

CONSTANT VOLUME REGULATORS

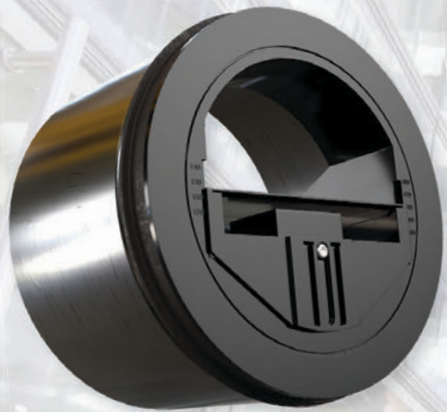


The Nailor Constant Volume Regulator (CVR) is an extremely cost-effective way to precisely control the airflow in HVAC systems – especially high-rise buildings (such as exhaust shafts) – without the need for controls or sensors. The CVR is a pressure independent self-regulating damper which adjusts to maintain a constant set airflow.

- Automatically responds to Varying Duct Pressures
- CVR Models for Standard, Low and High Pressure Applications
- Minimizes Building Stack Effect
- Conserves Energy

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CVR-SP, CVR-LP, CVR-HP

The CVR contains a blade and spring piston which self-adjust to maintain the preset constant airflow volume. They adjust automatically for variable duct pressures caused by building pressure, thermal stack effect, dust buildup and other variable adverse conditions. The CVR can be used in either supply or exhaust applications by simply placing the factory mounted collar-side against the airflow direction in all models offered.

Operational Static Pressure Ranges:

CVR-SP Standard Pressure – 0.2" to 0.8" w.g. (50 to 200 Pa)

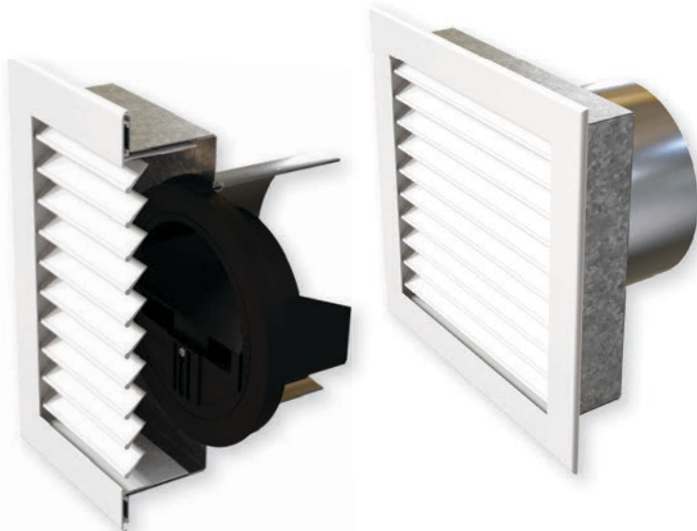
CVR-LP Low Pressure – 0.08" to 0.4" w.g. (20 to 100 Pa)

CVR-HP High Pressure – 0.6" to 2.4" w.g. (148 to 597 Pa)



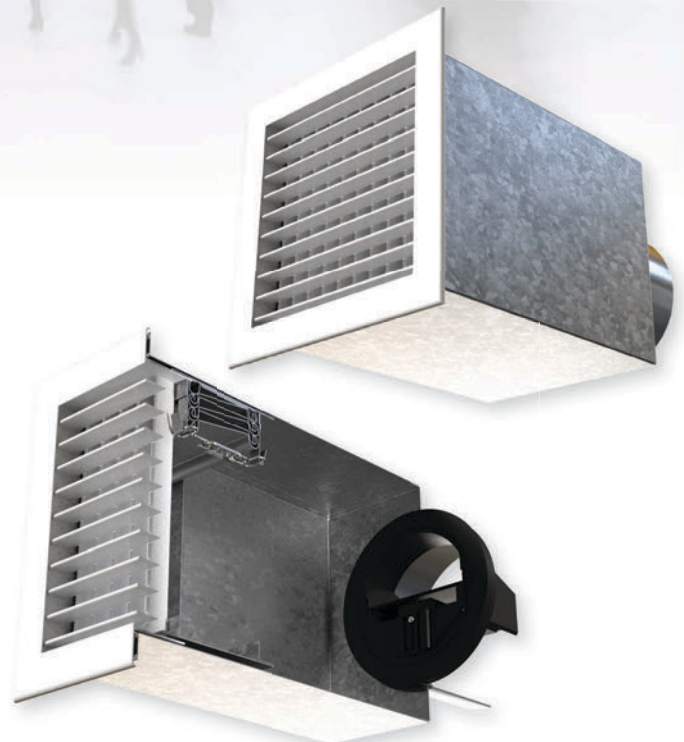
CVR-T

The CVR-T is the Constant Volume Regulator with a square or round transition collar on either side, allowing for any duct shape application. The CVR features a blade and spring piston which self-adjust to maintain the preset constant airflow volume.



CVR-GM

The CVR-GM is the Constant Volume Regulator in a flanged box for grille mount purposes (factory supplied or by others). This model is available for supply or exhaust applications. Used in applications where fire dampers are not required, this model comes preassembled for quick and easy installation.

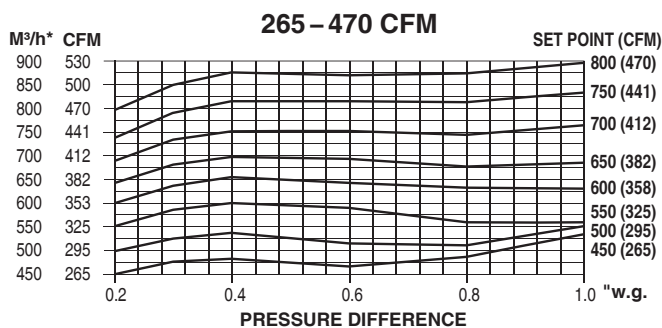
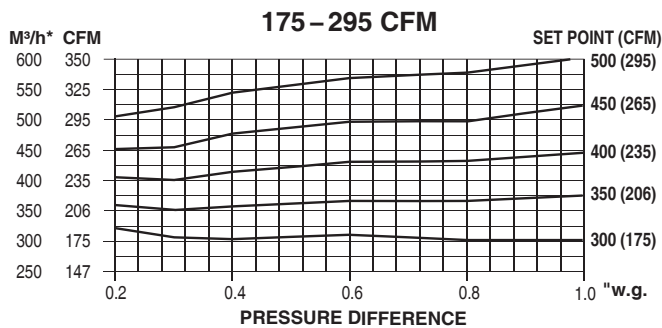
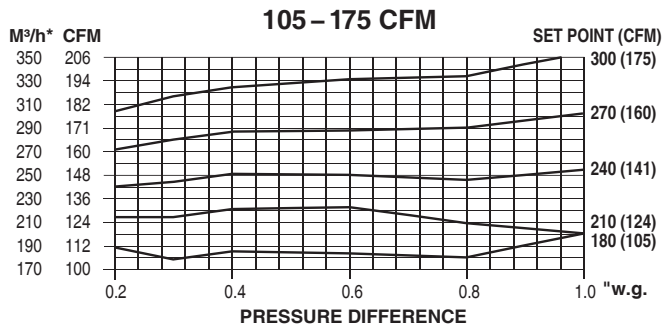
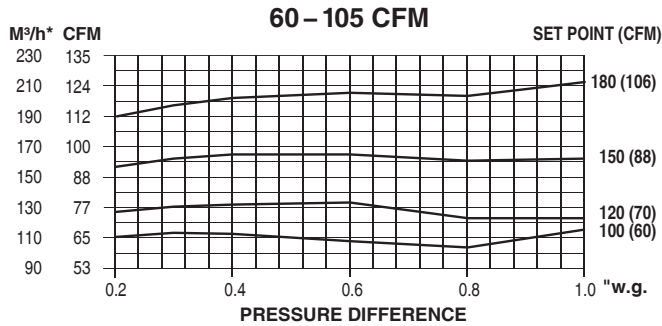
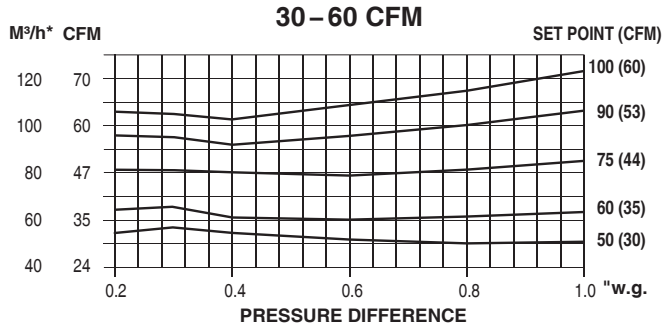


CVR-FD

The CVR-FD is the Constant Volume Regulator assembled with a UL 555 Listed 1-1/2 hour static or dynamic curtain fire damper. This model is available for supply or exhaust applications. This labor saving model is complete, requires no rear retaining angles, and reduces installation time.

PERFORMANCE CURVES

STANDARD PRESSURE



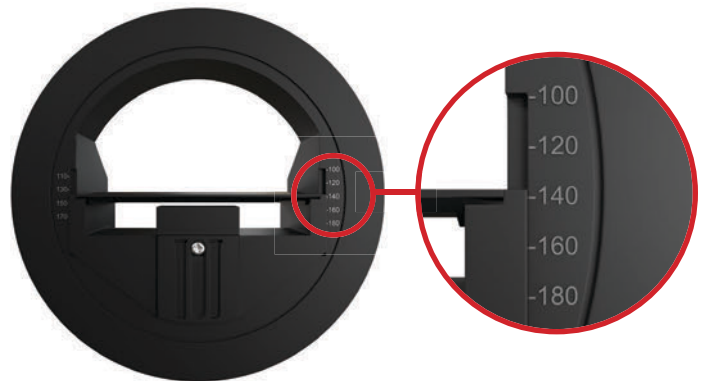
* set point numbers on regulator are in m³/H

SIZING:

SIZE (NOMINAL)	C DEPTH	D DIA.
4" (102)	2.8" (70)	3.7" (94)
5" (127)	3.4" (86)	4.625" (117)
6" (152)	3.6" (91)	5.9" (150)
8" (203)	3.6" (91)	7.7" (196)
10" (254)	5.0" (127)	9.625" (244)

AIRFLOW:

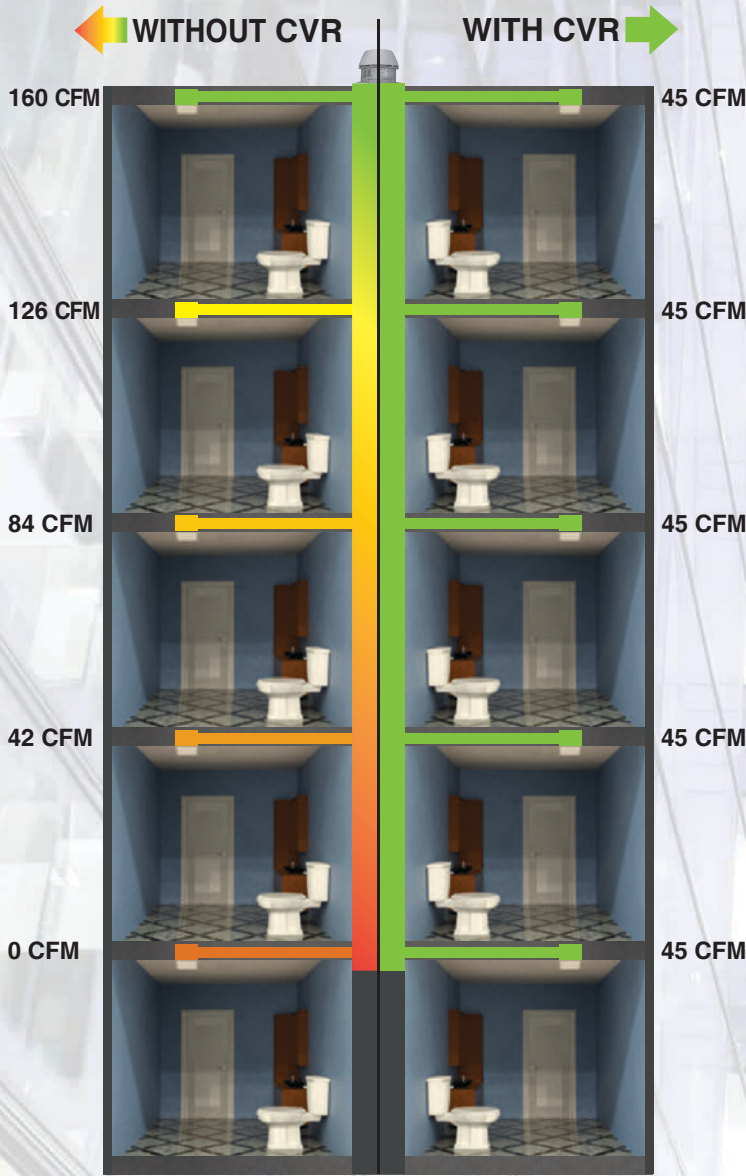
SIZE (NOMINAL)	FLOW RATE RANGE (CFM)				
4" (102)	30-60	-	-	-	-
5" (127)	30-60	60-105	-	-	-
6" (152)	30-60	60-105	105-175	-	-
8" (203)	-	60-105	105-175	175-295	-
10" (254)	-	-	105-175	175-295	265-470



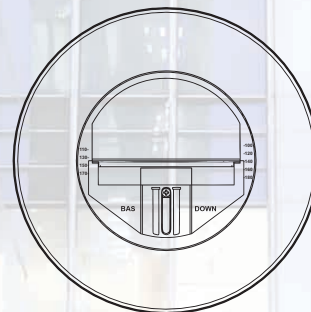
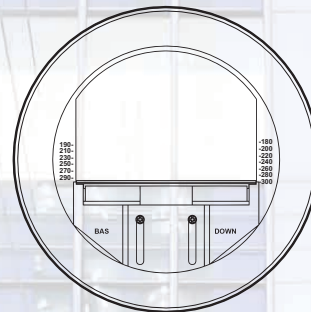
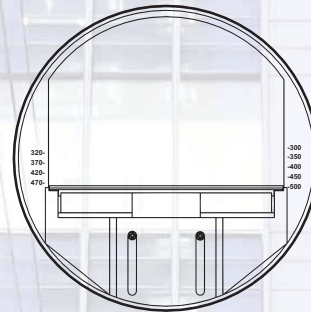
Sample of airflow setting: Set Point Mark 140 = 140 m³/H = 83 CFM

When choosing a CVR model, select the appropriate size for your building needs. Then select the desired flow rate range among those available for your size.

For adjusting your CVR, reference our performance curve table and choose your maximum desired flow rate versus pressure. Choose a Set Point on the CVR that best matches that flow rate (see graphic for example). Using a Torx T-10 bit, loosen the adjustment screw. Re-tighten the screw when the self-adjusting arrowing lines up with desired Set Point.



Size (Nominal)	FLOW RATE (CFM)	TOTAL ASSEMBLY
4" (102)	30-60	4" (102) Regulator
5" (127)	30-60	4" (102) Regulator + 1 Shim
5" (127)	60-105	5" (127) Regulator
6" (152)	30-60	4" (102) Regulator + 2 Shim
6" (152)	60-105	5" (127) Regulator + 1 Shim
6" (152)	105-175	6" (152) Regulator
8" (203)	60-105	5" (127) Regulator + 2 Shims
8" (203)	105-175	6" (152) Regulator + 1 Shim
8" (203)	175-295	8" Regulator
10" (254)	105-175	6" (152) Regulator + 2 Shims
10" (254)	175-295	8" Regulator + 1 Shim
10" (254)	265-470	10 Regulator



THERMAL STACK EFFECT

Without the use of a CVR there can be what is called "Stack Effect". Stack Effect is an imbalance of exhaust airflow from floor to floor due to varying pressure changes, creating an inefficient and imbalanced exhaust system throughout the building. This can create stale or uncomfortable settings and be costly. The CVR eliminates Stack Effect by automatically adjusting to these varying pressures, creating equalized airflow and exhaust among all floors.

Each size is supplied with factory installed shims where necessary to achieve different airflow ranges. See the graphic for an example and the chart for a detailed total assembly.