

## WALK-IN SPECIFICATIONS

### 1. GENERAL

Walk-in coolers and freezers shall be built with a modular panel system design for accurate and rapid field assembly. Construction shall be approved by National Sanitation Foundation Standard No. 7 and shall bear the NSF Listed Seal.

### 2. PANEL CONSTRUCTION

**2.1** Panel shall have 4-inch thick extruded polystyrene foam (XPS) core insulation, bonded under strict controlled parameters to metal skins providing a structural panel.

**2.2** All panels shall be assembled placing the tongue into the groove of the (XPS) core insulation of the adjacent panel.

**2.3** Walk-in wall, ceiling, door and floor panels shall be connected to each other using non-corrosive thermoplastic cam-action locking panel fasteners, using a pull tension force of 600 pounds. Locking panel fasteners are operated from the interior using a hexagonal wrench. All fastener holes are sealed with a vinyl cap plug. Hexagonal wrench shall be supplied inside the hardware box.

**2.4** Panel joints shall have a NSF compression gasket applied to all panels on the interior and exterior edges of the tongue, providing an airtight seal.

### 3. INSULATION

**3.1** Insulation shall be 4 inches thick, UL Class 1 rigid extruded polystyrene (XPS) foam, with a minimum density of 1.5 PCF (pounds per cubic foot). It shall be closed cell, void-free and high performance, with high resistance to water absorption (Hydrophobic, per ASTM C272). XPS insulation shall have a 50 year R-value warranty.

**3.2** Insulation R-value is measured per the requirements in U.S. CFR Title 10 Chapter 11 Subchapter D Part 431, using the ASTM C518 method for Walk-in Coolers and Freezers.

**3.3** XPS Panel Core 20 (AK-XPS4) and XPS ULTRA SL (AK-XPS4 ULTRA) rigid extruded polystyrene foam insulations shall be Federal Energy Independence & Security Act (EISA) compliant effective January 1, 2009, and Department of Energy (DOE) Compliance Certified effective July 1, 2017.

**3.4** AK-XPS4 for cooler wall, ceiling, door and floor panels shall have a minimum R-value of 27.2

**3.5** AK-XPS4 freezer floor panels shall have a minimum R-value of 30.4

**3.6** AK-XPS4 ULTRA for freezer wall, ceiling and door panels shall have a minimum R-value of 32.4

**3.7** Surface burning characteristics for AK-XPS4 and AK-XPS4 ULTRA, according to ASTM E84/UL 723, shall have a Flame Spread of 15 or less, and Smoke Developed of 165 or less.

### 4. FLOOR CONSTRUCTION

**4.1** Floor panel construction shall be 4 inches thick.

**4.2** The joint between the floor and wall panels shall be 4½" thick and shall form a NSF ½-inch radius.

#### 4.3 FLOOR PANELS & ALTERNATIVE FLOOR TYPES:

**4.3.1** Foot traffic standard floor panels, with .050 thick smooth aluminum finish bonded to the insulation. Panels are designed to support uniformly distributed loads of up to 600 pounds per square foot.

**4.3.2** Rolling rack reinforced floor panels with .050 thick smooth aluminum finish bonded to ½-inch plywood underlayment and to the insulation. Panels



are designed to support uniformly distributed loads of up to 1200 pounds per square foot.

**4.3.3 Hand trucks, rolling racks and beer keg reinforced floor panels** with 22 gauge textured stainless steel finish bonded to ½-inch plywood underlayment and to the insulation. Panels are designed to support uniformly distributed loads of up to 1500 pounds per square foot.

**4.3.4 Hand pallet jack, dollies and carts reinforced floor panel** with 22 gauge textured stainless steel finish-bonded to ¾-inch plywood underlayment and to the insulation; with additional load-bearing capacity structural reinforcement with an overlay of .090 thick aluminum diamond-tread plate over the finished floor panel (shipped loose). Panels are designed to support uniformly distributed loads of up to 2,600 pounds per square foot.

**4.3.5 Floorless coolers** shall be supplied with PVC extruded vinyl screeds, with a NSF ½-inch radius to allow for easy cleaning. Screeds are designed to sit flat on a leveled finished floor and be anchored to the concrete floor.

**4.3.6 Built-in mass insulated floor** shall be constructed on the job site. It shall consist of 8" depressed, above a 2" thick concrete sub-slab. Insulated floor shall consist of 4-inch thick rigid extruded polystyrene (XPS) sheets, placed in four layers of 1" X 48" X 96" (to suit temperature requirements), with staggered joints, over a .004" polyethylene vapor barrier.

Add a minimum of 4-inches of reinforced concrete wearing floor over a .004" polyethylene vapor barrier on top of the insulation. Adequate ventilation or other heat source shall be provided beneath the sub-slab.

## 5. PANEL FINISH

**5.1** 26-gauge corrosion resistant stucco embossed acrylic coated Galvalume steel (Acrylume) standard on the interior and exterior of wall, ceiling and door panels and the exterior of floor panels.

## 6. DOOR CONSTRUCTION

**6.1** Entrance door shall be swing type and flush, in-fitting, self-closing with magnetic seal.

**6.2** Door and door jamb shall be 4-inches thick and constructed to incorporate a heavy duty PVC molded non-heat conductive perimeter frame.

**6.3** Chrome plated door hardware shall include two spring-assisted, easy lift-off super cam-rise hinges, a deadbolt locking handle with key and padlocking provision, with inside emergency release, plus a spring activated door closer for smooth and reliable door closure.

**6.4** Door jamb shall include a digital LED thermometer and on-off pilot light switch for each entrance door. Jamb to have a clear opening of: 36"W x 76"H or 36"W x 80"H

**6.5** Top and sides of door shall be provided with a NSF approved thermoplastic gasket with magnetic core for a positive seal against the magnetic stainless steel polished (No. 4) channels on door jamb. The bottom of the door shall be sealed with a NSF approved double sweep gasket designed to seal with the threshold.

**6.6** Each door panel shall include an interior vapor proof light fixture with globe, mounted on the center-top of the jamb. Door jamb shall be pre-wired with materials and using guidelines approved by Underwriters Laboratories. Door shall be field wired to surface mounted light fixture junction box.

**6.7** Trim strip between door panel and building wall shall be provided with the same exterior metal skin as the door jamb, where shown on drawings.

**6.8** Freezer doors shall include a low voltage anti-condensate heater cable. Heater cable shall be factory wired to an energy-efficient heat sensing regulating thermostat to prevent condensation.

**6.9** Freezer door jamb shall include a heated pressure relief vent, which is factory mounted.



**6.10** Freezer doors that open to ambient temperature shall have an interior and exterior NSF approved double sweep gasket designed to provide extra bottom seal with the threshold.

## 7.0 CEILING PANELS

**7.1** Ceiling panel construction shall be 4-inches thick.

**7.2** Optional joint construction between the ceiling and wall panels shall be 4½" thick and shall form a ½- inch radius for easy cleaning.

## 8.0 APPROVALS

**8.1** Department of Energy (DOE) Compliance and Certified: effective July 1, 2017.

**8.2** Energy Independence and Security Act (EISA) Compliant: effective January 1, 2009.

**8.3** Certified construction to NSF Standard No. 7.

**8.4** UL certified panels, when tested in accordance with ASTM E84/UL-723. Panels shall bare the UL label.

**8.5** Hydrophobic insulation, when tested in accordance to ASTM C272.

**8.6** Insulation Self Ignition Temperature of 896 degrees F; and Flash Ignition Temperature of 734 degrees F, when tested in accordance to ASTM D 1929.

**8.7** Door panel shall be factory pre-wired with materials and guidelines approved by Underwriters Laboratories. Door panel shall bear NSF label on the exterior of jamb.

**8.8** City of Houston Fabricator's Certification No. 694.

**8.9** Oregon Component Insignia of Compliance No. M-PFC688.

**8.10** New York City Approval MEA113-87-M.

**8.11** Miami-Dade County, Outdoor Hurricane High Velocity Wind (170 mph), approval pending.

## 9.0 WARRANTY

**9.1** Manufacturer shall provide a written warranty to the owner stating the product is free from defect or workmanship under normal use and service.

**9.2** 50-year R-value warranty on panel insulation.

**9.3** 15-years on wall and ceiling panels, 5 years on door and floor panels, and 1 year on component parts.

**9.4** See limited protection warranty document for complete information.

## 10. SITE CONDITIONS

**10.1** The walk-in should be installed in a well ventilated location. A minimum of 2" clearance shall be required between walk-in and building walls, for proper air circulation.

**10.2** Floor panel and PVC vinyl floor screeds are designed to sit flat on a leveled finished floor.

