

### SUBMITTAL DATA

# Precision/Flow<sup>™</sup> SYSTEM CRB-10-E-CD

Constant Volume Regulator with ceiling radiation damper (for exhaust or return applications)

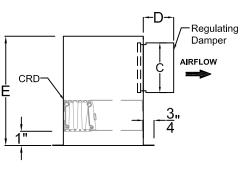
# Application and Design:

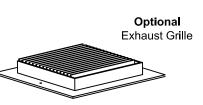
Precision/Flow<sup>™</sup> System CRB-10-E-CD is a factory set constant volume control damper for ceiling applications composed of fire retardant plastics. It contains a self regulating airfoil damper blade and spring piston design to maintain a factory preset air volume flow and includes a ceiling radiation damper. These dampers are designed to operate in a pressure range of 0.20" w.g. to 0.80" w.g. The regulators automatically adjust for variable duct pressures caused by building pressure, thermal stack effect, dust build-up, etc. This system also creates a very cost effective answer to balancing air systems for HVAC exhaust ventilation in high rise buildings, without the requirement for on-site balancing, electrical / pneumatic controls or sensors. System CRB-10-E-CD requires no standard maintenence under normal conditions.

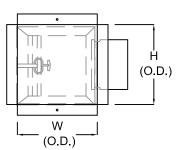


- CRB Plenum: 20 GA Galvanized Steel
- Regulating Damper: UL94V-0 ABS Plastic UL 2043 classified, UL File #R38307
- C/FS-2F ceiling radiation damper (UL-555C, R25411)

# Plenum Box & Regulator CRD-Model C/FS-2F RIGHT SIDE VIEW Ceiling Radiation Damper







**BOTTOM VIEW** 

#### **OPTIONS:**

- ☐ Add Exhaust Grille
  - ☐ Removable Grille (No Screw Holes) Wedged in Via Stainless Spring Steel
- ☐ Grille and Box Powder Coated with Anti-Microbial Agent Added
- ☐ Additional Box Depth

Range of Operation Static Pressure					
Minimum	0.20" w.c.				
Maximum	0.80" w.c.				

Box Size	Damper (nominal)	W	Н	С	D	Е
<b>6x4</b> (152.4x101.6)	4 (101.6)	6 (152.4)	4 (101.6)	3.8 (96.5)	2.4 (61)	8.8(223.5)
6x6 (152.4x152.4)	4 (101.6)	6 (152.4)	6 (152.4)	3.8 (96.5)	2.4 (61)	8.8(223.5)
6x6 (152.4x152.4)	5 (127)	6 (152.4)	6 (152.4)	4.5 (114.3)	3 (76.2)	9.5(241.3)
8x8 (203.2x203.2)	4 (101.6)	8 (203.2)	8 (203.2)	3.8 (96.5)	2.4 (61)	8.8(223.5)
8x8 (203.2x203.2)	5 (127)	8 (203.2)	8 (203.2)	4.5 (114.3)	3 (76.2)	9.5(241.3)
8x8 (203.2x203.2)	6 (152.4)	8 (203.2)	8 (203.2)	5.5 (139.7)	3.2 (81.3)	10.5 (266.7)
10x10 (254x254)	6 (152.4)	10 (254)	10 (254)	5.5 (139.7)	3.2 (81.3)	10.5 (266.7)
10x10 (254x254)	8 (203.2)	10 (254)	10 (254)	7.2 (182.9)	3.2 (81.3)	12.2 (309.9)
12x12 (304.8x304.8)	8 (203.2)	12 (304.8)	12 (304.8)	7.2 (182.9)	3.2 (81.3)	12.2 (309.9)
12x12 (304.8x304.8)	10 (254)	12 (304.8)	12 (304.8)	8.9 (226.1)	4.6 (116.8)	13.9 (353.1)
14x14 (355.6x355.6)	10 (254)	14 (355.6)	14 (355.6)	8.9 (226.1)	4.6 (116.8)	13.9 (353.1)

Consult factory for sizes not shown

Sizes in inches (millimeters)

Job Name:	☐ Preci					
Location:	(Constai	nt Volume	Regulator for	Exhaust o	r Return App	lications)
Architect:						
Engineer:						
Contractors	DRAWN BY:	DATE:	REV. DATE:	REV. NO.	APPROVED BY:	DWG NO.:
Contractor:	cs	10-12-16			Cl	L-4d



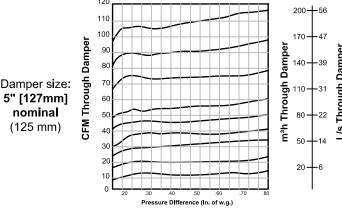
The charts to the right, show the approximate constant volume airflow through the damper at a given pressure differential. The ideal pressure differential across the damper to provide the desired factory set constant airflow volume is between 0.2" w.g.(50 Pa) and 0.8"w.g. (200 Pa). As shown if the pressure across the damper falls below 0.2" w.g. (50 Pa) then the airflow volume will be reduced. Likewise if the pressure across the damper increases to over 0.8" w.g. (200 Pa), then the airflow volume will be increased. Please note that these dampers are factory set to the specific airflow. They can be field modified to another desired airflow. The graphs shown are averages and can vary by 5%. The maximum air temperature is 140°F (60° C). The charts shown are at 68°F (20°C) and 1 atmosphere pressure.

Range of Operation					
Static Pressure					
Minimum .2" w.g.					
Maximum .8" w.g.					

## SYSTEM CR PERFORMANCE DATA

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Damper Through Damper Damper size: Through 4" [101.6mm] nominal (100m) CFM. Pressure Difference (in. of w.g.) Note: Dampers are pre-set at the factory for the specified cfm Pressure Difference (Pa) 120

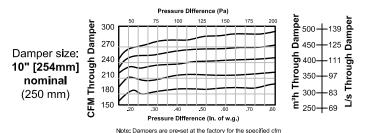


Note: Dampers are pre-set at the factory for the specified cfm

210 CFM Through Damper 170 Damper size: 150 6" [152.4mm] nominal 130 (150 mm)

Through Damper Pressure Difference (in. of w.g.) Note: Dampers are pre-set at the factory for the specified cfm

			Pre	ssure D	Ifference	e (Pa)					
Damper size: 8" [203.2mm] nominal (200 mm)	CEW Throngh Damber 270 240 210 180 150 120 90	50	.30	.40	.50	.60	175	200	m <sub>3</sub> µ Lhrough Damper 400— 400— 350— 250— 200—	-111 -97	L/s Through Damper
		Note: Dam					•	fled cfm			



DRAWN BY:	DATE:	REV. DATE:	REV. NO.	APPROVED BY:
BR/CLJ	11-26-14			CLJ