FIRST CO.
P.O. BOX 270969 - DALLAS, TEXAS 75227
PH. (214) 388-5751 | FAX (214) 388-2255
WWW.FIRSTCO.COM

H(B,C)XBX-HW Series

WITH ECM MOTOR

AquaTherm® by First Co.

Hydronic Air Handler

Without Pump

Cooling or Heat Pump / HW Heat

1.5 - 5 Tons

Up to 131,700 BTUH Heating

AHRI CERTIFIED® www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

H(B,C)XBX-HW Series

The **HBXBX-HW/HCXBX-HW** air handler is designed for use with today's high efficiency split-system condensing units, heat pumps, hot water boilers, and Tankless Water Heaters.

All **HBXBX-HW/HCXBX-HW** air handlers include a standard **ECM** motor. These motors offer the efficiency of variable speed type **ECM** motors, but at a considerably lower cost.

Boiler applications: The **HBXBX-HW/HCXBX-HW** can be directly wired to a boiler without adding additional relays or related controls. Multiple air handlers can be connected to a single boiler to provide comfortable, efficient, whole house hydronic space heating.

Tankless Water Heater applications: : For Tankless Water Heater applications, install the optional high capacity flow control module (**#940-2CV**) in the piping between the Tankless Water Heater and the **HBXBX-HW/HCXBX-HW** air handler.

Cooling efficiencies are up to **16 SEER**, depending on the outdoor condensing unit or heat pump model.

These fan coils are compatible with any source of hot water that doesn't exceed 180º and is NSF/ANSI certified for use with domestic water.

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 certified indoor/ outdoor combinations, **go to www.ahridirectory.org**

STANDARD FEATURES:

- **Multi-function micro-processor circuit board** with these standard features:
  - **Blower start relay** - Eliminates field installed boiler relay, allowing direct wiring from the boiler to the air handler
  - **Blower-on fan delay** - (heating mode) - preheats the HW coil for 45 seconds.
  - **Blower-off fan delay** - (heating and cooling models) - blower continues to operate for 45 seconds after thermostat is satisfied, for increased efficiency.
  - **120V or 24V zone valve control** - The micro-pro-cessor powers either 120V or 24V field supplied motorized zone valves.
- Factory or field installed R-410A TXV (cooling or heat pump operation) (non-bleed type)
- **High efficiency standard ECM motor**
- Manual Air Vent on hot water coil
- Blower door shut-off switch (except 60HCXB-HW)
- Slide out hot water coil for easier service
- Copper tube heating and cooling coils
- Compatible with all major brands of split condensing units and heat pumps
- Attractive baked-on powder coated cabinet
- Primary and secondary condensate drain connections
- Easily accessible 1” filter

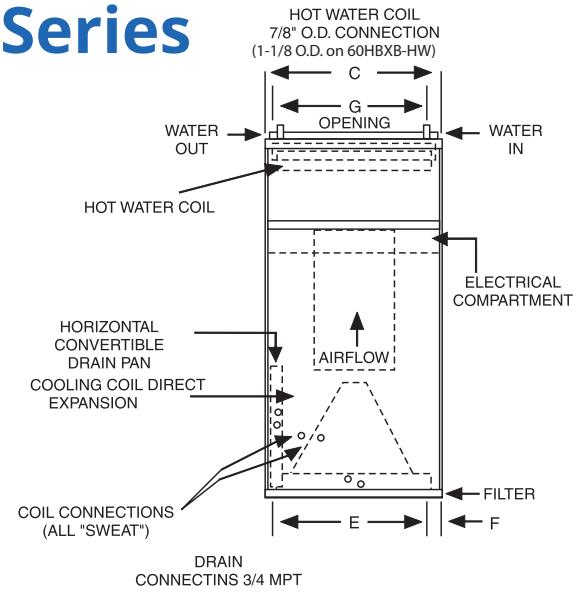
OPTIONAL ACCESSORIES:

- Freeze Protector - Reduces the possibility of the water coil freezing by switching the unit to the heating mode if the water temperature is nearing freezing conditions.
- High capacity Flow Control Module for Tankless Water Heater applications (#**940-2CV**)

H(B,C)XBX-HW Series

DX COOLING

HW HEATING



(See P.4 for Model Numbers)

ACCESSORIES
(field installed)

FLOW CONTROL MODULE	
PART NUMBER	**FOR**
940-2CV	18-60HBXB-HW

NOTE:
Flow Control Module is required when connecting to individual Tankless Water Heaters. Contact factory for assistance.

FREEZE PROTECTOR	
KIT NUMBER	**FOR**
941-1	18 - 60HBXB-HW

PHYSICAL DIMENSIONS									
UNIT MODEL	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**FILTER SIZE**
18HBXBX-HW 24HBXBX-HW	40	20	20	18-1/2	16	2	18	16	18 X 20 X 1
30HBXBX-HW 36HBXBX-HW	42	23	20	21-1/2	16	2	18	19	20 X 22 X 1
42HCXBX-HW 48HCXBX-HW	48	28	21-1/4	26-1/4	17-1/4	2	18	24	20 X 25 X 1
60HCXBX-HW	52	28	25-1/4	26-1/2	21-1/4	2	22	24	14 X 24 X 1 (2 required)
61HCXBX-HW	58	28	25-1/4	26-1/2	21-1/4	2	22	24	14 X 24 X 1 (2 required)

BLOWER DATA							UPFLOW / HORIZONTAL ONLY					
							CFM vs. EXTERNAL STATIC PRESSURE					
UNIT MODEL	**MOTOR HP-AMPS (120V)**	**BHP**	**NOMI-NAL AMPS**	**MIN. CKT. AMPAC-ITY**	**MAX. CKT. PROTEC-TION**	**SPEED TAPS**	**0.05**	**0.10**	**0.20**	**0.30**	**0.40**	**0.50**
18HBXBX-HW	1/3 - 4.8	0.33 0.18 0.13	3.2 2.1 1.4	5	15	3 2 1	970 770 640	940 750 620	870 700 580	800 660 530	730 620 480	630 580 430
24HBXBX-HW	1/3 - 4.8	0.33 0.18 0.13	3.2 2.1 1.4	5	15	3 2 1	930 740 620	900 720 600	830 690 560	760 650 520	690 610 480	600 560 430
30HBXBX-HW	1/2 - 6.8	0.50 0.34 0.27	4.8 3.5 2.5	10	15	3 2 1	1250 1090 960	1230 1070 940	1170 1040 900	1110 1010 860	1050 980 820	990 950 780
36HBXBX-HW	1/2 - 6.8	0.50 0.34 0.27	4.8 3.5 2.5	10	15	3 2 1	1280 1110 970	1250 1090 950	1190 1050 900	1130 1010 850	1070 970 800	1010 930 760
42HCXBX-HW 48HCXBX-HW	1 - 10.9	1.00 0.66 0.47	8.5 6.8 4.1	15	15	3 2 1	1900 1560 1300	1870 1540 1270	1800 1500 1220	1730 1460 1170	1660 1420 1120	1590 1380 1070
60HCXBX-HW 61HCXBX-HW	1 - 10.9	1.00 0.67 0.52	8.7 6.7 4.7	15	15	3 2 1	--- --- ---	2190 1780 1550	2130 1740 1490	2070 1700 1430	2010 1650 1370	1950 1590 1310

COIL CONNECTIONS		
UNIT SIZE	**LIQUID**	**SUCTION**
18/24	3/8	5/8
30/36	3/8	3/4
48/60	1/2	7/8

RECOGNIZED COMPONENT
Intertek
NSF/ANSI 169:2016

NOTES:
1. All models are approved for installation with 0" clearance to combustible materials.
2. Use 48HBXB-HW for 3.5 ton applications and field-convert fan motor to medium speed.

WARNING AVERTISSEMENT ADVERTENCIA
Cancer and Reproductive Harm
Cancer et Troubles de l'appareil reproducteur
Cáncer y Daño Reproductivo
www.P65Warnings.ca.gov
LBY0057

H(B,C)XBX-HW Series

MODEL NUMBERS

MODEL SIZE (BTU)	FACTORY INSTALLED TXV MODEL (PISTON)	FACTORY INSTALLED TXV MODEL (R-410A TXV)
18,000	18HBXBX-HW	18HBXB-HW R410 TXV
24,000	24HBXBX-HW	24HBXB-HW R410 TXV
30,000	30HBXBX-HW	30HBXB-HW R410 TXV
36,000	36HBXBX-HW	36HBXB-HW R410 TXV
42,000/48,000	48HCXBX-HW	48HCXB-HW R410 TXV
60,000	60/61HCXBX-HW	60/61HCXB-HW R410 TXV

All TXV's are approved for cooling only or heat pump operation (non-bleed type).

NOTE:
Expansion valve requirement depends on the selected outdoor unit. **go to www.ahridirectory.org, www.firstco.com or contact the factory.**

EXPANSION VALVE KITS (Field installed) (cooling only or heat pump)	
PART NUMBER	
R-410A	FITS
9EVR410-3	18/24HBXBX-HW
9EVR410-4	30/36HBXBX-HW
9EVR410-5	48-60HBXBX-HW

NOTES:
1. Above expansion valve kits are approved for both cooling only (non heat pump) and heat pump applications.
2. Valves are non-bleed type. Field added. Hard start kit may be required.
3. Valves have screw-on connections.

PERFORMANCE DATA

UNIT MODEL	NOM. COOLING BTUH	MOTOR SPEED CONN.	CFM @ .3 ESP	P.D. (FT. WTR.)	BTUH (1000) AT ENTERING WATER TEMPERATURE							
					120°F	GPM	140°F	GPM	160°F	GPM	180°F	GPM
18HBXBX-HW	18,000	HIGH	650	2.0 1.1 0.5	18.0 17.2 15.9	1.8 1.7 1.6	25.2 24.1 22.3	2.5 2.4 2.2	32.4 31.0 28.7	3.2 3.1 2.9	39.6 37.9 35.1	4.0 3.8 3.5
		MED.	550	2.0 1.1 0.5	16.3 15.7 14.6	1.6 1.6 1.5	22.9 22.0 20.5	2.3 2.2 2.1	29.4 28.2 26.3	2.9 2.8 2.6	35.9 34.5 32.2	3.6 3.5 3.2
		MED. LOW	420	2.0 1.1 0.5	14.0 13.5 12.7	1.4 1.4 1.3	19.6 18.9 17.8	2.0 1.9 1.8	25.2 24.3 22.9	2.5 2.4 2.3	30.8 29.7 27.9	3.1 3.0 2.8
24HBXBX-HW	24,000	HIGH	800	2.0 1.1 0.5	20.3 19.4 17.9	2.0 1.9 1.8	28.5 27.1 25.0	2.9 2.7 2.5	36.6 34.9 32.2	3.7 3.5 3.2	44.7 42.7 39.3	4.5 4.3 3.9
		MED.	725	2.0 1.1 0.5	19.2 18.4 17.0	1.9 1.8 1.7	26.9 25.7 23.8	2.7 2.6 2.4	34.6 33.1 30.6	3.5 3.3 3.1	42.3 40.4 37.4	4.2 4.0 3.7
		LOW	650	2.0 1.1 0.5	18.0 17.2 15.9	1.8 1.7 1.6	25.2 24.1 22.3	2.5 2.4 2.2	32.4 31.0 28.7	3.2 3.1 2.9	39.6 37.9 35.1	4.0 3.8 3.5
30HBXBX-HW	30,000	HIGH	1000	7.5 3.6 1.0	25.9 24.4 21.1	2.6 2.4 2.1	36.3 34.2 29.6	3.6 3.4 3.0	46.7 44.0 38.0	4.7 4.4 3.8	57.0 53.8 46.5	5.7 5.4 4.7
		MED.	780	7.5 3.6 1.0	22.4 21.2 18.5	2.2 2.1 1.9	31.3 29.7 26.0	3.1 3.0 2.6	40.3 38.2 33.4	4.0 3.8 3.3	49.2 46.6 40.8	4.9 4.7 4.1
		LOW	625	7.5 3.6 1.0	19.6 18.7 16.6	2.0 1.9 1.7	27.5 26.2 23.3	2.8 2.6 2.3	35.3 33.7 29.9	3.5 3.4 3.0	43.1 41.1 36.5	4.3 4.1 3.7
36HBXBX-HW	36,000	HIGH	1200	7.5 3.6 1.0	28.8 27.0 23.2	2.9 2.7 2.3	40.3 37.9 32.4	4.0 3.8 3.2	51.8 48.7 41.7	5.2 4.9 4.2	63.3 59.5 50.9	6.3 6.0 5.1
		MED.	1140	7.5 3.6 1.0	28.0 26.3 22.6	2.8 2.6 2.3	39.2 36.9 31.7	3.9 3.7 3.2	50.4 47.4 40.8	5.0 4.7 4.1	61.5 57.9 49.8	6.2 5.8 5.0
		LOW	1070	7.5 3.6 1.0	27.0 25.5 22.0	2.7 2.6 2.2	37.8 35.7 30.8	3.8 3.6 3.1	48.6 45.8 39.6	4.9 4.6 4.0	59.4 56.0 48.4	5.9 5.6 4.8
42HCXBX-HW 48HCXBX-HW	48,000	HIGH	1660	3.8 2.1 0.8	48.2 45.5 40.7	4.8 4.6 4.1	67.5 63.7 57.1	6.8 6.4 5.7	86.8 81.9 73.4	8.7 8.2 7.3	106.1 100.1 89.7	10.6 10.0 9.0
		MED.	1460	3.8 2.1 0.8	44.7 42.3 38.0	4.5 4.2 3.8	62.6 59.2 59.3	6.3 5.9 5.9	80.5 76.1 68.5	8.1 7.6 6.9	98.3 93.0 83.7	9.8 9.3 8.4
		LOW	1180	3.8 2.1 0.8	39.1 37.1 33.7	3.9 3.7 3.4	54.8 52.0 47.2	5.5 5.2 4.7	70.4 66.9 60.7	7.0 6.7 6.1	86.1 81.7 74.2	8.6 8.2 7.4
60HCXBX-HW 61HCXBX-HW	60,000	HIGH	1980	5.1 3.3 1.9	58.5 56.1 52.5	5.9 5.6 5.3	81.9 78.5 73.5	8.2 7.9 7.4	105.3 100.9 94.5	10.5 10.1 9.5	128.6 123.4 115.5	12.9 12.3 11.6
		MED.	1710	5.1 3.3 1.9	53.6 51.6 48.5	5.4 5.1 4.9	75.1 72.2 68.0	7.5 7.2 6.8	96.5 92.8 87.4	9.7 9.3 7.4	117.9 113.5 106.8	11.8 11.4 10.7
		LOW	1430	5.1 3.3 1.9	47.9 46.1 43.6	4.8 4.6 4.4	67.0 64.6 61.0	6.7 6.5 6.1	86.2 83.1 78.5	8.6 8.3 7.9	105.3 101.5 95.9	10.5 10.2 9.6

NOTES:
(1) Heat BTU is at 65° Entering Air Temperature.
(2) Based on 20ºF Delta-T. Velocity not to exceed 4ft./sec.
(3) Units are shipped with motors connected to high speed for cooling and medium speed for heating.
(4) 190° EWT would increase the 180° EWT heating capacities by 9.1%. 200° EWT would increase the 180° EWT heating capacities by 18.2%.
(5) See "USM" data sheet for additional coil information

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.**

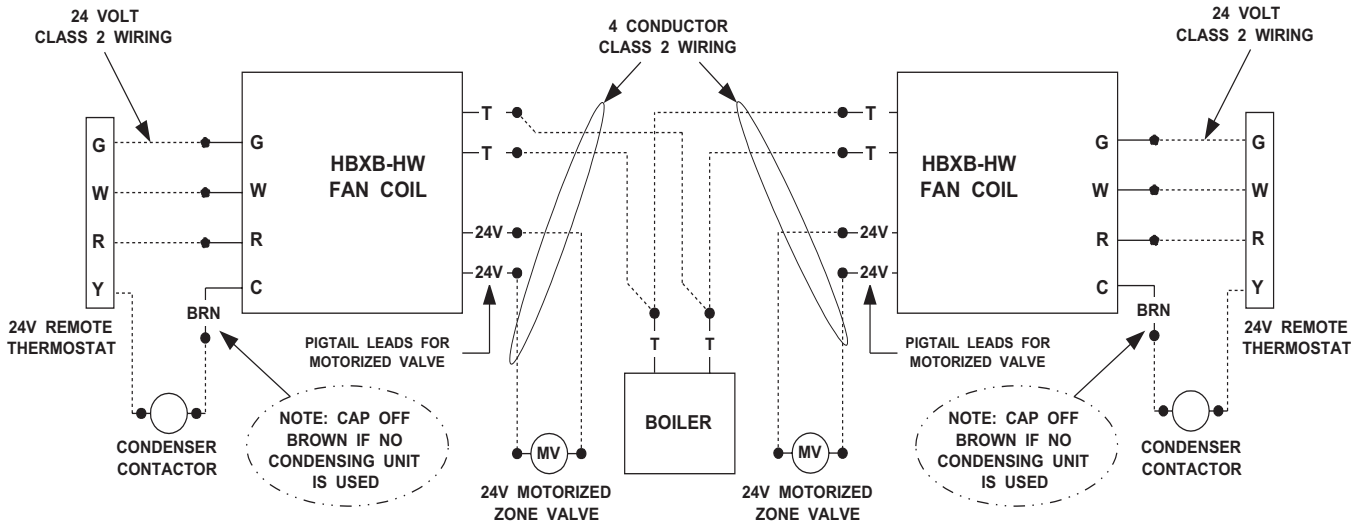
APPLICATION GUIDELINES
FOR BOILERS

ZONE VALVES

Install a motorized valve with each air handler to control flow to that zone as required.

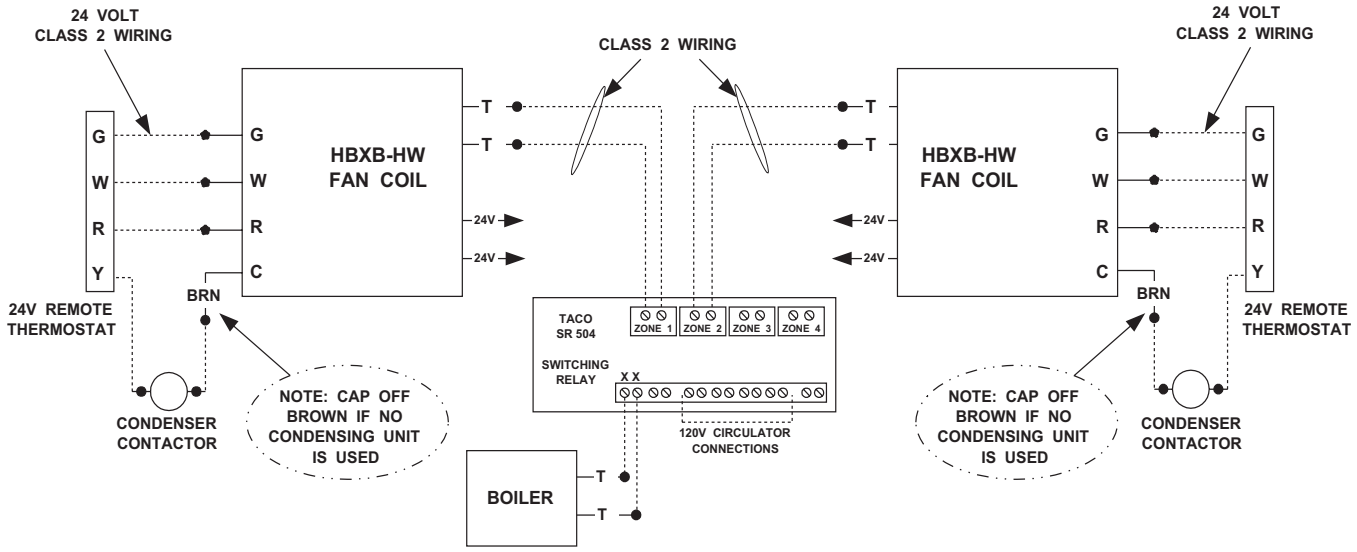
TYPICAL WIRING SCHEMATIC

FOR MULTIPLE ZONE CONNECTIONS WITH ZONE VALVES



TYPICAL WIRING SCHEMATIC

FOR MULTIPLE ZONE CONNECTIONS TO TACO SR-504/506 SWITCHING RELAY



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