



# Young Regulator Co.

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Submit CVDxx 6/2018

## CVDR-wwxhh

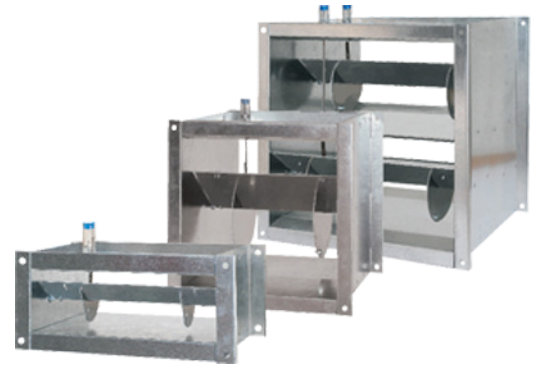
*Rectangular Constant Volume Damper  
Adjustable Maximum Flow Control*

### Application and Design

#### Application and Design

The Constant Volume Rectangular Dampers are designed to provide a pressure-independent maximum air flow into or out of a space. These units are installed in both the supply and exhaust side of commercial systems. Most sizes can be fit with a motor to provide two flow settings. (Example: day/night - occupied/unoccupied)

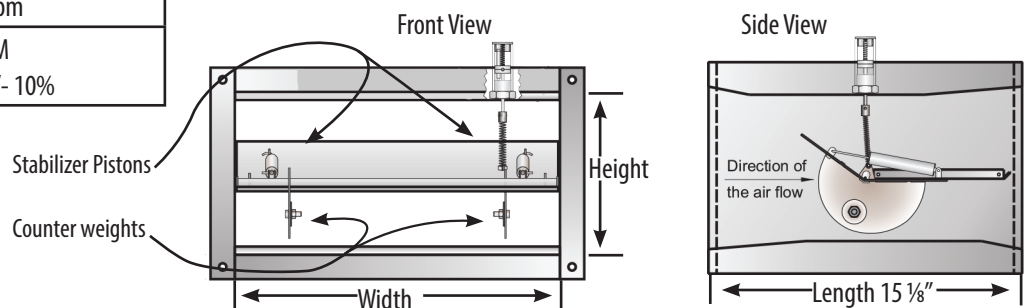
As velocity changes, the asymmetrical angled damper blade self-adjusts to maintain a preset maximum airflow. The system is adjusted at installation by professional installers/balancers over a wide range of desired flows. This is new technology to the U.S. but has been employed in Europe for some time. The system has been designed to be robust with special maintenance-free bearings and a stabilizing piston to prevent vibrations. This allows the units to be installed in all but the harshest environment:



**Performance Note:**  
Young Regulator recommends 48" of straight duct, the same size as the damper, before the unit to assure laminar flow. Turbulence will degrade performance accuracy.

Standard Construction	
Shell	24 gauge galvanized Stainless Steel available
Asymmetrical Blade	Heavy-duty aircraft aluminum
Bearings	PTFE Maintenance Free
Size	
6x6 to 24x24	30 Sizes
Height,Width,length See Selection Chart Back	See drawing All units 15 1/8" front to back
Flanges 1 3/4" with corner holes	
Operating Limits	
Temperature	0°F to 200°F
Pressure	Up to - 4.0 InWC
Velocity	500 - 2000 fpm
Volume See chart on back	60 -5900 CFM Set-point +/- 10%

CVDR - Two Configurations	
One Max Flow	Two Max Flows
Application: Space Ventilation	Application: Occupied/Unoccupied Ventilation
Limit airflow to a preset field adjustable, pressure independent volume	Limit airflow to either of two preset field adjustable, pressure independent volumes
No Motor	Brushless Belimo LM Motor 24 VAC Std. / 120 VAC available 5 year motor warranty
Required Accessories	
None Unit is non-electric	Activation Signal from: <ul style="list-style-type: none"> <li>Occupancy Sensor, Current Sensing Relay or T-720A thermostat</li> <li>Transformer</li> </ul>



Damper Installation			Two Flow Option Motorized
Duct	CVDR	Duct	
<p>Duct bolts CVDR 4 plcs per Joint</p>			
<p>The CVDR is built with heavy 1 3/8" flanges on both the entering and leaving faces of the damper with holes in each corner. Simply drill holes in the <b>duct flange</b> and bolt together. Unit should be supported in accordance with professional standards.</p>			<p>Adding a motor provides a two flow solution. Control with either 24 or 120VAC. Set the default condition to correspond with the off motor cycle. Energize the motor and the blade will move to the higher control point. See table below for size availability.</p>

### Damper Adjustment

Calibrated in M3/hr

To convert CFM to M3/hr  
 $M^3/hr = CFM \times 1.7$

Use a #2 allen wrench to adjust flow rate.

Down = less flow  
 Up = more flow

**Adjustment device**

Rectangular Constant Volume Min/Max Flows													
Nominal	in(mm)	Width									Legend		
		6	8	10	12	14	16	18	20	24			
Height	4	3.9(100)	120/350		120/470		180/645					Min / Max	
	6	5.9(150)	120/410	150/530	180/530	235/880	295/645	355/1055			500		1475
	8	7.9(200)		235/585	235/824	295/1175	415/1470	355/1645	530/1470	590/2060	590/2645	No Motor Available	2 Flow Units (Motorized) available
	10	9.8(250)			380/1350	470/1585	475/1880	590/2060	590/2350	765/2530	885/2940		
	12	11.8(300)				415/1765	885/1765	650/2530	590/2649	590/3235	880/3825		
	16	13.8(400)						710/3295		1180/4120	1180/5295		
	20	19.7(500)								1530/5060	1770/5885		
	24	23.6(600)									1770/7651		

QUANTITY	SIZE (WXXHH)	FLOW (CFM)	NOTES
PROJECT			LOCATION
CONTRACTOR			DESIGN SPECIFIER