



# Young Regulator Co.

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## Model CVR-LP-xx

Low Pressure Constant Volume Regulator  
 0.1- 0.4 InWC

### Application and Design

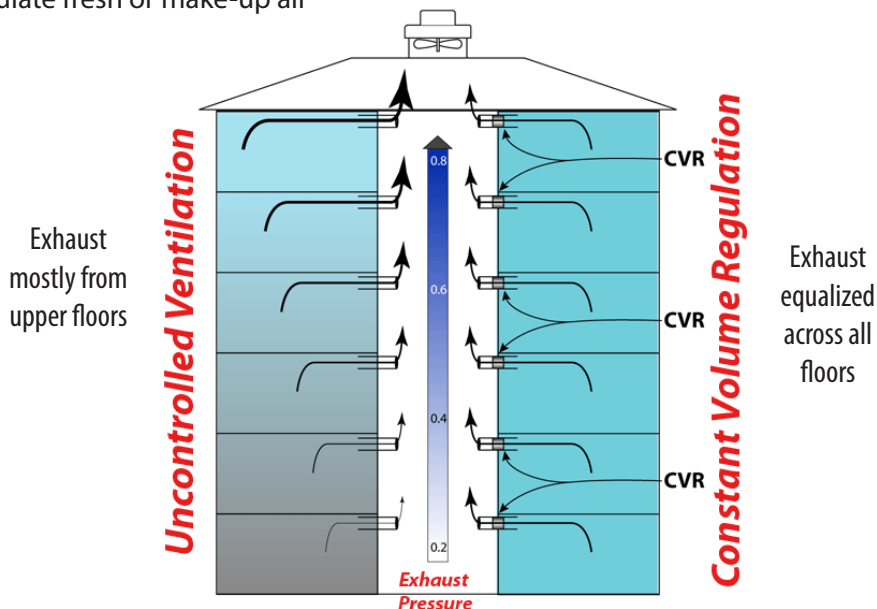
Constant Volume Regulators (CVR) are designed to save significant amounts of energy and money by limiting airflow, preventing over-ventilating or over-serving a space. They are engineered with a specifically shaped free area and a wing-like damper (Aero-Gate) ①. When pressure increases, the increased flow causes the Aero-Gate to rise and block more of the free area. The CVR is adjustable. ② Each size unit can provide a range of flow profiles over its rated pressure range.

The product is precision molded of fire-resistant ABS plastic. They have been used in Europe for years and are starting to gain a larger market in North America as well. Constant Volume Regulators may contribute to meeting coveted USG BC Leed Building Certification.



### Applications:

- Limit over-conditioning due to ductwork limitations
- Limit or equalize exhaust
- Automatic Air Balancing
- Overcome stack effect in tall buildings
- Regulate fresh or make-up air

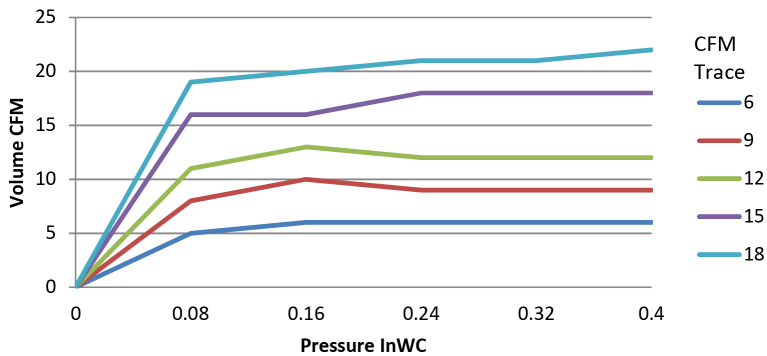


PRODUCT PARAMETERS		
Pressure Range	0.1 to 0.4 InWC	
Accuracy	Desired Set point +/- 15%	
SIZE INFORMATION		
DIAMETER	Flow	Depth
3	6-17 CFM	2.3"
4	6-17, 18-34 CFM	2.3"
5	6-17, 18-34, 35-70 CFM	3.5"
6	50-130	3.5"
STANDARD CONSTRUCTION		
Construction	Molded UL94 VO ABS Plastic	
Safety Ratings	UL2043 Flame and Smoke European Fire and Smoke M1	
Mounting	Friction fit - Rubber Gasket	
Color	Black	

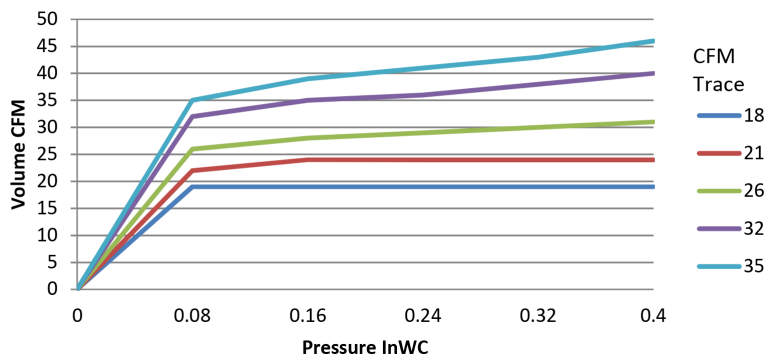
Diameter	CFM Set Point	Quantity	Orientation	Notes
			S / R	
			S / R	
			S / R	
PROJECT			LOCATION	
CONTRACTOR			DESIGN SPECIFIER	

# Performance Curves

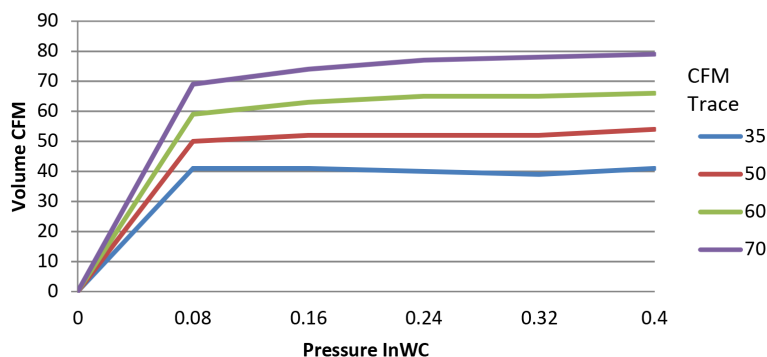
## CVR-LP-03 Performance Chart



## CVR-LP-04 Performance Chart



## CVR-LP-05 Performance Chart

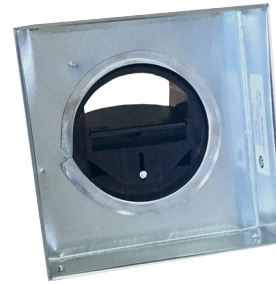


### A word about Low Pressure CVRs

Low Pressure Constant Volume Regulators provide slightly better resolution at very low volumes. The trade-off is a very low top-end effective pressure (only 0.4 InWC). This means they can be overwhelmed pretty easily. The performance curves above tell the story. The gate starts moving at about 0.08 InWC (where the graph changes directions). Beyond 0.4 InWC the LP CVRs are still significant restrictions in airflow but the results are unpredictable.

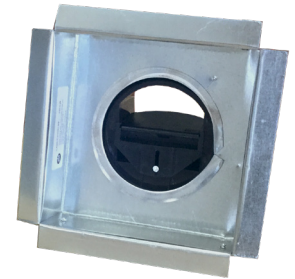
Before specifying the Low Pressure CVRs make sure that conditions will not move out of the effective pressure range.

CVR-LP-xx is available factory installed in enclosures to accommodate grilles, fire and radiation dampers, or control dampers. Contact the factory for assistance.

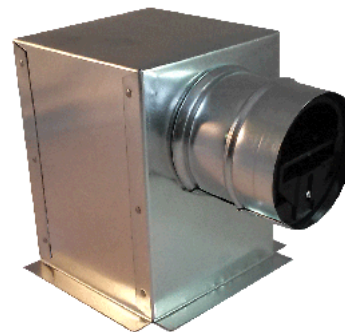
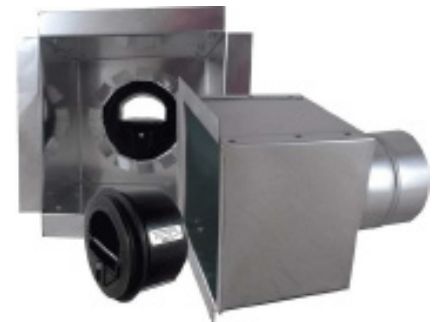


CVRF1-LP  
Duct insert

CVRF2-LP  
2" Register Box



CVRF5-LP  
Sidewall  
Enclosure



CVRF8-LP  
Ceiling Mount  
Enclosure

### The Young Regulator Constant Volume Family

Model	Pressure Range InWC	Volume	Diameters
LP CVR	0.1 - 0.4	6 - 130	3,4,5,6
Std CVR	0.2 - 0.8	10 - 410	3,4,5,6,8,10
CVP	0.2 - 2.0	25 - 275	4,5,6
HP CVR	0.6 - 2.4	15 - 720	3,4,5,6,8,10
CVD Round	0.2 - 4.0	25 - 2,354	4,5,6,8,10,12,14,16
CVDR Rectangular	0.2 - 4.0	20 - 7,650	6x6 to 24x24 Particular Sizes