Swing Door Operator

DORMA CD 400

Universal applicability, simple installation, reliable function

The reliability of high-convenience access solutions is gaining in importance against the background of growing security awareness. In order to meet the demands associated with this security imperative and, at the same time, ensure high traffic load capacities, DORMA has developed its CD 400 system, an advanced electro-mechanical swing door operator with slide channel.
As a flexible system that can be integrated within a wide range of applications, the DORMA CD 400 is ideal for the automation of swing doors up to a width of 1400 mm and leaf weights up to 160 kilograms. Aesthetically elegant and with a high degree of user friendliness, the system is characterised by its extensively noiseless operation. Indeed, thanks to the electro-mechanical drive principle, the acoustically CD 400 is virtually imperceptible. The flexibility of the CD 400 is underlined by the wide variety of operating modes it offers. Aside from the functions “Off”, “Automatic”, “Exit Only” and “Permanent Open”, the control unit is also equipped for capabilities such as “Night-Bank”, “Push & Go” and “Low Energy” for disabled access, plus a pushbutton-activated emergency off/stop function. This means that this efficient operator for swing doors can be programmed to fit perfectly into a wide range of different situations.
The CD 400 also impresses through its ease of installation. With the mounting backplate, fixing costs, effort and time for fitting the CD 400 are minimised. The unit is also adaptable to any fixing position (pull side, push side, LH/RH). This variability means that the myriad safety requirements governing modern access solutions can be readily satisfied to optimum effect. The CD 400 is ideal both for emergency exits and fire doors. The powerful automatic drive unit combined with the radar motion detectors inconspicuously integrated in the SSCD sensor slide channel for door activation, and also the two sensors for monitoring the through-passage zone, provide further safety benefits. And, of course, the CD 400 can also be combined with the Softline slide channel.
A significant aspect in functional terms today is the reliable protection of buildings and/or sections of same against unauthorised access. With the extensive range of program variants, the CD 400 system in conjunction with the appropriate components is able to ensure effective restriction.

DIN 18263/T4

Features and benefits

- Simple and time-efficient installation with specially designed mounting backplate
- One operator can be used for all applications whether LH, RH, pull side or push side
- Customising adjustment of the operating curve can be performed simply and flexibly using the Automatic Service Program (ASP)
- Settings and servicing can be implemented with ease via the infra-red interface without the need for extensive dismantling
- Numerous special functions already integrated in the standard system (no expansion modules needed)
- Top jamb and door leaf installation both possible
- Optional integration of motion detectors and safety sensors in the sophisticated slide channel assembly

Applications	
Standard doors, 1 and 2 leaves **Fire and smoke check doors, 1 and 2 leaves** Door leaf width in standard doors per leaf	750 to 1400 mm
Door leaf width for fire and smoke-check doors per leaf	750 to 1250 mm
Door leaf weight, max.	160 kg
Frame reveal depth – for standard doors	– 40 mm to 200 mm
– for fire and smoke check doors installation on the pull side installation on the push side	0 mm to 200 mm 0 mm to 100 mm

Caution! Use special operator model only for push side (opposite hinge side) mounting on fire and smoke check doors – must be specifically indicated in order.

Technical data of the drive unit	
Closing force	EN 5
Dimensions Height x Depth x Width	90x120x700mm
Extended/continuous cover for 1 and 2-leaf operators	○
Weight per operator	17 kg
Opening angle, max.	110°
Adjustable via learning cycle and ASP	●
Suitable for pull and push side and LH/RH doors	●
Power consumption, max.	250 W
Power supply data	230 V, 50/60 Hz
Power supply for external accessories	24 V DC; 1,5 A
Class of protection	IP 20
TÜV type-approved	●
Compliant with EU low-voltage directives	●
Quality-assured manufacture to ISO 9000	●

Adjustable operating curve parameters	
Opening time, infinitely variable	≥ 3 s
Closing time, infinitely variable	≥ 3 s
Hold-open time, infinitely variable	0 s to 180 s
Backcheck, infinitely variable	●
Delayed action, infinitely variable	●
Latching/delatching action, infinitely variable	●
Wall blanking, infinitely variable	●
Operating speed, infinitely variable	●
Acceleration angle of door	●
Deceleration angle of door	●
Opening angle	●
Static force	●
Holding current	●
Delayed opening for locking mechanism	●

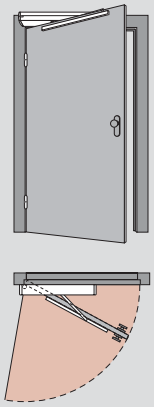
Operational modes		
Off		●
Automatic		●
Permanent open		●
Exit only		●
Partial opening (for double doors, and nurse/bed control)		●
Special functions	Airlock control	○
	Timed airlock function	○
	Night-bank control	●
	Push & Go mode	●
	Low-energy mode	●
	Operation to prEN 12650	●
	Current impulse relay function	●
Door closer function in de-energised condition		●

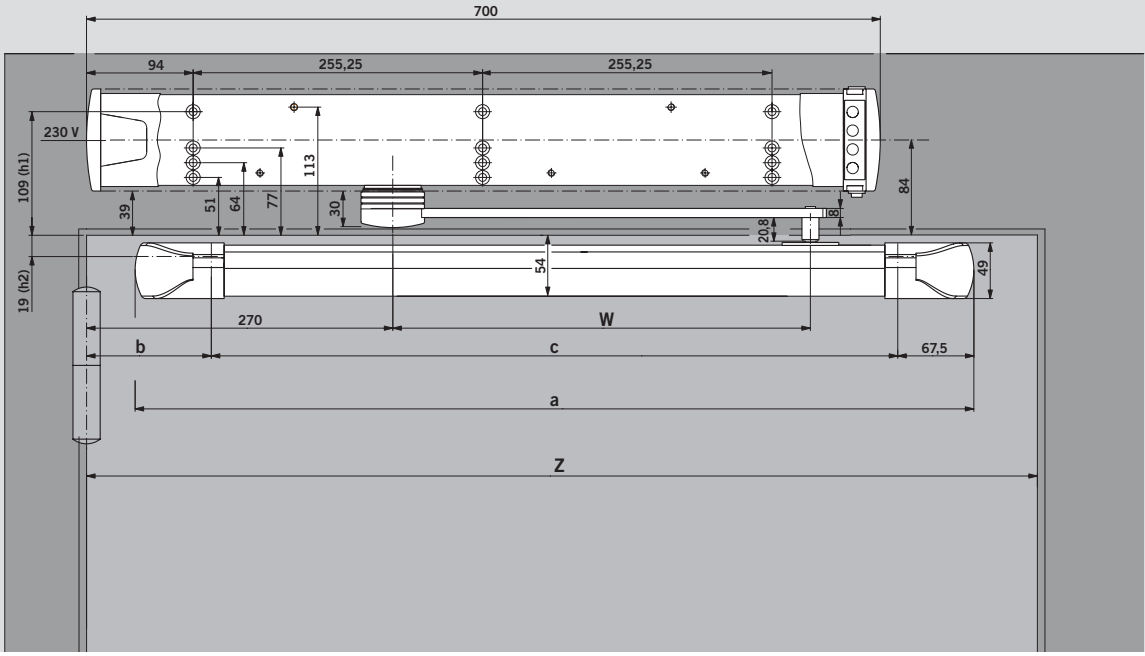
Prepared for connection of the following accessories
SSCD sensor slide channel with integrated radar detector and infra-red sensors
Softline slide channel
Infra-red sensors: DORMA IRS-2-33/70/90/120 (pull and push sides)
Electro-mechanical door locking mechanism
Electric strike (fail-safe/fail-secure principle)
Emergency exit motor lock with automatic locking action: DORMA SVP
Access control system
Module for interfacing with building management system (EIB compatible)
2 different activators
Smoke detector with integral power pack
Smoke detectors: DORMA RM, RM-ED (power supply for smoke detectors 24 V DC, stabilised)
Radio remote control
Double door co-ordinator
External program selectors (internal integrated program switch as standard)

● standard ○ optional

Installation on the pull side with SSCD sensor slide channel

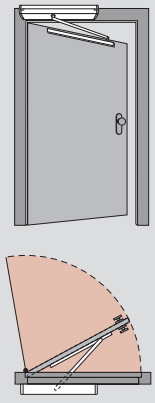
LH and RH doors
(example shows LH/ISO 6 door)

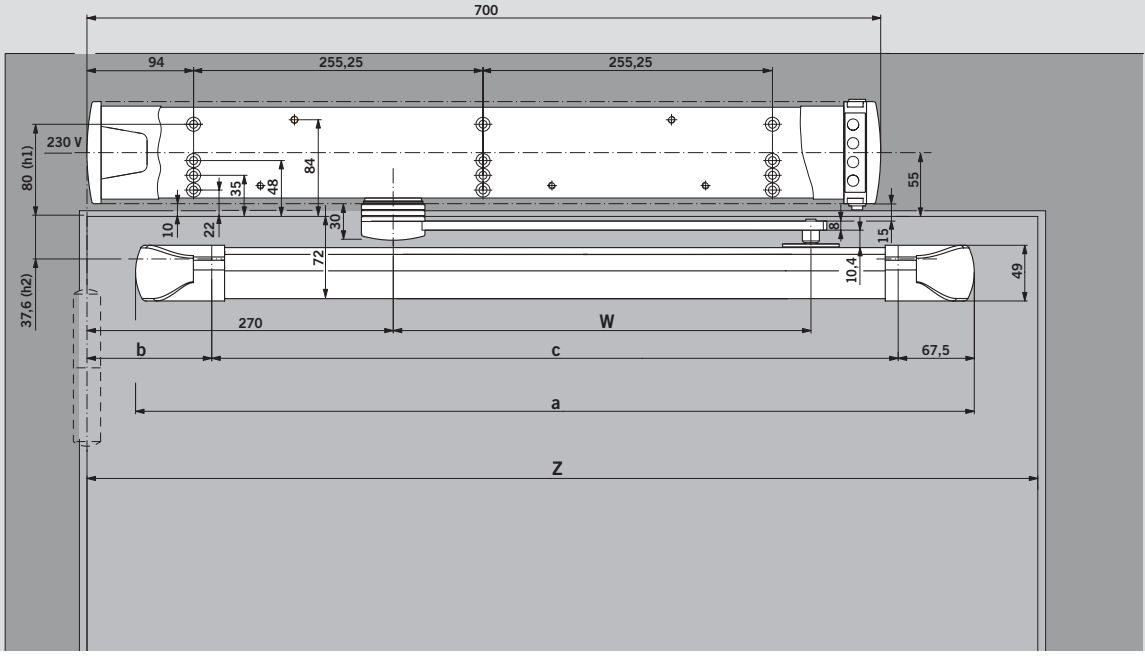


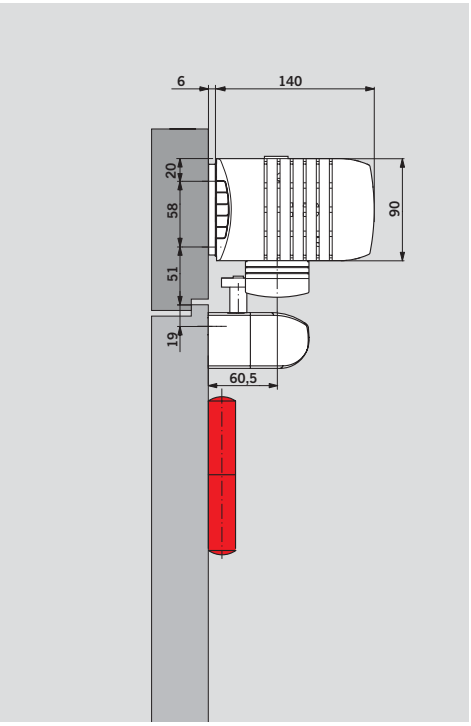


Installation on the push side with SSCD sensor slide channel

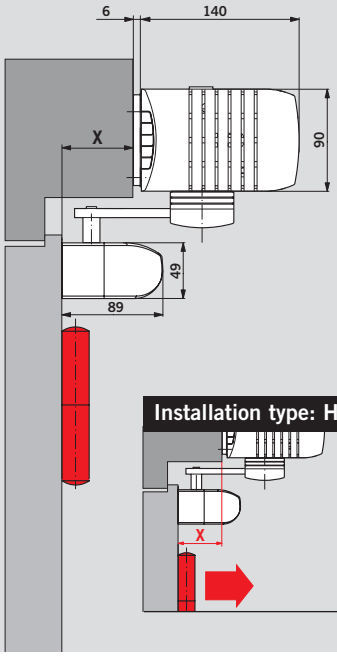
LH and RH doors
(Example shows RH/ISO 5 door)







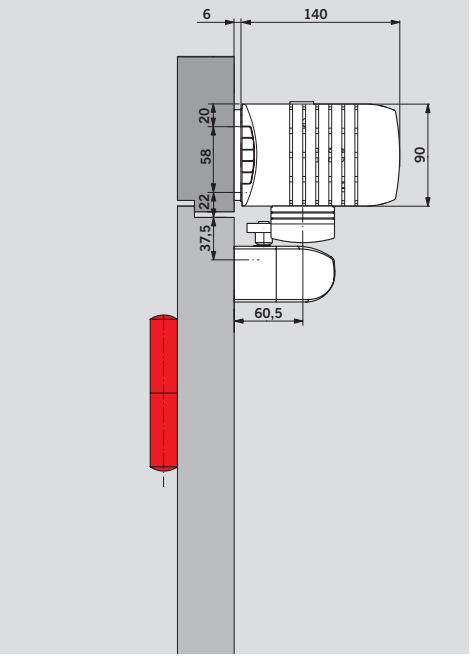
Operator arm lengths with SSCD



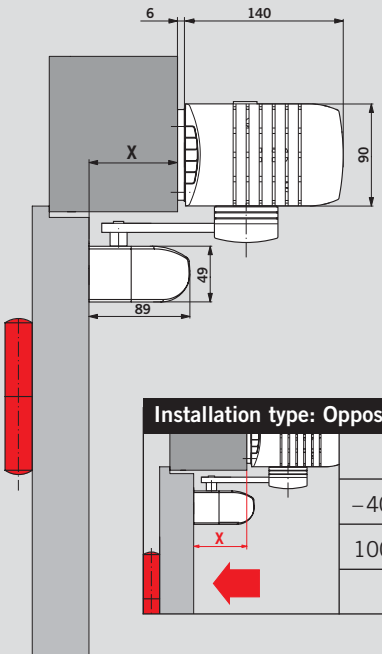
*If mounted on the pull side (hinge side) of fire and smoke check doors, the CD 400 may only be used for frame/lintel depths from 0 to 200 mm.

Installation type: Hinge side, pulling

X*	Z	W	a	b	c
−40 ≤ x < 0	≥ 800	370	740	110	605
0 ≤ x < 60	≥ 900	460	740	210	605
60 ≤ x ≤ 200	≥ 1100	600	740	420	605



Operator arm lengths with SSCD



**If mounted on the push side (opposite hinge side) of fire and smoke check doors, the CD 400 may only be used for frame/lintel depths from 0 to 100 mm. For frame/lintel depths of 0 to 50 mm, the main arm length required is 460 mm, and for depths from 50 to 100 mm, the main arm length required is 600 mm. Make sure that the door width and slide channel length are sufficient for the application!

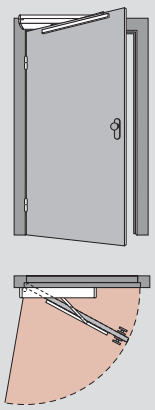
Installation type: Opposite hinge side, pushing

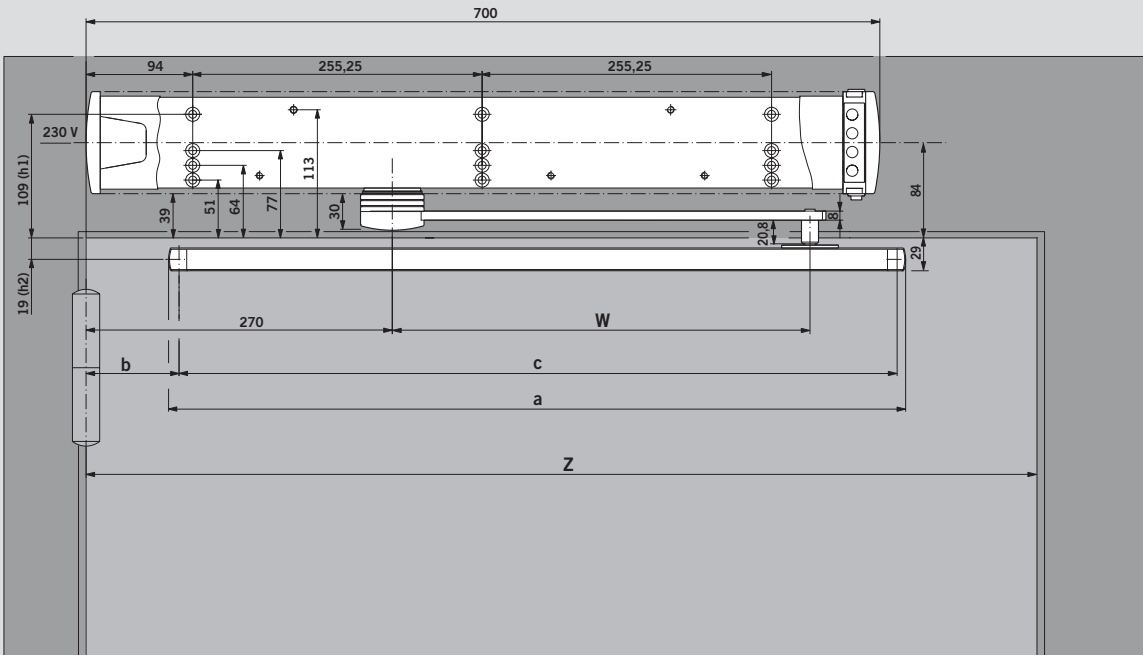
X**	Z	W	a	b	c
−40 ≤ x < 100	≥ 950	460	840	120	705
100 ≤ x ≤ 200	≥ 1050	600	940	130	805

X = Frame reveal depth
Z = Minimum door width
W = Minimum operator arm length
a = Minimum length SSCD
b, c = Recommended hole dimensions

Installation on the pull side with Softline slide channel

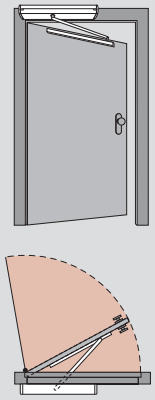
LH and RH doors
(Example shows LH/ISO 6 door)

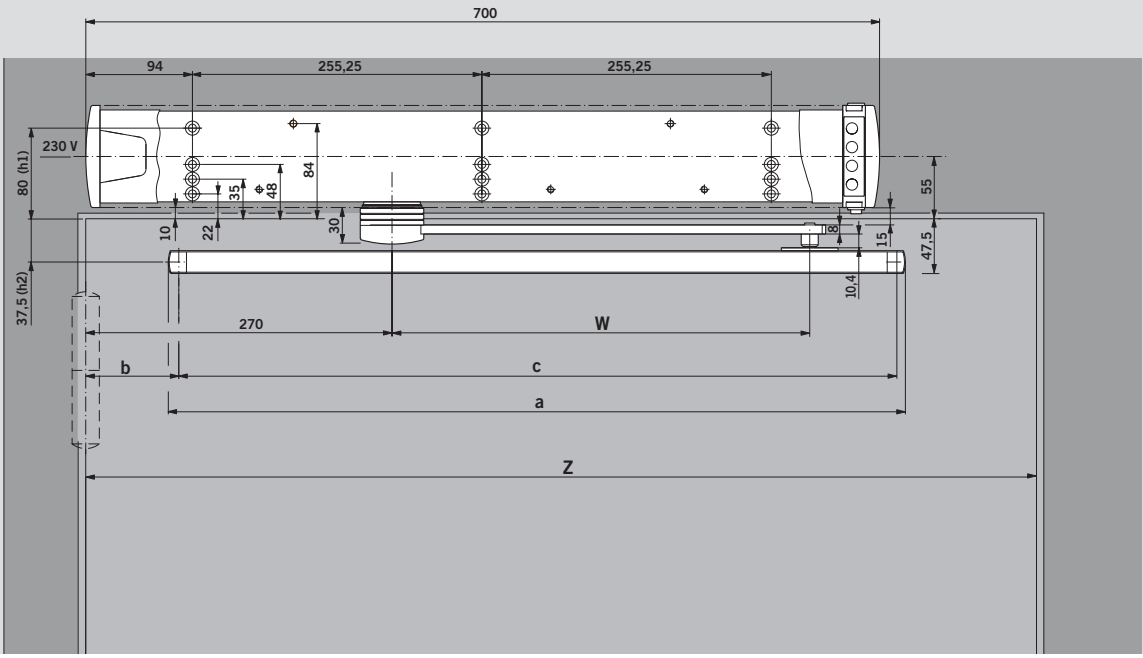


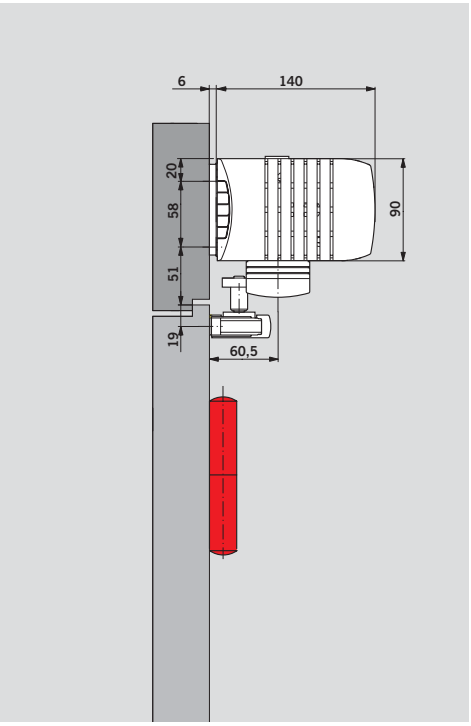


Installation on the push side with Softline slide channel

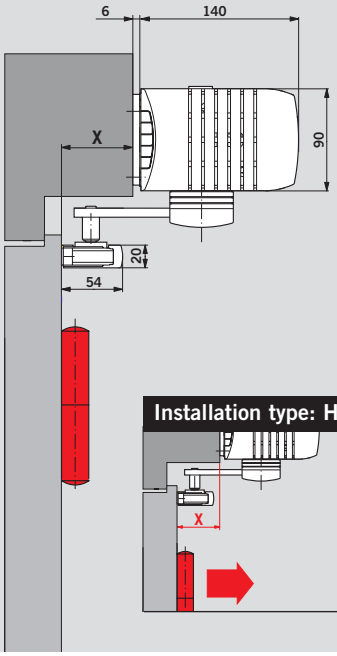
LH and RH doors
(Example shows RH/ISO 5 door)







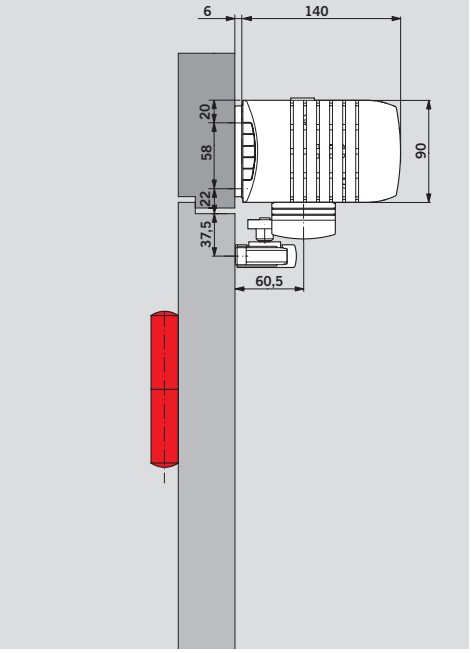
Operator arm lengths with Softline slide channel



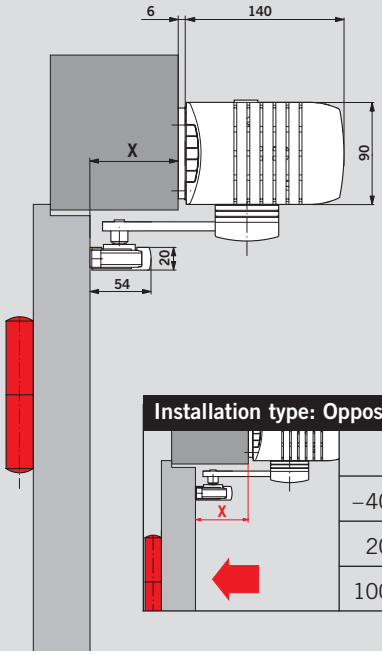
*If mounted on the pull side (hinge side) of fire and smoke check doors, the CD 400 may only be used for frame/lintel depths from 0 to 200 mm.

Installation type: Hinge side, pulling

X*	Z	W	a	b	c
−40 ≤ x < 0	≥ 750	370	652	80	635
0 ≤ x < 60	≥ 850	460	652	170	635
60 ≤ x ≤ 200	≥ 1000	600	652	355	635



Operator arm lengths with Softline slide channel



**If mounted on the push side (opposite hinge side) of fire and smoke check doors, the CD 400 may only be used for frame/lintel depths from 0 to 100 mm. For frame/lintel depths of 0 to 50 mm, the main arm length required is 460 mm, and for depths from 50 to 100 mm, the main arm length required is 600 mm. Make sure that the door width and slide channel length are sufficient for the application!

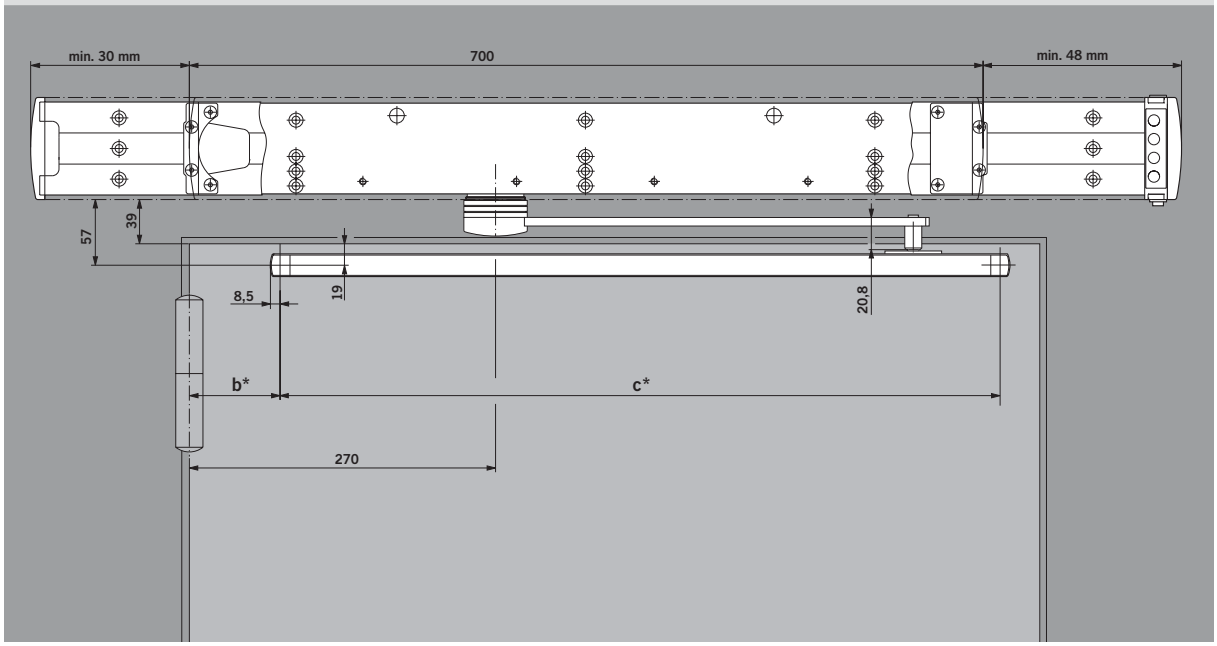
Installation type: Opposite hinge side, pushing

X**	Z	W	a	b	c
−40 ≤ x < 20	≥ 750	370	652	70	635
20 ≤ x < 100	≥ 850	460	723	90	706
100 ≤ x < 200	≥ 950	600	837	100	820

X = Frame reveal depth
Z = Minimum door width
W = Minimum operator arm length
a = Minimum length of slide channel
b, c = Recommended hole dimensions

CD 400, single leaf with extended cover

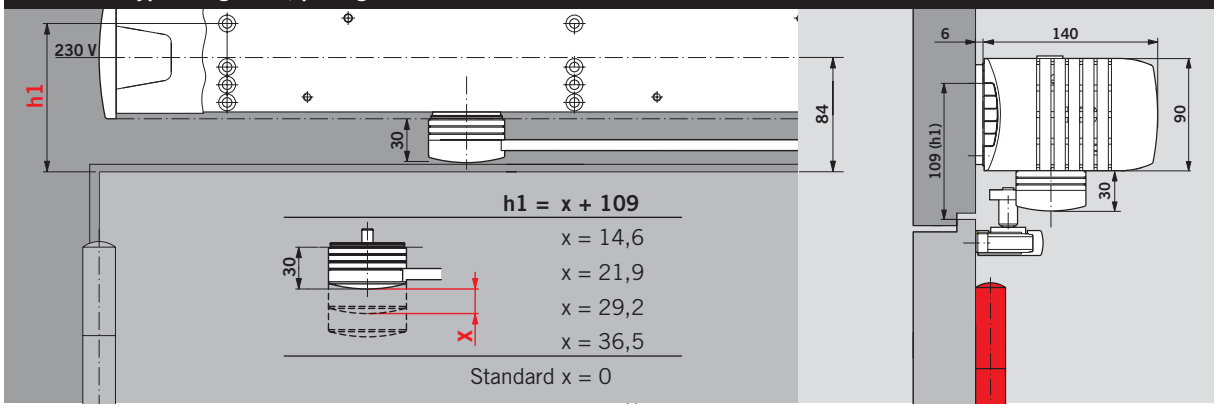
LH and RH doors
(Example shows LH/ISO 6 door on the pull side)



*see page 6/7

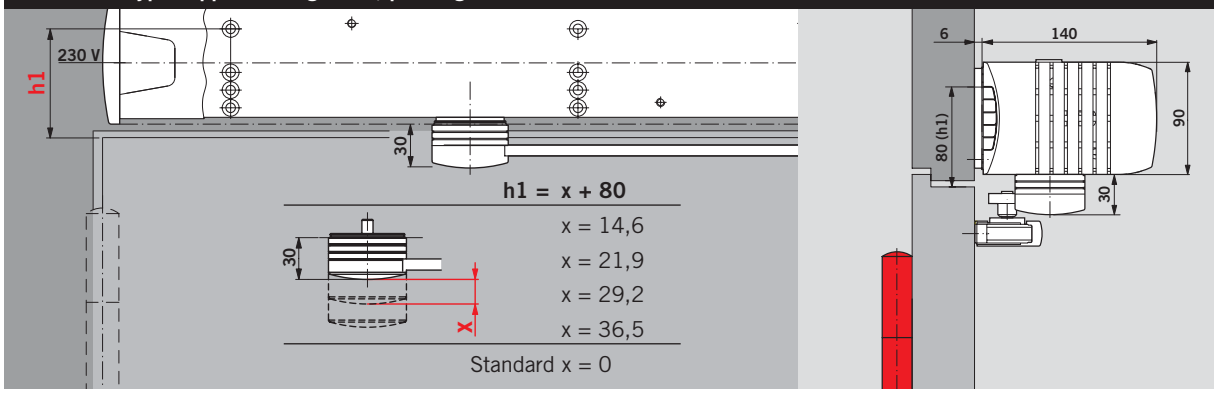
Spindle extensions

Installation type: Hinge side, pulling



h1 = x + 109
x = 14,6
x = 21,9
x = 29,2
x = 36,5
Standard x = 0

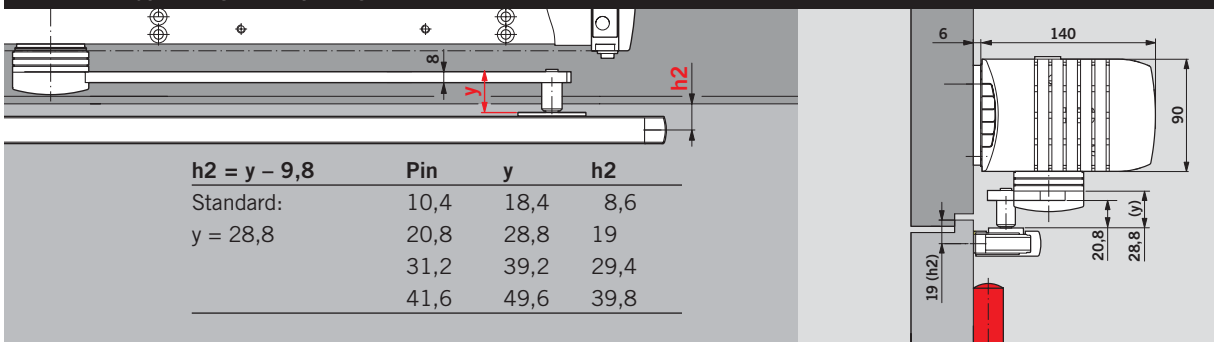
Installation type: Opposite hinge side, pushing



h1 = x + 80
x = 14,6
x = 21,9
x = 29,2
x = 36,5
Standard x = 0

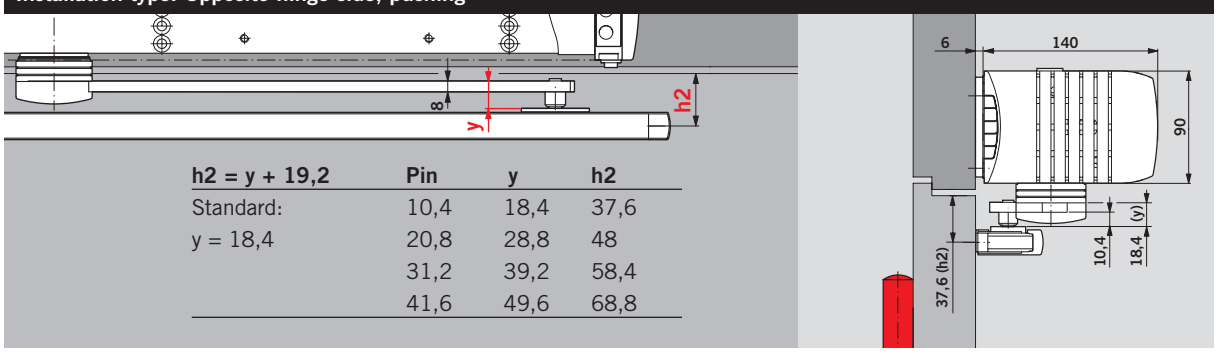
Pin lengths for the operator arm

Installation type: Hinge side, pulling



h2 = y – 9,8	Pin	y	h2
Standard:	10,4	18,4	8,6
y = 28,8	20,8	28,8	19
	31,2	39,2	29,4
	41,6	49,6	39,8

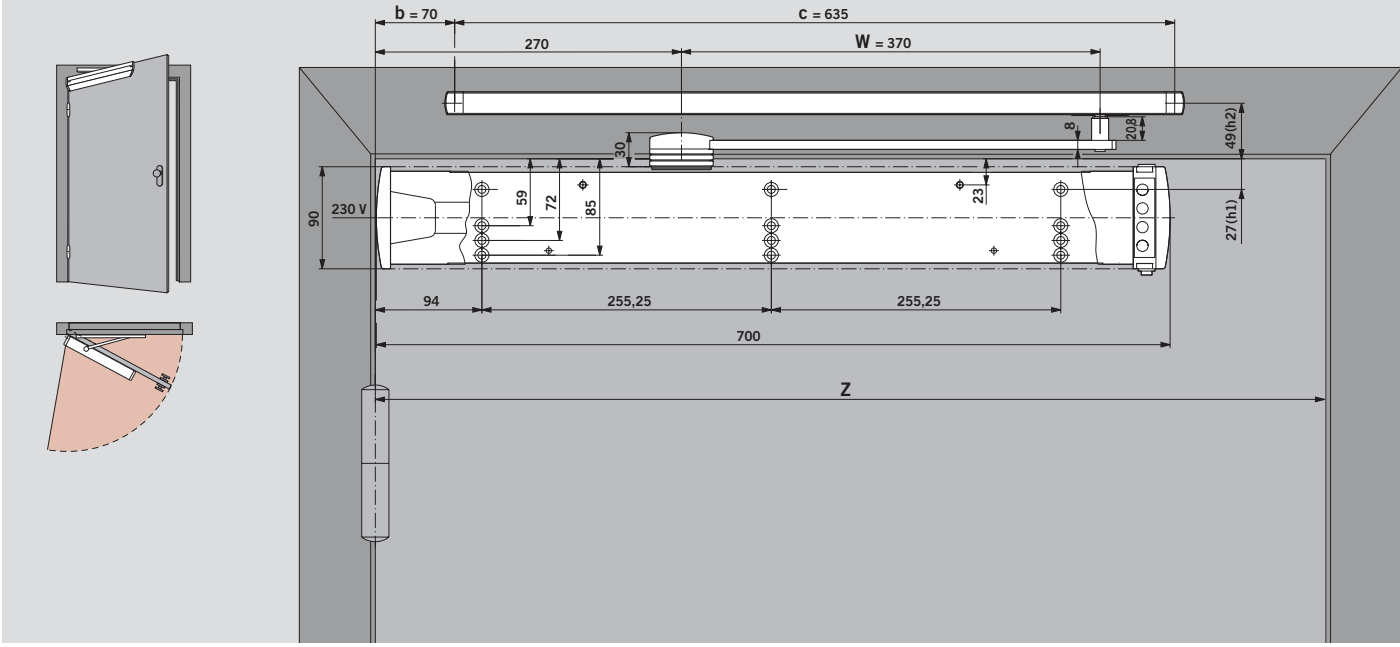
Installation type: Opposite hinge side, pushing



h2 = y + 19,2	Pin	y	h2
Standard:	10,4	18,4	37,6
y = 18,4	20,8	28,8	48
	31,2	39,2	58,4
	41,6	49,6	68,8

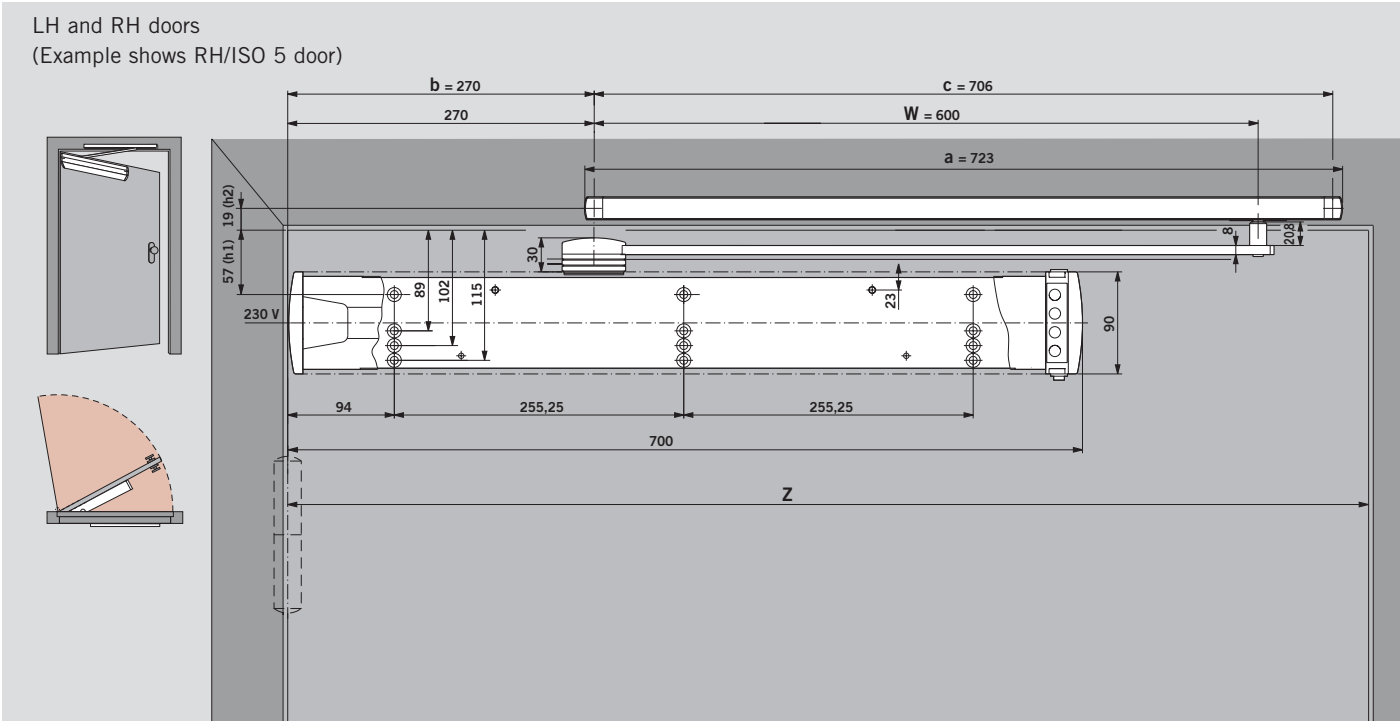
Door leaf installation on the pull side with Softline slide channel

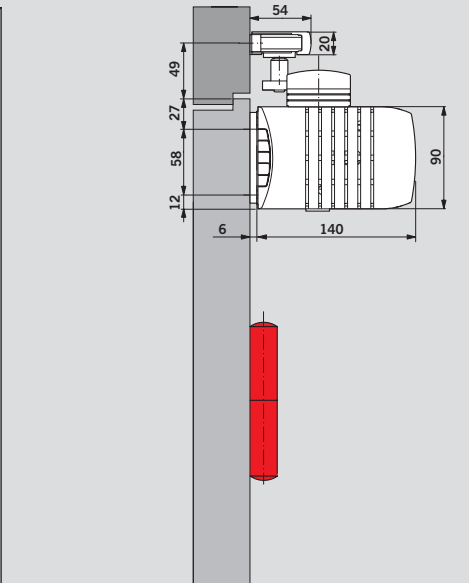
LH and RH doors
(Example shows LH/ISO 6 door)



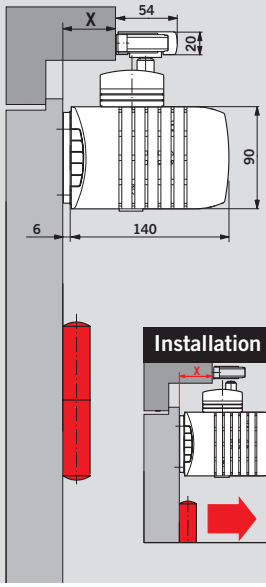
Door leaf installation on the push side with Softline slide channel

LH and RH doors
(Example shows RH/ISO 5 door)

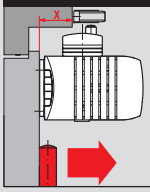




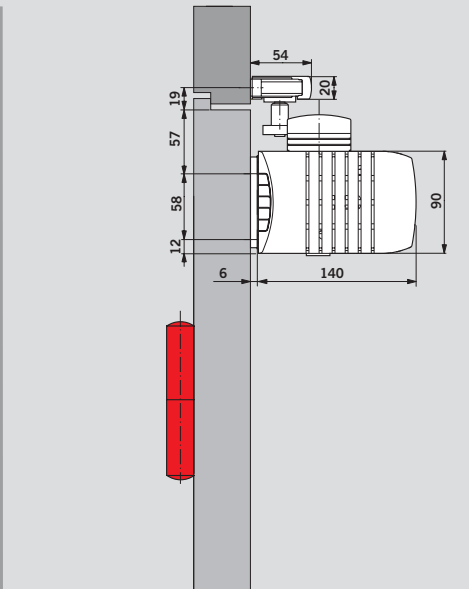
Operator arm lengths with Softline slide channel



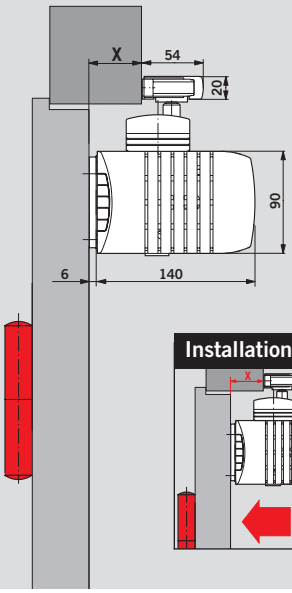
Installation type: Hinge side, pulling



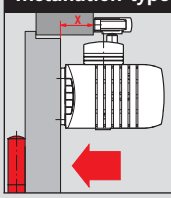
X	Z	W	a	b	c
–120 ≤ x ≤ 20	≥ 750	370	652	70	635



Operator arm lengths with Softline slide channel



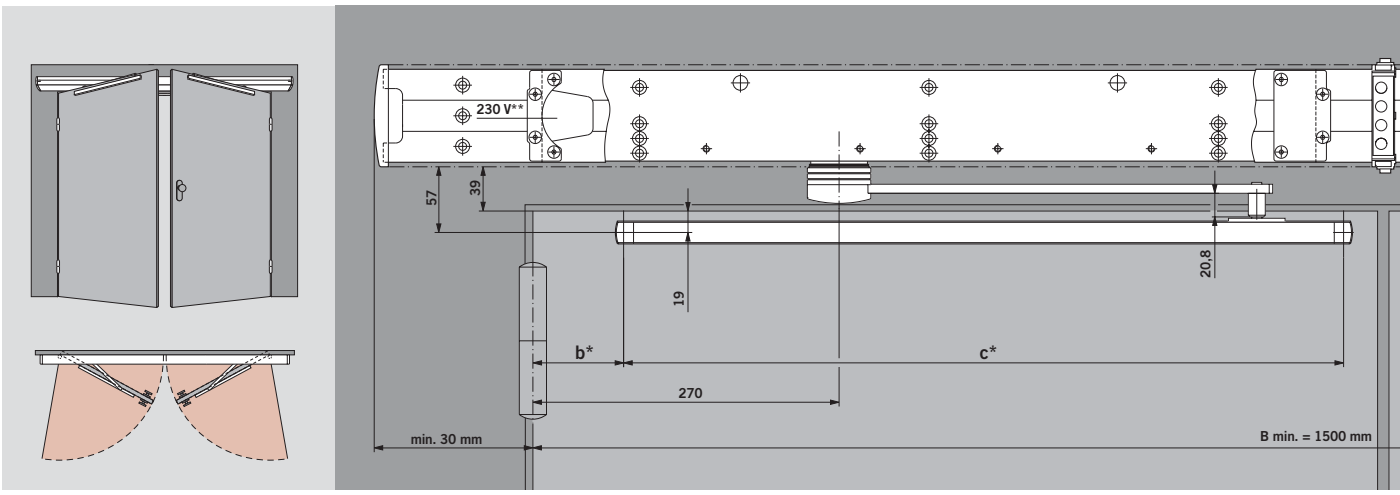
Installation type: Opposite hinge side, pushing



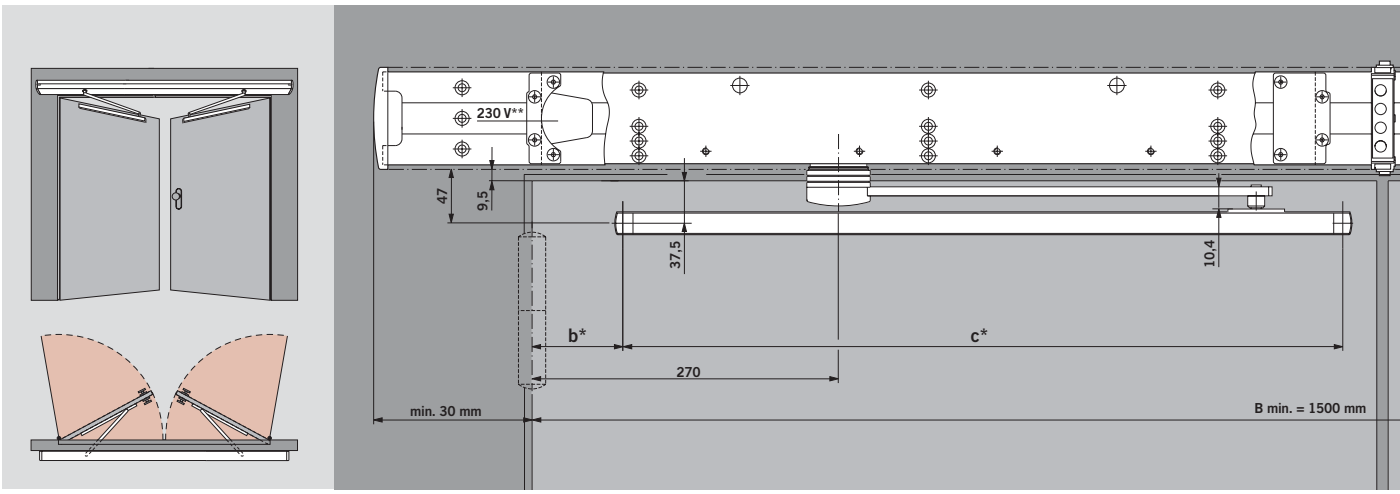
X	Z	W	a	b	c
–120 ≤ x ≤ 20	≥ 1000	600	723	270	706

X = Frame reveal depth
Z = Minimum door width
W = Minimum operator arm length
a = Minimum length of slide channel
b, c = Recommended hole dimensions

Installation on the pull side (with continuous cover)



Installation on the push side (with continuous cover)

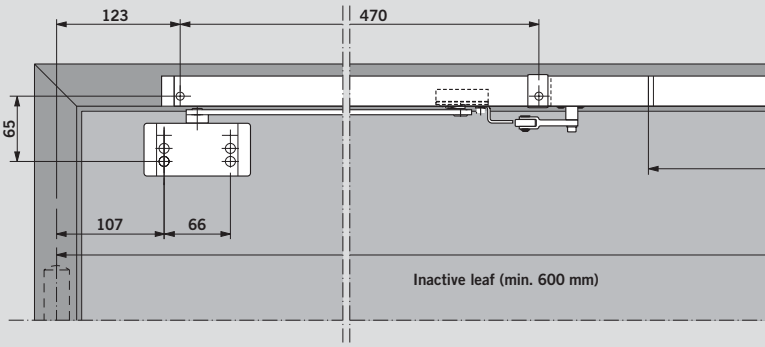


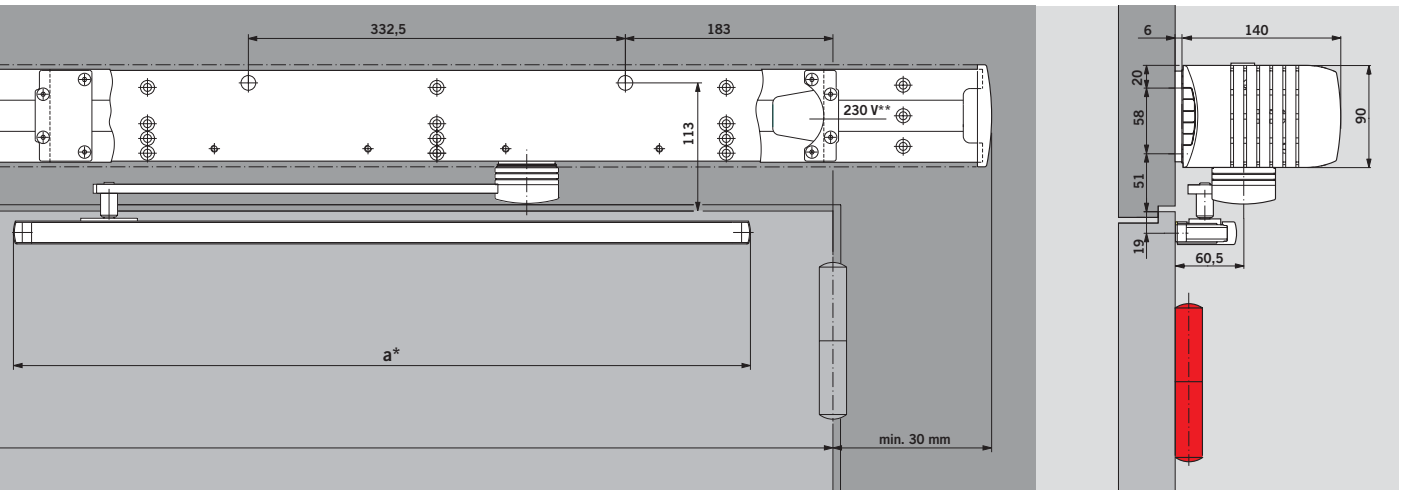
CD 400 with door co-ordinator

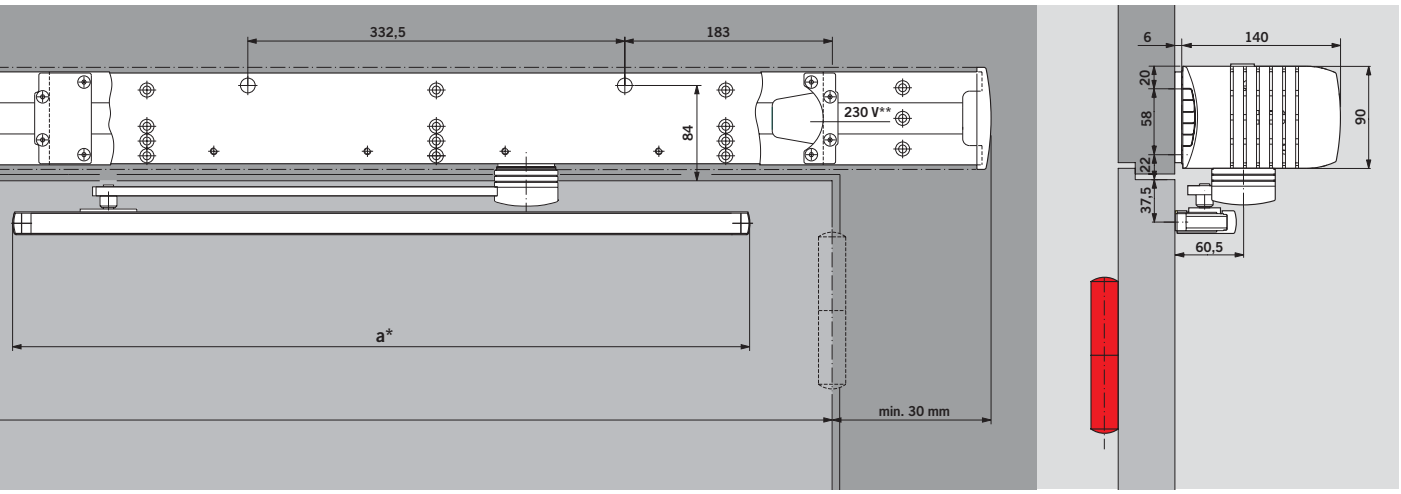
The CD 400 can be mounted on both the pull and push side of fire and smoke check doors. There are various door co-ordinators available for both applications, and these have to be mounted on the side of the door set opposite to that on which the operator is installed.
The DORMA RM-ED can be used as the control device for actuating the closing sequence in the event of a fire. The CD 400 can also be connected for the same purpose to fire alarm systems by others.
In the event of a fire, the door co-ordinators ensure that, once the smoke detector has responded, double doors close in the right sequence. The active leaf is retarded to ensure that it closes after the inactive leaf. The illustration shows by way of example the GSR door co-ordinator mounted on the push side (opposite hinge side) with the CD 400 installed on the pull side.

Approval certification
Approval certification relating to the use of the CD 400 on fire and smoke check doors plus ancillary information is available on request.

Example:
Active leaf LH/ISO 6 door. RH/ISO 5 door is mirror image

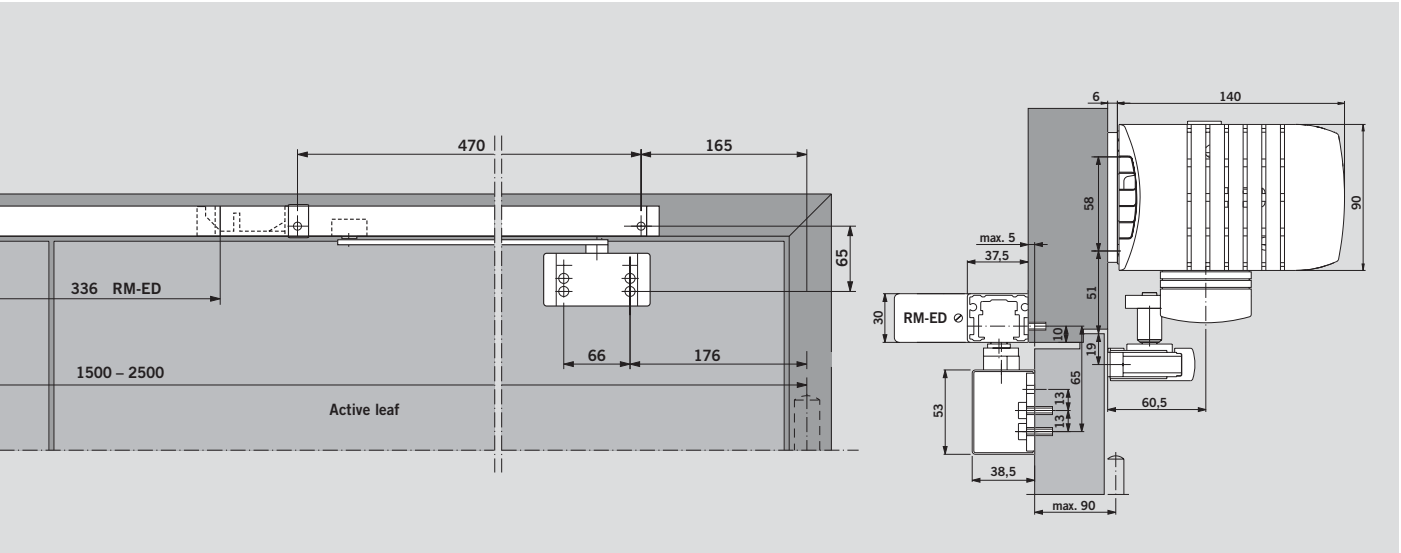




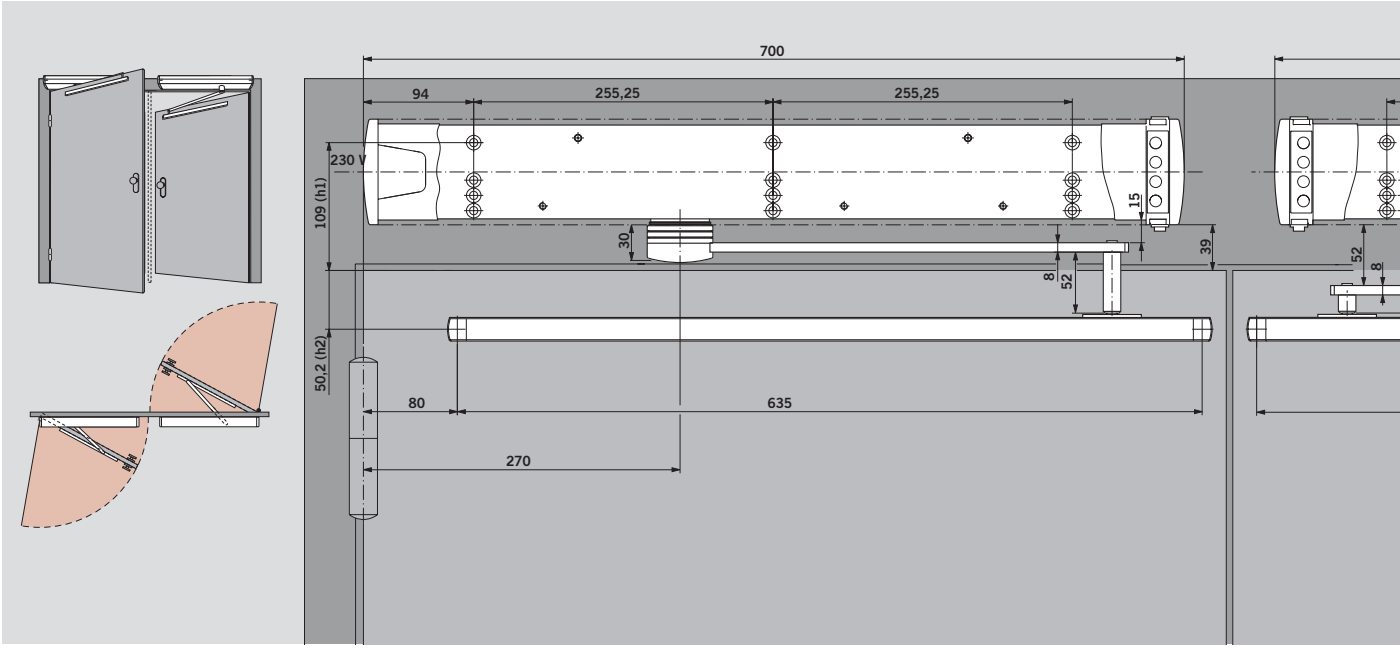


* see page 6/7

**Power supply feed can be either from the left or right.



Installation on pull side and push side (contraflow traffic)



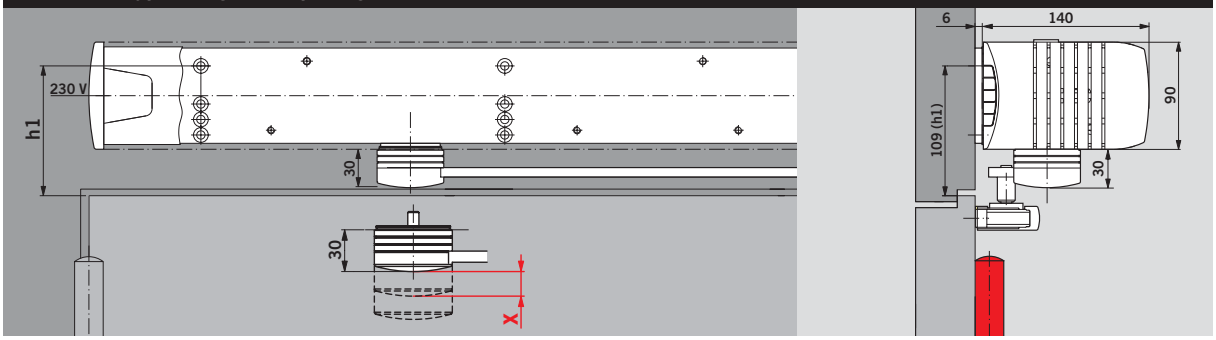
Spindle extensions

Spindle extensions for double-leaf contraflow variant

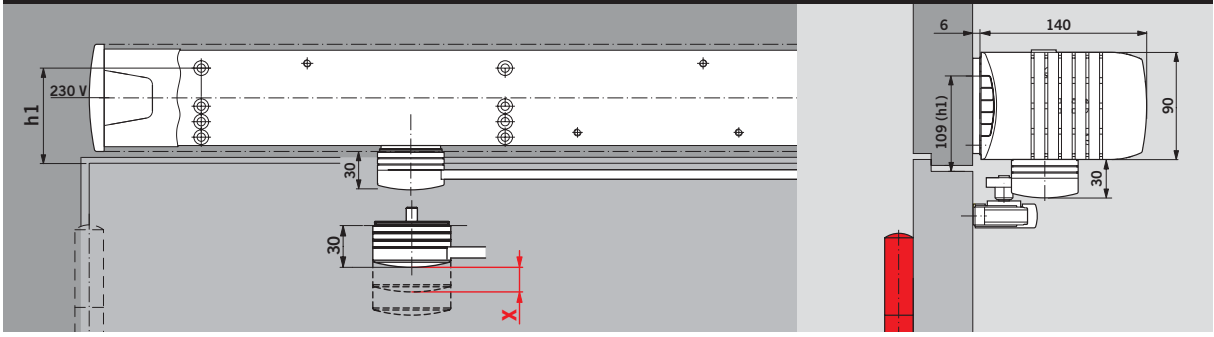
Door model	Hinge side operator, pulling Spindle extension **X**	Opposite hinge side operator, pushing Spindle extension **X**
With rebate at top	0.0 mm	36.5 mm
Without rebate at top	0.0 mm	29.2 mm

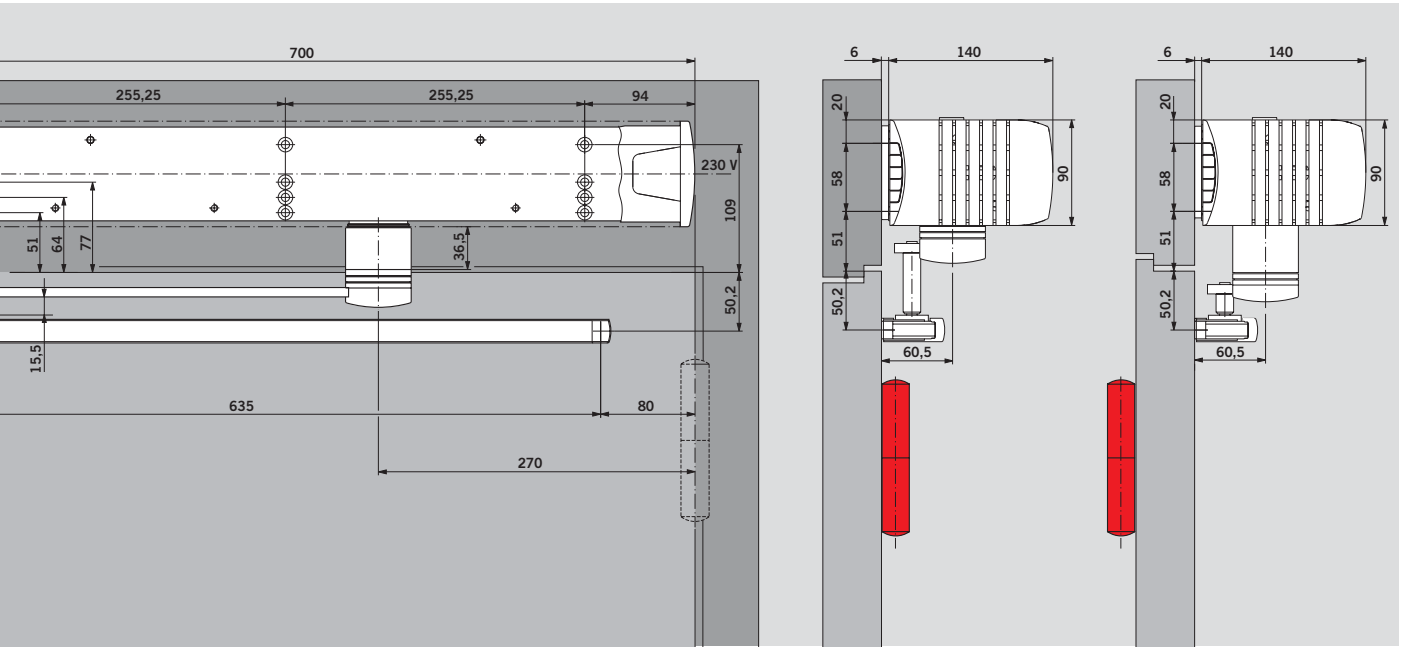
In all cases the difference between the spindle extensions must be constant for both operators.
In the case of doors with top rebates, the difference therefore must always be 36.5 mm.
For doors without top rebates the difference in spindle extension is smaller (29.2 mm).

Installation type: Hinge side, pulling



Installation type: Opposite hinge side, pushing



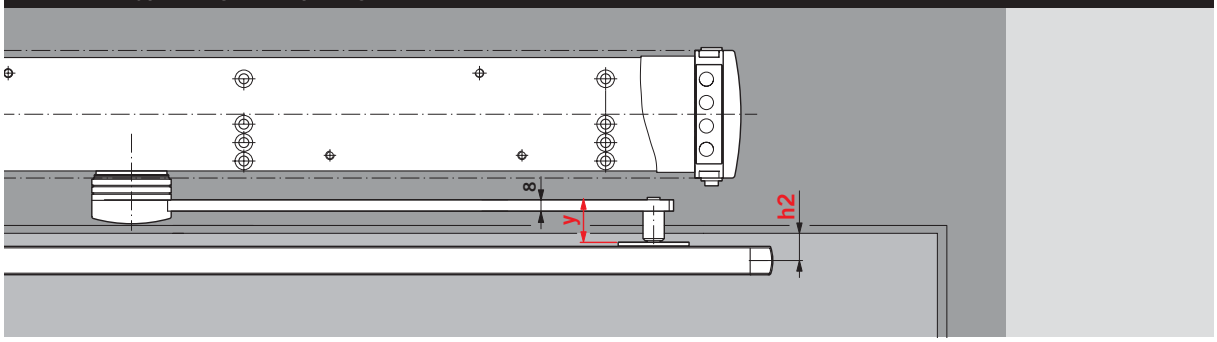


Pin lengths

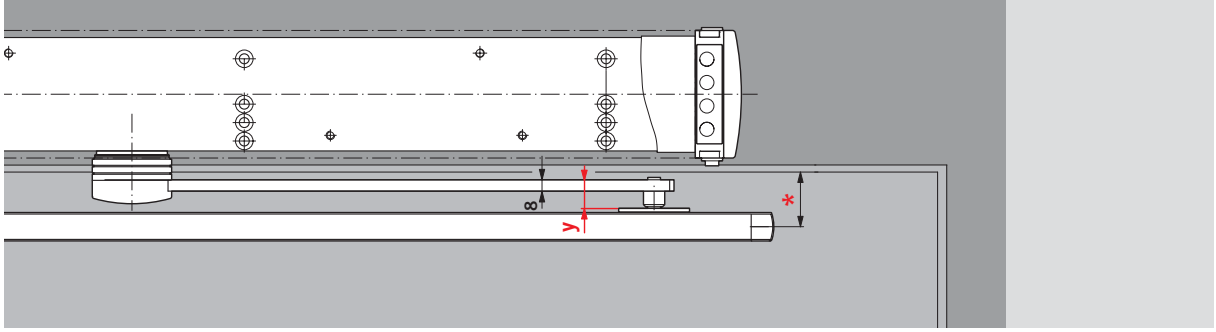
Pin lengths for operator arms for double-leaf contraflow variant

Door model	Hinge side operator, pulling			Opposite hinge side operator, pushing	
	Pin length of operator arm	y	h2	Pin length of operator arm	y
With rebate at top	52.0 mm	60.0 mm	50.2 mm	15.5 mm	23.5 mm
Without rebate at top	41.6 mm	49.6 mm	39.8 mm	12.4 mm	20.4 mm
	h2 = y – 9,8			***The relative heights of operator and slide channel on the push side are as per the specification for the operator/slide channel relationship on the pull side.**	

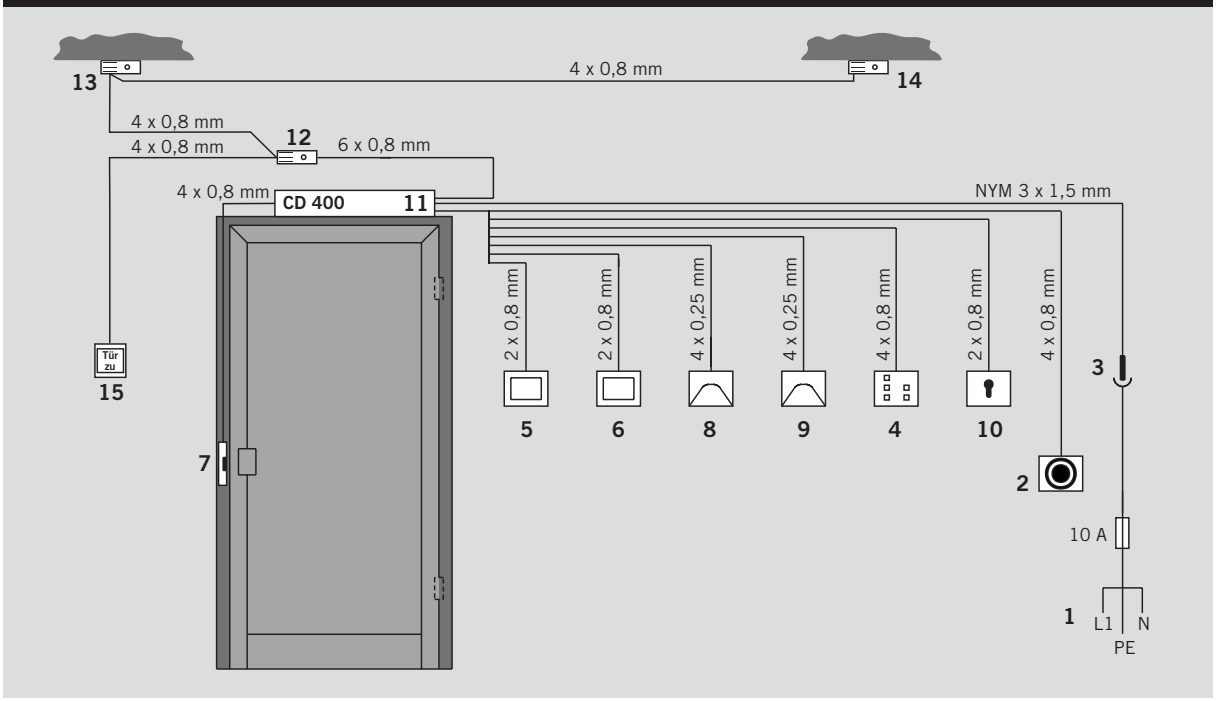
Installation type: Hinge side, pulling



Installation type: Opposite hinge side, pushing

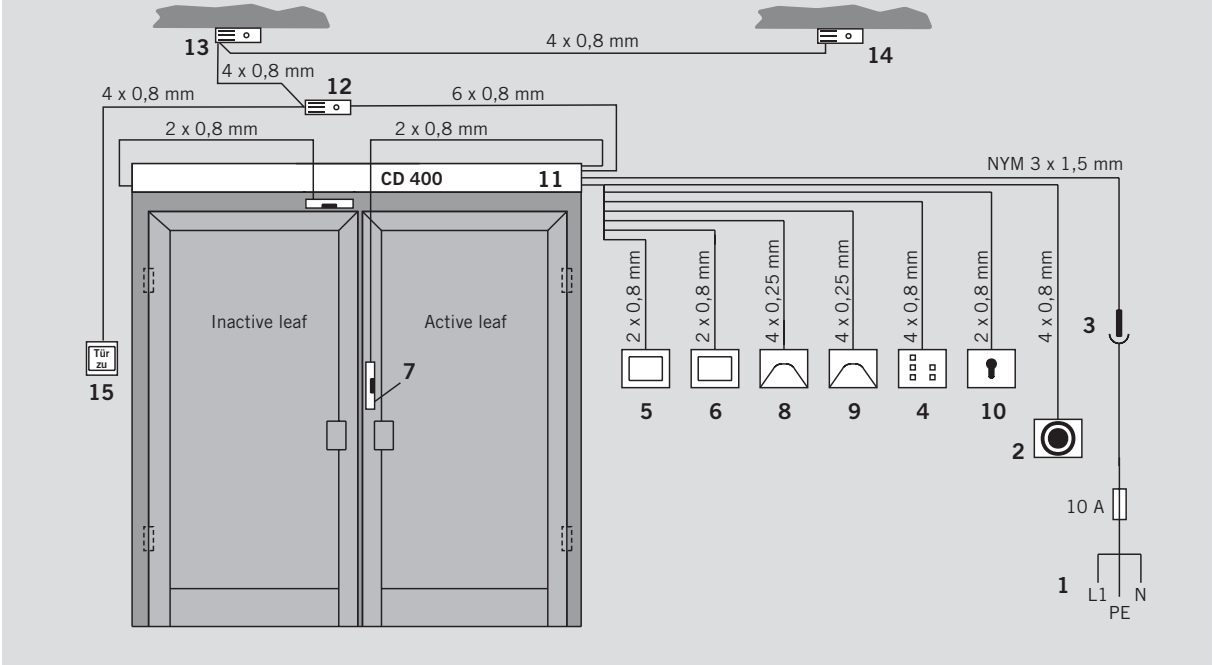


Connections for single-leaf system



1 Feeder:
2 Emergency pushbutton
3 Two-pole-and-earth socket-outlet
4 EPGS-D DCW® external program switch
5 Pushbutton, internal
6 Pushbutton, external
7 Locking mechanism
8 Radar, internal
9 Radar, external
10 Key switch
11 CD 400
12 RM-ED or RM
13 Ceiling-mounted smoke detector, opposite hinge side
14 Ceiling-mounted smoke detector, hinge side
15 Manual door release mechanism

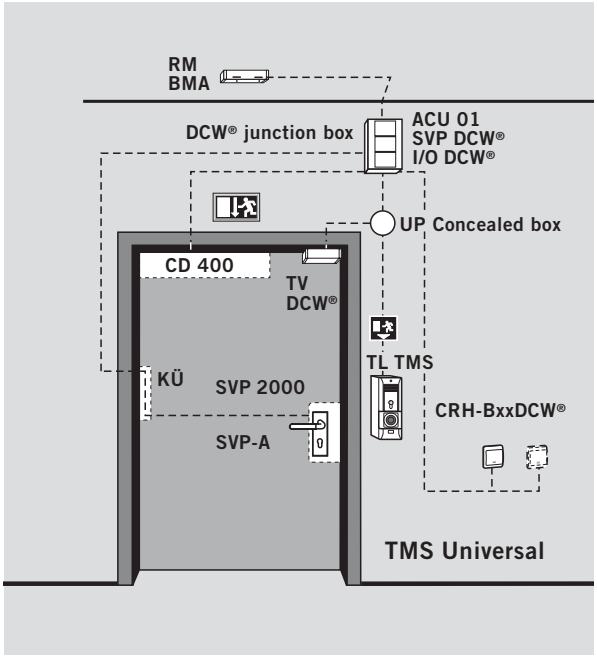
Connections for double-leaf system



1 Feeder:
2 Emergency pushbutton
3 Two-pole-and-earth socket-outlet
4 EPGS-D DCW® external program switch
5 Pushbutton, internal
6 Pushbutton, external
7 Locking mechanism
8 Radar, internal
9 Radar, external
10 Key switch
11 CD 400
12 RM-ED or RM
13 Ceiling-mounted smoke detector, opposite hinge side
14 Ceiling-mounted smoke detector, hinge side
15 Manual door release mechanism

Emergency exit security system

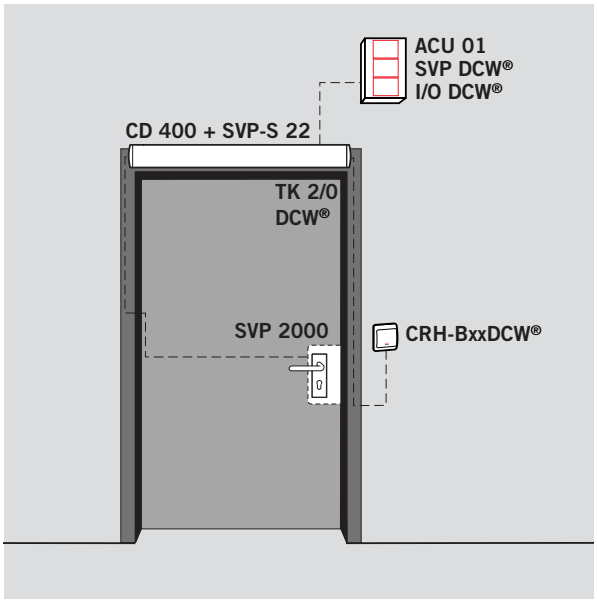
The door is normally locked (DORMA TV 100, TV 500). Operation of the emergency pushbutton in the DORMA TL terminal causes the locking mechanism to be de-energised and released, and also the deadbolt and latch of the DORMA SVP 2000 emergency escape lock to be withdrawn and enabled respectively. At the same time, the system emits an alarm and the DORMA CD 400 receives an opening signal. Authorised personnel can unlock the door using the momentary contact key switch of the DORMA TL, or via DORMA access control systems such as CODIC-CARD. If the DORMA RM smoke detector responds, the DORMA TV is unlocked, the DORMA SVP 2000 anti-panic lock with automatic locking action is locked and the DORMA CD 400 is de-energised. These actions ensure that the fire protection characteristics of the door are maintained. If activated from a central control position, the TV and the SVP 2000 are unlocked and the CD 400 opens the door. German MPA and VdS (insurance) approval certificates for use in emergency exit and escape routes have been issued for this system.



Insurance lock

When closed, the door is locked by the DORMA SVP 2000 emergency exit motor lock with automatic locking action (insurance lock). The door can be opened and closed from the inside at any time, with unlocking of the DORMA SVP 2000 and delayed activation of the DORMA CD 400 being initiated either manually or by active detectors as required. Activation control from a central position is also possible.

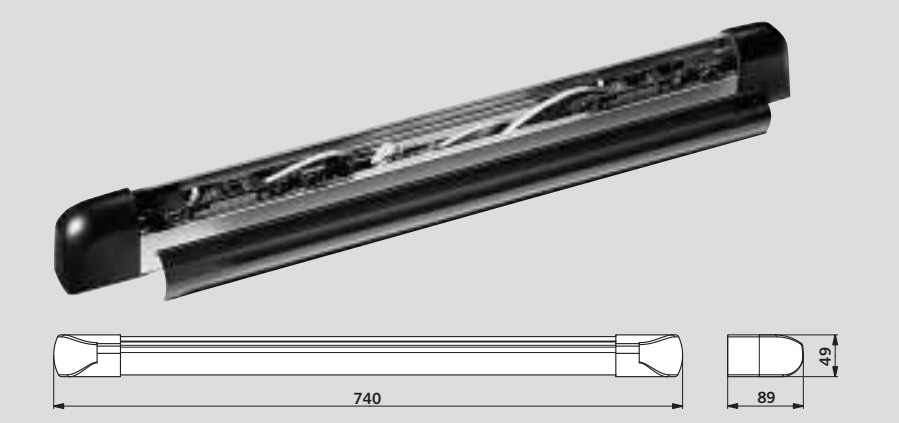
The CRM-B DCW® CODIC Card reader enables access from outside for authorised persons. Once the door is closed, the insurance lock is reinstated fully automatically as the DORMA SVP 2000 automatically throws the bolt after each closing cycle. The motor lock control module DORMA SVP-S22 is installed in the extended cover of the CD 400 for activation control of the DORMA SVP 2000.



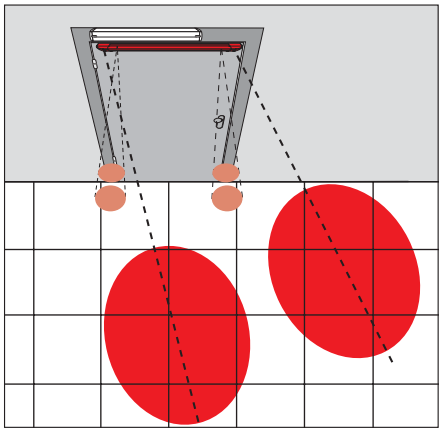
CD 400 with
Softline slide channel

Features and benefits

- Integrated motion detectors
  - simple activation from a distance of approx. 4 m
  - repeat opening signal initiated with the door half opened
- No additional external installation of radar motion detectors and infra-red safety sensors
- Simple solution offering easy installation even in problematic situations



Operating principles



SSCD functional description and applications

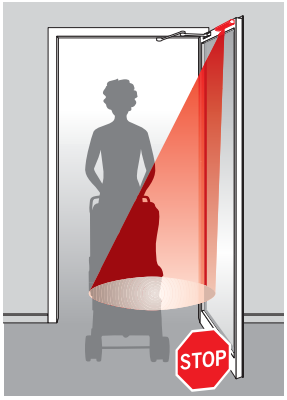
- On activation, the infra-red safety sensors of the SSCD
  - initiate a stop function when fitted on the pull side
  - reverse the door when fitted on the push side
- On activation, radar motion detectors integrated in the SSCD (pull side fixing only)
  - emit an opening signal at any door opening angle
- Installation of the integrated sensors:
  - fixing on the pull side: infra-red safety sensors and 2 radar motion detectors
  - fixing on the push side: infra-red safety sensors

Integrated radar motion detectors

- Technical system: Merkur radar motion detector
- Detection cone length max. 4.25 m
- Operating temperature from –20 °C to +60 °C

Integrated infra-red safety sensors

- Technical system: of the DORMA IRS-2 safety sensor
- Background blanking function
- Detection distance setting adjustable from 1500 mm to 2500 mm
- Operating temperature from –20 °C bis +60 °C



CD 400 with SSCD sensor slide channel on a single-leaf door

Accessories

"Merkur" radar motion detector

EPGS-D DCW® electronic program switch (compatible with DCW® bus)

Handheld computer for servicing and commissioning with DORMA Automatic Service Program (ASP)

DORMA IRS-2 infra-red safety sensor for protection of the door sweep range. Standard lengths: 330, 770, 900 and 1200 mm.

Large pushbutton, flush or surface mounted

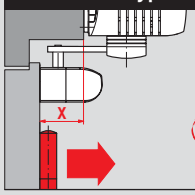
Ordering guide:
Choosing the right operator arms and slide channels

Single-leaf operator
(Same selection procedure applies for double-leaf operators. Selection procedure for accessories for contraflow models is described on Pages 14 and 15)

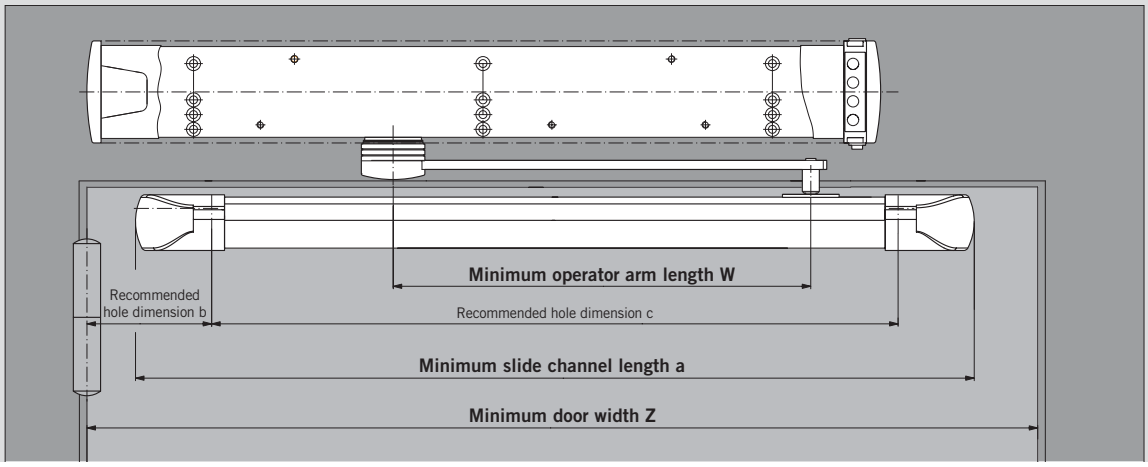
1. Select application, i.e. decide on type of fixing (hinge side/opposite hinge side) and choose slide channel (SSCD sensor slide channel or Softline slide channel)
2. Depending on the application selected in Step 1, select the appropriate application diagram and table from Pages 4–11.
3. Select the appropriate row in the table based on frame reveal depth X. Selecting this table row determines the following:
   - Min. door width Z:
     Minimum door width Z is required for the relevant application.
   - Min. operator arm length W:
     Minimum arm length W is required for the relevant application. If the door width is sufficiently large, a longer operator arm can be used.
     Caution! If you need a longer main arm, you may also need a longer slide channel.
   - Min. slide channel length a:
     A minimum slide channel length a is required for the relevant application. If the door width is sufficiently large, a longer slide channel can be used. Particularly when using the SSCD sensor slide channel, a maximum length should be selected in line with the door width so as to ensure that the entire door sweep range is protected by the integrated safety sensors.
4. With hinge-side installation of the CD 400 the standard pin length of the operator arm is 20.8 mm. If the operator is installed on the side opposite the hinge, a standard pin length of 10.4 mm is recommended. The effects of varying the pin length are shown in the illustrations on Page 9.

Practical example

Installation type: Hinge side, pulling



X	Z	W	a	b	c
–40 ≤ x < 0	≥ 800	370	740	110	605
0 ≤ x < 60	≥ 900	460	740	210	605
60 ≤ x ≤ 200	≥ 1100	600	740	420	605



The above illustration shows the installation of the CD 400 on the hinge side (pulling) in combination with an SSCD sensor slide channel.

For frame reveal depths of 0 mm to 60 mm a min. door leaf width of Z = 900 mm is needed. In addition, a min. operator arm length of W = 460 mm and a min. length of sensor slide channel of a = 740 mm are needed. (Recommended hole sizes of b = 210 mm and c = 605 mm apply.)

If the door widths are sufficiently large, a longer operator arm and longer slide channel can be used. The sizes of the holes would then increase accordingly.

The standard pin length of the operator arm for hinge-side installation is 20.8 mm.

All required accessories are defined in the above details.

Specification texts

Door parameters:

- Clear passage width: 750 mm to 1400 mm
- Door leaf weight: max 160 kg
- Opening angle: max 110°
- Operator dimensions (height x depth x width)
  90 mm x 140 mm x 700 mm
- Function programs: OFF – AUTOMATIC – EXIT ONLY – PERMANENT OPEN (rated for continuous duty)
- Power supply data: 230 V AC, 50/60 Hz,
  CD 400 can be installed on the hinge side (pulling) or opposite hinge side (pushing)
  Force transmission with slide channel assembly only

Electro-mechanical operator for swing doors with electronic control and integrated door closer; manual operation of door possible in the event of a power failure; tested and quality third-party verified to DIN 18263, Part 4.
Door closer function remains intact in the event of power failure or disconnection. Closing force EN 5 to EN 1154.
Parameterisation of customer-specific configuration via handheld computer: hold-open time infinitely variable from 0 to 180 s, variable opening and closing speeds, force limitation on detection of obstruction, latching/delatching action in “Close” and “Open” cycles, Push & Go function, Low Energy mode, operating behaviour in accordance with prEN 12650.

Manufactured and tested in accordance with German code of practice ZH 1/494 governing power-operated windows, doors and gates, German UVV (accident prevention) regulations, the EU machinery, EMC and low-voltage directives (CE mark) and VDE (Association of German Engineers) regulations (latest edition in each case).
Quality-assured manufacture, registered to ISO 9000.
In the case of fire doors, ensure compliance with the relevant approval certificate in each case!

Model (incl. mounting backplate):
( ) LH/ISO 6 ( ) RH/ISO 5

Installation of operator:
( ) push side (opposite hinge side)
( ) push side (hinge side)

Frame reveal depth:
( ) Dimension = ... mm (–40 mm to 200 mm)

Extended cover:
( ) Dimension = ... mm (min. extension 30/48 mm)

Colour:
Standard: ( ) silver ( ) RAL 9010 ( ) RAL 9016
Special colours: ( ) similar to RAL = ...

Emergency pushbutton to DIN VDE installed in vicinity of door:
Type: ( ) emergency off ( ) emergency stop
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Program selectors:
( ) internal (standard) ( ) external, 5 modes
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Selected accessories
Safety equipment

- Infra-red safety sensors for protection of the sweep range as per German code ZH 1/494:
  ( ) IRS-2-33 ( ) IRS-2-70 ( ) IRS-2-90
  ( ) IRS-2-120/2 ( ) IRS-2-120/3

- SSCD sensor slide channel assembly; combination of infra-red safety sensors for protection of the sweep range, radar motion detectors as activators and slide channel:

  SSCD with 2 integrated infra-red safety sensors and 2 radar motion detectors (pull-side fixing only!):
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...

- SSCD with 2 integrated infra-red safety sensors (suitable for fixing on push side and pull side)
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...

Activators:
( ) radar motion detectors ( ) pushbuttons

Service options:
( ) Installation ( ) Commissioning
( ) Service Agreement

Specification texts

Door parameters:

- Clear passage width: 1500 mm to 2800 mm
- Door leaf weight: max 160 kg
- Opening angle: max 110°
- Operator dimensions (height x depth x width)
  90 mm x 140 mm x 700 mm
- Function programs: OFF – AUTOMATIC – EXIT ONLY – PERMANENT OPEN (rated for continuous duty)
- Power supply data: 230 V AC, 50/60 Hz,
  CD 400 can be installed on the hinge side (pulling) or opposite hinge side (pushing)
  Force transmission with slide channel assembly only

Electro-mechanical operator for swing doors with electronic control and integrated door closer; manual operation of door possible in the event of a power failure; tested and quality third-party verified to DIN 18263, Part 4.
Door closer function remains intact in the event of power failure or disconnection. Closing force EN 5 to EN 1154.
Parameterisation of customer-specific configuration via handheld computer: hold-open time infinitely variable from 0 to 180 s, variable opening and closing speeds, force limitation on detection of obstruction, latching/delatching action in "Close" and "Open" cycles, nurse/bed control, Push & Go function, Low Energy mode, operating behaviour in accordance with prEN 12650.

Manufactured and tested in accordance with German code of practice ZH 1/494 governing power-operated windows, doors and gates, German UVV (accident prevention) regulations, the EU machinery, EMC and low-voltage directives (CE mark) and VDE (Association of German Engineers) regulations (latest edition in each case). Quality-assured manufacture, registered to ISO 9000.
In the case of fire doors, ensure compliance with the relevant approval certificate in each case!

Installation of operator:
( ) push side (opposite hinge side)
( ) push side (hinge side)

Frame reveal depth:
( ) Dimension = ... mm (–40 mm to 200 mm)

Extended cover:
( ) Dimension = ... mm

Colour:
Standard: ( ) silver ( ) RAL 9010 ( ) RAL 9016
Special colours: ( ) similar to RAL: = ...

Emergency pushbutton to DIN VDE installed in vicinity of door:
Type: ( ) emergency off ( ) emergency stop
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Program selectors:
( ) internal (standard) ( ) external, 5 modes
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Selected accessories
Safety equipment

- Infra-red safety sensors for protection of the sweep range as per German code ZH 1/494:
  ( ) IRS-2-33 ( ) IRS-2-70 ( ) IRS-2-90
  ( ) IRS-2-120/2 ( ) IRS-2-120/3

- SSCD sensor slide channel assembly; combination of infra-red safety sensors for protection of the sweep range, radar motion detectors as activators and slide channel:

  SSCD with 2 integrated infra-red safety sensors and 2 radar motion detectors (pull-side fixing only!):
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...

- SSCD with 2 integrated infra-red safety sensors (suitable for fixing on push side and pull side)
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...

Activators:
( ) radar motion detectors ( ) pushbuttons

Service options:
( ) Installation ( ) Commissioning
( ) Service Agreement

Specification texts

Door parameters:

- Clear passage width: 750 mm to 1250 mm
- Door leaf weight: max 160 kg
- Opening angle: max 110°
- Operator dimensions (height x depth x width)
  90 mm x 140 mm x 700 mm
- Function programs: OFF – AUTOMATIC – EXIT ONLY – PERMANENT OPEN (rated for continuous duty)
- Power supply data: 230 V AC, 50/60 Hz,
  CD 400 can be installed on the hinge side (pulling) or opposite hinge side (pushing)
  Force transmission with slide channel assembly only

Electro-mechanical operator for swing doors with electronic control and integrated door closer; manual operation of door possible in the event of a power failure; tested and quality third-party verified to DIN 18263, Part 4.
Door closer function remains intact in the event of power failure or disconnection. Closing force EN 5 to EN 1154.
Parameterisation of customer-specific configuration via handheld computer: hold-open time infinitely variable from 0 to 180 s, variable opening and closing speeds, force limitation on detection of obstruction, latching/delatching action in "Close" and "Open" cycles, Push & Go function, Low Energy mode, operating behaviour in accordance with prEN 12650.

Manufactured and tested in accordance with German code of practice ZH 1/494 governing power-operated windows, doors and gates, German UVV (accident prevention) regulations, the EU machinery, EMC and low-voltage directives (CE mark) and VDE (Association of German Engineers) regulations (latest edition in each case).
Quality-assured manufacture, registered to ISO 9000.
In the case of fire doors, ensure compliance with the relevant approval certificate in each case!

Model (incl. mounting backplate):
( ) LH/ISO 6 ( ) RH/ISO 5

Installation of operator:
( ) push side (opposite hinge side)
( ) push side (hinge side)

Frame reveal depth:
( ) Dimension = ... mm (0 mm to 200 mm)
for pull side fixing
( ) Dimension = ... mm (0 mm to 100 mm)
for push side fixing

Extended cover:
( ) Dimension = ... mm (min. extension 30 mm/48 mm)

Colour:
Standard: ( ) silver ( ) RAL 9010 ( ) RAL 9016
Special colours: ( ) similar to RAL: = ...

Emergency pushbutton to DIN VDE installed in vicinity of door:
Type: ( ) emergency off ( ) emergency stop
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Program selectors
( ) internal (standard) ( ) external, 5 modes
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Smoke detector: DORMA RM

- Quantity: 1 x RM where bottom surface of frame reveal/lintel to underside of smoke-proof ceiling < 1 m
- Plus: 2 x RM where bottom surface frame reveal/lintel to underside of smoke-proof ceiling > 1 m
- Palm switch "Close Door" as per German DIBt regulations

Selected accessories
Safety equipment

- Infra-red safety sensors for protection of the sweep range as per German code ZH 1/494:
  ( ) IRS-2-33 ( ) IRS-2-70 ( ) IRS-2-90
  ( ) IRS-2-120/2 ( ) IRS-2-120/3

- SSCD sensor slide channel assembly; combination of infra-red safety sensors for protection of the sweep range, radar motion detectors as activators and slide channel:

  SSCD with 2 integrated infra-red safety sensors and 2 radar motion detectors (pull-side fixing only!):
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...

- SSCD with 2 integrated infra-red safety sensors (suitable for fixing on push side and pull side)
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...

Activators:
( ) radar motion detectors ( ) pushbuttons

Service options:
( ) Installation ( ) Commissioning
( ) Service Agreement

Specification texts

Door parameters:

- Clear passage width: 1500 mm to 2500 mm
- Door leaf weight: max 160 kg
- Opening angle: max 110°
- Operator dimensions (height x depth x width)
  90 mm x 140 mm x 700 mm
- Function programs: OFF – AUTOMATIC – EXIT ONLY – PERMANENT OPEN (rated for continuous duty)
- Power supply data: 230 V AC, 50/60 Hz,
  CD 400 can be installed on the hinge side (pulling) or opposite hinge side (pushing)
  Force transmission with slide channel assembly only

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Parameterisation of customer-specific configuration via handheld computer: hold-open time infinitely variable from 0 to 180 s, variable opening and closing speeds, force limitation on detection of obstruction, latching/delatching action in "Close" and "Open" cycles, nurse/bed control, Push & Go function, Low Energy mode, operating behaviour in accordance with prEN 12650.
Manufactured and tested in accordance with German code of practice ZH 1/494 governing power-operated windows, doors and gates, German UVV (accident prevention) regulations, the EU machinery, EMC and low-voltage directives (CE mark) and VDE (Association of German Engineers) regulations (latest edition in each case). Quality-assured manufacture, registered to ISO 9000.
In the case of fire doors, ensure compliance with the relevant approval certificate in each case!

Installation of operator:
( ) push side (opposite hinge side)
( ) push side (hinge side)

Frame reveal depth:
( ) Dimension = ... mm (0 mm to 200 mm)

Extended cover:
( ) Dimension = ... mm (min. extension 30 mm)

Colour:
Standard: ( ) silver ( ) RAL 9010 ( ) RAL 9016
Special colours: ( ) similar to RAL: = ...

Emergency pushbutton to DIN VDE installed in vicinity of door:
Type: ( ) emergency off ( ) emergency stop
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Program selectors:
( ) internal (standard) ( ) external, 5 modes
Mounting method: ( ) concealed/flush-mounted
( ) surface-mounted

Smoke detector: DORMA RM

- Quantity: 1 x RM where bottom surface of frame reveal/lintel to underside of smoke-proof ceiling < 1 m
- Plus: 2 x RM where bottom surface frame reveal/lintel to underside of smoke-proof ceiling > 1 m
- Palm switch "Close Door" as per German DIBt regulations

Selected accessories
Safety equipment

- Infra-red safety sensors for protection of the sweep range as per German code ZH 1/494:
  ( ) IRS-2-33 ( ) IRS-2-70 ( ) IRS-2-90
  ( ) IRS-2-120/2 ( ) IRS-2-120/3
- SSCD sensor slide channel assembly; combination of infra-red safety sensors for protection of the sweep range, radar motion detectors as activators and slide channel:

  SSCD with 2 integrated infra-red safety sensors and 2 radar motion detectors (pull-side fixing only!):
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...
- SSCD with 2 integrated infra-red safety sensors (suitable for fixing on push side and pull side)
  ( ) Length 740 mm
  ( ) Length 840 mm
  ( ) Length 940 mm
  Colour: ( ) silver ( ) RAL 9010 ( ) RAL 9016
  ( ) similar to RAL = ...

Activators:
( ) radar motion detectors ( ) pushbuttons
Service options:
( ) Installation ( ) Commissioning ( ) Service Agreement

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