

HIGH-SPEED SPIRAL DOOR, type "EFA-SST®-L EX"

Manufacture, delivery and installation of:
high-speed spiral door, type "EFA-SST®-L EX", with electro-mechanical high-performance drive for permanent indoor industrial applications.

The door system mainly consists of:
self-supporting lateral steel frames, steel parts (which are generally galvanized) and spiral-shaped door leaf mounts. The force is applied on both sides: To achieve this, a synchronised drive is installed. Ball-bearing precision rolling units have to be used for the precise, smooth and low-noise guidance of the hinge chains. A sufficiently dimensioned tension spring mechanism, ensuring the weight balancing of the door leaf and the emergency opening of the door (e.g. in the case of a power failure), is installed in the door frames, in accordance with DIN EN 12604.

This SPIRAL BODY (either a round or an oval spiral) is designed to guide the laths of the door leaf completely without contact and thus without wear and with best possible noise reduction.
The DOOR is driven by a high-frequency motor. The door positions are detected by means of non-wearing, inductive proximity switches (zone 1) or by means of absolute encoders (zone 2), whereby the limits are determined electronically. Electro-mechanical limit switches are not permissible here.

DOOR LEAF DESIGNS:

Version1 distance between laths 151 mm (spiral body with round or oval spiral guiding):

Door leaf made of double-walled ALUMINIUM laths which are fixed onto hinge chains and moved vertically (i.e. up or down), surface of the laths have an anodised finish (E6/EV1).

Version2 distance between laths 225 mm (spiral body with round spiral guiding):

The door leaf consists of two outer posts made of anodised aluminium (E6/EV1) as well as of a middle area which is made of transparent, single-walled acrylic glass. The visible surface of the door leaf must be at least 70%, and optical clarity must be ensured permanently.

OPENING SPEED: up to approx. 1.0 m/s

CLOSING SPEED: up to approx. 0.5 m/s

The **MICROPROCESSOR CONTROL** is installed along with the integrated frequency converter in a separate steel switch cabinet, protection class IP 65. Connection to 230V -50 Hz power supply on site. The control **MUST** be installed outside the explosion protection zone.

SAFETY DEVICES:

- Safety contact edge which is self-monitoring in accordance with DIN EN12453 in an explosion protection design. The connection cable must be guided and protected within the door frame by an energy chain.
- Safety light barrier in an explosion protection design, integrated into the door frames so that it is protected - emergency stop buttons in an explosion protection design (surface-mounted industrial design)

EXPLOSION PROTECTION DESIGNS:

In accordance with the ATEX Directive 2014/34/EU, the door system is suitable for use in:

- Explosion protection zone 1 (II 2G IIB T4 X)
- Explosion protection zone 2 (II 3G IIB T4 X)

(X: Operating and ambient temperature -15°C to +50°C)

ATEX certificates are available for all electrical components (except for the switch cabinet).

Mechanical explosion protection is designed according to the explosion protection zone.

12/17 Subject to technical changes

Regulations pursuant to DIN EN 13241-1 are complied with;

Resistance to wind load in accordance with DIN EN 12424, up to class 4

Air permeability in accordance with DIN EN 12426, class 2

Airborne sound insulation in accordance with DIN EN 7171, up to 23 dB(A)
(values dependant on the door size and equipment)

for clear passage opening dimensions

Width = mm x Height = mm

Manufacturer:
EFAFLEX Tor- und Sicherheitssysteme GmbH & Co. KG
www.efaflex.com

OPTIONS available for the high-speed spiral door, type "EFA-SST®-L EX":

WINDING SHAFT / MOTOR COVER:

- Spiral covers at the bottom and front
- Spiral cover at the top (not in the case of an oval spiral) as dust cover
- Motor cover

SURFACE

Powder coating of all visible, galvanised steel parts in a colour according to RAL _____
(Pearl, fluorescent and metallic colours are not available)

or

Stainless steel version (V2A) of all visible steel parts, visible surface polished, grain size 220, incl. switch cabinet made of V2A.

Special coating of the laths in a colour according to RAL _____
(Pearl, fluorescent and metallic colours are not available)

If steel parts as well as lath parts are coated in the same RAL colour, minor deviations in colour, which cannot be fully avoided, may occur due to the different surface structures of the materials. However, the supplier will do their best to keep deviations in colour to a minimum by altering the amount of gloss.

DOOR LEAF

Version1 distance between laths 151 mm (standard double-walled ALUMINIUM laths):

Surcharge for aluminium sight laths with fully transparent, single-walled windows made of acrylic glass. Option: Surcharge for door leaf filling of single-walled, transparent and impact-resistant polycarbonate.

Version2 distance between laths 225 mm (standard outer posts with single-walled acrylic glass filling)

Surcharge for door leaf filling of single-walled, non-transparent plastic (colour: aluminium-grey).

Option: Surcharge for door leaf filling of single-walled, transparent and impact-resistant polycarbonate.

ACTIVATORS

- Push-buttons in an explosion protection design, surface-mounted industrial design
- Push-button combination for OPEN/STOP/CLOSE in an explosion protection design, surface-mounted industrial design
- Pull switch in an explosion protection design, optionally with retaining bracket
- Induction evaluation unit in an explosion protection design (1-channel or 2-channel)
(including the installation of induction loops)

SPECIAL DESIGNS

Door system in accordance with the ATEX Directive 2014/34/EU for dust explosion protection:

- Explosion protection zone 21 (II 2D IIIB 135°C X)
 - Explosion protection zone 22 (II 3D IIIB 135°C X)
- (X: Operating and ambient temperature -15°C to +50°C)