



Refrigerator Manufacturers, Inc.

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Recommended Specifications
for
RMI Econ/O/Cold
Prefabricated Refrigerator/Freezer Rooms

RMI Specification RMISP1

ITEM # \_\_\_\_\_ PRE-FABRICATED REFRIGERATOR/FREEZER
ROOMS REQUIRED.

1.01 WORK INCLUDED:

Provide necessary labor, material, equipment and tools for complete installation of Econ/O/Cold System 34-1 Modular Thermal Barrier Panel room as manufactured by Refrigerator Manufacturers, Inc., or approved equal to conform with drawings and specifications as detailed herein. Unit shall have U.L. listing and shall bear the N.S.F. stamp.

Note: [ ] (Items in Brackets) Indicates Optional. Delete Specification if not required.

Table with 3 columns: Section, Description, Page. Rows include 2.02A Panel Fabrication (4), 2.02B Panel Fascia (5), 2.02C [Floor Depressed] (5), 2.02D [Floor panels Wearing floor (Non NSF)] (6).

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Interior ceiling height shall be ( \_\_\_\_\_ )above finished floor.

**1.02 RELATED WORK IN OTHER SECTIONS**

Concrete work.

[Wearing floor and cove base].

[Exterior grout and cove base].

Mechanical Refrigeration Systems.

Plumbing - Piping, drain lines, floor sinks, drains, underground vent systems.

Electrical services, including installation of light fixtures and connections to lights, alarms, and frame and door heaters.

Penetrations by each trade.

**2.01 MATERIALS**

Insulation - All wall and ceiling panel insulation shall be 4-inches thick foamed-in-place. Urethane Foam Insulation: Rigid HCFC filled, over 90 percent closed cell content, nominal density of 2.2 pounds per cubic foot +0.1 CF -0.

Dimensional Stability - No change from -20 degrees F to +160 degrees F.

Flammability - Less than 25 flame spread and less than 450 smoke density when tested in accordance with ASTM E84 and UBC Section 1712.

Classification - Class 1, 0-25 flame spread in accordance with UBC Std 42-1 (based on UL 723 which is similar to ASTM E84, the "Steiner Tunnel Test"); and Class "A" interior finish in accordance with NFPA 101, Section 6-2, and NFPA 255

Thermal Conductivity - Initial (K-Factor), reference ASTM C -177 shall not exceed 0.12 BTU, and aged K-Factor shall not exceed 0.13 BTU, per hour per square foot

per degree F. per inch thickness as tested in accordance with California Bureau of Home Furnishings and Thermal Insulation standards.

Sheet Aluminum - ASTM B209, Alloy 5052 H34.

Stainless steel sheet - ASTM A167, Type 304, No. 4 finish.

Galvanized steel sheet - ASTM A525, G90.

Silicone sealant - FDA approved sealant; GE 1200 or other approved.

Foil laminated Kraft paper - 0.01 Perm per ASTM E96, Fortifier "Poly Foil Barrier", or other approved.

PVC Membrane - 0.01 perm per ASTM E96 or less.

Asphalt emulsion – ASTM D1187 clay type.

Fiber Glass Reinforced Plastic Class I (FRP-X): USDA accepted, UL 790, smoke 75, fuel 5, class B flame spread less than 50.

## **2.02A PANEL FABRICATION**

Wall and ceiling panels shall be a modular sandwich panel design based on completely frothed-in-place or foamed-in-place construction, without any wood, metal frame, or high-density urethane frame.

Sheet metal facing shall be flanged 1/2 to 3/4 inches around the perimeter of each sheet.

Corner panels and "T" panels shall be matching one-piece construction including 1/2-inch minimum radius at all inside vertical corners.

Panel joints shall be sealed with double-bubble PVC gasket at interior and exterior panel edges, maintaining continuity.

Wall panels shall be set in concealed continuous 18-gauge galvanized steel or extruded aluminum floor track anchored to the sub-floor with drive pins, 24 inches on-center. Wall panels shall be sealed to the building floor with a continuous bead of sealant.

Roof panel joints shall offset or lap wall panel joints. Matching alignment of wall/roof joints will not be accepted. Typical 46" wall panels must have minimum of 2 connectors at wall/ceiling juncture.

Lateral alignment of adjoining panels shall be provided by continuous tongue and groove mating edges.

Panels shall be rigidly coupled by cam-action locks, foamed in place, on a maximum of 4-foot centers. Section lock ports shall be finished with a PVC snap-in button.

Maximum deflection of ceiling panels shall not exceed 1/240 of the span under a loading of 20 pounds per square foot. If the ceiling spans require a support system, the contractor shall submit details and structural calculations demonstrating conformance with specified requirements.

**2.02B PANEL FACIA**

Interior face of ceiling panels shall be clad with [\_\_\_\_\_].

Interior face of wall panels shall be clad with [\_\_\_\_\_].

Exterior exposed face of wall panels shall be clad with [\_\_\_\_\_].

Exterior unexposed face of wall and ceiling panels shall be clad with [\_\_\_\_\_].

**2.02C [FLOOR DEPRESSED]**

Provide for depressed sub-floor membrane and insulation assembly including the following:

Sub floor Membrane: Asphalt emulsion (ASTM D1187 clay type ) shall be applied to clean, smooth and level concrete sub floor. Cover with foil laminated Kraft water-proof paper (0.01 perm as determined by ASTM-E96-80) (Fortifier “Poly Foil Barrier”) joints lapped 6-inches minimum, and flash up sides of recess.

Floor Insulation: After erection of wall panels, floors in refrigerator and freezer shall be insulated with 2 or more layers of 2-inch thick rigid, urethane board form, of the same density and conductivity as panel insulation. Joints shall be staggered.

Vapor Permeable Separation: 15 pound felt, protective slip sheet shall be applied over insulation, flashed up height of cove and joints and lapped 6-inches minimum.

Finished floor of kitchens shall ramp up approximately 1/2 to 3/4 inches to finish floor in prefabricated refrigerator (and freezer). (Floor of pre-fabricated refrigerator shall

ramp up ½ to ¾ inches to connection prefabricated freezer floor). Interior finish floor and cove is not included in this contract.

## **2.02D [FLOOR PANELS WEARING FLOOR (NON NSF)]**

Provide floor panel assembly of similar construction to wall and ceiling panels as specified and as follows:

Sub-floor membrane of 6-mil (minimum) polyvinyl separator sheets laid over cleaned smooth concrete sub floor with joints lapped 6-inches minimum.

Floor panels: 650-psf Load capability without physical damage or denting of panel or insulation. Provide floor panels with [14 ] gauge galvanized steel wearing surface.

Floor panels shall be rigidly coupled with cam locks on a maximum of 4'-0" centers. Fill joints with silicone sealant [3/16--inch aluminum tread plates applied to floor panels (for cart traffic) secured with full bed adhesive and stainless steel sheet metal screws. Fill 1/8-inch space between plates with silicone sealant. Provide matching cove base with ½ inch radius.]

[Provide interior ramps with tread plates where shown on drawings]

[Provide aluminum cove base around outside perimeter of cold storage rooms; 0.080" X 5" with ½" radius. Base to be sealed to finish floor with silicone sealant.

## **2.02Da [NSF FLOOR PANELS]**

Provide floor panel assembly of similar construction to wall and ceiling panels as specified and as follows:

Sub floor membrane of 6-mil (minimum) polyvinyl separator sheets laid over cleaned smooth concrete sub floor with joints lapped 6 inches minimum.

Floor panels: 650-psf Load capability without physical damage or denting of panel or insulation. Provide floor panels with integral NSF coved base and wearing floor of [100 aluminum tread plate] [16 G stainless steel ] [and backing of ¾" Marine grade plywood]

Floor panels rigidly coupled with cam locks at maximum of 4'0" centers. All gasketing to be foamed-in-place and not glued or stapled.

[Provide interior ramp(s) where shown on drawings]

## **2.02E FLOORLESS (ON-GRADE COOLER ROOMS)**

Provide for non-insulated floorless assembly on level smooth, broom clean wearing floor.

Wall panels are secured to floor by grooving over concealed galvanized steel floor track, mechanically fastened to floor.

Provide for caulked joint between floor and wall panel using silicone sealant on both interior and exterior side.

[5--inch top-set cove base matching adjacent room spaces on interior and outer side.]

## **2.03A REFRIGERATOR AND FREEZER DOORS (DEADBOLT):**

Door width in clear (WIC) and height in clear (HIC) opening size shall be 42 inches wide by 7 feet high, or sized as shown on drawing.

Door shall be insulated with a 3-inches thick core of the same insulating material specified for the wall panels.

Front, back and edges of doors shall be clad with [18 gauge #304 stainless steel]. Sheet metal joints of doors and doorframes shall be heliarc welded, ground smooth and polished.

Door casing shall be raised 3/4-inch and 4-inches wide, at sides and head, clad with 14 stainless steel.

The threshold shall be removable 1/8-inch thick stainless steel plate.

The ambient side of door perimeter and frame, including the threshold shall each be provided with 120 volt, 500 watt, electric resistance heating elements, including thermostatic controls, factory wired to a "GS" splice box located above the door at interior face of the wall panel.

[Provide 15 inch by 20 inch, tempered hermetically sealed triple panel glass vision panel in prefabricated refrigerator and freezer door. Each door vision panel shall be furnished with electrically conducting, transparent tin coating on interior face of ambient panel connected to main door circuit]

Each door shall have [Interior)][(Exterior)] kick plates of [16 gauge stainless steel, type 304 #4 finish] [3/16-inch aluminum tread plate] [fiberglass reinforced plastic (FRP-X)] and shall be 3'-6" high and full width of door.

Three hinges, each door, shall be nylon cam stainless steel pin, zinc die cast, polished chrome finish.

Lock shall be mortise deadlock, including inside release, with bronze or stainless steel components. Exposed surfaces . chrome plated. Cylinders shall be keyed differently and master keyed.

Door-pull shall be high-pressure die cast zinc highly polished chrome plated.

Hydraulic rack and pinion door closer shall have automatic hold open. Finish shall be three coat aluminum with lacquer final coat.

Gasket shall be extruded polyvinyl chloride with corners vulcanized and continuous magnetic core at side and head of doorjamb.

Sill wiper shall be extruded neoprene secured by removable stainless steel retainer strip and stainless steel fasteners.

Hardware shall be mounted with reinforced steel tapping plates and stainless steel security machine screws.

Interior door-cart bumper bar shall be 1/4-inch X 2-inch aluminum channel, 3'-0" A.F.F.

Interior door jamb guards shall be 3/16-inch aluminum tread plate 48-inch high.

[All door openings to ambient temperature shall have a [stainless steel locking bar with provision for padlock (by others)].

## **2.03B ECON/O/COLD MARK XV MANUAL HORIZONTAL SLIDING DOOR**

Door shall be Econ/O/Cold Model Mark XV Cooler and Freezer Manual Horizontal Sliding Door with 4-inch thick Class 1 foamed-in-place urethane foam insulation. Door casings shall be clad with 18-gauge stainless steel, Type 304, #4. Front, back and edges of door shall be faced with metal corner door pans of 20-gauge stainless steel, type 304, #4, heliarc welded, ground, and polished. The ambient side of freezer door perimeter shall be provided with dual, 120-volt electric resistance heating elements, including thermostatic control, factory wired to a splice box located at the side of the door. Gaskets shall be black neoprene bulb type that remains pliable to -40 degrees Fahrenheit. Furnish with black PVC retainer molding. Exterior level handle surface mounted to opening side of door. Interior door pull shall be recessed flush PVC pull. 3/16-inch aluminum tread plated jamb angle guard at sides and head. Hardware and track shall have corrosion protective coating.



Cooler vision panel shall be 15-inch x 20-inch hermetically sealed, three pane glass unit, with stainless steel frame. Freezer vision panel shall be 15-inch x 20-inch hermetically sealed, three panel glass unit, with electrically conducting transparent tin coating on interior face of ambient pane, connected to door heater circuit, and stainless steel frame. There shall be a padlocking provision on interior of exterior side of door with safety release on opposite side. Interior and /or exterior kick plate, 3'-0" high x full width of door of 1/8-inch aluminum diamond tread plate.

### **2.03 Ba ELECTRIC HORIZONTAL SLIDING DOOR.**

All the doors shall have 5-inch foamed-in-place polyurethane insulation, a hasp-type locking device with inside safety release and power cut-off. Door panel to be equipped with manual chain disconnect with front and back release.

Metal cladding: Door panels. Casings and headers to be complete metal clad with type 304 stainless steel 22-gauge, #4 finish, masked for protection.

Electric Operator to be E.Z. Slide Chain drive operator. Solid state control system including soft starting. Time delay close all in a NEMA 4-X control cabinet mounted on header. Power 120 volt, Single Phase, 60 cycle. Travel shall be controlled by a separate limit switch powered by the gear box.

Safety reversing device shall be Electronic Reversing Device located in the control panel. The lower 48-inches of each single slide door panel shall have a 16-gauge stainless steel nose guard on the leading edge.

The track system shall be 3-1/2-inch x 2-1/2-inch x 14-inch steel angle with 5/8-inch round welded in place. The entire assembly shall be hot dip galvanized. A track system shall be included for down and in seal. Carrier assembly shall be adjustable to four positions and include anti-derail wheels. Carrier shall be 10-gauge C-channel Galvanized Steel with heavy-duty reinforcement at the wheels. Carrier wheels shall be solid steel with precision bearings.

Gaskets: T-10A Bulb seal gaskets are to be attached to the casing at the sides and head. Door sill gaskets shall be 1-1/2-inch double sill seals. All gaskets shall be neoprene.

Each door shall be complete with a face pull handle and flush inside pull. Two (2) heavy duty adjustable floor guides shall be provided.

All door panels shall be equipped with an electric defrost system at all four sides and shall be U.L. listed.

[1/8-inch Aluminum Tread Platte on two sides of the door panel 48-inch high shall be provided.] [16-inch x 18-inch Quad – 4 pane heated view windows. One per door panel shall be provided.]

[The system shall include a Pedestrian Control Button on door for 30" opening with 15-second time delay close.]

[Door Control Stations: Two pull cords stations or two push button wall mounted stations shall be furnished. Control stations inside freezer room shall have a 10 watt heater.]

[NOTE. Some doors require both pull cords and push buttons. Refer to pull switch-mounting detail for switch and electric hook-up. This detail will also apply to wall push button controls.]

### **2.03C DOORS AND FINISH HARDWARE (LATCH)**

Door width in clear (WIC) and height in clear (HIC) shall be 3'-0" wide by 7'-0" high, or sized as shown on drawing.

Door shall be insulated with a 3-inch thick core of the same insulating material specified for the wall panels. The ambient side of the freezer door jamb, including the threshold shall be provided with 120 Volt, 500 Watt, heating element, including thermostat control, factory wired to a "GS" splice box located above the door at the interior face of the wall panel.

Front back and edges of doors shall be clad with [\_\_\_\_\_]. Sheet metal joints of doors and doorframes shall be heliarc welded, ground smooth and polished.

The threshold shall be removable 1/8-inch thick stainless steel plate.

[Provide 15 inch by 20 inch, tempered hermetically sealed triple pane glass vision panel in prefabricated refrigerator and freezer door(s). Freezer door vision panel shall be furnished with electrically conducting, transparent tin coating on interior face of ambient pane connected to main door circuit.]

[Each door shall have (Interior) (Exterior) kickplate of [ 16-gauge stainless steel ] [3/16-inch aluminum tread plate] [fiber glass reinforced plastic (FRP-X)].

Three hinges, each door, shall be nylon cam stainless steel pin, zinc die cast, polished chrome finish.

Door latch shall be a Kason #58CH with cylinder lock with heavy spring, provision for padlock (padlock by others) and style #2000 surface mounted safety inside release handle. Gasket shall be closed cell neoprene.

Sill wiper shall be extruded neoprene secured by removable stainless steel retainer strip and stainless steel fastener.

Hardware shall be mounted with reinforced steel tapping plates and stainless steel machine screws. Interior door jamb guards of 1/8-inch aluminum tread plate.

## **2.03D POWER (SINGLE LEAF) (BI-PART) SLIDING DOORS.**

Electrically operated sliding doors shall be sized for a clear opening of [\_\_\_\_\_] wide by [\_\_\_\_\_] high. Doors shall be fabricated of [\_\_\_\_\_] laminated to 4-inch thick foamed in place polyurethane insulation. Doors to be complete with mounting hardware, and reinforcing steel taping plates. [Kickplates interior and exterior] of [3/16-inch x 48-inch high aluminum tread plate] or [16-gauge stainless steel, type #304, #4 finish]. Provision for padlocking. Provide 3/16-inch aluminum tread plate ramp guard full perimeter. [Door shall have a triple-pane view-port 12-inch x 14-inch]. Edey or Jamison shall manufacture the door.

## **2.04 LIGHT FIXTURES AND SWITCHES**

Quantity of light fixtures shall be as indicated on the Food Service Equipment Electrical Plan.

[Fixtures shall be Luminaire incandescent light fixture #LVP1212, or equal, cast aluminum, fully enclosed and gasketed for vapor tight, weather tight operation, with shatterproof diffuser and furnished with two 100-watt lamps and one 10-watt lamp.]

Provide vapor tight cast junction box and galvanized steel nipple of proper length to terminate at exterior of roof panel.

Factory install and wire interior and exterior companion 3-way and / or 4-way AC press-switches, where indicated, mounted in "FS" boxes adjacent to latch side of door openings.

Switch covers shall be neoprene, weatherproof press-switch plates or equal.

Provide pilot light with unbreakable red plastic lens embedded in neoprene plate.

1. Interior red light - constant burning
2. Exterior red light - indicating

Rigid, zinc coated, steel conduit and wiring shall be run within insulated wall panels. Conduit shall be terminated in vapor tight splice boxes mounted on the inside wall of the compartment near the ceiling.

Only conduit and wiring within wall panels, including boxes, light fixtures, switches and cover plates, shall be furnished as part of this section.

## 2.05 [DIAL THERMOMETERS]

Refrigerator and freezer shall each be furnished with one [\_\_\_\_\_] inch diameter, vapor actuated, remote bulb, dial thermometer on ambient face of refrigerator preferably located above or adjacent to door facing work area. Bulb shall be mounted in return air stream.

## 2.06 [DIGITAL THERMOMETER AND ALARM]

Each refrigerated compartment shall be monitored by a Modularm Model 75 temperature alarm (flush mount enclosure). The alarm shall provide a constant digital readout of monitored temperature and shall provide field adjustable high and low alarm temperature set points and field adjustable time delay to override normal rises in compartment temperature. The alarm shall provide two visual status indicators, a green safe light and a red alarm light. Under normal conditions, the green light shall be on and the red light off. When abnormal temperatures occur, the green light shall extinguish and the red light shall begin to blink, indicating that an abnormal temperature has been reached, and that the time delay has been activated. When a temperature remains abnormal beyond the allotted time delay, the red light shall come on constantly. Simultaneously, the horn shall sound to provide audible annunciation and the self-contained relay shall be energized to provide dry contact outputs for remote notification. The unit shall be reset manually with the alarm control switch. Fail-safe circuitry shall prevent accidental disabling of the unit. The alarm shall be enclosed in a drawn aluminum enclosure with a stainless steel faceplate.

[Interior compartment units must be mounted at the nearest ambient entrance].

### 2.06A [MULTIPOINT ALARM]

A Modularm model 96-number of compartments to be monitored) shall be provided to monitor ( number of compartments to be monitored) different compartments from a central location. The location of the alarm panel shall be specified by the consultant. The alarm shall provide digital readout on demand of each monitored temperature, and shall provide independent field adjustable time delays to override normal rises in compartment temperature for each monitored point. Visual annunciation shall consist of a red indicator light for each monitored point, which shall be off when the temperature is abnormal to indicate that the time delay has been activated, and on constantly when an alarm occurs. Simultaneously when an alarm occurs the horn shall sound, and the internal relay shall be energized to provide dry contact outputs for remote notification. Resetting shall be done manually. Temperature probes shall be provided with the unit, and all probe wiring

shall be low voltage. The unit shall be housed in a completely stainless steel enclosure.

#### **2.06B [DIGITAL THERMOMETER AND ALARM]**

Each refrigerator compartment shall be monitored by a digital electronic high temperature alarm (flush mount enclosure); alarm shall provide constant digital readout of monitored temperature and when temperature rises to the setpoint temperature, display flashed and audible alarm sounds, NCC Model TNC-TM-100-A10.

#### **2.07 [FREEZER DOOR FAN SWITCH]**

Each freezer door opening to ambient condition shall be equipped with a door operated switch designed to shut off the freezer coil fan when the door is open. The switch shall be built into door head and factory wired to a splice box. Electrical connections between splice box and fan motor(s) by jobsite electrician shall be as specified under the electrical section.

#### **2.08 PRESSURE RELIEF VENT**

Factory mount in head section, electrically heated vacuum pressure relief vent above each freezer door. (If stainless steel exterior panel, provide stainless steel vent cover).

#### **2.09 COIL SUPPORTS**

Furnish to the mechanical refrigeration contractor sufficient quantity of 1/2 inch diameter nylon threaded rods with stainless steel nuts and washers to accommodate support of refrigeration coils.

#### **2.10 UTILITY PENETRATIONS**

Each trade to provide penetrations at refrigerator and freezer wall and ceiling panels to accommodate electrical, refrigeration lines and drain lines.

## **2.11 ESCUTCHEON PLATES**

Furnish sufficient quantity of 5-inch diameter stainless steel escutcheon plates for each trade to dress off utility penetrations.

Each trade shall be responsible for cutting holes in blanks and sealing of respective penetrations.

## **2.12 [FIREMANS AXE]**

Each cold storage room shall include one regulation firearms axe, wall mounted with stainless steel bracket near door.

## **2.13 [PERSONNEL ALARM SYSTEMS]**

One alarm system shall be provided for each cold storage room.

Each system shall consist of:

- Bell, 4" (minimum 77 decibels @ 10') 120V/60
- Interior mounted indicating lamp each room.
- Lamp and switch factory wired, terminated in wall panel splice box.

Bell(s) shall be mounted in remote locations as indicated on electrical drawings by Electrical Section. Interconnecting conductors and conduit shall be furnished and installed by Electrical Section.

## **2.14A FINISH TRIM**

Tolerance gaps between face of cold room walls and building walls/ceiling shall be finished with matching sheet metal angles furnished and installed by the Contractor.

## **2.14B ENCLOSURE PANELS**

Space between suspended ceiling and top of refrigerator shall be enclosed with matching sheet metal panels designed for easy removal to facilitate access to crawl space (dimensions permitting) as furnished by the Refrigerator Contractor. Omit closure panels when structural ceiling is exposed. Inspect each aluminum tread plate panel for sharp edges or ....burrs. Remove or file off any or all protuberances.

### **2.15A [WALL PROTECTION (Stainless steel) (Aluminum)]**

Rub rails: Furnished and installed as indicated on drawings: one or two rows high at elevations of and above finished floor to be determined by the Specifier.

Rub rails continuous length of 18 gauge stainless steel or aluminum "V" shaped hat sections secured to wall panel with two faced tape and stainless steel sheet metal screws, 18"O.C.

Exposed ends of hat section shall be level cut, capped, welded, ground and polished.

### **2.15C [WAINSCOT OF ALUMINUM TREADPLATE]**

Jobsite apply 42" high, [1/8"] [316"] thick aluminum tread plate, wainscot to exposed exterior walls of cold rooms with Henry's #117 (or equal) panel adhesive and mechanically fastened with stainless steel truss head Phillips #8 X3/4" screws 24" centers top and bottom

Including:

Exposed corners: 6"X6" matching wainscot angles.

Internal corners: 6"X6" radiused interior coved.

Base: Hold wainscot 1/8" wide gap at top of quarry tile base. Grout gap with aluminum color silicone.

Butting Edge: Hold 1/8" wainscot panel at abutting edges. Grout gap with aluminum color silicone.

Inspect each aluminum tread plate panel for sharp edges or burrs. Remove or file off any or all protuberances.'

### **2.15D [CORNER GUARDS]**

Provide 4-inch x 4-inch – 16-gauge stainless steel 4'-0" high at each exposed corner with mechanical fasteners and two-faced adhesive tape.

## **2.15E [WALL VENEER]**

Exposed exterior face of walls to be clad with Masonite, Ornyte or Kemlite, fire rated glass reinforced plastic panels, 0.09-inch thick white embossed finish. F.R.P.X. to be adhered to wall panel with Dow #11 adhesive. Joints to be finished with matching PVC Division bars, inside corners to be sealed with white G.E. or equal silicone sealant formed into a coved corner. Outside corners to be fitted with full height 2-inch x 2-inch, 16-gauge stainless steel corner guards.

## **2.17A [REACH-IN SWING DOORS]**

Provide (1) reach-in glass door(s), swing type, size (23-inch W x 67-inch H) with sill at (12-inch) above the finished floor, magnetic gasket, (dual) pane hermetically sealed tempered glass (for freezer applications, provide triple pane heated glass). Door shall be self-closing with warming cables for each door and frame. Provide options [lights] [locks] [shelves].

## **2.19 ROOF CAP FOR OUTDOOR INSTALLATIONS**

Provide Duro-Last Roofing Inc., 40-mil single-ply membrane, custom sized, roofing system fabricated of weft inserted low-shrink, anti-wilting polyester fabric with a thermoplastic coating.

## **2.20 [ID LABEL]**

For each compartment, provide at the ambient entrance adjacent to temperature indicator, a 1/16-inch thick self-adhesive black plastic label with 5/8-inch high white recessed letters.

## **2.21 [STRIP CURTAINS]**

For Walk-in doors: All strip curtains shall be of the NSF Certified Kason Easimount System Series # 401SA606 with single-piece extrusion channel. Strips shall be 6-inch wide by 0.060-inch thick material and shall be rated to -20 degrees F. Curtains shall have all strips designed for a 50% over-lap. The overall dimensions of each curtain shall have an approximate minimum of 2-inch overlap at each side of the door and should hang within 1-inch of the floor.

For large loading and warehouse doors: All strip curtains shall be of the Kason extra heavy duty Maximount System, Series # 401MM808 . Strips shall be 8-inch wide by 0.080-inch thickness and rated to -20 degrees F, unless forklift traffic is used in which case the strips shall 12-inch wide ribbed material by 0.120-inch thick



and rated –20 degrees F. Series # 401 MM120. Curtains shall have all strips designed for 50% over-lap. The overall dimensions of the curtain shall have an approximate 3-inch minimum over-lap, 2-inches at each side of the door.

## **2.22 [SEISMIC CALCULATIONS AND ANCHORAGE]**

Submittal drawings must be wet stamped by California Certified Structural Engineer including structural calculations and anchorage details.