

# HBX Series

Vertical / Horizontal / Counterflow Air Handler  
**Cooling or Heat pump - with electric heat**  
**1-1/2 - 5 tons, 0 - 25kW**



## Description :

The **HBX** series air handler is designed to offer the industry an air handler that includes every available feature as well as up to 14 SEER when matched with today's higher efficiency condensing units and heat pumps. The **HBX** is completely factory assembled with a cooling coil, electric heat (except 0kW models), 240V motor, 24V transformer, horizontal drain pan, service switch (over 10kW models), and throw away filter. All components are installed within a fully insulated, galvanized steel cabinet with an attractive epoxy finish.

(1) **First Co's customer is ultimately responsible for confirming which fan coil models are compatible with selected outdoor unit(s) and which expansion valves (if any) are required. To determine approved indoor/outdoor matches, go to: [www.firstco.com](http://www.firstco.com) or contact the factory.**

**New Feature:** Factory or field installed TXV kits for optimum cooling performance.  
Counterflow conversion kits also available. (1-1/2 to 4 tons only)

## NOW AVAILABLE WITH FACTORY INSTALLED R22 OR R410A EXPANSION VALVES

### FEATURES:

1. **4-way airflow** (except 60HBX) (kit required for counterflow)
2. Factory installed horizontal drain pan
3. Completely **prewired** with 0-25kW electric heat (except 0kW models)
4. Compatible with major brands of **split condensing units** and **heat pumps** (Contact factory for correct match with outdoor unit)
5. **Piston-type** metering device or factory or field installed R22 or R410A TXV's on cooling coil
6. Factory installed **filter**
7. Attractive **baked on finish**
8. **Copper tube** cooling coils
9. Primary and secondary **drain connections** on cooling coil
10. Fully **insulated and painted** galvanized steel cabinet
11. Factory installed **service switch** (over 10kW models)



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# HBX Series

## Cooling / Heat Pump

### With Electric Heat

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#### Efficiency:

The **HBX** series air handler is the latest state-of-the-art air handler for heat pump or straight cool (DX) operation. Depending on the condensing unit or heat pump used, cooling efficiency is up to 14 SEER depending on the outdoor unit. Cooling coils have either piston type metering devices or factory or field installed R22 or R410A TXV's and are circuited for cooling or heat pump operation.

**First Co's customer is ultimately responsible for confirming which fan coil models are compatible with selected outdoor unit(s) and which expansion valves (if any) are required. To determine approved indoor/outdoor matches, go to:**

**[www.firstco.com/EfficiencyRatings.aspx](http://www.firstco.com/EfficiencyRatings.aspx) or contact the factory.**

#### Components:

Each air handler includes a high efficiency cooling coil, pre-wired electric heat (except 0kW), service switch (over 10kW), 240V fan motor, 24V transformer, horizontal drain pan, and throw away filter.

#### Cabinets:

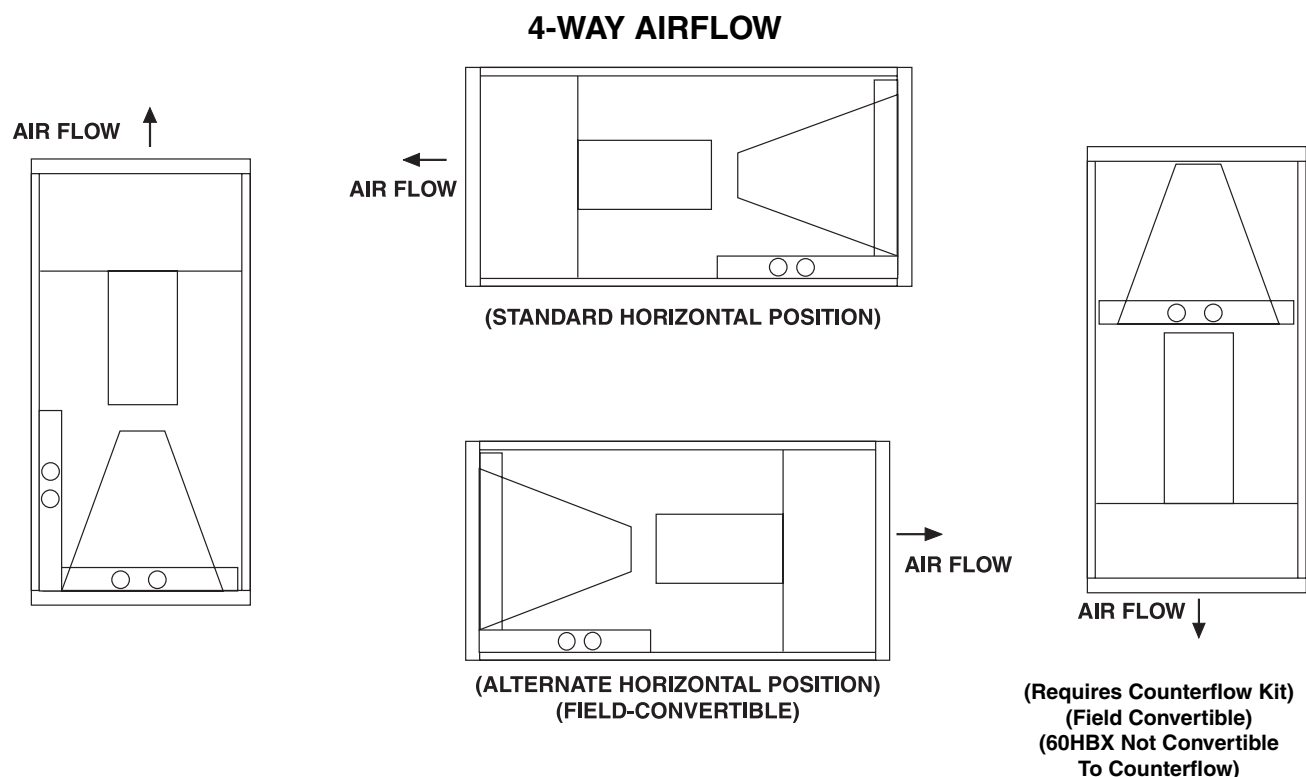
Cabinets are fully insulated and painted with an attractive, baked-on powder coating (light gray).

#### Installation:

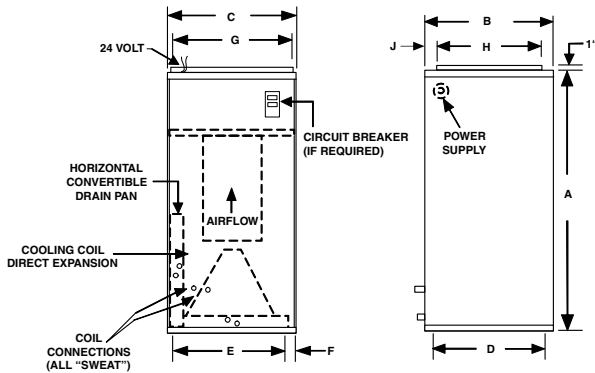
No modification is required for vertical or horizontal (right-to-left) airflow. A horizontal drain pan is factory installed for right-to-left airflow and can be re-positioned within the cabinet to offer left-to-right airflow. Optional counterflow conversion kits are available for downflow installations.

#### Accessories:

Accessories include counterflow conversion kits and cooling / heat pump TXV kits. (P. 4)



# HBX Series



BLOWER DATA										
UNIT MODEL	FAN SPEED	DUTY	MOTOR HP (240V)	CFM vs. EXTERNAL STATIC PRESSURE						
				0.10	0.15	0.20	0.25	0.30	0.40	0.50
18HBX	LOW LOW	COOL HEAT	1/6	780	750	720	700	660	600	510
				780	750	720	700	660	600	510
24HBX	HIGH LOW	COOL HEAT	1/6	900	880	860	830	790	700	600
				740	710	690	660	630	570	490
30HBX	LOW LOW	COOL HEAT	1/3	1210	1190	1160	1140	1110	1050	990
				1210	1190	1160	1140	1110	1050	990
36HBX	HIGH LOW	COOL HEAT	1/3	1410	1380	1340	1310	1270	1190	1060
				1170	1150	1130	1100	1080	1030	970
48HBX	HIGH MED. LOW	COOL COOL HEAT	1/2	1760	1730	1680	1640	1580	1480	1360
				1490	1460	1430	1400	1370	1300	1210
60HBX	HIGH LOW	COOL HEAT	3/4	2130	2110	2090	2060	2025	1930	1820
				1690	1680	1660	1640	1620	1580	1540

**NOTE:** Use 48HBX for 3.5 ton applications and field convert to medium speed for cooling.

(See P.4 for Model Numbers)

PHYSICAL DIMENSIONS												
UNIT MODEL	A	B	C	D	E	F	G	H	J	LIQ. (SWEAT)	SUCT. (SWEAT)	FILTER
18/24HBX	40	20	20	18-1/2	16	2	18	16	3	3/8	5/8	18 X 20 X 1
30/36HBX	42	23	20	21-1/2	16	2	18	17	5	3/8	3/4	20 X 22 X 1
48/60HBX	48	28	21-1/4	26-1/4	17	2	19-1/4	18-1/4	8-7/8	1/2	7/8	20 X 25 X 1

PERFORMANCE DATA													
UNIT MODEL		NOM. CFM	(1) NOM. COOL BTUH	ELECTRIC HEAT CAPACITY				TOTAL AMPS		MIN. CIR. AMPACITY		MAX. FUSE OR HACR BREAKER	
				kW		BTUH							
				240V	208V	240V	208V	240V	208V	240V	208V	240V	208V
18HBX & 24HBX	-0	600	18,000	0	0	0	0	1.6	1.6	2	2	15	15
	-3			3	2.3	10,200	7,700	14	13	18	16	20	20
	-4			4	3	13,600	10,200	19	16	23	20	25	20
	-5	800	24,000	5	3.8	17,000	13,000	23	20	28	25	30	25
	-6			6	4.5	20,500	15,400	27	24	36	29	40	30
	-8			8	6	27,300	20,500	35	31	46	38	50	40
	-10			10	7.5	34,100	25,600	44	38	54	47	60	50
30HBX & 36HBX	-0	1,000	30,000	0	0	0	0	2.5	2.5	3	3	15	15
	-5			5	3.8	17,000	13,000	24	21	30	26	30	30
	-8			8	6	27,300	20,500	36	32	46	40	50	40
	-10	1,200	36,000	10	7.5	34,100	25,600	45	39	56	49	60	50
	(2) -15			15	11.3	51,100	38,500	45	39	56	49	60	50
				21	18	26	23	30	25				
	48HBX	-0	1,600	48,000	0	0	0	0	3.5	3.5	5	5	15
-5		5			3.8	17,000	13,000	25	22	30	27	30	30
-8		8			6	27,300	20,500	37	33	47	40	50	40
-10		10			7.5	34,100	25,600	46	40	57	50	60	50
(2) -15		15			11.3	51,100	38,500	46	40	57	50	60	50
		21			18	27	23	30	25				
(2) -20		20			15	68,200	51,100	46	40	57	50	60	50
		42			36	53	46	60	50				
(2) -25		25			18.75	85,250	63,900	46	40	57	50	60	50
		42			36	53	46	60	50				
		21			18	27	23	30	25				
60HBX	-0	2,000	60,000	0	0	0	0	6.0	6.0	8	8	15	15
	-5			5	3.8	17,000	13,000	27	24	34	30	35	30
	-8			8	6	27,300	20,500	40	35	49	44	50	45
	-10			10	7.5	34,100	25,600	48	42	60	53	60	60
	(2) -15			15	11.3	51,100	38,500	48	42	60	53	60	60
				21	18	27	23	30	25				
	(2) -20			20	15	68,200	51,100	48	42	60	53	60	60
				42	36	53	46	60	50				
	(2) -25			25	18.75	85,250	63,900	48	42	60	53	60	60
				42	36	53	46	60	50				
				21	18	27	23	30	25				

## NOTES:

1. Nom. cooling at 45°F suction temp. 80°F DB / 67°F WB air on.
2. 15kW and 20kW models require 2 supply circuits. 25kW models require 3 supply circuits.
3. Units suitable for installation with 0" clearance to combustible material.



## Model Numbers:

		FACTORY INSTALLED TXV'S	
MODEL SIZE (BTU)	MODEL (PISTON)	MODEL (R22 TXV)	MODEL (R410A TXV)
18,000	18HBX(X)	18HBX(X) w/R22 TXV	18HBX(X) w/R410A TXV
24,000	24HBX(X)	24HBX(X) w/R22 TXV	24HBX(X) w/R410A TXV
30,000	30HBX(X)	30HBX(X) w/R22 TXV	30HBX(X) w/R410A TXV
36,000	36HBX(X)	36HBX(X) w/R22 TXV	36HBX(X) w/R410A TXV
42,000/48,000	48HBX(X)	48HBX(X) w/R22 TXV	48HBX(X) w/R410A TXV
60,000	60HBX(X)	60HBX(X) w/R22 TXV	60HBX(X) w/R410A TXV

**All TXV's are approved for cooling only or heat pump operation.**

(X) = kW HEAT

**NOTE:**

Expansion valve requirement depends on the selected outdoor unit. Go to [www.firstco.com](http://www.firstco.com) or contact the factory for assistance.

## ACCESSORIES - (all field installed)

EXPANSION VALVE KITS (Field installed) (cooling only or heat pump)	
PART NUMBER	FITS
<b>R22</b>	
9EVR22-4	18/24HBX
9EVR22-5	30/36HBX
9EVR22-6	48/60HBX
<b>R410A</b>	
9EVR410-3	18/24HBX
9EVR410-4	30/36HBX
9EVR410-5	48/60HBX

**NOTES:**

- Above expansion valve kits are approved for both cooling only (non heat pump) and heat pump applications.
- Valves are external equalizing, internal bleed.
- Valves have screw-on connections.

COUNTERFLOW CONVERSION KITS	
FITS	KIT NUMBER
<b>18, 24HBX</b>	919-11
<b>30, 36HBX</b>	919-12
<b>48HBX</b>	919-13

**Notes:**

- Counterflow conversion **not** recommended where the air handler is installed above a finished ceiling.
- No kit available for 60HBX. This model is not approved for counterflow installation.

In keeping with its policy of continuous progress and product improvement, First Co. reserves the right to make changes without notice. Maintenance for all First Co. products is available under "Product Maintenance" at [www.firstco.com](http://www.firstco.com).