



Young Regulator Co.

7100 Krick Rd • Walton Hills, OH 44146

P: 440-232-9700 • F: 440-232-8266

www.youngregulator.com

Submit 4100BOX – 1-10

Model 4100CVR

Ceiling Box w/ Damper & Constant Volume Regulator

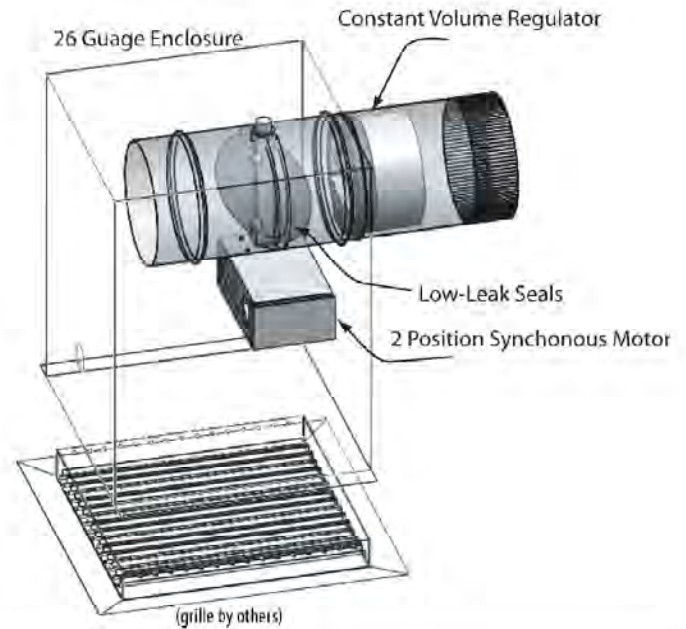
Power Open - Regulated Max Flow

Spring Closed - Low or No Flow

Application and Design

The 4100CVR is the next logical step for Young Regulator. The 4100BOX features one of our high-quality dampers is a fitting to provide occupied/unoccupied demand-response exhaust. Now we have added a Constant Volume regulator into the outlet to provide a regulated, pressure-independent flow when the space is occupied. In the unoccupied mode the damper closes to further limit flow of conditioned air out of the space.

The low end flow can be set with a mechanical blade stop. Low leak seals are a popular option depending on your application. The damper opens when it receives the occupied signal, either from the light switch or from an occupancy sensor. The regulator is factory set to your specifications. They are rated to set-point +/-10%, so you can be assured that you are not over-ventilating.



STANDARD CONSTRUCTION

Box	24 ga. Galvanized Steel
Shell	24 ga. Galvanized Steel
Blade	20 ga. Galvanized Steel
Shaft	1/2" Plated Steel
Bushing	Oil Impregnated Bronze

SIZE INFORMATION

Inlet	For 8" x 8" Grille
Outlet Diameter	4", 5", 6" and 8"

Constant Volume Regulator (pressure range 0.2inwc to 0.8inwc)

4" 10-30, 30-60 CFM	UL94V-0 and UL2043
5" 10-30, 30-60, 60-105 CFM	European Fire And Smoke Rating M1
6" 10-30, 30-60, 60-105, 105-175 CFM	Optional High Pressure CVRs available
8" 60-105, 105-175, 175-295 CFM	(0.6inwc to 2.4inwc)

Airflow Ranges

ACTUATOR

Special windings and heavy-duty steel gearing provide for long life and easy spring return operation. Cross pin on motor shaft provides positive direct drive to damper without a coupling or setscrews and allows for quick and easy motor change.

Volts	120V
Watts	6
VA	10
Timing	15 Sec Open 5 Sec Close
Torque	35 in. oz.
Motor Enclosure	Aluminum

OPTIONS

120V Motor with Time Delay	24V Motors without Time Delay
Low-Leak Seals	Mechanical Blade Stops

QUANTITY	GRILLE OPENING	OUTLET DIAMETER	NOTES

PROJECT	LOCATION
CONTRACTOR	DESIGN SPECIFIER



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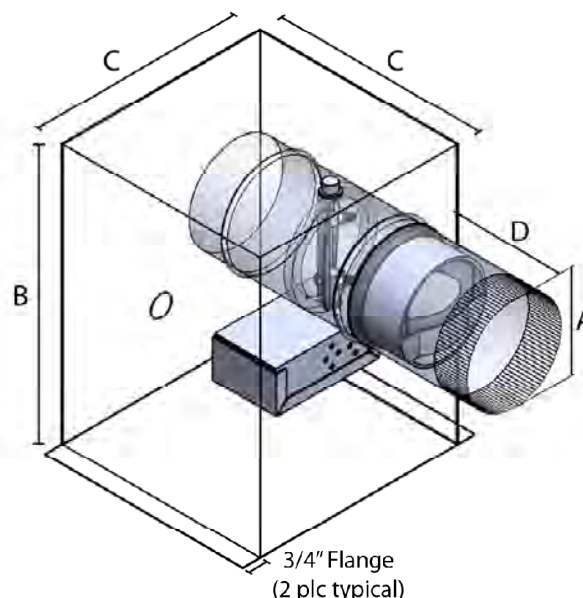
Submit 4100CVR 2-15

In occupied rooms, the damper opens to permit the rooftop exhaust fan to exhaust stale air. The Constant Volume Regulator limits flow to the calibrated setting regardless of pressure (0.2inwc to 0.8inwc). The damper remains open until the light switch is turned off.

In unoccupied rooms, the damper is closed to prevent the rooftop exhaust fan from exhausting conditioned air. Optional low-leak seals are available for nearly zero blow-by. Alternatively, a blade stop is available to set a minimum flow position to ensure required air changes.

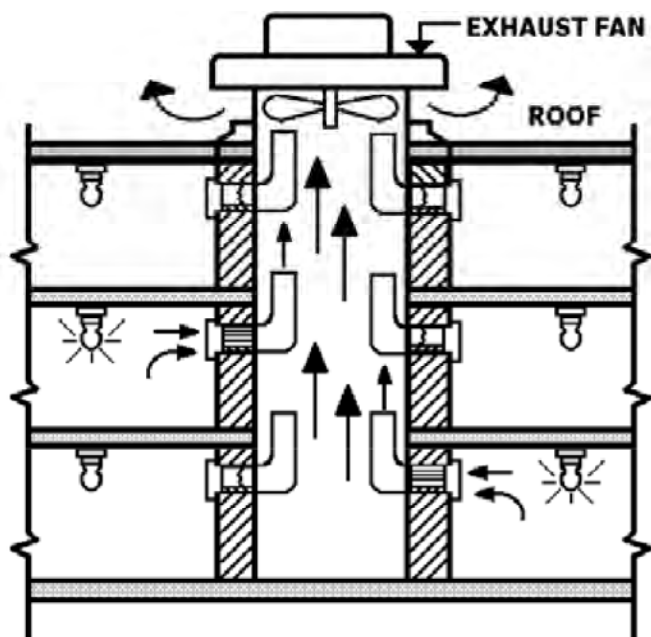
The rooftop exhaust fan no longer has to pull air from every room for 24 hours a day, 7 days a week. The fan may be able to be downsized saving on both the initial fan cost and, more significantly, on ongoing operating expenses.

For relief, a bypass loop of outdoor air can be installed. Optionally, a variable speed fan controlled by a pressure sensor can be used.



Dimensional Drawing

Outlet Diameter	Height	Grille Size	Outlet Length
A	B	C	D
4"	11"	8"x8"	8¼"
5"	11"	8"x8"	8¼"
6"	11"	8"x8"	8¼"
8"	13"	10"x10"	8¼"



TYPICAL APPLICATION

Drawings subject to change
Consult the factory for custom sizes