FMC
METAL FACTORY

شركة محمد عبدالرحمن فرحات للصناعة
Mohammad A. Farhat Co. For Industry

Volume Control Dampers

SISTEMA Certifications and Inspections ISO 9001:2015
IAS ACCREDITED Management Systems Certification Body
INTERNATIONAL ACCREDITATION FORUM IAF
International - Affiliate MEMBER SMACNA
amca INTERNATIONAL MEMBER

Assure Success with Customer Together

Assure Success with Customer Together

ABOUT US

FMC Metal Factory, founded in 2021 in the city of Jeddah, for its Excellence, Engineering, Professionalism, and Experience in the field of fabrication of HVAC duct and its Accessories. The company has been a forerunner in the Construction field with his vast experience, commitment, adoption of new technologies and challenges by emerging as one of a key player. It offers a wide range of services for Supply, Installation, Testing and Commissioning in HVAC field. The group is leading under the supreme guidance of Mr. Mohamed Abdul Rahman Farhat, who has a long life experience in the Saudi market.

Vision

Our ambition is to amplify the presence of FMC as a recognized company in the field of construction. We aspire to extent our professional services abroad in the coming years.

Mission

Form valuable long-term relationships with our clients and partners.

Manage large and complex projects.
Be a reliable company.

Compete successfully in the Construction market of the region with high efficiency, professionalism and honesty in order to maintain, our outstanding reputation.

Objective

Our aim is to enhance the lifestyle of the communities we serve through consistent, timely, efficient and added value delivery of engineered, innovative, and tailor-made technology solutions that never fails to exceed expectations

Commitment

Constantly strive to ensure that amidst all the projects exists a great deal of passion and commitment to provide quality services and to deliver clients satisfaction.

Maintain leadership in project management capability.

Provide an open and flexible approach towards the needs of our clients by listening and respecting their views and by being ahead of emerging trends.

Deliver superior value through our consistent implementation of advanced methods and state of the art solutions.

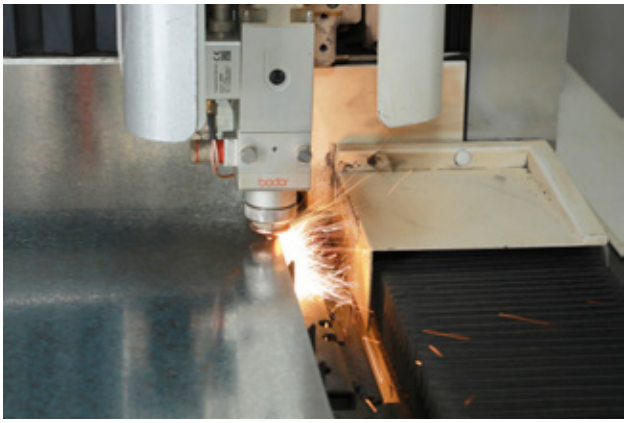
Our Team

FMC's work force is the main asset which represent and implement all projects in professional manors due to the on going training programs that we provide to our, head office employees, engineers, supervisors, technicians, drivers, labors and all of our working force whom reflect their professions on sites.

OUR PRODUCTS MAINTAINING THE HIGHEST INTERNATIONAL STANDARDS.

INTRODUCTION

- **A Damper** is a valve or plate that regulates the Flow of Air inside a duct, or other air handling equipment. To regulate air for room-by-room temperature and climate control. Its operation can be manual or automatic. Manual dampers are turned by a handle on the outside of a duct. Automatic Dampers are used to regulate airflow constantly and are operated by electric or pneumatic motors, in turn controlled by a thermostat or building automation system.
- Volume control is an essential requirement in most ventilation systems.
- Selecting the right damper is important to assure good operating characteristics in any air flow system, helping you maximize energy efficiency and minimize installation cost
- The need to balance the airflow to different areas is as important as the choice of grille or diffuser itself.
- FMC Volume Control Dampers are designed to provide positive control of Air Flow within Ventilation Systems.
- FMC Volume Control Dampers can be manufactured with different types, shapes and adjustment systems to suit most of installation.



RECTANGULAR VOLUME CONTROL DAMPERS

Standard Construction

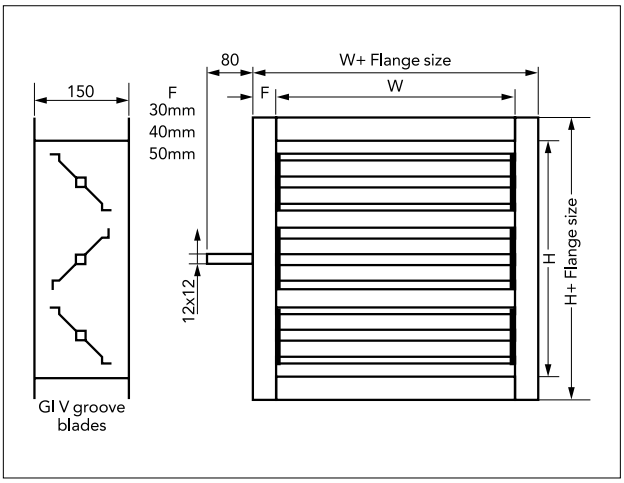
Casing	Shall be made of LFQ Galvanized Steel complying with ASTM A653, having G90 Coating Designation. 16 Gauge (1.5mm Thickness) 18 Gauge (1.2mm Thickness)
Blades:	Shall be made of LFQ Galvanized Steel complying with ASTM A653, having G90 Coating Designation, Minimum18 Gauge.
Quadrant:	Shall be made of Zink Coated Steel with integral rotation slot, indicating blade Open and Close position.
Axles:	12mm zinc plated round mild steel.
Linkage:	Side linkage out of airstream is (2.8mm Thickness) Galvanized Steel (Concealed in frame).
Bearings:	Bronze Bearings.

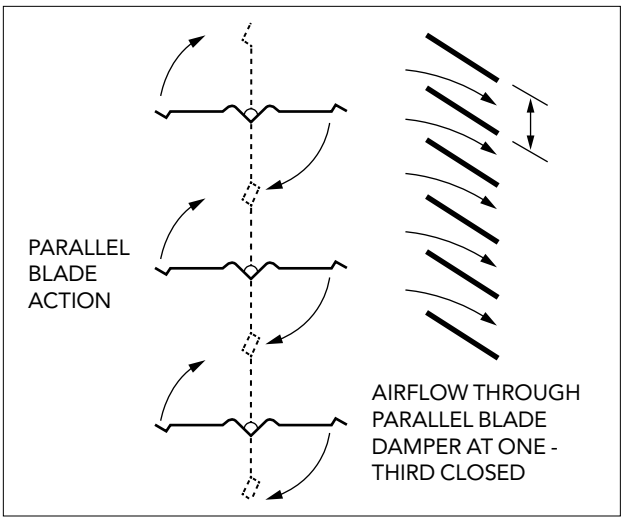
Optional

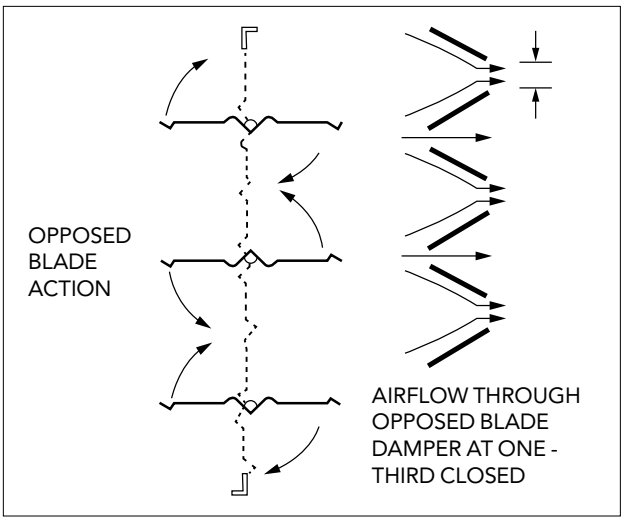
- **STAINLESS STEEL BEARINGS**
- **ACTUATORS**
- **BLADE SEALS**
- **OPPOSED BLADES TYPE**
- **SLIPE OF DRIVE, AND COMPANION ANGLES CONNECTION**

Size Limitations

- **Minimum Size:** One blade: 100 x 100mm
- **Maximum Size:** Single section: 1000 x 1000mm
  Multiple sections: Unlimited







Materials Used for VCD (Casing & Blades):

- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.

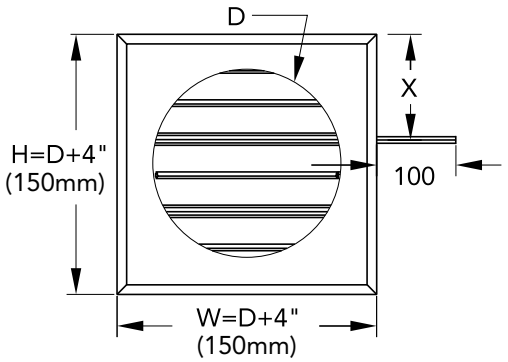
ROUND VOLUME CONTROL DAMPERS

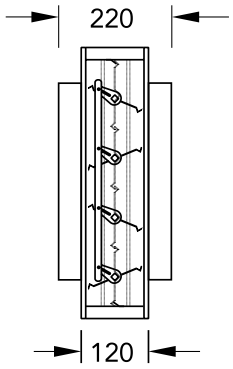
Standard Construction

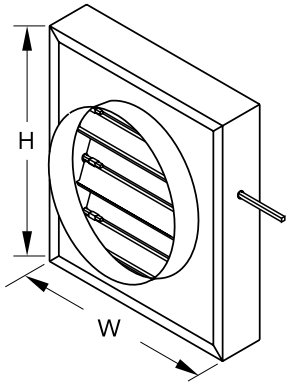
Casing	Shall be made of LFQ Galvanized Steel complying with ASTM A653, having G90 Coating Designation. 22 Gauge (0.8mm Thickness) Double Skin.
Blades:	Shall be made of LFQ Galvanized Steel complying with ASTM A653, having G90 Coating, Minimum18 Gauge.
Quadrant:	Shall be made of Zink Coated Steel with integral rotation slot, indicating blade Open and Close position.
Axles:	12mm zinc plated round mild steel.
Linkage:	Side linkage out of airstream is (2.8mm Thickness) Galvanized Steel (Concealed in frame).
Bearings:	Bronze Bearings.

Size Limitations

- **Minimum Size:** One blade: 150x150mm
- **Maximum Size:** Single section: 1600 x 1600mm







Materials Used for VCD (Casing & Blades):

- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.

ROUND VOLUME CONTROL DAMPERS - SINGLE BLADE

Types

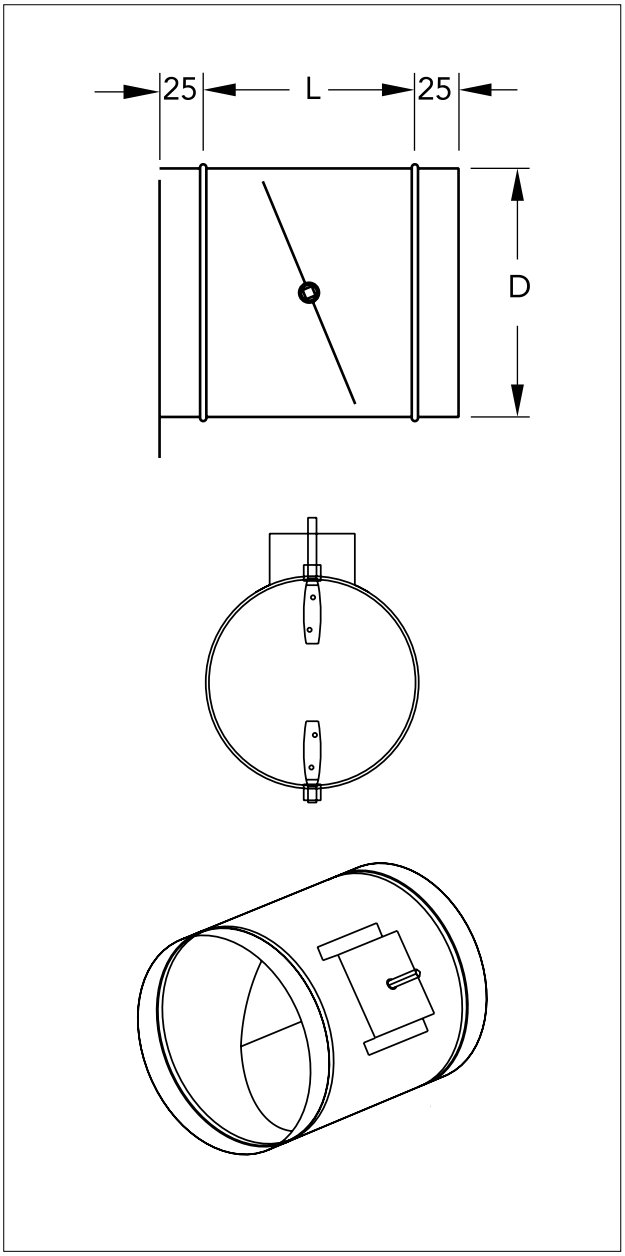
VCD shall be installed between 2 pieces of circular ducts or plenum box. **VCD** with normal sizes of 100 to 400mm is circular control dampers to adjust air volume flow rates in air conditioning and ventilation systems.

Standard Construction

Casing	Shall be made of LFQ Galvanized Steel complying with ASTM A653, having G90 Coating Designation. Guage 22
Blades:	Shall be made of LFQ Galvanized Steel complying with ASTM A653, having G90 Coating Designation. Guage 18
Quadrant:	Shall be made of Zink Coated Steel with integral rotation slot, indicating blade Open and Close position.
Axles:	12mm zinc plated round mild steel.
Bearings:	Bronze Bearings.

Size Limitations

- **Minimum Size:** 100mm
- **Maximum Size:** 400mm



Materials Used for VCD (Casing & Blades):

- **Galvanized Steel** : (Standard) L.F.Q. Complying with ASTM A653 and Having G90 Coating Designation.
- **Stainless Steel** : (Optional) Complying with ASTM A240M / A480M, Grade 304, 304L, 316 & 316L.

PRE- INSTALLATION NOTES AND GUIDELINES

A. Check the schedules for proper damper locations within the building.

B. Inspect damper for damage before installing.

C. Dampers must be installed free from twisting or racking.

D. DO NOT compress or stretch the damper into the opening.

E. DO NOT lift the damper by the blades or actuator (handle damper using frame or sleeve).

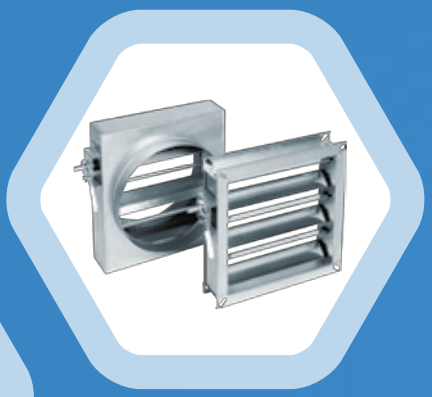
F. DO NOT install screws or fasteners in the damper that could potentially interfere with the unexposed blade linkage and prevent proper damper operation.

G. When painting, wall-texturing, insulating or any other foreign material is being sprayed within 5 feet of the damper, the damper must be sufficiently covered and protected.

GENERAL INSTALLATION INSTRUCTIONS

1. Single section control dampers as well as multiple section control damper assemblies must be installed square and free from racking or twisting. In order to ensure the damper is not racked
2. Determine proper location of the extended shaft coupling or jacks haft before installing the damper . Shaft must be attached to a power blade. On parallel blade units, all blades are power blades and on opposed blade units, every other blade is a power blade.
3. Multiple damper assemblies are not restricted to a maximum number of sections, but single section units are restricted to the maximum and minimum sizes
4. Damper blades, axles and linkages must operate proficiently without binding. Before system operation, all dampers should be cycled after installation to assure proper operation. When testing multiple section dampers, all individual sections should open and close simultaneously.

Note: Damper blades must always be running horizontally when installing the control damper in a vertical orientation. Consult the factory if a vertical damper with vertical blades is needed.



P.O. Box 6599 Jeddah 21452,
Kingdom of Saudi Arabia
+966 55 521 4885
info@fmc-metalfactory.com
fmcksa.com