

## Application

The VCDRM-53, a low leakage insert type multi-blade round damper, is designed to provide control of airflow in round HVAC ductwork.

## Ratings

### Velocity

Up to 2500 fpm (12.7 m/s).

### Pressure

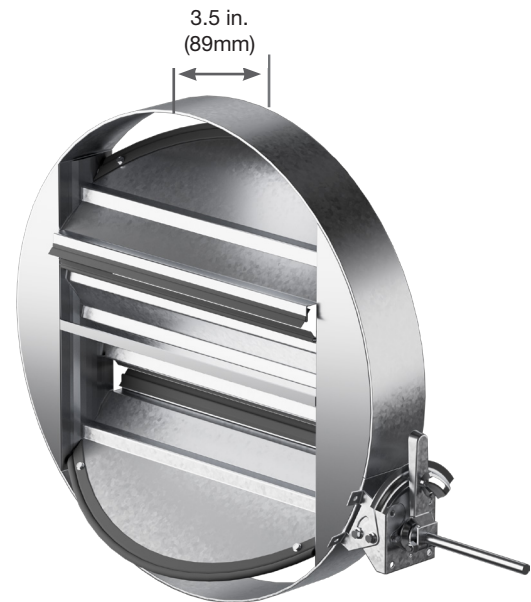
Up to 5 in. wg (1.2 kPa)

### Leakage

3½ cfm/ft² @ 1 in. wg (64 cmh/m² @ 0.25 kPa) on 48 in. diameter.

### Temperature

Up to 180°F (82°C)



\*Diameter furnished approximately ¼ in. (6mm) undersize.

## Construction

|                        | Standard                                                                                                                    | Optional |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------|----------|
| <b>Frame Material</b>  | Galvanized Steel                                                                                                            | 304SS    |
| <b>Frame Thickness</b> | 3½ in. x 14 ga.<br>(89 mm x 2 mm) under<br>22 in. dia. (559mm);<br>3 ½ in. x 10 ga.<br>(89 mm x 3 mm) 22 in.<br>and greater | -        |
| <b>Frame Type</b>      | Round                                                                                                                       | -        |
| <b>Blade Material</b>  | Galvanized Steel                                                                                                            | 304SS    |
| <b>Blade Action</b>    | Opposed                                                                                                                     | Parallel |
| <b>Blade Seals</b>     | Vinyl blade seals with<br>silicone on top and<br>bottom radii                                                               | -        |
| <b>Blade Thickness</b> | 16 ga. (1.5 mm)                                                                                                             | -        |
| <b>Blade Type</b>      | 3V                                                                                                                          | -        |
| <b>Linkage</b>         | Plated Steel                                                                                                                | 316SS    |
| <b>Axle Material</b>   | ½ in. (13 mm) Plated<br>Steel                                                                                               | -        |
| <b>Jamb Seals</b>      | Stainless Steel                                                                                                             | -        |

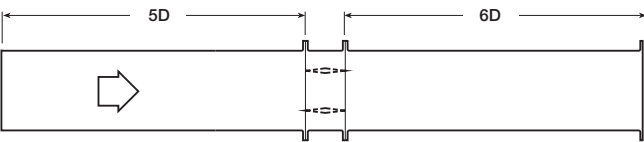
| Diameter*                 | Minimum      | Maximum       |
|---------------------------|--------------|---------------|
| in. (mm)                  | 11 in. (279) | 48 in. (1219) |
| * 1 in. (25mm) increments |              |               |

## Options and Accessories

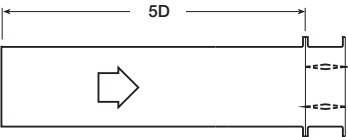
- Electric actuator and manual quadrant available. Factory supplied actuators are sized for 1500 fpm (7m/s) and fully closed differential pressure of 2 in. wg (.5 kPa). contact factory for actuator sizing on applications exceeding those limits.
- Clean Wrap
- NEMA enclosures: 3, 4, 4X, 7
- Transformers

# Performance Data

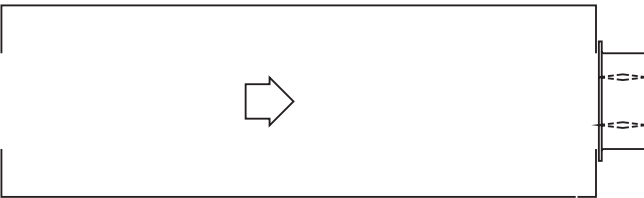
Pressure drop testing was conducted in accordance with AMCA Standard 500-D using the three configurations shown. All data has been corrected to represent standard air at a density of 0.075 lb/ft<sup>3</sup> (1.2 kg/m<sup>3</sup>). Actual pressure drop found in an HVAC system is a combination of many factors. This pressure drop information, along with an analysis of other system influences should be used to estimate actual pressure losses for a damper installed in an HVAC system.



AMCA 5.3  
D = Duct length  
W = Damper width  
H = Damper height



AMCA 5.2



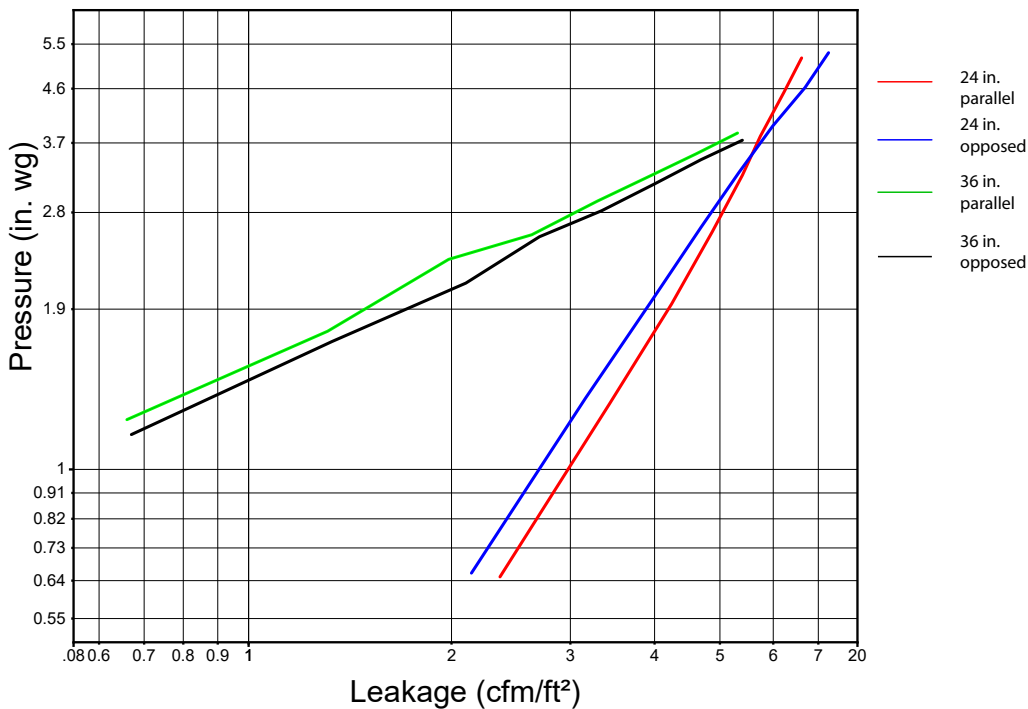
AMCA 5.5

| Dimension inches  | 12                   |     |      | 24  |     |     | 36   |      |      |
|-------------------|----------------------|-----|------|-----|-----|-----|------|------|------|
| AMCA figure       | 5.2                  | 5.3 | 5.5  | 5.2 | 5.3 | 5.5 | 5.2  | 5.3  | 5.5  |
| Velocity (ft/min) | Pressure Drop in. wg |     |      |     |     |     |      |      |      |
| 500               | .04                  | .03 | .05  | .03 | .02 | .04 | .05  | .05  | .06  |
| 1000              | .15                  | .11 | .19  | .13 | .10 | .15 | .19  | .20  | .25  |
| 1500              | .33                  | .25 | .42  | .29 | .21 | .33 | .42  | .44  | .57  |
| 2000              | .59                  | .45 | .75  | .51 | .38 | .59 | .75  | .79  | 1.01 |
| 2500              | .93                  | .70 | 1.18 | .79 | .60 | .92 | 1.18 | 1.23 | 1.58 |

$$D = \sqrt{\frac{4(W)(H)}{3.14}}$$

# Leakage Data

Leakage testing was conducted in accordance with AMCA Standard 500-D and is expressed as cfm/ft<sup>2</sup> of damper face area. All data has been corrected to represent standard air at a density of 0.075 lb/ft<sup>3</sup> (1.201 kg/m<sup>3</sup>).





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