



MHQWW-36-H-3 Chilled/Hot Water Hi-Wall Fan Coil

Heat / Cool Fan Coil 36,000 BTUH

Rev. 1.5

HVAC Guide Specifications

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

Nominal Size:
36,000 BTUH

MultiAqua Model Number:
MHQWW-36-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.

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-36-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-36-H-3	14.25	56.50	8.37	50.50	3-18	3/8	3/4	3/4	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-36-H-3	850	120-1-50/60	1/12	0.88	.92	5

MHQWW-36-H-3 Chilled Water Performance Data

MHQWW-36-H-3 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
850*	42	8.0	TC	37523
			SC	25156
			WPD	17.9
		8.5	TC	38146
			SC	25427
			WPD	20.0
		9.0	TC	38711
			SC	25687
			WPD	22.3
		9.5	TC	39207
			SC	25916
			WPD	24.7

*High Speed

MHQWW-36-H-3 COOLING CAPACITIES				
CFM	EWT (°F)	GPM	ENTERING AIR TEMPERATURE (°F)	
				80° D.B. / 67° W.B.
850*	45	8.0	TC	33331
			SC	23304
			WPD	17.8
		8.5	TC	33960
			SC	23585
			WPD	19.9
		9.0	TC	34428
			SC	23798
			WPD	22.2
		9.5	TC	34975
			SC	24085
			WPD	24.5

*High Speed

Recommended minimum flow rate for this unit at \geq 2fps is 3.5 gpm

Recommended maximum flow rate for this unit at \leq 6fps is 9.5 gpm

MHQWW-36-H-3 Hot Water Performance Data

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

MHQWW-36-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
50	850	8.0	16.6	30234	37876	45545	53235	60914	68662	76392	84131
		8.5	18.6	30427	38114	45827	53560	61309	69070	76842	84622
		9.0	20.7	30599	38326	46078	53848	61634	69433	77241	85057
		9.5	22.9	30753	38516	46302	54106	61926	69757	77598	85446

MHQWW-36-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
60	850	8.0	16.6	22700	30324	37977	45652	53345	61054	68774	76504
		8.5	18.6	22843	30513	38210	45929	53665	61416	69178	76949
		9.0	20.7	22971	30682	38418	46175	53949	61737	69836	77343
		9.5	22.8	23086	30832	38603	46395	54203	62024	69855	77695

MHQWW-36-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
70	850	8.0	16.5	15159	22767	30404	38065	45746	53443	61154	68875
		8.5	18.5	15254	22907	30589	38294	46019	53759	61511	69274
		9.0	20.6	15338	23033	30754	38498	46261	54038	61828	69627
		9.5	22.8	15414	23145	30902	38681	46477	54288	62111	69943

MHQWW-36-H-3 HEATING CAPACITIES											
ENTERING AIR (°F)	CFM	GPM	WPD	ENTERING WATER TEMPERATURE (°F)							
				90°	100°	110°	120°	130°	140°	150°	160°
80	850	8.0	16.5	7612	15203	22824	30472	38140	45827	53527	61239
		8.5	18.5	7659	15295	22962	30654	38367	46096	53839	61592
		9.0	20.6	7700	15378	23085	30816	38567	46335	54115	61906
		9.5	22.7	7737	15452	23195	30961	38747	46548	54361	62185

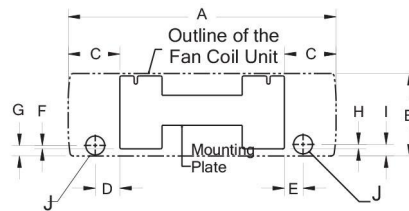
Heating at ANSI/AHRI 440 with addendum 1, 6.3.2 Table 1 as follows

ENTERING AIR TEMPERATURE	GPM	ENTERING WATER TEMPERATURE 140°F
70°F DB / 60°F WB	8.0	53967
	8.5	54293
	9.0	54581
	9.5	54839

MHQWW-36-H-3 Sound Data

MODEL #	MHQWW-36-H-3
Fan Speed	dB @ 1 m
H	43
M	42
L	40

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

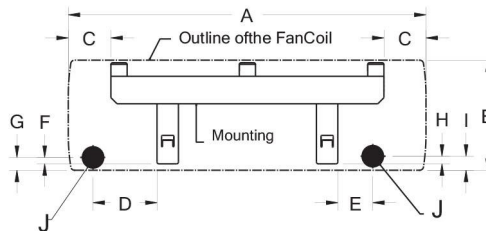


(Left, Backward Piping Hole)

(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.

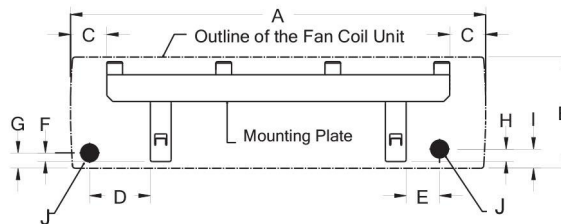


(Left, Backward Piping Hole)

(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.

WIRING DIAGRAM

Model: MHQWW-36-H-3-U

