

Floor Spring



ASSA ABLOY

Experience a safer
and more open world



The ASSA ABLOY Group

The global leader in access solutions

ASSA ABLOY Group is the global leader in access solutions. Every day, we help billions of people experience a safer and more open world. ASSA ABLOY Opening Solutions leads the development within door openings and products for access solutions in homes, businesses and institutions. Our offering includes doors, door and window hardware, mechanical and smart locks, electromechanical locks, access control solutions and service.

With over 150 companies operating in more than 70 countries, the Group is the strongest global player in the industry with over 61,000 employees and more than SEK 141 billion sales worldwide.

Today, ASSA ABLOY is the leading global supplier of intelligent lock and security solutions. Its products account for more than one in ten of all lock installations worldwide.

ASSA ABLOY Group is represented in all major regions, on both mature and emerging markets, with leading positions in many markets all over the world.

In the rapidly growing electromechanical security sector, the Group has a leading position in fields such as access control, identification technology, automatic doors and hotel security.

ASSA ABLOY's vision is to be the most innovative supplier of total door opening solutions in order to deliver safe and convenient security solutions that provide real added value to customers.

Using the latest 'technologies together with tried and tested' techniques, we are constantly developing innovative solutions that improve our customers' lives through greater security, safety and convenience.

ASSA ABLOY has been producing an annual sustainability report based on GRI (Global Reporting Initiative) guidelines since 2005. We are leading the way, with more than 250 environmental product declarations across the Group since 2008.

Sustainability is integrated in all Group processes: innovation, product development, manufacturing, logistics and sales.



Floor Spring

A floor spring, also known as a floor hinge or floor closer, is a type of door hardware installed in the floor beneath a door to control its opening and closing motion. It consists of a spring mechanism housed in a metal casing, along with hydraulic or pneumatic components that regulate the speed and force of the door. Floor springs are concealed beneath the floor surface, providing a sleek and unobtrusive appearance while ensuring smooth and controlled door operation.

Floor Spring

Use state-of-the-art technology

Floor Spring-Overview of functions										
Models	EN SIZE	Door max. width (mm)	Max. weight of door	Applications	opening	Back Check	Single action	Double action	Hinge Distance (mm)	Dimension L x D x H (mm)
DC475	EN3-6	950-1400	<300kg	Heavy doors high traffic doors, exterior doors		Mechanical	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	36-42	345 x 78 x 82
DC477	EN2-4	850-1100	<170kg	Recommended exterior & Interior doors		Mechanical	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	54-57	277 x 110 x 70
AF-224P	EN2-4	850-1100	<150kg	Recommended exterior & Interior doors			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	49-54	319 x 82 x 49.5

Floor Spring

Feature & Benefits

Floor spring

Key features:

- Non-handed system
- Fire rated options
- Up to 1 million cycles tested
- Concealed mounting
- Cam Motion system

Benefits:

- Versatile usage
- High durability
- Suitable for fire doors
- Modern & compact design
- Energy conservation

Standard & Certification

EN1154
CE marked

Technical details:

- Various power sizes
- Suitable for wood, glass, metal and fire rated door
- Available finishes - SSS, PSS and customized finishes available on request

Technical details:

- Back-check
- Hold-open
- Controlled closing speed
- Thermodynamic valves
- Independent hydraulic circuit

This new range of product is bases on a new modular concept and a common design, under a unique platform for both premium and standard floor spring.



Floor Spring with Cam Motion® technology and adjustable closing force for large or very heavy doors

Floor Spring

DC 475

Model no.: DC 475

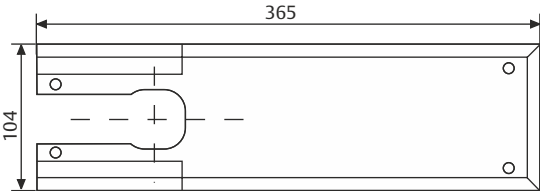
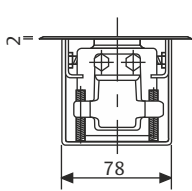
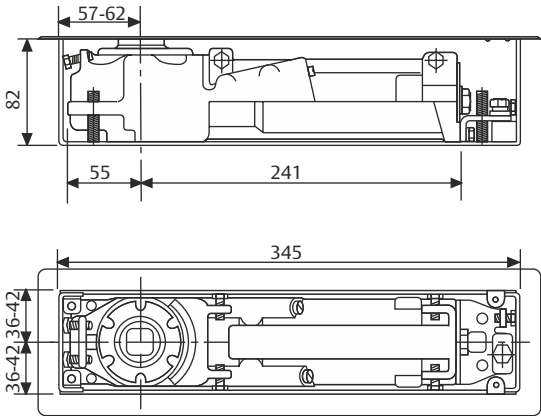
- Floor spring with adjustable closing force for large and very heavy doors
- In compliance with EN1154 size EN3-6
- 1,000,000 cycles tested
- Suitable for fire and smoke protection doors
- For single and double action door up to 300kg

Characteristics of DC475

- Closing from 175° in both door swing directions with hydraulic control from 175°
- Two thermodynamic valves for consistent performance
- Adjustable door speed and latching speed through top regulating valves
- Back-check
- Cast Iron body
- Adjustments in all directions within the cement box
- Cement box is hot zinc plated
- Cover plates and eyelets made in polished or Satin Satinless Steel and Polished Brass
- Interchangeable spindle from 0 to 30mm
- Available without hold-open or with hold-open angle 90° and 105°

Speed adjustment:

- 1 variable closing speed 175° - 15°
- 2 variable latching speed 15° - 0°



Floor Spring

DC 475

DC475 Technical details

Adjustable closing force closing force	EN 3-6
Door width up to	1400mm
Door weight up to	300 kg
Max. opening angle	175°
Closing speed	Variable between 175° - 15°
Latching speed	Variable between 15° - 0°
Back-check	Mechanical
Weight	7.3 Kg
Height	82 mm
Depth	345 mm
Length	78mm
Body adjustment within cement box	Vertical 9mm, side 6mm, front 5mm, angular 2°
DIN-direction	Left/Right-handed doors or double action
Hold-open mode	90°/105°/Non hold-open
In compliance with	EN1154
CE Marking for building products	Yes
Fire and smoke protection	Yes

Our service for you
Here you can see the individual advantages of our floor spring models for your respective fields of business.

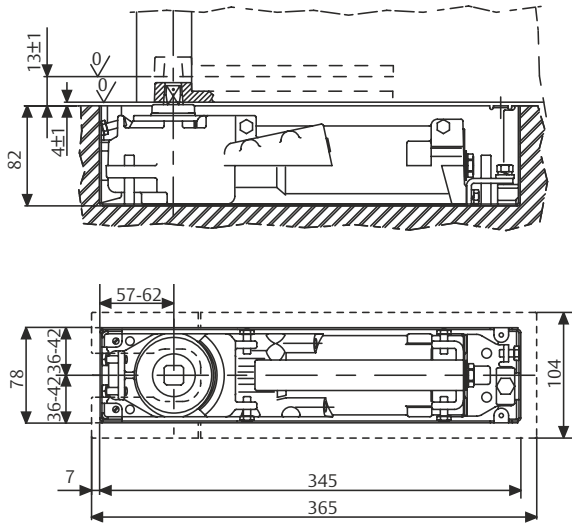
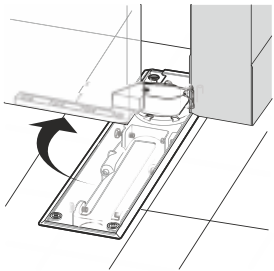
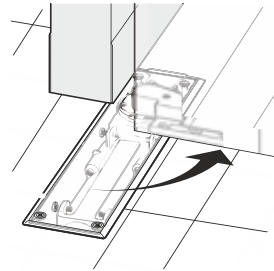
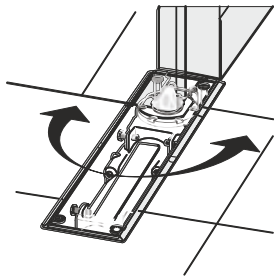
The advantages at a glance:	
Customer segment	Advantages
Project planners	<ul style="list-style-type: none">- Extensive range of uses: Fire and smoke protection doors as well as standard doors- Hold-open at 90°,105° and non hold-open- Variety of available spindles: squared Italian, rectangular German- Architectural finishes: Cover plates and eyelets in Polished Satinless Steel Polished Brass
Builders	<ul style="list-style-type: none">- Universal for left/right handed and double-action doors- Overpressure relief valve to protect unit against abuse- Large range of adjustment within cement box to solve possible alignment problems on the site without taking down the door
Trade	<ul style="list-style-type: none">- Reduced inventory costs due to modular product range- One single product suitable for a large variety of mounting positions- Complementary accessories available for the whole product range
User	<ul style="list-style-type: none">- Adjustable operating force to meet door construction requirements and user needs- Easier door opening and improved accessibility due to Cam Motion® technology- Back-check feature offers optimum protection for doors and walls

Floor Spring

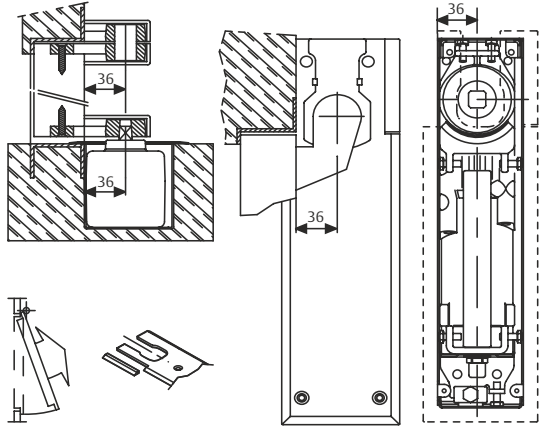
DC 475

Floor Spring Dimensional Drawing for DC 475

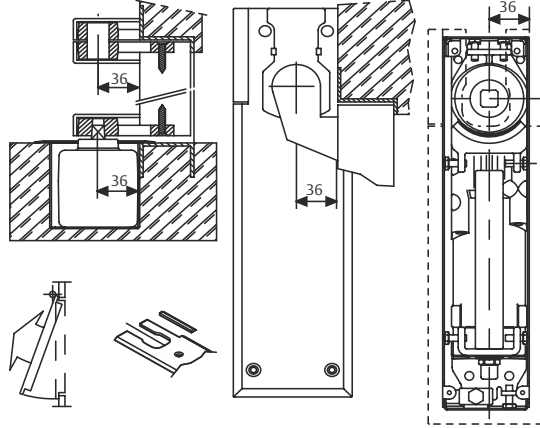
Double-action door mounting



Right-handed door mounting



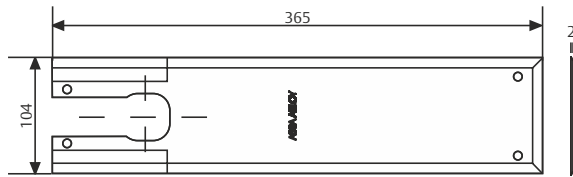
Left-handed door mounting



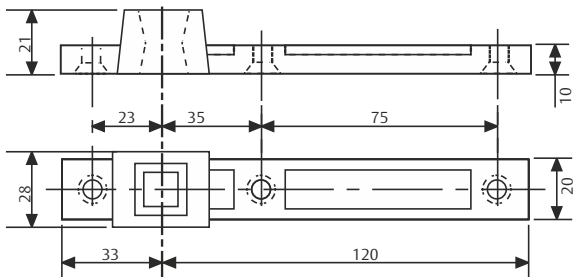
Floor Spring DC 475

Floor Spring Accessories for DC475

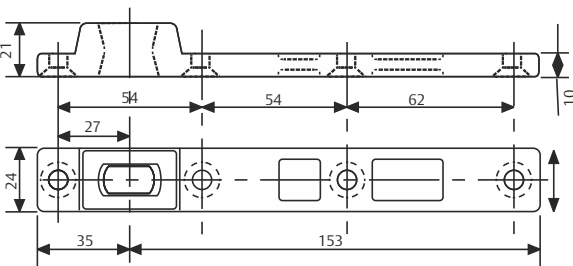
AC 269
Available in Satin
Satinless Steel, Polished
Satinless Steel and
Polished Brass.



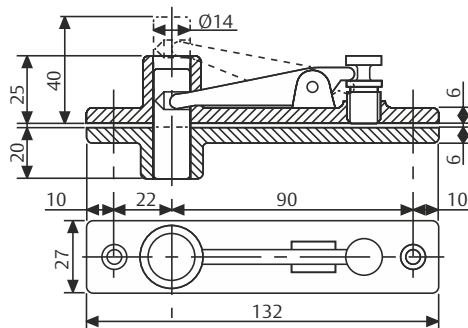
AC 115
Reversible bottom
arm in steel for double
action doors, socket for
Italian squared spindle



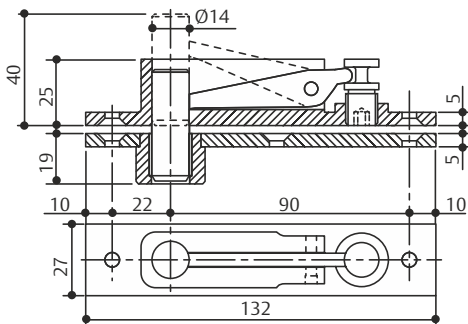
AC 393
Reversible bottom
arm in steel for double
action doors, socket for
German rectangular
spindle



AC 8
Double action top pivot



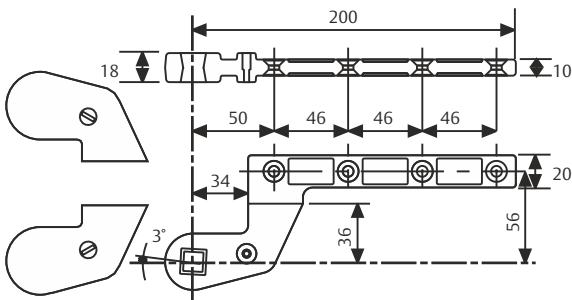
AC375
Double action top pivot
in full steel with self
lubricating bushing



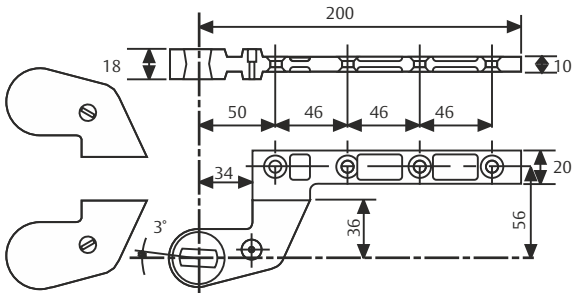
Floor Spring DC 475

Floor Spring Accessories for DC475

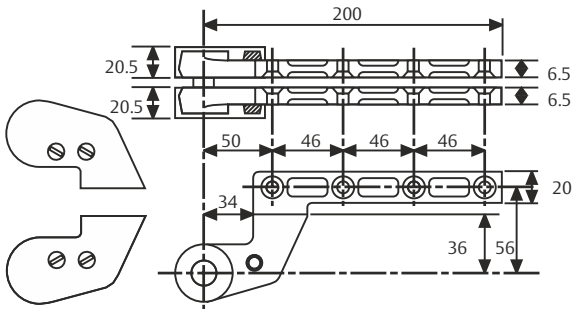
AC 583
Right and left bottom
arm in steel for single
-action doors, 36mm
offset. Socket for italian
squared spindle, Silver
or Black painted,



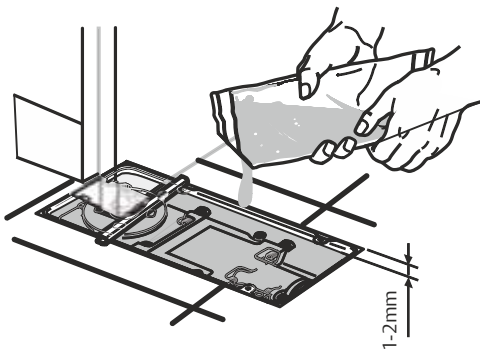
AC 392
Right and left bottom
arm in steel for single
action doors, 36mm
offset, socket for
German rectangular
spindle, Silver and Black
painted ABS covers.



AC 384
Right and left top arm in
full steel, 36mm offset
with Silver or Black
painted ABS cover.



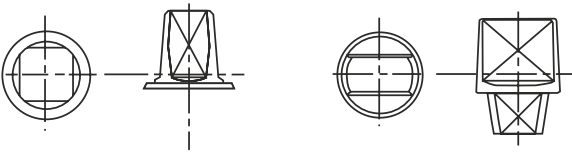
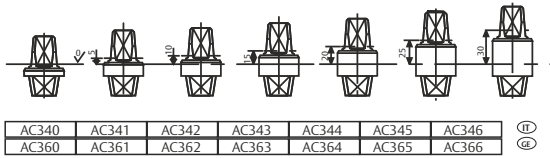
AC612
Sealing compound for
floor springs



Floor Spring DC 475

Floor Spring
Accessories and
order placement
information for
Dc475

Detachable spindles
Italian spindle - square
shape (left image)
German spindle - flate -
conical shape
(right image)



You can find the
complete specification
on the internet
at: www.assaabloy.com
under “Service”
in the support
section.

Specifications for DC475:
ASSA ABLOY Floor spring DC475 featuring
Cam Motion® technology is in compliance with
EN1154
• 1,000,000 cycles tested
• Closing power variable adjustable, size EN3-6,
for doors up to 1400mm wide
• Closing speed, latching speed adjustable
through top regulating valves
• CE approved
• 9mm height adjustable within cement box
• Suitable for left/right handed double-action
doors

Colour:
☐ Polished Satinless Steel
☐ Satin Satinless Steel
☐ Polished Brass

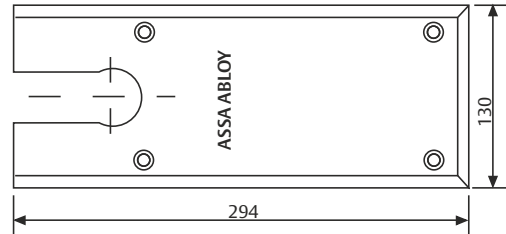
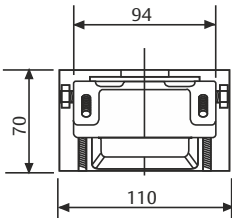
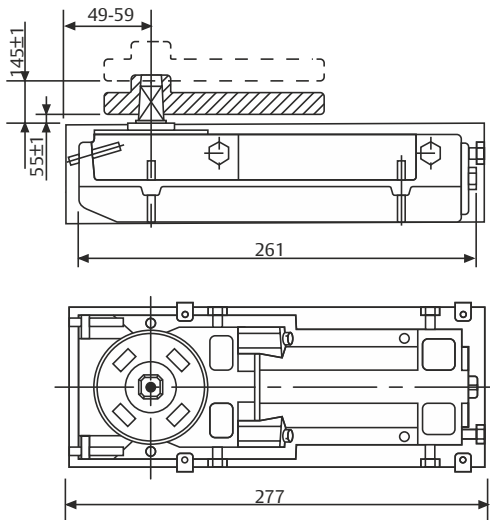
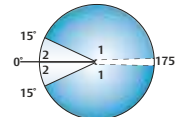
Accessories:
☐ AC115 - Reversible bottom arm Italian spindle
☐ AC393 - Reversible bottom arm German spindle
☐ AC8 - Double action top pivot
☐ AC375 - Double action top pivot
☐ AC583 - Right and left bottom arm. Socket for
Italian square spindle.
☐ AC392 - Right & left bottom arm. Socket for
German rectangular spindle.
☐ AC384 - Top pivot for left or right doors
☐ AC612 - Sealing compound for floor springs
☐ AC269 - Cover plate for DC475

Floor Spring DC 477

Floor Spring with
Cam Motion®
technology and
adjustable closing
force for large or very
heavy doors

Model no.: DC 477
• Floor spring with adjustable closing force for
large and very heavy doors
• In compliance with EN1154 size EN2-4
• 1,000,000 cycles tested
• Suitable for fire and smoke protection doors
• For single and double action door up to 170kg

Characteristics of DC477
• Closing from 175° in both door swing directions
with hydraulic control from 150°
• Two thermodynamic valves for consistent
performance
• Adjustable door speed and latching speed
through top regulating valves
• Back-check
• Cast Iron body
• Adjustments in all directions within the cement
box
• Cement box is hot zinc plated
• Cover plates and eyelets made in polished or
Satin Satinless Steel and Polished Brass
• Interchangeable spindle from 0 to 30mm
• Available without hold-open or with hold-open
angle 90° and 105°



All dimensions are in mm

Floor Spring

DC 477

DC477 Technical details

Adjustable closing force closing force	EN 2-4
Door width up to	1100mm
Door weight up to	170 kg
Max. opening angle	175° (Max, 150° in case of no hold-open)
Closing speed	Variable between 150° - 15°
Latching speed	Variable between 15° - 0°
Back-check	Mechanical
Weight	5.4 kg
Height	70 mm
Length	277mm
Width	110mm
Body adjustment within cement box	Vertical 9mm, side 4mm, front 10mm, angular 4°
DIN-direction	Left/Right-handed doors or double action
Hold-open mode	90°/105°/Non hold-open
In compliance with	EN1154
CE Marking for building products	Yes
Fire and smoke protection	Yes

Our service for you

Here you can see the individual advantages of our floor spring models for your respective fields of business.

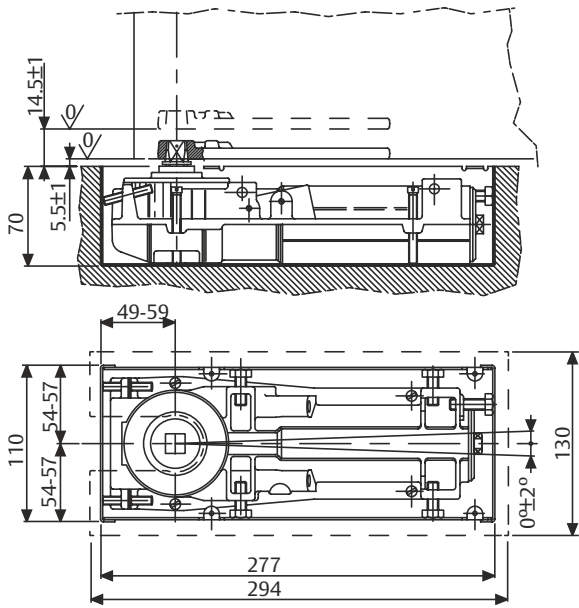
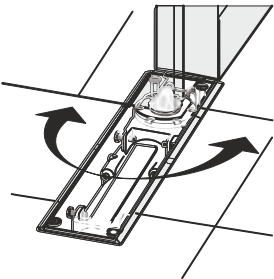
The advantages at a glance:	
Customer segment	Advantages
Project planners	<ul style="list-style-type: none">- Extensive range of uses: Fire and smoke protection doors as well as standard doors- Hold-open at 90°, 105° and non hold-open- Variety of available spindles: squared Italian, rectangular German- Architectural finishes: Cover plates and eyelets in Polished Satinless Steel Polished Brass
Builders	<ul style="list-style-type: none">- Universal for left/right handed and double-action doors- Overpressure relief valve to protect unit against abuse- Large range of adjustment within cement box to solve possible alignment problems on the site without taking down the door
Trade	<ul style="list-style-type: none">- Reduced inventory costs due to modular product range- One single product suitable for a large variety of mounting positions- Complementary accessories available for the whole product range
User	<ul style="list-style-type: none">- Ideal for residential interiors, thanks to adjustable opening/closing force that makes opening/closing easy- Adjustable operating force to meet door construction requirements and user needs- Easier door opening and improved accessibility due to Cam Motion® technology- Back-check feature offers optimum protection for doors and walls

Floor Spring

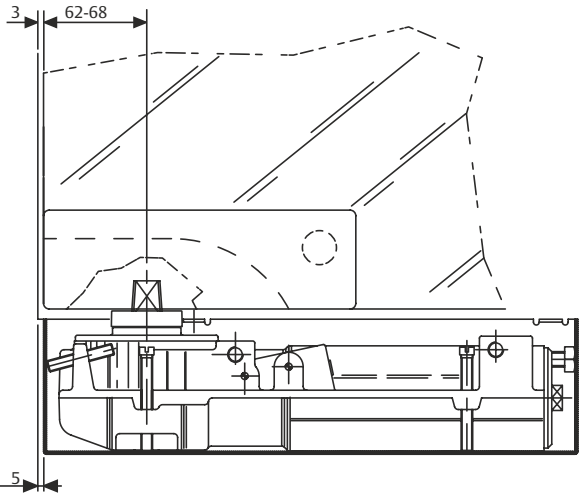
DC 477

Floor Spring Dimensional Drawing for DC 477

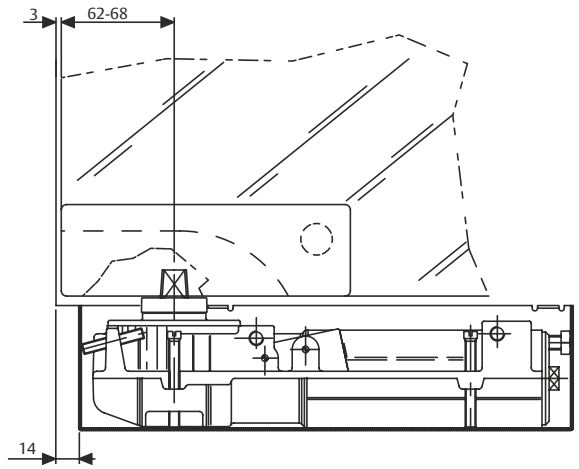
Double-action door mounting



Right-handed double-action door
with patch fitting V500 bottom
hinge for centre-hung doors



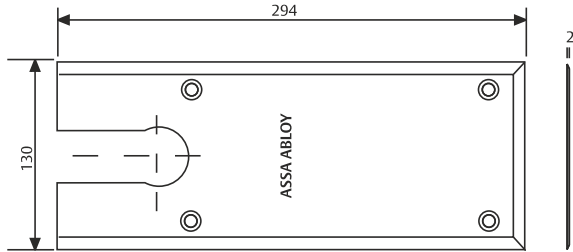
Left-handed double-action door
with patch fitting V500 bottom
hinge for centre-hung doors



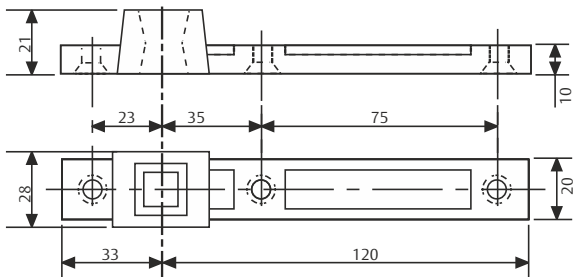
Floor Spring DC 477

Floor Spring Accessories for DC477

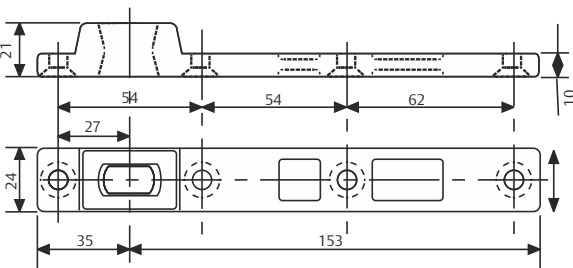
AC 534
Available in Satin
Satinless Steel, Polished
Satinless Steel and
Polished Brass.



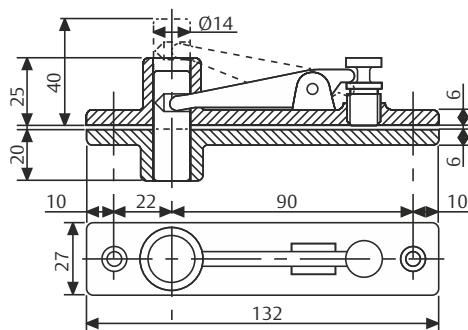
AC 115
Reversible bottom
arm in steel for double
action doors, socket for
Italian squared spindle



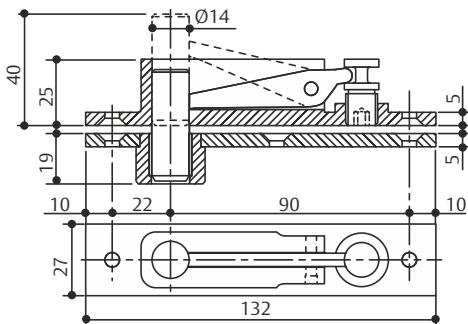
AC 393
Reversible bottom
arm in steel for double
action doors, socket for
German rectangular
spindle



AC 8
Double action top pivot



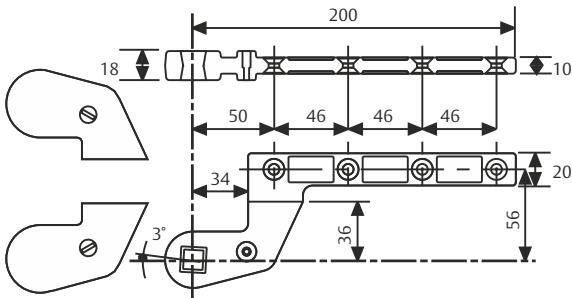
AC375
Double action top pivot
in full steel with self
lubricating bushing



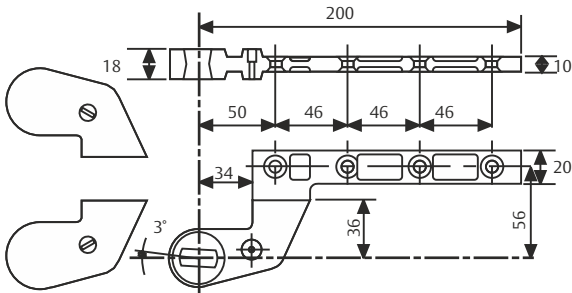
Floor Spring DC 477

Floor Spring Accessories for DC477

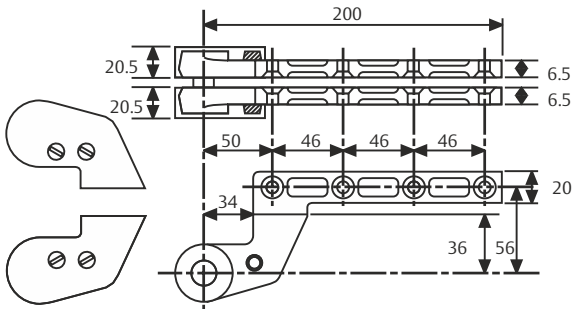
AC 583
Right and left bottom
arm in steel for single
-action doors, 36mm
offset. Socket for italian
squared spindle, Silver
or Black painted,



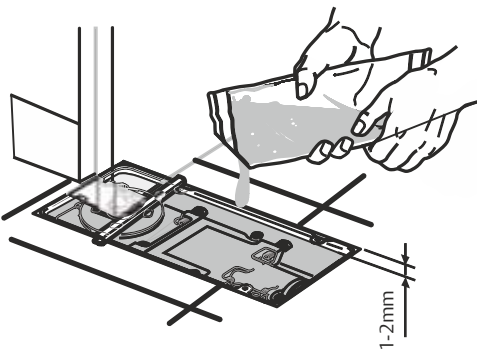
AC 392
Right and left bottom
arm in steel for single
action doors, 36mm
offset, socket for
German rectangular
spindle, Silver and Black
painted ABS covers.



AC 384
Right and left top arm in
full steel, 36mm offset
with Silver or Black
painted ABS cover.



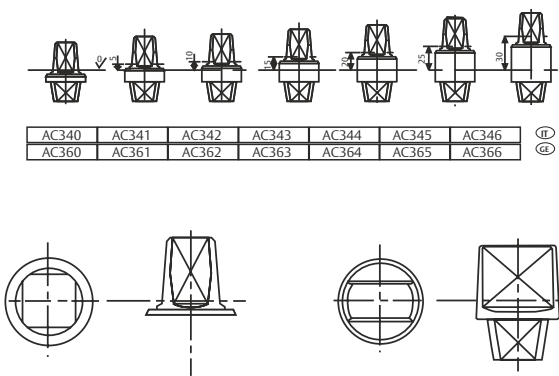
AC612
Sealing compound for
floor springs



Floor Spring
DC 477

Floor Spring
Accessories and
order placement
information for
DC477

Detachable spindles
Italian spindle - square
shape (left image)
German spindle - flate -
conical shape
(right image)



You can find the
complete specification
on the internet
at: www.assaabloy.com
under “Service”
in the support
section.

Specifications for DC477:
ASSA ABLOY Floor spring Dc477 featuring
Cam Motion® technology is in compliance with
EN1154

- 1,000,000 cycles tested
- Closing power variable adjustable, size EN2-4,
for doors up to 1100mm wide
- Closing speed, latching speed adjustable
through top regulating valves
- CE approved
- 9mm height adjustable within cement box
- Suitable for left/right handed double-action
doors

Colour:

- ☐ Polished Satinless Steel
- ☐ Satin Satinless Steel
- ☐ Polished Brass

Accessories:

- ☐ AC115 - Reversible bottom arm Italian spindle
- ☐ AC393 - Reversible bottom arm German spindle
- ☐ AC8 - Double action top pivot
- ☐ AC375 - Double action top pivot
- ☐ AC583 - Right and left bottom arm. Socket for
Italian square spindle.
- ☐ AC392 - Right & left bottom arm. Socket for
German rectangular spindle.
- ☐ AC384 - Top pivot for left or right doors
- ☐ AC612 - Sealing compound for floor springs
- ☐ AC537 - Cover plate for DC477
- ☐ Ac534 - Cover plate for DC477

Floor Spring
Ordering matrix and replaceable
spindle calculation

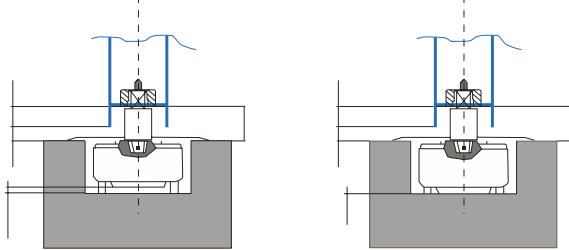
Springs. The table below shows how to choose the correct replaceable spindle. The distance between the door leaf and the floor can be
nlarged if needed by means of various heights of replaceable spindles.

Cover plate													
Floor Spring	EN Size	Hold open	Article Number	CE	Max. door leaf width	Max. door leaf weight	Max. opening angle	Double/ Single action	Interior/ Exterior	Polished Brass	Satin Stainless Steel	Polished Stainless Steel	Cealing Compound
DC475	EN3-6	90°-105°	DCE7490TSR	CE	≤1400mm	300kg		Single action Double action	Interior + Exterior	DCA0269PR	DCA0269HR	DCA0269IR	MA0612S0
			DCE7490TSR										
			DCE7490TSR										
DC477	EN2-4	90°-105°	DCE7980TSR	CE	≤1100mm	170kg		Single action Double action	Interior + Exterior	DCA053PR	DCA0534HR	DCA0534IR	MA0612S0
			DCE7960TSR										
			DCE7910TSR										





Floor Spring	HA min	HA max	AC340/ AC360	AC341/ AC361	AC342/ AC362	AC343/ AC363	AC344/ AC364	AC345/ AC365	AC346/ AC366	X	
										X min	X min
DC477	5.5mm	15mm	0mm	5mm	10mm	15mm	20mm	25mm	30mm	5.5mm	45mm
DC475	4mm	13.5mm								4mm	43.5mm

Legend:
HA = Height adjustment within the cement box
SH = Spindle Height
X = Floor clearance

Formula Example
X = HA + SH X = 34.5mm **Floor Spring = DC420** **HA min = 5.5** **HA max = 10.5**
34.5mm = (5.5mm or 10.5mm) + SH;
SH max = 29mm AC345/AC365;
SH min = 24.5mm AC344/AC364













Floor Spring Ordering Assistance

Extended Spindle (0-30mm)				
Spindle Type	Square type (Italian)		Flat-conical type (German)	
				
Extension	Name	Art. no.	Name	Art. no.
0mm	AC360	MA0360S0	AC340	MA0340S0
5mm	AC361	MA0361S0	AC341	MA0341S0
10mm	AC362	MA0362S0	AC342	MA0342S0
15mm	AC363	MA0363S0	AC343	MA0343S0
20mm	AC364	MA0364S0	AC344	MA0344S0
25mm	AC365	MA0365S0	AC345	MA0345S0
30mm	AC366	MA0366S0	AC346	MA0346S0

**Cover plate in
Polished Brass, Satin
Stainless steel and
Polished Stainless
Steel:**



	Top Pivot				Bottom Pivot					
Single / Double	Single Action	Double Action			Single Action		Double Action			
Pivot Name	A384	A8	A118	A375	AC583	AC392	AC2	AC213	AC115	AC393
										
Material	Steel	Zamac	Zamac	Steel	Steel	Steel	Brass	Steel	Steel	Steel
Adjustable			Adjust-able							
Max.Door Weight					≤300kg		≤100kg	≤170kg	≤300kg	
Spindle type										
	MA038400 - Silver MA038430 - Black	MA000850	MA011850	MA037550	MA039200 - Silver	MA000250	MA021350	MA011550	MA039350	
					MA039230 - Black					
					MA058300 - Silver					
					MA058330 - Black					

Floor Spring AF 224P

Floor Spring AF-224P

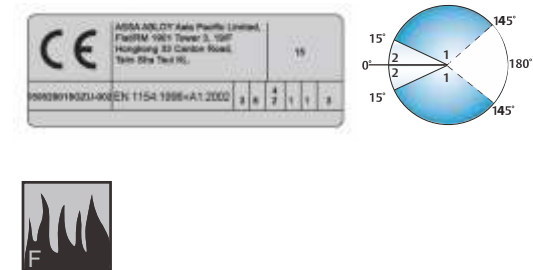
Model no.: AF-224P

- Floor spring with adjustable closing force for very thin slab
- Certified EN1154, size EN2-4
- 5,000,000 cycles tested
- Suitable for fire and smoke protection doors
- Maximum door weight 150kg

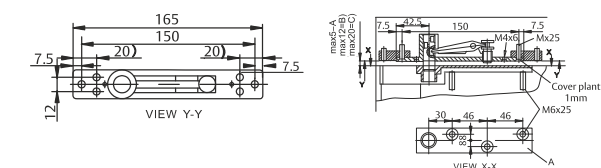


Characteristics of AF-200F

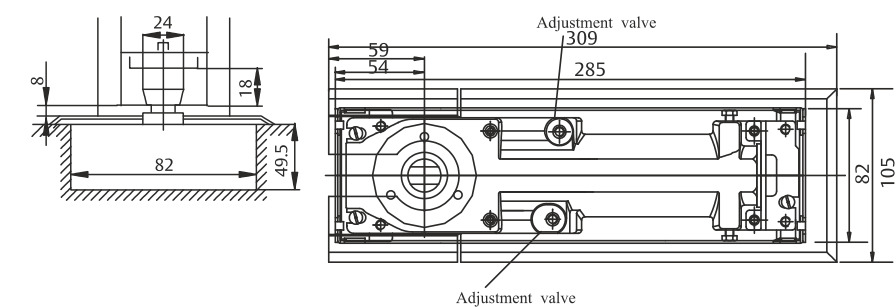
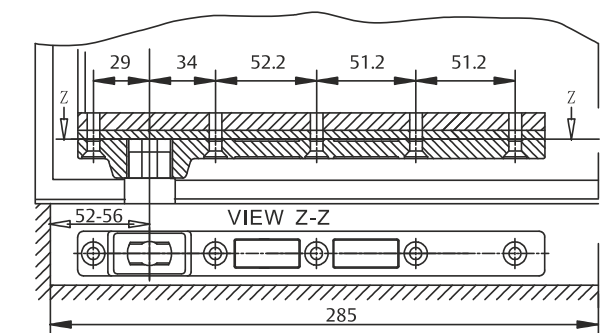
- CE Mark product
- Easy installation with thin body design
- Closing speed adjustable (1) - 145° - 15°
- Latching speed (2) - 15° - 0°
- Standard 90° hold-open, optional - Non hold-open
- Maximum door weight 150kg
- Suitable for wooden/glass/Aluminium profile doors application
- Body adjustable inside cement box with height up to 4mm, width up to 4mm, length up to 4mm



Top of door frame



Bottom of door frame



All dimensions are in mm

Floor Spring

AF 224P

AF-224P

Technical details

Adjustable closing force closing force	EN 2-4
Door width up to	850mm - 1100mm
Door weight up to	150 kg
Max. opening angle	145°
Closing speed	Variable between 145° - 15°
Latching speed	Variable between 15° - 0°
Back-check	No
Height	49.5 mm
Length	319mm
Width	82mm
Body adjustment within cement box	Body adjustable inside cement box with height up tp 4mm, width up to 4mm, length up to 4mm
DIN-direction	Left/Right-handed doors or double action
Hold-open mode	90° Non hold-open
In compliance with	EN1154
CE Marking for building products	Yes
Fire and smoke protection	Yes

Our service for you

Here you can see the individual advantages of our floor spring models for your respective fields of business.

The advantages at a glance:	
Customer segment	Advantages
Project planners	- Extensive range of uses: Fire and smoke protection doors as well as standard doors - Particularly suitable in case of double-action glass doors - Recommended for thin slabs - Hold-open at 90° and non hold-open - Available with high quality rectangular German spindle - Architectural finishes: Satin Satinless Steel
Builders	- Universal for left/right handed and double-action doors
	- Large range of adjustment within cement box to solve possible alignment problems on the site without taking down the door
Trade	- Reduced inventory costs due to modular product range
	- One single product suitable for a large variety of mounting positions - Complementary accessories available for the whole product range
User	- Easier door opening and improved accessibility due to Cam Motion® technology

Floor Spring

Accessories

AC2004F-TP

AC224P-TP

Model no.: AC200F-TP
Description: Top Pivot (Iron-double action) for AC-200F

Model no.: AC224P-TP
Description: Top Pivot (Iron-double action) for AF-224P



AC200FA/B-C

AC224PA/B-C

Model no.: AC200A/B-C
Description: Top Pivot Arm(Iron-double action)
Standard parts for AF-200F

Model no.: AC224PA/B-C
Description: Top Pivot Arm(Iron-double action)
Standard parts for AF-224P



AC200FA/B-O

AC224PA/B-O

Model no.: AC200FA/B-OR, AC200FA/B-OL
Description: Top Pivot Arm(Iron-double action)
Standard parts for AF-200F

Model no.: AC224PA/B-OR, AC224PA/B-OL
Description: Top Pivot Arm(Iron-double action)
Standard parts for AF-224P



ASSA ABLOY Group is the global leader in access solutions. Every day, we help billions of people experience a more open world.

ASSA ABLOY

ASSA ABLOY Opening Solutions leads the development within door openings and products for access solutions in homes, business and institutions. Our offering includes doors, door and window hardware, locks, access control and service.

assaabloy.com

MUMBAI

EcoStar, 11th Floor, 1101 / 1105,
Off Aarey Road, Vishweshwar Nagar
Goregoan (East),
Mumbai - 400063,

PUNE

Sr. No.36, Hissa No.1, Plot No.11,
Village Pisoli Haveli Kondhwa,
Pune - 411 028,
Maharashtra

GURUGRAM

1&2, ENCO Co-working Space,
6th Floor, Enkay Tower,
Udyog Vihar, Phase – 5,
Gurugram -122016, Haryana

BENGALURU

#36/2, Fourth Floor,
JRR Towers, Near South-end Circle,
Basavanagudi,
Bengaluru-560 004, Karnataka

HYDERABAD

2nd Floor, Alcazar Mall,
Plot No. 497/498,
Road No. 36, Jubilee Hills,
Hyderabad-500 033, Telangana

CHENNAI

23-2, Old No 39-2, Cenotaph Road,
1st Lane, Near to Crown Plaza Hotel,
Opp Canara Bank, Teynampet,
Chennai-600 018