

# RapidRoll® Clean

Certified doors for cleanroom applications

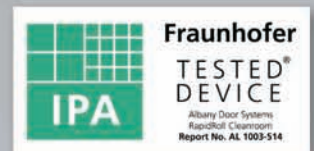
**ALBANY**  
**ASSA ABLOY**

Technical Data Sheet

ASSA ABLOY, the global leader  
in door opening solutions



**NIHVA**



# RapidRoll® Clean

- Cleanroom suitability certified by Fraunhofer Institute
- Fulfills international standards and guidelines for cleanroom applications in accordance with DIN EN ISO 14644-1 and GMP
- ISO Class 5, GMP Class C
- Low particle emission
- Low air exchange thanks to fast opening and closing speed

## DOOR DESIGN

The entire door (side frame, motor and roll cover, and bottom profile) is made from stainless steel. The smooth surface facilitates easy cleaning and avoids the accumulation of particle deposits.



## NARROW SIDE COLUMNS / MINIMAL GAP

The dimensions of the door's side columns are kept to a minimum and allow the door to be installed in confined areas. The extremely small gap of the door curtain guide ensures minimal pressure loss.



## CABLE GUIDE SEALING

To prevent pressure losses, the cable guide is integrated and access openings inside the door are sealed.



## DOOR CURTAIN

The door curtain consists of PVC with white fabric reinforcement strips. Fabric reinforcement strips in a wide variety of RAL colours are available as option.



## BOTTOM PROFILE

There is only a small gap between the bottom profile and the side columns. This minimises the pressure loss when the door is closed.



## SAFETY FEATURES

The door is equipped with an electrical safety contact edge. A contactless pre-running safety photocell is available as option. In addition the door is equipped with a door line photocell which prevents the door from closing when objects are in the way.



## INTEGRATED CABLE GUIDE

The cables are located in the side columns to provide a smooth surface and avoid surface irregularities that increase particle turbulence.

The supply cables of the pre-running safety photocell and the contact strip are guided reliably by an internal cable carrier chain.





**Fraunhofer**  
**TESTED<sup>®</sup>**  
**DEVICE**  
 Albany Door Systems  
 RapidRoll Cleanroom  
 Report No. AL 1003-514



#### TOP ROLL COVER / MOTOR COVER

The door is equipped with top roll cover and motor cover as standard.



#### FREQUENCY CONVERTER CONTROL SYSTEM

The MCC<sup>vector Control</sup> frequency converter control system and the optional UPS battery are located in a compact sealed compartment under the top roll cover.



#### MOTOR POSITION

The motor can be fitted either on the right or on the left hand side.



#### CONTROL UNIT AND MAIN SWITCH

The display unit with its user-friendly foil keypad and graphic display and the main switch are integrated in the side column.



#### EGRESS

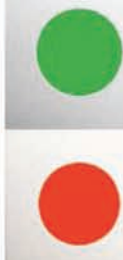
Self opening is available as an option. The UPS battery supplies power to the door control system in case of a power failure. UPS error and diagnostic messages are indicated by LEDs.



#### INTEGRATED TRAFFIC LIGHT IN THE SIDE COLUMNS

It is possible to signal the movement of the door via a traffic light system which can be inserted into either both side columns or just one side column.

A yellow flashing light, a stationary red/green light is available or a traffic light in separate stainless steel housing could be installed opposite. A red/green traffic light with recognition of direction is possible for the option with the MCC control unit.



#### CONTACTLESS ACTUATOR

An optional contactless actuator is available for fast, hygienic opening.



# RapidRoll® Clean Cleanroom Door

Production in a controlled environment, such as a cleanroom environment, is common practice in many industries. Some examples are medical applications, pharmaceutical production, research, electronics production, semiconductor production, and space flight. All components used in cleanrooms are subject to stringent requirements. Particularly in these areas, it is important to keep the production stations clean. In this connection, doors as components of cleanroom areas must prevent undesired air exchange and the uncontrolled entry of airborne particles.

For this area, Albany has now expanded its product range with a new cleanroom door: RapidRoll® Clean. This is the first door that has been tested by the Fraunhofer Institute for cleanroom suitability.

## ADVANTAGES OF THE RAPIDROLL® CLEAN HIGH PERFORMANCE ROLLER DOOR

- Well suited to cleanroom isolation in accordance with DIN EN ISO 14644-1 Class 5
- Provides high air-tightness and keeps the pressure drop through the closed door at a minimum
- Fast opening and closing ensures very low air loss and minimize air exchange, which results in a low filter burden and increased cleanroom cost-effectiveness
- Smooth surface allows easy cleaning
- Design in accordance with GMP Class C
- Integrated cable guide for a smooth overall surface
- Contactless actuator (optional) enables fast, hygienic opening with a simple hand motion
- Integrated traffic light (optional)

## DESIGN

Side frames, top roll and motor cover and the bottom profile are made from stainless steel (V2A). The cable guide is integrated. Gaskets and sealings to minimize air leakage.

## DOOR CURTAIN

The door curtain is made from clear PVC with vertical white fabric reinforcement strips. Other versions with fabric reinforcement strips in a wide variety of RAL colours are available as option.

## DRIVE UNIT

The drive unit is a geared brake motor. It can be fitted on the right or left.

## CONTROL SYSTEM

The door is equipped with the frequency converter control system MCC<sup>VectorControl</sup>, which supports a wide range of speeds, supply voltages and options for connecting control and safety devices. The MCC<sup>VectorControl</sup> system is integrated in the overall structure under the roll cover. The display unit and main switch are located in the side column.

## EGRESS OPTIONS

The control system MCC<sup>VectorControl</sup> can be equipped with a UPS battery for continued emergency operation after a power failure.

## SAFETY FEATURES

The door is designed according to the Workplace Directive of the UVV regulations and the harmonized CE Guidelines including the EN 13241-1.

## INDICATION OF RISKS

The security of the door is designed for normal use corresponding to the harmonized CE-Guidelines. In addition to this, difficult environmental conditions may affect the proper use of cleanroom doors. In this connection, we recommend that you consult our local sales engineers for expert advice on specific situations.

## TECHNICAL DATA

Place of installation	Suitable for cleanrooms with pressure differences up to 50 Pa
Cleanroom class	ISO Class 5 – EN 14644-1
GMP	Class C
Leakage (door size 1500 x 2000 mm)	20 m <sup>3</sup> /h at a pressure difference of 25 Pa
Door dimensions (W min./max.) (H min./max.) W min. and H min. with UPS	For details please see general drawing 1000 / 3500 mm 1000 / 3500 mm 1500 / 1000 mm
Opening direction	vertical
Drive unit	electrical

## Surface

Side frame	Stainless steel V2A
Bottom profile	Stainless steel V2A
Top roll cover	Stainless steel V2A
Motor cover	Stainless steel V2A

## Door curtain

PVC with white reinforcement strips	✓
PVC with coloured reinforcement strips	•

## Control systems / Drive unit

MCC <sup>VectorControl</sup>	✓
MCC <sup>VectorControl</sup> with UPS	•
Motor power	0,75 kW
Open / close up to max.	2.0 / 1.0 m/s
Fuse protection <sup>1)</sup>	10 A
Control voltage	24 V DC
Protection	IP 55
AC mains connection <sup>2)</sup>	3 L / (N) PE 380 / 400 / 415 / 440 / 480 V; 50 / 60 Hz
Additional opening heights	•
Potential-free contacts max. 250 V	•

## Safety

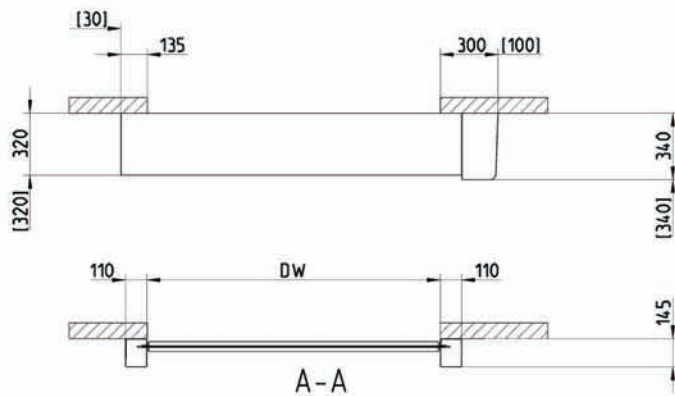
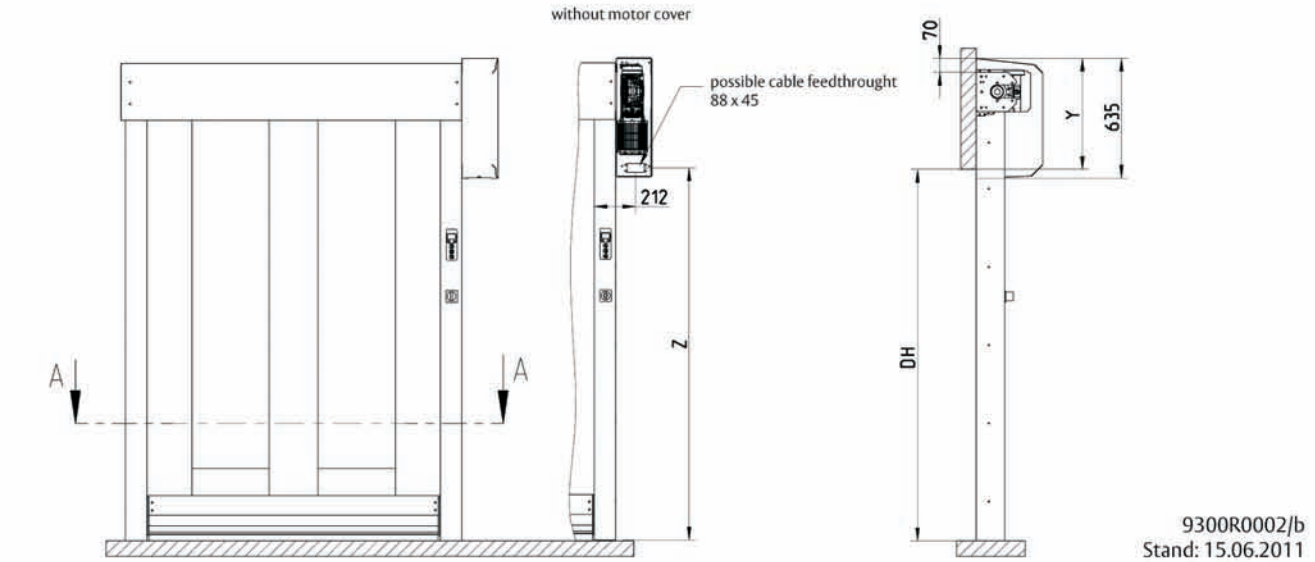
Electric safety contact edge	✓
Door line photocell	✓
Pre-running safety photocell	•
Fall down protection	✓ via drive
Automatic egress	• with MCC and UPS
Manual activation with an emergency crank handle	✓

## Traffic light function

Without direction detection	✓ 24 V DC
With direction detection	✓ 24 V DC
Flashing alarm light	• 24 V DC
MCC error message	✓ Text message
UPS error message	• LEDs

- Option
- ✓ Standard
- not available

- 1) 10 A preferred, 16 A max.
- 2) External transformer required for 220/230/500 V

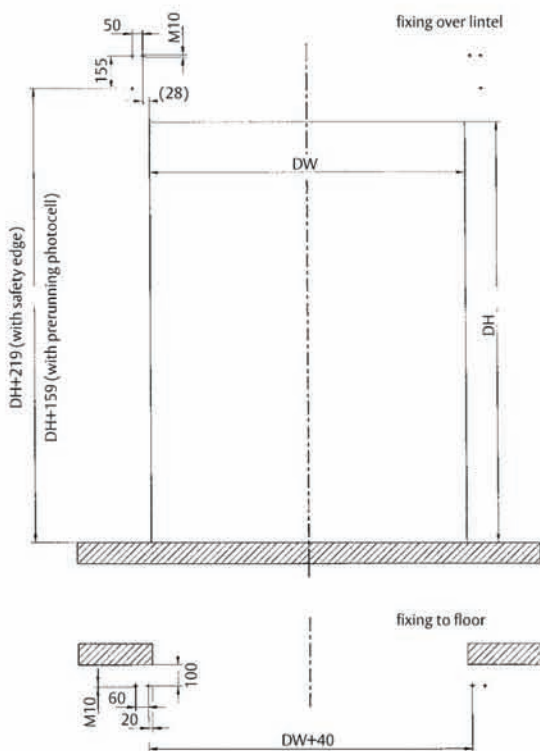


	Y	Z
with safety edge	470	DH - 93
with pre-running photocell	410	DH - 153

Available Sizes		
	DW (B)	DH (H)
min. (mm)	1000	1000
max. (mm)	3500	3500
with UPS with MCC extension	1500	1000
with UPS without MCC extension	1350	1000

Control System MCC <sup>vector Control</sup>		
Opening speed	max. (m/s)	2,0
Closing speed	max. (m/s)	1,0

| ] = Space needed for installation



ASSA ABLOY Entrance Systems is a leading supplier of entrance automation solutions for efficient flow of goods and people. With a worldwide presence we offer products and services 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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