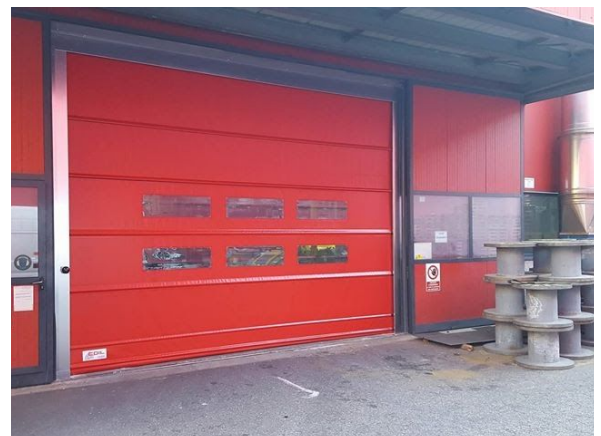


The COIL logo is displayed in a bold, orange, sans-serif font. To the right of the text is a graphic element consisting of several horizontal lines of varying lengths, creating a sense of motion or a stylized 'L'.

## PAL 150/200

Roll-up high speed door  
resistant and reliable

A unique coat in polyester fabric, reinforced with steel tubes, it is a particularly wind-resistant door and ideal for large openings. Available in AISI 304 stainless steel versions for highly sanitized environments, Pneumatics for operation in explosion-proof and panic proof environments, which can also be combined with centralized safety logic.



## Versions

### PAL 150 Inox AISI 304

An AISI 304 stainless steel frame is a valid solution for sanitizing wash down requirements and best environmental hygiene in the food processing, chemicals production and pharmaceutical industries.

### PAL 150 Pneumatic

This door version meets all processing requirements in explosion-prone environments by use of a totally pneumatic drive motor.

### PAL 200 Antipanic

A panic exit feature is censored by the installation of a counterbalance spring installed inside one of the vertical mullions. In case of power outage this counterbalance system allows for motor brake unlocking and automatic curtain lifting or, alternatively, manual unlocking by means of a pushbutton positioned at a convenient operator's height. This safety system can be connected to central safety logics e.g. fire fighting systems.



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## Technical features

### Self supporting structure

The framework is built with sturdy galvanized steel profiles, sized to ensure durability and protection in all situations, even during accidental impacts.

### Drive shaft

Made of galvanized 152 mm dia. flanged steel tube, which rotates on side supports fitted with self-aligning ball bearings. The galvanized steel header has removable inspection access panel.

### Framework option

Framework available in AISI 304 stainless steel or in galvanized steel painted in RAL colors.

### Drive Motor

#### Motor assembly

Three phase self-braking motor running on 220/380 Volt 50 Hz, rated from 0,75 to 1,5 Kw, complete with safety overload detector and electro-magnetic lock brake.

#### Opening Speed

0,9 m/sec.

#### Non reversible gear speed reducer

Self-lubricating worm screw mounted directly on the winding drum. Cam type end-stroke switch.

### Curtain features

#### Flexible curtain

Single piece curtain made of type "Trevira", dual sides coated Class 2 self-extinguishing polyester fabric fitted with sealed sleeves for the reinforcing tubes. Large dimension transparent PVC viewing windows. Variable number of sections with rows of windows according to door size (one row of windows standard). Basic curtain color is Orange. Other colors are available.

#### Curtain slide travel

Very quiet operation thanks to dual rubber seals fitted on to the side tracks.

#### Wind resistant bars

A high wind pressure resistance is ensured by a series of steel tubing inserted into suitable sleeves, heat sealed on the curtain.

### Wind pressure resistance

Either UNI EN 12424 Class 0/1. On request the resistance can be as option Class 2.

### Curtain options

#### Bottom rail

Made of solid aluminum profile fitted with an effective, durable airtight seal.

### Safety features

#### Emergency opening

In case of power outage or a breakdown, opening and closing operations are ensured by a manual control located at a suitable operator height for a snap-ingrain into the drive motor. The PAL 200 version is fitted with a counterbalancing spring installed inside one of the side jambs for motor brake unlocking and automatic curtain lifting.

#### Safety photocell

A pair of photocell beams stop the curtain descent and make it lift again, if they detect an obstruction in the doorway.

#### Door Fall Preventing

Complying with current regulations, all vertical high speed roll up doors must be fitted with a device preventing them to fall in case of breakdown. PAL doors are fitted with a "no-fall device" curtain which is connected to the irreversible reducer mounted directly on the winding drum.





## Optional Safety Devices

### Emergency/panic door opening (Coil patent) for PAL 200 only

This device allows automatic curtain lifting in case of power outage, or actuating the manual emergency button located at an easy operator height. The exclusive design features of this system allow it to be integrated in central safety logics, e.g. fire detection systems.

### Safety Bar

This opto-electronic system features an optical sensor inside the bottom curtain rail (up to a width of 4000mm). An alternate version features a double chamber bottom rail with dual pneumatic signal amplifiers ensuring a prompt stop of the door and the reversal of its travel.

### Additional set of photocells

These can be installed at a higher level than the standard photocell configuration.

## Electric Equipment

### Hard Wiring

Fully prewired, with standard terminal block for connections between control panel and remote utilities (motor, photocells, commands, etc.), using electrical ducts.

### Control panel

COIL door is supplied with an exclusive electronic control unit powered by 400V three-phase +N, equipped with electronic limit switches with absolute multi-turn encoder. It also offers the possibility of expansion and connection to external devices (fire or emergency security systems) and remote control. Equipped with a large and specific display for programming, diagnostics and verification of operating cycles.

Alternatively, the door can be supplied with the exclusive electronic programmer with single-phase INVERTER 230 V, for the management and customisation of the upward and downward speeds of the mantle, the slowdown in limit switch phases during opening and closing.



### Optional partial opening

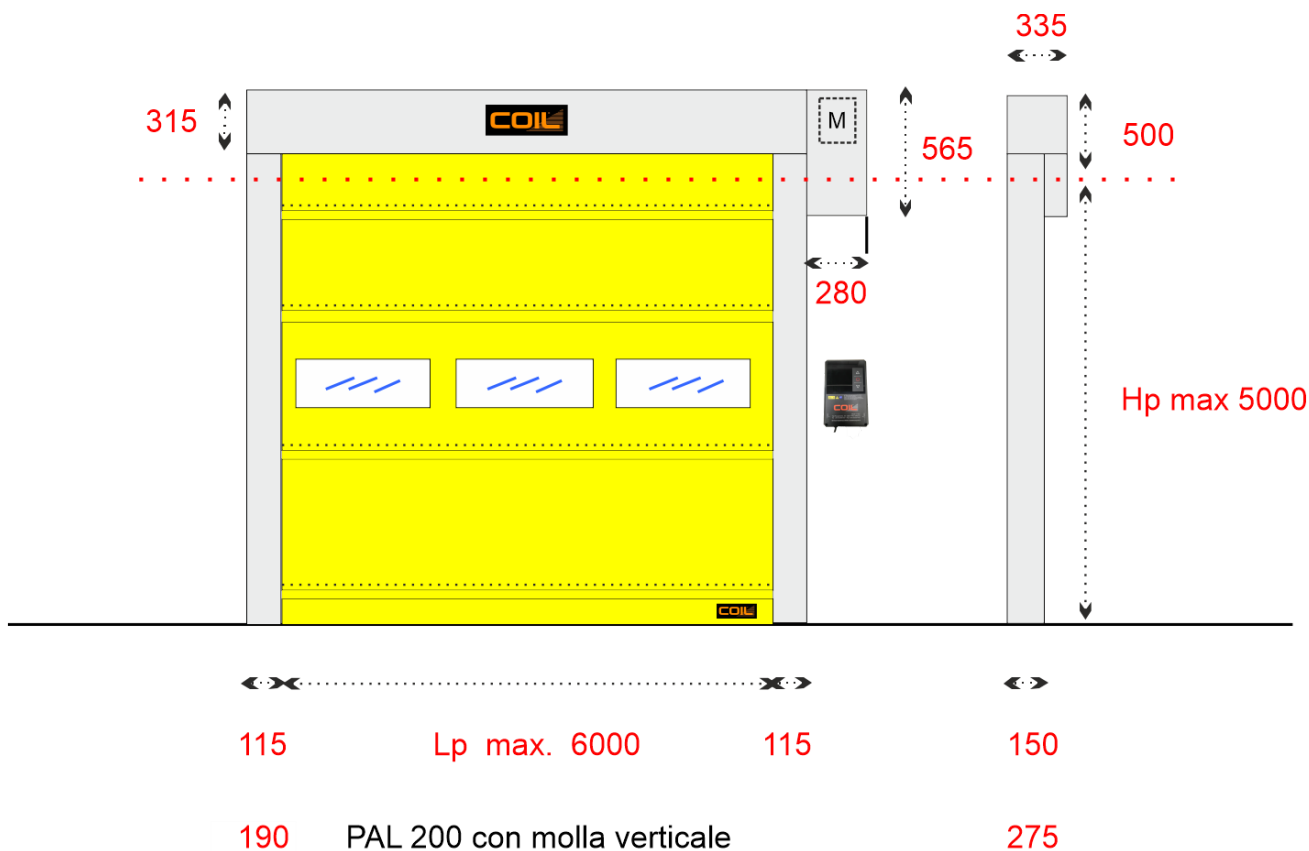
This option allows a curtain partial lifting up to a preselected height

### Optional PLUS type switchboard

In addition to the standard: Manual/Automatic selector switch, up/down buttons for human presence control.

### Optional interlock logic

Interface commands for a series of doors.



## Pneumatic version for environments classified ATEX 2014/34/EU



Technical features of the pneumatic version vs. the standard series:

### Drive Assembly

A reversible Pneumatic Motor rated 1,1 Kw at 3000 rpm, running on 7 bar. plant air.

### Safety Pneumatic Bottom Rail

A special rubber profile fitted with dual signal amplifiers in the bottom rail, ensures a prompt door standstill and an immediate reverse lifting when hitting an obstacle on the threshold line.

### Pneumatic equipment

A fully cabled system with external connectors ensures a fast safe contact between the control panel and the plant air supply.

### Control panel

The control panel is installed inside a sturdy IP 55 rated casing, and the system can operate on 6 Atm. The equipment includes a pressure-reducer regulator, a lubricator assembly with 95% oil mist filter capacity, power throttle valves, open/close pushbuttons and a Manual/Automatic selector switch. Time scheduling logic can be programmed from 0 to 30 seconds. Pneumatic safety rail control with possibility to adjust the pause time.

### Emergency door opening

An optional 100 liter air tank

### Opening speed

about 0,5 m/sec.

### Accessories

Pneumatic push button  
Pneumatic pull cord  
Pneumatic mat

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## Warranty

Manufactured with the best electronic materials and components, PAL doors are tested in the most severe applications in industry and commerce and are covered by a standard 12-month warranty.

## Certifications

Product in compliance with the product standard UNI EN 13241:2016 Industrial and commercial closures. All COIL doors are supplied with the original CE certificate.

CE certification ensures that construction and design of the product complies with requirements of the following safety directives:

- UNI EN 13241:2016 Product standard for Industrial and Commercial Closures
- 305/2011 Construction Products Directive
- 2014/35/EU Low Voltage Directive or LVD
- 2014/30/EU Electromagnetic Compatibility Directive or EMC Directive
- 2006/42/EC Machinery Directive
- UNI EN 12604 Mechanical aspects
- UNI EN 12453 Safety in use of motorized doors
- UNI EN 12424 Wind load resistance



## PAL 150 ATEX certifications

The product complies with the 2006/42/EC Machinery Directive. All COIL doors are supplied complete with the original EC certificate. The EC certificate guarantees the product design and construction comply with the safety requirements included with the following standards:

- Machinery Directive 2006/42/EC
- Product compliant with ATEX 2014/34/EU

Note : The information contained in this document is descriptive and does not constitute a contract. MISA Automazione Srl reserves the right to modify, even in part, the information contained in this document without notice, due to the continuous research and updating of its products.

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