

## 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.

