

HYGIENIC AIR HANDLING UNITS

# Typical SSTP Specifications



# Table of Contents

## 3 Unit Construction

- 3 Casing
- 3 Roof
- 3 Drain Pans
- 3 Unit Base
- 3 Fans
- 3 Motors

## 4 Cooling Coils

## 4 Re-Heating Coils

## 4 Electric Controls

## 4 Discharge Plenum (Option)



# Unit Construction

## Casing

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The casing of the unit shall be a minimum of 4" 100% foam-in-place polyurethane insulated panel, cam lock construction. The unit is designed to be mounted on the roof steel and the roofing material flashed into the side of the unit (by others). The bottom of the unit is not insulated and is designed to be exposed to the refrigerated space below.

**Optional:** The unit shall have an insulated bottom bottom. An insulated bottom is recommended in applications with room temperatures above 45°F and required when the unit does not sit directly over the room (ducting through interstitial space) or is on elevated structural steel.

**Optional:** The unit base shall have a pitched base to match the building roof pitch

The polyurethane insulation shall be 97% closed cell. The insulation shall be bonded to a 26-gauge smooth unpainted galvanized steel interior surface and a 26-gauge white embossed galvanized steel exterior. The insulated panels shall be UL listed, Class I – composite panel with NSF listing. The 4" insulation shall have an R-value of 29.

**Optional:** Stainless steel interior

**Optional:** 5" or 6" panels

The unit shall have two (2) flush mounted access doors. Each access door shall be complete with a removable 8 watt/ft heating cable around the perimeter of the door, wired to a junction box. Gasketing around the doors shall be a field replaceable. Doors shall be a minimum of 36" x 52".

There shall be no wood in the insulated panels except in areas where control panels will be mounted to the exterior casing. Plywood will be provided for added strength when mounting control panels. All door openings shall be supported around the perimeter with foam rail.

## Roof

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The roof shall be a single piece EPDM type (no seams) fastened to the panel roof.

## Drain pans

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The drain pan shall be constructed of G235 hot dipped galvanized steel, pitched to the drain connection. All drain pans shall be fully insulated.

**Optional:** The pan shall be complete with a hot dip galvanized steel hot gas defrost pan coil (under the drain pan)

**NOTE** - Check valve and pan to coil piping by others

**Optional:** Stainless steel drain pan

## Unit Base

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The base of the unit shall be minimum of 8 gauge, G235 galvanized steel. The return air opening shall be complete with an aluminum walk on safety grating. Each fan shall have removable, aluminum walk on safety grating.

## Fans

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The unit shall be supplied with direct drive, air foil, solid Uni-cast (single piece) aluminum fan blades. Each blade shall be complete with bushing.

## Motors

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Each unit shall be supplied with motors. The motors shall be TEAO, premium efficient and low temperature lubricated for rooms -10F and below. Each unit shall be complete with a motor davit arm for motor/fan removal. Motor/fan assemblies shall be designed to be removed as an assembly for ease of motor/fan removal and service. On systems with VFD drives, the motors shall be VFD ready and have a grounding ring.

Motors will be wired to outside of the unit and landed in terminal blocks in a single junction box.

## Cooling Coils

The coil shall be designed for refrigerant required for the application. Recirculating ammonia (1.2:1 to 1.3:1 feed rate), flooded ammonia, DX refrigerant coils (NH<sub>3</sub>, CO<sub>2</sub>, Freon), glycol or water, and recirculated CO<sub>2</sub>.

The coil shall be constructed using EVAPCO's stainless steel tubes and .014" thick enhanced aluminum fins. Coil shall meet strength requirements of ASME/ANSI B31.5. All coils shall be charged with nitrogen prior to shipment. Coils are rated in accordance with AHRI-420. Coils will have a design working pressure of 300 PSI (650 PSI for recirc CO<sub>2</sub> or 1160 PSI for DX CO<sub>2</sub>). Wet coil baffles included on units with 28°F room temperature or higher.

**Optional:** CRN certification for units going to Canada

## Re-Heating Coils (where specified)

The coil shall be designed for refrigerant required for the application. Hot gas, steam, and glycol or water, the coil shall be constructed using EVAPCO's stainless steel tubes and .014" thick enhanced aluminum fins. Coil shall meet strength requirements of ASME/ANSI B31.5.

All coils shall be charged with nitrogen prior to shipment. Coils are rated in accordance with AHRI 420. Coils are rated in accordance with AHRI-420. Coils will have a design working pressure of 300 PSI (1160 PSI for CO<sub>2</sub>).

**Optional:** CRN certification for units going to Canada

## Electric Controls

The following are some options available for control systems.

- Painted steel NEMA 4 control panel mounted on the outside of the unit complete with motor starter(s) for each individual motor
- Control panel heater mounted in control panel
- Disconnect switch located in the control panel
- Allen Bradley door switch located on fan access door
- Interior service lights wired back to the main control panel (120 volt by others)
- Service receptacle mounted on the control panel (120 volt by others)
- Ammonia detector located on the interior of the unit
- VFD drive(s) for the motors
- Heat trace power provided from control panel (Watts and Amps for heat trace provided by others for design)

## Discharge Plenum (Option)

G235 galvanized steel discharge plenum with four way (optional 1, 2 or three way) round directional supply openings. Plenum includes round duct from unit fans to the plenum. Duct is "telescoping" type and is adjustable from 36" to 72" long (longer available on special design).

**Note:** round ducts from unit to plenum are **NOT** included if the unit has an insulated bottom. Insulated duct will be **BY OTHERS**. Hanger rods and support by others.

Plenum is fully insulated on the bottom for thermal and sound control.

**Optional:** Stainless steel construction

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