Machine protection doors

Fast, safe and reliable

MS Series

EFAFLEX

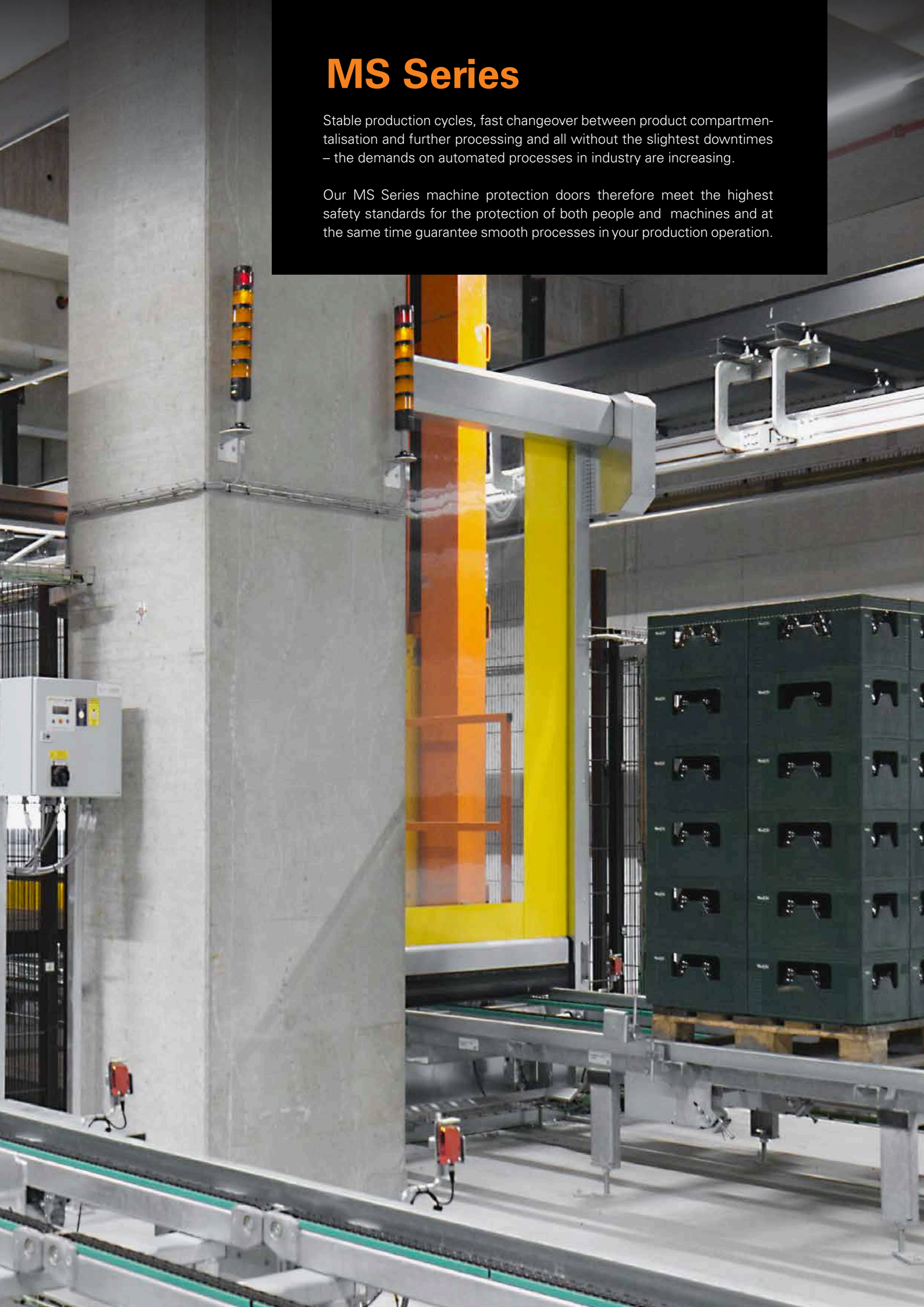
safe high-speed doors


EFAFLEX

MS Series

Stable production cycles, fast changeover between product compartmentalisation and further processing and all without the slightest downtimes – the demands on automated processes in industry are increasing.

Our MS Series machine protection doors therefore meet the highest safety standards for the protection of both people and machines and at the same time guarantee smooth processes in your production operation.



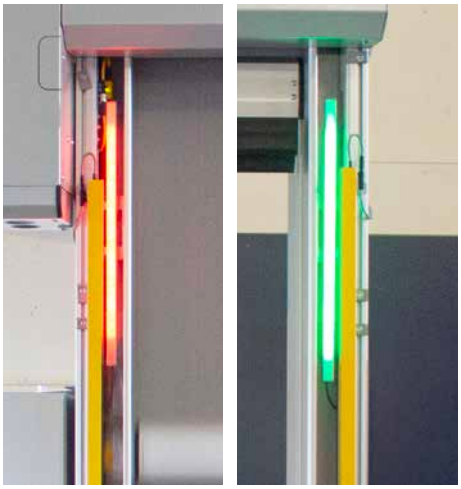
EFA-SRT® MS PERFORMANCE AT A GLANCE:

- Functional safety performance level »d«
- Up to 1,000,000 cycles per year
- Transparent, easy-to-open door frames
- Flexible attachment of components (e.g., fence connections/sensors, etc.)
- Hinged cover for easy maintenance
- Self-assembly possible
- Rotatable drive in up to eight positions
- Maximum speed up to 2.0 m/s
- Door curtain made from flexible PVC
- Life cycle 12 years
- Standard sizes up to w=6,200 mm, h=5,500 mm

The powerful machine protection door. EFA-SRT® MS Performance

The EFA-SRT® MS Performance is ideal for areas with custom requirements, as it can be flexibly adapted to individual needs. The newly developed door frames made of extruded aluminium profiles allow for the attachment of supplied components and fence connections in nearly any position. It's possible to integrate up to four optional end switches into the door frames. Thanks to the optimized construction, our trained personnel can quickly assemble the door on-site, either freestanding or on the wall.

This very low-maintenance door features, among other things, a hinged cover and detachable cable covers, which expedite and simplify servicing. The EFA-SRT® MS Performance can handle up to 1 million load cycles per year. Depending on the variant, the drive is rotatable in up to eight positions. Additionally, transparent door frame covers allow for the integration of LED strips, enabling the implementation of a traffic light function.



Transparent frame cover with integrated LED strip and traffic light function.

TRANSPARENT DOOR FRAMES

The high-speed rolling door EFA-SRT® MS Performance features transparent door frame covers, allowing for direct visual inspections, integration of LED strips, and the setup of traffic light functions.

WELL-THOUGHT-OUT DESIGN

The newly developed door frames made of extruded aluminum profiles in the EFA-SRT® MS Performance allow for the flexible attachment of components such as fences or sensors. Integrated cable channels also enable safe and organized cable separation. Maintenance is made easy thanks to a hinged cover.

HIGHEST NUMBER OF CYCLES

With its typical EFAFLEX optimized construction, the EFA-SRT® MS Performance effortlessly manages to carry out over a million load cycles per year, a feat unmatched by any other door on the market.

SOLUTIONS FOR EVERY INSTALLATION LOCATION

No matter what your on-site conditions may be, the EFA-SRT® MS Performance by EFAFLEX can be installed either on the wall or in two freestanding variants (standard or flush at the front). Depending on the installation variant, the door motor can be rotated to different positions.

STATE-OF-THE-ART SAFETY TECHNOLOGY

The high-speed rolling door EFA-SRT® MS Performance features a safety light curtain at the closing plane. When the light curtain detects a person or obstacle in the closing plane, the door movement is immediately halted, even before any contact occurs. This enhances safety for both humans and machinery. Furthermore, our machine protection doors can be supplemented with the Head-Safe option. In this case, the operator side is equipped with an additional safety light curtain in front of the closing plane, preventing the door from closing as soon as an obstacle is detected.

EFA-SRT® MS AT A GLANCE:

- Functional safety performance level »d«
- Maximum speed of up to 1.8 m/s
- Free-standing door assembly
- Door curtain made from transparent flexible PVC
- Special curtains are available on request
- Maximum of 7 cycles per minute
- Standard sizes up to w=6,000 mm, h=3,500 mm

The compact one for machine protection. EFA-SRT® MS

Due to its space-saving and compact design, the EFA-SRT® MS high-speed roll-up door satisfies all requirements for optimum integration into the required safety guard. The standard door leaf is fully transparent and equipped with warning strips as standard. Coloured, highly tear-resistant and transversely stable curtains as well as welding protection curtains are also readily available. All curtain versions are, of course, free of substances which are detrimental to paint adhesion.

FUNCTIONAL DRIVE

The interaction of a high-performance frequency converter control unit and a functionally adjusted drive allow a high cycle rate in manufacturing processes. The drive of the EFA-SRT® MS is a shaft-mounted drive with absolute encoder, which is also equipped with a gear breakage protection. The drive of the EFA-SRT® MS is a slip-on drive with additional gear break protection and an absolute encoder.

INNOVATIVE DOOR CONTROL

The control unit which can be used worldwide operates at performance level PL "d" for safety-relevant control circuits and is operated via the higher-level system controls.

SOPHISTICATED CHARACTERISTICS

Because there is no weight counterbalance mechanism, the side door frames are very slim; the maintenance work and spare parts required are significantly reduced. Transparent covering provides a clear view of the integrated safety limit switch of Cat. 4 / PI »e« according to DIN EN ISO 13849-1. Thanks to the optional floor supports, the door can be installed as a stand-alone system. Uneven ground is compensated by levelling screws.

HIGH-END SAFETY TECHNOLOGY

The EFA-SRT® MS high-speed roll-up door has a safety contact strip integrated into the main closing edge and an additional light barrier. If the light barrier detects a person or an obstacle within the closing level, the movement of the door leaf is stopped immediately, even before any contact takes place. This increases safety for man and machine.

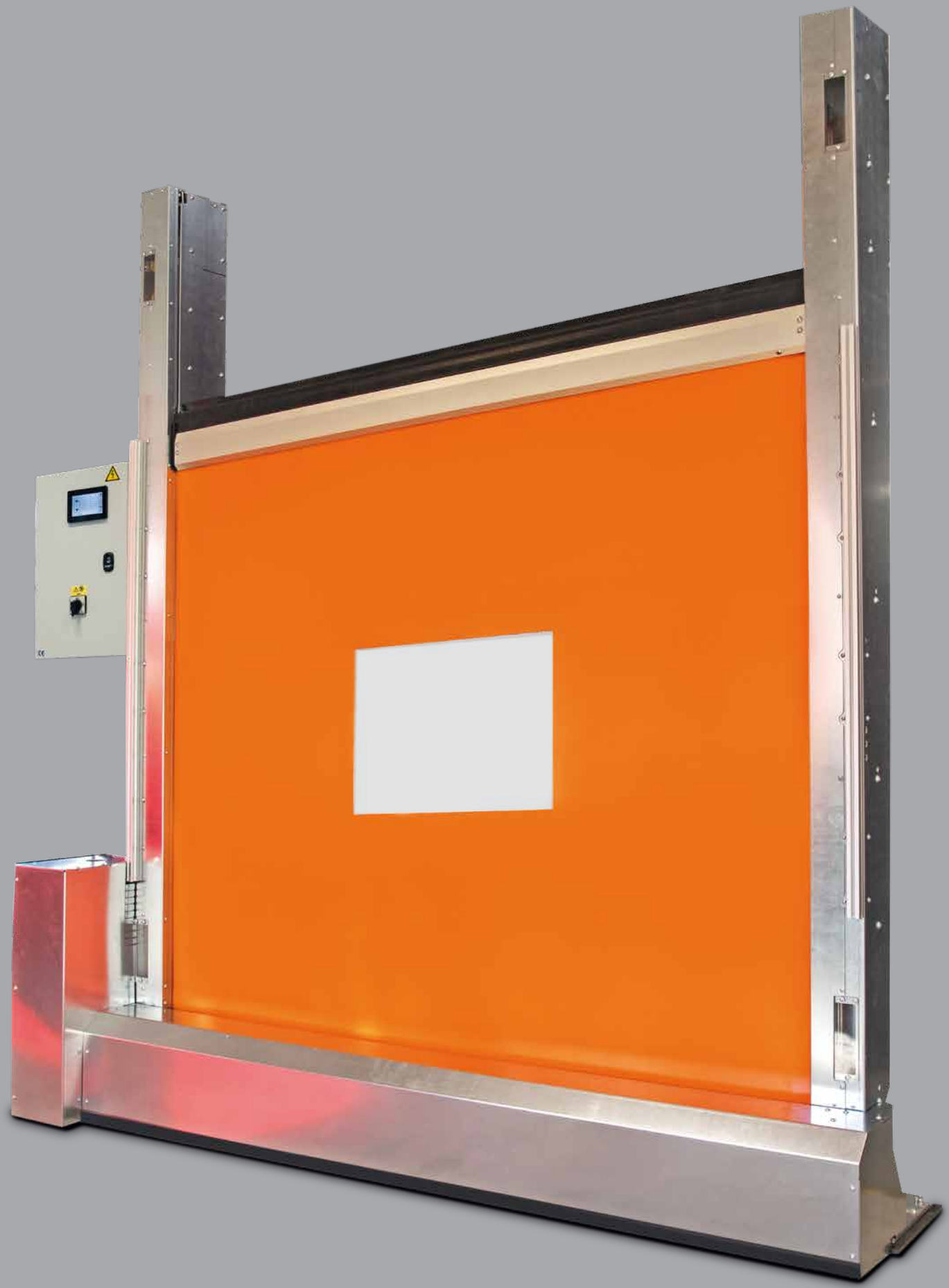
In addition, our machine protection doors can be supplemented with the head-safe option. Here, the operator's side is equipped with a safety light grid that prevents the door from closing as soon as an obstacle is detected.

Head-safe option with safety light grid

Integrated safety limit switch

HIGH-QUALITY MATERIALS

Due to their high-quality materials and considered design, our doors can be recycled by type. For sustainability purposes, we prefer to source our aluminium, steel and electrical components from local and European suppliers – taking material compliance into account.



The upside-down high-speed door. EFA-SRT® MS USD

The EFA-SRT® MS USD is the first EFAFLEX machine safety door that closes from the bottom up. This reliable, space-saving and low-maintenance upside-down high-speed door was developed specifically for heavy-duty industrial applications. A particularly powerful pulling device which pulls the end-shield upwards is installed in the door frames of the roll-up door.

EFA-SRT® MS USD AT A GLANCE:

- Use as a movable separating safety guard
- Door leaf made of flexible, transparent PVC
- Functional safety performance level »d«
- Maximum opening speed of up to 1.8 m/s
- Maximum of 7 cycles per minute
- Standard sizes up to w=6,000 mm, h=4,500 mm

BEST STABILITY

Due to the floor supports integrated into the side door frames, this roll-up door has a self-supporting design and can be installed as a stand-alone system. Due to its application, it is not intended for wall installation. Securing buttons on the outer edge of the door curtain secure it within the guide rails.

Integrated safety limit switch

INDIVIDUAL MANUFACTURING OPTIONS

The door dimensions can be configured with widths ranging from 600 to 6,000 mm and heights ranging from 1,000 to 4,500 mm. The flexible door curtain is available in several designs and colours.

HIGH-END SAFETY TECHNOLOGY

The EFA-SRT® MS USD has an interlocking device in accordance with DIN EN ISO 14120 and thus serves as a single-acting, power-operated, movable guard and as a personnel restraint device. In combination with the machine's control system, the door guarantees the highest level of safety for people working at plants and with machinery in the industrial and commercial sector. A safe limit switch serves as an electric locking mechanism between the door and the machinery or equipment. To ensure protection against reaching into the door mechanism, both the winding shaft and the drive are completely covered with sheet metal profiles.

Control box EFA-ProfiNetSafe®

KEY OPTIONS:

- Control box EFA-TRONIC®, EFA-TRONIC® Professional MS or EFA-ProfiNetSafe® version
- EFA-ProfiNetSafe® control concept specifically tailored to the requirements of the automotive industry
- Head-safe option: patented application-specific safety option with a safety light grid


EFAFLEX

Machine protection door for industry.
EFA-SST® MS

The EFA- SST® MS high-speed spiral door has been specially developed for industrial applications, as stand-alone separating safety guard that fulfils all requirements for a safe and modern machine protection door. We are the only manufacturer of industrial doors to also implement our spiral technology and the flexible hinge chain for optimum performance in our machine safety doors.

EFA-SST® MS AT A GLANCE:

- Maximum speed of up to 2.7 m/s
- Door leaf consisting of high-strength and compact aluminium laths
- Permanent transparent sight laths
- Weight counterbalance with spring fracture detection
- Very smooth running performance
- Maximum of 7 cycles per minute
- Standard sizes up to w=3,000 mm, h=3,000 mm

LOW-MAINTENANCE WEIGHT COUNTERBALANCE

The weight counterbalance in the EFA- SST® MS machine protection door is implemented by means of virtually maintenance-free tension spring assemblies with electromechanical function monitoring.

INNOVATIVE DOOR CONTROL

The door control unit, which can be used worldwide, operates at performance level PL »d« for safety-relevant control circuits and is operated via the higher-level system control.

OPTIONAL ADDITIONS

Additionally selectable covers also ensure finger protection for low total heights. Of course, the EFA-SST® MS is also equipped with a transparent covering providing a clear view of the integrated safety limit switch of Cat. 4 / PI »e« according to DIN EN ISO 13849-1.

HIGH-END SAFETY TECHNOLOGY

The EFAFLEX EFA-SST® MS machine protection door has a safety contact strip integrated into the main closing edge and an additional light barrier. If the light barrier detects a person or an obstacle within the closing level, the movement of the door leaf is stopped immediately, even before any contact is made. This increases safety for both people and machines.

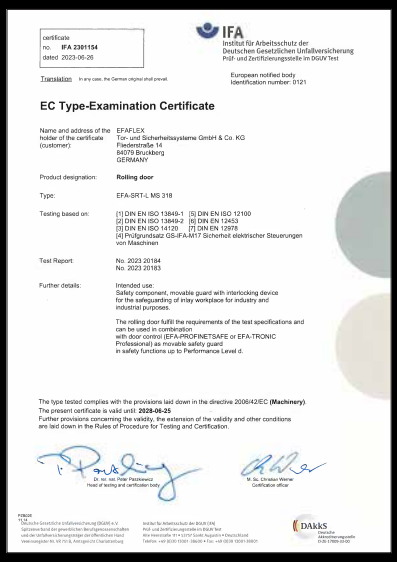
Furthermore, our machine safety doors can be supplemented with the head-safe option. To this end, the operator side is equipped with a safety light grid, which prevents the door from closing as soon as an obstacle is detected.

FREE-STANDING DOOR ASSEMBLY

With its self-supporting basic design and the add-on floor supports, you can set up the EFA-SST® MS high-speed spiral door as a free-standing system. Levelling and compensation of slightly uneven ground is possible by means of screws.


EFAFLEX

For more information on our high-speed machine protection doors visit:
www.efaflex.com/machine-protection



certificate
no. IFA 2301154
dated 2023-06-26

IFA
Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung
Prüf- und Zertifizierungsstelle im DGUV Test

Translation In any case, the German original shall prevail.

European notified body
Identification number: 0121

EC Type-Examination Certificate

Name and address of the holder of the certificate (customer): EFAFLEX Tor- und Sicherheitssysteme GmbH & Co. KG, Fliederstraße 14, 84079 Bruckberg, GERMANY

Product designation: Rolling door

Type: EFA-SRT-L MS 318

Testing based on: [1] DIN EN ISO 13849-1 [5] DIN EN ISO 12100; [2] DIN EN ISO 13849-2 [6] DIN EN 12453; [3] DIN EN ISO 14120 [7] DIN EN 12978; (4) Prüfgrundsatz GS-IFA-M17 Sicherheit elektrischer Steuerungen von Maschinen

Test Report: No. 2023 20184, No. 2023 20183

Further details: Intended use: Safety component, movable guard with interlocking device for the safeguarding of inlay workplace for industry and industrial purposes.

The rolling door fulfil the requirements of the test specifications and can be used in combination with door control (EFA-PROFINETSAFE or EFA-TRONIC Professional) as movable safety guard in safety functions up to Performance Level d.

The type tested complies with the provisions laid down in the directive 2006/42/EC (Machinery).
The present certificate is valid until: 2028-06-25
Further provisions concerning the validity, the extension of the validity and other conditions are laid down in the Rules of Procedure for Testing and Certification.

Dr. rer. nat. Peter Pasztewicz, Head of testing and certification body
M. Sc. Christian Werner, Certification officer

DAkkS Deutsche Akkreditierungsstelle D-ZE-17009-01-00

certificate
no. IFA 1301207
dated 2024-09-19

IFA
Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung
Prüf- und Zertifizierungsstelle im DGUV Test

Translation In any case, the German original shall prevail.

European notified body
Identification number: 0121

EC Type-Examination Certificate

Name and address of the holder of the certificate (customer): EFAFLEX Tor- und Sicherheitssysteme GmbH & Co. KG, Fliederstraße 14, 84079 Bruckberg, GERMANY

Product designation: Rapid action rolling door

Type: EFA-SRT MS USD 312

Testing based on: [1] DIN EN ISO 13849-1 [5] DIN EN ISO 12100; [2] DIN EN ISO 13849-2 [6] DIN EN ISO 14119; [3] DIN EN ISO 14120; (4) Prüfgrundsatz GS-IFA-M17 Sicherheit elektrischer Steuerungen von Maschinen

Test Report: No. 2024 22708 of 2024-09-19

Further details: Intended use: Safety component, movable guard with interlocking device for the safeguarding of inlay workplace for industry and industrial purposes. Rapid action rolling door with door control EFA-TRONIC Professional MS incl. safety sensors and actuators fulfill the requirements of the test specifications and can be used as a movable safety guard in safety functions up to Performance Level d and Category 3. Furthermore, the product meets the requirements of functional safety and mechanical aspects as specified in DIN EN 12453 (closing forces) and DIN EN 12978.

The type tested complies with the provisions laid down in the directive 2006/42/EC (Machinery).
The present certificate is valid until: 2027-01-19
Further provisions concerning the validity, the extension of the validity and other conditions are laid down in the Rules of Procedure for Testing and Certification.

Dr. rer. nat. Peter Pasztewicz, Head of Certification Body
M. Sc. Christian Werner, Certification officer

DAkkS Deutsche Akkreditierungsstelle D-ZE-17009-01-00

certificate
no. IFA 1301201
dated 2024-09-19

IFA
Institut für Arbeitsschutz der Deutschen Gesetzlichen Unfallversicherung
Prüf- und Zertifizierungsstelle im DGUV Test

Translation In any case, the German original shall prevail.

European notified body
Identification number: 0121

EC Type-Examination Certificate

Name and address of the holder of the certificate (customer): EFAFLEX Tor- und Sicherheitssysteme GmbH & Co. KG, Fliederstraße 14, 84079 Bruckberg, GERMANY

Product designation: Rapid action door

Type: EFA-SST MS 286

Testing based on: [1] DIN EN ISO 13849-1 [5] DIN EN ISO 12100; [2] DIN EN ISO 13849-2 [6] DIN EN ISO 14119; [3] DIN EN ISO 14120; (4) Prüfgrundsatz GS-IFA-M17 Sicherheit elektrischer Steuerungen von Maschinen

Test Report: No. 2024 22631 of 2024-09-19

Further details: Intended use: Safety component, movable guard with interlocking device for the safeguarding of inlay workplace for industry and industrial purposes. Rapid action door with door control EFA-TRONIC Professional MS incl. safety sensors and actuators fulfill the requirements of the test specifications and can be used as a movable safety guard in safety functions up to Performance Level d and Category 3. Furthermore, the product meets the requirements of functional safety and mechanical aspects as specified in DIN EN 12453 (closing forces) and DIN EN 12978.

The type tested complies with the provisions laid down in the directive 2006/42/EC (Machinery).
The present certificate is valid until: 2027-01-19
Further provisions concerning the validity, the extension of the validity and other conditions are laid down in the Rules of Procedure for Testing and Certification.

Dr. rer. nat. Peter Pasztewicz, Head of Certification Body
M. Sc. Christian Werner, Certification officer

DAkkS Deutsche Akkreditierungsstelle D-ZE-17009-01-00

EC type-examination as safety component, interlocking movable guard according to Machinery Directive 2006/42/EC at IFA Institut für Arbeitssicherheit [an institute for research and testing of the German Social Accident Insurance in Germany]

Machine protection

1 DRIVE

Direct mount drive with absolute encoder, for EFA-SRT® MS including gear unit failure protection.

2 DOOR CONTROL

The control unit, which can be used worldwide, operates at performance level PL »d« for safety-relevant control circuits.

3 WEIGHT COUNTERBALANCE

The weight counterbalance for the EFA-SST® MS is carried out by means of virtually maintenance-free tension spring assemblies with electromechanical function monitoring.

4 LOCKING MECHANISM

Safety limit switch Cat. 4 / PI »e« according to DIN EN ISO 13849-1. Transparent covering removable for adjustment and replacement.

5 FLOOR SUPPORT

Optional supports in order to install the door system as a free-standing system. Levelling of slightly uneven ground possible by means of screws.

6 SAFETY

Safety contact strip in the main closing edge, in combination with an additional light barrier.

Technical details
High-speed doors machine protection

		MS Series							
						EFA-SRT® MS			EFA-SST® MS
		Performance				A	A	USD	
	Size	L	S	L	S	L	S		
Application	According to DIN EN 12424 class	●	●	●	●	●	●	●	●
Wind load max.*	According to DIN EN 13241 class	0	0	0	0	0	0	–	4
Operating forces/ safe closing	According to DIN EN 13241 class	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled	fulfilled
Air permeability*	in dB according to DIN EN 717-1	0	0	0	0	0	0	–	0
Direct airborne sound insulation R_w*	in dB nach DIN EN 717-1	12	12	12	12	12	12	12	23
Door size (in mm)	Width W max.	3,500	6,200	3,000	5,000	3,000	6,000	6,000	3,000
	Height H max.	3,500	5,500	3,000	3,500	3,000	3,500	4,500	3,000
Maximum door leaf speed*	in m/s	2.0	2.0	1.8	1.8	1.8	1.8	1.8	2.7
Guide of door leaf	Round Spiral	–	–	–	–	–	–	–	●
Design	Galvanized sheet steel frame	○	○	●	●	●	●	●	●
	Powder coated in RAL colours	○	○	○	○	○	○	○	○
	Door frames aluminium anodised	●	●	–	–	–	–	–	–
Door leaf	EFA-CLEAR® Vision laths single-walled	–	–	–	–	–	–	–	○
	EFA-VENT® Ventilation laths	–	–	–	–	–	–	–	○
	EFA-ALUX® Aluminium laths	–	–	–	–	–	–	–	●
	Colour according to RAL (without vison panel)	–	–	–	–	–	–	–	○
	Door curtain made of flexible PVC, transparent with warning stripes in different colours	●	●	●	●	●	●	●	–
	flexible fabric in different colours with / without vison panel	○/○	○/○	○/○	○/○	○/○	○/○	○/○	–
Fire class	Building Material class DIN 4102	B2/B1 ○	B2/B1 ○	B2/B1 ○	B2/B1 ○	B2/B1 ○	B2/B1 ○	B2/B1 ○	B2
	Building Material class SE DIN EN ISO 340	○	○	○	○	○	○	○	–
Weight balancing by		–	–	–	–	–	–	Weight	Spring
Designed for approx ... operating cycles per year		1,000,000	1,000,000	250,000	250,000	250,000	250,000	250,000	250,000
Drive	Electric motor	●	●	●	●	●	●	●	●
Control	EFA-TRONIC® Professional MS	●	●	●	●	●	●	●	●
	EFA-TRONIC®	○	○	○	○	○	○	○	○
	EFA-ProfiNetSafe®	○	○	○	○	○	○	○	○
Lead	Electricity connection 230 V/50 Hz	○	○	○	○	○	○	○	○
	Electricity connection 400 V/50 Hz	●	●	●	●	●	●	●	●
	Circuit breaker	16 A (K)	16 A (K)	16 A (K)	16 A (K)	16 A (K)	16 A (K)	16 A (K)	16 A (K)
Emergency operation	Automatic after manual activation	–	–	–	–	–	–	–	○
	Manual activation	●	●	●	●	●	●	–	–
Safety Devices	EFA-TLG® door light grid in door closing line	●	●	–	–	–	–	–	–
	Contact edge	○	○	●	●	●	●	●	●
	Light barrier	○	○	●	●	●	●	–	●
	Light grid, external	○ HSO	○ HSO	○ HSO	○ HSO	○ HSO	○ HSO	○	○ HSO

● Standard, ○ upon request, – Not available, HSO = Head Safe Option,
* Depending on door leaf, guide of door leaf and door size, we reserve the right to make technical alterations!

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Overall design:
www.creativconcept.de 02 | 2025

EFAFLEX
safe high-speed doors