



ISO 9001 : 2000



Section 08326

THERMOSTOP INC., 3775 Losch, Longueuil, Québec, Canada, J3Y 5T7, Tél. : (450) 678-8666, Fax. : (450) 678-7765

**STANDARD SPECIFICATIONS**  
**BREAKFREE™ 400**  
Section 08326: Cold Storage Doors

**PART 1 – GENERAL**

**1.1 Works by others :**

- Metal fabrication, section 05500
- Electrical power supply, division 16
- Structural work, division 5

**1.2 Construction requirements :**

- Design doors to withstand wind load of 21 psf (velocity of 90.5 miles/hour) with a maximum horizontal deflection of 1/120 of opening width
- Breakfree bottom panel impact test: Missile Impact Test 201 of the Florida (USA) Building Code: No penetration of exterior skin under the impact of a 2” x 4” x 8’ stud at 50’ per second

**1.3 Shop drawing:** Supply shop drawings in accordance with plans and specifications for approval. Contractor shall be responsible for job site dimensions before fabrication and co-ordination with others sub-trades.

**1.4 Maintenance instructions:** Supply maintenance instructions for hardware and/or others components in accordance section 01300.

**1.5 Warranty:** Thermostop doors and hardware carry a warranty of one (1) year against any defect or faulty workmanship. The Breakfree top and intermediate door panels carry a ten (10) year limited warranty against perforation due to rusting, and a five (5) year limited warranty on delamination, under normal operational conditions.

**PART 2 - PRODUCT**

**2.1 Material :**

- Impact resistant thermoplastic composite skins for bottom panel
- Pre-painted galvanised G-60 metal sheet conform to ASTM A653
- Commercial pre-painted aluminium sheet 3105 H254
- Commercial anodised aluminium extrusions 6063 T5
- Insulation: foamed in place polyurethane, 2.56 lbs/ft<sup>3</sup> (41.0 kg/m<sup>3</sup>) minimum density, conform to CGSB 51-GP-21M.

**2.2 Reference product : Breakfree™ 400, model 430 or 448**, as manufactured by **THERMOSTOP INC.**, 3775 Losch boulevard, Longueuil, (Québec), Canada, Tel.: 450-678-8666, Fax: 450-678-7765, [www.thermostop.com](http://www.thermostop.com)

**2.3 Dimensions and clearances :**

<u>Quantity</u>	<u>Dimensions</u> (height x length)	<u>Clearances</u> (floor to first obstruction)
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**2.4 Manufacturing process (top and intermediate sections):** The inner core consists of rigid polyurethane, foamed in place under high pressure between two metal skins. To avoid mouldiness, no wood material is used in the construction of the panel.

**2.5 Size capacity:** Up to 10' W. x 16' H. (3048mm W. x 4877mm H.).

**2.6 Thickness:**  
4" (100mm) thick.

**2.7 Joint and seal:**

- The top and intermediate sections high quality galvanized steel skins are roll-formed into an exclusive tongue-and-groove joint with a true thermal break and a double bubble-shaped weather seal.
- The bottom section is sealed on four sides by an airtight double U-shaped seal.
- The door perimeter is sealed with triple-lip, flexible PVC weather seal, retained in an extra-robust extruded aluminum retainer.

**2.8 Door sections:**

- **Top and intermediate sections:**  
Polyurethane insulated 26ga. steel sections, white finish.
- **Bottom section:**  
Expanded polystyrene (EPS) foam core shielded on both sides by impact-resistant thermoplastic composite skins, 30" or 48" high, white finish. The bottom section and its hardware are designed to break free, outward or inward, upon impact and to be easily reset in place for continuous operation.

**2.9 Continuous reinforcement plate for hinges attachment:** The top and intermediate panels are equipped, on its full length, with 20ga. steel (0.86mm) continuous reinforcement plates, for the solid attachment of hinges.

**2.10 Window or full view panel:**

- Type B: square corner black frame. Double acrylic or clear 1/8" (3mm) - 1/8" (3mm) thermal sealed glass. Standard 24" (610mm) x 12" (305mm).
- Type C: round corner black frame. Double acrylic or clear 1/8" (3mm) - 1/8" (3mm) thermal sealed glass. Standard 24" (610mm) x 12" (305mm).
- Type E: square corner white frame. Clear 1/8" (3mm) - 1/8" (3mm) thermal sealed glass. Standard 24" (610mm) x 12" (305mm).

Optional: tempered glass, tinted glass, lexan.

**2.11 Perimeter weather seal:** Triple-lip, flexible PVC weather seal, retained in an extra robust extruded aluminum retainer.

**2.12 Bottom weather seal:** U-shaped, double flexible PVC weather seal, retained in a heavy duty extruded aluminum retainer, securely fastened to the bottom of the door.

**2.13 End caps:** Sections are equipped with 16ga. (1.42mm) thick galvanized steel end caps.

**2.14 Track configuration options:**

- Full vertical
- Hi-lift of at least 54" (for the 30" high bottom section)
- Hi-lift of at least 72" (for the 48" high bottom section)



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### **PART 3 – HARDWARE**

- Hardware model 80-T (3’’) (See brochure **Hardware – Thermostop Industrial Doors**)

For more information, please consult with Thermostop Inc.

### **PART 4 – ELECTRICAL OPERATOR AND ACCESSORIES**

- 4.1** The door will be equipped to be operated either by :
- manually with a handle and a sash cord
  - or manually with a handle and a pull chain
  - or with a chain hoist, recommended for doors over 10’ (W.) x 12’ (H.)
  - or with an electric operator

- 4.2 Electric operator:** Side mounted “Jackshaft” motor.

- electric motor XTRA-LH or XTRA-H (See brochure **Operators – Thermostop Industrial Doors**)

For electric accessories and their corresponding options such as push button control stations, radio controls, magnetic loop detector, motion detector, safety edge, utility switch, time delay, closing timer etc., please consult brochure **Operators – Thermostop Industrial Doors**.

### **PART 6 - INSTALLATION**

- 6.1** Install doors and hardware in accordance with manufacturer's standards.
- 6.2** Touch-up doors with primer where galvanized finish is damaged during fabrication.
- 6.3** Install electrical motors, controller units, push button stations, relays and other electrical equipment required for door operation.
- 6.4** Lubricate springs and adjust door operating components to ensure smooth opening and closing of doors.
- 6.5** Adjust weatherstripping to form weathertight seal against the elements.