User manual

Revolving doors

ASSA ABLOY RD200-3-5 / RD200-4-5

ASSA ABLOY
Entrance Systems

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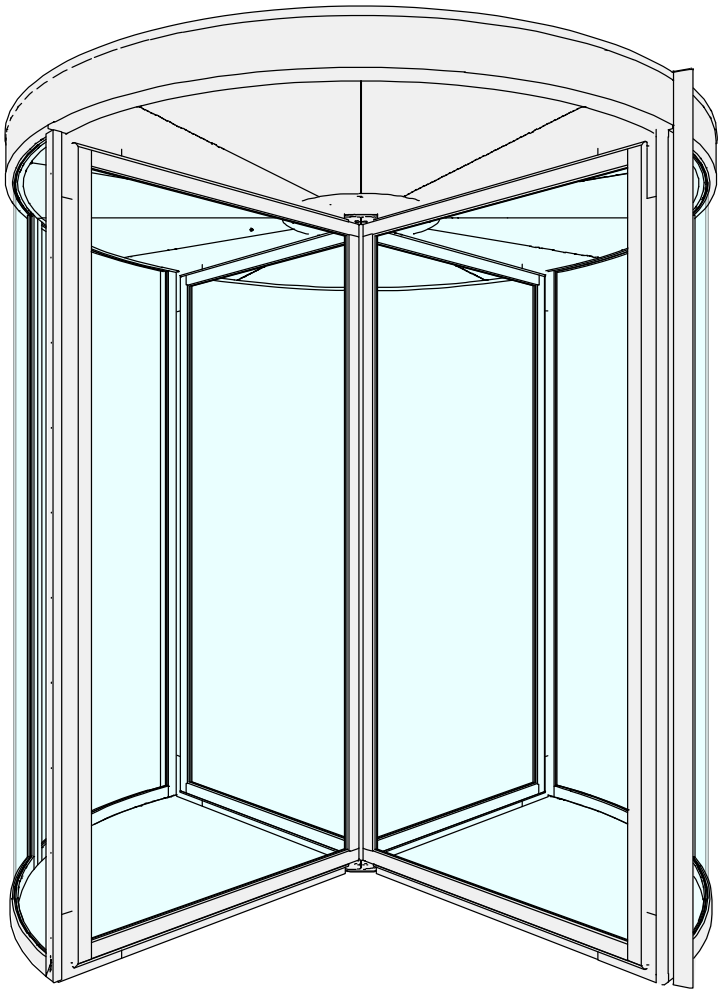

Original instructions

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Table of Contents

List of abbreviations

BOK
: Breakout kit

CDC
: Configurable door controller

DoC
: Declaration of conformity

DoI
: Declaration of incorporation

DSR
: Direction sensing radar

LED
: Light emitting diode

MPV
: Multipoint locking device

PDR
: Photo direct reflection

PE
: Protective earth

PIR
: Passive infrared motion sensor

PSK
: Phase-shift keying

PS-RD
: Program selector - revolving door

1 Safety

1.1 Presentation of warning signs

DANGER

Warning against an imminent or latent hazardous situation that can lead to electric shock and cause serious injury or death.

DANGER

Warning against an imminent hazardous situation that can lead to severe injury or death.

WARNING

Warning against a latent hazardous situation that can lead to severe injuries or death and cause substantial property damage.

CAUTION

Warning against a potential hazardous situation that can lead to minor personal injury and property damage.

NOTICE

Useful advice and information to make sure of a correct and efficient workflow of the system.

1.2 General hazards

The system can cause the hazards in this section even when it is used as intended.

To reduce the risk of malfunction, damage to property or injury to persons and to avoid dangerous situations, the safety instructions listed here must be observed. Save this manual for future reference.

The specific safety instructions in the other sections of this manual must also be observed.

DANGER

Electric current.

In case of contact with live parts, there is an immediate danger to life because of electric shock. Damage to or removal of the insulation or individual components can be life-threatening.

- Make sure that only approved personnel work on the electrical system.
- Make sure that all poles are voltage free and that this is maintained for the duration of the work.
- Disconnect all poles from voltage before you start the work (cleaning, maintenance, replacement) on active parts of the electrical systems and the equipment.
- Keep moisture away from live parts. This can lead to a short circuit.
- Do not bridge fuses or put them out of operation.
- Do not connect the power supply or a battery until all work has been completed.
- Do not use a damaged supply cord. Only the manufacturer, its service agent or a similarly qualified person is permitted to replace a damaged supply cord.

DANGER

Faulty connection of the mains power supply.

Risk of electric shock and property damage if the mains power supply to the system is not installed with a safe method.

- The mains power supply must be installed with protection (fuse, circuit breaker).
- An all-pole mains disconnection switch with isolating capabilities of Category III must be installed.
- All installation must be done correctly, refer to local regulations.

DANGER

Fire in an electronic system.

Risk of electric shock if you use a water-based fire extinguisher for a fire in an electrical system.

- Use a fire extinguisher of type carbon dioxide (CO_2) or ABC dry powder.

DANGER

Faulty safety devices of the fire protection system.

Danger to life if the safety devices of the fire protection system do not work. This can cause severe injuries or death.

- Do not disconnect the fire protection system from the power supply overnight.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Do not remove safety instructions from the system.
- Do not block, hold open, or otherwise prevent the fire doors from closing.
- Inspect and do a service and maintenance of the fire protection system.
- Always follow the local applicable regulations or the regulations in a maintenance contract.
- Examine and maintain the condition of the fire protection system.

DANGER

Faulty safety devices.

Risk of personal injuries that can lead to death or material damages if the safety devices are faulty, manipulated, or put out of operation.

- Make sure that all safety devices (breakouts, sensors, lock release, and so on) operate correctly.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Examine and perform service and maintenance of the safety devices.
- Always follow the local applicable regulations or the regulations in a maintenance contract.

DANGER

Moving system.

If the system moves, careless behaviour can lead to severe personal injuries to limbs or severance of limbs.

- Do not reach in when parts of the system move.
- Keep a distance when parts of the system move.
- Do not bump into or touch the system when it moves.
- Do not open or remove protective covers during operation.
- Do not permanently remove covers from the system.
- Only carry out inspection, service, maintenance, or cleaning when the system is stationary and the power is OFF.
- Danger points must be safeguarded up to a height of 2500 mm from the floor level.

WARNING

Maintenance and checks during operation.

Risk of personal injuries if the system is in operation during service and maintenance.

- Make sure that the power is OFF and that the system is stationary before you do checks, repairs, service, maintenance, and cleaning.
- Before you start the work, make sure that there are no persons in the system or in the close area of the system..

WARNING

Incorrect use and/or installation.

Incorrect use and/or installation can lead to severe injuries and/or cause substantial material damage.

- Read and obey all instructions regarding safe use and/or assembly.
- Make sure that all connection points between the door system and the building are sufficiently strong, even and level.
- Only use ASSA ABLOY approved components. Other components may have a negative effect on the safety of the system.

WARNING

Heavy parts.

Lifting the heavy parts can cause personal injuries.

- Always be at least two persons when you lift and handle the heavy parts. Refer to local regulations.
- Use the tools provided for lifting.

WARNING

Unapproved persons without supervision using the system.

Risk of personal injuries, malfunction, or material damage to the property if unapproved persons use the system.

- Infants and children under 8 years of age are not allowed to be within the opening area of the system without supervision of an adult.
- Children must not play, climb on, clean, or maintain the system or the fixed/remote controls.
- Children must not play with the system, the fixed controls, or the remote controls.
- Keep children away from the fixed controls and the remote controls.
- Persons with limited physical, sensory, or mental abilities can only use the system under supervision.
- Unapproved persons must have received and understood the instructions on how to use the system.

WARNING

Locked in persons in the building.

Risk of personal injuries and material damage.

- Before the system is set to locked, make sure that the locked area is empty and that no persons are locked in.

WARNING

The system can open, close, or turn unexpectedly.

Risk of material damage or personal injuries because of unforeseen opening, closing, or turning of the system.

- No persons can be present in the opening area of the system.
- Ensure that moving objects such as flags or parts of plants do not enter the detection range of the sensors.
- Do not make any settings on the control unit when the system is in use.
- Make sure that approved personnel immediately correct the errors.
- Remove objects from the opening area.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Do not dash through a closing system.

CAUTION

Incorrect settings.

Incorrect settings can lead to malfunctions, material damage, or personal injuries.

- Do not disconnect the system from the power supply overnight.
- Make sure that only approved personnel adjust the settings.
- Do not disassemble, put out of operation, or manipulate the safety devices.
- Make sure that only approved personnel correct errors.
- Follow locally applicable regulations, or make sure to have a maintenance contract for service and maintenance.

CAUTION

Insufficient cleaning or care.

Insufficient or inattentive cleaning or care of the system can lead to malfunctions, material damage or personal injuries.

- Examine the sensors regularly for dirt and clean them if necessary.
- Regularly remove dirt accumulations from the product and its close surroundings, for example the floor, in the floor rail, or under the floor mat.
- Keep the system free from moisture like water, snow and ice.
- Do not use aggressive or caustic cleaning agents.
- Use road salt or loose chippings only conditionally.
- Put the floor mat without folds and flush with the floor.
- Do not lean or attach equipment required for cleaning purposes, such as ladders or similar, to the system.

CAUTION

Imbalance and damaged parts.

Imbalance, wear, or damage to cables, springs, and fastening parts can cause material damages.

- Inspect the installation during the function- and safety check for imbalance and damaged parts.
- Do not use the equipment if repair or adjustment work needs to be carried out.

CAUTION

Product damage.

If the product packages are not properly stored the product this can lead to personal injuries, material damage or malfunction.

- Always store the packages indoors, in a dry condition at all times during transportation and reloading.
- The package has plastic tarpaulin around it and can be stored outdoors for a shorter while during installation, at the installation site.

NOTICE

Observe and comply with the country-specific regulations.

NOTICE

To prevent not wanted activations of the system, keep the area around the system clear. Moving objects such as flags or parts of plants must not be allowed to enter the detection range of the sensors.

1.3 Product specific hazards

DANGER

In manual operating mode all safety devices but the emergency stop are disabled.

Risk of personal injuries or material damage because of unforeseen opening, closing, or turning of the system.

- Make sure that no person is at risk of injury when the door is moving.
- Make sure that no items are in the way of the door leaves when the door is moving.

WARNING

Entrapment in a compartment.

The door stops with a person in a compartment.

- Push the evacuate button to start the door again.

1.4 Electronic equipment reception interference

The equipment can generate and use radio frequency energy. If the equipment is not installed and used properly it can cause interference to radio, television reception or other radio frequency type systems.

If other equipment does not fully comply with immunity requirements, interference may occur. There is no guarantee that interference will not occur in a particular installation.

If the equipment causes interference to radio or television reception, try to correct the interference:

1. Turn the equipment ON and OFF to determine interference.
2. Reorient the receiving antenna.
3. Move the receiver with respect to the equipment.
4. Move the receiver away from the equipment.
5. Connect the receiver into a different outlet so that equipment and receiver are on different branch circuits.
6. Make sure that protective earth (PE) is connected.

If necessary, consult the dealer or an experienced electronics technician for additional suggestions.

1.5 State of technology

NOTICE

Installation, commissioning, inspection, and maintenance must only be done by approved technicians. We recommend you to have a service agreement.

Record the work in the check list and give it to the customer for safe keeping.

This system was developed using state of the art technology and officially recognized technical safety regulations. The system, depending on its options and variants, comply with the requirements of the Machine Guidelines 2006/42/EG as well as EN 16005 and DIN 18650 (D).

Danger can occur if you do not use the system as intended.

1.6 Personal protective equipment

Use personal protective equipment to protect persons from adverse effects on health. Personnel must wear personal protective equipment during the various work activities on and with the system.

Depending on the place of work and the working environment, the protective equipment varies and must be adapted to the situation. In addition to the protective equipment for specific work, the work site can require other protective equipment (for example a harness).

In hygiene-protected areas, special or additional requirements of personal protective equipment can be necessary. These requirements must be thought of when choosing personal protective equipment. If there is any uncertainty regarding the choice of personal protective equipment, the safety officer must be consulted at the place of work.

1.7 Product liability

To guarantee a reliable and trouble-free operation of the system, only use parts that the manufacturer recommends. The manufacturer declines any liability for damages as a result of unapproved modifications to the system or the use of parts that are not permitted.

Refer to regulations, the responsibility of the owner or caretaker of the equipment are as follows:

- That the equipment operates correctly, so that it gives sufficient protection in regard to safety and health.
- That someone with documented competence in the equipment and in applicable regulations operates and regularly maintains, inspects, and services the equipment.
- That the provided Service log book and Site acceptance test and risk assessment are kept available for maintenance and service records.
- That the inspection covers the emergency opening function (when applicable).
- That the closing force is appropriate for the system size on fire-approved systems (when applicable).

1.8 Warranty

ASSA ABLOY warrants its products to be free from defects in material and workmanship under intended use and service for a warranty time of 12 months, beginning at time of delivery. This warranty extends only to the original buyer of the equipment.

ASSA ABLOY warrants that the software operates substantially in accordance with its functional descriptions and that it has been recorded on non-defective media.

The ASSA ABLOY warranty does not apply to:

- That the software is error-free or operates without interruption.
- General wear and tear on the system.
- Fuses, disposable batteries and glass damage.
- System deviations caused by installers other than ASSA ABLOY.
- System that has been altered or damaged by vandalism or misuse.
- System that has been additionally equipped with non ASSA ABLOY original branded parts and/or spare parts.
- Unnecessary visits due to poor client communication (system working when our technician arrives, reset, power discontinuation).
- Adjustments (closing and opening speed and also detection field radars) due to customer requests (excludes operational adjustments thought to create a hazard).
- Water damage.
- Adverse weather conditions.
- Any damage caused, directly or indirectly, by a circumstance beyond the control of the applicable company within ASSA ABLOY. Damages can be for example industrial dispute, fire, natural disaster, war, extensive military mobilization, insurrection, requisition, seizure, embargo, restrictions in the use of power, and defects or delays in deliveries by sub-contractors caused by any such circumstances.
- Non-compliance with the manufacturers care and the maintenance recommendations may void the warranty.

- ASSA ABLOY approved resellers must extend this warranty to the end-users only, but have no authority to extend a greater or different warranty on behalf of ASSA ABLOY.
- A service agreement with ASSA ABLOY helps to secure the availability of a fully operational system and gives priority at call-out, thus minimizing the time that the equipment is unusable.

1.9 Locking the system

Doors used for emergency escape in buildings such as hospitals and homes for elderly people may not be locked or put in mode selection OFF. In other buildings emergency escape doors may be locked or put in mode selection OFF after it has been verified that all people have exited the building.

Unlock all the mechanical locks before you activate the operator.

2 General information

2.1 Terms and definitions

Term	Definition
Approved personnel	Authorised personnel are entitled to perform the following work: • Disassembly • Assembly • Commissioning • Operation • Audit • Maintenance • Troubleshooting • Decommissioning The approved personnel have several years of professional experience in the technical field, for example, as mechanics or machine fitters. The approved personnel are aware of the residual risks arising from the installation site and, due to their professional training, knowledge, and experience, can carry out the work assigned to them and to independently identify and avoid possible danger points.
Approved representative	The approved representative takes over certain parts of the manufacturer's obligations about fulfilling the requirements of the Machinery Directive. In particular, the approved representative can also place the system on the market and/or sign EC declarations of incorporation.
Life phases	All phases of the system's condition and use are referred to as life phases. This applies from the time the system leaves the factory until it is disposed of.
Manufacturer	The manufacturer is whoever designs and/or builds machinery or incomplete machinery under the scope of the Machinery Directive.
Personnel	All persons who carry out activities on and with the system are referred to as personnel. Personnel can be, for example, the operator, the cleaning staff, or the security staff. The personnel meet the personnel qualifications required by the manufacturer.
Service technician	Experts and specialists or representatives approved by the manufacturer to perform commissioning, maintenance, and servicing.
System	The term is used in these instructions as a synonym for the product. Door operators, revolving doors, sliding doors, gates, and so on are referred to as a system. If information in these instructions refers to a specific type, this is shown accordingly in the text.
System operator	The respective owner is referred to as the system operator, regardless of whether they operate the system as the owner or pass it on to third parties.
User	Users are all the persons who use the system.

2.2 Purpose and use of the instructions

NOTICE

A replacement of the instruction is available from the supplier or on the website.

These instructions are an integral part of the system and enable efficient and safe handling of the system. In order to ensure proper functioning, the instructions must be accessible at all times and kept in the immediate area of the system.

Only the male form has been chosen for reasons of better legibility.

The operator must have read and understood the manual before starting any work. The basic requirement for safe working is to follow the safety instructions and the handling instructions. In addition, the local regulations and safety rules apply.

The manual can be handed over in extracts to instructed personnel who are familiar with the operation of the system.

The illustrations are for basic understanding and may differ from the actual presentation. Specific representations are contained in the drawings.

2.3 Manufacturer

ASSA ABLOY Entrance Systems AB
Box 131
SE-261 22 Landskrona
Sweden
Phone: +46 10 4747 000

2.4 Target groups

WARNING

Risk of injury if the personnel are not approved.

If unapproved personnel work on the system or are in the danger zone of the system, dangers can occur. Severe injuries and substantial material damages can be the consequence.

- Only approved personnel must carry out work on the system.
- Keep unapproved personnel away from danger areas.

This manual is intended for the target groups listed below:

- The person who is responsible for the technical maintenance of this system.
- The person who operates the system every day and has been instructed.

3 Description

3.1 Intended use of the product

The system is designed exclusively for use as a pedestrian passage. The installation must only occur in dry areas. If there are deviations, it is necessary to have proper waterproofing and water drains on the site.

Any other application or use beyond this purpose is not considered to be an intended purpose. The manufacturer bears no liability for any resulting damage; the operator alone shall bear the associated risk.

The intended purpose also includes observation of the operating conditions specified by the manufacturer, in addition to regular care, maintenance and repair.

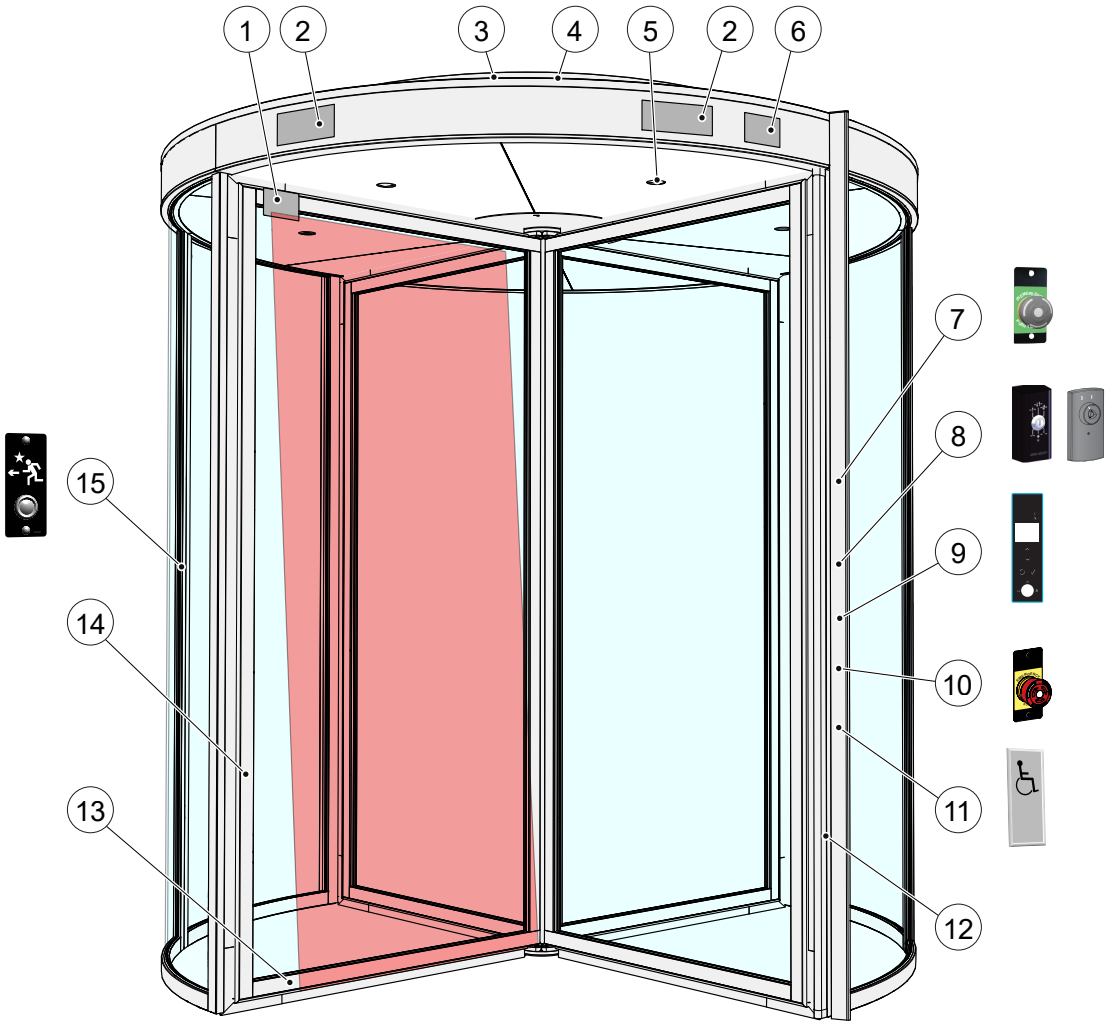
Interventions in or alterations to the installation performed by unapproved maintenance technicians voids the manufacturer's liability for consequential damages.

3.2 Function description

The door is designed so that the operation is not affected or interrupted by winds or by users pushing the doors. The unique control system is developed by ASSA ABLOY specifically for use with ASSA ABLOY products. The result is a fully integrated entrance solution with no compromise in design or function. The system ensures lowest operating and maintenance cost, highest safety, and best availability.

You can get a clear, unimpeded evacuation path through the revolving door if you add an emergency breakout system (available as an option). The emergency breakout system can be integrated with a fire alarm. The door leaves collapse only when required and not under wind pressure. The breakout system can also be very useful for example when bringing long objects through the entrance.

3.3 Overview



Item	Description	Option
1	Presence sensing sensor system, SP59-M, on the rotating door leaves. Refer to Laser presence sensing system, SP59-M on page 23.	Option
2	Activation sensors units. Refer to 4.6 Infrared presence sensing system, PIR on page 22 and 4.7 Direction sensing radar, DSR on page 22.	-
3	Dust protection roof. Maximum load 0 kg. **NOTICE! Do not walk or store any material on the roof.**	-
4	Control unit CDC500, junction and lighting control box, drive unit (above the inner ceiling).	-
5	LED lights. Refer to 4.1 LED lights on page 21.	Option
6	Vertical presence photocell sensor PDR. Refer to 4.8 Vertical presence sensor, PDR on page 23.	Option
7	Emergency opening button. Refer to 4.3 Emergency opening button on page 22.	Option
8	PSK-6U, control unit for lock for automatically closing Night closing doors. Refer to 4.15.2 PSK-6U (option) on page 25. PSK-2, control unit for lock for manually closing Night closing doors. Refer to 4.15.3 PSK-2 (option) on page 25.	Option
9	Program selector, PS-RD . Refer to 6.1 Operating modes on page 28.	-
10	Emergency stop button. Refer to 6.3.1 Emergency stop button on page 40.	-
11	Push button for persons with disabilities. Refer to 4.4 Push button for persons with disabilities on page 22.	Option
12	Active pressure sensitive safety edges on the drum edges. Refer to 4.11 Active safety edges, rubber noses on page 24.	-
13	Active horizontal pressure sensitive safety edges on the door leaves. Refer to 4.10 Safety edges on door leaves on page 24.	Option
14	Active vertical pressure sensitive safety edges on the door leaves. Refer to 4.10 Safety edges on door leaves on page 24.	Option
15	Evacuation button, inside of the outer wall. Refer to 4.5 Evacuation button on page 22.	-

3.4 Signage

CAUTION

Without marking on the moving door leaf the glass pane is difficult to see.

Risk of personal injuries or material damages.

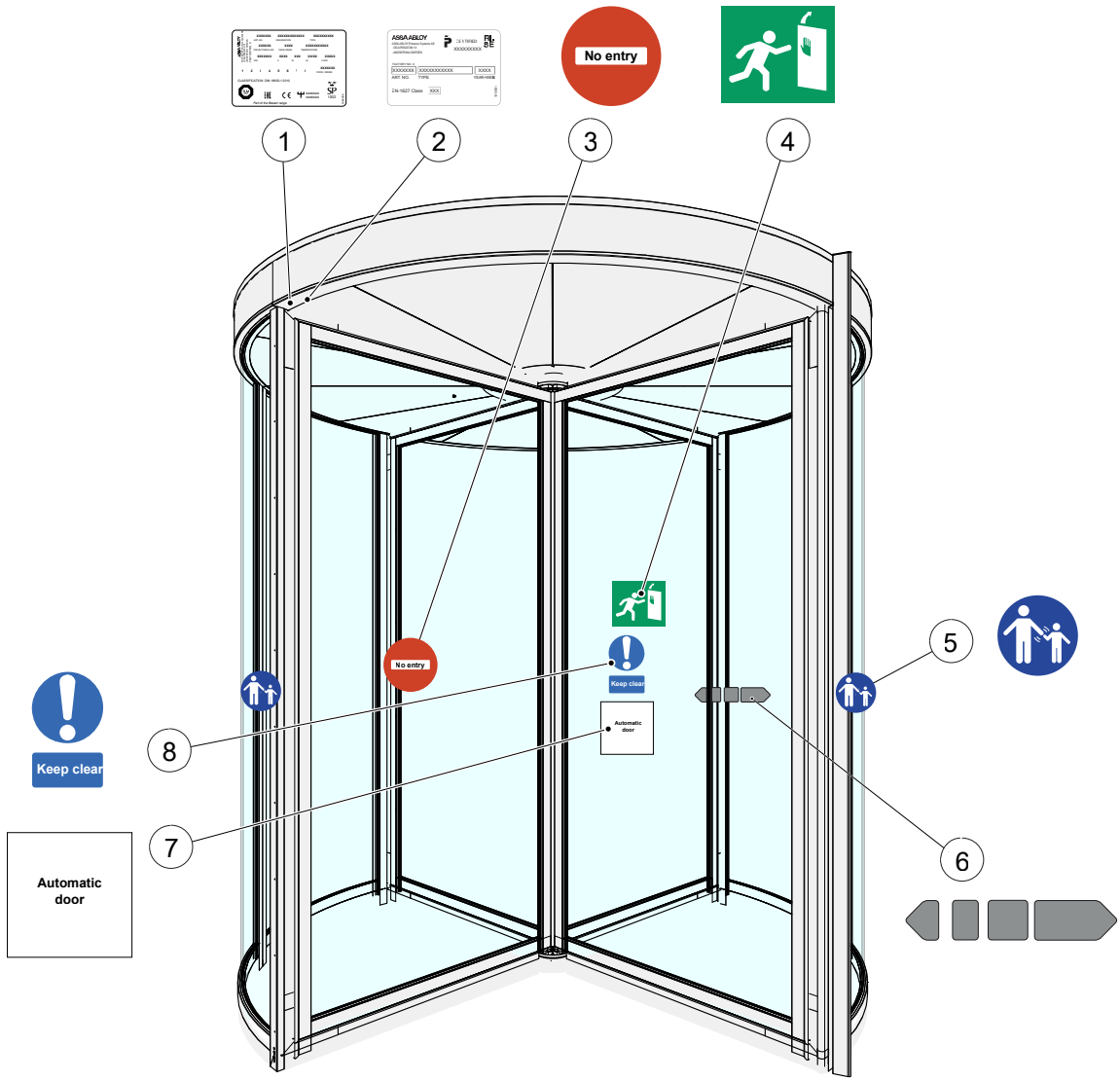
- It is a requirement in EN 16005 that the glass surface is clearly recognizable, for example with markings or stickers. Always place marking on the moving leaf.
- If the operator of the system does not want visible glass marking, the operator must confirm this in writing to the installer.

The signs must be attached from both the inside and the outside of the door approximately 1100 mm from the finished floor to the center of the signs.

Mandatory in the table indicates that the sign is mandatory, refer to European directives and equivalent national legislation outside the European Union.

When the door is correctly installed and adjusted:

1. Attach the labels that come with the door.
2. Attach the label with the CE mark.
3. Do a visual check that all necessary signage is applied and intact.



Item	Door label	Description
1	Product label	Mandatory.
2	P-mark label	For doors with RC2/RC3 only.
3	No entry	If mandatory in your country, the sign must be applied. Identifies that this door is one-way traffic. The sign is not included in the product.

Item	Door label	Description
4	Emergency breakout	Mandatory, if the door is approved for escape route.
5	Supervision of child	If mandatory in your country, the sign must be applied. If the risk analysis shows that children use the door, the sign is recommended.
6	ASSA ABLOY door sticker	Mandatory, if applicable for the door set-up, to highlight the presence of the glass. Apply the signs to all glass sections that are moving.
7	Automatic door	If mandatory in your country, the sign must be applied. The sign is not included in the product.
8	Keep clear	If mandatory in your country, the sign must be applied. The sign is not included in the product.

If problems occur contact your ASSA ABLOY service representative.

4 Options

The system complies with all applicable safety regulations, but it is possible to enhance the safety and comfort with the add-ons.

Contact the local ASSA ABLOY company for a detailed description.

4.1 LED lights

LED spotlight system

Lamp type:	LED
Voltage:	12 V DC
Color temperature:	4000 K
Power:	7 W
Life time:	≥25 000 hours
Luminous flux:	300 lm
Beam angle:	24 degrees

LED down light system

Lamp type:	LED
Voltage:	12 V DC
Color temperature:	3000 K
Power:	12 W
Life time:	≥30 000 hours
Luminous flux:	960 lm
Beam angle:	24 degrees
Diameter	175 mm

4.2 Emergency stop button

One emergency stop button is mandatory for the RD200-3-5 / RD200-4-5 .

An additional emergency stop button can be installed on the inside and outside control posts. The additional stop button has the same function as the normal emergency stop button. How to use the emergency stop button, refer to 6.3.1 Emergency stop button on page 40.

4.3 Emergency opening button

The emergency opening button activates the breakout system. Refer to 6.3.2 Emergency opening button on page 40.

4.4 Push button for persons with disabilities

The push button is used to reduce the speed of the door. It can be installed on the inside and the outside control posts. Refer to 6.3.3 Push button for persons with disabilities on page 40.

4.5 Evacuation button

The evacuation button is used to impulse the door if somebody is trapped. When a person is trapped inside a locked door the evacuation button unlocks the door and the door continues forward and relocks in locked position. The button is mandatory when an electromechanical lock or rotation lock is installed on the door. It is installed on the inside control post. Refer to 6.3.4 Evacuation button on page 41.

4.6 Infrared presence sensing system, PIR

The passive infrared presence sensing system, PIR, is an activation unit. Objects that are approaching the door triggers an opening impulse, but not objects that are leaving the door.

Door diameter 1800 up to 3000 mm (3000 mm not included) have one unit on each side.

Door diameter 3000 mm have two units on each side.

4.7 Direction sensing radar, DSR

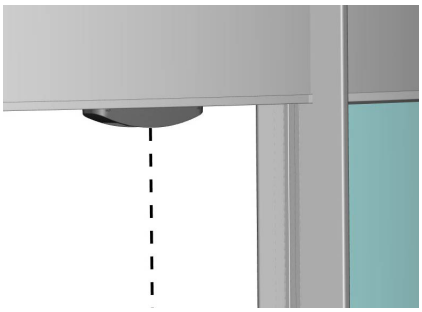
The direction sensing radar, DSR , is an activation unit. The DSR senses which direction objects are moving in. Objects that are approaching the door triggers an opening impulse, but not objects that are leaving the door.

Door diameter 1800 mm to 3000 mm have one unit on each side.

Door diameter larger than 3000 mm have two units on each side.

4.8 Vertical presence sensor, PDR

The vertical presence photocell sensor, PDR , is located above the entrance on the inner and the outer sides. If the beam is broken in the safety zone (approximately 25° from the drum edge) the door stops. When the obstacle is removed the rotation starts.

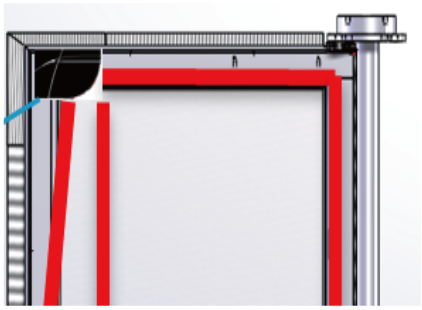


4.9 Laser presence sensing system, SP59-M

The laser presence sensing system, SP59-M, is installed on the top of the door leaves. It provides safety over the whole height of the door. If the sensor detects an obstacle the door stops or reduces the speed to 0.5 rpm (configurable). When the obstacle is removed, the rotation starts.

Recommended only on door diameter larger than 3 000 mm. Necessary for door diameter larger than 3 000 mm when EN16005 compliant.

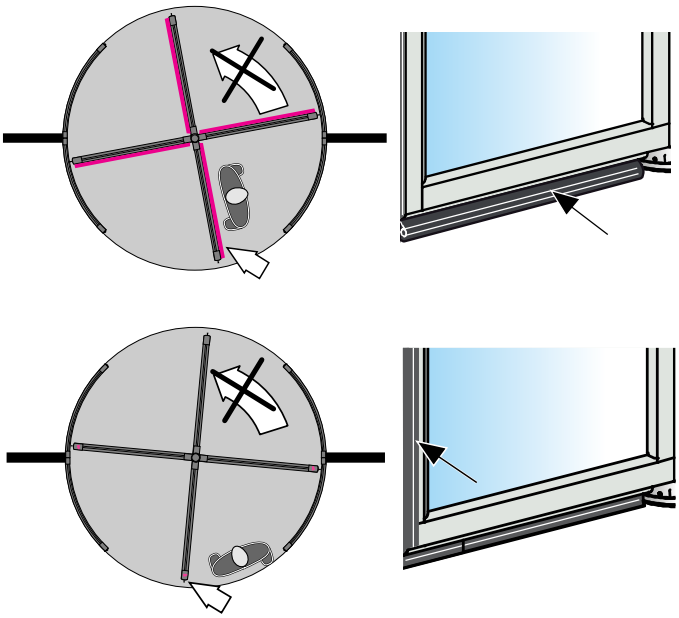
Refer to the sensor manuals for installation and adjustments. The protective device must obey EN 12978.



4.10 Safety edges on door leaves

The pressure sensitive safety edges are installed vertically and horizontally on the door leaves.

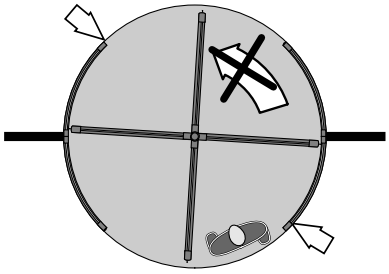
- If one of the pressure sensitive safety edges is compressed, the door stops.
- When the obstacle is removed, the rotation can continue.



4.11 Active safety edges, rubber noses

The rubber noses are pressure sensitive safety edges. They are installed on the outer wall or on the inner night closing door in the moving direction of the door leaves to avoid injuries.

- Necessary when EN16005 compliant.
- Not used in the US and Canada.



4.12 Electromechanical lock

The electromechanical lock, locks the door in home position and remains locked when the power is OFF.

4.13 Rotation lock

Automatic activation (configurable) of the rotation brake in the standby position. The rotation brake prevents the door rotation when there is no signal from the activation units, for example from being manually pushed or by strong wind. The key switch or the push button can also active the brake for immediate stop of the door.

The rotation lock activates the magnet brake in parked position and is released by impulse. The magnet brake can also be activated with a key switch or stop button. Requires power when locked.

4.14 Mechanical lock, door leaves (option)

NOTICE! The espagnolette lock is not an option in combination with vertical safety edge two side access, only in combination with vertical safety edge one side access.

The mechanical lock is installed in the door leaves. The door locks with the key(s).

The locks can be different depending on your choice in the configuration of the door.

4.15 Night closing door (option)

The RD200-3-5 / RD200-4-5 has two different night closing door options, an internal night closing door and an external night closing door. The night closing doors are available manually operated and automatically operated.

4.15.1 MPV lock (option)

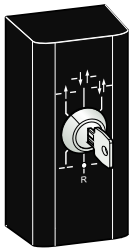
Doors with internal night closing doors always have an MPV lock installed. For doors with external night closing door the MPV lock is optional.

If the door is automatic the MPV lock is controlled with the PSK -6U, refer to 4.15.2 PSK-6U (option) on page 25.

If the door is manual the MPV lock is controlled with the PSK -2, refer to 4.15.3 PSK-2 (option) on page 25.

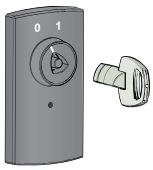
4.15.2 PSK-6U (option)

The PSK -6U is a switch for automatic night closing doors. Installed in the triangle post on the inside of the building. Refer to 6.2.4 PSK-6U (option) on page 38.



4.15.3 PSK-2 (option)

The PSK -2 is a switch for manual night closing doors. Installed in the triangle post on the inside of the building. Refer to 6.2.5 PSK-2 (option) on page 39.



4.15.4 Mechanical lock, night closing door (option)

The mechanical lock is installed in the external night closing doors. An ASSA one way lock or a Euro one way can be installed on manual external night closing doors. The door locks with the key(s).

The locks can be different depending on your choice in the configuration of the door.

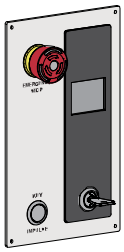
4.16 Air curtain (option)

The air curtain controls the indoor climate by enhancing the functionality of the revolving door. It improves the energy efficiency and maintains the internal temperature. When a person approaches a revolving door, an air curtain automatically activates as the door begins to open. The air curtain creates a barrier of air that helps facilitate a normal flow of pedestrian traffic.

4.17 Reception panel (option)

The reception panel contains a PS-RD , a key impulse and an emergency stop button. The key impulse makes the door rotate 360º. The maximum cable distance from the door to the reception panel is 100 m.

The reception panel is a complement to the PS-RD that is installed on the control post.



5 Specification

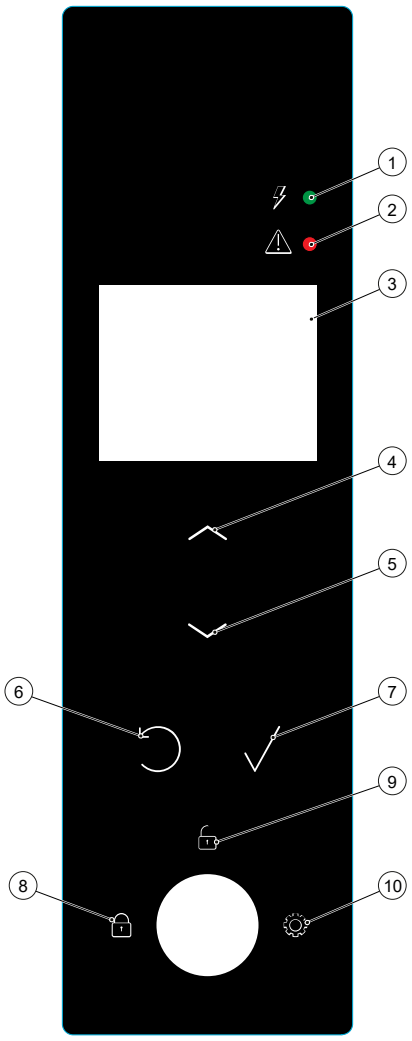
5.1 Technical specification

Type:	ASSA ABLOY RD200-3-5 / RD200-4-5
Mains power supply:	230 V, 50/60 Hz, mains fuse maximum 10 AT or 100-120 V, 50/60 Hz, mains fuse maximum 16 AT.
Power consumption:	275 W
Power consumption, ON mode:	No lights: 105 W. Up to 3.0 m with lights: 185 W. Up to 4.0 m with lights: 275 W.
Power consumption, stand-by:	No lights: 50 W. Up to 3.0 m with lights: 130 W. Up to 4.0 m with lights: 210 W.
Power consumption, idle:	No lights: 48 W. Up to 3.0 m with lights: 48 W. Up to 4.0 m with lights: 48 W.
Temperature range:	-20°C to +50°C
Degree of protection:	IP20.
Degree of protection control, actuators:	IP54.
Sound pressure:	$L_{pa} \leq 70$ dB (A).
Wind load:	0-0.5 kN/m^2 wind pressure, corresponds to a wind speed of 0-28 m/s.
Glass type:	Clear laminated safety glass 4+4 mm EN12600/1B1, thickness is 8.76 mm (default). Security glass DIN52290/A1 EN356/P2A, thickness is 8.76 mm. Security glass DIN52290/A2 EN356/P3A, thickness is 9.14 mm. Security glass DIN52290/A3 EN356/P4A, thickness is 9.52 mm. Security glass EN356/P5A, thickness is 10.28 mm. Security glass DIN52290/B1 EN356/P6B, thickness is 14.28 mm. Low iron glass. Other glass on request Maximum glass thickness is 18 mm.
Approvals:	Third party approvals from established certification organizations valid for safety in use, refer to the DoC and the DoI .

6 Operation

6.1 Operating modes

6.1.1 General information PS-RD

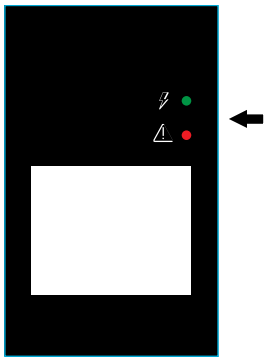


Item	Function
1	Power ON LED. Refer to 6.1.2 LEDs on the PS-RD on page 29.
2	Error LED . Refer to 6.1.2 LEDs on the PS-RD on page 29.
3	Display.
4	Setpoint value change up button.
5	Setpoint value change down button.
6	Back or leave menu button.
7	Confirm button.
8	Locked key switch position (OFF). Refer to 6.2.1 Key switch on page 36.
9	Unlocked key switch position (ON). Refer to 6.2.1 Key switch on page 36.
10	Configuration key switch position (Menu). Refer to 6.2.1 Key switch on page 36.

6.1.2 LEDs on the PS-RD

There is one green LED and one red LED on the PS-RD . The LEDs are lit differently depending on if there are any status or error codes on the door.

- Steady green LED during normal operation.
- Flashing green LED if there is a status code.
- Flashing red LED if there is an error code.
- Steady red LED when the door has reached its service interval. The door still runs as during normal operation. The green light is steady green at the same time.

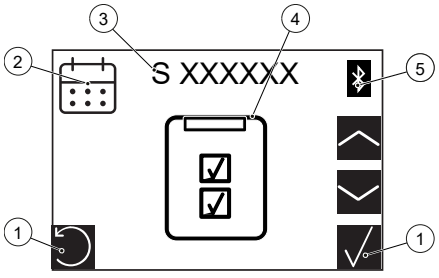


6.1.3 User interface layout

Display

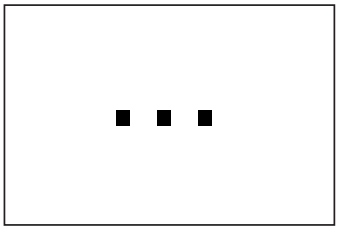
The display is divided into basic fields with specified purposes.

1. The display shows the push keys that can be used in the current menu, back, up, down, and confirm. Refer to 6.1.1 General information PS-RD on page 28.
2. The mode requestor shows the different mode requestor statuses. Refer to 6.1.11 Door mode requestor on page 32.
3. If there is an error or a status, the display shows the code of the error or status. E for error and S for status. Refer to 6.1.12 Error and status codes on page 32.
4. The display shows the image representing the error or status category. Refer to 6.1.13 Error and status images on page 32. The door mode, operation mode shows the mode that is present for the door. Refer to 6.1.17 Operating mode on page 34.
5. Bluetooth (when implemented).



Start-up

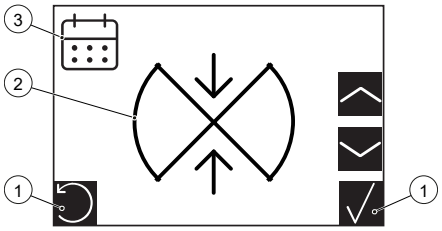
At start-up the display shows a start-up screen until the door is ready to use. This display is only visible for a very short period of time.



Main menu

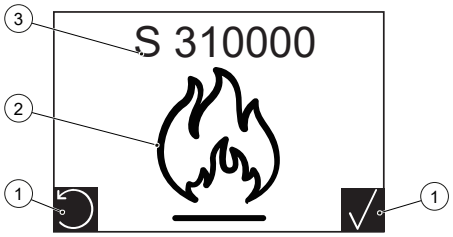
The main menu view shows:

1. The active push keys that you can use in the displayed menu on the PS-RD, back, up, down, and confirm. Refer to 6.1.1 General information PS-RD on page 28.
2. Door mode.
3. Mode requestor.



If there is an error or a status, the display shows:

1. The push keys that you can use on the PS-RD to operate the mode, status, or error code.
2. The image representing the error or status, or a category of errors.
3. The code with the highest prioritized error or status code. E for error and S for status.



6.1.4 Pass code

The pass code is a code of four digits. At delivery the pass code is 4321.

To operate the PS-RD it is necessary to login with an pass code, or turn the key switch to the key switch position Menu. Refer to 6.1.6 Login with the PS-RD on page 30 or 6.1.7 Login with the key switch on page 31.

It is not possible to change the pass code from the PS-RD . This needs to be done from the RD Service Tool. Only the service technician can change the pass code.

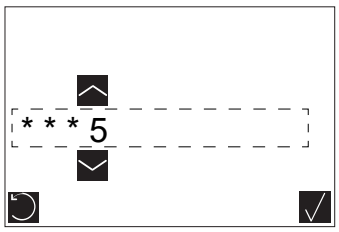
6.1.5 Change the pass code

At delivery the pass code is 4321. Only the service technician can change the pass code.

6.1.6 Login with the PS-RD

1. Press any key on the PS-RD to get to the login access screen.
2. Enter the pass code, four digits (0 to 9). Refer to 6.1.4 Pass code on page 30

3. Select the numbers with the up and down arrows on the PS-RD .
4. Push the Confirm button to use the selected number.
5. Push the Back / Leave menu button to remove the last selected digit. If you push the Back / Leave menu button and no digit is entered you will return to the default screen.
6. Push the Confirm button to finish the code.
   If the pass code is correct the display allows you to change the door operation mode and reset the door. In case of four consecutive failed login attempts, five minutes must pass before a new attempt can be made.
7. After a timeout the user is logged out.



6.1.7 Login with the key switch

1. Turn the key switch to the position Menu.

6.1.8 Logout from the PS-RD

1. Enter the pass code. If the pass code is correct the display changes back to the normal display mode again.
2. There is an automatic logout ten minutes after the last key press. The automatic logout cannot be prevented.

6.1.9 Settings and operation of the PS-RD

The PS-RD can display and provide the possibility to change the door to any mode valid for any of the supported door models.

The key switch provides an easy way to log in, and to alter the selected door mode and run the door in manual mode.

The PS-RD selects the active operating mode when the key switch is unlocked position (ON).

You first have to log in on the PS-RD to set the door. Either use the PS-RD menu system or turn the key switch into the Menu position. Refer to 6.1.6 Login with the PS-RD on page 30 or 6.1.7 Login with the key switch on page 31.

When you are logged in, it is possible to alter the door mode, refer to 6.1.17 Operating mode on page 34.

6.1.10 Set new door mode

1. Log in on the PS-RD, refer to 6.1.6 Login with the PS-RD on page 30.
2. Push the up and down arrows to step through the available door modes. The display shows only one door mode at the time.
3. Push the Confirm key to mark the selected door mode.
4. Push the Confirm key again to confirm the door mode. The door mode changes and the display shows the menu where you can choose door mode.
5. Push the Back key to logout.

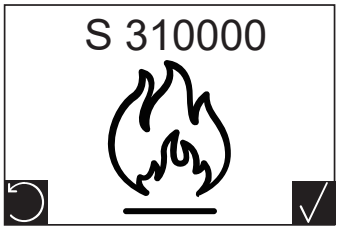
6.1.11 Door mode requestor

Icon	Door mode requestor	Description
	Scheduling	Changes the door mode refer to the schedule defined in the RD Service Tool. Update the operating mode either with the PS-RD menus, the key switch, or with the external mode select to disable the schedule.
	Main	Applies the main operating mode through the RD Service Tool or the PS-RD .
	External	The operating mode is applied.
	Key switch	The door is locked with the key switch or with the external IO.

6.1.12 Error and status codes

The PS-RD shows error and status codes to inform the user about the state of the door. Some of the status and error codes have individual graphics representations, refer to 6.1.13 Error and status images on page 32.

If there is an error, the display shows the image representing the error or the error category along with the code of the highest prioritized error.

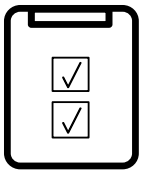
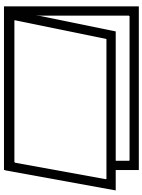
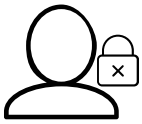


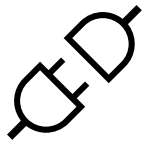
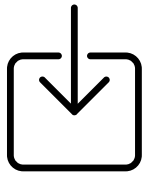
1. Clear the error on the PS-RD or with the RD Service Tool.
2. Refer to the specific error shown on the top of the screen if you have to call the ASSA ABLOY service technician.
3. If there is no error, touch any key on the PS-RD to show the access screen.
4. Use the key switch to change between modes regardless of errors.

6.1.13 Error and status images

Some codes have images connected to the error or status, refer to 6.1.12 Error and status codes on page 32 for information on the codes.

Errors that do not have individual graphics are classified into one of two groups, errors that can be cleared and errors that need a service technician to clear the error.

Icon	Code on the PS-RD	Description
	-	General image for errors that can be cleared.
	-	The user cannot clear the error. A technician needs to clear the error. Call your ASSA ABLOY service technician.
	S 10000x	Safety stop.
	E 200000	Emergency stop.
	S 31000x	Fire alarm.
	S 7C0100	Locked with breakout ON.
	S 7F0100	Lock breakout
	S 0D0000	Login locked out. There has been to many attempts to log in, a time has to pass before you can try again.
	S C30000	Breakout kit not armed.
	S 7D0000	Initializing.

Icon	Code on the PS-RD	Description
	E 0B000x	Bus down.
	S FF0000 S FE0000	Firmware upgrade.

6.1.14 Restart

Icon	Operating mode	Description
	Restart	The restart icon shows as an operating mode. The restart is an operation on the system that when activated triggers the entire control system to restart.

6.1.15 Clear the error or the status codes

The PS-RD always shows the error- or status code for the most dangerous error or status.

If there is an error or status code that can be cleared, the error- or status code shows on the display together with the corresponding image. The symbol Confirm symbol appears in the lower right corner of the display on the PS-RD .

On the PS-RD the LED blinks green if there is a status code and with a red if there is an error code.

1. Clear the error or status code on the PS-RD or with the RD Service Tool. To clear the error or status code on the PS-RD , use the Confirm button.

2. If you cannot clear the error the toolbox image shows on the display. You will not be able to clear the error. Call your ASSA ABLOY service technician.

3. Note the error code, for easier help from the technician.
4. If there is no error, touch any key to bring up the login access screen.

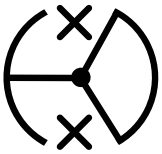
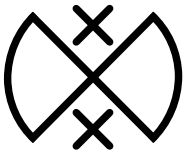
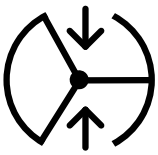
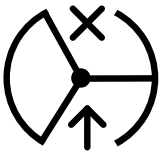
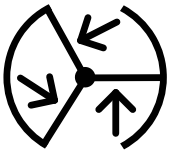
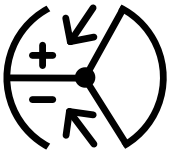
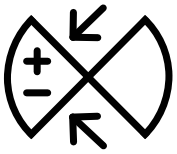
6.1.16 Screen blanking

A blank (black) screen can be configurable after a time-out.

6.1.17 Operating mode

When the door is ON the operating mode for the door shows one of the door mode icons. Each door mode has a graphical representation. When the door mode changes, the display shows the new door mode. An operating mode icon on the screen indicates that the system is OK with no active error/status codes.

Is the door ON and there is an error or status on the door, the code and its icon shows instead of the operating mode. Refer to 6.1.12 Error and status codes on page 32.

Door mode	Icon 3-wing	Icon 4-wing	Description
01			Locked, refer to 6.1.18 Door mode 01, Locked door (OFF) on page 35.
02			Automatic, refer to 6.1.19 Door mode 02, Automatic open on page 36.
04			Exit only, refer to 6.1.20 Door mode 04, Exit on page 36.
06			Continuous, refer to 6.1.21 Door mode 06, Continuous rotation on page 36. The arrows show the direction of the rotation. If the door rotates the other way around the arrows show a mirrored image.
07			Manual, refer to 6.1.22 Door mode 07, Manual mode on page 36. The arrows show the direction of the rotation. If the door rotates the other way around the arrows show a mirrored image.

No door mode set

Icon	Description
	The icon shows when the system har not yet set any door mode or if the door is not configured correctly.

6.1.18 Door mode 01, Locked door (OFF)

WARNING

The escape route can be disabled.

The escape route cannot be used when the operating mode is Locked or the key switch is in position OFF.

- Make sure that the escape route is functioning correctly after the configuration.

The door rotates to its home position. If an electromechanical lock is installed, the lock is activated. The door can be opened with the key impulse switch, refer to 6.2.2 Key impulse switch (option) on page 37.

The escape function is by default disabled in the door mode Locked or if the key switch is in position OFF. The door can however be configured to make escape possible, also when the door is locked, refer to 6.3.15 Breakout configuration on page 43.

6.1.19 Door mode 02, Automatic open

The door is parked in standby position when there is no traffic. As soon as the outside or inside activation units detect approaching traffic, the door starts rotating.

6.1.20 Door mode 04, Exit

The door is parked in standby position when there is no traffic. As soon as the inside activation units detect approaching traffic, the door starts rotating.

6.1.21 Door mode 06, Continuous rotation

The door rotates at a low speed. As soon as the outside or the inside activation units detects approaching traffic, the door accelerates to normal speed. The door returns to low speed when there is no traffic.

6.1.22 Door mode 07, Manual mode

DANGER

In manual operating mode all safety devices but the emergency stop are disabled.

Risk of personal injuries or material damage because of unforeseen opening, closing, or turning of the system.

- Make sure that no person is at risk of injury when the door is moving.
- Make sure that no items are in the way of the door leaves when the door is moving.

This operation can be used in a cleaning operation.

- The door rotates forward as long as you hold down the + key.
- The door rotates backwards as long as you hold down - key.

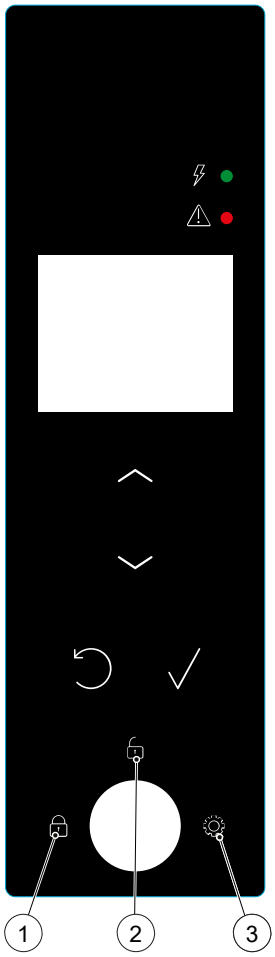
6.2 Locking and unlocking

6.2.1 Key switch

The key switch can be used in door modes 1 to 7, refer to Operating modes on page 34.

1. Turn the key switch to the unlocked position (ON), to operate the door referred to the selected operating mode. In the unlocked position (ON) it is possible to select the door modes 1 to 7, refer to Operating modes on page 34.
2. Turn the key switch to the locked position (OFF) to select the operating mode Locked (OFF) 1.

3. Turn the key switch to the configuration position (Menu) to change the door mode. The Menu does not change the mode from unlocked (ON), but provides a way to change to another mode.



Item	Icon	Description
1		Locked key switch position (OFF).
2		Unlocked key switch position (ON).
3		Configuration key switch position (Menu)

6.2.2 Key impulse switch (option)

If the door is locked with the key switch (OFF).

1. Turn the key switch from the unlocked position (ON) then back to the locked position (OFF) again to open the door. When the key switch is activated, the door unlocks, runs 360° and locks again.

6.2.3 Lock and unlock the night closing door

There are two different kind of night closing doors, the internal night closing door and the external night closing door. The night closing door can be either manually locked or automatically locked.

The internal night closing door always uses an MPV lock. The external night closing door can be either locked manually with a mechanical lock or locked automatically with an MPV lock.

Internal night closing door, manual

The internal night closing door always uses an MPV lock to lock the door.

1. Close the internal night closing door manually.
2. Use the PSK -2, refer to 6.2.5 PSK-2 (option) on page 39 to lock the internal night closing door.

Internal night closing door, automatic

There are different ways of closing and locking the automatic night closing door. Choose one of the options.

1. Turn the key switch on the PS-RD to the locked position (OFF).
2. Log in on the PS-RD and select the operating mode Locked. Use the up/down/select keys on the PS-RD .

or

3. If you have the option PSK-6U you can use this option.
   Use the PSK -6U, refer to 6.2.4 PSK-6U (option) on page 38, to close and lock the external night closing door.

External night closing door, automatic

There are different ways of closing and locking the automatic night closing door. Choose one of the options.

1. Turn the key switch on the PS-RD to the locked position (OFF).
2. Log in on the PS-RD and select the operating mode Locked. Use the up/down/select keys on the PS-RD .

or

3. If you have the option PSK-6U you can use this option.
   Use the PSK -6U, refer to 6.2.4 PSK-6U (option) on page 38, to close and lock the external night closing door.

External night closing door, manual

1. Close the night closing door manually.
2. Lock the external night closing door with the PSK -2, refer to 6.2.5 PSK-2 (option) on page 39 or lock the hook lock in the external night closing door.

6.2.4 PSK-6U (option)

NOTICE! Unlock all the mechanical locks before you activate the PSK-6U operator.

The door functions are set with different key program selectors. The key must always be removed on emergency escape doors after you have changed the settings.

Mode		Function
	OFF	Only used on emergency escape doors when you have made sure that all people have left the building. The door cannot be opened with the inner and outer activation units. The door is locked, if an electromechanical locking device has been fitted. The door can be opened partially with a key switch (if installed).
	Exit	Not in use.

Mode		Function
	Auto	Not in use.
	Auto partial	Not in use.
	Open	The door is permanently open. The door can be moved by hand for example for window cleaning. All activation units except for the emergency push button (if fitted) are disconnected.
R	Reset	Reset position.

Open

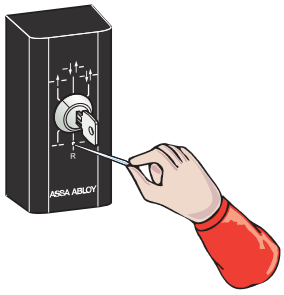
1. Turn the key to the position Open to open the door.

Lock

1. Turn the key to the position Off to close the door.

Reset

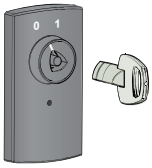
1. Turn the key clockwise to the reset position R.
2. Insert a narrow object in the small hole on the programme selector.
3. Push briefly.
4. Turn the key counter-clockwise back to the requested setting. The operator makes a system test of the emergency unit (if selected), electromechanical lock, watchdog relay and closed door position.
5. Close the reset to use the normal operation.



6.2.5 PSK-2 (option)

NOTICE! Unlock all the mechanical locks before you activate the PSK-2 operator.

The door can be locked with the PSK-2 program selector. The key must always be removed on emergency escape doors after you have changed the settings.



Mode		Function
0	OFF	The door is normally locked if an electromechanical locking device is installed.
1	ON	The door is normally opened if an electromechanical locking device is installed.

Open

1. Turn the key to the position ON (1) to open the door.

Lock

1. Turn the key to the position OFF (0) to close the door.

6.3 Functions and options

6.3.1 Emergency stop button

Stop

In case of an emergency:

1. Push the Emergency stop button to stop the door rotation.

Reset

Reset the door to normal operation after the emergency situation has ceased.

1. Rotate the Emergency stop button in the direction of the arrows to release the button.
2. Clear the error on the PS-RD or on the RD Service Tool.

6.3.2 Emergency opening button

Breakout function

WARNING

Yearly testing is needed.

If the door is equipped with the breakout function, it must be tested minimum once a year.

- Follow local regulations.

NOTICE! Not available for door leaves without center shaft.

This function makes it possible for the door leaves to be broken outwards in case of emergency.

The breakout function can be connected to the fire alarm system. The function can also be activated with an emergency opening button.

1. In case of emergency, push the button to open.

Reset the breakout function

If the escape doors have been opened, the display on the PS-RD shows S 370000 or S C30000.

To close the escape doors and reset after the breakout function has been used:

1. Turn the emergency opening button in the direction of the arrows to release it.
2. Close the door leaves correctly.
3. Push the clear button on the PS-RD .

6.3.3 Push button for persons with disabilities

1. Push the push button for persons with disabilities to reduce the speed of the door rotation, if you need more time to pass through the door.

6.3.4 Evacuation button

1. Push the evacuation button to start the rotation of the door if you are trapped.

6.3.5 Scheduling

The ASSA ABLOY service technician must program the scheduling.

The CDC -system has three different day schedules. Each day schedule can contain up to ten different operating modes, refer to 6.3.11 Day schedule on page 41.

The week schedule informs the system of which day schedule to run and in what order, during a week, refer to 6.3.12 Week schedule on page 41. It is possible to make up to 16 exceptions from this week schedule, for example for public holidays, refer to 6.3.13 Exceptions on page 42.

6.3.6 Activation of the scheduling

Only a service technician can activate the scheduling.

6.3.7 Deactivation of the scheduling

Scheduling is deactivated as soon as another input is active.

Only a service technician can reactivate the scheduling.

6.3.8 Key switch

The locked (OFF) position overrides the scheduling. The door is locked.

When the key switch is set to the unlocked (ON) position, the door resumes to External mode selection (highest priority) or Operation mode flash (lowest priority).

6.3.9 Manual setting of operating mode

If the door is running in scheduling and the operating mode is manually changed, scheduling is automatically deactivated.

6.3.10 Summer time / Winter time

The settings can only be changed with the RD Service Tool.

6.3.11 Day schedule

The settings can only be changed with the RD Service Tool.

1. Fill in the table with your day schedule for future reference.

Day schedule 1	Day schedule 2	Day schedule 3
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10

6.3.12 Week schedule

The settings can only be changed with the RD Service Tool.

1. Fill in the table with your week schedule for future reference.

Weekday	Schedule
Monday	
Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	
Sunday	

6.3.13 Exceptions

The settings can only be changed with the RD Service Tool.

1. Fill in the table with your exceptions for future reference.

Start exeption	End exception	Exception schedule
1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9
10	10	10
11	11	11
12	12	12
13	13	13
14	14	14
15	15	15
16	16	16

6.3.14 Read speed settings

The settings can only be changed with the RD Service Tool.

Setpoint	Description	Setpoint value
S1	High speed setpoint	1.0-6.0 rpm
S2	Low (handicap) speed setpoint	0.2-2.5 rpm
S3	Creep speed setpoint	0.2-1.0 rpm
S4	Continuous speed setpoint	1.0-2.5 rpm
S5	Manual speed setpoint	0.2-2.0 rpm
S9	Door force parameter	02-99

6.3.15 Breakout configuration

The settings can only be changed with the RD Service Tool.

6.3.16 Real time clock

The CDC system has a real time clock built in. The clock is used for event log recording and when the door is running, refer to a real time operation schedule.

The settings can only be changed with the RD Service Tool.

Information on Summer time and Winter time, refer to 6.3.10 Summer time / Winter time on page 41.

6.3.17 Adjust the safety zone

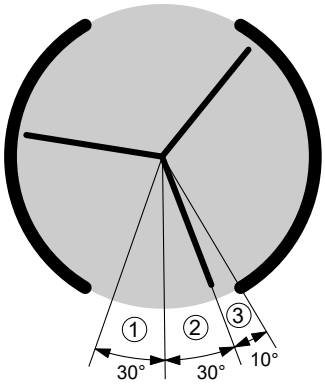
NOTICE! Only for doors with optional PDR.

The safety zone has:

- An adjustable segment of 30° for Safety zone slow (1)
- An adjustable segment of 30° for Safety zone stop (2)
- A fixed segment of 10° (3).

If you activate the fixed safety sensors above the entry posts (PDR) the following happens:

- The door runs at Creep speed, Safety zone slow (1).
- The door stops, Safety zone stop (2).
- The door stops, fixed segment of 10° (3).



7 Inspection and maintenance

DANGER

Electric current.

In case of contact with live parts, there is an immediate danger to life because of electric shock. Damage to or removal of the insulation or individual components can be life-threatening.

- Make sure that only approved personnel work on the electrical system.
- Make sure that all poles are voltage free and that this is maintained for the duration of the work.
- Disconnect all poles from voltage before you start the work (cleaning, maintenance, replacement) on active parts of the electrical systems and the equipment.
- Keep moisture away from live parts. This can lead to a short circuit.
- Do not bridge fuses or put them out of operation.
- Do not connect the power supply or a battery until all work has been completed.
- Do not use a damaged supply cord. Only the manufacturer, its service agent or a similarly qualified person is permitted to replace a damaged supply cord.

CAUTION

Safety check necessary

Personal injuries or damages to the equipment can occur.

- Do not use the equipment if repair or adjustments are necessary.

When you have a service agreement with ASSA ABLOY , approved representatives do the service and adjustments. ASSA ABLOY makes sure that there is a safe and proper operation of your automatic door unit.

Remember to keep the Maintenance documentation, the Site Acceptance Test, and the Risk Assessment documents available. These documents are used together.

It is important to record any maintenance operation.

Recommended minimum maintenance interval of once a year. Refer to EN 16005.

To help you fulfil the national and international requirements and to avoid malfunction and risk for injuries, perform a check of the following things:

- 3.4 Signage on page 18
- 7.1 Inspection on page 44
- 7.2 Maintenance on page 45

7.1 Inspection

7.1.1 Daily inspection

NOTICE

If the door is put in an escape route, approved personnel or the fire department must test the equipment regularly. Refer to the local regulations.

1. Do a visual check of the condition of the door seals.
2. Do a visual check of the condition of glazing rubbers.
3. Examine the safety sensors (if there are any).
   If you are unsure of which type of sensor you have, contact your ASSA ABLOY representative.
4. For doors equipped with breakout, do a functional test on all door leaves.

5. Make sure that the door leaves can be released and are not mechanically jammed.
6. Push the Emergency opening button and fold the door leaves.
7. Remove dirt from the locking holes in the floor for the espagnolette lock (if the door has espagnolette lock).
8. If there are any problems, contact your ASSA ABLOY representative.

Safety edges

Required when EN16005 compliant.

1. Make sure that the rubber is not damaged.
2. Make sure that the safety edges are firmly attached.
3. Make sure that the cut-out function is 5-10 mm.
4. Make sure that the door stops when you activate a safety edge.
5. To replace a safety edge, contact your ASSA ABLOY service technician.

Brushes

1. Examine the condition of the brush.
2. Remove any litter from the brush.

7.1.2 Cleaning

Clean the product on a regular basis to maintain the quality of the coating layer.

- Remove dust and dirt.
- To avoid damages to the profiles the brushes must be vacuum cleaned weekly.
- Clean the surfaces three times a year with a gentle (pH 5-9) non-polishing detergent and water.
- Use a soft non-abrasive sponge.
- Do not expose the product to alkalis. Both aluminium and glass are sensitive to alkalis.
- Do not clean with high pressure water. Operator, program selector and sensor can be damaged and water can enter the profiles.
- Do not use detergents or abrasive additives.
- Do not scrub with materials like Scotch-brite, as this can cause mechanical damage.
- If there is a doormat, remove the doormat and clean it thoroughly every year.
- Document the cleaning.

7.2 Maintenance

7.2.1 Service request

After 300 000 revolutions the red LED on the PS-RD indicates that it is time for service. The LED will flash red fast. Recommended minimum maintenance interval of once a year. Refer to EN 16005.

1. Call your ASSA ABLOY service technician.

7.2.2 Maintenance intervals

The table below shows the recommended interval in revolutions, when to replace parts during preventive maintenance. Talk to your ASSA ABLOY representative to learn more about our service offering.

Part	Revolutions	Action
Motor	300 000 / 1 500 000	Examine / Replace.
Safety devices	300 000 or minimum once a year.	Examine and test of function.
Impulse devices	300 000	Examine.
Gear box	3 000 000	Examine.
Drive belt	300 000 / 600 000	Examine /Replace.

Part	Revolutions	Action
Breakout function	Minimum once a year.	Examine.
Emergency stop button	Minimum once a year.	Examine and test of function.
Fire alarm, functional test	Minimum once a year.	Examine.
PS-RD, display	Minimum once a year.	Examine.
Doormat	Minimum once a year.	Examine.

8 Troubleshooting

The ASSA ABLOY RD200-3-5 / RD200-4-5 have built in self-diagnostics, analysing performance, wear, sensors and safety systems integrity. In case this monitoring fails, an error raises, stops the door, and requests a service technician for further analysis.

1. Make sure that nothing in the building is causing the problem, like the mains switch or the fuses, before you do anything on your door.
2. Look at the PS-RD for error or status codes.
3. Try to clear the error.
4. If the icon for Call a service technician is displayed, call the service technician.
5. Note the error code on the PS-RD if you need to report the code to the service technician.

Cause	Solution
The door leaves do not rotate.	• Make sure that there are no objects in the safety detection zone. • Make sure that the emergency stop button is released. • Make sure that the espagnolette lock is unlocked. • Examine the mains switch and fuse in the building.
The motor does not start.	• Make sure that the system is powered on. • Make sure that the PS-RD display indicates any stopping errors. • Make sure that the operating mode is set that can run the door, for example Auto Open. Operating mode can be selected with the key switch or with log in on the PS-RD . • Make sure that there are no objects in the safety detection zone.
The motor does not start, the PS-RD shows S 100000.	• Make sure that the door leaves are not open. • Make sure that no safety edges are pressed. • Arm the BOK by doing error clear. • Refer to after the breakout function has been used for the start-up procedure.
The green LED flashes on the PS-RD .	• There is a service code that needs to be cleared. • Clear the service code on PS-RD or in the RD Service Tool.
The red LED flashes on the PS-RD .	• There is an error code that needs to be cleared. • Clear the error code on the PS-RD or in the RD Service Tool.
The red LED on the PS-RD is lit.	• Time for service, refer to 7.2.1 Service request on page 45.
The motor starts but the door does not rotate.	• Make sure that nothing is jammed beneath the door. • Unlock the mechanical lock. • Make sure that the PS-RD does not display any error.

Cause	Solution
The door runs jerky, PS-RD shows S DA0000 or S 7B0000.	• Daily test procedure is running, wait a while for it to complete. **NOTICE! The door can be in use during the daily test procedure.**
The door does not stop in the correct position.	• Call a service technician.
The door cannot find the lock position. The lock pin does not hit the lock hole in the cog-wheel.	• Call a service technician.
The door rotates but the there is an indication on the PS-RD that the door does not move.	• Call a service technician.
One motor is running in the wrong direction.	• Call a service technician.
Fire alarm sync error even if there is no fire alarm connected to the door.	• Call a service technician.
Fire alarm sync error with fire alarm connected.	• If the problem occurs during the test /installation of the fire alarm call a technician.
Emergency stop sync error.	• Call a service technician.

If the problem continues, contact your ASSA ABLOY representative.

8.1 Supervision system

The ASSA ABLOYRD200-3-5 / RD200-4-5 has a built-in self-diagnostics, analysing performance, wear, sensors, and safety systems integrity. If there is an error, the PS-RD display shows an error or a status code and an icon for the error/status.

1. Clear the error/status on the PS-RD or clear the error/status with the RD Service Tool.

9 Taking out of service and disposal

9.1 Decommissioning

NOTICE

After each temporary shutdown a new commissioning must be carried out.

When the system is taken out of service:

1. Disconnect the system from the mains supply.
2. Unplug from any existing battery.

9.2 Dismantling and disposal

NOTICE

All parts must be separated, sorted by the type of material, and disposed of. Refer to local regulations and guidelines.

NOTICE

The systems can be completely disassembled in the reverse order.

The installation mainly consists of the following materials:

Metal components (aluminium, steel, and iron)

- Linking profiles, system leaf profiles, side profiles, various profiles, and reinforcement profiles.
- Gearbox, drive panel.
- Gear components and springs.
- Stainless steel casing, floor panel, and box recess for the floor installation.
- Various small parts like fittings, covers, optional spacers, and linking parts.

Glass

- Leaves and side panels.

Various electronic and electromechanical components

- Sensors.
- Control components and operator components.
- Batteries and rechargeable batteries.

Various plastics

- Rollers.
- Sealing profiles.
- Cable clips, coupling and linking parts.
- Casing of electromechanical components and sensors.

ASSA ABLOY Entrance Systems is a leading supplier of entrance automation solutions for efficient flow of goods and people. Building on the long-term success of the Besam, Crawford, Albany and Megadoor brands, we offer our solutions under the ASSA ABLOY brand. Our products and services are dedicated to satisfying end-user needs for safe, secure, convenient and sustainable operations. ASSA ABLOY Entrance Systems is a division within ASSA ABLOY.

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