



## **CFFWA-06-1-U Submittal Chilled/Hot Water Universal Mount Fan Coil**

**2-Pipe Heat / Cool Fan Coil 18,000 BTUH**

# HVAC Guide Specifications

Chilled and Hot Water Universal Mount Fan Coil  
2-Pipe

Nominal Size:

**18,000 BTUH**

MultiAqua Model Number:

**CFFWA-06-1-U**

## **Part 1-General**

### **1.01 System Description**

MultiAqua Chilled Water Fan Coils are manufactured with galvanized steel and high impact molded polymers.

### **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 chilled and 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 galvanized steel with baked polyester powder and high impact polymers.
  - 2. Shall be internally insulated to ensure quiet operation.
- C. Fan Motors:
  - 1. Shall be available in 208/230-1-50/60 VAC.
  - 2. Fan motors shall be three speed, direct drive, and PSC type.
  - 3. Totally enclosed.
  - 4. Internal overload protected.
  - 5. Unit shall contain a swing motor to modulate the discharge air.
- D. Blower Wheels:
  - 1. Blower wheels are tangential and dynamically balanced.
- E. Water Coil:
  - 1. Manufactured with water coils containing 3/8" copper tubing mechanically bonded to aluminum fins.
  - 2. Maximum operating pressure is 150 psig.
  - 3. Maximum inlet water temperature 160° F
- F. Drain Pan:
  - 1. All drain pans shall be coated on both the interior and exterior with baked polyester powder to resist corrosion.
  - 2. The exterior of all drain pans shall be insulated with closed cell to prevent condensation.
  - 3. Pans shall contain drain tubing that is accessible from the back, bottom and side of the unit.
- G. Filters:
  - 1. Unit shall contain 65% washable filters.

**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.
- C. Controls shall be capable of incorporating an optional hard-wired 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.

## CFFWA-06-1-U Product Specifications

<b>Physical Data</b>								
Model Number	Height (in)	Length (in)	Depth (in)	Weight (lbs.)	Cooling Rows FPI	Water Inlet (in)	Water Outlet (in)	Drain (in)
CFFWA-06-1-U	25.27	40.31	9.01	83.77	3-13	1/2	1/2	1/2

<b>Electrical Data</b>						
Model Number	High Speed CFM	Volts/Phase/Hertz	Fan Motor HP	Fan Motor Full Load Ampacity	Fuse or HACR Circuit Breaker Per Circuit	
					MCA	MOP
CFFWA-06-1-U	520	208/230-1-50/60	1/15	0.56	.70	2

# CFFWA-06-1-U Chilled Water Performance Data

<b>CFFWA-06-1-U COOLING CAPACITIES</b>				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (F)	
			80° D.B. / 67° W.B.	
520*	42	2.0	TC	14852
			SC	11543
			WPD	9.0
		2.5	TC	16433
			SC	12213
			WPD	13.6
		3.25	TC	18230
			SC	12963
			WPD	22.1
		3.75	TC	19083
			SC	13314
			WPD	28.8

**\*High Speed**

<b>CFFWA-06-1-U COOLING CAPACITIES</b>				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (F)	
			80° D.B. / 67° W.B.	
520*	45	2.0	TC	13342
			SC	10917
			WPD	9.0
		2.5	TC	14699
			SC	11515
			WPD	13.6
		3.25	TC	16233
			SC	12154
			WPD	22.0
		3.75	TC	16992
			SC	12465
			WPD	28.7

**\*High Speed**

**Recommended minimum flow rate for this unit at  $\geq$  2fps is 1.5 gpm**

**Recommended maximum flow rate for this unit at  $\leq$  6fps is 3.75 gpm**

# CFFWA-06-1-U Hot Water Performance Data

This heating performance data is at dry bulb temperature indicated / wet bulb temperature not considered

CFFWA-06-01-U 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	520	2.0	8.4	14306	17896	21500	25112	28739	32368	36002	39636	43277	46915
		2.5	12.6	15079	18865	22664	26474	30292	34116	37945	41776	45609	49443
		3.25	20.4	15846	19823	23812	27812	31819	35831	39848	43868	47890	51912
		3.75	26.5	16200	20264	24641	28426	32519	36617	40719	44824	48931	53039

CFFWA-06-01-U 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	520	2.0	8.3	10449	14361	17957	21565	25182	28807	32436	36068	39703	43338
		2.5	12.6	11354	15130	18922	22724	26536	30335	34178	38006	41835	45666
		3.25	20.3	11923	15891	19873	23866	27866	31874	35886	39902	43920	47939
		3.75	26.4	12185	16242	20311	24390	28477	32570	36667	40769	44872	48977

CFFWA-06-01-U 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	520	2.0	8.3	7246	10819	14408	18010	21662	25241	28866	32494	36126	39758
		2.5	12.5	7622	11391	15175	18971	22777	26590	30409	34233	38059	41886
		3.25	20.3	7995	11956	15931	19917	23912	27914	31922	35934	39949	43965
		3.75	26.4	8168	12216	16278	20351	24433	28521	32614	36712	40812	44914

CFFWA-06-01-U 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	520	2.0	8.3	3705	7271	10853	14449	18055	21670	25290	28915	32544	36173
		2.5	12.5	3885	7646	11423	15213	19013	22821	26636	30456	34278	38103
		3.25	20.3	4064	8017	11924	15964	19954	23951	27955	31963	35974	39988
		3.75	26.4	4146	8187	12243	19309	20386	23951	28559	32652	36749	40849

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

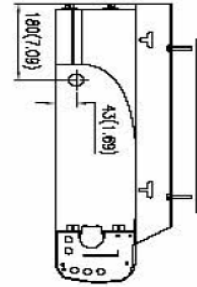
ENTERING AIR TEMPERATURE	GPM	ENTERING WATER TEMPERATURE 140°F
70°F DB / 60°F WB	2.0	25406
	2.5	26778
	3.25	28127
	3.75	28746

## CFFWA-06-1-U Sound Data

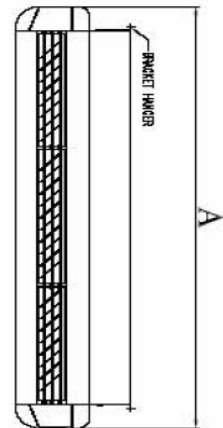
MODEL #	CFFWA-06-1-U
Fan Speed	dB @ 1 m
H	44

# CFFWA-06-1-U Dimensional Drawing

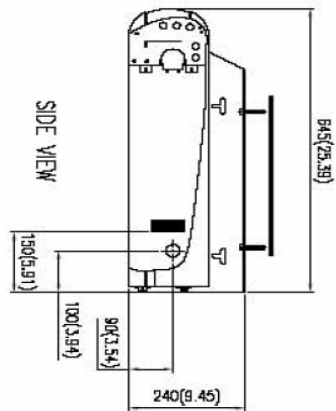
CFFWA Certified Drawing  
Drawing # 0907400073



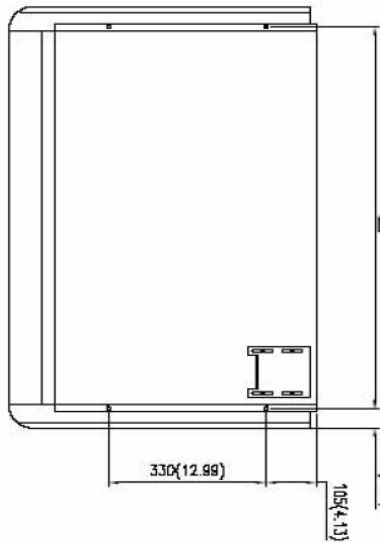
SIDE VIEW



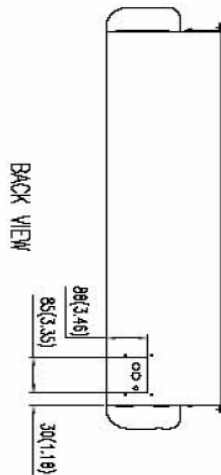
FRONT VIEW



SIDE VIEW

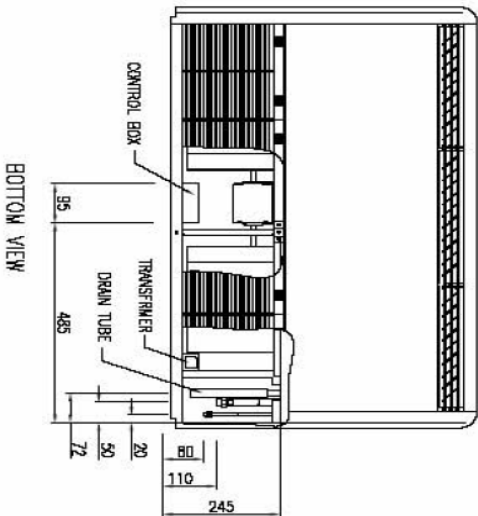


TOP VIEW



BACK VIEW

Model CFFWA			
MODEL	A	L	
04	1024(40.32)	927(36.50)	
06	1024(40.32)	927(36.50)	
08	1024(40.32)	927(36.50)	
10	1324(52.13)	1227(48.31)	
12	1324(52.13)	1227(48.31)	
16	1925(75.79)	1828(71.97)	
20	1925(75.79)	1828(71.97)	



BOTTOM VIEW

