

High-speed spiral doors for deep-freeze applications

TK Series



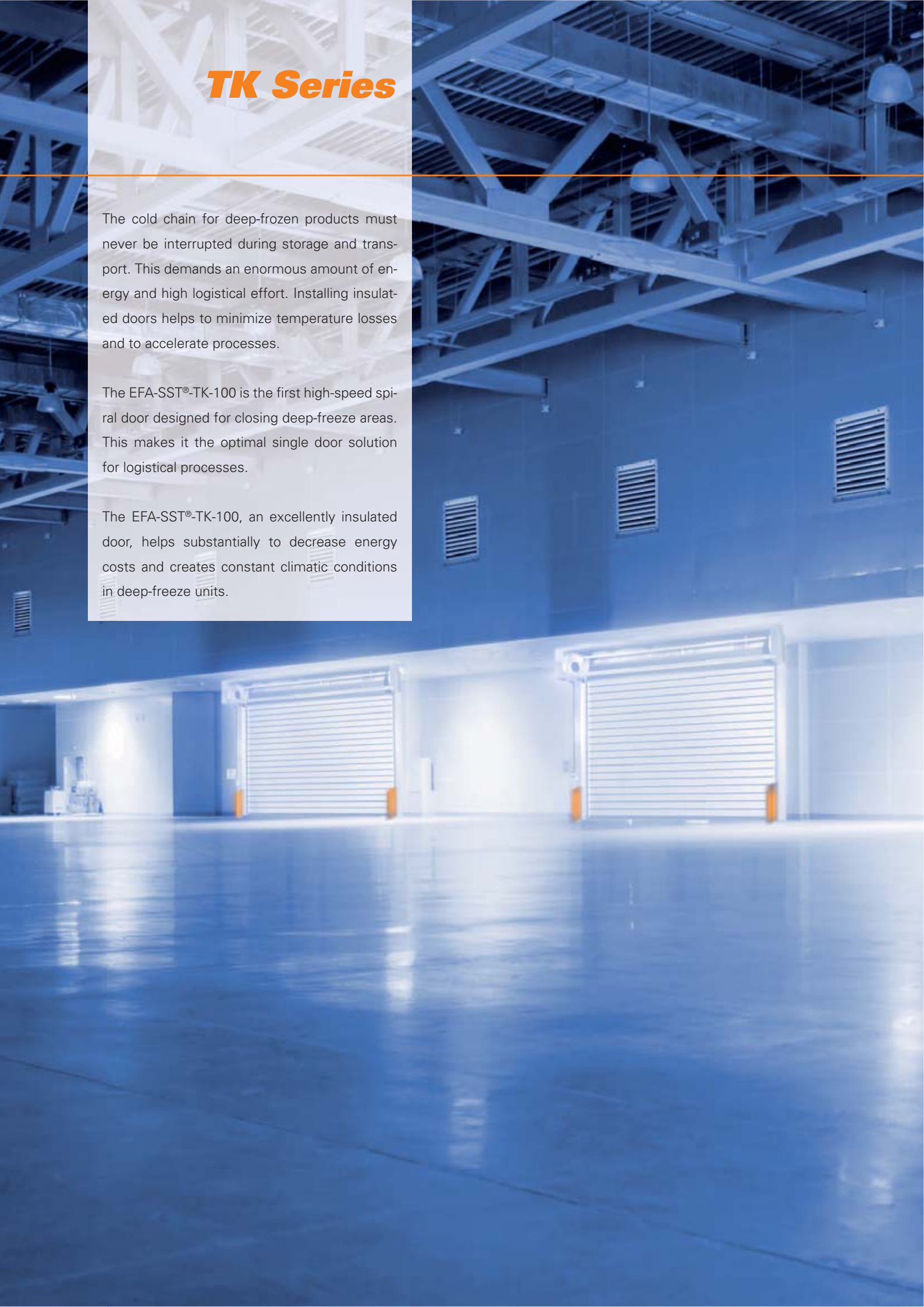
EFAFLEX 
safe high-speed doors

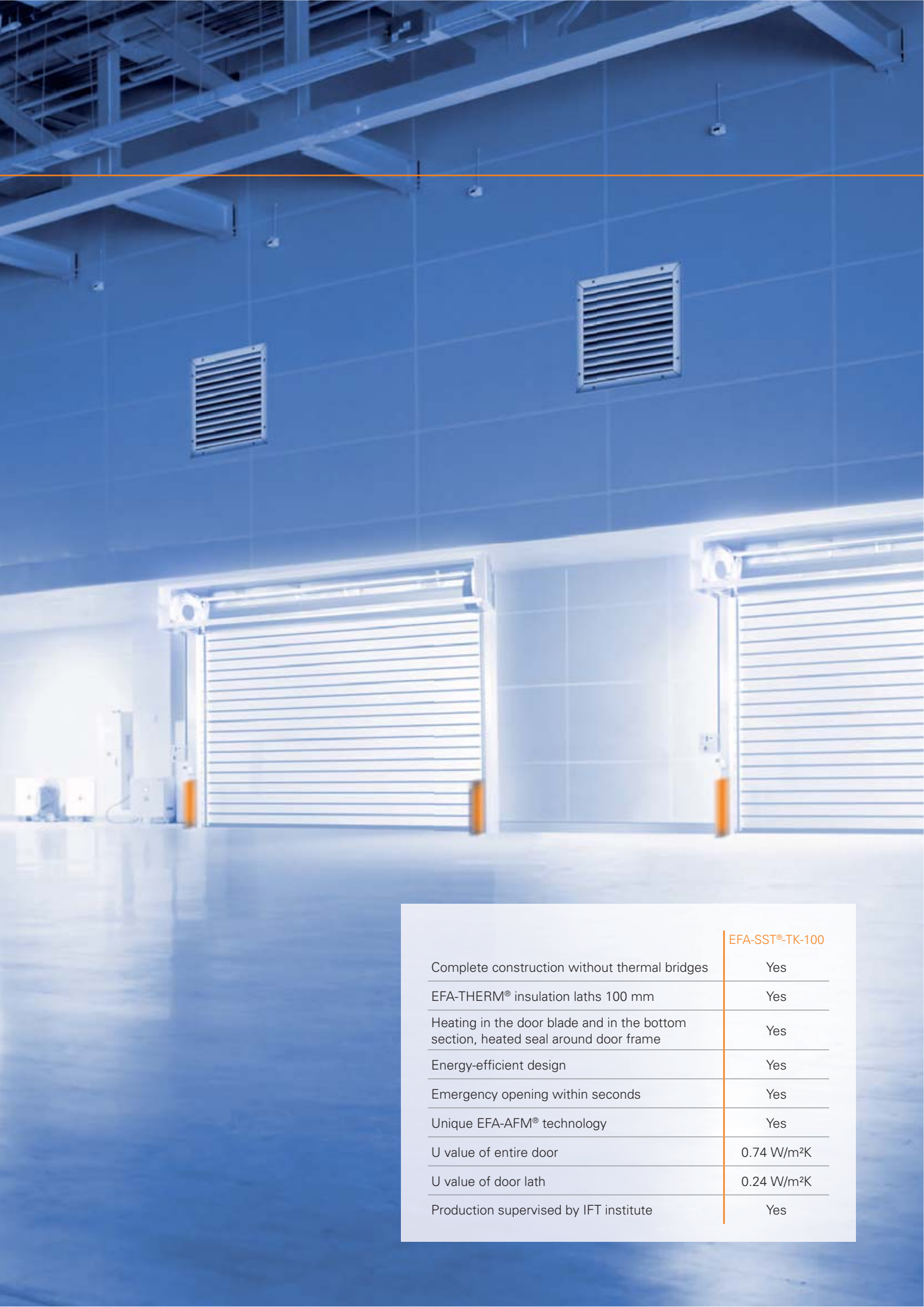
TK Series

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	0.74 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



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.

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. Unlike other door designs, the spiral box of the EFA-SST®-TK-100 is mounted on the outer, warm side of the door opening to protect it against increased wear due to cold.

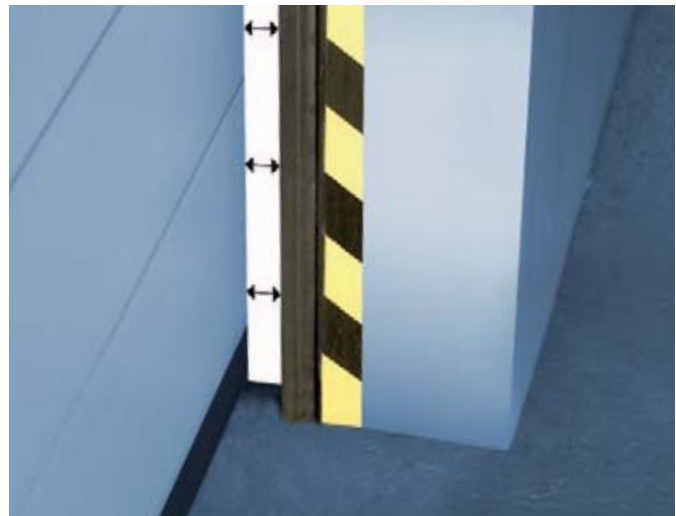
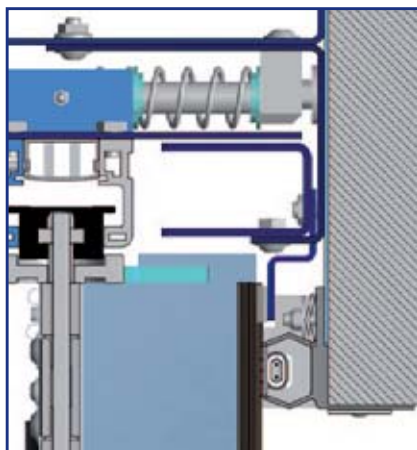
The EFA-SST®-TK-100 at a glance

- 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

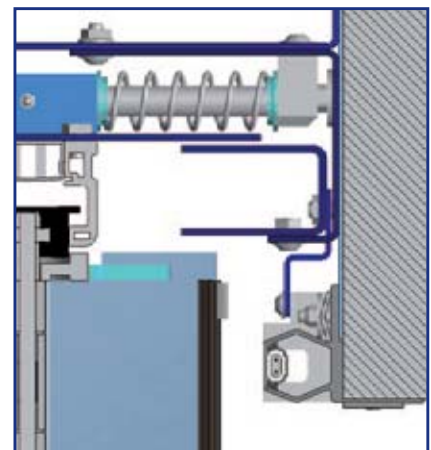
The Active Framework Mechanism EFA-AFM® ensures a practically hermetic door seal.



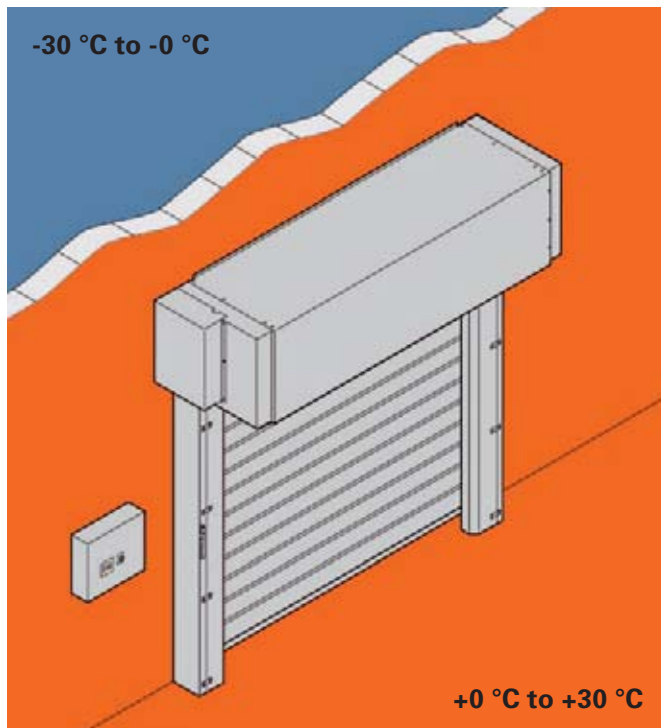
AFM® system closed: The door is hermetically sealed.



AFM® system open: The door blade is in motion.



Perfection is in the detail



Constant temperature, low energy consumption

The 100 mm thick EFA-THERM® insulation laths of the 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 0.74 W/m²K 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. Even more features can be integrated at any time for greater safety, such as approach area surveillance, laser scanners and more.



Technical Data:

EFA-SST®-TK-100

Application	Deep-freeze applications	-30 degrees
Area of application	Installation on the warm side	+30 degrees
Wind load*	According to DIN EN 13241-1 in classes	4
Operating forces/safe opening	According to DIN EN 13241-1	fulfilled
Resistance against penetrating water	According to DIN EN 13241-1 in classes	3
Air permeability	According to DIN EN 13241-1 in classes	4
Direct airborne sound insulation R_w *	in dB according to DIN EN 717-1	26
U value*	in W/m ² K according to DIN EN 13241-1	0.74
Door size (in mm)	Width W max.	3000
	Height H max.	3180
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	1.5
	Closing in m/s	0.5
Door blade guidance	Round Spiral	•
Door running direction		vertical
Steel design	Galvanized sheet steel frame	•
	Stainless steel	o
	Powder-coated according to RAL	o
Door blade	EFA-THERM® laths double-wall insulated/painted	•
	Colour according to RAL	o
Fire class	Building material class DIN 4102	B2
Weight balancing by		springs
Drive	Electric motor with frequency converter	•
Control	MCP2 with BUS technology	•
Lead	Power supply connection 400V/50Hz	•
Manual locking		–
Emergency opening	Automatic after manual activation	•
Safety Devices	EFA-TLG® door light grid in door closing line	•
	Contact edge	•
Safety device including activator	EFA-SCAN® bollard	o
Activators	Connection of all common activators possible	•

• Standard, o on request, – not available, * depending on door blade, door blade guidance and door size, subject to technical changes!



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