

# UCQB Series Wall / Closet Air Handlers 1.5 - 3.0 Tons Cooling or Heat Pump Up to 45,300 BTUH Hydronic Heat

These upflow air handlers are designed for use with today's higher efficiency split-system heat pump and condensing units.

<sup>(1)</sup> 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 matches, go to: <u>www.firstco.com</u> or contact the factory.

The **UCQB** can be installed on a closet platform, hung on a closet wall, or recessed in a wall between the studs.

These fan coils are compatible with any source of hot water that doesn't exceed  $180^{\circ}$  and is NSF/ANSI certified for use with domestic water.

The **UCQB** is the most innovative hydronic heat air handler available today and is the only hydronic air handler with the following features:

- Multi-function micro-processor circuit board with these standard features.
  - Automatic pump timer The pump operates for sixty seconds every six hours in order to purge the water from the hot water coil and piping (the pump timer cycle is skipped while the compressor is operating).
  - Blower-on fan delay (heating mode) preheats the HW coil for 45 seconds.
  - Blower-off fan delay (heating and cooling modes) blower continues to operate for 45 seconds after thermostat is satisfied for increased efficiency.

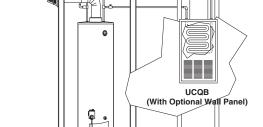
#### **Standard Features:**

- Multi-function micro-processor board
- 120V motor, 24V controls
- Cooper tube/aluminum fin heating and cooling coils
- Blower door shut-off switch
- Separate compartment for drain connections
- Drain pan has 3/4" female primary and secondary fittings
- Higher efficiency cooling coil with piston-type metering
- devise (contact factory for correct indoor/outdoor match)
  Convenient equalizer connection for field or factory
- installed R410A TXV (non-bleed type)
- Circulating pump with unique, easy access anti-syphon check valve, and air purge valve
- Easily accessible 1" filter
- Cabinet air leakage is no more than 2% when tested in accordance with ASHRAE 193.
- ★ Optional Features: (see Page 4)
  - Optional features include Wall Panels with Captive Screws Factory or Field installed TXV's (non-bleed type), Condensate Overflow Switch, Closet Hanger Bracket Kit, and Bottom Return Air Kit.
     Unique New Feature - In recessed wall applications

utilizing the optional wall panel, the hot water coil can be removed without modifications to the drywall. To allow this feature, the top of the **UCQB** cabinet is notched for coil removal and the wall panel is 3" taller than the cabinet.

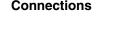
(Standard Unit shown)

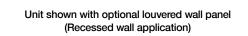
(Closet application - Front Return Air)



## New! non-swedged strait pipe connections.







# UCQB Series Compatible with gas fired water heaters Up to 45,300 BTUH Hydronic Heat

### (See P. 3 for Model Numbers)

PERFORMANCE DATA									
UNIT MODEL	NOMINAL COOLING BTUH	HEATING BT Delta -T 20 <sup>e</sup> l	NTERING TE	MPATURE	TOTAL AMPS	TOTAL AMPS	MIN. CIRCUIT	MAX. FUSE OR HACR	
		120ºF	GPM	140ºF	GPM	(MOTOR) (120V)	(PUMP) (120V)	AMPACITY	BREAKER
18-20UCQB	18,000	18.5	1.9	25.9	2.6	5.4	0.57	8	15
24-26UCQB	24,000 / 18,000	22.1	2.2	31.0	3.1	5.4	0.57	8	15
30-31UCQB	30,000 / 24,000	25.0	2.5	35.1	3.5	8.1	0.57	11	15
32UCQB	30,000 / 24,000	27.0	2.7	37.7	3.8	8.1	0.57	11	15
36/37UCQB	36,000 / 30,000	29.6	3.0	41.3	4.1	8.1	0.57	11	15
38UCQB	36,000 / 30,000	32.3	3.2	45.3	4.5	8.1	0.57	11	15

### NOTES:

1. Heating output will not exceed output of hot water source.

2. Approved for installation with 0" clearance to combustible materials.

3. Contact factory for correct matches with outdoor unit.

(1) Heat BTUH is at 70°F entering air temperature.

(2) Based on 20° Delta -T. Velocity not to exceed 4ft./sec.

BLOWER DATA										
UNIT	MOTOR	MOTOR	FAN	CFM vs. EXTERNAL STATIC PRESSURE						
MODEL	H.P. (120V)	AMPS (120V)	SPEED	0.10	0.15	0.20	0.25	0.30	0.40	0.50
			MED-HIGH	790	775	760	745	730	700	670
18/19UCQB	1/3	5.4	MED-LOW	710	695	680	665	650	630	610
			LOW	560	550	540	525	510	490	460
			MED-HIGH	770	750	730	710	690	650	610
20UCQB	1/3	5.4	MED-LOW	690	675	660	645	630	590	550
			LOW	540	525	510	495	480	450	420
			HIGH	840	820	800	780	760	710	660
24/25UCQB	1/3	5.4	MED-HIGH	770	750	730	710	690	650	610
			MED-LOW	690	665	660	645	630	590	550
	1/3	5.4	HIGH	860	845	830	810	790	750	700
26UCQB			MED-HIGH	780	765	750	735	720	680	640
			MED-LOW	700	685	670	655	640	600	560
30/31UCQB		8.1	HIGH	1070	1045	1020	995	970	920	850
	1/2		MED-HIGH	1020	1000	980	960	940	890	820
			MED-LOW	760	755	750	735	720	680	640
			MED-HIGH	1140	1110	1080	1050	1020	960	900
32UCQB	1/2	8.1	MED-LOW	900	885	870	855	840	790	740
			LOW	650	645	640	635	630	610	580
			HIGH	1160	1135	1110	1080	1050	990	930
36/37UCQB	1/2	8.1	MED-HIGH	1120	1095	1070	1045	1020	970	900
			MED-LOW	890	875	860	845	830	790	740
		8.1	HIGH	1400	1375	1350	1325	1300	1250	1200
38UCQB	1/2		MED	1260	1245	1230	1210	1190	1150	1100
			LOW	1090	1080	1070	1055	1040	1010	970

### NOTES:

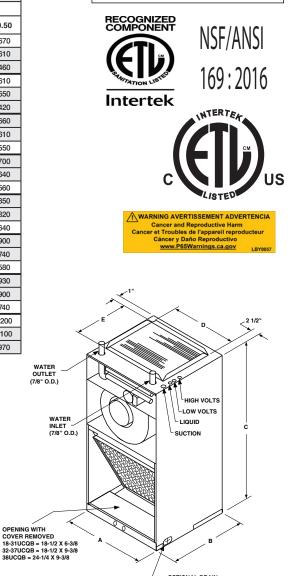
Add nominal .05 static when optional wall panel is used.
 Shaded areas are factory motor settings.

PHYSICAL DIMENSIONS								
UINT MODEL	А	в	с	D	Е	FILTER SIZE	LIQUID LINE	SUCTION LINE
18-25UCQB	22-1/8	18	43	18	12-1/2	18 X 18	3/8" O.D.	5/8" O.D.
26/31UCQB	22-1/8	18	43	18	12-1/2	18 X 20	3/8" O.D.	3/4" O.D.
32-37UCQB	22-1/8	21	43	18	15-1/2	18 X 24	3/8" O.D.	3/4" O.D.
38UCQB	28-1/8	21	46	24-1/8	15-3/4	24 X 24	3/8" O.D.	7/8" O.D.

NOTES:

1.All coil connections are sweat

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.



OPTIONAL DRAIN OUTLETS (BOTH SIDES AND FRONT)

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## **MODEL NUMBERS:**

		FACTORY INSTALLED TXV'S
MODEL SIZE (BTU)	MODEL (PISTON)	MODEL (R410A TXV)
18,000	18UCQB	18UCQB R410 TXV
18,000	19UCQB	19UCQB R410 TXV
18,000	20UCQB	20UCQB R410 TXV
24,000	24UCQB	24UCQB R410 TXV
24,000	25UCQB	25UCQB R410 TXV
24,000	26UCQB	26UCQB R410 TXV
30,000	30UCQB	30UCQB R410 TXV
30,000	31UCQB	31UCQB R410 TXV
30,000	32UCQB	32UCQB R410 TXV
36,000	36UCQB	36UCQB R410 TXV
36,000	37UCQB	37UCQB R410 TXV
36,000	38UCQB	38UCQB 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: <u>www.firstco.com</u> or contact the factory for assistance.

## (See P. 4 for Optional Accessories)

ALL UCQB OPTIONAL ACCESSORIES (FIELD INSTALLED)							
DESCRIPTION PART NO.		FOR	DIMENSIONS				
	9PWUC03L	18-37UCQB	49-3/8 X 25-5/8	46-3/8 x 22-5/8			
WALL PANEL (1)	9PWUC04L	38UCQB	38UCQB 52-1/2 X 31-5/8 49-1/2 (Outside Frame) (Insid				
CLOSET BRKT.	90PK3	18-37UCQB	1-3/4 X 22-1/8				
GLOSET BRKT.	90PK31	38UCQB	1-3/4 X 27-15/16				
BOTTOM RETURN	90PK5	18-37UCQB	20-7/16 X 22				
AIR KIT	90PK51	38UCQB	20-5/8 X 28				
CONDENSATE OVERFLOW SS3 SWITCH		ALL UCQB					
FREEZE (2) PROTECTOR 941-1		ALL UCQB					

### NOTES:

- (1) Wall Panels are taller than the UCQB cabinet to allow access to hot water coil connections.
- (2) Energizes the pump if HW coil temperature falls below 40°.

EXPANSION VALVE KITS (Heat Pump or Cooling Only) (FIELD INSTALLED)						
PART NO.	TYPE	FOR				
9EVR410-1	R410A	18 - 38UCQB (1-1/2 - 3 TON)				

### NOTES:

- 1. Expansion valve kits are approved for both cooling only
- (non heat pump) or heat pump applications. 2. Valves are non-bleed type. Field added. Hard start kit may be required.

3. Valves mount inside unit cabinet



Optional wall panel (Recessed wall application)

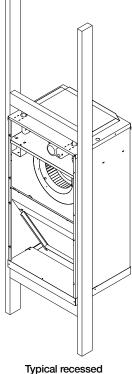


Condensate drain connections (With drain cover removed) (Thermoplastic pan shown)

Condensate Overflow Switch #SS3



Unit shown with front panel removed



wall installation



Unit shown with optional bottom return air kit