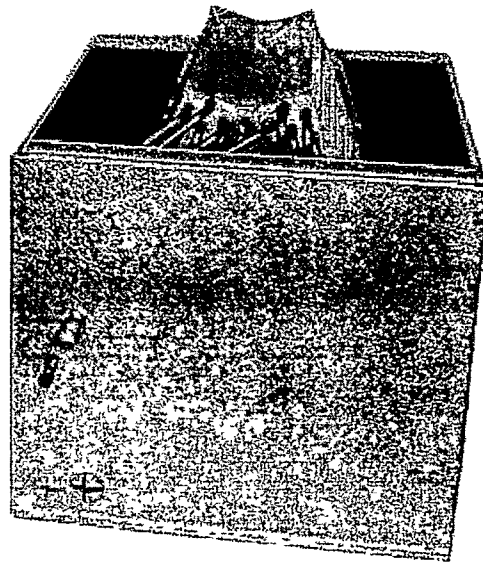
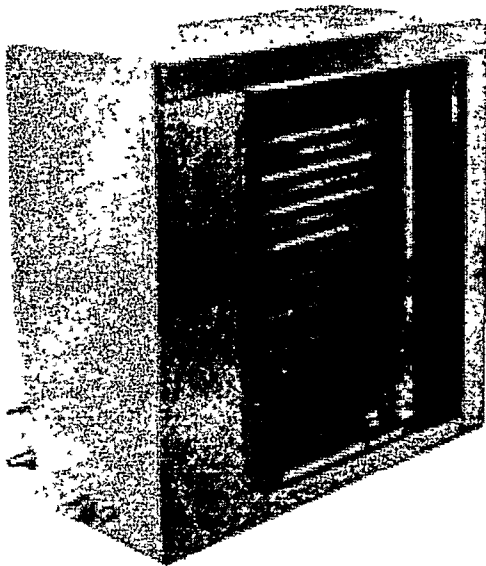


INSTALLATION & OPERATING INSTRUCTIONS

HORIZONTAL / UPFLOW COILS



Goodman Manufacturing Co., L.P.
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IO-125J (1)

7/02

IMPORTANT: "The United States Environmental Protection Agency ("EPA") has issued various regulations regarding the introduction and disposal of refrigerants in this unit. Failure to follow these regulations may harm the environment and can lead to the imposition of substantial fines. Because these regulations may vary due to the passage of new laws we suggest that any work on this unit be done by a certified technician. Should you have any questions please contact the local office of the EPA."

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

APPLICATION INFORMATION

1. Coil must be installed upstream (discharge air) of the furnace.
2. For Horizontal ("H") Coils allow a minimum of 18" from the furnace outlet to the coil for adequate transition. The Horizontal Coil may be installed with the air flow going in either direction.
3. Condensate Drain Piping - "In all cooling applications, a secondary drain pan should be provided by the installer and placed under the entire unit with a separate drain line properly sloped and terminated in an area visible to the owner. This secondary drain pan can provide extra protection to the area under the unit should the primary drain plug up and overflow." As expressed in our product warranty, Goodman will not be liable for any damages, structural or otherwise due to the failure to follow this installation requirement.

Condensate drain connections are located in the drain pan at the bottom of the coil/enclosure assembly. The threaded fitting protrudes outside of the enclosure for connecting externally.

1. Drain hole in the drain pan must be clear.
2. Insulate drain line to prevent sweating and dripping. Use armaflex or similar material.

A Secondary Condensate Drain Connection, now called for by many building codes, has been provided. The drain line is to be pitched 1/4" per foot to provide free drainage. A condensate trap should be installed to insure proper drainage.

SPECIAL INSTRUCTIONS

This indoor coil contains the flowrater distributor assembly, which consists of a flare nut, distributor body, copper tubes feeding the coil, and the internal flow check piston.

It is essential that the indoor and outdoor sections be properly matched. When matching the indoor coil with other than the matching outdoor section, the flow check piston in the indoor section should be changed to match the outdoor section to obtain rated performance as specified in our sales specification sheets. (See Piston Kit Chart).

A piston size that is too small will cause starving and one that is too large will cause flooding.

If a combination is used that requires a piston size change, the piston in the distributor on the indoor coil before installing the coil and charging the system following the procedure shown below.

Using a back-up wrench on the flare fitting, remove the 3/8" flare nut.

Using a back-up wrench on the distributor body, remove the 3/8" flare fitting and Teflon seal.

Using the wire provided with replacement pistons, run wire (hooked end) through hole in piston.

Hook nose end of piston and lift gently from distributor body. Replace piston with one of proper size (See Piston Kit Chart), install piston with Teflon seal end of piston in distributor first. Do not force piston into distributor.

NOTE: With piston in distributor, seal end should be down and should not be seen looking in end of distributor. Piston must be free to rotate and move up and down. Make sure piston is free to move in distributor body.

Replace 3/8" flare fitting with Teflon seal using back-up wrench on distributor body. Torque fitting with 8 to 10 ft. lb. Do not over tighten.

Replace 3/8" flare nut using back-up wrench on flare fitting. Torque 3/8" flare nut with 40 to 45 ft. lb.

Remove old piston size label from outside of distributor body. Remove new piston size label from poly bag new piston came in and install new size label on outside of distributor.

Check fittings for leaks after installation, evacuation and charging of low side is complete.

NOTE FOR QUICK CONNECT COILS INSTALLATION OF PRECHARGED SYSTEM

A brief description follows, for specific instructions see condensing units IO-101.

1. Connect lines to evaporator coil before connecting to the condensing units.
 - A. Form tubing so it properly aligns with coil connections.
 - B. Remove plugs and caps from connections.
 - C. Check to be sure mating surfaces are clean.
 - D. Lubricate rubber seal with clean refrigerant oil and thread couplings together by hand to be sure they are not cross threaded.
 - E. Tighten connections using backup wrench on evaporator quick connect fitting until coupling bottoms; then tighten 1/6 turn to complete knife edge seal.
2. Connect lines to condensing unit in the same manner as to evaporator coil. Observe same precautions.
3. After making all connections and opening valves, check all piping for leaks.

PLASTIC DRAIN PAN APPLICATION

All vertical plastic drain pans used on upflow coils U & UC are using a high temperature black drain pan marked B17559-XXN or (B17559-XXH, "H" for high temperature, effective Aug.1999). Light gray color drain pans are used on "H" horizontal coils but will be changed to high temperature black color effective July 1999. When you install your "H" horizontal coil with a horizontal gas furnace, an 18" minimum transition length must be used. All Horizontal coils will have a water-blow off bracket which can be placed on either side of the coil depending how the gas furnace is positioned in the application. See figure below.

CAUTION:

Use a black color drain pan with label part no. B17559-XXN or B17559-XXH or light gray color drain pan on a vertical or upflow coil which would be applied on top of a gas furnace. Do not use black drain pans from Airhandlers with markings -XXB. These drain pans are made of a lower temperature plastic not designed for placing on top of gas furnaces.

If you install your U, UC, coil on top of a gas furnace the following is required:

WARNING:

EXCESSIVE HEAT MAY DAMAGE DRAIN PAN AND RESULT IN STRUCTURAL DAMAGE TO BUILDING.

Allow enough space between the top to the furnace heat exchanger and the bottom of the plastic coil drain pan to have a free flow of air. There should be a minimum of 2.0" distance from the sectional heat exchanger and the bottom of the pan. See figure 1.

Do not use this coil on oil furnaces or any applications where the temperature on drain pan may exceed 300°F. Should the application require a coil with a drain pan that exceed temperatures of 300°F or more, use the following metal pans: 15236-18(U/ UC18, 29, 30, 31,32, and 35), 15236-19 (U/ UC36, 42, and 47), 15236-20 (U/ UC 60 thru U 61) are available to be ordered from our Part's department. *Metal drain pans for U/UC49, 59 and 62 must be field fabricated.*

The usage of these coils/drain pans must be strictly adhered to, so as to avoid any possibility of using a low temperature material in a high temperature application.

The drain pan has a primary and an optional secondary drain with 3/4" NPT female connections. The connectors required can be 3/4" NPT male PVC pipe or metal and should not be over torqued to prevent damage to drain pan connection. If secondary drain line is required it must be run separately from the primary drain and should end where it is easily seen. Water coming from this line means the coil primary drain is plugged and needs clearing.

A trap must be installed in the drain line below the bottom of the drain pan. If a copper drain line is used, solder a short piece of pipe to connector before installing a drain fitting. Again do not over torque the 3/4" copper connector to the plastic drain connection. Use a wet rag or heat sink material on the short piece to protect plastic drain pan, when completing drain line.

HORIZONTAL COIL WATER BLOW-OFF BRACKET

Water blow-off bracket will be installed on the left side (looking at the access panel) of the Horizontal coil at the factory with the Gas Furnace for right side horizontal application. If the Gas Furnace will be installed on the left hand side, the water blow-off bracket must be installed on the right side by simply sliding bracket off the edge of drain pan of left side and sliding bracket on to the edge of the right side edge of the drain pan. See figure A below.

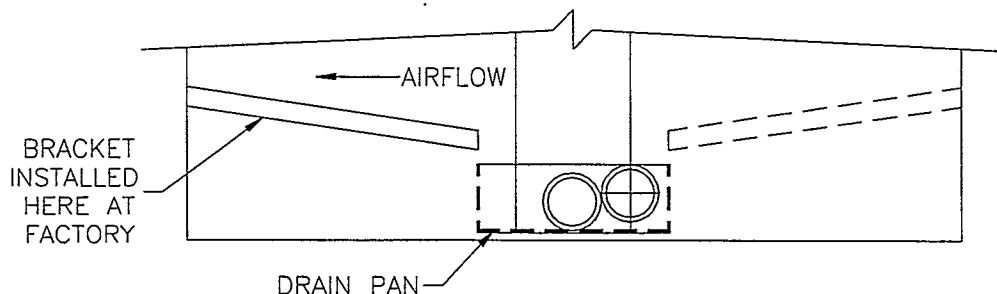


FIGURE A

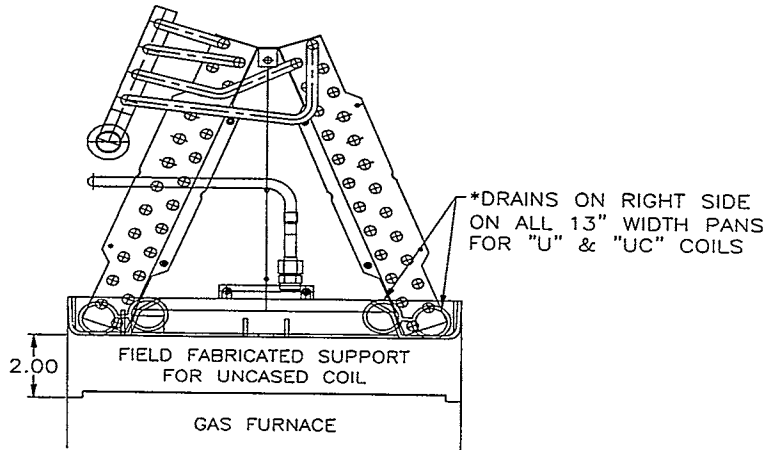
CASED (U) COIL APPLICATION OPTIONS

	FURNACE MODEL NO.	GMP050-32 GMP075-32 GMP050-3 GMP075-3 GMPH050-3 GMPN040-3 GMPN060-3 GSM060-3 GSMS060-3 GPD050-3 GPD075-3 GSU060-3	GMP100-42 GMP075-3 GMP100-3 GMP100-4 GMPH075-4 GMPN080-4 GSU080-4 GSM080-4 GMP100-4 GMPE075-3 GSMS080-4	GMP125-52 GMP100-5 GMP125-4 GMP125-5 GMPE100-4 GMPE125-5 GMPN100-4 GSM100-4 GSMS100-4 GPD125-4 GMPH080-5 GSU100-4	GMP150-52 GMP150-5 GMPN120-5 GMPH120-5
	NOMINAL FURNACE WIDTH	14"	17-1/2"	21"	24-1/2"
COIL MODEL NO.	NOMINAL COIL WIDTH				
* U-18	14"	X			
* U-29	14"	X			
* U-30	17-1/2"	X ₍₁₎	X ₍₂₎		
* U-31	14"	X			
* U-32	17-1/2"	X ₍₁₎	X ₍₂₎		
* U-35	14"	X			
U-36	17-1/2"	X ₍₁₎	X ₍₂₎		
U-42	17-1/2"	X ₍₁₎	X ₍₂₎		
U-47	17-1/2"		X		
U-49	21"		X ₍₁₎	X ₍₂₎	
U-59	21"		X ₍₁₎	X ₍₂₎	
U-60	24-1/2"			X ₍₁₎	X ₍₂₎
U-61	24-1/2"			X ₍₁₎	X ₍₂₎
U-62	21"		X ₍₁₎	X ₍₂₎	

- (1) - Utilizing factory installed bottom cabinet filler plates.
 (2) - Discard bottom cabinet filler plates.

UC COIL INSTALLATION RECOMMENDATIONS:

MINIMUM DISTANCE BETWEEN FURNACE AND COIL PAN: 2"



NOTE: DO NOT USE THIS COIL ON OIL FURNACES OR ANY APPLICATIONS WHERE THE TEMPERATURE ON DRAIN PAN MAY EXCEED 300°F. USE THE FOLLOWING METAL DRAIN PANS: 15236-18 (U-18 THRU U-32), 15236-19 (U-36 THRU U-47), 15236-20 (U/UC-60 THRU U-61).

METAL DRAIN PANS FOR U/UC-49, U-59, AND U-62 MUST BE FIELD FABRICATED.