# Technical Door Description
# EFA-SST® - L/S ECO
# Type 263/264

DATE 08

**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 263 ECO** | | |
| | Door width | 1.200 mm - 4.500 mm |
| | Door height | 1.800 mm - 5.000 mm |
| **SST-S 264 ECO** | | |
| | Door width | 1.200 mm - 6.000 mm |
| | Door height | 1.800 mm - 6.000 mm |

### Speeds

| | | |
|---|---|---|
| **SST-L 263 ECO** | | |
| | Opening speed | approx. 1,0 m/s |
| | Closing speed | approx. 0,6 m/s |
| **SST-S 264 ECO** | | |
| | Opening speed | approx. 0,9 m/s |
| | Closing speed | approx. 0,6 m/s |

### Performance parameters according to DIN EN 13241-1

**Resistance against wind load according to DIN EN 12424**

| | |
|---|---|
| SST-L ECO | 1200 mm ≤ W ≤ 3000 mm ➔ class 4 |
| | 3000 mm < W ≤ 3500 mm ➔ class 3 |
| | 3500 mm < W ≤ 4500 mm ➔ class 2 |
| SST-S ECO | 1200 mm ≤ W ≤ 4000 mm ➔ class 4 |
| | 4000 mm < W ≤ 5500 mm ➔ class 3 |
| | 5500 mm < W ≤ 6000 mm ➔ class 2 |

**Resistance against penetrating water according to DIN EN 12425**

| | |
|---|---|
| SST-L ECO | Class 3 ② |
| SST-S ECO | Class 3 ② |

**Air permeability according to DIN EN 12426**

| | |
|---|---|
| SST-L ECO | Class 3 ② |
| SST-S ECO | Class 3 ② |

**Airborne sound insulation according to EN ISO 717-1**

| | |
|---|---|
| SST-L ECO | $R_w$ = 24 dB ① |
| SST-S ECO | $R_w$ = 25 dB ① |

**Thermal insulation according to DIN EN 12428**

| | |
|---|---|
| SST-L ECO | U = 1,52 W/(m²K) at 4500 mm x 5000 mm ① |
| SST-S ECO | U = 0,91 W/(m²K) at 6000 mm x 6000 mm ① |

① depending on door blade configuration and guidance
② class 0 with low header

## Fire behaviour

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

## Door leaf guides

**Door leaf guides**

| | | |
|---|---|---|
| | SST-L ECO | round, oval, low (low header) |
| | SST-S ECO | round, oval, low (low header) |
| 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 ECO | Galvanized steel | Standard |
| SST-L/S ECO | Stainless steel V2A (1.4301) corrosion resistant, polished | Option |
| **Surfacing** | | |
| SST-L/S ECO | 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 ECO | | |
| 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 | |
| Door leaf guide low (low header) | bottom cover for horizontal door leaf guide made of galvanized steel sheet | |
| SST-S ECO | | |
| 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 | |
| Door leaf guide low (low header) | bottom cover for horizontal door leaf guide made of galvanized steel sheet | |
| SST-L/S ECO | | |
| Door leaf guide round and oval | 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 ECO | 40*225 mm thermally separate, insulated lath | |
| SST-S ECO | 60*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 ECO | 40*225 mm thermally separate, double wall | |
| SST-S ECO | 60*225 mm thermally separate, double wall | |
| **Material** | | Standard |
| | Thermally separated aluminium profiles with two pressed on SAN panes | |
| **Surfacing** | | Standard |
| | Anodized E6/EV1 | |
| **Colour** | | |
| | Anodized E6/EV1 | Standard |
| | Painted, colours in accordance with RAL | on individual request |

| | | |
|---|---|---|
| **ISO Transparent lath PC-H** | | Option |
| SST-L ECO | 40*225 mm thermally separate, double wall | |
| SST-S ECO | 60*225 mm thermally separate, double wall | |
| **Material** | | Standard |
| | Thermally separated aluminium profiles with two pressed on surface-coated double-sided polycarbonate panes | |
| **Surfacing** | | Standard |
| | Anodized E6/EV1 | |
| **Colour** | | |
| | Anodized E6/EV1 | Standard |
| | Painted, colours in accordance with RAL | on individual request |

| | | |
|---|---|---|
| **Transparent lath** | | Option |
| SST-L ECO | 40*225 mm, single wall | |
| SST-S ECO | 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** | | Option |
| SST-L ECO | 40*225 mm, single wall | |
| SST-S ECO | 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** | | Option |
| SST-L ECO | 40*225 mm, single wall | |
| SST-S ECO | 60*225 mm, single wall | |
| **Material** | | |
| | Aluminium sections with pressed on 2 mm aluminium perforated sheet, perforation 6*50 mm | |
| **Surfacing** | | |
| | 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. 150.000 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 safety edge + light barrier (C-appointment + D- appointment).

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

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 ECO** | EFA-CON® with frequency converter, size 530*160*160mm, polycarbonate housing, protection class IP54<br>with EMERGENCY OFF switch, window for display and operator controls OPEN-STOP-CLOSE on front of switchgear cabinet.<br>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.<br>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 |

## Drive

| | | |
|---|---|---|
| SST-L/S ECO | Spur-gear three-phase asynchronous motor | |
| **Performance class** | | |
| | SST-L ECO | 0,75 KW |
| | SST-S ECO | 1,50 kW |
| **Type of protection** | IP 54 | |
| **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 ECO | 263 R … |
| | | 263 N … |
| | | 263 A… |
| | SST-S ECO | 264 R … |
| | | 264 N … |
| | | 264 A … |
| **Tractive forces** | | |
| | SST-L ECO | max. 4,0 KN per frame |
| | SST-S ECO | max. 8,0 KN per frame |
| **Installation position** | Internal installation<br>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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