



## **MHQWW-24-H-3 Chilled/Hot Water Hi-Wall Fan Coil**

**Heat / Cool Fan Coil 24,000 BTUH**

# HVAC Guide Specifications

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

Nominal Size:

**24,000 BTUH**

MultiAqua Model Number:

**MHQWW-24-H-3**

## **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 120-1-50/60 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.

*These specifications are subject to change without notice. Check [www.multiaqua.com](http://www.multiaqua.com) for the latest information.*

**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-24-H-3 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-24-H-3	14.17	46.14	8.10	46.20	3-18	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-24-H-3	600	120-1-50/60	1/20	0.77	.81	5

## MHQWW-24-H-3 Chilled Water Performance Data

MHQWW-24-H-3 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
600*	42	6.0	TC	26588
			SC	17789
			WPD	14.5
		6.5	TC	27214
			SC	18071
			WPD	16.8
		7.0	TC	27717
			SC	18302
			WPD	19.3
		7.5	TC	28173
			SC	18512
			WPD	21.9

\*High Speed

MHQWW-24-H-3 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
600*	45	6.0	TC	23669
			SC	16507
			WPD	14.4
		6.5	TC	24248
			SC	16760
			WPD	16.7
		7.0	TC	24719
			SC	17003
			WPD	19.2
		7.5	TC	25118
			SC	17182
			WPD	21.8

\*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

## MHQWW-24-H-3 Hot Water Performance Data

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

MHQWW-24-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
50	600	6.0	13.4	21380	26787	32212	37653	43106	48569	54039	59516
		6.5	15.5	21555	27002	32466	37945	43436	48936	54444	59957
		7.0	17.8	21705	27186	32684	38196	43719	49251	54790	60334
		7.5	20.3	21835	27346	32873	38414	43964	49523	55089	60660

MHQWW-24-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
60	600	6.0	13.4	16053	21446	26859	32289	37733	43187	48650	54121
		6.5	15.5	16183	21617	27070	32539	38021	43513	49013	54520
		7.0	17.8	16295	21763	27251	32753	38267	43791	49323	54861
		7.5	20.3	16391	21891	27407	32938	38481	44032	49591	55156

MHQWW-24-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
70	600	6.0	13.3	10722	16102	21504	26923	32358	37804	43260	48724
		6.5	15.5	10807	16229	21671	27130	32603	38088	43581	49082
		7.0	17.8	10881	16338	21815	27308	32814	38330	43856	49388
		7.5	20.2	10945	16433	21939	27461	32996	38540	44093	49653

MHQWW-24-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
80	600	6.0	13.3	5385	10753	16144	21553	26978	32417	37865	43322
		6.5	15.4	5427	10837	16268	21718	27182	32658	38145	43639
		7.0	17.7	5463	10909	16375	21859	27356	32866	38384	43910
		7.5	20.1	5494	10971	16468	21981	27507	33045	38591	44145

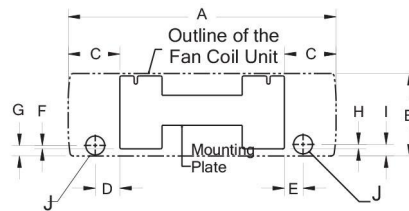
Heating at ANSI/AHRI 440 with addendum 1, 6.3.2 Table 1 as follows:

ENTERING AIR TEMPERATURE	GPM	ENTERING WATER TEMPERATURE 140°F
70°F DB / 60°F WB	6.0	38177
	6.5	38470
	7.0	38720
	7.5	38937

## MHQWW-24-H-3 Sound Data

MODEL #	MHQWW-24-H-3
Fan Speed	dB @ 1 m
H	43
M	42
L	40

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

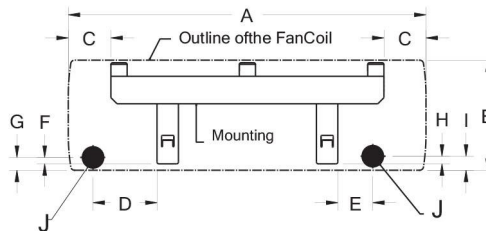


(Left,Backward Piping Hole)

(Right,Backward Piping Hole)

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

Dimensions are in inches.

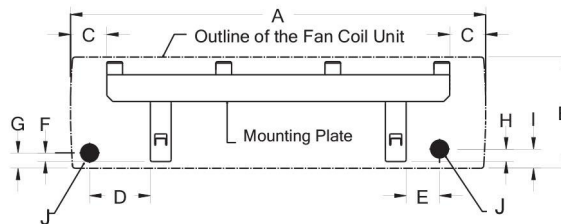


(Left,Backward Piping Hole)

(Right,Backward Piping Hole)

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

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-	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-24-H-3-U

