Technical Door Description
EFA-SST® - L/S/ÜS Premium
Type 260/261/262

DATE 07

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

1. Construction data

Application

Application	Industrial door, hall closing
Area of application	Exterior and interior door
Operational temperatures	- 15°C to + 50°C (no permanent temperature)

Dimensions

SST-L 260 Premium		
	Door width	1.200 mm - 4.500 mm
	Door height	1.950 mm - 5.000 mm
SST-S 261 Premium		
	Door width	1.200 mm - 6.000 mm
	Door height	1.950 mm - 6.000 mm
SST-ÜS 262 Premium		
	Door width	2.000 mm - 8.000 mm
	Door height	1.950 mm - 8.000 mm

Speeds

SST-L round spiral 260 Premium		
	Opening speed	approx. 2,0 m/s
	Closing speed	approx. 1,0 m/s
SST-L oval spiral 260 Premium		
	Opening speed	approx. 1,5 m/s
	Closing speed	approx. 1,0 m/s
SST-S 261 Premium		
	Opening speed	approx. 1,2 m/s
	Closing speed	approx. 1,0 m/s
SST-ÜS 262 Premium		
	Opening speed	approx. 1,0 m/s
	Closing speed	approx. 0,8 m/s

Performance parameters according to DIN EN 13241-1

Resistance against wind load according to DIN EN 12424

SST-L Premium	1200 mm ≤ W ≤ 3000 mm ➔ class 4 3000 mm < W ≤ 3500 mm ➔ class 3 3500 mm < W ≤ 4500 mm ➔ class 2
SST-S Premium	1200 mm ≤ W ≤ 4000 mm ➔ class 4 4000 mm < W ≤ 5500 mm ➔ class 3 5500 mm < W ≤ 6000 mm ➔ class 2
SST-ÜS Premium	1200 mm ≤ W ≤ 4500 mm ➔ class 4 4500 mm < W ≤ 6500 mm ➔ class 3 6500 mm < W ≤ 8000 mm ➔ class 2

Resistance against penetrating water according to DIN EN 12425

SST-L Premium	Class 3
SST-S Premium	Class 3
SST-ÜS Premium	Class 3

Air permeability according to DIN EN 12426

SST-L Premium	Class 3
SST-S Premium	Class 3
SST-ÜS Premium	Class 3

Airborne sound insulation according to EN ISO 717-1

SST-L Premium	R_w = 24 dB ①
SST-S Premium	R_w = 25 dB ①
SST-ÜS Premium	R_w = 26 dB ①

Thermal insulation according to DIN EN 12428

	SST-L Premium	U = 1,52 W/(m²K) at 4500 mm x 5000mm ①
	SST-S Premium	U = 0,91 W/(m²K) at 6000 mm x 6000mm ①
	SST-ÜS Premium	U = 0,66 W/(m²K) at 8000 mm x 8000mm ①

① only with EFA-THERM® lath

Fire behaviour

Fire behaviour accord. to DIN 4102 Construction material class B2, normally inflammable

Door leaf guides

Door leaf guides

	SST-L Premium	round, oval
	SST-S Premium	round, oval
	SST-ÜS Premium	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		
SST-L/S/ÜS Premium	Galvanized steel	Standard
SST-L/S Premium	Stainless steel V2A (1.4301) corrosion resistant, polished	Option
Surfacing		
SST-L/S/ÜS	Powder coating, colours in accordance with RAL	on individual request

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<2.500mm required as finger protection.

Design types:		
SST-L Premium		
Door leaf guide round	Cover bottom, front and top made of galvanized steel sheet	Option
Door leaf guide oval	Cover bottom and front made of galvanized steel sheet, only possible up to H <= 3.000 mm, top cover not possible	
SST-S Premium		
Door leaf guide round	Cover bottom, front and top made of galvanized steel sheet	Option
Door leaf guide oval	Cover bottom and front made of galvanized steel sheet, only possible up to H <= 3.450 mm, top cover not possible	
SST-ÜS Premium		
	Cover bottom, front and top made of galvanized steel sheet	Option
SST-L/S/ÜS Premium		
	Cover bottom, front and top made of insulated door laths	Option
Surfacing		
Steel sheet cover	Galvanized steel	Option
	Stainless steel V2A (1.4301) corrosion resistant, polished	Option
Door laths	2 layer paint (similarly RAL 9006)	
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 Premium	40*225 mm thermally separate, insulated lath	
SST-S Premium	60*225 mm thermally separate, insulated lath	
SST-ÜS Premium	80*225 mm thermally separate, insulated lath	
Material		
	Galvanized steel sheet painted resp. aluminium sheet painted / PU foam	
Surfacing		
	2 layer paint (primer, topcoat polyurethane / polyamide)	
Colour		Standard
	Aluminium (similarly RAL 9006)	
	Painted, colours in accordance with RAL	on individual request

ISO Transparent lath		Option
SST-L Premium	40*225 mm thermally separate, double wall	
SST-S Premium	60*225 mm thermally separate, double wall	
SST-ÜS Premium	80*225 mm thermally separate, insulated lath with window	
	545*83 mm (per meter door width one window, e.g. 5.900mm ➔ 5 windows)	
Material		Standard
SST-L/S Premium	Thermally separated aluminium profiles with two pressed on SAN panes	
SST-ÜS Premium	Galvanized steel sheet painted resp. aluminium sheet painted / PU foam, window: black plastic frame and SAN panes	
Surfacing		Standard
SST-L/S Premium	Anodized E6/EV1	
SST-ÜS Premium	2 layer paint (primer, topcoat polyurethane / polyamide)	
Colour		
SST-L/S Premium	Anodized E6/EV1	Standard
	Painted, colours in accordance with RAL	on individual request
SST-ÜS Premium	Aluminium (similarly RAL 9006)	Standard
	Painted, colours in accordance with RAL	on individual request

ISO Transparent lath PC-H (not for SST-ÜS)		Option
SST-L Premium	40*225 mm thermally separate, double wall	
SST-S Premium	60*225 mm thermally separate, double wall	
Material		Standard
SST-L/S Premium	Thermally separated aluminium profiles with two pressed on surface-coated double-sided polycarbonate panes	
Surfacing		Standard
SST-L/S Premium	Anodized E6/EV1	
Colour		
SST-L/S Premium	Anodized E6/EV1	Standard
	Painted, colours in accordance with RAL	on individual request

Transparent lath (not for SST-ÜS)		Option
SST-L Premium	40*225 mm, single wall	
SST-S Premium	60*225 mm, single wall	
Material		
	Aluminium sections with pressed on SAN Pan	
Surfacing		Standard
	Anodized E6/EV1	
Colour		Standard
	Anodized E6/EV1	
	Painted, colours in accordance with RAL	on individual request

Transparent lath PC-H (not for SST-ÜS)		Option
SST-L Premium	40*225 mm, single wall	
SST-S Premium	60*225 mm, single wall	
Material		
	Aluminium sections with pressed on surface-coated double-sided polycarbonate pan	
Surfacing		Standard
	Anodized E6/EV1	
Colour		Standard
	Anodized E6/EV1	
	Painted, colours in accordance with RAL	on individual request

Ventilation lath (not for SST-ÜS)		Option
SST-L Premium	40*225 mm, single wall	
SST-S Premium	60*225 mm, single wall	
Material		
	Aluminium sections with pressed on 2 mm aluminium perforated sheet, perforation 6*50 mm	
Surfacing		Standard
	Anodized E6/EV1	
Colour		Standard
	Anodized E6/EV1	
	Painted, colours in accordance with RAL	on individual request
Air valve diameter (m^2, W in m)	LA = ((W-0,105)*0,066)*number of laths	

Door sealing

Vertically, a low wear door leaf sealing ensures an effective hand and finger protection. The room is closed between wall and door leaf, directly at the clear door height through an active door head sealing.

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. 200.000 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.

Door safety

Closing-edge safety	Door plane light curtain EFA-TLG® in the door closing plane, installed in the door frame.	Standard

The closing edge protection fulfils the requirements of the product standards for doors DIN EN 13241-1.
In addition, it is necessary to secure the approach area by agreement between operator and manufacturer.

Control

SST-L/S Premium	EFA-CON® with frequency converter, size 530*160*160mm, polycarbonate housing, protection class IP54, 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 mcp2 with frequency converter, size 380*380*210mm resp 380*600*210mm, in steel housing (V2A on request), protection class IP65, with EMERGENCY OFF switch, window for display and operator controls OPEN-STOP-CLOSE on front of switchgear cabinet. Standard assembly position at max. 3m from door – motor side, at level of sight	Option
	Supply voltage: 230VAC +/- 10%, 50-60 Hz, power supply to be protected with 16A, K characteristics, at site, if necessary with FI – circuit breaker (RCD) 300mA according to DIN VDE 0100-530 AC/DC sensitive	Standard
SST-ÜS Premium	Control mcp2 with frequency converter, size 380*380*210mm resp 380*600*210mm, in steel housing (V2A on request), protection class IP65, With EMERGENCY OFF switch, window for display and operator controls OPEN-STOP-CLOSE on front of switchgear cabinet. Standard assembly position at max. 3m from door – motor side, at level of sight	Standard
	Supply voltage: 400VAC +/- 10%, 50-60 Hz (3Ph/N/PE), power supply to be protected with 16A, K characteristics, at site, if necessary with FI - circuit breaker (RCD) 300mA according to DIN VDE 0100-530 AC/DC sensitive	Standard

Drive

SST-L/S Premium	Spur-gear three-phase asynchronous motor	
SST-ÜS Premium	Bevel-gear three-phase asynchronous motor	
Performance class		
	SST-L Premium	0,75 KW / 1,1 kW
	SST-S Premium	1,5 kW
	SST-ÜS Premium	2,2 kW
Type of protection	IP 54	
Position recording	Absolute encoder, integrated into the motor. EFA-SST-ÜS, type 262: contactless sensory technology, optional with absolute encoder	

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 Premium	260 R … 260 A …
	SST-S Premium	261 R … 261 A …
	SST-ÜS Premium	262 R…
Tractive forces		
	SST-L Premium	max. 4,0 KN per frame
	SST-S Premium	max. 8,0 KN per frame
	SST-ÜS Premium	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 13241-1 Doors product standard

EFAFLEX Tor- und Sicherheitssysteme GmbH & Co. KG
Technical Department

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