

HIGH SPEED SPIRAL DOOR, type „EFA-SST® TK-100“

Manufacture, delivery and installation of

High-speed spiral door, type „EFA-SST® TK-100“, with electro-mechanical high-performance door drive for closure of deep-freeze rooms down to max. -30°C. Installation of the door system can be done on the warm side or on the cold side (recommended on warm side).

Released temperatures for installation on the warm side
Cold side from 0° to -30°C / warm side from 0°C to +30°C
For door systems wider than 3000mm the released max. temperature difference may be 40°C

Released temperatures for installation on the cold side
Cold side from 0° to -30°C / warm side from 0°C to +10°C
Relative air humidity on the warm side max. 60°C

The door system mainly consists of:

Thermally separated, self-supporting lateral steel frames with double sealing to the door blade; steel parts generally galvanized, spiral-shaped door guidance

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, 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.

Door leaf made of double-walled, thermally separated and insulated, 100 mm thick EFA-THERM®-laths, which are fixed onto hinge straps and moved vertically (i.e. up or down), surface as 2-layer coating similar to RAL 9006 (white aluminium).

The door blade is pushed against a heated sealing on the wall by means of the EFA-AFM (Active guide rail mechanism), providing excellent sealing between the cold and the warm side of the opening. This especially heated sealing towards the door leaf as well as heating tapes between the individual laths and also the heated contact edge complete the freezer equipment.

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 non-wearing, inductive proximity switches, with the limits being determined electronically. Electro-mechanical limit switches are not permissible here.

OPENING SPEED:	up to approx. 1.5 m/sec. (depending on door size)
Max. DOOR LEAF SPEED:	up to approx. 2.0 m/sec. (depending on door size)
CLOSING SPEED:	up to approx. 0.5 m/sec.

The **MICROPROCESSOR CONTROL** is installed together with the integrated frequency converter in a separate plastic switch cabinet 600x600x210 mm (protection type IP 65);
Connection to 400V/ 50 Hz power supply on-site.

SAFEGUARDING of the door closing line in case of INSTALLATION ON THE WARM SIDE is effected by CONTACT EDGE and the TÜV-approved DOOR LIGHT-LINE GRID (EFA-TLG®) which generates a very dense infrared light curtain up to a height of 2.5m.

In case of INSTALLATION ON THE COLD SIDE two freezer photo cells and a second contact edge apply instead of the EFA-TLG®. The safety systems integrated in the lateral frames operate fully protected in the door closing line, stop the closing movement and immediately trigger the opening movement automatically.

Regulations pursuant to DIN EN 13241-1 are complied with;
Heat insulation according to DIN EN 12428 up to 0.74 W/m²K

Resistance to wind load pursuant to DIN EN 12424 up to class 4
Air permeability according to DIN EN 13241-1 up to class 4
Airborne sound insulation according to DIN EN 7171 up to 26 dB(A)
(values depend on the door size and the equipment)

for clear opening dimensions

Width = mm x Height = mm

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

OPTIONS for high-speed spiral door, type „EFA-SST® TK-100“:

Surface

Powder coating of all galvanised steel parts in a colour according to RAL _____
(pearl, luminous and metallic colours not possible)

or

Stainless steel version (V2A) of all visible steel parts (grounded in 220 graining),
incl. control box made of V2A, incl. guide rollers with stainless steel bearings

Special coating of the laths in a colour according to RAL _____

If steel parts as well as laths parts are to be coated in the same RAL colour, minor deviations in colour may occur which can not 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.