

Applications

The SEVCD-23 is a severe environment 316SS low leakage control damper with 316SS stainless steel 3V blades. The SEVCD-23 is intended for application in low to medium pressure and velocity systems. Low profile head and sill used on sizes less than 17 in. (432mm) high. This model is also IECC (International Energy Conservation Code) compliant with a leakage rating of 3 cfm/ft² @ 1 in. wg (55 cmh/m² @ .25 kPa) or less.

Damper Ratings

| | |
|--------------------|---|
| Pressure | Up to 5 in. wg (1.2 kPa) pressure differential |
| Velocity | Up to 3000 fpm (15.2 m/s) |
| Leakage | Class 1A @ 1 in. wg (.25 kPa) Class 1 @ 5 in. wg (1.2 kPa) |
| Temperature | Up to 250°F (121°C) |

Construction

| | Standard | Optional |
|---------------------------------|--|--|
| Frame Material | 316SS | - |
| Frame Thickness | 16 ga. (1.5mm) | - |
| Frame Type | 5 in. x 1 in. (127mm x 25mm) hat channel | Single Flange, Reverse Flange, Double Flange |
| Blade Action | Opposed | Parallel |
| Blade Material | 316SS | - |
| Blade Material Thickness | 16 ga. (1.5 mm) equivalent | - |
| Blade Type | 3V | - |
| Linkage | 316SS | - |
| Axle Bearings | 316SS | - |
| Axle Material | 316SS | - |
| Blade Seals | TPE | Silicone |
| Jamb Seals | 316SS | - |



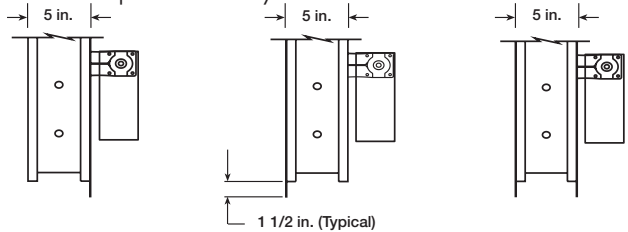
*W&H dimension furnished approximately 1/4 in. (6mm) undersize.

Size Limitations

| W x H | Minimum Size | Maximum Size | |
|--------|--------------|----------------|---------------|
| | | Single Section | Multi-Section |
| Inches | 6 x 6 | 48 x 74 | Unlimited |
| mm | 152 x 152 | 1219 x 1880 | |

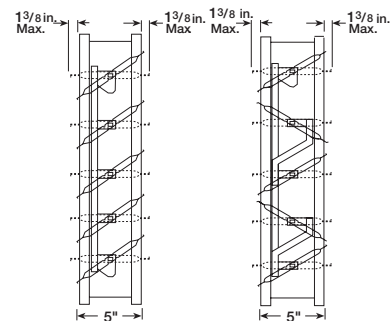
Flange Options

Shown with optional internally mounted actuator.



Single Flange Reversed Flange Double Flange

Blade Operation



Parallel Blades Opposed Blades

Options and Accessories

- Actuator: pull chain, manual quadrant, variety of 24V, 120V actuators
- Actuator mounting; external, external kit, and internal
- Clean wrap
- NEMA enclosures
- OCI (Open Closed Indicator)
- Retaining angles
- Transformers

Document Links

[Venco All Products Catalog](#)



[Installation Instructions](#)

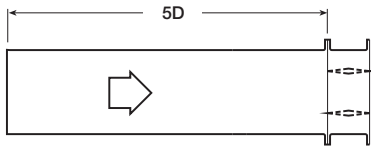


[Warranty Statement](#)



Pressure Drop

AMCA 5.2



12 in. x 12 in. (305mm x 305mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.05 |
| 1500 | 0.11 |
| 2000 | 0.19 |
| 2500 | 0.29 |
| 3000 | 0.41 |
| 3500 | 0.55 |
| 4000 | 0.72 |

24 in. x 24 in. (610mm x 610mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.03 |
| 1500 | 0.06 |
| 2000 | 0.10 |
| 2500 | 0.16 |
| 3000 | 0.23 |
| 3500 | 0.30 |
| 4000 | 0.40 |

36 in. x 36 in. (914mm x 914mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.02 |
| 1500 | 0.05 |
| 2000 | 0.09 |
| 2500 | 0.14 |
| 3000 | 0.19 |
| 3500 | 0.27 |
| 4000 | 0.35 |

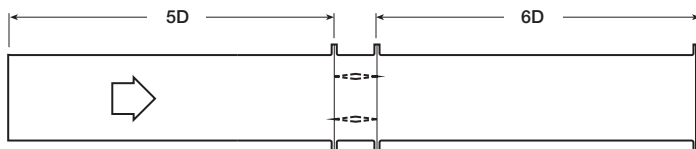
12 in. x 48 in. (305mm x 1219mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.04 |
| 1500 | 0.08 |
| 2000 | 0.15 |
| 2500 | 0.22 |
| 3000 | 0.32 |
| 3500 | 0.43 |
| 4000 | 0.56 |

48 in. x 12 in. (1219mm x 305mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.03 |
| 1500 | 0.07 |
| 2000 | 0.12 |
| 2500 | 0.18 |
| 3000 | 0.26 |
| 3500 | 0.36 |
| 4000 | 0.47 |

AMCA 5.3



12 in. x 12 in. (305mm x 305mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.03 |
| 1500 | 0.08 |
| 2000 | 0.13 |
| 2500 | 0.20 |
| 3000 | 0.29 |
| 3500 | 0.40 |
| 4000 | 0.51 |

24 in. x 24 in. (610mm x 610mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.02 |
| 1500 | 0.04 |
| 2000 | 0.07 |
| 2500 | 0.11 |
| 3000 | 0.16 |
| 3500 | 0.21 |
| 4000 | 0.28 |

36 in. x 36 in. (914mm x 914mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.02 |
| 1500 | 0.03 |
| 2000 | 0.06 |
| 2500 | 0.09 |
| 3000 | 0.13 |
| 3500 | 0.19 |
| 4000 | 0.25 |

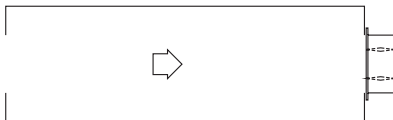
12 in. x 48 in. (305mm x 1219mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.03 |
| 1500 | 0.07 |
| 2000 | 0.12 |
| 2500 | 0.18 |
| 3000 | 0.26 |
| 3500 | 0.36 |
| 4000 | 0.46 |

48 in. x 12 in. (1219mm x 305mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.01 |
| 1000 | 0.03 |
| 1500 | 0.06 |
| 2000 | 0.10 |
| 2500 | 0.16 |
| 3000 | 0.22 |
| 3500 | 0.30 |
| 4000 | 0.39 |

AMCA 5.5



12 in. x 12 in. (305mm x 305mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.03 |
| 1000 | 0.13 |
| 1500 | 0.30 |
| 2000 | 0.53 |
| 2500 | 0.82 |
| 3000 | 1.19 |
| 3500 | 1.62 |
| 4000 | 2.10 |

24 in. x 24 in. (610mm x 610mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.03 |
| 1000 | 0.12 |
| 1500 | 0.26 |
| 2000 | 0.47 |
| 2500 | 0.75 |
| 3000 | 1.04 |
| 3500 | 1.41 |
| 4000 | 1.90 |

36 in. x 36 in. (914mm x 914mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.02 |
| 1000 | 0.10 |
| 1500 | 0.22 |
| 2000 | 0.40 |
| 2500 | 0.62 |
| 3000 | 0.90 |
| 3500 | 1.23 |
| 4000 | 1.62 |

12 in. x 48 in. (305mm x 1219mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.03 |
| 1000 | 0.12 |
| 1500 | 0.27 |
| 2000 | 0.47 |
| 2500 | 0.75 |
| 3000 | 1.07 |
| 3500 | 1.45 |
| 4000 | 1.91 |

48 in. x 12 in. (1219mm x 305mm)

| Velocity (fpm) | Pressure Drop (in. wg) |
|----------------|------------------------|
| 500 | 0.03 |
| 1000 | 0.12 |
| 1500 | 0.28 |
| 2000 | 0.49 |
| 2500 | 0.77 |
| 3000 | 1.12 |
| 3500 | 1.53 |
| 4000 | 2.01 |

Air leakage is based on operation between 32°F (0°C) and 120°F (49°C).

Tested for leakage in accordance with ANSI/AMCA Standard 500-D, Figure 5.5.

Tested for air performance in accordance with ANSI/AMCA Standard 500-D, Figures 5.2, 5.3 and 5.5.

Torque

Data are based on a torque of 7.0 in.lb/ft² (0.79 N·m) applied to close and seat the damper during the test.

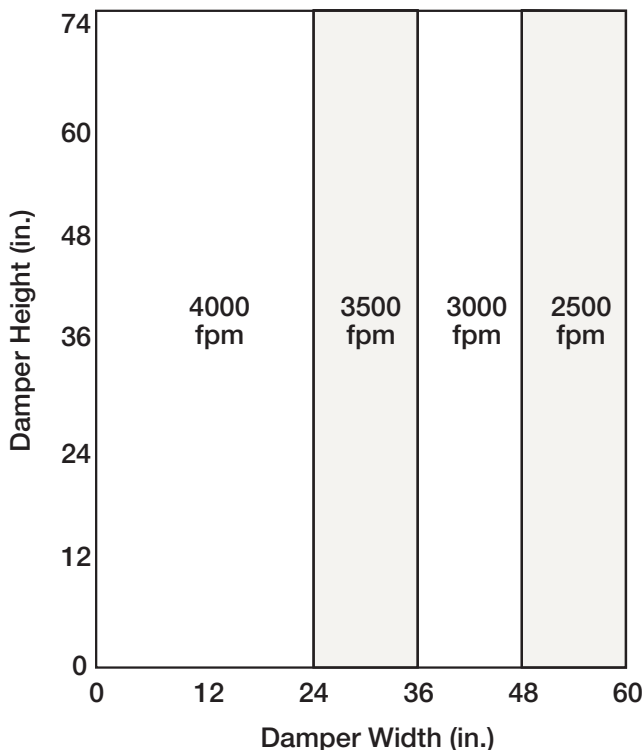
| SEVCD-23 | Leakage Class | | |
|-----------------------------|------------------------|---------------------|-----------------------|
| Maximum Damper Width | 1 in. wg (0.25 kPa) | 4 in. wg (1 kPa) | 5 in. wg (1.2 kPa) |
| 48 in. (1219mm) | 1A | 1 | 1 |

*Leakage Class Definitions

The maximum allowable leakage is defined by AMCA as the following:

- Leakage Class 1A - 3 cfm/ft² @ 1 in. wg (class 1A is only defined at 1 in. wg).
- Leakage Class 1
 - 4 cfm/ft² @ 1 in. wg
 - 8 cfm/ft² @ 4 in. wg
 - 11 cfm/ft² @ 8 in. wg
 - 12.6 cfm/ft² @ 10 in. wg

Velocity Limitations

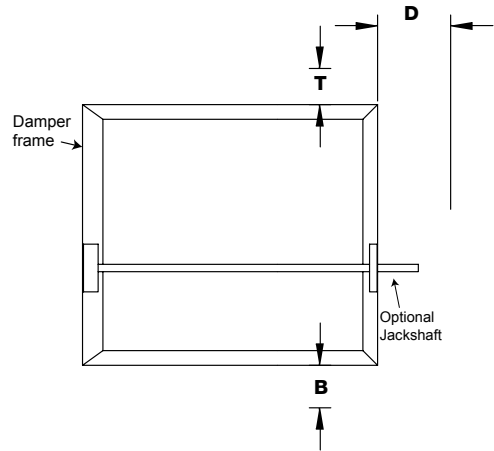


Temperature Limitations

| Blade Seal | Temperature Range |
|-----------------|---------------------------------|
| TPE | -10°F to 180°F (-23°C to 82°C) |
| Silicone | -40°F to 250°F (-40°C to 121°C) |

Space Envelopes

On dampers less than 18 in. (457mm) high, actuators may also require clearances above and/or below the damper frame. "B" and "T" dimensions are worst case clearance requirements for some dampers less than 18 in. (457mm) high. All damper sizes under 18 in. (457mm) high do not require these worst case clearances. If space availability above or below the damper is limited, each damper size should be individually evaluated.



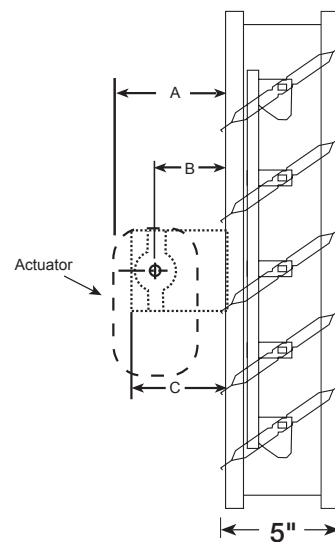
| Actuator Type/Model | Height | T | B | D |
|---|------------|--------|--------------------------------|---|
| | Inches | Inches | | |
| AFBUP (-S) and FSNF Series, Belimo MSxx20 Series, Honeywell | ≥6 to <10 | 0 | 12 ³ / ₄ | 6 |
| | ≥10 to <18 | 0 | 2 | 6 |
| | ≥18 | 0 | 0 | 6 |
| FSLF, LF and TFB Series, Belimo | ≥6 to <10 | 0 | 3 ¹ / ₂ | 6 |
| | ≥10 | 0 | 0 | 6 |
| MSxx04 & MSxx09 Series, Honeywell | ≥6 to <9 | 0 | 4 ³ / ₄ | 6 |
| | ≥9 | 0 | 0 | 6 |
| MS75xx Series, Honeywell | ≥6 to <10 | 0 | 12 ³ / ₄ | 6 |
| | ≥10 to <18 | 0 | 7 | 6 |
| | ≥18 | 0 | 0 | 6 |

This drawing depicts the worst case clearance requirements for an actuator with a jackshaft.

Mounting

- External - includes extension pin (standoff bracket optional)
- External kit - actuator and all mounting hardware
- Internal - blade lever

| Internal mount only Actuator model | A | B | C |
|---------------------------------------|---|--|---|
| All except - EFB & EFCX Series | 7 ³ / ₄ in. (197 mm) | 3 ³ / ₄ in. (95 mm) | 5 ³ / ₈ in. (136.5 mm) |
| EFB & EFCX Series | 8 ¹ / ₂ in. (216 mm) | 6 in. (152mm) | 8 ¹ / ₂ in. (216 mm) |



Multi-Section Assembly

Dampers larger than the maximum single section size, will be made up of a multiple of equal size sections. Multiple section dampers can be jackshafted together so that all sections operate together as shown below.

NOTE: Dampers larger than 48 in. x 74 in. (1219mm x 1880mm) are not intended to be structurally self supporting. Additional horizontal bracing is recommended to support the weight of the damper and vertical bracing should be installed as required to hold against system pressure.

Refer to IOM document 483509 for structural support requirements on multi-section assemblies.

