



MCFCW-06-4LS-1 (4-Pipe) Low Static Chilled/Hot Water Ceiling Concealed Cased Fan Coil 208/230V

4-Pipe Heating & Cooling Fan Coil 18,000 BTUH

*These specifications are subject to change without notice.
Check www.multiaqua.com for the latest information.*

HVAC Guide Specifications

Chilled and Hot Water Fan Coil Low Static

4-Pipe

Nominal Size:

18,000 BTUH

Multiaqua Model Number:

MCFCW-06-4LS-1

Part 1-General

1.01 System Description

Multiaqua Chilled Water Fan Coils are manufactured with heavy gauge galvanized steel to resist corrosion.

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 heavy gauge galvanized steel.
 - 3. Contained with the unit shall be all factory wiring, piping, associated controls and special accessories required prior to start up. Filters are not included with the fan coil.
 - 4. A filter rack is built into the return of each fan coil.

B. Unit Cabinet:

- 1. Composed of heavy gauge galvanized steel casing with a baked polyester powder.
- 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.

D. Blower Wheels:

- 1. Blower wheels are forward curved and dynamically balanced.

E. External Static Pressure

- 1. Unit shall be rated for a max external static pressure of .3" WG.

F. Water Coil:

- 1. Manufactured with water coils containing 3/8 copper tubing mechanically bonded to aluminum fins.
- 2. Contain both a manual water/ air bleed port per coil.
- 3. Coils shall be factory tested to 350 psig.
- 4. Coils have a max operating pressure of 200 PSI.
- 5. Maximum liquid solution temperature is 180 degrees F.

G. 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 insulation to prevent condensation.
3. Pans shall contain sloped drain connection as well as a sloped secondary drain connection.
4. Field supplied and installed P-Traps are required.

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

- A. Fan coils shall be completely factory wired and tested.
- B. All components shall be wired to an internal terminal block to allow for a field installed 24 vac thermostat and or fan speed control.
- C. Controls shall include the following components.
 1. 24vac transformer.
 2. Three fan relays.
 3. Optional thermostats.

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. Primary electrical power supply shall enter the unit at a single location.
- B. Electrical power supply shall be rated to withstand 120°F operating ambient temperatures.
- C. Control and high voltage points shall be accessed through terminal block.

Part 6- Definitions:**6.01 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.

6.02 Measurements

- A. All measurements with regard to length, width, and height shall be in inches.

MCFCW-06-4LS-1 Product Specifications

Physical Data										
Model Number	Height (in)	Length (in)	Depth (in)	Weight (lbs.)	Primary Rows FPI	Secondary Rows FPI	Copper Diameter (in)	Water Inlet O.D (in)	Water Outlet O.D(in)	Drain (in)
MCFCW-06-4LS-1	12.25	37.25	29.25	100	3-14	1-14	3/8	5/8	5/8	3/4

Electrical Data						
Model Number	Nominal CFM	Volts/ Phase/ Hertz	Fan Motor HP	Full Load Ampacity	Fuse or HACR Circuit Breaker Per Circuit	
					MCA	MOP
MCFCW-06-4LS-1	600	208/230-1-50/60	1/8	1.01	1.27	5

MCFCW-06-4LS-1 Chilled Water Performance Data

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
1130	42	0.00	3.5	TC	25922
				SC	20335
				WPD FT	11.3
			4.0	TC	27609
				SC	21123
				WPD FT	14.5
			4.5	TC	29097
				SC	21800
				WPD FT	18.0
MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
930	42	0.10	3.5	TC	24375
				SC	18359
				WPD FT	11.3
			4.0	TC	25899
				SC	19045
				WPD FT	14.5
			4.5	TC	27252
				SC	19643
				WPD FT	18.0
MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
790	42	0.20	3.5	TC	23048
				SC	16794
				WPD FT	11.3
			4.0	TC	24430
				SC	17406
				WPD FT	14.5
			4.5	TC	25617
				SC	17928
				WPD FT	18.0

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MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
610	42	0.30	3.5	TC	20895
				SC	14507
				WPD FT	11.3
			4.0	TC	22002
				SC	14993
				WPD FT	14.5
			4.5	TC	22942
				SC	15403
				WPD FT	18.0

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
1130	45	0.00	3.5	TC	23297
				SC	9247
				WPD FT	11.2
			4.0	TC	2477
				SC	19975
				WPD FT	14.4
			4.5	TC	25953
				SC	20554
				WPD FT	17.9

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
930	45	0.10	3.5	TC	21844
				SC	17337
				WPD FT	11.2
			4.0	TC	23147
				SC	17943
				WPD FT	14.4
			4.5	TC	24214
				SC	18428
				WPD FT	17.9

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
790	45	0.20	3.5	TC	20601
				SC	15810
				WPD FT	11.2
			4.0	TC	21780
				SC	16337
				WPD FT	14.4
			4.5	TC	22777
				SC	16774
				WPD FT	17.9

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
610	45	0.30	3.5	TC	18640
				SC	13576
				WPD FT	11.2
			4.0	TC	19622
				SC	14003
				WPD FT	14.4
			4.5	TC	20404
				SC	14345
				WPD FT	17.9

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
1130	42	0.00	3.5	TC	12619
				SC	10161
				WPD FT	13.4
			4.0	TC	13278
				SC	10417
				WPD FT	17.2
			4.5	TC	13840
				SC	10635
				WPD FT	21.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
930	42	0.10	3.5	TC	1208888
				SC	9344
				WPD FT	13.4
			4.0	TC	12686
				SC	9576
				WPD FT	17.2
			4.5	TC	13193
				SC	9773
				WPD FT	21.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
790	42	0.20	3.5	TC	11621
				SC	8698
				WPD FT	13.4
			4.0	TC	12167
				SC	8910
				WPD FT	17.2
			4.5	TC	12629
				SC	9091
				WPD FT	21.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
610	42	0.30	3.5	TC	10835
				SC	7736
				WPD FT	13.4
			4.0	TC	11301
				SC	7919
				WPD FT	17.2
			4.5	TC	11692
				SC	8074
				WPD FT	21.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
1130	45	0.00	3.5	TC	10972
				SC	9611
				WPD FT	13.3
			4.0	TC	11565
				SC	9835
				WPD FT	17.1
			4.5	TC	12010
				SC	10027
				WPD FT	21.3

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
930	45	0.10	3.5	TC	10515
				SC	8811
				WPD FT	13.3
			4.0	TC	11117
				SC	9016
				WPD FT	17.1
			4.5	TC	11570
				SC	9190
				WPD FT	21.3

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
790	45	0.20	3.5	TC	10183
				SC	8182
				WPD FT	13.3
			4.0	TC	10671
				SC	8370
				WPD FT	17.1
			4.5	TC	11084
				SC	8529
				WPD FT	21.3

MCFCW-06-4LS-1 COOLING CAPACITIES (Secondary Coil Only)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
610	45	0.30	3.5	TC	9509
				SC	7251
				WPD FT	13.3
			4.0	TC	9926
				SC	7412
				WPD FT	17.1
			4.5	TC	10277
				SC	7548
				WPD FT	21.3

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
1130	42	0.00	3.5	TC	28132
				SC	21946
				WPD FT	4.6
			4.0	TC	30032
				SC	22899
				WPD FT	5.9
			4.5	TC	31721
				SC	23724
				WPD FT	7.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
930	42	0.10	3.5	TC	26387
				SC	19799
				WPD FT	4.6
			4.0	TC	28085
				SC	20603
				WPD FT	5.9
			4.5	TC	29607
				SC	21313
				WPD FT	7.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
790	42	0.20	3.5	TC	24885
				SC	18073
				WPD FT	4.6
			4.0	TC	26424
				SC	18785
				WPD FT	5.9
			4.5	TC	27755
				SC	19390
				WPD FT	7.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
610	42	0.30	3.5	TC	22450
				SC	15535
				WPD FT	4.6
			4.0	TC	23696
				SC	16093
				WPD FT	5.9
			4.5	TC	24770
				SC	16574
				WPD FT	7.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
1130	45	0.00	3.5	TC	25493
				SC	20842
				WPD FT	4.6
			4.0	TC	27118
				SC	21713
				WPD FT	5.9
			4.5	TC	28565
				SC	22452
				WPD FT	7.4

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MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
930	45	0.10	3.5	TC	23791
				SC	18746
				WPD FT	4.6
			4.0	TC	25234
				SC	19457
				WPD FT	5.9
			4.5	TC	26540
				SC	20071
				WPD FT	7.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
790	45	0.20	3.5	TC	22364
				SC	17056
				WPD FT	4.6
			4.0	TC	23690
				SC	17666
				WPD FT	5.9
			4.5	TC	24840
				SC	18195
				WPD FT	7.4

MCFCW-06-4LS-1 COOLING CAPACITIES (Primary and Secondary Coil)					
CFM	EWT (°F)	ESP IN WC	GPM	ENTERING AIR TEMPERATURE (F)	
					80° D.B. / 67° W.B.
610	45	0.30	3.5	TC	20106
				SC	14562
				WPD FT	4.6
			4.0	TC	21192
				SC	15044
				WPD FT	5.9
			4.5	TC	22126
				SC	15456
				WPD FT	7.4

MCFCW-06-4LS-1 Hot Water Performance Data

This heating performance data is at dry bulb temperature indicated / wet bulb temperature is 56 degrees F.

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	1130	0.00	3.5	10.3	20623	27330	34076	40855	47661	54487	61331
			4.0	13.2	21368	28322	35315	42341	49392	56465	63554
			4.5	16.4	21977	29133	36326	43551	50801	58072	65360
			5.0	19.9	22485	29806	37165	44555	51969	59403	66854

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	930	0.10	3.5	10.3	18823	24923	31056	37215	43397	49597	55811
			4.0	13.2	19416	25711	32039	38392	44768	51160	57567
			4.5	16.4	19896	26349	32833	39342	45872	52418	58979
			5.0	19.9	20293	26875	33487	40123	46779	53452	60137

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	790	0.20	3.5	10.3	17318	22913	28535	34180	39844	45523	51213
			4.0	13.2	17798	23550	29329	35129	40948	46781	52625
			4.5	16.4	18184	24061	29965	35889	41830	47785	53751
			5.0	19.9	18500	22480	30485	36509	42550	48604	54668

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	610	0.30	3.5	10.3	14978	19792	24626	29477	34342	39217	44101
			4.0	13.2	15308	20229	25169	30125	35094	40073	45060
			4.5	16.4	15566	20571	25593	30630	35679	40737	45804
			5.0	19.9	15776	20847	25935	31037	36150	41273	46403

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MCFCW-06-4LS-1 HOT WATER CAPACITIES (Secondary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	1130	0.00	3.5	12.2	10877	14301	17753	21228	24722	28232	31755
			4.0	15.7	11132	14638	18171	21725	25297	28885	32484
			4.5	19.6	11341	14914	18512	22131	25766	29416	33077
			5.0	23.8	11546	15145	18797	22468	26156	29857	33569

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Secondary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	930	0.10	3.5	12.2	10124	13297	16495	19712	22945	26192	29451
			4.0	15.7	10342	13585	16851	20135	23435	26748	30071
			4.5	19.6	10521	13820	17141	20480	23833	27198	30573
			5.0	23.8	10669	14016	17383	20766	24163	27572	30990

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Secondary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	790	0.20	3.5	12.2	9496	12463	15451	18456	21475	24506	27547
			4.0	15.7	9687	12714	15761	18824	21900	24988	28085
			4.5	19.6	9841	12918	16013	19122	22245	25378	28519
			5.0	23.8	9970	13087	16221	19370	22530	25700	28879

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Secondary Coil)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	610	0.30	3.5	12.2	8218	11159	13822	16499	19187	21885	24590
			4.0	15.7	8368	11356	14066	16788	19521	22263	25012
			4.5	19.6	8490	11516	14264	17022	19791	2268	25352
			5.0	23.8	8591	11649	14427	17216	20014	22820	25632

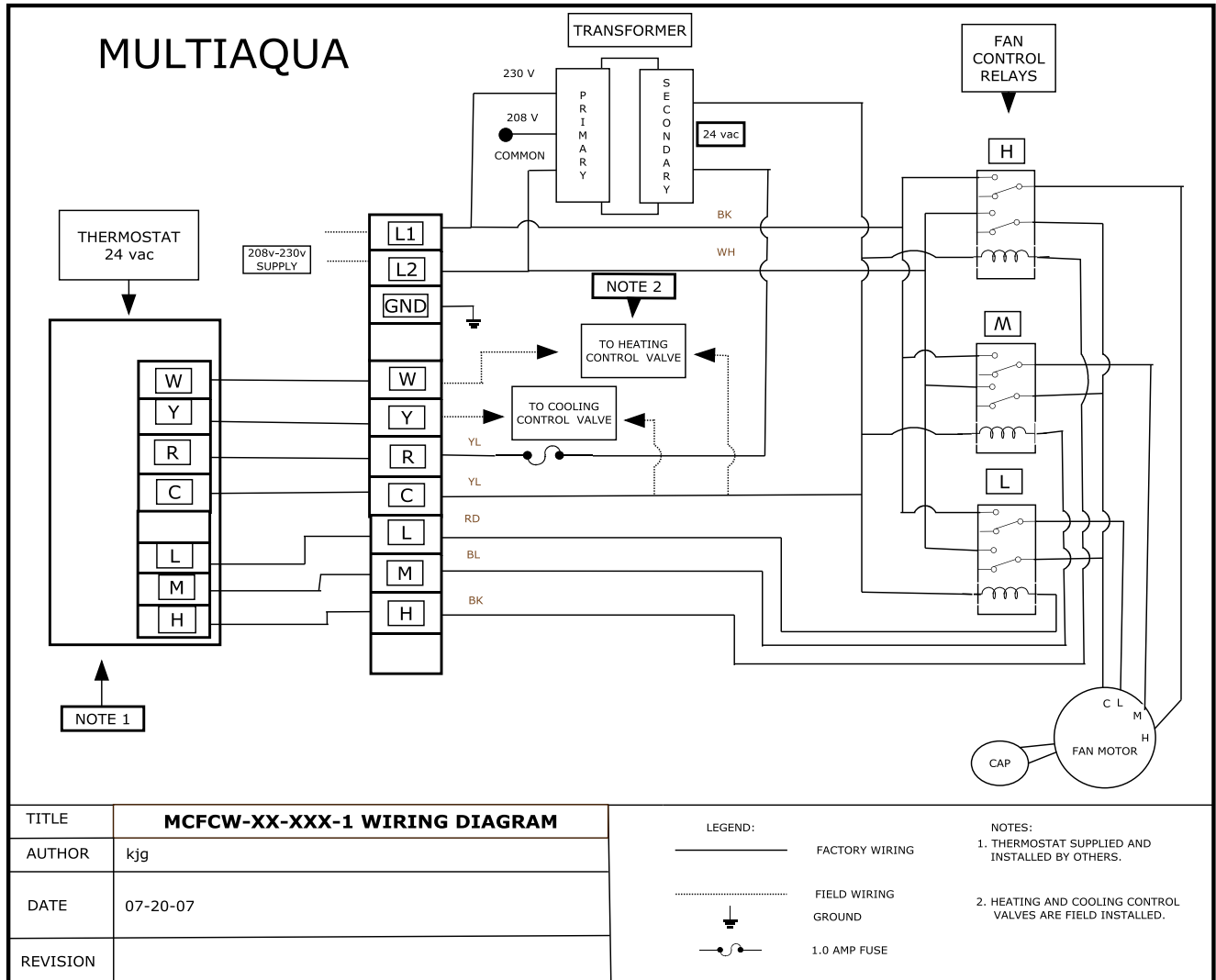
MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary and Secondary)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	1130	0.0	3.5	4.3	22817	30296	37831	45413	53033	60685	68362
			4.0	5.5	23740	31527	39369	47258	55185	63143	71127
			4.5	6.9	24494	32531	40622	48758	56931	65136	73366
			5.0	8.4	25121	33363	41658	49997	58373	66779	75210

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary and Secondary)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	930	0.10	3.5	4.3	20811	27609	34453	41337	48252	55194	62158
			4.0	5.5	21531	28566	35646	42765	49915	5790	64287
			4.5	6.9	22110	29335	36603	43980	51244	58604	65985
			5.0	8.4	22585	29964	37385	44842	52327	59837	67365

MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary and Secondary)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	790	0.20	3.5	4.3	19112	25334	31596	37890	44211	50554	56915
			4.0	5.5	19680	26088	32533	39010	45512	52036	58577
			4.5	6.9	20132	26686	33276	39895	46540	53204	59885
			5.0	8.4	20498	27170	33876	40610	47368	54145	60937

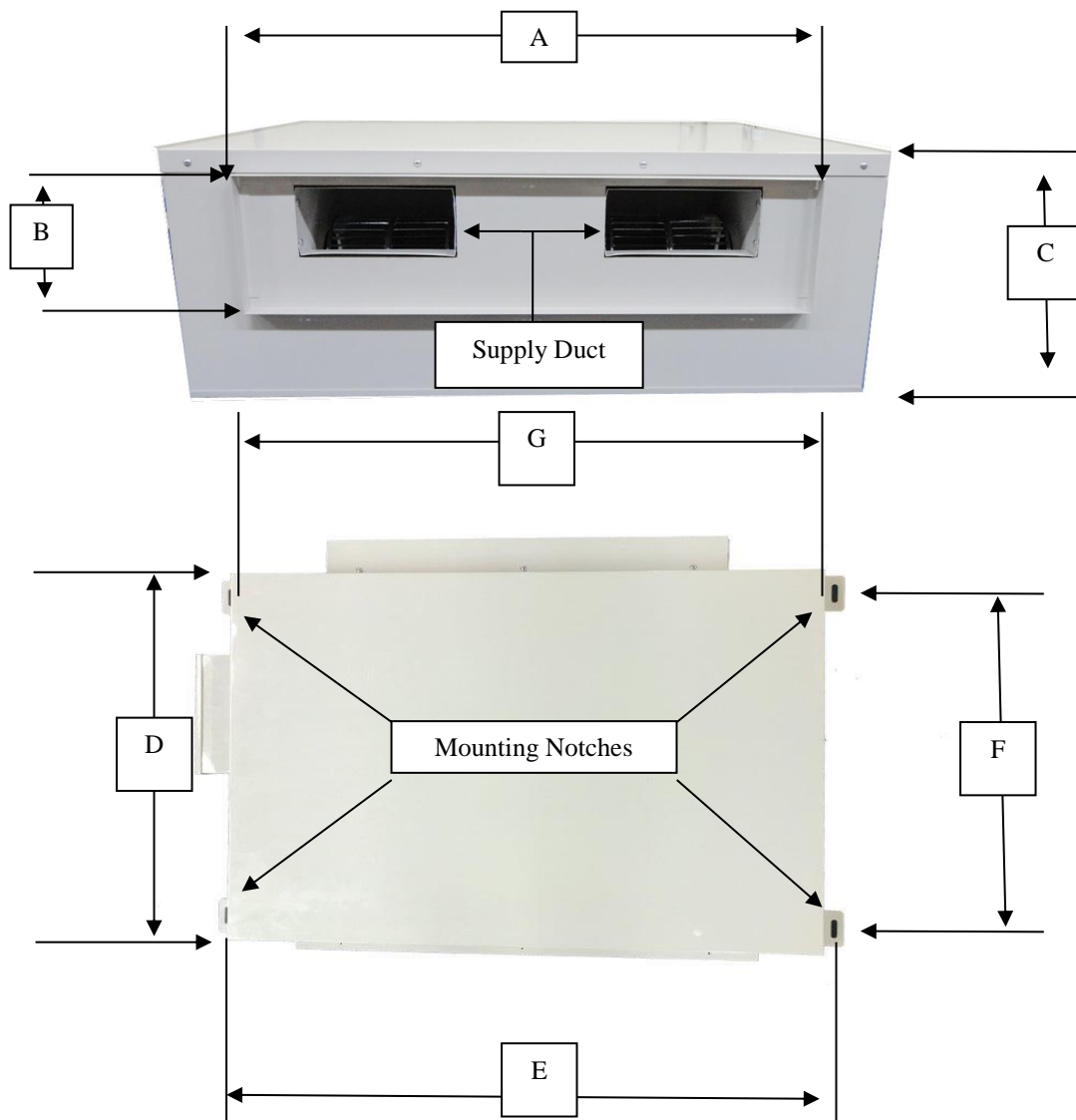
MCFCW-06-4LS-1 HOT WATER CAPACITIES (Primary and Secondary)											
ENTERING AIR (°F)	NOMINAL CFM	ESP "WC	GPM	WPD	ENTERING AIR TEMPERATURE (F)						
					100°	110°	120°	130°	140°	150°	160°
70	610	0.30	3.5	4.3	10645	21760	27110	32483	37875	43284	48705
			4.0	5.5	16514	22247	27713	33201	38707	44227	49760
			4.5	6.9	16801	22625	28180	33756	39348	44955	50572
			5.0	8.4	17029	22925	28551	34196	39856	45530	51213

MCFCW-06-4LS-1 Wiring Diagram



MCFCW-06-4LS-1 Dimensional Drawing

FAN COIL DIMENSIONS (in.)									
Fan Coil Model Number	A	B	C	D	E	F	G	H	I
MCFCW-06-4LS-01	29.25	7.00	12.25	29.21	37.2	24.25	39.25	26.00	10.50



These specifications are subject to change without notice.
Check www.multi-aqua.com for the latest information.

