



**MODEL
"CHILLFAST"
Direct Drive
Freezer Door**

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PART 1 - GENERAL

1.1 SECTION INCLUDES:

- .01 Steel channel door frames and reinforcing steel. Section 05500.
- .02 Electrical power supply. Division 16, Electrical.

1.2 DESIGN CRITERIA

- .01 Rolling door to include extruded aluminum guide design with anodized finish.
- .02 Insulated, one piece fabric curtain forming a 10mm (3/8") curtain to provide a thermal coefficient of 3.3 W/(m²*K)

1.3 SAMPLES

- .01 Submit shop drawing in accordance with Section 01340 [Division 1 - General Requirements] - Shop Drawings, Product Data, Samples and Mock-Ups.

1.4 SHOP DRAWINGS

- .01 Submit shop drawing in accordance with Section 01340 [Division 1 - General Requirements] - Shop Drawings, Product Data, Samples and Mock-Ups.
- .02 Indicate each type of door arrangement of hardware, required clearances, electrical characteristics including voltages, size of motors, auxiliary controls and wiring diagrams.
- .03 Indicate assembly details and dimensions of fabrication, required clearances and electrical connections.

PART 1 – GENERAL

1.5 MAINTENANCE DATA

- .01 Provide operation and maintenance data for the Model "CHILLFAST" door and hardware for incorporation into manual specified in Section 01730 [Division 1 - General Requirements] - Operation and Maintenance Manual.

- .02 Maintenance data shall include:
 - a complete description of operation in order of task
 - wiring diagrams showing all electrical connections
 - a list of parts requiring replacement
 - a parts list with illustrations and identifications
 - identification numbers for each door

1.6 QUALITY ASSURANCE

- .01 Installer with Factory-Approved qualifications.

PART 2 - PRODUCTS

2.1 PRODUCTS

- .01 The acceptable freezer door is to be the Model "CHILLFAST" springless design as manufactured by TNR Industrial Doors.

- .02 Substitutions will not be accepted.

2.2 CURTAIN

- .01 A one piece, insulated PVC canvas at 10mm (3/8") thick offers a thermal transmission coefficient of 3.3 W/(m²*K). The combination of PVC and Polyurethane creates a curtain with excellent acoustic and thermal properties as well as providing a flexible curtain to -30°C (-22 °F).

- .02 Standard Color: Blue Exterior

2.3 GUIDES

- .01 The guide system is constructed from a single piece aluminum extrusion, with a full length heater integrated to prevent ice build-up. A PVC strip integrated into one side of the guide, provides excellent wear characteristics and no maintenance to the guide system. Integrated channels within the guide provide for cable routing to reduce installation time and the cost of running external conduit.
 - .02 Guide channel is provided for installation directly onto concrete or steel door framing. Additional customization of door frame is not required. Predrilled holes provide easy attachment to the door frame.
- 2.4 BOTTOM RAIL
- .01 Bottom bar shall extend the full width of the curtain, sufficient to maintain the bottom edge of the curtain parallel to the door threshold at all times. The bottom bar shall include a heater along its full length to prevent any ice build-up between the curtain and the floor at all times.
- 2.5 ROLL-UP DOOR SYSTEM
- .01 The curtain is to be rolled on a barrel of sufficient size to carry the door load with a deflection of not more than 2.5 mm/m (.03" per foot) of opening width. Drive shaft in the barrel is to be constructed C1018 Cold Rolled steel shafts and may vary depending on the opening width of the door
 - .02 Door shall be designed to operate safely without the use of a counterbalance system (springless design).
 - .03 End brackets are constructed of stainless steel with sealed heavy-duty, self-aligning bearings with cast iron housings to support the drive barrel. Drive shaft bearing shall be load-rated at 2960 kg (7000 lbs.) dynamic and 1830 kg (4050 lbs.) static.
 - .04 A stainless steel idler roller is mounted on the end brackets to ensure that the curtain transitions smoothly from the drive barrel to the guide system.
- 2.6 REVERSING EDGE
- .01 Door to be equipped with reversing sensing edge to stop and

reverse door to manufacturer's standard.

2.7 CONSTRUCTION

- .01 Doors: constructed of stainless steel, aluminum and PVC.
- .02 Structural elements: assembled by mechanical fasteners or by welding.

2.8 OPERATION OF DOOR

- .01 Doors shall be equipped for operation by:
 - a) electric operator
 - b) manual hand crank

2.9 MANUAL OPERATION

- .01 Emergency manual hand crank shall be provided to allow manual door operation.

2.10 ELECTRICAL OPERATION

- .01 Electric door operators shall be CSA/UL approved, high RPM, heavy-duty worm gear type c/w pre-wired, number coded control cabinet as required, to manufacturer's standard. Panel enclosure to NEMA-4 rating.
- .02 Motor to be NEMA 4, high-starting torque, direct drive, hoist-type, operating through a worm gear reducer mechanism. Sprockets and chains will not be accepted.
- .03 Motor to be of capacity to open door at maximum speeds of up to 1.94 m/s (75 ips), depending on door size to manufacturer's standard, rated for X-HP power, "X" Voltage, "X"-phase, "X" Hz.
- .04 Operator shall be equipped with digital encoder limits to control the open and close door positions as well as an electro mechanical brake system to stop and hold door in any position to manufacturer's standards.

2.10 ELECTRICAL OPERATION

- .05 Operator shall be equipped with built-in manual emergency operation. Built-in electrical interlock shall prevent motor

operation during use of manual chain hoist.

- .06 Control Panel:
Panel enclosure shall be NEMA-4 and wiring shall be completed by manufacturer and shall be UL listed. Drive system shall be controlled by a circuit board with built in frequency drive. Control panel shall have fused primary power, adjustable closing timer, three (3) push buttons for open, close and stop functions, push/pull mushroom button E-stop and a cycle counter.

PART 3 - EXECUTION

3.1 INSTALLATION

- .01 Install doors in accordance with manufacturer's printed instructions.
- .02 Install electrical motors, controller units, push-button stations and other electrical equipment required for door operation.
- .03 All electrical wiring including power supply, control and interface located near the door to be installed by an electrical contractor (to be put into electrical contractor's specification).
- .04 Upon completion of the door and electrical installation, the door installer must make necessary adjustments to the door to ensure smooth operation.