

Introduction: RVE

As energy costs rise, the need for energy conservation increases in importance. A typical building environmental (HVAC) system consumes 30 - 60% of the total energy used to operate a commercial building. This makes the HVAC system a primary target for building energy use reduction. Any reduction in the energy required to operate these buildings results in significant energy savings to the building owner.

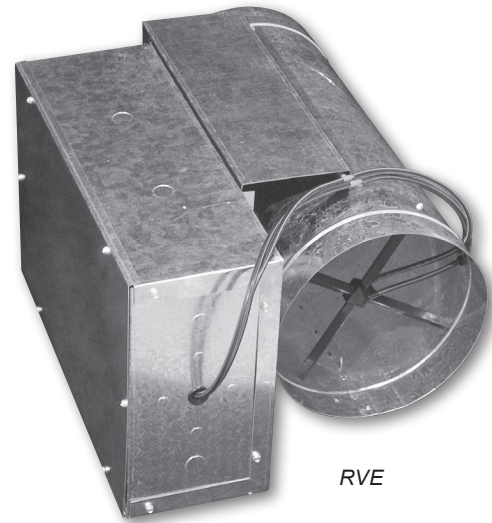
Fan power consumption normally ranks second only to chillers in building energy consumption. Many buildings today contain high pressure, constant volume air distribution systems. These single and dual duct systems operate at static pressures of up to 6" WG. Control of these distribution systems was often performed by mechanical constant volume terminal units. Most of these systems were implemented when energy was relatively inexpensive and plentiful. Now that low pressure variable air volume (VAV) systems have been established, it makes good economic sense to retrofit these constant volume systems to VAV.

By retrofitting from a high pressure, constant volume system to a low pressure, variable volume system, building owners can reduce their fan operating expense by as much as 60%.

The Krueger retrofit unit is ideal for converting a mechanical terminal unit into a VAV terminal unit. Designed to retrofit constant volume units, Krueger's RVE retrofit product offers compatible controls for most building automation systems and installation convenience. With Krueger Retrofit VAV terminals in place, building owners can make use of a variety of fan volume control options.

A major concern when retrofitting is downtime. Since the RVE terminal unit is compact and can be installed through the ceiling grid, installation costs and downtime are reduced.

Additional uses for the RVE unit are in exhaust and non reheat supply applications. The stainless steel RVE is ideal for lab applications where the exhaust consists of corrosive materials. Supply applications might include any situation where a round to round connection is desired.



RVE

MODEL

RVE - Retrofit Terminal Unit

FEATURES

- 22 Gage galvanized steel casing construction with an optional 20 gage or (304 / 316) stainless steel casing.
- Suitable for low, medium, or high pressure application with the ability to operate throughout a wide range of HVAC systems.
- Airflow capacities ranging from 40 to 3660 CFM to provide airflow control for most commercial applications.
- Round inlet and outlet sizes ranging from 4" to 16" diameter; slightly undersized to fit standard spiral and flex duct.
- Cast position indicator on damper shaft for easy monitoring of damper position.
- Delrin® damper bearings are self lubricating; unaffected by temperature and humidity.

RVE Unit Capacities

RVE, UNIT CAPACITIES

Unit Size	Airflow CFM [L/s]		Min. Ps.
	Max.	Min.	
4	230 [109]	40 [19]	0.24
5	360 [170]	62 [29]	0.26
6	515 [243]	89 [42]	0.24
7	700 [330]	121 [57]	0.25
8	920 [434]	159 [75]	0.26
9	1160 [547]	201 [95]	0.26
10	1430 [675]	248 [117]	0.25
12	2060 [972]	357 [168]	0.25
14	2800 [1321]	486 [229]	0.26
16	3660 [1727]	634 [299]	0.25

NOTES: If sizing to retrofit Krueger Model CVM, select same inlet size for RVE. The minimum CFM value is based on a signal of 0.03" WG differential pressure of the inlet airflow sensor. Some DDC controls supplied by others have differing limitations. Minimum Ps is measured at maximum airflow.

Example: (Based on CFM range) For an existing size 4 terminal unit to be retrofitted, the space requires 200 CFM of primary air during peak load. The minimum can be set above 40 CFM or 0.