EFAFLEX
safe high-speed doors

ATEX Series

High-speed door systems for potentially explosive atmospheres


EX

General information about ATEX

The ATEX Product Directive 2014/34/EU sets out the intended use of equipment and protective systems in potentially explosive atmospheres.

The ATEX Workplace Directive 1999/92/EC establishes the minimum requirements for improving the health and safety protection of workers potentially at risk from explosive atmospheres. According to this Directive, the operator of systems in such areas must draw up an explosion protection document within the scope of their risk assessment and classify potentially explosive atmospheres into explosion protection zones.

Our ATEX door systems can be used in the following explosion protection zones:

Gas: Zone 1 (II 2G IIB T4 GbX)
Zone 2 (II 3G IIB T4 GcX)

Dust*: Zone 21 (II 2D IIIB 135°C DbX)
Zone 22 (II 3D IIIB 135°C DcX)

X = Operating temperature

* Optionally on request

Please note that our switch cabinet is not designed for use in potentially explosive atmosphere and must thus be installed outside the explosion protection zone.

Our door systems are designed particularly for use in potentially explosive atmosphere in accordance with the ATEX Directive 2014/34/EU. ATEX certificates are available for all electrical components (except for the switch cabinet). Mechanical design is according to the requirements of the explosion protection zone.

ATEX pulse generator:

- Push-button
- Pull switch
- Induction loops
- Light barriers

Potentially explosive atmospheres

Conditions and classification of zones			**Required marking of the operating equipment**			
Flammable substances	**Temporary behaviour** of explosive atmosphere	**Classification of** potentially explosive atmospheres	**Group** within the meaning of Directive 2014/34/EU	**Equipment category** within the meaning of Directive 2014/34/EU	**Equipment group** within the meaning of EN IEC 60079-0	**Equipment protection level** (EPL) within the meaning of EN IEC 60079-0
Gases Vapours	are present continuously, for long periods or frequently	Zone 0	II	1G	II	Ga
	occur occasionally during normal operation	Zone 1	II	2G or 1G	II	Gb or Ga
	do usually not occur or occur only for short periods during normal operation	Zone 2	II	3G or 2G or 1G	II	Gc or Gb or Ga
Dusts	are present in the form of a cloud continuously, for long periods or frequently	Zone 20	II	1D	III	Da
	occur occasionally during normal operation in the form of a cloud	Zone 21	II	2D or 1D	III	Db or Da
	do usually not occur in the form of a cloud during normal operation or occur only for short periods	Zone 22	II	3D or 2D or 1D	III	Dc or Db or Da
Methane Coal dust	Operation if there is a risk of explosion	–	A	M1	A	Ma
	Switch-off if there is a risk of explosion	–	A	M2 or M1	A	Mb or Ma

EFA-SST® EX

High-speed spiral door for ATEX applications

The advantages of EFA-SST® EX at a glance:

- Can be used in the explosion protection zones 1, 2, 21 and 22
- Wind load class 2 to 4
- Up to 200,000 operating cycles per year
- Suitable for external and internal applications
- Speed: opening 1.0 m/s; closing 0.5 m/s
- Standard sizes up to W = 4,000 mm x H = 5,000 mm

The typical hall door for potentially explosive atmospheres

The EFA-SST® EX is excellently suited for both indoor and outdoor use. In addition to high opening and closing speeds, it also offers a solid door leaf with high wind resistance and optimised sealing. The door leaf consists (for the round spiral design) either of double-walled aluminium laths (distance between laths 151 mm) or of PVC-free, highly transparent sight laths (distance between laths 225 mm). For the oval spiral design, only double-walled aluminium laths are used. The laths are integrated into a spiral without contact moving in a virtually wear-free manner.

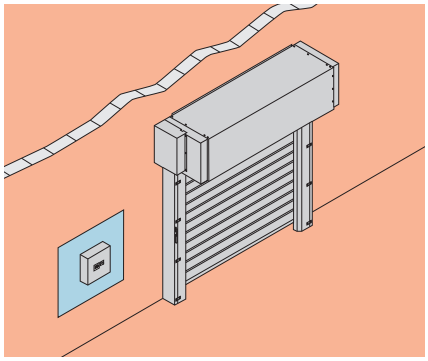
For use in explosion protection zones

The high-speed spiral door EFA-SST® EX has been developed in accordance with the ATEX Directive 2014/34/EU specifically for use in potentially explosive atmospheres:

Gas: Zone 1 (II 2G IIB T4 GbX)
Zone 2 (II 3G IIB T4 GcX)

Dust*: Zone 21 (II 2D IIIB 135°C DbX)
Zone 22 (II 3D IIIB 135°C DcX)

X = Operating temperature -15 °C to +50 °C
* Optionally on request

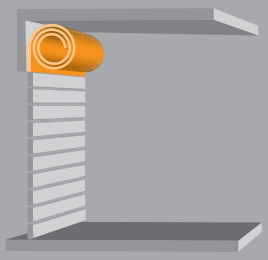


potentially explosive atmosphere

no potentially explosive atmosphere

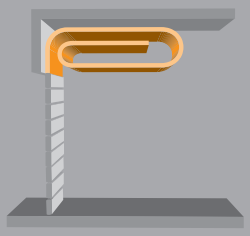
The control must be installed outside the potentially explosive atmosphere.

Round spiral



The round spiral is standard, the ideal solution when you have sufficient space above the door.

Oval spiral



Oval and thus space-saving designs are used in case of restricted structural conditions.

Application

- Industrial applications e.g. pharmaceuticals, chemicals, hazardous substances and paint shops
- Suitable for external and internal applications
- Outdoor installation possible under an on-site canopy

EFA-SRT® EX

High-speed roll-up door for ATEX applications

The advantages of EFA-SRT® EX at a glance:

- Can be used in the explosion protection zones 1, 2, 21 and 22
- Up to 150,000 operating cycles per year
- Heavy-duty inside door
- Speed: opening 1.0 m/s; closing 0.5 m/s
- Standard sizes up to W = 4,000 mm x H = 4,000 mm

The internal door for potentially explosive atmospheres

In addition to a standard frequency converter and microprocessor control, the EFA-SRT® EX comprises all typical basic characteristics of modern door technology, such as a dynamic door leaf tension and counterbalance via springs. A hand lever at the side frame allows for manual release of the door (e.g. in case of a power failure). So there is no need for time-consuming handling using an emergency hand crank! The door leaf consists of an approx. 1.4 mm thick, non-transparent, black special ATEX curtain with wind safety devices.

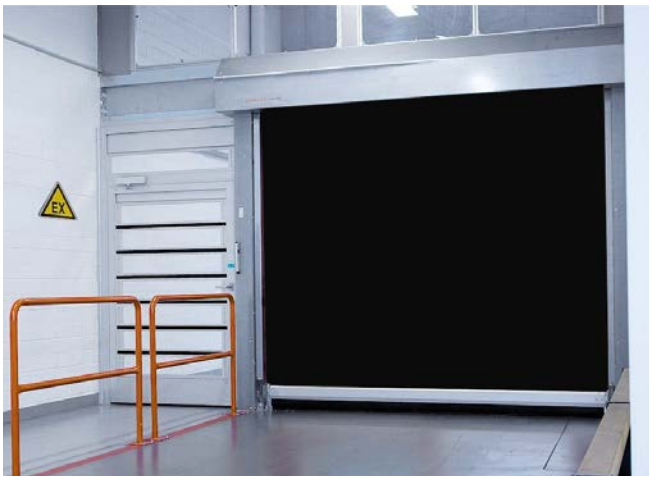
For use in explosion protection zones

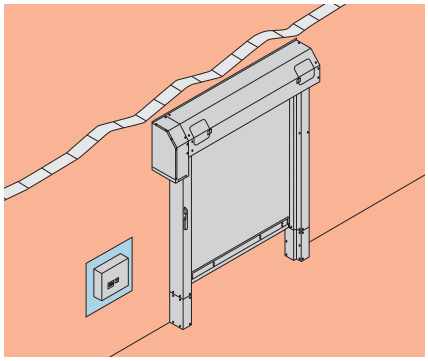
The high-speed roll-up door EFA-SRT® EX has been developed in accordance with the ATEX Directive (Directive 2014/34/EU) specifically for use in potentially explosive atmospheres:

Gas: Zone 1 (II 2G IIB T4 GbX)
Zone 2 (II 3G IIB T4 GcX)

Dust*: Zone 21 (II 2D IIIB 135°C DbX)
Zone 22 (II 3D IIIB 135°C DcX)

X = Operating temperature +5 °C to +50 °C
* Optionally on request





potentially explosive atmosphere

no potentially explosive atmosphere

The control must be installed outside the potentially explosive atmosphere.

Application

- Industrial applications e.g. pharmaceuticals, chemicals, hazardous substances and paint shops
- Suitable for indoor use

ATEX accessories

Safety

- Manual release
- Locking handle
- Optical signal devices
- Motion detectors on request
- Safety light barriers
- Emergency stop pushbutton

ATEX key switch open-close
ATEX emergency stop mush-room-type push-button

ATEX push-button open-close

Sight laths

Activator

- Push-button
- Pull switch
- Induction loops
- Light barriers
- Key switch

ATEX pull switch

ATEX light barrier

Manual release at the side frame and on the console for the opposite side of the door

Technical data:

ATEX Series

		EFA-SST® EX	EFA-SRT® EX
		L	L
Application	Inside door	●	●
	Closing door	●	–
Wind load, max.*	According to DIN EN 12424 in classes	2-4	npd
Operating forces / secure opening	According to DIN EN 13241	Fulfilled	Fulfilled
Resistance against penetrating water*	According to DIN EN 13241 in classes	0	npd
Air permeability*	According to DIN EN 13241 in classes	2	npd
Direct airborne sound insulation R_W*	in dB according to DIN EN 717-1	23	12
Heat transfer coefficient (HTC) maximum*	in W/m²K according to DIN EN 13241	5.8	npd
Door size (in mm) (Special sizes on request)	Width W max.	4,000	4,000
	Height H max.	5,000	4,000
Maximum door leaf speed	Opening in m/s	1.0	1.0
	Closing in m/s	0.5	0.5
Door leaf housing	Round spiral	●	–
	Oval spiral	●	–
Steel design	Steel-sheet, galvanized	●	●
	Stainless steel	○	○
	Powder-coated according to RAL	○	○
Door leaf	• ATEX curtain, black, without a viewing window	–	●
	• Double-walled aluminium lath (distance between laths 151 mm)	●	–
	· Anodised	●	–
	· Powder coating (RAL)	○	–
	· Sight lath (acrylic glass)	○	–
	· Sight lath (polycarbonate)	○	–
	· Ventilation lath	○	–
	• Single-walled acrylic glass with aluminium outer posts	●	–
	· Anodised	●	–
	· Powder coating (RAL)	○	–
	· Sight lath (acrylic glass)	●	–
	· Sight lath (polycarbonate)	○	–
	· Ventilation lath	○	–
Fire behaviour	DIN 4102 material class	B2	B2
Weight balancing by		Spring	Spring
Designed for approx. … load cycles p.a.		200,000	150,000
Drive	Electric motor with frequency converter	●	●
Control	EFA-TRONIC® Professional	●	●
	Frequency converter	●	●
	Main switch with membrane key pad	●	●
Lead	Power supply connection 230 V / 50 Hz	●	●
	Circuit breaker	16 A (K)	16 A (K)
Manual opening	Self-acting after manual triggering	●	●
Safety devices	Switching strip	●	●
	Light barrier	●	●
	Approach area monitoring, explosion protection (motion detector)	○	○

● Standard, ○ on request, – not deliverable, *dependent on door leaf, door leaf housing and door size, subject to technical changes,
npd = no performance determined

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Technological advancement. Pioneering design.

For more than 40 years, EFAFLEX has developed and designed reliable and highly-efficient high-speed doors. With innovative technology and pioneering solutions for special requests, EFAFLEX continually provides the market with new stimuli. This leadership role through superior technology, the best quality and a maximum degree of security is part of EFAFLEX's identity. More than 1,200 employees guarantee competent consultation and excellent service. Worldwide and always near you.

Overall design:
www.creativconcept.de 01|21

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