Technical Door Description
EFA-STT® - L N TYPE 272

Issue 02
High Speed Turbo Door – Low lintel

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

1. Technical Design Data

Dimensions

STT-L N 272	*with KL*	*with TLG*
Width	1.200 mm - 4.000 mm	1.200 mm - 4.000 mm
Height	1.200 mm - 5.000 mm	1.950 mm - 5.000 mm

Door speed

STT-L N 272	*with KL*	*with TLG*
Opening speed	approx 1,6 m/s	approx 1,6 m/s
Closing speed	approx 0,75 m/s	approx 1,0 m/s

Area of application

Application	Internal door
Operational temperatures	- 15°C to + 50°C

Performance parameters according to DIN EN 13241-1

Resistance against wind load according to DIN EN 12424

1200 mm ≤ W ≤ 3500 mm ➔ class 4
3500 mm < W ≤ 4000 mm ➔ class 3

Resistance against penetrating water according to DIN EN 12425

Class 0

Air permeability according to DIN EN 12426

Class 2

Airborne sound insulation according to EN ISO 717-1

R_w = 20 dB

Thermal insulation according to DIN EN 12428

U = 6,50 W/(m²K) at 4000 mm x 5000 mm

Door design

It is based on a self-supporting design and modular construction. The components of the assembly are bolted together.

Door leaf guide	Low lintel
Possible materials	- Galvanized steel
Option	- Stainless steel V2A (1.4301) corrosion resistant, polished
Possible surfacings	- Galvanized
Option	- Powder coating, colors in accordance with RAL
Coverings Option (for H<2.500mm required as finger protection)	- bottom cover for horizontal door leaf guide made of galvanized steel sheet

Door leaf design

The door leaf consists of laths which are connected to each other with hinge elements vertically and with rubber stripping horizontally 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 divided rails made of aluminium. The division of forces is accomplished via two integrated rotating toothed belts in the side frames. These are connected on both sides to the lowermost lath via door-leaf attachments.
The plastic panes (SAN) used by us do not contain any material which can diffuse affecting paints. The materials are free of silicone, Teflon, and are compatible with paints.

Aluminium – transparent lath	Standard	
Execution	SAN glass, compressed in aluminium structural elements without middle post	
Material	AlMgSi 0,5 F22 and SAN transparent	
Surfacing in aluminium	Eloxal E6/EV1	Standard
	Powder coating, color according to RAL	Option
Dimensions	s = 30 mm h = 222 mm	

Technical Door Description
EFA-STT® - L N TYPE 272

Issue 02
High Speed Turbo Door – Low lintel

Aluminium –transparent lath PC-H	Option	
Execution	Surface-coated double-sided polycarbonate glass, compressed in aluminium structural elements without middle post	
Material	AlMgSi 0,5 F22 and polycarbonate	
Surfacing in aluminium	Eloxal E6/EV1	Standard
	Powder coating, color according to RAL	Option
Dimensions	s = 30 mm h = 222 mm	
Aluminium – grey-colored lath	Option	
Execution	SAN glass, compressed in aluminium structural elements without middle post	
Material	AlMgSi 0,5 F22 and SAN alu grey	
Surfacing in aluminium	Eloxal E6/EV1	Standard
	Powder coating, color according to RAL	Option
Dimensions	s = 30 mm h = 222 mm	
Ventilation lath in aluminium	Option	
Execution	Aluminium plate 2mm with elongated hole 50*6, compressed in aluminium structural elements	
Material	AlMgSi 0,5 F22 and aluminium plate	
Surfacing in aluminium	Eloxal E6/EV1	Standard
	Powder coating, color according to RAL	Option
Dimensions	s = 30 mm h = 222 mm	
Air valve diameter (m^2, W in m)	LA = ((W-0,105)*0,066)*number of laths	

Door sealing

The sealing is carried out horizontally and vertically using low wear plastic door leaf (TPE) which simultaneously acts as finger and touch protection according to European standards.

Weight balance

Counter acting system Tension springs are installed in the side frames and connected to the drive shaft by heavy load belts. The springs are taut in the position “Gate is closed” and slack in the position “Gate is open” By means of an order-related spring-tension calculation a high service life is attained.

Material	Spring steel wire class C, polished and oiled (galvanized or stainless steel not possible)
Function	Crash-down safety
Theoretical service life	Approx. 120.000 load changes

Emergency operation

On power failure	By activation of the EMERGENCY unlocking lever, the motor brake is released. The tension spring mechanical action opens the door partially automatically. The entire door opening can be attained by moving the door leaf upwards. The controller is in an EMERGENCY OFF state during activation.

Door locking

The lock is installed in a lateral frame, the door latch keeps the door leaf closed in a burglar-proof manner.

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	contact bar
Light barrier option	Safety light barrier IP 67, which is placed directly in the door closing plane. Standard fitting height of first light barrier: 300 mm (variable from 130 mm till H-40 mm) Fitting height of second light barrier: height of first light barrier + 170mm till H-40 mm) max. 2 units
Light curtain option	Door plane light curtain EFA-TLG® in the door closing plane, installed in the door frame.

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

STT-L N	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

Drive

	Spur-gear three-phase motor IP54
Performance class	1.5 kW
Position recording	Contactless sensory technology, integrated into the motor

2. Assembly

The design of a high-speed door requires a stable foundation (concrete of 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 dimensions	AZ 272 …
Installation position	Internal installation
Installation type	Front header
Recommended value max. tensile force per frame (see AZ)	approx. 2.0 KN

3. Special Design

Special designs / Special orders are such types of design 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

The following directives and standards were applied when designing, producing and assembling the door.

EN 13241-1 Door product standard

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

Bruckberg, 20/07/2011