

**HORIZONTAL SINGLE AND DOUBLE WALL PLENUM FAN AIR HANDLER  
HPH UNITS**

**DX OR CHILLED WATER COOLING WITH  
HOT WATER OR ELECTRIC HEAT**



**MADE IN USA** 



**SIZES FROM 600 CFM TO 9,000  
CFM**

All Technical Specifications are Subject to  
Change without Notice. For more  
information contact Customer Service  
Phone (817)624.0820 Fax (817)624.8581

## STANDARD FEATURES

### CONSTRUCTION

- Single and Double wall post and panel construction from heavy gauge galvanized steel.
- 2" Insulation sandwiched between double wall galvanized panels.
- IAQ drain pan sloped 3-ways.
- Drain pans are made with 304 stainless steel.
- Both sides of cabinet include gasket, service access panels.
- Factory installed mounting rails provided for unit suspension system on units up to 3000 cfm. Capped Knockouts to be provided for units over 3000 cfm and larger to accommodate threaded rods to pass through unit corners
- All cabinet parts are assembled with stainless steel hardware.
- All access panels can be removed while unit is suspended without affecting the unit's structure.

### FAN ASSEMBLY

- Our Plenum Fans are direct drive with single with/Single inlet forward curb (FC) for indoor or outdoor applications including variable frequency drives (VFD's) for controlling variable cfm's systems.
- Our fans are rated in accordance with AHRI Standard 430.
- All blowers are mounted to 12-gauge support channels on rubber isolators.
- A discharge duct flange is provided.

### FILTER SECTION

- Filter Section accepts 2" or 4" TA flat filters as standard on all units.

### COIL SECTION

- 3/8" O.D. seamless copper tube on sizes 24 to 240
- Coil and drain pan assembly slides into cabinet from either side of unit for left hand piping and electrical connections.
- Units can accept up to 8 rows of coil without modification.
- Manual air vents are accessible

### STANDARD MOTORS

- ODP Motor are mounted on a Direct Drive Base attached to the unit floor with rubber isolators
- 208/230/460v 3ph. And VFD's mounted to control the motor speed
- All units are ETL listed.

VFD's – Variable Frequency Drives Installed on the units

## OPTIONAL FEATURES

### CONSTRUCTION

- Powder coated cabinet or prepainted metal
- 1/2" foil faced and 7/8 closed cell are offered on single wall units.

### ELECTRIC HEAT SECTION

- Factory Supplied for Field Mounting
- Reheat Configurations.
- Single point power connection.
- Custom staging and controls, including SCR.
- Available Voltages: Single phase (230v, 277v)  
Three phase (208v, 230v, 460v, 575v)

### COIL SECTION

- 2, 4, 6, 8 row coil options. allows you to select the proper coil for your required capacity and pressure drop.
- Heating coils are factory installed in preheat or reheat positions.
- Steam coils-Low Pressure, less than 5 PSI. .
- Phenolic Coat coil option
- Optional stainless steel end plates.
- Face split, row split, intertwined circuiting available.
- Face and bypass dampers.
- Automatic air vents.

### MOTOR OPTIONS

- TEFC
- 575 volt

## GUIDE SPECIFICATIONS

### Unit Description:

Horizontal FORWARD CURB PLENUM FAN with optional chilled water, hot water, steam or DX coils. Galvanized steel cabinet can be double or single wall construction. Unit designated to be installed in above ceiling space. Units have full service access from both sides of the cabinet.

### Quality Assurance:

Coils are factory tested under water in accordance with AHRI 410 Standard at 500 psig for operating pressures to 400 psig. Insulation and adhesive shall meet the NFPA-90A standard for smoke and flame spread.

### Delivery, Handling and Storage:

Units have to be stored and handled in accordance with equipment manufacturer's recommendations.

## PRODUCTS

### Equipment:

- A. Factory assembled, horizontal, draw-thru blower coil units, for installation above the ceiling. Units shall be complete with chilled or hot water, steam or DX coils, forward curb fans and direct drive motors including VFD's for speed control, drain pan and filter rack to accept 2" or 4" TA filters.

### Cabinet, Single wall:

- B. Post and panel construction shall be from heavy gauge galvanize steel, lined with 1" 1.5 lb density and 0.5" as an option fiber glass Thermal acoustical insulation 7/8" closed cell is offered as an option too. Unit sizes 024 to 060 include a factory mounted suspension rail mounted to the bottom of the unit. Capped Knockouts to be provided for units over 3000 cfm and larger to accommodate threaded rods to pass through unit corners. Supply and return flanges to be 1" long. Large removable access panels shall be on both sides of unit.

### Cabinet, Double wall:

- C. Post and panel construction shall be from heavy gauge galvanize steel, lined with 2" 1.5 lb density fiber glass Thermal acoustical insulation, lined with smooth galvanized steel. Unit sizes 024 to 060 include a factory mounted suspension rail mounted to the bottom of the unit. Capped Knockouts to be provided for units over 3000 cfm and larger to accommodate threaded rods to pass through unit corners. Supply and return flanges to be 1" long. Large removable access panels shall be on both sides of unit.

### Drain Pan:

- D. The primary shall be stainless steel and include a built in overflow pan with a 1" MPT secondary and a 1" MPT primary drain connection. Secondary drain shall be galvanized or stainless steel to prevent corrosion should an overflow occur.

### Coil Section:

- E. Entire coil section cabinet shall be double wall lined with smooth galvanized steel for easy cleaning and coil removal.

### Blowers:

- F. Direct Drive Forward Curb fan wheel shall be forward curved blades and be factory statically and dynamically balanced. Blower's drives shall consist of direct drive motor with a VFD for speed control; blowers will be manufactured from aluminum .

### Coils:

- G. Coil tube diameters shall be 0.375", 0.50" or 0.625" OD copper tubes, aluminum fins mechanically bonded to the tubes and have a working pressure of 250 psig at 200 °F. Each water coil shall have manual air vents and sweat connections, which have to be accessible from the exterior of cabinet. Coils shall be circuited so they can be switched from right to left hand piping access while maintaining counter flow water circuiting.

### Motors:

- H. Motors shall be Open Type, Drip Proof, single or 2 speed, 60 Hz 1750 RPM, 3 phases, suitable for continuous duty at 130 °F; include automatic reset thermal over-load protection and. Three phase motors are available in 208, 230, 460 or 575 volts. Motors shall be resilient base mounted up to 2 hp. From 3 hp and up shall be rigid base mounted.

### Electric Heat:

- I. Electric heat shall be designed to mount at the discharge air openings of the unit. Electric heat is factory supplied for field installation and shall include a de-energizing magnetic control contactor per stage with a capacity of 48 Amps per circuit and include a secondary over-temperature switch. Heaters shall include fan-interlocking, power and control terminal boards with grounding lugs. An automatic limit switch shall provide aver-temperature protection and a manual reset limit switch shall provide secondary over-temperature protection.

### Filters:

- J. Standard filter rack shall include 2" TA filters but are suitable for 4" TA filters. With options for 2" and 4" pleated filters. Filter racks have to be accessible from both sides.



# HIGH PERFORMANCE DIRECT DRIVE PLENUM UNITS

## CAP DESCRIPTION MODEL NUMBER NOMENCLATURE - PAGE #1

HP	H	W	E	D	A	0	9	0	B	3	2	2	5	1	.	2	5	2	4	2	A	R	H	6
TYPE	MODEL				CM	SIZE			BS	CFM			ESP			COIL ROWS			RF	CN	MOTOR			
<p><b>UNIT TYPE</b></p> <p>HP HIGH PERF EC ECM MOTOR BD BELT DRIVE</p> <p><b>UNIT CONFIGURATION</b></p> <p>H HORIZONTAL V VERTICAL M MODULAR R ROOFTOP</p> <p><b>COOLING OPTIONS</b></p> <p>W CHILLED WATER X DIRECT EXPANSION 0 NO COOLING</p> <p><b>HEATING OPTIONS</b></p> <p>H HOT WATER S STEAM E ELECTRIC NO O HEAT</p> <p><b>UNIT INSULATION</b></p> <p>S SINGLE WALL 1" F F FIBERGLAS D DOUBLE WALL U SINGLE WAL 7/8" CLOSED CELL SPECIA X L</p> <p><b>CABINET MATERIAL</b></p> <p>A GALVANIZED STEEL B PRE-PAINTED STEEL C POWDER PAINTED</p> <p><b>UNIT SIZE</b></p> <p>024 24000 036 36000 048 48000 060 60000 090 90000 120 120000 180 180000 240 240000</p> <p><b>BLOWER SIZE OPTIONS</b></p> <p>1 9 X 4 2 9 X 6 3 9 X 9 4 10 X 10 5 12 X 12 6 15 X 11 7 15 X 15 8 18 X 18</p> <p><b>PRE-HEAT</b></p> <p>0 NO PH 1 1- ROW 2 2-ROW</p> <p><b>COOLING</b></p> <p>0 NO COOLING 2 2-ROWS 4 4-ROWS 6 6-ROWS 8 8-ROWS</p> <p><b>RE-HEAT</b></p> <p>0 NO RH 1 1- ROW 2 2-ROW</p> <p><b>REFRIGERANT</b></p> <p>A R-410A B R-22 C R-NU22 D R-134A 0 NONE</p> <p><b>PIPING CONNECTIONS</b></p> <p>R RIGHT HAND L LEFT HAND ALL CONNECTIONS ARE SET LOOKING THE UNIT IN THE AIR FLOW DIRECTION</p> <p><b>MOTOR SIZE AND VOLTAGE OPTIONS</b></p> <p><b>1ST DIGIT</b></p> <p>A 0.25 HP B 0.33 HP C 0.50 HP D 0.75 HP E 1.00 HP F 1.50 HP G 2.00 HP H 3.00 HP I 5.00 HP J 7.50 HP K 10.0 HP</p> <p><b>2ND DIGIT</b></p> <p>1 115/1 ODP/HE 2 208/1 ODP/HE 3 230/1 ODP/HE 4 277/1 ODP 5 208/3/60/ODP/HE 6 230/3/60/ODP/HE 7 460/3/60/ODP/HE 8 575 /3/60/ ODP/HE</p>																								

## HIGH PERFORMANCE DIRECT DRIVE PLENUM UNITS

### CAP DESCRIPTION MODEL NUMBER NOMENCLATURE - PAGE #2

B	B	C	0	E	1	0	0	.	0	C	0	0	C	F	0	1	1
OAO	UNIT ACCS			V	EH KW				HTR ACCS				V	VFD ACC S	REV.		REV.

**OUTSIDE AIR OPTIONS**

- O NONE
- A MIXING BOX W/ PLEATED FILTER 2"
- B MB W/ 3 POSITION CONTROL PACKAGE
- C MB W/MODULATING CONTROL PACKAGE
- E FACE & BYPASS DAMPER W/FILTER SEC.
- F 100% OUTSIDE AIR HOOD W/DAMPER
- G 30% OUTSIDE AIR HOOD W/DAMPER
- X SPECIAL

**UNIT ACCESSORIES**

- O NONE
- A PLEATED FILTER 2"
- B DISCHARGE GRILL PLENUM
- C RETURN GRILL AIR PLENUM
- MOTOR START STOP STATION
- F ROOF CURB 12"
- G ROOF CURB 14"
- X SPECIAL

**HEATER VOLTAGE**

- O NO HEATERS
- A 115/1
- B 208/1
- C 230/1
- E 277/1
- F 208/3
- G 230/3
- H 460/3
- J 575/3

**HEATER CAPACITY**

- 1.0 to 100.0 KW IN .1 Kw increments
- O NO HEATERS

**HEATER ACCESSORIES**

- O NO ACCESSORIES
- A Single point line Conn.
- B SCR Controls
- C Start Stop Control St
- D None

**FACTORY USE**

**VFD ACCESSORIES**

- O NO ACCESSORIES
- A REM MTG KIT
- B LCP11 CONT PANEL
- C LCP12 CONT PANEL
- D NE/UL TY1 K FOR M1 FR
- E NE/UL TY1 K FOR M2 FR
- F NE/UL TY1 K FOR M3 FR
- G DECOUPLING PLT KIT FOR M1&M2 FRAME
- H DECOUPLING PLT KIT FOR M3 FRAME
- I IP21 FOR M1 FRAME
- J IP21 FOR M2 FRAME
- K IP21 FOR M3 FRAME
- L DIN RAIL MTG KIT

**VFD SIZE**

- O NO VFD
- A 0.25 HP 230/1
- B 0.50 HP 230/1
- C 1.00 HP 230/1
- D 2.00 HP 230/1
- E 3.00 HP 230/1
- F 0.33 HP 230/3
- G 0.50 HP230/3
- H 1.00 HP 230/3
- I 2.00 HP 230/3
- J 3.00 HP 230/3
- K 5.00 HP 230/3
- L 0.50 HP 460/3
- M 1.00 HP 460/3
- N 2.00 HP 460/3
- P 3.00 HP 460/3
- Q 5.00 HP 460/3
- R 7.50 HP 460/3
- S 10.0 HP 460/3

**For more information contact Customer Service**

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