

**QUALIFICATIONS:**

- UL-2043 Listing: UL File #R38307.
- UL555 Listing: UL File #R9492.

**CVR-FD STANDARD PRESSURE:**

The CVR-FD is the Constant Volume Regulator assembled with a UL 555 Listed 1 1/2 hour static or dynamic curtain fire damper. 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. The assembly can be used in a supply or exhaust application. 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.

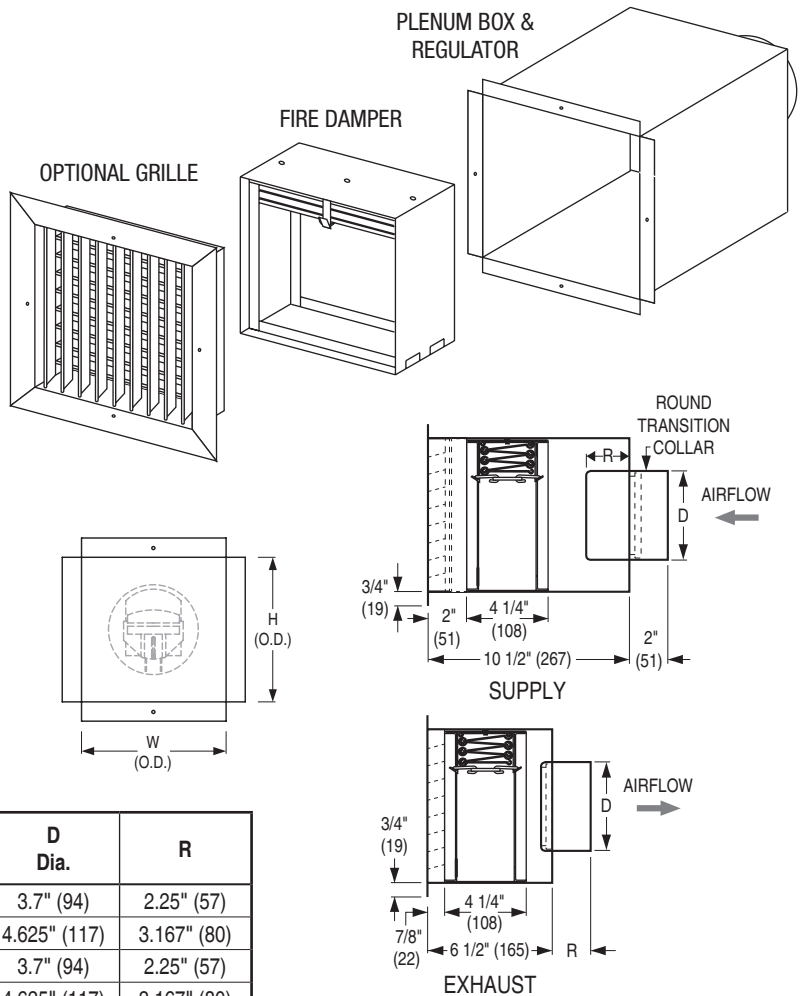
**STANDARD CONSTRUCTION:**

**CVR-FD 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)

Airflow:

- EXH** Exhaust  
 **SUP** Supply

Grille:

- GDS** Double Deflection Supply Grille (Model 61DV)  
 **GSS** Single Deflection Supply Grille (Model 61SV)  
 **GER** Exhaust Grille (Model 6145H)

Standard Grille Finish is:

**AW** Appliance White

**Fire Damper:**

- 1 1/2 Hr. Fire Damper  
 **15S** Static (0110V)  
 **15D** Dynamic (D0110)

\*For installation, see IOM-CVR-FD.

<b>SCHEDULE TYPE:</b>
<b>PROJECT:</b>
<b>ENGINEER:</b>
<b>CONTRACTOR:</b>

Page 1 of 2  
Dimensions are in inches (mm)

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

**STANDARD PRESSURE CVR-FD PERFORMANCE:**

The data charts show the approximate constant volume airflow through the CVR-FD at a given pressure differential. CVR-FD 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-FD 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 (m <sup>3</sup> /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)

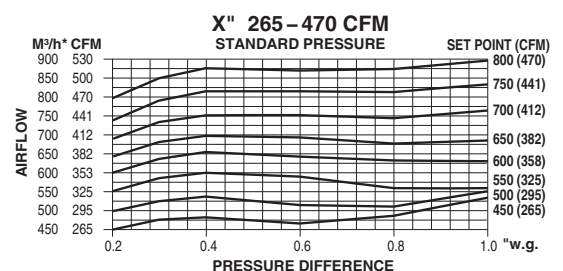
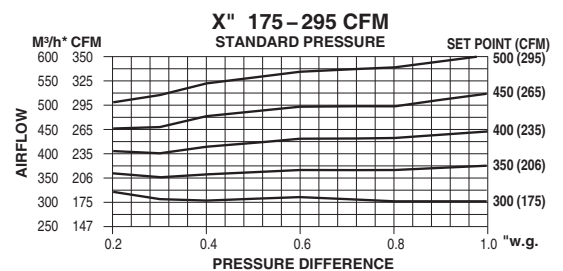
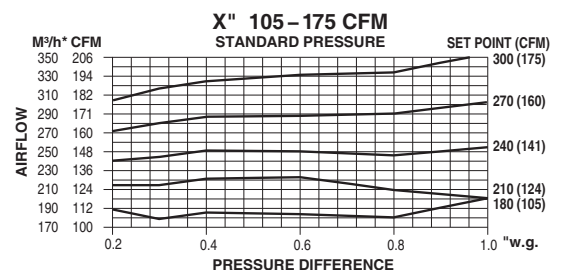
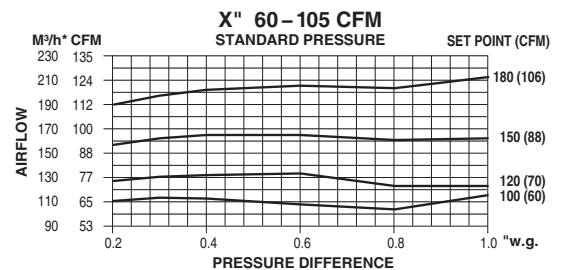
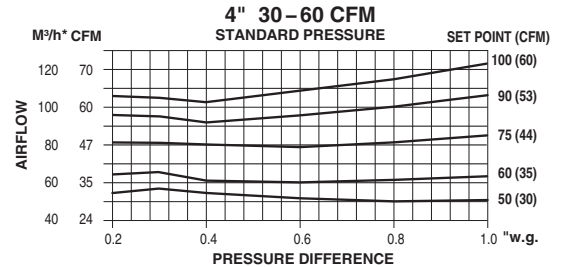
Note: Each diameter can be adjusted with shims to achieve different airflow ranges. Ensure both overall CVR-FD diameter and airflow match your requirements. See CVR-LP/CVR-HP for low and high pressure flow rate ranges.

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

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



Sample of setting:  
Set Point Mark 140 = 140 m<sup>3</sup>/H = 83 cfm



**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

Page 2 of 2 Dimensions are in inches (mm)

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

**QUALIFICATIONS:**

- UL-2043 Listing: UL File #R38307.

**CVR-GM STANDARD PRESSURE:**

The CVR-GM is the Constant Volume Regulator in a flanged box for grille mount purposes. 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. This assembly can be used in a supply or exhaust application. 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.

**STANDARD CONSTRUCTION:**

- CVR-GM 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)

**OPTIONS:**

Pressure:

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

Airflow:

- EXH** Exhaust
- SUP** Supply

Grille:

- GDS** Double Deflection Supply Grille (Model 61DV)

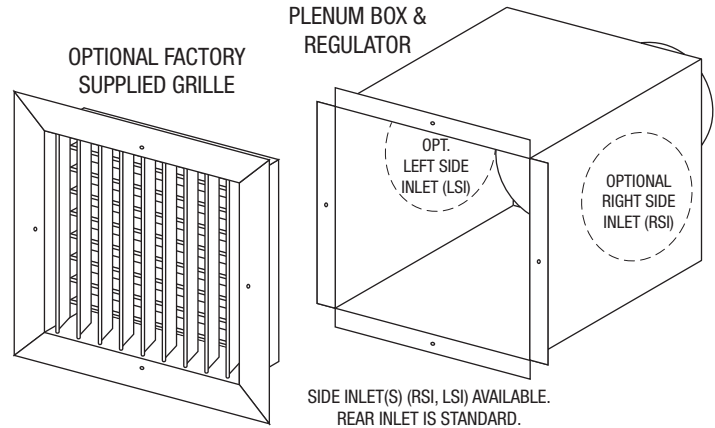
- GSS** Single Deflection Supply Grille (Model 61SV)

- GER** Exhaust Grille (Model 6145H)

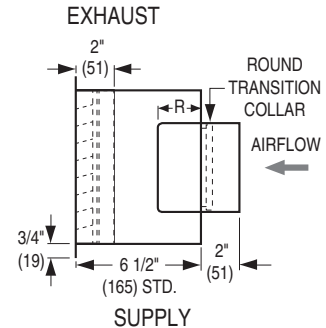
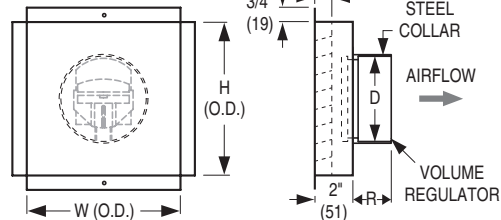
Standard Grille Finish is:  
**AW** Appliance White

Alternate Inlet Location:

- ILS** Inlet - Left Side
- IRS** Inlet - Right Side

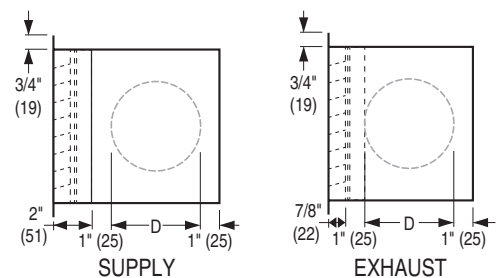


SIDE INLET(S) (RSI, LSI) AVAILABLE. REAR INLET IS STANDARD.



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

**ALTERNATE SIDE INLET DIMENSIONS:**



\*For installation, see IOM-CVRINST.

Page 1 of 2 Dimensions are in inches (mm)

<b>SCHEDULE TYPE:</b>				
<b>PROJECT:</b>				
<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-GM

**STANDARD PRESSURE CVR-GM PERFORMANCE:**

The data charts show the approximate constant volume airflow through the CVR-GM at a given pressure differential. CVR-GM 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-GM 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%.

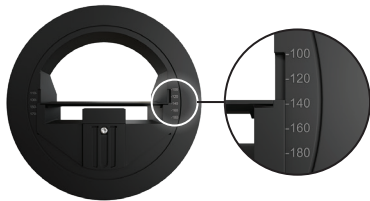
**STANDARD PRESSURE AIR FLOW (FLOW RANGE):**

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)

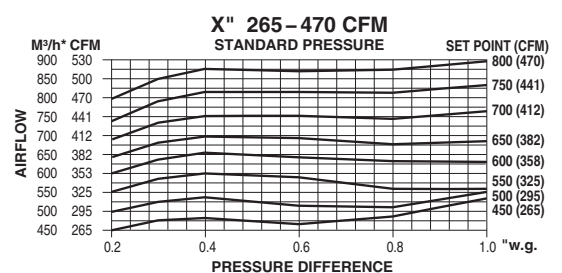
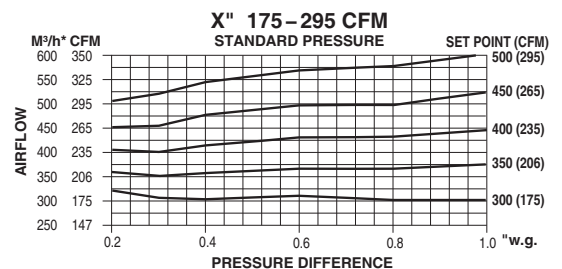
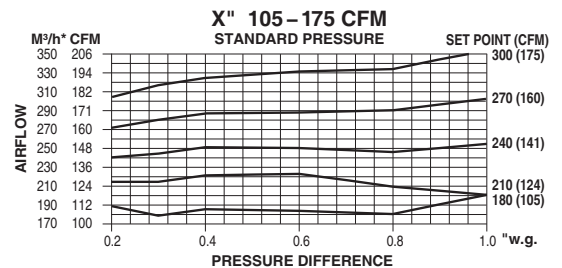
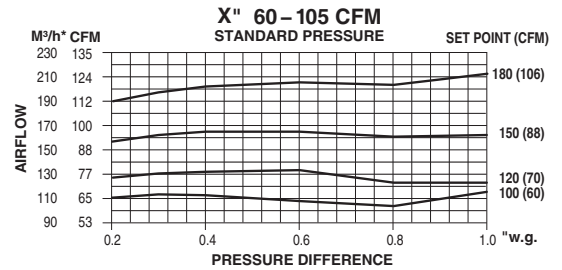
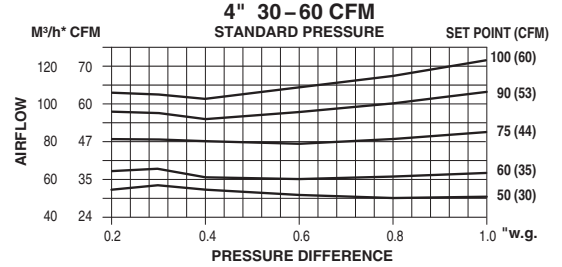
Note: Each diameter can be adjusted with shims to achieve different airflow ranges. Ensure both overall CVR-GM diameter and airflow match your requirements. See CVR-LP/CVR-HP for low and high pressure flow rate ranges.

**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:**

Page 2 of 2 Dimensions are in inches (mm)

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

**QUALIFICATIONS:**

- UL-2043 Listing: UL R38307.

**CVR-HP HIGH PRESSURE:**

The CVR-HP 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 0.6" w.g. to 2.4" 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)

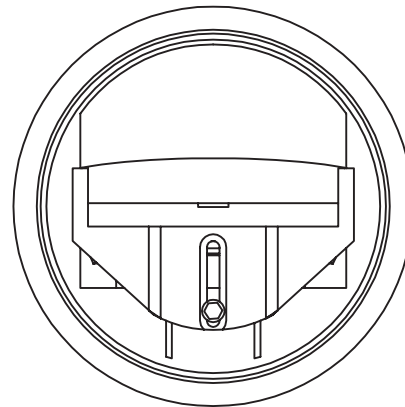
**OPERATIONAL STATIC PRESSURE RANGE:**

0.6" w.g. – 2.4" w.g. (150 Pa – 600 Pa).

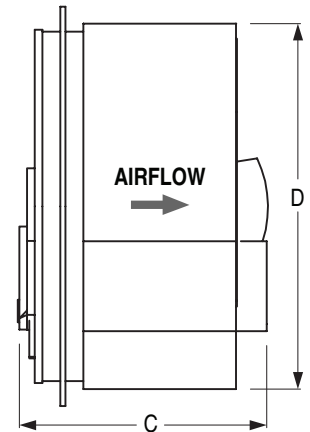
**HIGH PRESSURE AIR FLOW (FLOW RANGE):**

Sizes	Flow Rate Ranges in CFM (m³/h)				
4" (102)	53 - 100 (50 to 170)	—	—	—	—
5" (127)	53 - 100 (50 to 170)	105 - 175 (180 - 300)	—	—	—
6" (152)	53 - 100 (50 to 170)	105 - 175 (180 - 300)	175 - 295 (300 - 500)	—	—
8" (203)	53 - 100 (50 to 170)	105 - 175 (180 - 300)	175 - 295 (300 - 500)	295 - 500 (500 - 850)	—
10" (254)	—	105 - 175 (180 - 300)	175 - 295 (300 - 500)	295 - 500 (500 - 850)	500 - 765 (850 - 1300)

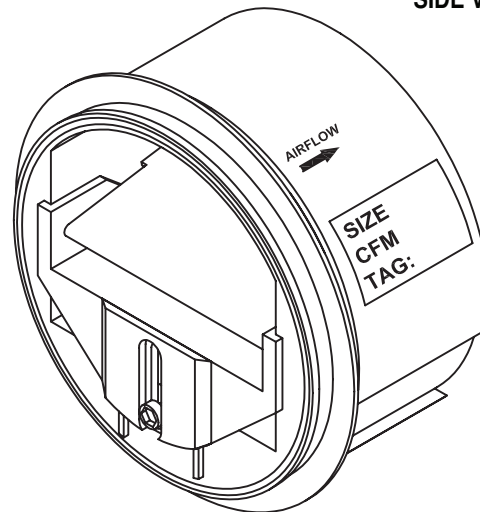
Note: Each diameter can be adjusted with shims to achieve different airflow ranges. Ensure both overall CVR-HP diameter and airflow match your requirements.



FRONT VIEW



SIDE VIEW



\*For installation, see IOM-CVRINST.

<b>SCHEDULE TYPE:</b>				
<b>PROJECT:</b>				
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	6 - 19 - 20	CBD	NEW	CVR-HP



**HIGH PRESSURE CVRH PERFORMANCE:**

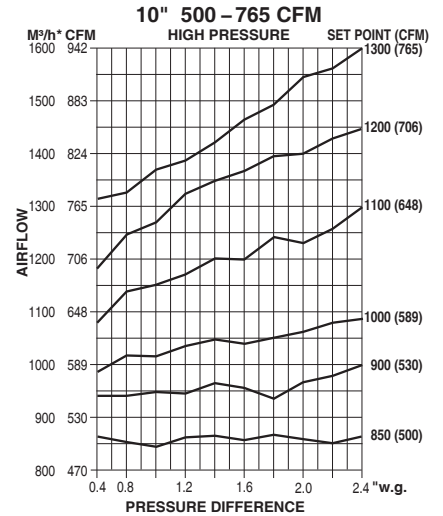
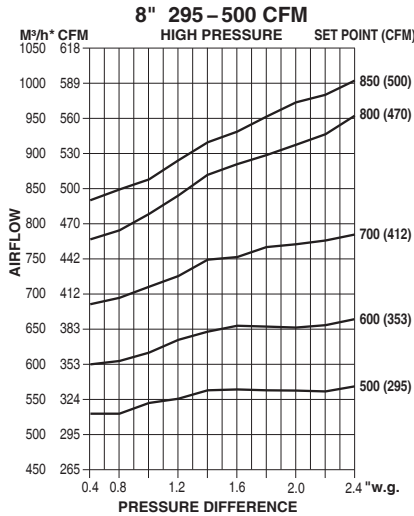
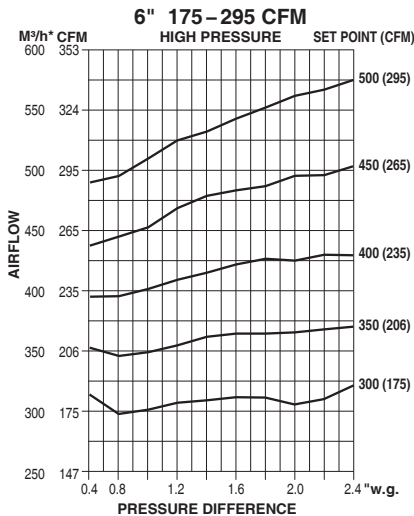
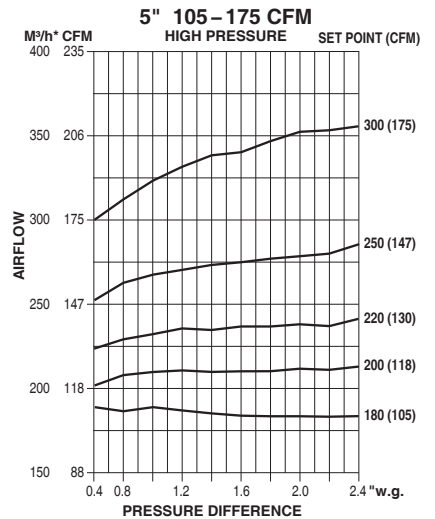
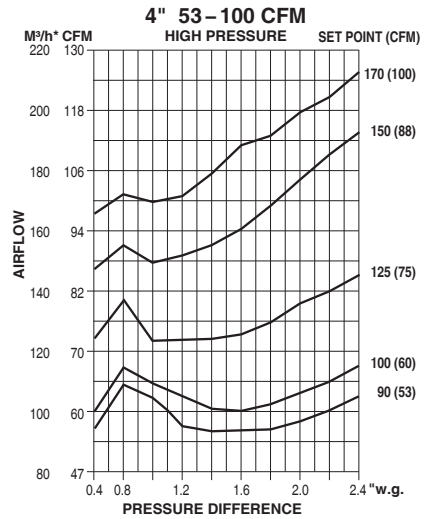
The data charts show the approximate constant volume airflow through the CVR-HP at a given pressure differential. High Pressure CVR-HP is designed for system pressure of 0.6" w.g. (150 Pa) through 2.4" w.g. (600 Pa). As shown, if the pressure across the regulator falls below 0.6" w.g. (150 Pa) the airflow volume will be reduced. Likewise, if the pressure across the regulator increases to over 2.4" w.g. (600 Pa), then the airflow volume will be increased. The CVR-HP 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%.

**HIGH PRESSURE SET POINT INTERVAL TABLE:**

Regulator Size ( Flow Rate )	Set Point Intervals	
	CFM	M <sup>3</sup> /h
4" (102) (53 - 100 cfm [90 - 170 m <sup>3</sup> /h])	5	8
5" (127) (105 - 175 cfm [180 - 300 m <sup>3</sup> /h])	6	10
6" (152) (175 - 295 cfm [300 - 500 m <sup>3</sup> /h])	15	25
8" (203) (295 - 500 cfm [500 - 850 m <sup>3</sup> /h])	15	25
10" (254) (500 - 765 cfm [850 - 1300 m <sup>3</sup> /h])	15	25



Sample of setting:  
 Set Point Mark 140 = 140 m<sup>3</sup>/H = 83 cfm



**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

Page 2 of 2 Dimensions are in inches (mm)

DATE	B SERIES	SUPERSEDES	DRAWING NO.
6 - 19 - 20	CBD	NEW	CVR-HP

**QUALIFICATIONS:**

- UL-2043 Listing: UL R38307.

**CVR-LP LOW PRESSURE:**

The CVR-LP 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 0.08" w.g. to .4" 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:**

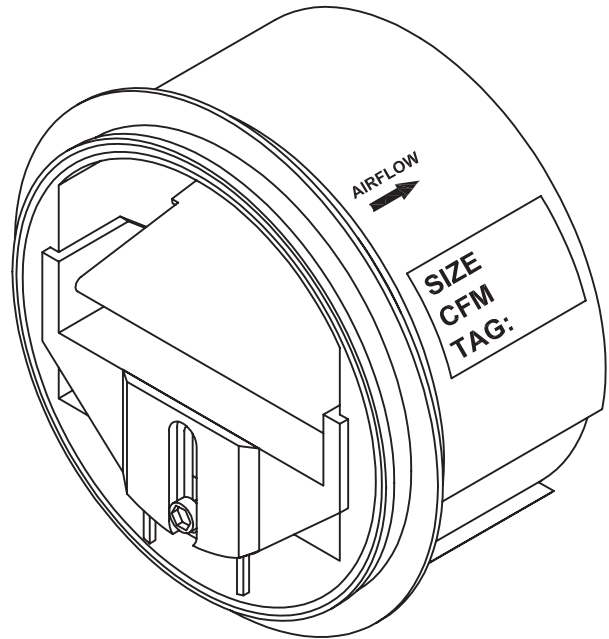
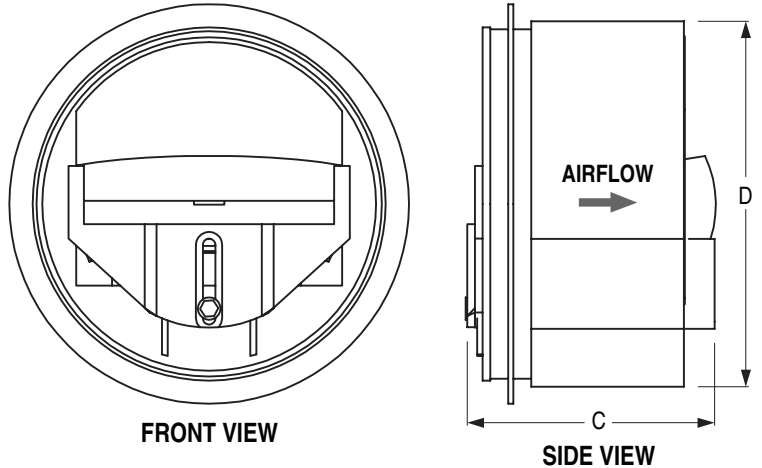
Frame: Fire resistant UL94V-0 ABS plastic.  
 Blade: Self-regulating.  
 Spring: Internal spring piston.  
 Seal: Full circumference rubber gasket.

**SIZING:**

Regulator (Nominal)	D Dia.	C Depth
4" (102)	3.7" (94)	2.8" (70)
5" (127)	4.625" (117)	3.4" (86)

**OPERATIONAL STATIC PRESSURE RANGE:**

0.08" w.g. – 0.4" w.g. (20 Pa – 100 Pa).



\*For installation, see IOM-CVRINST.

<b>SCHEDULE TYPE:</b>				
<b>PROJECT:</b>				
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	3 - 5 - 21	CBD	6 - 19 - 20	CVR-LP

**CVR-LP LOW PRESSURE PERFORMANCE:**

The data charts show the approximate constant volume airflow through the CVR-LP at a given pressure differential. Low Pressure CVR-LP is designed for system pressure of 0.08" w.g. (20 Pa) through 0.4" w.g. (100 Pa). As shown, if the pressure across the regulator falls below 0.08" w.g. (20 Pa) the airflow volume will be reduced. Likewise, if the pressure across the regulator increases to over 0.4" w.g. (100 Pa), then the airflow volume will be increased. The CVR-LP 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%.

Range of Operation Static Pressure	
Minimum	0.08" w.c.
Maximum	0.4" w.c.

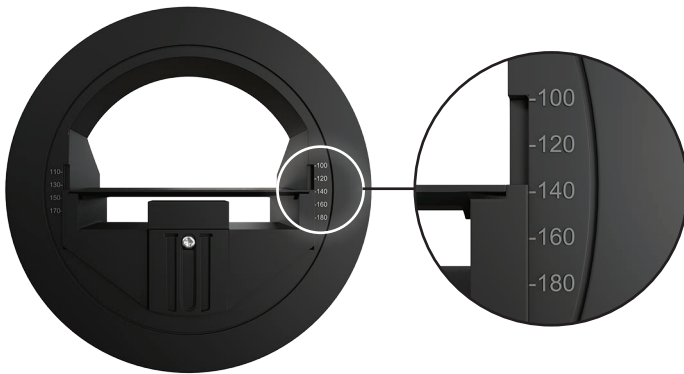
**LOW PRESSURE AIR FLOW (FLOW RANGE):**

Sizes	Flow Rate Ranges in CFM (m³/h)	
4" (102)	18 - 35 (30 - 60)	—
5" (127)	18 - 35 (30 - 60)	35 - 70 (60 - 120)

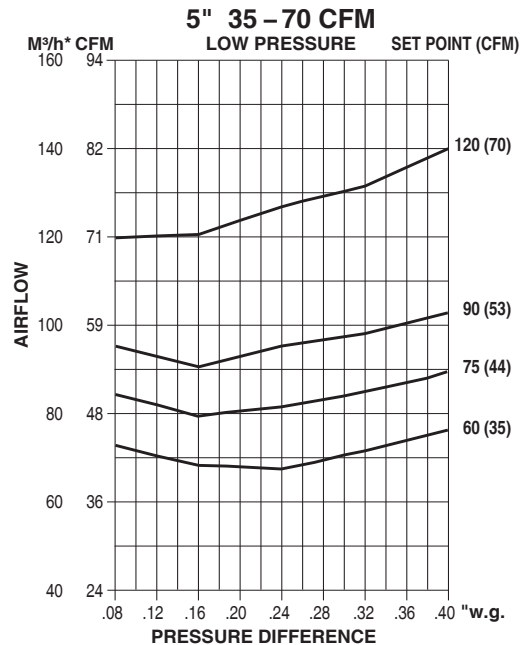
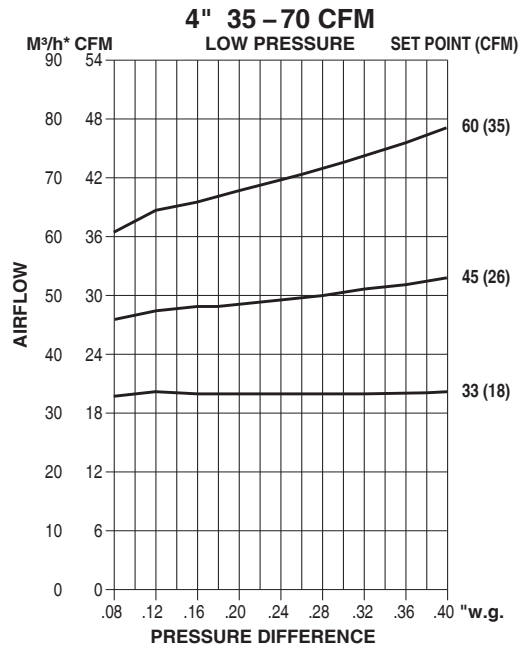
Note: 5" (127) dia. can be adjusted with shim to achieve different airflow ranges. Ensure both overall CVR-LP diameter and airflow match your requirements.

**LOW PRESSURE SET POINT INTERVAL TABLE:**

Regulator Size ( Flow Rate )	Set Point Intervals	
	CFM	M³/h
4" (102) (18 - 35 cfm [30 - 60 m³/h])	2	3
5" (127) (35 - 70 cfm [60 - 120 m³/h])	3	5



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



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



**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.

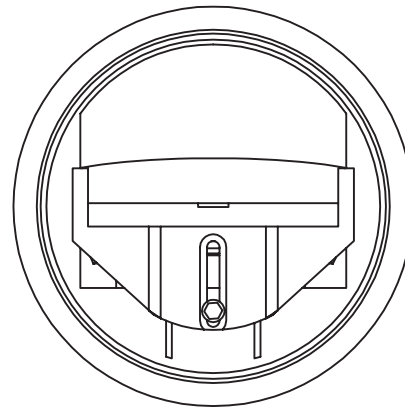
**STANDARD CONSTRUCTION:**

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

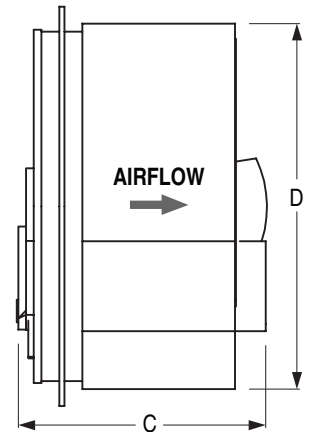
**SIZING:**

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)

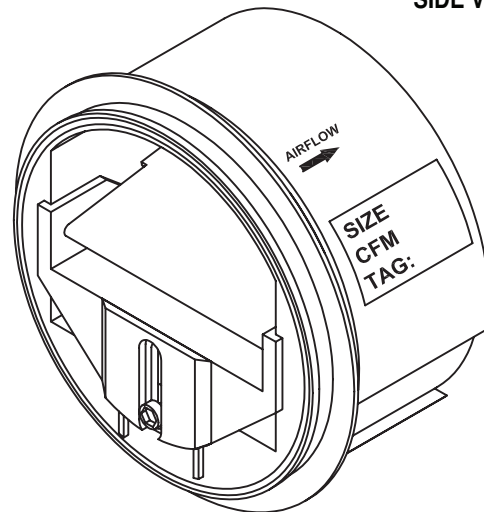
Standard Range of Operation Static Pressure	
Minimum	0.2" w.c.
Maximum	1.0" w.c.



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 <sup>3</sup> /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.

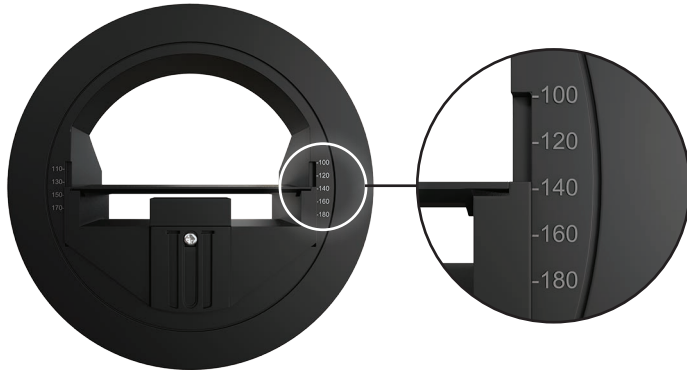
<b>SCHEDULE TYPE:</b>	Page 1 of 2 Dimensions are in inches (mm)			
<b>PROJECT:</b>				
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	3 - 5 - 21	CBD	6 - 19 - 20	CVR-SP

**STANDARD PRESSURE PERFORMANCE:**

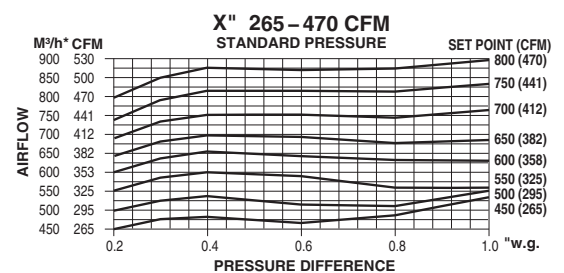
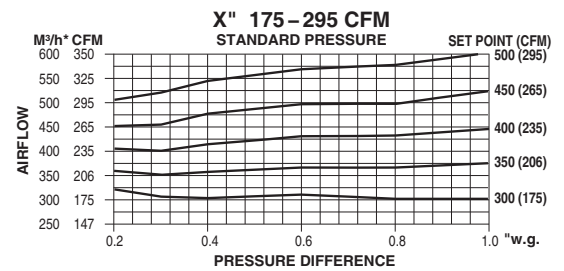
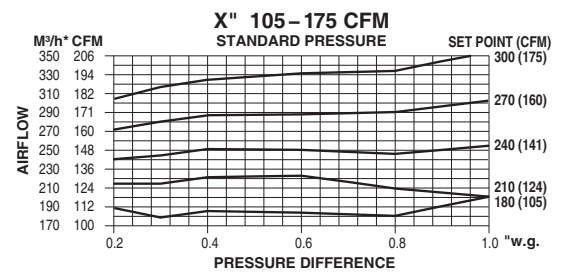
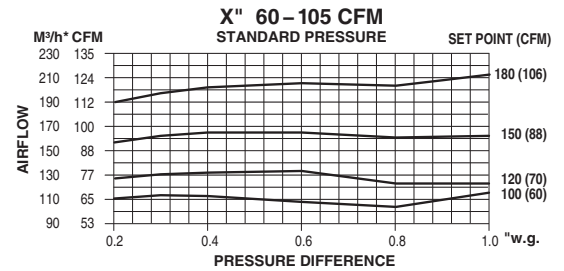
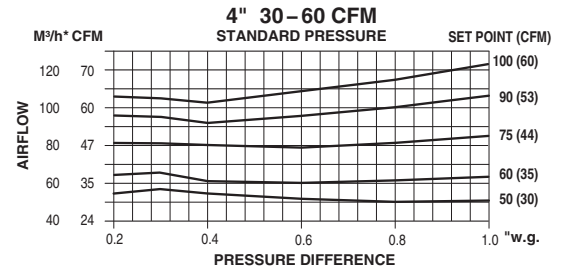
The data charts show the approximate constant volume airflow through the CVR-SP at a given pressure differential. CVR-SP is designed for system pressure of 0.2" w.g. (50 Pa) through 1.0" w.g. (249 Pa). As shown, if the pressure across the regulator falls below 0.2" w.g. (50 Pa) the airflow volume will 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 <sup>3</sup> /h
4" (102) (30 - 60 cfm [50 - 100 m <sup>3</sup> /h])	3	5
5" (127) (60 - 105 cfm [100 - 180 m <sup>3</sup> /h])	3	5
6" (152) (105 - 175 cfm [180 - 300 m <sup>3</sup> /h])	3	5
8" (203) (175 - 295 cfm [300 - 500 m <sup>3</sup> /h])	6	10
10" (254) (265 - 470 cfm [450 - 800 m <sup>3</sup> /h])	15	25



Sample of setting: Set Point Mark 140 = 140 m<sup>3</sup>/H = 83 cfm



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

**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)

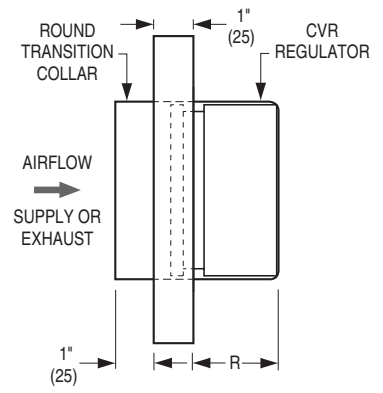
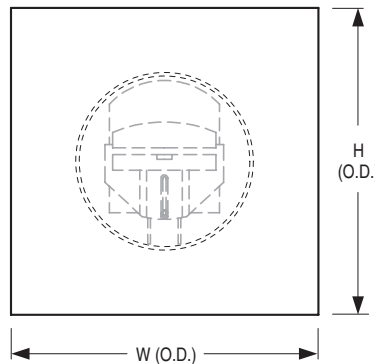
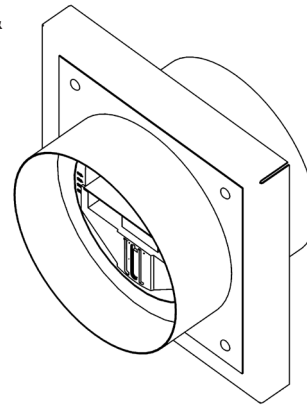
SP Standard Pressure Range of Operation (Static Pressure)	
Minimum	0.2" w.g.
Maximum	1.0" w.g.

**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>				
<b>PROJECT:</b>				
<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%.

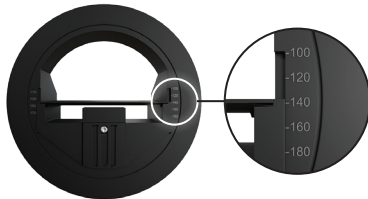
**STANDARD PRESSURE AIR FLOW (FLOW RANGE):**

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)

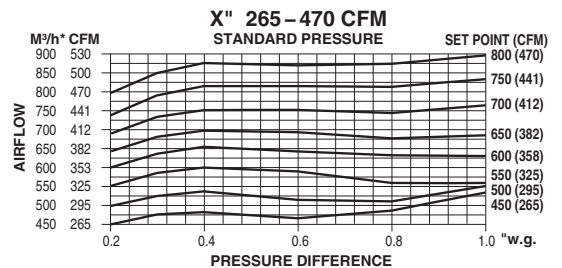
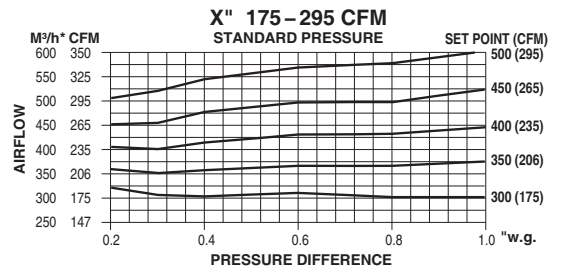
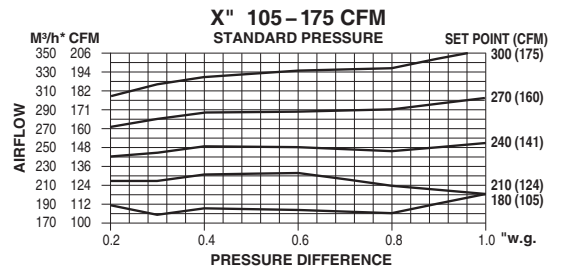
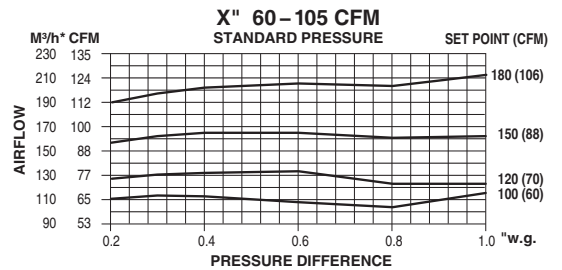
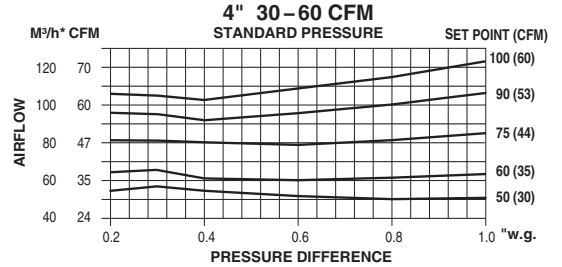
Note: Each diameter can be adjusted with shims to achieve different airflow ranges. Ensure both overall CVR-T diameter and airflow match your requirements. See CVRL/CVRH for low and high pressure flow rate ranges.

**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:**

Page 2 of 2  
Dimensions are in inches (mm)

**DATE**

**B SERIES**

**SUPERSEDES**

**DRAWING NO.**

12 - 22 - 22

CBD

3 - 5 - 21

CVR-T