STAR 250 Artic

High speed Rollup Door for deepfreeze rooms

Overview

A recent analysis in a trade magazine reported that one of the major causes for energy loss in deepfreeze rooms was blamed for poor or inefficient performance of the closure door or, better, of the "door system".

This part of the deepfreeze building could be charged for up to 30% of the energy loss.

Keeping constant the subzero temperatures of freezing plants and storage rooms is the main target of **STAR Artic.**

The main drawback of standard deepfreeze doors is the time frame when they stay open for transit. This time and the door dimensions account for the heat exchange with the outdoor environment. Hence the need to oversize the deepfreeze plant.

A high speed door, in addition to a standard deepfreeze door, allows fast transit as it opens and closes quickly, cutting down drastically the heat exchange time.

Furthermore, a fully transparent curtain allows best visibility of inner rooms, making inward inspection with "closed doors" possible.

Warranty

The STAR doors are built with best quality materials and electronic components, field tested by the most strict industrial and commercial applications, are covered by a standard 12-month warranty.

Compliance with safety regulations

This product is built in compliance with current safety regulations for Industrial and Commercial Doors as per norm UNI EN 13241-1. Each COIL door is supplied complete with an original E.C. Certificate. The E.C. Certificate vouches that product engineering and constructions comply with current safety directions.

The technique

Endurance to subzero temperatures

The clear transparent "Super Polar" flexible curtain can stand subzero temperatures down to -60° C.(-76°F). It is a custom made plastic that is not normally used. For standard applications the plastic currently used stands at best subzero temperatures to -45° C. (-50° F.).

This special feature allows maximum curtain flexibility and avoidance of heating systems for sliding tracks and the bottom sealing bar. These heating systems would be required to avoid cold sticking of the curtain plastic in such freezing environment.

Track heating systems would create vapor condensation, which will turn to ice at subzero temperatures. The only heating system operates for the motor brake, but is fully contained inside the door and has no contact with the outer environment.

Compact design

All mechanical and other electro-mechanical components reside inside the compact body provided with flush inspection doors. This allows the installation of the high speed door in any entrance thanks to its compact design without any external component. The control panel should be located outside the freezer room for easy access, as required.

What temperature and air characteristic

In a subzero environment the air composition and temperature are subject to variations. These may be border-line conditions in which STAR Artic doors can be installed.

Technical Specifications

Structure
- This consists of an AISI 304 stainless steel framework encased by boxed jambs and upper canopy provided with inspection and maintenance access doors.
- Thanks to its snag-free construction, this door can be installed both outside and inside entryways.

Drive Assembly
- A 3-phase self braking motor with overload safety running on 220/380 Volt A.C.
- A non-reversible speed reducer in a Low Temperature oil bath, with worm screw and a chain transmission on the winding shaft.
- A cam operated switch
- A heated electro-magnetic brake assembly.

Speed
Opening speed up to 1,0 m/sec.

Flexible Curtain
- The curtain, broken in several interchangeable panels, is made of “SuperPolar” clear PVC plastic made of a special formulation capable of standing temperatures as low as -60° C. (-76° F.).
- This special plastic avoids the installation of heating systems for the sliding tracks and the bottom seal bar.
- The curtain interchangeable panels can be replaced easily and quickly in case of accidental hits.

Wind load resistance
- The door complies with the UNI EN 12424 Class 0/1 regulation**.**

Safety System
- Emergency opening by means of a manual handle located at operator’s reach on one of the door jambs, thanks to a counter-balance spring.
- Safety photocell. A pair of photocells positively stop the door fall and a prompt raising in case of obstacle detection in the doorway
- Door fall prevention. Current safety laws require all fast vertical opening doors to be equipped with a fail-safe protection system preventing them from falling in case of breakdown. STAR doors are endowed with a proprietary “fall-prevention” system in case of a door motion failure**.**

Control panel
-The control panel, positioned outside of the door, is included in a sturdy cabinet with an IP 55 protection, complying with current EC/CEI 44/5 & DIN regulations.
- Pushbutton board complies with IP 65 class protections (UP pushbutton. Emergency pushbutton with mechanical lock).
- The control panel must be installed in a location with above zero temperatures.
- The digital electronic board for microprocessor control allows easy programming of door operation and the automatic closing time. The electronics allows easy interfacing with auxiliary controls such as remote opening and other standard or additional safety devices.
- The panel also includes various overload protections (Mains, motor and controls). The mains supply is 3-phase 220/380 Volt AC – 50 Hz , the inner panel supply is 24 V. DC.

Door opening systems
- The automatic door opening and closing operate by means of remote controls.
- These controls include radio wave manual controls or fully automatic such as floor-embedded magnetic loops, which are activated by the transit of a metallic mass (trucks etc.) only. Persons cannot activate the magnetic loop control..

Safety regulations
-This product complies with norm UNI EN 13241-1 for Industrial Doors.
- All COIL doors are supplied complete with original E.C. certificates.
- The EC Certificate vouches that Product Design and Construction comply with current safety regulation and requirements.