



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

CW-HW & CWX-HW Series

CHILLED WATER COOLING WITH HOT WATER OR ELECTRIC HEAT

VERTICAL 190-1190 CFM

CW-HW PSC Motor Options

3 speed 120V with 24V controls

- 120V/1PH /60HZ
- 208-230V/1PH/60HZ
- 277V/1PH/60HZ

NEW

CWX-HW ECM Motor Options

The ECM motor option includes 24V controls, a constant torque, permanent magnet, brushless DC motor, with 4 discrete speed taps that allow for high static applications and precise air balancing Voltage options:

- 120V/1PH /60HZ
- 208-230V/1PH/60HZ
- 277V/1PH/60HZ



HIGH EFFICIENCY
HIGH PERFORMANCE



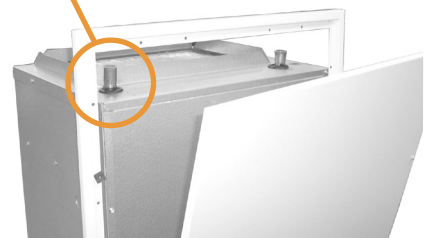
NEW!

ECM MOTOR OPTION

This new ECM motor option includes 24V controls, a constant torque, permanent magnet, brushless DC motor, with 4 discrete speed taps that allow for precise air balancing.

The **CW(X)** is equipped with a control board that allows 24V **3-speed fan operation from a 3-speed wall mounted thermostat**. Three compatible 3-speed thermostats are available from First Co.: manual changeover (#T420), auto changeover (#T421), and the all new "Autospeed 24V" (#T200 and #T201). The T200/T201 Autospeed 24V provides maximum comfort and efficiency by **automatically varying the fan speed between High, Medium, and Low speeds**, depending on room temperature and desired thermostat setting. (See P5. for additional information)

(X) Denotes with ECM motor



*** Accessible HW Connections**

CW-HW(X) SERIES *4-PIPE UPFLOW WALL/CLOSET*

The CW-HW series is designed for as an upflow indoor air handler with a chilled water coil for cooling and hot water coil for heating.

STANDARD FEATURES

- 120V motor, 24V 3-speed fan control
- **Electrical service pullout** not available on CW-HW four pipe unit
- Factory installed electric heat
- Non-corrosive thermoplastic drain pan, slope for positive drainage
- Separate compartment for drain connections (allows the use of PVC drain piping)
- Drain pan has female primary and secondary fittings
- Easily accessible 1" filter
- Various optional factory installed valve packages
- Coil connections stub out top of unit

OPTIONAL ACCESSORIES (see Page 4)

Optional accessories include 3-Speed Wall Thermostats, Wall Panels with captive Screws (for recessed wall mounting), Condensate Overflow Switch, Closet Hanger Bracket Kit, Bottom Return Air Kit and various Chilled Water Valve Packages.



Standard unit shown
(Closet application - Front Return Air)

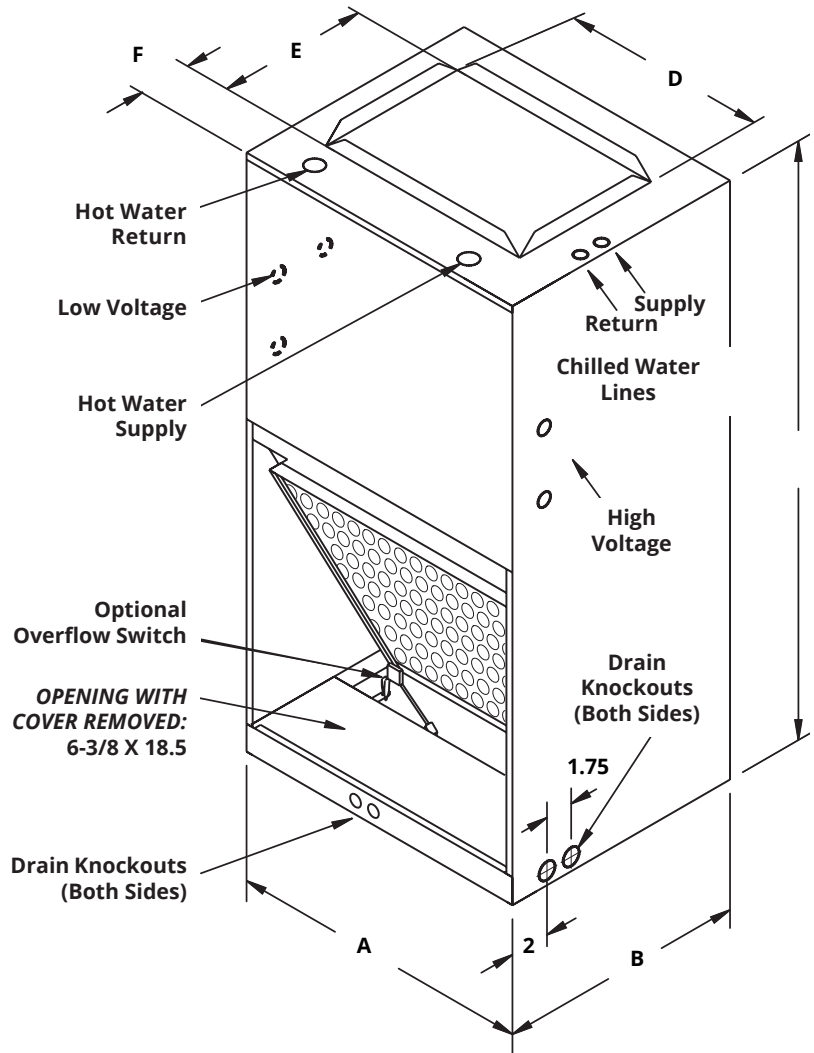
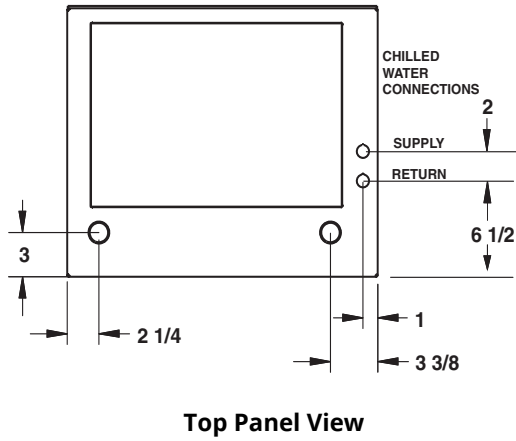


Unit shown with bottom return air kit
(Closet application - Bottom Return Air)

CW-HW Series Upflow Wall / Closet Fan Coils

4-PIPE CHILLED WATER - HOT WATER

(190 - 1190 CFM)



PHYSICAL DIMENSIONS								
UNIT MODEL	A	B	C	D	E	F	FILTER SIZE	CW AND HW COIL CONNECTIONS
4 - 8CW-HW	22-1/8	18-1/8	43	18	12-1/2	4-3/4	18 X 18	5/8 O.D.
10CW-HW	22-1/8	18-1/8	43	18	12-1/2	4-3/4	18 X 20	5/8 O.D.
12CW-HW	22-1/8	21-1/8	43	18	15-1/2	4-3/4	18 X 20	5/8 O.D.

NOTE:

1. Coil connections are sweat and stub out top of unit

CW-HW Series Upflow Wall / Closet Fan Coils

4-PIPE CHILLED WATER - HOT WATER

(190 - 1190 CFM)

COOLING CAPACITY																	
UNIT MODEL	NOMINAL CFM	45 DEGREE ENTERING WATER									42 DEGREE ENTERING WATER						
		GPM	P.D. (Ft. Wtr.)	80F D.B. / 67F W.B.			75F D.B. / 63F W.B.			GPM	GPM (Ft. Wtr.)	80F D.B. / 67F W.B.			75F D.B. / 63F W.B.		
				TH	SH	TR	TH	SH	TR			TH	SH	TR	TH	SH	TR
4CW-HW	400	1.5	4.5	9.7	8.0	12.8	8.0	7.3	10.6	1.5	4.5	10.8	8.4	14.3	9.0	7.7	11.9
		2.5	11.1	11.8	9.0	9.4	9.5	8.1	7.6	2.5	11.1	13.2	9.5	10.5	10.8	8.6	8.6
		3.4	19.2	12.8	9.5	7.5	10.3	8.4	6.0	3.4	19.2	14.5	10.2	8.4	11.8	9.1	6.9
6CW-HW	600	3.0	5.0	17.0	13.5	11.3	13.9	12.3	9.2	3.0	5.0	19.0	14.3	12.6	15.7	13.0	10.4
		4.0	8.6	19.0	14.5	9.5	15.3	13.0	7.6	4.0	8.6	21.3	15.4	10.6	17.5	13.9	8.7
		5.0	13.0	20.5	15.1	8.1	16.4	13.5	6.5	5.0	13.0	23.0	16.1	9.1	18.8	14.5	7.5
8CW-HW	800	6.5	12.5	22.6	18.2	6.9	18.4	16.2	5.6	6.5	12.5	25.2	19.1	7.7	20.8	17.4	6.4
		7.5	16.4	23.8	18.6	6.3	19.2	16.7	5.1	7.5	16.4	26.6	19.7	7.1	21.9	17.9	5.8
		8.3	19.9	24.7	18.9	5.9	19.9	17.0	4.8	8.3	19.9	27.6	20.1	6.6	22.6	18.2	5.4
10CW-HW	1000	6.5	5.7	28.7	22.8	8.8	23.4	20.5	7.2	6.5	5.7	32.1	24.1	9.8	26.4	21.9	8.1
		8.0	8.2	31.0	23.8	7.7	25.1	21.3	6.2	8.0	8.2	34.7	25.2	8.6	28.5	22.8	7.1
		9.5	11.0	32.9	24.5	6.9	26.4	22.0	5.5	9.5	11.0	36.9	26.2	7.7	30.2	23.5	6.3
12CW-HW	1200	6.0	6.3	32.4	26.8	10.8	26.7	24.2	8.8	6.0	6.3	36.1	28.3	12.0	29.9	25.7	9.9
		7.5	9.5	35.8	28.3	9.5	29.0	25.5	7.7	7.5	9.5	40.0	29.9	10.6	32.9	27.1	8.7
		9.0	13.2	38.4	29.5	8.5	31.0	26.4	6.9	9.0	13.2	43.3	31.4	9.6	35.4	28.2	7.8

HEATING CAPACITY											
UNIT MODEL	NOMINAL CFM	GPM	P.D. (Ft. Wtr.)	HEATING DATA (70° ENTERING AIR)							
				BTUH @ 180 F	LVG AIR F	BTUH @ 160 F	LVG AIR F	BTUH @ 140 F	LVG AIR F	BTUH @ 120 F	LVG AIR F
4CW-HW	400	2.0	1.2	30.0	139	see below		see below		see blow	
		3.2	2.9	33.3	147						
		---	---	---	---						
4CW-HW	400	2.0	1.2	see above		24.3	124.7	18.8	112.3	13.3	100.0
		4.0	4.4			27.2	131.1	21.1	117.3	15.0	103.6
		6.0	9.3			28.2	133.4	21.9	119.2	15.6	105.0
6CW-HW	600	2.0	1.2	37.0	125.5	30.1	115.1	23.3	104.8	16.5	94.6
		4.0	4.4	43.0	134.4	35.0	122.5	27.1	110.6	19.2	98.8
		6.0	9.3	45.3	137.9	37.0	125.4	28.6	112.9	20.4	100.5
8CW-HW	800	4.0	4.4	51.4	127.8	41.9	117.0	32.4	106.4	22.9	106.4
		5.5	7.9	54.3	131.0	44.3	119.7	34.2	108.5	24.3	108.5
		7.0	12.3	56.1	133.0	45.7	121.4	35.4	109.8	25.1	109.8
10CW-HW	1000	4.0	4.4	58.4	122.4	47.5	112.7	36.7	103.0	26.0	93.3
		5.5	7.9	62.2	125.9	50.7	115.5	39.2	105.2	27.8	95.0
		7.0	12.3	64.6	128.1	52.7	117.3	40.8	106.6	28.9	96.0
12CW-HW	1200	4.0	4.5	67.1	120.2	54.6	110.9	42.2	101.6	29.9	92.4
		5.5	8.2	71.9	123.9	58.6	113.9	45.3	103.9	32.2	94.1
		7.0	12.9	75.0	126.1	61.1	115.8	47.3	105.4	33.6	95.1

BLOWER DATA - PSC											
UNIT MODEL	MOTOR H.P. (120V)	AMPS	MOTOR SPEED	CFM VS. EXTERNAL STATIC PRESSURE							
				0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40
4CW-HW	1/15	0.8	HIGH	485	470	455	440	410	380	350	---
			MEDIUM	395	380	365	350	325	300	275	---
			LOW	300	280	265	250	230	210	190	---
6CW-HW	1/4	2.9	HIGH	730	710	685	660	640	620	595	---
			MEDIUM	600	580	565	550	530	510	490	---
			LOW	465	450	435	420	405	390	375	---
8CW-HW	1/3	5.8	HIGH	890	870	845	820	800	780	760	740
			MED. LOW	715	700	685	670	655	640	625	610
			LOW	575	560	550	540	525	510	500	490
10CW-HW	1/2	8.0	HIGH	1085	1060	1070	1020	995	970	950	930
			MED. LOW	910	890	870	850	835	820	800	780
			LOW	745	730	715	700	690	680	665	650
12CW-HW	1/2	7.0	HIGH	1190	1170	1150	1130	1105	1080	1055	1030
			MED. LOW	955	940	930	920	905	890	875	860
			LOW	765	760	750	740	735	730	720	710

CWX-HW Series Upflow Wall / Closet Fan

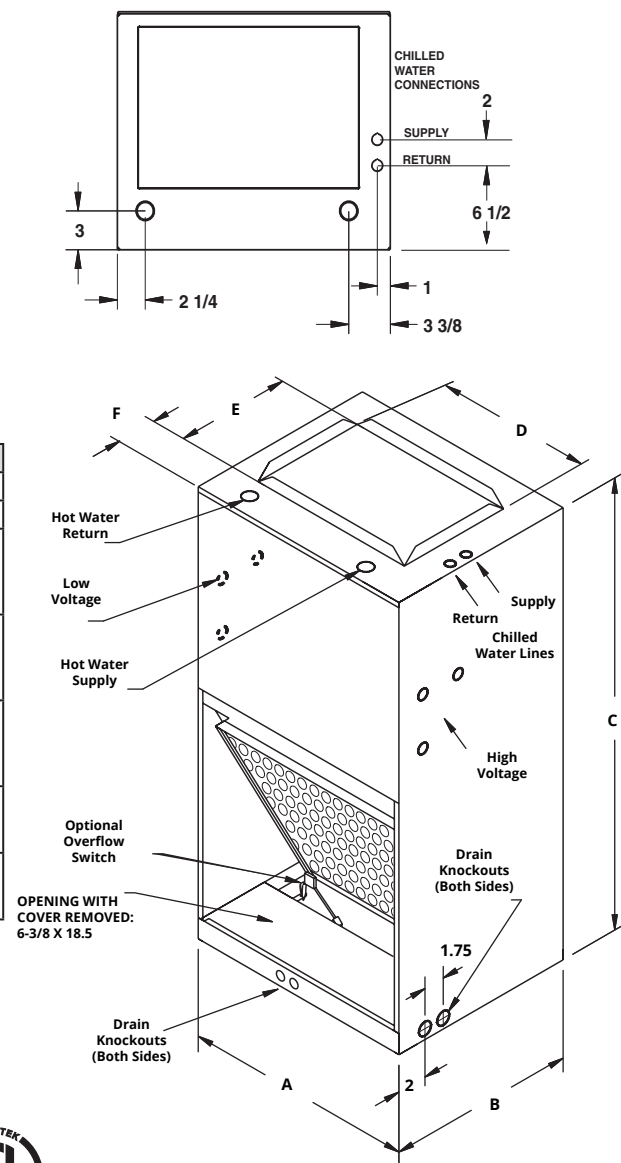
Coils 4-PIPE CHILLED WATER - HOT WATER (190 - 1190 CFM)

COOLING CAPACITY																	
UNIT MODEL	NOMINAL CFM	45 DEGREE ENTERING WATER									42 DEGREE ENTERING WATER						
		GPM	P.D. (Ft. Wtr.)	80F D.B. / 67F W.B.			75F D.B. / 63F W.B.			GPM	GPM (Ft. Wtr.)	80F D.B. / 67F W.B.			75F D.B. / 63F W.B.		
				TH	SH	TR	TH	SH	TR			TH	SH	TR	TH	SH	TR
4CWX-HW	400	1.5	4.3	9.7	8.8	13.0	7.8	7.8	10.4	1.5	4.3	10.6	9.1	14.1	8.6	8.6	11.4
		2.5	10.5	12.0	9.6	9.6	9.2	8.5	7.4	2.5	10.5	13.1	10.0	10.5	10.0	8.8	8.0
		3.5	19.0	13.1	10.0	7.5	10.0	8.8	5.7	3.5	19.0	14.2	10.5	8.1	10.9	9.2	6.2
6CWX-HW	600	3.0	5.0	17.3	13.1	11.5	13.2	11.5	8.8	3.5	6.7	20.0	14.1	11.4	15.3	12.3	8.7
		4.0	8.6	19.2	13.8	9.6	14.7	12.1	7.3	4.5	10.7	21.7	14.8	9.6	16.6	12.8	7.4
		5.0	13.0	20.4	14.3	8.2	15.6	12.5	6.2	5.5	15.5	22.8	15.2	8.3	17.4	13.2	6.3
8CWX-HW	800	6.5	11.4	23.2	17.1	7.1	17.7	15.0	5.4	6.0	9.8	24.6	17.6	8.2	18.8	15.4	6.3
		7.5	14.8	24.2	17.4	6.5	18.5	15.3	4.9	7.0	13.1	25.8	18.1	7.4	19.7	15.8	5.6
		8.5	18.7	25.0	17.7	5.9	19.1	15.5	4.5	8.0	16.7	26.8	18.4	6.7	20.5	16.1	5.1
10CWX-HW	1000	6.5	5.7	29.0	21.6	8.9	22.2	19.0	6.8	6.0	4.6	30.7	22.2	10.2	23.5	19.4	7.8
		8.0	8.2	31.0	22.3	7.8	23.7	19.5	5.9	8.0	8.2	33.8	23.4	8.5	25.8	20.4	6.5
		9.5	11.0	32.5	22.9	6.8	24.8	20.0	5.2	10.0	12.1	35.8	24.1	7.2	27.3	20.9	5.5
12CWX-HW	1200	6.0	6.3	33.0	26.1	11.0	25.2	23.1	8.4	5.5	5.4	34.7	26.7	12.6	26.5	23.5	9.6
		7.5	9.5	36.1	27.3	9.6	27.6	24.0	7.4	7.0	8.4	38.3	28.1	10.9	29.3	24.6	8.4
		9.0	13.2	38.5	28.1	8.5	29.4	24.7	6.5	8.5	11.9	41.1	29.2	9.7	31.4	25.5	7.4

HEATING CAPACITY												
UNIT MODEL	NOMINAL CFM	GPM	P.D. (Ft. Wtr.)	HEATING DATA (70° ENTERING AIR)								
				BTUH @ 180 F		BTUH @ 160 F		BTUH @ 140 F		BTUH @ 120 F		
				LVG AIR F	F	LVG AIR F	F	LVG AIR F	F	LVG AIR F	F	
4CWX-HW	400	2.0	1.3	30.0	139	24.6	127	19.1	114	13.6	102	
		4.0	4.5	33.3	147	27.3	133	21.2	119	15.1	105	
		6.0	9.6	34.9	151	28.5	136	22.2	121	15.9	107	
6CWX-HW	600	2.0	1.3	38.5	129	31.5	119	24.5	108	17.5	97	
		4.0	4.5	43.4	137	35.5	125	27.6	113	19.7	100	
		6.0	9.6	45.7	141	37.4	128	29.1	115	20.8	102	
8CWX-HW	800	4.0	4.5	52.0	130	42.6	119	33.1	108	23.6	97	
		5.5	8.0	54.5	133	44.6	122	34.7	110	24.8	99	
		7.0	12.5	55.9	135	45.8	123	35.6	111	25.4	99	
10CWX-HW	1000	4.0	4.5	59.4	125	48.6	115	37.8	105	27.0	95	
		5.5	8.0	62.5	128	51.2	117	39.8	107	28.4	96	
		7.0	12.5	64.3	130	52.6	119	40.9	108	29.2	97	
12CWX-HW	1200	4.0	4.5	70.2	124	57.4	114	44.6	104	31.9	95	
		5.5	8.2	73.7	127	60.3	116	46.9	106	33.5	96	
		7.0	12.9	75.8	128	62.0	117	48.2	107	34.4	97	

BLOWER DATA - ECM												
UNIT MODEL	MOTOR HP	AMPS	SPEED TAP	CFM vs EXTERNAL STATIC PRESSURE								
				0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	
4CWX-HW	1/3	4.8	4	660	640	615	590	560	530	500	470	
			3	500	490	480	470	450	430	415	400	
			2	415	400	385	370	350	330	310	290	
			1	340	330	310	290	275	260	235	210	
6CWX-HW	1/3	4.8	4	730	720	710	700	685	670	655	640	
			3	660	650	640	630	615	600	585	570	
			2	540	520	500	480	470	460	440	420	
			1	400	380	360	340	320	300	280	260	
8CWX-HW	1/2	6.8	4	990	980	960	940	920	900	875	850	
			3	860	850	835	820	810	800	785	770	
			2	710	700	690	680	665	650	635	620	
			1	560	550	540	530	515	500	485	470	
10CWX-HW	1/2	6.8	3	1100	1080	1060	1040	1020	1000	975	950	
			2	900	890	880	870	860	850	835	820	
			1	770	760	740	720	710	700	690	680	
			1	960	950	940	930	915	900	890	880	

PHYSICAL DIMENSIONS								
UNIT MODEL	A	B	C	D	E	F	FILTER SIZE	CW AND HW COIL CONNECTIONS
4 - 8CWX-HW	22-1/8	18-1/8	43	18	12-1/2	4-3/4	18 X 18	5/8 O.D.
10CWX-HW	22-1/8	18-1/8	43	18	12-1/2	4-3/4	18 X 20	5/8 O.D.
12CWX-HW	22-1/8	21-1/8	43	18	15-1/2	4-3/4	18 X 20	5/8 O.D.



NOTES:
 1. Coil connections are sweat and stub out top of unit



AUTOMATIC FAN SPEED CONTROL

The Autospeed 24V™ Thermostats

(PART #'S T200/T201)



(T200 shown with wall plate)

The new **Autospeed 24V™** thermostat (part's # T200 and T201) provides 24V AC single stage temperature control of 2 pipe and 4 pipe fan coil applications. The T200/T201 thermostat offers maximum comfort and efficiency by **automatically selecting the appropriate High, Medium, or Low fan speed**, depending on room temperature and thermostat temperature setting. This automatic fan speed control not only brings the room temperature to the desired set point quickly, it maintains the room temperature with the most efficient fan speed selection.

Once the desired room temperature is achieved the fan coil operates on low speed for extremely quiet operation. The fan coil control board (which is factory installed in all CW units) is a circuit board that provides control of a 3-speed line voltage fan motor. The control board allows the thermostat to control the fan motor even though, by itself, the thermostat does not have the amperage capability nor the voltage rating capability to control the fan motor.

T200/T201 THERMOSTAT FEATURES

- Compatible with 2 pipe and 4 pipe fan coils: Series HBC/PHBC/RHBC/CHBC, MB/MB-HW, HYB/PHYB, and CW/CH-HW/CWE
- Cycle fan or continuous fan operation
- **T200**-Manual Heat / Cool changeover switch
- **T201**-Automatic Heat / Cool changeover switch
- Set points are permanently retained in memory in case of power interruption
- 3-speed fan operation, with speed indicator lights
- Fan speed determination:
 - If room temperature is 4 degrees (F.) off thermostat set point, fan will operate on High speed.
 - If 3 degrees off set point, fan will operate on Medium speed.
 - If within 2 degrees of set point, fan will operate on Low speed.
- One or 3 hour Auto override - Fan speed defaults to "Auto" mode after 1 hour if the user manually changes it to a particular fan speed.
- Large LED digital display
- Allows less expensive 24V control wiring from the fan coil to the thermostat, rather than larger, more expensive line voltage wiring.
- Temperature set range: 64-88 degrees F.
- Adjustable high and low temperature set points
- Selectable Fahrenheit / Centigrade display
- Power switch turns system off/on
- Requires 7-wire 24V thermostat wire
- No batteries required
- Simple operation
- Mercury Free
- Wall plate included

DISPLAY CODES		
DISPLAY	STEADY	FLASHING
P1	Auto fan timer - 1 hour (default)	Auto fan timer - 3 hour
P2	Continuous fan (default)	Cycled fan
P3	°F (default)	°C
P4	Cycled fan standard	Cycled fan overdrive (default)
P5	Low temp limit 64 °F (default)	Low temp limit 67 °F
P6	Hi temp limit 88 °F (default)	Hi temp limit 84 °F

CW-HW Series Upflow Wall / Closet Fan Coils

OPTIONAL ACCESSORIES (FIELD INSTALLED)			
DESCRIPTION	PART #	DIMENSIONS	
WALL PANEL (1)	9PWUC01L (4-10)	43-3/8 X 25-5/8 (Outside Frame)	40-3/8 X 22-5/8 (Inside Frame)
	9PWUC02L (12)	46-3/8 X 25-5/8 (Outside Frame)	43-3/8 X 22-5/8 (Inside Frame)
HANGER BRKT. SET	90PK3	1-1/2 X 22-1/8	---
RETURN AIR COVER	90PK4 (4-10)	19-13/16 X 22	---
	90PK5 (12)	21-5/8 X 22	---
CONDENSATE OVERFLOW SWITCH	SS3	---	---
WALL THERMOSTAT 3-SPD., MANUAL CHANGEOVER	T420 (120/230/277)	---	---
WALL THERMOSTAT 3-SPD., AUTO CHANGEOVER	T421 (120/230/277)	---	---
24V WALL THERMOSTAT 3-SPD., MANUAL CHANGEOVER (AUTOSPEED 24V)	T200 (24V)	---	---
24V WALL THERMOSTAT 3-SPD., AUTO CHANGEOVER (AUTOSPEED 24V)	T201 (24V)	---	---

OPTIONAL VALVE CLUSTERS (Factory installed)	
PART #	DESCRIPTION
VALVE CLUSTER:	Chilled Water Coils
9VCWNVN	No valves, stub kit only
9VCW2BVM	2 hand valves
9VCW22BM	2-way, valve body, 2 hand valves
9VCW23BM	3-way, valve body, 2 hand valves
POWER HEAD:	
911-111	24V
VALVE CLUSTER:	Hot Water Coil including Power Head
HW-2WM	2-way, valve body, 2 hand valves
HW-3WM	3-way, valve body, 2 hand valves

⚠ WARNING AVERTISSEMENT ADVERTENCIA
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**T200/T201
AUTOSPEED 24V™
THERMOSTAT**



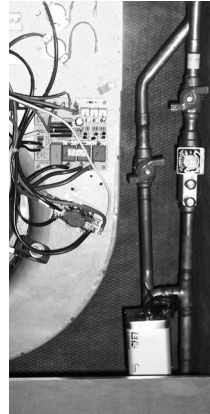
**T420/T421
THERMOSTAT**



Optional wall panel
(Recessed wall application)

NOTE:

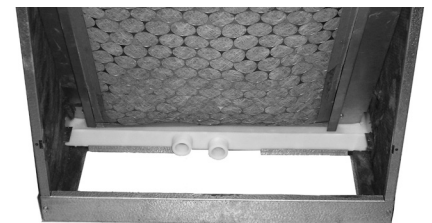
All models are available with or without factory installed valve clusters. Above are "standard" 2-way and 3-way valve clusters. Contact the factory for other options such as circuit setters, strainers, auto-flow valves, etc.



Unit shown with an
optional valve package



Unit shown with optional
bottom return air kit
(#90PK4)



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

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.

CW-HW Series Upflow Wall / Closet Fan Coils

4-PIPE CHILLED WATER - HOT WATER

(190 - 1190 CFM)

OPTIONS

Cabinet Return Panel

Return air panel converts front return air to bottom return air configuration.

90PK4 - CW(X)-HW4-10

90PK4F - CW(X)-HW4-10 Foil Faced Insulation.

90PK5 - CW(X)-HW-12

90PK5F - CW(X)-HW-12 Foil Faced Insulation.

Wall Mount Bracket Kit

Kit allows unit to be mounted directly to the wall.

90PK3 - CW(X)-HW4-12

Insulation

Foil Face with wrapped edges prevents fiberglass fibers from entering the air stream.

Coils

Chilled Water

2,3 and 4 row coils available.

Hot Water

1,2,3 and 4 row coils available.

(Contact Factory for availability)

Wall Panels

Framed wall panels are available with return air louvers or solid for bottom return configurations.

LOUVERED PANEL

9PWUCO3L CW(X)-HW4-12

SOLID PANEL

9PWUCO3S CW(X)-HW4-12

4-Pipe Cooling and Heating

Manual Changeover - Requires thermostat with Heat/Cool switch.

Auto Changeover - Requires thermostat with Heat/Cool/ Auto switch.

Motors

PSC 3-Speed

Includes CB500 3-Speed control board and 24-V transformer.

115-V single phase 60-Hz

ECM 3-speed

Includes 24-V Transformer and terminal strip.

115-V single phase 60-Hz

Valve packages

Factory assembled and installed inside the cabinet and factory wired.

4-Pipe

2-Way Valve w/4-bv - 9VCW42BM

3-Way Valve w/4-bv - 9VCW43BM

Valve Actuators

E50132180 24V

No Valves

Stub-Out tubing kit only - 9VCWHNVW

Factory installed valve package accessories

CP601 - 1/2" Manual Circuit Setter

CP6011 - 3/4" Manual Circuit Setter

Auto Flow Control Hays 2517

CP6025 - Pete's Plugs 1/4" NPT

CP603 - 1/2" Y-Strainer

CP6031 - 3/4" Y-Strainer

CP603B - 1/2" Y-Strainer w/blow down

CP6031B - 3/4" Y-Strainer w/blow down

Thermostats

T-420 Manual Changeover

2-Pipe/4-Pipe 3-Speed, 24 to 277 VAC, remote sensing available.

T-421 Auto Changeover

2-Pipe/4-Pipe 3-Speed, 24 to 277 VAC, remote sensing available.

T200 Manual Changeover

2-Pipe/4-Pipe 3-Speed Auto Speed, 24 VAC, LCD Display

T201 Auto Changeover

2-Pipe/4-Pipe 3-Speed Auto Speed, 24 VAC, LCD Display

T426 Auto or Manual Changeover

2-Pipe/4-Pipe 3-Speed Auto Speed, 24 VAC or 110-277, LCD Display backlight, setback capability, key pad lockout, local or remote sensing, temperature range limits.

T427 Programmable Auto or Manual Changeover









2-Pipe/4-Pipe 3-Speed Auto Speed, 24 VAC or 110-277, LCD Display backlight, 7 day, 4 event, setback capability, key pad lockout, local or remote sensing, temperature range limits.

SS-3 Condensate overflow switch is field mounted to the drain pan.

VALVE PACKAGES AND ACCESSORIES

VALVES AND ACCYS

2-Pipe Hydronic

ACTUATOR		 <p>2-Way Valve and Actuator</p>	ACTUATOR MATERIALS					
2-POSITION (ON-OFF) 50/60HZ			BASE	POLYCARBONATE		APPROVALS		
VOLTAGE	PART #		COVER	POLYCARBONATE		ETL Cul CE		
24V	E50131180		BASE PLATE	ALUMINUM				
230/1/60	E50138180		LEAD LENGTH	6" - (24V 18")				
277/1/60	E50137180		AMBIENT TEMPERATURE RANGE	32 TO 170 F				
220/1/50	E50138180		MICRO SWITCH	5 A, 250 V				
			HUMIDITY	95% NON-CONDENSING				
VALVE BODY MATERIALS			VALVE BODIES (2-POSITION)					
BODY		BRASS	E43XXXX 3-WAY		E42XXXX 2-WAY			
STEM		STAINLESS STEEL						
TWO O-RINGS SEALS		EPDM						
PADDLE		EPDM						
FLUID		WATER/GLYCOL						
MAXIMUM % OF GLYCOL		50%						
TEMPERATURE RANGE		32 TO 230	VALVE PACKAGE ACCESSORIES					
MAXIMUM STATIC PRESSURE		300 PSI	Automatic Fixed Flow Control		Manual Adj. Flow Setter			
SWEAT CONNECTION		1/2", 3/4", 1"	1/2"	3/4"				
FLOW CHARACTERISTICS			CP654XXXXX	CP655XXXXX				
Conne- tion Size	Flow Coefficient	Maximum Close-Off Pressure AP	PETE'S PLUG	Requires CP6025 CP61712				
1/2"	1.0 Cv	75	Ball Valves (Sweat)					
1/2"	2.5 Cv	50	Full Port (T-Handle)					
3/4"			1/2"	3/4"	1"	Y-Strainer (Sweat)		
1/2"	3.5 Cv	30	CP-9	CP-90	CP-905	1/2"	3/4"	
3/4"								
3/4"	5 Cv	25						
1"								
3/4"	7.5 Cv	20						
1"								
1"	8 Cv	20						



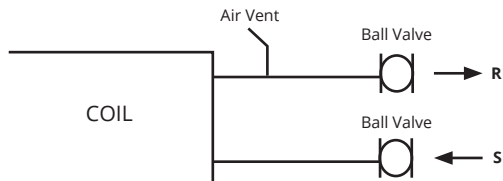
Unit shown with an optional valve package factory installed

PIPING PACKAGE OPTIONS

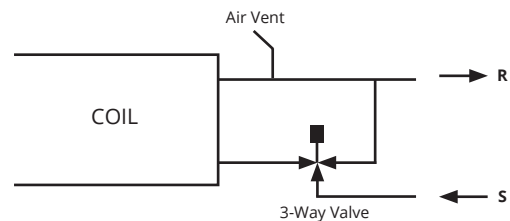
TWO POSITION · MODULATING

Manual air vents are standard and are factory mounted on all chilled water and hot water coils. All pre-piped on/off or modulating valve packages are factory assembled with sweat connections.

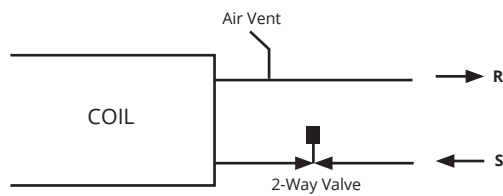
Ball Valves only, No Control Valve



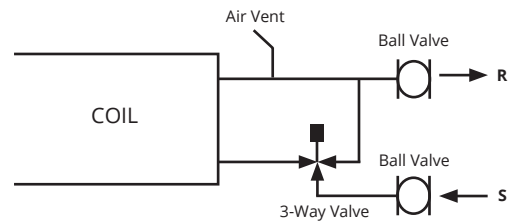
3-Way Valve, No Ball Valves



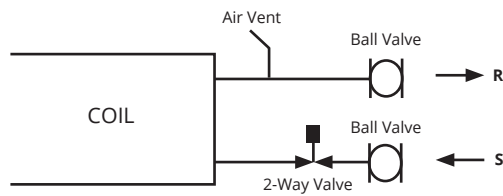
2-Way Valve, No Ball Valves



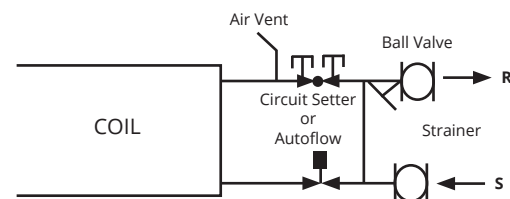
3-Way Valve, with 2-Ball Valves



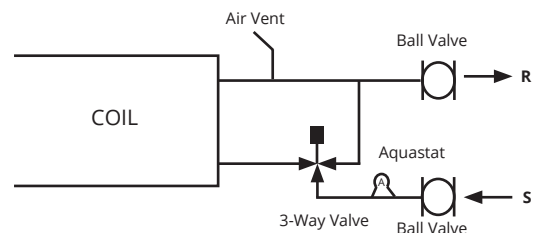
2-Way Valve with 2-Ball Valves



3-Way Valve, with 2-Ball valve and Manual Circuit Setter or Autoflow Control, Y-Strainer, PT's



3-Way Valve with 2-Ball Valves and Aquastat



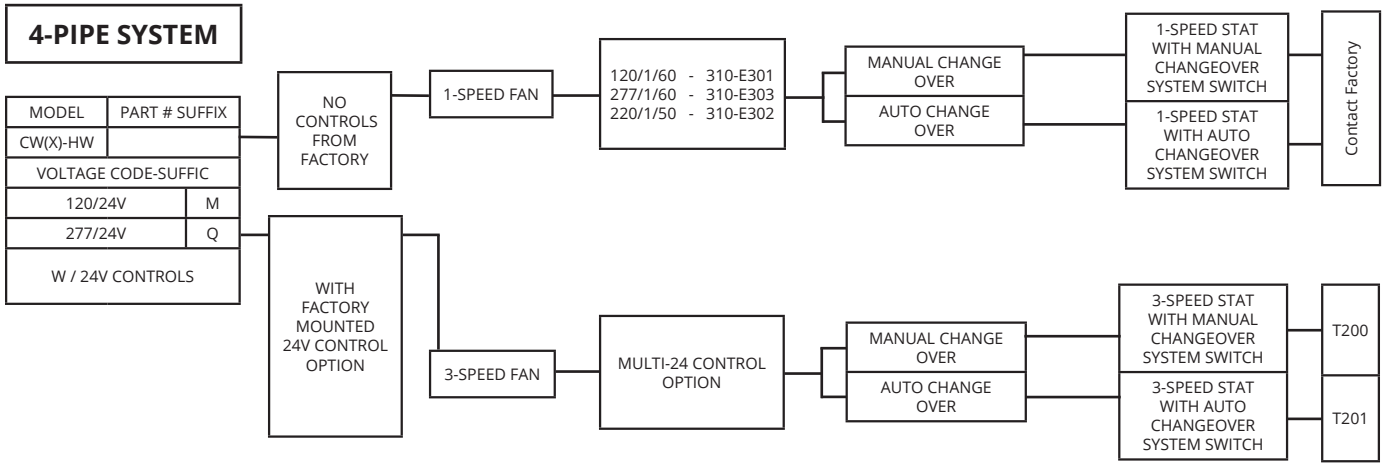
Add Options:

Y-Strainers, Pete's Plugs, Cleanout Blow-down, SS hose kits, Aqua Stats

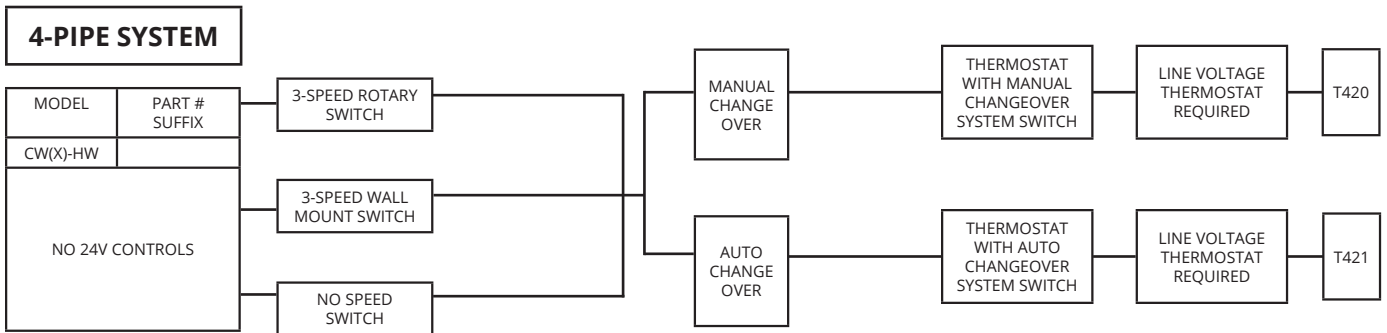
Additional options and configurations may be available. Contact factory for availability.

Valve packages are available as kits or factory mounted on certain products. Contact factory for availability.

LOW VOLTAGE 24V CONTROLS



LINE VOLTAGE 120/230/277V CONTROLS



CW(X), CW(X)-HW, CWE(X)

GUIDE SPECIFICATIONS

SYSTEM DESCRIPTION

Vertical fan coil units, 2-pipe, 4-pipe or 2-pipe electric heat for closet or wall furred-in applications for single or multi-story buildings. Units shall be completely assembled and complete with water coils, fan, motor, drain pan, and all required wiring, piping, controls and special features.

Water Coils

All coils shall have 3/8-inch copper tubes mechanically bonded to a configured aluminum plate fin. The copper tubes comply with the ASTM B-75. Coils shall be leak tested at the factory to ensure the pressure integrity. The coil shall be leak tested under water to 450 psig for operation to 300 psig. Coils are equipped with two manual air vents for the supply and return lines.

Valve Package with Automatic Flow Devices (option)

The optional valve package shall contain factory furnished and installed 2-way or 3-way 2-position, spring return, normally open, LEAD FREE, motorized valves rated at 300 psig for 2-pipe or 4-pipe applications. Valve Actuator to be easily detached from valve body with a push button. The ball valves, strainers, and automatic flow controls shall be rated at 600 psig. The automatic flow control valve shall be factory set to a rated flow, and shall automatically control flow to within 10% of the rated value over a 40 to 1 differential pressure, operating range (2 to 80 PSID). Operational temperature shall be rated from fluid freezing, to 225°F. The valve body shall be constructed from hot forged brass UNS C37700 per ASTM B-283 latest revision. For more information pertaining to the automatic balancing valve packages, see literature documentation.

Cabinet

Fabricated from heavy gauge galvanized steel. Large access panels permit full access to internal components. The structural integrity of the cabinets shall remain unaffected by the removal of any or all access panels. All panels shall be insulated with ½" Tuf-Skin RX™, which offers greater sound absorption and better thermal efficiency. Insulation to have a special acrylic coating that's formulated with an EPA registered anti-microbial agent. The insulation meets the erosion requirements of UL 181. It has a flame spread of less than 25 and a smoke developed classification of less than 50 per ASTM E-84 and UL 723. Access for inspection and cleaning of the unit drain pan, coils and fan section shall be provided. The unit shall be installed for proper access.

Basic Controls

Units include the following controls and functions. Provide with a 3-speed circuit board (CB500) with conformal coating (both sides of board) for humidity and condensation protection. Controls include 24V transformer, 15 amp service disconnect, and fan relays factory mounted and wired.

Drain Pan

The condensate pan shall be constructed of corrosion proof material. The bottom of the drain pan shall be sloped on two planes which pitches the condensate to the drain connection. The drain pan shall be flame rated per UL945V-B.

Electrical

The unit control box shall contain all necessary devices to allow heating and cooling operation to occur from a remote wall thermostat. These devices shall be as follows:

24 VAC energy limiting class II [40 VA] (minimum) transformer] 24 VAC 3-speed control board.

Thermostat connections shall be provided for ease of hook-up to a terminal strip located in the unit's control box.

Electric Heat (CWE only)

Unit shall be equipped with nichrome wire electric strip heaters for total or auxiliary electric heat as specified on equipment schedule.

Heaters shall be protected by an automatic reset safety cutout switch.

Heater capacity shall be as specified on the equipment schedule.

Heaters shall be single phase, 60 Hz for 208, 240 or 277 volts as specified on the equipment schedule.

For total electric heat, unit controls may include a sequenced heating and cooling thermostat.

*For auxiliary electric heat or twilight heat, optional unit controls shall include 2 additional automatic changeover devices.

Filters

One inch filters shall be standard and factory installed.

Indoor Blower Wheels are double width, double inlet (DWDI), forward curved, centrifugal type. They are statically and dynamically balanced for a smooth, quiet operation. The Class I housing is constructed of heavy gauge steel with die-formed inlet cones.

Motors to be multi-speed, 120V, 208-230V, or 277V single phase, 60-Hz, permanent split capacitor (PSC) or electrically commutated motor (ECM) type factory mounted to the blower assembly with rubber isolators or optional ECM with 3 speeds factory programmed.

Wall Panels to be louvered or solid frame type. Panels fabricated of heavy gauge galvanized steel and coated with white epoxy powder finish. Panel to be insulated with ½" Tuf-Skin RX™. Panel to provide full access to all internal components including valve packages.