

QUALIFICATIONS:

- UL-2043 Listing: UL R38307.

CVR-SP STANDARD PRESSURE:

The CVR-SP constant volume regulator 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. 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. to 1.0" w.g. They adjust automatically for variable duct pressures caused by building pressure, thermal stack effect, dust buildup and other variable adverse conditions.

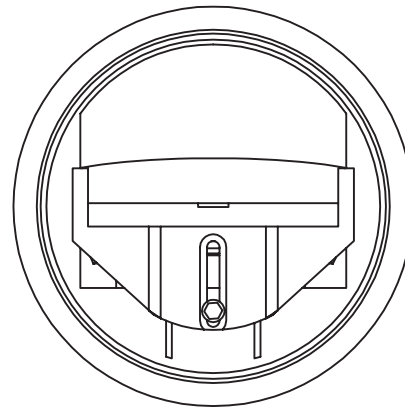
STANDARD CONSTRUCTION:

- Frame: Fire resistant UL94V-0 ABS plastic.
- Blade: Self-regulating.
- Spring: Internal spring piston.
- Seal: Full circumference rubber gasket.

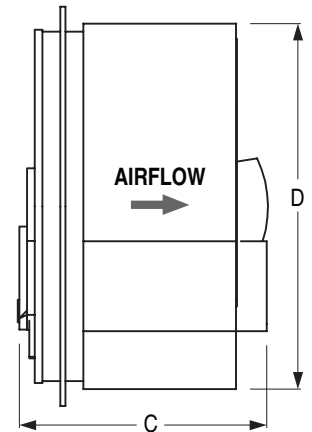
SIZING:

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

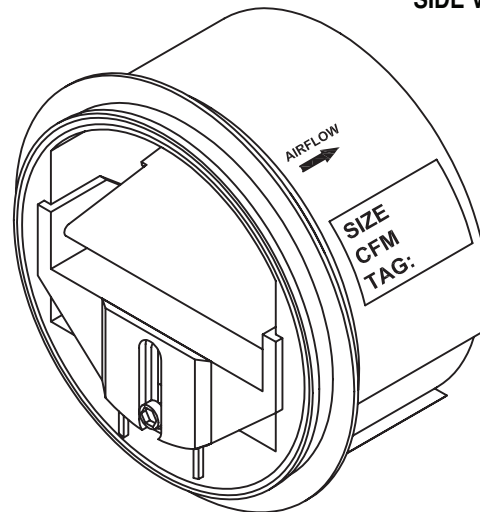
Standard Range of Operation Static Pressure	
Minimum	0.2" w.c.
Maximum	1.0" w.c.



FRONT VIEW



SIDE VIEW



OPERATIONAL STATIC PRESSURE RANGE:

0.2" w.g. – 1.0" w.g. (50 Pa – 249 Pa).

STANDARD PRESSURE AIR FLOW (FLOW RANGE):

Sizes	Flow Rate Ranges in CFM (m ³ /h)				
	30 - 60 (50 - 100)	60 - 105 (100 - 180)	105 - 175 (180 - 300)	175 - 295 (300 - 500)	265 - 470 (450 - 800)
4" (102)	30 - 60 (50 - 100)	—	—	—	—
5" (127)	30 - 60 (50 - 100)	60 - 105 (100 - 180)	—	—	—
6" (152)	30 - 60 (50 - 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-SP diameter and airflow match your requirements.

*For installation, see IOM-CVRINST.

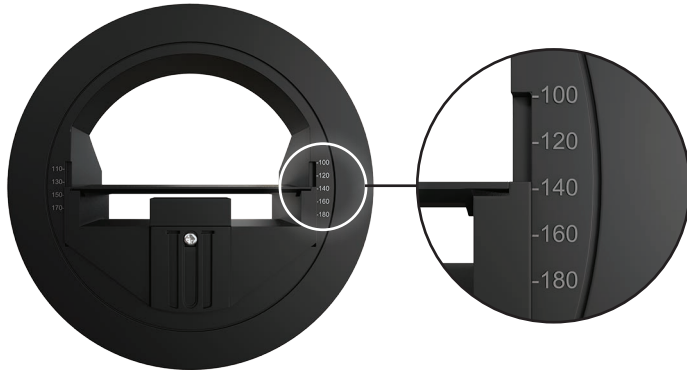
SCHEDULE TYPE:	Page 1 of 2 Dimensions are in inches (mm)			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	3 - 5 - 21	CBD	6 - 19 - 20	CVR-SP

STANDARD PRESSURE PERFORMANCE:

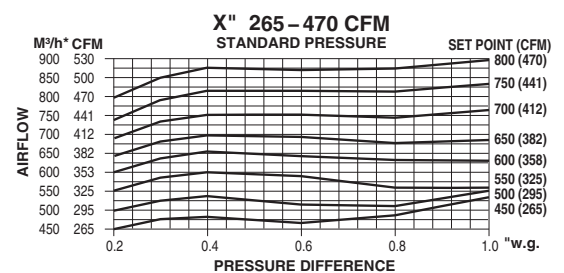
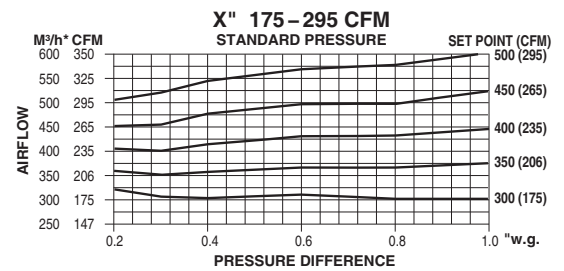
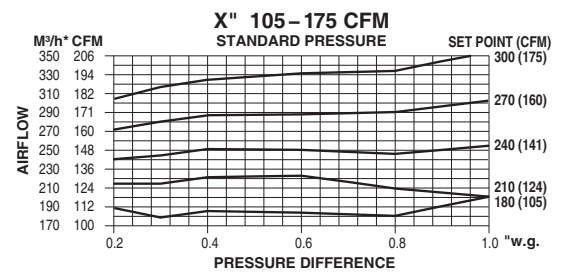
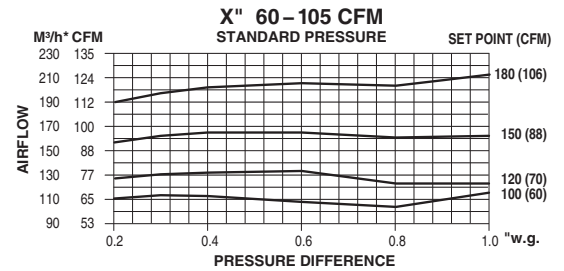
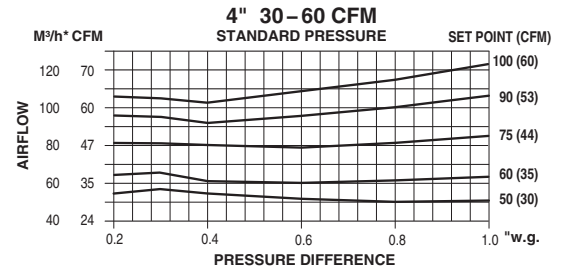
The data charts show the approximate constant volume airflow through the CVR-SP at a given pressure differential. CVR-SP is designed for system pressure of 0.2" w.g. (50 Pa) through 1.0" w.g. (249 Pa). As shown, if the pressure across the regulator falls below 0.2" w.g. (50 Pa) the airflow volume will 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-SP 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%.

STD. PRESSURE SET POINT INTERVAL TABLE:

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



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



SCHEDULE TYPE:	
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ENGINEER:	
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DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 5 - 21	CBD	6 - 19 - 20	CVR-SP