

# INSTALLATION and OPERATION MANUAL



**MHCCW (115)**





# INSTALLATION & OPERATING MANUAL

MHCCW Fan Coils 1- 3 Tons

## ----- 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 an horizontal configuration only, and into an enclosure assembly. The enclosure assembly can be ordered separately or field fabricated by the installing contractor. See **Figure 2** for enclosure part numbers, dimensions and weights. See **Figure 3** for fan coil only dimensions.

The coil hand of connection is field reversible to left or right hand connection. See **Figures 4-6** for converting the coil hand of connection.

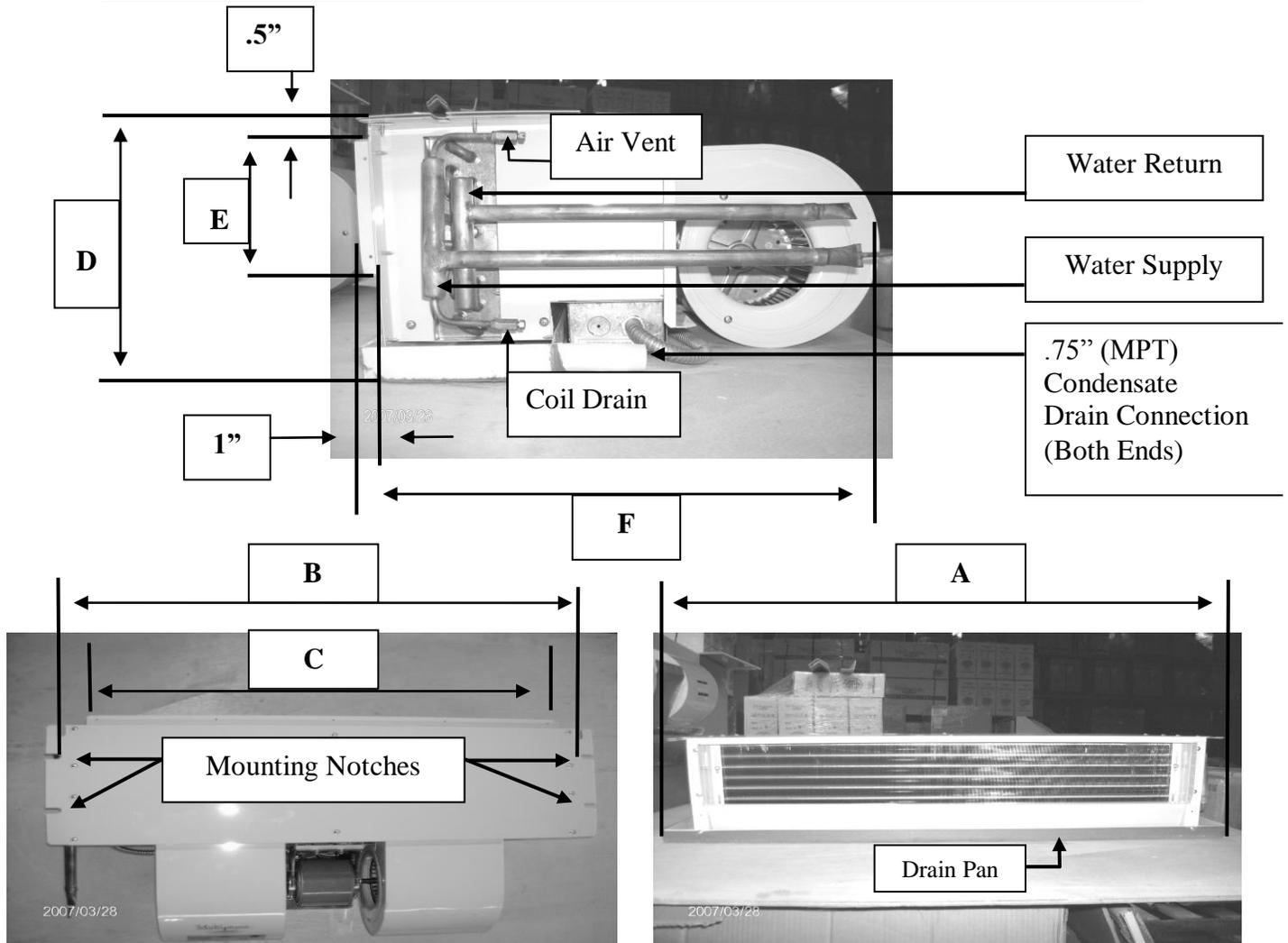
FAN COIL MODEL NUMBER	APPROXIMATED WEIGHTS (LBS)
MHCCW-04	66.0
MHCCW-06	68.2
MHCCW-08	72.6
MHCCW-10	74.8
MHCCW-12	83.6

**Figure 1**

ENCLOSURE PART NUMBER	FAN COIL SIZE	ENCLOSURE DIMENSIONS (in.)			
		Depth	Length	Height	Weight (LBS.)
MPE468	4	32.75	39.75	11.00	26
MPE468	6	32.75	39.75	11.00	26
MPE468	8	32.75	39.75	11.00	26
MPE10	10	32.75	45.75	11.00	30
MPE12	12	32.75	51.75	11.00	34

**Figure 2**

FAN COIL DIMENSIONS						
Fan Coil Model Number	A	B	C	D	E	F
MHCCW04-XX	37.72	34.56	31.41	10.23	5.51	21.65
MHCCW06-XX	37.72	34.56	31.41	10.23	5.51	21.65
MHCCW08-XX	37.72	34.56	31.41	10.23	5.51	21.65
MHCCW10-XX	43.70	40.55	37.40	10.23	5.51	21.65
MHCCW12-XX	49.68	46.53	43.38	10.23	5.51	21.65



**Figure 3**

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**INSTRUCTIONS FOR  
CONVERTING COIL HAND  
CONNECTION (Left or Right)  
& ELECTRIC HEATER  
ACCESS.**

1. Remove the eleven screws that attach the top to the fan coil assembly and remove the top. This will allow you to access the electric heaters.

Figure 4

2. Remove the eight screws that hold the coil into the fan coil frame assembly. Four screws per side.

Figure 5

3 Slide the coil out of the fan coil frame assembly toward the coil supply and return line connections. Ensure that care is taken when removing and inserting the coil not to damage the coil fins. Insert the coil into the fan coil frame assembly from the other end and reverse procedures 4 & 5 to reassemble the fan coil.

Figure 6

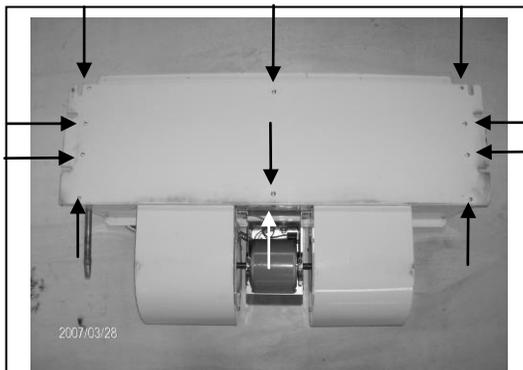


Figure 4

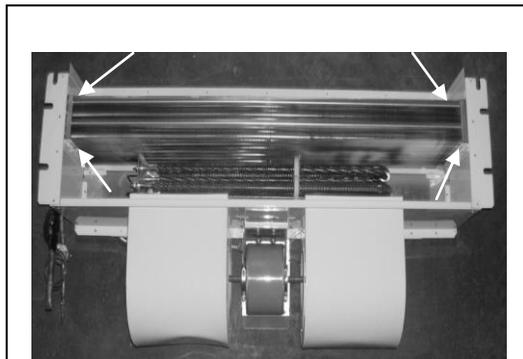


Figure 5



Figure 6

**INSTRUCTIONS FOR  
INSTALLING FAN COIL  
UNIT INTO ENCLOSURE  
ASSEMBLY**

1. Remove the ten screws that attach the electrical assembly to the fan coil unit. Do not separate the electrical assembly from the blower assembly. These two assemblies will be removed in the next step.

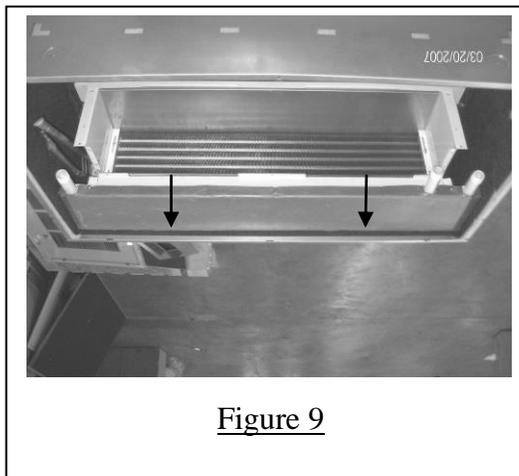
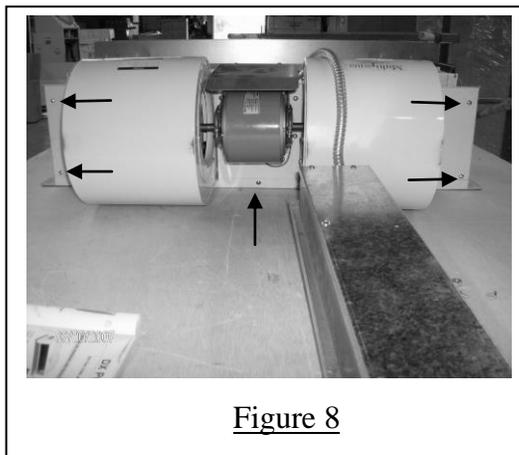
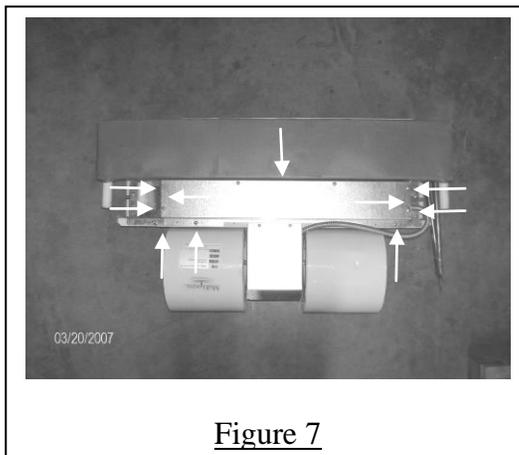
Figure 7

2. Remove the five screws attaching the blower assembly to the coil assembly. Separate the electrical and blower assemblies from the coil assembly.

Figure 8

3. Insert the coil assembly into the enclosure assembly starting with the discharge air opening of the coil first. Ensure that the discharge of the coil is inserted into the discharge of the enclosure completely. Failure to completely insert the coil discharge will result in recirculation of the discharge air.

Figure 9



4. Align the fan coil mounting bolts up with the four fan coil mounting notches provided in the coil assembly top. Secure the coil assembly to the enclosure with two mounting bolts per side. Ensure that the coil assembly is level in both directions to allow proper drainage and operation.

Figure 10

5. Reinstall the blower assembly onto the coil assembly using the five screws previously removed in step 2 **Figure 8**.

Figure 11

6. Reinstall the electrical assembly onto the coil assembly using the ten screws previously removed in step 1 **Figure 7**.

Figure 12

### ELECTRICAL, COIL, DRAIN AND RETURN / SUPPLY AIR LOCATIONS

7. There are multiple entry points on the factory supplied enclosure assembly for water lines, condensate lines, refrigerant lines and electrical connections. If a non-louvered service access panel is used or if an alternate return air location is required, an optional return air cutout is provided.

Figure 13



Figure 10



Figure 11



Figure 12

### ELECTRICAL & CONDENSATE DRAIN

8. There are four termination points for the electrical wiring. There are two on each side of the electrical box. See Wiring Diagrams for electrical drawings. Wiring must be installed according to prevailing codes and regulations. The fan coil unit has one condensate drain connection on either side of the drain pan for either left or right hand drain connection. The opposite drain connection not being used must be capped off by the installing contractor. The middle drain connection is the safety condensate drain connection. Ensure that all condensate drain lines have at least one quarter of an inch of fall per foot for proper drainage.

Figure 14

### WATER COIL CONNECTIONS

9. The fan coil unit comes with a manual air bleed and a manual coil drain fitting. They are located on the same side as the supply and return water line connections. The water supply line is connected to the coil connection furthest away from the fans. The water return line is connected to the coil connection closest to the fans. Ensure that both the supply and return water lines are insulated to prevent them from sweating.

Figure 15

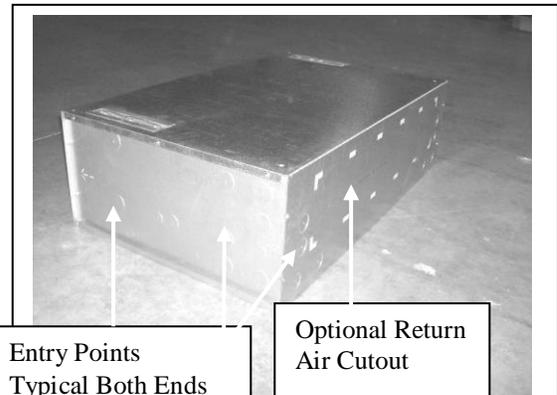


Figure 13

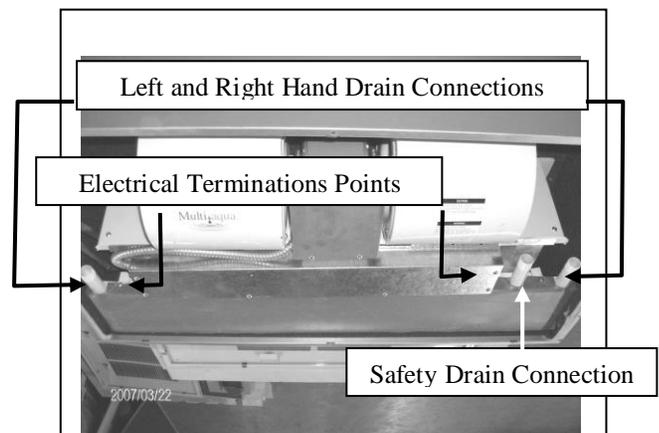


Figure 14

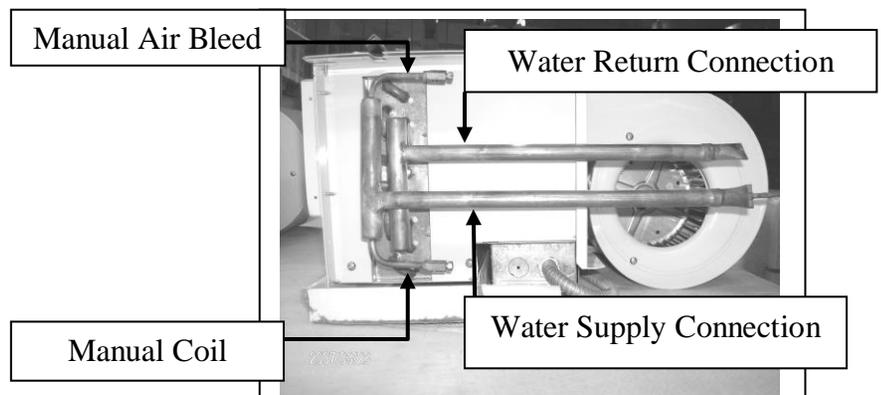


Figure 15

### RETURN AND SUPPLY AIR CONNECTIONS

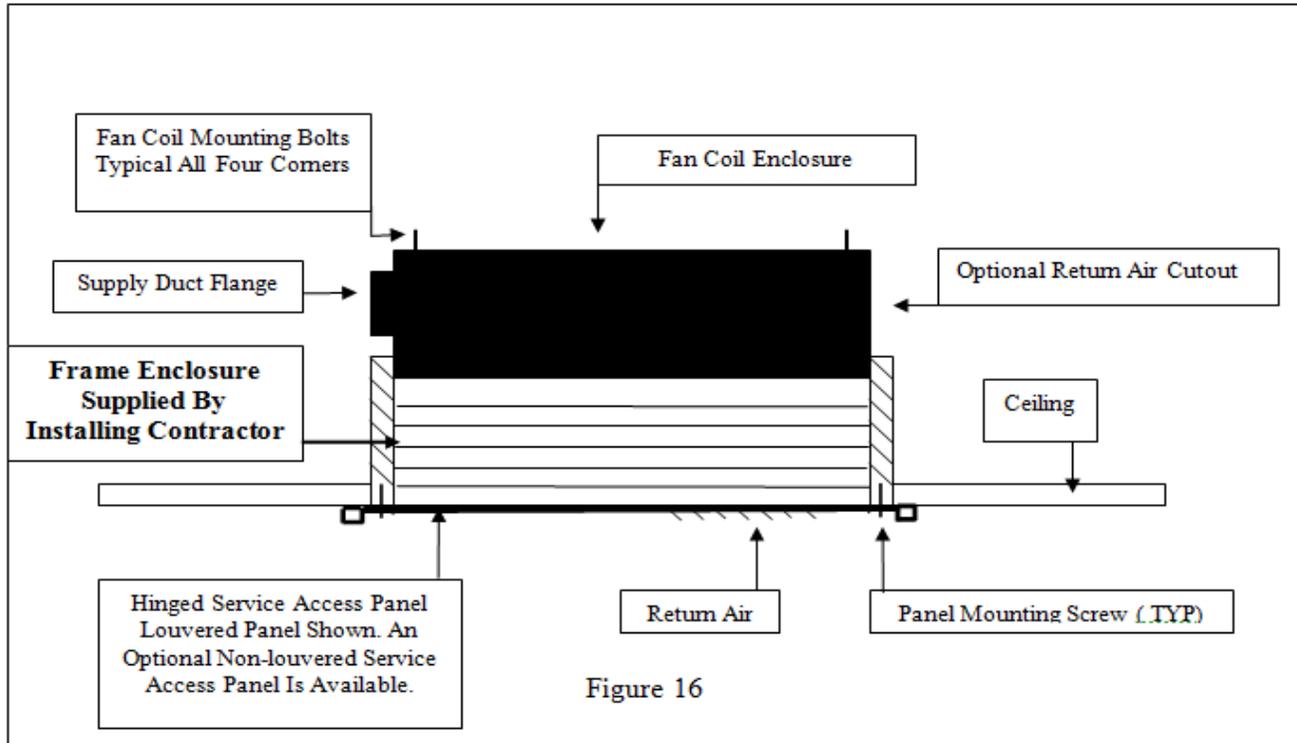
10. When mounting the service access panel, louvered or non-louvered, **the installing contractor must provide a frame in order to connect the enclosure assembly to the service access panel.**

This is required to obtain an airtight seal for the return air. Ensure that the material used for the frame adheres to national codes and / or local codes and regulations. Care must be taken when installing the service access panel to ensure the opening of the hinged service panel.

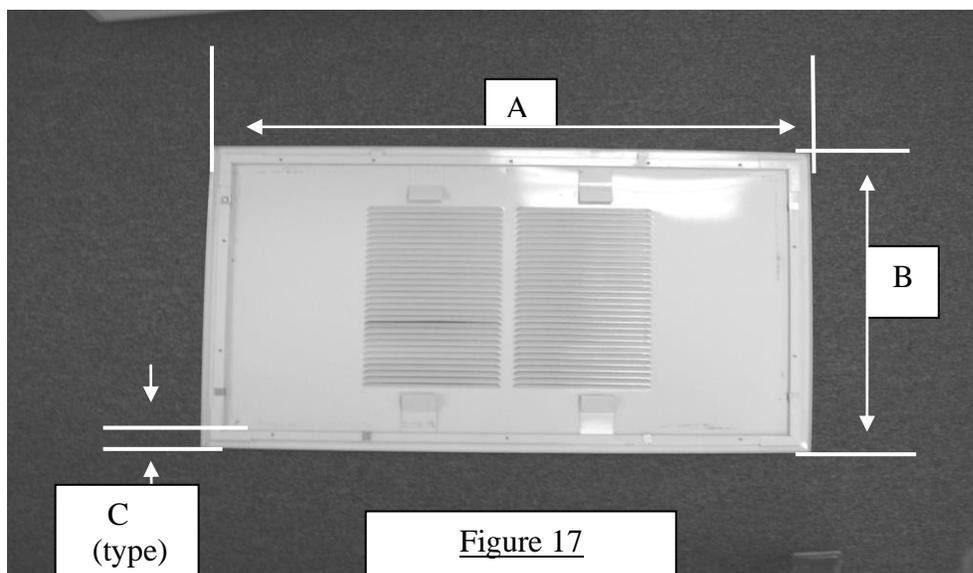
Figure 16 & 17

11. Filters are not supplied with the fan coil unit or the service access panel. The filter(s) must be supplied by the installing contractor. If a louvered service access panel is used, the filter will mount on the under side of the hinged access panel. If the optional return air cutout is used it is recommended that a return air filter grille be used that has the same surface area as the recommended filter sizes.

Figure 18



SERVICE ACCESS PANEL DIMENSIONS				
Louvered & Non-Louvered				
Panel Model Number	Fan Coil Size	A (in)	B (in)	C (in)
MAP468L(NL)	4	43.25	27.5	1.5
MAP468L(NL)	6	43.25	27.5	1.5
MAP468L(NL)	8	43.25	27.5	1.5
MAP10L(NL)	10	49.25	27.5	1.5
MAP12L(NL)	12	55.25	27.5	1.5



FAN COIL MODEL NUMBER	RECOMMENDED FILTER SIZES	
	Width (in)	Length (in)
MHCCW04	18	36
MHCCW06	18	36
MHCCW08	18	36
MHCCW10	18	36
MHCCW12	2 qty 18	24

**Figure 18**

12. The fan coil enclosure assembly has a supply air duct flange to allow the attachment of ductwork. Ensure when attaching ductwork to the flange, that the screws are at least one and half inches away from the front of the enclosure. This is to allow proper insertion of the fan coil assembly into the enclosure assembly when duct work will be installed before the fan coil is installed.

Figure 19

SUPPLY AIR DUCT FLANGE			
Enclosure Model Number	Fan Coil Size	A (in)	B (in)
MAP468L(NL)	4	6	31.75
MAP468L(NL)	6	6	31.75
MAP468L(NL)	8	6	31.75
MAP10L (NL)	10	6	37.75
MAP12L (NL)	12	6	43.75

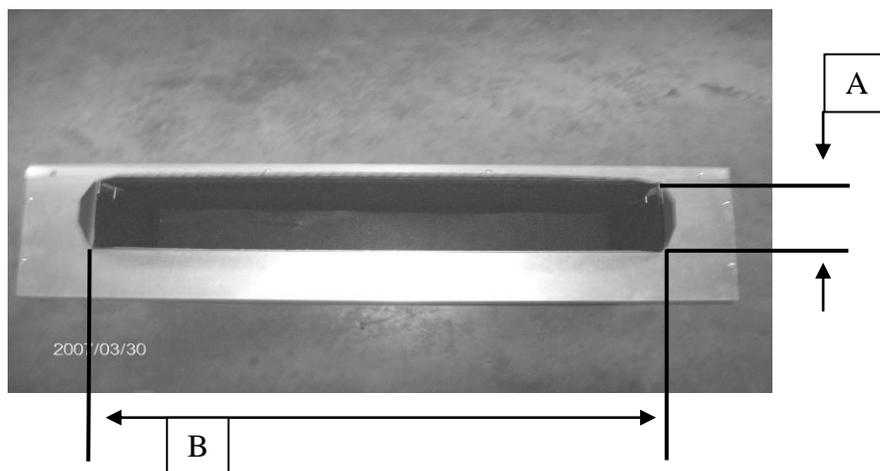


Figure 19



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MHCCW Fan Coils 1- 3 Tons

## MAINTENANCE

### **1. Air Filter(s):**

Filters are an essential part of the quality of air that is provided to the occupants. Never operate HVAC equipment without filters. Filters help remove dust and unwanted particles from the air stream, helping to keep the space clean. They also keep this debris from collecting on the heat transfer surfaces of the unit thus maintaining optimum equipment efficiency and performance. These filters will be located either in the unit or upstream from the unit in the return air ductwork. Filters must be inspected, cleaned and/or changed routinely. This routine maintenance procedure will allow the unit to continually operate as designed, reduce service expenses and extend equipment/component life.

### **2. Fuses and/or Circuit Breakers:**

This unit must be connected to the buildings electric service in accordance with local/national electrical codes and regulations. These electrical connections will include over current protection in the form of fuses or circuit breakers. Have your contractor identify/label the circuits and the location of them so that you may be in a position to make inspections

and/or replacements in the event the unit fails to operate or is being serviced. If fuses are used, ensure that the replacement fuses are of the same size and type as the ones you are replacing. It is a good idea to keep replacement fuses of the appropriate size and type on hand.

### **3. 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 checkups and cleaning can result in excessive operating cost and/or equipment failure.