

INSTALLATION INSTRUCTIONS

Manufactured Home Restrictor Orifice Coils

These instructions must be read and understood completely before attempting installation.

It is important that the Blower and Duct System be properly sized to allow the system to operate at full capacity. Poorly designed systems will not give satisfactory cooling or economy. They may even shorten the service life of the compressor in the outdoor unit.

WARNING

Danger Of Electrical Shock.

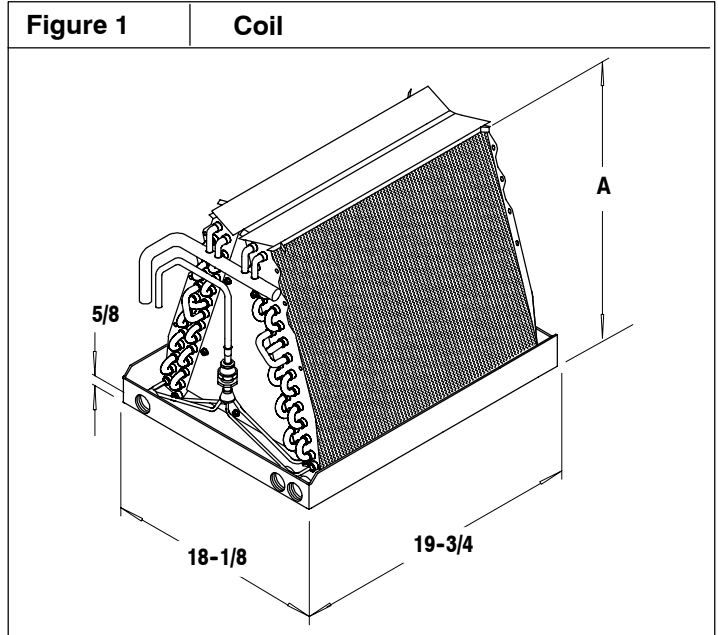
Shut Off Electric Power and Gas Supply To The Furnace or Blower Module.

Failure To Shut Off Electric Power and or Gas Can Result In Bodily Injury Or Death.

Application Note:

These coils are designed to be used within a gas or electric downflow furnace certified for use in manufactured homes (mobile homes). They are to be used on the outlet air side only. If coil is to be installed with a Heat Pump in conjunction with a Gas Furnace a Fossil Fuel Kit **MUST** be used.

If installation is in a gas Furnace and gas piping is in the way of the coil installation, have a qualified Gas Service Technician rework the gas piping.



“A” COILS

Model No.	Height (inches)	Weights		Refrigerant Control	Connection Sweat	
	A	Net	Shpg.		Liq.	Suc.
EMH24F19A	14-1/2	17	21	.059	3/8	3/4
EMH30F19A	16-1/8	22	26	.065	3/8	3/4
EMH36F19A	18-5/8	26	30	.072	3/8	3/4
EMH42F19A	18-1/2	30	34	.078	3/8	3/4
EMH48F19A	18-1/2	33	39	.079	3/8	3/4

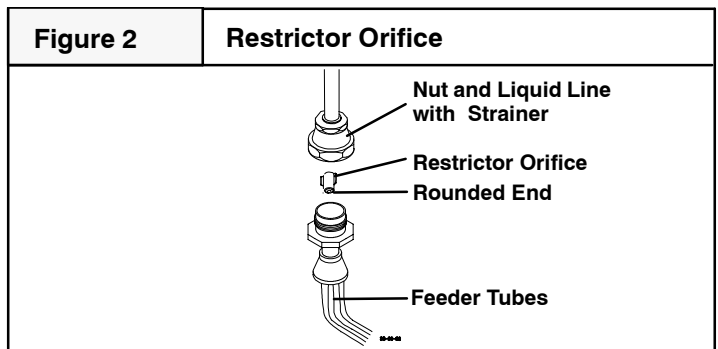
Restrictor Orifice Selection

A restrictor orifice is located in a fitting at the distributor. The factory installed restrictor orifice is identified on the unit rating plate.

The restrictor orifice may require changing to obtain best performance. Refer to coil specification sheet for match info and orifices.

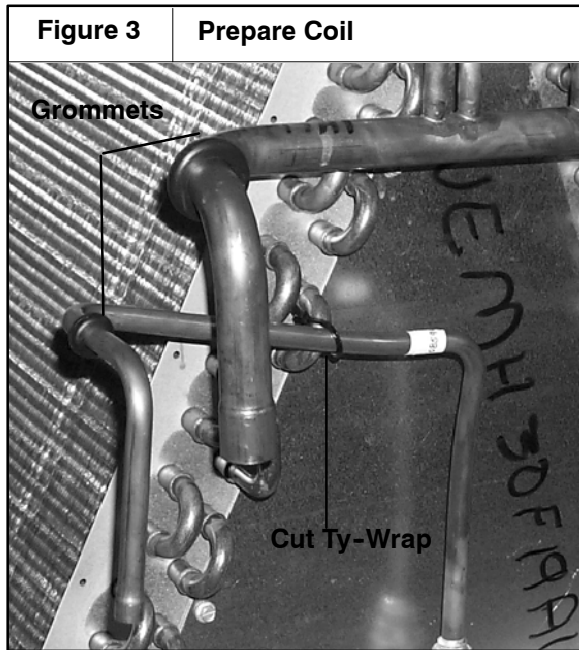
Changing Restrictor Orifice

1. Remove the liquid line fitting and replace restrictor orifice. **(STANDARD RIGHT HAND THREAD)**
2. Make sure the restrictor is installed with the rounded end toward the feeder tubes. **See Figure 2.**



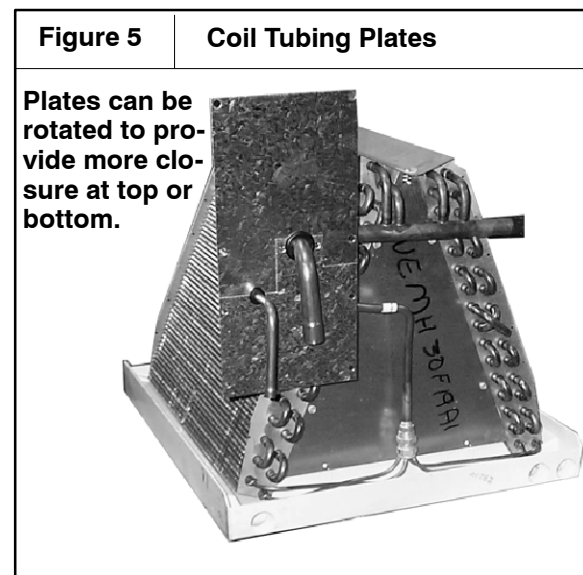
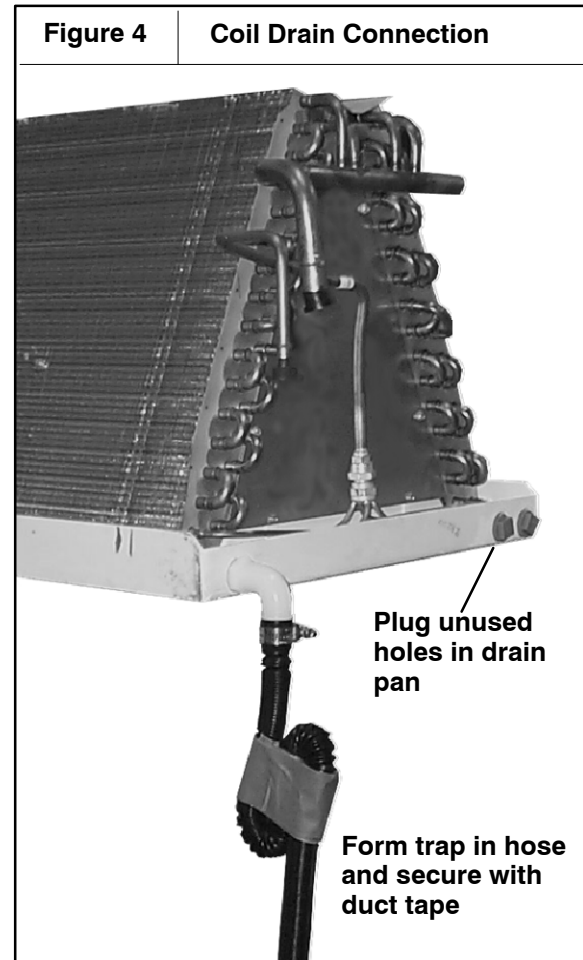
Installation

1. Shutoff electric power and gas supply if gas furnace.
2. Remove front doors from furnace.
3. Remove filter if required to gain access.
4. Remove knockouts for refrigerant lines within furnace.
5. Install field supplied brackets to support coil if needed.
6. Cut the plastic ty-wrap securing the liquid line to the coil return bend. Change the restrictor orifice if required for the system match. Remove the rubber plugs from liquid and suction lines so the grommets can be slid up on the lines.



7. Slide coil into furnace and center over the discharge air opening.
8. Route refrigerant lines up to coil and braze lines. Protect Grommets from heat. Refer to Refrigerant Line Connections.
9. Determine whether condensate drain needs to go on left or right side. Install the two plugs in the unused holes and the 90° barbed adapter in the hole where drain will connect. Form a trap in the drain hose by bending into two "U" and securing with duct tape. Slide end of hose over barbed fitting and secure hose to fitting with hose clamp. Route drain to a suitable disposal point. If connecting to a horizontal run allow a minimum of 1/4" per foot drop in line.
10. Remove knockout section from panel that covers the coil. Insulation in that area can be left in place with slits cut in it for the tubing or it can be removed.
11. Reinstall any internal filters.
12. Install panel covering coil and position access cover plates into the tubing grommets and position so they close the entire area. Position of access plates can be rotated up or down so there is more plate above or below the refrigerant tubes.

13. Secure access plates with screws and then reinstall any furnace doors.
14. Restore electrical power and gas supply as necessary and check system operation.

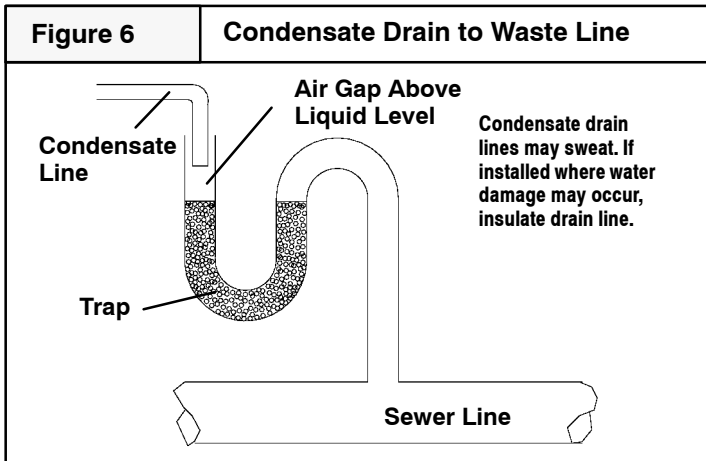


Waste Line Connection

WARNING

**Danger Of Explosion.
Provide Trap With Air Gap In Drain Line When Connected To Sewer Line.
Failure To Provide Trap Can Result In Bodily Injury Or Death.**

If the condensate line is to be connected to a waste line, an open trap must be installed ahead of the waste line to prevent escape of sewer gases. NEVER CONNECT THE DRAIN LINE DIRECTLY TO A WASTE LINE. ALWAYS INCLUDE AN AIR GAP AND TRAP, (Figure 6). Be sure to keep the trap filled with water during the winter or off season.



Refrigerant Line Connections

Size refrigerant lines according to information provided with outdoor condensing unit. Route the refrigerant lines to the coil in a manner that will not obstruct service access to the unit or removal of any filters.

1. Remove rubber plugs from refrigerant connections using a pulling and twisting motion. Hold refrigerant lines to avoid bending or distorting.
2. Remove or protect painted surfaces before brazing refrigerant connections to prevent damage to paint finish.

Check and Adjust Air Flow

Check Pressure Drop Across Coil

It is important that the right amount of air flows through the coil. The amount is related to a pressure drop. To check the air flow, measure the pressure drop using an inclined manometer (sometimes called draft gauge or air flow gauge).

Checking Static Drop Across Coil

1. **The coil should be dry and clean. The air filter must be clean and all registers open. DO NOT** run the condensing unit when checking air flow.
2. Run the Blower on cooling speed.
3. Set the blower motor speed-belt drive or direct drive to the nominal CFM required across coil and the dry coil static reading. **See Figure 6.**

Adjusting Air Flow

If the gauge reading is below the required pressure, increase the blower speed until reading is the same or slightly above the required pressure. If the gauge reading is much above the required pressure decrease the blower speed. Change speed as shown in the instruction for your furnace or modular blower.

NOTE: You may not be able to obtain a gauge reading exactly the same as the required pressure. This is due to variations in duct systems and blower speeds.

If your reading is the same or slightly higher, you will be all right. Too little air will cause a freeze up. This will shorten compressor life. Too much air will result in poor humidity control and over-heating of the compressor. It may cause tripping of the compressor overload. Too much air on horizontal applications may result in water blowing off the coil into the duct work.

If you cannot get a reading as high as the required pressure at the highest speed, replace the blower and/ or motor with a larger size.

If you are adjusting a belt driven blower, use an ammeter to check the motor current draw. If the current draw is higher than the motor name plate amps, replace the motor with one of greater horse power.

AIRFLOW PERFORMANCE DATA (CFM vs DRY/WET STATIC @ INCHES WATER COLUMN)																										
Model No.	600		700		800		900		1000		1100		1200		1300		1400		1500		1600		1700			
	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet		
EMH24F	.11	.12	.14	.15	.18	.19	.23	.23	.27	.29																
EMH30F					.13	.17	.16	.20	.19	.24	.22	.28	.26	.33												
EMH36F									.19	.21	.21	.24	.25	.28	.29	.33	.33	.37								
EMH42F									.21	.27	.25	.32	.29	.37	.33	.43	.33	.49								
EMH48F											.20	.25	.23	.29	.27	.35	.32	.40	.36	.46	.41	.52	.47	.58		

KEY NO.	DESCRIPTION	PART NUMBER	EMH24F19A2	EMH30F19A2	EMH36F19A2	EMH42F19A2	EMH48F19A2
1	Coil, Evaporator	Not Stocked	0	0	0	0	0
2	Manifold, Evaporator	1085931	1	1			
2		1085932	*	*	1		
2		1085934	*	*	*	1	1
3	Housing, Flow Control	1082972	1	1	1		
3		1082973	*	*	*	1	1
4	Restrictor, .059	1055236	1				
4	.065	1093424	*	1			
4	.072	1069387	*	*	1		
4	.078	1053112	*	*	*	1	1
5	Adapter, Flow Control	1084878	1	1	1	1	1
6	Distributor Assembly	Not Stocked	0	0	0	0	0
7	Pan, Drain, 19"	1082776	1	1	1	1	1
A	Baffle, Top	1084530	1	1	1		
A		1082955	*	*	*	1	1
B	Plate, Triangular	1082963	2				
B		1082821	*	2			
B		1082924	*	*	2	2	2
C	Plug, Drain Pan	1083241	2	2	2	2	2
)	Plate, Cover (Upper)	1085942	1	1	1	1	1
)	Plate, Cover (Lower)	1085943	1	1	1	1	1
)	Clamp, Tube	1085978	1	1	1	1	1
)	Grommet, 9.5 ID X 12.7	1085979	1	1	1	1	1
)	Grommet, 19 ID X 25.4	1085980	1	1	1	1	1
)	Tube, Drain Compressed	1085957	1	1	1	1	1
)	Fitting, 90D Elbow	1085944	1	1	1	1	1
)	Manual, Installation	48401120100	1	1	1	1	1

