

## **HIGH-SPEED TURBO DOOR, type "EFA-STT-CR®"**

Manufacture, delivery and installation of

High-speed turbo door, type "EFA-STT® CR" with electro-mechanical high-performance drive unit for permanent industrial use, preferably in clean rooms up to ISO class 8. With air pressure differences of up to 30 Pa there is an air loss of up to 50<sup>3</sup>/hr (depending on size and installation side).

The components of the door system, which are especially hermetically sealed towards one another, mainly consist of:

Self-supporting, lateral steel frames; steel parts generally galvanised; spiral-shaped door leaf guidance and complete cover (can be folded down for inspection purposes). The load is transmitted on both sides: For achieving this, a synchronised shaft will be installed. For the exact, smooth and low-noise guidance of the hinge straps (with special labyrinth packing), ball-bearing precision rolling units have to be used. A sufficiently dimensioned tension spring mechanism, ensuring the weight balancing of the door leaf according to the standard DIN EN 12604 and a manual opening of the door (e.g. in the case of a power failure) is installed in the door frames.

The door leaf consists of a frame made of anodised aluminium as well as of a middle area which is made of transparent, single-walled acrylic glass. The visible surface of the door leaf must be at least 70%, and optical clarity must be ensured permanently.

This spiral body is designed to guide the laths of the door leaf completely without contact and thus without wear and with best possible noise reduction.

The door is driven by a geared motor which has to be developed as high-frequency motor. The positions of the door are permanently detected by means of an absolute encoder.

Accident protection:

The scope of supply includes a photo cell fitted into the door frame as well as a self-monitoring safety contact bar according to DIN EN12453. Its connection cable must be guided in a protective energy chain within the door frame. An EMERGENCY STOP shock switch is attached to the frame as standard.

**OPENING SPEED:** up to approx. 2.5 m/s  
**Max. DOOR LEAF SPEED:** up to approx. 3.0 m/s  
(depending on door size)  
**CLOSING SPEED:** up to approx. 1.0 m/s

The **MICROPROCESSOR CONTROL** is installed together with the integrated frequency converter in a separate plastic switch cabinet, protection type IP 65.

On-site connection to 230 V respectively 400V / 50-60 Hz. Fuse 16 A

Regulations pursuant to DIN EN 13241-1 are complied with;  
Resistance to wind load pursuant to DIN EN 12424 up to class 4  
(values depend on the door size and the equipment)

for clear opening dimensions (max. W x H = 4,000 x 5,000 mm)

Width = ..... mm x Height = ..... mm

Manufacturer:  
EFAFLEX Tor- und Sicherheitssysteme GmbH & Co. KG  
www.efaflex.com

### **Options for the HIGH-SPEED TURBO DOOR, type "EFA-STT® CR"**

#### **Surface**

- Powder coating of all galvanised steel parts in a colour according to RAL \_\_\_\_\_ (pearl, luminous and metallic colours not possible)
- Powder coating of the aluminium posts in a colour according to RAL \_\_\_\_\_

If steel parts as well as aluminium parts are to be coated in the same RAL colour, minor deviations in colour may occur which cannot be fully avoided due to the different surface structures. The supplier, however, will make the best possible efforts to keep deviations in colour as small as possible through influencing the degree of gloss.

- stainless steel version (V2A) of all visible steel parts, visible surface polished, coarseness 220, incl. switch board made of V2A, incl. guide rollers with V2A bearings, e.g. for wet operations

#### **Door leaf**

- Surcharge for door leaf filling of single-walled, non-transparent plastic (colour: aluminium-grey)
- Surcharge for door leaf filling of single-walled, transparent and impact resistant polycarbonate.

#### **Safety**

- As alternative to the photo cell and contact bar our TÜV approved light-line grid (EFA-TLG®) can be used. It is installed in a fully protected way in the closing line and its infrared beams generate a very dense light curtain up to 2.5m. Obstacles are detected without contact and the automatic closing movement immediately stops.
- Max. 2 photo cells in door frame, radars and active infrared sensor element for safety

#### **Activator and displays:**

- clean room-compatible pressure switch (AP or UP), pull switch, radars
- contact-less proximity switch
- red/green LED traffic light, clean room version

#### **GMP clean room air lock**

Delivery and assembly of 2 high-speed roll-up doors to the prepared substructure in a clean room air lock with interlocking.