



## 36CWA4-HW 4-Pipe Chilled & Hot Water Air Handler (120V)

4-Pipe Heat & Cool Fan Coil 36,000 BTUH

# HVAC Guide Specifications

Chilled & Hot Water Multi-Position Fan Coil  
4-Pipe

Nominal Size:  
**36,000 BTUH**

MultiAqua Model Number:  
36CWA4-HW

## **Part 1-General**

### **1.01 System Description**

MultiAqua Chilled Water Fan Coils are manufactured with heavy gauge galvanized steel to resist corrosion.

### **1.02 Quality Assurance**

- A. Certified in accordance with U.L. Standard 95, latest version (U.S.A.)
- B. Manufactured in a facility registered to ISO 9002, Manufacturing Quality Standard.
- C. Fully load tested at the factory.
- D. Damage resistant packaging.

### **1.03 Delivery, Storage and Handling**

- A. Packaged and readied for shipment from the factory.
- B. Controls shall be capable of withstanding 150°F storage temperatures in the control compartment.
- C. Stored and handled per manufacturer's recommendations.

## **Part 2-Product**

### **2.01 Equipment**

- A. General:
  1. Unit shall be a factory assembled and tested multi-position chilled & hot water fan coil.
  2. Shall be assembled with high quality.
  3. Contained with the unit shall be all factory wiring, piping, associated controls and special accessories required prior to start up.
- B. Unit Cabinet:
  1. Composed of heavy gauge galvanized steel casing with baked polyester powder.
  2. Shall be internally insulated to ensure quiet operation.
  3. Cabinet shall be capable of being installed in a vertical or horizontal position.
- C. Fan Motors:
  1. Shall be available in 120-1-60 VAC.
  2. Fan motors shall be three speed, direct drive, and PSC type.
  3. Internal overload protected.
- D. Blower Wheels:
  1. Blower wheels are forward curved and dynamically balanced.
- E. Water Coil:
  1. Manufactured with a chilled water coil containing 3/8" copper tubing mechanically bonded to aluminum fins.
  2. Manufactured with a hot water coil containing 3/8" copper tubing mechanically bonded to aluminum fins.
  3. Coils shall be factory tested to 350 psig.
  4. Maximum coil inlet water temperature is 180F.
  5. Coil shall contain manual air bleed port.
- F. Drain Pan:
  1. Drain pan shall be molded with high impact polymers.
  2. Pan shall contain a primary and secondary drain connection.
  3. Pan shall be capable of draining in the vertical and horizontal positions without changing the pan configuration.
- G. Filters:

*These specifications are subject to change without notice.*

*Check [www.multiaqua.com](http://www.multiaqua.com) for the latest information.*

1. Unit shall contain a filter door for easy access to the filter.
  2. A filter track shall be provided.
  3. Unit shall come supplied with a 1" throwaway filter.
- H. Hot Water Pump
1. Unit shall contain an internal hot water circulating pump.

### **Part 3-Controls and Safeties**

#### **3.01 Controls**

- A. Fan coils shall be completely factory wired and tested.
- B. Unit shall include a terminal block that is capable of incorporating a 24 vac thermostat.

#### **3.02 Safeties:**

- A. Fan coil shall contain a non-reusable fuse on the secondary voltage side of the transformer.

### **Part 4-Operating Characteristics**

#### **4.01 Electrical Requirements**

- A. Electrical shall include a terminal block.
- B. Electrical power supply shall be rated to withstand 120°F operating ambient temperatures.

### **Part 5- Definitions**

#### **5.01 Abbreviations**

- A. CFM = Cubic Feet per Minute
- B. DB = Dry Bulb Temperature
- C. EWT = Entering Water Temperature
- D. GPM = US Gallons Per Minute
- E. MBH = BTU X 1000
- F. SC = Sensible Cooling
- G. TC = Total Cooling = Sensible + Latent
- H. WB = Wet Bulb Temperature
- I. WPD = Water Pressure Drop in feet of head
- J. dB = Decibel Level
- K. m = Meter
- L. In = Inches
- M. FPI = Fins per Inch
- N. OD = Outside Diameter
- O. ID = Inside Diameter
- P. MCA = Minimum Circuit Amps
- Q. MOP = Maximum Over current Protection
- R. LBS = Pounds U.S.

#### **5.02 Measurements**

- A. All measurements with regard to length, width, and height shall be in inches.

## 36CWA4-HW Product Specifications

### Physical Data

Model Number	Height (in)	Length (in)	Depth (in)	Weight (lbs.)	Cooling Rows FPI	Heating Rows FPI	Copper Diameter (in)	Chilled Water Inlet (in)	Chilled Water Outlet (in)	Hot Water Inlet (in)	Hot Water Outlet (in)	Drain (in)
36CWA4-HW	49.75	21.5	25	175	4-14	3-12	3/8	3/4	3/4	1/2	1/2	3/4

### Electrical Data

Model Number	Nominal CFM	Volts/Phase/Hertz	Fan Motor HP	Fan Motor Full Load Ampacity	Pump Motor HP	Hot Water Pump Full Load Ampacity	Fuse or HACR Circuit Breaker Per Circuit	
							MCA	MOP
36CWA4-HW	1306	120-1-60	1/3	6.2	1/40	0.52	8.0	15

## 36CWA4-HW Chilled Water Performance Data

36CWA-4-HW COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (F)	
				80° D.B. / 67° W.B.
1306	42	4	TC	30360
			SC	26116
			WPD	1.2
		5	TC	34460
			SC	28218
			WPD	2.0
		6	TC	38010
			SC	29815
			WPD	3.0
		7	TC	41118
			SC	31124
			WPD	3.8

**\*High Speed**

36CWA-4-HW COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (F)	
				80° D.B. / 67° W.B.
1306	45	4	TC	27696
			SC	25206
			WPD	1.2
		5	TC	31032
			SC	26726
			WPD	2.0
		6	TC	34070
			SC	28258
			WPD	2.9
		7	TC	36690
			SC	29462
			WPD	3.8

**\*High Speed**

Recommended minimum flow rate for this unit at  $\geq 2$  fps is 2.75 gpm

Recommended maximum flow rate for this unit at  $\leq 6$  fps is 7.75 gpm

## 36CWA4-HW Hot Water Performance Data

### 36CWA4-HW HOT WATER CAPACITIES

ENTERING AIR (°F)	NOMINAL CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)									
				90°	100°	110°	120°	130°	140°	150°	160°	170°	180°
50	1306	3	4.6	33878	42027	50218	58457	66735	75043	83373	91720	100077	108438
		4	7.8	37297	46374	55515	64708	73944	83214	92510	101826	111156	120494
		5	11.8	39597	49302	59071	68892	78755	88653	98577	108521	118480	128449
		6	16.5	41235	51381	61588	71845	82143	92473	102829	113204	123595	133996

### 36CWA4-HW HOT WATER CAPACITIES

ENTERING AIR (°F)	NOMINAL CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)									
				90°	100°	110°	120°	130°	140°	150°	160°	170°	180°
60	1306	3	4.5	26018	34123	42290	50506	58763	67052	75366	83698	92040	100389
		4	7.7	28480	37524	46635	55800	65011	74257	83533	92830	102142	111465
		5	11.7	30142	39812	49549	59340	69176	79049	88950	98875	108816	118769
		6	16.5	31325	41436	51610	61837	72107	82413	92747	103102	113475	123860

### 36CWA4-HW HOT WATER CAPACITIES

ENTERING AIR (°F)	NOMINAL CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)									
				90°	100°	110°	120°	130°	140°	150°	160°	170°	180°
70	1306	3	4.5	18096	26178	34322	42519	50757	59030	67328	75647	83979	92318
		4	7.7	19626	28641	37724	46864	56051	65277	74533	83813	93110	102420
		5	11.7	20658	30296	40002	49766	59577	69427	79309	89214	99139	109078
		6	16.4	21392	31469	41613	51812	62057	72340	82653	92991	103347	113717

### 36CWA4-HW HOT WATER CAPACITIES

ENTERING AIR (°F)	NOMINAL CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)									
				90°	100°	110°	120°	130°	140°	150°	160°	170°	180°
80	1306	3	4.5	10130	18191	26316	34494	42716	50974	59259	67566	75887	84218
		4	7.7	10735	19723	28780	37897	47063	56269	65507	74771	84055	93352
		5	11.6	11143	20750	30429	40167	49954	59783	69645	79533	89442	99367
		6	16.4	11433	21478	31593	41766	51987	62248	72542	82861	93201	103558

**Heating at ANSI/AHRI 440 with addendum 1, 6.3.2 Table 1 as follows:**

ENTERING AIR TEMPERATURE	GPM	ENTERING WATER TEMPERATURE 140F
70F DB / 60F WB	3	59268
	4	65600
	5	69819
	6	72786

## 36CWA4-HW CFM Adjustments

Model Number	Motor Speed	CFM vs. ESP				
		0.1	0.2	0.3	0.4	0.5
36CWA4-HW	High	1360	1310	1270	1230	1190
	Medium	1340	1250	1170	1090	1060
	Low	1280	1170	1040	970	-

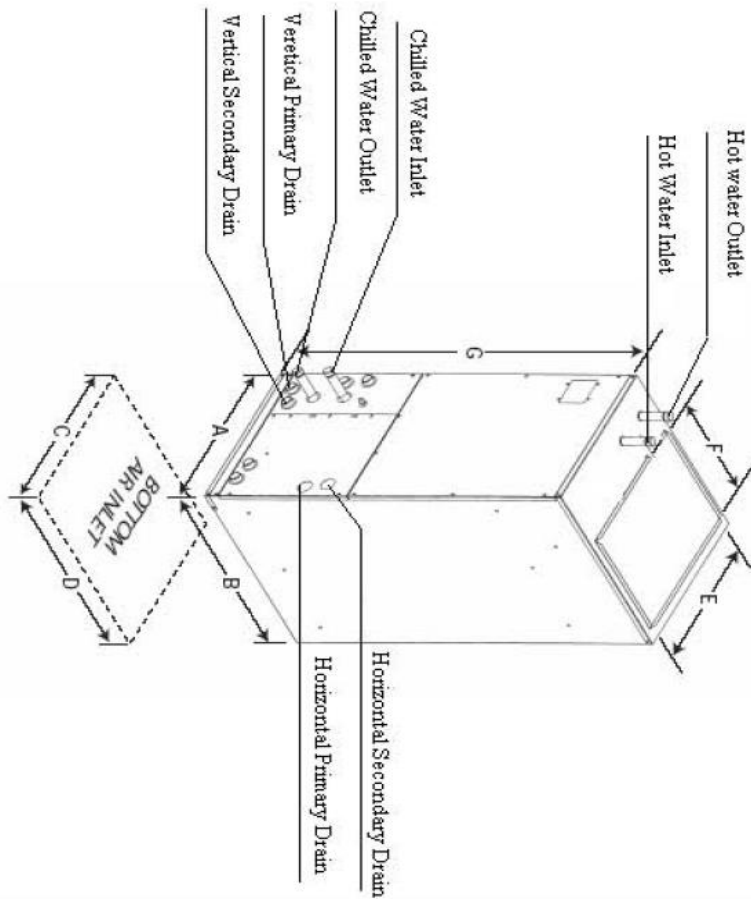
## 36CWA4-HW Sound Data

MODEL #	36CWA4-HW
Fan Speed	dB @ 1 m
H	42



# 36CWA4-HW Dimensional Drawing

CWA4 Certified Drawing  
 Drawing # 0907400079



Model No.	A	B	C	D	E	F	G
24CWA4-XX	17 1/2	21	15	17 1/2	16	12 3/4	39 1/4
36CWA4-XX 48CWA4-XX 60CWA4-XX	21 1/2	25	19 1/4	22 1/4	19 5/8	17 1/4	49 1/4

Note: "-XX" indicates electric heat (KW) size.