Technical Door Description
EFA-SST® -L ISO-60 /S ISO-60
Type 279 / 270
DATE 01

EFAFLEX
schnelle und sichere Tore

This data sheet also describes special designs at extra cost. Therefore, please consult the valid price lists as well.

1. Construction data

Application

Application	High-insulation industrial door, for cool room	High-insulation industrial door, hall closing
Area of application	interior door	Exterior and interior door
Operational temperatures	cool room temperature ≥ 0°C	- 1 °C to + 0°C (no permanent temperature)

Dimensions

SST-L ISO-60 (279)		
	Door width	1.500 mm - 4.000 mm
	Door height	1.900 mm - 4.000 mm
SST-S ISO-60 (270)		
	Door width	1.500 mm - 7000 mm
	Door height	1.900 mm - 7000 mm

Speeds

SST-L ISO-60		
	Opening speed	approx. 2,0 m/s
	Closing speed with TLG	approx. 1,0 m/s
	Closing speed with closing-edge safety	approx. 0,7 m/s
SST-S ISO-60		
	Opening speed	approx. 1,2 m/s
	Closing speed with TLG	approx. 1,0 m/s
	Closing speed with closing-edge safety	approx. 0,7 m/s

Performance parameters according to DIN EN 13241-1

Resistance against wind load according to DIN EN 12424

SST-L ISO-60	1.500 mm ≤ W ≤ 4000 mm → class 4 4000 mm < W ≤ 4.000 mm → class
SST-S ISO-60	1.500 mm ≤ W ≤ 4000 mm → class 4 4000 mm < W ≤ 7.000 mm → class 7.000 mm < W ≤ 7000 mm → class 2

Resistance against penetrating water according to DIN EN 12425

SST-L ISO-60 /S ISO-60	Class

Air permeability according to DIN EN 12426

SST-L ISO-60 /S ISO-60	Class

Airborne sound insulation according to EN ISO 717-1

SST-L ISO-60 /S ISO-60	R_w = 2 dB ①

Thermal insulation according to DIN EN 12428

SST-L ISO-60	U = 0,9 W/(m²K) at 4.000 mm x 4.000mm ①
SST-S ISO-60	U = 0,80 W/(m²K) at 7.000 mm x 7.000mm ①

① only with EFA-THERM® lath

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Door leaf guide

Door leaf guide

	SST-L ISO-70 /S ISO-70	round
Material	Aluminium sections	

Door system, frame, hood

It is based on a self-supporting design and modular construction. The prefabricated elements are assembled through screwed connections.

Material

	Galvanized steel	Standard
	Stainless steel V4A (1.4 401) corrosion resistant, polished	Option
Surfacing		
	Powder coating, colours in accordance with RAL	Option

Hood cover system

The hood is covered with steel panels and/or laths. The covering does not fulfil the requirements of a weather protection cover. The cover reduces the clear door height, see quotation drawing.
Cover bottom and front for H<2500mm required as finger protection.

Design types:

	Cover bottom, front and top made of galvanized steel sheet	Option
	Cover bottom, front and top made of insulated door laths	Option
	Recommendation with door assembly within the cool room	

Surfacing

Steel sheet cover	Galvanized steel	
	Stainless steel V4A (1.4 401) corrosion resistant, polished	Option
Door laths	1 layer paint (similarly RAL 9007)	

Colours (conforming door system, frame, hood)

Steel sheet cover	Powder coating, colours in accordance with RAL	Option
Insulated door laths	Paint, colours in accordance with RAL	on individual request

Door Panel

The door panel consists of insulated laths which are vertically connected through laterally attached hinge chains. Horizontally, the laths are connected with hinge rubber sections and parallel-running rubber sealing strips to form a joint resistant to wind and the elements. The door leaf travel is effected using ball bearing guide rollers which run vertically and horizontally in rails made of aluminium. Transmission of force from the motor to the door leaf is effected via a synchronizing shaft and two toothed belts integrated and circulating in the side frames and which are connected to the lower bottom lath by door leaf attachments.

EFA-THERM® lath — Standard
SST-L ISO-70 /S ISO-70 70 mm thermally separate, insulated lath

Material
Galvanized steel sheet painted resp. aluminium sheet painted / PU foam

Surfacing
1 layer paint (primer, topcoat polyurethane / polyamide)

Colour

Aluminium (similarly RAL 9007)	Standard
Painted, colours in accordance with RAL	on individual request

ISO Transparent lath — Option
SST-L ISO-70 /S ISO-70 70 mm thermally separate, double wall

Material — Standard
Thermally separated aluminium profiles with two pressed on SAN panes

Surfacing — Standard
Anodized EV1/EV1

Colour

Anodized EV1/EV1	Standard
Painted, colours in accordance with RAL	on individual request

ISO Transparent lath PC-H		Option
SST-L ISO-70 /S ISO-70	70 mm thermally separate, double wall	
Material		Standard
	Thermally separated aluminium profiles with two pressed on surface-coated double-sided polycarbonate panes	
Surfacing		Standard
	Anodized EW EV1	
Colour		
	Anodized EW EV1	Standard
	Painted, colours in accordance with RAL	on individual request

Door sealing

Thermally separating aluminium profiles with low wear seals are mounted vertically on both sides of the door frame. By this an isolation to the frame is achieved. Supplementary an active sealing flap closes the gap between door leaf an wall/lintel.

Heating

horizontal option	Steel profiles and sealing flap can both be heated over heating tapes. This is an indispensable option for use in cool rooms ≤ 1 °C.
vertical option	Aluminium profiles can be heated over heating tapes. This option shell be used in case of large difference in temperature and/or high air humidity.

Weight counter-balance

Counter acting system: Tension springs are installed in the side frames and connected to the drive shaft by heavy load belts. With the door closed, the springs are tensioned and with the door opened, tension is low. The calculation of the spring tension is based on the respective order.

Material	Spring steel wire class C polished and oiled
Function	Crash-down safety
theor. life	approx. 100.000 load changes

Motor brake

By activation of the lever attached to the frame, the brake of the drive is released. The tension spring's mechanical action of the weight balance opens the door partially automatically. The entire door opening can be attained by manually moving the door leaf upwards. The controller is in an EMERGENCY OFF state during activation.

Door locking

The mechanical lock is installed in a lateral frame. The door latch keeps the door leaf closed in a burglar-proof manner. The door locking is operated by a lever attached to the door frame. Option

Door safety

In pursuance with EN 12453 the minimum protection level for the safeguard of the closing edge is achieved through combination of contact bar + light barrier (C-appointment + D- appointment).

Closing-edge safety	Door plane light curtain EFA-TLG® in the door closing plane, installed in the door frame.	Standard
	contact bar	Option
	One-way light curtain installed in the inside of the door, in the door frame. A maximum of 2 light barriers can be installed.	Option

The closing edge protection fulfils the requirements of the product standards for doors DIN EN 12453-1.
In addition, it is necessary to secure the approach area by agreement between operator and manufacturer.

Control

SST-L ISO-[illegible]0 /S ISO-[illegible]0	EFA-CON® with frequency converter, size 0 1[illegible]0 1[illegible]0mm, polycarbonate housing, protection class IP 4, with EMERGENCY OFF switch, window for display and operator controls OPEN-STOP-CLOSE on front of switchgear cabinet. Standard assembly position: fitted at motor side frame at level of sight	Standard
	EFA-CON® separate (e.g. on the wall)	Option
	Control mcp with frequency converter, size 80 80 [illegible]10mm resp 80 [illegible]00 [illegible]10mm, in steel housing (V [illegible]A on request), protection class IP[illegible], with EMERGENCY OFF switch, window for display and operator controls OPEN-STOP-CLOSE on front of switchgear cabinet. Standard assembly position at max. m from door – motor side, at level of sight	Option
	Supply voltage: [illegible] 0VAC +/- 10 , 0-[illegible]0 Hz, power supply to be protected with 1[illegible]A, K characteristics, at site, if necessary with FI – circuit breaker (RCD) 00mA according to DIN VDE 0100- 0 AC/DC sensitive	Standard

Drive

SST-L ISO-60 /S ISO-60	Spur-gear three-phase asynchronous motor
Performance class	SST-L ISO-[illegible]0 /S ISO-[illegible]0 1, kW
Type of protection	IP 4
Position recording	Contactless sensory technology, integrated into the motor

2. Assembly

The design of a high-speed door requires a stable foundation (concrete or steel structure). Light masonry, e.g. hollow block masonry, expanded concrete or ISO walls are to be supported by auxiliary structural elements. In the case of technically difficult installation conditions, please contact EFAFLEX - Bruckberg. Method of installation “pegs”, “bolts in steel”, “welding to steel” or bolt and nut installation must be specified.

Installation drawing		
	SST-L ISO-[illegible]0	[illegible]79 R …
	SST-S ISO-[illegible]0	[illegible]70 R …
Tractive forces		
	SST-L ISO-[illegible]0	max. ,0 KN per frame
	SST-S ISO-[illegible]0	max. 8,0 KN per frame
Installation position	Internal installation External installation under cantilever roof with restriction	
Installation type	Front header	

3. Special Design

Special designs / Special orders are such types of designs which are not covered mechanically or electrically by standard variants in accordance with the price list in sales or by design variant table technology. A special request must be made for them. For special designs, extra charges and an extended period of delivery will be specified depending on the construction.

4. Applied safety standards

During planning, design and production the following standard was taken into consideration:

DIN EN 1 [illegible]41-1	Doors product standard

EFAFLEX Tor- und Sicherheitssysteme GmbH Co. KG
Technical Department

Bruckberg, [illegible]0/07/[illegible]011