

VOLUME CONTROL DAMPERS

VOLUME CONTROL DAMPERS STEEL CONSTRUCTION

CONSTRUCTION FEATURES

FRAME Roll formed 16 gauge galvanized steel channel with welded corners. X-Standard, Z-optional

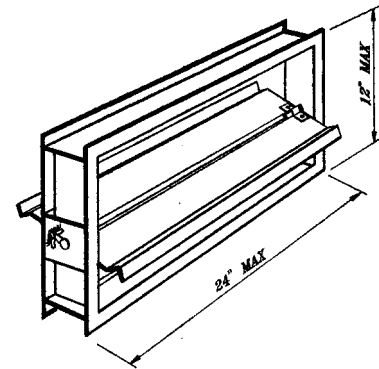
BLADE Roll formed 18 gauge galvanized steel.

AXLES 1/2" Round chrome plated steel at bearing ends.

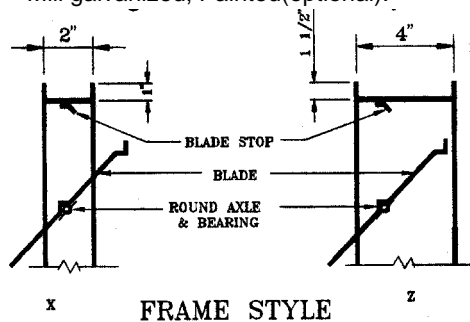
BEARINGS Nylon; Bronze, Oilite(Optional) bearings.

REGULATOR Positive locking at any damper position, Full open thru full closed.

FINISH Mill galvanized, Painted(optional).



MODEL: GCD-S



APPLICATION:-
Air modulation control in rectangular ducts up to 12 inch height.

CONSTRUCTION FEATURES

FRAME Roll formed 16 gauge galvanized steel channel with welded corners. X-Standard, Z-optional

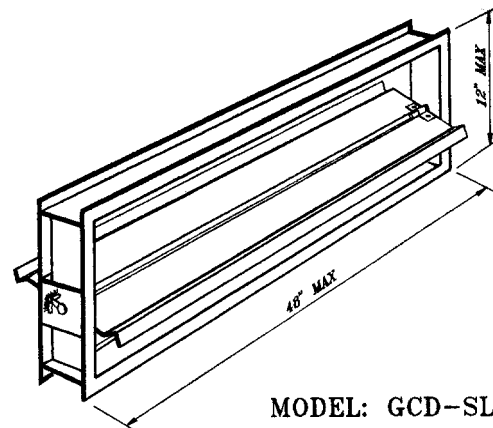
BLADE Roll formed 16 gauge galvanized steel.

AXLES 1/2" Round chrome plated steel at bearing ends. Continuous along blade.(optional)

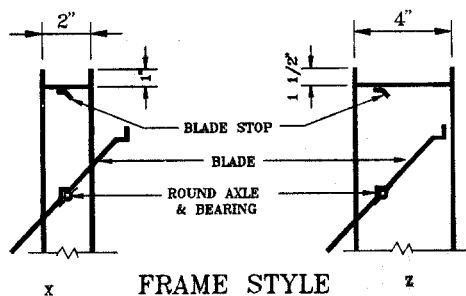
BEARINGS Nylon; Self oiling Bronze(Optional) bearings.

REGULATOR Positive locking at any damper position, Full open thru full closed.

FINISH Mill galvanized, Painted(optional).



MODEL: GCD-SL



APPLICATION:-
Air modulation control in rectangular ducts up to 12 inch height.

VOLUME CONTROL DAMPERS PARALLEL BLADE - STEEL

STANDARD CONSTRUCTION

FRAME Roll formed 16 gauge galvanized steel channel with welded corners. X-Standard, Z-optional

BLADES Roll formed 16 gauge galvanized steel.
Min.width-4", Max.width-8"

BEARINGS Nylon; Bronze oilite(optional) **AXLES**

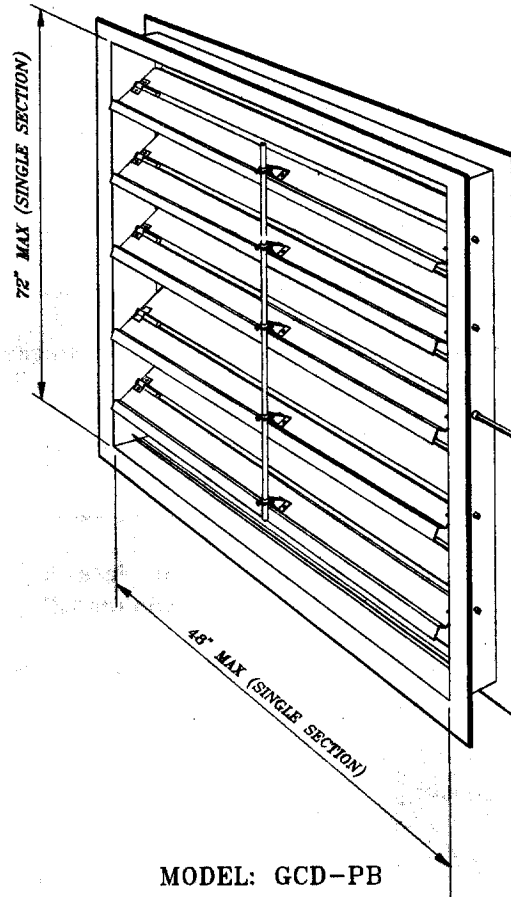
1/2" Round chrome plated steel.

LINKAGE Purpose made, swing type bracket and steel rod.

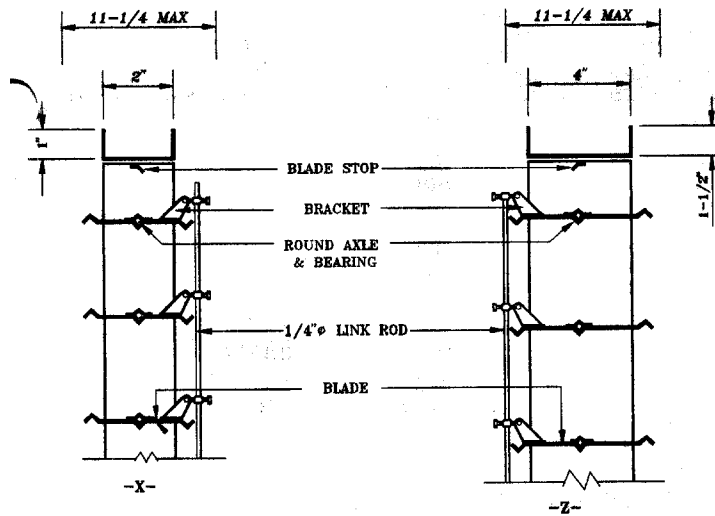
FINISH Mill galvanized; Painted(optional).

MIN.SIZE 4"x4" (Dampers 8" or less in height furnished as single blade model)

MAX.SIZE 48"x72" (single section) Unlimit for multiple sections.



MODEL: GCD-PB



FRAME STYLE

APPLICATION:-
Air control application where two position control is desirable.

DESIGN FEATURES		OPTIONAL/ACCESSORIES
FRAME	Heavy gauge steel, internal welded corners prevent from deforming in transit or on site.	Heavy gauge construction Aluminum or stainless steel construction
BLADES	Design assure uniform blades interlocking; minimize leakage and blades rattling	Aluminum jamb seal for low leakage application. Polyurethane foam blade seals
BEARINGS	Press fitted to minimize wear	Manual damper regulator Factory mounted Electric/Pneumatic damper operator
LINKAGE	Purpose made bracket and rod provide uniform pressure to blades for tight close and reduce operational torque requirement.	Heavy duty jack shaft for multiple damper assembly operation
AXLES	Blade axles positively locked to blade	External blade linkage assembly

VOLUME CONTROL DAMPERS OPPOSED BLADE - STEEL

STANDARD CONSTRUCTION

FRAME Roll formed 16 gauge galvanized steel channel with welded comers. X-Standard, Z-optional

BLADES Roll formed 16 gauge galvanized steel. Min.width-4", Max.width-8"

BEARINGS Nylon; Bronze oilite(optional) **AXLES** 1/2"

Round chrome plated steel.

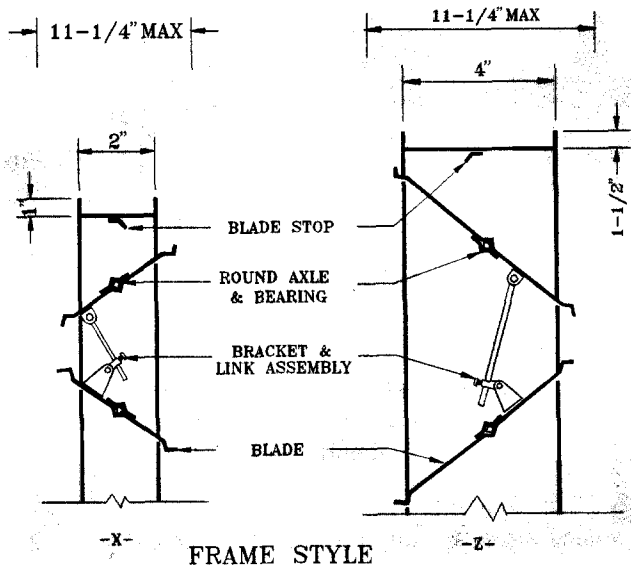
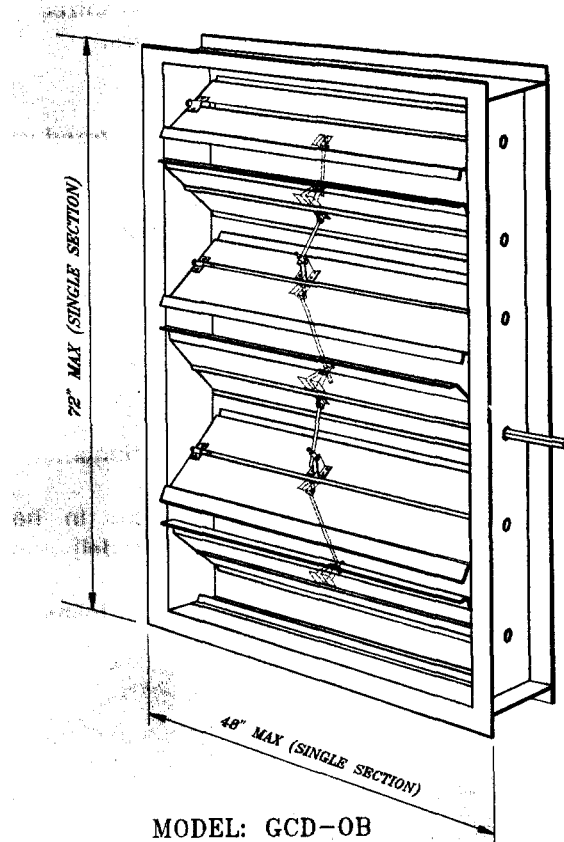
LINKAGE Purpose made, swing type bracket and steel rod assembly.

BLADE STOP Roll formed 16 gauge galvanized steel **FINISH**

Mill galvanized; Painted(optional).

MIN.SIZE 4"x4"(Dampers 8" or less in height furnished as single blade model)

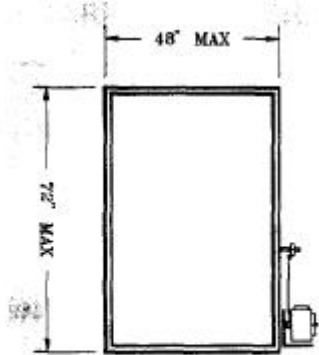
MAX.SIZE 48"x72" (single section) Unlimit for multiple sections.



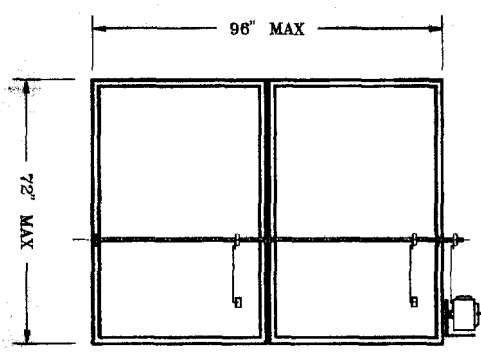
APPLICATION:-
Air control application where modulation control is desirable.

DESIGN FEATURES		OPTIONAL/ACCESSORIES
FRAME	Heavy gauge steel, internal welded corners prevent from deforming in transit or on site.	Heavy gauge construction Aluminum or stainless steel construction
BLADES	Design assure uniform blades.	Aluminum jamb seal for low leakage application.
BEARINGS	Press fitted to minimize wear	Polyurethane foam blade seals
LINKAGE	Purpose made bracket and link assembly provide uniform pressure to blades for tight close and reduce operational torque requirement.	Manual damper regulator Factory mounted Electric/Pneumatic damper operator
AXLES	Blade axles positively locked to blade	Heavy duty jack shaft for multiple damper assembly operation Linkage assembly out of air stream External blade linkage assembly

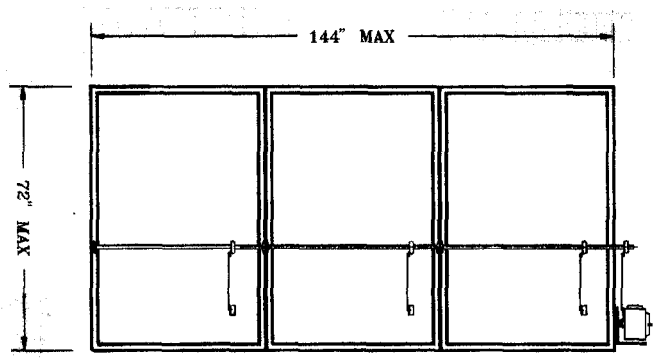
VOLUME CONTROL DAMPERS STANDARD MULTI SECTION ASSEMBLY



STANDARD SINGLE
SECTION ASSEMBLY



STANDARD MULTI SECTION
ASSEMBLY

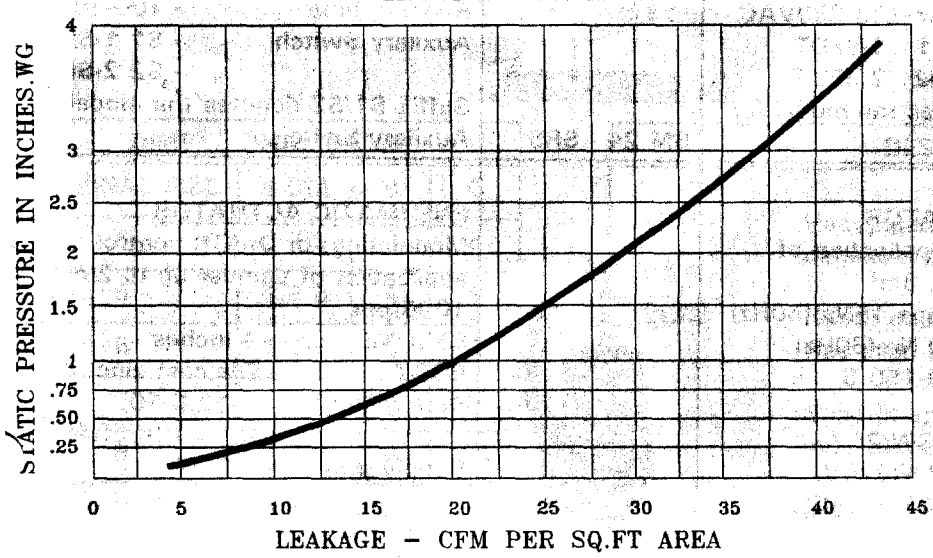


SPECIAL MULTI SECTION ASSEMBLY WITH
HEAVY DUTY JACK SHAFT

NOTE:
Standard factory location of damper operator illustrated. Operator can be mounted at any side or in air stream up on request.

- Careful attention shall be given while selecting damper operator torque considering face area and velocity for satisfactory operation.

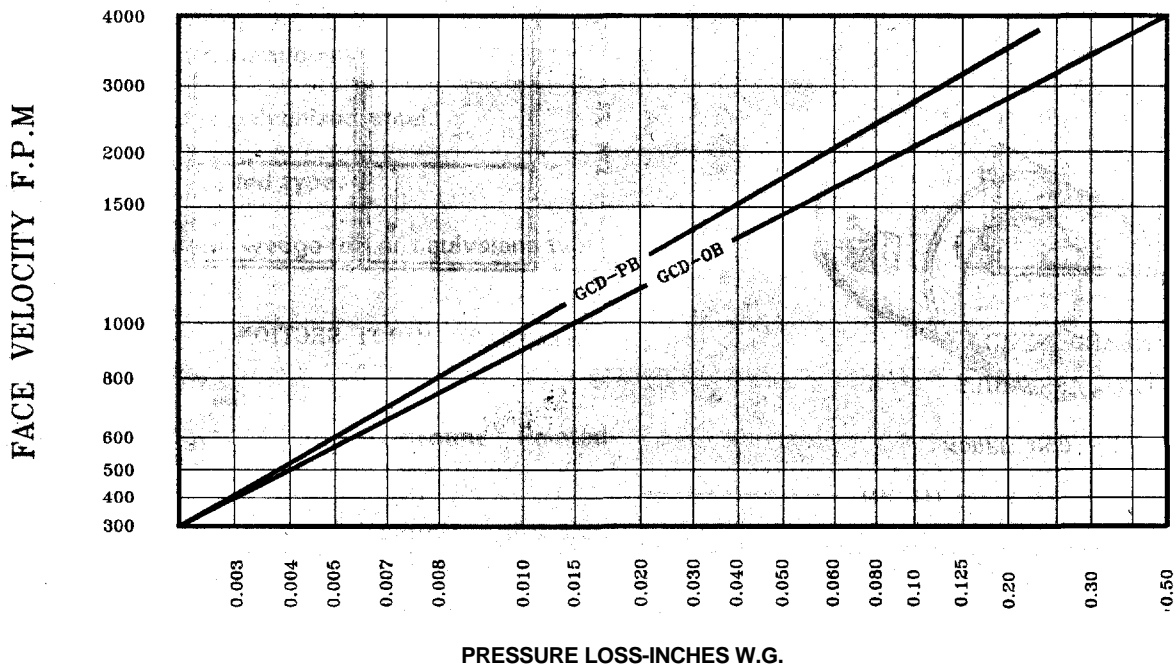
LEAKAGE CHART



Leakage chart is based on damper with standard construction having aspect ratio of 1:1 and in extreme close position.

Greater in damper aspect ratio will reduce leakage shown in this chart.

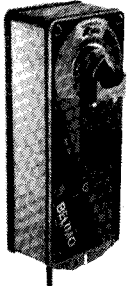
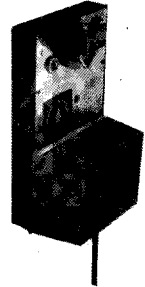
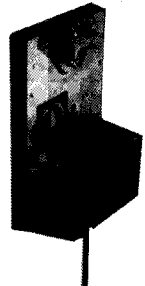
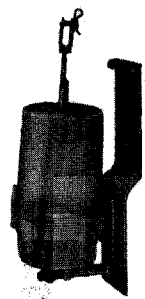
PRESSURE DROP CHART
VOLUME CONTROL DAMPER MODEL
GCD-PB, GCD-OB



NOTE:

1. Above chart is based on damper in fully open position. Static pressure and Face velocities are corrected to 0.075 lb/cu.ft. air density.
- 2.

ACCESSORIES (Electric / Pneumatic Actuator)

 AF 24, AF 230	<p>SPRING RETURN ACTUATOR Damper returns to its selected fail safe position when the power supply is interrupted. (Max. 2m²)</p> <p>TORQUE - Appx. 15 Nm Opening - Appx. 150 S Closing - Appx. 16 S Power - AF-24-24VDC/AC - AF-230-230VAC</p> <p>Auxiliary Switch - S1 1-SPDT - S2 2-SPDT</p> <p>Suffix S1/S2 denotes the model for Auxiliary Switch.</p>	 SM 24 - SRS	<p>MODULATING DAMPER ACTUATOR Modulating control application of opposed blade damper up to 2.0m²</p> <p>TORQUE - 15Nm POWERS - 24 VAC Power consumption - 3W Control signal - 0-10VDC Running time - 100-200 S Auxiliary Switch - S1 1-SPDT - S2 2-SPDT</p> <p>Suffix S1/S2 denotes the model for Auxiliary Switch.</p>
 SM 24, SM 240	<p>2 POSITION ACTUATOR 2 Position On/Off application of damper up to appx. 3m²</p> <p>TORQUE - Appx. 15Nm(50Hz) - 10 Nm(60Hz) Running time - 90-150 S Power consumption - 1.8W(24V) - 13W(220V) Auxiliary Switch - S1 1-SPDT - S2 2-SPDT</p> <p>Suffix S1/S2 denotes the model for Auxiliary Switch.</p>	 MCP-5140	<p>PNEUMATIC ACTUATOR Modulating, or On/Off control application of damper up to 2m² @ 1000fpm</p> <p>STROKE - 4 inches BODY - Die-cast zinc Spring Ring - 3-12,5-10, - 8-13,10-15&48</p> <p>Supply pressure- 20PSI</p> <p>Note: Higher capacity model and positioner available</p>

VOLUME CONTROL DAMPERS ROUND - STEEL CONSTRUCTION

STANDARD CONSTRUCTION

CASING 20 gauge galvanized steel with longitudinal 'ACME' seam lock or butt welded continuously.

BLADE 20 gauge galvanized steel(std.) Perforated, galvanized blade having 50% free area.(optional)

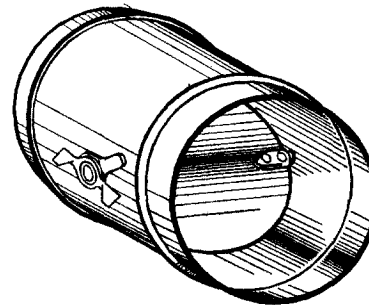
BEARINGS Snap-fit, spring bearing.

REGULATOR Stamped, zinc coated steel with damper position indicator and wing nut.

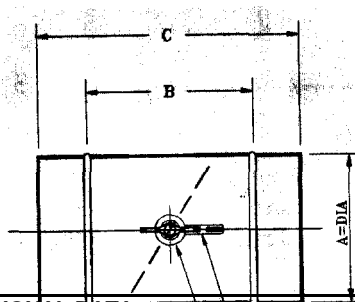
MIN.SIZE 4" Dia.

MAX.SIZE 9" Dia.

FINISH Mill galvanized; Aluminum Painted (optional).



MODEL: GCD - R



DIMENSIONAL DATA			
NOMINAL SIZE	A-DIA	B	C
4	3-7/8	3	6
5	4-7/8	4	8
6	5-7/8	4	8
7	6-7/8	5	9
8	7-7/8	6	10
9	8-7/8	8	12
All dimensions are in inches			

APPLICATION:-
Generally employed as a balancing damper in low velocity round air duct system where maximum static pressure not exceeding 2"w.g.

DESIGN FEATURES
<p>Heavy gauge casing construction provide dimensional stability.</p> <p>Heavy gauge blade ; prevent rattling, thus noise free even damper at partially open position.</p> <p>Snap-fit spring bearing; smooth blade movement, yet low gland leak</p> <p>Damper position indicator and positive locking facility at any desired angle from full open thru full closed.</p>

VOLUME CONTROL DAMPERS ROUND - STEEL CONSTRUCTION

STANDARD CONSTRUCTION

CASING 16 gauge galvanized steel with longitudinal 'ACME' seam lock or butt welded continuously.

BLADE 16 gauge galvanized steel.

BEARINGS Spring loaded type.

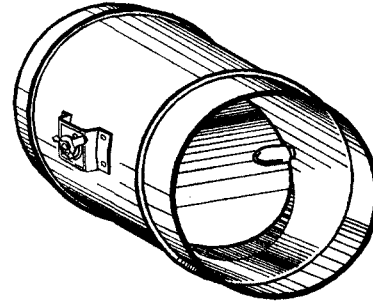
REGULATOR Duro-dyne wedge-loc or equivalent type.

MIN.SIZE 4" Dia.

MAX.SIZE 20" Dia.

FINISH Mill galvanized; Aluminum Painted (optional).

OPTION Actuator for zone control application. (VAVT system)



MODEL: GCD - RX

DIMENSIONAL DATA			
NOMINAL SIZE	A-DIA	B	C
4	3-7/8	3	6
5	4-7/8	4	8
6	5-7/8	4	8
7	6-7/8	5	9
8	7-7/8	6	10
9	8-7/8	8	12
10	9-7/8	8	12
12	11-7/8	10	14
14	13-7/8	12	16
16	15-7/8	14	18
18	17-7/8	16	20
20	19-7/8	18	22

All dimensions are in inches

APPLICATION:-

Generally employed as a balancing damper in medium velocity round air duct system where maximum static pressure not exceeding 3" w.g.

DESIGN FEATURES

Heavy gauge casing construction provide dimensional stability.

Heavy gauge blade ; prevent rattling, thus noise free even damper at partially open position.

Spring loaded bearings; smooth blade movement, yet low gland leak.

Damper position indicator and positive locking facility at any desired angle from full open thru full closed.

VOLUME CONTROL DAMPERS ROUND/OVAL - STEEL CONSTRUCTION

STANDARD CONSTRUCTION

MODEL GCD-RZ

FRAME 12 gauge roll formed steel channel with welded longitudinal seam 4" wide.

BLADE 18" and below 12 gauge steel. Above 18"-10 gauge steel.

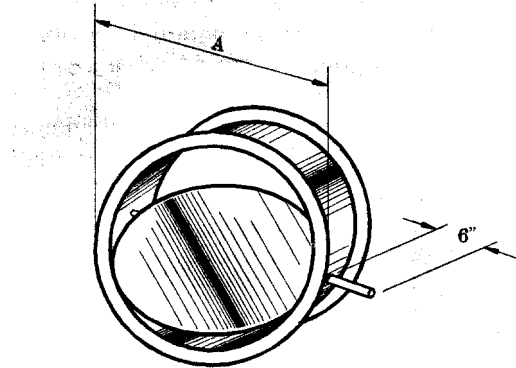
BEARINGS Steel sleeve pressed in to frame. Bronze oilite sleeve (optional).

AXLE 1/2"x1/2" steel up to 20"
3/4"x3/4" steel for above 20".

MIN.SIZE 4" Dia.

MAX.SIZE 40" Dia.

FINISH Aluminum Painted.



MODEL : GCD-RZ

"MODEL GCD-OL

FRAME 12 gauge roll formed steel channel with welded longitudinal seam 4" wide.

BLADE A-dimension 6" thru 20" 12 gauge steel.
A-dimension above 20". 10 gauge steel.

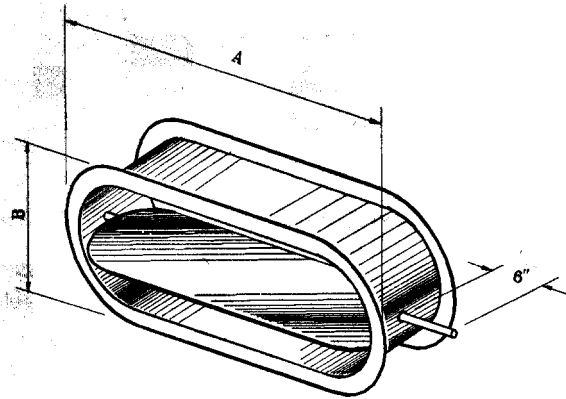
BEARINGS Steel sleeve pressed in to frame. Bronze oilite sleeve (optional).

AXLE 1/2"x1/2" steel up to A-dimension 20" 3/4"x3/4" steel for above 20".

MIN.SIZE B-dimension 6".

MAX.SIZE B-dimension up to 24".
A-dimension -36"(without center million)
A-dimension 72" (with center million)

FINISH Aluminum Painted.



MODEL : GCD-OL

APPLICATION:-

Generally employed as a balancing damper in high velocity round/oval air duct system where maximum static pressure not exceeding 6" w.g.

ACCESSORIES/OPTIONAL

Heavy duty damper regulator

Blade stop with foam rubber for low leakage application.

Special finishes.

Special materials construction.

Actuator ON/OFF or spring return type.

**VOLUME CONTROL DAMPERS
ROUND/OVAL - STEEL CONSTRUCTION**

STANDARD CONSTRUCTION

MODEL GCD-RH

FRAME 10 gauge or equivalent thickness roll formed steel channel with welded longitudinal seam 6" wide.

BLADE 8 gauge or equivalent thickness steel plate up to 40". 1/4" thick steel plate above 40" up to 72".

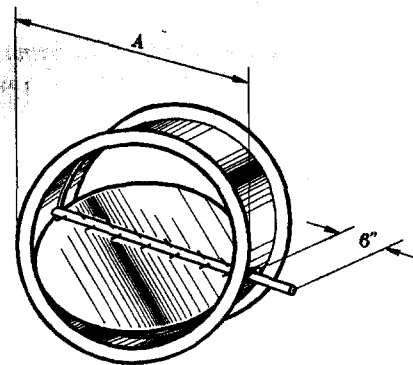
BEARINGS Ball bearing bushings fitted to damper frame.

AXLE 5/8"x5/8" steel bar up to 40" 3/4"x3/4 steel bar up to 60". 1"x1" steel bar above 60"

MIN.SIZE 8" Dia.

MAX.SIZE 72" Dia.

FINISH Aluminum Painted.



MODEL: GCD - RH

MODEL GCD-OH

FRAME 10 gauge or equivalent thickness roll formed steel channel with welded longitudinal seam 6" wide.

BLADE A-dimension up to 40"-10 gauge or equivalent steel plate.
A-dimension above 40"-8 gauge or equivalent thick steel plate.

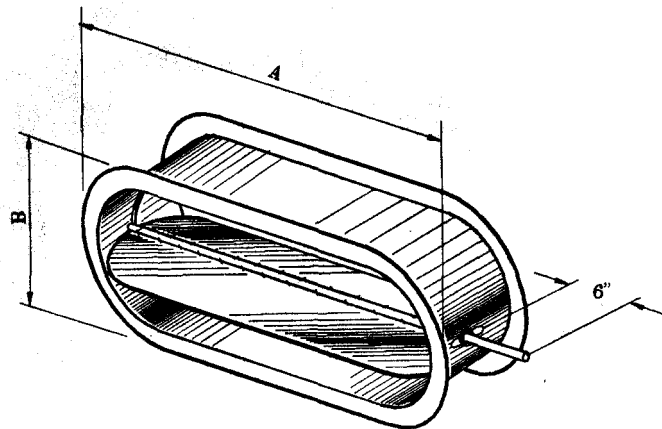
BEARINGS Ball bearing bushings fitted to damper frame.

AXLE 5/8"x5/8" steel bar up to A-dimension 40" 1"x1" steel bar above A-dimension 40".

MIN.SIZE B-dimension 8".

MAX.SIZE A-dimension - 40" (without center million).
A-dimension -72"(without center million)

FINISH Aluminum Painted.



MODEL : GCD - OH

APPLICATION:-

Generally employed as a control damper in high velocity air distribution/material handling system where maximum pressure not exceeding 10" w.g.

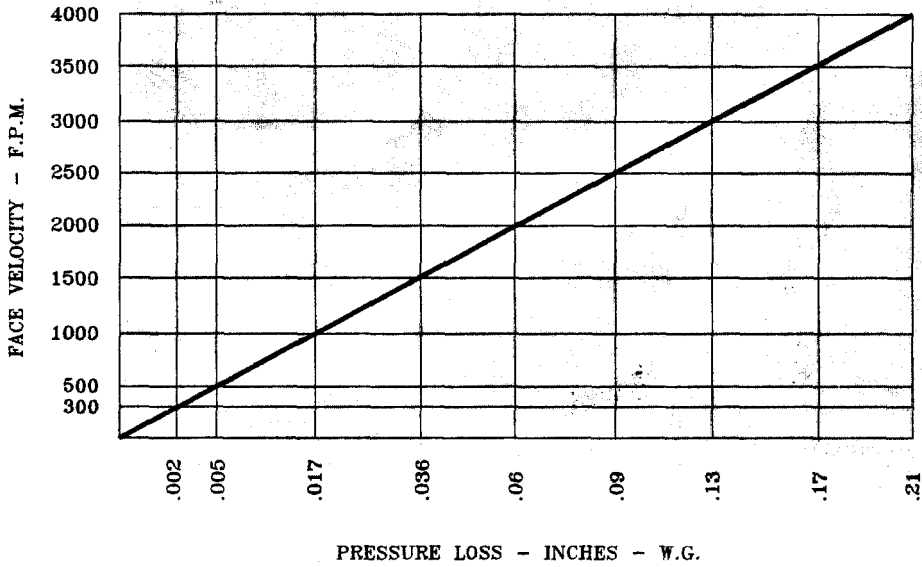
ACCESSORIES/OPTIONAL

- Heavy duty damper regulator
- Electric/Pneumatic operator
- Blade seal for low leakage application.

- Special finishes.
- Heavier / Special materials construction.
- Pre-drilled flange holes.
- Actuator ON/OFF or spring return type.

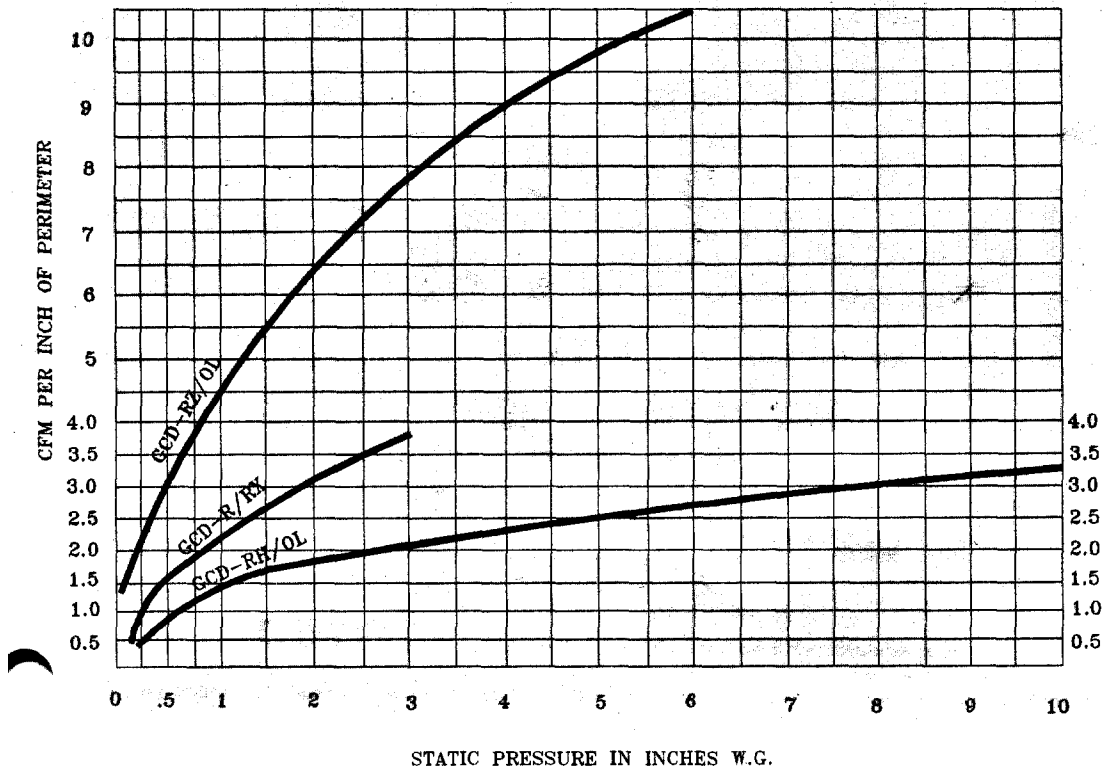
VOLUME CONTROL DAMPERS
MODEL-GCD-R,GCD-RX,GCD-RZ,GCD-OL,GCD-RH,GCD-OH

PRESSURE DROP CHART



PRESSURE DROP CHART IS BASED ON STANDARD AIR WITH DAMPER IN FULLY OPEN POSITION.

LEAKAGE CHART



LEAKAGE CHART IS BASED ON DAMPERS WITHOUT BLADE SEAL AND IN FULLY CLOSED POSITION.