

**EFAFLEX**   
safe high-speed doors

*TK Series*



*High-speed spiral doors  
for deep-freeze applications*



# TK Series

The cold chain for deep-frozen products must never be interrupted during storage and transport. This demands an enormous amount of energy and high logistical effort. Installing insulated doors helps to minimize temperature losses and to accelerate processes.

The EFA-SST® TK-100 is the first high-speed spiral door designed for closing deep-freeze areas. This makes it the optimal single door solution for logistical processes.

The EFA-SST® TK-100, an excellently insulated door, helps substantially to decrease energy costs and creates constant climatic conditions in deep-freeze units.

	EFA-SST® TK-100
Complete construction without thermal bridges	Yes
EFA-THERM® insulation laths 100 mm	Yes
Heating in the door blade and in the bottom section, heated seal around door frame	Yes
Energy-efficient design	Yes
Emergency opening within seconds	Yes
Unique EFA-AFM® technology	Yes
U value of entire door	0.62 W/m²K
U value of door lath	0.24 W/m²K
Production supervised by IFT institute	Yes

# EFA-SST® TK-100



# The deep-freeze single door solution

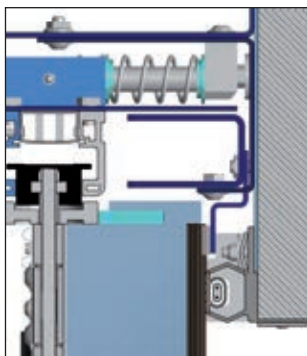
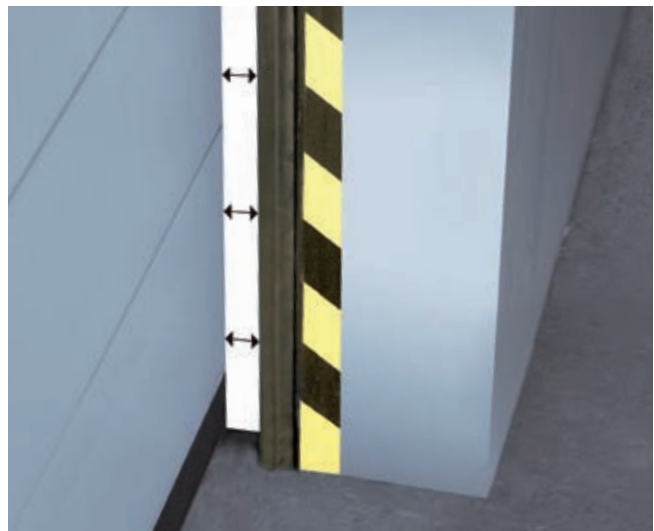
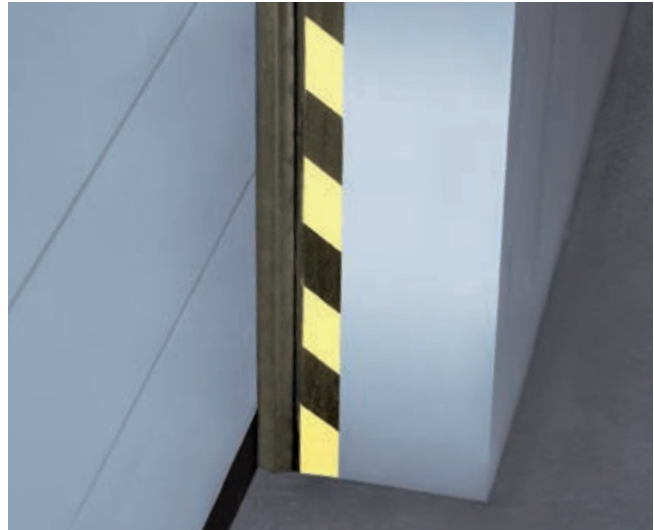
## A glance at the advantages of the EFA-SST® TK-100:

- Optimal deep-freeze single door solution
- Long-lasting high-speed door technology
- CFC free, 100 mm thick insulation laths
- Frames and laths thermally separated
- Energy-efficient heating system in laths and bottom section

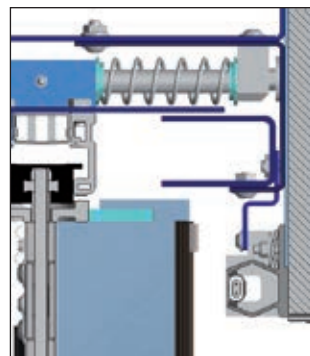
## Leading technologies create real benefits that you can see and notice!

The EFA-SST® TK-100 is a true specialist! The first truly single door solution for deep-freeze areas that simultaneously reaches highest opening and closing speeds and the best insulation values for spiral doors. The EFAFLEX SST® TK-100 high-speed door is a high-quality solution for every deep-freeze room. The door is designed for up to 200,000 load cycles per year and the original EFAFLEX spiral ensures practically wear-free movement of the door blade at up to 2.0 m/s.

The Active Framework Mechanism EFA-AFM® ensures a practically hermetic door seal.



AFM system closed:  
The door is hermetically sealed.



AFM system open:  
The door blade is in motion.

## Seals tight!

The innovative door design of the EFA-SST® TK-100 is ingenious. The door features a seal running all the way around the structure and dynamic door blade guidance. This guidance and the spiral are mounted in a way to be movable against the frames. EFA-AFM® keeps the door blade pushed against the door frame, when closed and, combined with the rubber seal, seals the door practically hermetically. The sophisticated door construction allows installation on the warm and on the cold side of the opening, adapted to the particular requirements.

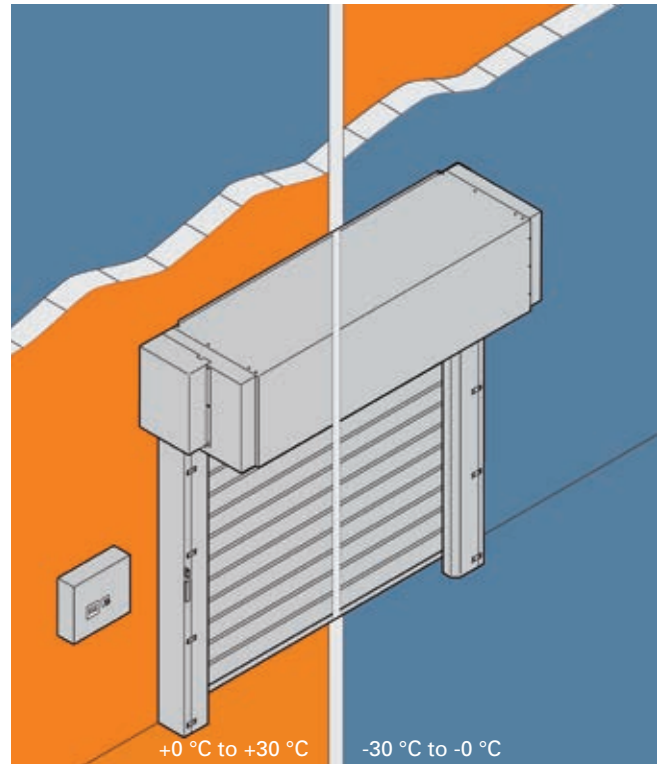
# Perfection is in the detail

## Constant temperature, low energy consumption

The 100 mm thick EFA-THERM® insulation laths of the EFA-SST® TK-100 guarantee better heat insulation than ever before. The laths are thermally separated as a standard.

## Braves the frost

Contact surface heaters are employed throughout the entire door, being integrated into the seals around it and into the contact bar strip. These heat the contact surfaces of the seals against the door blade and the floor. The result of this unique design is a U value down to 0.62 W/m<sup>2</sup>K and operational temperatures between plus and minus 30 °C.



## EFA-TLG® Door Light Grid

With the TÜV-certified infrared light grid EFA-TLG® you are on the safe side. The system is self-monitoring and works entirely without contact. EFA-TLG® detects even the smallest of obstacles in the door closing line. All EFA-SST® TK-100 doors come equipped with an additional accident prevention contact bar on the main closing edge as a standard. This ensures the highest degree of active and passive functionality in consideration of difficult usage and environment conditions in the deep-freeze area. The EFA-SST® TK-100 therefore also features tension springs integrated into the sides: in the event of e.g. a power failure, the door can be open in a second using a manual lever. For even higher safety we are able to provide further features like area surveillance as you approach or laser scanners.

## Technical Data:

## TK Series

EFA-SST® TK-100

Application	Deep-freeze application Installation on cold side Installation on warm side	- 30 °C/+ 30 °C - 30 °C to + 10 °C + 30 °C to - 30 °C
Wind load*	According to DIN EN 13241 in classes	4
Operating forces/safe opening	According to DIN EN 13241	fulfilled
Resistance against penetrating water	According to DIN EN 13241 in classes	3
Air permeability	According to DIN EN 13241 in classes	4
Direct airborne sound insulation $R_w$ *	in dB according to DIN EN 717-1	26
U value*	in W/m <sup>2</sup> K according to DIN EN 13241	0,62
Door size (in mm)	Width W max. Height H max.	4,000 6,000
Designed for approx. ... load changes p.a.		200,000
Maximum door blade speed*	in m/s	2.0
Average speed, approx.*	Opening in m/s Closing in m/s	1.5 0.5
Door blade guidance	Round Spiral	●
Direction of door operation		vertical
Steel design	Galvanized sheet steel frame Stainless steel Powder-coated according to RAL	● ○ ○
Door blade	EFA-THERM® laths double-wall insulated/painted Colour according to RAL	● ○
Fire class	Building material class DIN 4102	B2
Weight balancing by		Spring
Drive	Electric motor with frequency converter	●
Control	EFA-TRONIC® PROFESSIONAL	●
Lead	Power supply connection 400 V/50 Hz	●
Manual locking		–
Emergency opening	Automatic after manual activation	●
Safety Devices	Warm side: EFA-TLG® door light grid in closing line and pressure sensitive edge Cold side: 2x pressure sensitive edge and 2x photo cells	● ●
Safety device including activator	Motion detector	○
Activators	Connection of all common activators possible	●

● Standard, ○ on request, – not available, \*depending on door blade, door blade guidance and door size, subject to technical changes!

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## Technological advancement. Pioneering design.

EFAFLEX® is a registered and legally protected trademark.

Subject to technical changes. Some diagrams depict special features.

Overall design:

[www.creativconcept.de](http://www.creativconcept.de) 02120

For more than 40 years, EFAFLEX has developed and designed reliable and highly-efficient high-speed doors. With innovative technology and pioneering solutions for special requests, EFAFLEX continually provides the market with new stimuli. This leadership role through superior technology, the best quality and a maximum degree of security is part of EFAFLEX's identity. More than 1,000 employees guarantee competent consultation and excellent service. Worldwide and always near you.

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