

GENERAL DESCRIPTION:

- HHY** – Hi-Performance Hideaway
- HPY** – Hi-Performance Hideaway with Plenum
- HLY** – Hi-Performance Cabinet
- HXY** – Hi-Performance Horizontal Cased
- VEY** – Hi-Performance Vertical Cased

PART 1

1.1 SUMMARY

This section includes fan coil units and accessories.

1.2 SYSTEM DESCRIPTION

Horizontal and Vertical Hi-Performance Fan Coil Units, 2-pipe, 4-pipe, or 2-pipe with electric heat, concealed or exposed cabinets that are horizontally or vertically mounted.

1.3 QUALITY ASSURANCE

Coils shall be tested in accordance with AHRI Standard 440-2008. Each coil shall be factory tested for leakage at 300 psig air pressure with coil submerged in water. Insulation and adhesive shall meet NFPA-90A requirements for flame spread and smoke generation.

Base or "standard" units shall be ETL listed.

1.4 DELIVERY, STORAGE AND HANDLING

Unit shall be handled and stored in accordance with the manufacturer's instructions.

PART 2—PRODUCTS

2.1 MANUFACTURER

A. Basis of design shall be fan coils by International Environment Corporation.

2.2 CONFIGURATION

A. General:

Factory assembled Hi-Performance horizontal and vertical fan coil units complete with water coil, fan, motor, drain pan, and all required wiring, piping and controls.

B. HHY Horizontal Hideaway Units:

1. Cabinet shall be made of heavy gauge galvanized steel.
2. The interior surfaces shall be lined with 1/2" Fiberglass (1/2" Premium Fiberglass, 1/2" Foil Face or 1/4" closed cell) insulation.
3. Units shall be supplied with a ducted collar for supply duct connection.
4. Units shall have a galvanized (or stainless steel) drain pan extending the entire width of the coil (with second drain connection).
5. Galvanized drain pans shall be internally coated with a 2-part closed cell foam insulation.

C. HPY Horizontal Hideaway with Plenum Units:

1. Units shall be constructed of heavy gauge galvanized steel.
2. The interior surfaces shall be lined with 1/2" Fiberglass (1/2" Premium Fiberglass, 1/2" Foil Face or 1/4" closed cell) insulation.
3. A heavy gauge plenum shall enclose the blower/motor assembly with bottom or rear return air path.

4. Units shall be supplied with a ducted collar for supply duct connection.
 5. Units shall have a galvanized (or stainless steel) drain pan extending the entire width of the coil (with second drain connection).
 6. Galvanized drain pans shall be internally coated with a 2-part closed cell foam insulation.
 7. Units shall have throwaway, permanent or pleated filters.
- D. HLY Horizontal Cabinet, Low Static Units:
1. Units shall be constructed of heavy gauge galvanized steel.
 2. The interior surfaces shall be lined with 1/2" Fiberglass (1/2" Premium Fiberglass, 1/2" Foil Face or 1/4" closed cell) insulation.
 3. Cabinet shall be painted with an Arctic White powder-coat finish.
 4. The unit shall have a double deflection steel discharge grille.
 5. The unit shall have a hinged, bar type aluminum finish, return air grille with throwaway filter.
 6. Units shall have a galvanized (or stainless steel) drain pan extending the entire width of the coil (with second drain connection).
 7. Galvanized drain pans shall be internally coated with a 2-part closed cell foam insulation.
- E. HXY Horizontal Cased, High Static Units:
1. Units shall be constructed of heavy gauge galvanized steel.
 2. The interior surfaces shall be lined with 1/2" Fiberglass (1/2" Premium Fiberglass, 1/2" Foil Face or 1/4" closed cell) insulation.
 3. The unit shall have a throwaway, permanent or pleated filter.
 4. Units shall have a galvanized (or stainless steel) drain pan extending the entire width of the coil (with second drain connection).
 5. Galvanized drain pans shall be internally coated with a 2-part closed cell foam insulation.
 6. Units shall be supplied with a ducted collar for supply and return connections.
- F. VEY Vertical Cased Units:
1. Units shall be constructed of heavy gauge galvanized steel.
 2. The interior surfaces shall be lined with 1/2" Fiberglass (1/2" Premium Fiberglass, 1/2" Foil Face or 1/4" closed cell) insulation.
 3. The unit shall have a throwaway, permanent or pleated filter.
 4. Units shall have a galvanized (or stainless steel) drain pan extending the entire width of the coil (with second drain connection).
 5. Galvanized drain pans shall be internally coated with a 2-part closed cell foam insulation.
 6. Units shall be supplied with a ducted collar for supply duct connection.
 7. Units can be supplied with optional 6" legs.

2.3 CERTIFICATION

A. Safety:

Units shall be listed by Electronics Testing Laboratories, Inc. with the listing indicating the units comply with the minimum requirements of the U.S. and Canadian national product safety standard, UL 1995/CSA C22.2 No. 236.

B. Capacities:

Coil capacities are tested in accordance with AHRI-440-2008.

2.3.1 MATERIALS

A. Coils:

All coils shall have 1/2" copper tubes, manual (or automatic air vents), and aluminum fins, 10 fins per inch spacing. Coil fins shall be mechanically bonded to copper tubes. Copper tubes must comply with ASTM B-75. Fin thickness shall be 0.0045" and tube thickness shall be 0.016". All coils shall be leak tested with air at 300 psig under water.

B. Fans:

1. Fans shall be direct-drive, double-width fan wheels with forward-curved blades.
2. Blower wheels shall be statically and dynamically balanced.
3. Scrolls and fan wheels shall be constructed of galvanized steel.
4. Shall be easily removable.

C. Fan Speed and Temperature Control:

3 (high, medium, low) speed control, (off, on, auto), (wall or unit) (auto or manual) thermostat.

D. Motors:

1. Motors shall be 3-speed, single phase, 60 Hz permanent split capacitor type for 115 V (208 V, 230 V, or 277 V), permanently lubricated, with sleeve bearings.
2. Motors shall be equipped with quick connect electrical plugs.
3. Motors shall have thermal overload protection with automatic reset.

E. Controls and Safeties:

1. Controls:
Unit shall be furnished with a 3-speed, 4-position fan switch on a wall plate for field installation.
2. Safeties:
Unit fan motor shall be equipped with integral motor protection.

F. Electrical Requirements:

1. Standard unit shall operate on 115 V (208 V, 230 V or 277 V), single phase, 60 Hz electrical power, and all exposed wiring shall be in flexible conduit.

G. Option and Accessories:

1. Unit shall be equipped with nichrome wire strip electric heaters for total or auxiliary electric heat as specified on the equipment schedule.
 - a. Heaters shall be protected by an automatic reset safety cutout switch and a fusible link.
 - b. Heater capacity shall be as specified on the equipment schedule.
 - c. Heaters shall be single phase, 120 V (208 V, 240 V or 277 V) as specified on the equipment schedule.
 - d. For total electric heat, unit controls shall include a sequenced heating and cooling thermostat in lieu of the heating/cooling thermostat and automatic changeover device.
 - e. For auxiliary electric heat, unit controls shall include thermistor and purge cycle to verify system mode.
 - f. A junction box and fuse shall be factory furnished and installed to protect the motor and control circuit when electric heaters are installed in a unit with a single power source.
2. Service switch shall be factory installed.
3. Units shall be equipped with 24 V controls.
4. Units shall be equipped with condensate overflow switch.