



# UCXQBR-ECM

*Air-Handlers*



- Cooling or Heat Pump
- Designed for Use with Tankless Water Heaters
- 1 - 3.0 Tons
- Up to 55,000 BTUH Hydronic Heat



# UCXQBR - ECM Series

The UCXQBR-ECM series air handlers are designed specifically for use with tankless water heaters. These air handlers allow high efficiency tankless water heaters to be used for *two* jobs instead of one, providing domestic hot water *and* high efficiency space heating! They are compatible with most of today's higher efficiency split-system R-410A heat pumps and condensing units.

These air handlers can be installed on a closet platform, hung on a closet wall, or recessed in a wall between the studs.

**Important:** In order for the UCXQBR-ECM's to operate properly with tankless water heaters, the hot water coils must be piped to the tankless heaters according to the tankless manufacturer's instructions. Contact the water heater manufacturer for required accessories and piping requirements, as well as water heater sizing information.

The UCXQBR-ECM air handlers include a high efficiency standard ECM motor, special circulating pump designed for tankless heaters, HW check valve, air purge valve, hot water coil, cooling coil, and multi-function circuit board.

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

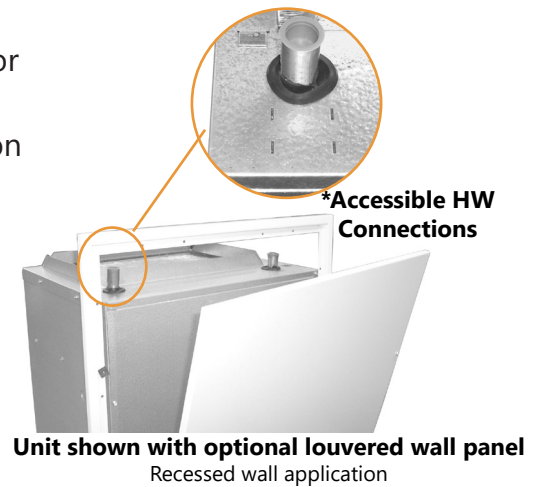


**Standard Unit**  
Closet application - Front Return Air

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

## STANDARD FEATURES:

- Multi-function micro-processor circuit board with:
- Automatic pump timer (heating mode) - pump purges the HW coil for 60 seconds every six hours.  
Note: State of MA, 248 CMR code of the state of MA requires a pump timer. (60 seconds every 6 hours)
- 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 15 seconds after thermostat is satisfied for increased efficiency.
- Freeze protector on HW coil
- High efficiency standard ECM motor
- 120V motor, 24V controls
- 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 installed R-410A TXV (non-bleed type)
  - Special circulating pump with unique, easy access anti-siphon check valve and air purge valve
  - Easily accessible 1" filter



## OPTIONAL FEATURES:

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 UCX-QBR-ECM cabinet is notched for coil removal and the wall panel is 3" taller than the cabinet.

Optional features include Wall Panels with Captive Screws, Condensate Overflow Switch, Closet Hanger Bracket Kit, and Bottom Return Air Kit



Unit shown with optional bottom return air kit

# UCXQBR-EMC Series

PERFORMANCE DATA																
UNIT MODEL	NOMI- NAL CFM	HEATING GPM (NOM.)	HEATING BTUH (1000) AT ENTERING WATER TEMPERATURE (1) Delta-T 20°F & GPM										TOTAL AMPS (MOTOR) (120V)	TOTAL AMPS (PUMP) (120V)	MIN CIRCUIT AMPACITY	MAX CIRCUIT PROTECTION
			120°F	GPM	130°	GPM	140°F	GPM	150°F	GPM	160°F	GPM				
12UCXQBR	275	4	11.3	1.1	13.6	1.4	15.9	1.4	18.1	1.8	20.4	2.0	3.5	.84	6	15
19/20UCXQBR	450	4	15.6	1.6	18.8	1.9	21.9	1.9	25.0	2.5	28.2	2.8	4.8	.84	7	15
25/26UCXQBR	610	4	19.1	1.9	22.9	2.3	26.7	2.3	30.5	3.1	34.3	3.4	6.8	.84	10	15
31UCXQBR	730	4	21.3	2.1	25.6	2.6	29.9	2.6	34.2	3.4	38.5	3.9	6.8	.84	10	15
32UCXQBR	730	4	22.7	2.3	27.3	2.7	31.8	2.7	36.3	3.6	40.9	4.1	8.4	.84	12	15
37UCXQBR	1050	4	28.3	2.8	34.0	3.4	39.7	3.4	45.4	4.5	51.1	5.1	8.4	.84	12	15
38UCXQBR	1050	4	30.6	3.1	36.7	3.7	42.8	3.7	48.9	4.9	55.0	5.5	8.4	.84	12	15

**NOTES:**

- (1) Heat BTUH is at 70°F entering air temperature.
- (2) Based on 20°F Delta-T. Velocity not to exceed 4ft./sec.
- (3) Heat BTUH output will not exceed output of water source.

BLOWER DATA												
UNIT MODEL	MOTOR H.P. (120V)	MOTOR AMPS (120V)	BHP	RUN- NING AMPS	SPEED TAP	CFM vs. EXTERNAL STATIC PRESSURE						
						0.10	0.15	0.20	0.25	0.30	0.40	0.50
12UCXQBR	1/4	3.5	0.11	1.6	WHT	575	555	540	525	505	465	425
			0.09	1.3	GRY	525	505	490	470	450	405	360
			0.04	0.5	VIO	300	275	250	225	200	155	---
19/20UCXQBR	1/3	4.8	0.24	3.0	3	690	675	660	645	630	600	570
			0.21	2.6	2	650	630	610	590	570	540	510
			0.16	1.7	1	530	510	490	470	450	420	390
25/26UCXQBR	1/2	6.8	0.36	4.1	3	880	865	850	835	820	790	760
			0.23	2.4	2	670	655	640	625	610	580	550
			0.17	1.7	1	570	550	530	515	500	470	440
31UCXQBR	1/2	6.8	0.50	5.1	3	930	910	890	870	850	810	760
			0.34	3.6	2	800	785	770	750	730	700	690
			0.22	2.1	1	610	595	580	565	550	510	480
32UCXQBR	3/4	8.4	0.37	4.2	3	1010	1000	990	975	960	930	900
			0.24	2.6	2	790	775	760	745	730	700	670
			0.20	2.0	1	700	685	670	650	630	600	560
37UCXQBR	3/4	8.4	0.75	6.7	3	1250	1230	1210	1190	1170	1120	1070
			0.49	5.5	2	1110	1095	1080	1065	1050	1020	990
			0.37	4.0	1	940	925	910	895	880	850	820
38UCXQBR	3/4	8.4	0.47	5.6	3	1240	1230	1220	1205	1190	1160	1130
			0.38	5.2	2	1100	1090	1080	1065	1050	1020	990
			0.25	2.3	1	860	845	830	815	800	760	730

**NOTES:**

- 1. Add nominal .05 static when optional wall panel is used.
- 2. Shaded rows are factory preset speeds.

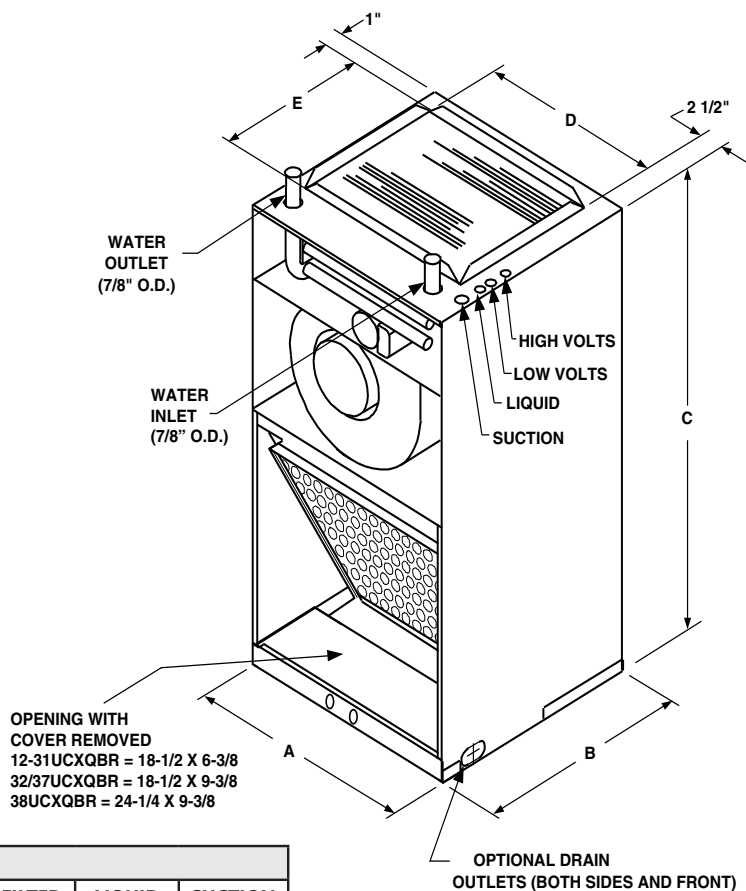
UNIT MODEL	NOM. COOLING BTUH	MOTOR SPEED TAP CONNECTION	
		HIGH SPD (VIO LEAD)	LOW SPD (GRY LEAD)
12UCXQBR	12,000	VIO	GRY
19/20UCXQBR	18,000	2	1
25/26UCXQBR	18,000	2	1
	24,000	3	2
31/32UCXQBR	24,000	2	1
	30,000	3	2
37/38UCXQBR	30,000	2	1
	36,000	3	2

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).



NSF/ANSI  
169:2016

# UCXQBR-EMC Series



PHYSICAL DIMENSIONS								
UNIT MODEL	A	B	C	D	E	FILTER SIZE	LIQUID LINE	SUCTION LINE
12-25UCXQBR	22-1/8	18	43	18	12-1/2	18 X 18	3/8" O.D.	5/8" O.D.
26/31UCXQBR	22-1/8	18	43	18	12-1/2	18 X 20	3/8" O.D.	3/4" O.D.
32/37UCXQBR	22-1/8	21	43	18	15-1/2	18 X 24	3/8" O.D.	3/4" O.D.
38UCXQBR	28-1/8	21	46	24-1/8	15-3/4	24 X 24	3/8" O.D.	7/8" O.D.

**NOTE:**

1. All coil connections are sweat

## MODEL NUMBERS:

MODEL SIZE (BTUH COOLING)	MODEL NUMBER
12,000	12UCXQBR R410 TXV
18,000	19UCXQBR R410 TXV
18,000	20UCXQBR R410 TXV
24,000	25UCXQBR R410 TXV
24,000	26UCXQBR R410 TXV
30,000	31UCXQBR R410 TXV
30,000	32UCXQBR R410 TXV
36,000	37UCXQBR R410 TXV
36,000	38UCXQBR R410 TXV

**NOTES:**

1. TXV's are approved for cooling or heat pump operation.
2. TXV's are non-bleed type. A field installed hard start kit may be required.



# Accessories

ALL UCXQB OPTIONAL ACCESSORIES (FIELD INSTALLED)				
DESCRIPTION	PART NO.	FOR	DIMENSIONS	
WALL PANEL (1)	9PWUC03L	12-37UCXQBR	49-3/8 X 25-5/8	46-3/8 x 22-5/8
	9PWUC04L	38UCXQBR	52-1/2 X 31-5/8 (Outside Frame)	49-1/2 X 28-5/8 (Inside Frame)
CLOSET BRKT.	90PK3	12-37UCXQBR	1-3/4 X 22-1/8	---
	90PK31	38UCXQBR	1-3/4 X 27-15/16	---
BOTTOM RETURN AIR KIT	90PK5	12-37UCXQBR	20-7/16 X 22	---
	90PK51	38UCXQBR	20-5/8 X 28	---
CONDENSATE OVERFLOW SWITCH	SS3	ALL UCXQBR	---	---
FREEZE (2) PROTECTOR	941-1	ALL UCXQBR	---	---



**Condensate Overflow Switch #SS3**



**Optional wall panel**  
Recessed wall application

**NOTES:**

- (1) Wall panels are taller than the **UCXQBR** 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	R-410A	12 - 38UCXQBR (1-1/2 - 3 TON)

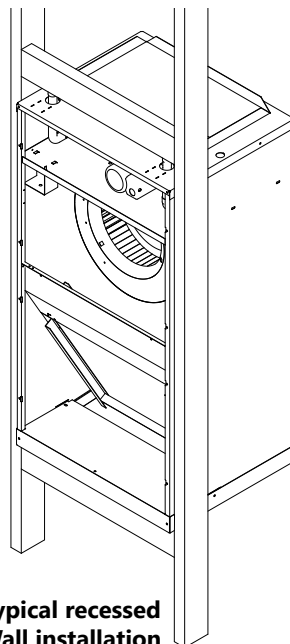
**NOTES:**

- 1. Expansion valve kits are approved for both cooling only (non heat pump) or heat pump applications.
- 2. Valves are non-bleed type.
- 3. Valves mount inside unit cabinet



**Condensate drain connections**  
With drain cover removed  
Thermoplastic pan shown

**Unit shown with optional bottom return air kit**



**Typical recessed Wall installation**

**Unit shown with front panel removed**





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