High speed roll door

The high speed roll doors design is unique. The door roll is located on the back of the door. Moving parts are thus placed inside the cell, out of reach for the operator. Further, this design allows a forklift to get closer and deeper into the cell e.g. at tool exchange.



Axelent's Swedish-manufactured High Speed Roll Door is a compact and efficient solution for production cells where high opening frequency and limited space require safe and smooth material flow. The door roll is positioned at the back of the unit, keeping all moving parts protected inside the cell. This increases operator safety and allows forklifts to approach closer during operations such as tool changes.

Designed for long service life, minimal maintenance and low operating costs, the door can be customised in size and configuration. Mounting posts and yardstick opening width are included as standard.

Design & Construction

The frame structure is made from anodised aluminium profiles that can be easily detached for inspection and service. The compact design allows the door to be placed close to work areas without affecting the layout of the cell.

Key construction features:

- Frames, bottom beam and top roll cover in anodised aluminium
- Rounded bottom beam for improved sealing and durability
- Motor cover available as option
- Motor cable supplied pre-connected, length 3 m
- Door stop position: 0 mm above floor
- Patented system securing the curtain edge inside the slim frame profiles
- Manual crank for emergency opening included

Door Panel

The curtain is manufactured from 2 mm PVC-coated fabric with a smooth finish. The material is antistatic and reinforced with insulated carbon fibre threads, offering high resistance to chemicals, welding splash and UV radiation.

Colours and variants:

- Standard colour: Blue (RAL 5007)
- Option: Yellow (RAL 1023), Red (RAL 3000), Light grey (RAL 7038), Orange (RAL 2004)
- Vision panel: Not included as standard
- Optional full-width transparent or tinted vision panel available (bronze or red)

Drive System & Control

The door is driven by a vector-controlled motor with adjustable opening speed up to 2.5 m/s.

Control cabinet:

- Power supply: 1 x 230 V AC
- Dimensions: 250 × 600 × 200 mm (W × H × D)
- Touch display mounted outside the door
- Supported display languages: Swedish, English, German, French
- Prepared for remote control and integration with higher-level systems
- Inputs for external open/close signals

Motor direction configuration:

- Backward – standard
- Forward – permitted
- Upward – permitted
- Downward – not permitted (requires modification)

Main circuit breaker is not included.

Safety Features

The High Speed Roll Door meets high safety requirements for machine guarding and automation environments.

Safety components include:

- Full-height safety photocell curtain integrated in the frame profiles
- Automatic reversing on obstacle detection
- Non-contact safety switch in the motor-side frame
  - Standard model: Allen-Bradley Sensaguard 440N-Z21SS2A
  - Safety level up to Cat. 4, PL e, SIL 3
- Cables marked but not connected for easy installation
- Clampguard not included

The door is supplied with:

- EC Declaration of Incorporation according to Machinery Directive 2006/42/EC Annex II B
- EC Declarations of Conformity for LVD and EMC
- Complete installation and operating manuals

Sizes

Available in multiple standard configurations adapted to X-Guard post heights and system layouts.

Maximum clear opening dimensions:

- Height up to 3055 mm (X-Guard)
- Height up to 3400 mm (X-Store)
- Width up to 3000 mm

Custom sizes are available on request.

Options

The system can be equipped with a range of options for advanced functionality:

- Reversing safety edge with wireless transmission
- UPS for opening during power failure
- Communication modules (Profisafe, Profinet, Profibus)
- Additional curtain colours
- Transparent or tinted vision panel
- Safety relay Cat. 4, PL e, SIL 3
- LED indication in the frame (yellow, red, blue, green or white)
- Motor cover

Models

ARTICLES / DESCRIPTION	WIDTH (MM)	MAX OPENING WIDTH (MM)	MAX HEIGHT (MM)
 **S-0145-230150L / S-0145-230150R** High speed roll door (Rollback, motor L /motor R) CH=2300 mm, CW=1500 mm		1500	2300
 **S-0145-230200L / S-0145-230200R** High speed roll door (Rollback, motor L /motor R), CH=2300 mm, CW=2000 mm		2000	2300
 **S-0145-230250L / S-0145-230250R** High speed roll door (Rollback, motor L/motor R), CH=2300 mm, CW=2500 mm		2500	2300
 **S-0145-250150L / S-0145-250150R** High speed roll door (Rollback, motor L/motor R), CH=2500 mm, CW=1500 mm		1500	2500
 **S-0145-250200L / S-0145-250200R** High speed roll door (Rollback, motor L/motor R), CH=2500 mm, CW=2000 mm		2000	2500

	**S-0145-250250L / S-0145-250250R** High speed roll door (Rollback, motor L/motor R), CH=2500 mm, CW=2500 mm	2500	2500