

# ABLOY® DOOR CLOSERS

*Exactly the right choice*





## *Superior performance and reliability*

**ABLOY®** high security products are known and highly respected all over the world.

Every item in our wide product range represents top quality and superior performance.

**ABLOY®** door closers protect door constructions by controlling the opening and closing actions of the door. Reliable performance over a wide operational temperature range guarantees that energy will be saved and security increased.

Production of **ABLOY®** door closers started in the 1930s. Today, we exploit the high quality and advanced technology in our new purpose-built

production facilities. Our long experience and extensive expertise combined with customer-oriented research and development mean that we have a wide range of solutions for the varying demands of different door environments.

Our global network of sales offices and distributors will help you to choose right products to increase security and convenience in your specific application. The functions, features, and wide variety of installation alternatives offered by **ABLOY®** door closers give you convenient operation, simplified installation and ease of adjustment and maintenance.





## CONTENT

OPERATION OF DOOR CLOSERS	4
FUNCTION OF TEMPERATURE	5
<b>ABLOY® DC210</b>	6
<b>ABLOY® DC215</b>	7
<b>ABLOY® DC335</b>	8
- installation	9
<b>ABLOY® DC240</b>	10
- installation	11
<b>ABLOY® DC247</b>	12
- installation	13
<b>ABLOY® DC330</b>	14
- installation	15
<b>ABLOY® DC250</b>	16
- installation	17
<b>ABLOY® DC270</b>	18
STANDARDS AND FEATURES	19
<b>ABLOY® ARMS</b>	20
<b>ABLOY® DOOR CLOSER ACCESSORIES</b>	21
<b>ABLOY® FIRE DOOR CLOSING SYSTEMS</b>	22
- FD440, FD450	
- Installation	
<b>ABLOY® FIRE DOOR CLOSING SYSTEMS</b>	24
- FD451, FD452, FD454	
- Installation	
<b>ABLOY® ACCESSORIES</b>	27

## COLOURS AVAILABLE

### PLASTIC COVERS

White (RAL 9010)

Silver (RAL 9006)

Brass

Brown (RAL 8014)

Black (RAL 9005)



### METAL COVERS

Stainless steel

Bright brass



Note: **ABLOY® DC270** is available only with metal cover. Colours white, brass, silver and stainless steel.

# OPERATION OF DOOR CLOSERS

## OPERATION

Operation is based on a hydraulically controlled rack and pinion or CAM-action mechanism (DC330, DC250). Within the closer there is oil to control the closing and latching speeds and delayed closing and back check features. The adjustable valves enable the adjustment of the speeds and features.

Opening a door, the spring inside the closer is becoming tense. When door is released the potential of the spring push the piston back and door closes. Pressure relief valves are standard feature (excluding DC210 and DC215) to protect the door from abuse and ensure reliable operation in demanding conditions.

## ADJUSTMENT (C- AND L-VALVE)

Closing speed (Valve C):

The closing speed can be adjusted 180 - 15 degrees (DC330 and DC250 170 - 7 degrees).

Latching speed (Valve L): The latching speed can be adjusted 15 - 0 degrees (DC330 and DC250 7-0 degrees).

## BACK CHECK (BC)

A brake affects door movement from 70°-80° to fully open (180°) and protects the door by preventing it from being pulled open by the wind. This feature can be adjusted by selecting the desired arm position. Adjustment by using valve B. Recommended for use with external doors.

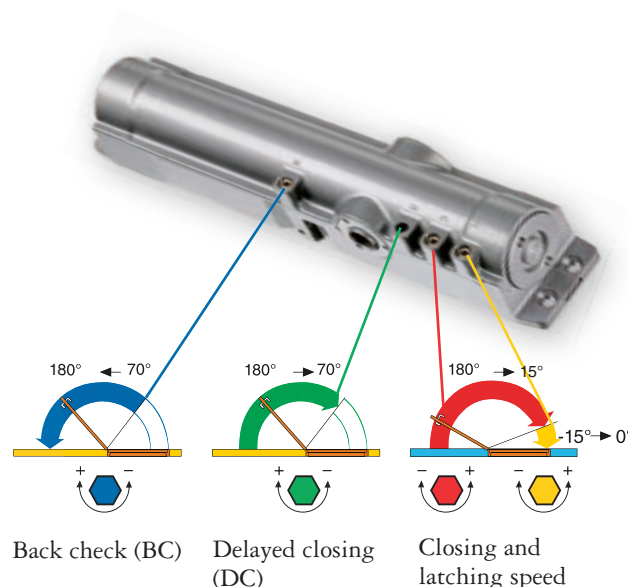
## DELAYED CLOSING (DC)

Delayed closing slows down the movement of the door from fully open (180°) to approximately 70°, after passing this point the door closes at normal speed. The starting angle can be adjusted by selecting desired arm position. Closing speed can be adjusted by adjustable valve D. Adjustable valve enables the adjustment of closing speed. Recommended for internal doors.

## ADJUSTABLE CLOSING FORCE

**ABLOY®** DC335, DC240, DC247, DC250, DC330, DC270 door closers are equipped with adjustable spring power which ensures the presetting of spring.

Due to adjustable spring power, the same door closer can be used in various applications.

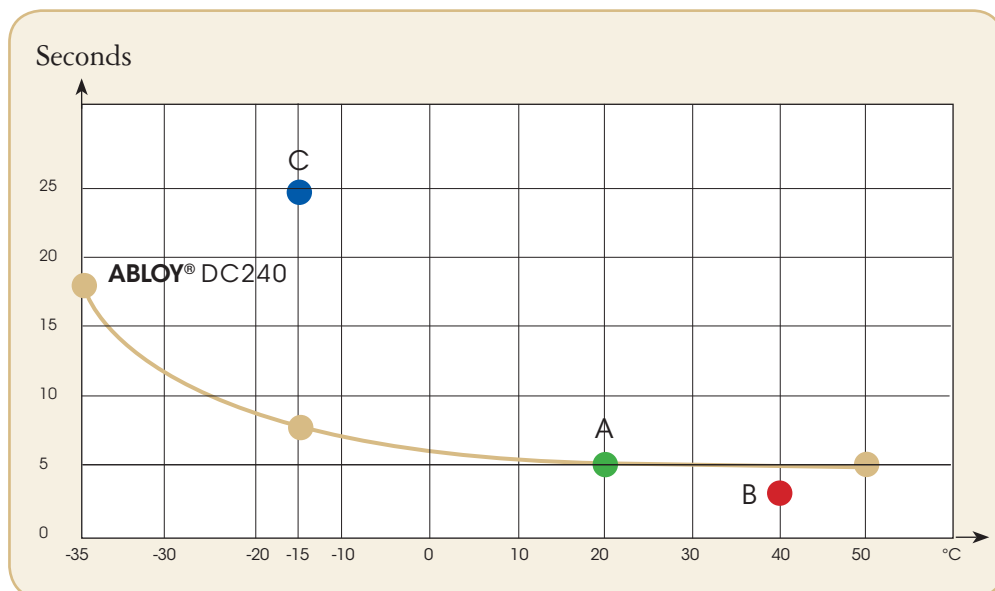


# FUNCTION OF TEMPERATURE

## CLOSING TIME AS A FUNCTION OF TEMPERATURE

Changes in temperature have only a minimal effect on the performance of **ABLOY®** door closers.

**ABLOY® DC240** guarantee constant closing speed in every situation. High quality hydraulic oil and patented valve systems have already earned this product a legendary reputation.

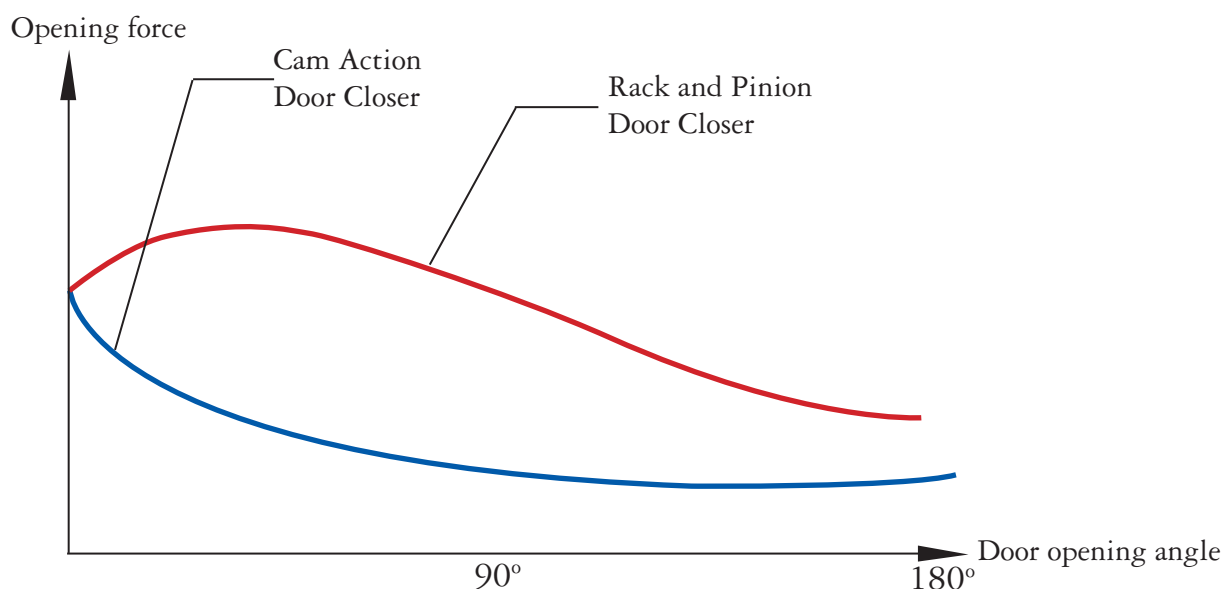


Changes in temperature have only a minimal effect on the performance of **ABLOY®** door closers and adjusted features. **ABLOY®** door closer exceeds standards demands for temperature area.

The EN1154 standard specifies the following:

- A A standard closing time of 5 seconds at +20 °C
- B A minimum closing time of 3 seconds at +40 °C (check point only)
- C A maximum closing time of 25 seconds at -15 °C (check point only)

## DOOR OPENING FORCE WITH SLIDING ARM





# ABLOY® DC210 DOOR CLOSER



## ABLOY® DC210

Interior doors with a maximum weight 60 kg and door leaf width 950 mm.

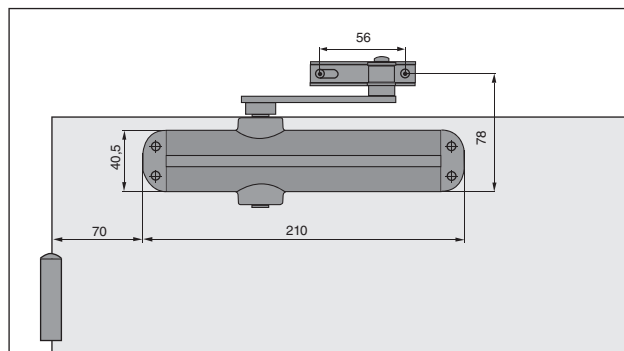
### FEATURES

- Adjustable closing force size EN 2 or 3 according EN1154
- Separate adjusting valves for closing and latching speed
- Die-cast aluminium body
- Arm is included in the package
- Three colours: silver, white and brown



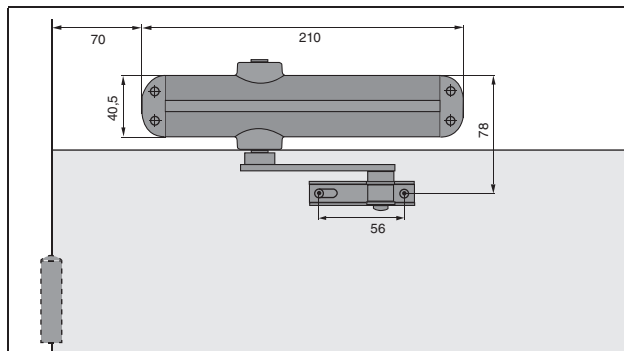
## INSTALLATION

### OPENING SIDE



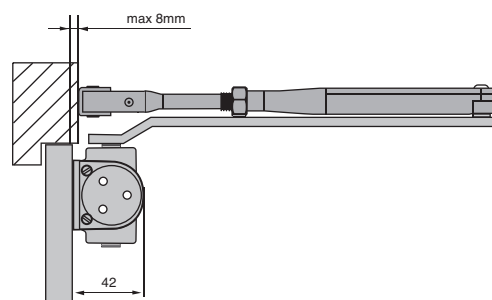
Maximum opening angle 180°

### CLOSING SIDE

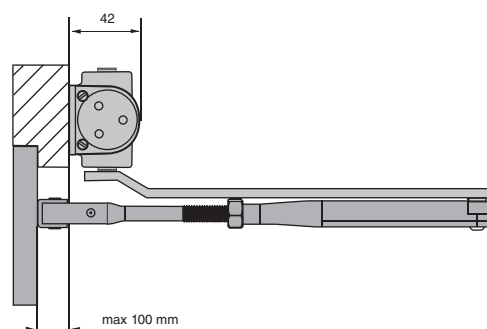


Maximum opening angle 180°

## DIMENSIONS



No height adjustment  
between arm and door closer.



# ABLOY® DC215 DOOR CLOSER

## ABLOY® DC215

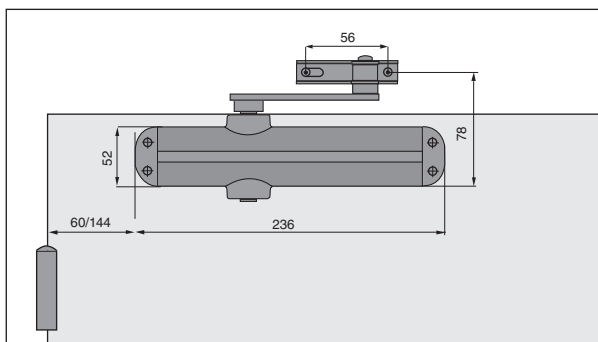
Suitable for external and internal doors. Maximum door weight 80 kg and door leaf width 1100 mm.

### FEATURES

- CE-certified
- Closing force size EN 2, 3 or 4 according EN1154
- Separate adjusting valves for closing and latching speed
- Die-cast aluminium body
- Arm is included in the package
- Three colours: silver, white and brown

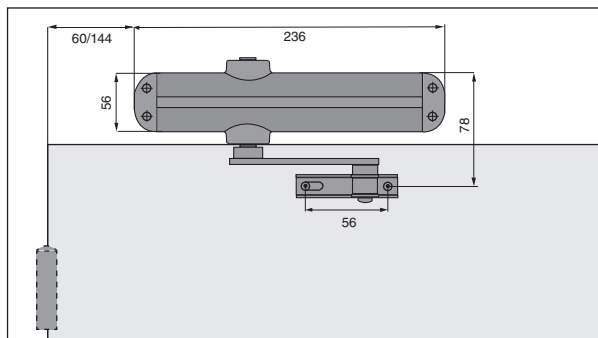
### INSTALLATION

#### OPENING SIDE



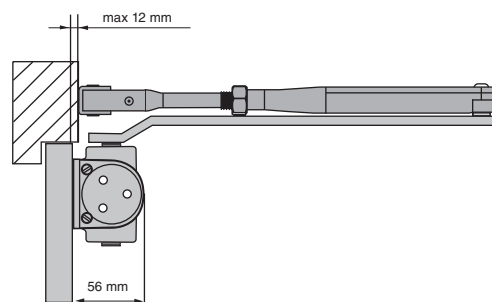
Maximum opening angle 180°

#### CLOSING SIDE

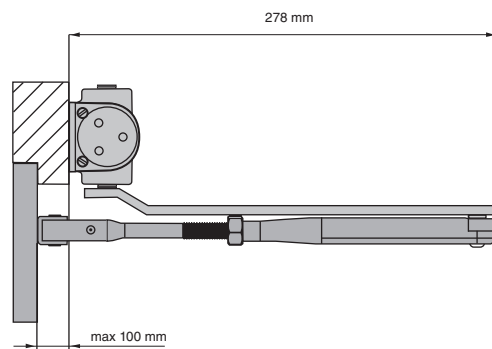


Maximum opening angle 180°

### DIMENSIONS



No height adjustment  
between arm and door closer.



# ABLOY® DC335 DOOR CLOSER



## ABLOY® DC335

Suitable for external and internal doors. Maximum door weight 100 kg and door leaf width 1250 mm with standard arm installation.

### FEATURES

- CE-certified with standard arm
- Adjustable closing force size EN 3-5 with standard arm according EN1154
- Separate adjusting valves for closing and latching speed
- Back check (BC) as a standard feature
- Delayed closing (DC) as an option
- Wide operating temperature range:  $-35^{\circ}\text{C} \dots +45^{\circ}\text{C}$
- Adjustable latching and back check starting angle by grooved spindle
- Easy adjustment of arm height (14 mm)
- Two pressure relief valves to protect against abuse
- Die-cast aluminium body manufactured from high performance silicon alloy

When ordering, please specify

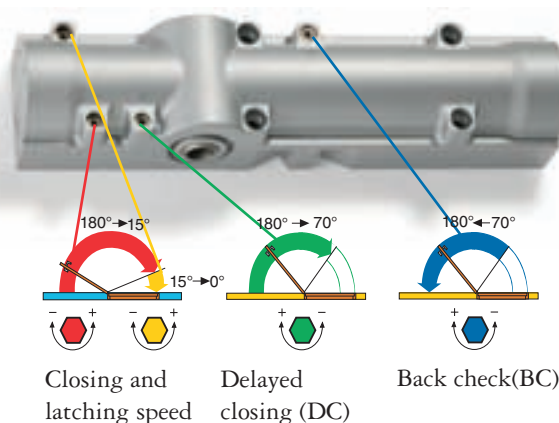
- Door closer model and colour e.g. DC335 (brass)
- Quantity
- Arm type and colour e.g. DC190 silver
- The arm is not included in the delivery or price of the door closer.
- Mounting plate e.g. DC130

## DIMENSIONS



## ADJUSTMENT

Back check (BC) as a standard feature and delayed closing (DC) as an adjustable optional feature

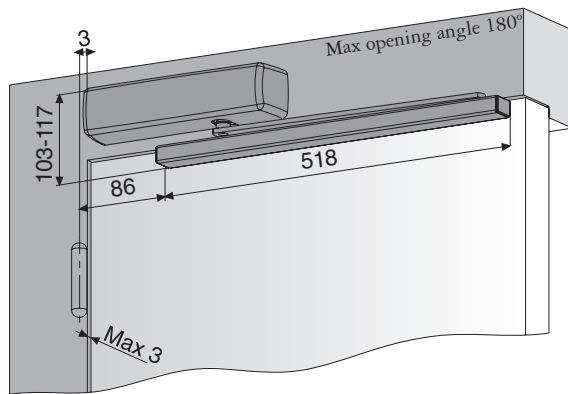
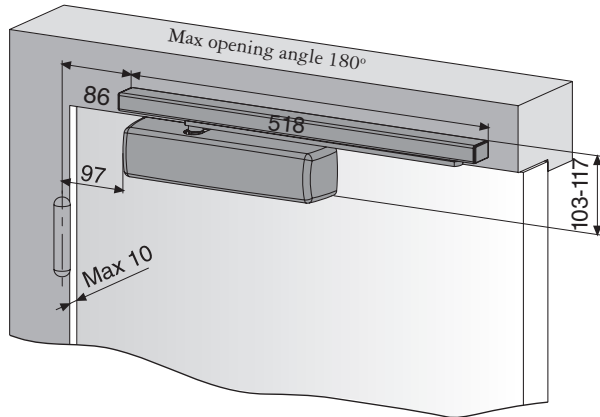




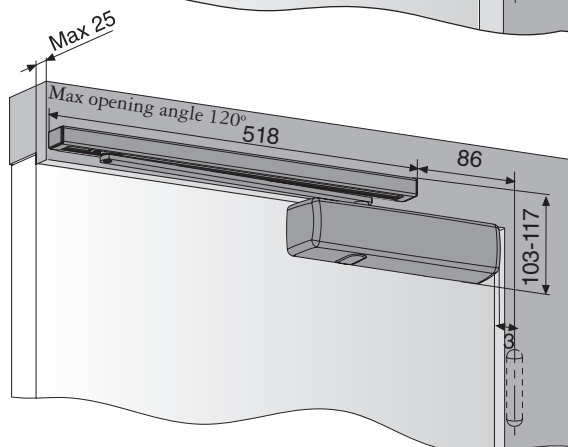
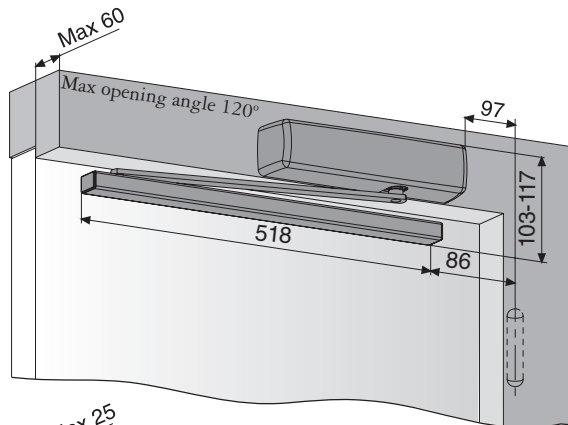
# ABLOY® DC335 INSTALLATION

## INSTALLATION WITH SLIDING ARM DC193, DC194

### OPENING SIDE

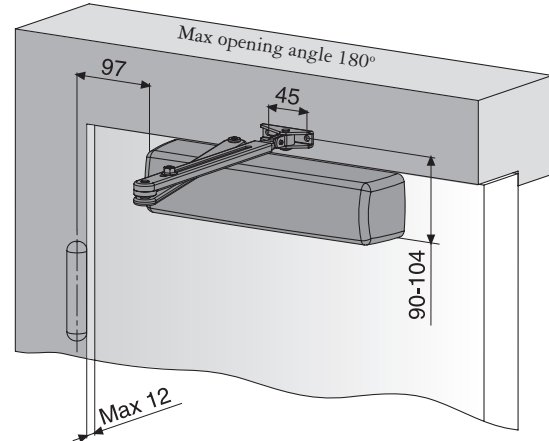


### CLOSING SIDE

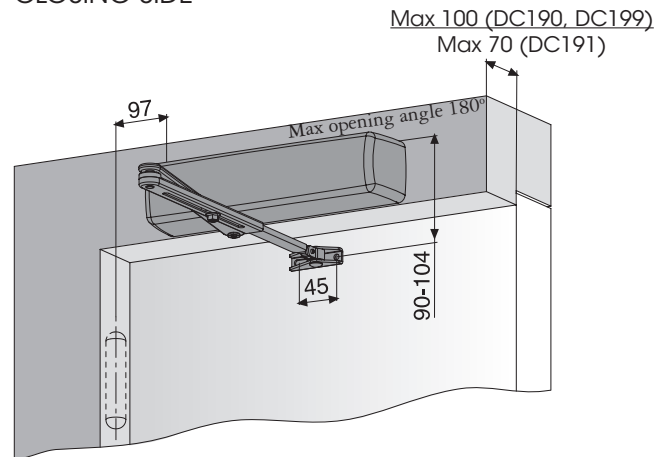


## INSTALLATION WITH ARMS DC190, DC191, DC199

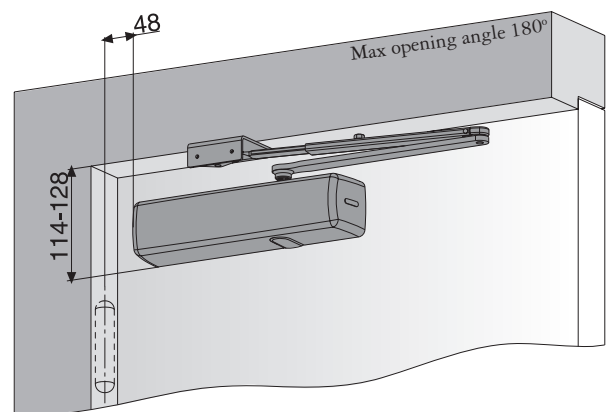
### OPENING SIDE



### CLOSING SIDE



## INSTALLATION WITH PARALLEL ARM



# ABLOY® DC240 DOOR CLOSER



## ABLOY® DC240

### APPLICATIONS

Suitable for external doors, large doors and internal doors exposed to conditions of pressure and heavy use. Maximum door weight 120 kg, and door leaf width 1400 mm with standard arm installation. When installed with sliding arm maximum door weight is 80 kg and door leaf width is 1100 mm.

### FEATURES

- CE certified with standard and sliding arms
- Adjustable closing force size EN 2-6 with standard arm and EN1-4 with sliding arm according EN1154
- Separate adjusting valves for closing and latching speed
- Back check (BC) as a standard feature
- Delayed closing (DC) as an option
- Wide operating temperature range: -35°C...+45°C
- Adjustable latching and back check starting angle by grooved spindle
- Easy adjustment of arm height (14 mm)
- Two pressure relief valves to protect against abuse
- Die-cast aluminium body manufactured from high performance silicon alloy

When ordering, please specify

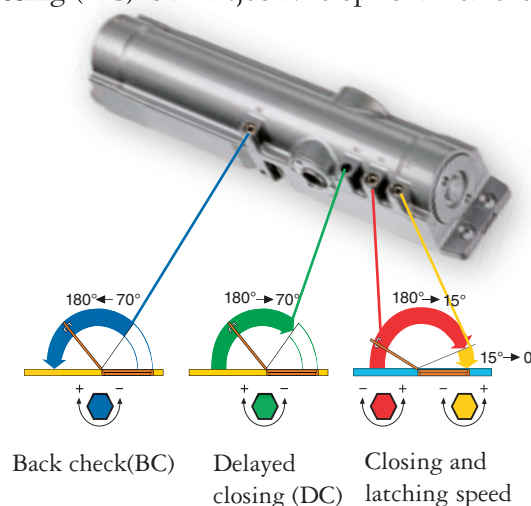
- Door closer model and colour e.g. DC240 (silver)
- Quantity
- Arm type and colour e.g. DC190 silver
- The arm is not included in the delivery or price of the door closer.
- Mounting plate e.g. DC106.

## DIMENSIONS



## ADJUSTMENT

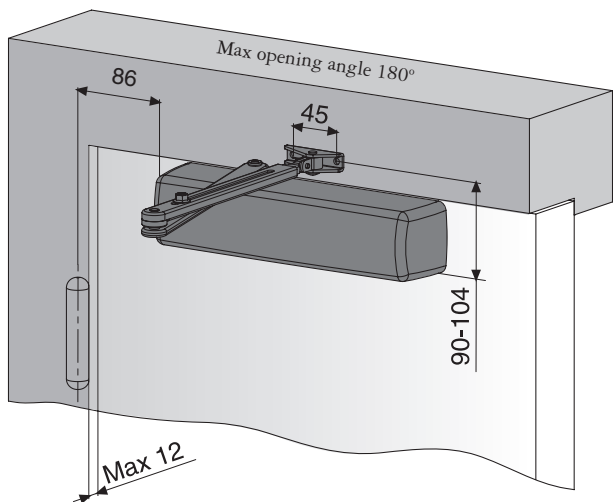
Back check (BC) as a standard feature and delayed closing (DC) is an adjustable optional feature.



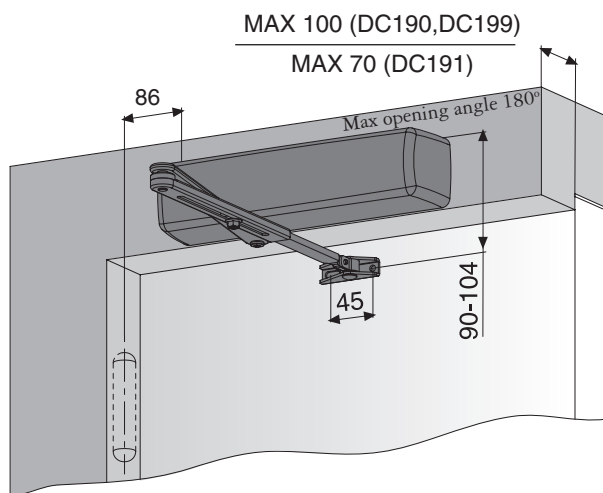
# ABLOY® DC240 INSTALLATION

## INSTALLATION WITH ARMS DC190, DC191 AND DC199

OPENING SIDE

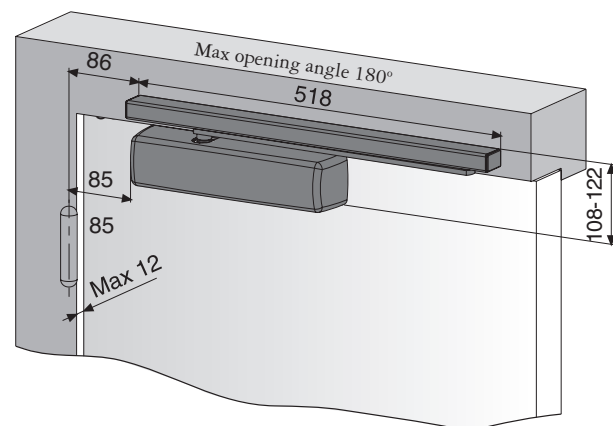


CLOSING SIDE

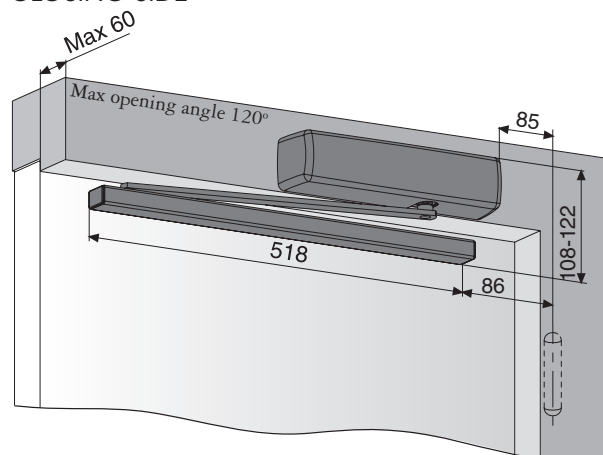


## INSTALLATION WITH SLIDING ARMS DC193, DC194

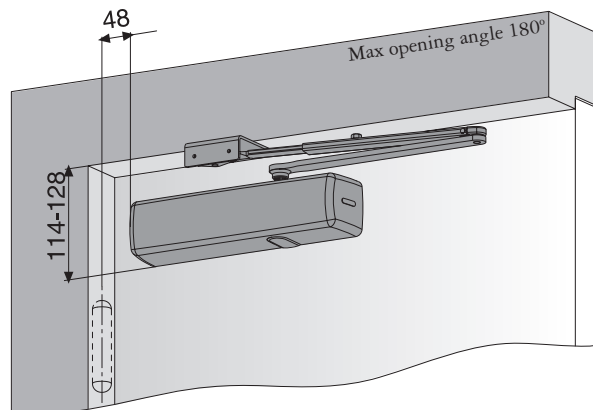
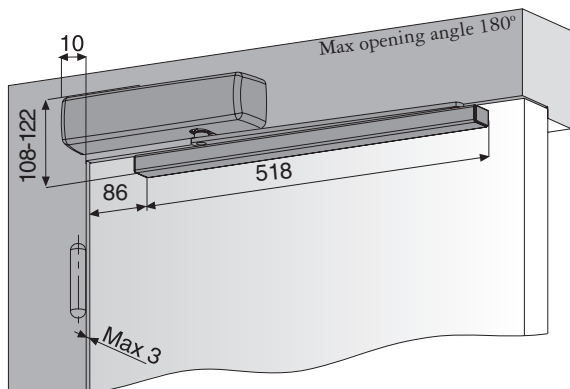
OPENING SIDE



CLOSING SIDE



## INSTALLATION WITH PARALLEL ARM



# ABLOY® DC247 DOOR CLOSER

## ABLOY® DC247

Suitable for use on internal and external doors but ideal solution for extremely heavy doors. Maximum door weight 160 kg and door leaf width 1600 mm with standard arm installation.

### FEATURES

- CE certified with arm DC197
- Adjustable closing force size EN 5-7 according EN1154
- Separate adjusting valves for closing and latching speed
- Back Check (BC) as a standard feature
- Wide operating temperature range:  $-35^{\circ}\text{C} \dots +45^{\circ}\text{C}$
- Adjustable latching and back check starting angle by grooved spindle
- Easy adjustment of arm height (14 mm)
- Two pressure relief valves to protect against abuse
- Die-cast aluminium body manufactured from high performance silicon alloy

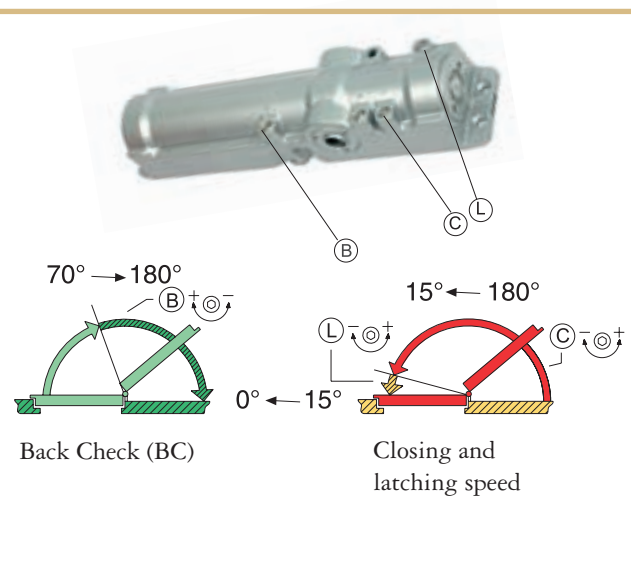
## DIMENSIONS



## ADJUSTMENT

When ordering, please specify

- Door closer model and colour e.g. DC247 (silver)
- Quantity
- Arm type and colour e.g. DC197 silver
- The arm is not included in the delivery or price of the door closer.
- Mounting plate e.g. DC106.

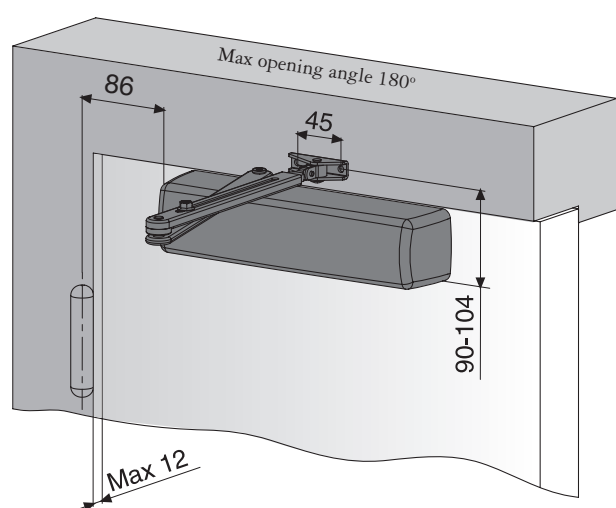


# ABLOY® DC247 INSTALLATION

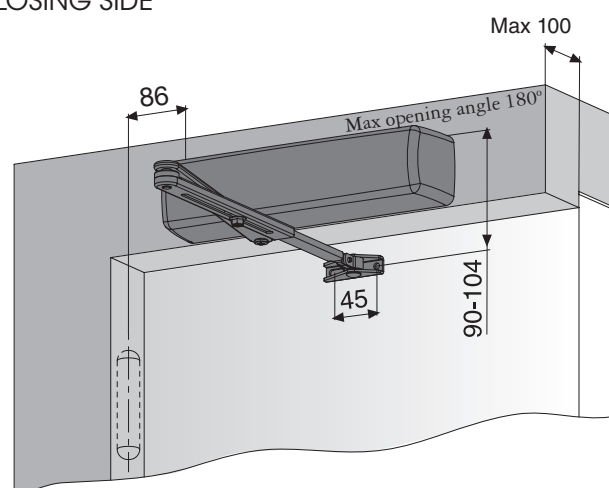


## INSTALLATION WITH ARM DC197

OPENING SIDE



CLOSING SIDE





# ABLOY® DC330 DOOR CLOSER



## ABLOY® DC330

Non-handed cam action door closer. Thanks to CAM it is light to open but still strong enough to close the door in every situation. **ABLOY® DC330** can be adjusted to meet the requirements of the light opening resistance, for example the DDA (Disability Discrimination Act) in UK. Suitable for external and internal doors. Maximum door weight 80 kg and door leaf width 1100 mm with sliding arm installation.

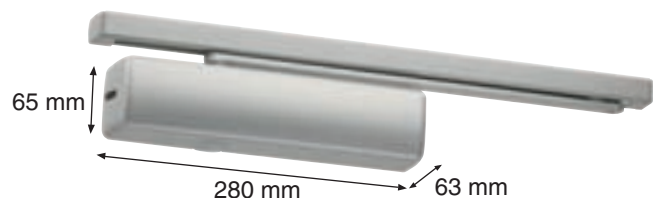
### FEATURES

- CE certified with sliding arm
- Adjustable closing force size EN 1-4 with sliding arm according EN1154
- Separate adjusting valves for closing and latching speed
- Wide operating temperature range: -15°C...+45°C
- Adjustable latching and back check starting angle by grooved spindle
- Easy adjustment of arm height (14 mm)
- Pressure relief valve to protect against abuse
- Die-cast aluminium body manufactured from high performance silicon alloy

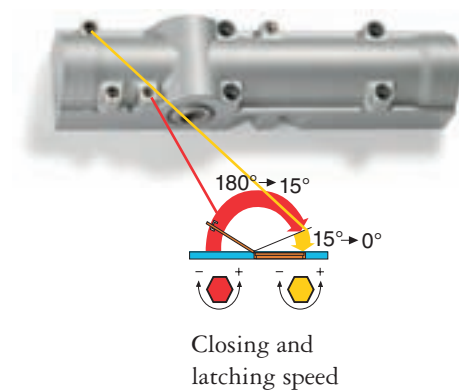
### When ordering, please specify

- Door closer model and colour e.g. DC330 (silver)
- Quantity
- Arm type and colour e.g. DC193 silver
- The arm is not included in the delivery or price of the door closer.
- Mounting plate e.g. DC130.

## DIMENSIONS



## ADJUSTMENT

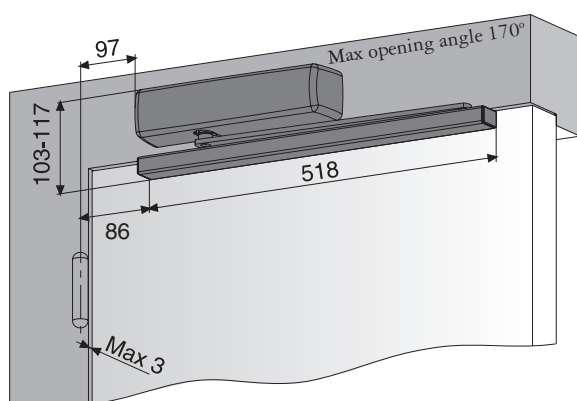
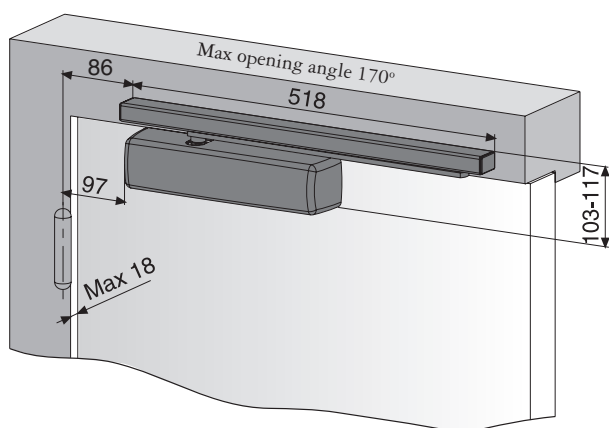


# ABLOY® DC330 INSTALLATION

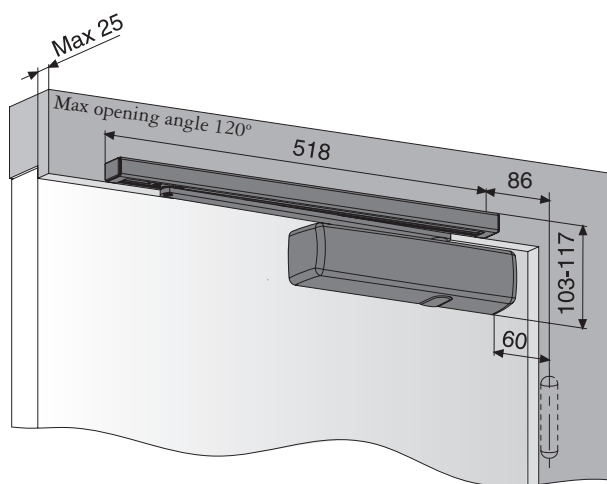
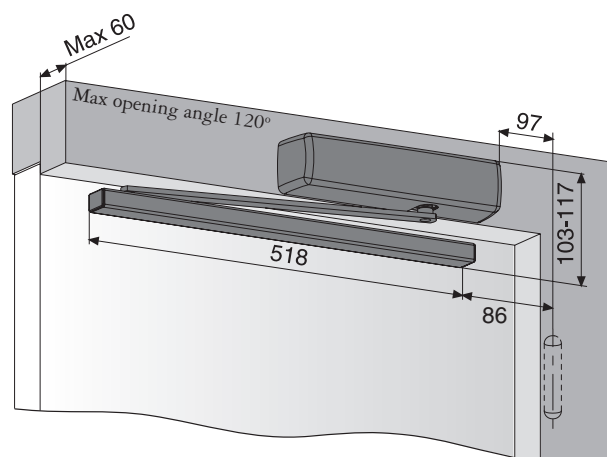


## INSTALLATION WITH SLIDING ARM DC193, DC194

OPENING SIDE



CLOSING SIDE



# ABLOY® DC250 DOOR CLOSER

## ABLOY® DC250

**ABLOY® DC250** is non handed cam action door closer and therefore very easy to install. Thanks to the cam construction it is extremely light to open, yet in terms of closing force strong enough for heavy duty applications. Suitable for external and internal doors. For use with **ABLOY® FD450** series fire door closing systems. Maximum door weight 120 kg and door leaf width 1400 mm with sliding arm installation.

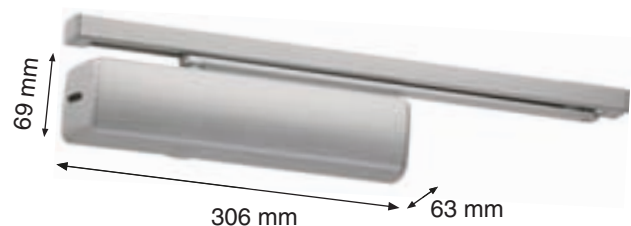
### FEATURES

- CE certified with sliding arm
- Adjustable closing force size EN 1-6 with sliding arm according EN1154
- Separate adjusting valves for closing and latching speed
- Back check (BC) as a standard feature
- Delayed closing (DC) as an option
- Wide operating temperature range: -15°C...+45°C
- Adjustable latching and back check starting angle by grooved spindle
- Easy adjustment of arm height (14 mm)
- Two pressure relief valves to protect against abuse
- Die-cast aluminium body manufactured from high performance silicon alloy

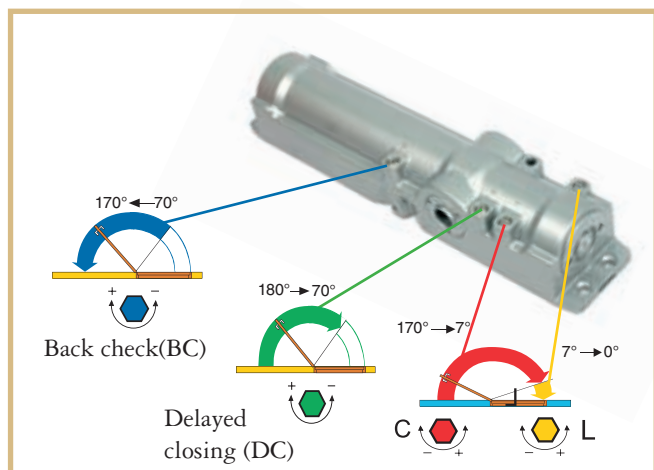
When ordering, please specify

- Door closer model and colour e.g. DC250 (silver)
- Quantity
- Arm type and colour e.g. DC193 silver
- The arm is not included in the delivery or price of the door closer.
- Mounting plate e.g. DC106.

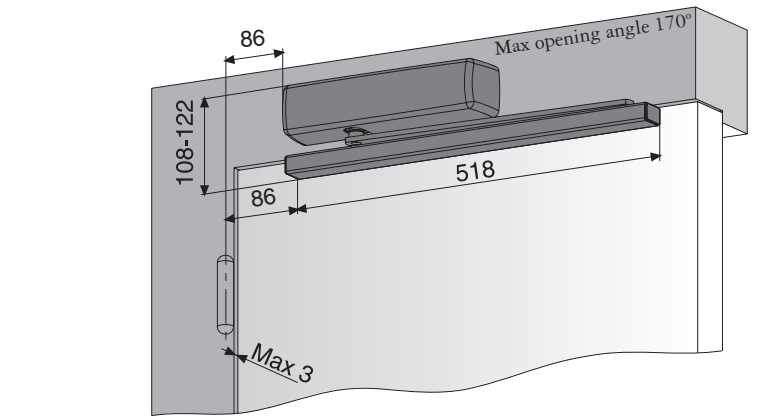
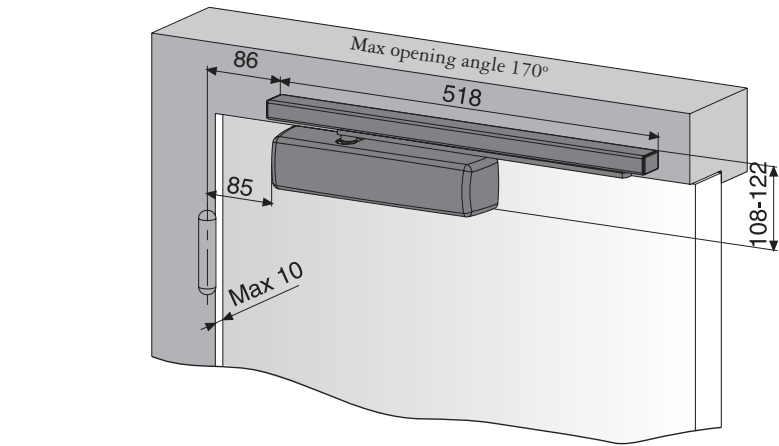
## DIMENSIONS



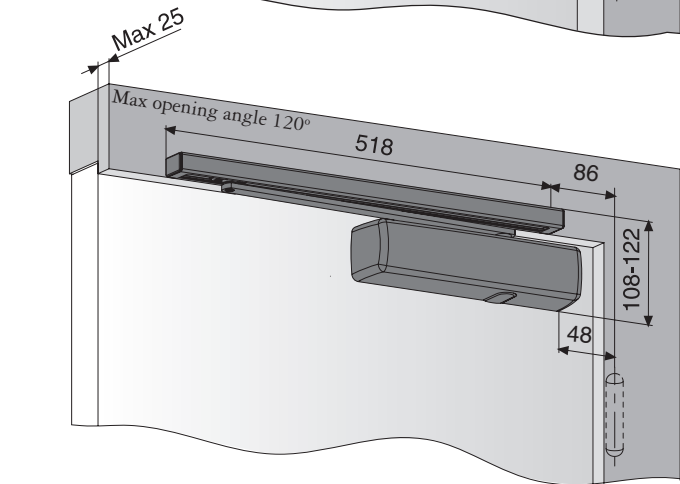
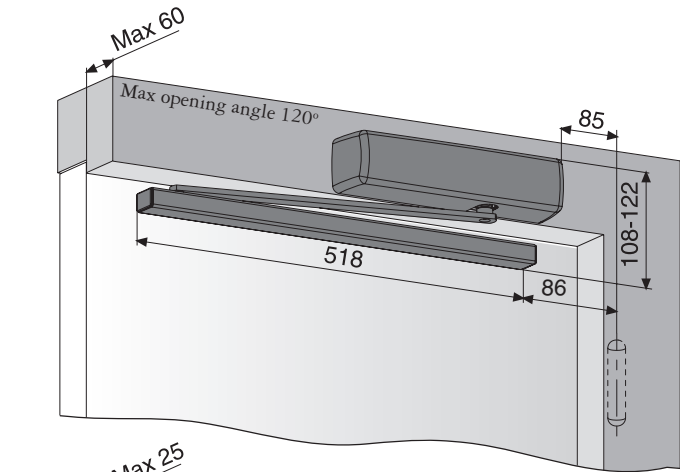
## ADJUSTMENT



OPENING SIDE



## CLOSING SIDE



# ABLOY® DC270 DOOR CLOSER

## ABLOY® DC270

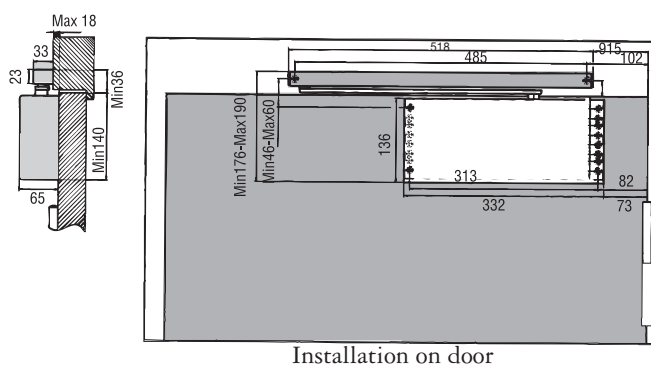
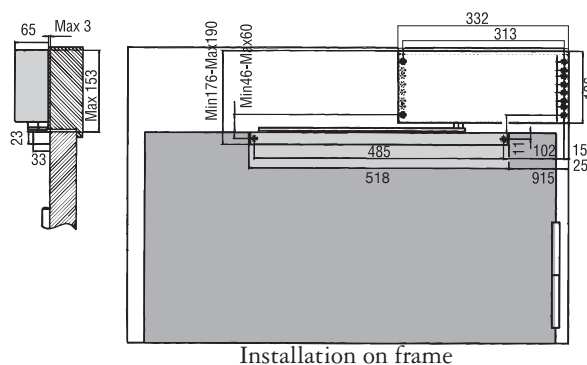
This closer is designed especially for ships and extremely heavy doors with sliding arm. It is double closer model where DC247 and DC250 are installed to the same mounting plate under same metal cover.

### FEATURES

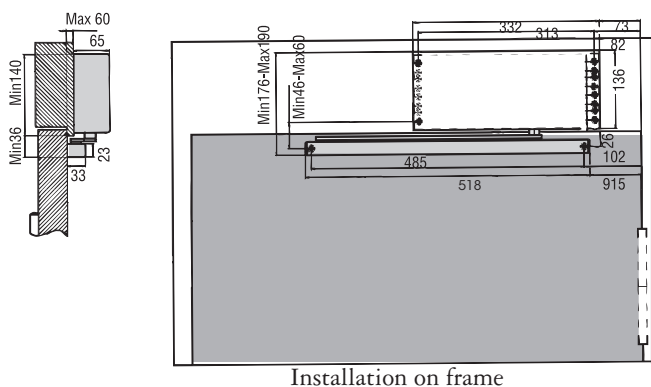
- Adjustable closing force size EN 6-7 with sliding arm according EN1154
- Separate adjustment for closing and latching speed using only adjusting valves of DC247
- Back check (BC) as a standard feature
- Wide operating temperature range:  $-15^{\circ}\text{C} \dots +45^{\circ}\text{C}$
- Adjustable latching and back check starting angle by grooved spindle
- Die-cast aluminium body manufactured from high performance silicon alloy
- Fulfill shipbuilders requirements when door is tilted even 3,5 degrees

### INSTALLATION

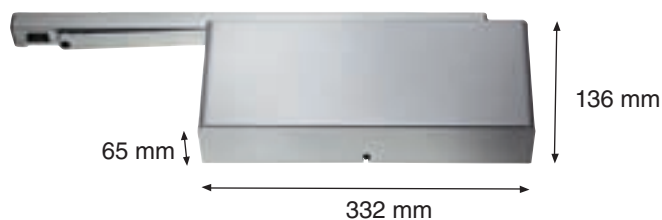
#### OPENING SIDE



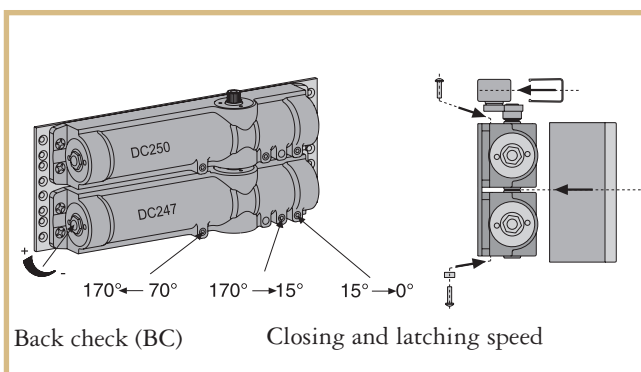
#### CLOSING SIDE



## DIMENSIONS



## ADJUSTMENT





# STANDARDS AND FEATURES

## CLASSIFICATION OF **ABLOY®** DOOR CLOSERS ACCORDING TO EUROPEAN STANDARD EN1154

	DC210	DC215	DC335	DC240	DC247	DC330	DC250	DC270
EN1						●	●	
EN2	●	●		●		●	●	
EN3	●	●	●	●		●	●	
EN4		●	●	●		●	●	
EN5			●	●	●		●	
EN6				●	●		●	●
EN7					●			●

When using sliding arm with door closer DC335 and DC240, the closing strength of the closer reduces by two classes.(e.g. DC240 and DC194 = EN1-4).

## FEATURES

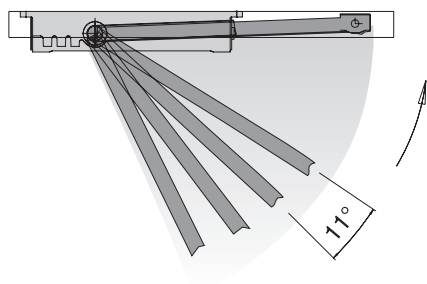
	DC210	DC215	DC335	DC240	DC247	DC330	DC250	DC270
BC			●	●	●		●	●
DC			●	●			●	

● Option      ● Standard

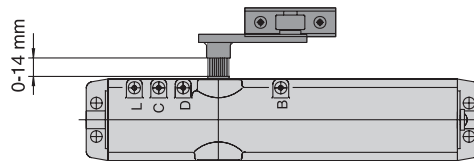
## RECOMMENDED DOOR SIZES ACCORDING EN1154

Door Closer Size	Recommended max. door leaf width mm	Door leaf mass Kg
EN1	750	20
EN2	850	40
EN3	950	60
EN4	1100	80
EN5	1250	100
EN6	1400	120
EN7	1600	160

# ABLOY® DOOR CLOSER ARM



The starting angle for back check, delayed closing and latching speed can be adjusted by selecting the desired arm position in relation to the grooved spindle. Each groove represents an angle of 11 degrees.



The arm height can be adjusted (max 14 mm) by moving the grooved spindle in a vertical direction.

## ARMS



Standard arm DC190 (removable joint)  
Standard arm DC199 (locked joint)  
Standard arm DC197 (hardened joint)



Hold-open arm DC191



Sliding arm DC194



Sliding arm DC193



Parallel arm bracket for DC190, DC199

410178 Silver

410179 Brass

410181 White

	DC210	DC215	DC335	DC240	DC247	DC330	DC250	DC270
DC190			●	●				
DC191			●	●				
DC199			●	●				
DC193			●	●		●	●	●
DC194			●	●		●	●	●
DC197					●			

# ABLOY® DOOR CLOSER ACCESSORIES

## HOLD-OPEN DEVICE AND OPENING DAMPER



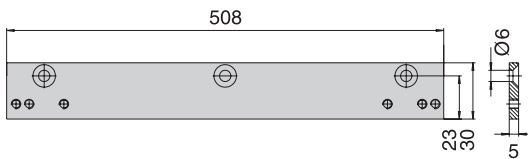
Hold-open device DC152

- Adjustable hold-open force
- Max. hold-open angle ~120°

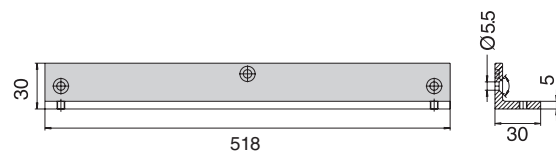


- Opening damper DC153
- Max. damping angle ~ 110°
- Designed to brake the door before hitting the door stopper
- Does not replace the mechanical door stopper

## MOUNTING PLATES FOR SLIDING ARMS



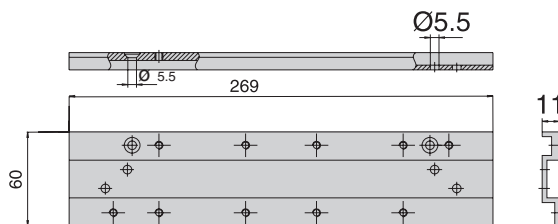
Straight mounting plate DC103



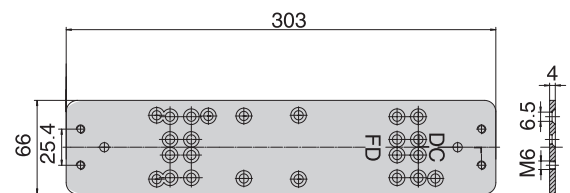
Angle mounting plate DC104

## MOUNTING PLATES FOR DOOR CLOSERS DC335, DC330

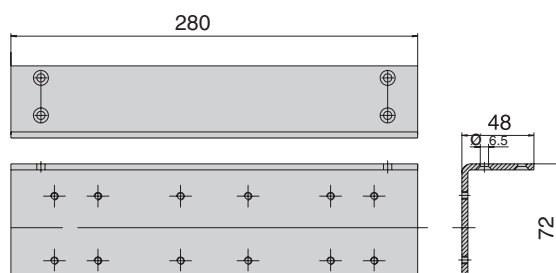
## DC240, DC247, DC250



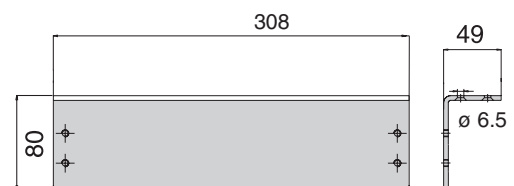
Mounting plate for profile doors  
DC102



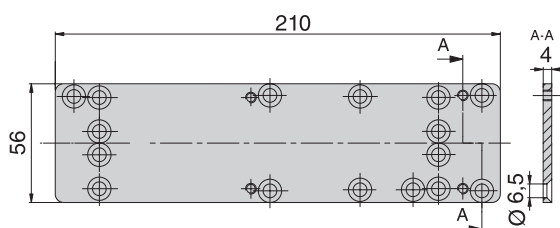
Mounting plate DC106



Angle mounting plate DC113



Angle mounting plate DC107



Mounting plate DC130

# ABLOY® FIRE DOOR CLOSING SYSTEMS

## ABLOY® FD440 ELECTROHYDRAULIC HOLD OPEN DEVICE

### APPLICATIONS

When using free swing arms **ABLOY®** FD494 or FD499, **ABLOY®** FD440 is particularly useful for applications where the door is in frequent use and the opening resistance of a door closer may be too heavy, like kindergartens, schools, retirement homes and day centres. Single doors with standard arm the maximum door leaf width 1400mm and weight 120 kg.

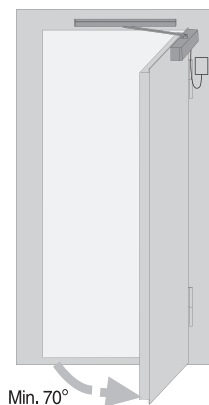
### FEATURES

- CE-certified
- Based on **ABLOY®** DC240 door closer



## ABLOY® FD440

With free swing arms the first opening is like with a normal door closer. The door is opened to the desired angle to determine the opening angle for later use (min. approx. 70°). After the first opening the free swing function enables the door to be opened and closed freely, without any resistance. When the power is switched off, i.e. when the smoke detectors react to smoke, the door closes always regardless of the door position. Current consumption 90 mA (24VDC).



Closing forces according to EN1155:  
With arms DC199 and FD499 EN 2-6  
With arms DC194 and FD494 EN 1-4

## ABLOY® FD450 ELECTROMECHANICAL HOLD OPEN DEVICE

### APPLICATIONS

Single doors of maximum door leaf width is 1250 mm.

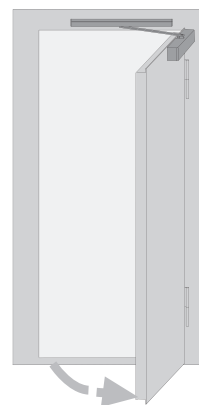
### FEATURES

- CE-certified
- Electromechanical hold-open device for single doors
- Recommended to use with DC250 door closer



## ABLOY® FD450

The door is held open by hold open device in the selected angle. When the power is switched off, e.g. when smoke detectors react to smoke, the door closes. Hold open angle for active door can be adjusted from 80° to 130°. Power consumption 1 x 60 mA.

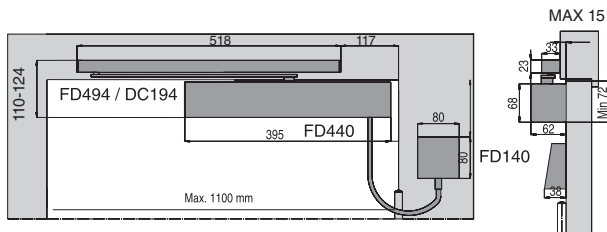


# ABLOY® FIRE DOOR INSTALLATION

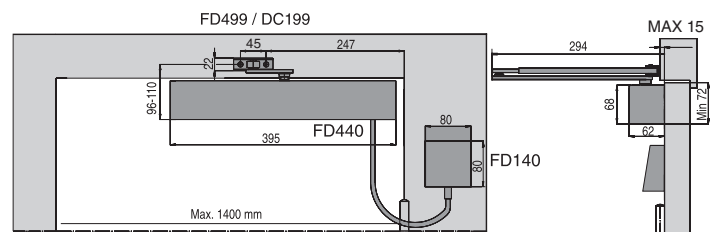
## ABLOY® FD440

### OPENING SIDE INSTALLATION ON DOOR

FD440 + FD494 / DC194 + FD140

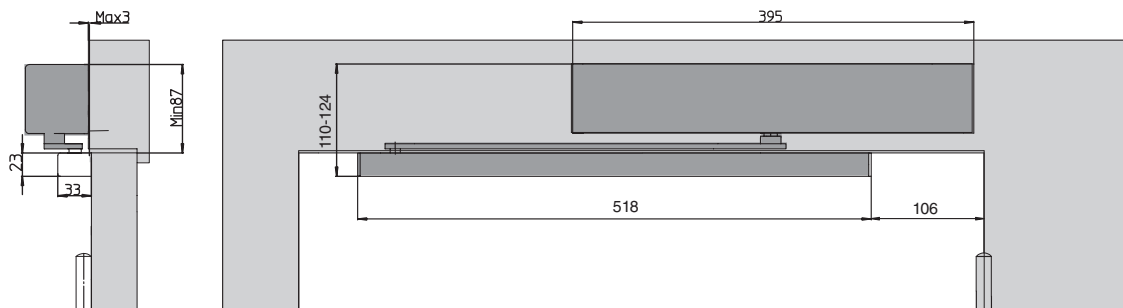


FD440 + FD499/DC199 + FD140



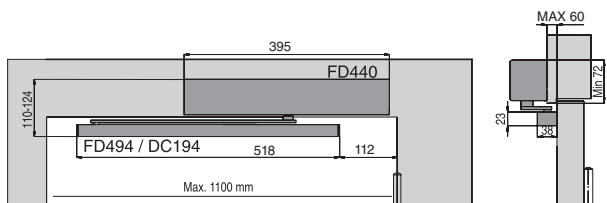
### OPENING SIDE INSTALLATION ON FRAME

FD440 + FD494 / DC194

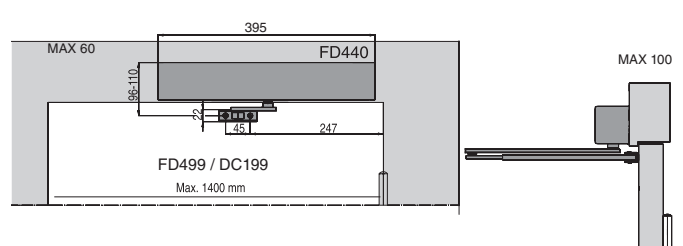


### CLOSING SIDE INSTALLATION ON FRAME

FD440 + FD494 / DC194



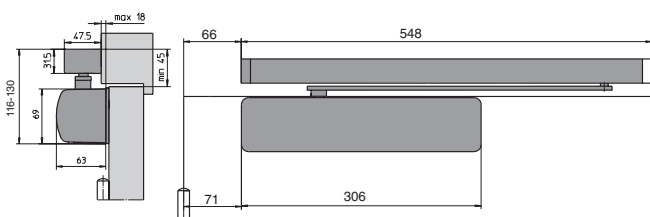
FD440 + FD499/DC199



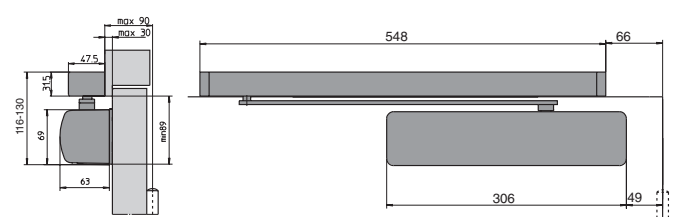
## ABLOY® FD450

### OPENING AND CLOSING SIDE INSTALLATION ON DOOR

OPENING SIDE



CLOSING SIDE







## **ABLOY® FD451** MECHANICAL DOOR COORDINATOR

### APPLICATIONS

Double doors with maximum door width of 1250 – 2500 mm.

### FEATURES

- CE-certified
- Can be used with wall magnets
- Recommended to use with 2 pcs DC250 door closer

### ACCESSORIES

Support brackets available to simplify installation.

## **ABLOY® FD454** ELECTROMECHANICAL HOLD OPEN DEVICE

### APPLICATIONS

Double doors with maximum door width of 1250 – 2500 mm.

### FEATURES

- CE-certified
- Electromechanical hold open device for active door or hold open for both doors with hold open device in inactive door and coordinator in active door
- Supplied with coordinator and arms
- Recommended to use with 2 pcs DC250 door closer

## **ABLOY® FD452** ELECTROMECHANICAL HOLD OPEN DEVICE

### APPLICATIONS

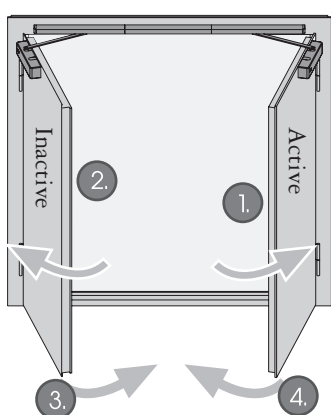
Double doors with maximum door width of 1250 – 2500 mm.

### FEATURES

- CE-certified
- Two electromechanical hold open devices
- Supplied with coordinator and arms
- Recommended to use with 2 pcs DC250 door closer

## ABLOY® FD451 MECHANICAL DOOR COORDINATOR

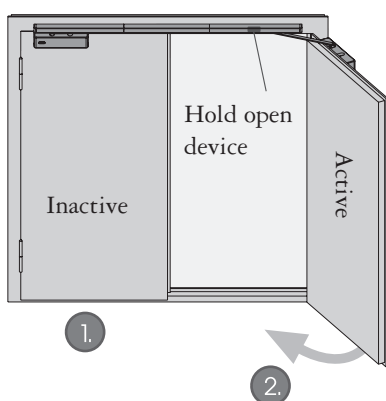
During the day the doors are normally closed and the active door is used as passage door. If both doors need to stay open, the active door must be opened first (1), after which the inactive door can be opened (2). The co-ordinator holds the active door in the desired angle during the time the inactive door is open. The inactive door stays open only if someone holds it or a wall magnet is used. When the inactive door is closed (3), the active door starts to close (4).



## ABLOY® FD454 HOLD OPEN FOR ACTIVE DOOR

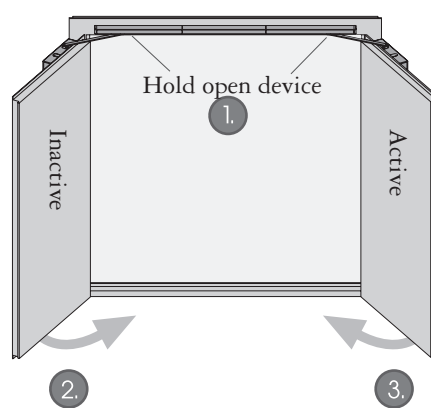
The inactive door is normally closed (1) and remains open only if someone holds it open. When the power is switched off, e.g. when smoke detectors react to smoke, the active door closes. Hold open angle for active door can be adjusted from 80° to 130°. Power consumption 1 x 60 mA.

The above solutions can be installed on the closing side of the door with the help of a small accessory set **ABLOY® FD100** (see page 15).



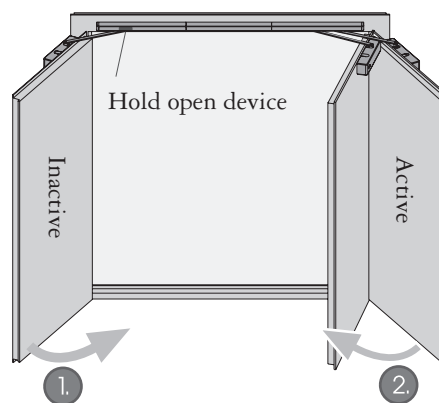
## ABLOY® FD452 TWO ELECTROMECHANICAL HOLD OPEN DEVICES

The doors are held open by the hold-open devices in the selected angle (1). When the power is switched off, e.g. when the smoke detectors react to smoke, the doors close so that the inactive door closes first (2), and when it is completely closed the active door starts to close (3). Hold open angle for both doors can be adjusted from 80° to 130°. Power consumption 2 x 60 mA.



## ABLOY® FD454 HOLD OPEN FOR BOTH DOORS

During the day both doors are normally held open. The inactive door is held open by the hold open device in the angle determined during the installation. The active door is held open by the coordinator. The hold open angle of the active door is adjustable (up to 150°). When the power is switched off, e.g. when the smoke detectors react to smoke, the passive door closes first (1), and when it is completely closed, the active door starts to close (2). Power consumption 1 x 60 mA.

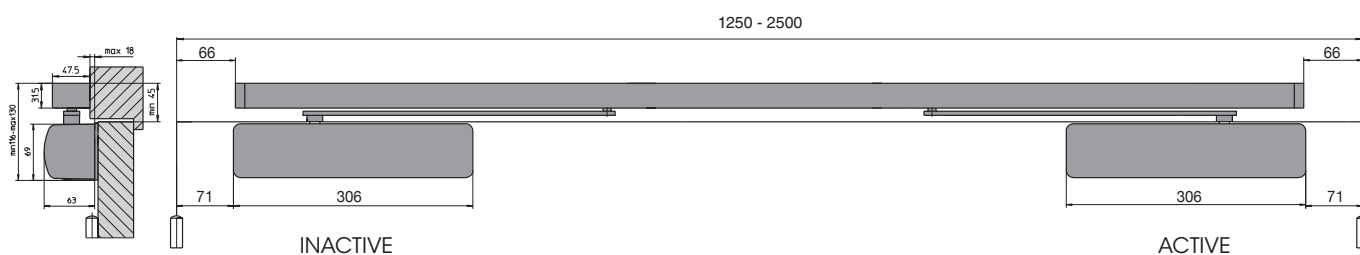


# ABLOY® FD451 - FD454 INSTALLATION



## ABLOY® FD451 - FD454

### OPENING SIDE

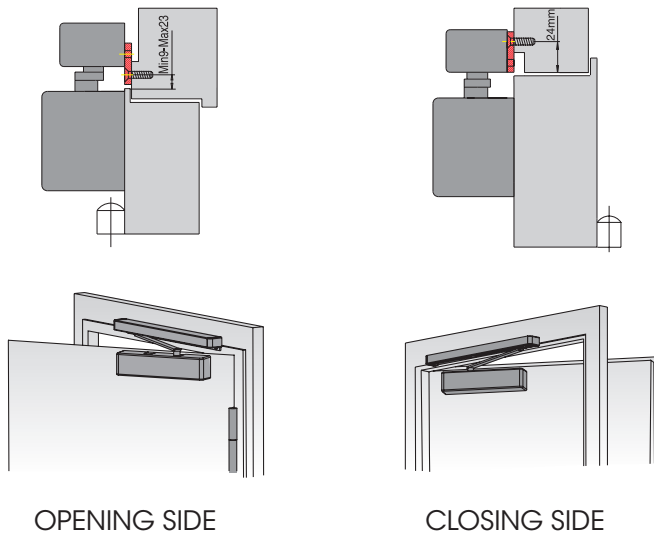


### CLOSING SIDE



FD100 is needed for passive door in closing side installation. FD100 must be specified when ordering.

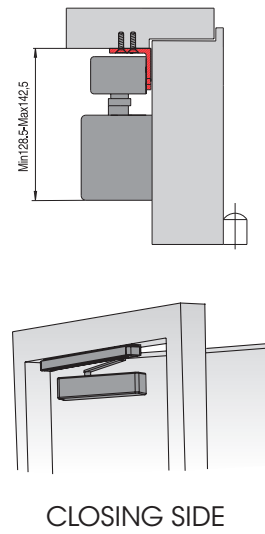
## ABLOY® DC103



OPENING SIDE

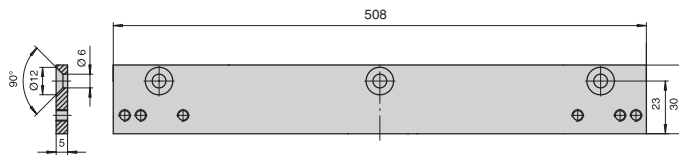
CLOSING SIDE

## ABLOY® DC105 (+ DC109)

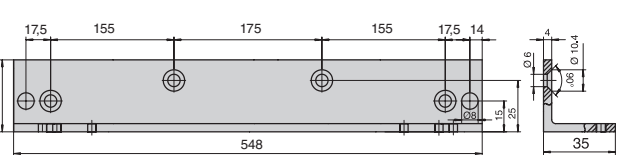


CLOSING SIDE

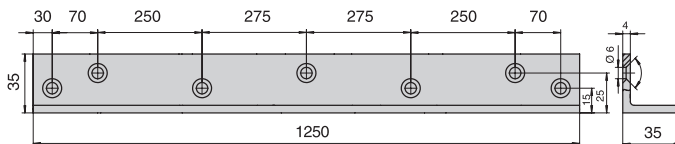
## ACCESSORIES



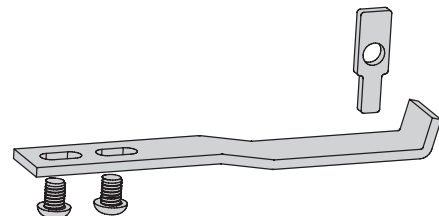
Straight mounting plate **ABLOY® DC103** for single or double doors



Angle mounting plate **ABLOY® DC105** for single or double doors



Angle mounting plate **ABLOY® DC109** for double doors



Accessory set **ABLOY® FD100** for closing side installation in double doors

It is recommended to use mounting plates.

**NOTE:** is not included in standard delivery, it must be specified separately.

## ABLOY® – the sign for security



The quality and environmental systems used by Abloy Oy guarantee that customers can be certain of **ABLOY®** quality in every field. We received our first Quality System Certificate - SFS-EN ISO 9001 - in 1989. Just eight years later, Abloy Oy was one of the first companies in Finland to be granted an SFS-EN-ISO 14001 Environmental System Certificate.

Our products are designed and manufactured not only to provide high levels of security, but also to be reliable, user-friendly and aesthetically pleasing. **ABLOY®** is your sign for security.



**ABLOY®** is a registered trademark of Abloy Oy, one of the leading manufacturers of locks, locking systems and architectural hardware and the world's leading developer of products in the field of electromechanical lock technology.

The unique **ABLOY®** detainer disc cylinder mechanism has several advantages over conventional locking mechanisms. Ever since its invention in 1907, it has been a symbol of high security and superior performance.

Our range consists of electromechanical locks, cam locks, padlocks, office furniture locks, rim locks, lock cases, cylinders for different types of mortice locks, door closers, door automatics and architectural hardware. **ABLOY®** locking solutions for every application are available from our world-wide network of distributors.

Customer-oriented development, combined with our long experience and extensive security expertise, mean that **ABLOY®** security solutions employ the very latest technology to meet your needs.



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