



## **MHQWW-18-H-1 Chilled/Hot Water Hi-Wall Fan Coil**

**Heat / Cool Fan Coil 18,000 BTUH**

*Rev. 1.5*

# HVAC Guide Specifications

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

Nominal Size:  
**18,000 BTUH**

MultiAqua Model Number:  
**MHQWW-18-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-18-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-18-H-1	14.17	46.14	8.10	44.40	2-18	3/8	1/2	1/2	3/4

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-18-H-1	480	208/230-1-50/60	1/20	.24/.30-.26/.34	.33/.37-.37/.43	5

# MHQWW-18-H-1 Chilled Water Performance Data

MHQWW-18-H-1 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
480*	42	4.75	TC	19633
			SC	13220
			WPD	14.6
		5.0	TC	19928
			SC	13356
			WPD	16.1
		5.5	TC	20425
			SC	13586
			WPD	19.2
		5.75	TC	20648
			SC	13707
			WPD	20.9

\*High Speed

MHQWW-18-H-1 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
480*	45	4.75	TC	17448
			SC	12316
			WPD	14.6
		5.0	TC	17691
			SC	12426
			WPD	16.0
		5.5	TC	18170
			SC	12641
			WPD	19.1
		5.75	TC	18373
			SC	12732
			WPD	20.8

\*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-18-H-1 Hot Water Performance Data

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

MHQWW-18-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
50	480	4.75	13.5	15895	19911	23942	27983	32034	36091	40154	44222
		5.0	14.8	15988	20026	24078	28141	32212	36290	40374	44462
		5.5	17.7	16151	20227	24316	28416	32523	36637	40756	44879
		5.75	19.2	16222	20315	24421	28536	32659	36789	40923	45061

MHQWW-18-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
60	480	4.75	13.5	11937	15943	19965	23998	28042	32093	36151	40213
		5.0	14.8	12006	16035	20078	24133	28197	32269	36348	40430
		5.5	17.7	12128	16195	20276	24368	28468	32577	36690	40809
		5.75	19.2	12181	16265	20362	24470	28587	32711	36841	40974

MHQWW-18-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
70	480	4.75	13.4	7976	11973	15986	20012	24048	28094	32146	36204
		5.0	14.8	8022	12041	16076	20123	24181	28247	32320	36399
		5.5	17.6	8102	12160	16233	20318	24413	28515	32624	36738
		5.75	19.2	8137	12212	16302	20403	24514	28633	32757	36887

MHQWW-18-H-1 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
80	480	4.75	13.4	4012	7999	12004	16022	20052	24091	28138	32191
		5.0	14.8	4034	8044	12071	16111	20162	24223	28290	32364
		5.5	17.6	4073	8123	12188	16266	20354	24451	28555	32665
		5.75	19.1	4090	8157	12239	16334	20438	24552	28671	32796

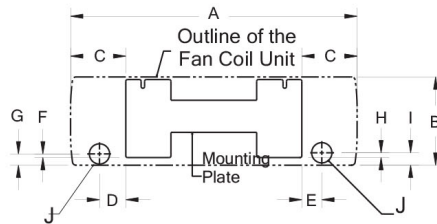
Heating at ANSI/AHRI 440 with addendum 1, 6.3.2 Table 1 as follows:

ENTERING AIR TEMPERATURE	GPM	ENTERING WATER TEMPERATURE 140°F
70°F DB / 60°F WB	4.75	28344
	5.0	28501
	5.5	28776
	5.75	28896

## MHQWW-18-H-1 Sound Data

MODEL #	MHQWW-18-H-1
Fan Speed	dB @ 1 m
H	47.3
M	42.2
L	39.7

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

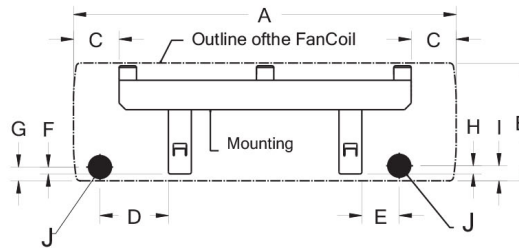


(Left, Backward Piping Hole)

(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.

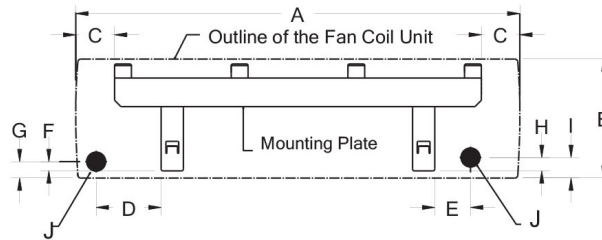


(Left, Backward Piping Hole)

(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)

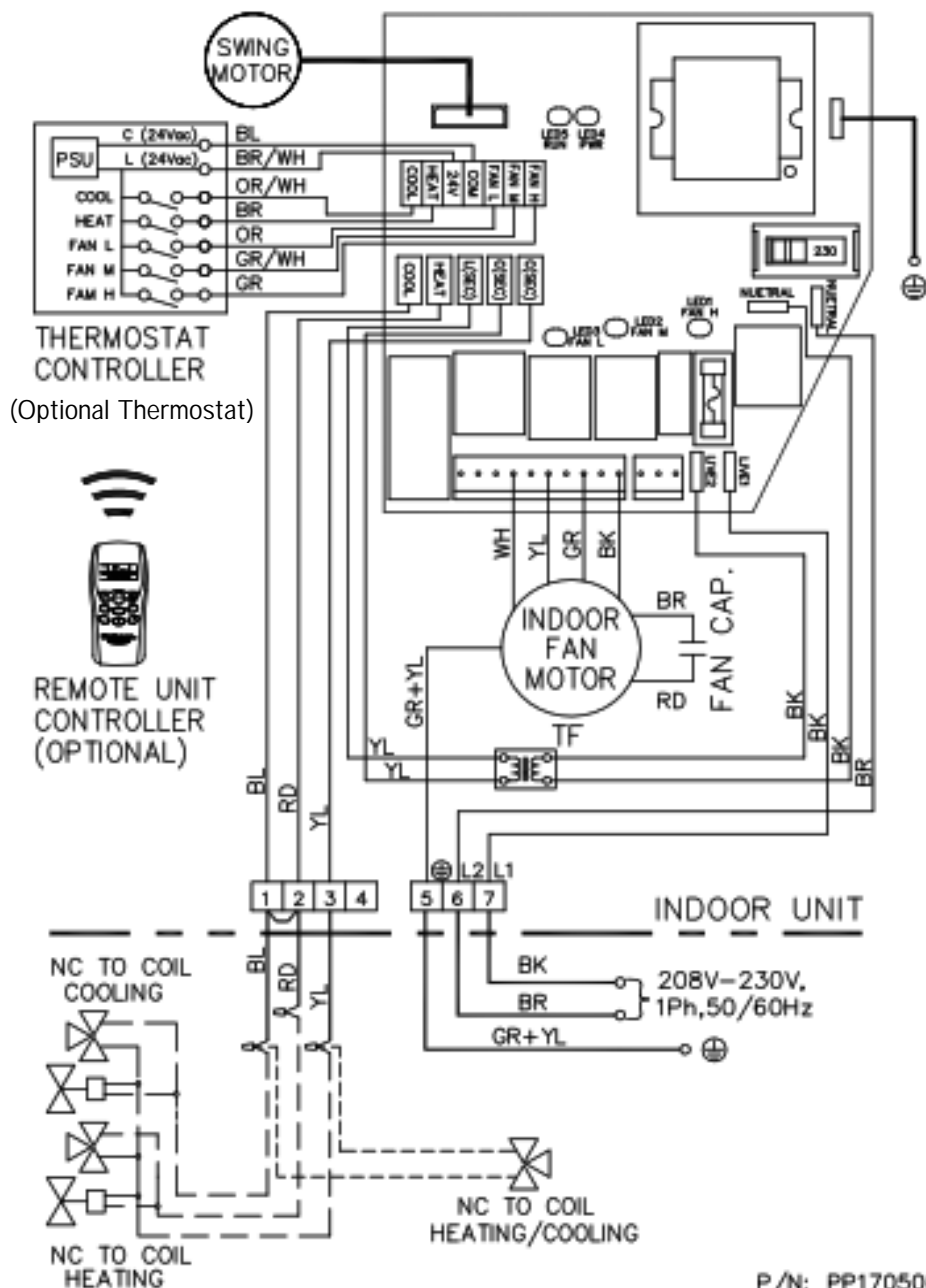
(Right, Backward Piping Hole)

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-18-H-1-U &  
MHQWW-24-H-1-U



P/N: PP170508