



*Air Outlets*

# **VOLUME CONTROL DAMPER VCD**



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# VOLUME CONTROL DAMPER



## TYPES

- VCD : VOLUME CONTROL DAMPER - OPPOSED BLADE.
- VCDM : VOLUME CONTROL DAMPER C/W ELECTRIC ACTUATOR.

## FEATURES

### MATERIALS

- THE CASING AND BLADES ARE MADE FROM EXTRUDED ALUMINUM .

### FINISH

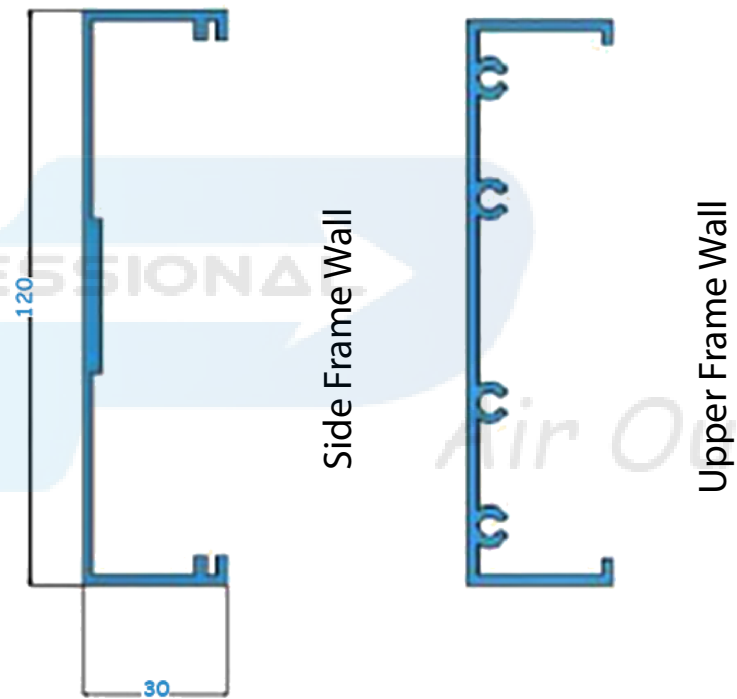
- STANDARD MILL FINISH OR POWDER COATED.

- THE VOLUME CONTROL DAMPER ARE SPECIFICALLY DESIGNED TO CONTROL AIR SUPPLY IN HEATING AIR CONDITIONING AND VENTILATION DUCT SYSTEM WHERE HIGH/ MEDIUM/ LOW PRESSURE.
- THESE DAMPERS ARE DESIGNED TO OPERATE FROM ONE CONTROL POINT.
- THE DAMPER CAN BE POWER OPERATED BY ELECTRIC ACTUATOR.
- OPPOSED BLADE ACTION VIA-GEARS.
- GEARS MADE FROM SPECIFIC PLASTIC TEMPERATURE RESISTANCE TO 70°C
- DRIVE ARM & HAND LOCKING QUADRANT MADE FRAME GALVANIZED STEEL.

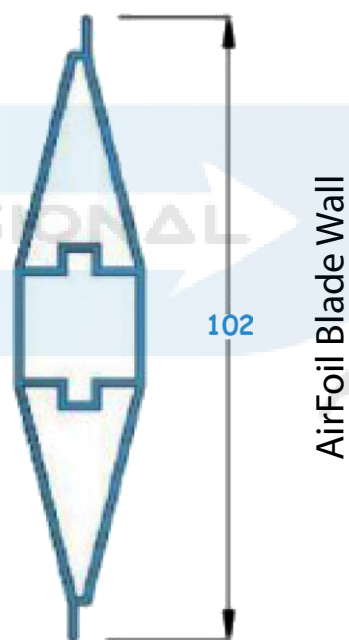


## VOLUME CONTROL DAMPER VCD

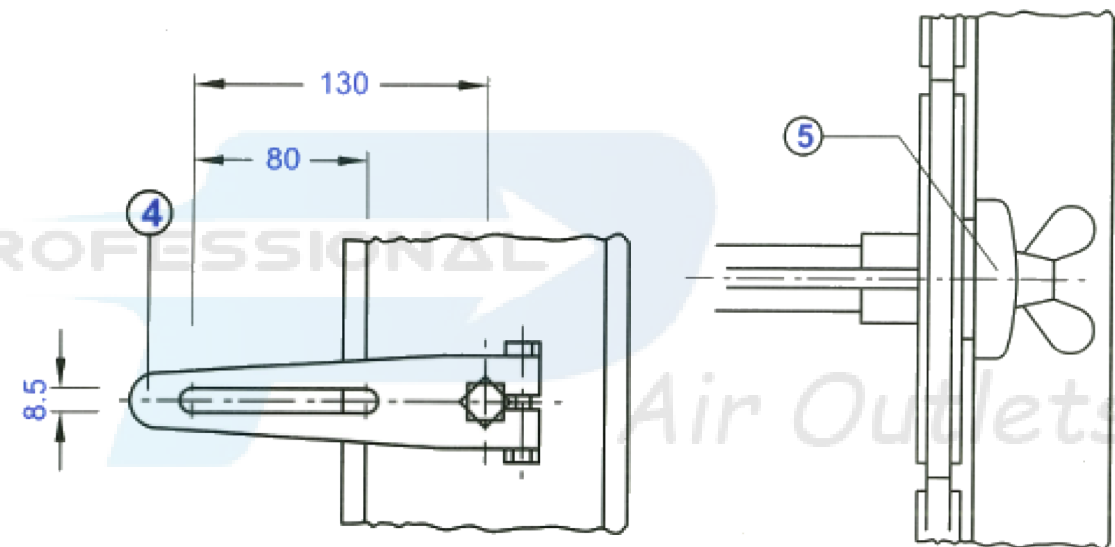
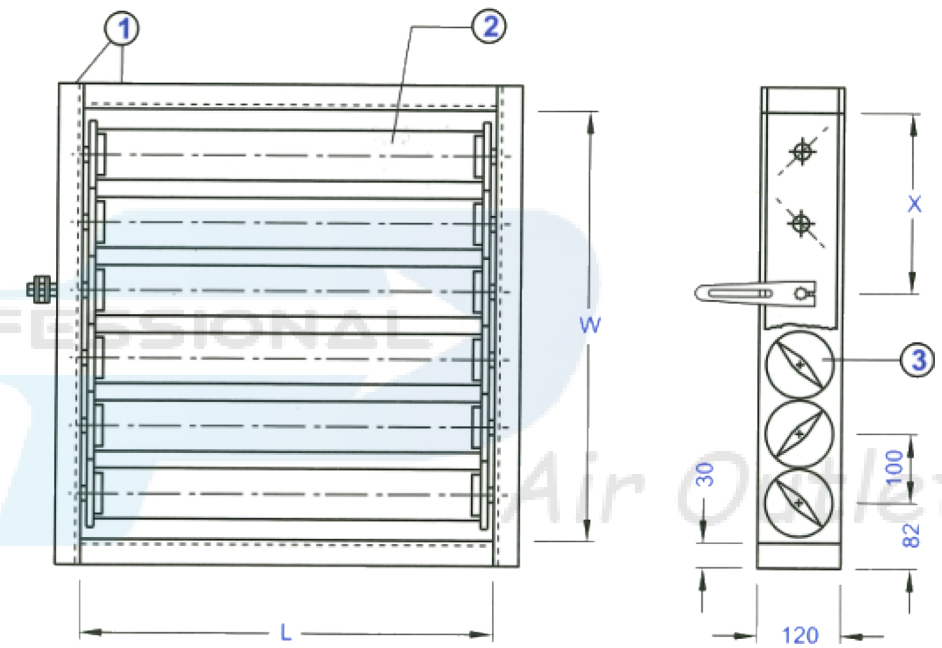
### FRAME



### BLADES



## VOLUME CONTROL DAMPER VCD



- 1..Casing (UPPER &SIDE FRAMES)
- 2.Blade
- 3.Plastic Gear
- 4.Drive Arm
- 5.Hand Locking Quadrant

## VOLUME CONTROL DAMPER VCD

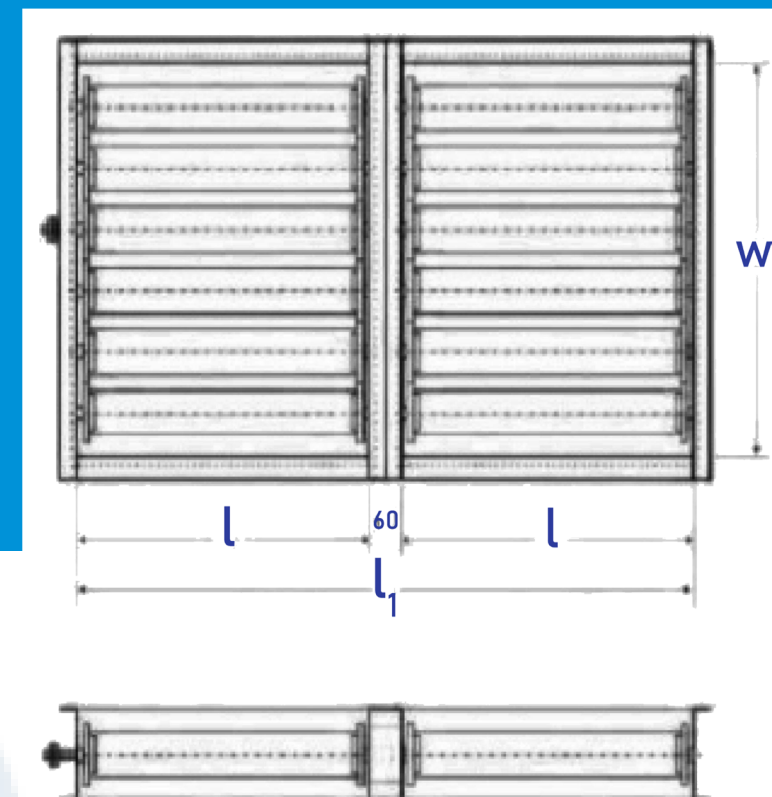
### POSITION OF DRIVE ARM

L (mm)	W (mm)	No. of Blades	Position of Drive Arm X (mm)
200	204	2	52
300	304	3	252
400	404	4	
500	504	5	
600	604	6	
700	704	7	
800	804	8	452
900	904	9	
1000	1004	10	

## VOLUME CONTROL DAMPER VCD

### SIZE

- Sub-division :For dimensions more than (1000mm\*1000mm) a double or more section is applied.

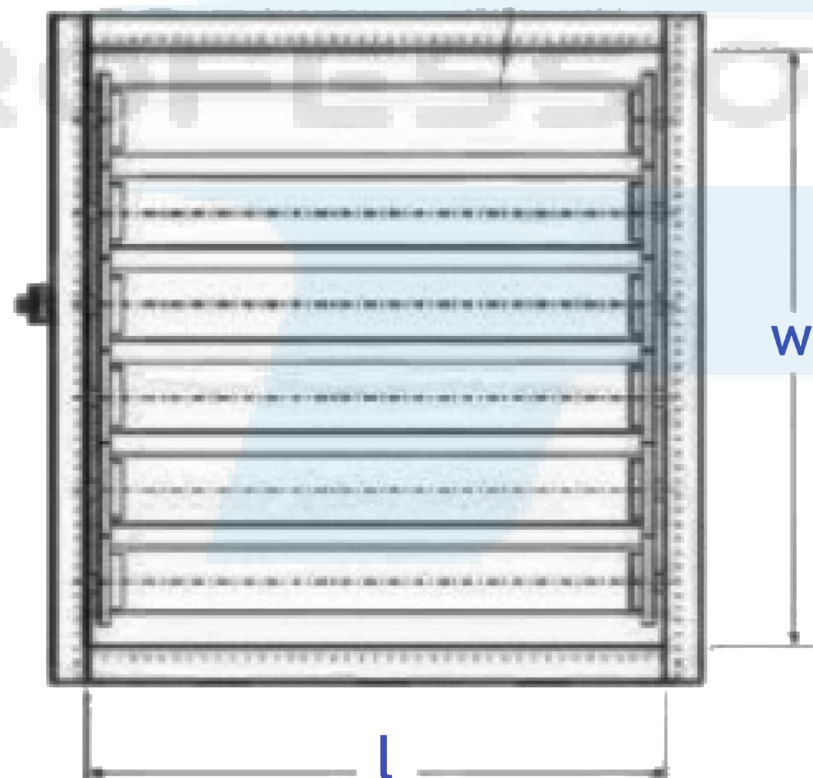


L Dimension sub-Division

L <sub>1</sub> (mm)	L (mm)	W (mm)
2460	1200	W Dimension Standard
2860	1400	
3260	1600	
3660	1800	
4060	2000	

### SIZE

- Single Section : For dimensions(1000mm\*1000mm) single section is applied.





## MOTORIZED VOLUME DAMPER



### MATERIALS

- ALUMINUM OR • GALVANIZED STEEL ( 1.25MM)

### MOTORS

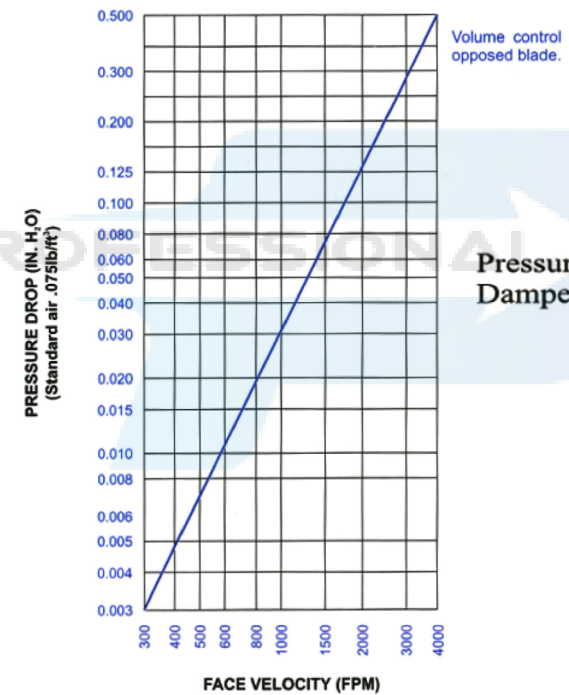
- HONEYWELL , BELIMO OR SAUTER

### TYPES OF MOTORS

- . O/C TYPE WITH SPRING RETURN FUNCTION .
- . O/C TYPE W/O SPRING RETURN FUNCTION .

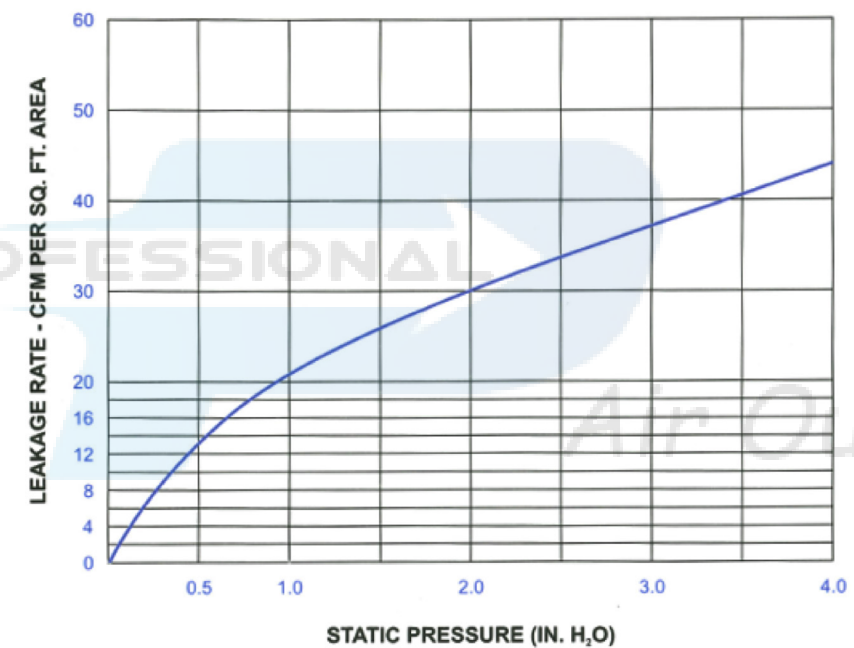
## PERFORMANCE DATA

**PRESSURE DROP CHART**



Pressure Drop Vs. Face Velocity with Damper in Open Position.

**LEAKAGE CHART**



## TYPES

- CVCD-LP : CIRCULAR VOLUME CONTROL DAMPER – LOW PRESSURE.
- CVCD-HP : CIRCULAR VOLUME CONTROL DAMPER – HIGH PRESSURE.

# FEATURES

## MATERIALS

- GALVANIZED STEEL



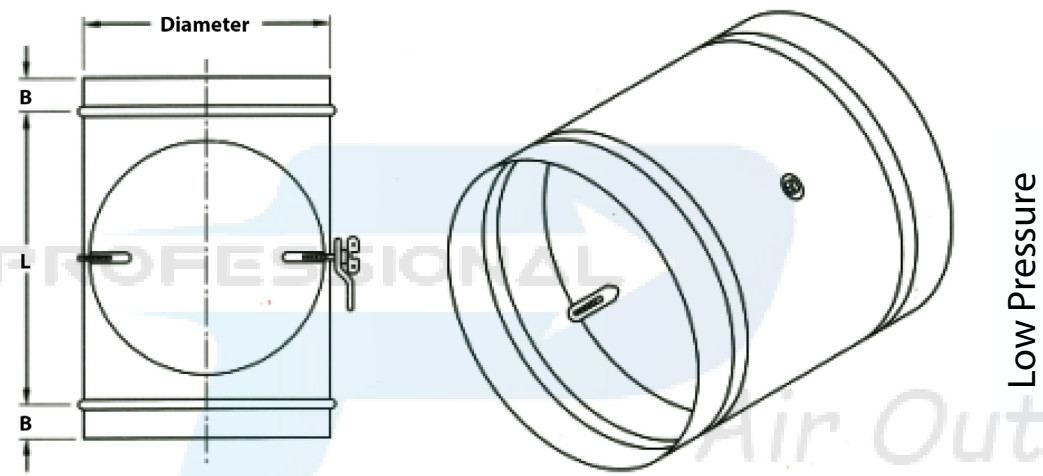
- THE CIRCULAR MODULATING DAMPER ARE SPECIFICALLY DESIGNED TO CONTROL AIR SUPPLY IN HEATING AIR CONDITIONING AND VENTILATION DUCT SYSTEM.
- IT PROVIDE NON-DIVERTING AIRFLOW AND REDUCE TURBULENCE.
- THESE MODULATING DAMPERS CONSISTS OF ONE BLADE AND CASING MADE BY GALVANIZED STEEL ( 18 GAUGE )
- OPERATION : HAND QUADRANT FOR MANUAL OPERATION.
- CIRCULAR MODULATING DAMPER CAN BE ORDER WITH MANUAL CONTROL OR ELECTRIC ACTUATOR.

## STANDARD SIZES IN DIAMETER

100mm	150mm	200mm	250mm	300mm
350mm	400mm	450mm	500mm	550mm

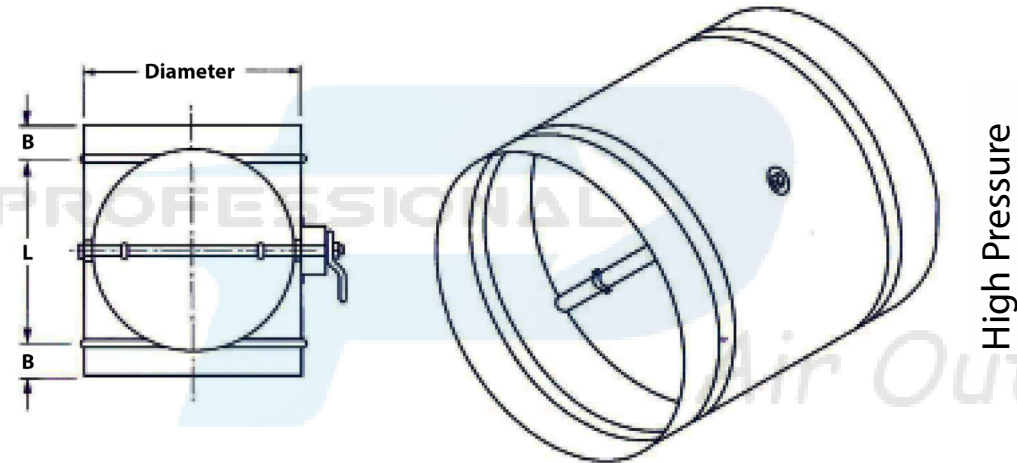
Non –standard sizes are also available

## MODEL (1) CVCD-LP



Regulator : Lower and upper parts of a rapid regulator set.

## MODEL (2) CVCD-HP



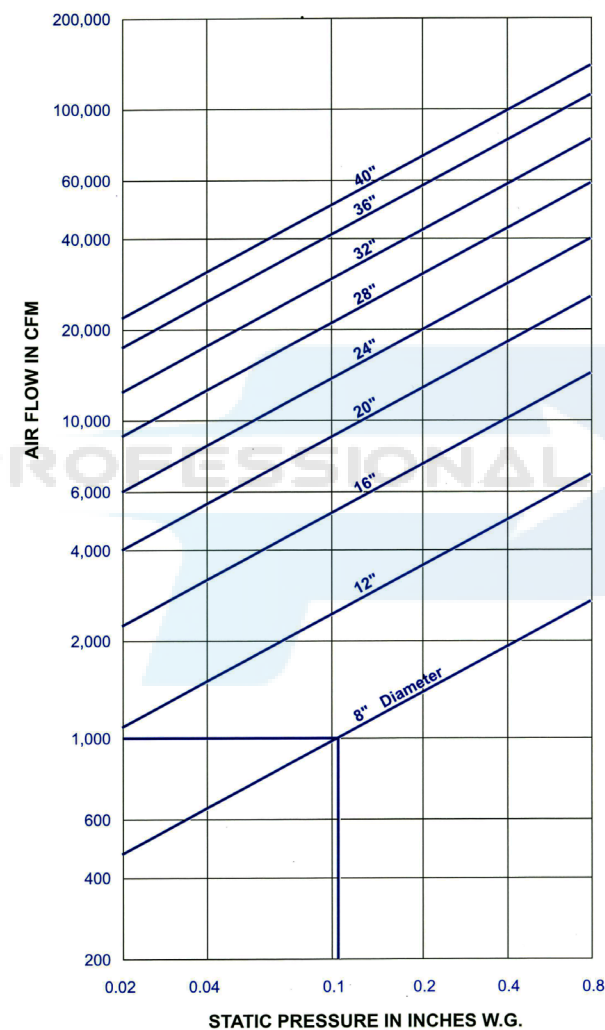
Axle : 1/2" square bar 'U' bolted to blade.

Diameter (D)	Length ( L )	B
Up to 150mm	200mm	25mm
Above 150mm	D + 50mm	

## PERFORMANCE CHARTS

### MODEL (2) : CVCD-HP ( CIRCULAR TYPE )

**STATIC PRESSURE DROP CHART**



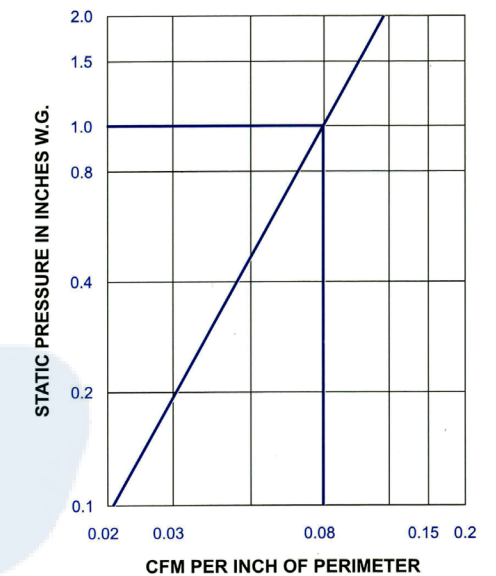
**Determining Static Pressure Drop**

To determine static pressure drop through an open damper, enter the damper pressure drop chart from the left side. Given the CFM of airflow through the damper, follow the CFM line to the diagonal line with the damper size required, then down to the static pressure drop of the unit.

**Example:**

The pressure drop of an 8" damper with 1000 CFM flow is 0.11 inches w.g.

**LEAKAGE CHART**



**Determining Leakage**

To determine damper leakage, enter damper Leakage chart from the right side. Given the static pressure the damper will encounter in closed position, move horizontally to the diagonal line, then go straight down the chart to CFM of leakage per inch of perimeter.

**Example:**

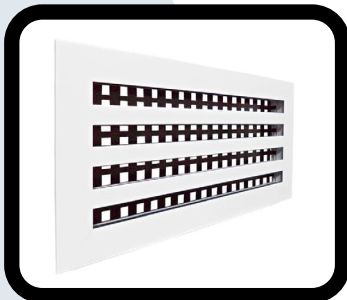
Damper operating 1" W.G. static pressure will leak 0.08 CFM per inch of perimeter. Total leakage on an 8" round will be  $8 \times 3.14 \times 0.08$  CFM per inch perimeter = 2 CFM leakage.

Static Pressure and CFM are corrected to 0.075 lb./cu.ft. air density.





**Linear Slot Diffusers LSD**



**Linear Bar Grilles LBG**

**External Louvers EX-L**



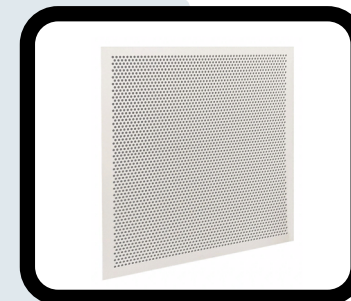
**Square Ceiling Diffusers SCD**



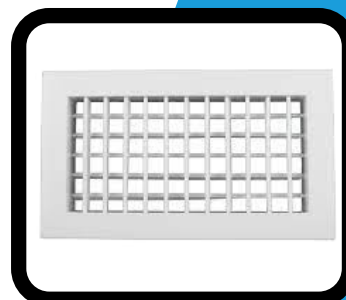
**Jet Nozzles JN**



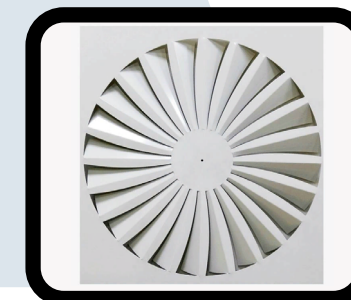
**Perforated Ceiling Diffusers PCD**



**Grilles And Registers SR**



**Swirl Diffusers SW-D**



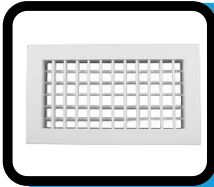
**Volume Control Dampers VCD**



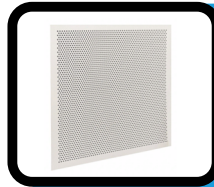
**Curtain Fire Dampers FD-C**







**GRILLES AND REGISTERS**



**PERFORATED CEILING  
DIFFUSERS**



**SQUARE & RECTANGULAR  
& Circular CEILING  
DIFFUSERS**



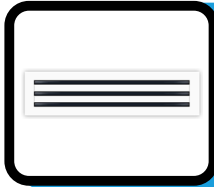
**GRAVITY SHUTTERS**



**LINEAR BAR  
GRILLES&REGISTERS**



**TRANSFER GRILLES**



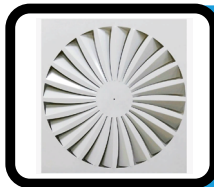
**Linear Slot  
Diffusers**



**DISC VALVES**



**EXTERNAL LOUVERS**



**SWIRL DIFFUSERS**



**SAND TRAP LOUVERS**



**VOLUME CONTROL  
DAMPERS**



**JET NOZZLES**



**CURTAIN FIRE  
DAMPERS**



**JET DIFFUSERS**



**SMOKE MOTORIZED  
DAMPERS**

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