Technical Door Description

EFA-SRT® EC TYP 242 issued 08

Doors designed for wet operations and the foods industry

EFAFLEX schnelle und sichere Tore

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

1. Technical Design Data

Dimensions

Width	1.000 mm – 3.500 mm
Height	1.000 mm – 3.750 mm

Door speed

Opening speed	approx. 1.50 m/s
Closing speed	approx. 0.75 m/s

Area of application

The door has been specially designed for indoor use. Suitable for rooms, in which the regulations of the BGA (German Federal Health Office) and the FDA (U. S. Food and Drug Administration) are to be maintained. E.g. pharmaceutical- and foods industry as well as inside rooms with high humidity and intensive wet cleaning operations. The door is not suitable for rooms subject to pressure differences, wind loads or for rooms in explosion-protected areas.

Application temperatures: +2° to +50° C	+5° to + 50° C

Performance characteristics accordance DIN EN 13241-1

Resistance against wind load according to DIN EN 12424	SRT-EC	Class 0 (18 km/h)
Air permeability according to DIN EN 12426	SRT-EC	Class 0
Airborne sound insulation according to EN ISO 717-1	SRT-EC	Rw = 11 dB ①

Performance characteristics were not approved!
① with PVC curtain

Door Design

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

Possible materials	- Stainless steel V2A (1.4301) corrosion resistant ground. Frame cover open for approx. 60 mm above the floor slab. Frame cover can be swivelled out and locked in place for the purpose of cleaning the frame on the inside.
option	- Stainless steel V4A (1.4571) corrosion and acid resistant, unpolished

Door leaf – variants

Material **Transilon**: (TO1 / TS1)	2 mm Transilon with or without window. standard (Quality E8/2 V1/V1 NA) TRANSVERSE STABILITY Approved in accordance with the FDA Articles 175.300, 178.2010 and 178.3740 for the transport of dry foods.	
Color	blue,	similar RAL 5002, antistatic, silicone free
	orange,	similar RAL 2008, Not antistatic, silicone free
	red,	similar RAL 3002, Not antistatic, silicone free
	yellow,	similar RAL 1021, Not antistatic, silicone free
Window	As optional feature, made of soft PVC, not approved in accordance with FDA Regulations.	
Material **PVC** ① (PVC)	Soft transparent PVC 2mm with 200mm wide warning stripes made of PES fabric. (Number dependent on the door width)	
Color of the warning strips	Ultramarine blue,	similar RAL 5002
	orange,	similar RAL 2008
	red,	similar RAL 3002
	green,	similar RAL 6005
	yellow,	similar RAL 1021
	white,	similar RAL 9016
	gray,	similar RAL 7035

① Not antistatic, silicone free

Material **PES (DURASKIN)**	PES-fabric 1.5mm For applications when door width is under 1300 mm due to the low roll-up resistance
Color	Ultramarine blue, similar RAL 5002 (standard) Orange, similar RAL 2008
(PVC-coated polyester) (TO5 / TS5)	2mm Transilon with or without window. (Quality E8/2 V1/V1 NA) TRANSVERSE STABILITY Approved in accordance with the FDA Articles 175.300, 178.2010 and 178.3740 for the transport of dry foods.
Color	papyrus-white, similar RAL 9018, antistatic, silicone free light grey, similar RAL 7035, antistatic, silicone free
Window	As optional feature, made of soft PVC, not approved in accordance with FDA Regulations.
Material **Transilon**: (urethane-impregnated polyester) (TO3)	2 mm Transilon without window (Quality E12/2 U0/V/U0 SE) TRANSVERSE STABILITY Hardly flammable B1 DIN EN 20340
Color	black antistatic, silicone free
Material **Transilon**: (urethane-impregnated polyester) (TO4)	1.4 mm Transilon without window (Quality E12/2 U0/U0) TRANSVERSE STABILITY (“free from paint-wetting impairment substances„) for use in the motorcar industry
Color	beige antistatic, silicone free

Weight balance

Weight compensation attained using balancing weights integrated into the door frames.

Material	Counterweights galvanized with additional coating.
Function	Crash-down security should the brakes or a gear-train defect occurs

Emergency operation

On power failure	By activating the pull cord, the motor brake is released. Owing to the counterweights, the door opens partially automatically. The entire door opening can be attained by moving the door leaf upwards. The controller is in EMERGENCY OFF state during this operation.
Option	***ASEPTIC*** version: Emergency-opening only with UPS and push-button
operating current brake option	Function: A power cut or switching off the main switch causes the brake to release. The door does not require any mechanical emergency release. The counterbalancing weights in the frame are raised. Note: Uncontrolled movement of the door leaf! Operators must be referenced to it. Operating current brake in ***ASEPTIC*** version not available.

Door-leaf guide

Guide for the door-leaf travel is accomplished by means of the studs riveted in the vertical direction on the door hanging which hold the door hanging in the frame.

Winding Shaft

Steel design	V2A Steel pipe 114x2.6 mm with welded on shaft journals made of V2A

Covering

Standard design	Motor covering and slanted front tray for drum drainage made of sheet metal V2A. Winding shaft covering which can be swung out and locked in two positions and slanted for the drainage of water. Motor cover with bevelling for water drainage
Shaft covering for H<2.500mm required as finger protection	
Special design	V4A (1.4571) corrosion – and acid resistant, window panel, non-polished

End elements

Closing edge	Two-shell design made of V2A or V4A Sheet metal with energy chain in the

	frame, **no external spiral cable!**
Guide	Lateral attachment of the protective cover using plastic profiles which slide into the vertical guides.

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	Safety light barrier IP 67 (max. 2 units), which are arranged directly in the door closing plane.

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

Control mcp2 with frequency converter, size 380*380*210mm resp 380*600*210mm, V2A (1.4301), 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 ***ASEPTIC*** version with UPS and external push-button for emergency-opening:
Break release by UPS in the control-box. Size of control-box therefor from 380x600x210mm

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

Type of drive

	Bevel gear brake motor 0.75kW 100Hz IP54,
Speed control	Frequency converter
Position recording	Contactless sensory technology, integrated in the motor
Optional version: ***ASEPTIC***	**Bevel gear brake motor 0.75 kW 50 Hz IP65**
Position recording	Absolute encoder on winding shaft IP65

Pulse generator

Possible pulse generator and elements for door safety with IP- Protection Class

Robust hand-foot pushbutton switch	IP67
Cord operated switch	IP65
Motion recorder	IP65
Light barriers	IP67
Remote-control	Receiver in control box

2. Assembly

Attachment of the roll-up door requires a stable foundation (concrete or steel structure). Light masonry, e.g. hollow block masonry or expanded concrete should be supported by auxiliary structural elements. In case of difficult technical installation conditions contact EFAFLEX - Bruckberg. Method of installation „pegs“, „bolts in steel“, „welding to steel“ or bolt and nut installation must be specified. Installation dimensions see AZ 242... Recommended values for attachment: Maximum tensile force approx.1.8 KN per door frame

3. Cleaning Procedure

Door Hanging
The door hanging is to be cleaned when the door is closed. For this purpose the top covering can be tilted open. When cleaning with a high-pressure cleaning unit, (pressure approx. 150 bar), a minimal distance of 30 cm to the hanging is to be maintained. For pressures above 50 bar, increase the distance accordingly. Otherwise the covering layer of the hanging can become detached from the fabric. The maximal temperature is dependent on the type of hanging. Soft PVC max. 60°C and fabric material max. 75°C. Please observe the temperature of the cleaning agent.

Inside Frame
Move door system into position „Door open“, turn off main switch, loosen knurled screw at the bottom. Swing open the frame cover to the front (approx. 600 mm) and secure with lever. For this purpose the lever must be swung out from the door frame to the front as well. Securing of the frame cover is carried out by hooking into the bottom cutout of the cover. Subsequently, clean the frame and the frame cover. Attention: Clean light barriers at substantial distances, i.e. at low pressure.

Winding Shaft
Close door halfway via the operator keyboard change to emergency travel: The door can be moved beyond its normal position „Door closed“ to the bottom until the door hanging is completely unwound, Swing open the protective covering at the top and clean the winding shaft. After closing the protective covering, turn on the main switch and with the „ arrow up“ begin synchronization travel.

4. Special Design

DEFINITION:
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 is specified, depending on costs.

5. Applied Safety Standards

The following directives and standards were applied when designing, producing and assembling the door.
EN 13241-1:2000 Door product standard

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