

EXCELAIR
VOLUME CONTROL DAMPER

EXCELAIR

Since 1982

EXCELAIR model EVCD Series Volume Control Dampers are widely used in Heating, Ventilation and Air Conditioning (HVAC) systems through out Middle East and South Asia. Unique construction and manufacturing technique and superior design make the dampers quiet and reliable in giving conditioned controlled air volume to various zones/applications.

Application & Features

- EVCD-100 series Volume Control Dampers are designed with a rigid, robust assembly formed from channel frame.
- Designed for heating, ventilation, air conditioning systems.
- Frame is constructed from heavy gauge galvanized steel sheet.
- Carefully selected blade section provides smooth and turbulence free air flow. Minimized turbulence flow offers minimum noise level and maximum efficiency.
- Blade linkages are held outside the casing to increase the free area of air flow and eliminate noise and friction against the air flow. Concealed case prevents the damage of linkage from dirt and moisture.
- Standard opposed blade operation provides minimum turbulence by non-diverted air flow which is a key factor when dampers are used close to the fan.
- Opposed blade operation offers low opening torque thus eliminating the Open/Close time in motorized applications.
- Parallel Blade operation is best suited for ON/OFF applications as the airflow is diverted to one side of the duct work.
- Nylon bush offers smooth blade operation in both static & dynamic conditions.
- Hand locking quadrant is coupled with handle by locking wing nut. Hand locking quadrant is marked to show exact open / close position of the damper.
- Jamb seals and blade edge seals provide high degree of sealing for low leakage applications (Optional).
- Construction is available with Slide on flange , Self flange, S&C and Plain end to suit the damper to duct connection.

Standard Construction

- Frame: 150 mm wide, 1.2mm thickness (18 ga.) Zinc coated formed galvanized steel frame or casing.
- Blades: 1.20mm (18ga) thickness formed single skin, reinforced, longitudinal structurally designed galvanized steel "V" blade.
- Bearing: 10mm Square, Nylon or PVC bush.
- Shaft: 10mm x 10mm zinc plated galvanized steel square shaft.
- Quadrant: Manual operation, locking type quadrant, made of galvanized steel sheet. Quadrant is marked with "Open" and "Close" markings with position locking wing nut.
- Linkage: 2.0 mm thickness Galvanized steel, concealed external linkage for parallel and opposed blade operation. Exposed linkage is also available as option.
- Blade operation: Opposed Blade operation (standard).
- Blade Stopper: Galvanized steel angle stopper.
- Gasket: Foam gasket at the edges to prevent air leakage in shut off position.
- Finish: Mill Galvanized
- Minimum Size: 100mm(W) x 100mm(H).
- Maximum Size: 1000mm(W) x 1000mm(H) or 1200mm (W) x 1200mm (H) in single section based on the damper configuration
- Multiple Modules: Width above 1000 / 1200 mm to Unlimited, Height above 1000mm to Unlimited. For large assemblies, additional support will be provide with vertical mullion (Optional).
- Connection with Duct: Self Flange (standard)



Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

Volume Control Damper

Optional Details

Optional Construction Details

Galvanized Steel Frame

1.2mm (18 ga.) Frame for HP applications (Model: EVCD//HP-1.2) (Standard)
1.5mm (16 ga.) Frame for HP applications (Model: EVCD//HP-1.5)
1.6mm (16 ga.) Frame for HP applications (Model: EVCD//HP-1.6)
1.8mm (15 ga.) Frame for HP applications (Model: EVCD//HP-1.8)
2.0mm (14 ga.) Frame for HP applications (Model: EVCD//HP-2.0)

Stainless Steel Frame

1.2mm Thickness, Grade 304 with 2B mill Finish frame (Model: EVCD//1.2SS-304)
1.2mm Thickness, Grade 316 with 2B mill Finish frame (Model: EVCD//1.2SS-316)
1.5mm Thickness, Grade 304 with 2B mill Finish frame (Model: EVCD//1.5SS-304)
1.5mm Thickness, Grade 316 with 2B mill Finish frame (Model: EVCD//1.5SS-316)

Mild steel Construction

1.5mm Thickness Mild Steel frame (Model: EVCD//MS-1.5)

Aluminium Construction

1.5mm Thickness, Aluminium Frame (Model: EVCD//AL-1)
2.0mm Thickness, Aluminium Frame (Model: EVCD//AL-2)

Galvanized Steel Blade

1.2mm (18 ga.) V-locking Type (Model: EVCD//V-1.2) (Standard)
1.5mm (16 ga.) V-locking Type (Model: EVCD//V-1.5)
1.6mm (16 ga.) V-locking Type (Model: EVCD//V-1.6)
1.8mm (15 ga.) V-locking Type (Model: EVCD//V-1.8)
2.0mm (14 ga.) V-locking Type (Model: EVCD//V-2.0)
0.6mm (24 ga.) Airfoil Type (Model: EVCD//A-1.2)
0.7mm (22 ga.) Airfoil Type (Model: EVCD//A-1.5)
0.8mm (22 ga.) Airfoil Type (Model: EVCD//A-1.6)
0.9mm (20 ga.) Airfoil Type (Model: EVCD//A-1.8)
1.0mm (20 ga.) Airfoil Type (Model: EVCD//A-2.0)

Stainless Steel Blade

1.2mm Thickness V-locking Type, Grade 304 with 2B mill finish frame (Model: EVCD//1.2VSS-304)
1.2mm Thickness V-locking Type, Grade 316 with 2B mill finish frame (Model: EVCD//1.2VSS-316)
1.5mm Thickness V-locking Type, Grade 304 with 2B mill finish frame (Model: EVCD//1.5VSS-304)
1.5mm Thickness V-locking Type, Grade 316 with 2B mill finish frame (Model: EVCD//1.5VSS-316)

Mild Steel Blade

1.5mm Thickness Mild Steel V-locking Type (Model: EVCD//MS-1.5V)

Aluminum Blade

Extruded Aluminum Airfoil Type (Model: EVCD//ALB)

Blade Axle

10x10mm galvanized steel Square Rod (Model: EVCD//BA-SQGI) (Standard)
10x10mm Stainless Steel steel Square Rod (Model: EVCD//BA-SQSS)
12.5 mm galvanized steel Round Rod (Model: EVCD//BA-RDGI)
12.5 mm Stainless Round Rod (Model: EVCD//BA-RDSS)

* Other optional constructions are available upon request

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.



Optional Construction Details

Blade Bush

10x10mm Nylon Bush (Model: EVCD//B-N) (Standard)
 10x10mm Brass Bush (Model: EVCD//B-B)
 10x10mm Phosphorous Bronze Bush (Model: EVCD//B-PB)
 10x10mm Stainless Steel Bush (Model: EVCD//B-SS)
 12.5mm Round Stainless Steel Bush (Model: EVCD//B-SSR)

Linkage

2.0mm Thick Galvanized Steel (Model: EVCD//L-GI) (Standard)
 1.2mm Thick Stainless Steel (Model: EVCD//L-SS)

Blade Gasket

Foam Gasket (Model: EVCD//BS-FG) (Standard)
 Neoprene Gasket (Model: EVCD//BS-NG)
 Silicone Rubber Gasket (Model: EVCD//BS-SG) (Applicable only for V-locking type blades)

Duct Connections

25mm Self flange connection (Model: EVCD//S) (Standard)
 30mm Self flange connection (Model: EVCD//S30)
 Slip & Cleat connection (Model: EVCD//SC)
 Plain end or Box type (Model: EVCD//BT)
 20mm Slide on Flange (Model: EVCD//ESF-20)
 30mm Slide on Flange (Model: EVCD//ESF-30)
 40mm Slide on Flange (Model: EVCD//ESF-40)
 30 x 30 x 3mm GI Angle Flange (Model: EVCD//AF-30GI)
 40 x 40 x 3mm GI Angle Flange (Model: EVCD//AF-40GI)
 30 x 30 x 3mm MS Angle Flange (Model: EVCD//AF-30MS)
 40 x 40 x 3mm MS Angle Flange (Model: EVCD//AF-40MS)
 30 x 30 x 3mm SS Angle Flange (Model: EVCD//AF-30SS)
 40 x 40 x 3mm SS Angle Flange (Model: EVCD//AF-40SS)

Jamb Seal

0.45mm thickness galvanized steel jamb seal (Model: EVCD//JS-GI)
 0.45mm thickness stainless steel jamb seal (Model: EVCD//JS-SS)

Blade Operation

Opposed Blade (Model: EVCD//OB) (Standard)
 Parallel Blade (Model: EVCD//PB)

Damper Operation

Galvanized steel Manal Quadrant (Model: EVCD//DO-GI) (Standard)
 Stainless Steel Manal Quadrant (Model: EVCD//DO-SS)
 Actuator (DO-M)* contact factory for available options

Shaft

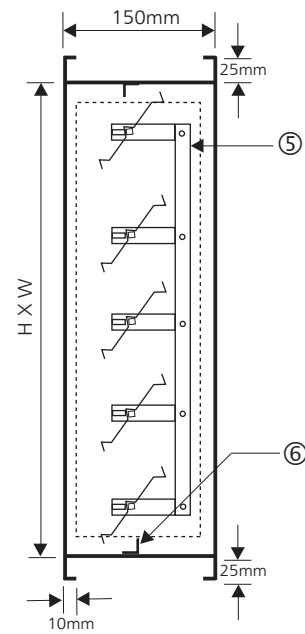
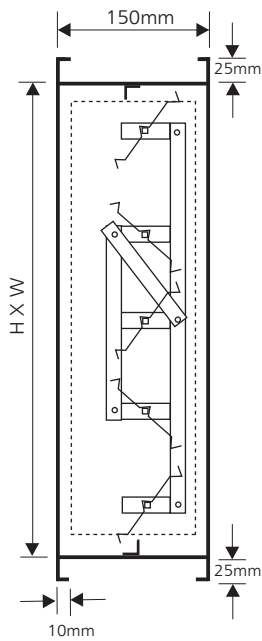
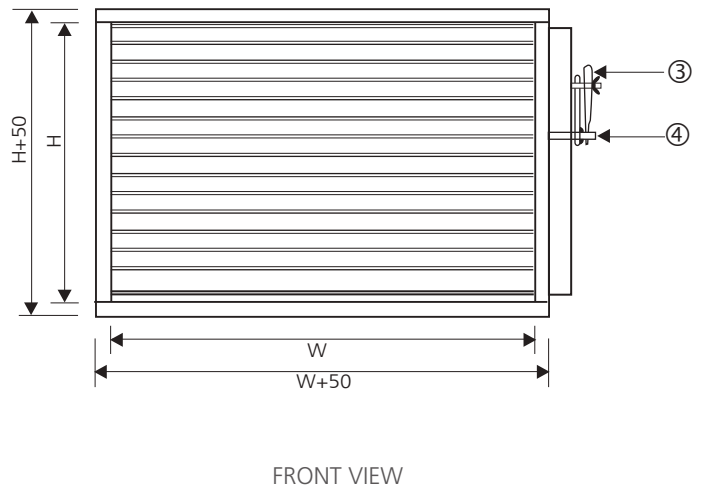
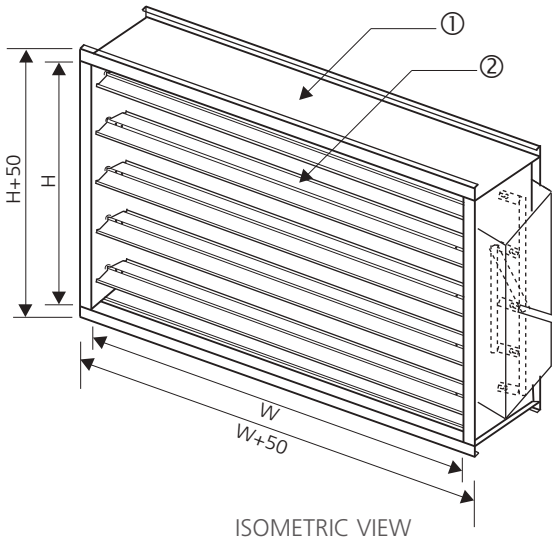
10x10mm Square GI Shaft
 10x10mm Square SS Shaft
 12.5mm Round GI Shaft
 12.5mm Round SS Shaft

* Other optional constructions are available upon request



Model: EVCD-100V/SF (Self Flange with "V" locking blades)

V - Lock Blades



1 - Frame, 2 - V Blade, 3 - Quadrant, 4 - Shaft, 5 - Linkage, 6 - Stopper

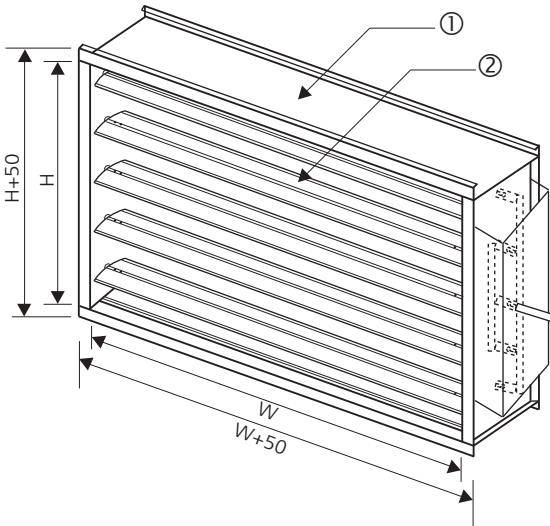
Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

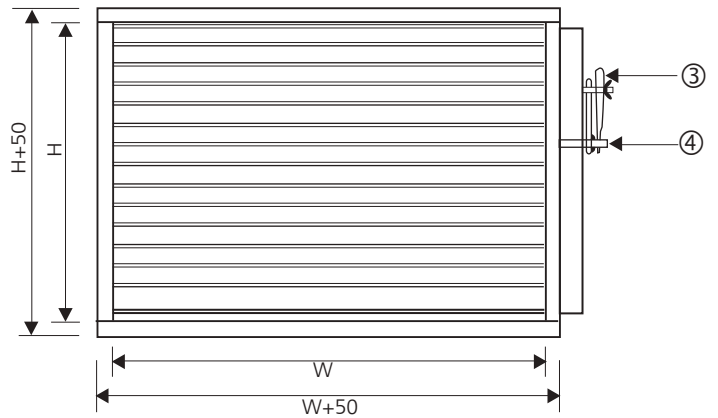


Model: EVCD-100A/SF (Self Flange)

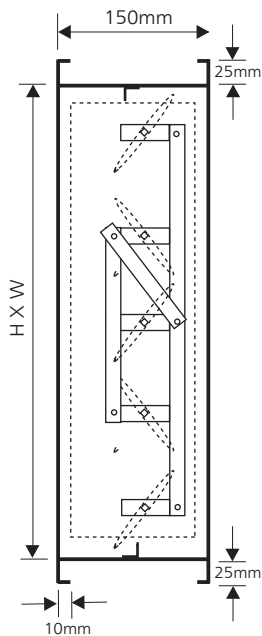
Aerofoil Blades



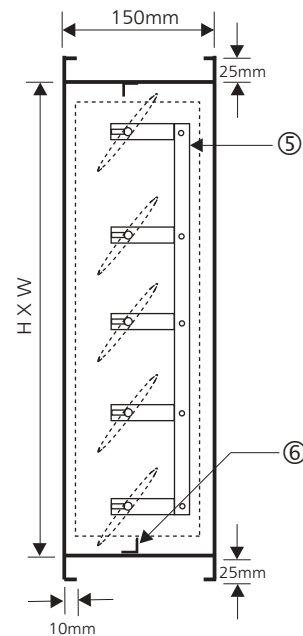
ISOMETRIC VIEW



FRONT VIEW



Opposed Blade Operation (OB)



Parallel Blade Operation (PB)

1 - Frame, 2 - Aerofoil Blade, 3 - Quadrant, 4 - Shaft, 5 - Linkage, 6 - Stopper

Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

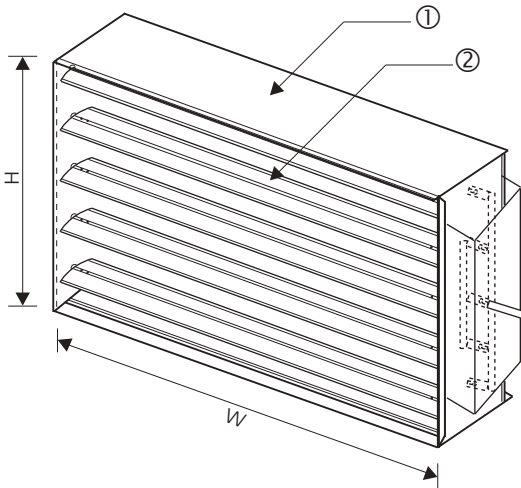


Volume Control Damper

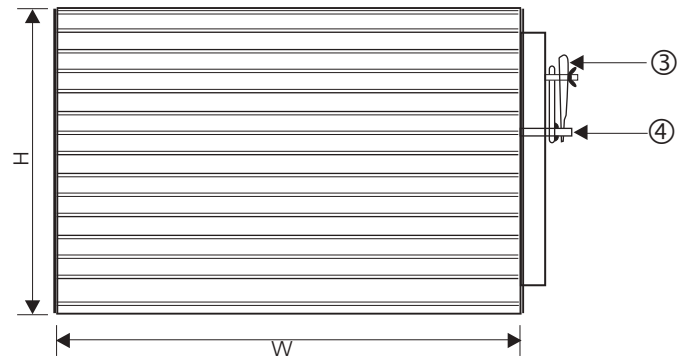
Dimensional Details

Model: EVCD-100A/S&C (Slip & Cleat Type)

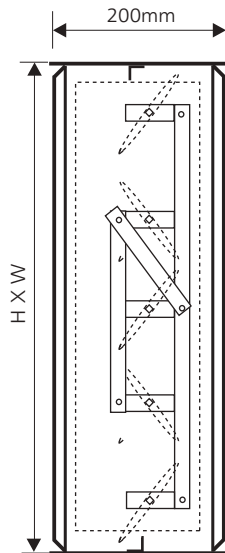
Slip & Cleat Type



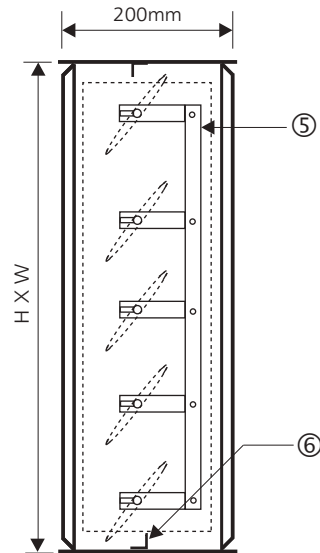
ISOMETRIC VIEW



FRONT VIEW



Opposed Blade Operation (OB)



Parallel Blade Operation (PB)

1 - Frame, 2 - Aerofoil Blade, 3 - Quadrant, 4 - Shaft, 5 - Linkage, 6 - Stopper

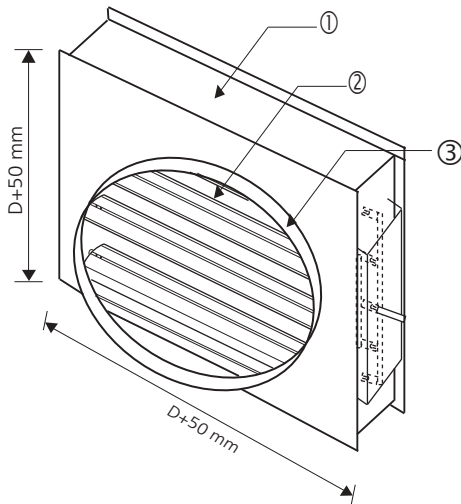
Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

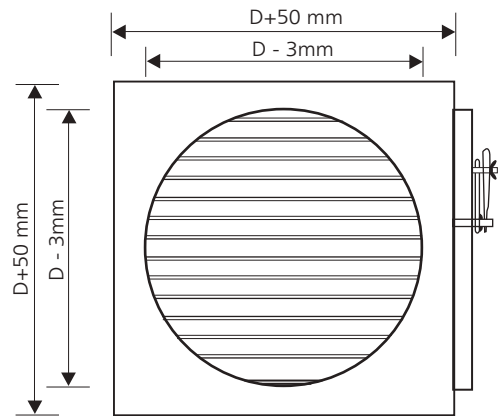


Model: EVCD-100A/CS (Circular Spigot Type)

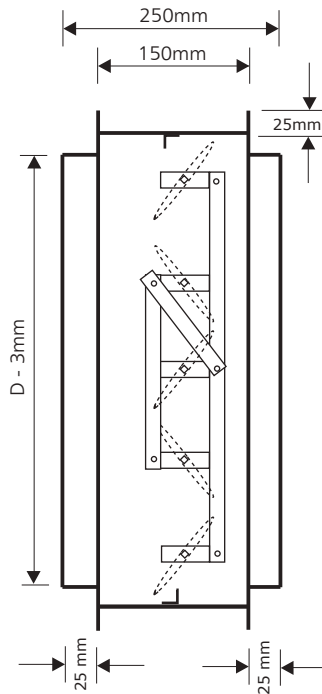
Circular Spigot Type



ISOMETRIC VIEW



FRONT VIEW



Opposed Blade Operation (OB)

1 - Casing 2 - Aerofoil Blade, 3 - Circular Spigot

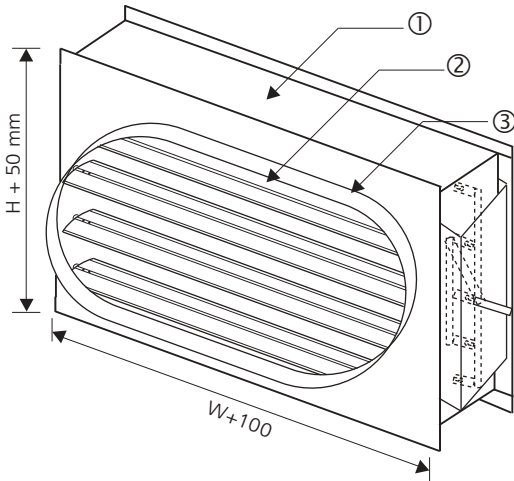
Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

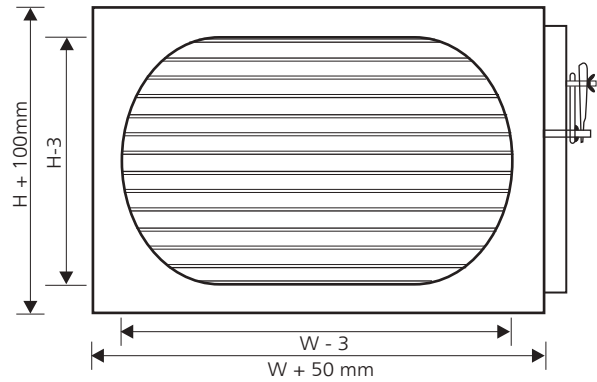


Model: EVCD-100A/OS (Oval Spigot Type)

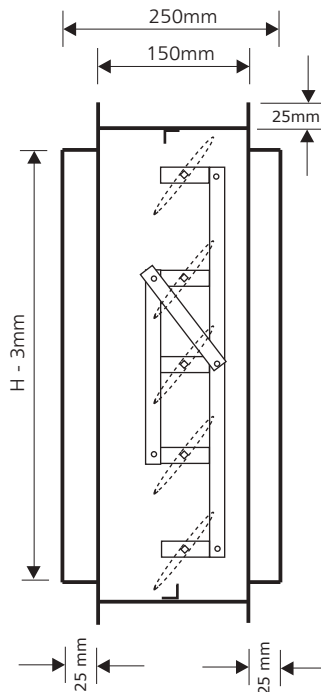
Oval Spigot Type



ISOMETRIC VIEW



FRONT VIEW



Parallel Blade Operation (OB)

1 - Casing 2 - Aerofoil Blade, 3 - Oval Spigot

Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

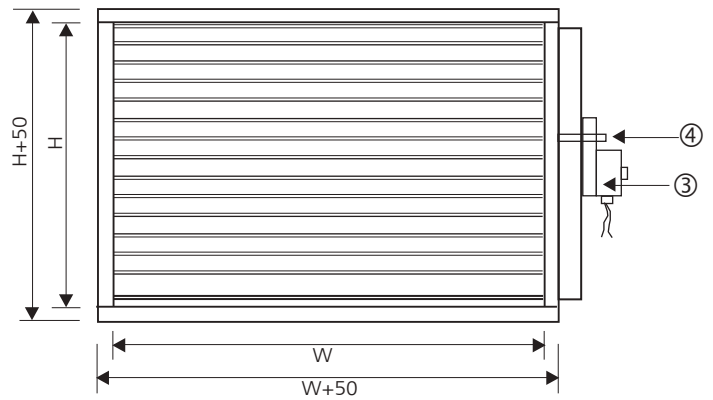
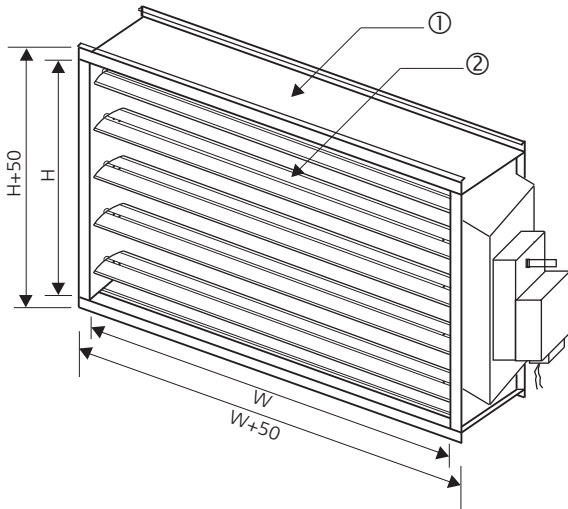


Volume Control Damper

Dimensional Details

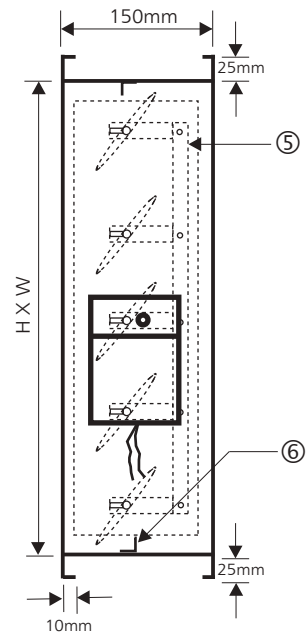
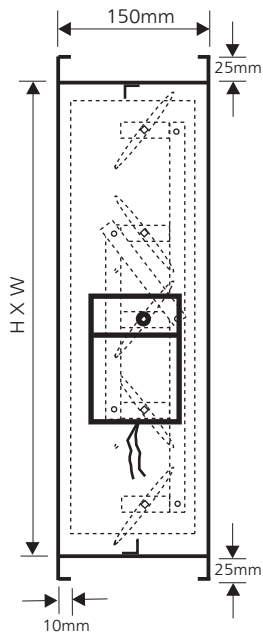
Model: EVCD-100A/SF/M (Self Flange-Motorized)

Motorized



ISOMETRIC VIEW

FRONT VIEW



Opposed Blade Operation (OB)

Parallel Blade Operation (PB)

1 - Frame, 2 - Aerofoil Blade, 3 - Actuator, 4 - Shaft, 5 - Linkage, 6 - Stopper

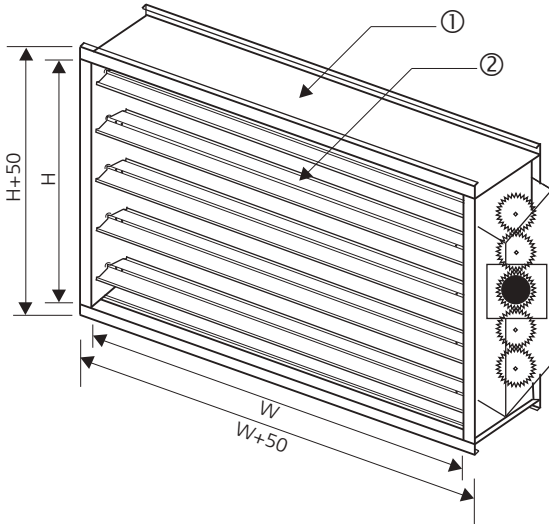
Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.



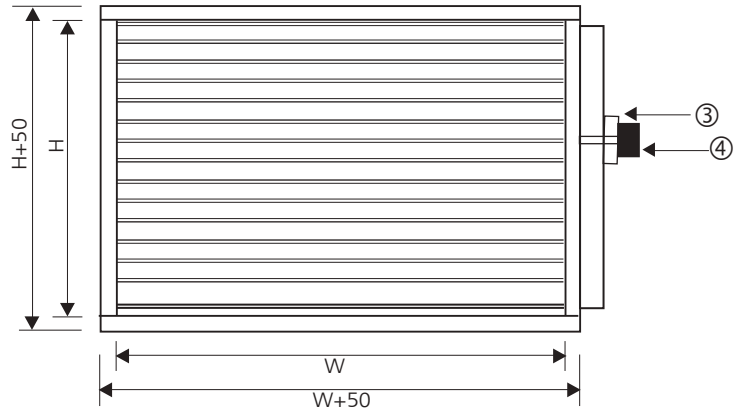
Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

Model: EVCD-100A/SF/GW (Self Flange-Gear Mechanism)

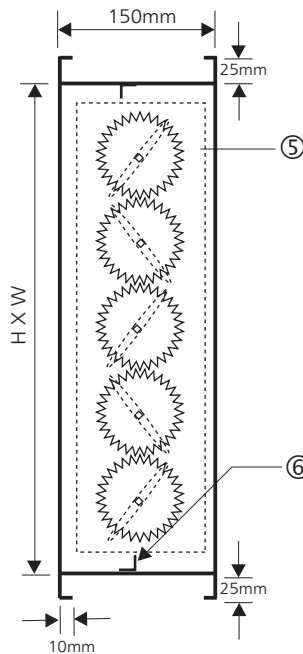
Gear Wheel Type



ISOMETRIC VIEW



FRONT VIEW



Opposed Blade Operation (OB)

1 - Frame, 2 - Blade, 3 - Knobe Set, 4 - Control Knobe, 5 - Gear Wheel, 6 - Stopper

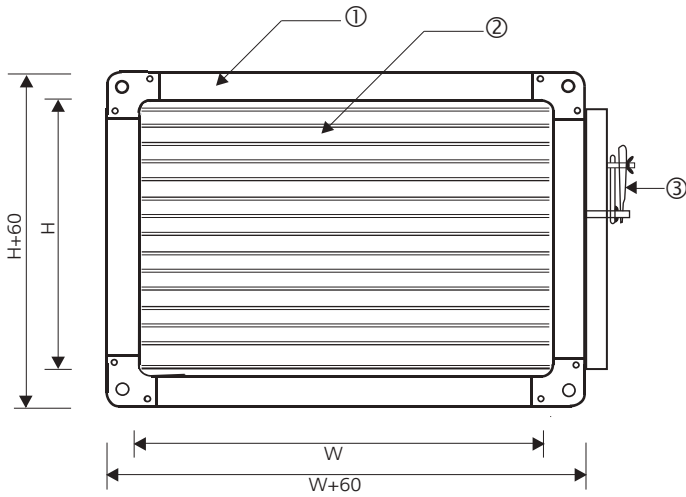
Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

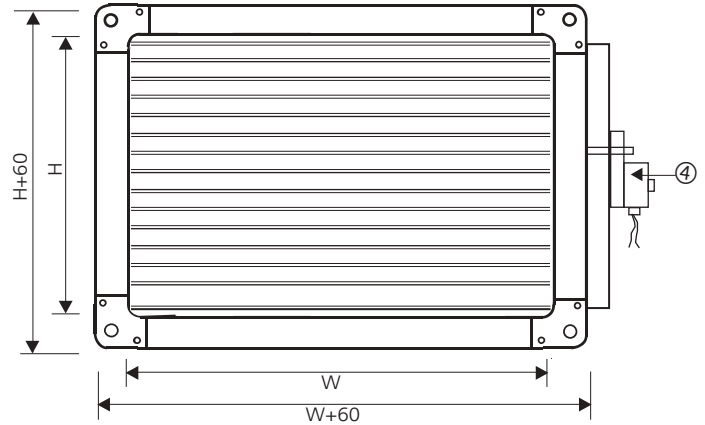


Model: EVCD-100A/ESF (EXCEL Slide on Flange)

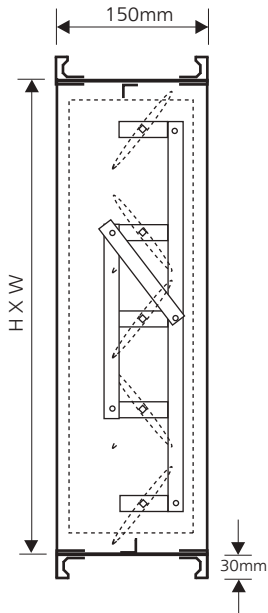
Slide on Flange Type



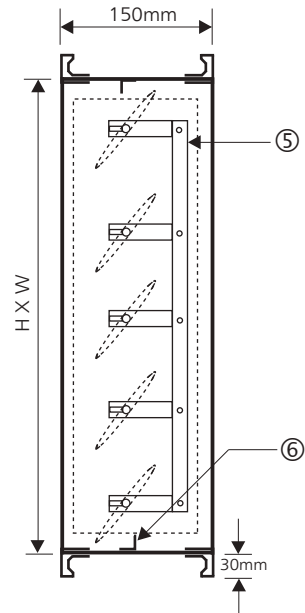
NORMAL OPERATION



MOTORIZED OPERATION



Opposed Blade Operation (OB)



Parallel Blade Operation (PB)

1 - Slide on Flange, 2 - Blade, 3 - Quadrant, 4 - Actuator, 5 - Linkage, 6 - Stopper

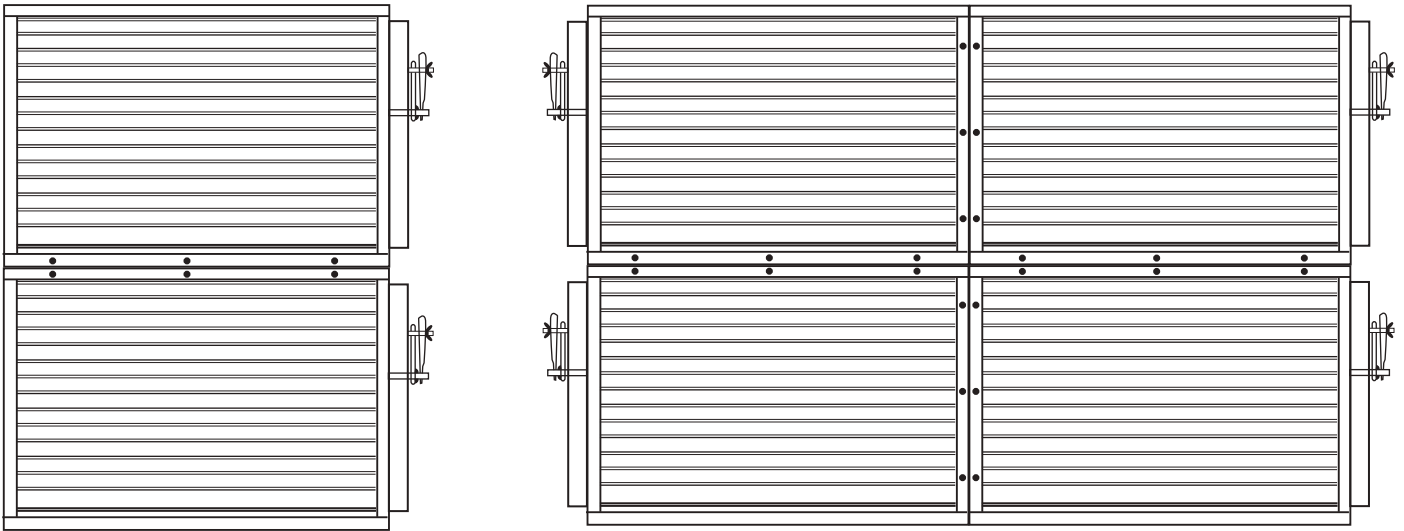
Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.

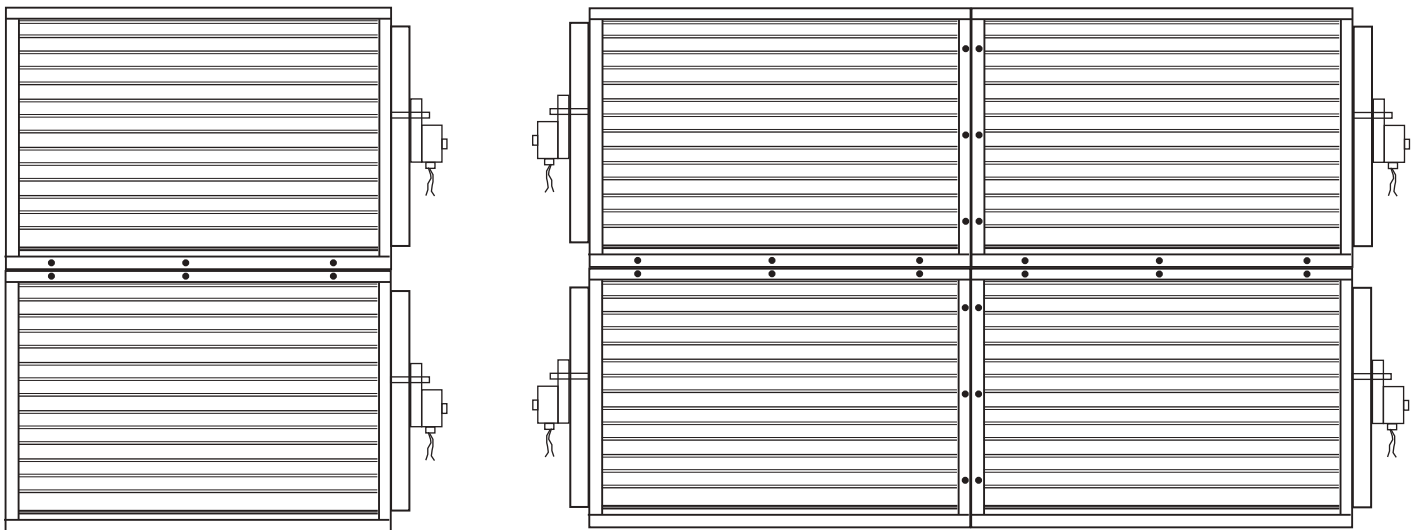


Model: EVCD-100A/SF (Manual Damper-Multisection Assembly)

Multisection



Model: EVCD-100A/SF/M (Motorized-Multisection Assembly)



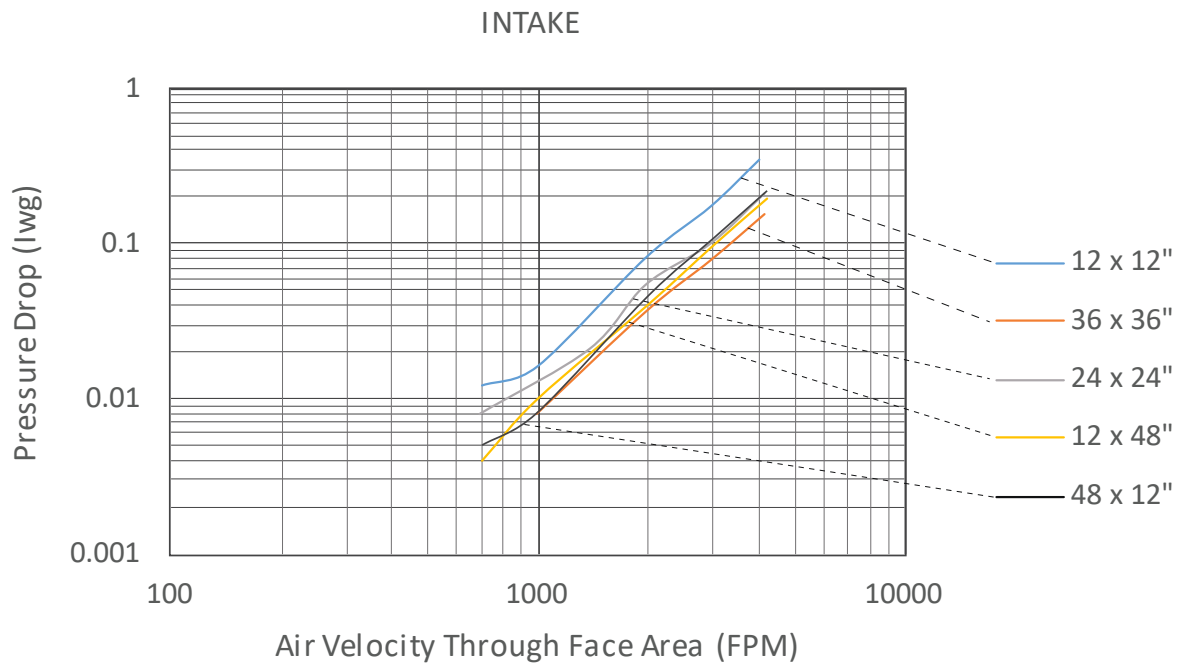
Please contact CMS for a detailed GA drawings for the larger multisection assemblies.

* Multi section assembly is available for all the models/types.

Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.





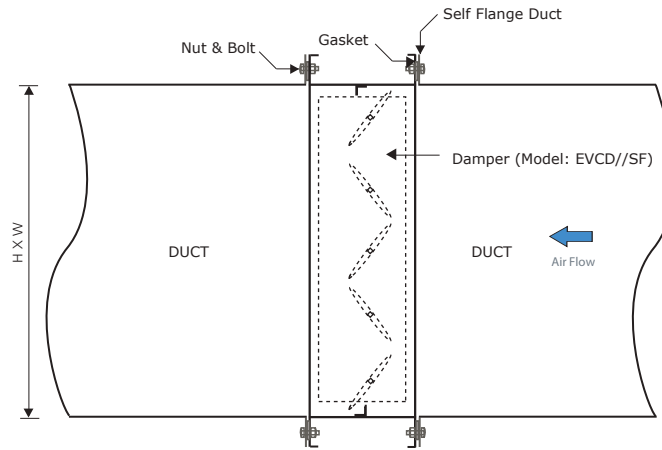
Pressure drop has been measure as per AMCA Figure 5.3 Illustrates a fully ducted damper. This configuration represents the lowest pressure drop of the three test configurations because entrance and exit losses are minimized by straight duct runs upstream and downstream of the damper.

Leakage Testing was conducted in accordance with AMCA Standard 500 - D - 2012, figure 5.5, " Laboratory Method of Testing Dampers for Rating", by Intertek laboratories USA for a sample size of 24X24" and is having class 2 leakage rating upto 750Pa

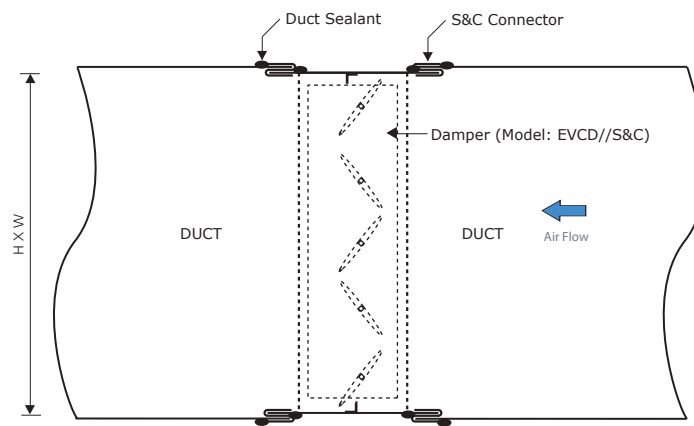
Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.



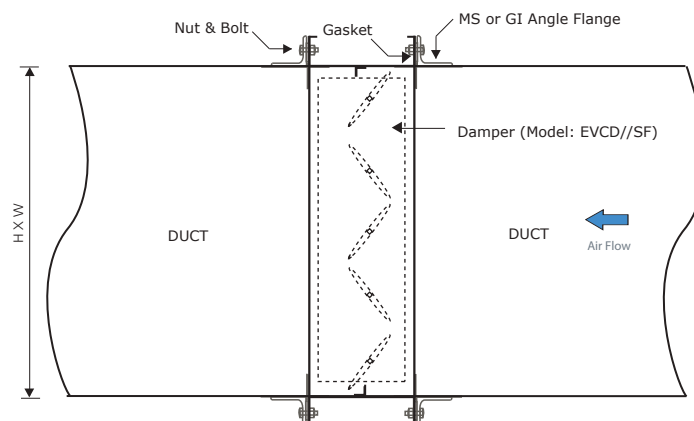
Damper to Self Flange Duct Connection:



S&C Duct Connection:



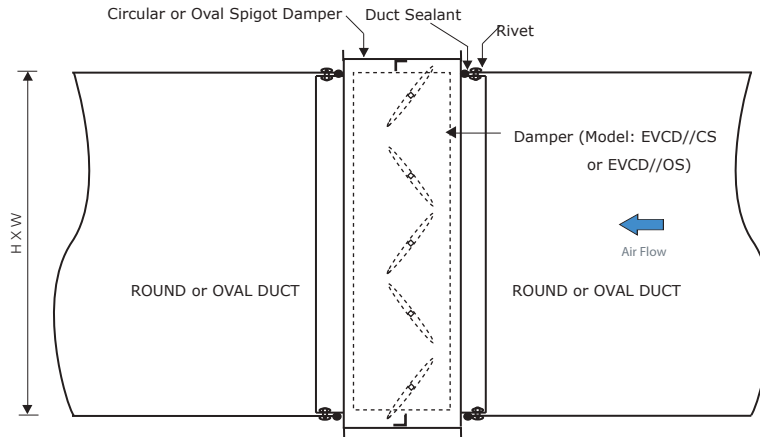
Damper to Angle Flange Duct Connection:



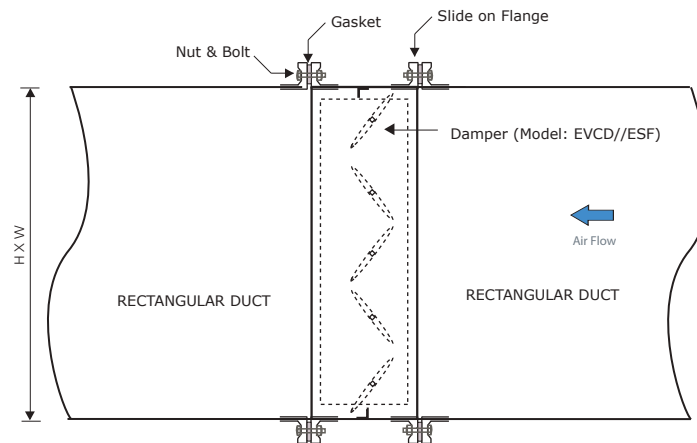
Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.



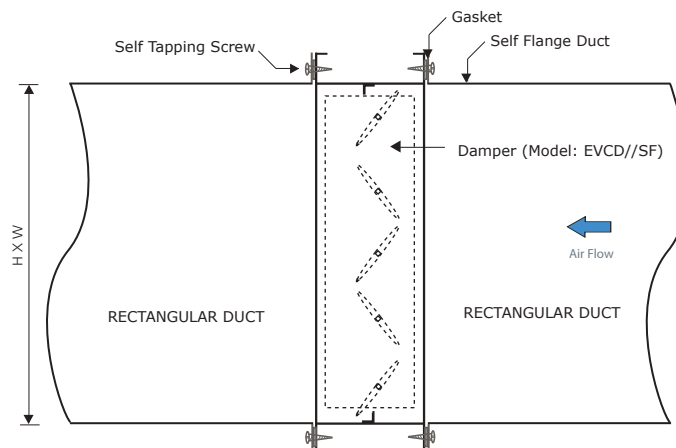
Circular or Oval Damper to Plain Duct Connection:



Damper to Slide on Flange Duct Connection:



Damper to Self Flange Duct Connection:



Century Mechanical Systems Factory LLC certifies that the model EVCD-100A shown herein is licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance ratings only.



Operation

- All the dampers are rigidly constructed, well-made and free from any defects in material and workmanship.
- Damper has to be stored in a clean and dry environment. A visual check is required on the damper to ensure that no damage is occurred during transit.
- Before installation, ensure that the damper is free from dust & foreign matters.
- Check the operation of the damper manually before installation . Ensure that the duct size is appropriate and supported properly so as not to relying on the damper. Damper has to be supported with suitable supporting systems.
- All the manual dampers are provided with quadrant with position indicator to show the position of the blades.
- Damper position can be manually locked by using the locking wing nut. Usually, damper position will be locked during the commissioning of the HVAC equipment.
- Motorized dampers can be controlled by actuators from fully open to fully closed position automatically based on the input signal.

Maintenance

- A visual check inside the damper is required once per year to ensure that the damper is free from dust or any foreign matters.
- Mechanical parts like bearings, spindles and linkages to be checked throughly for wearing.
- If the damper is build up with dust, wipe the damper with clean & dry cloth.
- Mechanical (moving) parts can be lightly greased for smooth and noise free functioning of the damper.
- Solutions (Liquids) which can affect the zinc coating of the damper should not be used to clean the damper at no event.
- For motorized dampers, actuators to be tested by using manual test switch.
- Access doors to be provided for cleaning & maintenance on all the installations.
- In the event of fire, flood, structural damage or other severe occurrences, contact CMS for specific instructions and recommendations.

Constructional Details (EVCD-200/ True Round)

Application & Features

- EVCD-200 series Round Volume Control Dampers are designed with a rigid, robust assembly from formed steel sheet.
- Body is constructed from heavy gauge galvanized steel sheet.
- Self lubricating nylon bush of internal square size for smooth blade operation in both static & dynamic conditions.
- Hand locking quadrant is coupled with handle by locking wing nut. Hand locking quadrant is marked to show exact open/close position of damper.

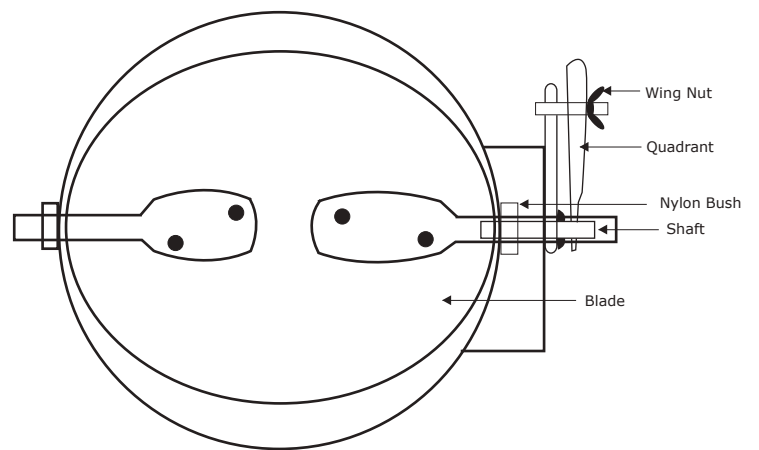
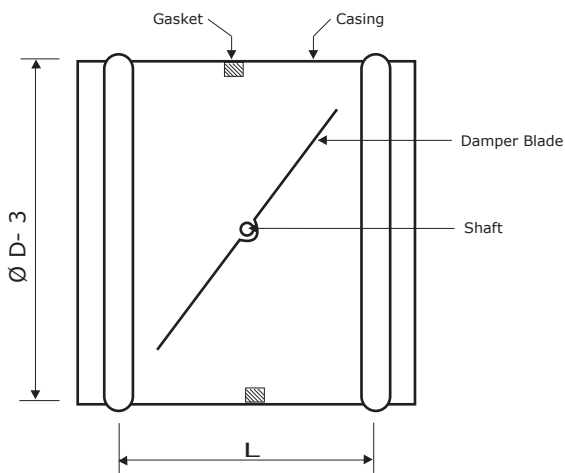
Constructional Details

- Casing: 0.90mm thickness (20 ga.) Zinc coated formed galvanized steel casing (body).
Aluminium and Stainless Steel casing is available as option.
- Blade: 0.7mm (22Ga) thickness zinc coated galvanized steel blade.
Aluminium and Stainless steel blades are available as optional.
- Bearing: 10mm round, PVC or Nylon bearing. Brass or Self lubricating phosphorus Bronze bearing (bush) is available as optional.
- Shaft: 10mm zinc plated galvanized steel round shaft.
- Quadrant: Manual operation, locking type quadrant made of stamped galvanized steel with "Open" and "Close" markings with position locking wing nut.
- Gasket: Foam gasket to prevent air leakage in shut off position.
- Finish: Mill Galvanized
- Minimum Size: 100mm, Maximum Size: 400mm. Above 400mm is multiblade construction as standard.
Special size of 400mm to 800mm is available and the constructional details shall be provided upon request.
- Actuator: Motorized Volume control damper fitted with approved 230V or 24V two position (Open/close) actuator without limit switch. Dampers with extended shaft can be provided to suit the site conditions and to fix the actuator at site. Modulating (0-10V) actuator is available as option.
- Connection with duct: Plain

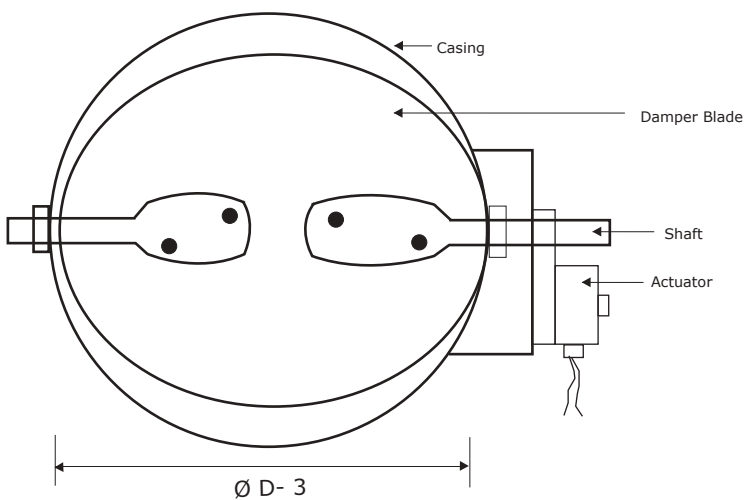
Volume Control Damper

Dimensional Details

Model: EVCD-200/ (True Round Type)



Model: EVCD-200M/ (Round Type-Motorized)



Standard Sizes:

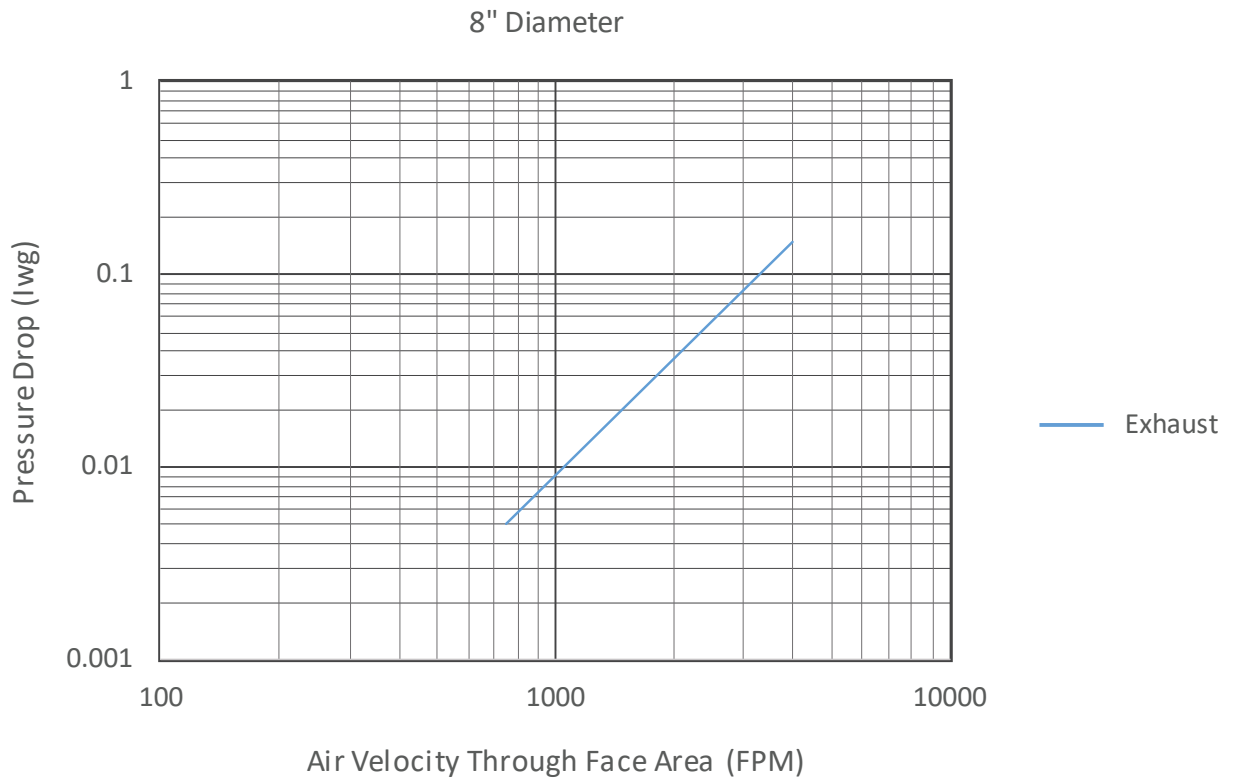
Diameter (mm)
100
125
150
175
200
225
250
275
300
325
350
400

Minimum Size: 100mm
Maximum Size: 400mm

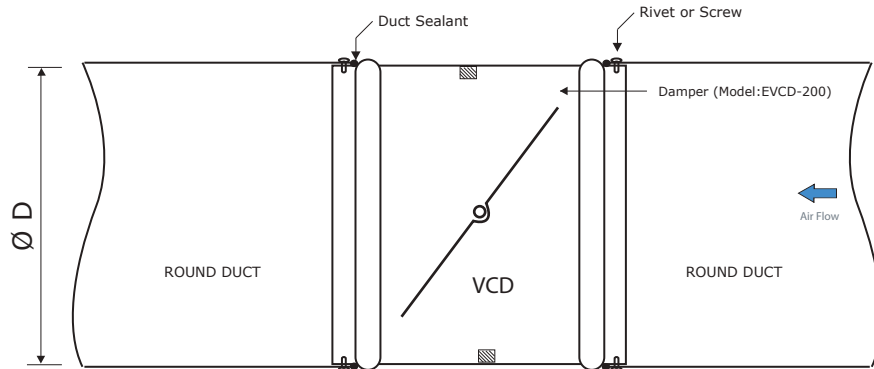
*Special constructions are available upon request.

Note: The photos shown are only for illustration purpose. The actual product may vary. Please contact the technical/sales department for more information. As a part of continuous improvement, CMS reserve the right to make technical modifications without prior notice.

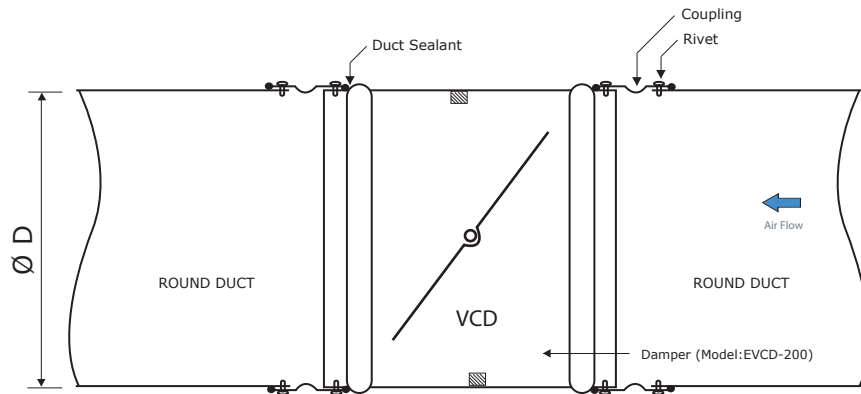
Model: EVCD-200/ (Round Type)



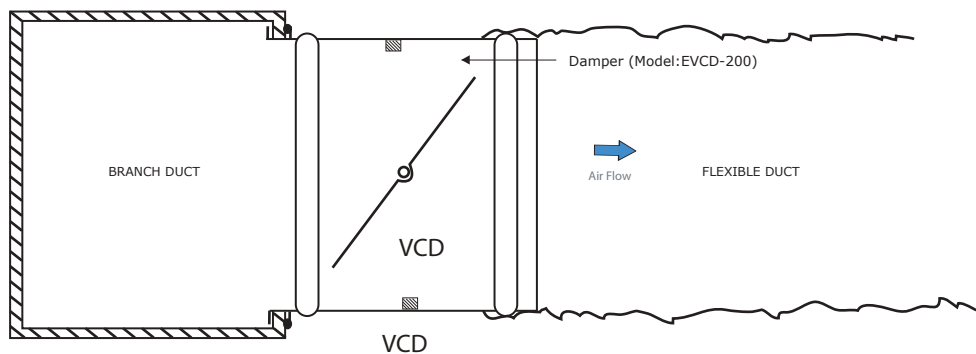
Damper to Plain Duct Connection :



Damper to Duct Connection with Coupler :



Damper to Direct Duct Connection :



Volume Control Damper

Ordering Requisites

1. Model

Rectangular VCD with Aluminium Aerofoil Blades	EVCD-100A
Rectangular VCD with GI "V" Locking Blades (Standard)	EVCD-100V
Round VCD	EVCD-200
Splitter Damper	ESD

2. Construction

With Self Flange (Standard)	SF
With S&C connection	S&C
With Round Spigot	RS
With Oval Spigot	OS
Motorized Damper (with Actuator)	M
With Gear Mechanism	GW
With EXCEL Slide on Flange	ESF
With Opposed Blade Operation (standard)	OB
With Parallel Blade Operation	PB

3. Operation

Manual	
Motorized (With Actuator)	DO-M

4. Size

Rectangular VCD	W x H
Round VCD	D

5. Number Of Units

In Numbers

Example

1	2	3	4	5
EVCD-100A	SF	500x400mm	5	-

Model: EVCD-100A Volume control damper with Aluminium Aerofoil blades, with self flange, size: 500x400mm, 5 Units.



Products from



An ISO Certified Company

Tel: +971 4 3474858, Fax : +971 4 3474656, P.O. Box: 60270
Dubai, United Arab Emirates, E mail: info@cmsglobal.com | cmsglobal.com

