

Architectural Specifications for Shandon Walk-In Refrigerators



Shandon walk-in refrigerators are designed and constructed to meet the customer's specification, no matter how large. This unit is made to accommodate approximately 400 bodies.

1. General

Walk-in coolers provided under this portion of the specifications are available in frameless or soft-nosed panel construction. The units are prefabricated of modular design and construction. They shall be designed to allow convenient and accurate field assembly and future enlargement by the addition of panels.

2. Panel Fabrication

Standard wall, ceiling and floor panels shall be 11.5", 23", 34.5", and 46" (29.2, 58.4, 87.6, and 116.8 cm) in width and shall be interchangeable with like panels. Custom panels are used to achieve the required overall cooler size. Frameless corner panels shall be 90° angles with actual 12" (30.5 cm) exterior horizontal measurements.

Edges of frameless panels shall be foamed-in-place "tongue and groove" with camlock assemblies foamed-in-place at time of fabrication.

Wall, ceiling, and floor reinforcement for supporting shelving or racking systems are available. Custom 3.5" (8.9 cm) wood-frame panels are available. Please specify on quote request.

3. Floor Construction (select one)

a. With Floor: Panels shall be fabricated similar to other panels, designed to withstand uniformly distributed loads of 700 lbs. per square foot. If additional load capacity is needed, specify a reinforced floor. Reinforced floors are fabricated with a 0.6" (16 mm) underlayment of plywood. Floor may/may not be recessed. It may/may not be covered by tile and grout or concrete wearing floor.

b. Floorless with screeds: Vinyl screeds shall form the base for wall sections. Screeds shall be designed to prevent thermal conduction and shall be coved on the interior and exterior for easy cleaning.

4. Insulation

Insulation shall have a 97% closed cell structure and average in-place density of 2.2 lbs. per cubic foot. Overall thickness shall be 3.5" (8.9 cm) for framed panels and 4" (10.2 cm) for frameless panels.

Fire hazard classification is according to ASTM E-84 and is certified with Underwriters Laboratories (UL) label. Custom 5.5" (14.0 cm) thick panels are also available.

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ISO 9001 Registered Company

5. Metal Finishes

- a. Standard finishes for walls, ceilings and floors are as follows:**
 Exterior walls except front wall: 26 gauge stucco embossed galvalume.
 Front wall: 22 gauge, type 304 stainless steel with a #3 finish.
 Interior walls & ceiling: 26 gauge stucco embossed galvalume
 Interior floor: 0.1" (2.5 cm) smooth aluminum.
- b. Options for custom materials for exterior walls:** (select one)
 0.032 stucco embossed aluminum 20 gauge stainless steel
- c. Options for custom materials for interior walls and ceilings:**
 (select one)
 0.032 stucco embossed aluminum 20 gauge stainless steel
- d. Options for custom materials for interior floor:** (select one)
 18 gauge stainless steel 16 gauge stainless steel
Note: Limited painted finishes are available. Call for details.

6. Panel Locking Assemblies

Assembly of walk-ins shall be accomplished by camlocks which are activated by a hex wrench provided by the manufacturer. Access ports shall be on interior to allow assembly of walk-in from the inside and shall be covered by snap caps.

7. Panel Gaskets

On frameless panels, vinyl gaskets are foamed-in-place on the interior and exterior edges of the tongue rails. On framed panels, closed cell foam gaskets are applied to the interior and exterior edges of the tongue rails. Gaskets are impervious to stains, greases, oil, and mildew.

8. Entrance Door and Door Frame

Standard door is 36" width x 78" height (91.4 x 198.1 cm). It is a swing out type door. When outside the unit and viewing the front face of the unit, the hinges are on the right hand side of the door. Swing in type doors, left side hinges, and sliding doors are available. Specify on quote request. Also, many optional size doors are available upon request.

The door shall be flush type, finished in and out to match the wall in which it is located, and equipped with the following:

- a.** Both sides and the top of door are equipped with a magnetic gasket to form an airtight seal. The bottom edge of the door is equipped with an adjustable sweep gasket. Door hinges are polished chrome, strap type with cam-lift hinges. Door latch is polished chrome with provisions for locking and a safety release to prevent entrapment of personnel within the box.
- b.** Door jamb and door perimeter shall be made of fiberglass reinforced or ABS plastic. An isolated, low wattage heater wire covered by magnetically attracting stainless steel shall be fitted onto this jamb. This shall provide perfect sealing of magnetic gasket and prevent frost and condensation buildup.
- c.** Each entrance door section shall be provided with an incandescent type vapor proof light, switch with pilot light and interconnecting wiring harness. Concealed wiring is standard on each entrance door section (see paragraph 13 for optional switches).
- d.** When required, a threshold shall be provided with the door section. Heater wire shall continue beneath the threshold.
- e.** A 2.5" (6.4 cm) dial thermometer shall be included with each door section to indicate inside temperature.
- f.** Manual and electric sliding doors are also available instead of swing-type doors.

9. Vapor Proof Lights

One pre-installed vapor proof light will be provided on the inside of each door section. Additional lights may be specified as options. Additional lights are shipped loose to be field installed.

10. Ramps (select one)

- a. Interior Ramp:** To eliminate a step up into the walk-in for limited, light duty roll-in traffic, an interior ramp shall be supplied. Ramp shall have non-skid strips and not interfere with inside storage area. It shall have a heated threshold. Ramp will be as wide as finished door opening with a depth of 20" (custom depths available upon request).
- b. Exterior Ramp:** For use with standard floor application and heavy usage roll-in traffic, an exterior ramp shall be supplied. It shall provide flush entrance, have non-skid strips and fasten to front of the walk-in floor. Ramp will be as wide as door and 36" (91.4 cm) deep (custom depths available upon request).

11. Installation Instructions

A complete set of installation instructions shall be included with the walk-in. These instructions shall cover the erection and assembly of the walk-in and information on the refrigeration system. A floor plan print shall be included.

12. Agency Approvals

All frameless walk-ins shall be fabricated to comply with National Sanitation Foundation (NSF) Standard No. 7. The NSF label shall be affixed to the interior door pan. Interior corners and floor shall be covered to meet NSF specifications. The panels are UL Listed with a fire hazard classification according to ASTM E-84. They are certified with UL label.

Options

13. Switches

- a. 3-Way Switch:** 3-way toggle switches with pilot lights are furnished as required to allow interior walk-in lights to be controlled from two entrances.
- b. Heavy Duty Cover:** Optional heavy duty metal switch cover with lever handle is available.

14. Electronic Temperature Controller

Digital readout, high / low audio / visual alarms, and contacts for remote alarm connection.

15. Viewing Window

To provide vision into the walk-in room, a 14" x 14" (35.6 x 35.6 cm) triple pane window shall be used with a heated frame as standard. For freezer applications or humid conditions, heated frame and heated glass shall be used. Window is neatly trimmed and designed for replacement in the field. Windows measuring 14" x 24" (35.6 x 61.0 cm) are also available.

16. Audio/Visual Alarm

Furnish, as required, digital alarm thermometer with LED display, a remote electronic sensor and dual adjustable alarm set points. There shall be an audible alarm and a flashing light when the walk-in temperature goes beyond acceptable operating limits. It shall have a reset button to silence the audible alarm. The alarm shall automatically revert to normal mode once temperature conditions are satisfied.

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17. Locking Bar

Door shall be provided with a locking bar to prevent opening of the door even if hinges and latch are removed. Locking bars shall be provided with inside safety release. (Padlocks are by others.)

18. Kickplate

Provide 16 gauge stainless steel or 0.125" (3.2 mm) aluminum diamond treadplate kickplate. Kickplate to be positioned on interior, exterior, or both interior and exterior of all entrance doors. Kickplate dimensions are to be 18", 24", 36" or 48" high (45.7, 61.0, 91.4, 121.9 cm) by the width of the door.

19. Treadplate Flooring

Aluminum diamond treadplate 0.125", 0.1875", or 0.25" (0.3, 0.5, 0.6 cm) thick (select one) shall be provided. All necessary fasteners, sealants and instructions to be provided.

20. Outdoor Door Package (required when door section is located outdoors)

A heavy gauge door hood shall be provided to keep rain and/or snow out of door gasket. It is field installed and includes rain hood, heated air vent cover for freezer, and weatherproof light, switch and thermometer.

21. Additional Vapor-Proof Light Fixtures

Provide, as required, additional ceiling mounted, vapor proof lights. One light, the light that is a standard feature on the wall next to the door, is factory installed. All other light fixtures are shipped loose to be field installed.

22. Fluorescent Lights

Fluorescent light fixtures shall be provided as shown on drawing. Low temperature fixtures are available.

23. Wall Protectors

- a. Hat shaped bumper rail:** 1" deep x 5" high (2.5 x 12.7 cm) shall be furnished where shown. It shall be fabricated of 16 gauge stainless steel or 0.125" (0.3 cm) aluminum (select one).

24. Shelving and Racking Systems

Shelving and racking systems information is available upon request from Thermo Electron Corporation, Anatomical Pathology.

25. Trim Strips

Furnish trim strips between walk-in and building walls and ceiling where shown. Trim strips are constructed and finished of same material as exterior of walk-in.

26. Corner Guard

Provide 16 gauge 6" x 6" (15.2 x 15.2 cm) stainless steel corner guards x 60" (152.4 cm) high on exposed exterior corner of walk-in.

27. Roof Caps

For walk-ins installed outdoors, a rubber membrane roof cap shall be used to provide a moisture tight seal. On rooms up to 19' x 99' (548.6 x 3,017.5 cm), it is a one piece cap without seams to ensure there are no leaks. Required trim and fasteners will be furnished.

28. Refrigeration Equipment

Thermo Electron Corporation, Anatomical Pathology will assist the customer in selecting the refrigeration system that best meets their needs.

- a. Condensing Unit:** Unit shall be hermetic or semi-hermetic type (select one) factory assembled and UL listed or recognized. Condenser shall be air cooled or water cooled (select one). Components to be mounted on a heavy gauge steel base.

- b. Evaporator:** Unit shall be sized to balance with the condensing unit. It shall be a copper tube, aluminum fin design. Fan motors and coil are to be housed in a heavy gauge aluminum enclosure. Evaporator will have drain pan with suitable drain pipe fitting. Cooler evaporators are to be air defrost. Freezer evaporators shall have an automatic electric defrost system including heaters, time clock, fan delay control and heated drain pan. Defrost shall be time initiated and temperature terminated with built-in fail safe controls.

29. Refrigeration Mounting Systems

- a. Ceiling Mounted:** Self-contained system that is supplied completely wired, charged and tested. The system shall consist of a condensing unit assembly and an evaporator assembly with all necessary controls installed. Supplying electrical power to a junction box is all that is necessary in the field.

- b. Wall Mounted:** Self contained system that is supplied completely wired, charged and tested. The system shall consist of a condensing unit assembly and an evaporator assembly with all necessary controls installed. Supplying electrical power to a junction box is all that is necessary in the field.

- c. Pre-Assembled Remote:** Pre-assembled remote refrigeration system shall consist of a condensing unit assembly with controls mounted and leak tested, and an evaporator assembly with expansion valve and solenoid valve mounted and tested. On low temperature systems the time clock shall be shipped loose and is to be field located and wired. Refrigerant lines between the condensing unit assembly and evaporator assembly shall be field supplied and installed. The required type and amount of refrigerant to be field supplied.

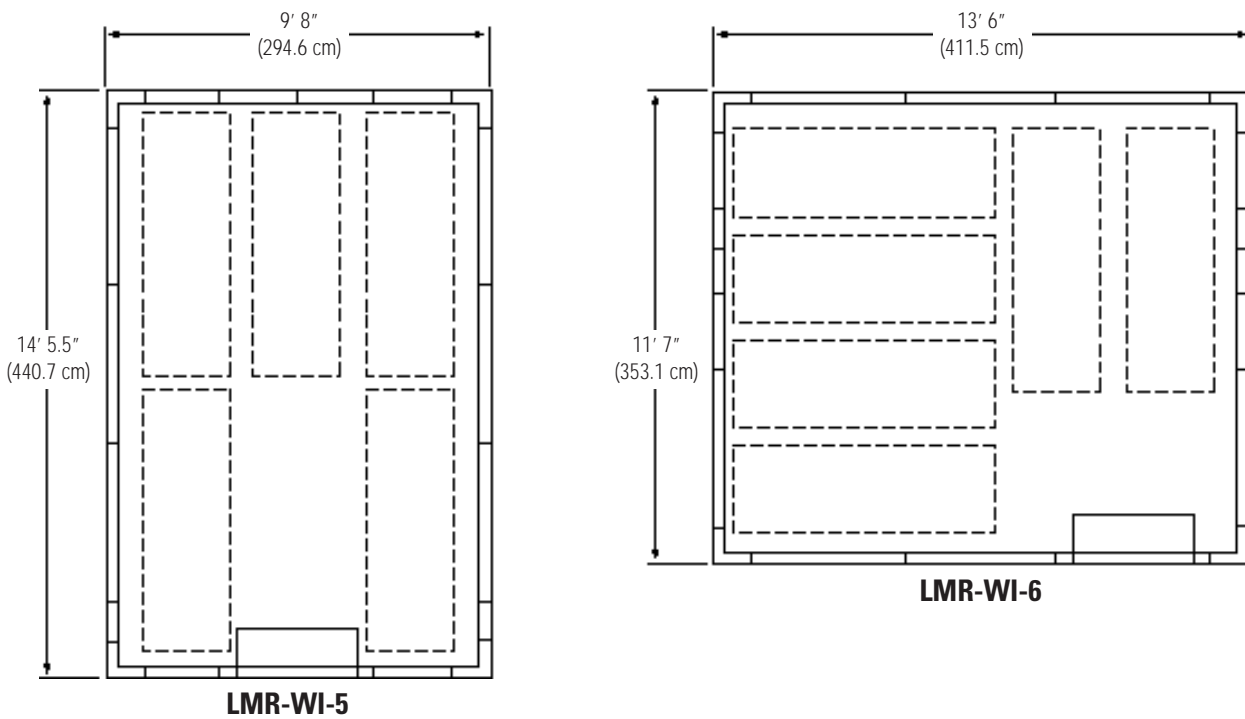
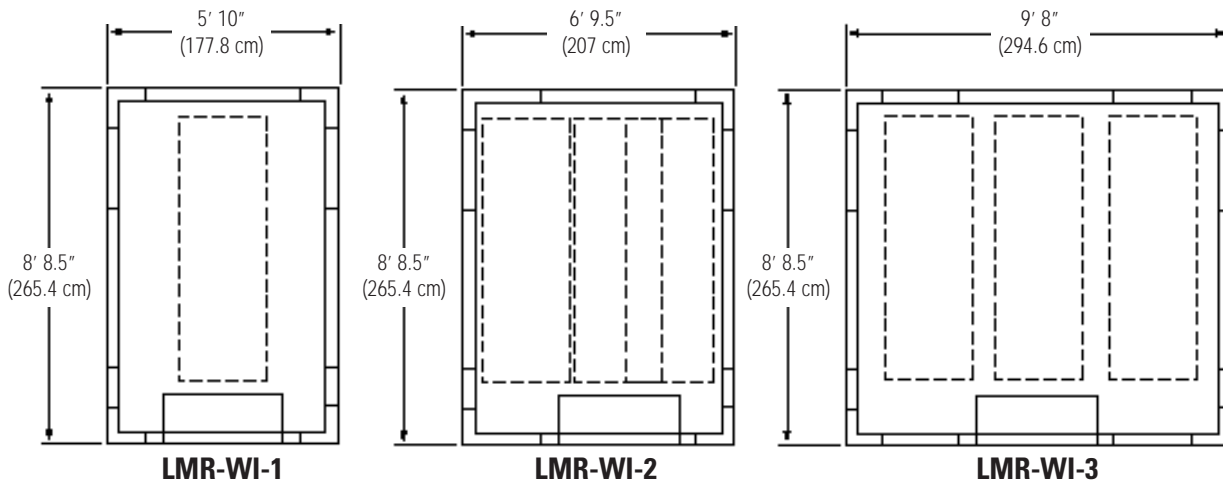
30. Refrigeration Accessories

- a. Outdoor Package:** Required for all air cooled condensing units installed in an area where the temperature falls below 50° F (10° C). The outdoor package includes a crankcase heater, a head pressure control and a weatherproof housing.

- b. Condensing Unit Rack:** Racks shall be constructed of heavy gauge aluminum angle that is welded together. Racks are sized to accommodate condensing unit(s) specified.



Shandon Standard Walk-in Refrigerators



Description	Order Number
Shandon LMR-WI-1	1390
Shandon LMR-WI-2	2390
Shandon LMR-WI-3	3390
Shandon LMR-WI-5	5390
Shandon LMR-WI-6	6390

Custom Units available upon request.

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