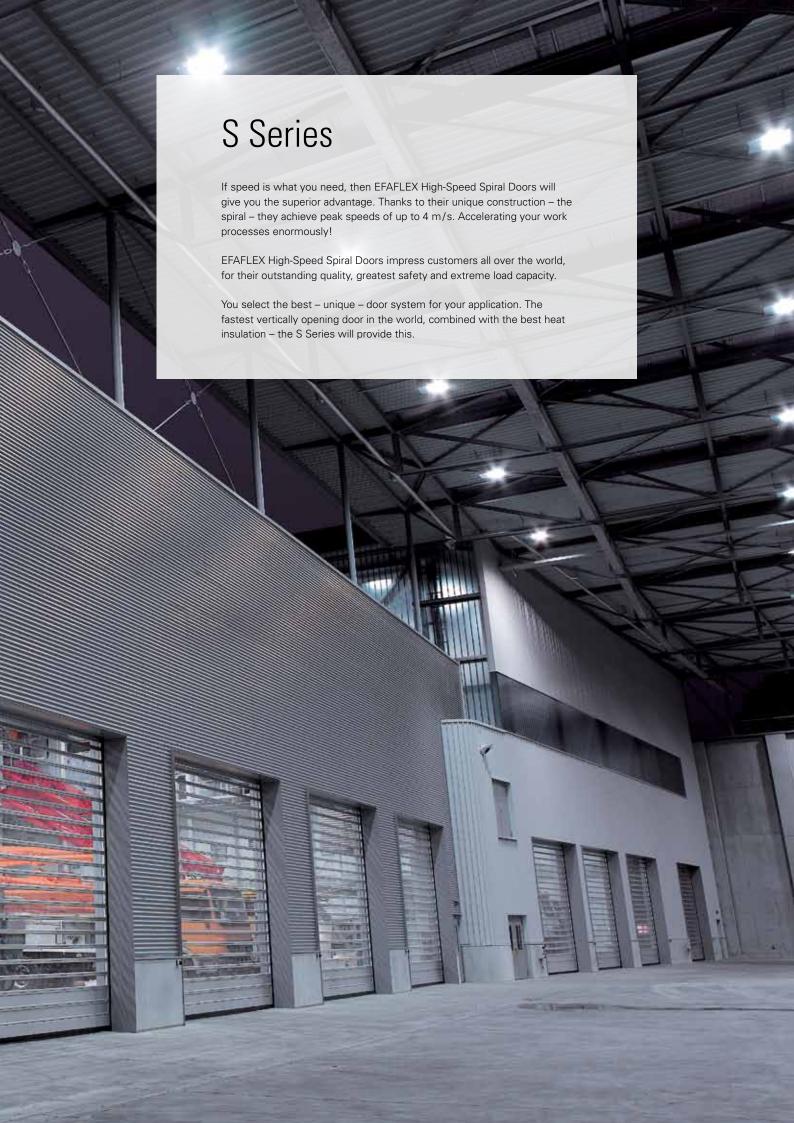


S Series



High-Speed Spiral Doors





The ingenious spiral technology.



Everything revolves around.

Copied a thousand times, still to be equalled

The tried and tested fundamental principle of EFAFLEX High-Speed Spiral Doors remains unbeatable! The door blade is not rolled up on a shaft, but is guided into the EFAFLEX spiral instead, saving space and keeping it in distance.

The laths are fixed together with large strap hinges.
The laths are guided by especially smoothrunning,
quiet rollers. That means there are no driving or transmitted forces acting within the door blade.

Available as round spiral, oval spiral and low header version

EFAFLEX offers High-Speed Spiral Doors of various different designs, with the circular spiral being the standard solution, boasting the fastest opening/closing times. If you only have limited space above the door then there are two space-saving variants to choose from in the S Series, the Oval spiral and low-header.

Perfection of the door blade guidance

EFAFLEX has invented this functional principle. It guarantees you a series of advantages: only this unique construction combines high opening speeds, longevity and efficiency anywhere in a comparable way.



Minimum mechanical load = Maximum service life

High-speed doors of the unique EFAFLEX S Series run quietly and with out wear, thanks to the spiral system. Your door will look new for many years to come, no other mechanical principle comes even close to handling the challenges of daily operation so smoothly.

All models ensure the highest level of safety for people and vehicles!

Round Spiral

The round spiral is the standard and is the ideal solution if there is enough space above the door.

Oval Spiral



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

Low-header



The low header model is used for example in underground parking and car parks.

EFA-SST®



The energy-saving door for closing large halls.

A glance at the advantages of the EFA-SST®:

- Unrivalled noise and heat insulation
- Fitted with EFA-THERM® laths as standard
- Maximum speeds of up to 2.5 m/s
- Class 2 4 wind resistance
- Completely weatherproof
- Up to 250,000 load cycles per year

The original spiral door

EFA-SST® is the classic among EFAFLEX High-Speed Doors, and our most successful series. We have developed three different variants to meet all different requirements you may have for a high-speed door.

EFA-SST® PREMIUM

Designed for long-term industrial use, this model easily copes with circa 250,000 operating cycles per year, with opening speeds up to 2.5 m/s and specification that also includes a secure lock and the TÜV [German Technical Inspection Association] tested EFA-TLG® safety system as standard.

EFA-SST® ECO

The capacity of the EFA-SST® ECO is significantly better than average with up to 200,000 operating cycles per year. Robust quality and the usual EFAFLEX reliability combined with opening speeds of approx.

1.5 m/s characterize this variant of the EFA-SST®.

Your door to a better environment

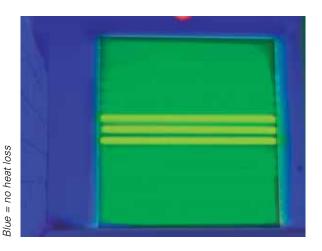
Responsible use of valuable resources is indispensable – for the sake of maintaining today's environment and creating a better future for coming generations. By choosing the EFA-SST®, you contribute your share towards active environmental protection – and are also optimally equipped for the future.

EFA-SST® ESSENTIAL

The EFA-SST® Essential was specifically designed for areas with average traffic levels in which medium opening and closing speeds are sufficient. The focus here is not on the speed, but rather on the high quality and the enormous resilience of the EFAFLEX spiral door.



This thermal image of a conventional roller door clearly shows the loss of heat to the outside.



The thermally insulated EFA-THERM® laths of the EFA-SST® considerably improve the thermal insulation, thus lowering your energy costs.

Generation EFA-SST®.



Revolutionary and advanced.

In light of rising energy prices, energy saving is right at the top of everyone's agenda – which naturally also goes for EFAFLEX. That is why we have now completely redesigned our High-Speed Spiral doors for you.

All rubber seals between the EFA-THERM® laths are built in using elaborate "clip" technology. The EFA-SST can continue to be operated even with one or more laths missing.



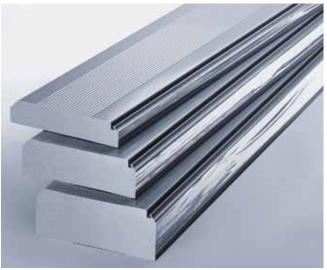
With EFA-SST® you save massively on energy costs

Due to its outstanding heat insulation, EFA-SST® is the most economical solution for a highly frequented building closure. The temperature remains constant inside, and no undesired heat or cold comes in from outside. As the door opens and closes, its high speed operation ensures that energy loss is kept to the absolute minimum.

The EFA-THERM® laths

We are the world's first manufacturer to provide a series of thermally insulated EFA-THERM® insulation laths for EFA-SST®. These achieve outstanding heat insulation between 0.66 and 1.52 W/m²K depending on door size. The door blade is extraordinarily robust, long-lasting, secure and sound-insulating. Depending on how much light you wish to allow in, we can incorporate as many EFA-CLEAR® transparent acrylic glass laths as you like into the blade of your EFA-SST®. These are also available in double-walled, thermally insulated design options.

Produced by EFAFLEX, our EFA-THERM® laths are available in different thicknesses, at 40, 60 or 80 mm, and in many different designs. In addition to the standard aluminium coloured coating, we also offer painted laths to meet your individual requirements or perhaps match your individual corporate identity – every colour from the RAL system is available.





EFA-SST®



Top in all respects

The EFA-SST® generation fulls highest expectations even under heaviest continuous operation. The EFA-SST® is extremely stable and weatherproof. It boasts outstanding heat and noise insulation, and surpassing wind resistance. The new high-speed spiral doors 'undyingly' withstand up to 250,000 load cycles per year with minimal maintenance requirements. You can expect a long service life from the EFA-SST®!

EFA-SST® with EFA-ACS® self-repairing door blade. Top in all respects.

Special models

EFAFLEX offers the EFA-SST® in a model that fulfils all standards for explosion-protected rooms. All electrical components are certified according to the applicable EU directives. The mechanical protection consists of brushes for electrostatically discharging the door blade, full earthing of the door installation and non-isolated installation of all metallic parts.

In cooperation with the automotive industry, we have also developed a special model that complies with all regulatory requirements for a laser beam strike.



Powerful core

We always deliver the EFA-ACS® in conjunction with direct synchronous drive (DC). The load is applied directly to the uppermost lath in the door blade, eliminating wear to components used in the transmission of power such as motor drive belts and pulleys. This compact, low-maintenance construction guarantees an even longer service life, quiet, precise running, and dependable EFA-ACS® triggering every time.

As the leading specialist manufacturer of high speed doors worldwide, EFAFLEX offers a combination between a rigid door blade and active crash system. Customers can specify this unique mechanical and electronic safety system for the Premium model of the EFA-SST®. EFA-ACS® not only protects the door against damage and therefore downtimes and repairs – the EFA-ACS® fully automatically repairs the door in just a few seconds! Should there ever be a collision, your door will still be serviceable again immediately.

How the world innovation works

In the event of a collision, the detachably connected laths are pushed out of their guide rails, undamaged. An inductive sensor system records this and, while slowly retracting the door upwards, safely and properly restores the door blade and frame to their proper condition.



A milestone in economy and safety: The EFA-ACS® active crash system prevents expensive damage, unnecessary downtime and a lot of hassle!

EFA-SST® for reliable conveyor application.

EFA-SST®:

unbeatable in materials handling

In automated logistics doors are often under very heavy goods traffic, this is where the advantages of EFA-SST® are most apparent. Our High-Speed Spiral Doors ensure extreme speed for rapid material flow and can withstand extraordinary numbers of operating cycles. The EFA-SST® can be connected over interfaces to a controlling computer.

In materials handling, a high-quality High-Speed Spiral Door such as the EFA-SST® offers yet further advantages: for example unrivalled heat insulation pays off when storing fresh goods. The EFA-SST® also seals tightly against dust. High-Speed Spiral Doors also make an important contribution to the safety of the conveyed goods.



EFA-SST® Low-header model.

Optimized door solutions in limited space

The EFA-SST® is available in a special model for low headroom situations. It reaches opening speeds of up to 1.0 m/s, and guarantees greatest safety for people and vehicles. System solutions for traffic control can be individually designed in a forward-thinking and customized way, for example by combining traffic lights, induction loop(s) and magnetic card readers.

The latest safety precautions combined with high closing speeds offer effective protection

With state of the art technology, the low-header model measures up to the increasing security requirements for people and cars in underground parking, for example. On request, we can also supply ventilation laths instead of transparent ones.



We create individual low-header door solutions for washing bays, fire brigades, underground parking, banks and insurance companies, cooling zones and many other applications.

EFA-SST®-ISO-60



Optimised sealing for controlled temperature zones.

A glance at the advantages of the EFA-SST®-ISO-60:

- Optimum solution for cold storage rooms
- Maximum speeds of up to 2.5 m/s
- Heat insulation of up to 0.80 W/m²K
- Thermally insulated EFA-THERM® insulation laths
- Easily 250,000 load cycles per year



Now, 60 millimetre thick EFA-THERM® insulation laths guarantee better heat insulation than ever before! These laths come thermally separated as a standard. Especially developed details produce the excellent vertical and horizontal sealing of the EFA-SST®-ISO-60. The vertical insulation against the door frame is made with thermally separated aluminium profiles with low-wear seals (see below photo). An active aluminium head seal closes the horizontal space between the structural connection and the door blade. For use in large temperature differences and/or high air humidity, both seals can be optionally equipped with heating strips.





Doors in cold storage rooms must withstand enormous stresses

Top quality and perfect workmanship are prerequisites if all components are to defy cold and moisture. EFA-SST®-ISO-60 is the ideal tight sealing door where effective insulation is demanded in heavily frequented openings, such as those to cold storage rooms.

Insulates perfectly, saves energy

The EFA-SST®-ISO-60 combines two EFAFLEX door technologies into an innovative solution: the spiral as well as highly insulating laths. Elaborate seals further prevent air and heat exchange. A superbly insulated door such as the EFA-SST®-ISO-60, which opens and closes very rapidly, helps you substantially lower your costs and creates constant climatic conditions at your establishment.

EFA-STT®



The transparent lath.

A glance at the advantages of the EFA-STT®:

- Impressive transparency
- Maximum speeds of up to 3.0 m/s
- Highest quality and economy
- Suitable as interior and exterior doors
- Easily 150,000 load cycles per year



Advantages clear to everyone

At every intersection in your company – often approached from both sides at once – a free view through the door gives you a decisive advantage: accidents are avoided and smooth transport processes are guaranteed.

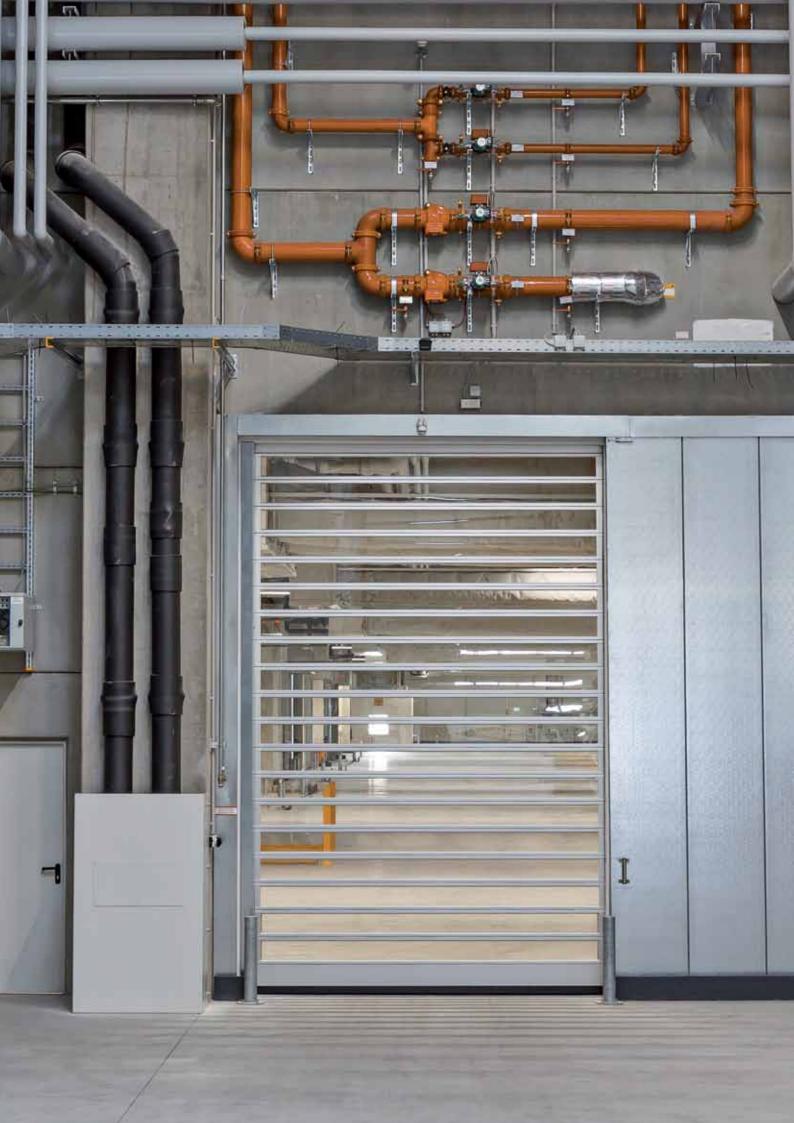
The EFA-STT® transparent laths will provide a clear view to the other side for many years to come, the door blade is held apart in the spiral mechanism. Given frictionless retraction, the high-speed door is extremely fast and the laths remain undamaged. Your premises become brighter, you save electricity and you have a clear view. Furthermore, the EFA-STT® ensures a constantly bright appearance even in tough working conditions.



NEW: EFA-STT® now available with Active Crash System and Direct-Synchronous Drive (DS)

Just recently announced, the transparent high speed door from EFAFLEX has been released in a model with active crash system (EFA-ACS®) which enables the door to repair "itself" after a collision, within a very short period of time.

The ideal supplement to this intelligent system is the direct-synchronous drive DS with which this model of the EFA-STT® is combined as standard.





EFA-STT®



Clear vision for your premises.

High performance for materials handling

Given the constant traffic of goods, doors in materials handling systems must withstand an enormous number of operating cycles. The EFA-STT®, with its extreme load capacity, is in its element here! In addition to the familiar advantages of an EFAFLEX High-Speed Spiral Door, such as quality and speed, the EFA-STT® also stands out for its highly transparent door blades.



A bright light in airlocks

In airlocks such as those used in the automotive industry, the transparent laths of the EFA-STT® let a lot of light into your plant. Not only do they provide a clear view – they are also truly a bright light, creating an atmosphere of freedom with free lines of sight between the rooms, Making for a much more pleasant working environment!

EFA-STR®



The fastest vertically opening door in the world.

A glance at the advantages of the EFA-STR®:

- Peak speed of to up to 4 m/s
- Class 3 wind resistance
- Suitable as interior door
- Flexible PVC door blade
- Easily 150,000 operating cycles per year

Power is nothing without control

Speed results from power, in this instance it's delivered by an innovative, electronically controlled high-speed drive. The motor does not start at full force, so the drive elements are not loaded with a jerk, as power is smoothly transmitted. This gentle acceleration and soft braking upon opening and closing protects the door and ensures a long service life. Also, undesirable linear expansion becomes a thing of the past – as the door blade is spring-actuated upwards and downwards.



Advantage included – thanks to dependable speed

With the spiral technology, EFA-STR® opens at a phenomenal speed of up to 4 m/s! This highspeed door will also certainly accelerate the processes in your business. With the EFA-STR®, your logistics gains both speed and efficiency. No brakes. No waiting. When every second counts, you have a distinct advantage with EFA-STR®. Our fastest door, a combination of the spiral-shaped door blade guidance and flexible curtain, guarantees you smooth business operations and an optimum flow of traffic!

Extreme load capacity and extreme stability

The EFA-STR® is not only unbelievably fast, it is also low-maintenance, highly resilient and extremely stable. The flexible door blade is guided on the sides and spring-actuated upwards and downwards. Linear expansion is ruled out. It consists of individually changeable, 4-field modular segments. Aluminium profiles every 225 mm reinforce the curtain. That achieves first-class sealing in all climatic conditions. Extreme wind resistance is also guaranteed.

Fast and save: EFA-STR® with EFA-ACS® self-repairing door blade.

How the safety system works

Given that more than 90 % of all collisions occur in the lower section of the door, the lower door blade module of the EFA-STR® dislodges on both sides upon a collision up to a nominal height of approx. 100 cm. The door immediately stands still. Integrated sensors initiate the controlled onward movement to the upper end position. The door blade is then moved upwards in crash mode at a reduced speed, running through return guides on both sides. The inner and outer hinges are fully automatically connected again.

The door blade is electronically checked for correct connection. Regular automatic operation then continues already when the door closes again. Your EFA-STR® is ready again for operation after a few seconds.

Especially at extremely high speeds, safety is a major concern. The EFA-ACS® Active Crash System gives you the best protection, with which the door blade repairs itself. The completely innovative collision protection ensures fully automatic, electronically monitored retraction of the door blade after a collision. Should there ever be a collision, your door will still be serviceable again immediately – the EFA-STR® with EFA-ACS® repairs the door for you in a matter of seconds.



Reliable triggering and high wind resistance

EFA-STR® with EFA-ACS® is impressive for its enormous speed, effective protection and high wind resistance, thanks to special adjustable blocking bolts in the hinges, which can be individually adjusted in tension.

Innovative drive for EFA-ACS®

The direct synchronous DS combines practically wear-free drive with incredibly smooth operation. The fall safety has been greatly enhanced by unique securing mechanisms. Important components now have a considerably longer service life, since we have replaced the drive belt by a leaf chain.

The best periphery.



New: The EFA-TRONIC® Control Box

Optimised functionality, compact and modern design all describe our all new EFA-TRONIC® controller. Fully compatible, incredibly reliable and significant power reserves are amongst its many key features. The new controller is equipped serially with more than 20 inputs, along with three bus systems and enhanced security functions.

New: Control with the latest micro-electronics

Our new EFA-TRONIC® control boxes come fully equipped with the very latest generation of microprocessors, with its 'digital heart' capable of processing numerous network data inputs; simultaneously coordinating the control circuits between motor, brake, drive, frequency converter, safety devices and your chosen activators.

Forefield Safety by Laser Scanner EFA-SCAN®

The world's first laser scanner for door applications is the patented EFA-SCAN®. This incorporates both an activation and safety system into one single solution. It monitors the complete area in front of the door in a seamless way and is more efficient than other technologies through its ability to also detect direction of movement.





EFA-TLG® door light-line curtain

In order to prevent collisions with the lower part of the door – where nearly 90 % of all collisions take place – you are on the safe side with our TÜV certied EFA-TLG® infrared door light-line curtain. This system is unique in the world, and entirely self-monitoring. We build it directly into the side door tracks, where it is well protected. EFA-TLG® monitors the closing level of the door up to a height of 2.5 metres.

Intersecting infrared beams create a practically complete light-line curtain that can perceive even the smallest of obstacles without contact. If something gets in the way, the closing motion stops immediately, or is prevented from starting. This unique technique protects the door, vehicles, materials and people.

Technical data:

S Series

EFA-SST®

PREMIUM

		PREMIUM							
		L	S	ÜS	XL	XXL	ISO-60	ACS-DS	
Application	Interior door	•	•	•	•	•	•	•	
	Lock-up doors	•	•	•	•	•	•	•	
Wind load max.*	According to DIN EN 12424 class	2 – 4	2 – 4	2 – 4	0 – 2	2 – 4	2 – 4	0	
Operating forces/safe opening	According to DIN EN 13241-1	fulfilled							
Resistance against water ingress*	According to DIN EN 13241-1 class	3	3	3	3	1	3	0	
Air permeability*	According to DIN EN 13241-1 class	3	3	3	3	3	3	0	
Direct airborne sound insulation R _w *	in dB according to DIN EN 717-1	24	25	26	26	26	25	22	
U value maximum*	in W/m²K according to DIN EN 13241-1	1.52	0.91	0.66	0.66	0,54	0.80	_	
Door size (in mm)	Width W max.	4,500	6,000	8,000	10,000	10.000	6,000	4,000	
	Height H max.	5,000	6,000	8,000	6,600	12.000	6,000	5,000	
Maximum door blade speed*	in m/s	2.5	1.5	1.2	1.0	0,5	2.5	2.5	
Average speed, ca. *	Opening in m/s	2.0	1.2	1.0	0.8	0,5	2.0	2.0	
	Closing in m/s	-	_	_	_	_	0.75	_	
	Closing in m/s, with EFA-TLG® door light-line grid	1.0	1.0	0.8	0.4	0,3	1.0	1.0	
Door blade guidance	Round Spiral	•	•	•	•	•	•	•	
	Oval Spiral	•	•	-	_	_	_	_	
	Low-header	-	-	-	_	-	-	_	
Steel design	Galvanized sheet steel frame	•	•	•	•	•	•	•	
	Stainless steel	0	0	_	_	_	0	0	
	Powder coated in RAL colours	0	0	0	0	0	0	0	
Door blade	EFA-THERM® laths, double walled, insulated/painted	•	•	•	•	•	•	•	
	EFA-THERM laths with double-walled transparent laths	-	_	0	0	_	_	_	
	EFA-ISO-CLEAR double walled, thermally separated/anodized	0	0	_	_	0	0	0	
	EFA-CLEAR® single-walled/anodized	0	0	_	_	_	_	0	
	Ventilation laths	0	0	_	_	_	_	0	
	Colour according to RAL (without window panel)	0	0	0	0	0	0	0	
	Vision panel single-walled	-	_	_	_	_	_	-	
	Non-transparent infill, single-walled	-	_	_	_	_	_	-	
	Flexible fabric in different colours with/without window	-	_	_	_	_	_	_	
Fire class	Building Material class DIN 4102	B2							
Weight balancing by		Spring							
Designed for approx operating	cycles per year	250,000	250,000	250,000	150,000	100.000	250,000	150,000	
Collision protection	Active Crash System EFA-ACS®		_	_	_	_	_	•	
Drive	Electric motor with frequency converter	•	•	•	•	•	•	•	
Control	EFA-TRONIC®	•	•	0	0	0	•	•	
	Frequency converter	•	•	•	•	•	•	•	
	EFA-TRONIC® PROFESSIONAL	0	0	•	•	•	0	0	
	Main switch and foil keypad	•	•	•	•	•	•		
Lead	Electricity connection 230 V/50 Hz	•	•	_	_	_	•	•	
	Electricity connection 400 V/50 Hz	_	_	•	•	•	_	_	
	Circuit breaker	16 A(K)	16 A (K)						
Manual locking		•	•	•	•	•	0	_	
Emergency opening	Automatic after manual activation	•	•	•	•	•	•	•	
Safety Devices	EFA-TLG® door light-line grid in door closing line	•	•	•	•	•	•	•	
•	Contact edge	0	0	_	_	_	0	_	
	Light barrier	-	_	_	_	_	0	_	
	Approach area monitoring	0	0	0	0	0	0	0	
Safety system including activator	- ' '	0/0	0/0	0/0	0/0	0/0	0/0	0/0	
Activators	Connection of all common activators possible	•	•	•	•	•	•	•	
		_							

[•] Standard, o upon request, – Not available, *Depending on door blade, door blade guidance and door size, we reserve the right to make technical alterations.

	FC	00	ESSENTIAL	EFA-STT®				EFA-STR®				
	L	s	ESSEN	L	S	ÜS	N	ACS-DS	L	S	N	ACS-DS
	•	•	•	•	•	•	•	•	•	•	•	•
Н	2 – 4	2 – 4	2 – 4	3 – 4	2 – 4	2 – 4	3 – 4	0	2 – 3	2 – 3	2-3	0
П	fulfilled											
	3	3	2	0	0	0	0	0	0	0	0	0
П	3	3	0	2	2	2	0	0	1	1	0	0
	24	25	20	20	20	20	20	18	12	12	12	11
Н	1.52	0.91	1.67	6.50	6.37	6.28	6.50	_	6.10	5.95	6.01	_
	4,500	6,000	4,500	4,000	6,000	8,000	4,000	4,000	4,000	7,000	7,000	4,000
	5,000	6,000	5,000	5,000	6,000	7,800	5,000	5,000	5,000	6,000	5,000	5,000
Н	1.5	1.2	0.5	3.0	2.8	2.2	1.8	2.5	4.0	3.2	2.5	4.0
Н	1.0	0.9	0.5	2.5	2.2	1.8	1.5	2.0	3.6	2.8	2.2	3.6
	0.6	0.6	0.5	0.75	0.6	0.6	0.75	_	0.75	0.75	0.75	_
	_	_	_	1.0	1,0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
H												
	•	•	-	•	•	-	_	•	• _	•	_	•
	•	•	_	_	_	_	•	_	_	_	•	_
Н	•	•	•	•	•	•	•	•	•	•	•	•
	0	0	_	0	0	_	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
	•	•	•	_	_	_	_	_	_	_	_	_
	_	_	_	_	_	_	_	_	_	_	_	_
	0	0	0	_	_	_	_	_	_	_	_	_
	0	0	0	•	•	•	•	•	_	_	_	_
	0	0	0	0	0	0	0	0	_	_	_	_
	0	0	0	0	0	0	0	0	-	_	_	_
	-	_	_	•	•	•	•	•	_	_	_	_
	-	_	_	0	0	0	0	0	-	_	_	-
	-	_	_	_	_	_	_	_	0/●	0/●	0/●	0/●
	B2											
	Spring											
	200,000	200,000	100,000	200,000	200,000	200,000	120,000	150,000	200,000	200,000	120,000	150,000
Ц	-	_	-	-	_	_	_	•	-	_	_	•
-	•	•	•	•	•	•	•	•	•	•	•	•
	•	•	0	•	•	0	•	•	•	•	•	•
	•	•	•	•	•	•	•	•	•	•	•	•
	0	0	0	0	0	•	0	0	0	0	0	0
Н	•	•	0	•	•	-	•	•	•	•	•	•
	-	• -	-	• -	• -	•	• -	-	• -	• -	• -	• -
Ц	16 A (K)	16 A(K)	16 A (K)									
Ц	0	0	0	0	0	0	0	-	-	_	_	_
Н	•	•	•	•	•	•	•	•	•	•	•	•
	0	0	_	0	0	•	0	•	0	0	0	•
	•	•	•	•	•	_	•	_	•	•	•	_
	0	0	0	0	0	0	0	_	0	0	0	_
Н	0/0	0/0	-	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Н	•	•	•	•	•	•	•	•	•	•	•	•
ш												

EFAFLEX
Tor- und Sicherheitssysteme
GmbH & Co. KG
Fliederstraße 14
DE-84079 Bruckberg/Germany
Telephone +49 8765 82-0
www.efaflex.com
info@efaflex.com



Technological advancement. Pioneering design.

EFAFLEX® is a registered and legally protected trademark.

Subject to technical changes. Some diagrams depict special features.

Overall design:

www.creativconcept.de 12 | 17

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 1,000 employees guarantee competent consultation and excellent service. Worldwide and always near you.

