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SCOPE OF SERVICES – Cold Storage

POS.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL PRICE
01.01	COLD STORAGE DOORS				
01.01.0010	<p>COLD STORAGE HIGH-SPEED SPIRAL DOOR</p> <p>Leading product: EFAFLEX Type "EFA-SST® ISO 60"</p> <p>Manufacturing dimensions: 0.000 x 0.000 mm</p> <p>Scope of supply, delivery, and installation:</p> <p>High-speed spiral door Type "EFA-SST®-ISO-60" with electro-mechanical high-performance drive, preferably designed for use in frost-free cold rooms.</p> <p>The door system mainly consists of:</p> <p>Self-supporting, thermally separated frames with double seals to the door curtain; all steel components are generally galvanized; spiral door curtain mounting.</p> <p>Force transmission on both sides: A synchronizing shaft is installed for this purpose. For precise, smooth, and low-noise guidance of the hinge bands, ball-bearing precision roller assemblies are used.</p> <p>Torsion spring mechanism installed in the door frames, dimensioned according to DIN EN 12604 to balance the weight of the door curtain and allow manual opening (e.g., in the event of power failure).</p> <p>The door curtain consists of double-walled, thermally separated, and insulated EFA-THERM® slats, mounted in hinge bands and moving vertically (upwards and downwards). Surface finish: two-layer coating similar to RAL 9006 (White Aluminum).</p> <p>The spiral body is designed so that the slats of the door curtain pass each other completely without contact, ensuring wear-free and quiet operation.</p> <p>Door drive: Gear motor with high-frequency design. Door positions are permanently monitored using wear-free inductive proximity switches; end positions are determined electronically. Electromechanical limit switches are not permitted.</p> <p>Opening speed: up to approx. 2.0 m/s Maximum door curtain speed: up to approx. 2.5 m/s (depending on door size) Closing speed: up to approx. 1.0 m/s</p> <p>Microprocessor control with integrated frequency inverter housed in a separate plastic control cabinet, protection class IP65. Connection to 230V/50Hz on-site.</p> <p>Included in delivery: light curtain to secure the closing area, combined with a safety contact strip.</p> <p><u>Additional features:</u></p> <p>ISO vision slats 3 pieces per door system Double-walled and thermally separated aluminum profiles (anodized E6-EV1) with transparent acrylic panes on both sides Viewing area: selectable</p> <p>Pull switch With pull cord (red) for ceiling mounting</p> <p>Motion detector As a safety device to detect moving objects (inactive when door is closed), directional detection, adjustable detection field Including mounting bracket</p> <p>Control expansion for conveyor technology: Separate terminal section in standard control cabinet For the following inputs and outputs: Inputs: Pulse Open, Pulse Close, Emergency Stop, Interlock, Pulse Generator</p>				

Outputs: potential-free signal Door Open, Door Closed, potential-free Ready/Fault
(Outputs assignable with max. 24 Volt DC)

Mounting by screw installation using threaded rods and counter plates.

Standards and performance:

- Complies with DIN EN 13241
- Thermal insulation according to DIN EN 12428 up to 0.8 W/m²K
- Wind load resistance according to DIN EN 12424 up to Class 4
- Airborne sound insulation according to DIN EN 7171 up to 25 dB(A)
(Values depend on door size and equipment)

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

Functional testing and commissioning for clear opening:
Width = ... mm x Height = ... mm

Offered product:

EFAFLEX Type "EFA-SST® ISO 60" (Bidder specification)

		1,000	piece	.....	.....
01.01.0020	Spiral cover, bottom and front: Sheet metal galvanized, powder-coated, or stainless steel (V2A) (Mandatory for cold-side installation)	1,000	piece	.....	.....
01.01.0030	Spiral cover, top as dust protection: Sheet metal galvanized, powder-coated, or stainless steel (V2A) (Not available for cold-side installation)	1,000	piece	.....	.....
01.01.0040	Safety: Door line light grid TÜV-tested, integrated in side frames, acting in the door closing plane, self-monitoring, replacing light curtain and contact strip	1,000	piece	.....	.....
01.01.0060	Powder coating: All visible steel parts according to RAL (excluding pearl and fluorescent colors)	1,000	piece	.....	.....
01.01.0070	Stainless steel design: All visible sheet metal parts in stainless steel (V2A), including ball bearings of deflection and guide rollers from V2A (Small parts inside frame not stainless)	1,000	piece	.....	.....#
01.01.0080	Coating of slats (door curtain): According to RAL (excluding pearl and fluorescent colors) Hinge chain not coated. Note: minor color differences may occur between aluminum and steel parts even with same RAL.	1,000	piece	.....	.....
01.01.0090	Heater for drive motor (Mandatory for cold-side installation)	1,000	piece	.....	.....
01.01.0100	Control cabinet heater (Mandatory below +0 °C)	1,000	piece	.....	.....

01.01.0120	Swiveling frame cover	1,000	piece	.....	.....
01.01.0130	Pulse generator: Pull switch with pull cord (red) for ceiling mounting	1,000	piece	.....	.....
01.01.0140	Pulse generator: Push button (black or red mushroom head)	1,000	piece	.....	.....
01.01.0150	Pulse generator / Safety: Motion detector (radar technology), adjustable radiation field and directional detection (Inactive when door closed)	1,000	piece	.....	.....
01.01.0160	Pulse generator / Safety: detector, 2-channel, incl. installation of 2 induction loops (1 at door side, 1 at opposite side)	1,000	piece	.....	.....
01.01.0170	Control expansion GVM: Mutual interlock of two EFAFLEX high-speed doors including wiring up to 5 m in on-site cable routing	1,000	piece	.....	.....
01.01.0180	Signal lights: Flashing beacon, yellow or red	1,000	piece	.....	.....
01.01.0190	Impact protection bollard: FLEXCORE 6 with stable metal core, rotatable HDPE outer shell, shock-absorbing ring Height = 1,370 mm, Diameter = 182 mm	1,000	piece	.....	.....
01.01.0200	Mechanical emergency release: For door opposite side via lever (flush or surface-mounted) for partial opening via spring force (brake ventilation)	1,000	piece	.....	.....
01.01.0210	Mechanical emergency release: For door opposite side via lever (flush or surface-mounted) for partial opening via spring force (brake ventilation)	1,000	piece	.....	.....
01.01	COLD STORAGE DOORS	Total:			