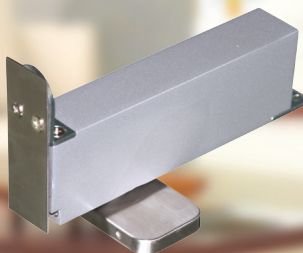


Closing Devices



Smooth Door Closing

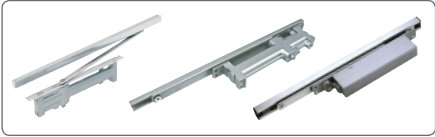
1000 Series	CA4
1500 / 1550 Series	CA5
1560 Series	CA18
1600 Series	CA6
1650 Series	CA7
2000 Series	CA8
5000 Series	CA9
7000 Series	CA10
8200 Series	CA11
8300 / 8325 / 8336 Series	CA12
CF540 Series	CA19
CF550 Series	CA20
CF560 Series	CA21
CF570 Series	CA22
CF580 Series	CA23
CF590 Series	CA24
CR280 Series	CA14
CR360 Series	CA29
CR380 Series	CA15
CR3835 Series	CA16
Exit Panic Device 2000 / 2000V Series	CA25-28
FH-210 Series	CA30
FH-300/300X Series	CA31
FH-410 Series	CA32
FH-700 Series	CA32
FH-800 Series	CA33
FH-900 Series	CA34
TC320 / TC340 Series	CA17
TS320 / TS340 Series	CA13
Fixing Details - Door Closers	CA34-39/42
Fixing Details - Concealed Door Closers	CA40-41
Fixing Details - Concealed Floor Spring / Concealed Door Hinges	CA43-54
Fixing Details - Transom Door Closers	CA55
Fixing Details - Floor Spring Hinges	CA55-58
Installation Instructions	CA59
Table of Closing Devices / Table of Test Reports	CA60-61



BS EN Standard / Professional / Economical Type Door Closers CA4-12



Track Arm Surface Door Closers CA13



Concealed Door Closers CA14-16



Concealed Track Arm Door Closers CA17



Electro-Magnetic Door Closers CA18



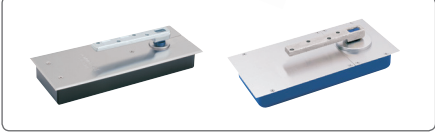
Concealed Floor Spring Hinges / Revolving Floor Spring Hinges CA19-24



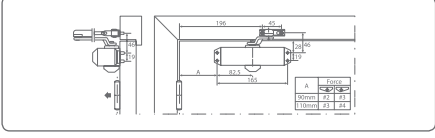
Exit Panic Devices CA25-28



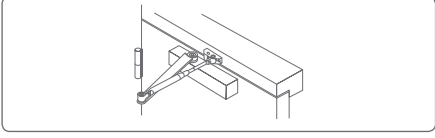
Transom Door Closers CA29



Floor Spring Hinges CA30-34



Fixing Details CA34-58



Installation Instructions CA59

















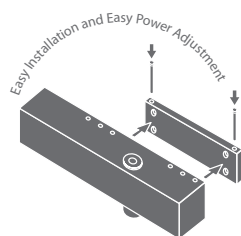
Series No.	Hold Open		Back Check		Delayed Action	S.S. Cover
	Build in	Hold-Open Arm	Adjustable At Valve	Self-Regulating		
DOOR CLOSER						
1500						
1550						
1600						
1650						

Table of Closing Devices / Table of Test Reports CA60-61

PROFESSIONAL / ECONOMICAL TYPE DOOR CLOSER



Parallel arm bracket	Hold open arm

**EN Fire Tested by Warrington APT
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bsi.
BS EN 1634-1:2014



GA
GA/T93-2004
FIRE PROOF DOOR CLOSER

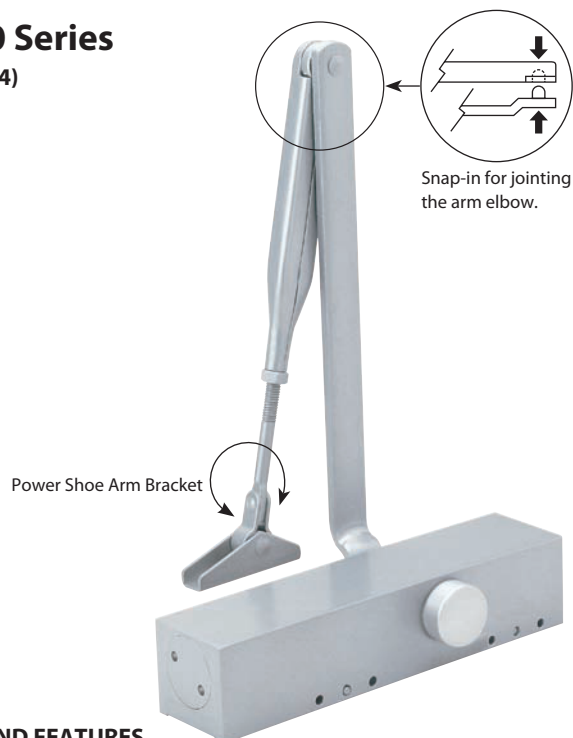


Snap-in assembling for the arm's elbow for easy installation.

Closing speed can be used from -15°C to + 40°C range.

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may

1000 Series (size 2-4)



DATA AND FEATURES

Sizes			2	3	4
Variable closing force standard doors			≤850mm	≤950mm	≤1100mm
Spring Strength (EN)			≤40kg	≤60kg	≤80kg
Arm	Standard	without hold-open	1000		
		with hold-open	1000H		
	Parallel	without hold-open	P1000		
		with hold-open	P1000H		
	Track	without hold-open	1000TA		
		with hold-open	1000TAH		
Body Dimension (Length x Height x Projection)			207 x 48 x 45 (mm)		
Rack and pinion			✓		
Power shoe arm bracket			✓		
Angle of opening			180°		
Power adjustable by spring			x		
Power adjustable by position			✓		
Sweep speed adjustable			✓		
Latching speed adjustable			✓		
Back-check	Self-regulating		x		
	Adjustable at valve		1000BC		
Delayed action adjustable			x		
Non-handed			✓		
With cover			✓		
Application	Regular		✓		
	Parallel arm				
	Transom		✓		
Guarantee/years			5 years		

✓ = yes x = no = option

cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

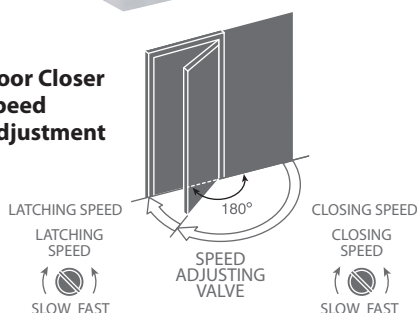
Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White



BS EN STANDARD DOOR CLOSERS

With stainless steel
arm and stainless
steel cover (option)



Door Closer Speed Adjustment



Parallel arm bracket	Hold-open arm
	

**EN Fire Tested by Warrington APT
Laboratories, UK**

bsi. **BS EN 1154**
BS EN 1634-1:2014 1997 / A1:2002

CE A Tested to EN 1154 **485113**
by Warrington APT Laboratories,
UK Power Adjustable by Spring
NUMBER 2812 EN Fire Tested



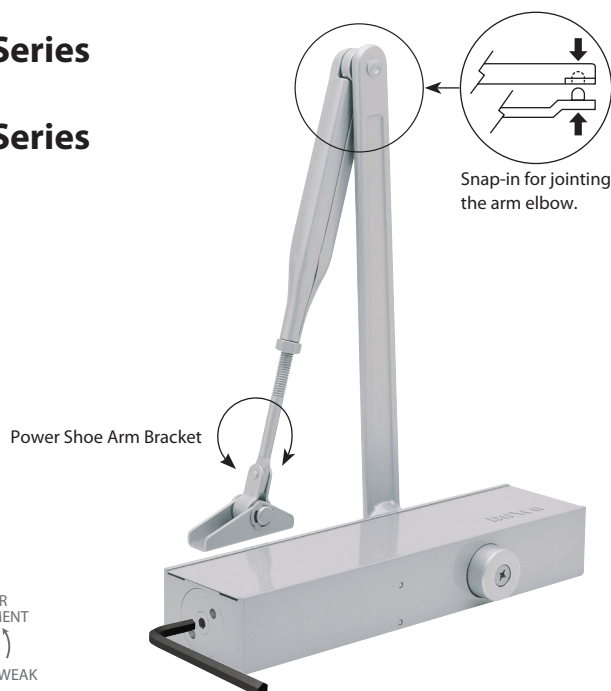
Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to

1500 Series

(size 2-5)

1550 Series

(size 3-6)



DATA AND FEATURES

Sizes			2	3	4	5	6
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm	≤ 1250mm	≤ 1450mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg	≤ 100kg	≤ 120kg
Arm	Standard	without hold-open	1500				1550
		with hold-open	1500H				1550H
	Parallel	without hold-open	P1500				P1550
		with hold-open	P1500H				P1550H
	Track	without hold-open	1500TA				1550TA
		with hold-open	1500TAH				1550TAH
Body Dimension (Length x Height x Projection)			236 x 60 x 39 (mm)				275 x 60 x 45 (mm)
Rack and pinion			✓				
Power shoe arm bracket			✓				
Angle of opening			180°				
Power adjustable by spring			✓				
Power adjustable by position			x				
Sweep speed adjustable			✓				
Latching speed adjustable			✓				
Back-check	Self-regulating	x					
	Adjustable at valve	1500BC				1550BC	
Delayed action adjustable			1500D				1550D
Non-handed			✓				
With cover			○				
Application	Regular	✓					
	Parallel arm	○					
	Transom	✓					
Guarantee/years			10 years				20 years

✓ = yes x = no ○ = option

avoid damages to firemen and those evacuees due to explosions.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Power shoe arm bracket: Designed to be reversed

to increase final closing power by approximately 15%.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

1600 Series

(size 2-5)



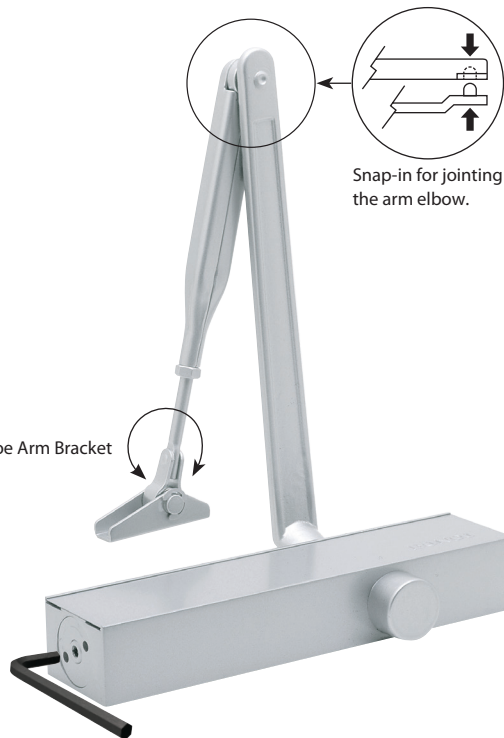
With stainless steel arm and stainless steel cover (option)

Parallel arm bracket	Hold-open arm

Power Shoe Arm Bracket



Snap-in for jointing the arm elbow.



EN Fire Tested by Warrington APT Laboratories, UK

bsi. **BS EN 1154**
BS EN 1634-1:2014 1997 / A1:2002



A Tested to EN 1154 **485113**
by Warrington APT Laboratories,
UK Power Adjustable by Spring
EN Fire Tested



FM 578071



GA/T93-2004
FIRE PROOF DOOR CLOSER



DATA AND FEATURES

Sizes			2	3	4	5
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm	≤ 1250mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg	≤ 100kg
Arm	Standard	without hold-open	1600			
		with hold-open	1600H			
	Parallel	without hold-open	P1600			
		with hold-open	P1600H			
	Track	without hold-open	1600TA			
		with hold-open	1600TAH			
Body Dimension (Length x Height x Projection)			236 x 55 x 39 (mm)			
Rack and pinion			✓			
Power shoe arm bracket			✓			
Angle of opening			180°			
Power adjustable by spring			✓			
Power adjustable by position			x			
Sweep speed adjustable			✓			
Latching speed adjustable			✓			
Back-check	Self-regulating		x			
	Adjustable at valve		1600BC			
Delayed action adjustable			1600D			
Non-handed			✓			
With cover			○			
Application	Regular		✓			
	Parallel arm		○			
	Transom		✓			
Guarantee/years			20 years			

✓ = yes x = no ○ = option

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as

substitute for a door stop.

Delayed action: Provides prolonged closing time to assist passage of trolleys, wheel chairs, elderly people etc.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

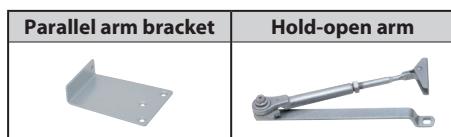
Produced by ISO 9001 approved factory.

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

BS EN STANDARD DOOR CLOSERS



With stainless steel arm and stainless steel cover (option)



EN Fire Tested by Warrington APT Laboratories, UK

bsi. **BS EN 1154**
BS EN 1634-1:2014 1997 / A1:2002



A Tested to EN 1154 **482113**
by Warrington APT Laboratories,
UK Power Adjustable by Spring
EN Fire Tested



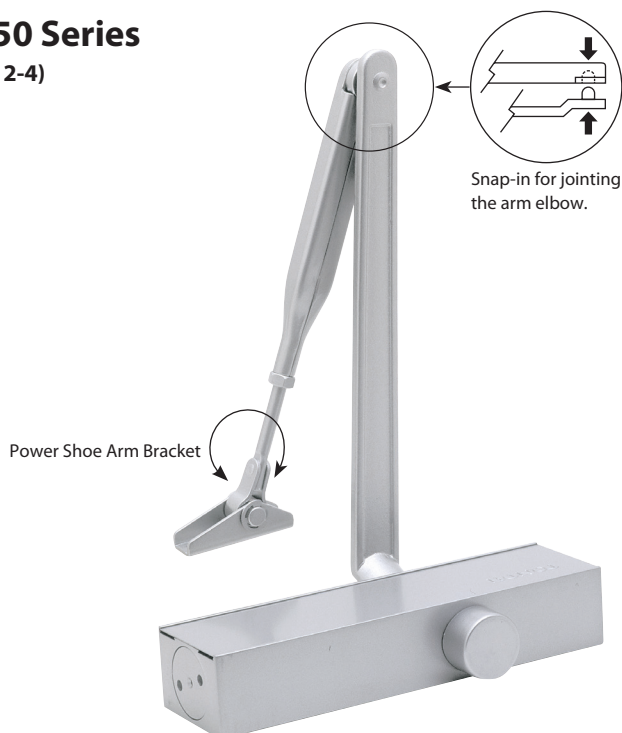
FM 578071



GA/T93-2004
FIRE PROOF DOOR CLOSER

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

1650 Series (size 2-4)



DATA AND FEATURES

Sizes			2	3	4
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg
Arm	Standard	without hold-open	1650		
		with hold-open	1650H		
	Parallel	without hold-open	P1650		
		with hold-open	P1650H		
	Track	without hold-open	1650TA		
		with hold-open	1650TAH		
Body Dimension (Length x Height x Projection)			204 x 55 x 39 (mm)		
Rack and pinion			✓		
Power shoe arm bracket			✓		
Angle of opening			180°		
Power adjustable by spring			x		
Power adjustable by position			✓		
Sweep speed adjustable			✓		
Latching speed adjustable			✓		
Back-check	Self-regulating	x			
	Adjustable at valve	1650BC			
Delayed action adjustable			1650D		
Non-handed			✓		
With cover			○		
Application	Regular	✓			
	Parallel arm	○			
	Transom	✓			
Guarantee/years			10 years		

✓ = yes x = no ○ = option

Guarantee: A free replacement ex-works of any corner proved defective by reason either of faulty manufactured or defect in materials.

Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

Produced by ISO 9001 approved factory.

BS EN PROFESSIONAL / ECONOMICAL TYPE DOOR CLOSERS

With stainless steel arm and
stainless steel cover (option)

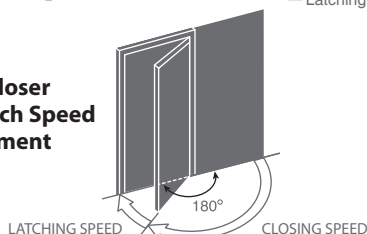


Door Closer Speed Adjustment

Speed Adjusting Valve
The door closing speed can be changed
easily by turning the speed adjusting
valve to the right or left.



Door Closer and latch Speed Adjustment



Parallel arm bracket	Hold-open arm

Tested according to **BS EN 1154**
1997 / A1:2002

bsi.

BS EN 1634-1:2014



GA

GA/T93-2004
FIRE PROOF DOOR CLOSER

Reversible - right and left hand operation.

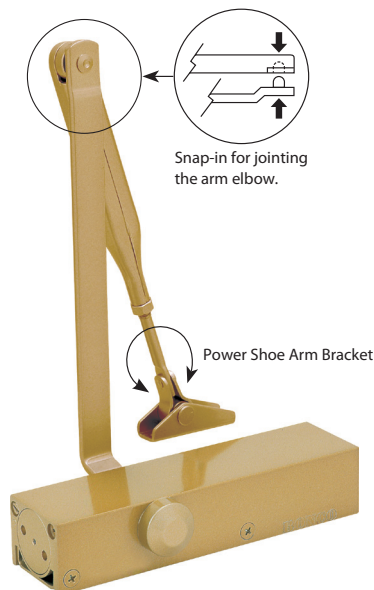
Piston & spindle heat treated for high strength.

Heat treated high tensile springs.

Full hydraulic control.

Compact design with low-profile, 38mm projection allows

2000 Series



DATA AND FEATURES

Sizes			2	3	4	5
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm	≤ 1250mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg	≤ 100kg
Arm	Standard	without hold-open	2002	2003	2004	2005
		with hold-open	2002H	2003H	2004H	2005H
		with build in hold-open	2002S	2003S	2004S	2005S
	Parallel	without hold-open	P2002	P2003	P2004	P2005
		with hold-open	P2002H	P2003H	P2004H	P2005H
		with build in hold-open	P2002S	P2003S	P2004S	P2005S
	Track	without hold-open	2002TA	2003TA	2004TA	2005TA
		with hold-open	2002TAH	2003TAH	2004TAH	2005TAH
		with build in hold-open	2002TAS	2003TAS	2004TAS	2005TAS
Body Dimension (Length x Height x Projection)			182 x 46 x 37 (mm)		203 x 47 x 38 (mm)	
Rack and pinion			✓			
Power shoe arm bracket			✓			
Angle of opening			110° - 180° <small>*Doors can be opened max.180°, in case of Track Arm or Parallel Arm installation.</small>			
Power adjustable by spring			x			
Power adjustable by position			✓			
Sweep speed adjustable			✓			
Latching speed adjustable			✓			
Back-check	Self-regulating		x			
	Adjustable at valve		2002BC	2003BC	2004BC	2005BC
Delayed action adjustable			x			
Non-handed			✓			
With cover			○			
Application	Regular		✓			
	Parallel arm		✓			
	Transom		✓			
Guarantee/years			5 years			

✓ = yes x = no ○ = option

installation on doors with adjacent walls at 90°.

Closing speed can be used from -15°C to +40°C range.

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those

evacuees due to explosions.

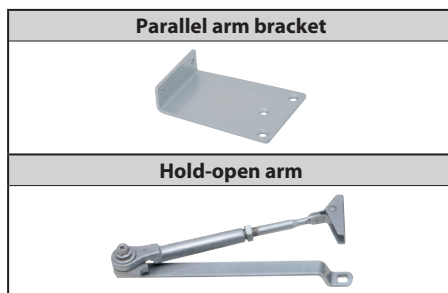
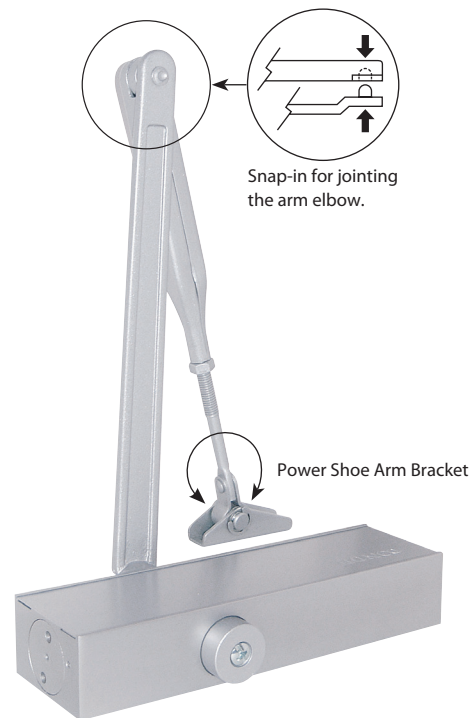
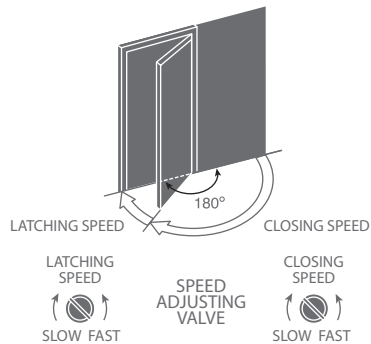
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

5000 Series

Door Closer Speed Adjustment



DATA AND FEATURES

Sizes			2	3	4	5	6
Variable closing force standard doors			≤850mm	≤950mm	≤1100mm	≤1250mm	≤1450mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg	≤ 100kg	≤ 120kg
Arm	Standard	without hold-open	5002	5003	5004	5005	5006
		with hold-open	5002H	5003H	5004H	5005H	5006H
	Parallel	without hold-open	P5002	P5003	P5004	P5005	P5006
		with hold-open	P5002H	P5003H	P5004H	P5005H	P5006H
	Track	without hold-open	5002TA	5003TA	5004TA	5005TA	5006TA
		with hold-open	5002TAH	5003TAH	5004TAH	5005TAH	5006TAH
Body Dimension (Length x Height x Projection)			207 x 60 x 39 (mm)			246 x 62 x 45 (mm)	
Rack and pinion			✓				
Power shoe arm bracket			✓				
Angle of opening			180°				
Power adjustable by spring			x				
Power adjustable by position			✓				
Sweep speed adjustable			✓				
Latching speed adjustable			✓				
Back-check	Self-regulating		○				
	Adjustable at valve		5002BC	5003BC	5004BC	5005BC	5006BC
Delayed action adjustable			5002D	5003D	5004D	5005D	5006D
Non-handed			✓				
With cover			○				
Application	Regular		✓				
	Parallel arm		○				
	Transom		✓				
Guarantee/years			10 years				

✓ = yes x = no ○ = option

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.

Back check: Provides a cushioning effect when the

door is forcibly thrown open but does not serve as substitute for a door stop.

Delayed action: Provides prolonged closing time to assist passage of trolleys, wheel chairs, elderly people etc.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

EN Fire Tested by Warrington APT Laboratories, UK

bsi. BS EN 1154
BS EN 1634-1:2014 1997 / A1:2002

CE A Tested to EN 1154 483113
by Warrington APT Laboratories,
UK Power Adjustable by position
NUMBER 2812 EN Fire Tested



FM 578071



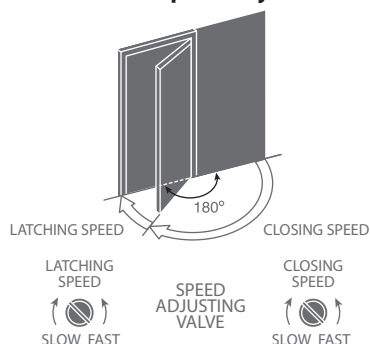
GA/T93-2004
FIRE PROOF DOOR CLOSER



Closing speed can be used from -15°C to +40°C range.

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

7000 Series

Door Closer Speed Adjustment



Parallel arm bracket	Hold-open arm
	

Tested according to **BS EN 1154**
1997 / A1:2002

bsi.
BS EN 1634-1:2014

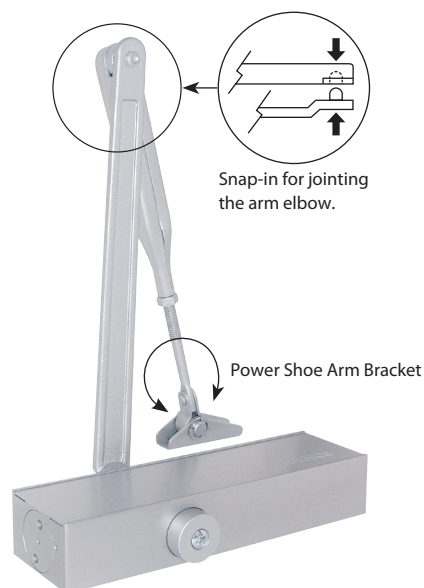


Reversible - right and left hand operation.

Efficient closing and latching is assured from an easily adjust two speed control.

Stable hydraulic fluid for any climatic operation and constant lubrication.

7000 series door closer are constructed with extruded anodised aluminium body, forged steel arms passivated



DATA AND FEATURES

Sizes			2	3	4
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg
Arm	Standard	without hold-open	7002	7003	7004
		with hold-open	7002H	7003H	7004H
		with Build in hold-open	7002S	7003S	7004S
	Parallel	without hold-open	P7002	P7003	P7004
		with hold-open	P7002H	P7003H	P7004H
		with Build in hold-open	P7002S	P7003S	P7004S
	Track	without hold-open	7002TA	7003TA	7004TA
		with hold-open	7002TAH	7003TAH	7004TAH
		with Build in hold-open	7002TAS	7003TAS	7004TAS
Body Dimension (Length x Height x Projection)			207 x 55 x 40 (mm)		
Rack and pinion			✓		
Power shoe arm bracket			✓		
Angle of opening			180°		
Power adjustable by spring			x		
Power adjustable by position			✓		
Sweep speed adjustable			✓		
Latching speed adjustable			✓		
Back-check	Self-regulating		7002BC	7003BC	7004BC
	Adjustable at valve		x		
Delayed action adjustable			x		
Non-handed			✓		
With cover			○		
Application	Regular		✓		
	Parallel arm		○		
	Transom		✓		
Guarantee/years			5 years		

✓ = yes x = no ○ = option
against rust and high quality steel internal components.

Closing speed can be used from -15°C to +40°C range.

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.



Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

BS EN STANDARD DOOR CLOSERS

8200 Series

Parallel arm bracket	Hold-open arm
	

**EN Fire Tested by Warrington APT
Laboratories, UK**

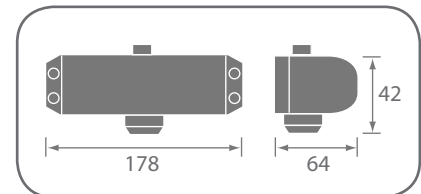
bsi.

BS EN 1634-1:2014

**Tested according to BS EN 1154
1997 / A1:2002**



Standard Finishes :
F71 Gold
F72 Silver
F73 Bronze



Door Closer Selection Chart

S I Z E S	Standard Arm installation			Parallel Arm Installation		Track Arm Installation		Back Check Adjustable at Value	Applicable Door Dimensions DW x DH (mm)	Maximum Door Weight (kg)
	Without Hold-Open	With Build In Hold-Open	With Hold- Open Arm	Without Hold-Open	With Build In Hold-Open	Without Hold-Open	With Hold-Open			
2	8202	S8202	8202H	P8202	P8202S	8202TA	8202TAH	8202BC	900 x 2100	50
3	8203	S8203	8203H	P8203	P8203S	8203TA	8203TAH	8203BC	1050 x 2100	65
4	8204	S8204	8204H	P8204	P8204S	8204TA	8204TAH	8204BC	1200 x 2100	85

hydraulic surface applied door closer for all interior or exterior doors, with standard, backcheck, hold-open.

- Rack and pinion mechanism.
- One compact body size for both spring strengths.
- Die-cast aluminum body protected by coat lacquer finish.
- Efficient closing and latching is assured from an easily adjusted two speed control.
- Regular arms are equipped with power adjustment bracket to increase or decrease closing power.
- Reversible, right and left hand operation.
- Closing speed can be used from -15°C to + 40°C range.

BS EN STANDARD DOOR CLOSERS

With stainless steel arm and stainless steel cover (option)



Parallel arm bracket	Hold-open arm

EN Fire Tested by Warrington APT Laboratories, UK

bsi. **BS EN 1154**
BS EN 1634-1:2014 1997 / A1:2002

CE A Tested to EN 1154 **382113**
by Warrington APT Laboratories, **383113**
UK Power Adjustable by Spring
NUMBER 2812 EN Fire Tested



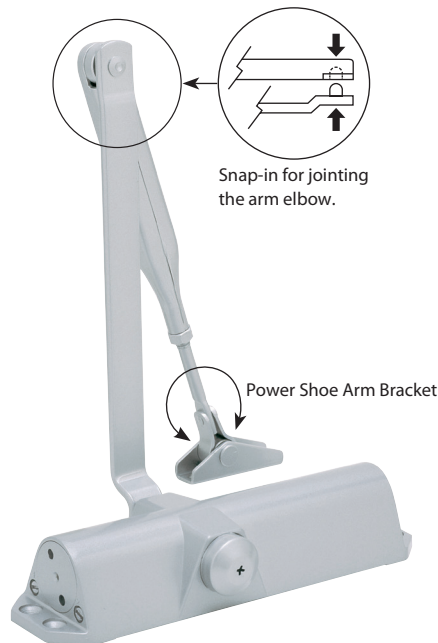
GA
GA/T93-2004
FIRE PROOF DOOR CLOSER



QB
QB/T3893-1999

One compact body size for both spring strengths.
Die-cast aluminum body protected by coast lacquer finish.
Reversible, right and left hand operation.
Closing speed can be used from -15°C to +40°C range.
Anti-explosion device: In case of fire, the "door closer"

8300 Series 8325 Series (size 2-5) 8336 Series (size 3-6)



DATA AND FEATURES

Sizes			1	2	3	4	5	6
Variable closing force standard doors			≤ 750mm	≤ 850mm	≤ 950mm	≤ 1100mm	≤ 1250mm	≤ 1450mm
Spring Strength (EN)			≤ 20kg	≤ 40kg	≤ 60kg	≤ 80kg	≤ 100kg	≤ 120kg
Arm	Standard	without hold-open	8301	8302	8303	8304	8325	8336
		with hold-open	8301H	8302H	8303H	8304H	8325H	8336H
	Parallel	without hold-open	P8301	P8302	P8303	P8304	P8325	P8336
		with hold-open	P8301H	P8302H	P8303H	P8304H	P8325H	P8336H
	Track	without hold-open	8301TA	8302TA	8303TA	8304TA	8325TA	8336TA
		with hold-open	8301TAH	8302TAH	8303TAH	8304TAH	8325TAH	8336TAH
Body Dimension (Length x Height x Projection)			162 x 44 x 36 (mm)	220 x 59 x 42 (mm)			248 x 59 x 42 (mm)	297 x 62 x 46 (mm)
Rack and pinion			✓					
Power shoe arm bracket			✓					
Angle of opening			120°	180°			180°	
Power adjustable by spring			×	×			✓	
Power adjustable by position			×	✓			×	
Sweep speed adjustable			✓					
Latching speed adjustable			✓					
Back-check		Self-regulating	×					
		Adjustable at valve	×	×			✓	
Delayed action adjustable			×					
Non-handed			✓					
With cover			×					
Application		Regular	✓					
		Parallel arm	○					
		Transom	✓					
Guarantee/years			5 years	10 years				

✓ = yes × = no ○ = option

will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

TRACK ARM SURFACE DOOR CLOSERS

With stainless steel arm and
stainless steel cover (option)



**EN Fire Tested by Warrington APT
Laboratories, UK**

bsi. BS EN 1154
BS EN 1634-1:2014 1997 / A1:2002

CE A Tested to EN 1154 **382113**
by Warrington APT Laboratories,
UK Power Adjustable by Spring
NUMBER 2812 EN Fire Tested



FM 578071



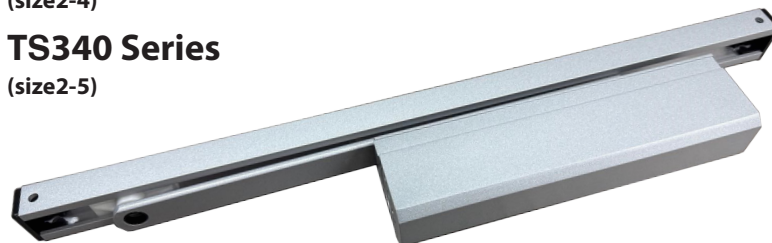
Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to

TS320 Series

(size2-4)

TS340 Series

(size2-5)



DATA AND FEATURES

Sizes			2	3	4	5
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm	≤ 1250mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg	≤ 100kg
Arm	Track	without hold-open	TS320			TS340
		with hold-open	TS320H			TS340H
Body Dimension (Length x Height x Projection)			210 x 53.5 x 32 (mm)			212 x 60 x 40 (mm)
Double Action			✓			
Rack and pinion			✓			
Power shoe arm bracket			x			
Angle of opening			120°			
Power adjustable by spring			✓			
Power adjustable by position			x			
Sweep speed adjustable			✓			
Latching speed adjustable			✓			
Back-check	Self-regulating		x			
	Adjustable at valve		TS320-BC			TS340-BC
Delayed action adjustable			x			
Non-handed			✓			
With cover			○			
Application	Regular		✓			
	Parallel arm		x			
	Transom		✓			
Guarantee/years			10 years			

✓ = yes x = no O = option
avoid damages to firemen and those evacuees due to explosions.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

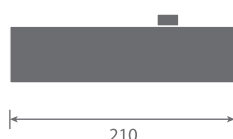
Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

Cover: Stainless steel

TRACK ARM SURFACE CLOSER

DIMENSIONS
IN MILLIMETERS



TS320



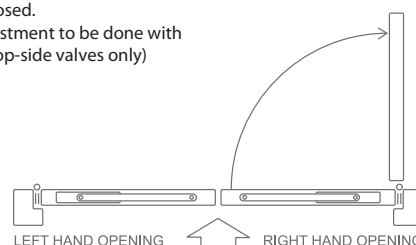
TS340

CONCEALED DOOR CLOSERS

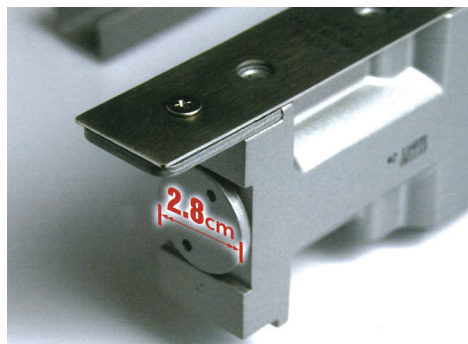
CR-280 Series



Bottom side valves have to be closed.
(Adjustment to be done with the top-side valves only)



2.8cm Thickness Narrow Body



DATA AND FEATURES

Sizes			2	3
Variable closing force standard doors			≤ 850mm	≤ 950mm
Spring Strength (EN)			≤ 40kg	≤ 60kg
Arm	Track	without hold-open	CR-282	CR-283
		with hold-open	CR-S282	CR-S283
Body Dimension (Length x Height x Projection)			225 x 61 x 28 (mm)	
Rack and pinion			✓	
Power shoe arm bracket			x	
Angle of opening			120°	
Power adjustable by spring			x	
Power adjustable by position			x	
Sweep speed adjustable			✓	
Latching speed adjustable			✓	
Back-check		Self-regulating	x	
		Adjustable at valve	x	
Delayed action adjustable			x	
Non-handed			✓	
Application		Regular	✓	
		Parallel arm	x	
		Transom	✓	
Guarantee/years			5 years	

✓ = yes x = no O = option

Tested according to **BS EN 1154**
1997 / A1:2002

bsi.
BS EN 1634-1:2014



Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

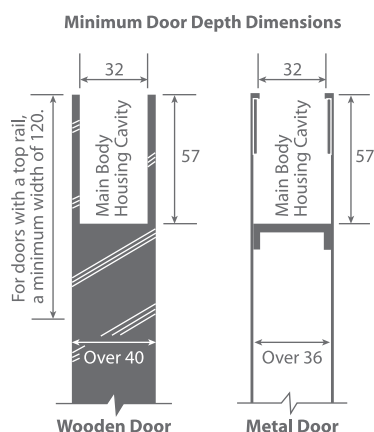
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Back Check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

Remarks: Left or Right hand opening should be indicated when ordering.

CR-380 Series



CR-S380

EN Fire Tested by Warrington APT Laboratories, UK

bsi. BS EN 1154
BS EN 1634-1:2014 1997 / A1:2002

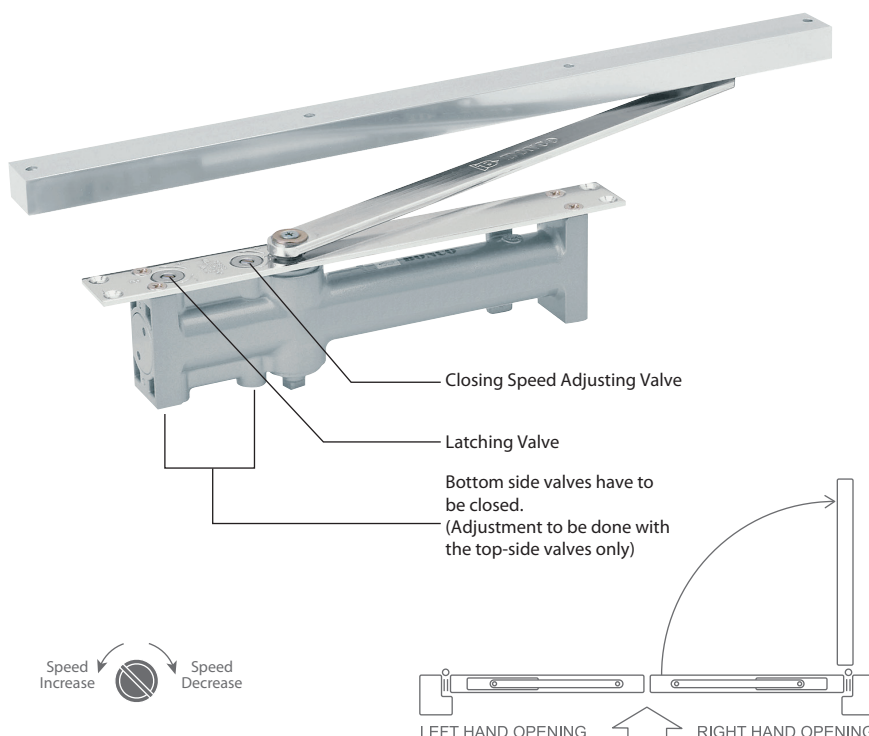


GA

GA/T93-2004
FIRE PROOF DOOR CLOSER

QB

QB/T3893-1999



DATA AND FEATURES

Sizes			2	3
Variable closing force standard doors			≤ 850mm	≤ 950mm
Spring Strength (EN)			≤ 40kg	≤ 60kg
Arm	Track	without hold-open	CR-382	CR-383
		with hold-open	CR-S382	CR-S383
Body Dimension (Length x Height x Projection)			230 x 57 x 32 (mm)	
Rack and pinion			✓	
Power shoe arm bracket			x	
Angle of opening			120°	
Power adjustable by spring			x	
Power adjustable by position			x	
Sweep speed adjustable			✓	
Latching speed adjustable			✓	
Back-check		Self-regulating	x	
		Adjustable at valve	x	
Delayed action adjustable			x	
Non-handed			✓	
With cover			x	
Application		Regular	○	
		Parallel arm	x	
		Transom	○	
Guarantee/years			5 years	

✓ = yes x = no O = option

Reversible - right and left hand operation.

Flexible easy adjustment of hold-open position even after installation.

Very thin compact body size.

Single body size, powerful enough to meet for medium to heavy duty door weights and sizes.

Concealed installation inside door or upside-down even into transom installation.

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

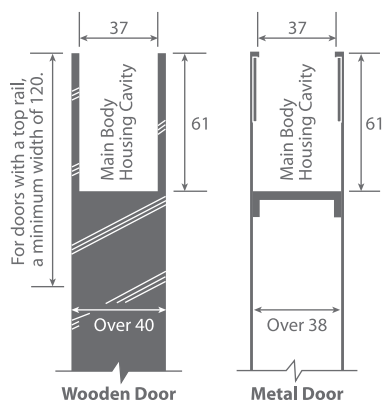
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

CONCEALED DOOR CLOSERS

Minimum Door Depth Dimensions



EN Fire Tested by Warrington APT
Laboratories, UK

bsi.

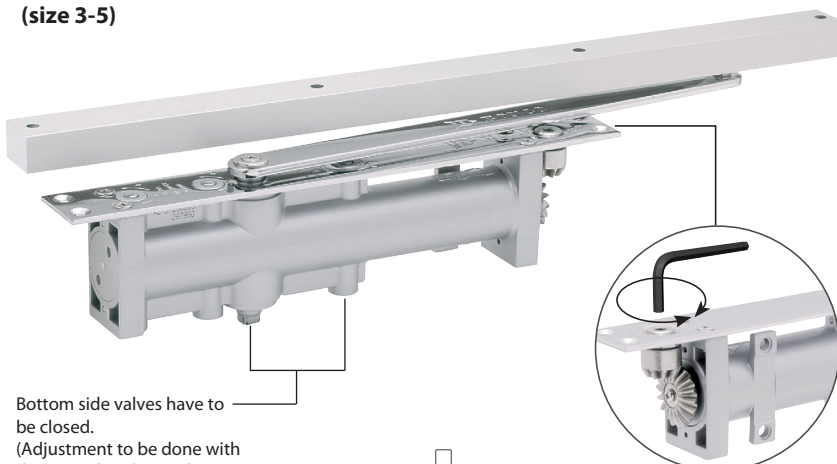
BS EN 1634-1:2014

Tested according to BS EN 1154
1997 / A1:2002

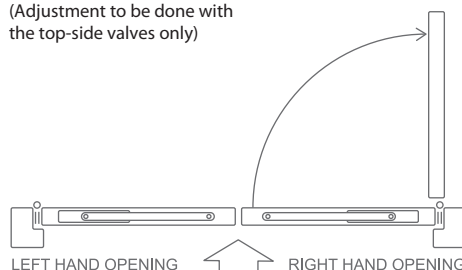


CR-3835 Series

(size 3-5)



Bottom side valves have to be closed.
(Adjustment to be done with the top-side valves only)



POWER
ADJUSTMENT
(STRONG WEAK)



CR-S3835

DATA AND FEATURES

Sizes			3	4	5
Variable closing force standard doors			≤ 950mm	≤ 1100mm	≤ 1250mm
Maximum Door Weight (kg)			≤ 60kg	≤ 80kg	≤ 100kg
Arm	Track	without hold-open	CR-3835		
		with build in hold-open	CR-S3835		
Body Dimension (Length x Height x Projection)			239 x 61 x 37 (mm)		
Rack and pinion			✓		
Power shoe arm bracket			x		
Angle of opening			120°		
Power adjustable by spring			✓		
Power adjustable by position			x		
Sweep speed adjustable			✓		
Latching speed adjustable			✓		
Back-check		Self-regulating	CR-3835-BC		
		with build in hold-open	CR-S3835-BC		
		Adjustable at valve	○		
Delayed action adjustable			x		
Non-handed			✓		
With cover			x		
Application		Regular	○		
		Parallel arm	x		
		Transom	○		
Guarantee/years			5 years		

✓ = yes x = no ○ = option

Very thin compact body size.

Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

Reversible - right and left hand operation.

Single body size, powerful enough to meet for medium to heavy duty door weights and sizes.

Easy adjustment of hold-open position even after installation.

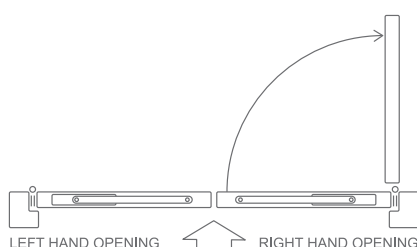
CONCEALED TRACK ARM DOOR CLOSERS

TC320 Series

(size 2-4)

TC340 Series

(size 2-5)



DATA AND FEATURES

Sizes			2	3	4	5
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm	≤ 1250mm
Spring Strength (EN)			≤ 40kg	≤ 60kg	≤ 80kg	≤ 100kg
Arm	Track	without hold-open	TC320			TC340
		with hold-open	TC320H			TC340H
Body Dimension (Length x Height x Projection)			210 x 53.5 x 32 (mm)			212 x 60 x 40 (mm)
Double Action			✓			
Rack and pinion			x			
Power shoe arm bracket			x			
Angle of opening			120°			
Power adjustable by spring			✓			
Power adjustable by position			x			
Sweep speed adjustable			✓			
Latching speed adjustable			✓			
Back-check	Self-regulating		x			x
	Adjustable at valve	without hold-open	TC320-BC			TC340-BC
		with hold-open	TC320H-BC			TC340H-BC
Delayed action adjustable			x			
Non-handed			✓			
With cover			x			
Application	Regular		○			
	Parallel arm		x			
	Transom		○			
Guarantee/years			10 years			

✓ = yes x = no ○ = option

EN Fire Tested by Warrington APT
Laboratories, UK

bsi. BS EN 1154
BS EN 1634-1:2014 1997 / A1:2002

CE A Tested to EN 1154 382113
by Warrington APT Laboratories,
UK Power Adjustable by Spring
NUMBER 2812 EN Fire Tested



Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to avoid damages to firemen and those evacuees due to explosions.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

ELECTRO-
MAGNETIC
DOOR
CLOSERS

1560 Series
(size 3-6)

Automatic Hold-Open: Engages at 75 degrees when 24V AC Power is supplied.
Full Fail - Safe Operation: The door releases and closes automatically during any power loss.
Alarm - Triggered Compliance: Integrates seamlessly with fire alarm systems for guaranteed closure in an emergency.

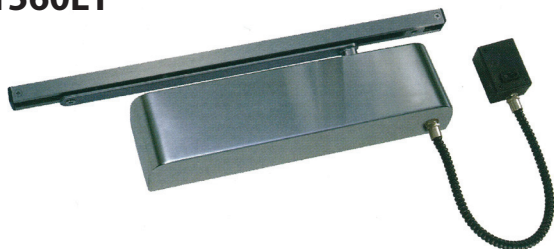
1560E



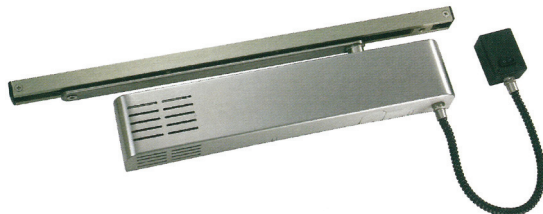
1560ES



1560ET



1560EST



dimensions in millimeters

Tested according to **BS EN 1154**
1997 / A1:2002

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze, F78 Black, F79 White

Cover: Stainless steel

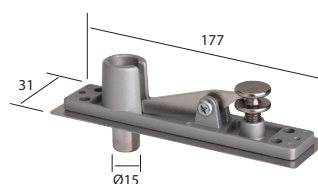
DATA AND FEATURES

Sizes			3	4	5	6
Variable closing force standard doors			≤ 950mm	≤ 1100mm	≤ 1250mm	≤ 1450mm
Spring Strength (EN)			≤ 60kg	≤ 80kg	≤ 100kg	≤ 120kg
Arm	Standard	w/o smoke detector	1560E			
		w/ smoke detector	1560ES			
	Track	w/o smoke detector	1560ET			
		w/ smoke detector	1560EST			
Body Dimension (Length x Height x Projection)			275 x 62 x 45 (mm)			
Input Voltage (AC)			240 V. AC			
Output Voltage (AC)			24 V. AC			
Angle of opening			180°			
Electro hold open			✓			
Latching speed adjustable (15° ~ 0°)			✓			
Sweep speed adjustable (180° ~ 15°)			✓			
Swing free function			○			
Non-handed			✓			
With cover			✓			
Parallel arm bracket			○			
Guarantee/years			10 years			

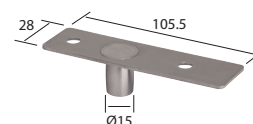
✓ = yes x = no ○ = option

CONCEALED FLOOR SPRING

CF540 Series NEW Glass Door



CF-560 Top Pivot (option)



or CF-560T (option)
Top Fixing Bracket

CF-543A

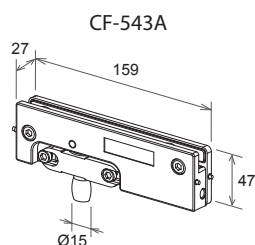
CF-543B

(A)

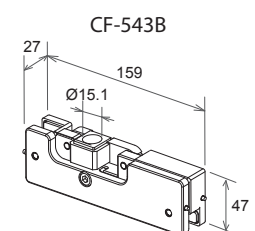
(B)

CF-S543

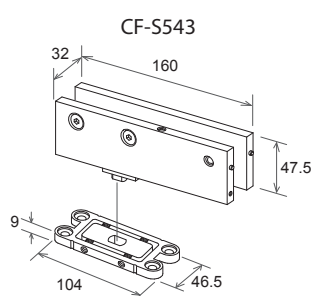
CF-543L



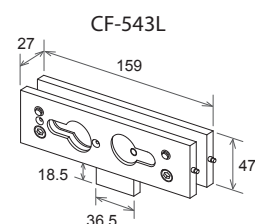
CF-543A



CF-543B



CF-S543



CF-543L

body dimensions in millimeters

DATA AND FEATURES

		CF-S543
Variable closing force Standard doors		≤ 850mm
Suitable door thickness		≥ 8~13mm
Spring Strength (EN)		≤60kg
Body Dimension (Length x Wide x Projection)	CF-543A/B/L	159 x 47 x 27 (mm)
	CF-S543	160 x 47.5 x 32 (mm)
Cover Dimension (Length x Height)		163 x 50 (mm)
Ambient temperature		-15° C ~ +40° C
Angle of opening		150°
Closing speed adjustable		150° ~ 10°
Braking speed adjustable		10° ~ 0°
Hold-open with build in hold open at 90°		✓
Non-handed		✓
With cover		✓
Guarantee/years		5 years

✓ = yes x = no O = option

Quick and easy installation with base seat adjustable for ±3mm backward and forward, ±3mm left and right, and for ±4° alignment adjustment. No need to have the pre-set on the floor.

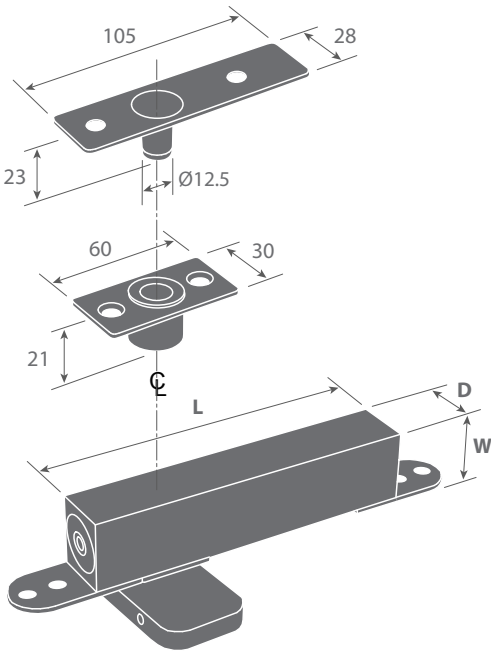
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Finishes: stainless steel cover, powder coating, PVD

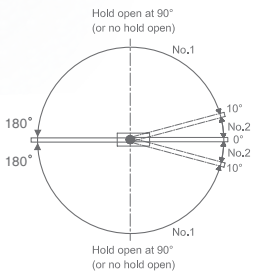
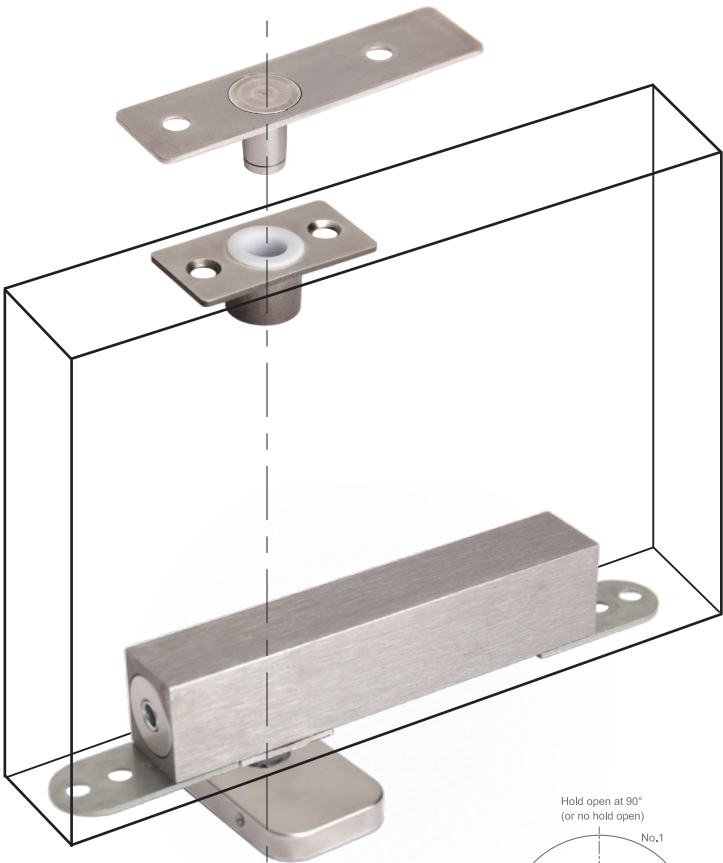
Tested according to **BS EN 1154**
1997 / A1:2002

CONCEALED
FLOOR
SPRING

CF550 Series **NEW**



dimensions in millimeters



Tested according to **BS EN 1154**
1997 / A1:2002

DATA AND FEATURES

		CF-S553	CF-553
Variable closing force Standard doors		≤ 850mm	
Suitable door thickness		≥ 30~50mm	
Body Dimension (Length x Wide x Projection)		140 x 30 x 25 (mm)	
Spring Strength (EN)		≤60kg	
Angle of opening		180°	
Closing speed adjustable		150° ~ 10°	
Braking speed adjustable		10° ~ 0°	
Hold-open	without hold-open		✓
	with build in hold open at 90°	✓	
Non-handed		✓	
With cover		✓	
Guarantee/years		5 years	

✓ = yes x = no O = option

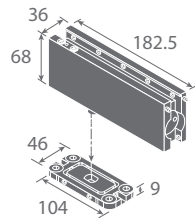
Quick and easy installation with base seat adjustable for backward and forward, left and right, and alignment adjustment. Smooth movement.

No need to have the pre-set on the floor Reduce the installation time and cost

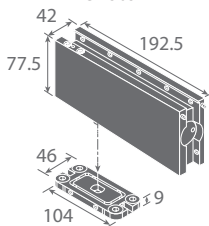
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

CONCEALED FLOOR SPRING

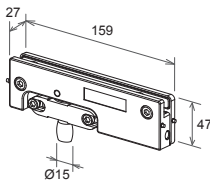
CF-563A/ CF563B/ CF563



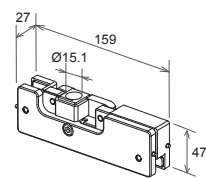
CF-565



CF-563A-N / CF-565A-N



CF-563B-N / CF-565B-N



body dimensions in millimeters

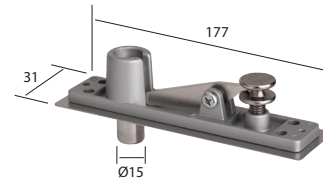
Passed and approved with
EN Testing (EN1154:1997) under
classification **383013**



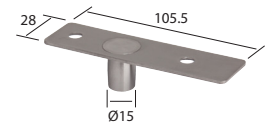
CF560 Series Glass Door



CF-560 Glass Door



CF-560 Top Pivot (option)

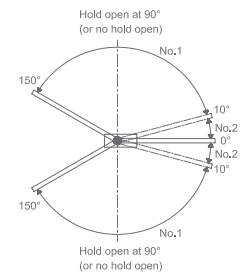
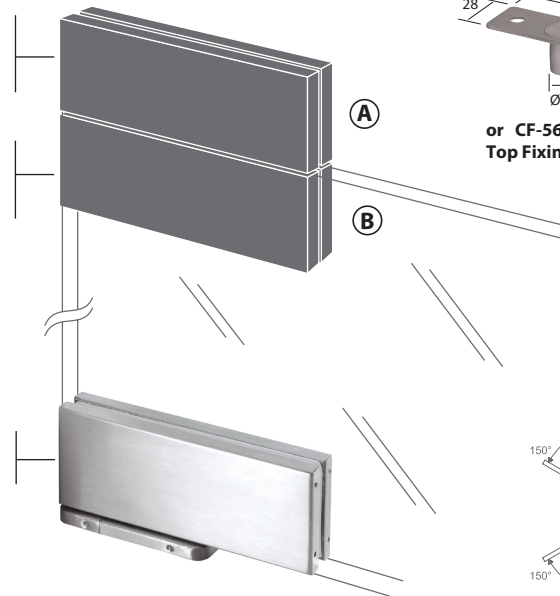


or CF-560T (option)
Top Fixing Bracket

CF-563A
CF-563A-N
CF-565A-N

CF-563B
CF-563B-N
CF-565B-N

CF-563
CF-565



DATA AND FEATURES

	CF-S563	CF-S565
Variable closing force Standard doors	≤ 950mm	≤ 1250mm
Suitable door thickness	8 ~ 13mm	10 ~ 15mm
Spring Strength (EN)	≤ 100kg	≤ 100kg
Body Dimension (Length x Height x Projection)	CF-563A/B	182.5 x 68 x 36 (mm)
	CF-563A-N/565A-N	159 x 47 x 27 (mm)
	CF-563B-N/565B-N	
	CF-S565	192.5 x 77.5 x 42 (mm)
Cover Dimension (Length x Height)	186.5 x 71 (mm)	197 x 80.5 (mm)
Ambient temperature	-20°C ~ +50°C	
Angle of opening	150°	
Closing speed adjustable	150° ~ 10°	
Braking speed adjustable	10° ~ 0°	
Hold-open	without hold-open	CF-563
	with build in hold open at 90°	CF-565
Non-handed	✓	
With cover	✓	
Guarantee/years	5 years	

✓ = yes x = no O = option

Quick and easy installation with base seat adjustable for ±3mm backward and forward, ±3mm left and right, and for ±4° alignment adjustment. No need to have the pre-set on the floor.

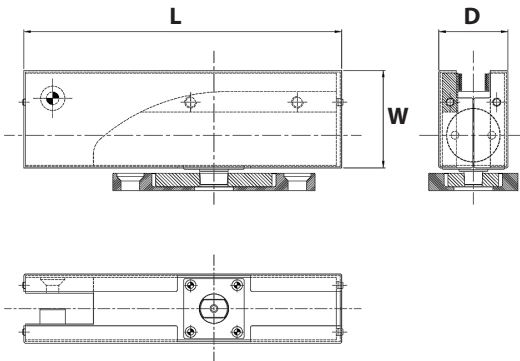
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Finishes: stainless steel cover

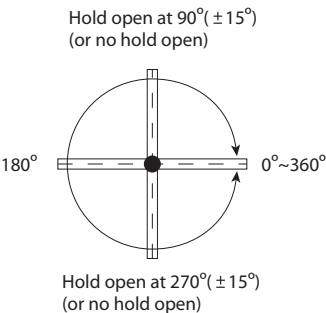
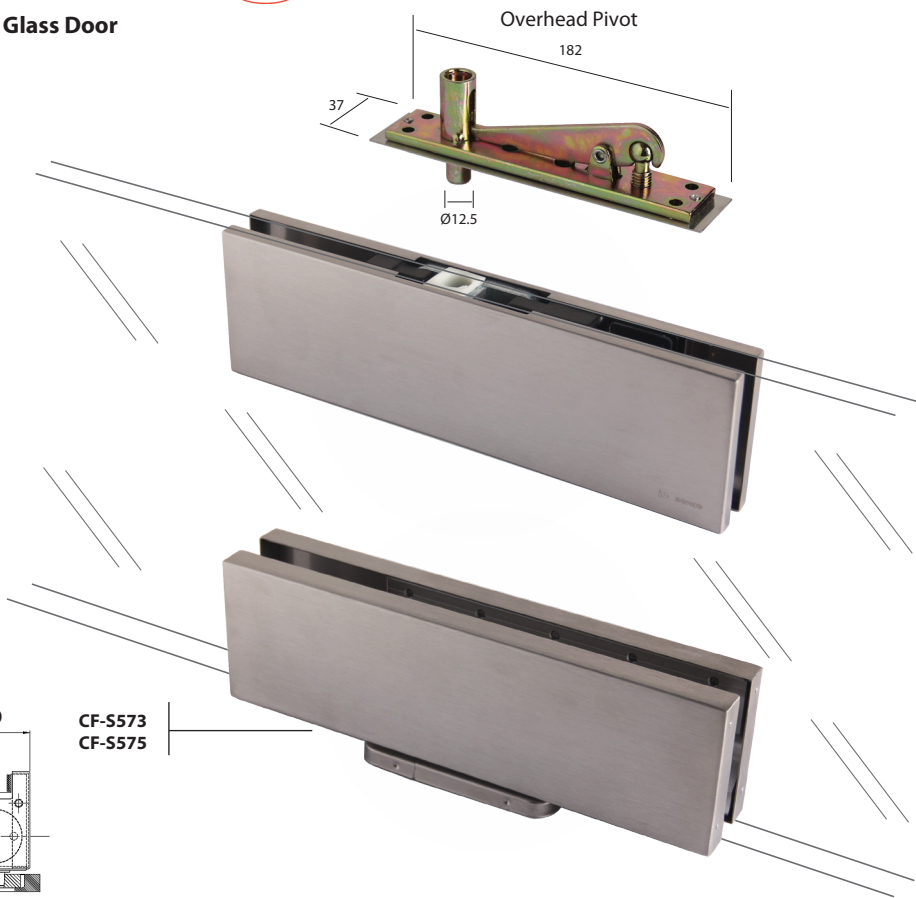
REVOLVING
FLOOR
SPRING



CF-570 (Glass Door)



CF570 Series **NEW**
Glass Door



Tested according to **BS EN 1154**
1997 / A1:2002

Quick and easy installation
with smooth movement

- No need to have the pre-set on the floor, and reduced the installation time and cost with smooth movement.
- Easy installation with base seat adjustable for backward and forward, left and right, and alignment adjustment.
- Standard finish: Satin or Polished Stainless Steel Covers, and special finish upon requests.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

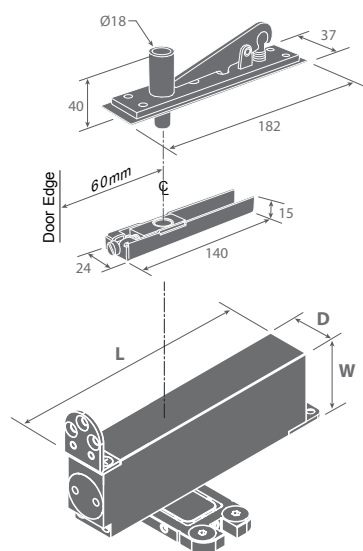
DATA AND FEATURES

		CF-573 / CF-S573		CF-575 / CF-S575	
Variable closing force Standard doors		≤1700 (mm)		≤2500 (mm)	
Suitable door thickness		10-15 (mm)			
Body Dimension (Length x Wide x Projection)		192 x 77 x 42 (mm)			
Spring Strength (EN)		≤100kg		≤200kg	
Angle of opening		360°			
Closing speed adjustable		150° ~ 10°			
Braking speed adjustable		10° ~ 0°			
Hold-open	without hold-open	✓		✓	
	with build in hold open at 90°		✓		✓
Non-handed		✓			
With cover		✓			
Guarantee/years		5 years			

✓ = yes x = no O = option

CONCEALED FLOOR SPRING

CF580 Series Wood / Metal Door



dimensions in millimeters

Passed and approved with
EN Testing (EN1154:1997) under
classification **3831113**

bsi.

BS EN 1634-1:2014



NUMBER 2812



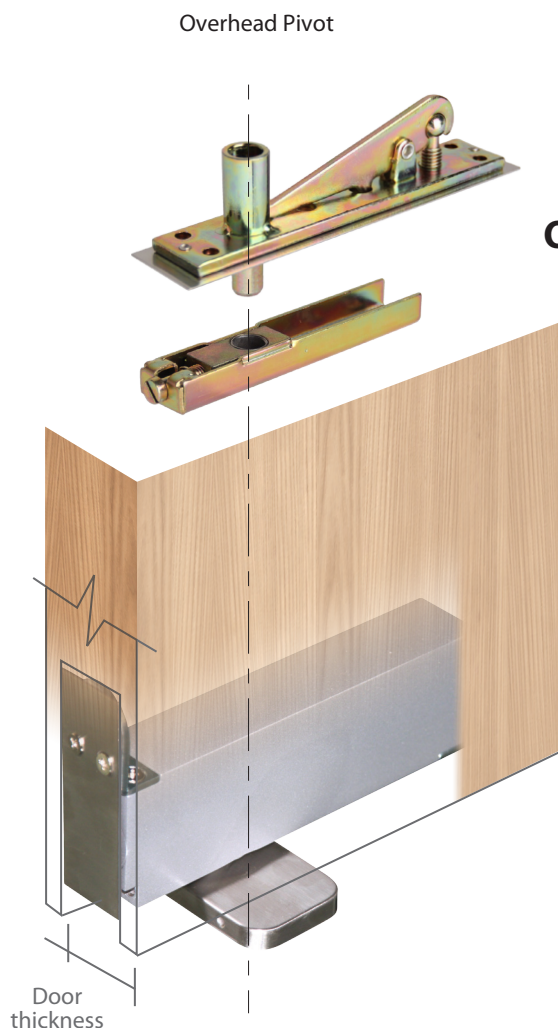
Quick and easy installation with base seat adjustable
for backward and forward, left and right, and
alignment adjustment.

Smooth movement.

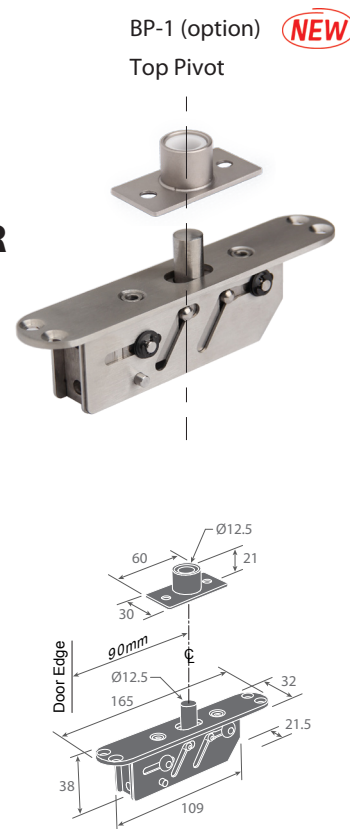
No need to have the pre-set on the floor.

Reduce the installation time and cost.

Guarantee: A free replacement ex-works of any
closer proved defective by reason either of faulty
manufactured or defect in materials.



OR



CF-580 Wood Door

DATA AND FEATURES

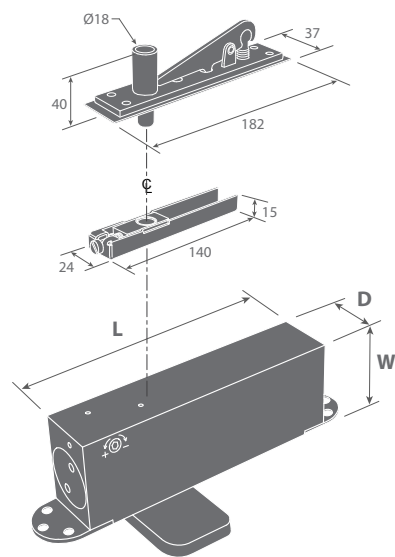
	CF-S583	CF-S585
Variable closing force Standard doors	≤ 950mm	≤ 1250mm
Suitable door thickness	≥ 40mm	≥ 50mm
Body Dimension (Length x Wide x Projection)	181 x 56 x 32 (mm)	184 x 64 x 40 (mm)
Spring Strength (EN)	≤ 100kg	
Angle of opening	150°	
Closing speed adjustable	150° ~ 10°	
Braking speed adjustable	10° ~ 0°	
Hold-open	without hold-open	CF-583
	with build in hold open at 90°	CF-585
Non-handed	✓	
With cover	✓	
Guarantee/years	5 years	

✓ = yes

x = no

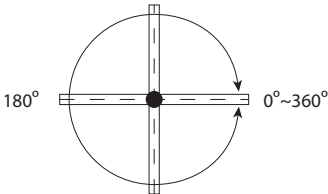
O = option

REVOLVING
FLOOR
SPRING



dimensions in millimeters

Hold open at 90° (± 15°)
(or no hold open)



Hold open at 270° (± 15°)
(or no hold open)

Tested according to **BS EN 1154**
1997 / A1:2002

Quick and easy installation with base seat adjustable
for backward and forward, left and right, and
alignment adjustment.

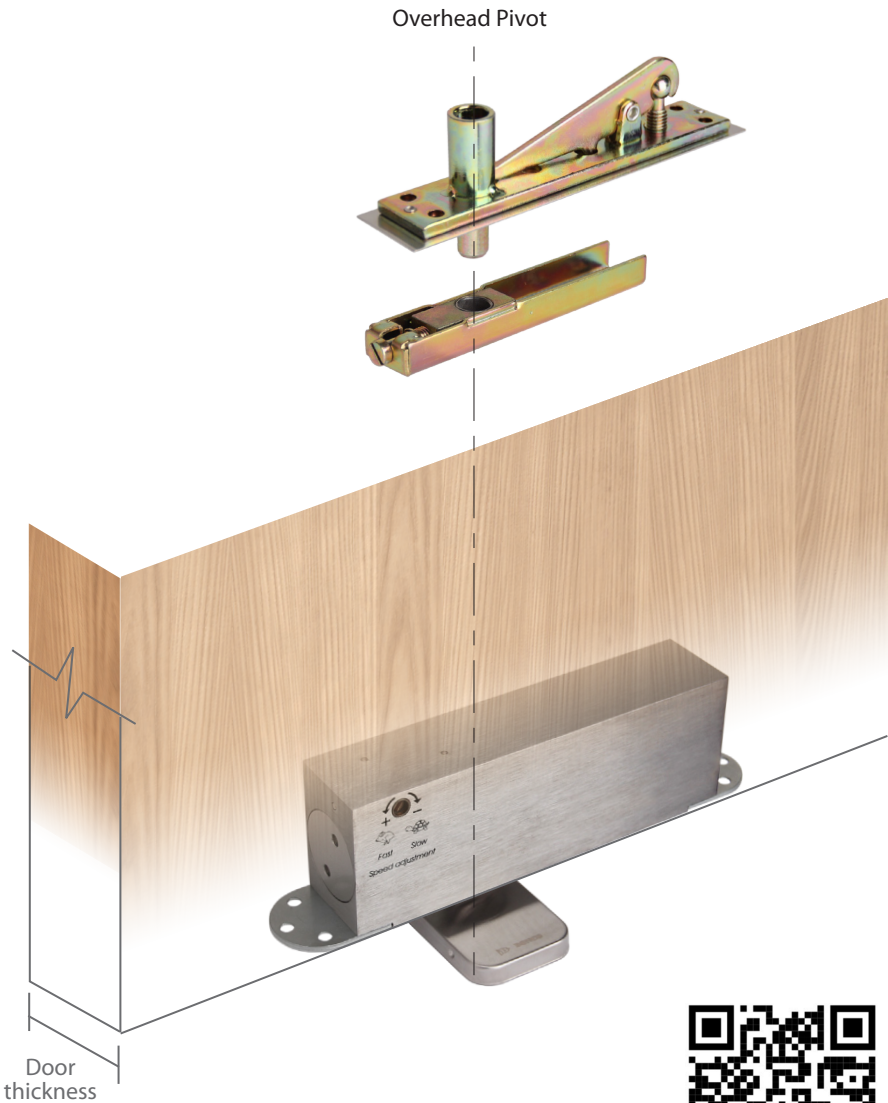
Smooth movement.

No need to have the pre-set on the floor.

Reduce the installation time and cost.

Guarantee: A free replacement ex-works of any
closer proved defective by reason either of faulty
manufactured or defect in materials.

CF590 Series **NEW**
Wood / Metal Door



CF-590 (Wood Door)

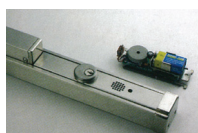
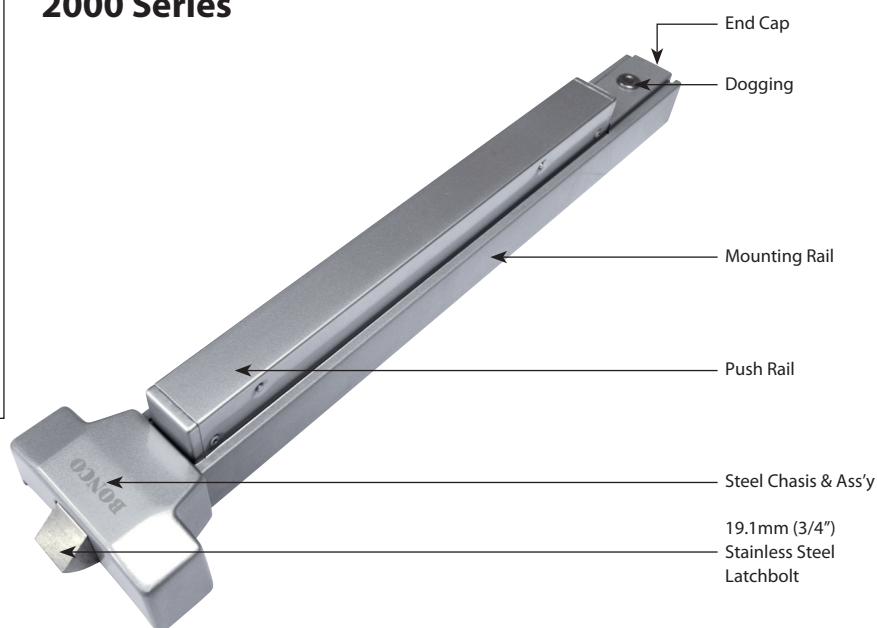
DATA AND FEATURES

	CF-593 / CF-S593	CF-595 / CF-S595	
Variable closing force Standard doors	≤ 1700 (mm)	≤ 2500 (mm)	
Suitable door thickness	≥ 40 (mm)	≥ 50 (mm)	
Body Dimension (Length x Wide x Projection)	181 x 56 x 32 (mm)	184 x 64 x 40 (mm)	
Spring Strength (EN)	≤ 100kg	≤ 200kg	
Angle of opening	360°		
Closing speed adjustable	150° ~ 10°		
Braking speed adjustable	10° ~ 0°		
Hold-open	without hold-open	✓	✓
	with build in hold open	✓	✓
Non-handed	✓		
With cover	✓		
Guarantee/years	5 years		

✓ = yes x = no O = option

EXIT PANIC DEVICES

2000 Series



(ALM) Exit device with alarm (optional)



(OTL) Outside trim with lever handle and EURO profile cylinder (optional)

- Suitable for use on single doors and the first opening leaf of double doors with rebated meeting stiles
- Supplied in left or right hand, but can be reversed on site
- Suitable for doors up to 1300mm wide
- Double door strike available for double rebated door applications
- Available with manual dogging (hold open)
- Can be used with rim cylinder fitted to the outside of the door
- Metal door variant available with a metal door strike and metal thread screws
- Metal: stainless steel or steel

Finishes: F24 stainless steel, F72 silver (steel)

Tested according to EN 1125:2008

bsi.

BS EN 1634-1:2014



(CP33-15) Lip pull with rim cylinder (optional), 4326NT Latch (optional)



(CP2) Outside by pull and key (Rim Cylinder) (optional)



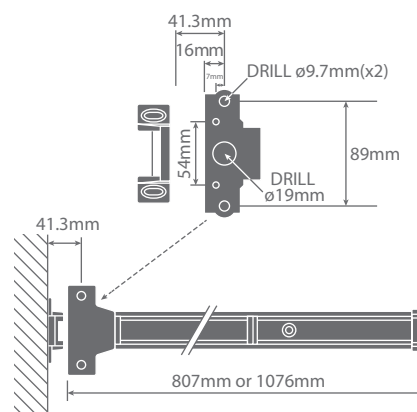
Strike for use with rim type exit device

DATA AND FEATURES

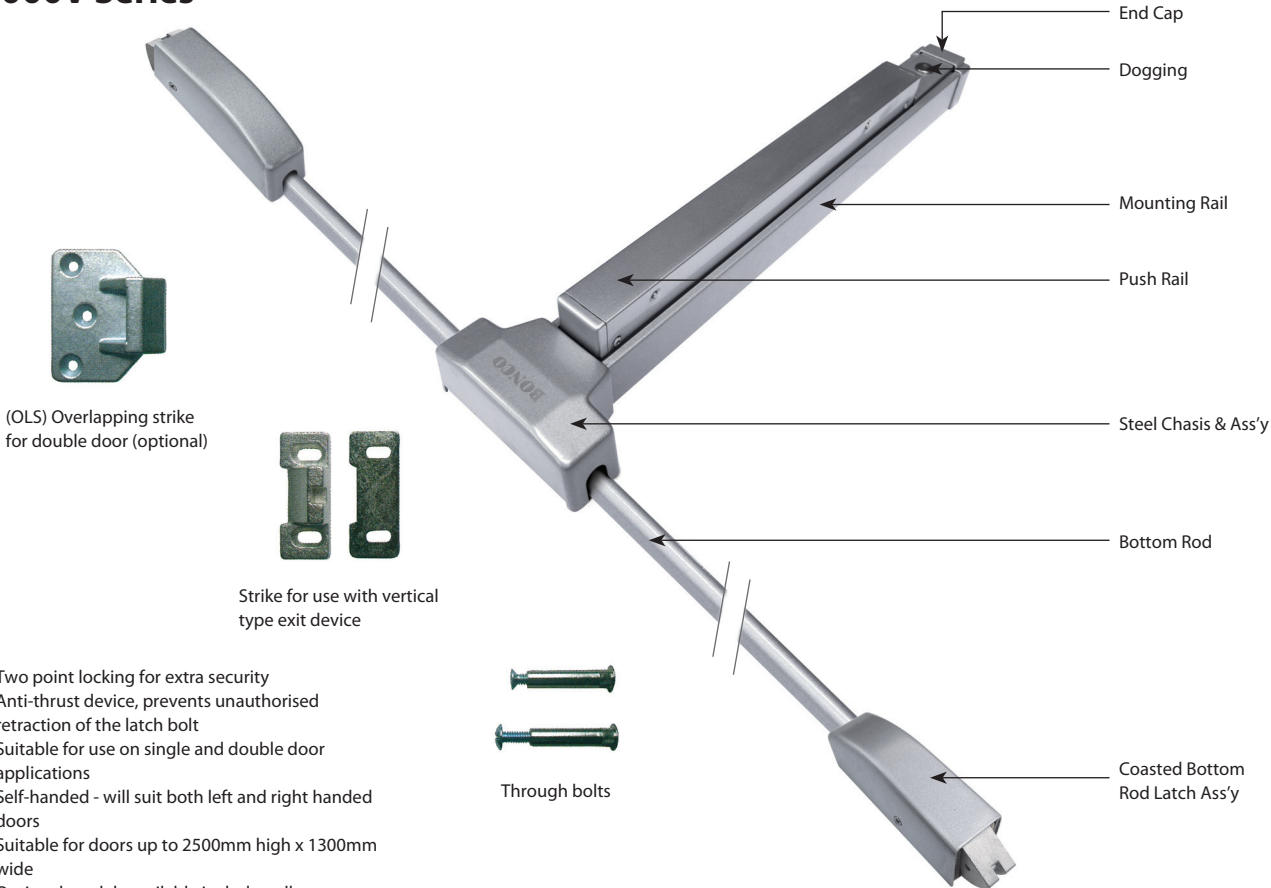
	2000
Suitable door width	914.4mm & 1219.2mm
Suitable door thickness	≥ 44.5mm
Latch bolt	19.1mm
Strike	16mm stop, plus shim for 12.7mm stop
Reversible	Non-handed
Backset	41.3mm
Guarantee/years	10 years

EXIT PANIC DEVICE

DIMENSIONS
IN MILLIMETERS



2000V Series



- Two point locking for extra security
- Anti-thrust device, prevents unauthorised retraction of the latch bolt
- Suitable for use on single and double door applications
- Self-handed - will suit both left and right handed doors
- Suitable for doors up to 2500mm high x 1300mm wide
- Optional models available include pullman latches, alarmed and manually dogged (hold open) functions
- Adjustable top and bottom shoots
- Supplied with an easy clean socket
- Metal door variant available with metal door strikes and machine screws
- Metal: stainless steel or steel

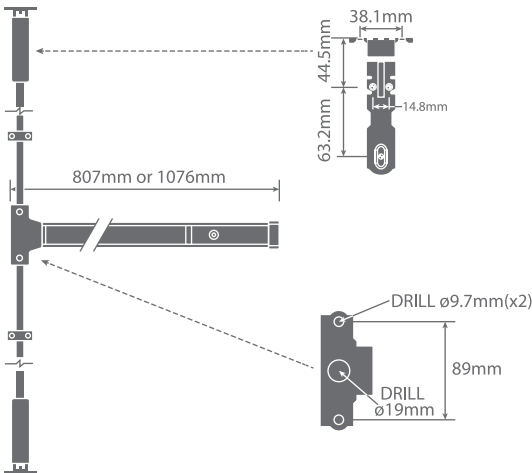
Finishes: F24 stainless steel, F72 silver (steel)

Tested according to EN 1125:2008

bsi.
BS EN 1634-1:2014

DATA AND FEATURES

	2000V
Suitable door width - vertical type	914.4 x 2133.6mm (3' x 7')
	1219.2 x 2133.6mm (4' x 7')
	914.4 x 2438.4mm (3' x 8')
	1219.2 x 2438.4mm (4' x 8')
Suitable door thickness	≥ 44.5mm
Latch bolt	19.1mm
Strike	16mm stop, plus shim for 12.7mm stop
Reversible	Non-handed
Backset	41.3mm
Guarantee/years	10 years



Understanding BS EN1125

These standards will effectively become MANDATORY.

Every new build or replacement panic and emergency exit application is required to comply with European safety legislation. The European standards BS EN 1125 covering exit devices for buildings have now been designated to demonstrate compliance with this legislation. Together they replace BS 5725:pt1:1981 which is now withdrawn.

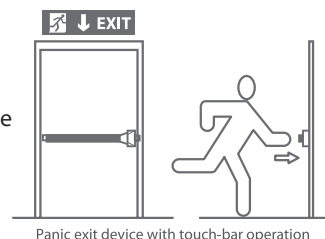
Two standards instead of one - which one for which application?

Panic Application - BS EN 1125

A panic application is where the exit door is used by the public and provides "safe and effective escape through the door way with minimum effort and without prior knowledge of operation".

For example:

Theatres, Shops, Schools, Hospitals and Cinemas.



Products to EN 1125

"The most important thing you must consider when specifying panic exit hardware is who might be in the building in the event of an emergency."

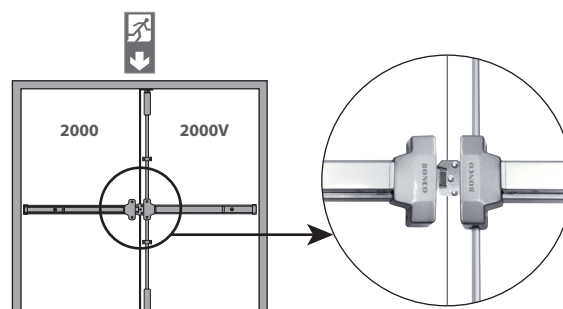
Where personnel have not been trained in the location and operation of the buildings exit devices or members of the public have access, exit devices conforming to EN 1125 must be specified and installed.

IMPORTANT: If you are in any doubt at all ALWAYS use products that conform to EN 1125

The following range consists of a vertical panic bolt, rim panic latch and a mortice nightlatch operator. Each product is operated by a horizontal push bar, which when pushed in a downward arc withdraws either the bolts or the latch, releasing the door for immediate escape in the event of an emergency.

Double door strike

For use on double rebated door applications with a rim panic latch on the first opening leaf and a vertical bolt on the second opening leaf.

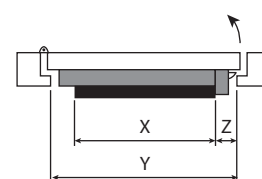


Bar length

The design of a panic exit device is the effective length (dimension X) of the horizontal bar shall be as near as possible to the effective width (dimension Y) of the door opening for which it is recommended, but never less than 60%. See Figure.

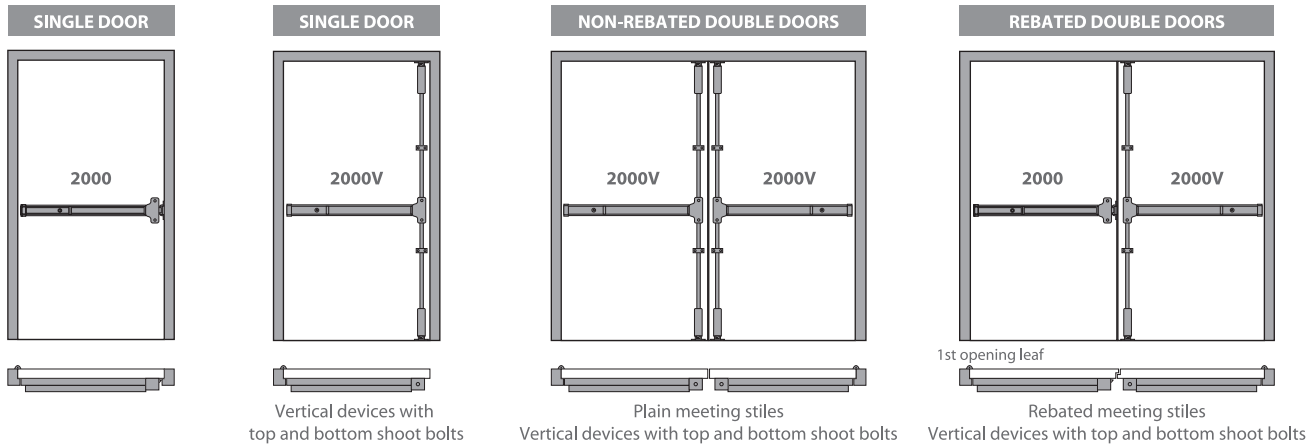
panic exit device

Z - distance from door stop
X - effective length of horizontal bar
Y - effective width of door opening



Application Guide

Panic and Emergency exit hardware is suitable for application to single doors, and in combinations on non-rebated and rebated double doors.



CE Marking Guide

BONCO exit devices with the CE mark will show the EN 1125 classification numbers (see below) and the test house logo on the product.



Durability
Two grades shall be used:
Grade 6
100,000 test cycles
Grade 7
200,000 test cycles

Suitability for use on fire/smoke doors
Three grades shall be used:
Grade 0
not approved for use on fire/smoke door assemblies
Grade A
suitable for use on smoke doors assemblies
Grade B
suitable for use on fire and smoke door assemblies based on a test in accordance with EN 1634-1

Corrosion resistance
Two grades shall be used:
Grade 3
96h (high resistance)
Grade 4
240h (very high resistance)

Projection of horizontal bar
Two grades shall be used:
Grade 1
projection up to 150mm (large projection)
Grade 2
projection up to 100mm (large projection)

Field of door application
Three categories shall be used. A panic exit device shall be characterised for one field of door application only.
Category A
single door, double door: active or inactive leaf
Category B
single door only
Category C
double door, inactive leaf only

3 **7** **6** **B** **1** **3** **2** **2** **B** **A**

Category of use
Only one grade shall be used:
Grade 3
high frequency of use where there is little incentive to exercise care
i.e. where there is a chance of an accident occurring and of misuse

Door Mass
Three grade shall be used:
Grade 5
doors up to 100kg
Grade 6
doors up to 200kg
Grade 7
over 200kg

Safety
Only one grade shall be used:
Grade 1
all panic exit devices have a critical safety function, therefore only the top grade is identified for the purpose of this European Standard

Security
Only one grade shall be used:
Grade 2
panic exit devices are primarily for the operation of a door from the inside and the security requirements are secondary to those of safety

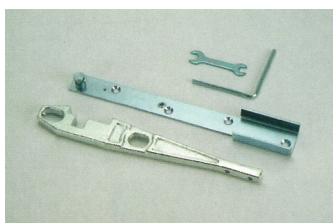
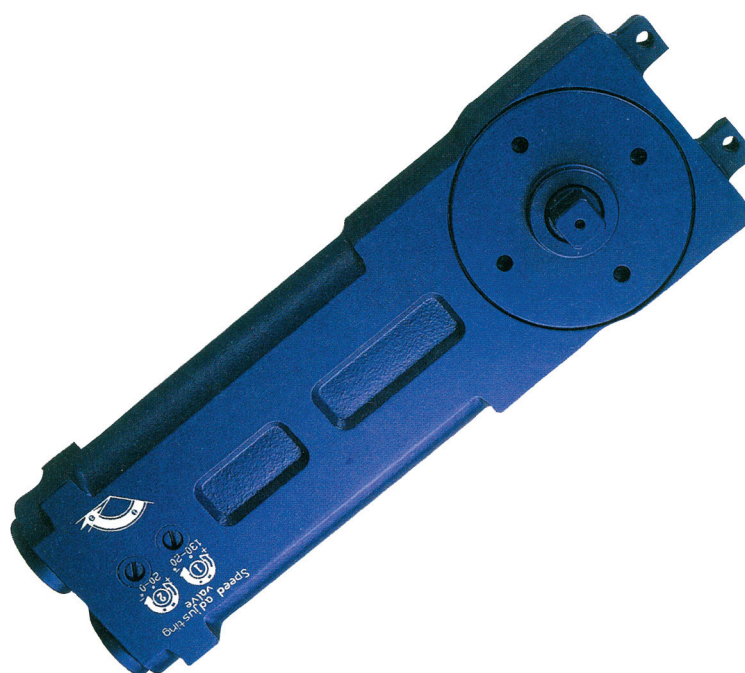
Type of horizontal bar operation
Two types shall be used:
Type A
panic exit device with "push bar" operation
Type B
panic exit device with "touch bar" operation



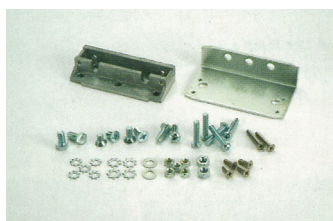
Double panic bolts are not permitted under the EN Standards.
On double devices the crossbars project beyond the end boxes often snagging the firefighters' clothing or equipment as they enter the burning building to extinguish the fire and save lives.
These projections can waste valuable seconds, which could be the difference between life and death...

TRANSOM DOOR CLOSERS

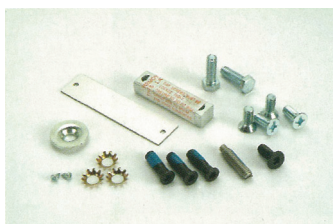
CR-360 Series



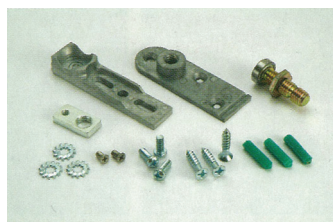
Top and bottom pivot



Screw pack for fixing bracket



Screw pack for side-load top arm and channel



Screw pack for side-load bottom pivot

Tested according to **BS EN 1154**
1997 / A1:2002



DATA AND FEATURES

SIZES			2	3	4
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm
Spring Strength (EN)			≤ 70kg	≤ 105kg	≤ 150kg
Arm	Standard	without hold-open	CR-362	CR-363	CR-364
		with build in hold-open at 90°	CR-S362	CR-S363	CR-S364
Body Dimension (Length x Height x Projection)			271 x 87 x 40 (mm)		
Double-action			✓		
Angle of opening			130°		
Sweep speed adjustable			✓		
Latching speed adjustable			✓		
Back-check	Self-regulating		x		
	Adjustable at valve		○		
Delayed action adjustable			○		
Non-handed			✓		
Guarantee/years			10 years		

✓ = yes x = no ○ = option

These are concealed overhead door closers mainly for aluminium transom.

Recommended for medium traffic doors.

An auxiliary stopper is recommended to be used together.

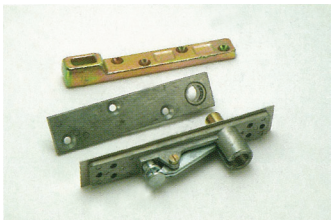
Guarantee: A free replacement ex-works of any closer

proved defective by reason either of faulty manufactured or defect in materials.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze

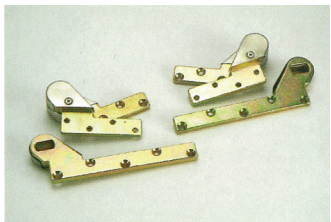
FLOOR
SPRING
HINGES



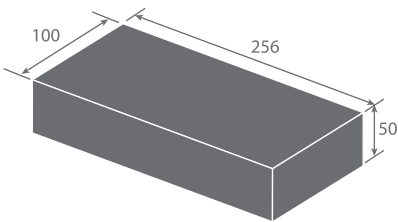
Standard strap, top and bottom pivot (DMA)



Standard strap, top and bottom pivot (NSA)



Offset pivot



dimensions in millimeters

Tested according to **BS EN 1154**
1997 / A1:2002

bsi.
BS EN 1634-1:2014

FH-210 Series



For replacement market use. No need to change the cement box

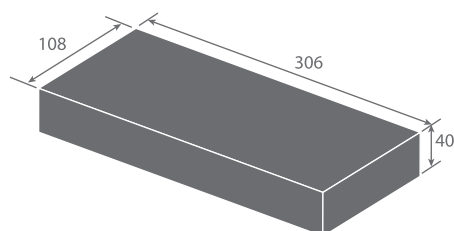
DATA AND FEATURES

Sizes		2	3	4
Variable closing force standard doors		≤850mm	≤ 950mm	≤1100mm
Spring Strength (EN)		≤ 70kg	≤ 105kg	≤ 150kg
Centre hung	Without hold-open	FH211	FH212	FH213
	With build in hold-open 90°	FH-S-211	FH-S-212	FH-S-213
Offset hung	Without hold-open	FH-O-211	FH-O-212	FH-O-213
	With build in hold-open 90°	FH-OS-211	FH-OS-212	FH-OS-213
Double action		✓		
Angle of opening		120°		
Sweep speed adjustable		✓		
Latching speed adjustable		✓		
Hold-open	at 105°	○		
	Self-regulating	x		
Back-check	Adjustable at valve	x		
Delayed action adjustable		x		
Non-handed		✓		
Guarantee/years		5 year		

✓ = yes x = no ○ = option

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

FLOOR SPRING HINGES



dimensions in millimeters

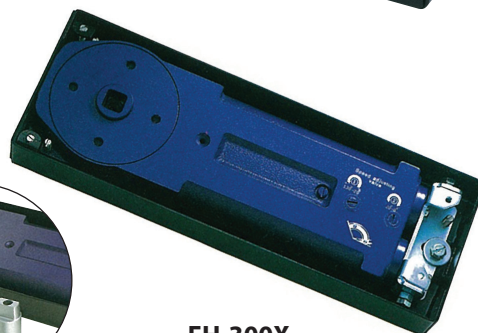
EN Fire Tested by Warrington APT Laboratories, UK

bsi. BS EN 1154
BS EN 1634-1:2014 1997 / A1:2002

**Passed and approved with
EN Testing (EN1154:1997) under
classification** **3831113**
3841113



FH-300/300X Series



FH-300X

DATA AND FEATURES

Sizes			2	3	4	5
Variable closing force standard doors			≤ 850mm	≤ 950mm	≤ 1100mm	≤ 1250mm
Spring Strength (EN)			≤ 70kg	≤ 105kg	≤ 150kg	≤ 200kg
Centre Hung	without hold-open		FH-311	FH-312	FH-313	FH-314
	with build in hold-open at 90°		FH-S-311	FH-S-312	FH-S-313	FH-S-314
Offset Hung	without hold-open		FH-O-311	FH-O-312	FH-O-313	FH-O-314
	with build in hold-open at 90°		FH-OS-311	FH-OS-312	FH-OS-313	FH-OS-314
Double action			✓			
Angle of opening			130°			
Sweep speed adjustable			✓			
Latching speed adjustable			✓			
Hold-open at 105°			○			
Back-check	Self-regulating		x			
	Adjustable at valve	FH-300	x			
		FH-300X	○			
Delayed action adjustable			○			
Non-handed			✓			
Guarantee/years			10 years			

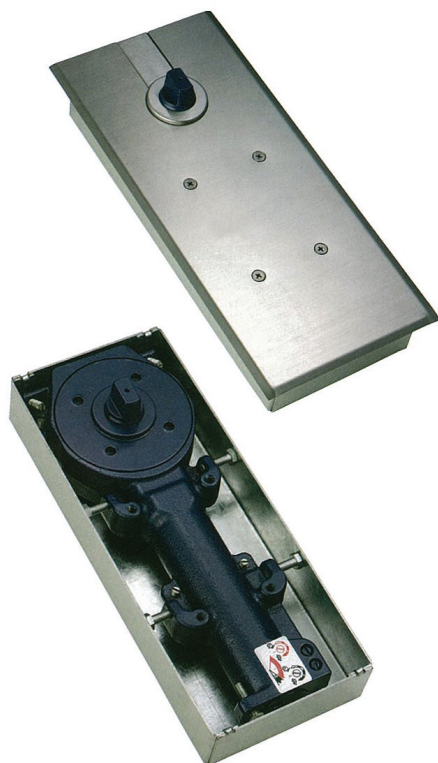
✓ = yes x = no ○ = option

FH-300X Series: Interchangeable Shaft with Adjustable Back Check.

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

FH-410 Series



DATA AND FEATURES

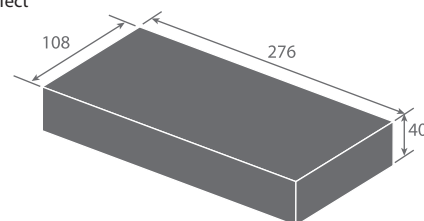
Sizes		2	3	4
Variable closing force standard doors		≤ 850mm	≤ 950mm	≤ 1100mm
Spring Strength (EN)		≤ 70kg	≤ 105kg	≤ 150kg
Centre hung	without hold-open	FH-411	FH-412	FH-413
	with build in hold-open at 90°	FH-S-411	FH-S-412	FH-S-413
Offset hung	without hold-open	FH-O-411	FH-O-412	FH-O-413
	with build in hold-open at 90°	FH-OS-411	FH-OS-412	FH-OS-413
Double-action		✓		
Angle of opening		130°		
Sweep speed adjustable		✓		
Latching speed adjustable		✓		
Hold-open at 105°		○		
Non-handed		✓		
Guarantee/years		5 years		

✓ = yes x = no ○ = option

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

Tested according to:

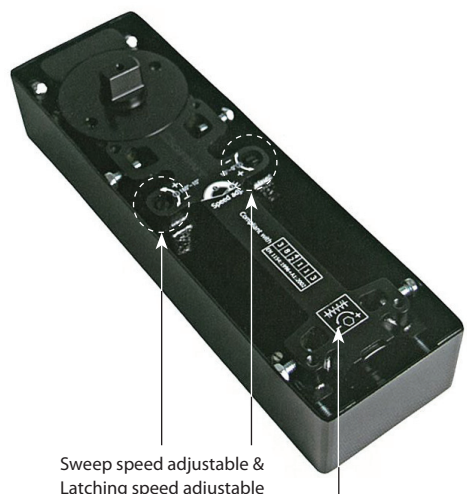
bsi. **BS EN 1154**
BS EN 1634-1:2014 1997 / A1:2002



dimensions in millimeters

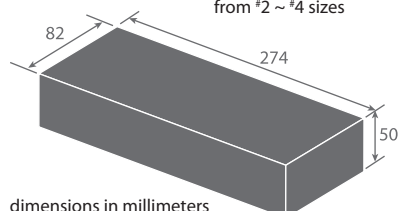
FH-700 Series

(size 2-4)



Sweep speed adjustable &
Latching speed adjustable

Power adjustable by springs
from #2 ~ #4 sizes



dimensions in millimeters

DATA AND FEATURES

Sizes		2	3	4
Variable closing force standard doors		≤ 850mm	≤ 950mm	≤ 1100mm
Spring Strength (EN)		≤ 70kg	≤ 105kg	≤ 150kg
Centre hung	without hold-open	FH-700		
	with build in hold-open at 90°	FH-S-700		
Offset hung	without hold-open	FH-O-700		
	with build in hold-open at 90°	FH-OS-700		
Double-action		✓		
Angle of opening		160°		
Power adjustable by springs from #2 ~ #4		✓		
Sweep speed adjustable		✓		
Latching speed adjustable		✓		
Hold-open at 105°		○		
Back-check	Self-regulating	x		
	Adjustable at valve	x		
Delayed action adjustable		x		
Non-handed		✓		
Guarantee/years		10 years		

✓ = yes x = no ○ = option

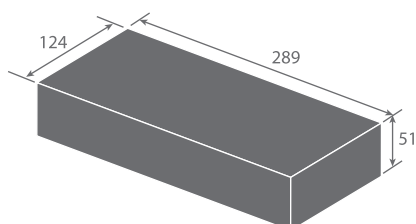
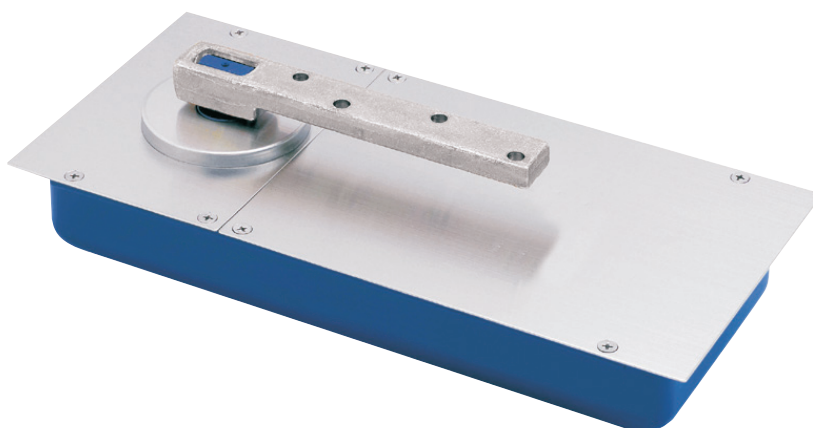
Tested according to:

bsi. **BS EN 1154**
BS EN 1634-1:2014 1997 / A1:2002

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

FLOOR SPRING HINGES

FH-800 Series



dimensions in millimeters

Tested according to **BS EN 1154**
1997 / A1:2002

bsi.
BS EN 1634-1:2014



Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

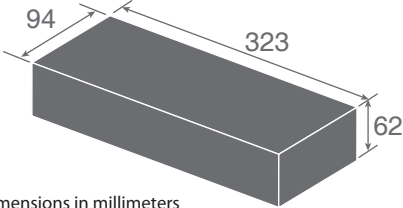
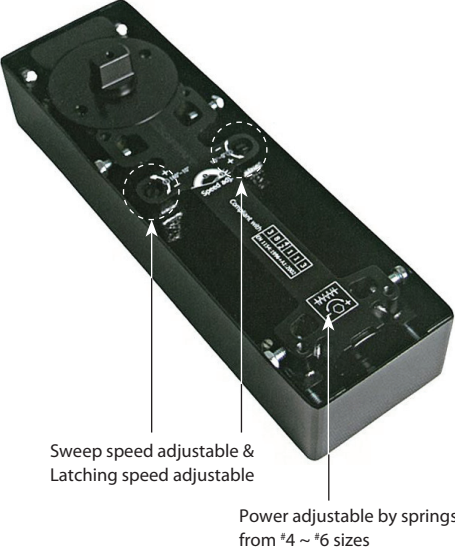
Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

DATA AND FEATURES

Sizes		2	3	4
Variable closing force standard doors		≤ 850mm	≤ 950mm	≤ 1100mm
Spring Strength (EN)		≤ 70kg	≤ 105kg	≤ 150kg
Centre Hung	without hold-open	FH-811	FH-812	FH-813
	with build in hold-open at 90° or 105°	FH-S-811	FH-S-812	FH-S-813
Offset Hung	without hold-open	FH-O-811	FH-O-812	FH-O-813
	with build in hold-open at 90° or 105°	FH-OS-811	FH-OS-812	FH-OS-813
Double action		✓		
Angle of opening		120°		
Sweep speed adjustable		✓		
Latching speed adjustable		✓		
Back-check	Self-regulating	x		
	Adjustable at valve	x		
Delayed action adjustable		x		
Non-handed		✓		
Guarantee/years		10 years		

✓ = yes x = no O = option

FH-900 Series **NEW**
(size 4-6)



dimensions in millimeters

DATA AND FEATURES

Sizes		4	5	6
Variable closing force standard doors		≤ 1100mm	≤ 1250mm	≤ 1450mm
Spring Strength (EN)		≤ 105kg	≤ 150kg	≤ 300kg
Centre hung	without hold-open	FH-900		
	with build in hold-open at 90°	FH-S-900		
Offset hung	without hold-open	FH-O-900		
	with build in hold-open at 90°	FH-OS-900		
CAH-action		✓		
Angle of opening		150°		
Power adjustable by springs from #4 ~ #6		✓		
Sweep speed adjustable		✓		
Latching speed adjustable		✓		
Back-check	Self-regulating	x		
	Adjustable at valve	x		
Delayed action adjustable		x		
Non-handed		✓		
Guarantee/years		10 years		

✓ = yes x = no O = option

Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

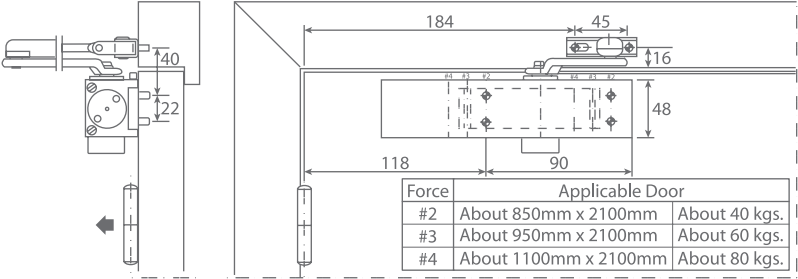
Tested according to:

bsi. **BS EN 1154**
BS EN 1634-1:2014 1997 / A1:2002

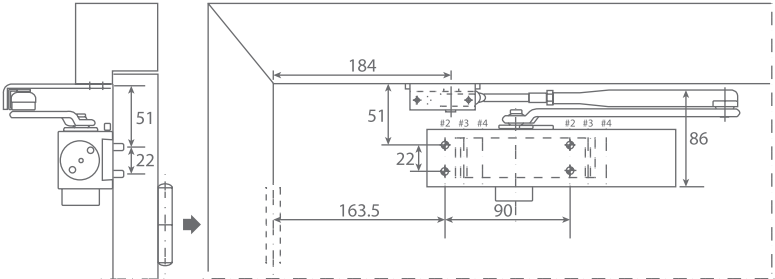
Fixing Details - Door Closers

1000 Series

Standard arm fixing, pull side
(Example refers to left-hand door;
mirror image applies to right-hand door)



Parallel-arm fixing, push side
(Example refers to left-hand door; mirror
image applies to right-hand door)

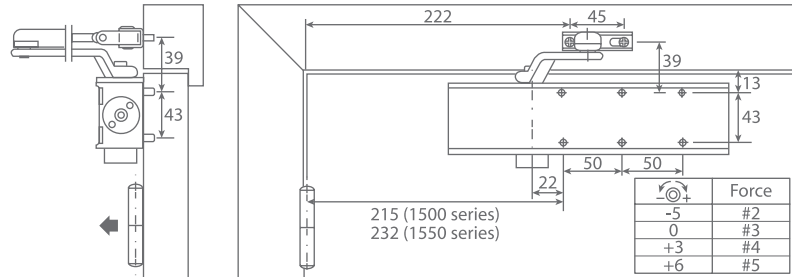


Fixing Details - Door Closers

1500 Series 1550 Series

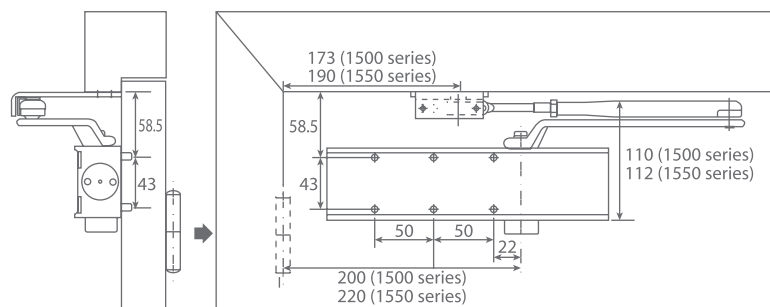
Standard arm fixing, pull side

(Example refers to left-hand door; mirror image applies to right-hand door)



Parallel-arm fixing, push side

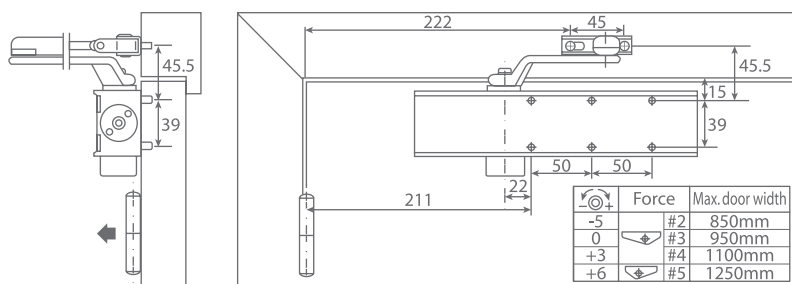
(Example refers to left-hand door; mirror image applies to right-hand door)



1600 Series

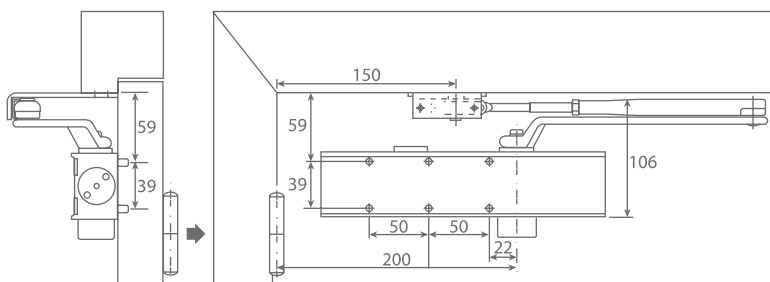
Standard arm fixing, pull side

(Example refers to left-hand door; mirror image applies to right-hand door)



Parallel-arm fixing, push side

(Example refers to left-hand door; mirror image applies to right-hand door)

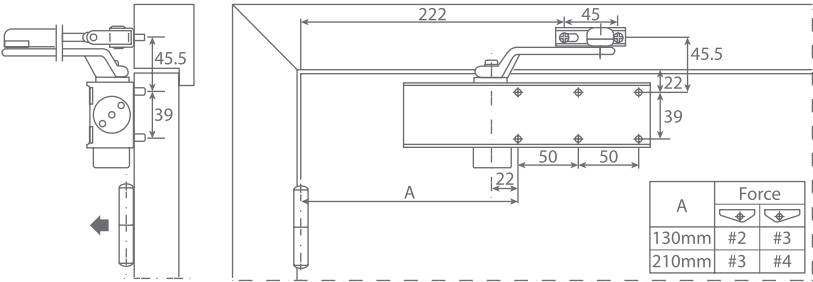


Fixing Details - Door Closers

1650 Series

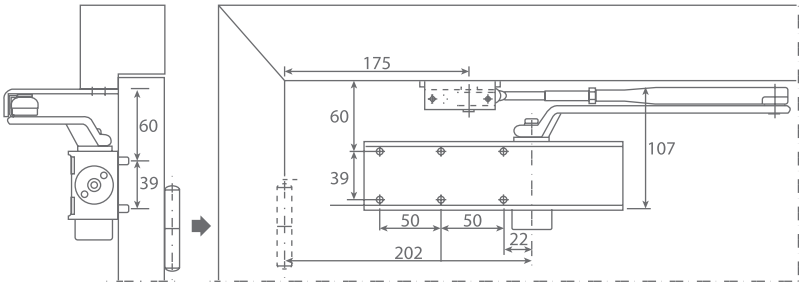
Standard arm fixing, pull side

(Example refers to left-hand door; mirror image applies to right-hand door)



Parallel-arm fixing, push side

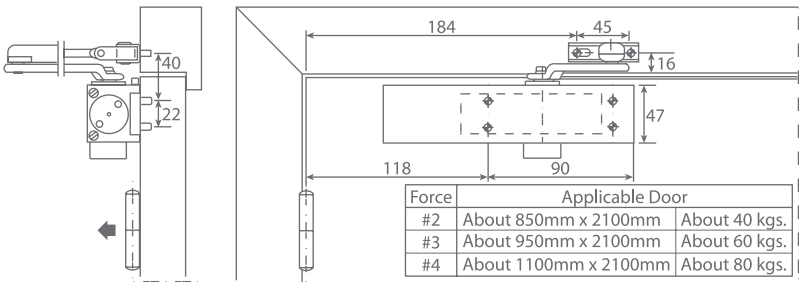
(Example refers to left-hand door; mirror image applies to right-hand door)



2000 Series

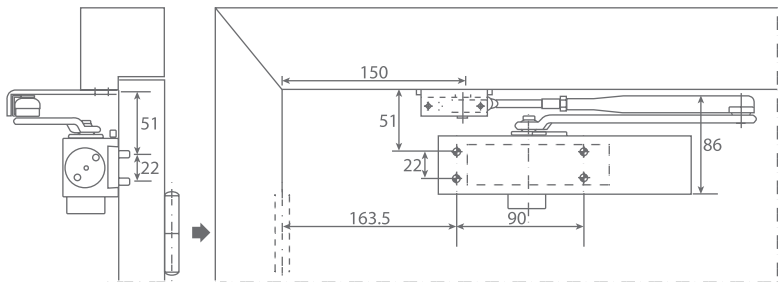
Standard arm fixing, pull side

(Example refers to left-hand door; mirror image applies to right-hand door)



Parallel-arm fixing, push side

(Example refers to left-hand door; mirror image applies to right-hand door)

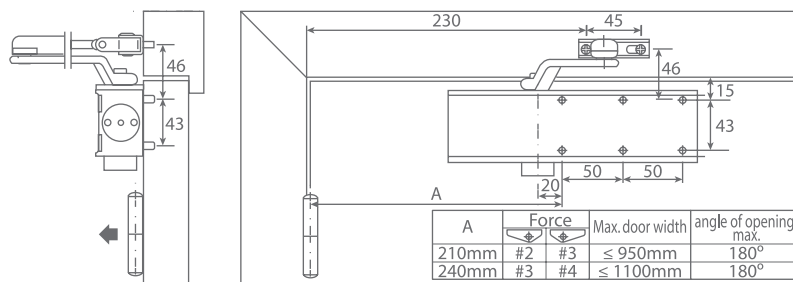


Fixing Details - Door Closers

5000 Series

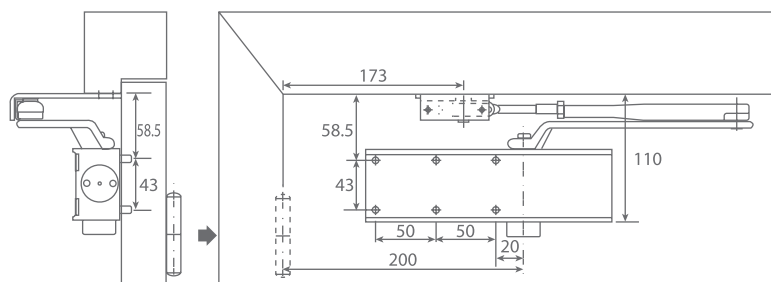
Standard arm fixing, pull side

(Example refers to left-hand door; mirror image applies to right-hand door)



Parallel-arm fixing, push side

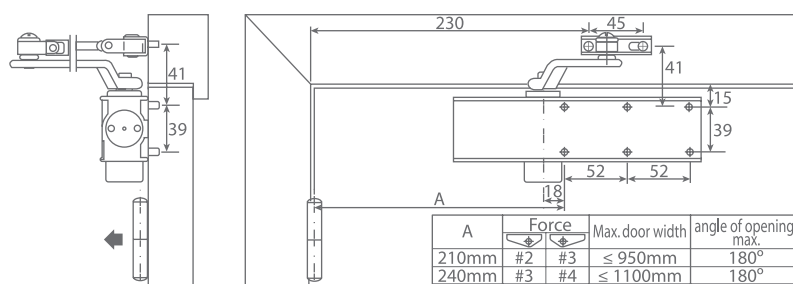
(Example refers to left-hand door; mirror image applies to right-hand door)



7000 Series

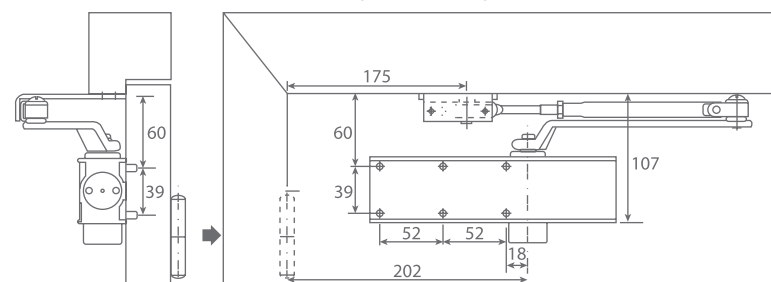
Standard arm fixing, pull side

(Example refers to left-hand door; mirror image applies to right-hand door)



Parallel-arm fixing, push side

(Example refers to left-hand door; mirror image applies to right-hand door)

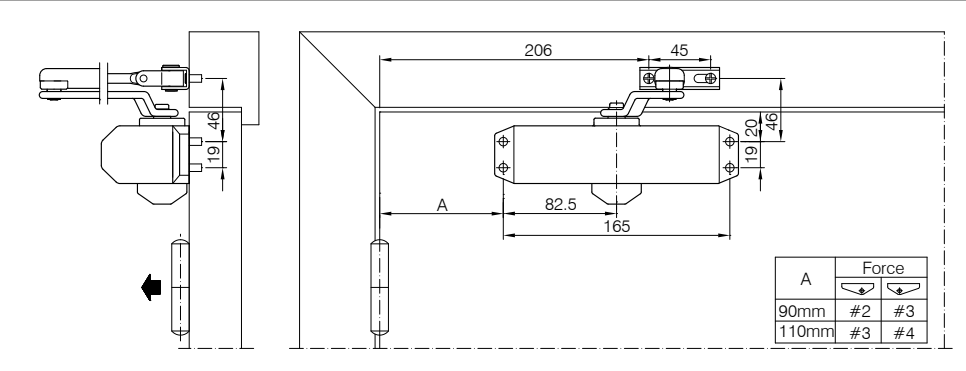


Fixing Details - Door Closers

8200 Series

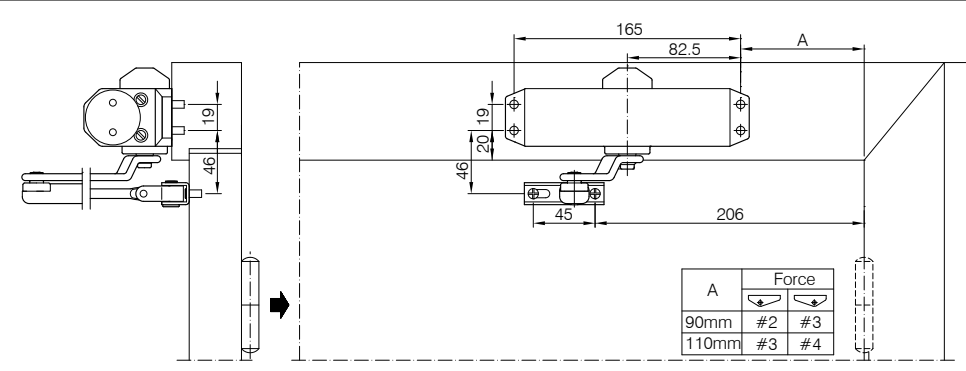
Door leaf fixing, pull side

(Example refers to left-hand [ISO 6] door; mirror image applies to right-hand [ISO 5] door)



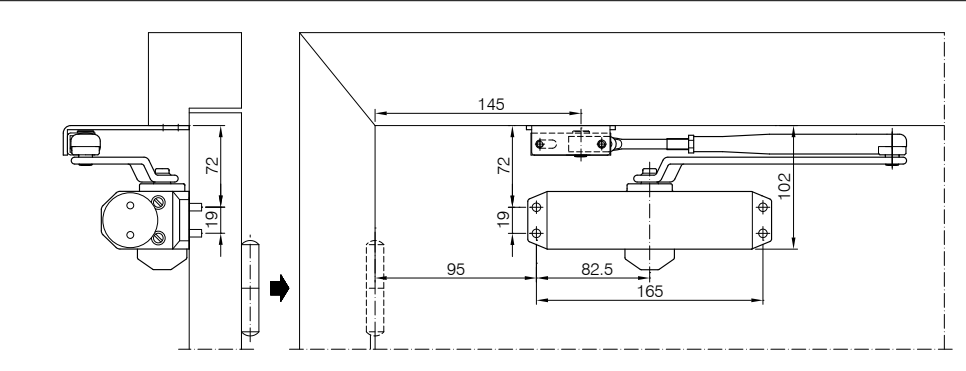
Transom fixing (overhead frame installation), push side

(Example refers to left-hand [ISO 6] door; mirror image applies to right-hand [ISO 5] door)



Parallel-arm fixing, push side

(Example refers to left-hand [ISO 6] door; mirror image applies to right-hand [ISO 5] door). Parallel-arm bracket (accessory) necessary

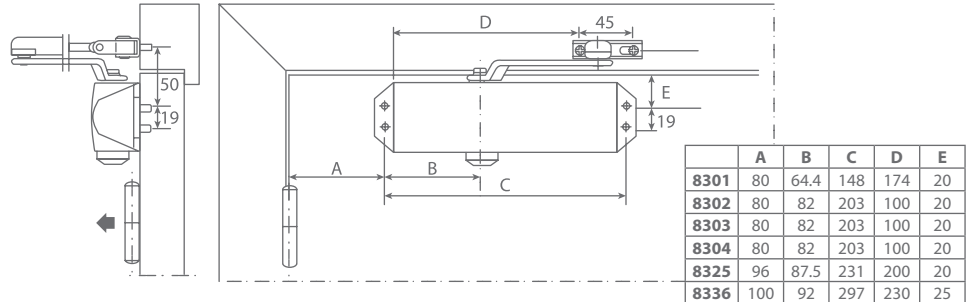


Fixing Details - Door Closers

8300 Series 8325 Series 8336 Series

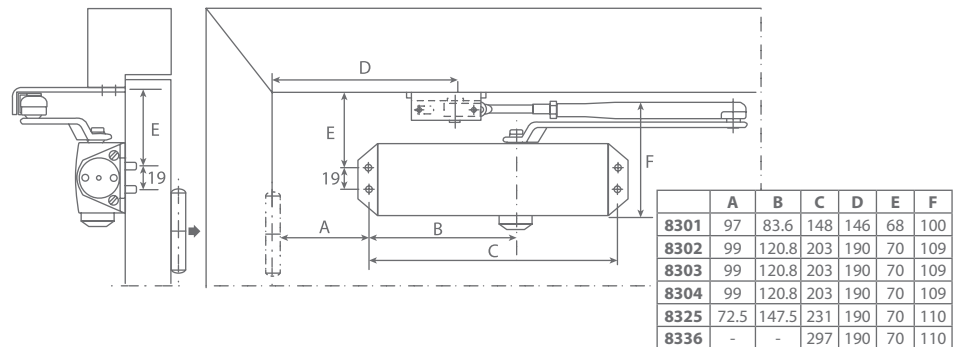
Standard arm fixing, pull side

(Example refers to left-hand door; mirror image applies to right-hand door)



Parallel-arm fixing, push side

(Example refers to left-hand door; mirror image applies to right-hand door)

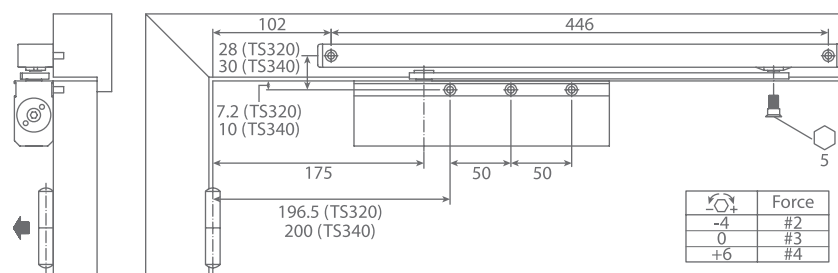


TS320 Series TS340 Series Standard installation

Standard arm fixing, pull side

(Example shows LH door; RH doors mirrored arrangement)

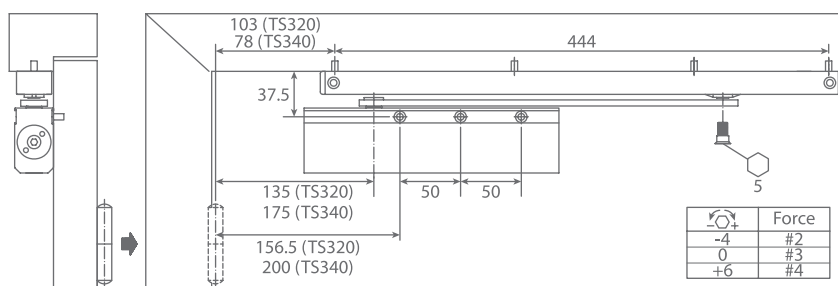
Provided conditions allow, an opening angle of 130° is possible with this method of fixing. In most cases, however, a wall recess will have to be provided for the door closer.



Door leaf fixing, push side

(Example shows RH door; LH doors mirrored arrangement)

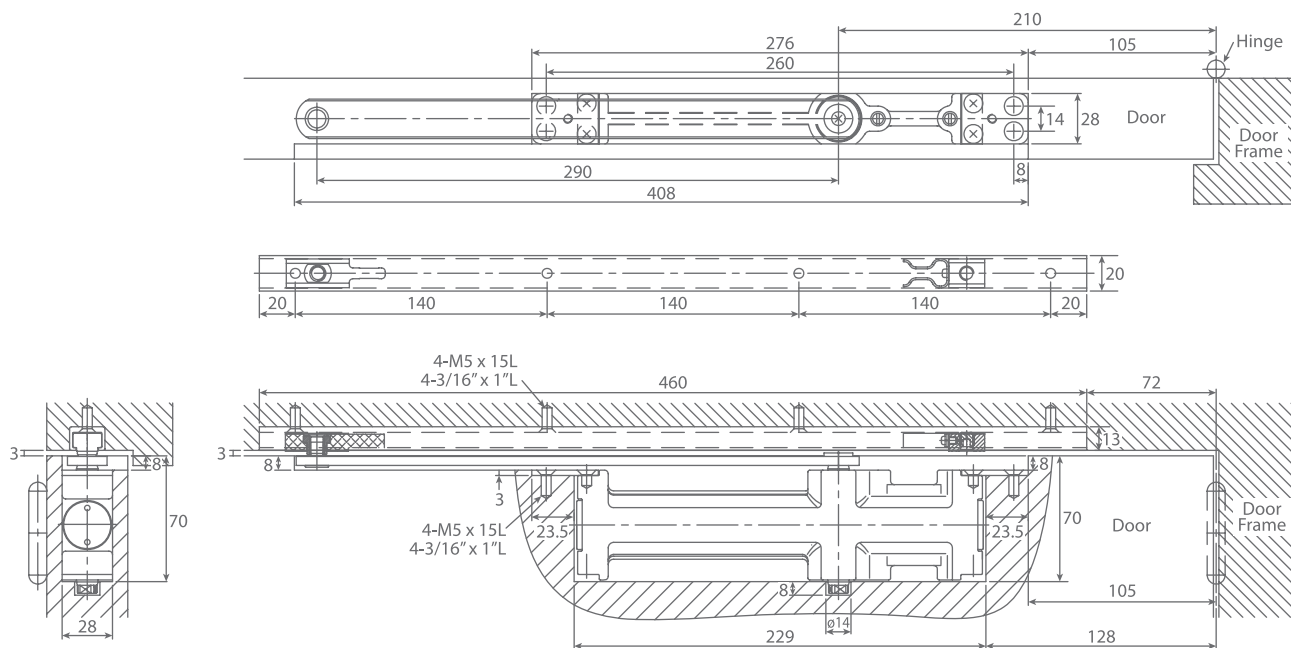
Depending on the structural conditions, the door opening angle with this method of fixing is limited to approx. 110° ~ 130°. In order to avoid damage to the door or door closer, users are recommended to install a cushioned backstay or a door stop.



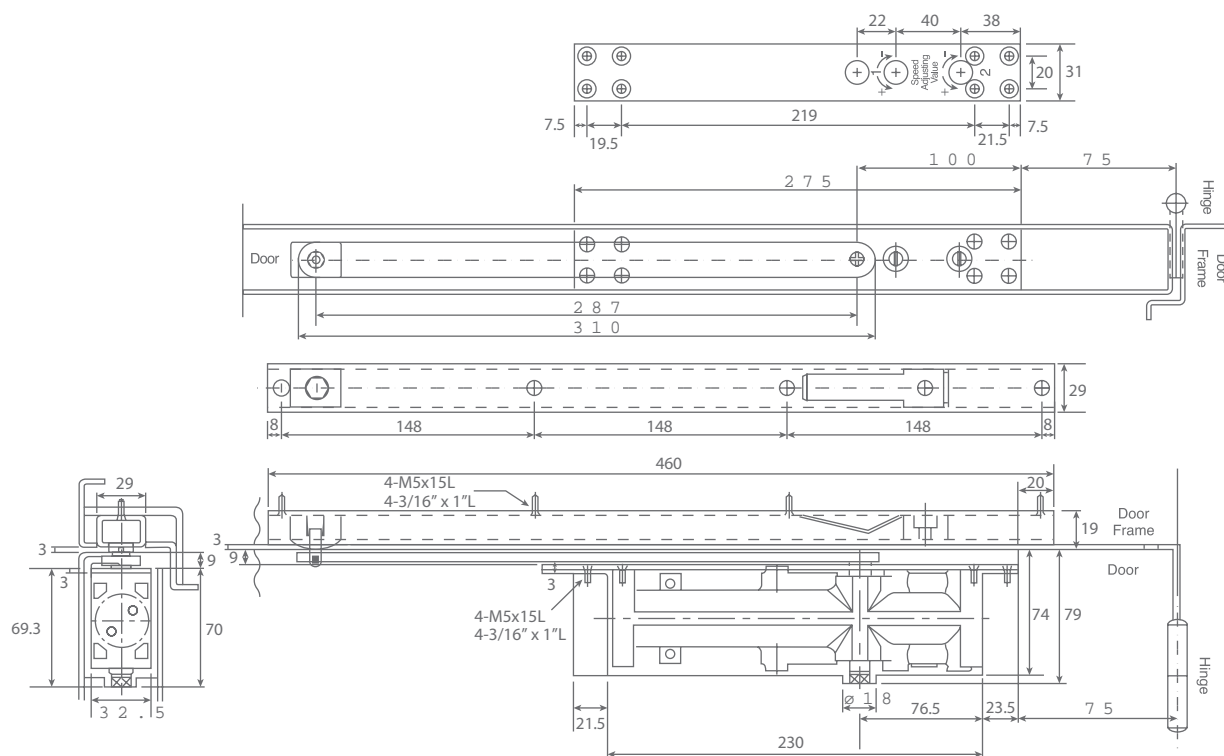
Fixing Details - Concealed Door Closers

CR-280 Series

(Standard Installation)

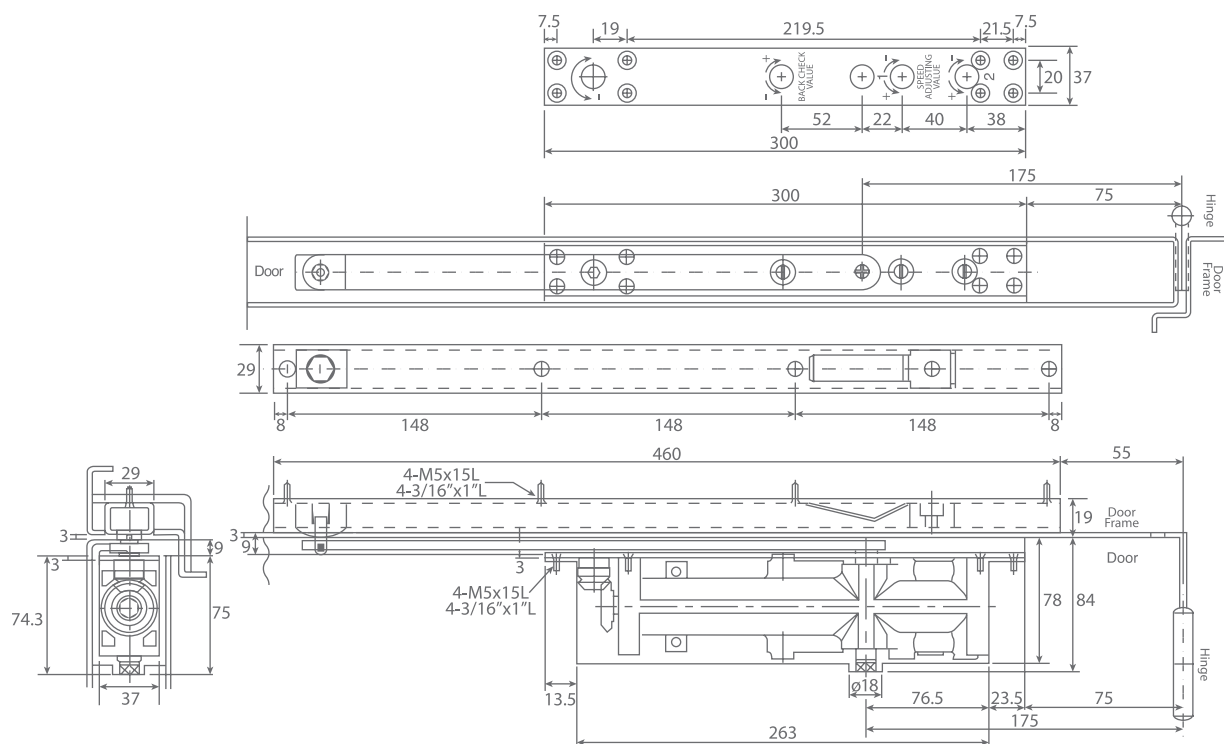


CR-380 Series



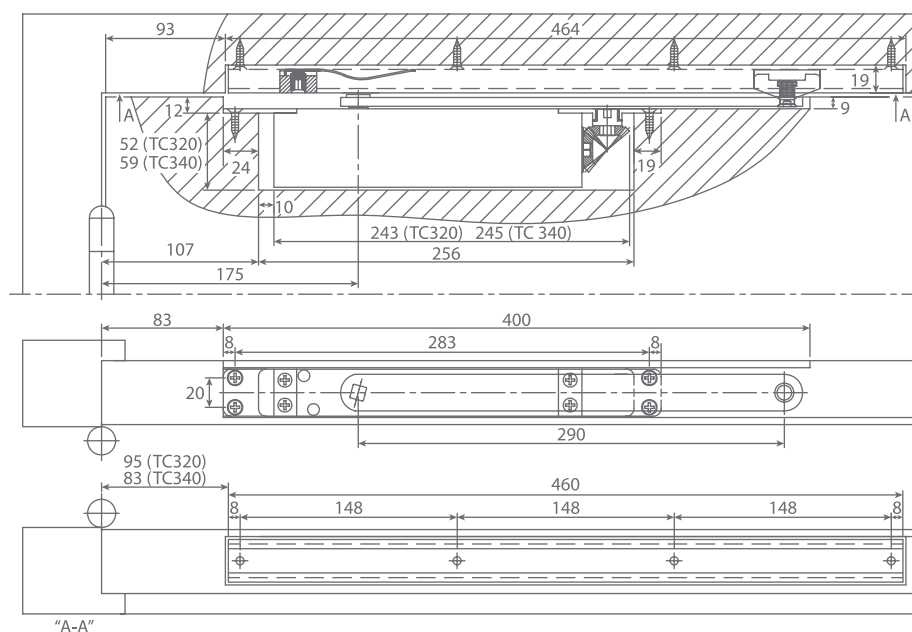
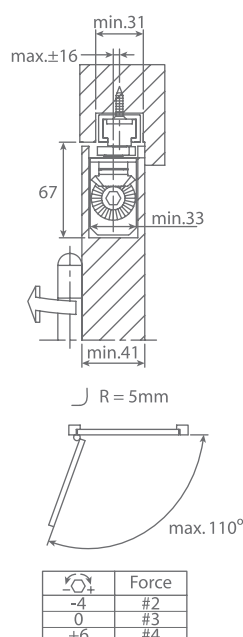
Fixing Details - Concealed Door Closers

CR-3835 Series Standard Installation (Example shows left-hand LH door, RH door, mirror arrangement)



TC320 Series
TC340 Series

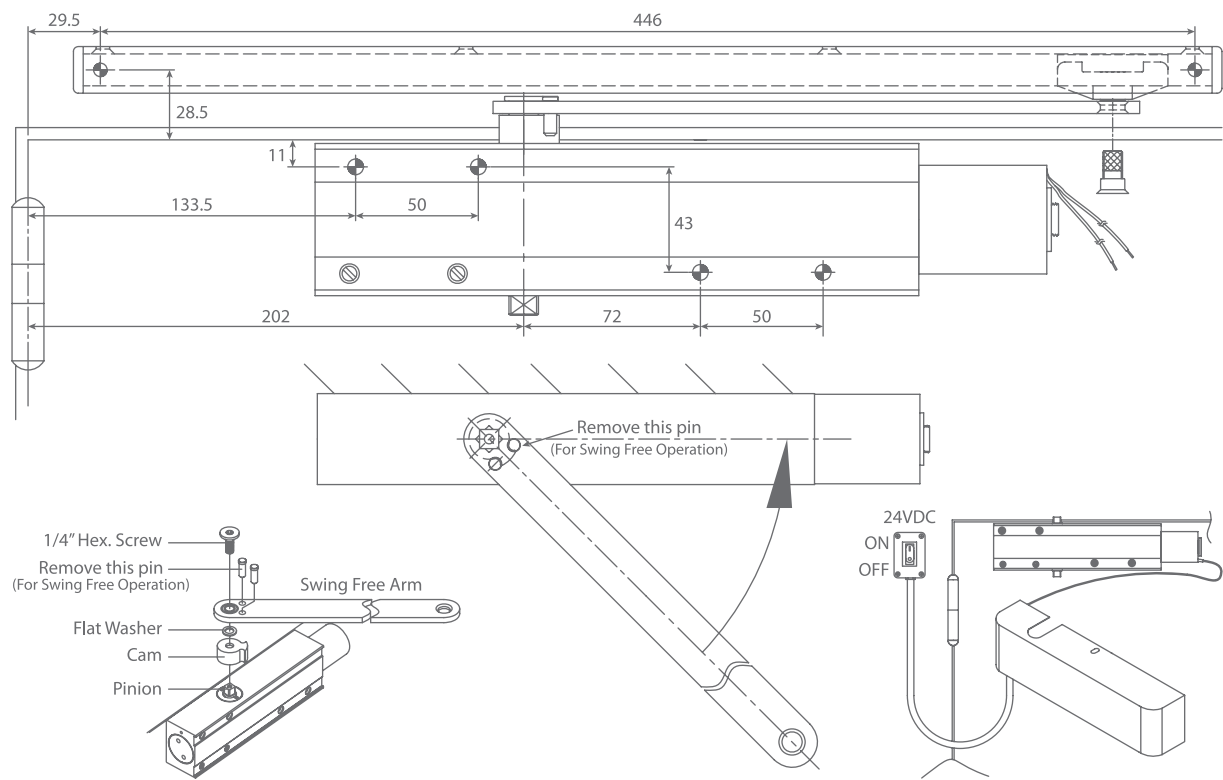
Depending on the structural conditions, the door opening angle with this method of fixing is limited to approx 110°. In order to avoid damage to the door or door closer, users are recommended to install a cushioned backstay or a door stop.



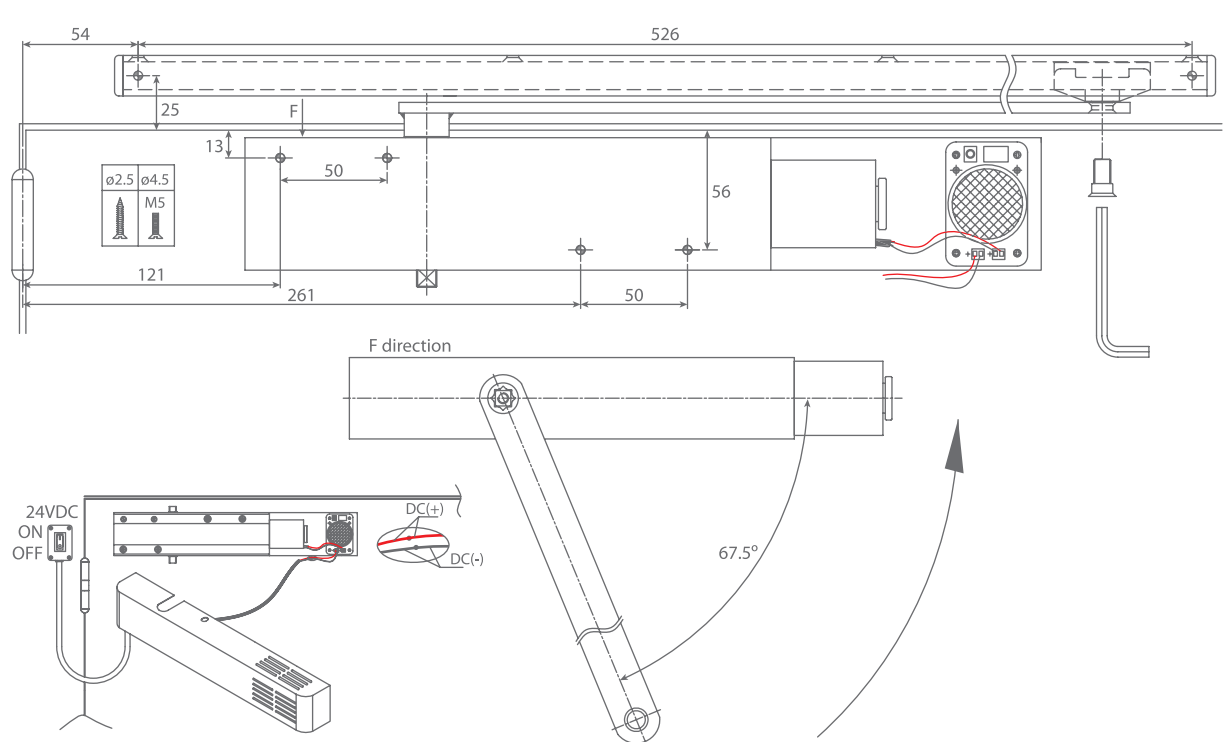
Force	
-4	#2
0	#3
+6	#4

Fixing Details - Door Closers

1560 ET Series Standard installation



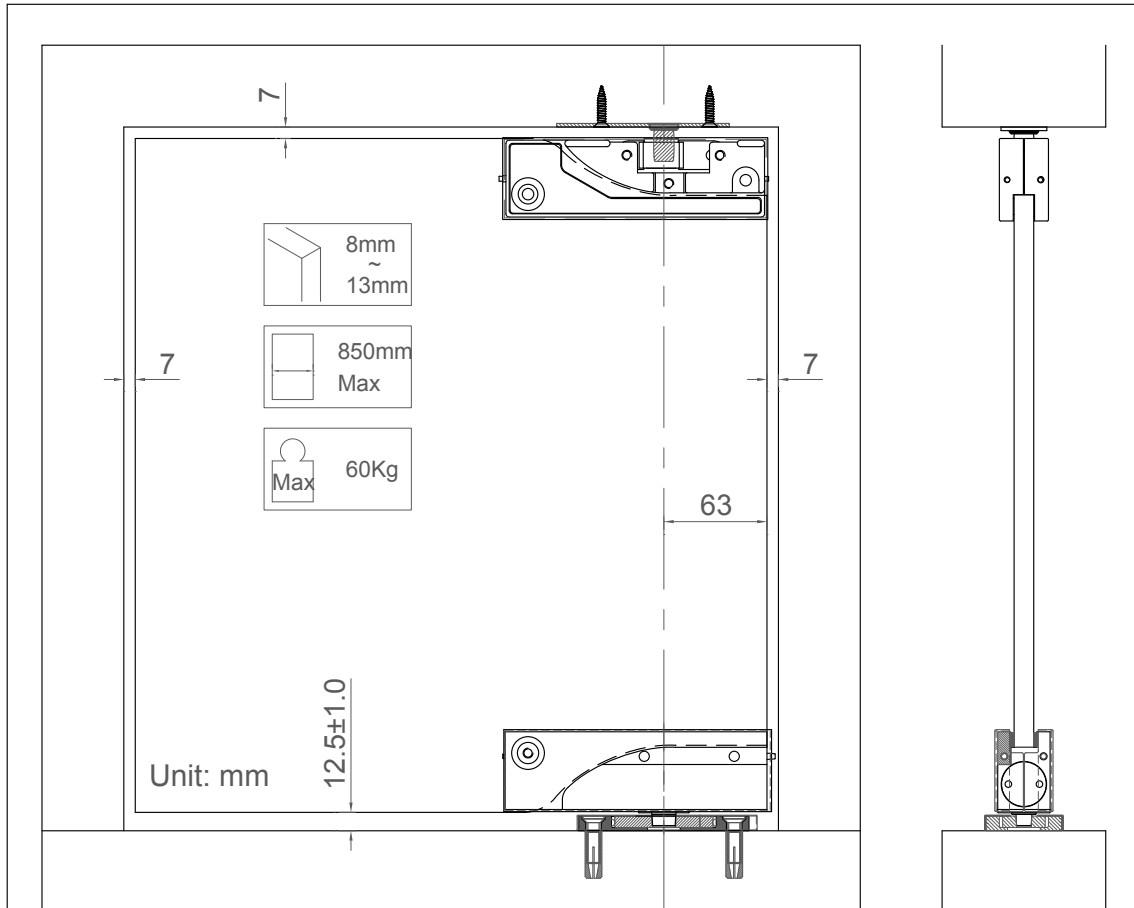
1560 EST Series Standard installation



Fixing Details - Concealed Floor Hinges

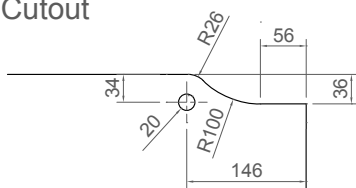
CF540 Series **NEW**

1/2



a1

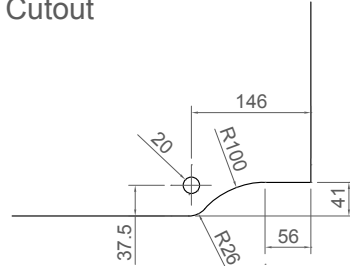
Glass Cutout



a2

Unit: mm

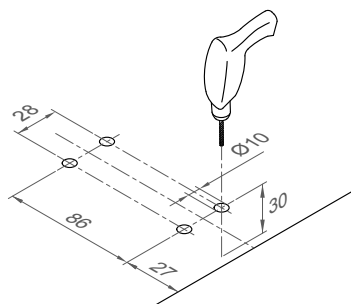
Glass Cutout



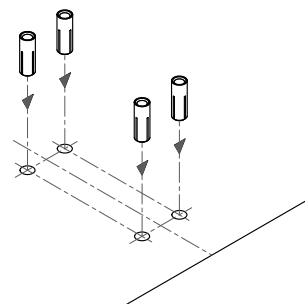
a3

Unit: mm

b1



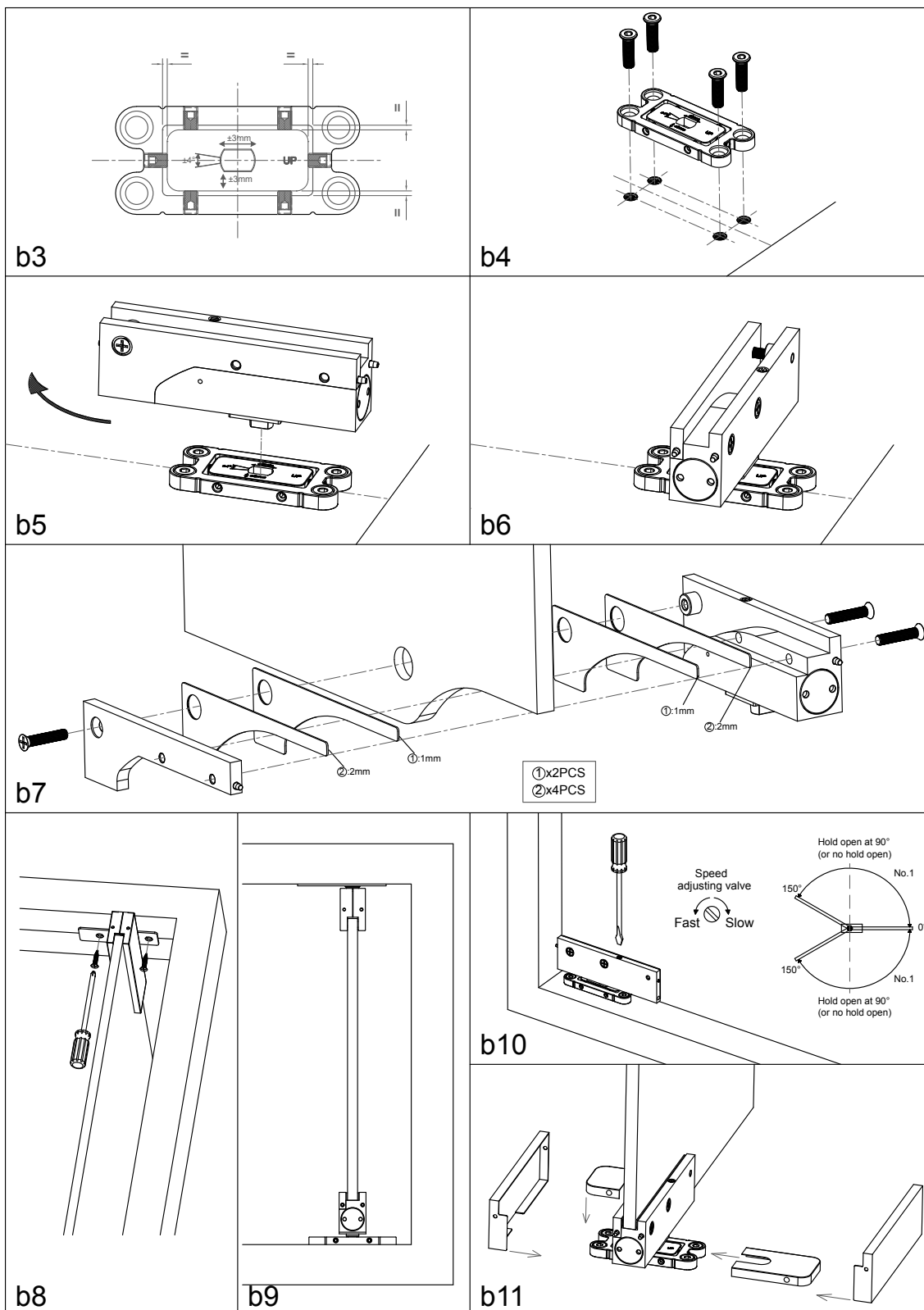
b2



Fixing Details - Concealed Floor Hinges

CF540 Series 

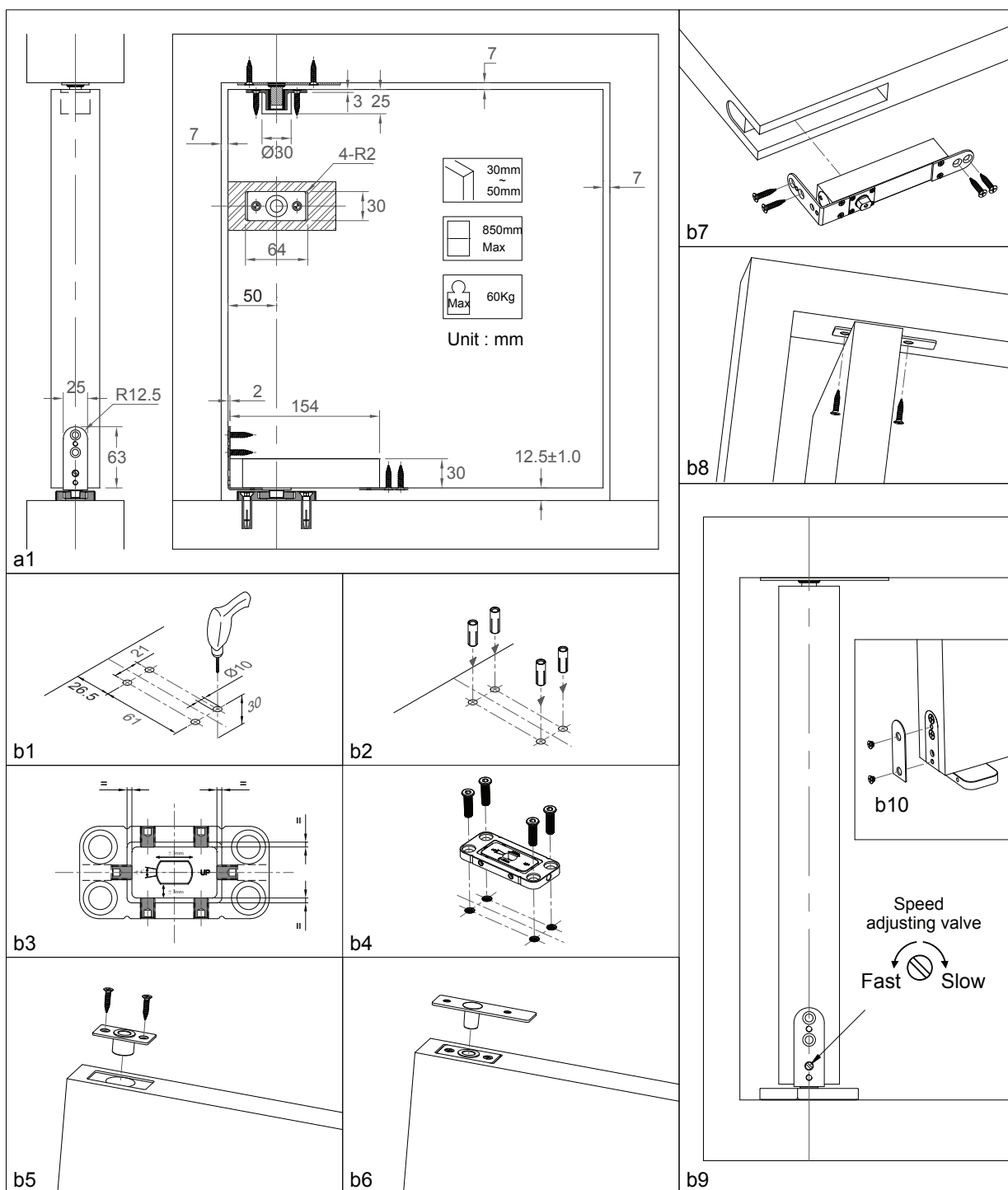
2/2



Fixing Details - Concealed Floor Hinges

CF550 Series **NEW**

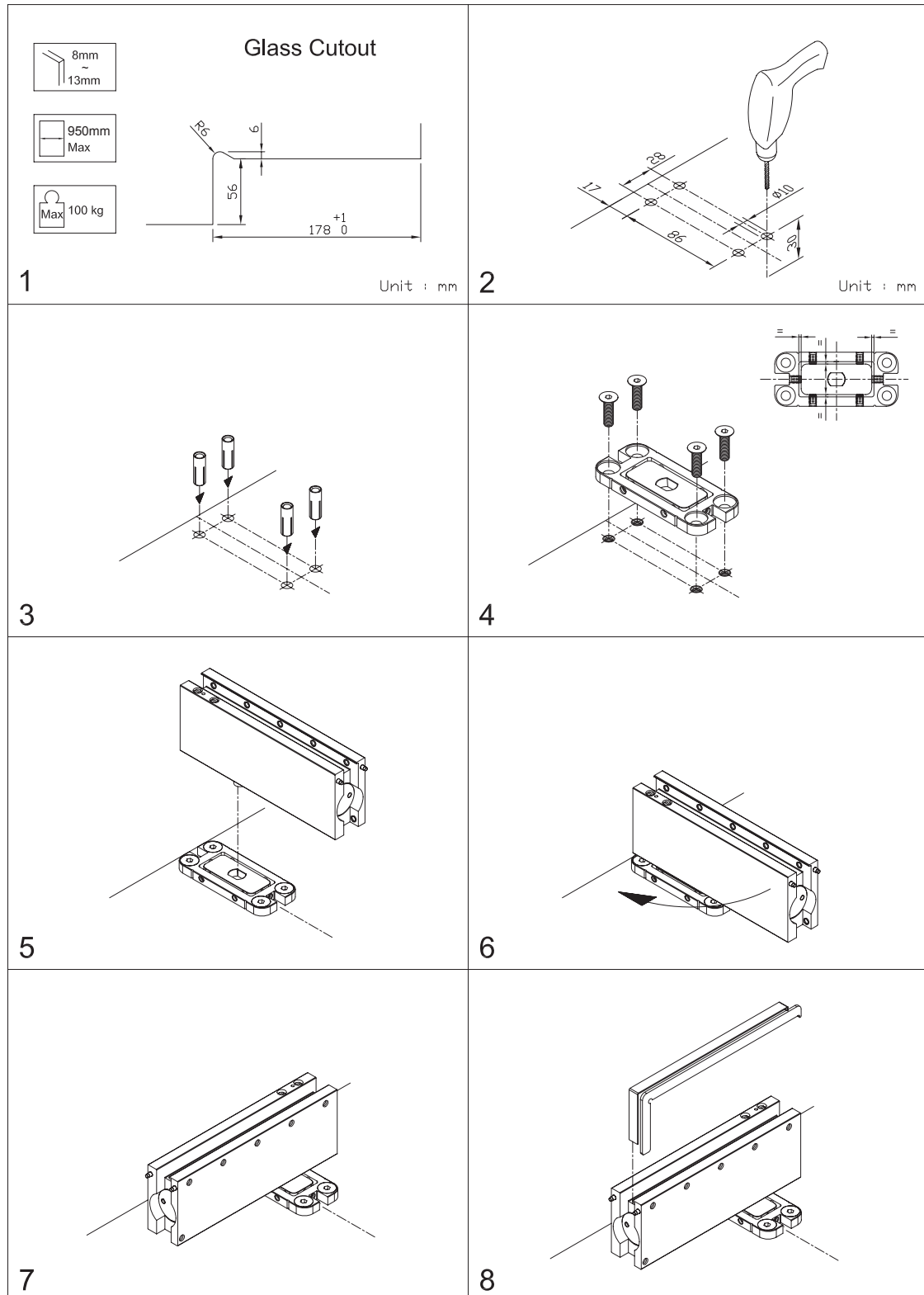
• Side Installation



Fixing Details - Concealed Floor Spring Hinges

CF560 Series Standard Installation

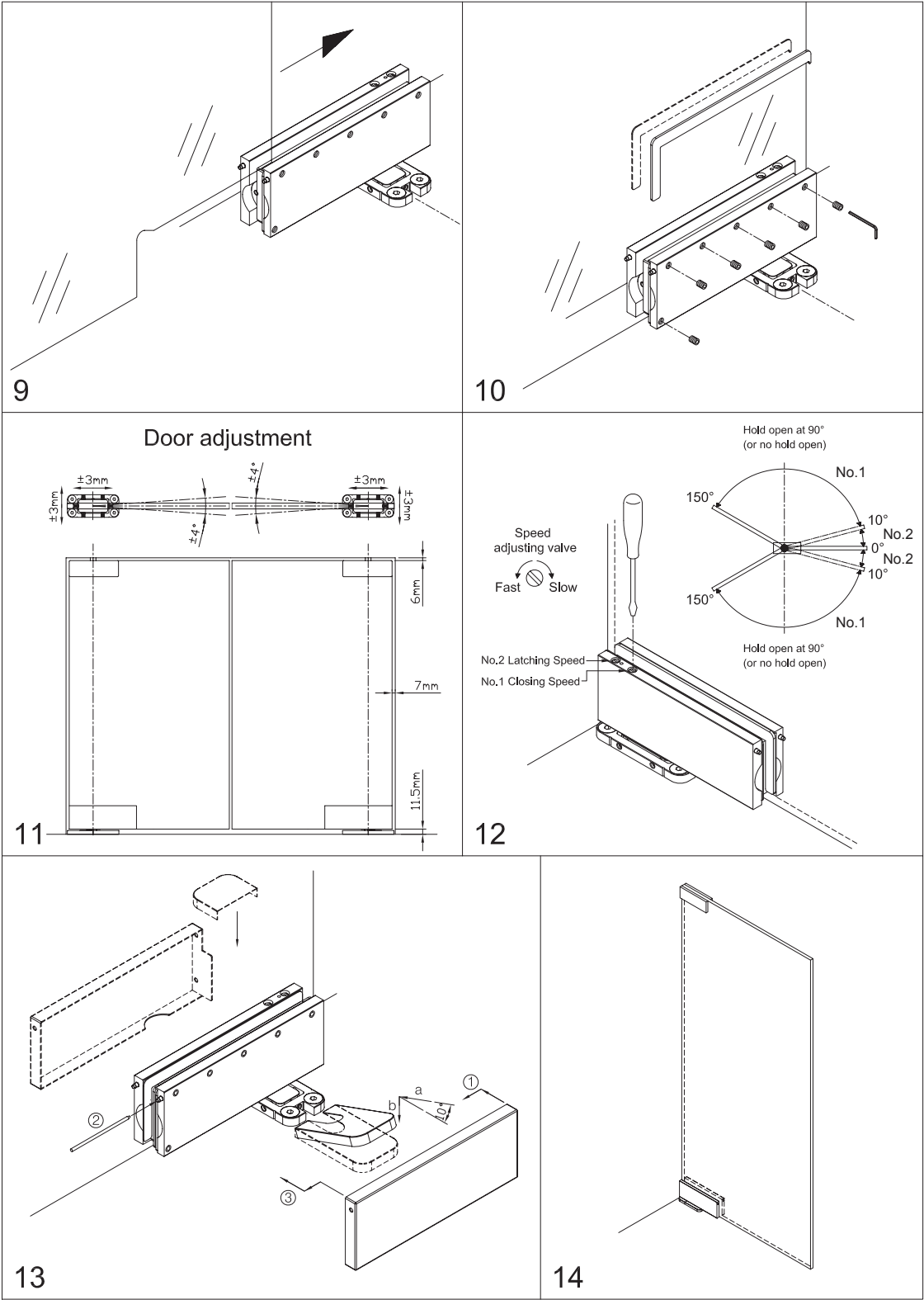
1/2



Fixing Details - Concealed Floor Spring Hinges

CF560 Series Standard Installation

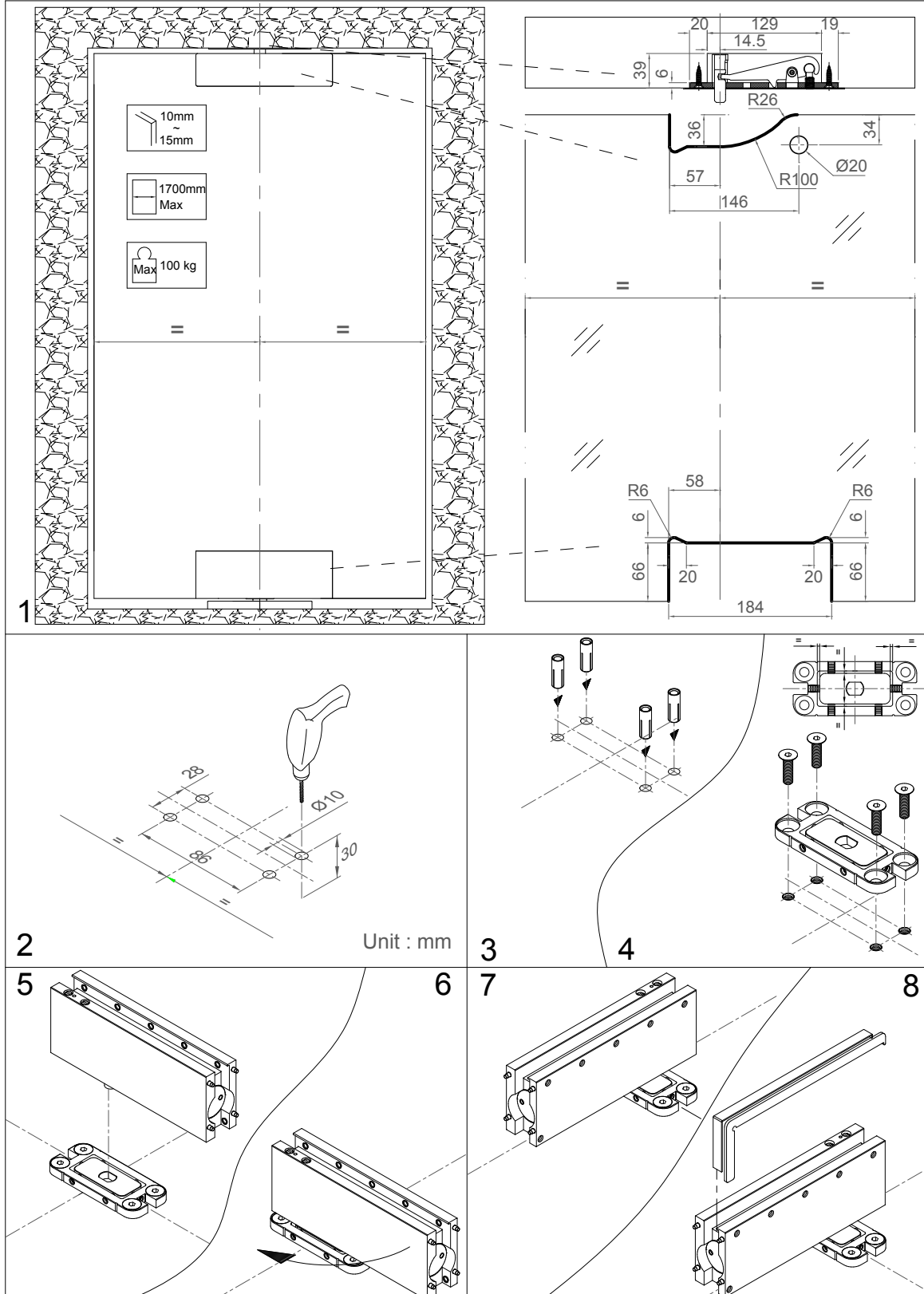
2/2



Fixing Details - Concealed Door Hinges

CF570 Series **NEW** Installation Instructions

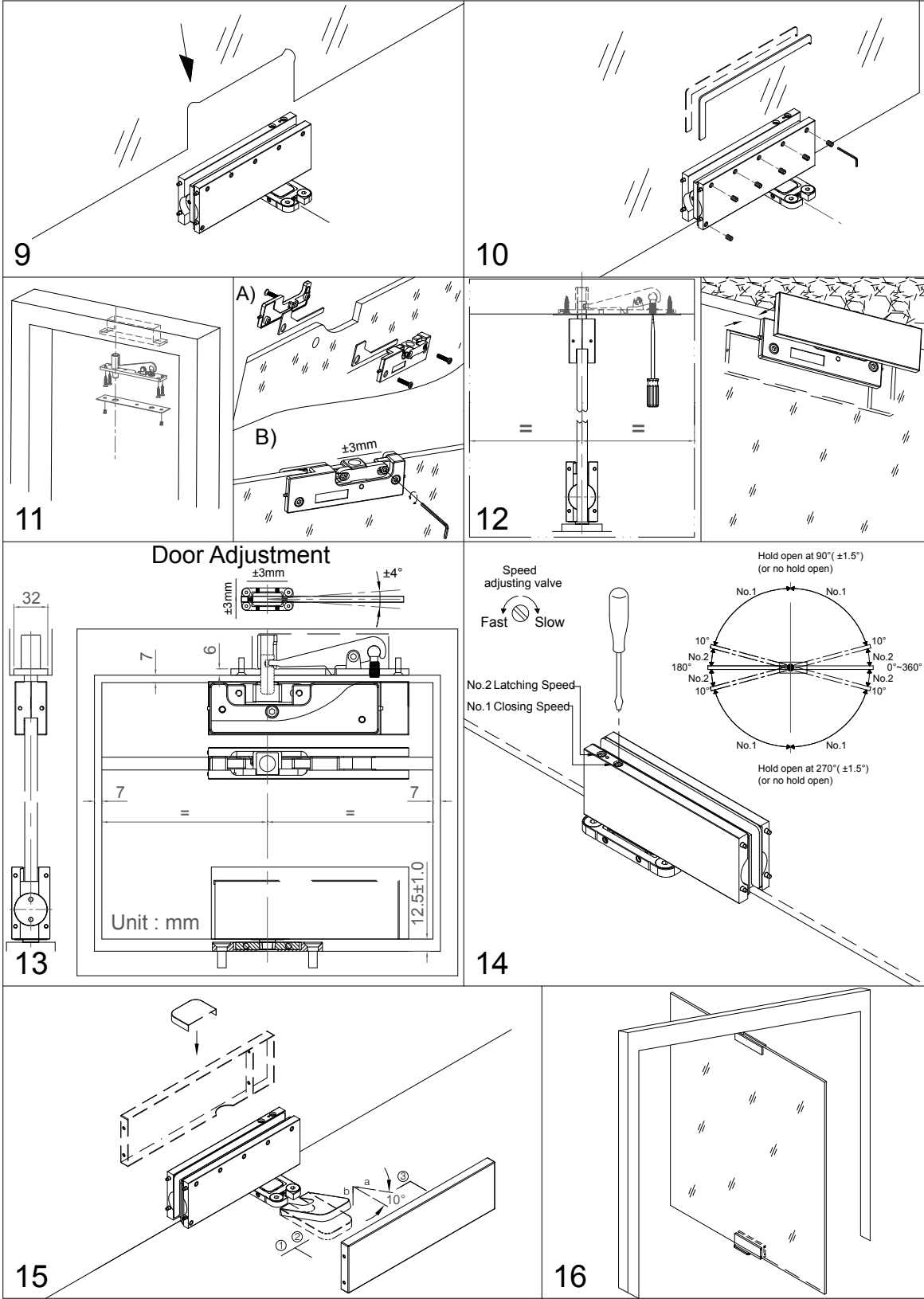
1/2



Fixing Details - Concealed Door Hinges

CF570 Series **NEW** Installation Instructions

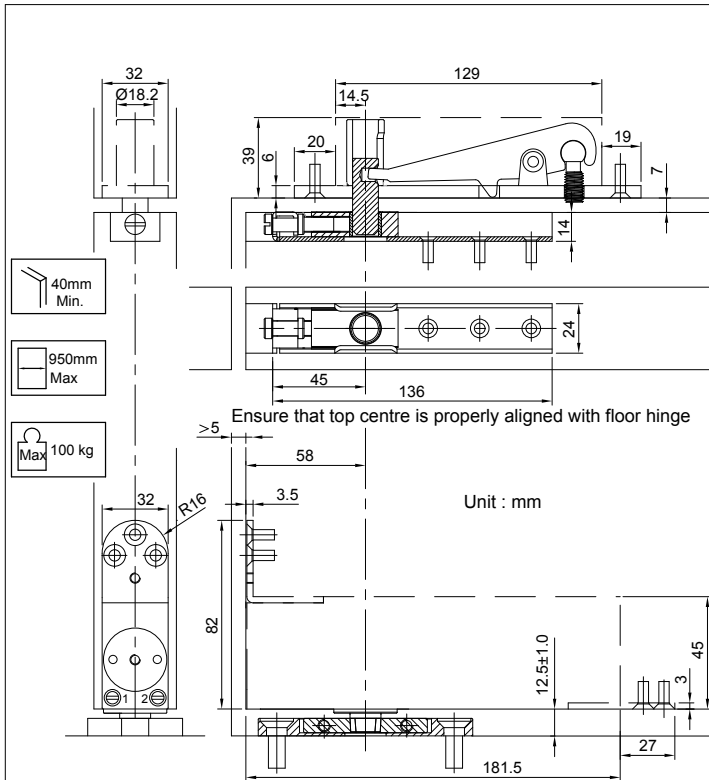
2/2



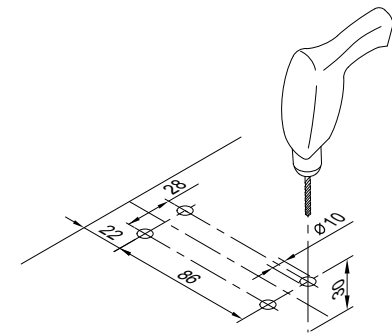
Fixing Details - Concealed Floor Hinges

CF580 Series **NEW** Installation Instructions

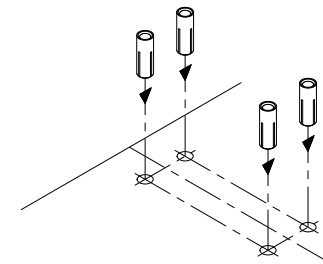
1/2



a1

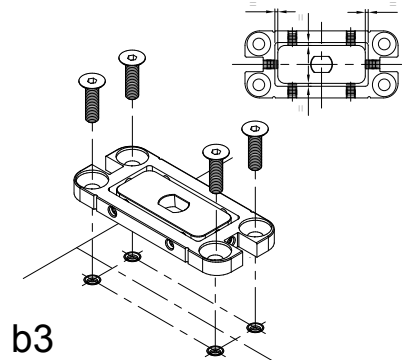
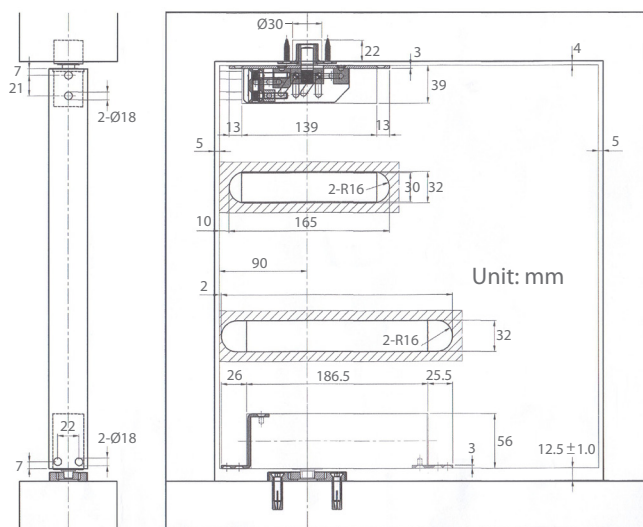


b1

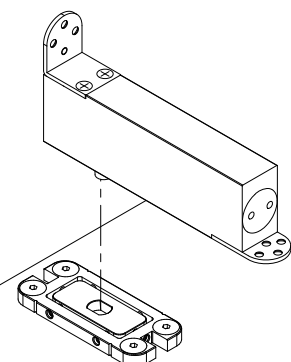


b2

BP-1 Top Pivot (option) **NEW**



b3

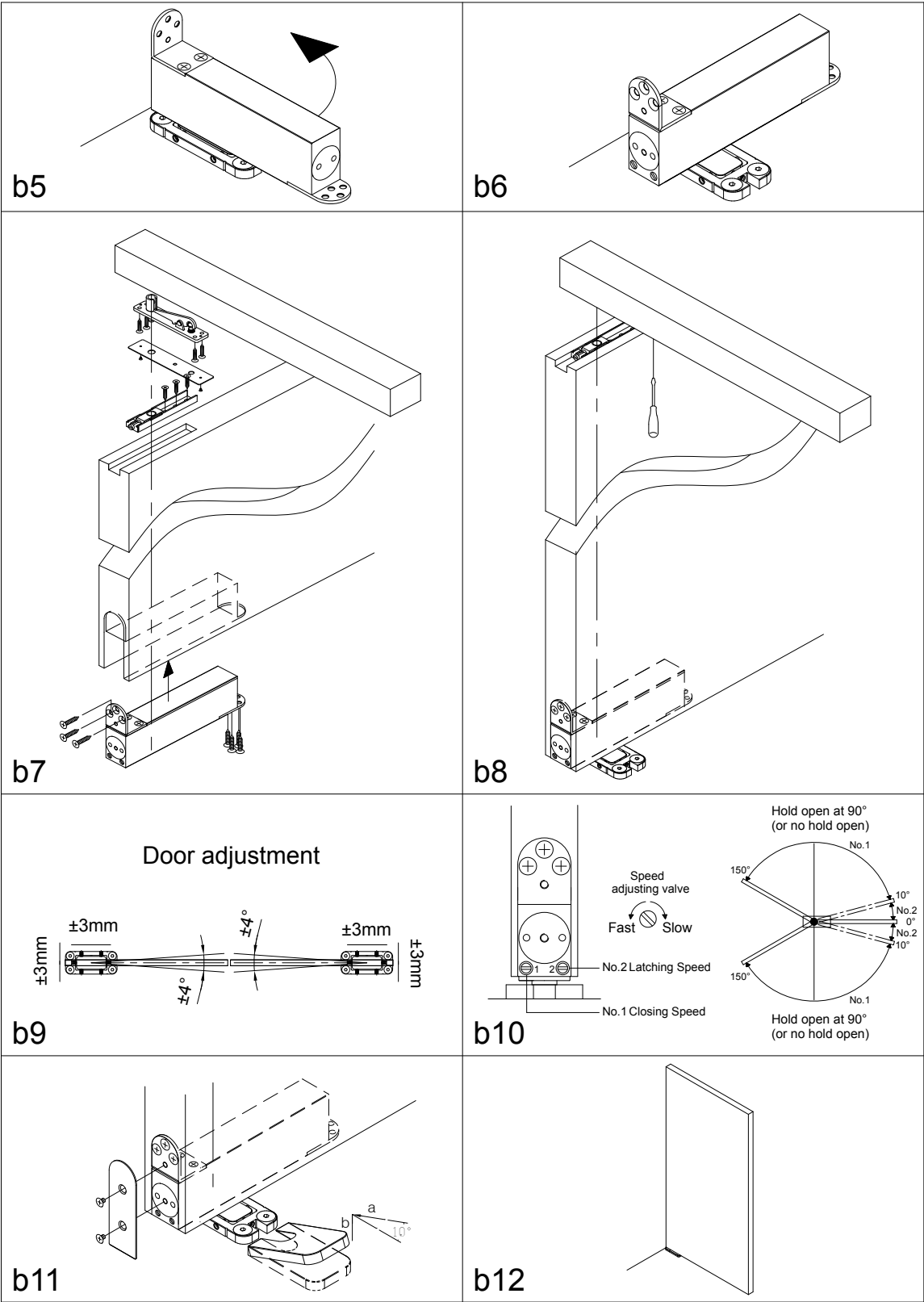


b4

Fixing Details - Concealed Floor Hinges

CF580 Series **NEW** Installation Instructions

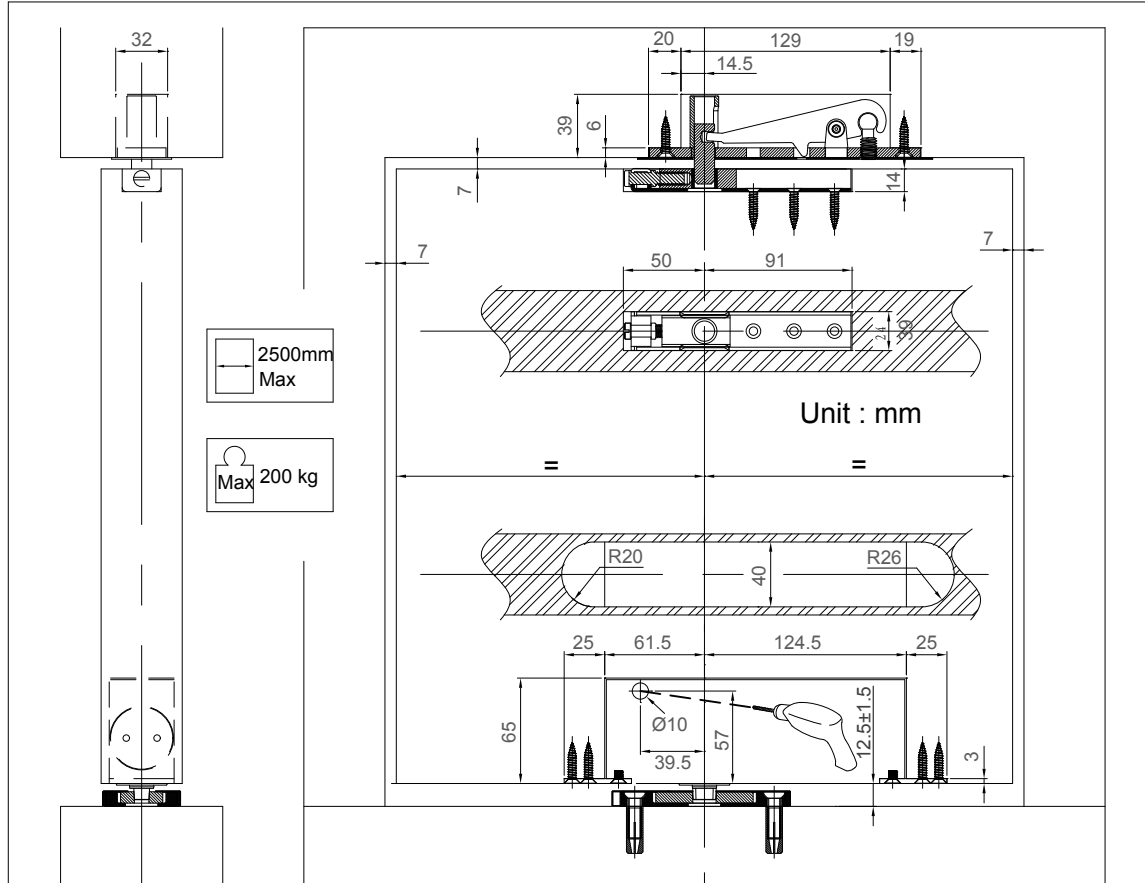
2/2



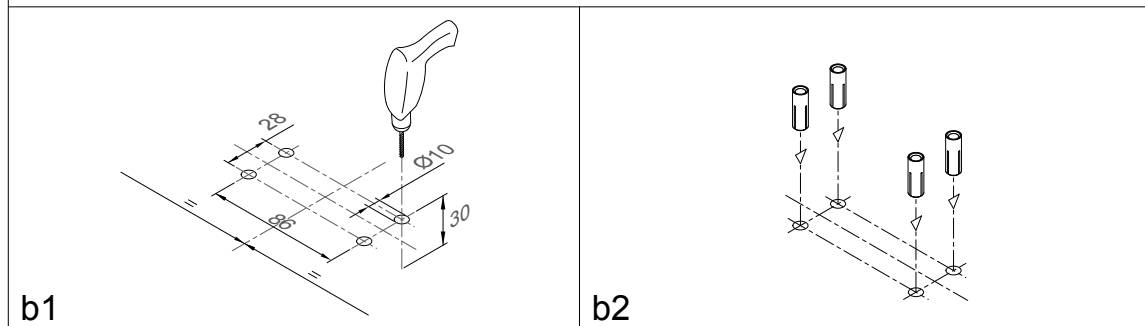
Fixing Details - Concealed Floor Hinges

CF590 Series **NEW** Installation Instructions

1/2

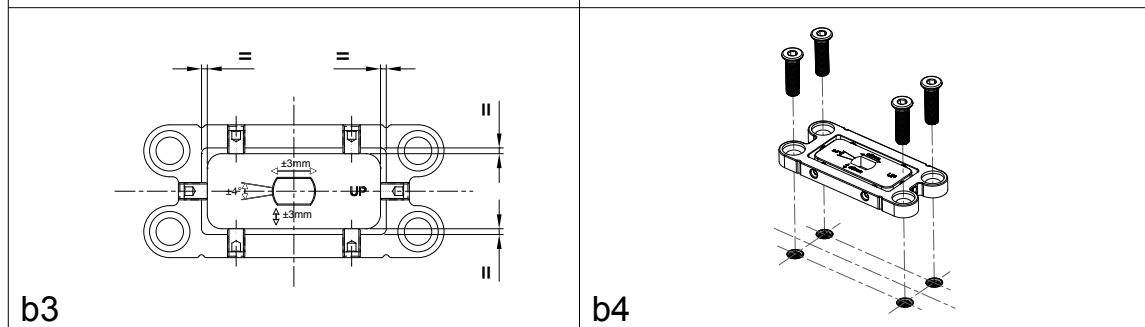


a1



b1

b2



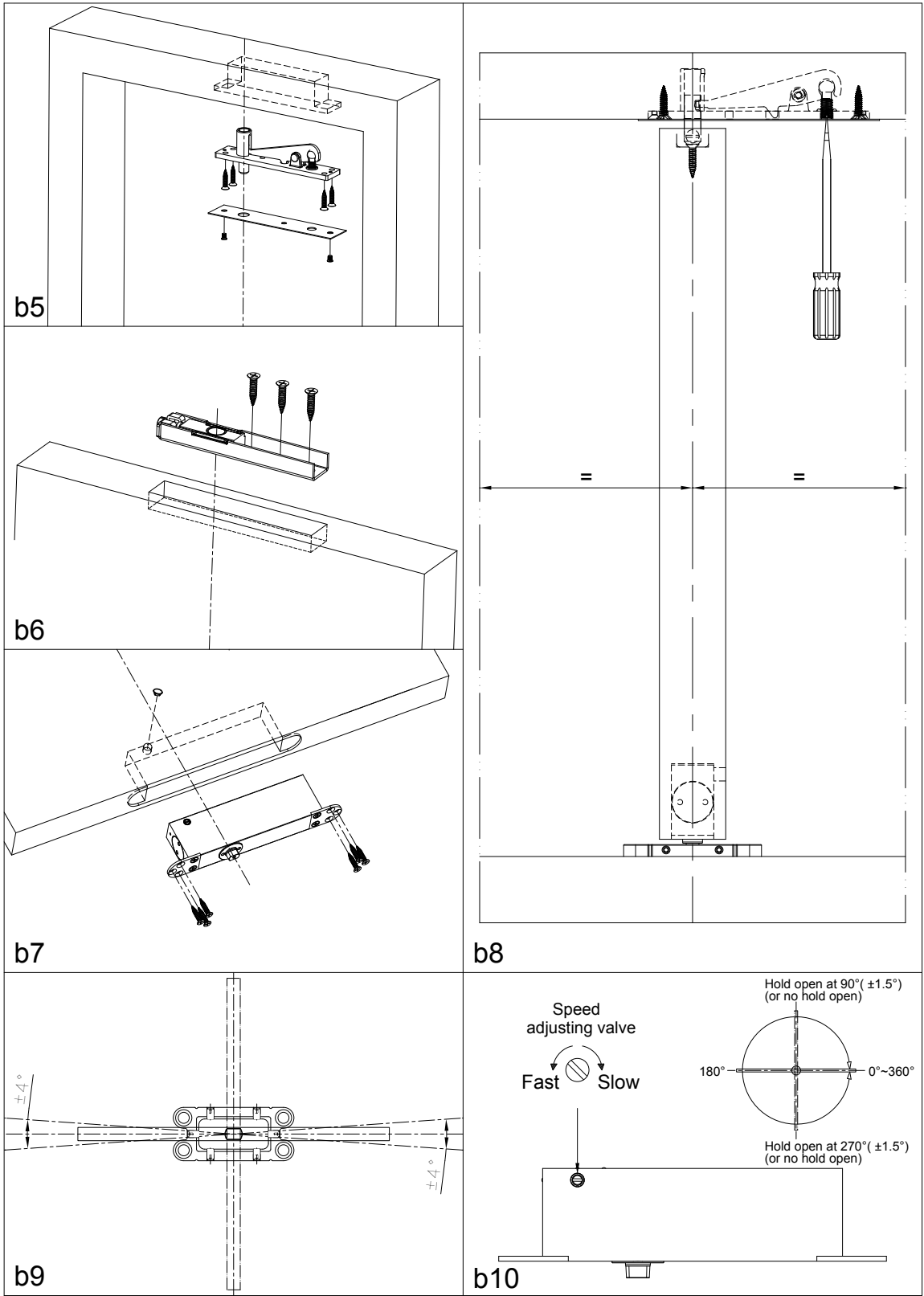
b3

b4

Fixing Details - Concealed Floor Hinges

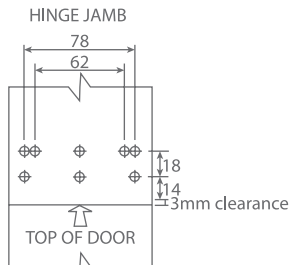
CF590 Series **NEW** Installation Instructions

2/2

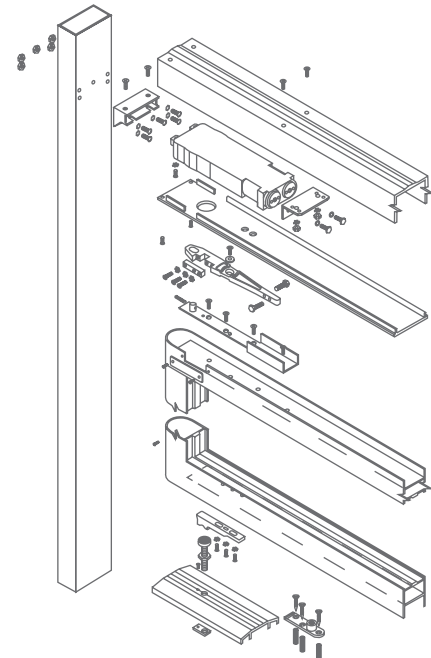
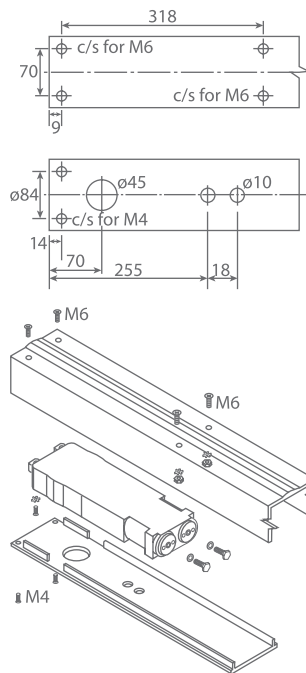
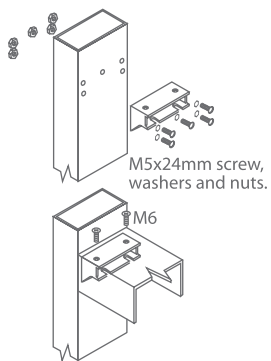


Fixing Details - Transom Door Closers

CR-360 Series Transom / Header Bar, 70mm Pivot Point



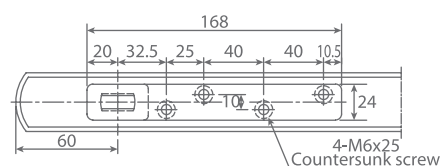
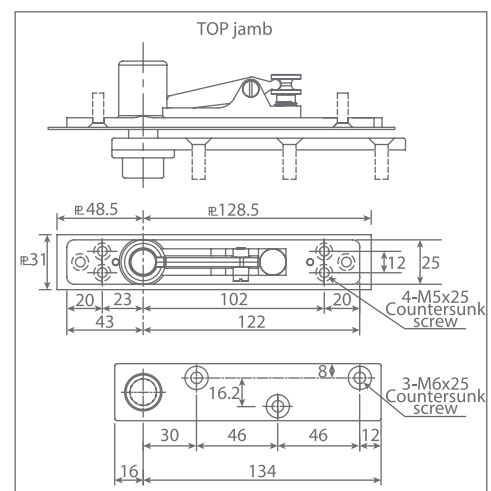
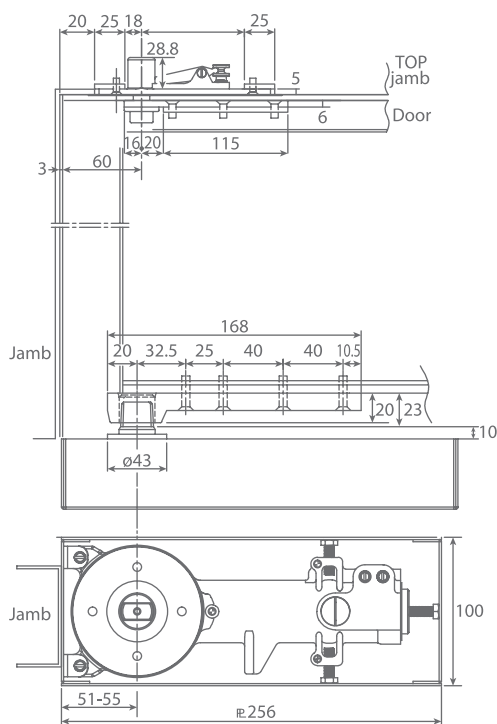
Select fixing holes most suitable for section and drill clearance size for M5 screws



Concealed overhead door closer
Centre pivoted - double or single acting

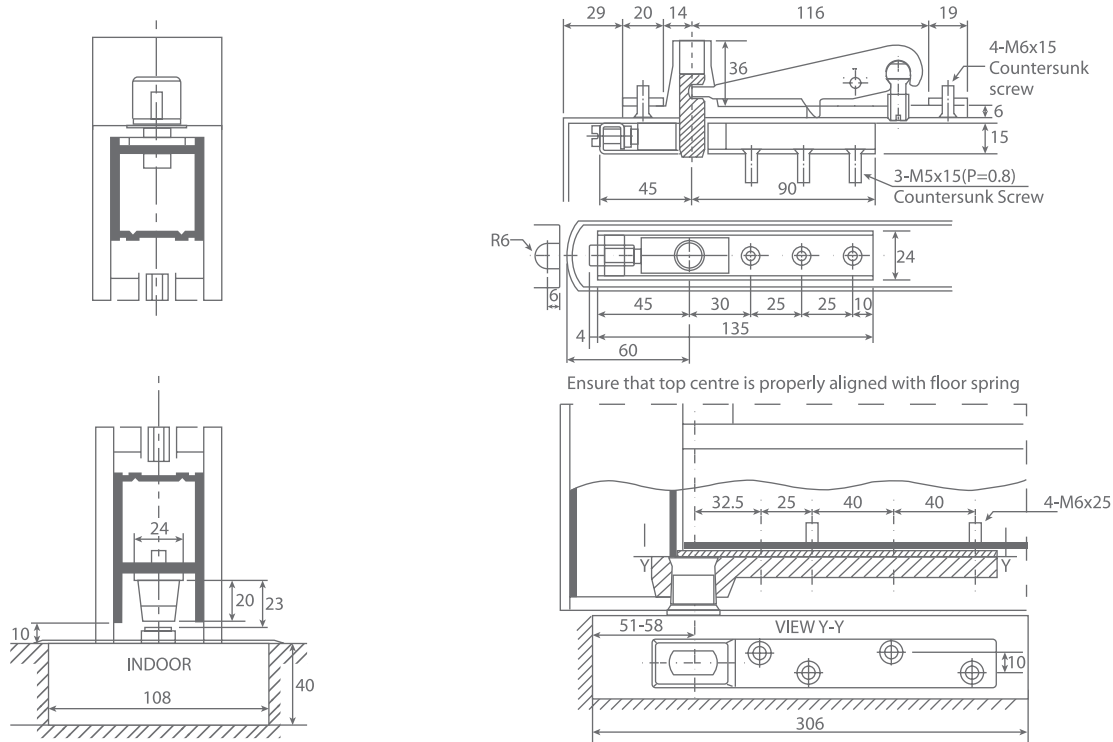
Fixing Details - Floor Spring Hinges

FH-210 Series For Centre - Hung, inward and outward opening doors

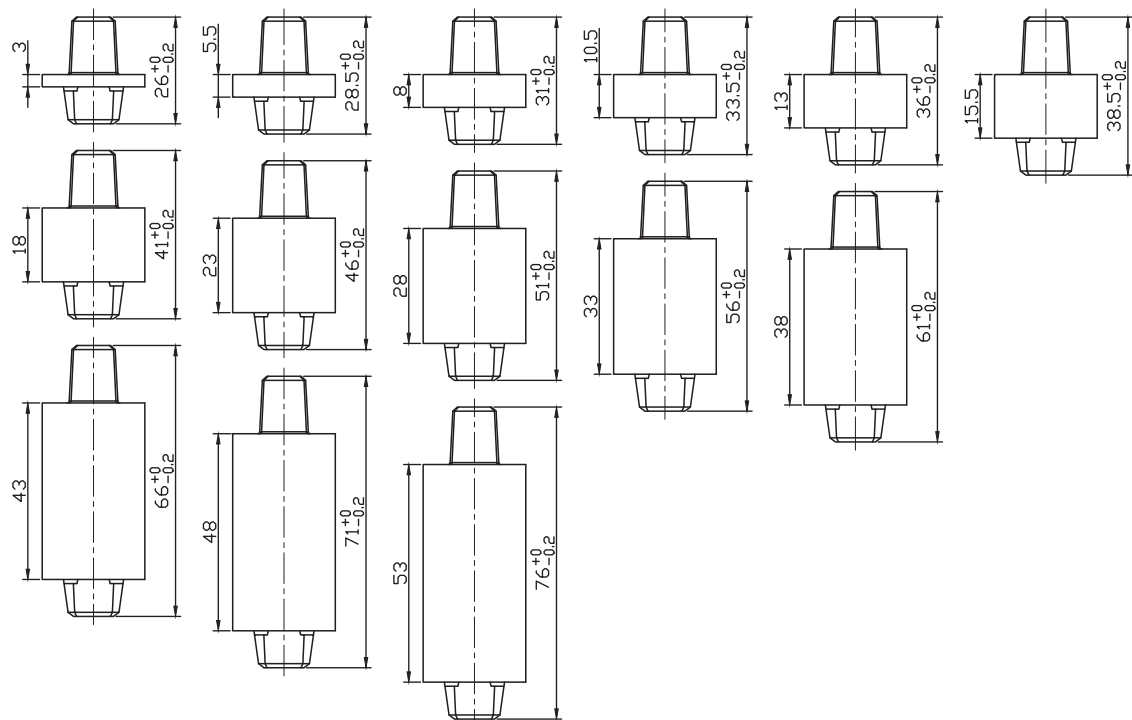


Fixing Details - Floor Spring Hinges

FH-300/300X Series For Centre - Hung, inward and outward opening doors

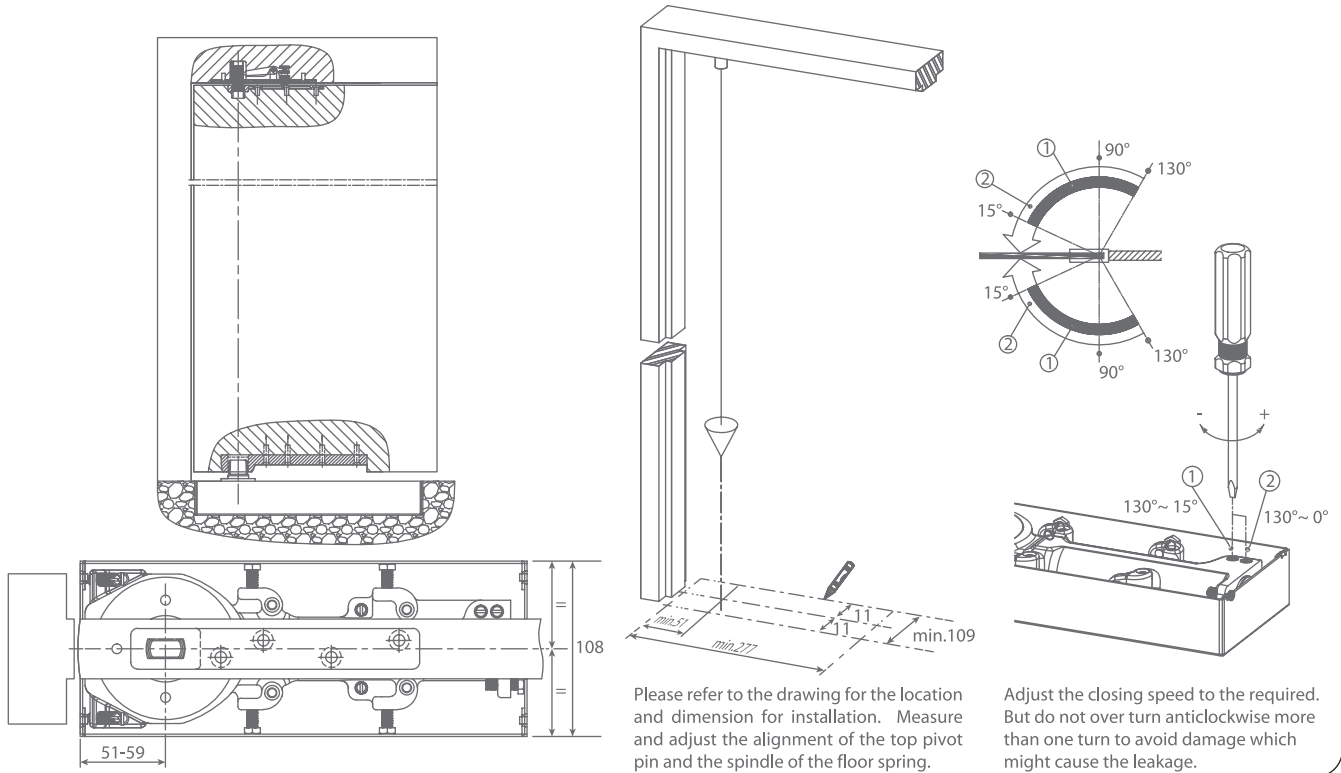


FH-300/300X Series Interchangeable Shaft
Shaft height can be flexibly adjusted to accommodate different floor levels or carpet thicknesses.

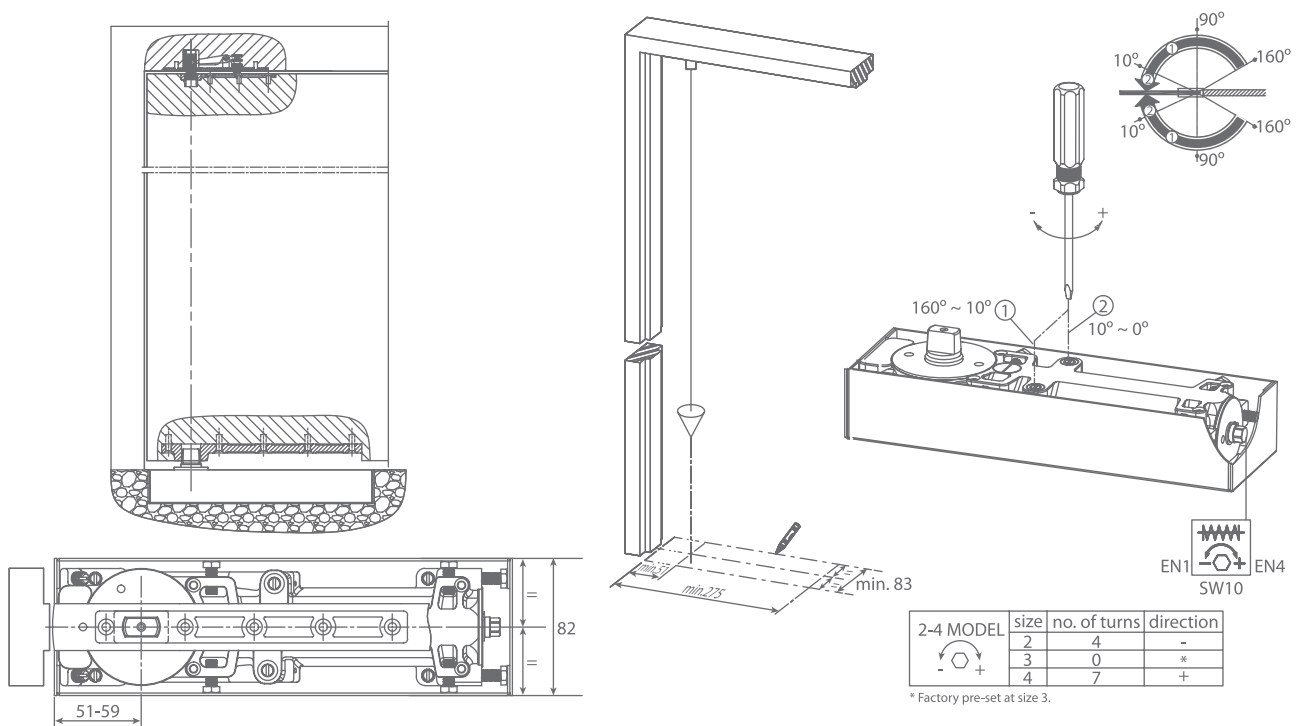


Fixing Details - Floor Spring Hinges

FH-410 Series For Centre - Hung, inward and outward opening doors

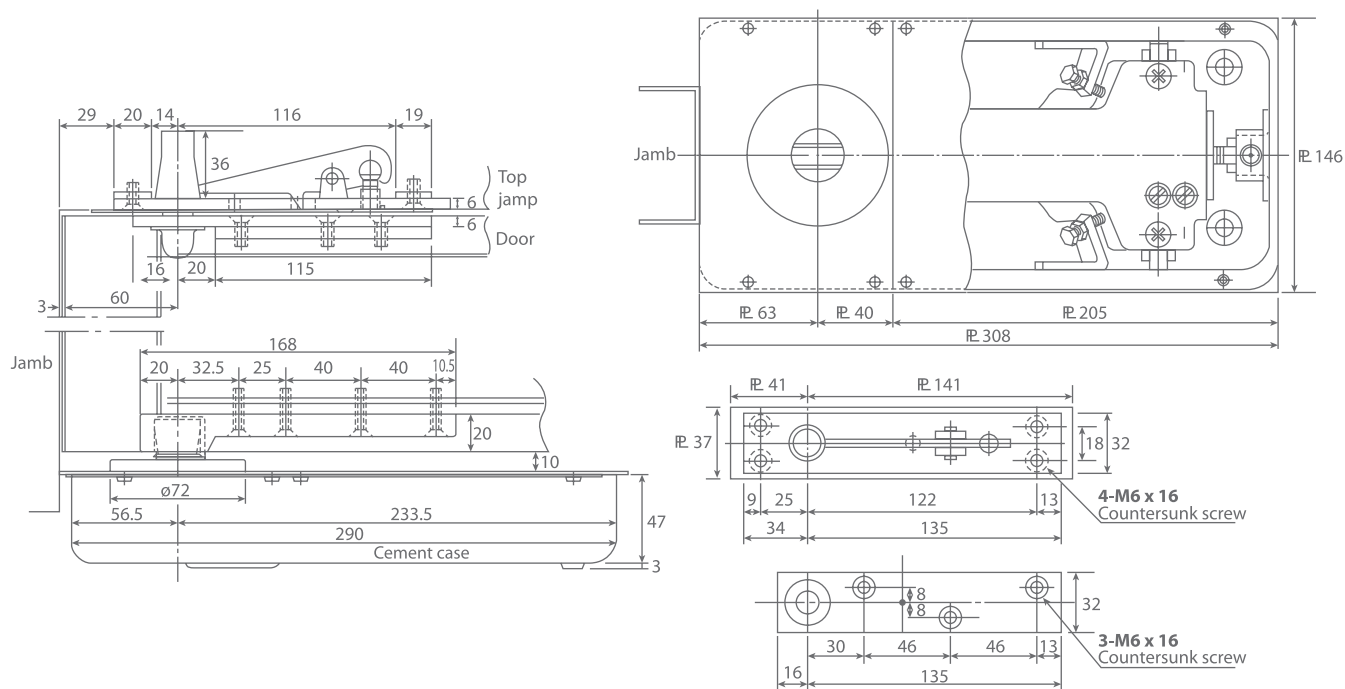


FH-700 Series For Centre - Hung, inward and outward opening doors

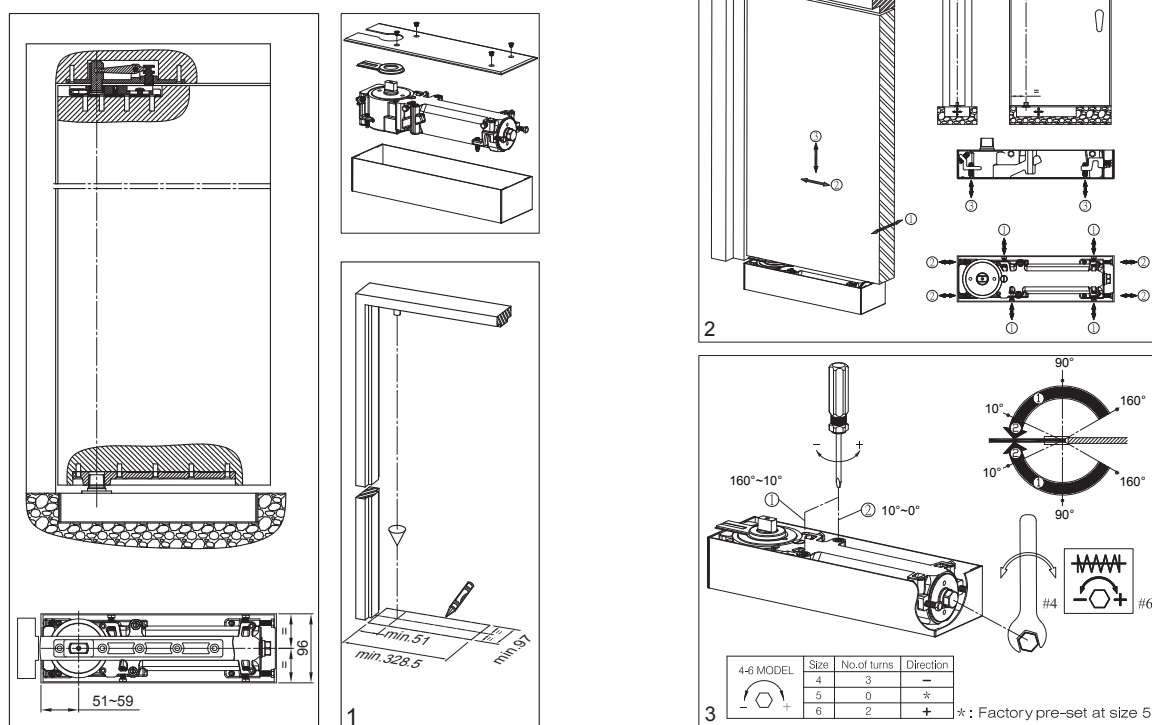


Fixing Details - Floor Spring Hinges

FH-800 Series

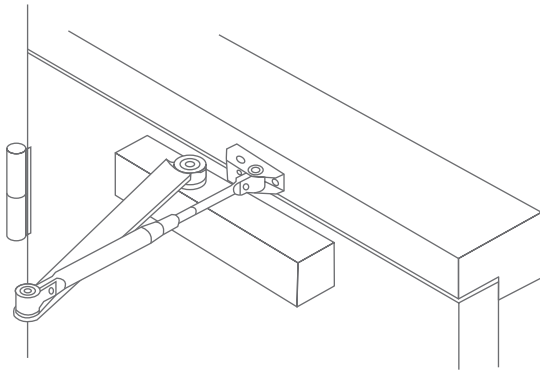


FH-900 Series

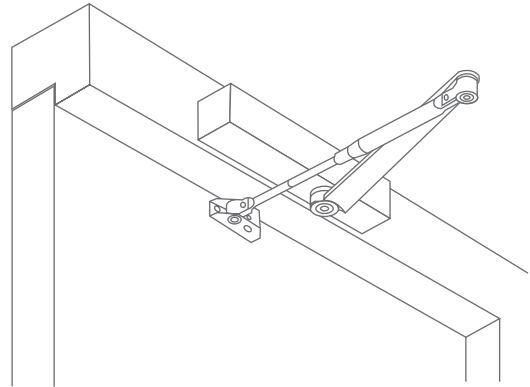


Installation Instructions

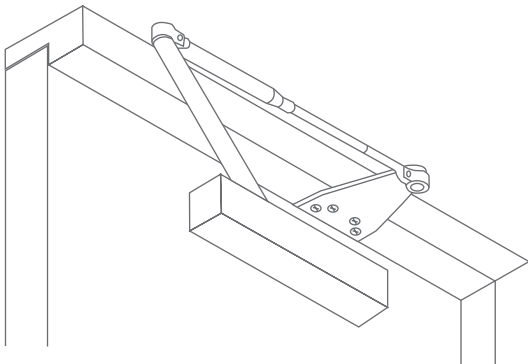
Standard Arm Installation



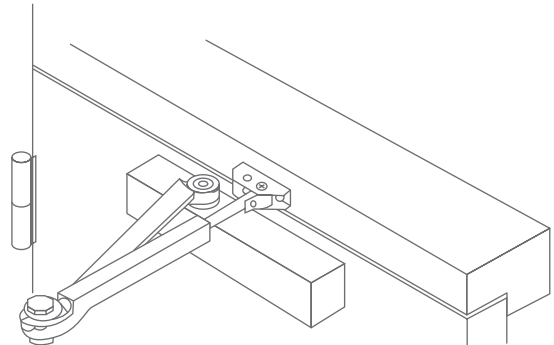
Top Jamb Installation



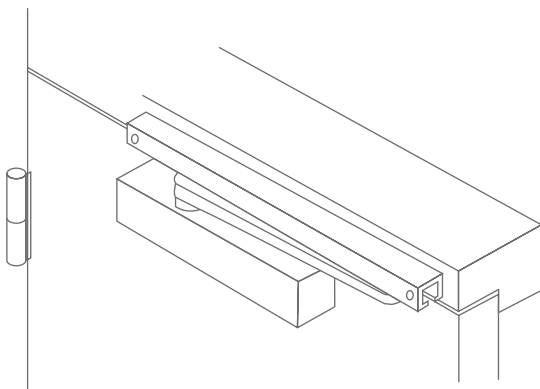
Parallel Arm Installation



Hold-Open Arm Installation



Track Arm Installation,
Jamb Mounted Track (TA)



Track Arm Installation,
Door Mounted Track (TA)

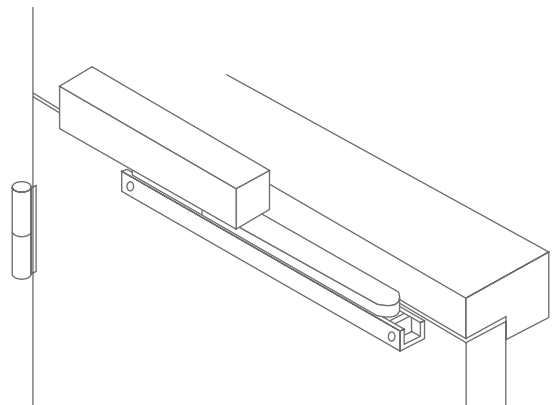


Table of Closing Devices








Series No.	Hold Open		Back Check		Delayed Action	S.S. Cover	Power Adjustable		Available Size
	Build-in	Hold-Open Arm	Adjustable At Valve	Self-Regulating			By Position	By Spring	
DOOR CLOSERS									
1000									#2, #3, #4
1500									#2, #3, #4, #5
1550									#2, #3, #4, #5, #6
1600									#2, #3, #4, #5
1650									#2, #3, #4
2000									#2, #3, #4, #5
5000									#2, #3, #4, #5, #6
7000									#2, #3, #4
8200									#2, #3, #4
8300									#1, #2, #3, #4
8325									#2, #3, #4, #5
8336									#3, #4, #5, #6
TS320									#2, #3, #4
TS340									#2, #3, #4, #5
CONCEALED DOOR CLOSERS									
CR-280									#2, #3
CR-380									#2, #3
CR-3835									#3, #4, #5
TC320									#2, #3, #4
TC340									#2, #3, #4, #5
ELECTRO-MAGNETIC DOOR CLOSERS									
1560									#3, #4, #5, #6
CONCEALED FLOOR SPRING HINGES									
CF540									≤60kg
CF550									≤60kg
CF560									≤100kg
CF570									≤100kg/200kg
CF580									≤100kg
CF590									≤100kg/200kg
TRANSOM DOOR CLOSERS									
CR-360									#2, #3, #4
FLOOR SPRING HINGES									
FH-210									#2, #3, #4
FH-300									#2, #3, #4, #5
FH-410									#2, #3, #4
FH-700									#2, #3, #4
FH-800									#2, #3, #4
FH-900									#4, #5, #6

Table of Test Reports

Series No.		BS EN 1154 1997 / A1:2002	bsi. BS EN1634-1:2014		 GA/T93-2004 FIRE PROOF DOOR CLOSER	 QB/T3884-1999 Floor Hinges QB/T3893-1999 Door Closer
DOOR CLOSERS						
1000	EN Fire		BS EN	UL	GA	
1500	EN Fire	483113	BS EN		GA	
1550	EN Fire	483113	BS EN		GA	
1600	EN Fire	483113	BS EN	UL	GA	
1650	EN Fire	483113	BS EN	UL	GA	
2000	EN Fire	EN1154	BS EN		GA	
5000	EN Fire	483113	BS EN		GA	
7000	EN Fire	EN1154	BS EN	UL	GA	
8200	EN Fire	EN1154	BS EN	UL	GA	
8300	EN Fire	483113 483113	BS EN	UL	GA	QB
8325	EN Fire	483113 483113	BS EN	UL	GA	QB
8336	EN Fire	483113 483113	BS EN	UL	GA	QB
TS320	EN Fire	383113 383113	BS EN	UL		
TS340	EN Fire	383113 383113	BS EN	UL		
CONCEALED DOOR CLOSERS						
CR-280	EN Fire	EN1154	BS EN			
CR-380	EN Fire	EN1154	BS EN	UL	GA	QB
CR-3835	EN Fire	EN1154	BS EN		GA	
TC320	EN Fire	383113 383113	BS EN	UL		
TC340	EN Fire	383113 383113	BS EN	UL		
ELECTRO-MAGNETIC DOOR CLOSERS						
1560		EN1154				
CONCEALED FLOOR SPRING HINGES						
CF540		EN1154				
CF550		EN1154				
CF560		383013		UL		
CF570		EN1154				
CF580		383113		UL		
CF590		EN1154				
TRANSOM DOOR CLOSERS						
CR-360		EN1154				
FLOOR SPRING HINGES						
FH-210	EN Fire	EN1154	BS EN			
FH-300	EN Fire	383113 384113	BS EN	UL		QB
FH-410	EN Fire	EN1154	BS EN			
FH-700	EN Fire	EN1154	BS EN			
FH-800	EN Fire	EN1154	BS EN	UL		QB
FH-900	EN Fire	EN1154	BS EN			
EXIT PANIC DEVICES						
2000/2000V	EN Fire	EN1125	BS EN			

Closing Devices





Name of quality & dependability

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