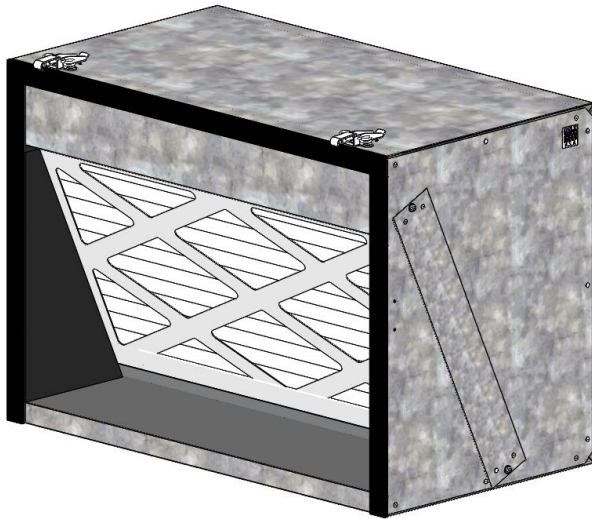


Return Air Plenum (RAP) Module Specifications



Model Number Key

M	2430	R	1	-
Unit Type	Matching Outdoor Unit (ODU) Nominal Capacity	Module Type	Revision Number	Paint Color
M = Modular	1218 2430 3036 3642 4860	R = Return Plenum	1, 2, 3, etc.	(blank) = None

FEATURES

- Blank sides and top allow for custom, multiple-return openings
- Centrally located disposable filter
- Heavy-duty closed cell insulation (no exposed fiberglass insulation)
- Filter access from both sides
- Standard *Unico System* 'latch' system

APPLICATIONS

The *Unico System* designed and built Return Air Plenum (RAP) is easily installed with the matching *Unico System* modular air-handling units. The RAP is designed specifically for multiple return duct systems. The plenum comes without any return openings so the installer can cut whatever openings are necessary for any number of return ducts. The top and all three sides of the RAP can be used for return air connections. Plus,

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it includes a centrally located filter accessible from either side of the cabinet. The filter rack can accommodate either a 1-inch or 2-inch thick filter.

The RAP is also ideal for bringing in outside air and combining it with return air, effectively changing the RAP into a mixing box. (Refer to Tech Note 105, *Providing Outside Air*, and Tech Note 106, *Return Duct System Design Requirements* for more information.). Return ducts can be any material so long as the duct is insulated, has acoustical properties, and is the correct size.

CABINET CONSTRUCTION

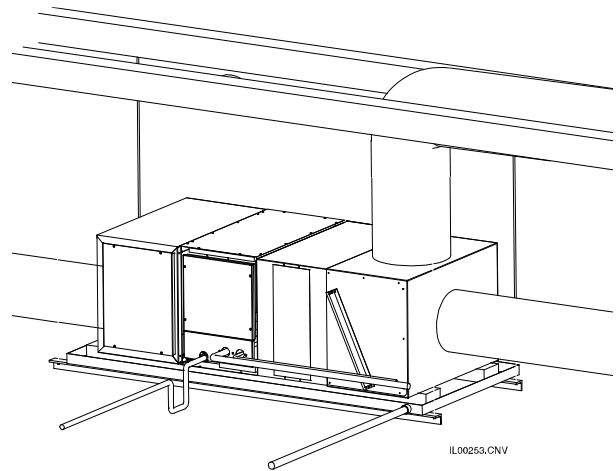


Figure 1. Horizontal installation with Unico System Blower, Cooling, Heating, and Return Air Plenum Modules.

The cabinet is fully insulated with closed cell insulation. There is no exposed fiberglass inside the cabinet. The 1218 cabinet is constructed with 24 gauge (0.6-mm) galvanized steel while the 2430, 3036, 3642, and 4860 cabinets are constructed of 22 gauge (0.7-mm) galvanized steel. All model sizes feature a removable access panel on both sides for ease of service. See Dimension drawing.

FILTER

The RAP includes a disposable 1-inch (25 mm) filter. The RAP can accommodate a 1-inch or 2-inch thick filter. Table 1 lists the sizes. Replace with a similar filter type. *Do not use filters with over 0.10-inch static pressure drop, such as electrostatic or pleated type.*

Table 1. Filter Data

Model Size	M1218R1	M2430R1	M3036R1	M3642R1 M4860R1
Size, inches (mm)	10 x 20 (254x508)	14 x 25 (356x635)	14 x 30 (356x762)	14 x 38 (356x965)
Max. Airflow, cfm (L/s)	700 (330)	850 (400)	1020 (408)	1290 (610)
Max. Velocity, fpm (m/s)	350 (1.78)			
Initial Resistance, in. wg (Pa)	.04 (10)			

PROVIDING OUTSIDE AIR

The *Unico System* is designed to handle up to 100 percent outside air provided the air is filtered and all water coils are freeze protected if necessary. To accommodate outside air, the amount of required airflow must first be established in accordance with all local codes or *ASHRAE Standard 62*. Outside air is normally based on occupancy, square footage, and use. Refer to *Tech Note 105, Providing Outside Air*, for more details. The Return Air Plenum provides a convenient plenum box for connecting and filtering the combined air streams from an outside air duct and the inside air ducts.

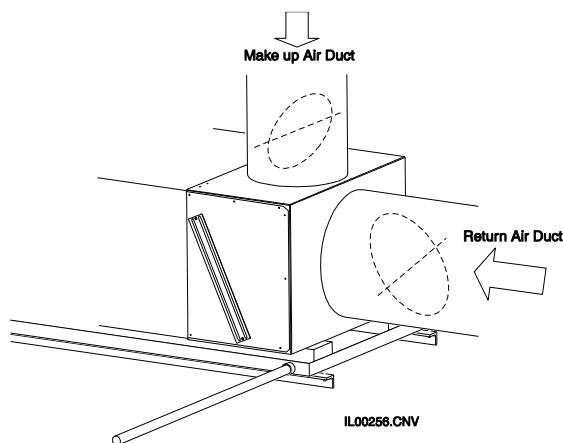


Figure 2. Return air plenum as mixing box

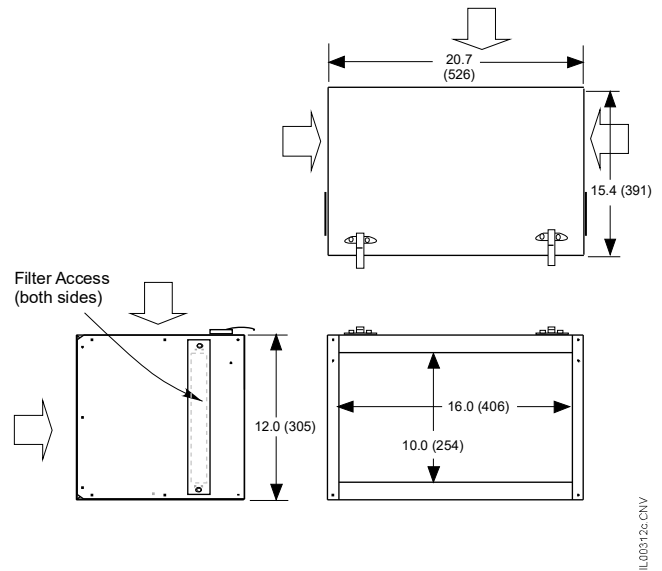


Figure 3a. Module Dimensions (1218)

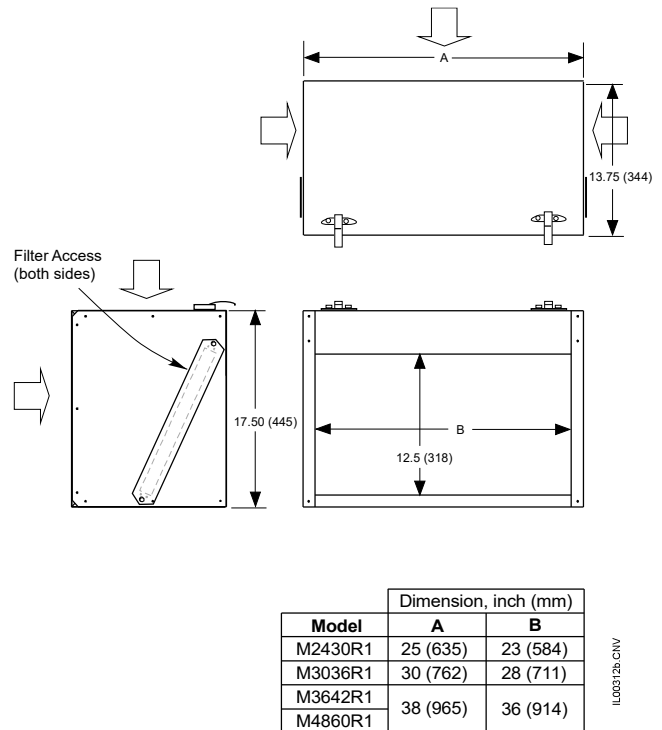
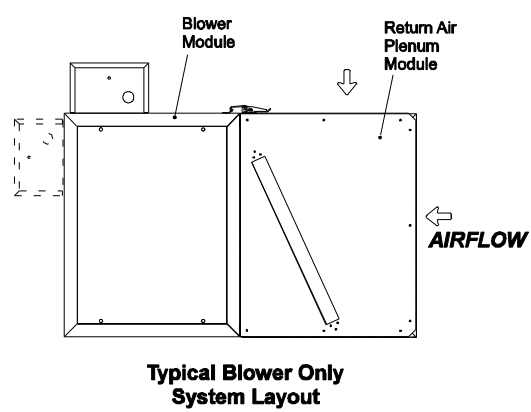
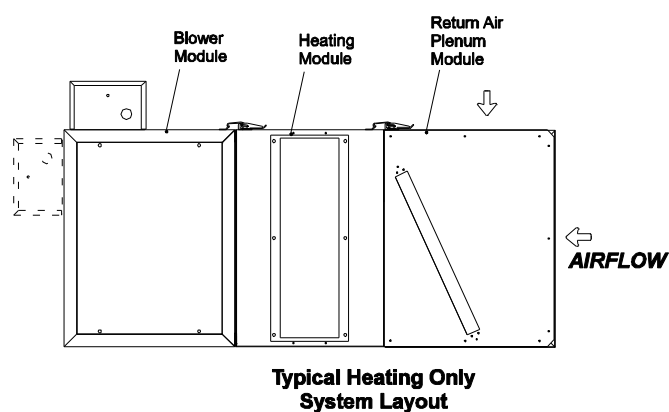
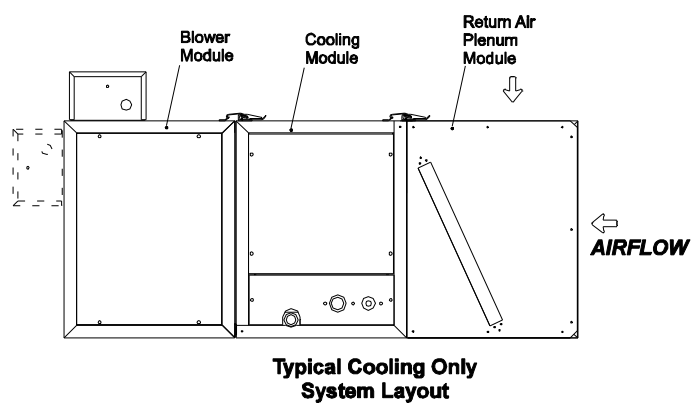
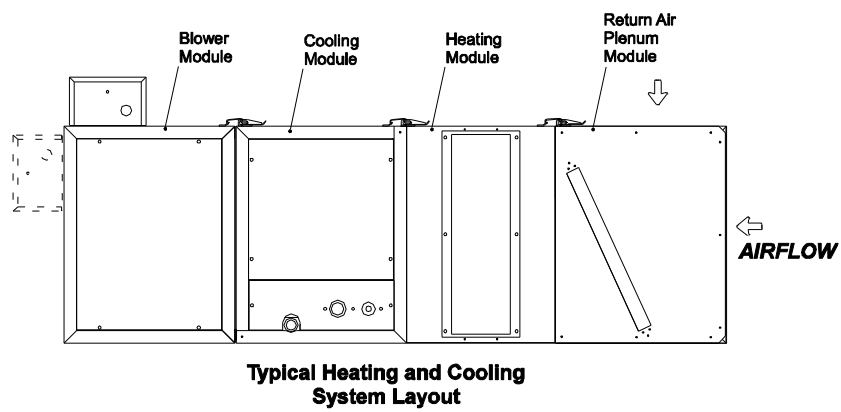


Figure 3b. Module Dimensions (2430, 3036, 3642, 4860)

CONFIGURATIONS



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