

Model CFR-xx Constant Flow Regulator

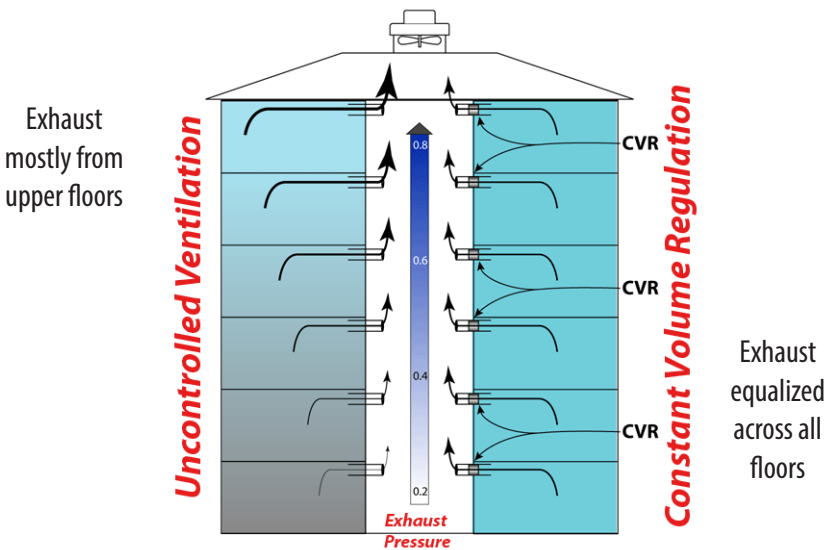


Application and Design

Constant Flow Regulators (CFR) 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 CFR 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 Flow 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	0.2 to 0.8 InWC
Accuracy	Desired Setpoint $\pm 10\%$ Below 50 CFM $\pm 15\%$
DIAMETER	Available Flow Ranges
3	10-30 CFM
4	10-30, 30-60 CFM
5	10-30, 30-60, 60-105 CFM
6	10-30, 30-60, 60-105, 105-175 CFM
8	60-105, 105-175, 175-295 CFM
10	105-175, 175-295, 295-410 CFM
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

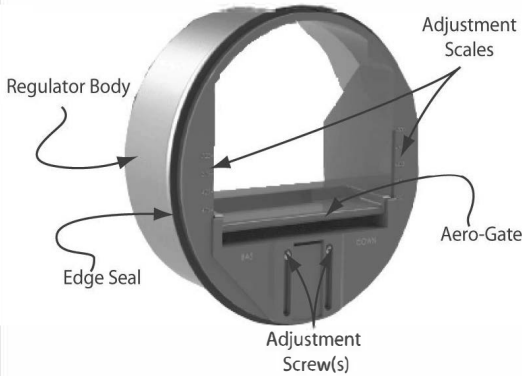
Constant Flow Regulators Performance Data

The CFR is a precision control. Choose the size to meet your performance criteria. Each diameter regulator is adjustable over a range of flow rates. Choose the correct part from the table below. Ensure that both fitting diameter and flow rates match your requirements.

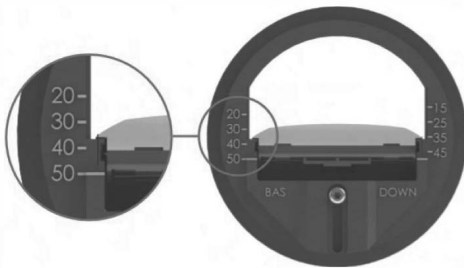
CFR Available Flow Ranges (CFM) & Sound Data						
Part #	Diameter (inches)					
	3	4	5	6	8	10
Part #	CVR-03	CVR-04L	CVR-05L	CVR-06L		
CFM Range	10-30	10-30	10-30	10-30		
		CVR-04H	CVR-05M	CVR-06ML		
		30-60	30-60	30-60		
			CVR-05H	CVR-06MH	CVR-08L	
			60-105	60-105	60-105	
				CVR-06H	CVR-08M	CVR-10L
				105-175	105-175	105-175
					CVR-08H	CVR-10M
					175-295	175-295
						CVR-10H
						295-410

Adjustment Process

Constant Volume Regulator (CFR)



1. Select the maximum flow rate (in CFM) from the Performance Curve table (right).
2. Note the Adjust Scale number next to the desired flow.
3. Loosen the adjustment screw using a Torx® T-10 bit.
4. Adjust the carriage that holds the Aero-Gate up and down to line up the top of the Carriage with the desired Adjust Scale number.



In the picture the CVR is set to 50 on the Adjust Scale. That equates to 30 CFM.

5. Retighten Adjustment Screw. Finger tight is sufficient. Do not over-tighten the screw(s).

Constant Volume Regulator Combined Performance Curves

