

INSTALLATION and OPERATION MANUAL



CWA2





INSTALLATION & OPERATING MANUAL

CWA2 Chilled Water Air Handler with Electric Heat
18,000 – 60,000 BTUH

----- CAUTION -----

Care must be taken when handling sheet metal. Sheet metal parts have sharp edges and could cause injury.

GENERAL

Read the entire contents of this manual before beginning installation. MultiAqua assumes no responsibility for equipment installed contradictory to any code requirement or installation instructions.

The components of this fan coil have been inspected at the factory and readied for shipment. Upon receiving the shipment a visual inspection of the packaging must be performed.

If any damage to the packaging is discovered, an inspection of the components must be performed and noted on the delivery documents. If component damage is found a damage claim must be filed by the receiving party against the delivery party immediately.

This product is designed and manufactured to permit installation in accordance with national codes. It is the installer's responsibility to install the product in accordance with national codes and/or prevailing local codes and regulations.

Care must be taken to ensure the structural integrity of the supporting members, clearances and provisions for servicing, power supply, coil connections and/or condensate removal. Before the installation ensure the structural strength of the supporting members is sufficient. See **Figure 1** for hanging weights of the fan coils.

This unit is designed to be installed in a

vertical or horizontal configuration. See **Figure 2** for fan coil only dimensions. The coil hand of connection is field reversible.

FAN COIL MODEL NUMBER	APPROXIMATED WEIGHTS (lbs.)
18CWA2-00	118
24CWA2-00	118
36CWA2-00	145
48CWA2-00	170
60CWA2-00	180

Figure 1

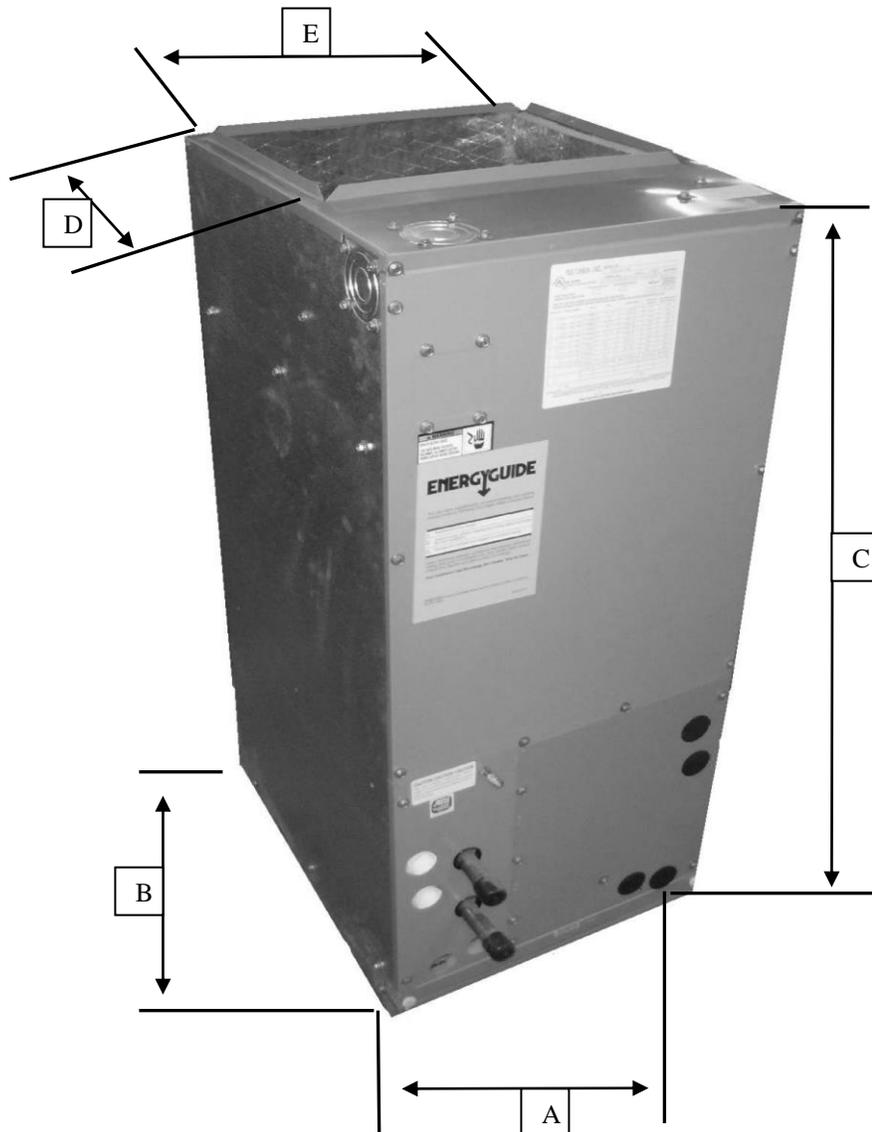


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Physical Dimensions (inches)					
Model Number	A	B	C	D	E
18CWA2-00	17.50	21.00	39.75	12.50	16.00
24CWA2-00	17.50	21.00	39.75	12.50	16.00
36CWA2-00	17.50	21.00	39.75	12.50	16.00
48CWA2-00	21.50	25.00	49.75	17.25	19.50
60CWA2-00	21.50	25.00	49.75	17.25	19.50

Figure 2





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INSTRUCTIONS FOR INSTALLING FAN COIL

The CWA2 is a chilled water fan coil with optional electric heat is designed for multi-position applications in closets, attics or basements or crawl spaces. They are field convertible to horizontal applications without the need for additional parts. Unit is not suitable for down flow applications.

Figure 3 & 4

CONVERTING FAN COIL TO RIGHT HAND DISCHARGE

The CWA2 fan coil comes shipped from the factory assembled with a left hand air discharge configuration.

Figure 4

1. To convert the fan coil to right hand discharge remove the three front panels.
2. Remove the three screws from the coil mounting brackets and pull entire A-coil assembly out of the fan coil.

Figure 5



Figure 3



Figure 4

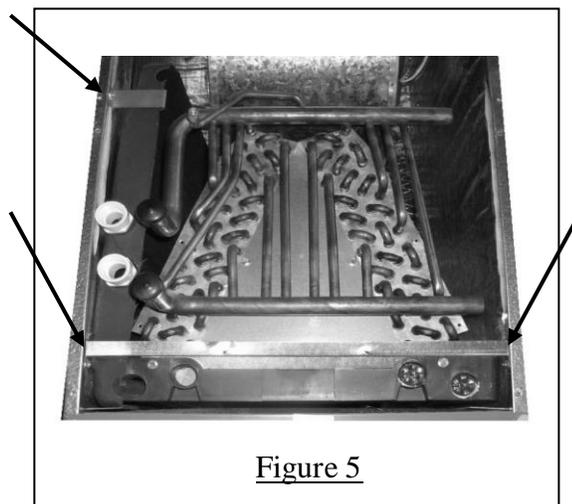


Figure 5



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3. Remove the horizontal drain pan from the coil and re-install it on the other side.

Figure 6 & 7

4. Ensure the coil mounting brackets are secure in order to avoid coil misplacement inside the cabinet. Check coil slope to make sure that the drain pan slopes toward the drain outlet. An incorrectly installed coil could result in damages to the fan coil and property.

5. Re-install the three front panels previously removed in **step 1**.

6. The unit shall be suitable for 0” clearance to combustible materials. Sufficient clearance must be provided at the front of the fan coil to allow access for maintenance and servicing.

7. The fan coil comes with one primary and one secondary condensate drain connection per configuration. Ensure when connecting the field installed condensate drain lines, the lower of the two fan coil drain connections is piped into the buildings condensate removal method.

Figure 8 & 9

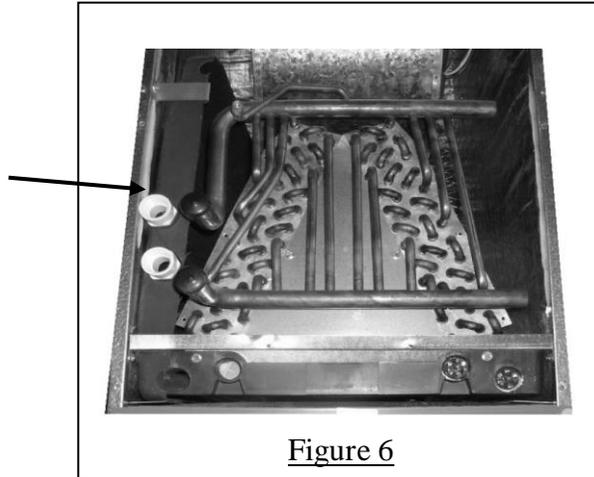


Figure 6

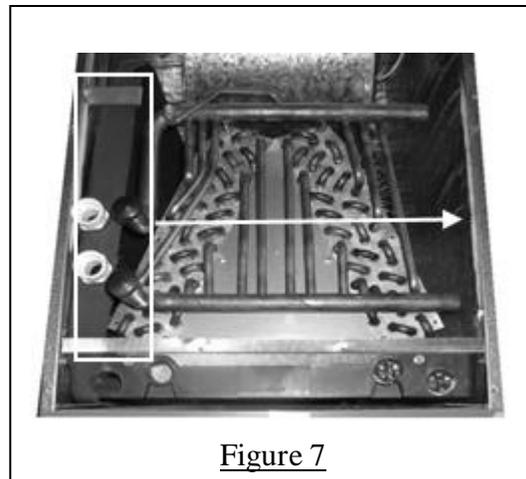


Figure 7

SECONDARY
DRAIN

PRIMARY
DRAIN

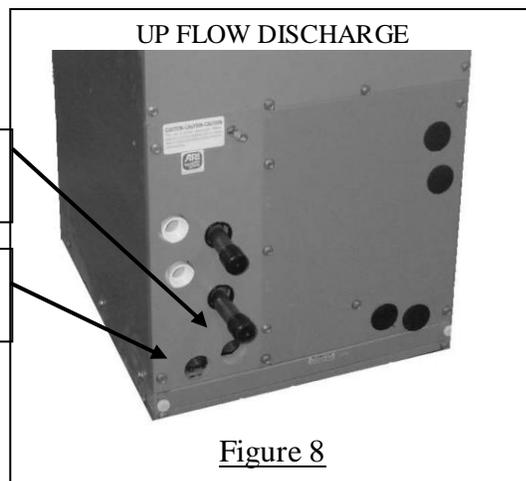


Figure 8



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8. The “A” coil includes an L-shaped piece of sheet metal with one leg of the L covering the top length of one coil slab; the other leg is between/inside the two slabs.

Figure 10

When converting the unit to right-hand horizontal discharge, the L-shaped piece of sheet metal should be removed, re-positioned and installed so that it covers the length of the top coil slab. This will force any condensate on the end of the top coil slab to run down the inside leg before dripping onto the lower slab. This will also help to prevent any possible condensate water blow off.

Figure 11

SECONDARY
DRAIN

PRIMARY
DRAIN

HORIZONTAL DISCHARGE

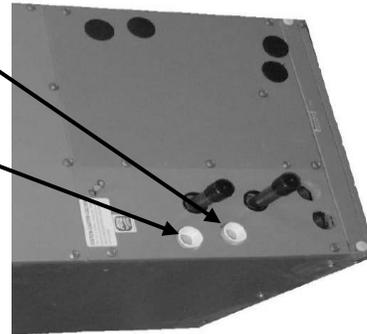


Figure 9



Figure 10



Figure 11



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ELECTRICAL

9. All duct work must be installed per local and national codes. The return air duct and the return air opening provided in the fan coil must have the same area.

Figure 12 & 13

All wiring must comply with local and national codes. High and low voltage terminal blocks are provided. An electrical plug is provided for the field installation of electric heat packages. Knockouts are provided in the cabinet for field wiring of the electrical. See page 8 for electric heat package installation instructions.

- A = High Voltage terminal block.
- B = Electric Heat Package Connection Plug.
- C = Low Voltage Terminal Block.

Figure 14

CONTROLS

A 24 VAC transformer, fan relay and electric heat sequencer are provided inside cabinet. All supplied controls are wired onto the low voltage terminal block.

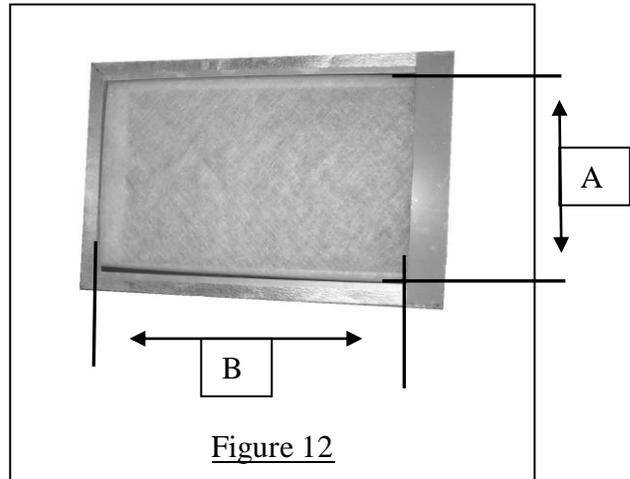


Figure 12

CWA2 Inlet Air Dimensions		
	A	B
18CWA2-00	15	17.5
24CWA2-00	15	17.5
36CWA2-00	15	17.5
48CWA2-00	19.25	22.25
60CWA2-00	19.25	22.25

- Dimensions are in inches

Figure 13

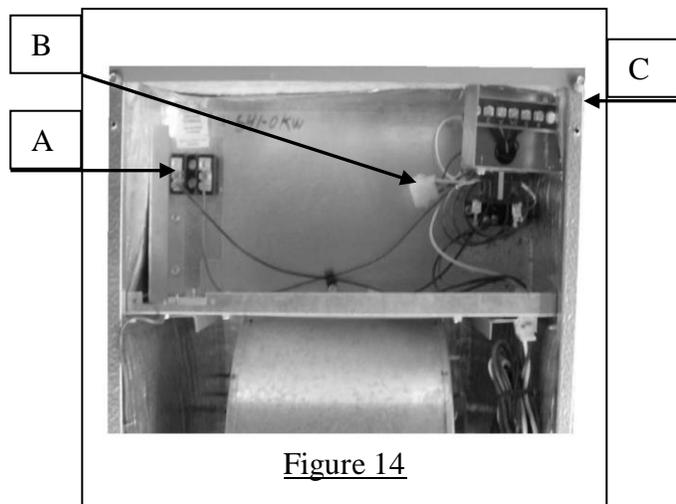


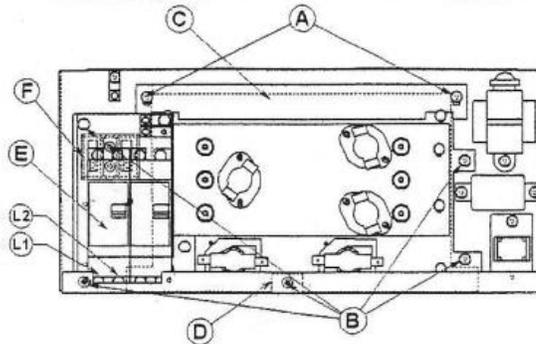
Figure 14



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INSTALLATION INSTRUCTIONS FOR SLIDE IN ELECTRIC HEATER MODULE

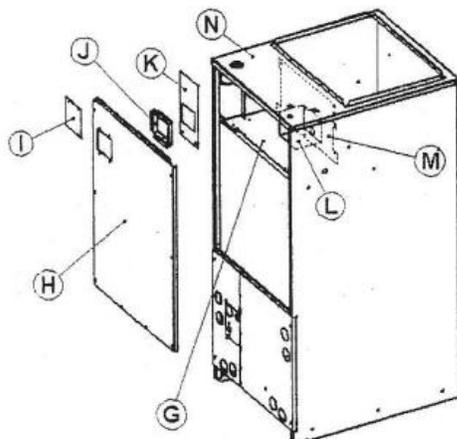


HEATER MODELS:

B41HK-05
B41HK-08
B41HK-10
B41HK-15
B15HK-05
B15HK-08
B15HK-10
B15HK-15
B15HK-20

TO INSTALL THE SLIDE IN MODULE:

- (1) DISCONNECT THE UNIT FROM POWER SUPPLY, MAKE SURE NO ELECTRICITY IS CONNECTED TO THE UNIT
- (2) REMOVE THE DOOR (H) FROM THE UNIT
- (3) REMOVE THE TERMINAL BOX (L) WHICH IS ATTACHED TO THE TOP PANEL (N) WITH TWO SCREWS, PUT ASIDE, CLEAR THE WAY FOR SLIDING MODULE
- (4) REMOVE THE COVER PLATE (M) FROM HEATER DECK (G)
- (5) UNPLUG RED AND BLACK WIRES FROM TERMINAL BLOCK (F), THEN MOVE TO RIGHT SIDE TO ALLOW INSTALLATION OF THE MODULE
- (6) RAISE THE MODULE ENOUGH TO CLEAR MOUNTING TAB (D), SLIDE THE MODULE HALFWAY THROUGH, PLUG THE TWO WIRES (WHICH WERE UNPLUGGED IN STEP 5) TO THE LEFT CIRCUIT BREAKER OR PROVIDED ¼ INCH INSULATED MALE TERMINALS(E), BLACK WIRE ON LEFT CONNECTION (L1) RED WIRE ON RIGHT CONNECTION (L2)
- (7) SLIDE THE MODULE IN, SECURE WITH SCREWS (B)
- (8) INSTALL AIRBLOCK (C) TO THE ASSEMBLY AS SHOWN, SECURE WITH SCREWS (A)
- (9) COMPLETE LINE VOLTAGE FIELD WIRING
- (10) ATTACH THE BREAKER COVER (K) TO HEATER DECK (G) WITH TWO BLUNT SCREWS, REMOVE THE PLATE (I) FROM THE DOOR (H) REPLACE WITH THE BREAKER FLANGE (J) AND ATTACH TO THE SAME PLACE WITH FOUR SCREWS
- (11) SECURE TERMINAL BOX (L) WITH TWO SCREWS TO THE TOP PANEL (N), CONNECT 6-PIN PLUGS, COMPLETE LOW VOLTAGE FIELD WIRING
- (12) REPLACE DOOR (H) AND CHECK UNIT OPERATION



NOTE: BREAKER COVER (K), BREAKER FLANGE (J) AND AIRBLOCK (C) ARE SHIPPED WITH THE SLIDE IN MODULE



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PIPING

10. This fan coil is supplied with one water coil that can be used for chilled and/or hot water. The coil has one dedicated water inlet and outlet. Ensure that both lines are insulated according to local and national building codes.

Figure 15

11. Condensate drains must be installed with at least .25" of slope per foot away from the fan coil. Since the drain pan is located on the suction side of the blower, a minimum trap of 1.5" must be installed in the drain line for proper drainage.

ROUTINE CHECK UP AND SERVICE

This product is designed to provide many years of dependable, trouble free comfort when properly maintained. Proper maintenance will consist of routine filter cleanings/changes, bi-annual check-ups that include but not limited to filter inspections, electric heater inspections /cleaning of the internal electrical and heat transfer components by a qualified service technician. Failure to provide periodic check-ups and cleaning can result in excessive operating cost and/or equipment failure.

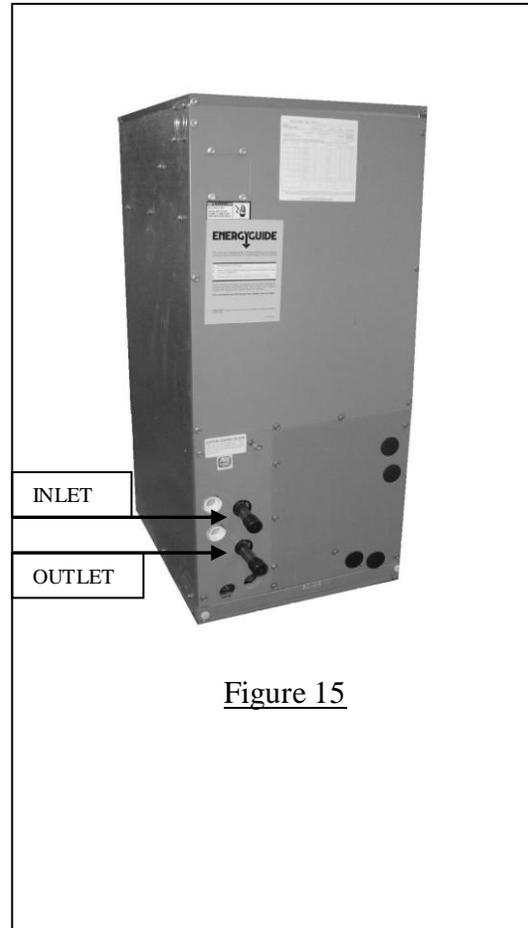


Figure 15