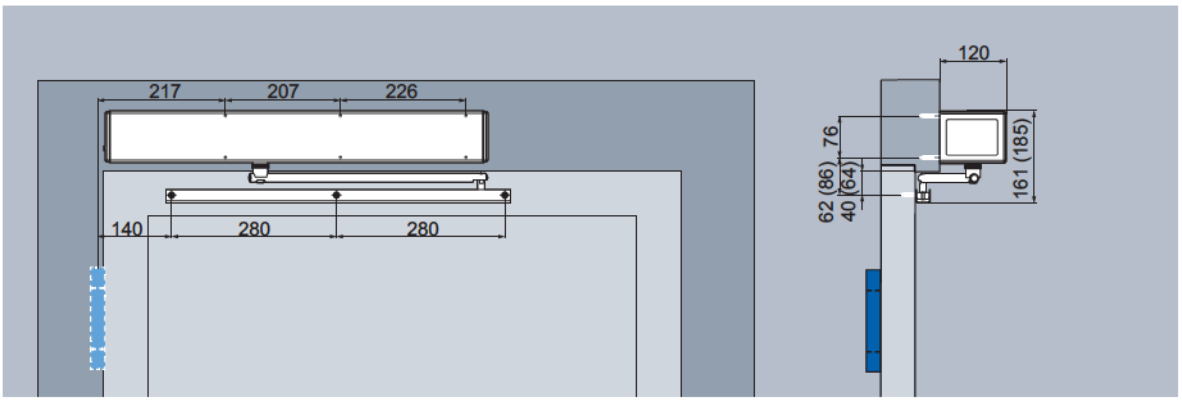
Please order safety elements, which offer additional protection for clamping points and two-way traffic, **with infrared sensor strips in accordance with DIN 18650 and EN 16005!** More information can be found on page 7.

Installation drawing ETS 73 single leaf

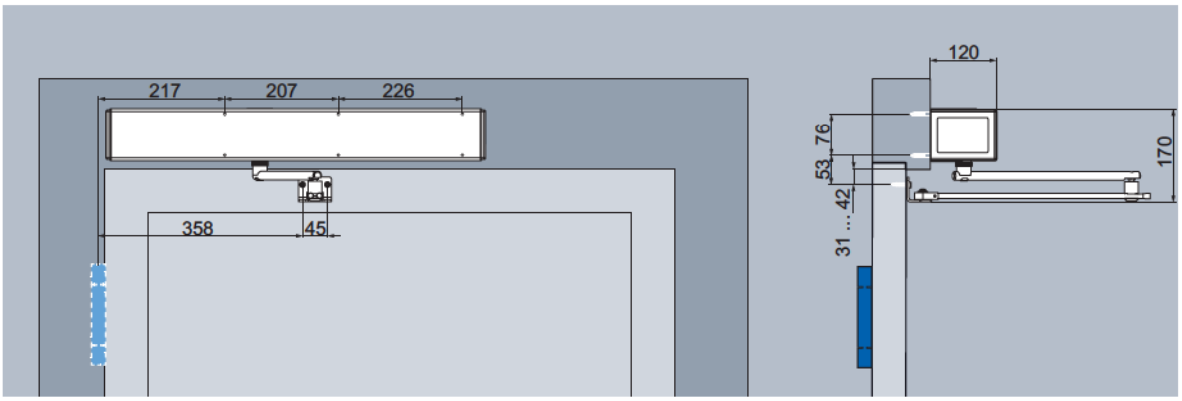


ETS 73 Head mounting hinge side with slide rail (pull)

* For rebated doors please use the long pins (included in delivery)

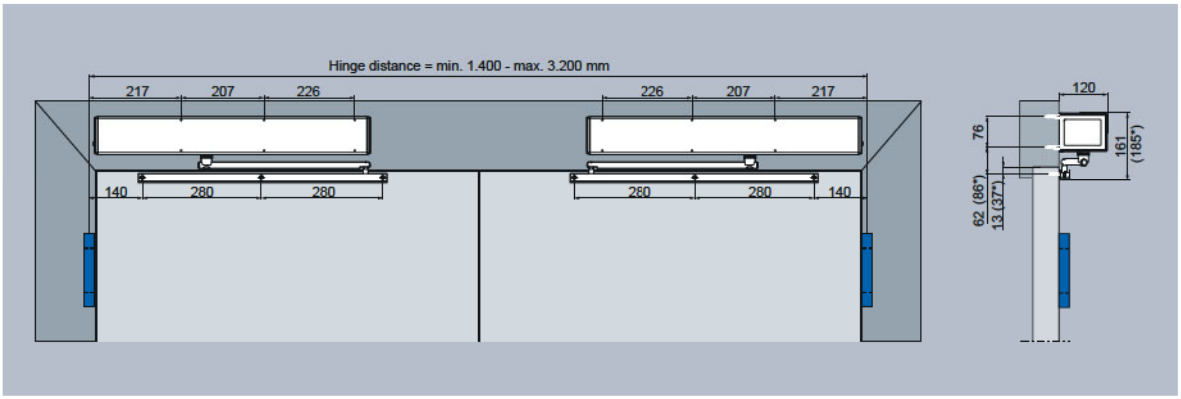


ETS 73 Head mounting hinge-opposite side with slide rail (push)



ETS 73 Head mounting hinge-opposite side with standard arm (push)

Installation drawing ETS 73 double leaf



ETS 73 Head mounting hinge side with slide rail (pull)

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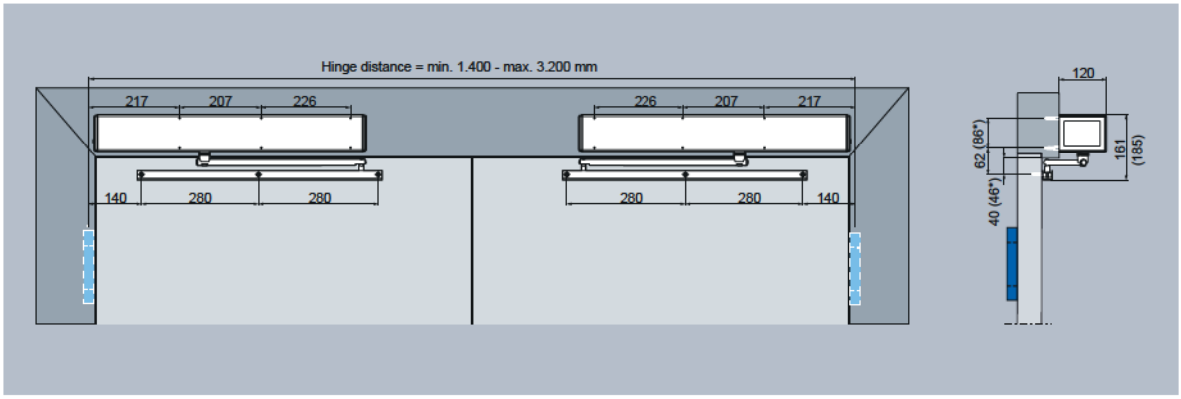
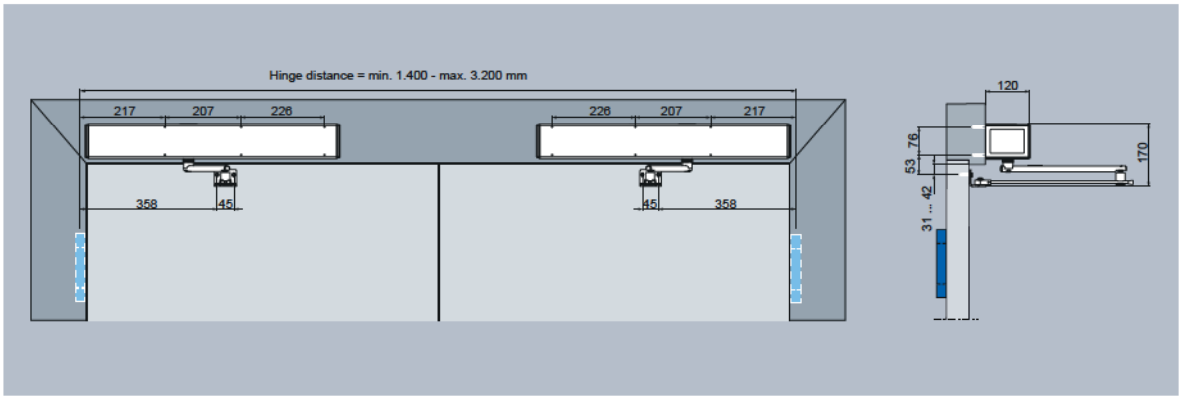
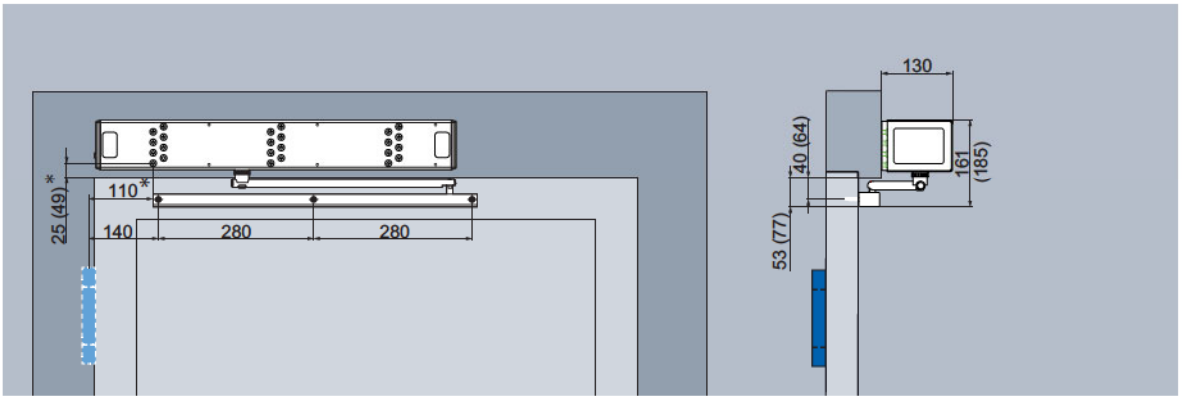


ETS 73 Head mounting hinge-opposite side with slide rail (push)



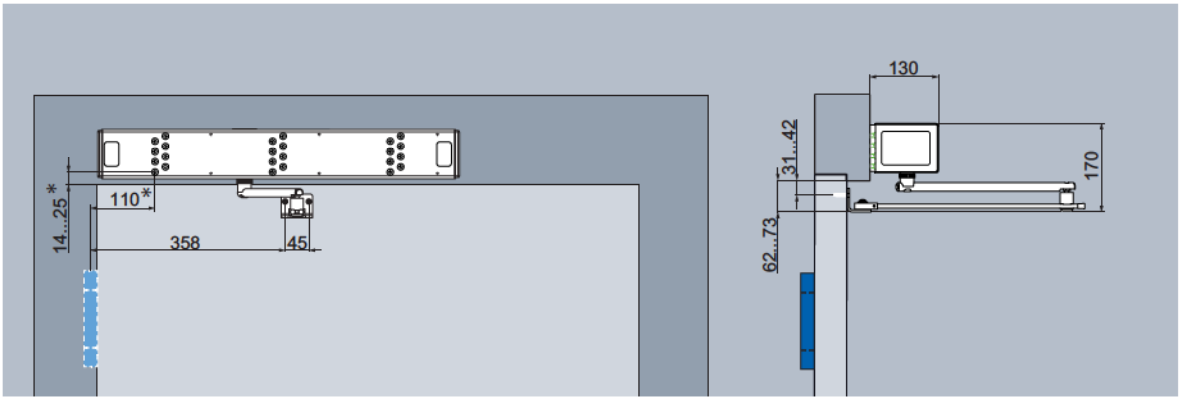
ETS 73 Head mounting hinge-opposite side with standard arm (push)

Installation drawing ETS 64-R single leaf



ETS 64-R – Single leaf head mounting hinge-opposite side with slide rail and mounting plate

*Reference dimension- all further holes must be drilled according to the specifications of the door or profile manufacturer.
All information in brackets can vary according to the clamp (clamp-13 or clamp +20)



ETS 64-R – Single leaf head mounting hinge-opposite side with standard arm and mounting plate

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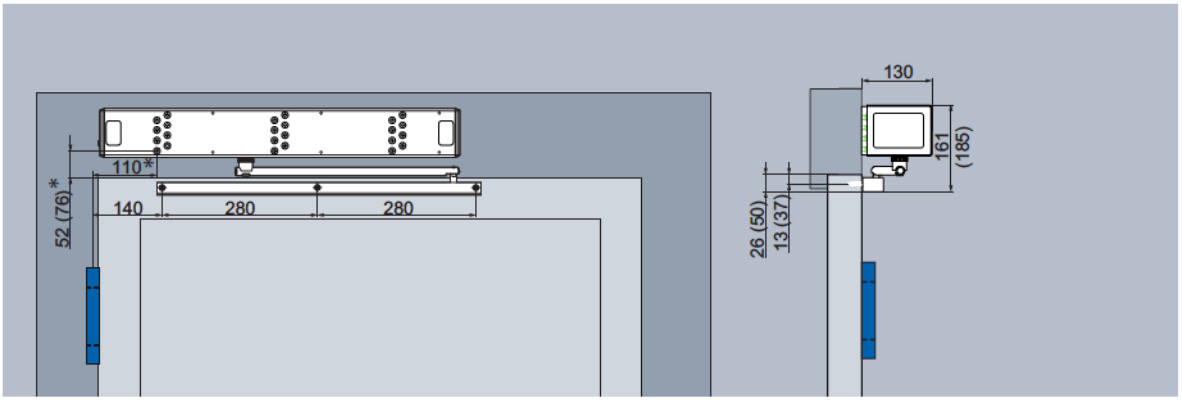

ETS 64-R – Single leaf head mounting hinge side with slide rail and mounting plate

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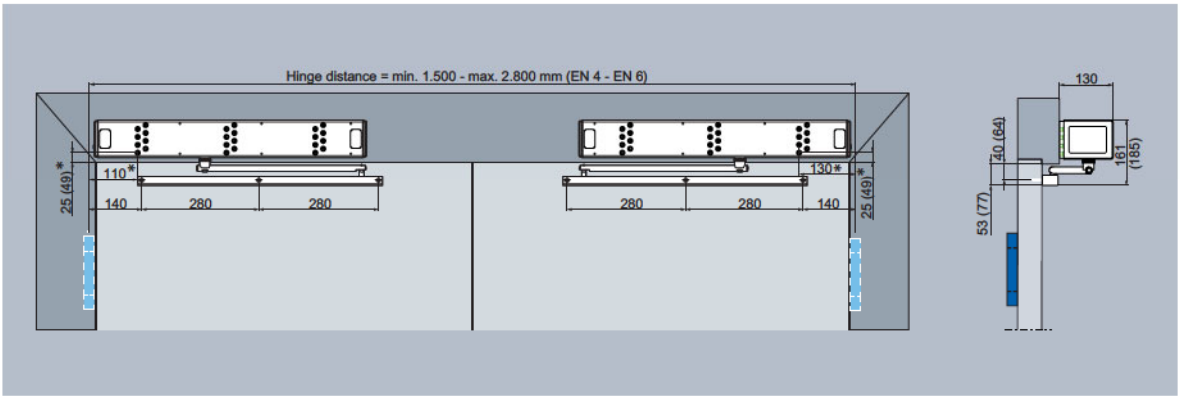
Installation drawing ETS 64-R double leaf



ETS 64-R – Double leaf head mounting hinge-opposite side with slide rail and mounting plate

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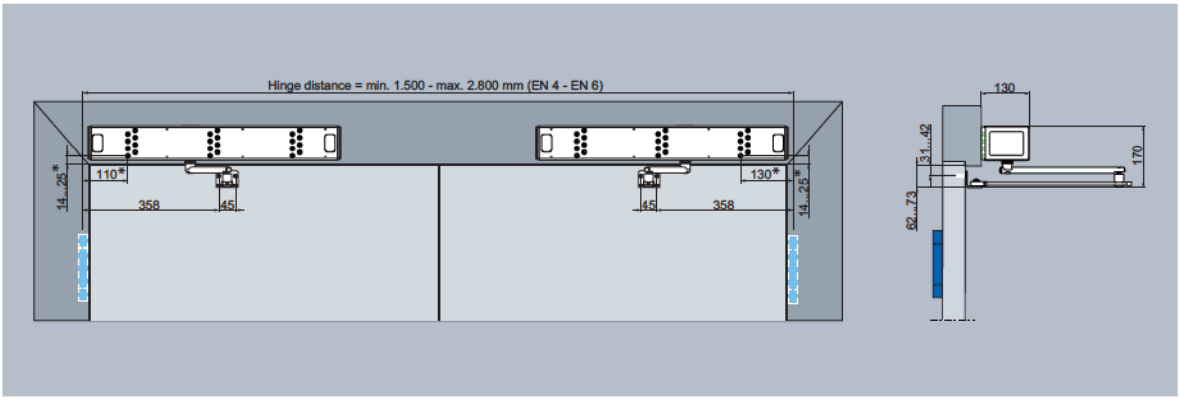

ETS 64-R – Double leaf head mounting hinge-opposite side with standard arm and mounting plate

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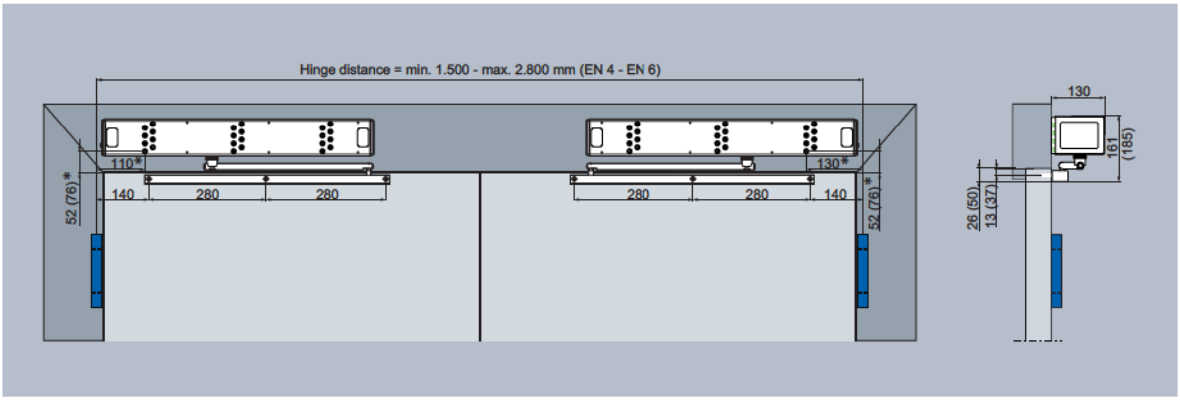
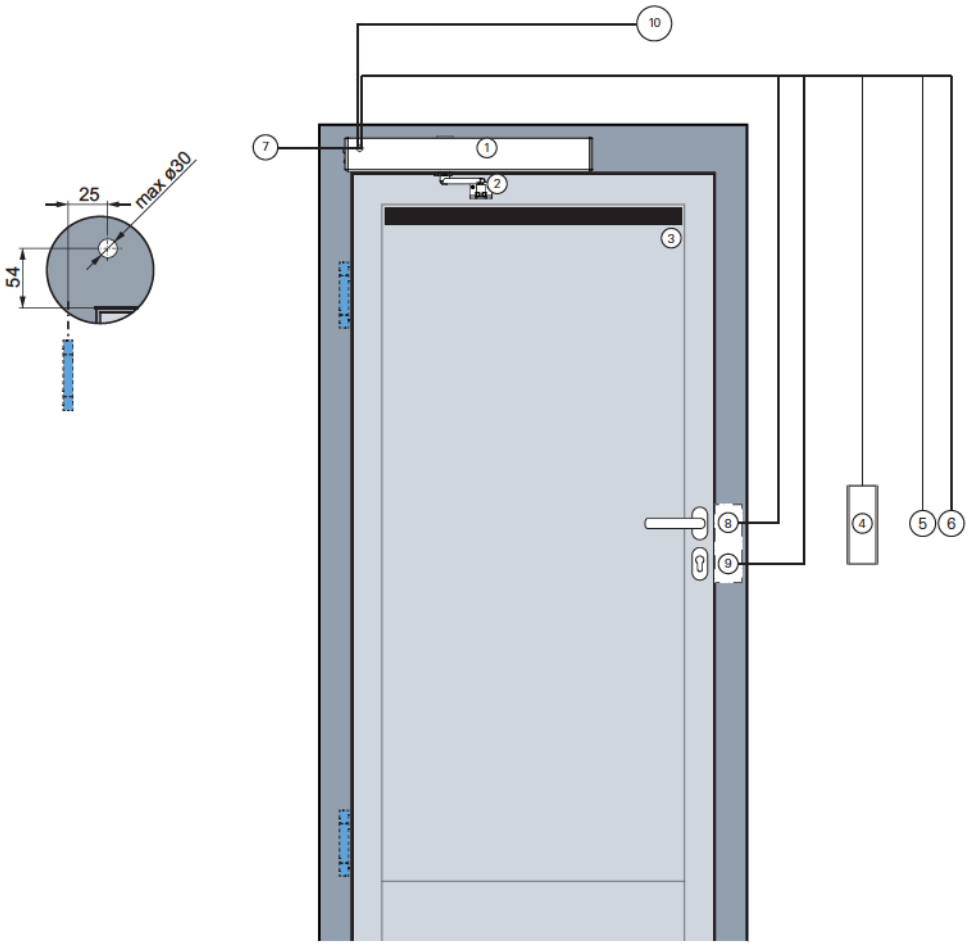
All information in brackets can vary according to the clamp (clamp-13 or clamp +20)



ETS 64-R – Double leaf head mounting hinge side with slide rail and mounting plate

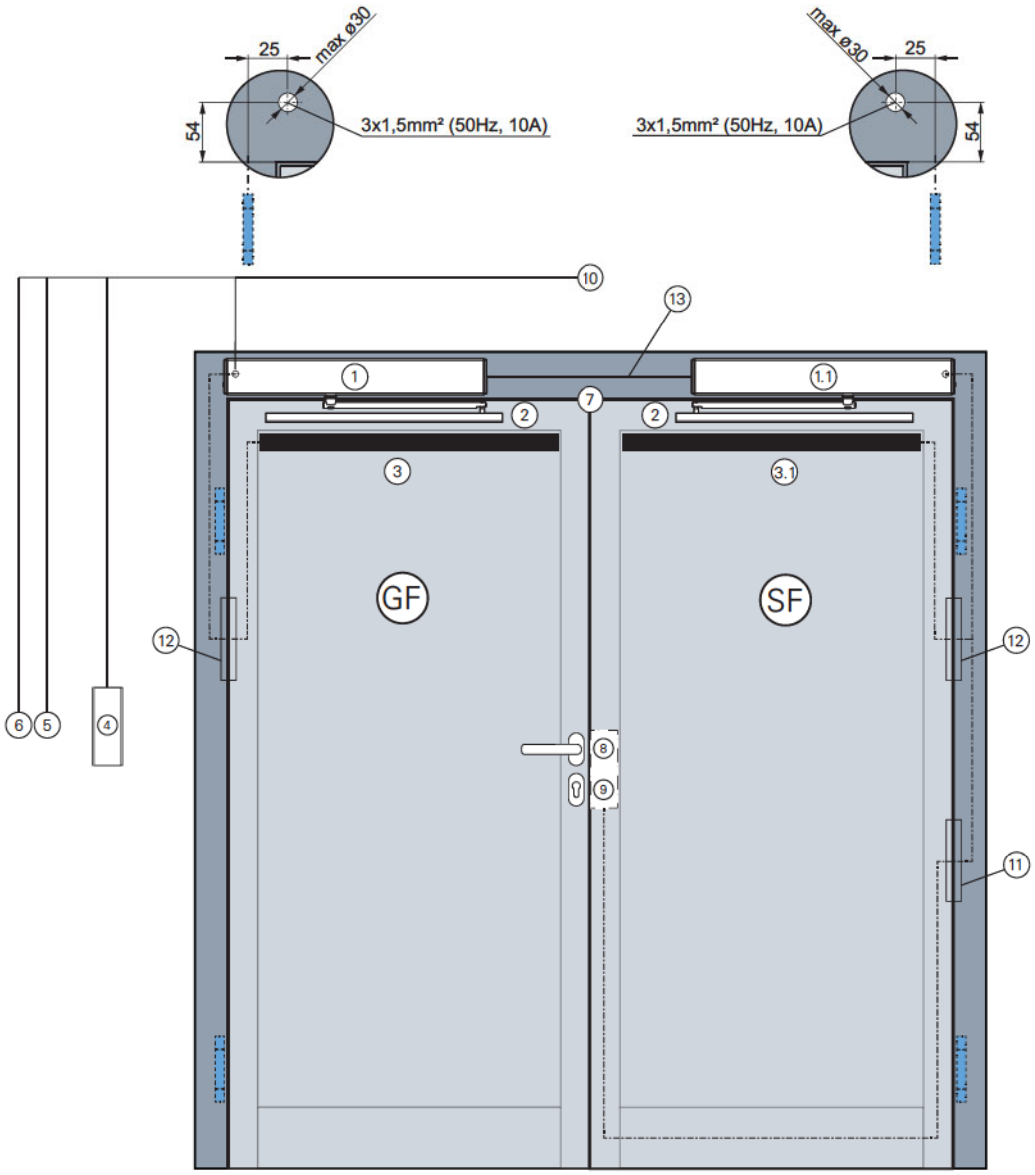
*Reference dimension- all further holes must be drilled according to the specifications of the door or profile manufacturer. For rebated doors please use the long pins (included in delivery)
All information in brackets can vary according to the clamp (clamp-13 or clamp +20)

ETS 73 - Cable plan single leaf



Pos.	Drawing	Cable	Comment
1	ECO ETS 73		Mounting hinge side or hinge-opposite side
2	Normal arm or slide rail (push)		Mounting on door leaf hinge side or hinge-opposite side
3	Sensor strip set for hinge or hinge-opposite side with stop or reverse function	supplied by ECO	For internal cabling the cable is installed in advance, otherwise the cable is installed externally with cable transition (black).
4	Large button internal	4 x 0,6 mm² oder 4 x 0,8 mm²	Concealed socket, cable installed in advance
4.1.	Large button external	4 x 0,6 mm² oder 4 x 0,8 mm²	Concealed socket, cable installed in advance
5	Emergency button „Door Closed" (optional)	4 x 0,8 mm²	Concealed socket, cable installed in advance
6	Bedix switchpoint	4 x 0,8 mm²	Concealed socket, cable installed in advance
7	Power cable 230V	3 x 1,5 mm²	50 Hz, 10 A
8	E-opener 24V	4 x 0,6 oder 0,8 mm²	Cable installation in advance inside the frame
9	Control circuit contact	supplied by ECO	Cable installation in advance inside the frame
10	Radar (internal)	supplied by ECO	Cable installation in advance (or concealed)
10.1	Radar (external)	supplied by ECO	Cable installation in advance (or concealed)

ETS 73 - Cable plan double leaf

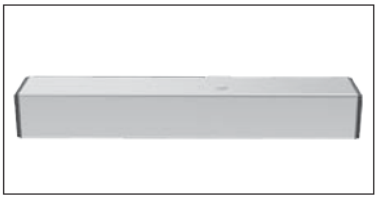


Pos.	Drawing	Cable	Comment
1	ECO ETS 73 (Master- GF)	3 x 1,5 mm² (50 Hz, 10 A)	Mounting hinge side or hinge-opposite side
1.1	ECO ETS 73 (Slave- SF)	3 x 1,5 mm² (50 Hz, 10 A)	Mounting hinge side or hinge-opposite side
2	Standard arm or slide rail		Mounting on door leaf hinge side or hinge-opposite side
3	Sensor strip set GF	Cable from ECO, Installed to Master- GF	internal cabling in advance, otherwise cable installed externally with cable transition
3.1	Sensor strip set SF	Cable from ECO, installed to Slave- SF	internal cabling in advance, otherwise cable installed externally with cable transition
4	Large button internal	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
4.1	Large button external	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
5	Bedix	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
6	alternative operating elements	4 x 0,6 oder 0,8 mm²	Concealed socket, cable installed in advance
7	ECO dual locking, or E-opener in SF	bei E-Öffner- 4 x 0,6 mm²	Cable installed in advance in the frame
8	E-opener 24V	4 x 0,6 oder 0,8 mm²	Cable installed in advance in SF
9	Control circuit contact	4 x 0,8 mm²	Cable installed in advance in SF
10	Radar (internal)	4 x 0,8 mm²	Cable installed in advance (or concealed)
10.1	Radar (external)	4 x 0,8 mm²	Cable installed in advance (or concealed)
11	internal cable transition	for E-opener and smoke protection RSK	Optional, in advance
12	internal cable transition	for sensor strips	Optional, in advance
13	CAN cable for control of closing sequence regulation for T0 doors	supplied by ECO	Cable installed in the frame (in advance) or in the continuous drive cladding (optional)

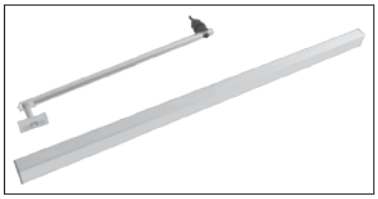
Check list orders - ETS

		Fire protection		leaf		Leaf width	Bedix		Button		Radar		Sensor strips		Finger protection blind	Emergency off		E-opener		RSK	
Pos.	Type of arm	yes	no	1	2	in mm	yes	no	internal	external	internal	external	Hinge side	hinge opposite side		yes	no	yes	no	yes	no

Hardware



Drive



Slide rails

Standard arms

Operating elements

Bedix

Button GFT

Radar

Security elements

Sensor strips

Finger protection

Emergency off

Accessories locks

E-opener

RSK

Motor driven locks

Fair Stuttgart,
Germany

ECO **Schulte**
Global confidence.

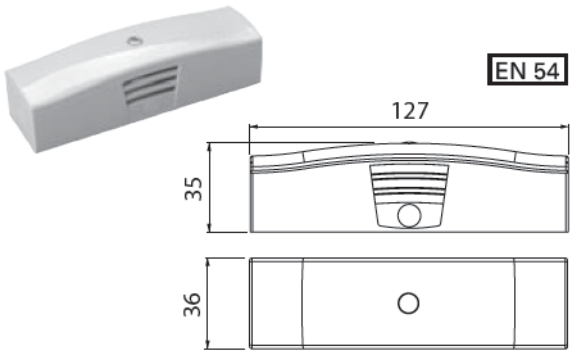
All over the world, wherever people value quality, reliability and safety, ECO Schulte products have been in use for many years. The combination of functionality and design have brought the ECO systems international recognition.

At this point we would like to say thank you for the global confidence that has been shown in ECO Schulte products. We see this as a challenge to continue to satisfy the demands of our customers and the market through constant development and carefully tailored production.

Smoke switch ORS 142 W - Standard

- Function: Scattered light
- Alarm level smoke acc. to **EN 54,** Part 7
- Release temperature: 70 ± 5° C
- Supply voltage: 18 to 24 V DC
- Power input: at 28 VDC Max. 22 mA
- Degree of protection: IP 42
- Ambient temperature:-20 to +75° C

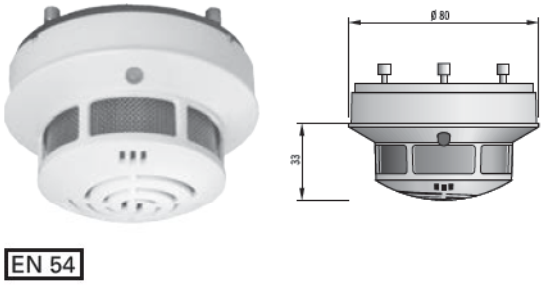
ORS 142 W - Standard	Article number
Smoke switch ORS 142 W - Standard	355000572
Cover for ORS 142 W	3543007350002



ORS 142 ceiling smoke switch

- Smoke detection: according to **EN 54**, Part 7
- Temperature: 70°C
- Operating voltage: 18 – 28 V DC
- Current power: at 28 V DC, rest 22 mA, Alarm 11 mA, Fault 16 mA,
- Relay contact: Opener
- Switching voltage: 30 V DC
- Switching current: 1A
- Switching power: 30 W
- Protection type: IP 42
- Temperature range:-20°C bis +60°C

Ceiling smoke switch	Colour / Material	Article number
ORS 142	White RAL 9010	350200000052100

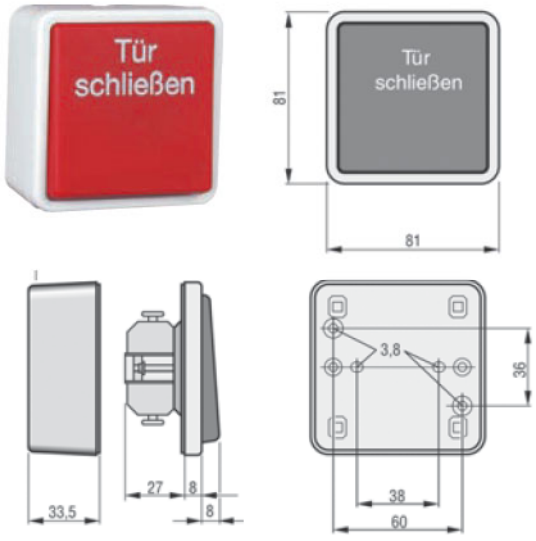


HAT 02

Hand-operated button for mounting in dry environments, for the manual activation of hold-open mechanisms in accordance with DIBt guidelines

- Mounting: On-wall / concealed
- Relay contact: Opener
- Switching voltage: 30 V DC
- Switching current: Max. 1 A
- Protection type: IP 20

Hand-operated button	Article number
HAT 02	356500143



Finger protection blind (FSR)

To prevent squashing or pinching between the door and the frame on the hinge-opposite side.

- Can be mounted retrospectively

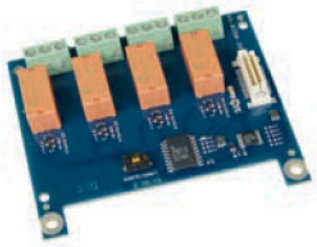
Finger protection blind	Total height	Article number
FSR	1.920 mm	3504710132

Relay board (RSP)

Relay board of the ETS. 4 freely configurable relays for controlling acoustic or optic transmitters or to signal the door status (e.g. open, closed, locked, fault)

- Can be mounted retrospectively

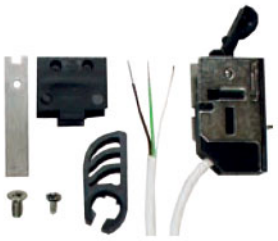
Relay board	Article number
RSP	350548215



Dead bolt switch contact (RSK)

Dead bolt switch contact for installation in the closing plate. Switches the power unit off as soon as the lock is mechanically locked. This prevents a failure of the power unit when locking. Includes 6 m cable.

Dead bolt switch contact	Article number
Dead bolt switch contact (RSK)	35851RK1335U06



Standard opener with smoke protection approval

Door openers with red connection blocks are designed for 12 or 24 Volt (each +/- 15%) continuous operation.

Standard opener with smoke protection approval	Article number
A-5002-B	35851A5002B
A-5002-FB (Latch guide)	35851A5002FB

Fire protection door opener

Door openers with red connection blocks are designed for 12 or 24 Volt (each +/- 15%) continuous operation.

Fire protection door opener	Article number
FT-502-B	35851FT502B
FT-502-FB (Latch guide)	35851FT502FB

Motor driven locks

FlipLock drive

- Multi-point locking with panic function, mechanically self-locking
- 3 patented latches + 3 long bars
- Motor unit with integrated control
- Pin and lock variations available

FlipLock access

- Multi-point locking with panic function, mechanically self-locking
- 3 patented latches + 3 long bars
- Motor unit with external control
- Pin and lock variations available
- Evaluation of all contacts (potential-free)

Motor driven locks	Article number
FlipLock drive	On request
FlipLock access	On request

Operating console D-BEDIX for ETS

With the D-BEDIX, the different types of operation can be chosen directly. In addition, the most important door settings can be implemented with ease. The display clearly shows the types of operation, menu settings and possible faults.

Operating console	Article number
D-BEDIX	358500063514215

Flip switch (GFT)

- Funtion door "OPEN".
- Operating voltage 250 VAC / 30 VDC
- Current power max. 10 AAC / 2 ADC
- Protection type IP 40
- 225 x 83 mm

Flip switch	Colour	Article number
GFT	platinum grey RAL 7036	358506443210000

Remote control for ETS

For the remote control of the motor, for disabled-friendly opening of the door.

Remote print for easy insertion on the control board of the ETS.

Handheld radio transmitter with a range of up to 10 m..

Remote control	Article number
Radio set (breadboard and handheld transmitter)	358545035039600
Handheld transmitter	358500006465722

Radar 1000 Domino

Radar movement detector as opening pulse generator for automatic doors.

Radar 1000 Domino	Article number
Domino 1000 RC	358506466127000

Radar Merkur 2 ES.C

Radar movement detector as opening pulse generator for automatic doors, directional.

Radar Merkur	Article number
Merkur 2 ES.C	358506466126000

Sensor strips

Active infrared safety sensor for automatic doors. Secures the movement area. Stops or reverses when obstacles are identified.

- Inc. cable and external, flexible cable transition.
- **Set I** consisting of 2 sensor strips per leaf, up to max. 1.250 mm
- **Set II** consisting of 2 sensor strips per leaf, up to max. 1.600 mm
- **Set III** consisting of 2 sensor strips per leaf (BEA), up to max. 1.250 mm

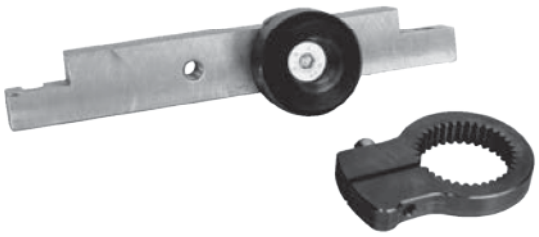
Sensor strips	Article number
Set I	358503050000000
Set II	358503060000000
Set III	358506466401

DIN 18650 EN 16005

Open stop for ETS (OA)

Mounted on the power unit to provide additional mechanical open stop. Can be used in combination with the standard arm and slide rails (not possible in combination with the short clamps).

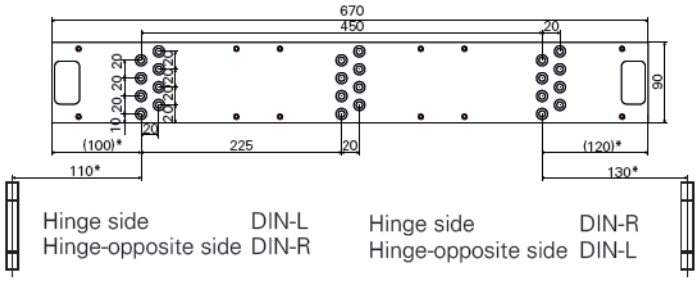
Open stop	Article number
OA ETS	358500450548106



Mounting plate for ETS (MPL)

Necessary for use in fire protection and for mounting on walls or narrow frame facings.

Mounting plate	Article number
MPL ETS	358500450548358



Clamps (extension shaft)

For use in special mounting situations

Clamp (extention shaft)	Article number
Clamp short (-13 mm)	358500450548124
Clamp 20 (+20 mm)	358500450548125
Clamp 50 (+50 mm)	358500450548126

Cladding for double leaf doors

Cladding/spacer for 2-leaf systems. The cladding is cut to size on site and clamped between the two motors. Consists of cladding and fixing material.

Cladding	Total length	Article number
V-ETS	On request	On request

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Your company logo

■ SYSTEM TECHNOLOGY FOR THE DOOR