Machine Protection Door

ASSA ABLOY RP2000

ASSA ABLOY
Entrance Systems

The global leader in
door opening solutions

HIGH SPEED

Rapid opening and closing ensures short cycle time.

HIGH RELIABILITY

High reliability and low service needs even after years of high numbers of cycles.

HIGH SAFETY

Safety contact edge and touchless safety edge.

Machine Protection Door ASSA ABLOY RP2000

Advantages of the door

- Rapid opening and closing ensures short cycle times
- Safety limit switches according to EN ISO 13849-1 and EN 62061
- Doors conform to EN ISO 12100 and EN ISO 14119
- For continuous operation with up to 5 openings per minute
- Versions conforming to various factory standards are possible
- High reliability even after years of high numbers of cycles

Design

Side Frames
The side frames are self-supporting and made of galvanized steel shoot sections. The top roll cover is made of anodized aluminum, motor cover is made of painted steel (grey). The side frames can be powder-coated in many RAL colors.

Door Curtain
The stable, ridgid door curtain is made from anodized aluminum slats.

Curtain for laser protection
ASSA ABLOY RP2000 was specifically developed for Laser Protection areas. The door is therefore equipped with double walled slats preventing penetration from laser beams. (Powder coating option is not available.)
The door was tested in accordance with DIN EN 60825-4. With 2x focal distance and a laser power of 4 kW, a protection period of min. 18 seconds is achieved.

Windows
To monitor the process whilst the door is closed, slats with windows (250 x 40 mm) made of shock-proof polycarbonate are optionally available. The number of windows depends on the door width.

Control System
The high performance frequency control MCC is installed underneath the drive unit without requiring a lot of space. It gives the door a particularly dynamic run with short cycle times. The microprocessor control makes individual programming for special customer requirements possible.

Motor cover and top roll cover
The door can be fitted with a motor and top roll cover when needed. The use of a top roll cover is required for doors of height <2,5m, according to standard EN 13241-1.

Motor position
Motor can be fitted on the right- or lefthand side.

Safety limit switches integrated in the side frame
For the indication “door safely closed”, safety limit switches according to PL e/Kat. 4 (EN ISO 13849-1), SIL 3 (EN 62061) are integrated in the side frame (2 units for the laser version). Delivered with safety monitoring module. Transparent cover for safety limit switches for easy monitoring and accessibility. Optional evaluation by the machines safety systems (versions without safety monitoring module).

CE Guidelines
This door is designed according to the regulations of the Workplace Directive of the UVV, as well as the harmonized CE Guidelines including the EN 13241-1.

Safety Features
The door has a pre-running photocell. An additional option is a door line photocell, which prevents the door from closing whilst objects or people are in the closing zone/area.

Indication of Risk
The security of the door is designed for normal use for vehicles in industrial environments corresponding to the harmonized CE-Guidelines. Special environmental conditions may impact the choice of door required. For clarification and any further information, please contact your local sales engineer.

Manual Activation
In the event of a power failure the door can be operated by releasing the brake manually. Partial opening takes place automatically via pre-tensioned tensile springs in the side frames.

Technical Data ASSA ABLOY RP2000

TECHNICAL DATA	
Application	Interior door / Machine Protection Door
Door dimensions: DW (min. / max.) LB [2] Door dimensions: DH (min. / max.) LH [2]	600 / 4000 mm 1000 / 3500 mm
max. area	12 m² (9,5 m² Laser protection)
Speed Open/Close max. (m/s) [2]	2,0 / 1,2
Cycles per minute max.	up to 5
Wind resistance (EN 12424)	Class 3 Class 2 (DW > 3000 mm)
Sound pressure level	< 80 dB A
Space requirement top (with lid) / side frame	495–550 / 210–265
Height grid	100 mm
Temperature range max. [3][4]	+10°C to +45°C (0 bis +60°C)
Surface material	
Side frame	✓ Galvanized steel • Powder coated steel *
Top roll cover [1]	• Aluminium • Powder coated
Motor cover [1][2]	• Galvanized steel • Powder coated
Lamelle Aluminium	✓ Anodized • Powder coated *
Bottom profile	Standard slat + seal
Safety features	
Electrical safety contact edge [2]	•*
Door line photocell in side frame	•
Light curtain (integrated) [2]	–
Pre-running safety photocell [2]	✓
Manual activation (partial opening)	✓ Pull rope
Counterbalance	Spring force
Equipment	
Light signals and actuators	Separate brochure
Laser Protection (separate conditions)	•
Machine protection	✓
Magnetic switch at the bottom of the side frame	✓ 1 piece • 2 pieces
Windows in side frame (View on magnetic switch)	✓
Additional opening height	•
X-Level	•
Drive unit	
Motor power	Bonfigioli 1,1 KW
Chain drive (space saving) [2]	–
Chain drive (NHK)	•
Control system	
MCC Open/Close max. (m/s) [2]	✓ 2,0 / 1,2
Separate display / control	•
Fuse protection by site	10 - 16 A (B-characteristic)
Control voltage	24 V DC
Protection	IP 55
Potential free contacts	•
Power supply	
MCC	380 – 480V (+/- 10 %) 50/60Hz
Door Curtain	
Single-walled slat	✓ Anodized aluminum
Double-walled slat (laser protection)	• Anodized aluminum
Slats with windows	• Anodized aluminum
Perforated plate slat	–

• Option ✓ Standard * not possible with laser protection

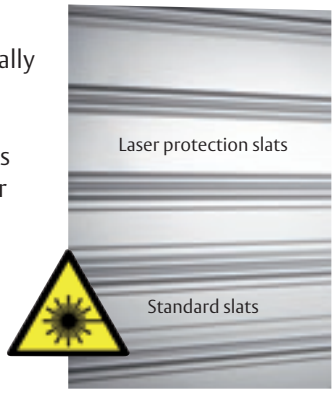
RollTex® based on TRAV (technical regulations for the use of anti-fall protection glazing)

1) Height < 2,500 mm, always with cover
2) Deviations possible depending on other properties
3) Depending on load alternation/minute, door size and installation location
4) Extended temperature range on request

Floor mounting brackets
The door can be mounted freestanding on the floor with floor mounting brackets. Levelling screws allow adjustment to an uneven floor.

Safety limit switches integrated in the side frame
Transparent cover for safety limit switches for easy monitoring and accessibility.

Curtain for laser protection
ASSA ABLOY RP2000 was specifically developed for Laser Protection areas. The door is therefore equipped with double walled slats preventing penetration from laser beams.



Control System
The high performance frequency control MCC is installed underneath the drive unit without requiring a lot of space. It gives the door a particularly dynamic run with short cycle times. The microprocessor control makes individual programming for special customer requirements possible.

Example of use: door in assembly line

Industrial sectors, such as the automotive industry, place stringent demands on automated manufacturing processes. Even the smallest error can result in downtimes and put employees at risk. Machine protection doors are an effective safety measure, providing optimal protection for personnel and machines without adversely affecting cycle times. They enable a rapid switch from complete isolation of a production stage to unimpeded access to the workpiece and machine in a matter of seconds, effectively protecting personnel from flying sparks, welding spatter etc.

Advantages of ASSA ABLOY RP2000 machine protection doors

- With a rigid, reinforced curtain made from aluminium slats, the ASSA ABLOY RP2000 provides complete protection, even from deflection of the curtain.
- The slats are connected with side-mounted flat belts for contact-free winding, which ensures:
  - very rapid speeds
  - reduced operational noise
  - very long maintenance intervals
  - long service life
  - scratch resistant surface
- Individual slats can easily be replaced as required.

Door Construction

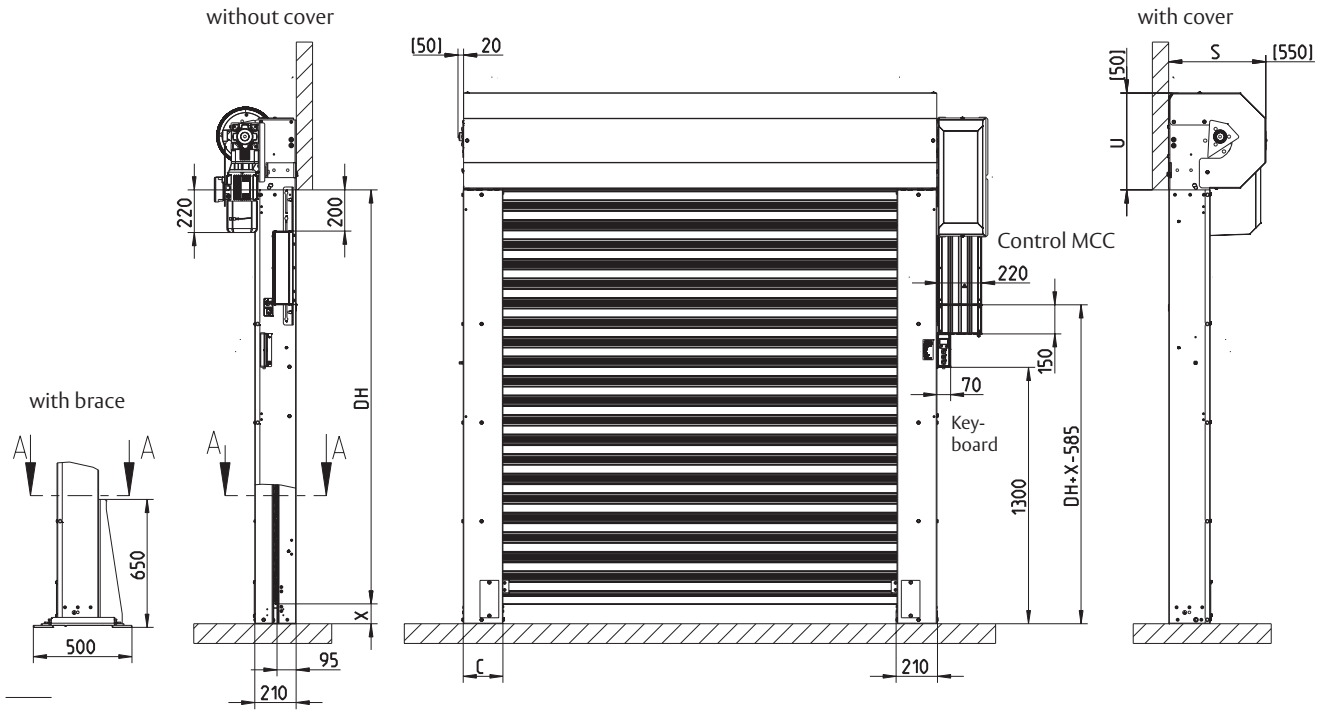
The self-supporting side frames are made from steel profiles. The roll cover is made of aluminum and the motor cover is grey steel. Integrated safety limit switches provide the interface with the machine control system.

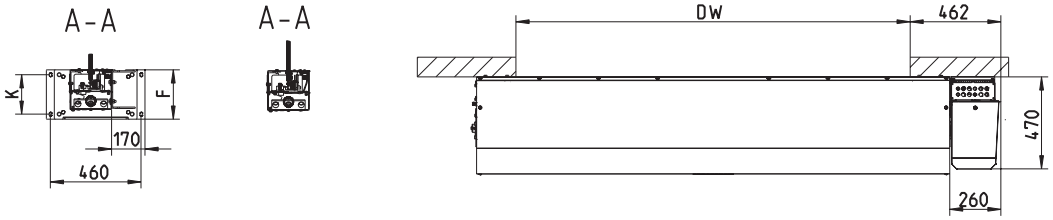
- 2 potential-free safety contacts, when the door is closed (safety limit switch)
- 1 output or potential-free signal, when the door is open
- 1 output or potential-free signal when the door is closed
- 1 output or potential-free signal for faults

Example of use: door in assembly line

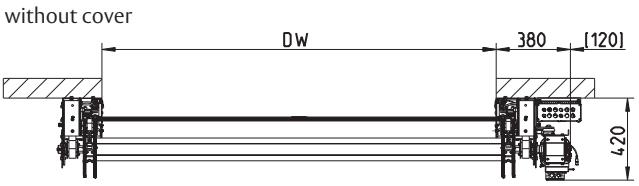
Example of use: door in assembly line

General drawing ASSA ABLOY RP2000

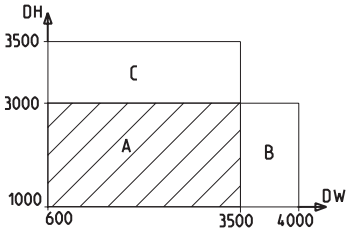




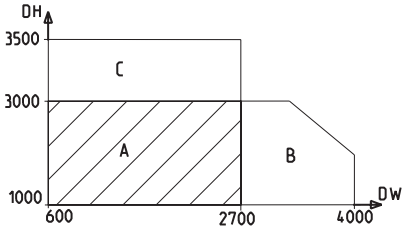
Door type			
	A	B	C
C	210	265	265
U	495	495	550
S	495	495	555
F	250	300	300
K	200	250	250



Door types - standard curtain



Laser protection curtain



X=X-Level

[ ] = Space needed for installation

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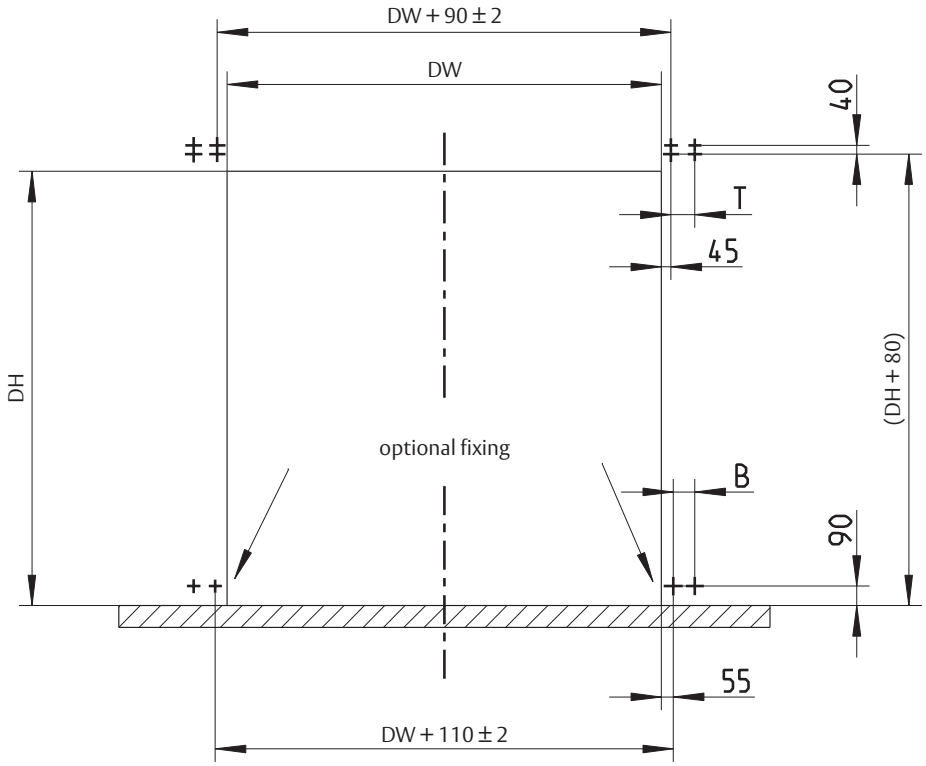
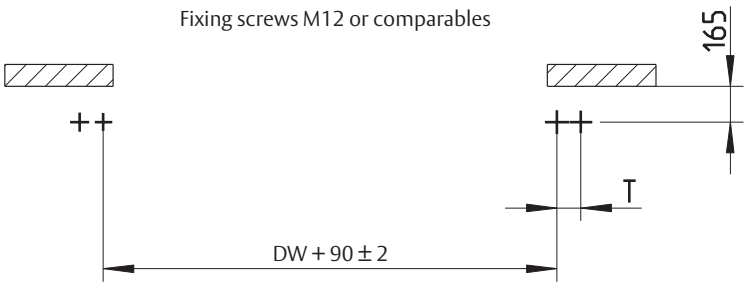
Fixing plan ASSA ABLOY RP2000



Door type		T	B
1–6	drive side	110	100
	non drive side		
1–9	drive side	110	100
2–9	non drive side	165	155



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