

First Co.

UCS HYDRONIC HEAT SERIES

UCSW/ UCSQ*/ UCSR**

PSC & ECM Wall Mount Fan Coils

Compatible With R454B & R32 & R410A-(Replacement Only)

Wall/Closet Indoor Air Handler

1.5 – 3.0 Ton Nominal Capacity

Up To 55,000 BTUH Hydronic Heat



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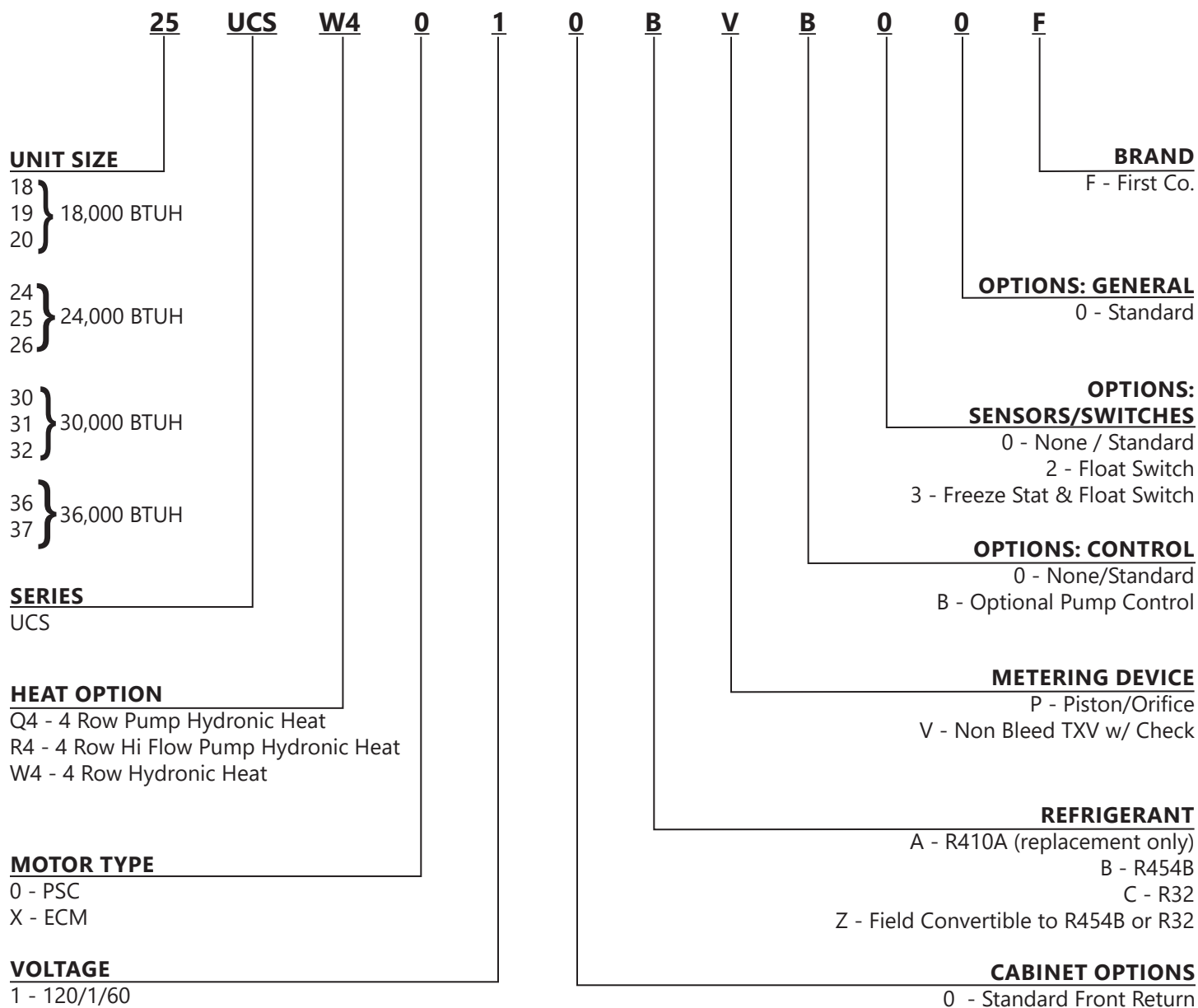
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First Co. reserves the right to change, alter, or update data, design features, and specifications without prior notice.

NOMENCLATURE



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UCS HYDRONIC HEAT SERIES

WALL MOUNT FAN COILS

PRODUCT OVERVIEW

APPLICATION

The UCS unit is designed as an upflow indoor air handler for use with today's higher efficiency split-system heat pumps or air conditioning units.

The cabinet is constructed of galvanized steel and is fully insulated. It has been tested in accordance with ASHAE 193 and verified to have a leakage rate not exceeding 2%.

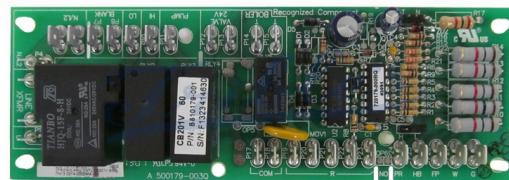
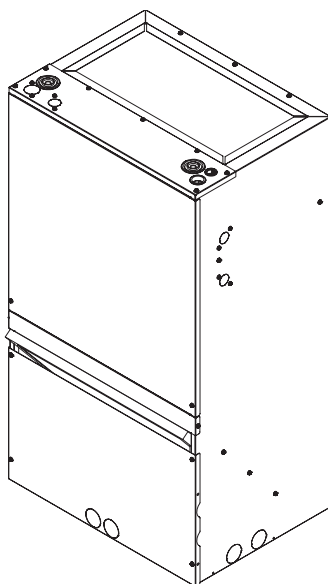
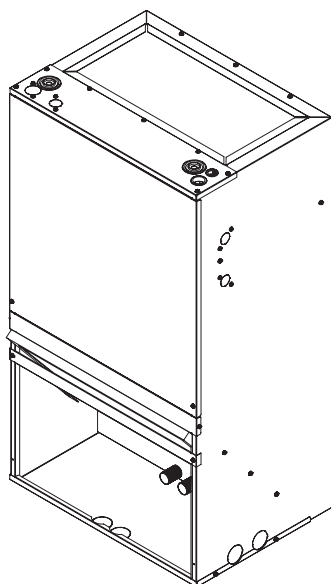
The condensate pan is sloped to ensure proper drainage. For installation flexibility, drain piping can be located on the bottom, front, left, or right side of the cabinet.

Units ordered with R-454B or R-32 are factory configured with a TXV or piston and include a factory-installed refrigerant detection sensor. Field-convertible units are designed for use with R-454B and R-32 refrigerants and also include a factory-installed refrigerant detection sensor. TXV kits are available separately.

The removable door on the optional wall panel is equipped with captive screws that remain in place when the door is removed for service or filter replacement.

STANDARD FEATURES

- 120V Motor, 24V Controls
- Factory installed hot water coil
- Separate compartment for drain connections
- Drain pan has 3/4" male or female primary and secondary fittings
- Convenient equalizer connection for factory or field installed TXV's (non- bleed type)
- Easily accessible 1" filter
- Easily accessible blower
- Back panel tooled to fit into wall hanging bracket (purchased separately)
- Front air return easily converted to bottom air return
- Blower door shut-off switch
- Separate compartment for drain connections
- Time Delay Relay is standard on units with Hydronic Heat and Pump Control



Hydronic Heat Controller Board

To convert the unit to a bottom air return, remove the bottom panel and reinstall it on the lower front of the cabinet as shown.

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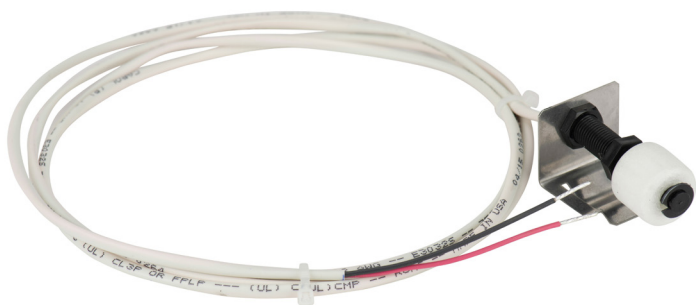
UCS HYDRONIC HEAT SERIES

WALL MOUNT FAN COILS

PRODUCT OVERVIEW (CONT'D)

OPTIONAL FEATURES & ACCESSORIES

- Freeze protection on hydronic heat coil
- ECM motor
- Special circulating Standard or Hi Flow pump with unique, easy access anti-siphon check valve and air purge valve
- Non-bleed type TXV to efficiently regulate refrigerant flow
- Float switch for condensate overflow
- Closet hanger bracket kit



Condensate Overflow Switch
#SS3



Optional Wall Panel
Recessed wall application

FIELD-INSTALLED ACCESSORY PART NUMBERS			
DESCRIPTION	PART #	DIMENSIONS	
		(OUTSIDE FRAME)	(INSIDE FRAME)
Louvered Wall Panel	9PWUC03L	49.38 X 25.63	46.38 X 22.63
Solid Wall Panel	9PWUC03S		
Condensate Overflow Kit	SS3	---	---
Freeze Protection (2)	941-1	---	---
R454B Field-Convertible TXV	9EVR454B-1A	---	---
R32 Field-Convertible TXV	9EVR32-1A	---	---

NOTES:

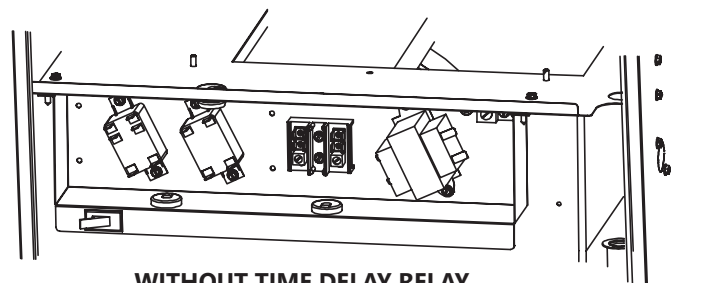
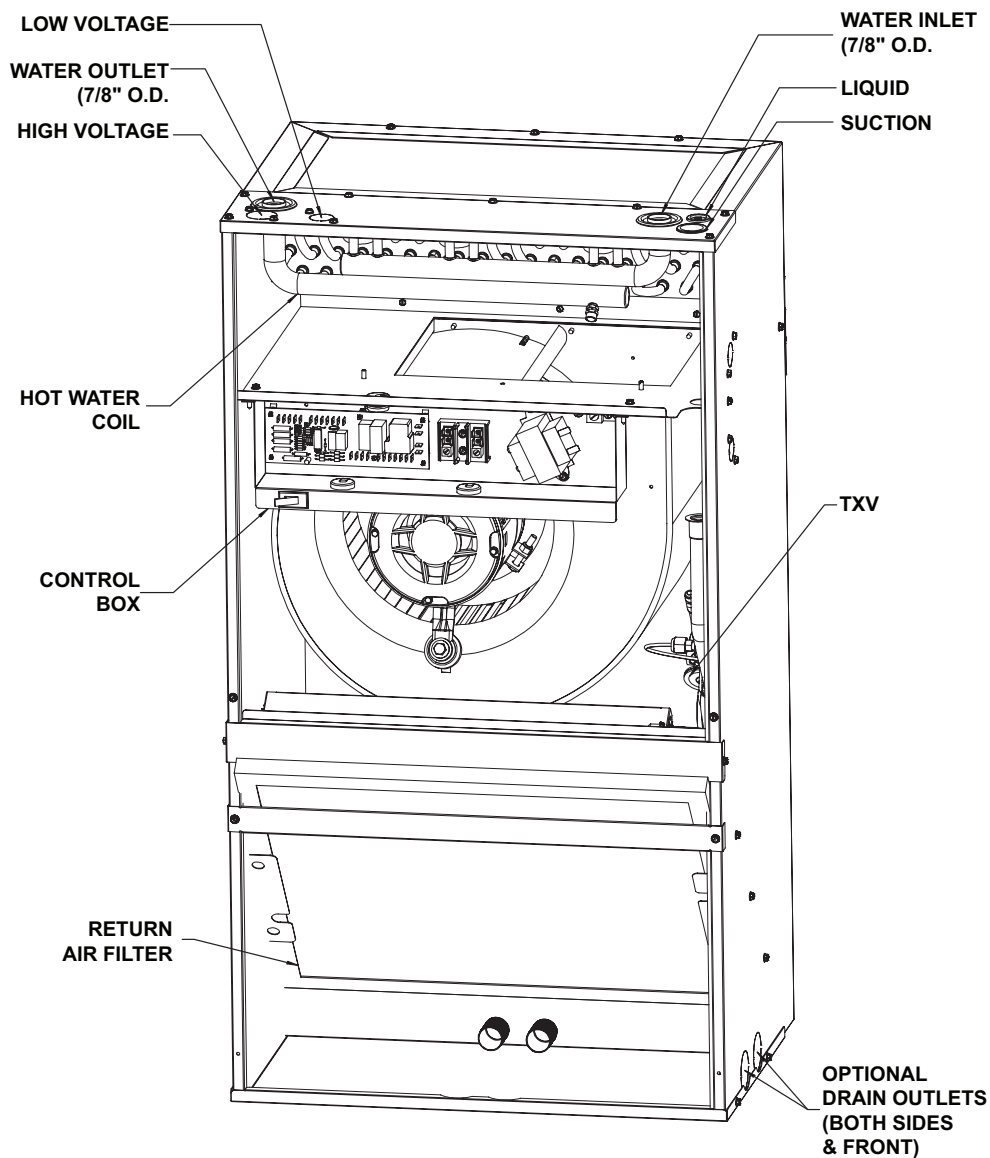
1. Above expansion valve kits are approved for cooling and heating applications.
2. Valves are non-bleed type with Chatleff connections. Hard start kit may be required

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WALL MOUNT FAN COILS

MAJOR COMPONENTS



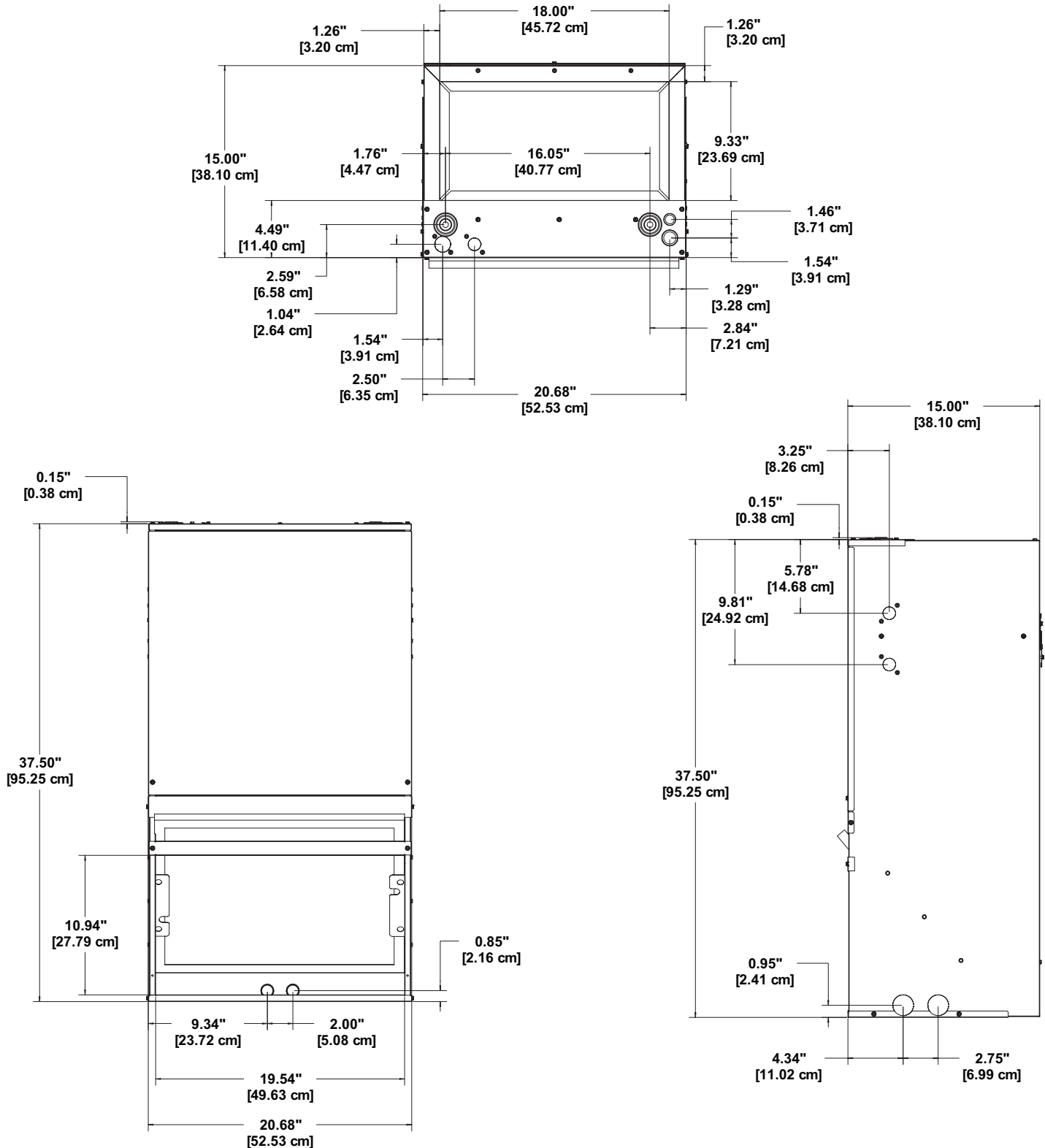
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UCS HYDRONIC HEAT SERIES

WALL MOUNT FAN COILS

PHYSICAL DATA

SIZE 18/19/20/24/25



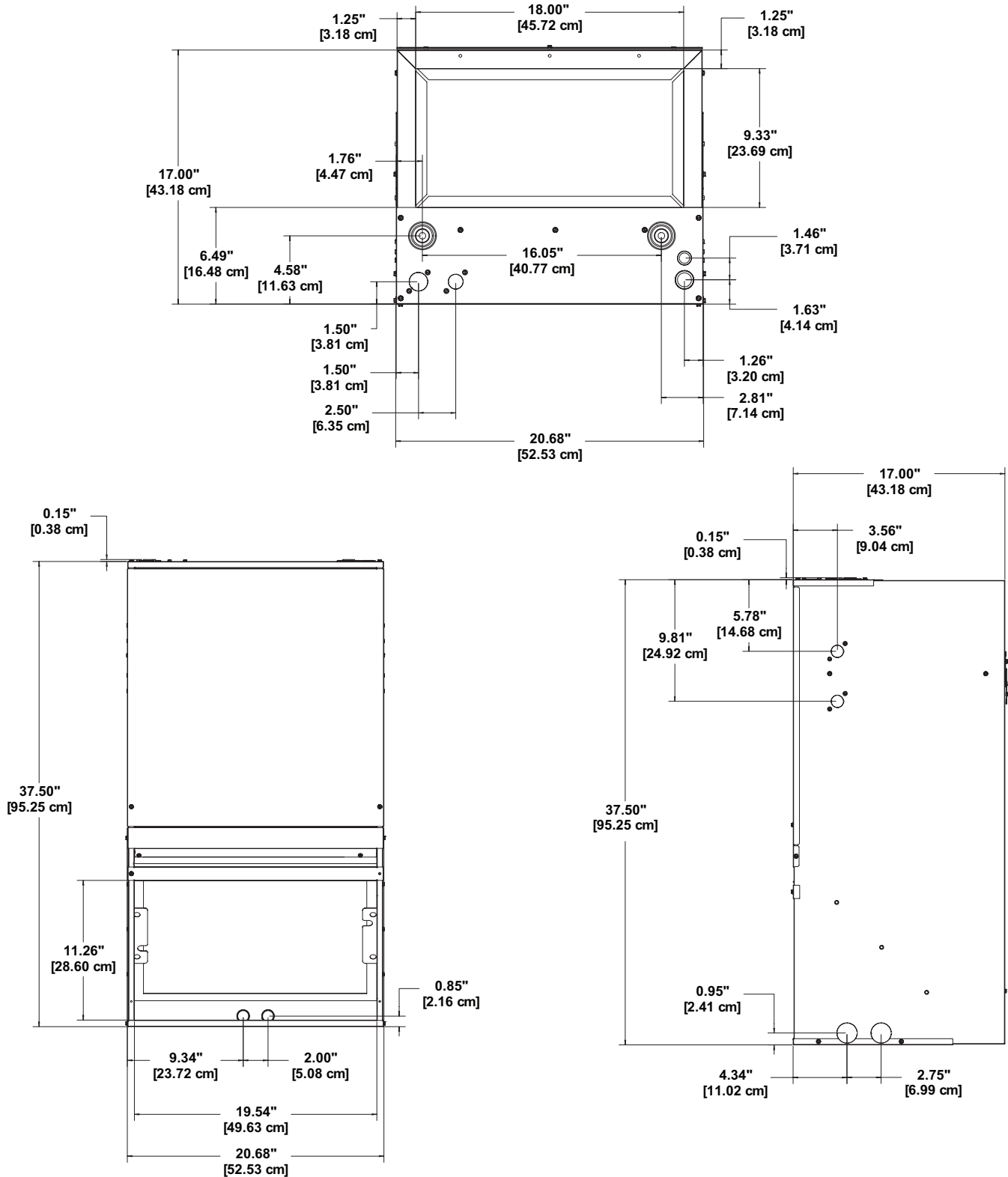
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UCS HYDRONIC HEAT SERIES

WALL MOUNT FAN COILS

PHYSICAL DATA

SIZE 26/31



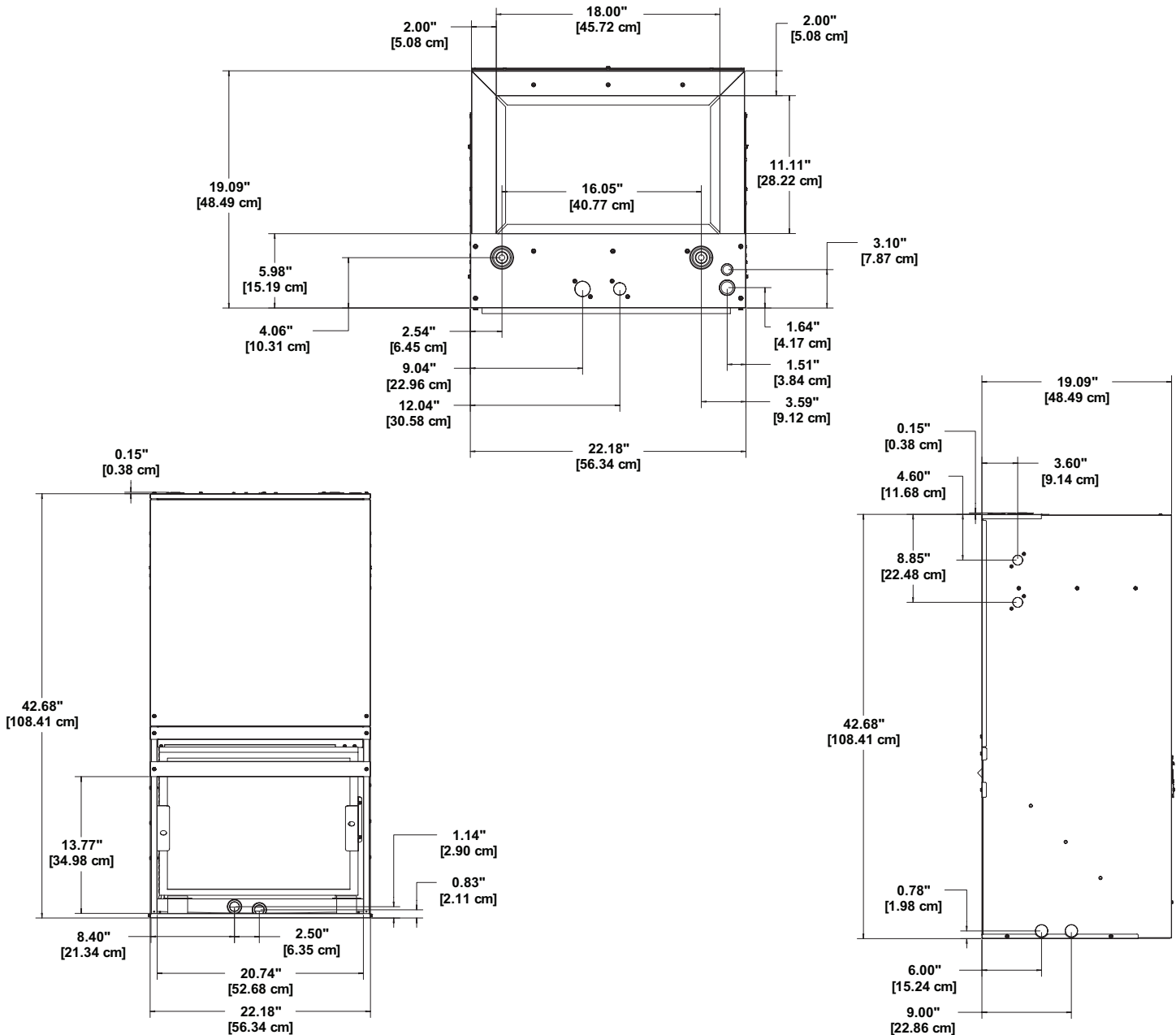
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UCS HYDRONIC HEAT SERIES

WALL MOUNT FAN COILS

PHYSICAL DATA

SIZE 30/32/36/37



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UCS HYDRONIC HEAT SERIES

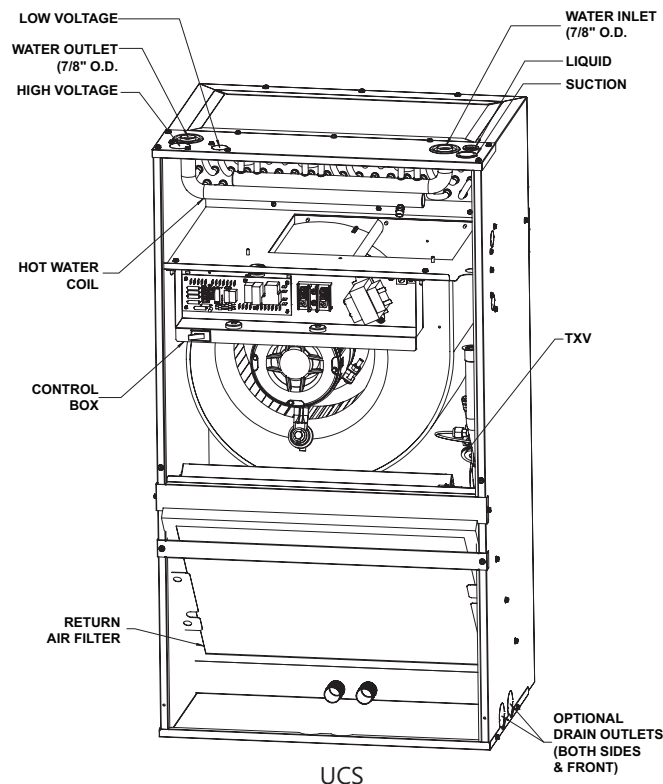
WALL MOUNT FAN COILS

GENERAL DATA

UCSW/Q/R*				
MODEL	18/19/20UCS*	24/25/26UCS*	30/31/32UCS*	36/37UCS*
Voltage	120V			
Refrigerant	R454B, R32, R410A ¹			
Nominal SCFM	600	800	1000	1200
COOLING PERFORMANCE				
Nominal Airflow (SCFM)	18,000	24,000	30,000	36,000
OPERATION CONDITIONS				
Max. Static Pressure (in.w.g.)	0.5			
PHYSICAL DATA				
ECM Motor (HP)	1/3	1/2		
PSC Motor (HP)	1/4	1/2	3/4	
Expansion Device	TXV or PISTON			
Shipping Weight (lbs)	90		113	

NOTE:

1. R410A only available on replacement units



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UCS HYDRONIC HEAT SERIES

WALL MOUNT FAN COILS

PERFORMANCE DATA

UCSW* 4ROW PERFORMANCE DATA										
UNIT MODEL	NOM. COOLING (BTUH)	P.D. FT. WTR. COIL ONLY	HEATING CAPACITY BTUH (1000) AT ENTERING WATER TEMPERATURE (1) DELTA-T 20°						MCA	MOCP
			120°F	GPM	140°F	GPM	180°F	GPM		
18UCSW*	18,000	3.2	18.3	2.5	25.7	2.5	40.4	2.5	8	15
19UCSW*		2.1	17.7	3.5	24.8	3.5	39	3.5		
20UCSW*		1.1	16.9	4.5	23.9	4.5	37.1	4.5		
24UCSW*	24,000	3.2	22	2.5	30.8	2.5	48.3	2.5	9	15
25UCSW*		2.1	21.2	3.5	29.7	3.5	46.7	3.5		
26UCSW*		1.1	19.9	4.5	28	4.5	44	4.5		
30UCSW*	30,000	3.2	28	2.5	39.2	2.5	61.5	2.5	11	15
31UCSW*		2.1	25.8	3.5	36.1	3.5	56.8	3.5		
32UCSW*		1.1	25.1	4.5	35.2	4.5	55.2	4.5		
36UCSW*	36,000	3.7	31.2	2.5	43.6	2.5	68	2.5	11	15
37UCSW*		2.5	29.8	3.5	41.5	3.5	65.3	3.5		
		1.3	27.4	4.5	38.4	4.5	60.5	4.5		

NOTE:

1. Size 31 not available with PSC motor



UCS

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WALL MOUNT FAN COILS

PERFORMANCE DATA

UCSQ* 4 ROW PERFORMANCE DATA										
MODEL	NOM. CAPACITY (BTU/h)	HEATING CAPACITY (BTUH)				TOTAL AMPS (PUMP 120V)	CAST IRON PUMP MED. FLOW (A)	BRONZE PUMP LOW FLOW (A)	MCA	MOCP
		120°F	GPM	140°F	GPM					
18UCSQ* 19UCSQ* 20UCSQ*	18,000	17,800	3.5	24,600	3.5	4.1	0.75	0.54	8	15
24UCSQ* 25UCSQ* 26UCSQ*	24,000	21,200	3.5	29,800	3.5	6.5	0.75	0.54	11	15
30UCSQ* 31UCSQ* 32UCSQ*	30,000	26,000	3.5	36,400	3.5	6.5	0.75	0.54	12	15
36UCSQ* 37UCSQ*	36,000	29,600	3.5	41,500	3.5	6.5	0.75	0.54	12	15

NOTE:

1. Size 31 not available with PSC motor

UCSR* 4ROW PERFORMANCE DATA												
MODEL	NOM. CAPACITY (BTU/h)	COIL DP (in. wg)	HEATING CAPACITY (BTHU)						TOTAL AMPS (PUMP 120V)	TOTAL AMPS (MOTOR 120V)	MCA	MOCP
			120°F	GPM	140°F	GPM	180°F	GPM				
18UCSR* 19UCSR* 20UCSR*	18,000	39.59	18,300	4	25,700	4	40,400	4	4.1	0.84	8	15
		25.19	17,700	4	24,800	4	39,000	4				
		14.40	16,900	4	23,900	4	37,100	4				
24UCSR* 25UCSR* 26UCSR*	24,000	39.59	22,000	4	30,800	4	48,300	4	6.5	0.84	9	15
		25.19	21,200	4	29,700	4	46,700	4				
		14.40	19,900	4	28,000	4	44,000	4				
30UCSR* 31UCSR* 32UCSR*	30,000	43.19	28,000	4	39,200	4	61,500	4	6.5	0.84	11	15
		28.79	25,800	4	36,100	4	56,800	4				
		15.60	25,100	4	35,200	4	55,200	4				
36UCSR* 37UCSR*	36,000	43.19	31,200	4	43,600	4	68,000	4	6.5	0.84	11	15
		28.79	29,800	4	41,500	4	65,300	4				
		15.60	27,400	4	38,400	4	60,500	4				

NOTE:

1. Size 31 not available with PSC motor

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WALL MOUNT FAN COILS

BLOWER DATA

ECM BLOWER DATA									
MODEL	NOM. CAPACITY (BTU/h)	MOTOR H.P. (120V)	MOTOR AMPS (120V)	SPEED TAP	CFM vs. EXTERNAL STATIC PRESSURE				
					0.1	0.2	0.3	0.4	0.5
18UCS*X*	18,000	1/3	4.1	T3	840	820	790	760	730
				T2	750	730	710	690	660
				T1	620	590	570	550	530
19UCS*X*	18,000	1/3	4.1	T3	760	730	700	670	640
				T2	680	660	640	610	590
				T1	580	560	530	500	480
20UCS*X*	18,000	1/3	4.1	T3	730	710	680	650	620
				T2	670	650	620	600	580
				T1	570	550	520	490	470
24UCS*X*	24,000	1/2	6.5	T3	870	850	830	810	790
				T2	790	770	750	730	700
				T1	680	660	640	610	590
25UCS*X*	24,000	1/2	6.5	T3	810	800	780	760	740
				T2	730	720	700	680	550
				T1	640	620	590	570	550
26UCS*X*	24,000	1/2	6.5	T3	850	830	810	780	760
				T2	770	750	730	700	680
				T1	660	630	610	580	560
30UCS*X*	30,000	1/2	6.5	T3	1100	1080	1060	1030	1010
				T2	1020	990	970	950	920
				T1	880	850	820	790	760
31UCS*X*	30,000	1/2	6.5	T3	930	910	880	850	820
				T2	790	770	750	720	700
				T1	610	580	550	530	500
32UCS*X*	30,000	1/2	6.5	T3	1060	1030	990	960	920
				T2	970	930	890	860	820
				T1	820	770	730	690	660
36UCS*X*	36,000	1/2	6.5	T3	1140	1120	1090	1060	1030
				T2	1040	1020	1000	970	950
				T1	810	780	750	720	690
37UCS*X*	36,000	1/2	6.5	T3	1080	1050	1010	980	940
				T2	990	960	920	880	850
				T1	750	700	660	620	580

NOTE:

1. T3 = High Speed for all; use Violet lead.
2. T2 = Low Speed for all; use Grey lead.

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WALL MOUNT FAN COILS

BLOWER DATA

BLOWER DATA PSC									
UNIT MODEL	NOM. CAPACITY (BTU/h)	MOTOR H.P. (120V)	MOTOR AMPS (120V)	FAN SPEED	CFM vs. EXTERNAL STATIC PRESSURE				
					0.1	0.2	0.3	0.4	0.5
18UCS*0*	18,000	1/4	4.7	High	790	740	710	650	610
				Medium	740	700	660	620	580
				Low	580	560	540	520	470
19UCS*0*	18,000	1/4	4.7	High	750	710	670	630	580
				Medium	690	660	620	590	540
				Low	540	530	500	480	450
20UCS*0*	18,000	1/4	4.7	High	720	690	650	610	570
				Medium	680	640	610	570	530
				Low	540	520	550	480	440
24UCS*0*	24,000	1/2	5.7	High	860	820	770	720	680
				Medium	830	800	750	700	660
				Low	740	700	670	620	580
25UCS*0*	24,000	1/2	5.7	High	770	740	700	660	610
				Medium	750	710	670	640	590
				Low	680	650	610	570	530
26UCS*0*	24,000	1/2	5.7	High	850	820	780	720	650
				Medium	830	790	740	690	630
				Low	730	700	660	610	560
30UCS*0*	30,000	3/4	5.4	High	1090	1040	990	940	890
				Medium	1020	970	920	870	820
				Low	990	950	900	860	800
32UCS*0*	30,000	3/4	5.4	High	1030	970	920	860	820
				Medium	1010	960	910	850	800
				Low	990	940	890	830	780
36UCS*0*	36,000	3/4	5.4	High	1090	1040	990	940	890
				Medium	1020	970	920	870	820
				Low	990	950	900	860	800
37UCS*0*	36,000	3/4	5.4	High	1030	970	920	860	820
				Medium	1010	690	910	850	800
				Low	990	940	890	830	780

NOTE:

1. High Speed = Black Lead; Medium Speed = Blue Lead; Low Speed = Red Lead



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