Product datasheet

Folding door

ASSA ABLOY FD2250P

ASSA ABLOY
Entrance Systems

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Technical facts

Features

Max size: (W x H)*	7500 mm X 6000 mm (manually operated) 5000 mm x 6000 mm (electrical operated)
Leaf thickness:	57 mm
Material:	CFC-free polystyrene with sheet metal inner and outer skins
Color outside / inside:	Standard 7 pre-coated colors
Windows:	400x800 mm, 500x800 mm, 600x800 mm, 700x800 mm, 500x1200 mm
Passdoor:	Optional: built in door leaf, built in fixed section, leaf as passdoor

* Other sizes are available on request

Performance

Life time expectations:	Door: 100.000 door cycles/20 years (with the recommended yearly service check)
Wind load, manual: EN12424 electric:	Class 5 ** Class 3 ***
Thermal transmittance, EN12428	1,1 W/m².K ****
Water penetration, EN12425	Class 3 ***
Air permeability, EN12426	Class 5 ***

** DLW 4000 mm x DLH 3300 mm

*** DLW 5000 mm x DLH 3300 mm

**** Door configuration 5000 mm x 5000 mm

Contents

1. Description

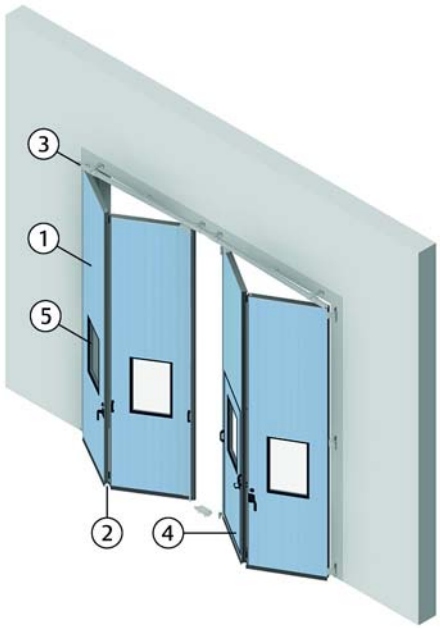
1.1 General

The ASSA ABLOY FD2250P folding door is designed to be strong, stable and robust folding door. It delivers a unique mix of safety, reliability, ease of opening and optimal space-saving. This smart sideways folding door is so easy to open, even after long periods. ASSA ABLOY FD2250P folding door is the perfect choice for the unique needs of the farming, construction, industrial and automotive industries.

ASSA ABLOY FD2250P folding door comes with a tight, well-sealed and high wind load resistance to take whatever the weather throws at it. This smart, economical folding door gives you the peace of mind and protection you need.

Built for premises where space around the door is limited, ASSA ABLOY FD2250P folding door provides the perfect fit. It's available in a range of sizes, configurations, opening, locking, folding and color options. Manufacturing with durable materials including an aluminum frame, and with few moving parts, this door is an excellent choice for years of reliable and secure use.

The ASSA ABLOY FD2250P folding door has been designed to meet all operational and safety requirements in the European Directives and the standards issued by the European Standardization Committee, CEN.



The ASSA ABLOY FD2250P folding door has 5 primary parts:

1) Door leaf
2) Seals
3) Hardware
4) Passdoor (option)
5) Windows (option)

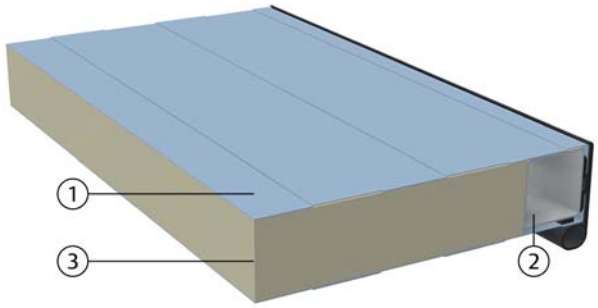
1.2 Door leaves

1.2.1 Construction

The ASSA ABLOY FD2250P folding door comprises vertical door leaves, connected together with hinges. Rollers are installed on the top of the middle door leaf. The rollers run in the top track to enable opening and closing of the door.

1.2.2 Material

The sections are made of steel profiles, cladded with sheet metal panels, insulated with CFC free polystyrene foam.



1) Rilled steel sheet
2) Steel frame
3) CFC free polystyrene insulation

1.2.3 Colors

The ASSA ABLOY FD2250P folding door is available in any color on request.

1.2.3.1 Standard colors

As a standard, the ASSA ABLOY FD2250P folding door door is available in 7 pre-coated colors.

	RAL 3002
	RAL 5010
	RAL 7016
	RAL 9002
	RAL 9005
	RAL 9006
	RAL 9007

1.2.3.2 Optional colors

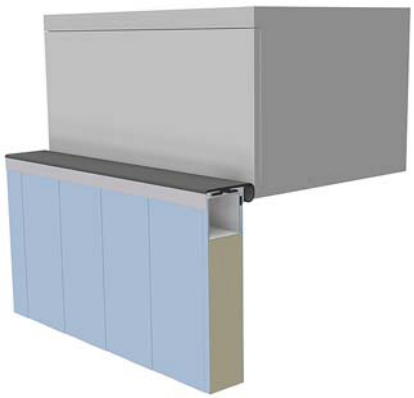
- Factory painting, all RAL colors, including metallic colors
- Factory painting, acc. to color sample

1.2.4 Seals

The door is equipped with well designed seals on all sides that gives the door its excellent sealing abilities.

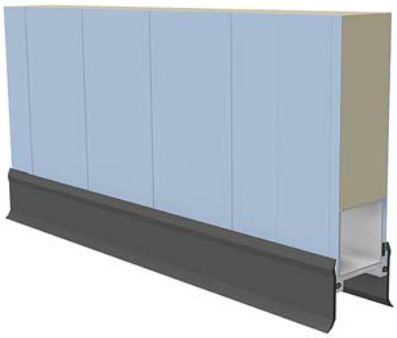
1.2.4.1 Top seal

Installed at the top of all door leaves, the top seal provides continuous pressure on the wall when the door is closed, ensuring maximum sealing.



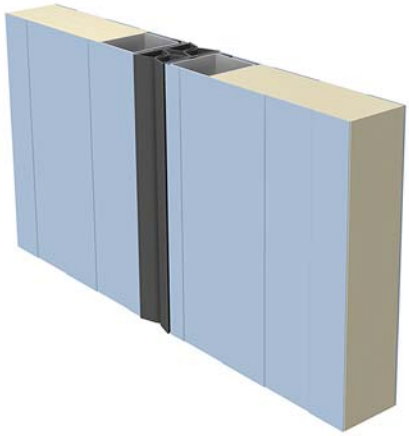
1.2.4.2 Bottom seal

Installed on the bottom edge of each door leaf, the bottom seal provides continuous pressure on the floor, ensuring maximum sealing.



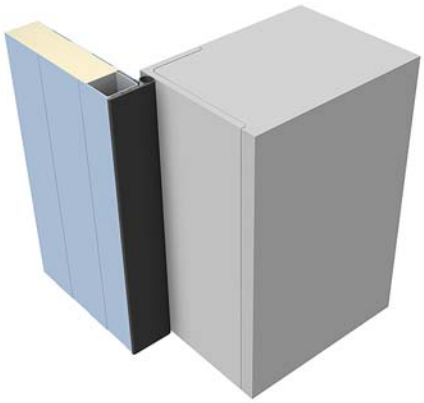
1.2.4.3 Seal between hinged leaves

Installed between each pair of door leaves, the middle seal provides continuous pressure on the adjacent door leaf's seal when the door is closed, ensuring maximum sealing.



1.2.4.4 Side seal

Installed on the sides of the outer door leaves, the side seal provides continuous pressure on the wall when the door is closed, ensuring maximum sealing.



1.2.5 Hardware

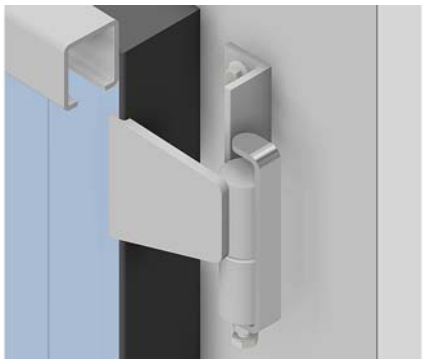
Robust and stable construction made of galvanized steel tubes. Designed for easy movement of the folding door and long life time.

1.2.5.1 Upper track

The upper track guides the door leaves to fold into position. It is made of galvanized steel

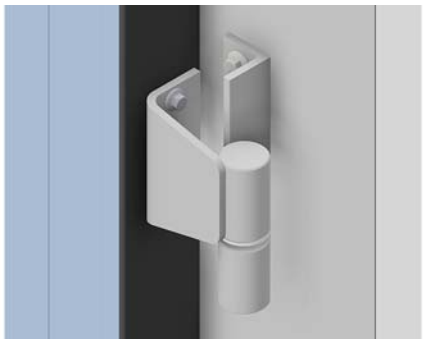
1.2.5.2 Top hinge

The top hinges support the weight and the movement of the door leaf. Standard: Galvanized steel. Option: Stainless steel.



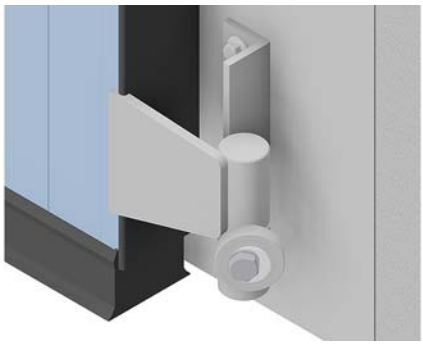
1.2.5.3 Wall hinge

The middle and lower wall hinges support the movement of the door leaf. Standard: Galvanized steel. Option: Stainless steel.



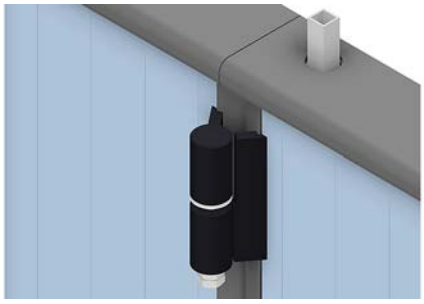
1.2.5.4 Bottom wall hinge

The bottom wall hinges are lifting hinges, lifting the door 10 mm to reduce friction and wear of the bottom seal. Standard: Galvanized steel. Option: Stainless steel.



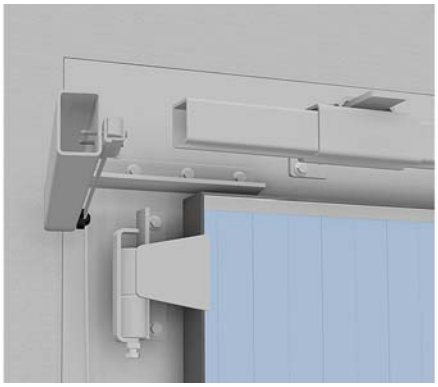
1.2.5.5 Hinge between door leaves

Hinges between door leaves keep the door leaves connected to each other. A reinforcement in the door leaf ensures maximal lifetime. Standard: Galvanized steel. Option: Stainless steel.



1.2.5.6 Autolock for open position

An autolock prevents unexpected movement when the door is fully opened. Pulling the rope releases the autolock.



1.2.6 Handles and locks

The ASSA ABLOY FD2250P folding door can be opened and closed by hand, using a solid, easy to grip handle and a cremone lock.

1.2.6.1 Handle

For manual operation the ASSA ABLOY FD2250P folding door is supplied with a solid, easy to grip handle. The auto lock secures the door in the open position and must be released to close the door.

1.2.6.2 Locks

Cremone lock

The standard cremone lock has an inside handle and can lock the door without the use of a key. Optionally an outside handle can be installed. There are several other options available for external and internal cremone.

Cylinder lock

For extra security a cylinder can be installed in combination with the cremone lock.

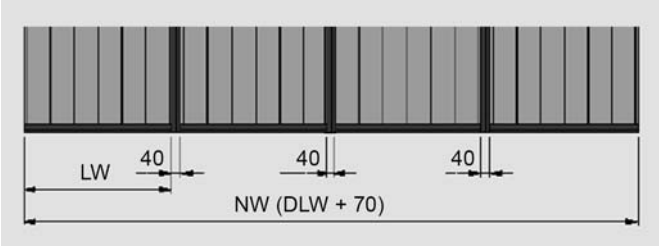
1.3 Dimensions

1.3.1 Manual door

The manually operated ASSA ABLOY FD2250P folding door is delivered in the following size range:

	Min	Max
DLW (daylight width):	1.265 mm	7.500 mm
DLH (daylight height):	1.850 mm	6.000 mm
LW (leaf width)*:	620 mm	1.237 mm

* Width excluding sealings
**The total width of the door is equally divided over the leaves at interval steps of 1 mm



Fixed dimensions

Folding sealing	40 mm
Edge sealing (opened, per side)	20 mm
Middle sealing (closed, total)	40 mm
Overlap outside DLW (per side)	35 mm

Example calculation

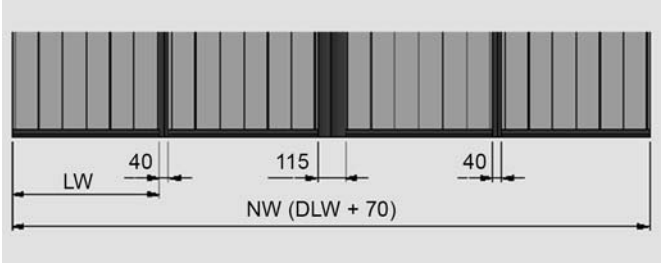
Configuration 2+2 manual, DLW 3.000 mm
3.000 mm + 70 mm overlap = 3.070 mm
3.070 mm – (3 x 40 mm seal) = 2.950 mm
2.950 mm / 4 door leaves = 738 mm leaf width

1.3.2 Power operated door

The power operated ASSA ABLOY FD2250P folding door is delivered in the following size range:

	Min	Max
DLW (daylight width):	1.400 mm	5.000 mm
DLH (daylight height):	2.500 mm	6.000 mm
LW (leaf width)*:	620 mm	1.218 mm

* Width excluding sealings
**The total width of the door is equally divided over the leaves at interval steps of 1 mm



Fixed dimensions

Folding sealing	40 mm
Edge sealing (opened, per side)	60 mm
Middle sealing (closed, total)	115 mm
Overlap outside DLW (per side)	35 mm

Example calculation

Configuration 2+2 power operated, DLW 3.000 mm
3.000 mm + 70 mm overlap = 3.070 mm
3.070 mm – (2 x 40 mm) – 115 mm seal = 2.805 mm
2.805 mm / 4 door leaves = 702 mm leaf width

1.4 CEN Performance

1.4.1 Lifetime expectation

100.000 door cycles or 20 years (in a normal industrial environment and with the recommended annual service check)

1.4.2 Resistance to windload

EN12424		
DLW 4000 mm x DLH 3300 mm		Class 5 manual, without passdoor
DLW 5000 mm x DLH 3300 mm		Class 3 electric, without passdoor
Class	**Pressure Pa (N/m^2)**	**Specification**
0	-	No performance determined
1	300	
2	450	
3	700	
4	1000	
5	> 1000	Exceptional : Agreement between manufacturer and supplier

1.4.3 Resistance to water penetration

EN12425		**Without passdoor**
Test result		Class 3
Class	**Pressure Pa (N/m^2)**	**Specification**
0	-	No performance determined
1	30	Waterspray for 15 minutes
2	50	Waterspray for 20 minutes
3	> 50	Exceptional : Agreement between manufacturer and supplier

1.4.4 Air permeability

EN12426	**Without passdoor**
Test result	Class 5
Class	**Air permeability dp at a pressure of 50 Pa ($m^3/m^2/h$)**
0	-
1	24
2	12
3	6
4	3
5	1,5
6	Exceptional : Agreement between manufacturer and supplier

1.4.5 Thermal transmittance

EN12428	**Without passdoor**
Thermal transmittance	1,1 W/m^2K*

* These values are calculated values for a complete, installed, door of 5000 x 5000 mm.

1.4.6 Operating forces and safe openings

EN12453 & EN12604	**Crushing force N**	**Crushing force N**	**Crushing force N**
Opening gap mm	200 mm from lateral border right from outside	In the middle of the door opening	200 mm from lateral border left from outside
50 N	passed	passed	passed
300 N	passed	passed	passed

The crushing force is the force needed for the safety edge to be activated. The maximum force allowed, according to EN12453 safety in use of power operated doors, is 400 N within a period of time of 0.75 s.

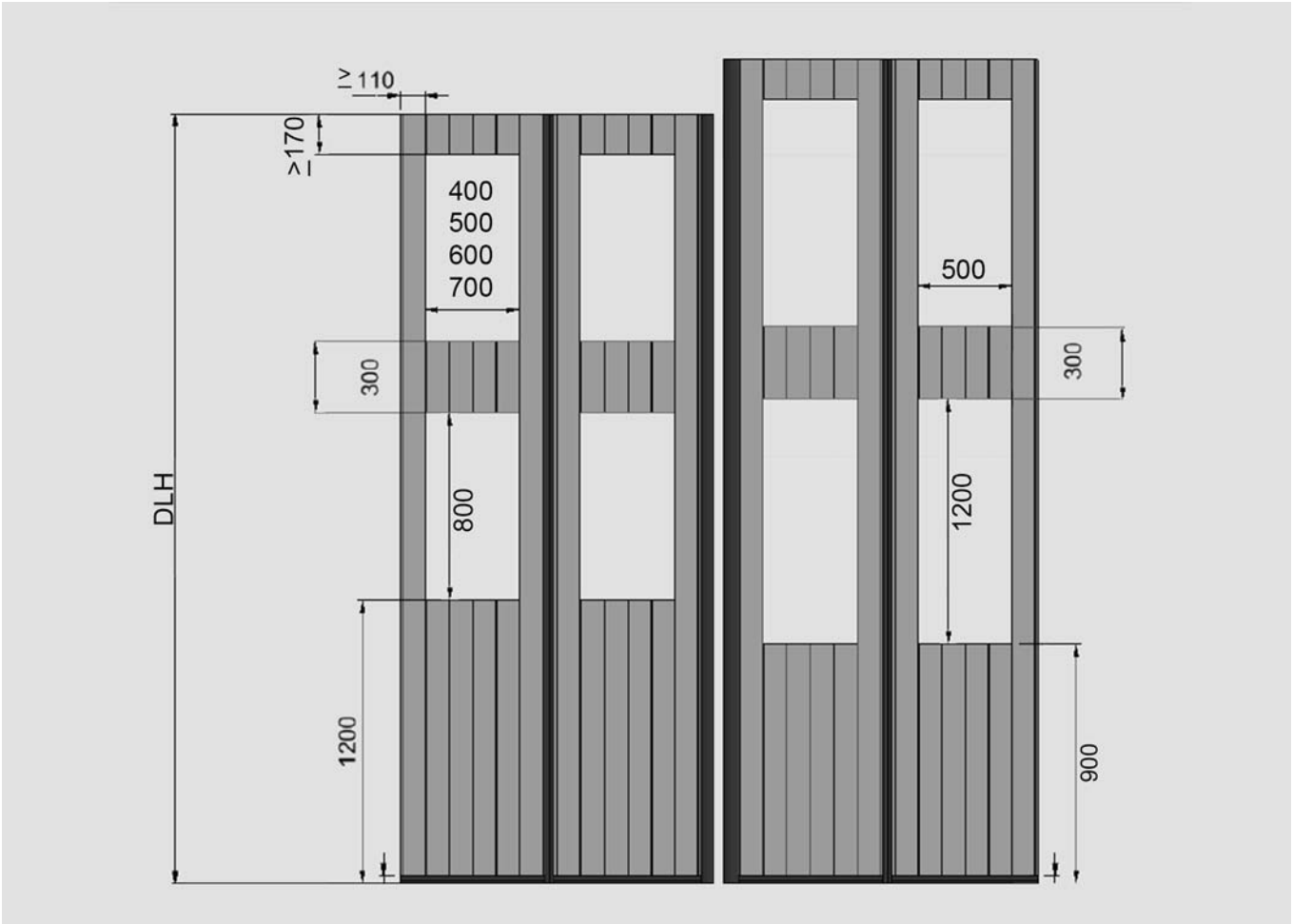
2. Available Options

2.1 Windows

The frame construction allows windows in all door leaves. The light opening depends on the dimensions of the door leaf.

Window specifications

- Double-sided insulated hardened glass, rectangular
- Window frame: black aluminium
- Window frames are burglar proof
- Option: Energy glass filled with argon gas
- Option: Hardened glass



Window size (WW x WH)	400 x 800	500 x 800	600 x 800	700 x 800	500 x 1.200
Min. LW excluding sealing	620	720	820	920	720
Min DLH 1 row	2.170	2.170	2.170	2.170	2.270
Min DLH 2 rows	3.270	3.270	3.270	3.270	3.770
Min DLH 3 rows	4.370	4.370	4.370	4.370	5.270

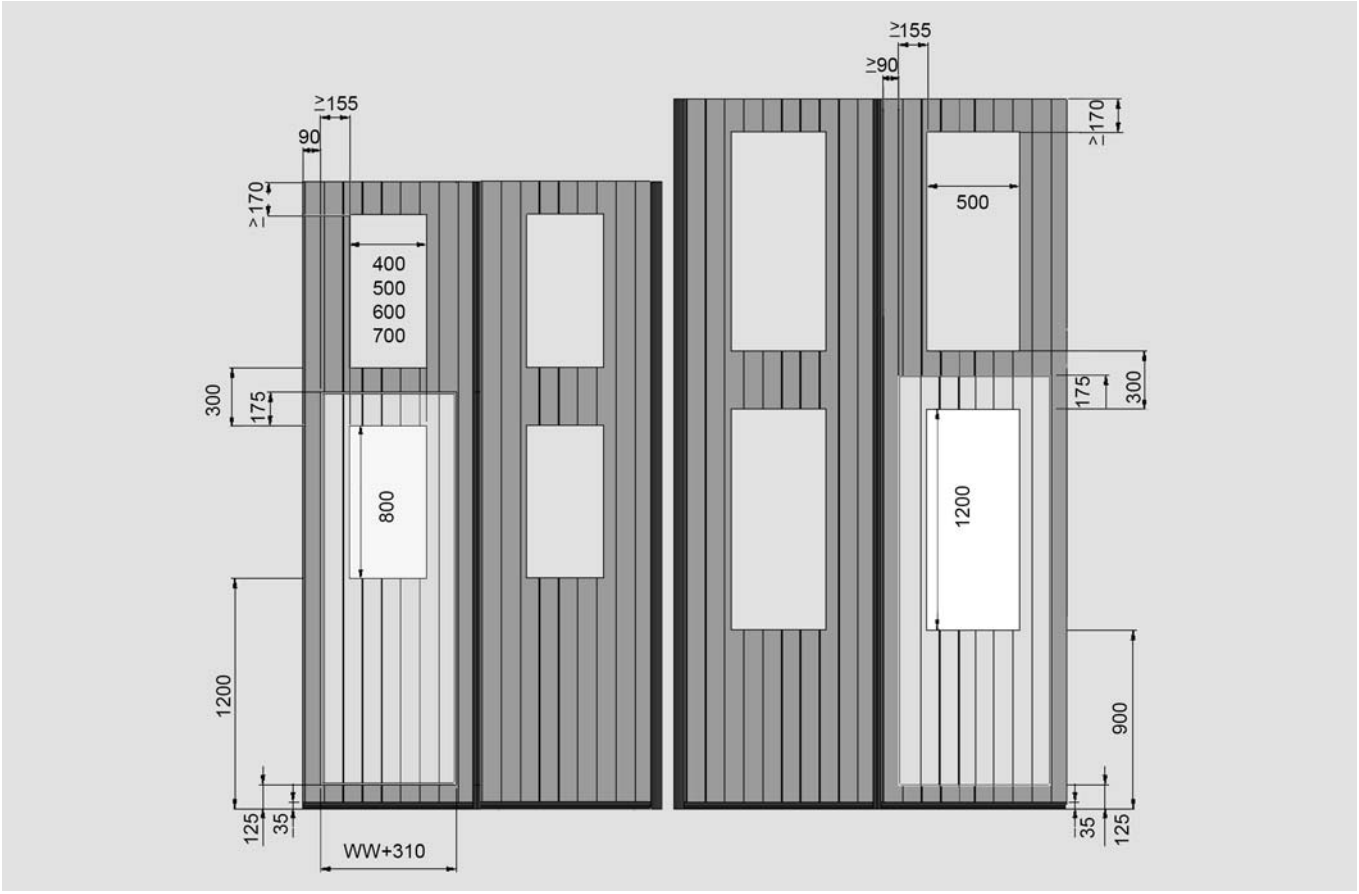
2.2 Passdoor in door leaf

For easy access the ASSA ABLOY FD2250P folding door can be delivered with a passdoor. It is also possible to have a door leaf as passdoor in cases where the door has a single leaf or an uneven numbers of leafs on one side.

The passdoor is designed with a handle that ensures easy opening and closing of the passdoor.

Features:

- Always opening outwards, min. 90 degrees opening
- Hinged left or right
- Seals in passdoor frame reduce air permeability
- All commonly used lock cylinders are available on request: Euro, ABLOY, ASSA
- Optimized width
- Black aluminium frame
- Hinges made of galvanized steel

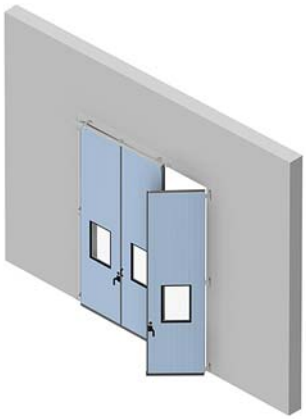


Passdoor dimensions

Window size		No windows	400x800	500x800	600x800	700x800	500x1.200
Passdoor width min		600	710	810	910	1.010	810
Passdoor width max	Manual	1.057	1.057	1.057	1.057	1.057	1.057
	Electric	1.038	1.038	1.038	1.038	1.038	1.038
Door leaf width min		780	890	990	1.090	1.190	990
Door leaf width max	Manual	1.237	1.237	1.237	1.237	1.237	1.237
	Electric	1.280	1.218	1.218	1.218	1.218	1.218
Min DLH		2.345	-	-	-	-	-
Min DLH 1 row		-	2.345	2.345	2.345	2.345	2.445
Min DLH 2 rows		-	3.270	3.270	3.270	3.270	3.770
Min DLH 3 rows		-	4.370	4.370	4.370	4.370	5.270

2.3 Door leaf as a passdoor

The passdoor does not have a threshold and is delivered with a cremone lock as standard. The cremone handle ensures easy opening and closing of the passdoor. All commonly used cylinder locks are also available on request.



Features:

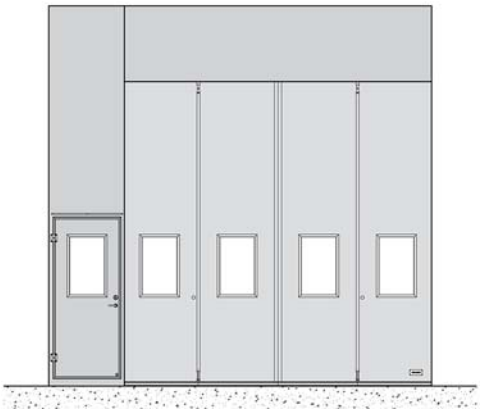
- No threshold
- Opening direction depends on installation side
- Only manually operated doors
- Cremone lock or standard cylinder lock
- All commonly used lock cylinders are available on request: Euro, ABLOY, ASSA
- Max. allowed height of the door leaf: 3200 mm

2.4 Fixed sections

Fixed sections can advantageously fill space around new doors that are smaller than the wall opening. Fixed sections are available in top and side sections. Fixed sections are supplied in the same color and construction as the door leaf.

2.4.1 Fixed sections options

	Minimum size in mm (Daylight width - Daylight height)
Passdoor	600 - 2076
Side panel with passdoor	820 - 2085
Side panel without passdoor	820 - 1850
Top panel	820 - 250
	Maximum size in mm (Daylight width - Daylight height)
Passdoor	980 - 2500
Side panel with passdoor	1200 - 6000
Side panel without passdoor	1200 - 6000
Top panel	1200 - 6000



2.5 Electrically operated door

2.5.1 Electrical operation

The ASSA ABLOY FD2250P folding door with a configuration 2+0, 0+2 or 2+2 can be supplied or upgraded with an electrical operating system. The system consists of a mechanical transmission unit with an electrical operator and a control unit. Electrical operation gives access to the full program of Access and Automation functions, that can fulfill many operational needs related to traffic type and frequency, door weight, and temperature control.

2.5.2 Selection guidelines for operation type

Door size m²	**Openings / day**			
	1-5/day	5-10/day	10-15/day	>25/day
0 – 10	□ / ■	□ / ■	■ / ■	■ / ■
10 – 20	□ / ■	■	■ / ■	■ / ■
> 20 - 42	■	■	■ / ■	■ / ■
> 42*	□	□	□	□

□ Manual operation

■ Electrical operation

■ Automated operation

2.5.3 CDM9 FD Operating system

The CDM9 FD operating system is a combination of the CDM9 FD Operator and a 950 door control system.

2.5.3.1 CDM9 Operator

The CDM9 FD Operator is an electric motor that drives the door via a mechanical transmission unit. It can be retrofitted to an existing ASSA ABLOY folding door if the door is configured for electrical operation. The CDM9 FD Operator is installed directly on the mechanical transmission unit and does not require any special wall reinforcement. On the FD2050FCW the transmission unit is built from anti-corrosive parts to ensure a long life in a humid environment.

Key features:

- Smooth and silent
- Soft start and stop
- Life time: 100.000 door cycles.

2.5.3.2 Door operation

950 door control system

The standard 950 door control system is fully prepared for one or more physical upgrades from the entire range of automation systems. An automation system allows door operation by sensors or remote control.

This control unit contains a 3-digit diagnostics display that allows efficient troubleshooting and displays the number of door cycles completed. The number on the display shows numbers of door openings x1000. Yellow led in the lid indicates that the maintenance interval has been achieved. Factory setting is 20 000 cycles/365 days. A lit dot in the lower right corner of the display indicates that automatic closing is activated. A flashing dot in the lower right corner of the display indicates that the door has reversed five times in a row during automatic closing on force/main safety edge. Together with the service indicator, this extra feature allows advanced maintenance planning for users where the door is an essential element of internal logistics.

Additional functions such as magnetic loop, photocells, radar and radio are available.

950 door control system functions

Functions	950 FD
	
Open (by impulse)	■
Stop	■
Close (by impulse)	■
Safety edge	■
Open function	■
One button function	■
Display (diagnostics)	■
Service indicator	■

950 door control system - Selection guidelines for automation

The “Automation D-kits“ are packages of common combinations. These kits can also be supplemented by “additions to D-kits“.

Automation D-kits	D1	D2	D3	D4	D5	D6
Interlocking	■	■	■	■	■	■
Magnetic loop		■		■		■
Traffic lights - Green + Red					■	■
Warning lights - Red	■			■		
Additions to D-kits						
Warning lights – Green	□	□	□	□		
Traffic lights - Green + Red	□	□	□	□		
Relay box	□	□	□	□	□	□
Radar	□	□	□	□	□	□

■ Standard
□ Option / Available

The following options can be individually selected to add functionality to the control unit.

Functions optional	950 FD
	
Complete kits	
Automation D-kits	□
Basic control functions	
Interlocking	□
External control functions	
External push-button box	□
Pull-rope switch	□
Remote control open/stop/close	□
Remote control 1-button function	□
Automatic control functions	
Automatic closing	□
Photocell open door	□
Safety functions	
Safety photocells 1-2	□
Additional functions	
UPS Battery backup	□
Relay box	□

■ Standard
□ Option / Available

2.5.4 Access and automation

ASSA ABLOY offers a wide range of functions that allows advanced opening and safety control.

2.5.4.1 Basic control functions

Interlocking

Developed for climate control or safety; If door A is open, door B cannot be opened. If door B is open, door A cannot be opened. An interlocked door can remember an up-command, if selected via a micro switch.

2.5.4.2 External control functions

External push button box

An extra control box is installed outside the building or inside close to the door if the main control unit needs to be installed away from the door opening.
Installed on the inside or outside wall beside the door.

Pull-rope switch

A pull-rope switch above the door opening can be operated from e.g. a forklift truck. Pulling the rope opens a closed door or closes an opened door.
Installed on the inside construction above the door.

Remote control

A hand-held radio transmitter allows door operation from a vehicle or any position within 50-100 meters from the receiver and aerial at the door. For closing, the door can be provided with a photocell beam.
Receiver installed in control unit, antenna installed on the wall beside the door.

2.5.4.3 Automatic control functions

Automatic closing

A programmable timer that closes the door after a specified time, counted from either the fully open position and/or from passing through the photocell beam.
Adjustable micro switches in control unit.

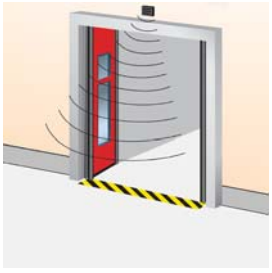
Magnetic loop

A sensor in the floor detects a metal object (usually forklift trucks, pallet trucks) and opens the door automatically. This is an ideal solution for frequent vehicle traffic.
Installed on the outside, inside or both sides of the door in the floor.

Photocell open door

A set of photocells on pillars, on each side of the door. When a person or vehicle passes between the photocells, the beam is interrupted and the door opens.
Photocells installed on pillars, away from the door.

Radar



An infrared sensor above the door detects an object (person, vehicle) within a specified distance from the door and opens the door automatically. This is an ideal solution for frequent vehicle or personal traffic. Often combined with automatic closing.
Installed on the inside or outside wall above the door.

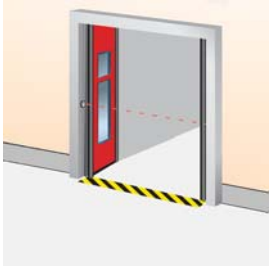
2.5.4.4 Safety functions

Safety edge

As a standard, all doors that have the impulse-open function or any form of automated closing, are equipped with a safety edge. The pneumatic sensor in the safety edge seal detects any obstruction between a closing door and reverses the door.

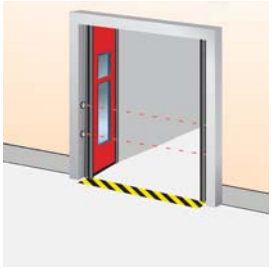
Installed in the safety edge seal.

Safety photocells 1-channel



A set of a photocell transmitter and receiver is installed in the door opening. If the photocell beam is interrupted during closing, the door will stop in less than 30mm and reverse to the fully open position.
Installed in the door opening.

Safety photocells 2-channel



Two sets of photocell transmitter and receiver are installed in the door opening. If one or both photocell beams are interrupted during closing, the door will stop in less than 30mm and reverse to the fully open position.
Installed in the door opening.

Warning lights - Green

One or two green warning lights indicating the open position of the door by continuous light signal.
Installed on the inside and/or outside wall beside the door.

Warning lights - Red

Two red warning lights giving information on the current door behaviour. Flashing light before or during door movement. Optional: Continuous light before and during door movement.
Installed on the inside and outside wall beside the door.

Traffic lights - Red & Green

If traffic through a door needs to be directed; two red and two green traffic lights can be installed to indicate traffic direction. From the side where a vehicle is first detected to approach the door, the green traffic light comes on. The opposing side shows a red traffic light. Traffic from this direction must give way to the other. Usually installed in e.g. parking garages.
Installed on the inside and outside wall beside the door.

2.5.4.5 Additional functions

UPS battery backup

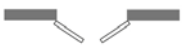
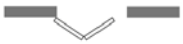
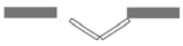
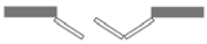
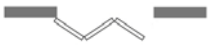
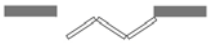
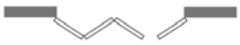
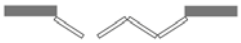
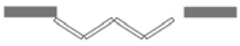
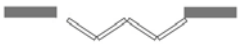
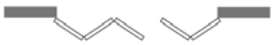
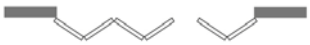
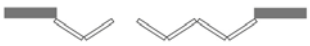
When mains failure cannot be permitted or an increased risk of mains failure is predicted, the UPS battery backup system can be installed to store enough energy for 5 door cycles.
Installed on the inside wall beside the door.

Relay box

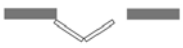
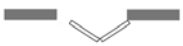
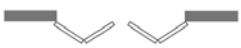
A sealed connection box makes it possible to safely connect external high-voltage equipment.

3. Specifications

3.1 Configurations manually operated

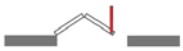
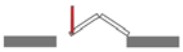
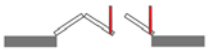
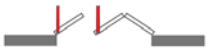
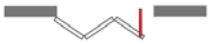
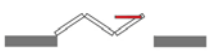
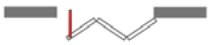
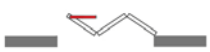
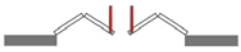
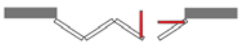
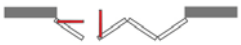
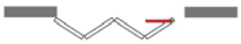
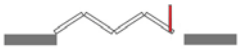
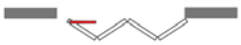
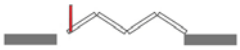
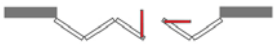
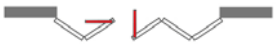
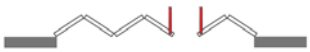
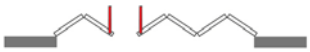
Configuration	Dimensions (DLW)	Dimensions (DLH)	Door assembly
1 + 1	1185 mm - 2400 mm	1850 mm - 4000 mm	
2 + 0	1265 mm - 2500 mm	1850 mm - 6000 mm	
0 + 2	1265 mm - 2500 mm	1850 mm - 6000 mm	
2 + 1	1870 mm - 3700 mm	1850 mm - 6000 mm	
1 + 2	1870 mm - 3700 mm	1850 mm - 6000 mm	
3 + 0	1885 mm - 3700 mm	1850 mm - 6000 mm	
0 + 3	1885 mm - 3700 mm	1850 mm - 6000 mm	
2 + 2	2530 mm - 5000 mm	1850 mm - 6000 mm	
3 + 1	2530 mm - 5000 mm	1850 mm - 6000 mm	
1 + 3	2530 mm - 5000 mm	1850 mm - 6000 mm	
4 + 0	2585 mm - 5000 mm	1850 mm - 6000 mm	
0 + 4	2585 mm - 5000 mm	1850 mm - 6000 mm	
3 + 2	3190 mm - 6300 mm	1850 mm - 6000 mm	
2 + 3	3190 mm - 6300 mm	1850 mm - 6000 mm	
4 + 2	3850 mm - 7500 mm	1850 mm - 6000 mm	
2 + 4	3850 mm - 7500 mm	1850 mm - 6000 mm	

3.2 Configurations electrical operated

Configuration	Dimensions (DLW)	Dimensions (DLH)	Door assembly
2 + 0	1400 mm - 2500 mm	2000 mm - 6000 mm	
0 + 2	1400 mm - 2500 mm	2000 mm - 6000 mm	
2 + 2	2600 mm - 5000 mm	2000 mm - 6000 mm	

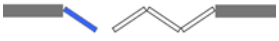
3.3 Configurations for passdoor in door leaf

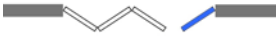
The passdoor in the door leaf is available in below configurations.

Configuration	Door Inside	Door Outside
2 + 0		
0 + 2		
2 + 1		
1 + 2		
3 + 0		
0 + 3		
2 + 2		
3 + 1		
1 + 3		
4 + 0		
0 + 4		
3 + 2		
2 + 3		
4 + 2		
2 + 4		

3.4 Configurations for door leaf as a passdoor

The door leaf as passdoor is available in below configurations.



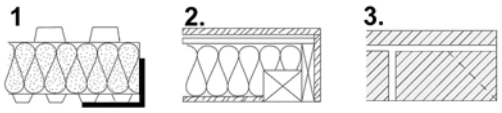


4. Building and space requirements

4.1 Building preparations

4.1.1 Installation preparations

The ASSA ABLOY FD2250P folding door is shipped in parts and installed on-site. All necessary installation material is included. For every building type ASSA ABLOY offers specific installation kits to install the door in the building facade.
To install the door a solid concrete, wood or steel installation surface is required.



1) Steel, 4 mm steel L-profile, 100 x 70 mm
2) Wood, min. thickness 200 mm
3) Brick & Concrete, min. thickness 100 mm

4.1.2 Electrical preparations

The manually operated door needs no electrical supply.
For an electrically operated door, the following environment criteria and electrical supplies are required for the operator to function properly:

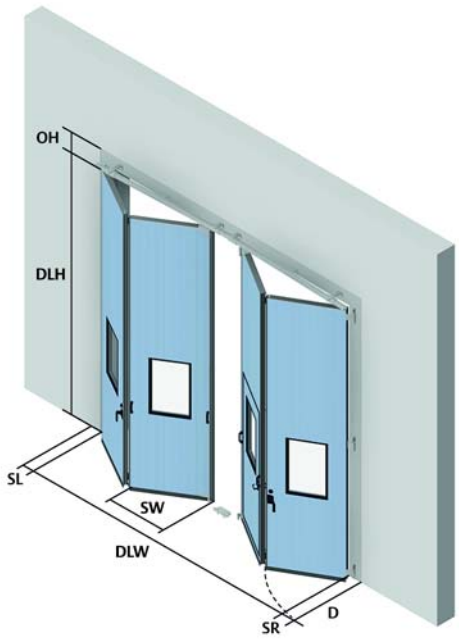
	CDM9 FD
Voltage supply: (+/- 10%)	230V AC 1-phase 50/60Hz, 2 A, fuse 10 A
Power supply:	0,5 kW
Degree of protection:	IP65 mech. Unit, IP55 control unit (Excluding the CEE-plug which is IP44)
Max. allowed total weight of door leaves:	750 kg
Working temperature range:	-20 °C to +60 °C*
Operating factor:	ED = 30% S3 10 min, non-continuous S3 10 min. intermittent
Installation preparations:	-

*) Normal opening speed in temperatures down to -8°C. In the temperature range -8 °C to -20 °C the opening speed is reduced during the first cycle in a two-hour period to prolong the operator's lifetime. An optional heating element is available for a working range down to -30 °C

4.2 Space requirements

4.2.1 Dimension terminology

DLW	=	Daylight Width	The width of the clear opening.
DLH	=	Daylight Height	The height of the clear opening.
OH	=	Headroom	The space required above the daylight height.
SL	=	Side space Left	The space required beside the daylight width.
SR	=	Side space Right	The space required beside the daylight width.
D	=	Depth	The space required to move the door leaves.
DLO	=	Daylight Opening	Free opening, 90°
SW	=	Section / leaf width	The width of a single door leaf.



4.2.2 Space requirements manual doors

Configuration	SL	SR	OH	OH - Cover	DLO - Door Inside	DLO - Door Outside
1 + 1	160	160	70	140		
0 + 2	50	200	160	200		
2 + 0	200	50	160	200		
2 + 1	200	200	160	200		
1 + 2	200	200	160	200		
3 + 0	200	50	160	200	DLW -150 mm	DLW -150 mm
0 + 3	50	200	160	200	DLW -150 mm	DLW -150 mm
2 + 2	200	200	160	200		
3 + 1	200	200	160	200	DLW -150 mm	DLW -150 mm
1 + 3	200	200	160	200	DLW -150 mm	DLW -150 mm
4 + 0	200	50	160	200	DLW -320 mm	DLW -260 mm
0 + 4	50	200	160	200	DLW -320 mm	DLW -260 mm
3 + 2	200	200	160	200	DLW -150 mm	DLW -150 mm
2 + 3	200	200	160	200	DLW -150 mm	DLW -150 mm
4 + 2	200	200	160	200	DLW -320 mm	DLW -260 mm
2 + 4	200	200	160	200	DLW -320 mm	DLW -260 mm

D	= (DLW ÷ number of sections) + 180 mm

Dimensions in mm.

4.2.3 Space requirements electrically operated doors

No plastic cover on operator

Configuration	Operator position left			Operator position right			Operator position center		
	SL	SR	OH	SL	SR	OH	SL	SR	OH
0+2	150	320	240	50	500	240	N.A.	N.A.	N.A.
2+0	450	50	240	320	200	240	N.A.	N.A.	N.A.
2+2	450	320	240	320	500	240	320	320	380

With plastic cover on operator

Configuration	Operator position left			Operator position right			Operator position center		
	SL	SR	OH	SL	SR	OH	SL	SR	OH
0+2	170	320	270	50	540	270	N.A.	N.A.	N.A.
2+0	470	50	270	320	240	270	N.A.	N.A.	N.A.
2+2	470	320	270	320	540	270	320	320	390

* Dimensions in mm.

4.2.4 Depth

The minimal required depth (DLW ÷ number of sections) + 180 mm. All indicated dimensions are based on exact width and height dimensions only. The space necessary for mounting and maintenance has to be provided.

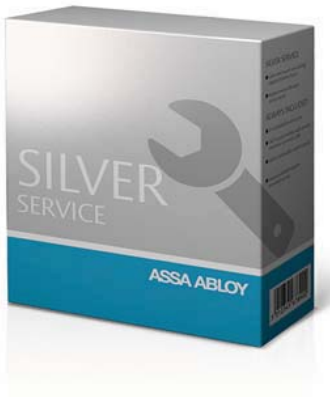
5. Service you can rely on

Gold

The ultimate protection

With full coverage, Gold Service enables you to plan and budget your expenses annually.

- Spare parts for emergency calls
- Labor and travel costs for emergency calls
- Replacement of components according to preventive maintenance schedule and to fulfill legislative and safety requirements



Silver

Added advantages

With cover for all service calls during business hours, Silver Service offers you peace of mind.

- Labor and travel costs for emergency calls
- Preventive maintenance

Bronze

Scheduled Service

With scheduled on site visits, Bronze Service means you know that your doors and docking systems will be regularly serviced and inspected.

- Preventive maintenance

Included in all packages			
1-4 scheduled maintenance visits per year	24/7 priority service hotline and fast response	Safety, compliance and quality control checks	Documentation reports provided on site

Expert service you can rely on

A healthy business enjoys a steady flow of goods, services and people through its entrances every day. But heavy traffic puts entrances under pressure as every component works to keep them running.

ASSA ABLOY Entrance Systems offer the industry's most complete, flexible service solutions. Because even something as robust and well-engineered as an ASSA ABLOY door or docking system needs to be serviced to stay in great working order.

Pro-active care packages

An ASSA ABLOY service agreement gives you service you can rely on. We have specialized local service technicians on call to take care of your service needs. Equipped with a wide range of spare parts and expertise, to keep your industrial doors and docking systems running.

With an ASSA ABLOY service agreement you can ensure reliable, safe and sustainable operations at every entrance under your agreement, including doors and docking systems, independent of brand.

ASSA ABLOY e-maintenance™ (optional add-on)

For an online overview of your entrance systems and history, add ASSA ABLOY e-maintenance™ to your service package for:

- Easy access to real-time data on all your doors
- Planning, order and service information
- Overview that helps you control lifecycle costs

Index

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

ASSA ABLOY Entrance Systems provides solutions for efficient and safe flow of goods and people. Our offering includes a wide range of automated pedestrian, industrial and residential doors, loading dock equipment, perimeter fencing and service.

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