

# HBC-HWQ-E Series

Horizontal **Cased** Fan Coil

Recessed Ceiling Mount

**DX Cooling / Hot Water Heating**

**1 Ton through 3 Tons, up to 49,300 BTUH Heating**



## Description :

The **HBC-HWQ-E** series fan coil is 11" high, fully cased, and designed to be recessed in a furr down, bathroom or other ceiling area. The space-saving **HBC-HWQ-E** is engineered to provide easy access for service and maintenance of the entire fan-coil from below. All models are completely compatible with all major brands of straight cool condensing units. Each fan coil includes a fully insulated cabinet, cooling coil, a separate hot water coil, 120V blower motor, exclusive circulating pump with built in hot water check valve, 24/240V relay/transformer, and an attractive access/return air panel. These fan coils are compatible with all sources of hot water not exceeding 180°F. such as boilers and hot water heaters.

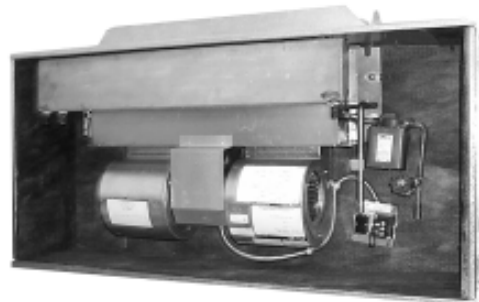
Water heater application - When connected to a standard gas or oil - fired water heater, this fan coil converts the water heater into a highly efficient, multi - purpose appliance that can heat an apartment, condominium, or home in addition to providing domestic hot water.

How the heating system works - When space heating is needed, the wall thermostat energizes the circulating pump which circulates hot water (135-140 degrees) from the water heater to the hot water coil. As the fan motor forces cool return air from the home over the hot water coil, the air absorbs heat from the hot water. This warm air (105-110) is then circulated throughout the duct system and into the home. The water leaving the hot water coil returns to the water heater to be reheated. See bulletin "ATC" or contact the factory for sizing information.

## **NEW FEATURE! EASY ACCESS CHECK VALVE**



**solid panel**  
(louvered also available)



## **FEATURES:**

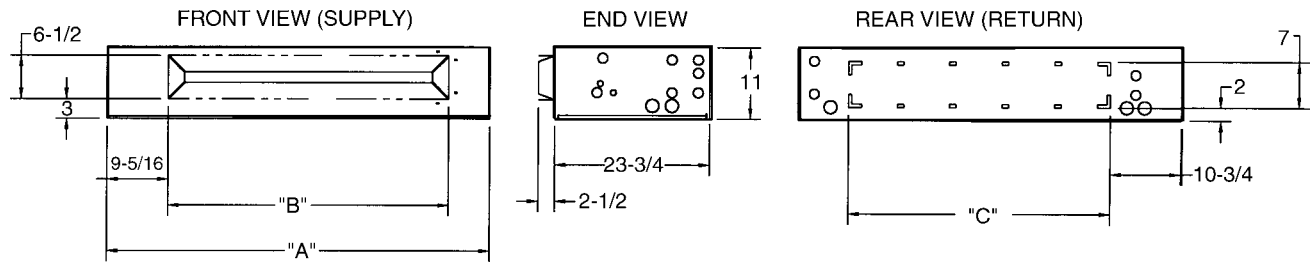
1. Built-in **circulating pump**, **air purge valve**, and **anti-thermosiphon check valve**
2. Completely **cased and insulated**
3. **Louvered access panels** accept 20 x 20 x 1 throw away filter (not included)
4. Completely **serviceable** from below
5. Engineered for **extremely quiet** operation
6. **Access panel** is shipped with each unit
7. 3/4" MPT Primary and Secondary drain connections.
8. For "lay-in" ceiling applications, a "**cap**" is available for each enclosure. Contact the factory for information.
9. Coil connections are **sweat type** and expanded for easy connection
10. **Insulated, sloped, and closed cell foam coated** drain pan

# HBC-HWQ-E Series

## 1 through 3 tons



Approved for installation with  
0" clearance to combustible  
materials



PERFORMANCE DATA							
UNIT MODEL	NOMINAL COOLING BTUH	HEATING GPM	PRESS. DROP (FT. WATER)	BTUH (1000) <sup>(1)</sup> AT ENTERING WATER TEMP.			
				120°F	130°F	140°F	180°F
12HBC-HWQ-E	12,000	3	3.3	10.5	12.5	14.6	22.8
18HBC-HWQ-E	18,000	3	3.3	13.3	15.8	18.4	28.8
24HBC-HWQ-E	24,000	3	4.1	16.6	19.7	23.0	36.0
30HBC-HWQ-E	30,000	3	4.3	19.6	23.4	27.9	42.6
36HBC-HWQ-E	36,000	3	5.4	22.7	27.1	31.6	49.3

### NOTES:

- Heat BTUH is at 70 degree EAT.
- 120 degree and 180 degree data is supplied for boiler applications.
- Heating BTUH output will not exceed output of water heater.
- Approved for installation with 0" clearance to combustible material.

### NOTE:

**Circulating pump must be field wired to the 4 x 4 junction box.**

BLOWER DATA								
UNIT MODEL	MOTOR		MOTOR HP (120 V)	CFM vs. EXTERNAL STATIC PRESSURE <sup>(2)</sup>				
	RPM	AMPS		0.05	0.10	0.15	0.20	0.25
12HBC-HWQ-E	1050	1.1	1/12	490	430	360	290	- - -
18HBC-HWQ-E	1550	1.9	1/8	720	690	655	635	600
24HBC-HWQ-E	1550	3.0	1/5	860	840	825	810	785
30HBC-HWQ-E	1550	3.6	1/4	1050	1025	1000	970	930
36HBC-HWQ-E	1550	4.6	1/5	1340	1300	1250	1200	1135

PHYSICAL DIMENSIONS			
MODEL	A	B	C
12HBC-HWQ-E	49-1/2	30-7/8	28
18HBC-HWQ-E	55-1/2	36-7/8	34
24HBC-HWQ-E	61-1/2	42-7/8	40
30HBC-HWQ-E	69-1/2	49-7/8	47
36HBC-HWQ-E	69-1/2	49-7/8	47

Model 36HBC-HWQ-E has four blowers and two motors.

- Motors are 120V and operate on high speed for both heating and cooling.
- CFM vs. static at high motor speed.

ENCLOSURE / PANEL INFORMATION			
For Fan Coil #	Enclosure Part #	Description	Access Panel Part #
12, 18HBC-HWQ-E	9E02	LOUVERED	9PE002-L
		SOLID	9PE002-S
24HBC-HWQ-E	9E03	LOUVERED	9PE003-L
		SOLID	9PE003-S
30, 36HBC-HWQ-E	9E04	LOUVERED	9PE004-L
		SOLID	9PE004-S

CEILING PANEL DIMENSIONS				
PART #	FRAME (OPENING)		FRAME (OUTSIDE)	
	W	L	W	L
9PE002L(S)	23-3/4	55-3/4	27	58-3/4
9PE003L(S)	23-3/4	61-3/4	27	64-3/4
9PE004L(S)	23-3/4	69-1/2	27	72-1/2

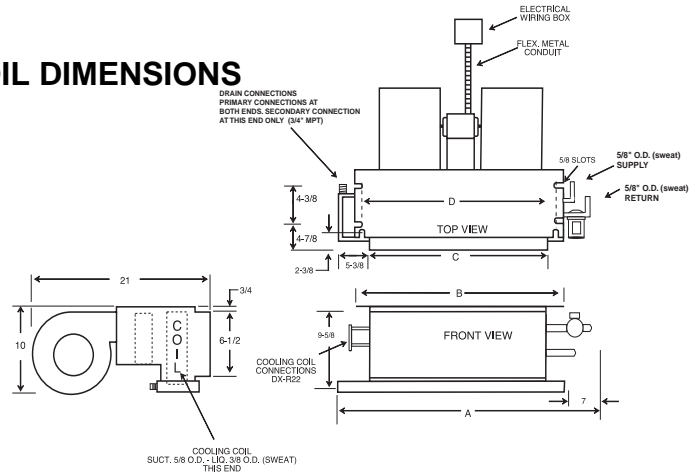
(1) Louvered access panels accept 20 x 20 x 1 throw away filter (not included)

(2) Solid panels require remote filter / grille (not included)

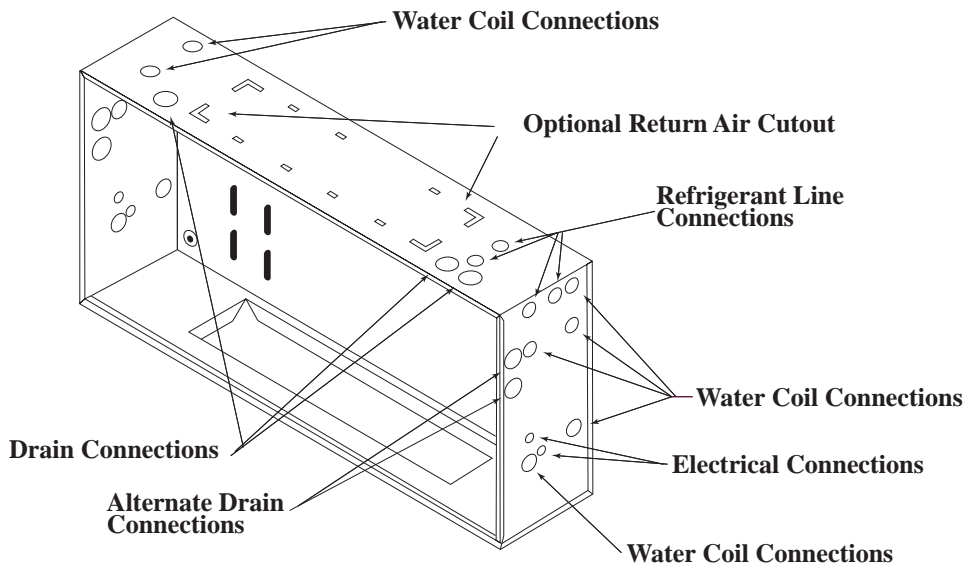
"In keeping with its policy of continuous progress and product improvement, First Co. reserves the right to make changes without notice."

## FAN COIL DIMENSIONS

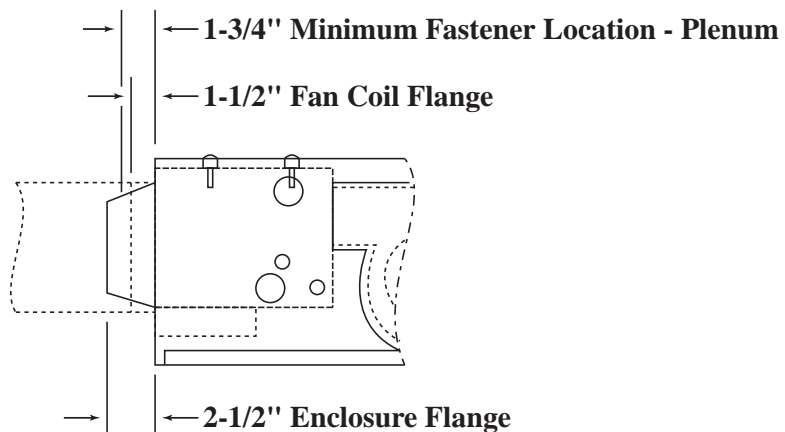
PHYSICAL DIMENSIONS				
UNIT MODEL	A	B	C	D
12HBC-HWQ	41-1/8	33-1/4	26-1/8	30-3/4
18HBC-HWQ	45-1/8	37-1/4	30-1/8	34-3/4
24HBC-HWQ	51-1/8	43-1/4	36-1/8	40-3/4
30HBC-HWQ	57-1/8	49-1/4	42-1/8	46-3/4
36HBC-HWQ	64-1/8	56-1/4	49-1/8	53-3/4



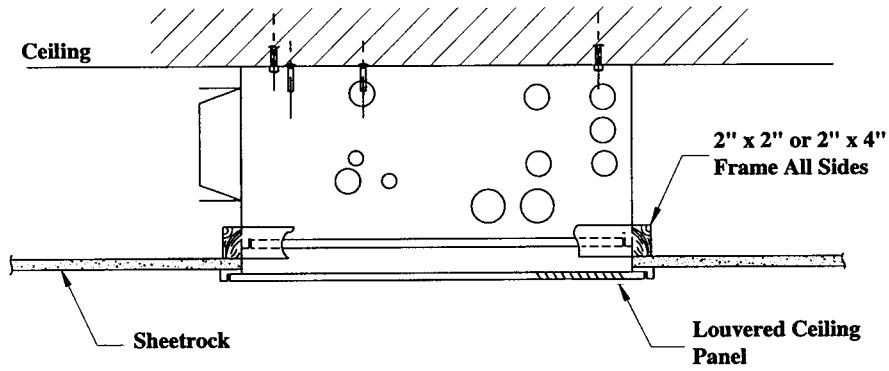
## CONNECTION LOCATIONS



## PLENUM AND UNIT FLANGE LOCATIONS



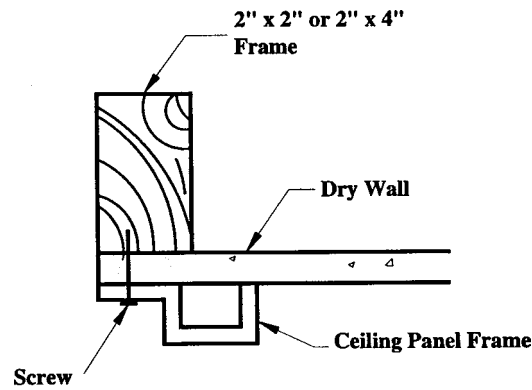
## INSTALLATION SUPPORT FRAMING



**NOTE:**

Unit must be located such that the 2" x 2" or 2" x 4" frame creates an air tight seal around unit.

## CEILING PANEL FRAME INSTALLATION



## WIRING DIAGRAM

