

Closing Devices



smooth door closing

1000 Series	EN Fire	BS		UL	GA		CA9	
1500 / 1550 Series	EN Fire	BS	483113 483113	EN	GA		CA4	
1560 Series	EN Fire	BS	483113				CA18	
1600 Series	EN Fire	BS	483113		GA		CA5	
1650 Series	EN Fire	BS	483113		GA		CA6	
2000 Series		BS		EN	GA		CA10	
5000 Series	EN Fire	BS	483113		GA		CA7	
7000 Series		BS		UL	GA		CA11	
8300 / 8325 / 8336 Series	EN Fire	BS	483113 483113	UL	GA	QB	CA8	
8600 Series	EN Fire	BS		UL	GA		CA12	
CF560 / CF5635 / CF580 Series			483113				CA19	
CM1000 Door Closer Cover Series							CA28	
CM1500 / CM1550 Door Closer Cover Series							CA28	
CM1600 / CM1650 Door Closer Cover Series							CA29	
C2000 / CM2000L Door Closer Cover Series							CA29	
CM5000 / CM5000L / CM7000 Door Closer Cover Series							CA29	
CM8600 Door Closer Cover Series							CA29	
CR280 Series		BS					CA14	
CR360 Series							CA24	
CR380 Series		BS		EN	UL	GA	QB	CA15
CR-3835 Series	EN Fire	BS		EN		GA		CA16
Exit Panic Device 2000 / 2000V Series							CA20-CA23	
FH-210 Series							CA25	
FH-300/300X Series	EN Fire		383113 384113	UL		QB	CA26	
FH-410 Series							CA27	
FH-700 Series			383113				CA27	
FH-800 Series			CE	UL		QB	CA28	
TC320 / TC340 Series	EN Fire		483113 483113				CA17	
TS320 / TS340 Series	EN Fire		483113 483113				CA13	
Fixing Details - Door Closer							CA29-CA35	
Fixing Details - Concealed Door Closer							CA35-CA37	
Fixing Details - Concealed Floor Spring Hinges							CA37	
Fixing Details - Transom Door Closer							CA38	
Fixing Details - Floor Spring Hinges							CA38-CA40	
Installations							CA41	
Closing Devices Table							CA42	



EN Standard Door Closer

CA4-8



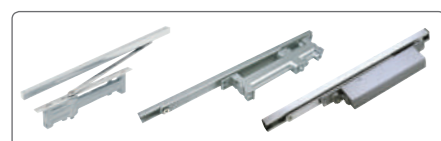
Professional / Economical Type Door Closer

CA9-12



Track Arm Surface Closer

CA13



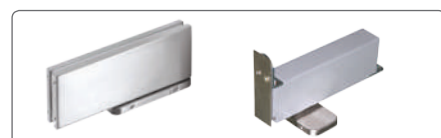
Concealed Door Closer

CA14-17



Electro-Magnetic Door Closer

CA18



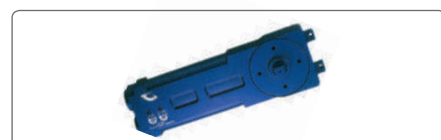
Concealed Floor Spring Hinges

CA19



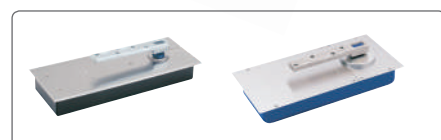
Exit Panic Device

CA20-23



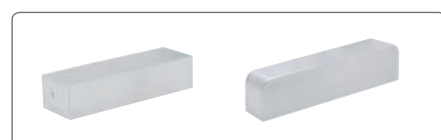
Transom Door Closer

CA24



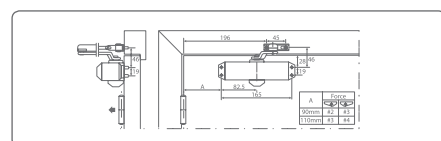
Floor Spring Hinges

CA25-28



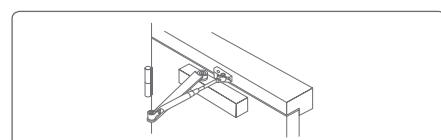
Door Closer Covers

CA28-29



Fixing Details

CA29-40



Installations

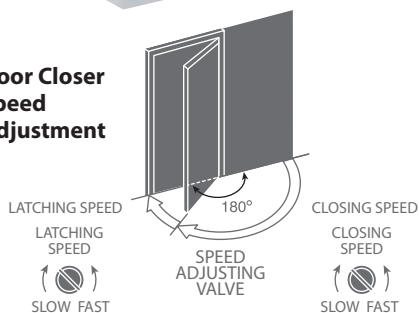
CA41

EN STANDARD DOOR CLOSER

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



FM 60396



NUMBER 1121

INTERNATIONAL STANDARDS
All products are manufactured under a quality management system BS 5750, ISO 9002, EN 29002, CNS 12681, Z4034, JIS Z9901 and ASQC Q91.

A Tested to EN 1154 **485113**
485113

by Warrington APT Laboratories,
UK Power Adjustable by Spring
EN Fire Tested



GA/T93-2004
FIRE PROOF DOOR CLOSER

1-hour fire rated. (B.S. 476 PART 22)

Produced by ISO 9001 quality management systems.

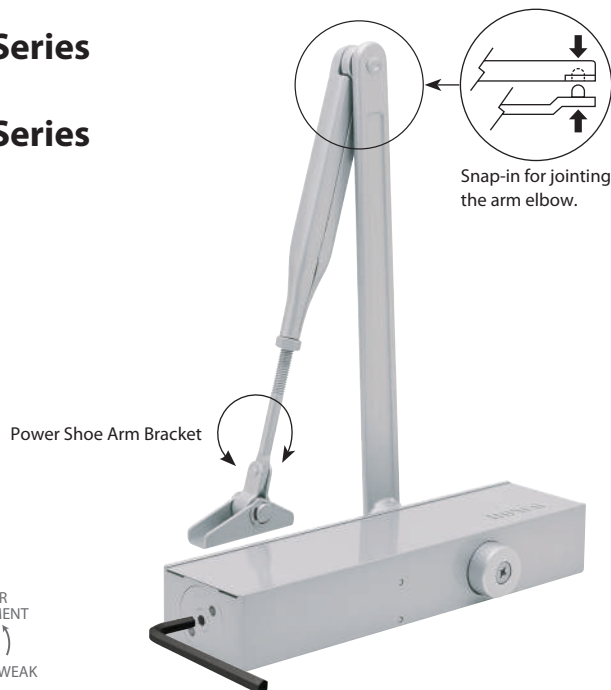
Anti-explosion device: In case of fire, the "door closer" will expand due to the high temperature of oil and may cause explosions. This anti-explosion device can automatically release the oil out from the door closer to

1500 Series

(size 2-5)

1550 Series

(size 2-6)



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

1600 Series

(size 2-5)



With stainless steel arm and stainless steel cover (option)

Parallel arm bracket	Hold open arm
	

Passed and approved with
EN Testing (EN1154:1997) under
classification **485113**

EN Fire Tested by Warrington APT
Laboratories, UK



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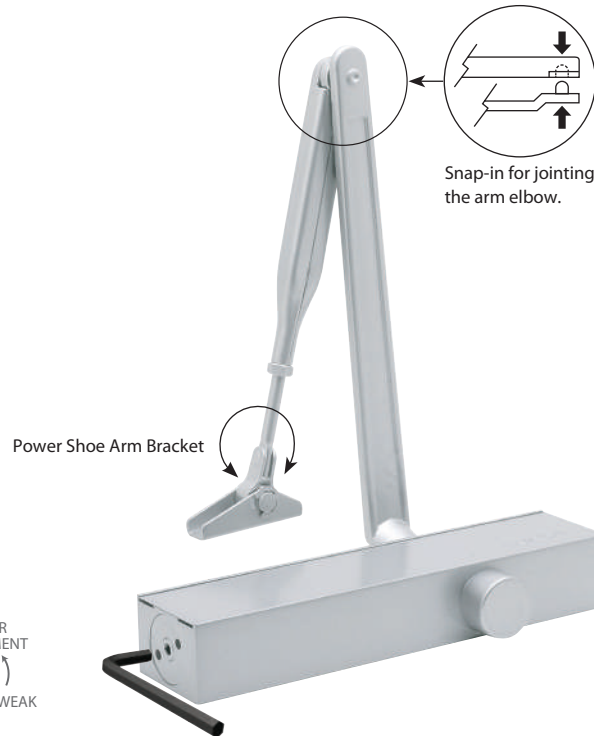
A Tested to EN 1154 **485113**
by Warrington APT Laboratories,
UK Power Adjustable by Spring
EN Fire Tested



GA/T93-2004
FIRE PROOF DOOR CLOSER

1-hour fire rated. (B.S. 476 PART 22)

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.



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.

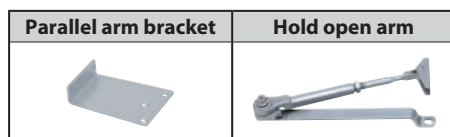
Finishes: F71 Gold, F72 Silver, F73 Bronze

Produced by ISO 9001 approved factory.

EN STANDARD DOOR CLOSER



With stainless steel arm and stainless steel cover (option)



EN Fire Tested by Warrington APT Laboratories, UK



FM 60396



INTERNATIONAL STANDARDS
All products are manufactured under a quality management system BS 5750, ISO 9002, EN 29002, CNS 12681, Z4034, JIS Z9901 and ASQC Q91.



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

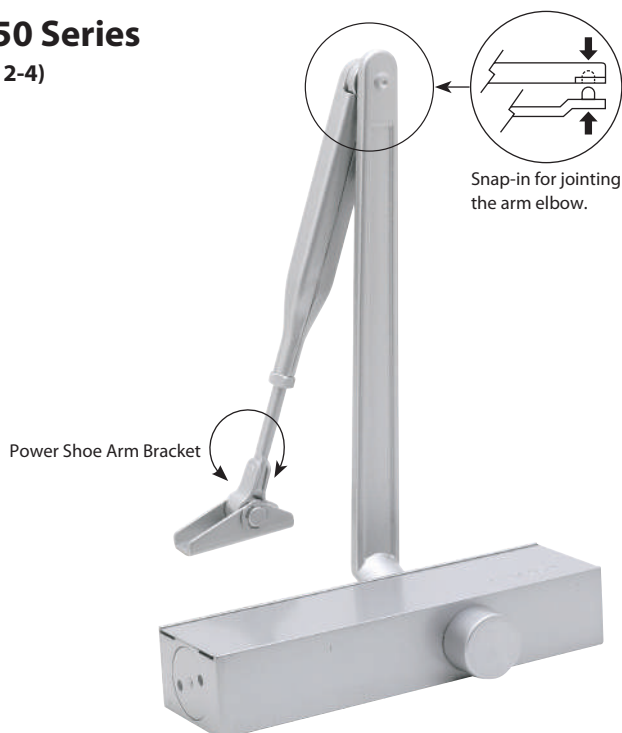


GA/T93-2004
FIRE PROOF DOOR CLOSER

1-hour fire rated. (B.S. 476 PART 22)

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 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.

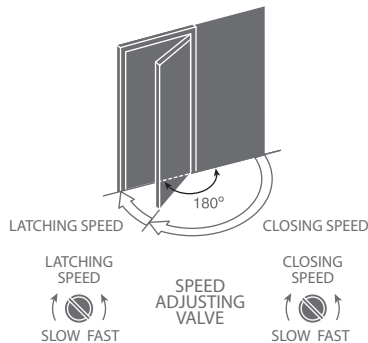
Finishes: F71 Gold, F72 Silver, F73 Bronze
Produced by ISO 9001 approved factory.

5000 Series

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



FM 60396



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

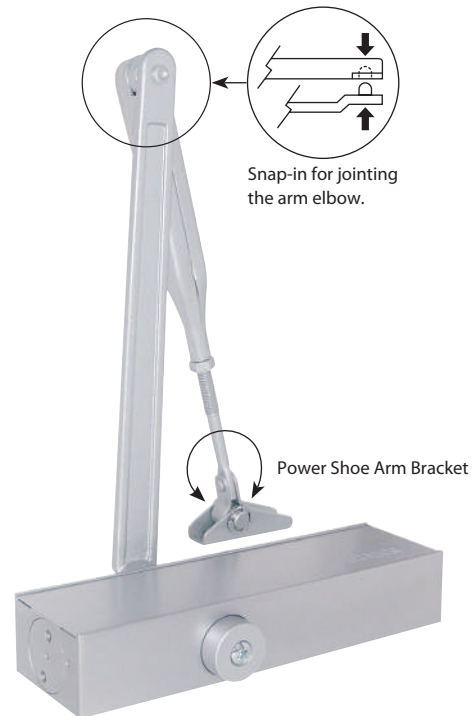


GA/T93-2004
FIRE PROOF DOOR CLOSER

1-hour fire rated. (B.S. 476 PART 22)

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.



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

EN STANDARD DOOR CLOSER

Parallel arm bracket	Hold open arm
	

EN Fire Tested by Warrington APT Laboratories, UK



FM 60396

INTERNATIONAL STANDARDS
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A Tested to EN 1154 **482113**
483113
by Warrington APT Laboratories,
UK Power Adjustable by Spring
EN Fire Tested



R19186



GA/T93-2004
FIRE PROOF DOOR CLOSER



QB/T3893-1999

1-hour fire rated. (B.S. 476 PART 22)

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"

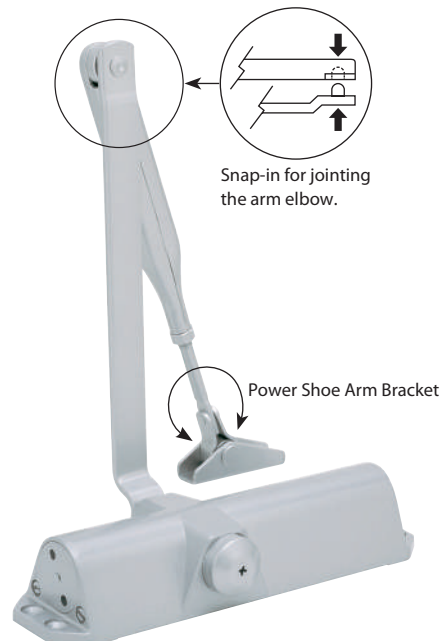
8300 Series

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.

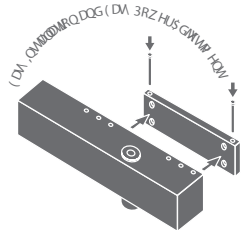
Power shoe arm bracket: Designed to be reversed to increase final closing power by approximately 15%.



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

PROFESSIONAL / ECONOMICAL TYPE DOOR CLOSER

With stainless steel arm
and stainless steel cover
(option)



Parallel arm bracket	Hold open arm
	

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



FM 60396



INTERNATIONAL STANDARDS
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under a quality management
system BS 5750, ISO 9002,
EN 29002, CNS 12681, Z4034,
JIS Z9901 and ASQC Q91.



GA/T93-2004
FIRE PROOF DOOR CLOSER



R19186

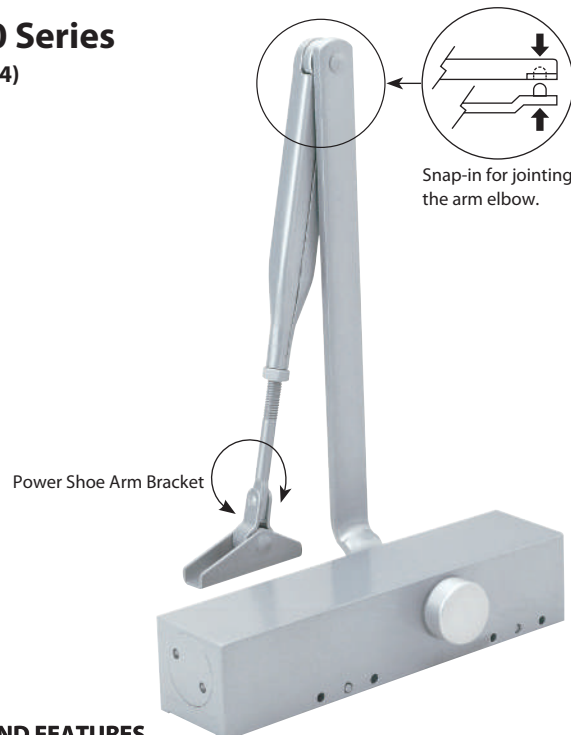
1-hour fire rated. (B.S. 476 PART 22)

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

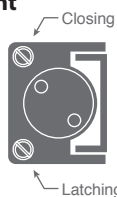
PROFESSIONAL / ECONOMICAL TYPE DOOR CLOSER

With stainless steel arm and
stainless steel cover (option)

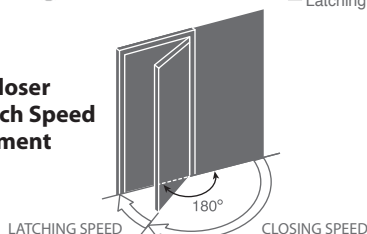


Door Closer Speed Adjustment

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



FM 60396



INTERNATIONAL STANDARDS
All products are manufactured
under a quality management
system BS 5750, ISO 9002,
EN 29002, CNS 12681, Z4034,
JIS Z9901 and ASQC Q91.

**BS EN
1634-1:2008**

GA

GA/T93-2004
FIRE PROOF DOOR CLOSER

1-hour fire rated. (B.S. 476 PART 22)

Reversible - right and left hand operation.

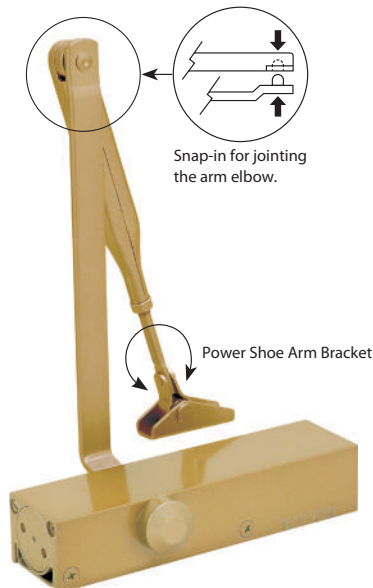
Piston & spindle heat treated for high strength.

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° *Doors can be opened max.180°, in case of Track Arm or Parallel Arm installation.			
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%.

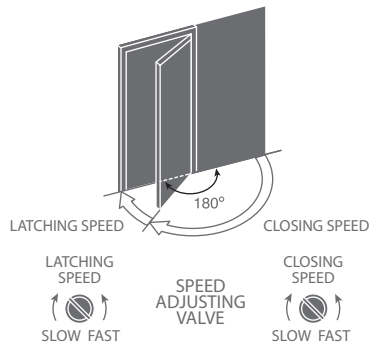
Finishes: F71 Gold, F72 Silver, F73 Bronze



7000 Series



With stainless steel arm and stainless steel cover (option)

Door Closer Speed Adjustment



Parallel arm bracket	Hold open arm
	



FM 60396



INTERNATIONAL STANDARDS
All products are manufactured under a quality management system BS 5750, ISO 9002, EN 29002, CNS 12681, Z4034, JIS Z9901 and ASQC Q91.



GA/T93-2004
FIRE PROOF DOOR CLOSER



R19186

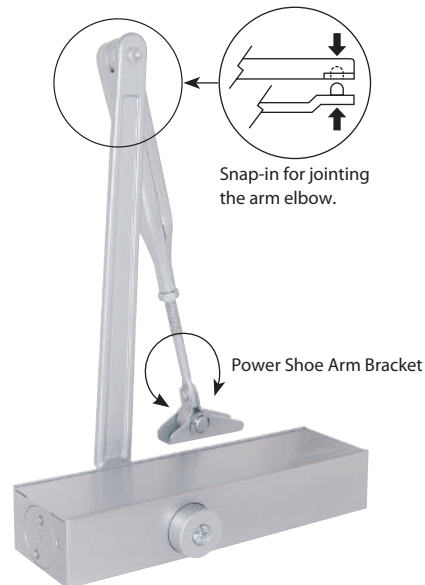
1-hour fire rated. (B.S. 476 PART 22)

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

PROFESSIONAL / ECONOMICAL TYPE DOOR CLOSER



With stainless steel arm and stainless steel cover (option)

Parallel arm bracket	Hold open arm

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



FM 60396



INTERNATIONAL STANDARDS
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GA/T93-2004
FIRE PROOF DOOR CLOSER



R19186

1-hour fire rated. (B.S. 476 PART 22)

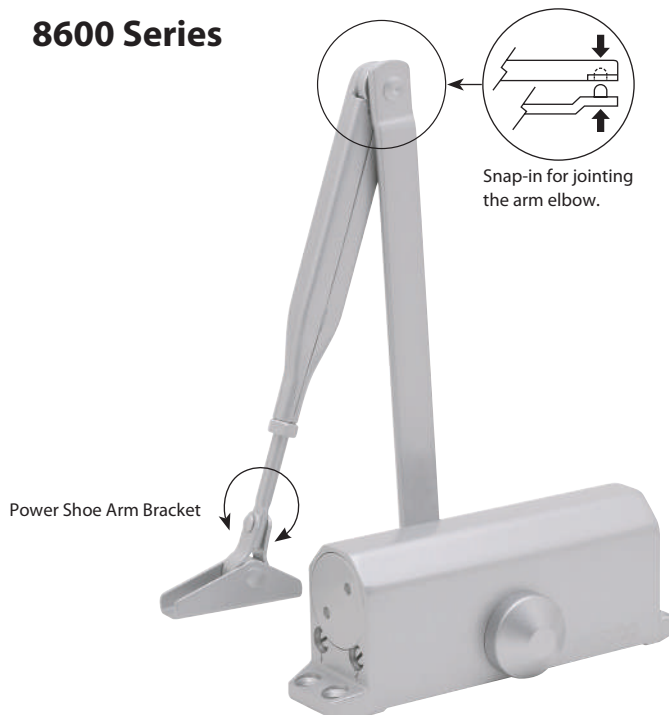
One compact body size for both spring strengths.

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.

8600 Series



Snap-in for jointing the arm elbow.

Power Shoe Arm Bracket

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	8602	8603	8604
		with hold-open	8602H	8603H	8604H
	Parallel	without hold-open	P8602	P8603	P8604
		with hold-open	P8602H	P8603H	P8604H
	Track	without hold-open	8602TA	8603TA	8604TA
		with hold-open	8602TAH	8603TAH	8604TAH
Body Dimension (Length x Height x Projection)			178 x 42 x 64 (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	8602BC	8603BC	8604BC	
Non-handed			✓		
With cover			○		
Application	Regular	✓			
	Parallel arm	○			
	Transom	✓			
Guarantee/years			5 years		

✓ = yes x = no ○ = option

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.

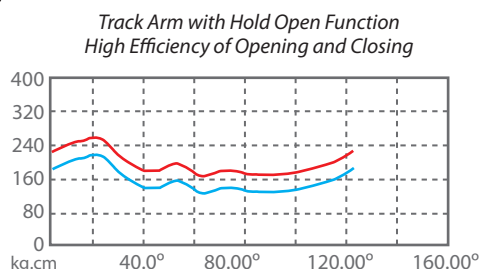
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

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

TRACK ARM SURFACE CLOSER



CE A Tested to EN 1154
by Warrington APT Laboratories,
UK Power Adjustable by Spring
NUMBER 1121 EN Fire Tested

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



FM 60396



INTERNATIONAL STANDARDS
All products are manufactured
under a quality management
system BS 5750, ISO 9002,
EN 29002, CNS 12681, Z4034,
JIS Z9901 and ASQC Q91.

1-hour fire rated. (B.S. 476 PART 22)

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 ○ = 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.

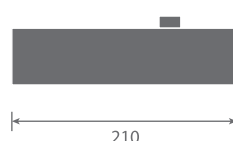
Back check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze

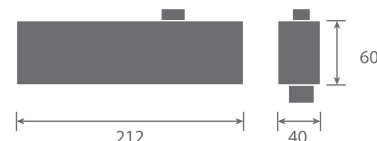
Cover: Stainless steel

TRACK ARM SURFACE CLOSER

DIMENSIONS
IN MILLIMETERS



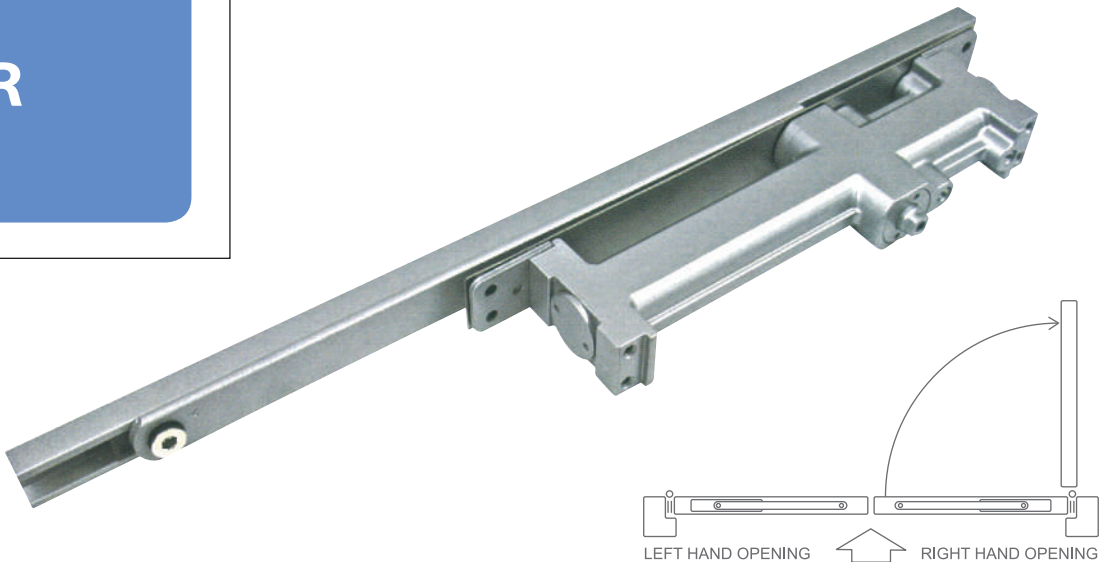
TS320



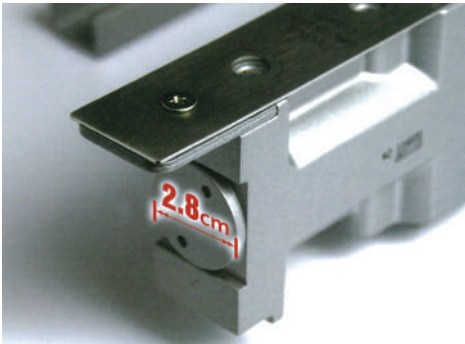
TS340

CONCEALED
DOOR
CLOSER


CR-280 Series



2.8cm Thickness Narrow Body



Finishes

			
	Finishes		
1	Gold	Silver	Bronze
2	Gold	Silver	Bronze
3	Gold	Silver	Bronze
4	Gold	Silver	Bronze



INTERNATIONAL STANDARDS
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FM 60396

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
		with hold-open	CR-S282
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 ○ = option

1-hour fire rated. (B.S. 476 PART 22)

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.

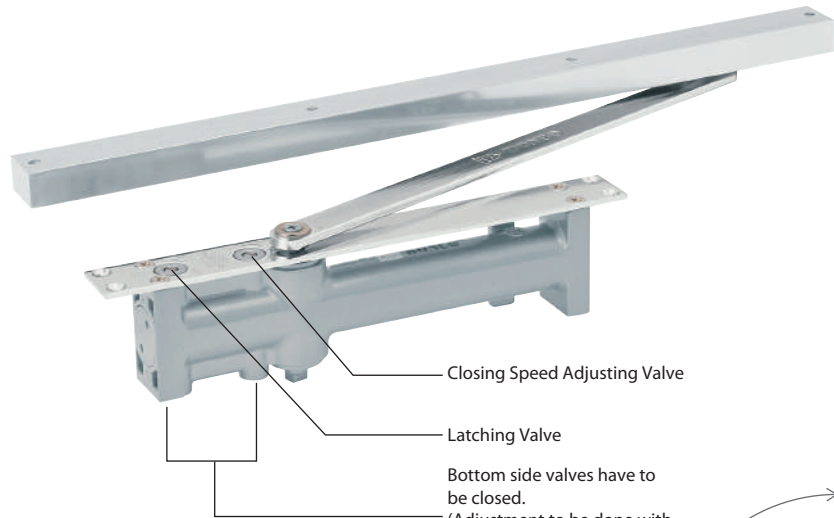
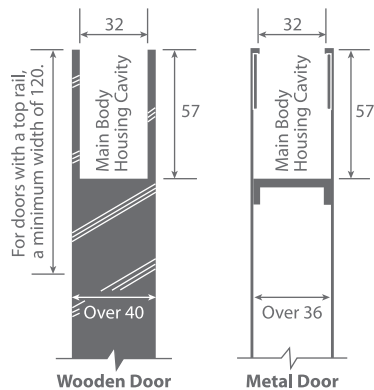
Back Check: Provides a cushioning effect when the door is forcibly thrown open but does not serve as substitute for a door stop.

Finishes: F71 Gold, F72 Silver, F73 Bronze

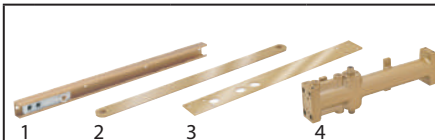
Remarks: Left or Right hand opening should be indicated when ordering.

CR-380 Series

Minimum Door Depth Dimensions



Finishes



	Finishes		
1	Gold	Silver	Bronze
2	Gold	Silver	Bronze
3	Gold	Silver	Bronze
4	Gold	Silver	Bronze



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GA/T93-2004
FIRE PROOF DOOR CLOSER

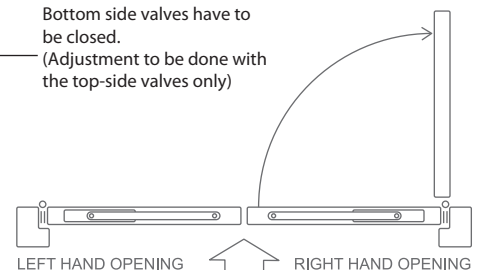


R19186

BS EN
1634-1:2008



QB/T3893-1999
DOOR CLOSER



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 ○ = option

1-hour fire rated. (B.S. 476 PART 22)

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.

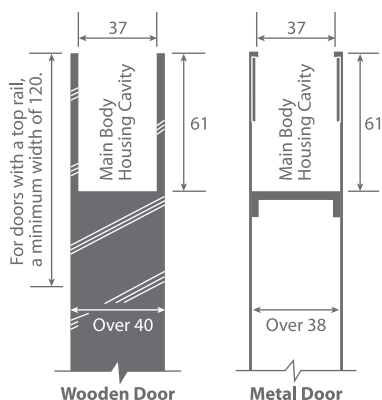
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.

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

CONCEALED DOOR CLOSER

Minimum Door Depth Dimensions



FM 60396



INTERNATIONAL STANDARDS
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EN Fire Tested by Warrington APT Laboratories, UK

**BS EN
1634-1:2008**

GA

GA/T93-2004
FIRE PROOF DOOR CLOSER

1-hour fire rated. (B.S. 476 PART 22)

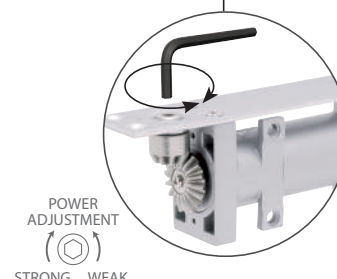
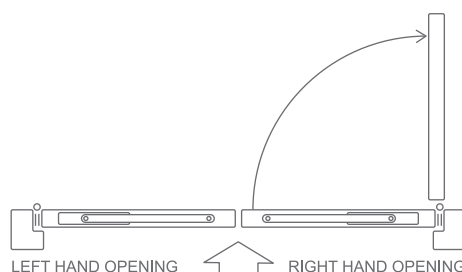
Reversible - right and left hand operation.

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.

CR-3835 Series

(size 3-5)



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.

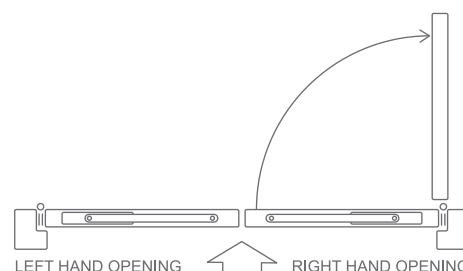
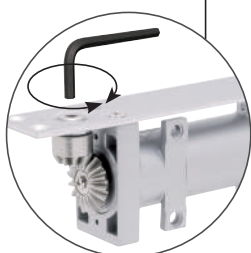
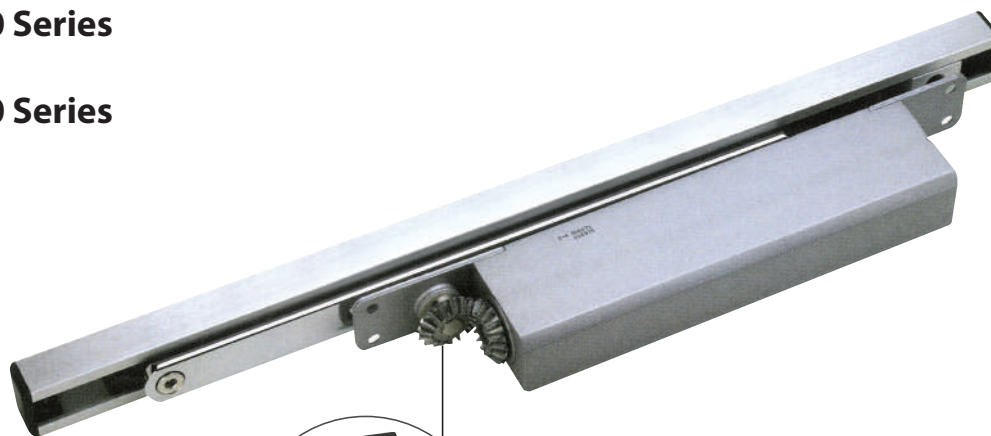
Finishes: F71 Gold, F72 Silver, F73 Bronze

TC320 Series

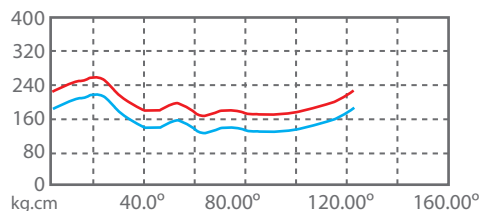
(size 2-4)

TC340 Series

(size 2-5)



Track Arm with Hold Open Function
High Efficiency of Opening and Closing



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



FM 60396

INTERNATIONAL STANDARDS
All products are manufactured
under a quality management
system BS 5750, ISO 9002,
EN 29002, CNS 12681, Z4034,
JIS Z9901 and ASQC Q91.



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

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

1-hour fire rated. (B.S. 476 PART 22)

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

ELECTRO-
MAGNETIC
DOOR
CLOSER

1560 Series
(size 3-6)

When the power supply of 24volts AC is connected to the door closer and the door is opened beyond 75degree, up to it's maximum, the hold open mechanism will be engaged and hold the door open. In the event of the electric supply being interrupted whether manually or alarm activated, the door will close from any position.

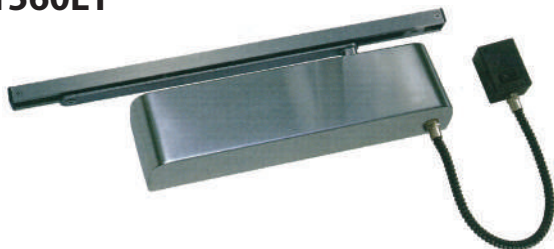
1560E



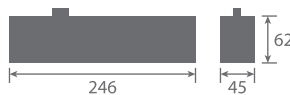
1560ES



1560ET

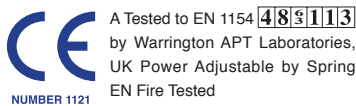


1560EST



dimensions in millimeters

EN Fire Tested by Warrington APT
Laboratories, UK



1-hour fire rated. (B.S. 476 PART 22)

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

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 HINGES

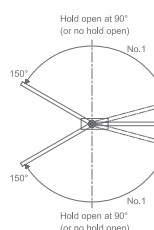
CF560 Series / CF5635 Series

Glass Door

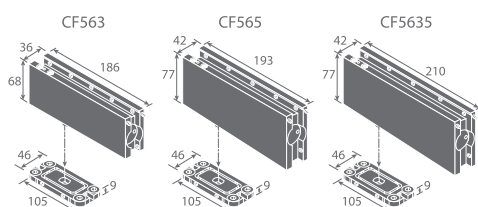
CF-563A

CF-563B

or CF-560 Top Pivot (option)



CF-563



dimensions in millimeters

**Passed and approved with
EN Testing (EN1154:1997) under
classification 4831113**

Quick and easy installation with base seat adjustable for ± 3 mm backward and forward, ± 3 mm left and right, and for $\pm 4^\circ$ 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

DATA AND FEATURES

		CF-S563	CF-S565	CF-S5635
Variable closing force Standard doors		≤ 950mm	≤ 1250mm	≤ 1250mm
Suitable door thickness		8 ~ 13mm	10 ~ 15mm	8 ~ 15mm
Spring Strength (EN)		≤ 100kg	≤ 100kg	≤ 100kg
Body Dimension (Length x Height x Projection)		186 x 68 x 36 (mm)	193 x 77 x 42 (mm)	210 x 77 x 42 (mm)
Cover Dimension (Length x Height)		190 x 70 (mm)	197 x 80 (mm)	250 x 80 (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	CF-565	CF-5635
	with build in hold open at 90°	✓		
Non-handed		✓		
With cover		✓		
Guarantee/years		5 years		

✓ = yes

x = no

○ = option

CF580 Series

Wood Door



**Passed and approved with
EN Testing (EN1154:1997) under
classification 4831113**

DATA AND FEATURES

	CF-S583	CF-S585
Variable closing force Standard doors	≤ 950 mm	≤ 1250 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 42 (mm)
Spring Strength (EN)	≤ 100 kg	
Angle of opening	150°	
Closing speed adjustable	$150^\circ \sim 10^\circ$	
Braking speed adjustable	$10^\circ \sim 0^\circ$	
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

○ = option

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

Smooth movement.

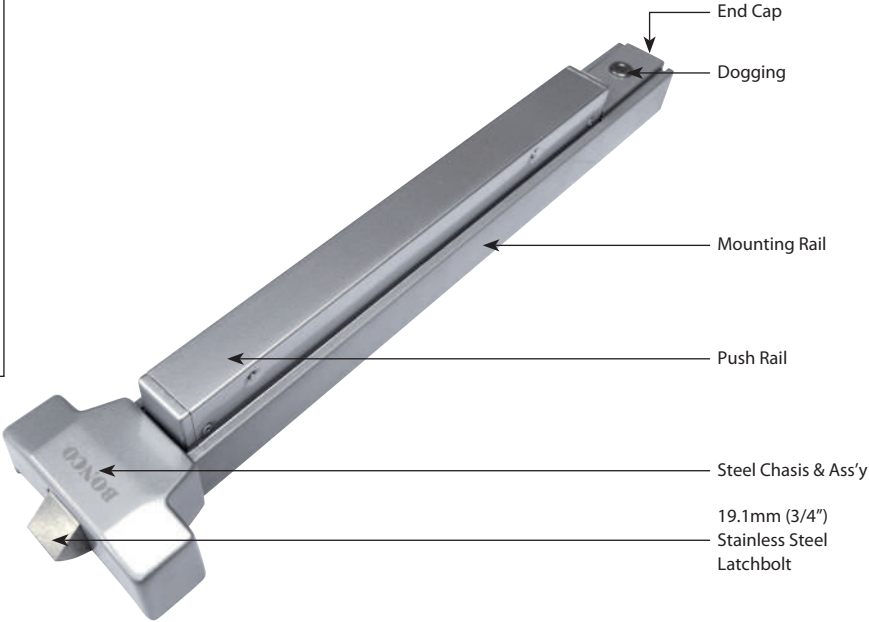
No need to have the pre-set on the floor

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.

EXIT PANIC
DEVICE

2000 Series



(ALM) Exit device with alarm (optional)



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



(CP1) Lip pull with rim cylinder (optional)



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



Strike for use with rim type exit device

- 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

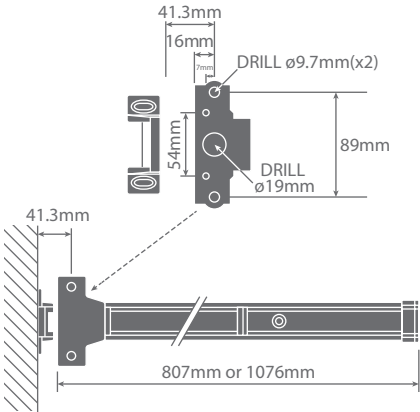
Finishes: F24 stainless steel, F72 silver (steel)

DATA AND FEATURES

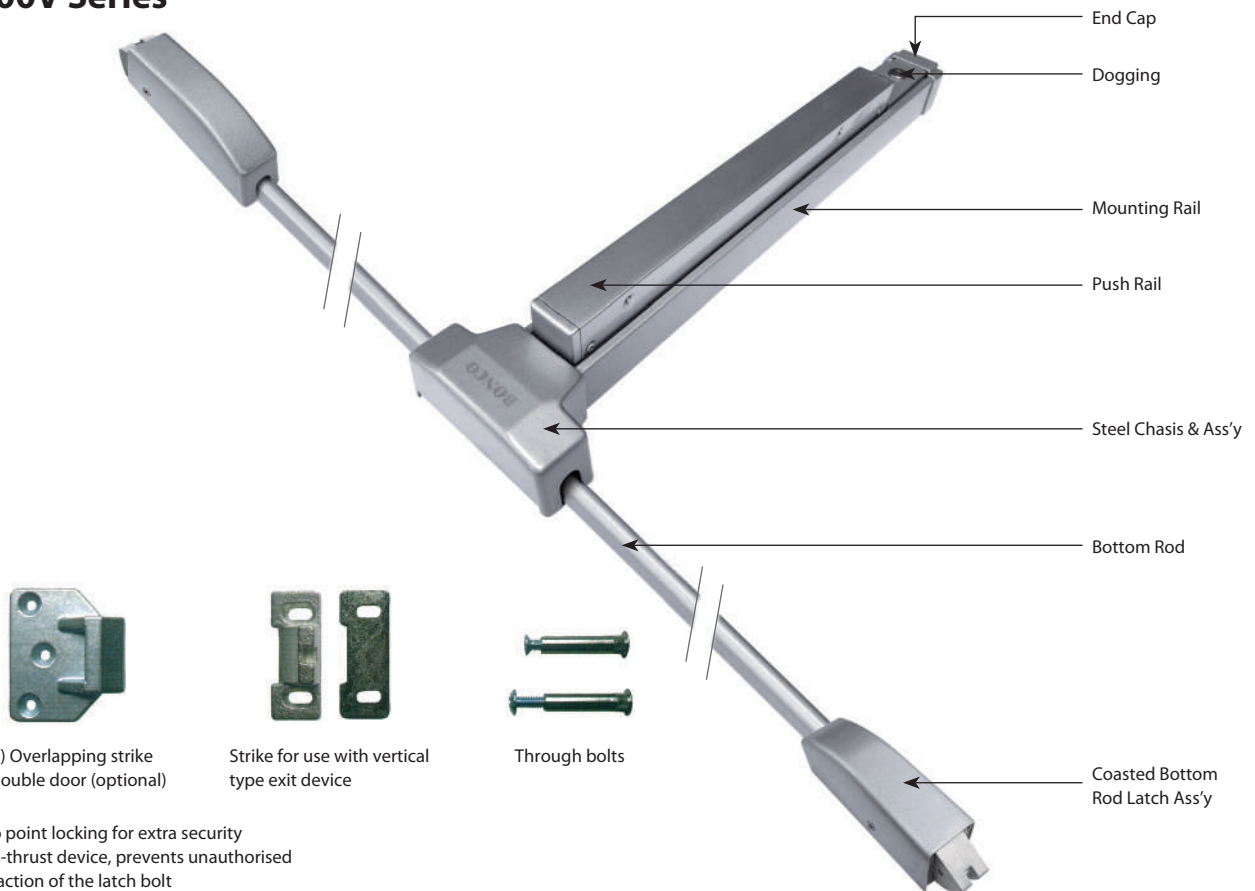
	2000
Suitable door width	914.4mm & 1219.2mm
Suitable door thickness	≥ 44.5mm
Latch bolt	19.1mm
Strike	16mm stop, plus shim for 12.7mm stop
Reversible	Non-handed
Backset	41.3mm
Guarantee/years	10 years

EXIT
PANIC
DEVICE

DIMENSIONS
IN MILLIMETERS



2000V Series

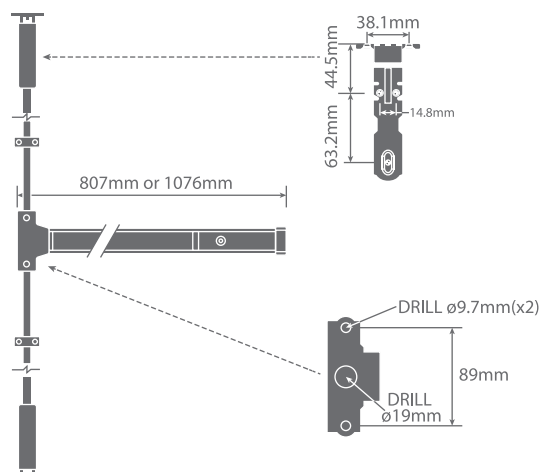


- Two point locking for extra security
- Anti-thrust device, prevents unauthorised retraction of the latch bolt
- Suitable for use on single and double door applications
- Self-handed - will suit both left and right handed doors
- Suitable for doors up to 2500mm high x 1300mm wide
- Optional models available 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)

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.

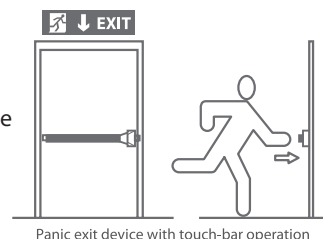
Two standards instead of one - which one for which application?

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."

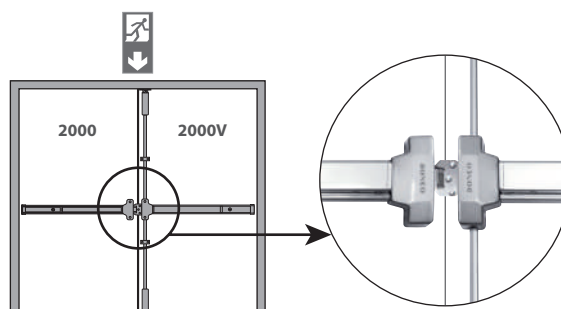
Where personnel have not been trained in the location and operation of the buildings exit devices or members of the public have access, exit devices conforming to EN 1125 must be specified and installed.

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.

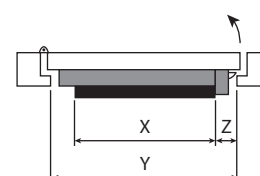


Bar length

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.

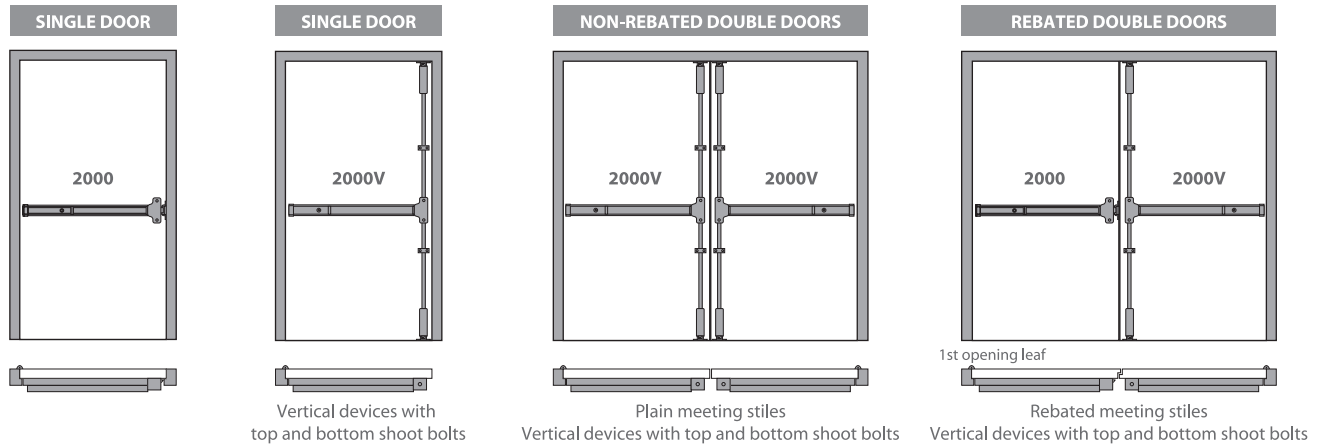
panic exit device

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 200ka	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					

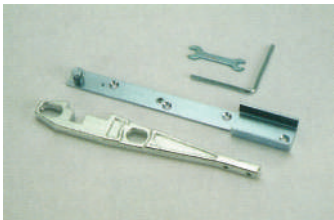


Double panic bolts are not permitted under the EN Standards.

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
CLOSER



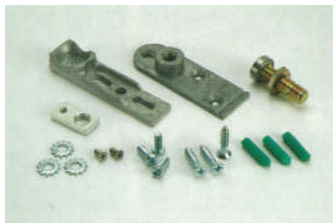
Top and bottom pivot



Screw pack for fixing bracket



Screw pack for side-load top arm and channel



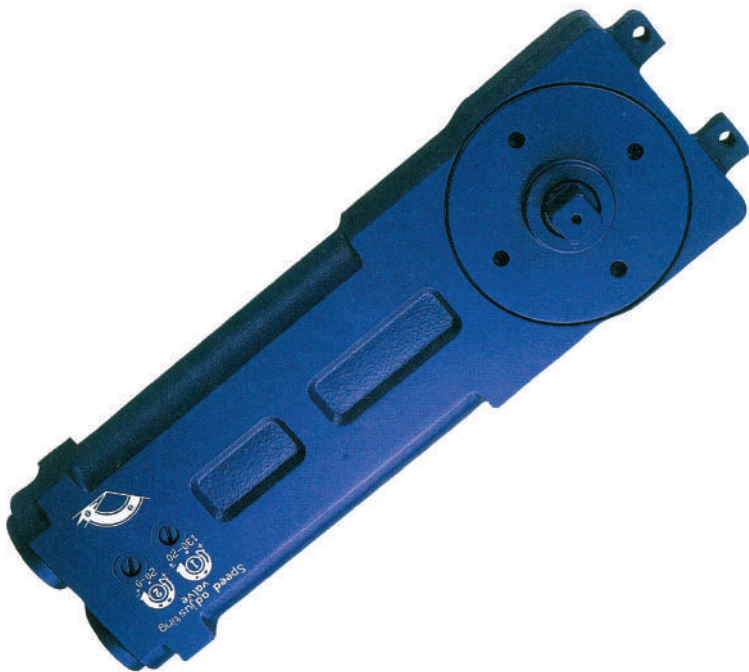
Screw pack for side-load bottom pivot



FM 60396

INTERNATIONAL STANDARDS
All products are manufactured under a quality management system BS 5750, ISO 9002, EN 29002, CNS 12681, Z4034, JIS Z9901 and ASQC Q91.

CR-360 Series



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

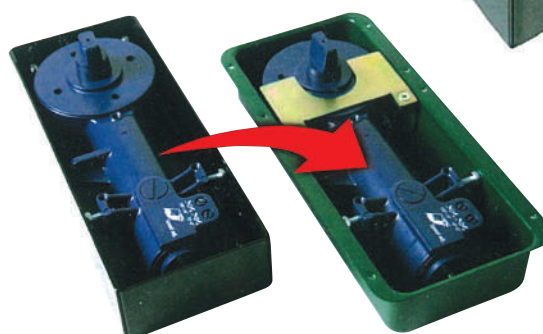
proved defective by reason either of faulty manufactured or defect in materials.

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

FH-210 Series



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



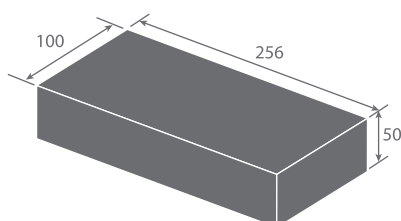
Standard strap, top and bottom pivot (DMA)



Standard strap, top and bottom pivot (NSA)



Offset pivot



dimensions in millimeters

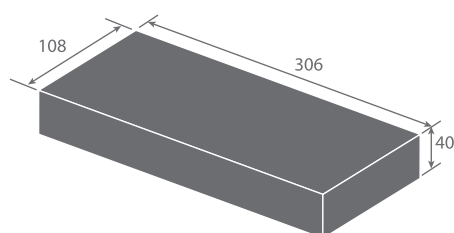
DATA AND FEATURES

Sizes		2	3	4
Variable closing force standard doors		≤850mm	≤ 950mm	≤1100mm
Spring Strength (EN)		≤ 70kg	≤ 105kg	≤ 150kg
Centre hung	Without hold-open	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



FM 60396

INTERNATIONAL STANDARDS
All products are manufactured under a quality management system BS 5750, ISO 9002, EN 29002, CNS 12681, Z4034, JIS Z9901 and ASQC Q91.



R19186



NUMBER 1121

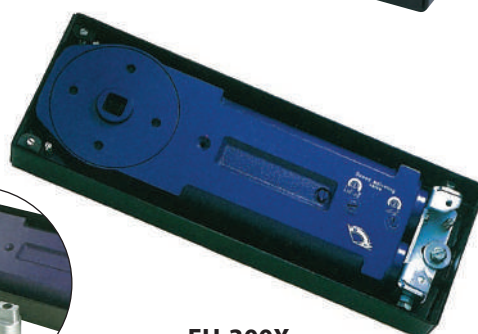
Passed and approved with
EN Testing (EN1154:1997) under
classification **3831113**
3841113



QB/T3884-1999

EN Fire Tested by Warrington APT
Laboratories, UK

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			

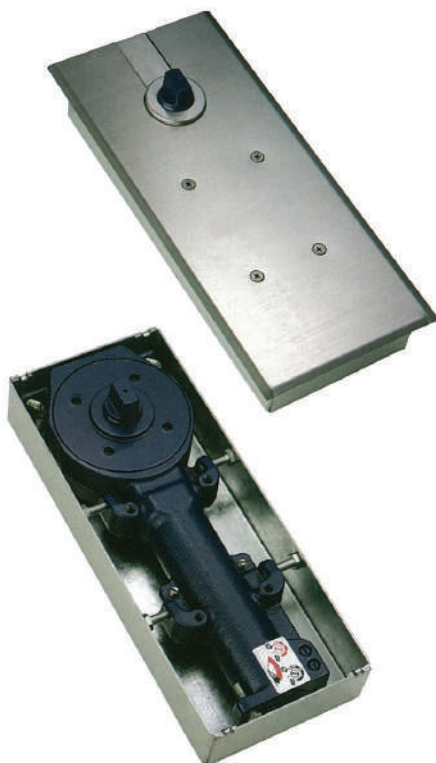
✓ = yes x = no ○ = option

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

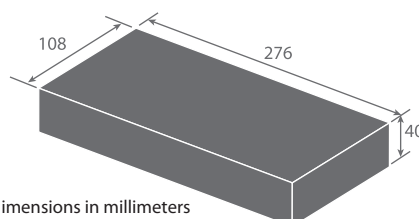


DATA AND FEATURES

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

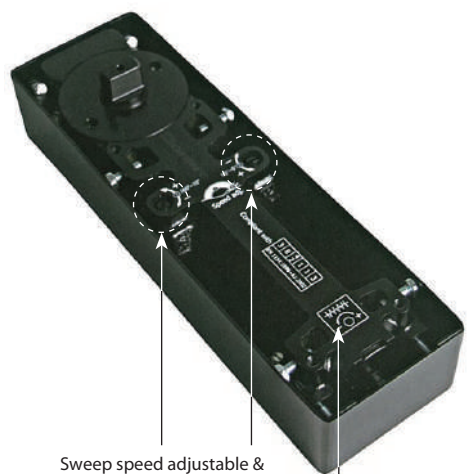
Guarantee: A free replacement ex-works of any closer proved defective by reason either of faulty manufactured or defect in materials.



dimensions in millimeters

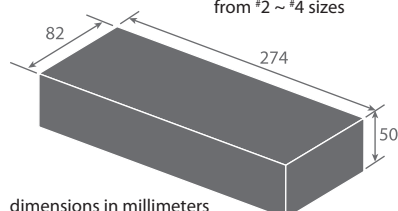
FH-700 Series

(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

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

**Passed and approved with
EN Testing (EN1154:1997) under
classification 3821113**

FLOOR
SPRING
HINGES



FM 60396



R19186



NUMBER 1121



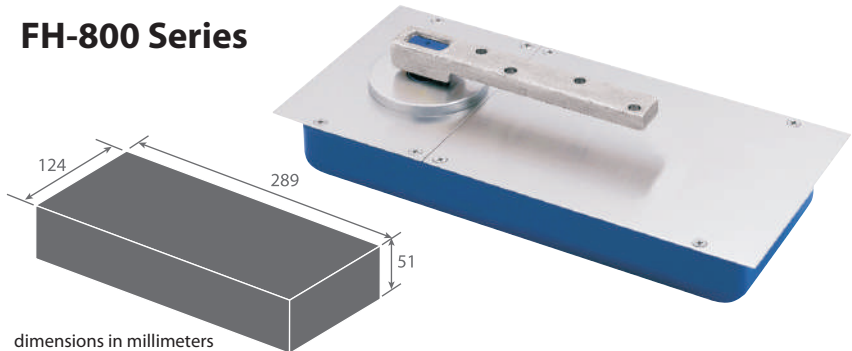
QB/T3884-1999

INTERNATIONAL STANDARDS
All products are manufactured under a quality management system BS 5750, ISO 9002, EN 29002, CNS 12681, Z4034, JIS Z9901 and ASQC Q91.

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-800 Series



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-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 ○ = option

DOOR
CLOSER
COVERS

This is applicable also for 1500 Series, specify as CM-1500. Same dimensions each other but the position and angle of the holding-spring differs each other.

Finishes:
F24 Satin stainless steel
F25 Polished stainless steel
F16 PVD (Gold)

CM1000 Series
(for 1000 Series)

Size 2~4
214W x 65H x 46D



CM1500 Series
(for 1500 Series)

Size 2~5
253W x 72H x 40D

CM1550 Series
(for 1550 Series)

Size 2~6
292W x 72H x 46D



CM1600 / CM1650 Series (for 1600/1650 Series)

Size 2~5
255W x 72H x 40D



CM2000 Series (for 2000 Series)

Size 2~3
195W x 60H x 40D



CM2000L Series (for 2000 Series)

Size 4~5
210W x 65H x 40D



CM5000L Series (for 5000 Series)

Size 5-6
252W x 78H x 47D



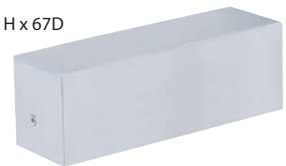
CM5000 / CM7000 Series (for 5000/7000 Series)

Size 2~4
212W x 71H x 40D



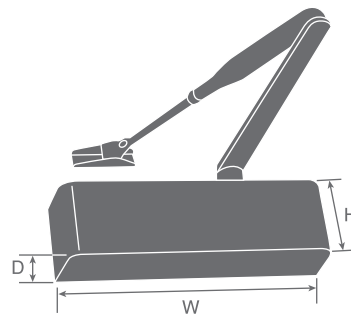
CM8600 Series (for 8600 Series)

Size 2~4
200W x 61H x 67D



DOOR CLOSER COVERS

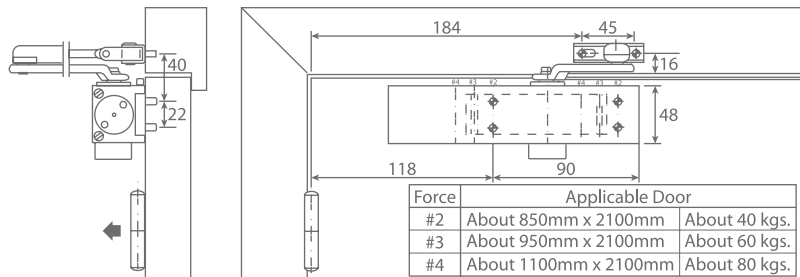
DIMENSIONS
IN MILLIMETERS



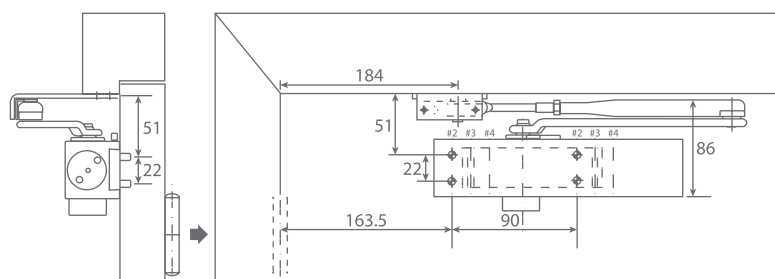
Fixing Details - Door Closer

1000 Series

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

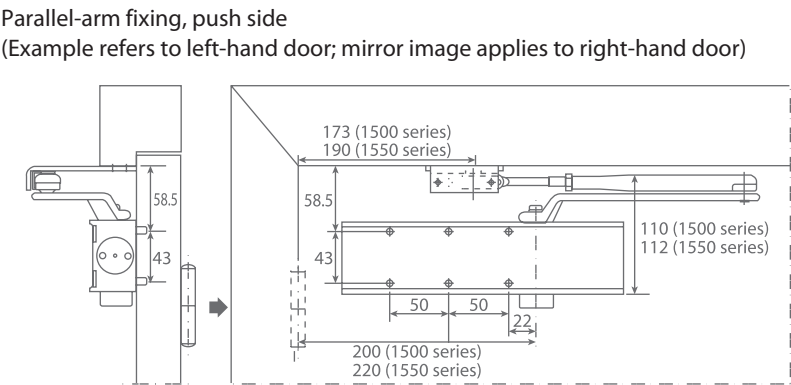
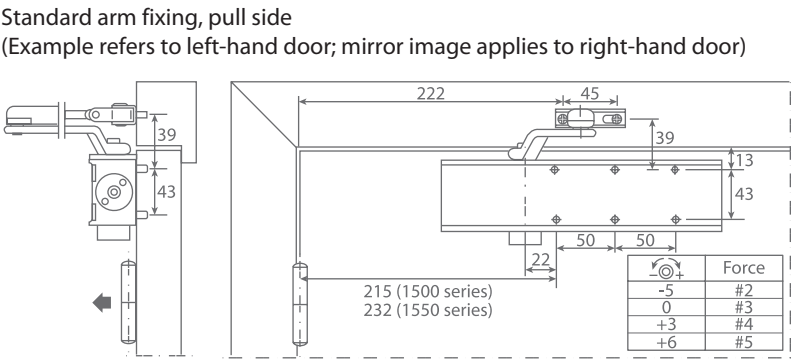


Parallel-arm fixing, push side
(Example refers to left-hand door;
mirror image applies to right-hand door)

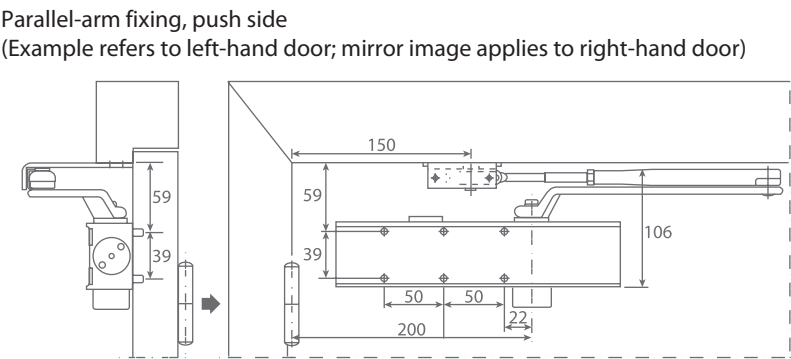
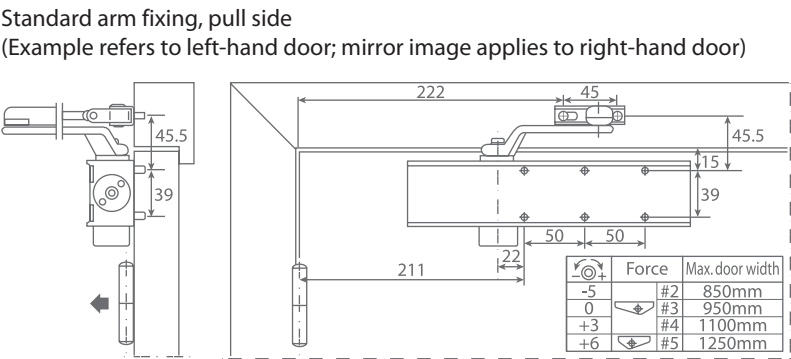


Fixing Details - Door Closer

1500 Series
1550 Series

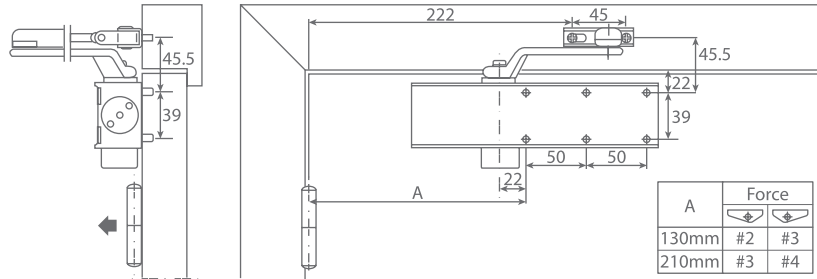


1600 Series

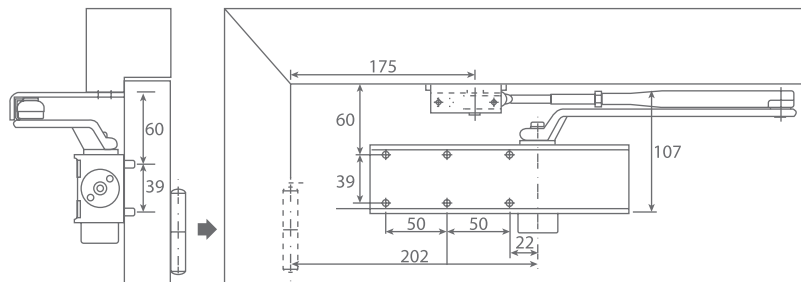


1650 Series

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

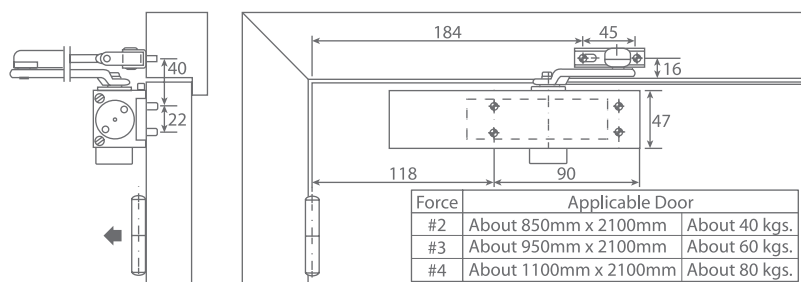


Parallel-arm fixing, push side
(Example refers to left-hand door; mirror image applies to right-hand door)

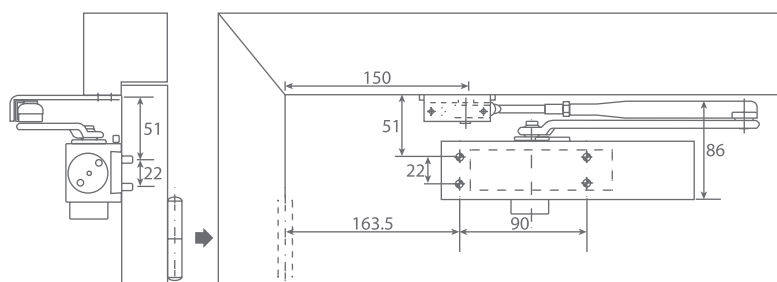


2000 Series

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



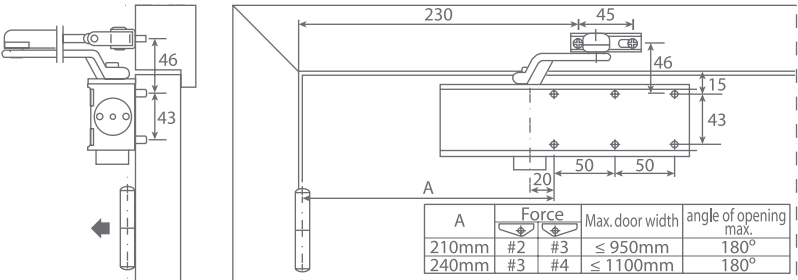
Parallel-arm fixing, push side
(Example refers to left-hand door; mirror image applies to right-hand door)



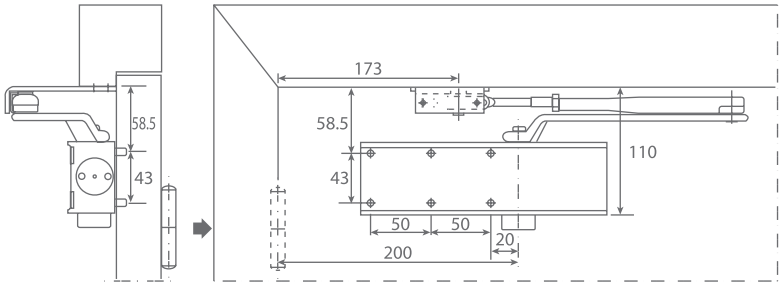
Fixing Details - Door Closer

5000 Series

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

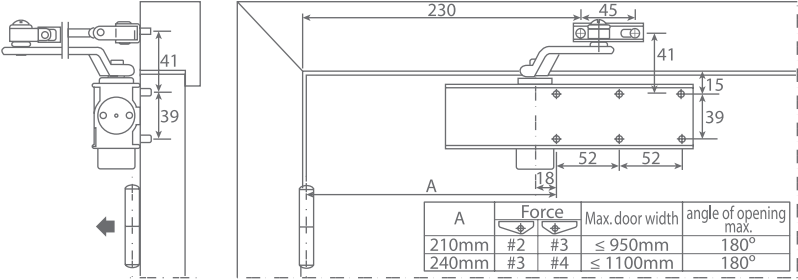


Parallel-arm fixing, push side
(Example refers to left-hand door; mirror image applies to right-hand door)

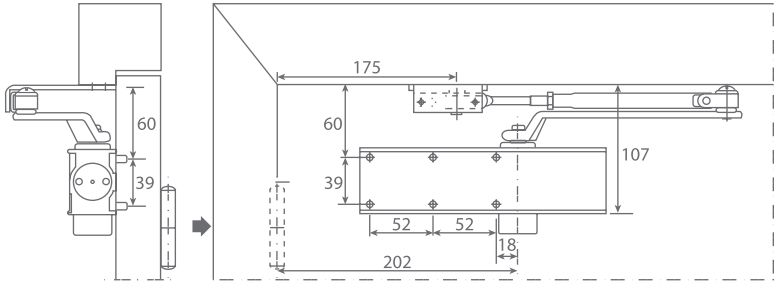


7000 Series

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

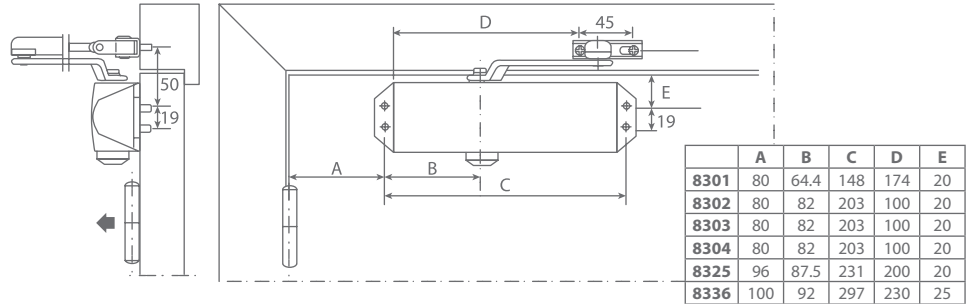


Parallel-arm fixing, push side
(Example refers to left-hand door; mirror image applies to right-hand door)

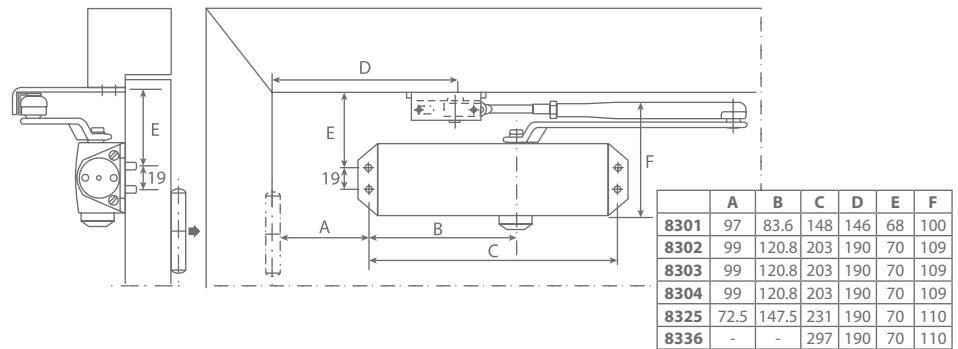


8300 Series
8325 Series
8336 Series

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

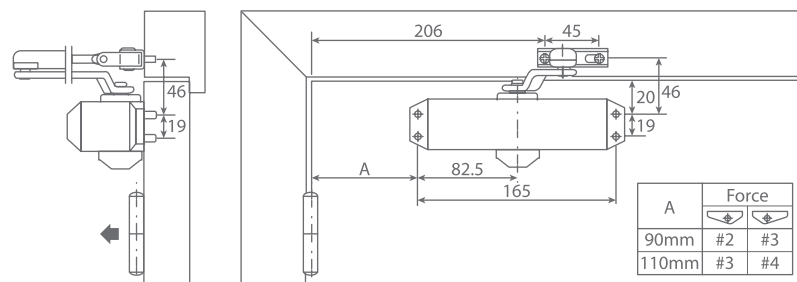


Parallel-arm fixing, push side
(Example refers to left-hand door; mirror image applies to right-hand door)

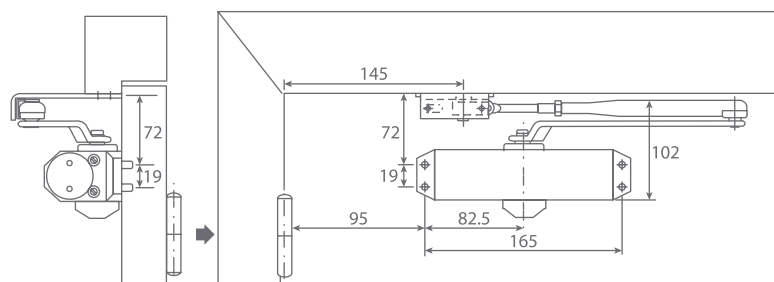


8600 Series

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

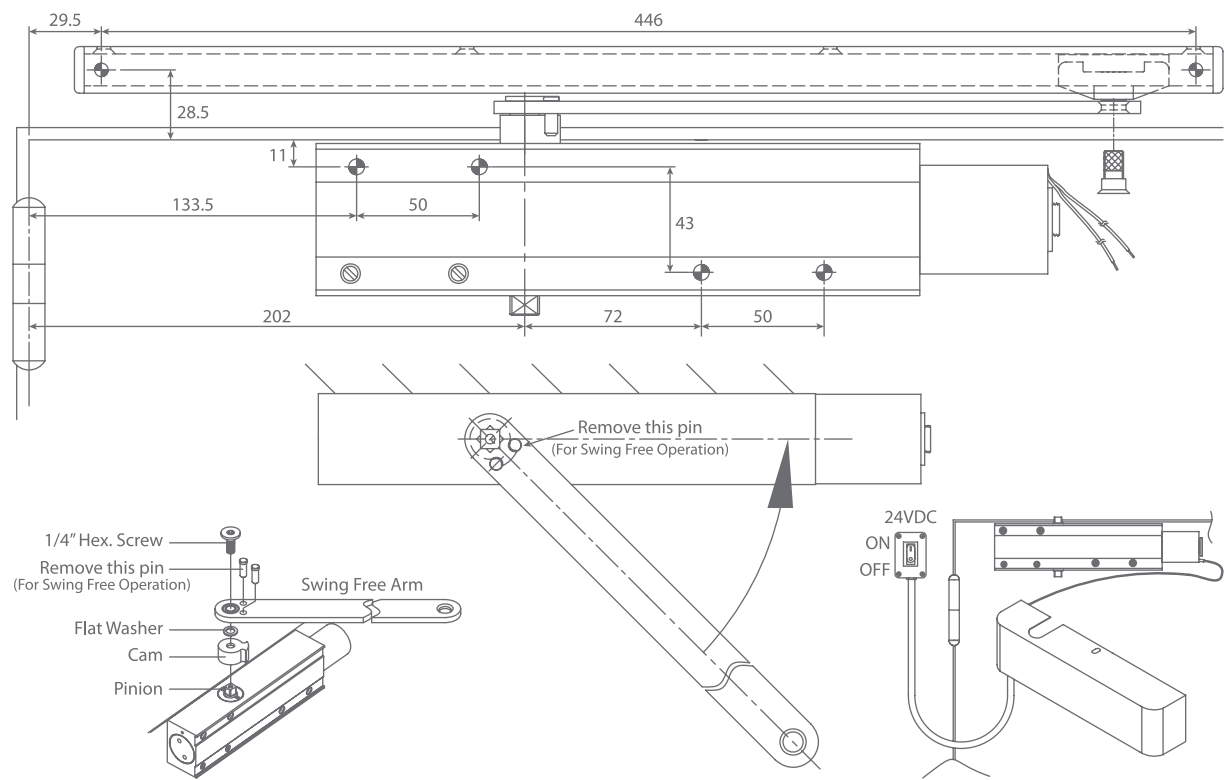


Parallel-arm fixing, push side
(Example refers to left-hand door; mirror image applies to right-hand door)

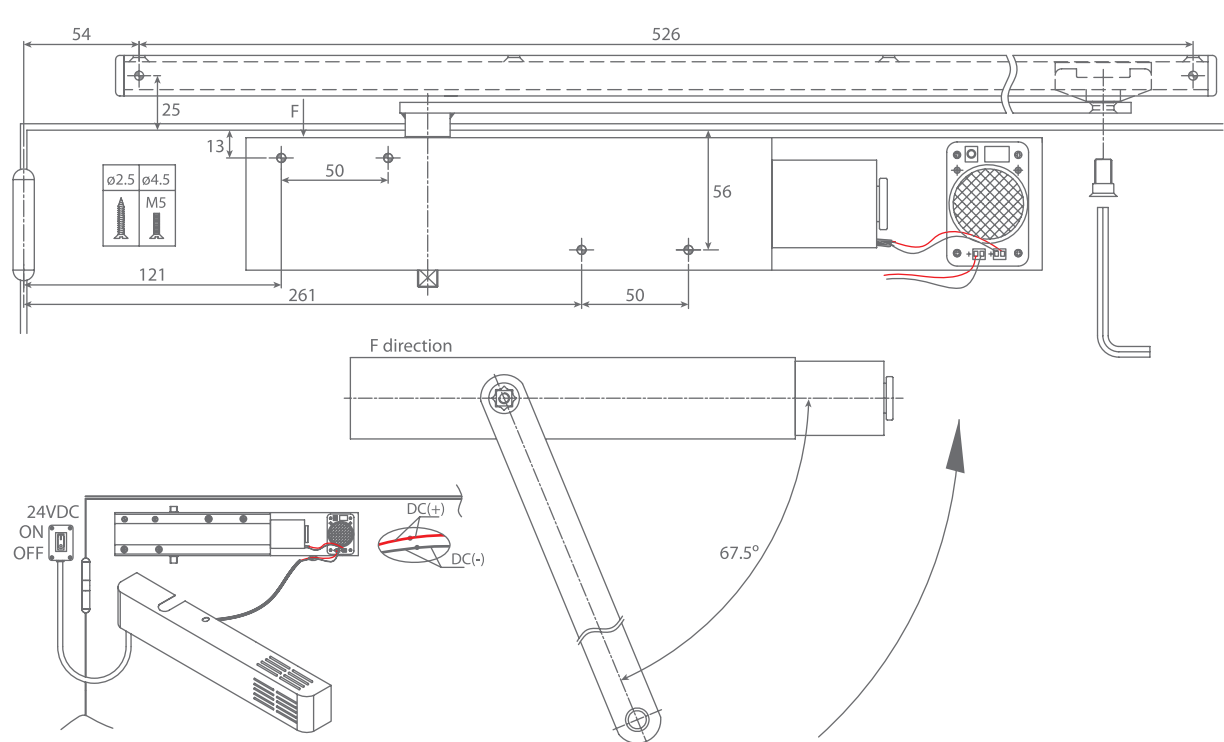


Fixing Details - Door Closer

1560 ET Series Standard installation



1560 EST Series Standard installation



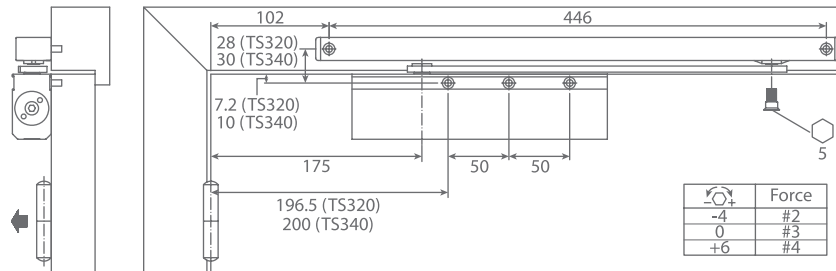
TS320 Series TS340 Series Standard installation

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.

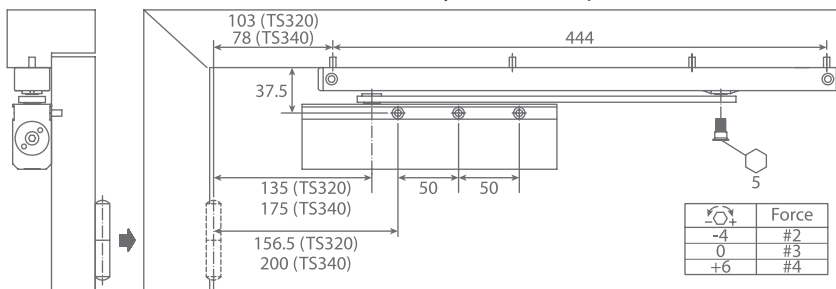
In most cases, however, a wall recess will have to be provided for the door closer.



Door leaf fixing, push side

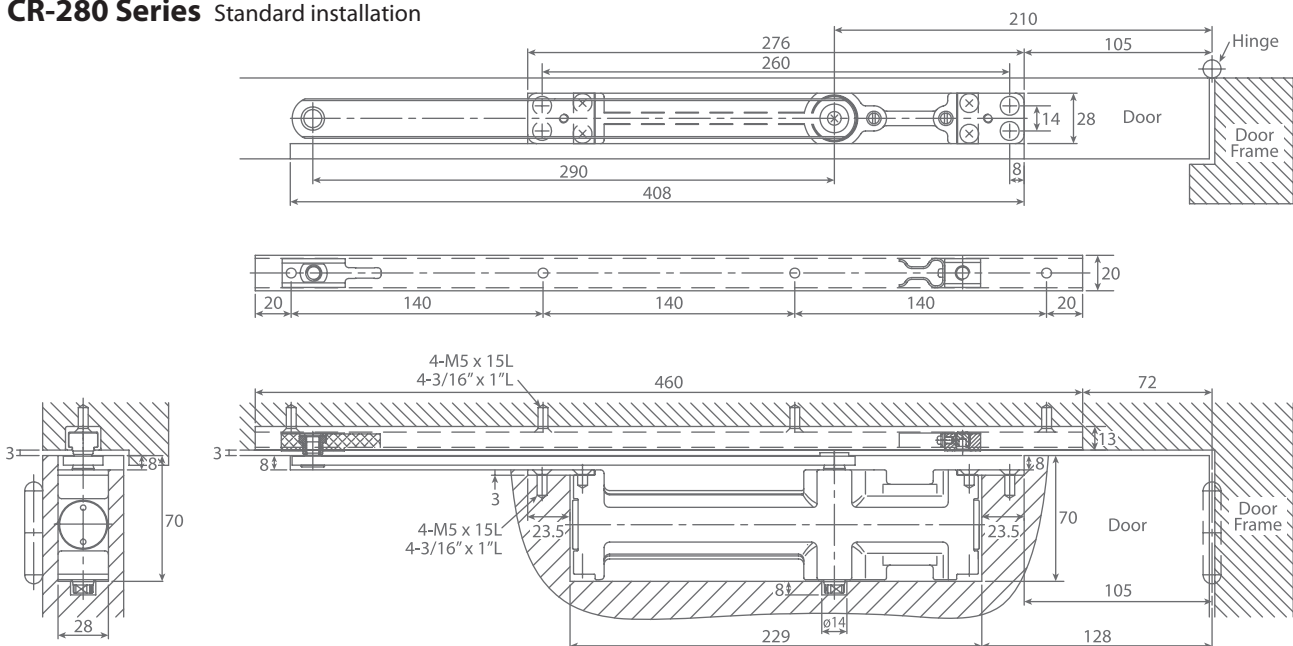
(Example shows RH door; LH doors mirrored arrangement)

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.



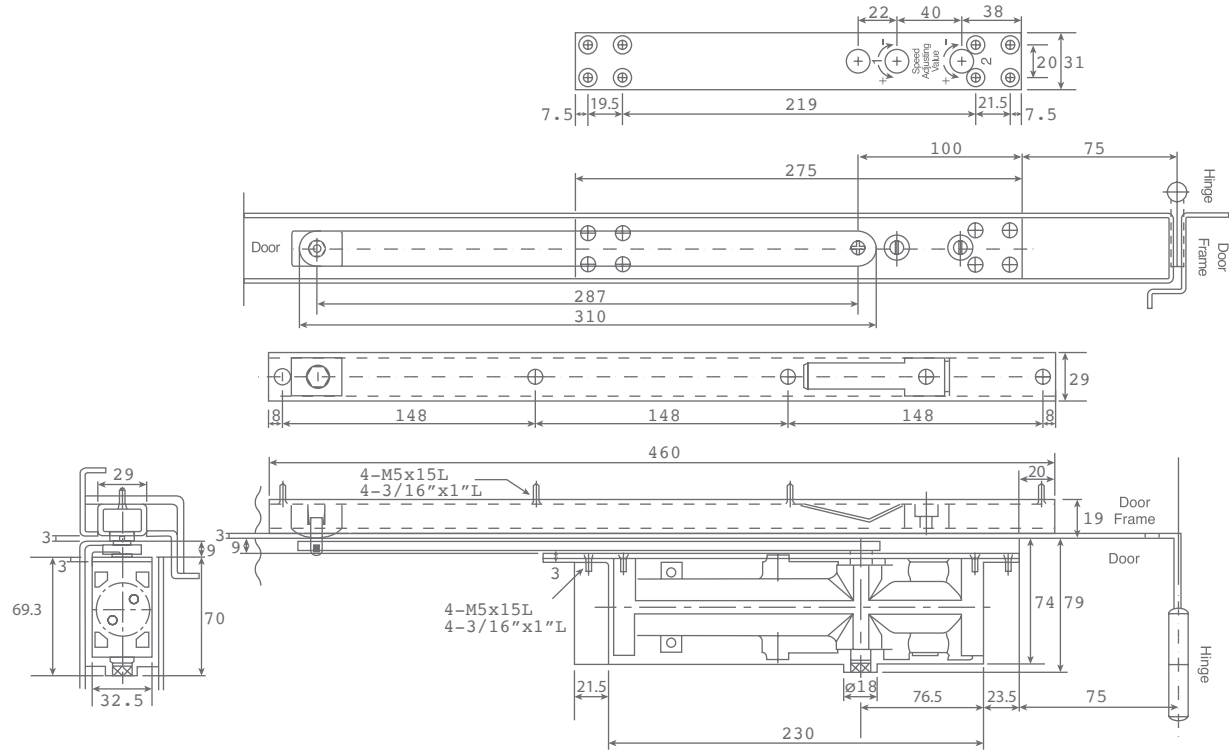
Fixing Details - Concealed Door Closer

CR-280 Series Standard installation

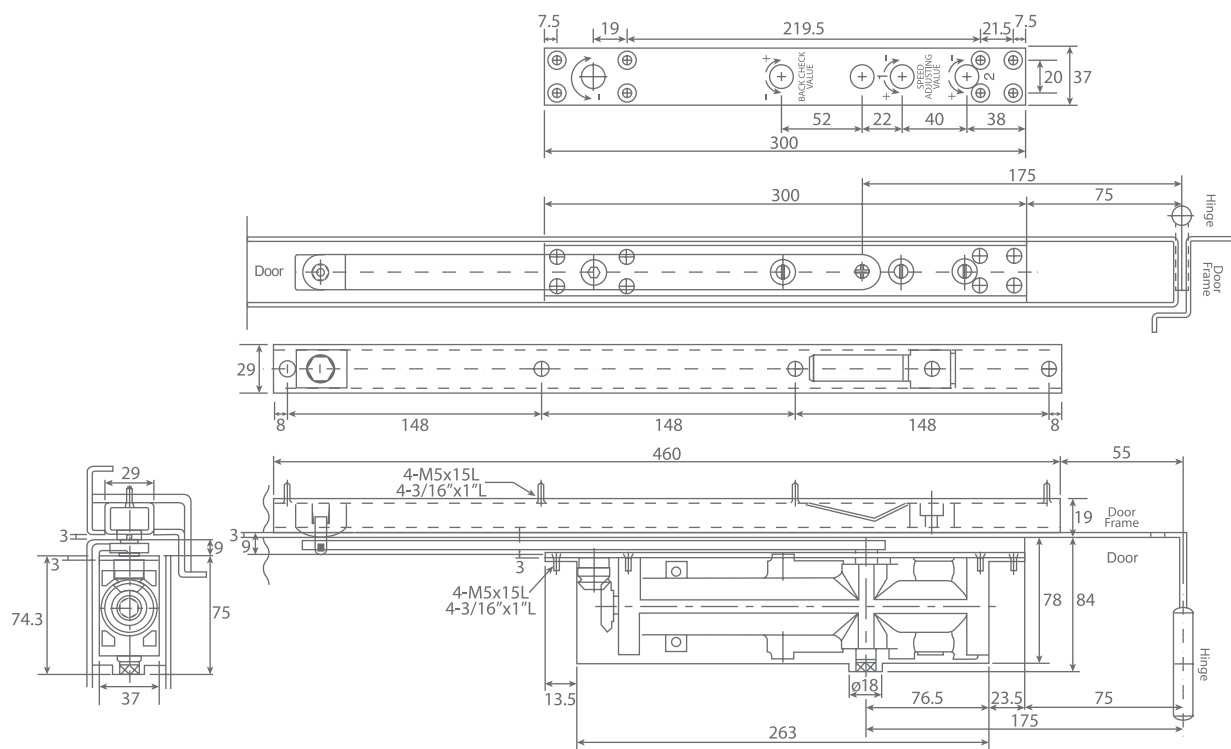


Fixing Details - Concealed Door Closer

CR-380 Series Standard Installation (Example shows left-hand LH door, RH door, mirror arrangement)

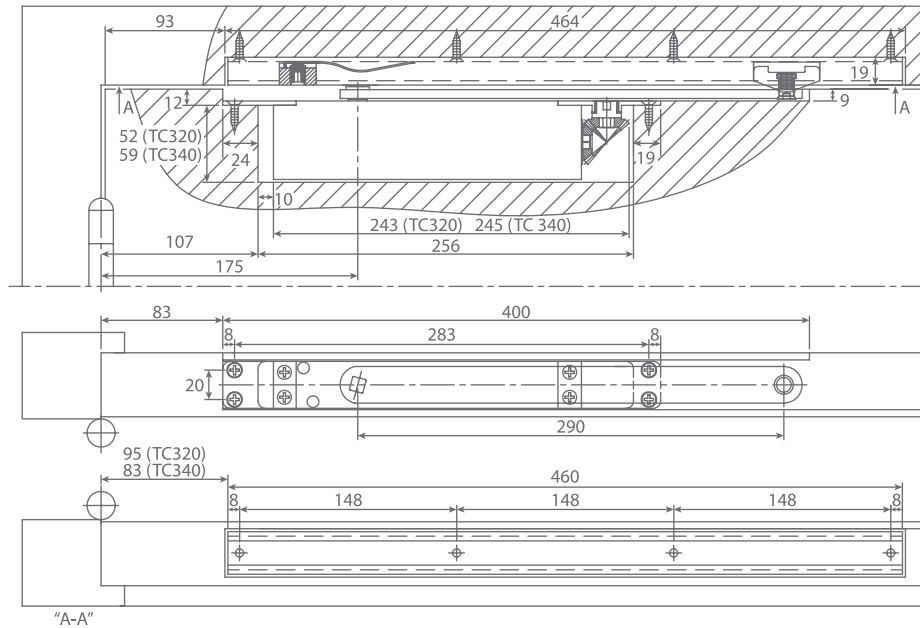
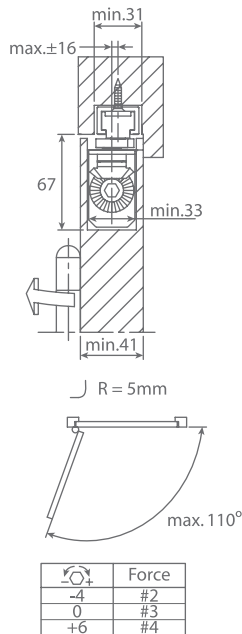


CR-3835 Series Standard Installation (Example shows left-hand LH door, RH door, mirror arrangement)



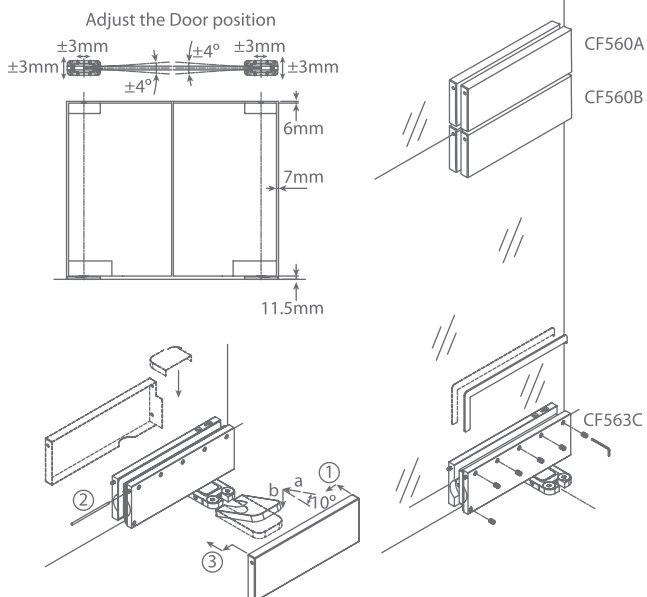
TC320 Series TC340 Series

Depending on the structural conditions, the door opening angle with this method of fixing is limited to approx 110°-115°. In order to avoid damage to the door or door closer, users are recommended to install a cushioned backstay or a door stop.

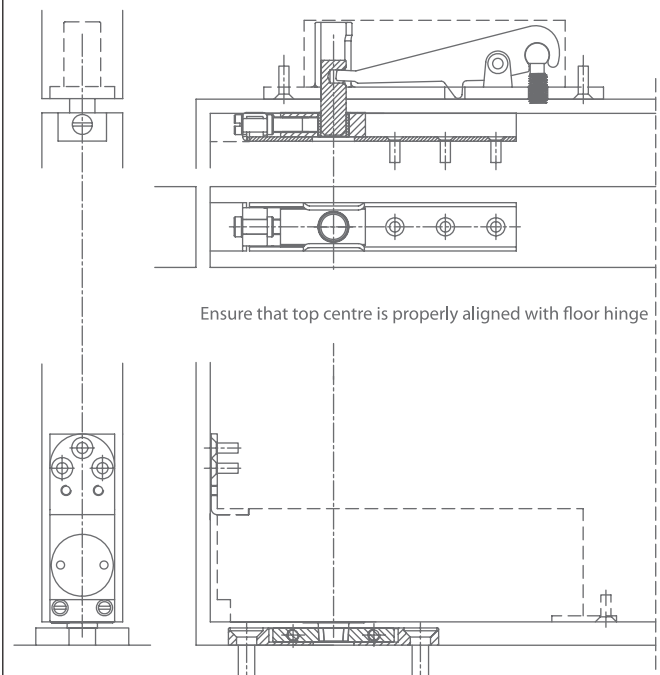


Fixing Details - Concealed Floor Spring Hinges

CF560 Series Standard installation

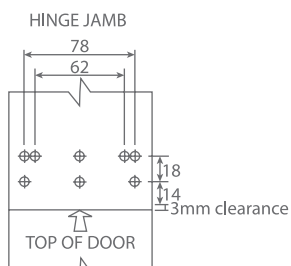


CF580 Series Standard installation

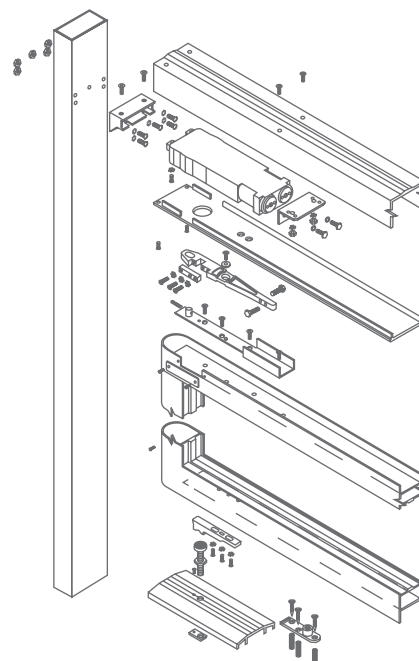
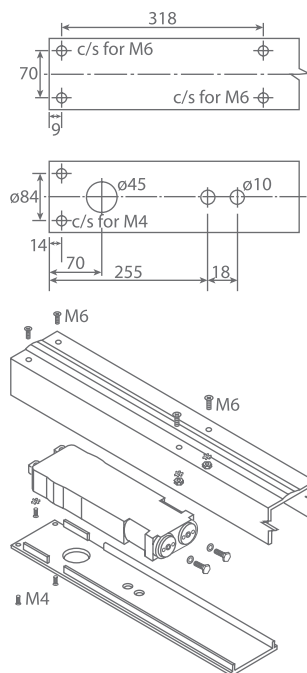
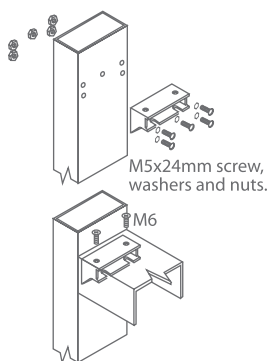


Fixing Details - Transom Door Closer

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



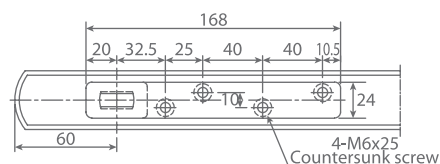
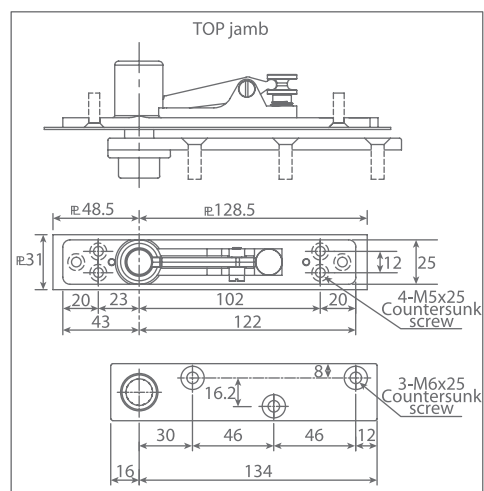
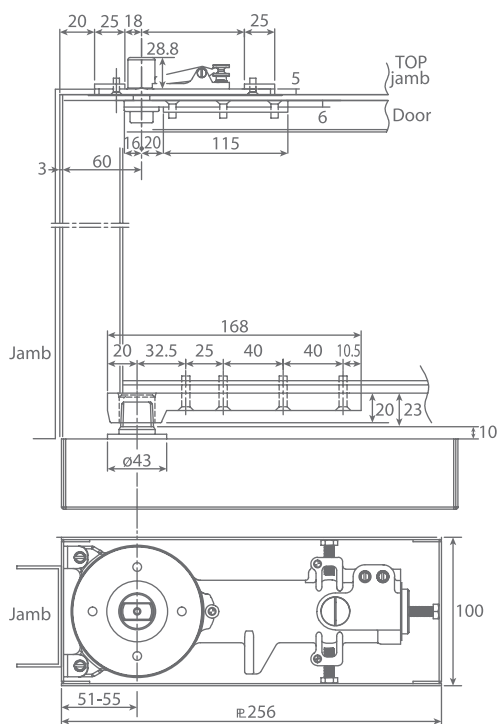
Select fixing holes most suitable for section and drill clearance size for M5 screws



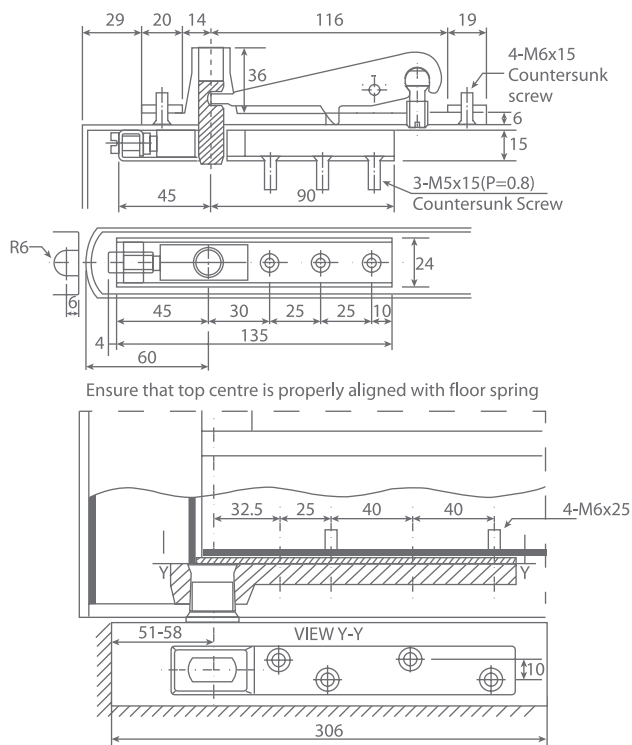
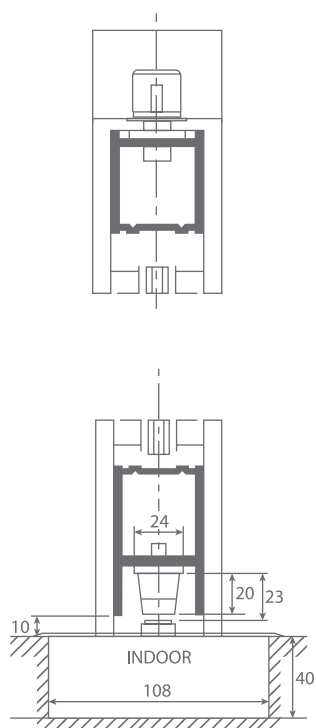
Concealed overhead door closer
Centre pivoted - double or single acting

Fixing Details - Floor Spring Hinges

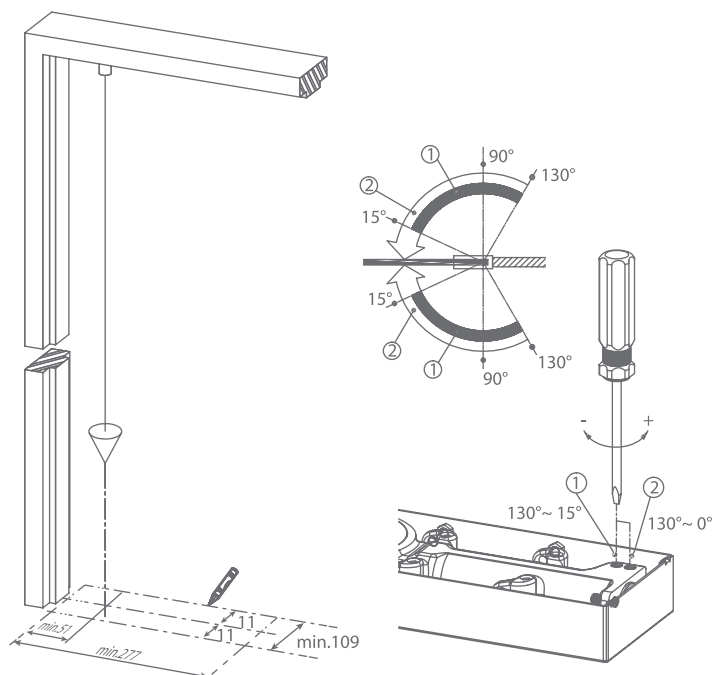
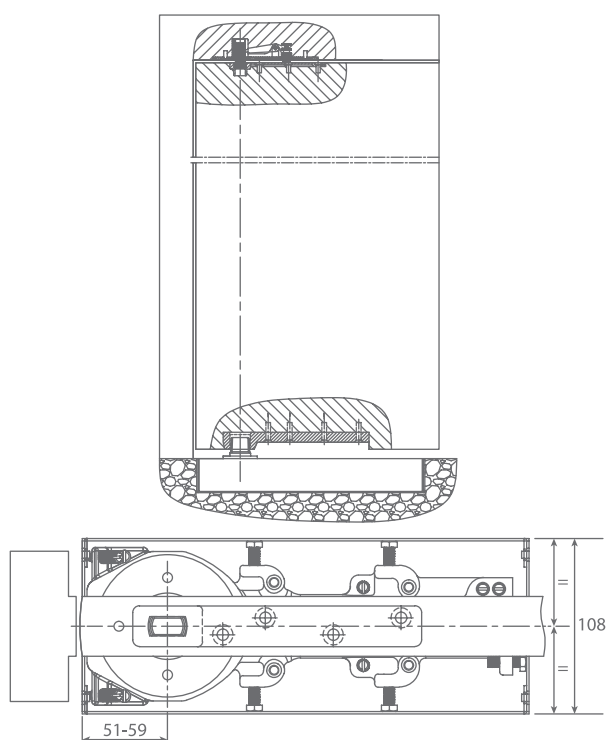
FH-210 Series For Centre - Hung, inward and outward opening doors



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



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

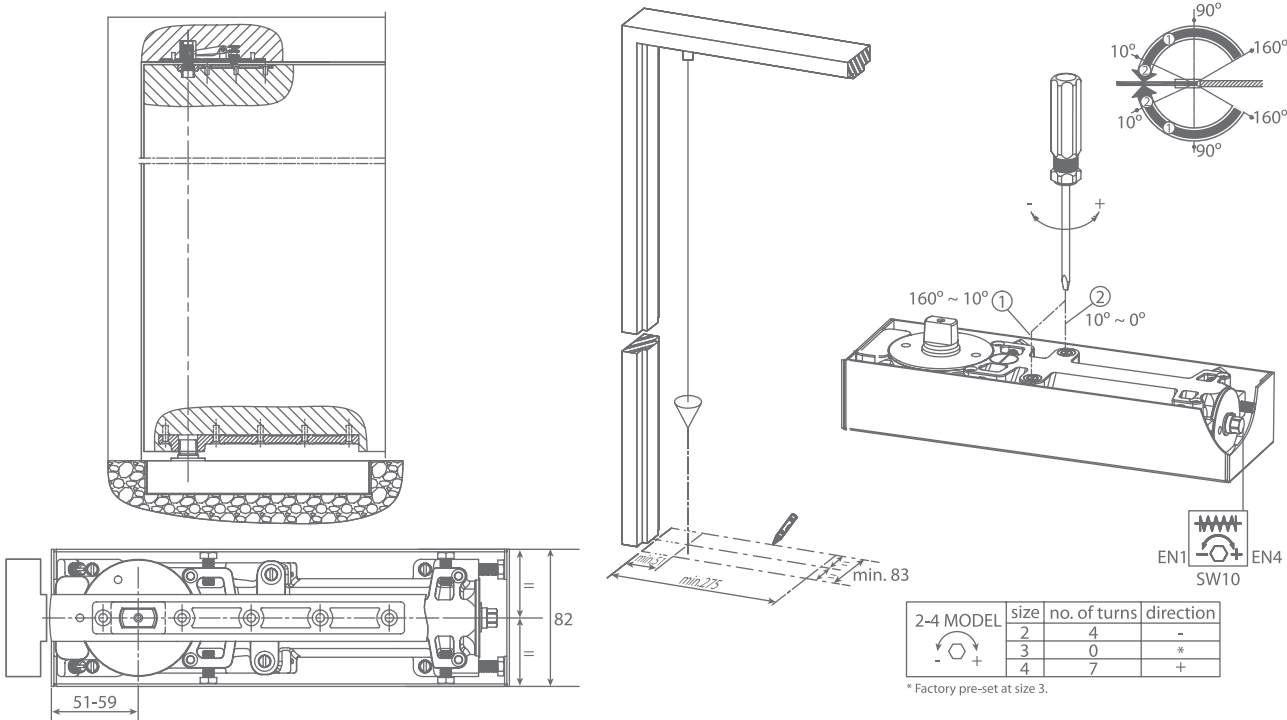


Please refer to the drawing for the location and dimension for installation. Measure and adjust the alignment of the top pivot pin and the spindle of the floor spring.

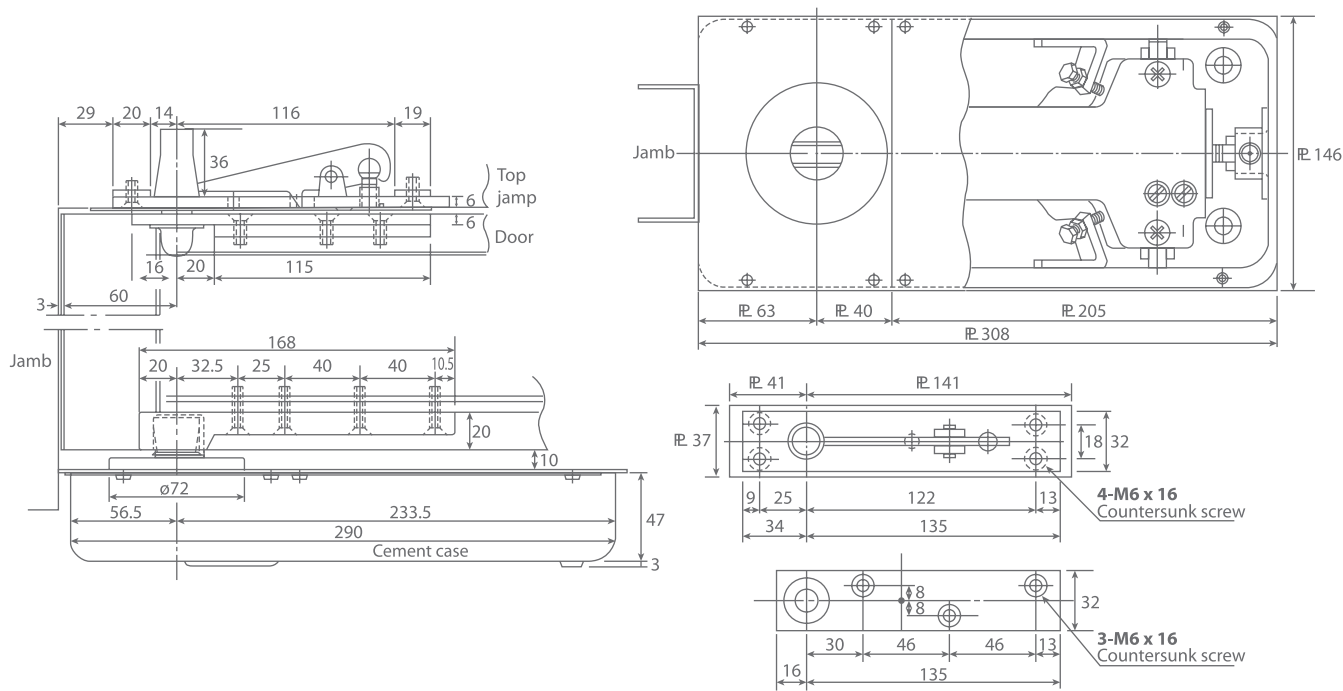
Adjust the closing speed to the required. But do not over turn anticlockwise more than one turn to avoid damage which might cause the leakage.

Fixing Details - Floor Spring Hinges

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

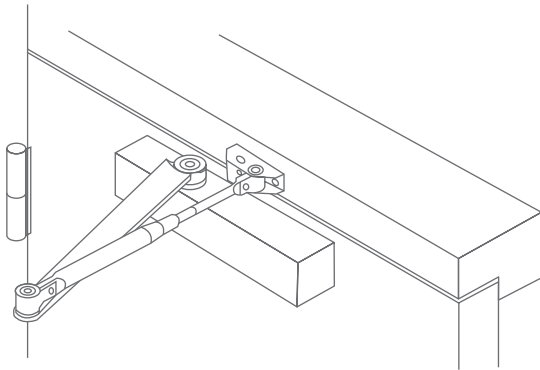


FH-800 Series For Centre - Hung, inward and outward opening doors

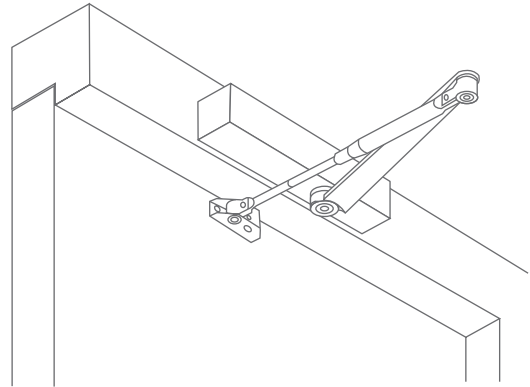


Installations

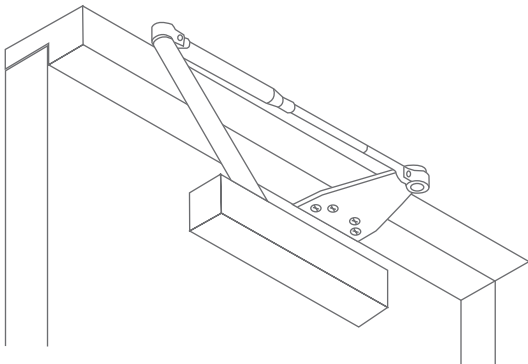
Standard arm installation



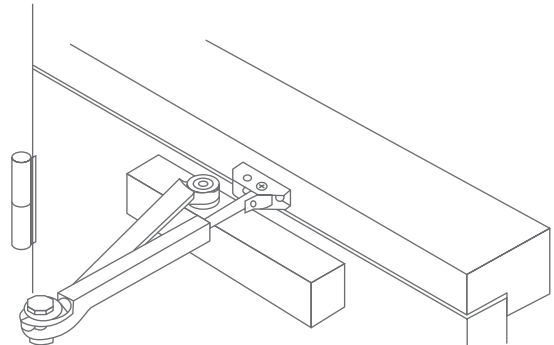
Top jamb installation



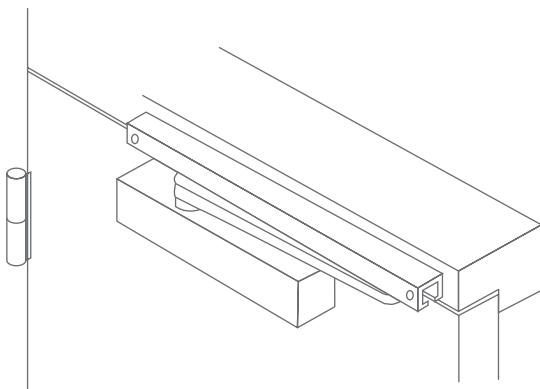
Parallel arm installation



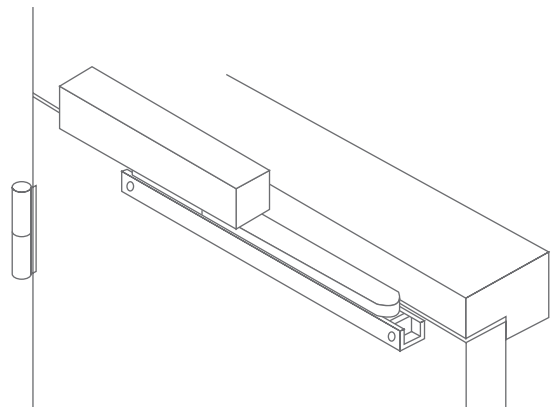
Hold open arm installation










































































































Track arm installation,
jamb mounted track (TA)



Track arm installation,
door mounted track (TA)



Closing Devices Table

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 CLOSER									
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
8300									#1, #2, #3, #4
8325									#2, #3, #4, #5
8336									#3, #4, #5, #6
8600									#2, #3, #4
TS320									#2, #3, #4
TS340									#2, #3, #4, #5
CONCEALED DOOR CLOSER									
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 CLOSER									
1560									#3, #4, #5, #6
CONCEALED FLOOR SPRING HINGES									
CF560									≤100kg
CF5635									≤100kg
CF580									≤100kg
TRANSOM DOOR CLOSER									
CR-360									#2, #3, #4
FLOOR SPRING HINGES									
FH-210									#2, #3, #4
FH-300									#2, #3, #4
FH-410									#2, #3, #4
FH-700									#2, #3, #4





Name of quality & dependability

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