

**QUALIFICATIONS:**

- UL-2043 Listing: UL File #R38307.

**CVR-T STANDARD PRESSURE:**

The CVR-T is the Constant Volume Regulator with a square or round transition collar on either side. This is an extremely cost-effective way to precisely control the airflow of the HVAC systems – especially high-rise buildings - without the need for on-site electric or pneumatic controls or sensors. Easily adjust the setpoint with a screwdriver, and a self-regulating blade and spring piston adjust automatically to maintain a constant set airflow volume. These regulators are designed to be operated in pressure ranges of 0.2" w.g. (50 Pa) to 1.0" w.g. (249 Pa). They adjust automatically for variable duct pressures caused by building pressure, thermal stack effect, dust buildup and other variable adverse conditions. This assembly can be used in either supply or exhaust applications, simply place the collar-side against the airflow direction.

**STANDARD CONSTRUCTION:**

**CVR-T Plenum:** 22 ga. galvanized steel.

**Volume Damper:** UL94V-0 ABS plastic.

**SIZING:**

Plenum Size	Regulator (Nominal)	W Width	H Height	D Dia.	R
6" x 6" (152 x 152)	4" (102)	6" (152)	6" (152)	3.7" (94)	2.25" (57)
6" x 6" (152 x 152)	5" (127)	6" (152)	6" (152)	4.625" (117)	3.167" (80)
8" x 8" (203 x 203)	4" (102)	8" (203)	8" (203)	3.7" (94)	2.25" (57)
8" x 8" (203 x 203)	5" (127)	8" (203)	8" (203)	4.625" (117)	3.167" (80)
8" x 8" (203 x 203)	6" (152)	8" (203)	8" (203)	5.9" (150)	3.167" (80)
10" x 10" (254 x 254)	6" (152)	10" (254)	10" (254)	5.9" (150)	3.167" (80)
10" x 10" (254 x 254)	8" (203)	10" (254)	10" (254)	7.7" (196)	3.33" (85)
12" x 12" (305 x 305)	8" (203)	12" (305)	12" (305)	7.7" (196)	3.33" (85)
12" x 12" (305 x 305)	10" (254)	12" (305)	12" (305)	9.625" (244)	4.25" (108)

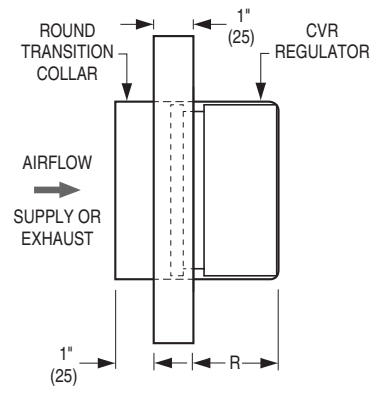
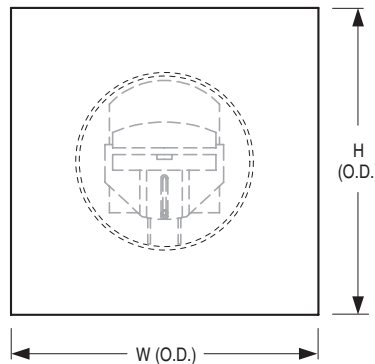
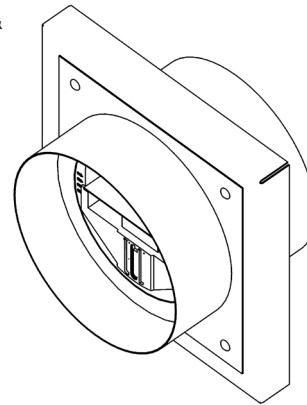
SP Standard Pressure Range of Operation (Static Pressure)	
Minimum	0.2" w.g.
Maximum	1.0" w.g.

**OPTIONS:**

Pressure:

- HP** High Pressure Regulator (0.8 - 2.4" w.g.) (refer to submittal CVR-HP)

PLENUM BOX & REGULATOR



\*PLACE COLLAR SIDE AGAINST AIRFLOW

\*For installation, see IOM-CVRINST.

<b>SCHEDULE TYPE:</b>	Page 1 of 2			
<b>PROJECT:</b>	Dimensions are in inches (mm)			
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	12 - 22 - 22	CBD	3 - 5 - 21	CVR-T

**STANDARD PRESSURE CVR-T PERFORMANCE:**

The data charts show the approximate constant volume airflow through the CVR-T at a given pressure differential. CVR-T is designed for system pressure of 0.2" w.g. (50 Pa) through 1.0" w.g. (249 Pa). As shown, if the pressure across the regulator falls below 0.2" w.g. (50 Pa) the airflow volume will be reduced. Likewise, if the pressure across the regulator increases to over 1.0" w.g. (249 Pa), then the airflow volume will be increased. The CVR-T is factory set to a specific airflow, but can be field-modified to another desired airflow using a standard screwdriver. The charts shown are at 68°F (20°C) and 1 atmosphere pressure. The graphs shown are averages and can vary from 5%.

**STANDARD PRESSURE AIR FLOW (FLOW RANGE):**

Sizes	Flow Rate Ranges in CFM (m³/h)				
4" (102)	30 - 60 (50 to 100)	—	—	—	—
5" (127)	30 - 60 (50 to 100)	60 - 105 (100 - 180)	—	—	—
6" (152)	30 - 60 (50 to 100)	60 - 105 (100 - 180)	105 - 175 (180 - 300)	—	—
8" (203)	—	60 - 105 (100 - 180)	105 - 175 (180 - 300)	175 - 295 (300 - 500)	—
10" (254)	—	—	105 - 175 (180 - 300)	175 - 295 (300 - 500)	265 - 470 (450 - 800)

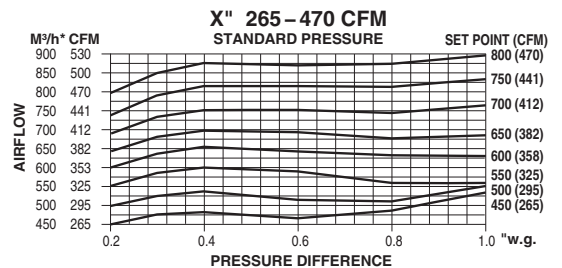
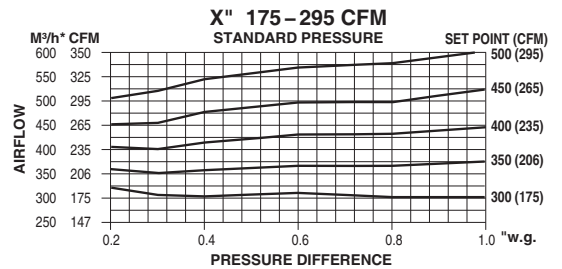
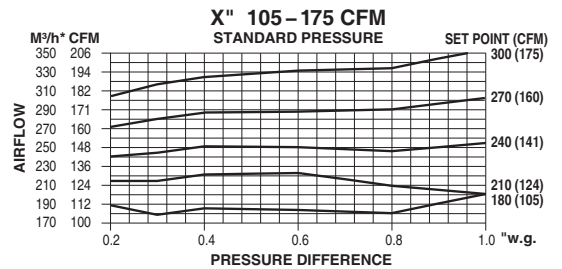
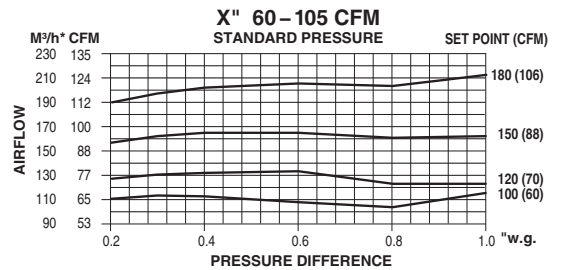
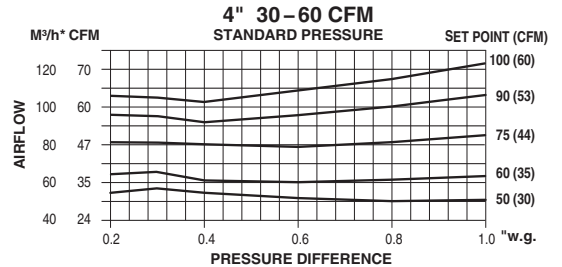
Note: Each diameter can be adjusted with shims to achieve different airflow ranges. Ensure both overall CVR-T diameter and airflow match your requirements. See CVRL/CVRH for low and high pressure flow rate ranges.

**STD. PRESSURE SET POINT INTERVAL TABLE:**

Regulator Size ( Flow Rate )	Set Point Intervals	
	CFM	M³/h
4" (102) (30 - 60 cfm [50 - 100 m³/h])	3	5
5" (127) (60 - 105 cfm [100 - 180 m³/h])	3	5
6" (152) (105 - 175 cfm [180 - 300 m³/h])	3	5
8" (203) (175 - 295 cfm [300 - 500 m³/h])	6	10
10" (254) (265 - 470 cfm [450 - 800 m³/h])	15	25



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



**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

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Dimensions are in inches (mm)

DATE	B SERIES	SUPERSEDES	DRAWING NO.
12 - 22 - 22	CBD	3 - 5 - 21	CVR-T