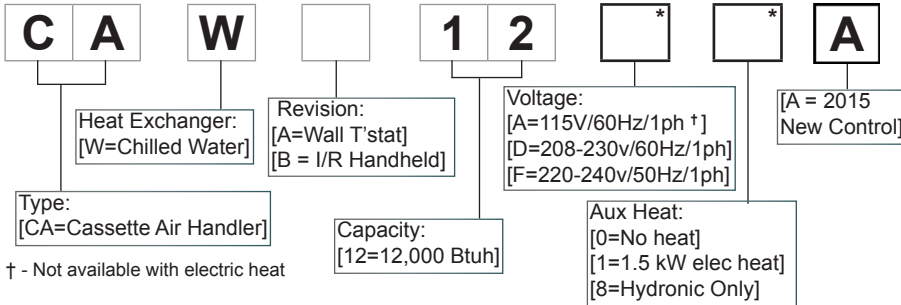


## 12,000 Btuh Hydronic Fan Coil Ceiling Cassette Air Handler

### Indoor Air Handler Model:



### Order Quantity of Air Handler

12,000 Btuh Hydronic Fan Coil Ceiling Cassette Air Handler

\* Select Voltage and Aux Heat option

No derate for 50Hz or 115v

### Please indicate desired quantity of optional accessories for each air handler (max allowed)

24VAC Wired Thermostat, Single-Stage, 1-Heat/1-Cool, Manual Changeover, #240008208 (1)	5 1/4" Ø Discharge Air Duct Collar Kit, 2pcs, #240009786 (1 kit, any 2 non-adjacent sides)
24VAC Wired Thermostat, Single-Stage, 1-Heat/1-Cool, Auto Changeover, #240008210 (1)	3" Ø Fresh Air Duct Collar Kit, 3 pcs, #240003416 (1 kit)
OEM Hand-Held Infrared Remote Control (#240006566) (1, For all CAWB air handlers)	Condensate Pump, 144" lift, External Floor Mount, 208/230v-#240003106 / 115v-#240003107 (Unit comes w/ 30" lift pump) (1)

NOTE: Every air handler requires either a 24VAC Wall Thermostat or Hand-Held Infrared Remote

### Electrical Specifications

Model #	Volts/Ph/Hz	Fan Motors		Elec Heat		Total Amps	Min Volt.	MCA	HACR BRKR
		Amps	HP	Amps	kW				
CAW_12D0	208-230/1/60	0.35	1/10	-	-	.04	197	0.5	15
CAW_12F0	220-240/1/50	0.35	1/10	-	-	1.0	198	0.4	15
CAW_12A0	115/1/60	0.9	1/10	-	-	2.0	104	1.2	15
CAW_12D1	208-230/1/60	0.35	1/10	6.52	1.5	22.7	197	8.6	15
CAW_12F1	220-240/1/50	0.35	1/10	6.8	1.56	23.7	198	8.9	15

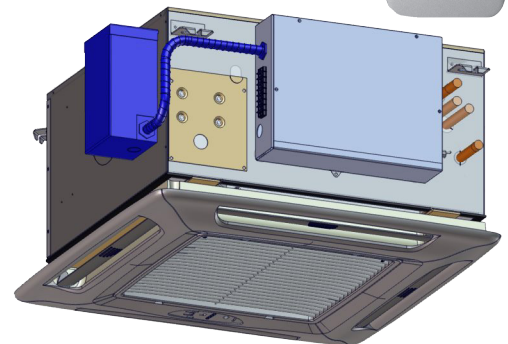


### Miscellaneous Technical Data

Indoor Fan Details	High	Low	Vertical Clearance	** 13 5/8" (0.35m) min
Discharge Air Volume [CMF (L/S)]	360 (170)	300 (142)	Ceiling Opening	23 1/4" x 23 1/4" (591 x 591 mm)
			Gross Weight	70 lbs (31.8 kg)
Indoor Sound Levels [dBA]	51	49	Washable Air Filter	1, Mesh, Metal Frame
Supply Water Inlet	*5/8" Ø			80% Arrestance
Return Water Outlet	*5/8" Ø		Condensate Pump Details	
Brand Air Duct Collar	~3" Ø		Lift	Nominal Flow Rate
Fresh Air Duct Collar	5" Ø		30" Max Head	0.1 GPM

\* Refrigerant Piping Outside Diameter

\*\* Measured from interior face of drop-ceiling

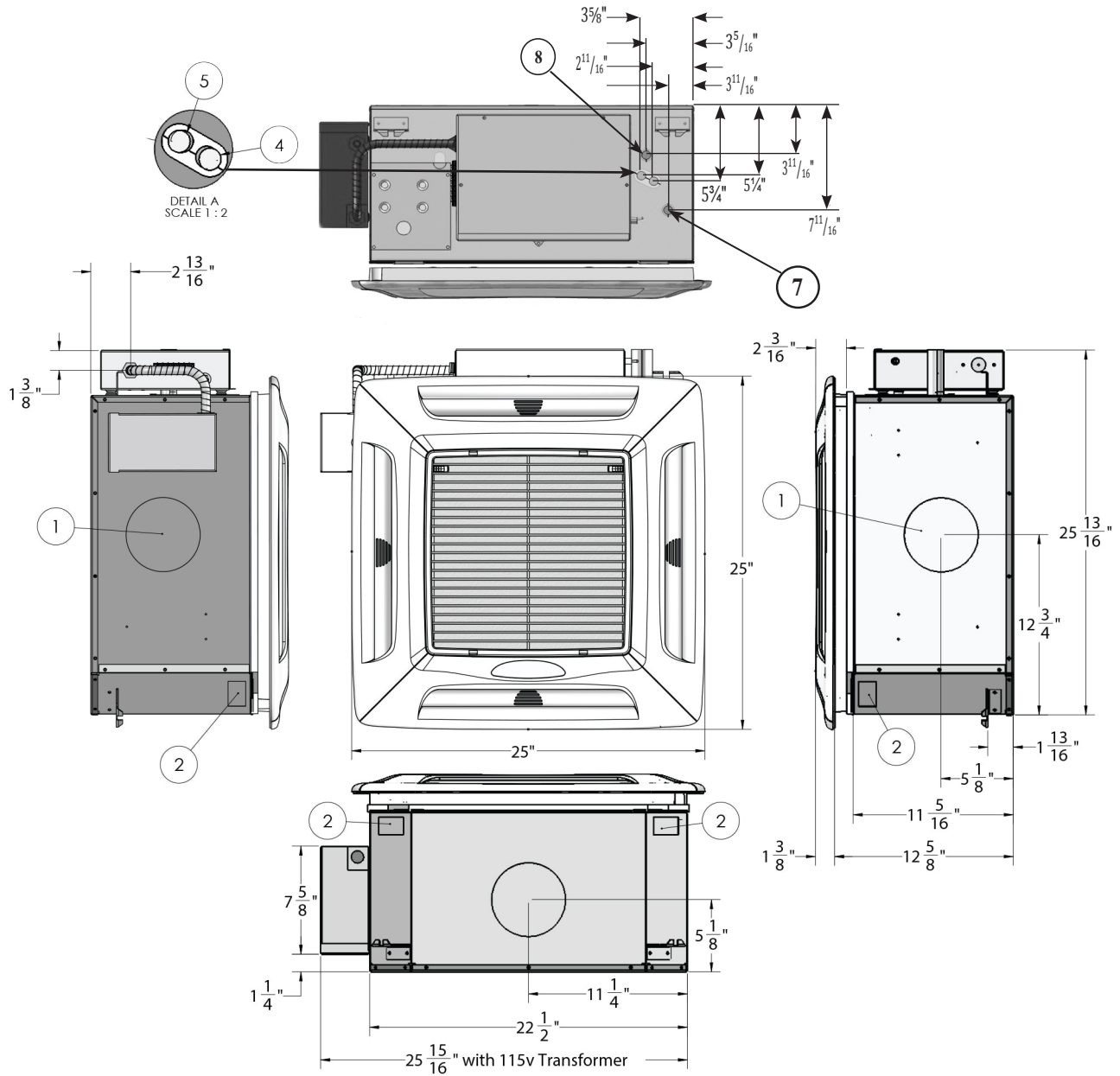


To: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 From: \_\_\_\_\_  
 Contact: \_\_\_\_\_

Project: \_\_\_\_\_  
 Customer: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Unit Tag# \_\_\_\_\_

For Your:  Reference  Approval  Construction

# 12,000 Btuh Hydronic Fan Coil Ceiling Cassette Air Handler



FEATURES	
1	Optional Discharge Knockouts 5 1/4" Diameter (3 Available)
2	Fresh Air Inlet Knockouts 1 1/4 x 2 1/2 Inches (2 Available)
3	Condensate Discharge 1/2 Inch Diameter
4	Chilled Water "IN" 5/8"
5	Chilled Water "OUT" 5/8"
6	Condensate Pump Access Panel
7	Hot Water "IN"
8	Hot Water "OUT"

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# CAW\_12 Ceiling Cassette Air Handler Performance Data Tables

Entering Water Temp	CFM		80° F DB / 67° F WB						
	Low	Total Capacity (Btuh)	Sensible Capacity (Btuh)	Water Flow Rate (GPM)	Pressure Drop (Ft)	Leaving Air Temp		Leaving Water Temp (°F)	ΔT (°F)
	High					DB °F	WB °F		
40°F	300	18800	11600	6.2	15.9	44.9	44.9	46	6
	360	22100	13700	7.3	21.5	45.5	45.5	46	6
	300	16900	10700	4.2	7.6	47.6	47.6	48	8
	360	20000	12700	5.0	10.4	47.9	47.9	48	8
	300	14900	9800	3.0	3.9	50.3	50.3	50	10
	360	17700	11700	3.5	5.4	50.6	50.6	50	10
	300	12900	9000	2.2	2.0	52.9	52.9	52	12
	360	15400	10700	2.6	2.9	53.0	53.0	52	12
	300	11000	8200	1.6	1.0	55.2	55.2	54	14
	360	13000	9800	1.9	1.5	55.4	55.4	54	14
41°F	300	18000	11300	6.0	14.7	46.0	46.0	47	6
	360	21200	13300	7.1	19.9	46.5	46.5	47	6
	300	16100	10400	4.0	6.9	48.7	48.7	49	8
	360	19100	12300	4.8	9.5	49.0	49.0	49	8
	300	14100	9500	2.8	3.5	51.4	51.4	51	10
	360	16700	11300	3.3	4.8	51.6	51.6	51	10
	300	12300	8700	2.1	1.8	53.6	53.6	53	12
	360	14600	10400	2.4	2.7	53.8	53.8	53	12
	300	10400	8000	1.5	0.9	55.9	55.9	55	14
	360	12400	9500	1.8	1.3	56.0	56.0	55	14
42°F	300	17300	10900	5.7	13.5	47.1	47.1	48	6
	360	20300	12900	6.8	18.3	47.5	47.5	48	6
	300	15400	10000	3.8	6.3	49.7	49.7	50	8
	360	18200	11900	4.5	8.7	50.0	50.0	50	8
	300	13500	9200	2.7	3.3	52.1	52.1	52	10
	360	16000	11000	3.2	4.5	52.3	52.3	52	10
	300	11600	8400	1.9	1.6	54.5	54.5	54	12
	360	13800	10100	2.3	2.3	54.7	54.7	54	12
	300	9700	7700	1.4	0.8	56.7	56.7	56	14
	360	11600	9200	1.7	1.1	56.8	56.8	56	14
43°F	300	16500	10500	5.5	12.3	48.2	48.2	49	6
	360	19400	12500	6.5	16.8	48.6	48.6	49	6
	300	14600	9700	3.6	5.7	50.7	50.7	51	8
	360	17200	11500	4.3	7.8	51.0	51.0	51	8
	300	12800	8900	2.6	2.9	53.1	53.1	53	10
	360	15100	10600	3.0	4.0	53.3	53.3	53	10
	300	11000	8200	1.8	1.4	55.2	55.2	55	12
	360	13100	9800	2.2	2.1	55.4	55.4	55	12
	300	9300	7500	1.3	0.7	57.3	57.3	57	14
	360	11000	9000	1.6	1.0	57.4	57.4	57	14

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# CAW\_12 Ceiling Cassette Air Handler Performance Data Tables - Continued

Entering Water Temp	CFM		80° F DB / 67° F WB - Continued						
	Low	Total Capacity (Btuh)	Sensible Capacity (Btuh)	Water Flow Rate (GPM)	Pressure Drop (Ft)	Leaving Air Temp		Leaving Water Temp (°F)	ΔT (°F)
	High					DB °F	WB °F		
44°F	300	15700	10200	5.2	11.2	49.3	49.3	50	6
	360	18500	12100	6.2	15.3	49.6	49.6	50	6
	300	13800	9400	3.4	5.2	51.8	51.8	52	8
	360	16300	11100	4.1	7.0	52.0	52.0	52	8
	300	12100	8700	2.4	2.6	53.9	53.9	54	10
	360	14400	10300	2.9	3.7	54.1	54.1	54	10
	300	10300	7900	1.7	1.2	56.1	56.1	56	12
	360	12300	9500	2.0	1.8	56.1	56.1	56	12
	300	8100	7000	1.2	0.5	58.8	58.5	58	14
	360	10400	8700	1.5	0.9	58.2	58.0	58	14
45°F	300	14900	9800	5.0	10.2	50.3	50.3	51	6
	360	17600	11700	5.9	14.0	50.6	50.6	51	6
	300	13200	9100	3.3	4.7	52.5	52.5	53	8
	360	15600	10800	3.9	6.5	52.8	52.8	53	8
	300	11400	8400	2.3	2.3	54.8	54.8	55	10
	360	13500	10000	2.7	3.3	54.9	54.9	55	10
	300	9600	7700	1.6	1.1	56.8	56.8	57	12
	360	11500	9200	1.9	1.6	56.9	56.9	57	12
	300	7700	6800	1.1	0.5	59.5	59.0	59	14
	360	9500	8300	1.4	0.8	59.1	58.8	59	14
50°F	300	11200	8300	3.7	5.9	55.0	55.0	56	6
	360	13200	9800	4.4	8.1	55.2	55.2	56	6
	300	9700	7700	2.4	2.6	56.8	56.8	58	8
	360	11500	9200	2.9	3.6	56.9	56.9	58	8
	300	8300	7200	1.7	1.2	58.4	58.4	60	10
	360	9800	8600	2.0	1.7	58.5	58.5	60	10
	300	6500	6200	1.1	0.5	61.3	60.3	62	12
	360	8200	7600	1.4	0.8	60.9	60.0	62	12
	300	5900	5600	0.8	0.3	63.0	61.0	64	14
	360	6600	6400	0.9	0.4	63.8	61.4	64	14

Propylene Glycol Solution Corrections (40°F EWT)				
Propylene Glycol %	Capacity Factor	Freezing Point (°F)	Tube Side Pressure Increase = 100% Capacity Factor	GPM Adjustment = 100% Capacity Factor
10%	0.93	26	1.2	1.5
20%	0.83	18	1.5	2.3
30%	0.72	7	2.1	4.3
40%	0.68	-8	3.0	9.0
50%	0.65	-29	4.2	17.1

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# CAW\_12 Ceiling Cassette Air Handler Performance Data Tables

Entering Water Temp	CFM	75° F DB / 62.55° F WB							
	Low	Total Capacity (Btuh)	Sensible Capacity (Btuh)	Water Flow Rate (GPM)	Pressure Drop (Ft)	Leaving Air Temp		Leaving Water Temp (°F)	ΔT (°F)
	High					DB °F	WB °F		
40°F	300	14000	9800	4.63	9.07	45.3	45.3	46	6
	360	16500	11600	5.5	12.4	45.6	45.6	46	6
	300	12300	9000	3.1	4.2	47.7	47.7	48	8
	360	14600	10700	3.6	5.7	47.9	47.9	48	8
	300	10700	8300	2.1	2.0	49.9	49.9	50	10
	360	12700	9900	2.5	2.9	50.0	50.0	50	10
	300	9200	7600	1.5	0.9	51.9	51.9	52	12
	360	10900	9100	1.8	1.4	52.0	52.0	52	12
	300	7600	6800	1.1	0.5	54.5	53.9	54	14
	360	8500	7800	1.2	0.6	55.2	54.5	54	14
41°F	300	13300	9500	4.4	8.3	46.3	46.3	47	6
	360	15700	11200	5.2	11.3	46.6	46.6	47	6
	300	11700	8700	2.9	3.8	48.5	48.5	49	8
	360	13800	10400	3.5	5.2	48.8	48.8	49	8
	300	10100	8000	2.0	1.7	50.7	50.7	51	10
	360	11900	9500	2.4	2.5	50.9	50.9	51	10
	300	8600	7300	1.4	0.8	52.7	52.6	53	12
	360	10200	8800	1.7	1.2	52.9	52.7	53	12
	300	7200	6600	1.0	0.5	55.0	54.4	55	14
	360	8100	7500	1.2	0.6	56.0	54.9	55	14
42°F	300	12600	9200	4.2	7.5	47.2	47.2	48	6
	360	14900	10900	5.0	10.2	47.5	47.5	48	6
	300	11000	8400	2.8	3.4	49.5	49.5	50	8
	360	13000	10000	3.3	4.7	49.7	49.7	50	8
	300	9600	7800	1.9	1.6	51.3	51.3	52	10
	360	11400	9300	2.3	2.3	51.5	51.5	52	10
	300	7600	6800	1.3	0.6	54.4	53.9	54	12
	360	9500	8400	1.6	1.0	53.7	53.5	54	12
	300	6800	6400	1.0	0.4	55.7	54.8	56	14
	360	7700	7300	1.1	0.5	56.6	55.3	56	14
43°F	300	11900	8800	4.0	6.7	48.2	48.2	49	6
	360	14100	10500	4.7	9.2	48.5	48.5	49	6
	300	10400	8200	2.6	3.1	50.2	50.2	51	8
	360	12400	9700	3.1	4.2	50.4	50.4	51	8
	300	9000	7600	1.8	1.4	52.1	52.1	53	10
	360	10700	9000	2.1	2.0	52.2	52.2	53	10
	300	7100	6600	1.2	0.6	55.0	54.5	55	12
	360	8900	8100	1.5	0.9	54.6	54.1	55	12
	300	6500	6100	0.9	0.4	56.4	55.2	57	14
	360	7200	7000	1.0	0.5	57.4	55.8	57	14

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# CAW\_12 Ceiling Cassette Air Handler Performance Data Tables - Continued

Entering Water Temp	CFM	75° F DB / 62.55° F WB - Continued							
		Total Capacity (Btuh)	Sensible Capacity (Btuh)	Water Flow Rate (GPM)	Pressure Drop (Ft)	Leaving Air Temp		Leaving Water Temp (°F)	ΔT (°F)
	Low					High	DB °F		
44°F	300	11300	8500	3.7	6.0	49.1	49.1	50	6
	360	13300	10100	4.4	8.2	49.4	49.4	50	6
	300	9800	7900	2.4	2.7	51.1	51.1	52	8
	360	11600	9400	2.9	3.7	51.3	51.3	52	8
	300	8400	7300	1.7	1.2	52.8	52.8	54	10
	360	10000	8700	2.0	1.7	52.9	52.9	54	10
	300	6800	6300	1.1	0.5	55.8	54.9	56	12
	360	8300	7700	1.4	0.8	55.5	54.7	56	12
	300	6100	5900	0.9	0.4	57.2	55.7	58	14
	360	6900	6600	1.0	0.4	58.2	56.1	58	14
45°F	300	10700	8300	3.5	5.4	50.0	50.0	51	6
	360	12600	9800	4.2	7.4	50.2	50.2	51	6
	300	9300	7700	2.3	2.4	51.7	51.7	53	8
	360	11000	9200	2.8	3.4	51.9	51.9	53	8
	300	7800	7000	1.6	1.0	53.7	53.6	55	10
	360	9300	8400	1.9	1.5	53.8	53.7	55	10
	300	6400	6100	1.1	0.5	56.4	55.3	57	12
	360	7200	7000	1.2	0.6	57.4	55.8	57	12
	300	5800	5600	0.8	0.3	58.0	56.0	59	14
	360	6500	6400	0.9	0.4	58.9	56.5	59	14
50°F	300	7700	7000	2.6	2.9	53.8	53.8	56	6
	360	9100	8300	3.0	4.0	53.9	53.9	56	6
	300	6600	6400	1.7	1.2	55.6	55.1	58	8
	360	7800	7600	2.0	1.7	55.8	55.2	58	8
	300	5300	5300	1.1	0.5	59.0	56.6	60	10
	360	6600	6500	1.3	0.7	58.6	56.4	60	10
	300	4600	4600	0.8	0.3	61.2	57.5	62	12
	360	5100	5100	0.9	0.3	62.1	57.8	62	12
	300	4000	4000	0.6	0.2	62.9	58.1	64	14
	360	4400	4400	0.6	0.2	63.8	58.4	64	14

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# CAW\_12 Ceiling Cassette Air Handler Performance Data Tables

Entering Water Temp	CFM	72° F DB / 60.1° F WB							
		Total Capacity (Btuh)	Sensible Capacity (Btuh)	Water Flow Rate (GPM)	Pressure Drop (Ft)	Leaving Air Temp		Leaving Water Temp (°F)	ΔT (°F)
	Low					High	DB °F		
40°F	300	11700	8800	3.9	6.5	45.3	45.3	46	6
	360	13800	10500	4.6	8.9	45.5	45.5	46	6
	300	10200	8100	2.5	2.9	47.4	47.4	48	8
	360	12100	9700	3.0	4.1	47.6	47.6	48	8
	300	8800	7500	1.8	1.3	49.3	49.3	50	10
	360	10500	8900	2.1	1.9	49.4	49.4	50	10
	300	7100	6600	1.2	0.6	52.1	51.6	52	12
	360	8600	7900	1.4	0.8	51.9	51.4	52	12
	300	6400	6100	0.9	0.4	53.4	52.4	54	14
	360	7200	6900	1.0	0.5	54.5	53.0	54	14
41°F	300	11100	8500	3.7	5.9	46.2	46.2	47	6
	360	13100	10100	4.3	8.0	46.4	46.4	47	6
	300	9700	7900	2.4	2.6	48.1	48.1	49	8
	360	11400	9400	2.9	3.6	48.3	48.3	49	8
	300	8200	7200	1.6	1.1	50.1	50.1	51	10
	360	9800	8600	1.9	1.6	50.2	50.2	51	10
	300	6700	6300	1.1	0.5	52.9	52.0	53	12
	360	8000	7500	1.3	0.7	52.9	52.1	53	12
	300	6100	5800	0.9	0.4	54.3	52.9	55	14
	360	6800	6600	1.0	0.4	55.3	53.3	55	14
42°F	300	10500	8200	3.5	5.3	47.0	47.0	48	6
	360	12400	9800	4.1	7.2	47.2	47.2	48	6
	300	9100	7600	2.3	2.3	48.9	48.9	50	8
	360	10800	9100	2.7	3.3	49.0	49.0	50	8
	300	7600	6900	1.5	0.9	51.0	50.9	52	10
	360	9000	8200	1.8	1.4	51.2	51.0	52	10
	300	6400	6100	1.1	0.5	53.5	52.5	54	12
	360	7100	6900	1.2	0.6	54.5	53.0	54	12
	300	5800	5600	0.8	0.3	55.1	53.2	56	14
	360	6400	6300	0.9	0.4	56.0	53.7	56	14
43°F	300	9800	7900	3.3	4.7	47.9	47.9	49	6
	360	11600	9400	3.9	6.4	48.1	48.1	49	6
	300	8500	7400	2.1	2.0	49.7	49.7	51	8
	360	10100	8800	2.5	2.9	49.8	49.8	51	8
	300	7100	6700	1.4	0.8	51.8	51.5	53	10
	360	8500	7900	1.7	1.2	51.9	51.6	53	10
	300	6000	5800	1.0	0.4	54.4	53.0	55	12
	360	6800	6700	1.1	0.5	55.2	53.4	55	12
	300	5400	5300	0.8	0.3	55.8	53.6	57	14
	360	6100	6000	0.9	0.4	56.8	54.1	57	14

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# CAW\_12 Ceiling Cassette Air Handler Performance Data Tables - Continued

Entering Water Temp	CFM		72° F DB / 60.1° F WB - Continued						
	Low	Total Capacity (Btuh)	Sensible Capacity (Btuh)	Water Flow Rate (GPM)	Pressure Drop (Ft)	Leaving Air Temp		Leaving Water Temp (°F)	ΔT (°F)
	High					DB °F	WB °F		
44°F	300	9300	7700	3.1	4.2	48.7	48.7	50	6
	360	11000	9200	3.6	5.7	48.8	48.8	50	6
	300	8000	7100	2.0	1.7	50.4	50.4	52	8
	360	9500	8500	2.4	2.5	50.5	50.5	52	8
	300	6700	6300	1.3	0.7	52.8	52.1	54	10
	360	8000	7500	1.6	1.0	52.9	52.2	54	10
	300	5700	5600	1.0	0.4	55.0	53.4	56	12
	360	6400	6300	1.1	0.5	56.0	53.8	56	12
	300	5100	5100	0.7	0.3	56.7	54.0	58	14
	360	5700	5700	0.8	0.3	57.7	54.5	58	14
45°F	300	8700	7400	2.9	3.7	49.4	49.4	51	6
	360	10300	8800	3.4	5.1	49.6	49.6	51	6
	300	7500	6900	1.9	1.5	51.2	51.1	53	8
	360	8900	8200	2.2	2.2	51.4	51.2	53	8
	300	6000	5800	1.2	0.6	54.4	53.0	55	10
	360	7400	7200	1.5	0.9	53.9	52.8	55	10
	300	5300	5300	0.9	0.4	56.0	53.8	57	12
	360	6000	6000	1.0	0.4	56.9	54.2	57	12
	300	4800	4800	0.7	0.3	57.6	54.4	59	14
	360	5100	5100	0.7	0.3	59.0	55.1	59	14
50°F	300	6200	6100	2.1	1.9	53.3	52.7	56	6
	360	7300	7300	2.4	2.7	53.5	52.8	56	6
	300	5100	5100	1.3	0.6	56.7	54.1	58	8
	360	6000	6000	1.5	0.9	56.7	54.2	58	8
	300	4200	4200	0.8	0.3	59.4	55.2	60	10
	360	4700	4700	0.9	0.4	60.1	55.5	60	10
	300	3600	3600	0.6	0.2	61.1	55.9	62	12
	360	4000	4000	0.7	0.2	61.9	56.2	62	12
	300	3000	3000	0.4	0.1	62.8	56.5	64	14
	360	3400	3400	0.5	0.1	63.5	56.8	64	14

## CAW HOT WATER 4-PIPE CASSETTE CAPACITIES HOT WATER ENTERING TEMPERATURE 180°F

Model	Room Conditions	Heating Capacity Btuh	Water Flow GPM	Leaving Water Temperature	P.D. Ft. H <sub>2</sub> O
CAW_12	70 °F DB	17,000	1.8	160 °F	1.6
	50% RH	13,500	0.7	140 °F	0.5

\* 140°F Leaving water temperature data is in accordance with ANSI/AHRI Standard 440-2008



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**NOTICE:** Due to ongoing product development; design, specification and performance data listed within this submittal document are subject to change without notice. For the most current unit/system performance data, please refer to the product literature on our website, [www.enviromaster.com](http://www.enviromaster.com), or consult the factory.