



Young Regulator Co.

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Submit CVDxx 6/2018

CVDxx

*Constant Volume Damper
Adjustable Maximum Flow Control*

Application and Design

The CVD - Constant Volume Damper has been designed to provide a pressure-independent maximum airflow. As pressure increases the asymmetrical blade moves to close off the free area which keeps airflow stable over a wide pressure range.

The CVDs have an exterior adjustment mechanism which is easily adjusted by professional installing/balancing contractors. They have been designed to handle up to 4.0 InWC (Medium Pressure Systems) with maximum flows from 25 to 2350 CFM.

Installation is simple, the unit slips inside standard ductwork. Secure with mechanical fasteners. Soft but rugged lip seals ensure a tight fit directly inline with ductwork which may eliminated the need for sealing.

Young Regulator can add a motor to provide two max air-flows. (ex. Occupied/Unoccupied) if your job calls for enhanced control.



CVD - 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	High Quality Synchronous Motor 24 VAC Std. / 120 VAC available
Required Accessories	
none Unit is non-electric	Activation Signal from: <ul style="list-style-type: none"> Occupancy Sensor, Current Sensing Relay or T-720A thermostat Transformer

Standard Construction	
Shell	26 gauge galvanized 304-316 Stainless Steel available
Gasket	Self-Sealing EPDM Lip Seals
Asymmetrical Blade	Heavy-duty aircraft aluminum
Size Diameter	
Low Range	High Range
4,5,6,8,10	4,5,6,7,8,10,12,14,16
Operating Limits	
Temperature	0°F to 200°F
Pressure	Low See Diff. Pres. Chart High - 4.0 InWC
Volume See chart on back	24 -2350 CFM Setpoint +/- 10%

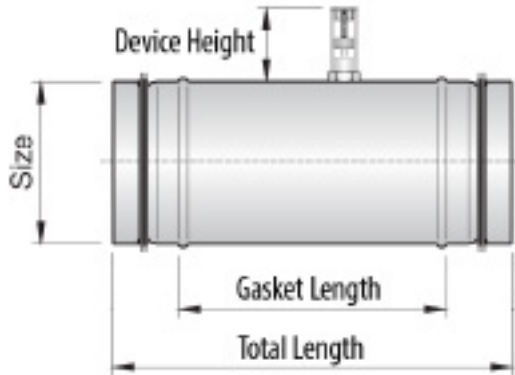
Performance Note:
Young Regulator strongly recommends three duct diameters of straight duct, the same size as the damper, both before and after the unit. Turbulence will degrade performance accuracy.

QUANTITY	DIAMETER	FLOW (CFM)	NOTES

PROJECT	LOCATION
CONTRACTOR	DESIGN SPECIFIER

More Information

Straight CVD
Provides One Max Flow



Motorized CVD
Provides Two Max Flows

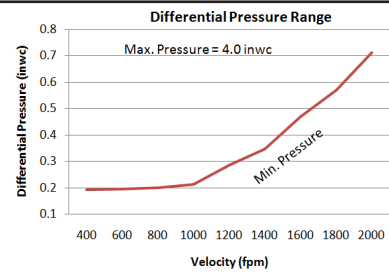


Constant Volume Damper Spec Table

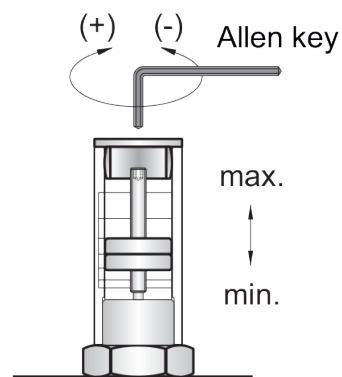
Nominal	mm	Volume CFM				Total Length	Gasket Length Inches	Device Height
		CVDxx-Low Min	CVDxx-Low Max	CVDxx-High Min	CVDxx-High Max			
4	100	24	74	41	130	9.6	8.1	2.75
5	125	40	130	59	165	9.6	8.1	2.75
6	150	60	206	100	265	9.6	8.1	2.75
7	180			118	350	12.4	10.9	2.75
8	200	95	295	147	530	12.4	10.9	2.75
10	250	140	470	295	940	12.4	10.9	2.75
12	300			470	1650	13.6	12.1	4.33
14	355			530	1880	16.3	14.8	4.33
16	400			589	2354	16.3	14.8	4.33

Pressure Range

The CVD begins to regulate flow when the pressure drop across the unit reaches a minimum value. The chart below provides that "Activation Point". The high pressure limit is 4.0 InWC.



Damper Adjustment

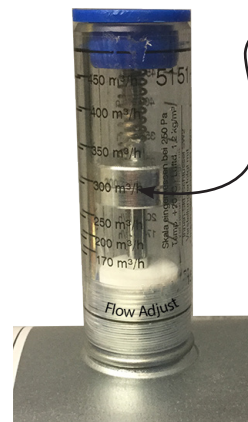


Adjustment device

Use a #2 allen wrench to adjust flow rate.

Down = less flow
Up = more flow

Adjustment Device



Calibrated in M³/hr

To convert CFM to M³/hr
M³/hr = CFM x 1.7