

Except for *Bulletin 30-05*, a copy of each instruction is shipped with each piece of equipment. For air distribution system components there are many individual specifications which include installation instructions. Check for the instruction upon unpacking the equipment.

DISTRIBUTION SYSTEM AND ACCESSORIES

The key distribution system components are depicted on *Bulletin 20-15, System Component Specifications*. The many accessory items shown on this specification sheet facilitate installation in a variety of situations.

Any system installed where water leakage from condensate or a hot water coil **MUST HAVE A SECONDARY DRAIN PAN** installed. These are available as UPC-94 for the M1218, UPC-20B and -20C for the M2430 models when 2 or 3 modules are used and UPC-24B or -24C for the M3642 models for 2 or 3 modules or for the M4860 for 2 modules. The UPC-24D is used for the M4860 for 3 modules.

Where a vertical installation is planned the Vertical Conversion Kits, UPC-63A for the M2430 and UPC-64A for the M3642 and M4860, are required. The M1218 is a multi-purpose unit and does not require any kits or modifications for vertical upflow applications.

RETURN AIR COMPONENTS

Unico, Inc. provides components for a complete return air system, including filters, which are particularly useful for attic type installations where one central ceiling return can be used. Different components are required for each size of air handler, which are detailed in Table 1.

Table 1. Return Air Box Components

Models	Return Grille	Return Air Duct	Return Cap
1218	UPC-01-1218	UPC-04-1218	UPC-104-1218
2430	UPC-01-2430	UPC-04-2430	UPC-59B-2430 (UPC-104-2430)*
3642	UPC-01-3642	UPC-04-3642	UPC-59B-3642 (UPC-104-3642)*
4860	UPC-01-4860	UPC-04-4860	UPC-59B-4860 (UPC-104-4860)*

*used to connect directly to the heating module

The return air duct, UPC-04-1218/2430/3642/4860, has a sound attenuating core; flexible duct with a solid plastic lining which should not be used as it will be noisy.

The standard return air components can be adapted to other than ceiling installation. The filter-grille can be installed in the sidewall (see Figure 1). However, if a filter-grille can not be used in the sidewall then other grilles can be used, such as a standard wall grille, a baseboard grille or an out-of-the wall baseboard grille. The filter-grille is more desirable because when other standard type grilles are used,

it is then necessary to build a suitable filter box or frame at

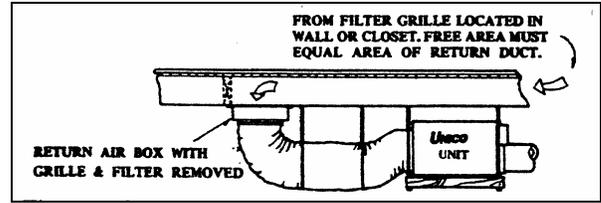


Figure 1. Optional Air Handler Placement

the air handler.

For basement or crawl space applications it can be handled as follows:

1. Install a filter-grille low in the sidewall.
2. Pan the basement or crawl space joists back to the air handler.
3. Connect the flexible return air duct to the panning:
 - A. By using the return air filter box normally supplied and fasten it to panning.

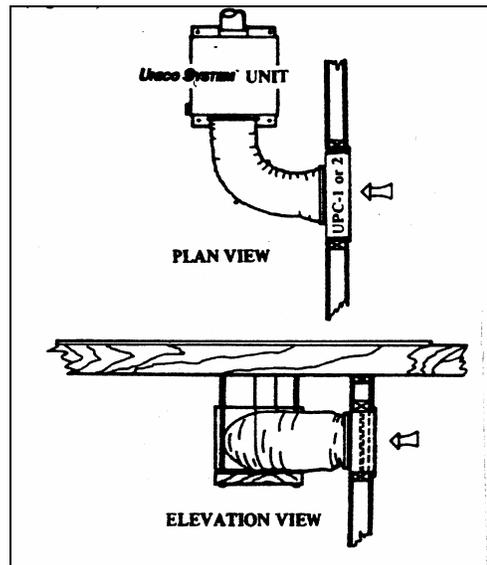


Figure 2. Optional Grille Placement

- B. Fabricate or obtain a sheet metal collar to which flexible return duct can be fastened and connect to the panning. See Figure 2.

When desired or necessary due to space limitations, a fabricated return duct system can be used. This would usually be done when multiple return ducts are required. Fabricated duct board or metal duct with acoustical lining may be used. The return duct including filter should be designed for a maximum static pressure drop of 0.15 IWC (37 Pa). A 90° bend or elbow should always be used for proper acoustical performance.

Duct Layout

To provide optimum system performance several important guidelines must be followed in doing the duct layout. The static pressure of the system determines the airflow for good system performance. The system operates most effectively