



## **MHQWW-12-H-1 Chilled/Hot Water Hi-Wall Fan Coil**

**Heat / Cool Fan Coil 12,000 BTUH**

*Rev. 1.4*

# HVAC Guide Specifications

Chilled and Hot Water Hi-Wall Fan Coil  
2-Pipe

Nominal Size:  
**12,000 BTUH**

MultiAqua Model Number:  
**MHQWW-12-H-1**

## **Part 1-General**

### **1.01 System Description**

MultiAqua Chilled Water Fan Coils are manufactured with 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 factory control board, wiring, and piping required prior to start up.
- B. Unit Cabinet:
  - 1. Composed of high impact polymers.
  - 2. Shall be internally insulated to ensure quiet operation.
- C. Fan Motors:
  - 1. Shall be 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 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 psi.
  - 3. Maximum inlet water temperature 160 F.
- F. Drain Pan:
  - 1. All drain pans shall be molded with high impact polymers.
  - 2. The exterior of all drain pans shall be insulated with closed cell insulation to prevent condensation.
  - 3. Pans shall contain flexible drain tubing that is accessible from the back of the unit.
- G. Filters:
  - 1. Unit shall contain washable filters.

**Part 3-Controls and Safeties****3.01 Controls**

- A. Fan coils shall be factory wired and tested.
- B. Unit shall be capable of operating on any 24 volt control.

**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. Unit shall be supplied with a three prong male primary electrical power cord.
- 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.



## MHQWW-12-H-1 Product Specifications

Physical Data									
Model Number	Height (in)	Length (in)	Depth (in)	Weight (lbs)	Cooling Rows FPI	Copper Diameter (in)	Water Inlet (in)	Water Outlet (in)	Drain (in)
MHQWW-12-H-1	12.00	39.00	7.10	27.50	2-18	3/8	1/2	1/2	1/2

Electrical Data						
Model Number	High Speed CFM	Volts/ Phase/ Hertz	Fan Motor HP	Full Load Ampacity	Fuse or HACR Circuit Breaker Per Circuit	
					MCA	MOP
MHQWW-12-H-1	330	208/230-1-50/60	1/60	.15/.17-.18/.19	24-.29/.30	5

## MHQWW-12-H-1 Chilled Water Performance Data

MHQWW-12-H-1 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
330*	42	4.0	TC	12698
			SC	8712
			WPD	12.6
		4.5	TC	13128
			SC	8916
			WPD	15.8
		5.0	TC	13483
			SC	9078
			WPD	19.3
		5.5	TC	13758
			SC	9203
			WPD	23.2

\*High Speed

MHQWW-12-H-1 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
330*	45	4.0	TC	11343
			SC	8138
			WPD	12.6
		4.5	TC	11717
			SC	8305
			WPD	15.7
		5.0	TC	12025
			SC	8458
			WPD	19.2
		5.5	TC	12259
			SC	8563
			WPD	23.1

\*High Speed

**Recommended minimum flow rate for this unit at  $\geq$  2fps is 2.0 gpm**

**Recommended maximum flow rate for this unit at  $\leq$  6fps is 5.75 gpm**

## MHQWW-12-H-1 Hot Water Performance Data

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

MHQWW-12-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
50	330	4.0	11.9	10528	13195	15872	18559	21253	23954	26659	29367
		4.5	14.9	10657	13352	16058	18773	21495	24222	26953	29688
		5.0	18.2	10761	13481	16210	18947	21691	24440	27193	29949
		5.5	21.9	10848	13588	16336	19092	21854	24621	27391	30165

MHQWW-12-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
60	330	4.0	11.9	7908	10566	13237	15917	18606	21301	24001	26706
		4.5	14.9	8003	10692	13391	16100	18816	21538	24265	26996
		5.0	18.2	8081	10794	13517	16248	18987	21731	24480	27232
		5.5	21.8	8146	10879	13621	16372	19129	21891	24658	27428

MHQWW-12-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
70	330	4.0	11.9	5286	7936	10600	13274	15957	18647	21343	24043
		4.5	14.9	5379	8029	10722	13425	16136	18854	21577	24304
		5.0	18.2	5400	8106	10822	13548	16282	19022	21767	24516
		5.5	21.8	5443	8169	10906	13651	16403	19162	21925	24692

MHQWW-12-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
80	330	4.0	11.9	2661	5304	7961	10629	13306	15991	18682	21379
		4.5	14.9	2692	5366	8052	10749	13455	16168	18886	21610
		5.0	18.2	2717	5416	8126	10847	13576	16311	19052	21798
		5.5	21.8	2738	5458	8188	10929	13677	16431	19190	21954

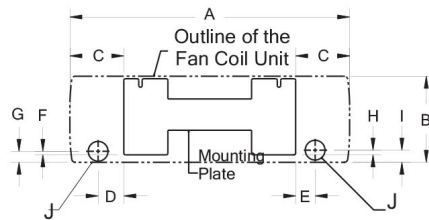
Heating at ANSI/AHRI 440 with addendum 1, 6.3.2 Table 1 as follows

ENTERING AIR TEMPERATURE	GPM	ENTERING WATER TEMPERATURE 140°F
70°F DB / 60°F WB	4.0	18805
	4.5	19016
	5.0	19189
	5.5	19332

## MHQWW-12-H-1 Sound Data

MODEL #	MHQWW-12-H-1
Fan Speed	dB @ 1 m
H	37
M	35
L	34

# MHQWW-09/12/18/24/36 Dimensional Drawings

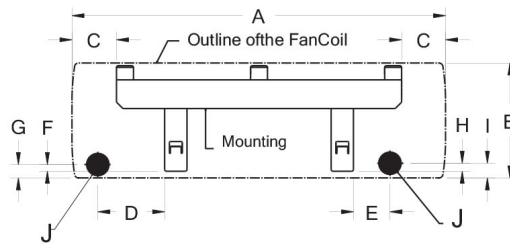


(Left, Backward Piping Hole)

(Right, Backward Piping Hole)

MODEL	A	B	C	D	E	F	G	H	I	J
MHQWW-09-H-1-U	34.6	11.7	7.5	3.5	2.7	.8	1.4	1.0	1.6	ø2.76
MHQWW-12-H-1-U	39.0	12.0	7.5	3.6	2.7	0.9	1.8	1.1	2.0	ø2.76

Dimensions are in inches.

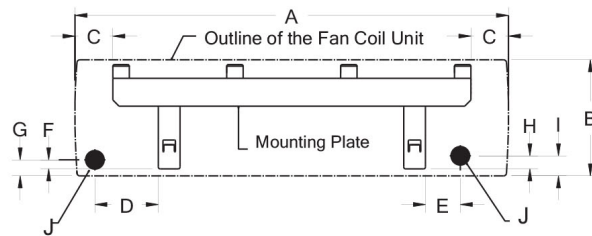


(Left, Backward Piping Hole)

(Right, Backward Piping Hole)

MODEL	A	B	C	D	E	F	G	H	I	J
MHQWW-18-H-1-U	46.0	14.2	5.5	8.3	4.5	0.8	1.7	1	1.8	ø2.76
MHQWW-24-H-1-U										

Dimensions are in inches.



(Left, Backward Piping Hole)

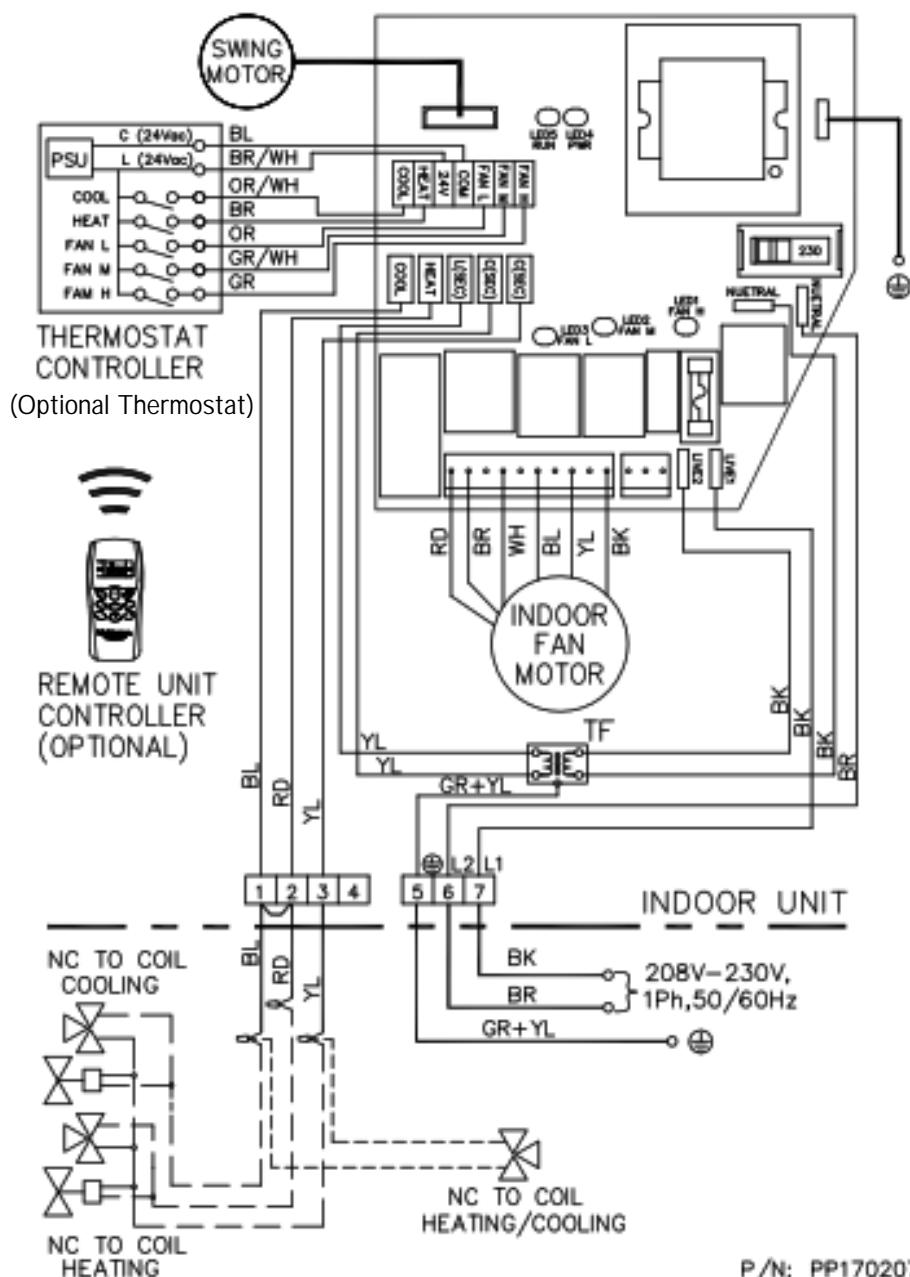
(Right, Backward Piping Hole)

MODEL	A	B	C	D	E	F	G	H	I	J
MHQWW-36-H-1-U	57.1	14.4	5.8	7.9	4.5	1.2	1.8	1.3	2.0	ø2.76

Dimensions are in inches.



Model: MHQWW-09-H-1-U &  
MHQWW-12-H-1-U



P/N: PP170207