

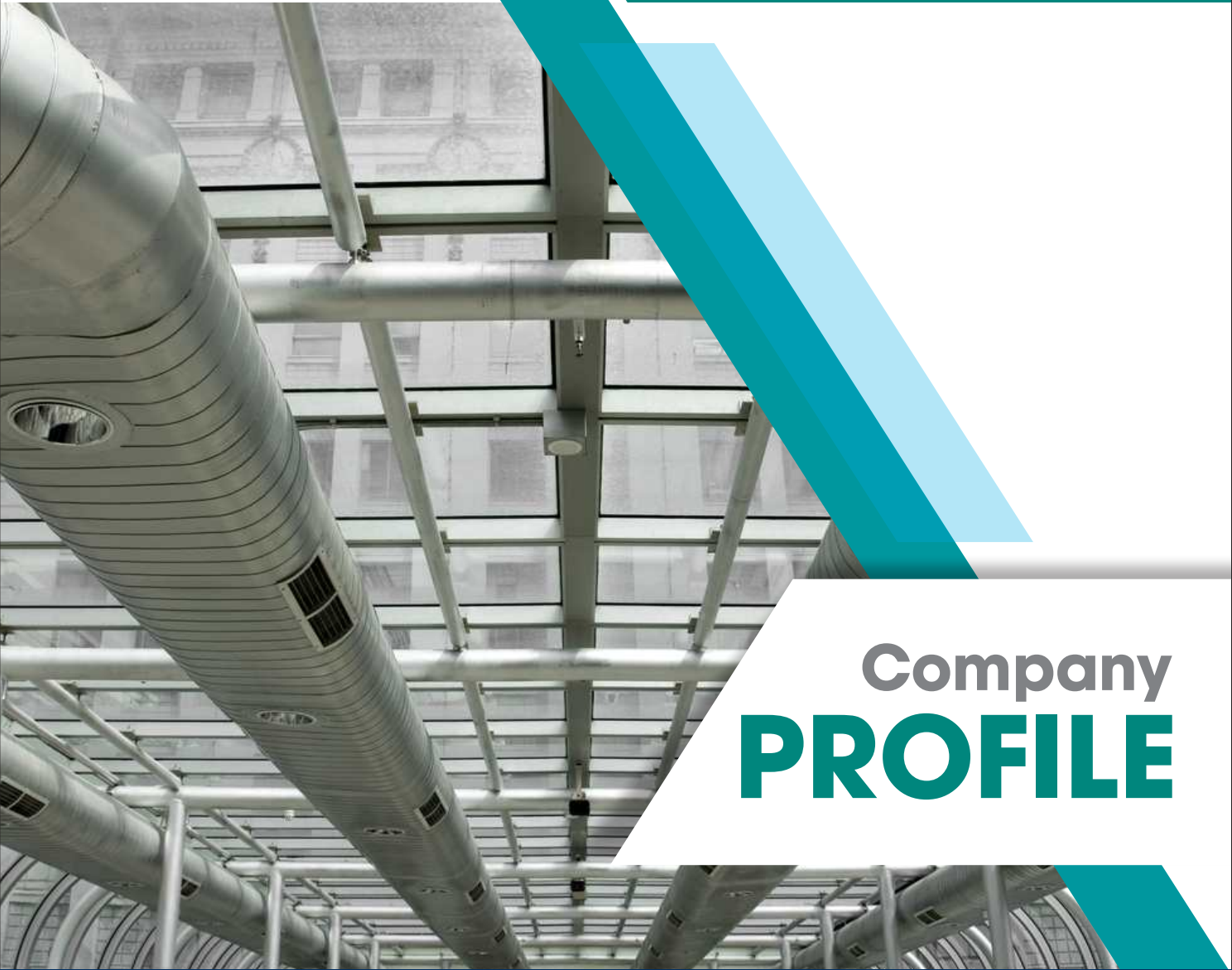


دائم الخضرة

لصناعة معدات التكيف ن.م.م.

EVER GREEN

Ref. Equip. Ind. L.L.C



Company **PROFILE**

CREATIVE • INNOVATION • PROCESS



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Sharjah - U.A.E.

Contents



1	Introduction	3
2	Product List	4
3	GI, PI, MS & SS Ducting	5
4	Formed Flang / TDC and Longitudinal Seams	6
5	Longitudinal SEAMS and Rectangular Fittings	7
6	Rectangular Elbows and Branch Connections	8
7	G.I and P.I Product	9
8	Fire & Smoke Dampers	10
9	Variable Air Volume (VAV) and Access Door	11
10	Sound Attenuator	12
11	Non Return and Splitter Butterfly Damper	13
12	Aluminum Bag & Filters	13
13	Sand Trap Louver and Exhaust Air Louver	14
14	Door Grill and Egg Crate Grill	15
15	Perforated Grill and Double Deflection Air Grill & Registers	16
16	Linear Bar Grill and Linear Slot Diffuser	17
17	Square Ceiling Diffusers and Round Ceiling Diffusers	18
18	Volume Control Damper	19
19	EVER GREEN STANDARD CONSTRUCTION	20

Introduction

WE STAND OUT WITH EFFICIENT AND EFFECTIVE SOLUTION FOR HVAC.....

Our aim is to understand our clients' needs and requirements and offer them quality products to meet their expectations at all levels.

We the **EVER GREEN Refurbishment Equipment Industry L.L.C.** is a professional manufacturing company established in 2007.

We are pleased to introduce ourselves as a leading manufacturer as well as **stockiest** of various **Central A/C Duct Accessories and Pipe support**.

We are the manufacturers of Volume Control Damper, Access Door, Round VCD, GI Ring, Fire Damper, VAV Boxes, Sound Attenuator, Splitter Damper, Butterfly Damper, Fresh Air Liuver, Non Return Damper (NRD), Grills (Liner Bar / Slot Grill), Diffuser (Liner Bar / Slot Diffuser, Exhaust Air Louver (EAL), Aluminum Filters & GI Ducting.

Additionally, **EVER GREEN** has a manufacturing of the **Electrical accessories and Pipe Support**. And also we do all types of metal fabrication (**G.I, MS, Aluminum, Stainless Steel, Brass, Bronze etc.**) work.

Our Factory is located in Sharjah Industrial Area No. 13, Equipped with all the Latest Machines and Dies required, which makes us to give you the delivery at a challenging time.

Our Production team consists of well trained and highly qualified employees to insure best quality and high reliability products. Our dealings and relation with the various consultants and contractors are very good. Our good relationship with them helps us to complete the project successfully.

Our company's goal is Customer Delight. We believe to give first quality service all the time. If you have any enquiries, please do not hesitate to contact us. Assuring you our best attention and co-operation all the time

Product List

1. GI, PI, MS & SS Ducting
2. Fire & Smoke Dampers
3. Variable Air Volume (VAV's)
4. Access Door
5. Sound Attenuator
6. Non Return Damper
7. Splitter Damper
8. Butterfly Damper
9. Aluminum Bag & Filters
10. Sand Trap Louvers
11. Exhaust Air Louvers
12. Door Grills
13. Egg Crate Grills
14. Perforated Grill
15. Double Deflection Air Grill and Register
16. Linear Bar Grill
17. Linear Slot Diffuser
18. Square Ceiling Diffusers
19. Round Ceiling Diffusers
20. Volume Control Dampers
21. Flanges & Corners
22. Supply & Return Air Grills
23. Supply Linear Bar Grills
24. Return Linear Bar Grills
25. Square Ceiling Diffusers
26. Rectangular Ceiling Diffusers
27. Round Ceiling Diffusers
28. VCD Handle, Spindles & Bushes
29. SA / FAD Accessories
30. G Clamp, Tiger Connector
31. U Bolt, U Strip
32. Clevis Hanger
33. Split Clamp

GI, PI, MS & SS Ducting

Duct and Fitting

Ever Green manufactures GI, PI, MS & SS Square and Round Ducting in all gauges.

Description:

Duct Work Manufactured To The Following Specifications :

- SMACNA
- DW142/144

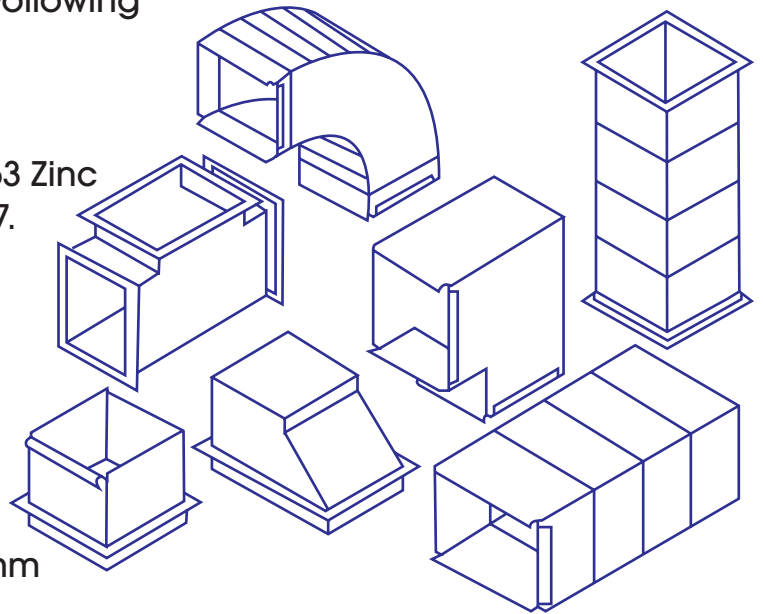
Galvanized Steel To Astm A527/653 Zinc Lock Forming Grade Of G90 / Z 27.

Options:

- Plain End Or Flange
- Black Mild Steel
- Aluminum
- Stainless Steel

Thickness:

- 0.4Mm Thik . Up To 3mm Thik
- Standard Straight Length 1200mm



Rectangular Straight

A SEAM

PITTSBURGH SEAMS

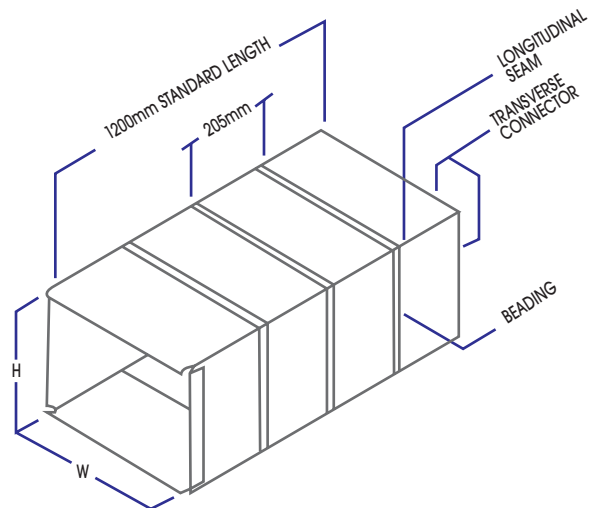
Small PITTSBURGH for 26 to 22 ga

Largest PITTSBURGH for 20 to 18 ga

B BEADING

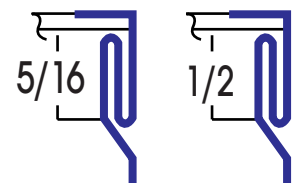
BEADING standard distance is at every 305mm interval up to 18ga steel thickness only.

beading is only for standard straight length of 1200mm.



C CONNECTOR

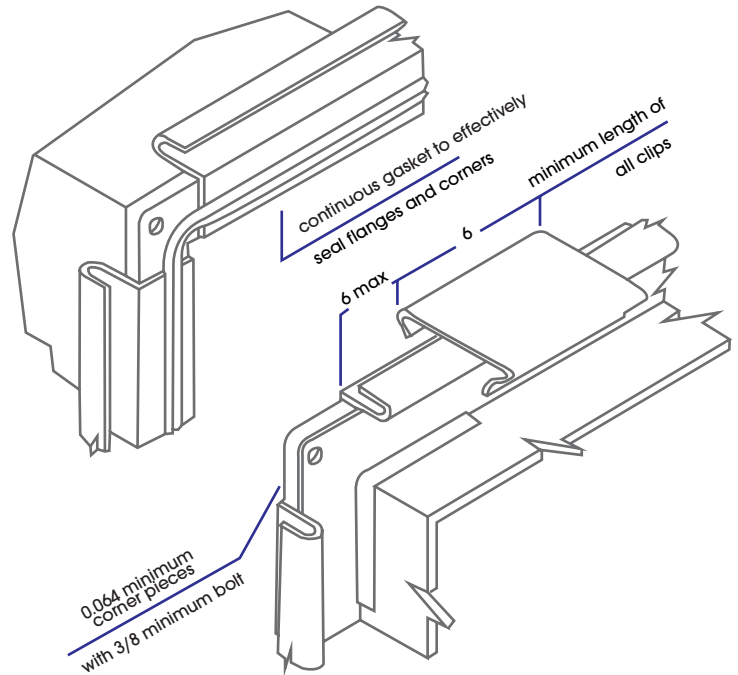
For Connector Details, Refer To Standard Duct Construction Schedule



Formed Flange / TDC

Joint t-24, formed flange : mating flanges are formed on the end of the duct in double flange style to create a tee shape when assembled. 0.064" Minimum thickness Steel corner pieces with 3/8 minimum Diameter bolts shall be used to close Corners.

1/4" By 1/2" minimum size gaskets of suitable density and resiliency shall be continuous around the joint and shall be located to form an effective seal. Mating Flanges shall be locked together by 6" long clips located within 6" of each corner and Also spaced at centers not exceeding 15" of 3"w.G or less static pressure, nor Exceeding 12" for 4", 6" and 10"w.G.



Securely attach additional Metal clips on flanges at 1.5" Maximum centers for 3"W.G static or less and at 12" Maximum centers or higher Pressures 22 ga Minimum.

Longitudinal Seams

Pittsburgh Lock

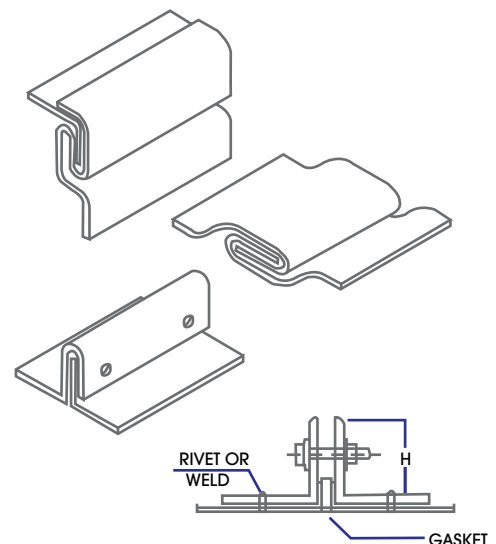
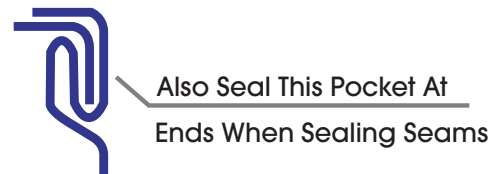
Pittsburgh seam : pocket depth varies From 1/4" to 5/8" depending on Gauge of metal and roll form equipment. The most common sizes are 5/6" and 3/8" Used on straight duct and fitting

Grooved Seam

Also called flat lock and Pipe lock type illustrated is Known as pipe lock, flat Lock or grooved seam.

Standing Seam

Unless other wise Required by the application, A1" seam is normally used up to 42" Duct width with 1 1/2" seams For larger ducts, May be used on interior of the Duct with due consideration for Velocity level. Fasten together At ends and 8" intervals. Companion angles (Caulk or gasket)



Longitudinal SEAMS



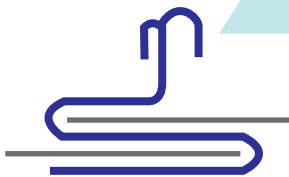
Drive Slip



Plain "S" Slip

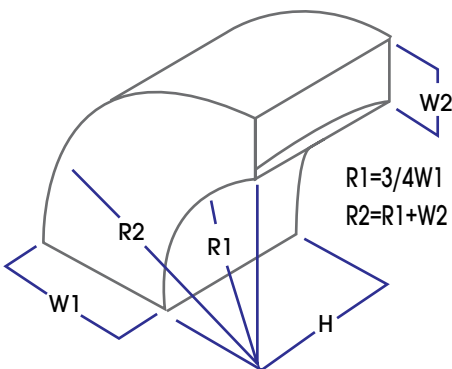


Hemmed "S" Slip

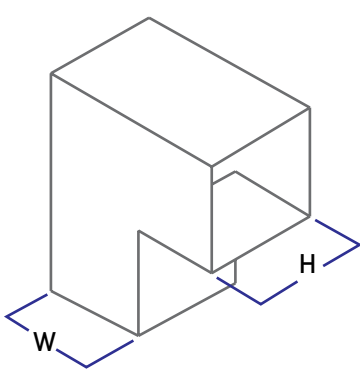


Standing S

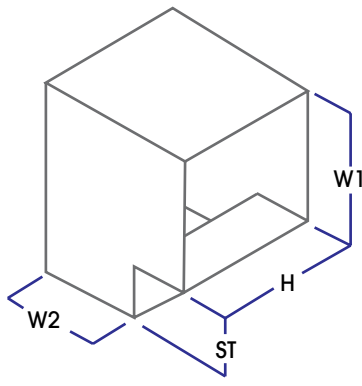
Rectangular Fittings



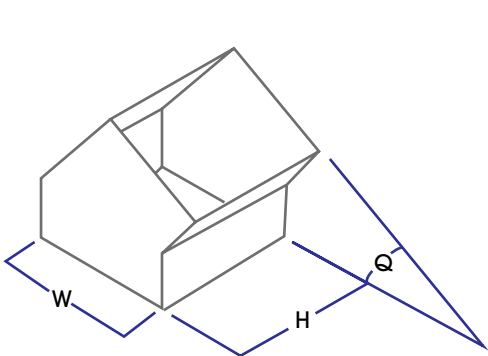
Dual Radius Elbow



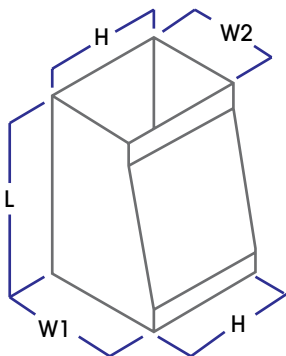
Square Throat Elbow Without Vanes



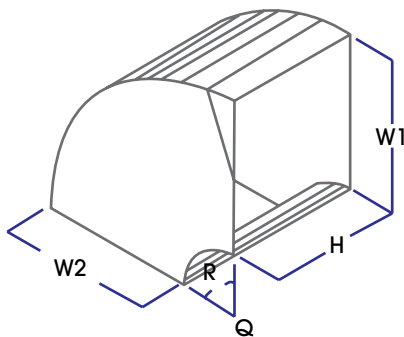
Square Throat Elbow



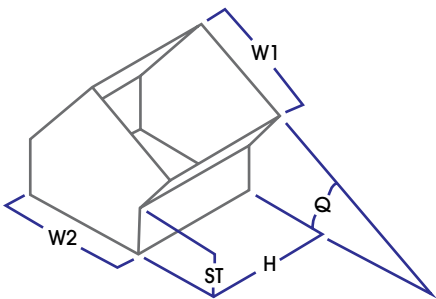
Mitered Elbow



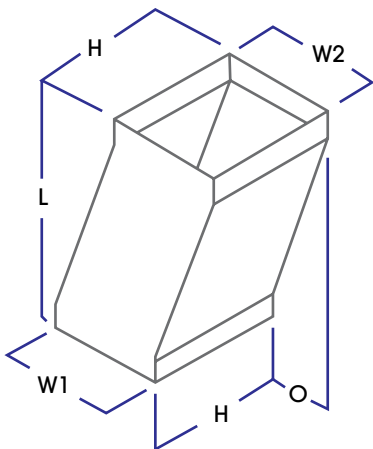
Straight Side Transition



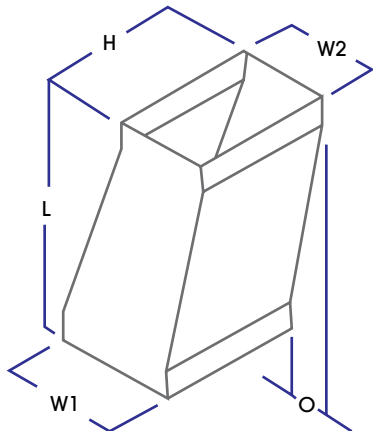
Angled Elbow



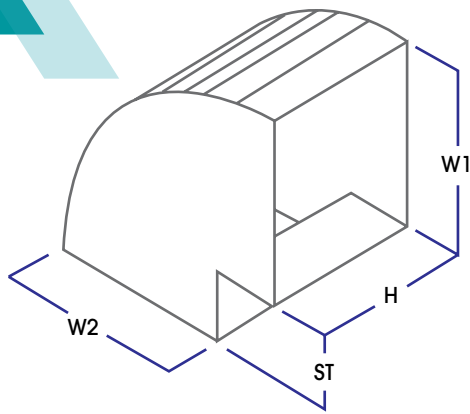
Radius Elbow Vanes
Depending On Elbow Width



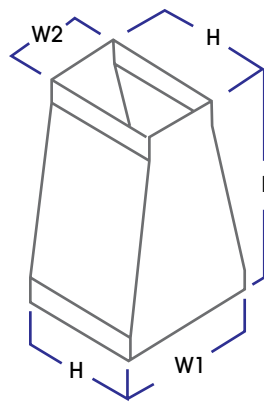
Dogleg Offset Equal Ends



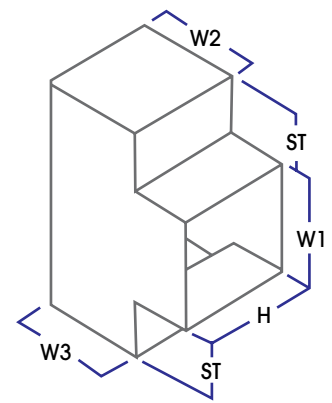
Dogleg Offset Unequal Ends



Square Throat Radiused
Hell Elbow

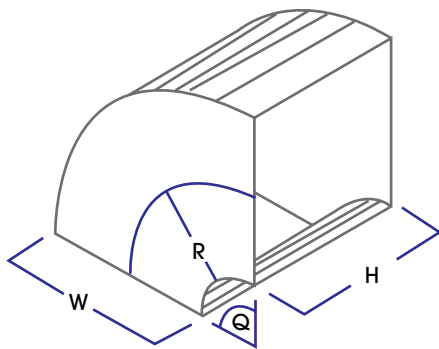


Equal Side Transition



Tee

Rectangular Elbows

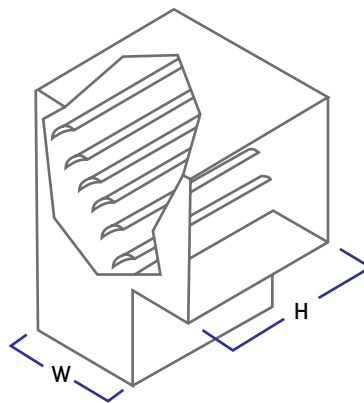


Radius Elbow
(Centerline $R = 3W / 2$ STD Radius)

W = up to 300mm No Splitter

W = over 300mm up to 500mm 1' no Splitter. $3W/2$

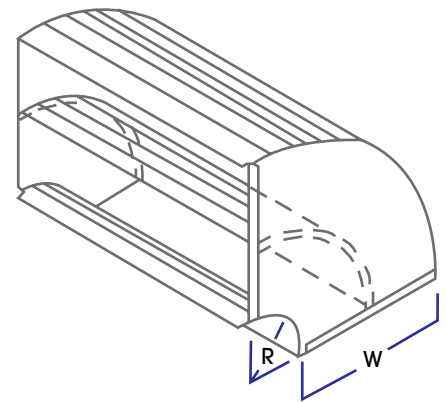
W = over 500mm up to 1000mm 3' no splitter ($W/6$, $W/2$)



Square Throat
Elbow With Vanes

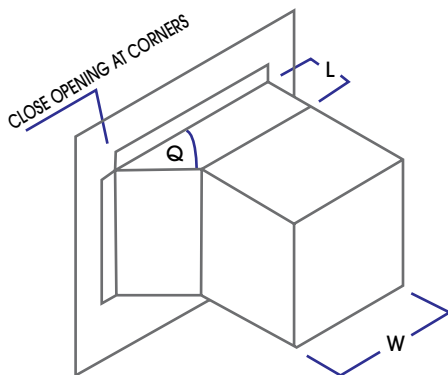
W = over 1000mm 3' no splitter ($W/12$, $W/4$, $W/2$)

Long Bends - ($R=W$), no splitter Required

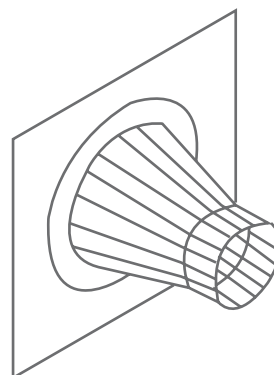


Short Bends

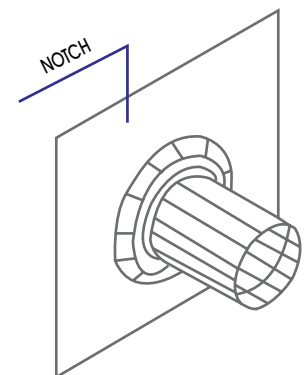
Branch Connections



Straight Tap Connection
45 DEGREE ENTRY $Q = 45$
 $L = 1/4W$, MIN



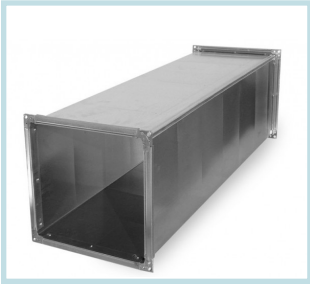
Conical Tap Connection



Spin In Tap Connection

- W1 = Width On End 1 • W2 = Width On End 2 • W3 = Width On End 3 • H = Duct Height • St = Square Throat Length
- L = Length • R = Radius Centerline Rod = $3w / 2$ STD Rod • Q = Degree • O = Offset
- If (H) On both ends are not the same, indicate elevation.

G.I Duct Products



Straight



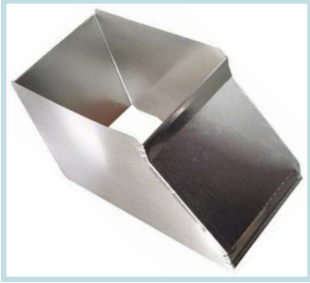
Taper



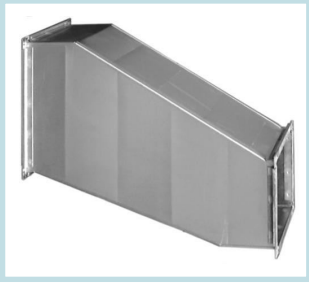
Elbow



Y . Elbow



Shoe



Offset



Y . Branch



Plenum Box



Round Duct



Round to Square



Round Elbow

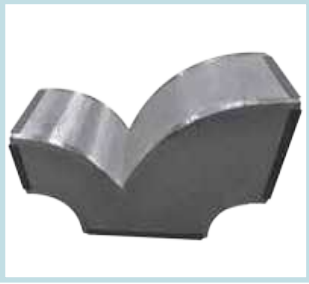


Round T

P.I Duct Products



Taper



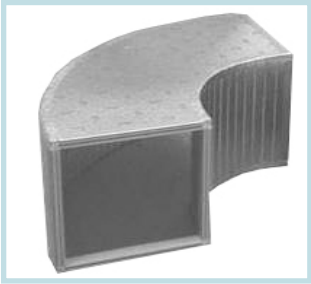
Y . Branch



Straight



Y . Elbow



Elbow



Shoe



Offset

Fire & Smoke Dampers

Ever Green Manufactures fire Dampers, which are designed to stop the spread of fire by means of localizing areas of fire zones, to prevent distribution of the through air conditioning ducts or wall in central HVAC systems. These Fire Dampers offer an effective fire barrier by maintaining integrity in a fire situation. And are rated up to two to four hours ratings, combined with low leakage characteristics.

Ever Green Fire Dampers are suitable for installation in sheet metal ductwork, or fire walls or ceiling slabs made from concrete or brick work. Ever Green Fire Dampers are available in variety different casings all fully welded, Square & Rectangular, Round & Oval and in both in Curtain and Multi blade for duct / wall fixing with any sizing capability within minimum dimensions.

Ever Green motorized smoke dampers are constructed of galvanized steel sheet, rectangular shaped, high strength structure, and flange type. Linkage designed to be outside of the airstream (concealed in frame). Blade edge seals are silicon edge type, mechanically locked into blade edges. Jamb seals are flexible stainless steel sheet compression type to further ensure low leakage of air / smoke. It is 3 hours fire rating and Classification II leakage as well. Classification II (Air / Smoke leakage shall be not greater than 10 CFM/12 at pressure difference 1 in wg., or 20 CFM/12 at pressure difference 4 in wg.)

Blade(s) are hold at full open position by the electric actuator, spring return type. Blade(s) will be automatically closed and locked within 20 seconds during fire conditions, smoke detection or power failure through the actuator closure springs. The electric actuators, spring return type wiring and terminals are also completely equipped. Suitable for mounting to duct lines installed through open in wall, partitions or floors to prevent fire/smoke transfer through the opening in wall partitions or floors.



Smoke Damper



Fire Damper

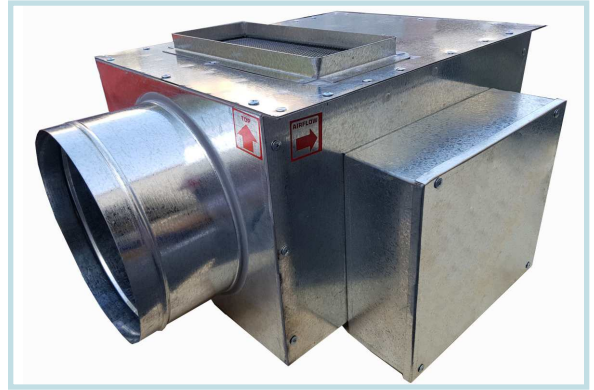
Variable Air Volume (VAV)

Bypass terminal units handles constant supply of primary air through its inlet and uses a diverting damper to bypass part of supply air into the plenum return.

The damper is directly controlled by room thermostat in the occupied space to provide the volume of air required to meet the thermal demand.

The pressure requirement through the supply air path to the conditioned space is set with an inlet balancing damper. A Second manual balancing damper in the bypass is field adjusted to match the resistance in the discharge duct in order to maintain minimum airflow to the space. Although variable air volume to the space in operation varies, total airflow of the fan remains constant so the fan power and associated energy cost is not reduced. Therefore bypass unit are energy efficient as compared to VAV system.

Internal walls of VAV are lined with 13mm thick, density 24kg/m³ acoustic liner made of mineral fiber & edges are coated with adhesive or concealed with metal stiffener to seal loose fiber.



Access Door

Access Door is available in all sizes. Frame thickness for standard size is 0.9mm box thickness 0.7mm with camlock and gasket. Hinges and chain function in optional.



Sound Attenuator

All fans / Impeller used in Air Conditioning system produce noise, relevant to the amount of work they do to move the air, much of the noise is generated by the fluctuations of radiated pressure and these pressure waves are distributed approximately equally in all directions, causing "ductborn noise" and "breakout" or "sinking noise". Our silencer are the reliable answer to those noise problems.



Our sound attenuator (Silencer) is carefully designed to combat noise problems. Galvanized steel outer casing of the silencer is designed to HVAC standard, perforated battles is filled with an odorless, incombustible, vermin proof and moisture proof inorganic sound absorbing material. Primary function of this unit is to reduce noise, operated smoothly, efficiently and trouble free service.



Rectangular sound attenuator performance data

LENGTH (INCHED)		STATIC PRESSURE DROP (IN W.G.)									
36		0.04	0.06	0.13	0.20	0.24	0.34	0.43	0.52	0.61	0.67
60		0.04	0.11	0.16	0.26	0.34	0.44	0.54	0.65	0.78	0.84
84		0.06	0.12	0.18	0.29	0.37	0.47	0.59	0.71	0.85	0.92
Size W x H (in.)	Face Area (Sq. Ft.)	FACE VELOCITY (fpm)									
		650	900	1100	1400	1500	1800	2000	2200	2400	2500
		AIR VOLUME (cfm)									
12 x 6	0.5	325	450	550	700	800	900	1000	1100	1200	1250
12 x 12	1.0	650	900	1100	1400	1600	1800	2000	2200	2400	2500
12 x 18	1.5	975	1350	1650	2100	2400	27	3000	3300	3600	3750
12 x 24	2.0	1300	1800	2200	2800	3200	3600	4000	4400	4800	5000
12 x 30	2.5	1625	2250	2750	3500	4000	4500	5000	5500	6000	6250
12 x 18	3.0	1950	2700	3300	4200	4800	5400	6000	6600	7200	7500
12 x 24	4.0	2600	3600	4400	5600	6400	7200	8000	8800	9600	10000
12 x 30	5.0	3250	4500	5500	7000	8000	9000	10000	11000	12000	12500
12 x 36	6.0	3900	5400	6600	8400	9600	10800	12000	13200	14000	15000

Non Return Damper

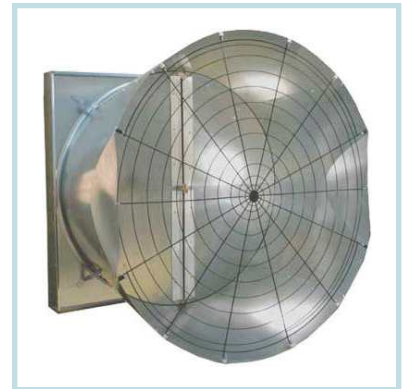
Ever Green Series Non Return Dampers are square and rectangular type with Single skin Aluminum blades to suit for medium performance applications where dampers are subjected to face quiet, efficient, balancing the air volume and medium duty operation.

The standard construction is suitable for use up to a maximum pressure of 2000 pa. The square and rectangular type NRD's are designed for balancing maximum air capacities at minimum pressure drop.

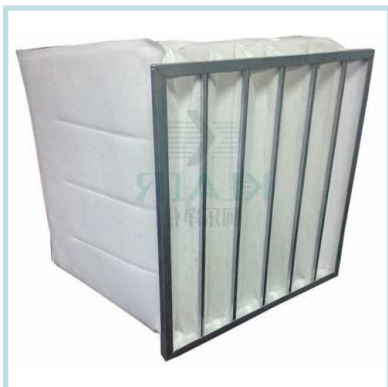


Splitter & Butterfly Damper

Ever Green also manufacturing Splitter Damper, Butterfly Damper, Dragonfly Damper and Heavy Duty Back Draft Damper in all standard and non standard sizes in every kind of metal sheet



Aluminium Bag & Filters



Sand Trap Louver

Ever Green manufactures Sand Trap Louvers for fresh air intake in HVAC systems, which are designed to separate large size sand particles at low air velocities thus avoiding excessive dust loading on conventional secondary stage filters. They give excellent performance for air filtration and moderate pressure drops at low air velocities.

The STL is made of aluminum sections. It is composed of two sets of inverted U channels, mounted vertically on two opposite rows. Aluminum washable filter (optional) can be installed on the neck of the Louver filter is 1" inch in thickness and higher thickness is available in optional.



Effective pressure areas Sq. Mts.

w x h (mm)	300	450	600	750	900	1050
300	0.028	0.043	0.059	0.073	0.089	0.104
450	0.043	0.066	0.089	0.112	0.134	0.157
600	0.059	0.089	0.119	0.150	0.181	0.258
750	0.073	0.112	0.150	0.118	0.226	0.273
900	0.089	0.134	0.181	0.225	0.273	0.318
1050	0.096	0.145	0.196	0.246	0.296	0.345

Exhaust Air Louver

The frame and blades are extruded aluminum alloy 6063 T6 Heat Treatment and are polyester powder coated with white finish. The frame and blades have a typical wall thickness of 1/16". The blades are spaced 3" on center and are set at 45° to the horizontal. An expanded aluminum bird screen is attached to the interior face of the louver.

Standard finish is white color for frame and blades. Painted under electrostatic polyester coated system. Other colors available on request. The polyester powder of highest quality are used to enhance the appearance of the units.



Door Grill

The frame and blades are extruded aluminum alloy 6063 T6 Heat Treatment and are polyester powder coated with white finish. The chevron style blade are mounted in the PVC track and are spaced 1/2" on center. The frame adjusts to suit door thickness from 1-3/8 inches.

Standard finish is white color for frame and blades. Painted under electrostatic polyester powder coated system. Other colors available on request. The polyester powder of highest quality is used to enhance the appearance of the units. Suitable for doors, walls or partitions where a sight proof transfer grille is required.



Egg Crate Grill

Ever Green Egg Crate grilles are either ceiling mounted or wall mounted air terminal devices used as exhaust air grilles for domestic and industrial applications.

The relatively large effective area of the crate grille permits better performance for return air applications effective area is 90% of the normal area. This generates low pressure drop and low noise level. The core of the Egg Crate grill is made of aluminum strips assembled to form equally distributed and sized square cells.

The frame of the Egg Crate grill is made of extruded aluminum bar. Insulating gasket (optional) is fixed around the back of the frame to prevent infiltration between the frame.



Perforated Grill

The perforated air grille is a ceiling / wall air terminal device that is composed of perforated sheet fixed to a frame. The perforated sheet is made of heavy GI, powder coated to RAL 9010 or 9016 as standard. Other colours available as per decorator request.

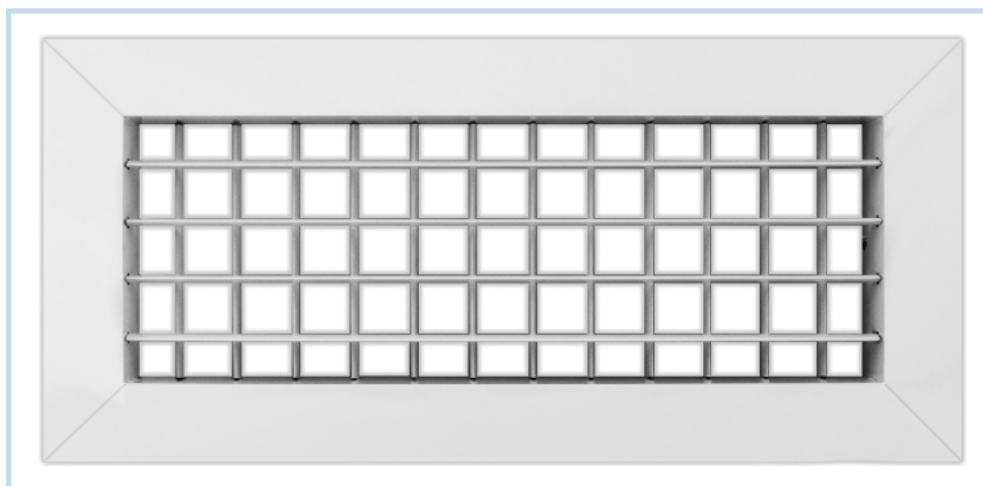
The frame is made of extruded aluminium bars. Fixing options are concealed spring fixing (CSF) for wall mounting or visible screw fixing (VSF) for ceiling mounting. Perforated face has (3/16) inch diameter holes on (1/4) inch staggered centers. The perforated air grilles are used in cooling, heating and air ventilation. They are usually used as return grilles.



Double Deflection Air Grill & Registers

Ever Green double deflection grille with an apposed blade damper, providing air deflection in both horizontal and vertical planes. Frame and blades are extruded aluminum alloy 6063 T6 Heat Treatment and are polyester powder coated with a white finish.

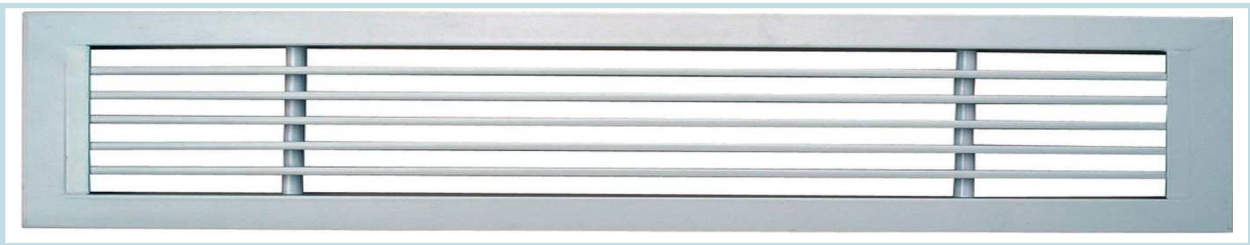
The frame has a typical wall thickness of 1/16" and is separated from the blades with PVC bushings. This method of assembly eliminates corrosion and vibration. The frame mounting holes are dimpled, allowing for a counter-sunk fastener head appearance. All blades are airfoil in design, individually adjustable and spaced 3/4" on center. Deflections of blades are easily set without use of special tools.



Linear Bar Grill

The frame and blades are extruded aluminum alloy 6063 T6 Heat Treatment and are polyester powder coated with white finish. The chevron style blade are mounted in the PVC track and are spaced 1/2" on center. The frame adjusts to suit door thickness from 1-3/8 inches.

Standard finish is white color for frame and blades. Painted under electrostatic polyester powder coated system. Other colors available on request. The polyester powder of highest quality is used to enhance the appearance of the units. Suitable for doors, walls or partitions where a sight proof transfer grille is required.



Normal width (mm)	CFM/m	NC	Nominal Width (mm)	CFM/m	NC
50	60-300	<20	150	250-1100	<20
75	90-550	<20	175	300-1200	<20
100	150-700	<20	200	350-1300	<20
125	210-950	<20	250	420-1450	<20

Linear Slot Diffuser

Frame and curved deflection blades are made of extruded aluminum alloy 6063 to T6 Heat Treatment. Available with Hit and Miss Damper of GI sheet to control air flow rate without affecting the air flow patterns, 180° fully adjustable air flow patterns by means of two air deflector blade per slot.

Both Deflector Blades and Hit & Miss Damper are powder coated with black color. Available in 1" to 8" slots. Standard Slot Width is 1/2" (16mm) 3/4 (20mm) optional.



Listed Sizes

No. of Slots	1	2	3	4	5	6	7	8
Neck Size	40	80	120	150	190	230	265	305
Out-Out (mm)	76	115	152	190	230	266	305	345
CFM/m	30-320	65-410	95-450	130-650	160-800	190-950	230-1100	250-1300

Square Ceiling Diffusers

Ever Green Square Ceiling Diffuser with multiple air flow patterns and with volume control damper. The frame and blades are extruded aluminium alloy 6063 T6 Heat Treatment and are polyester powder coated with a white finish. The frame and blades have typical wall thickness of 1/16".

The inner core of the diffuser is fully removable for easy installation. It is held in place with four machine screws and two spring steel clips which together center the core in the frame. The ceiling diffuser projects 3/16" from the mounting surface. The unit size increase in 3 inches increments beginning with 6 in x 6 in as the smallest available.

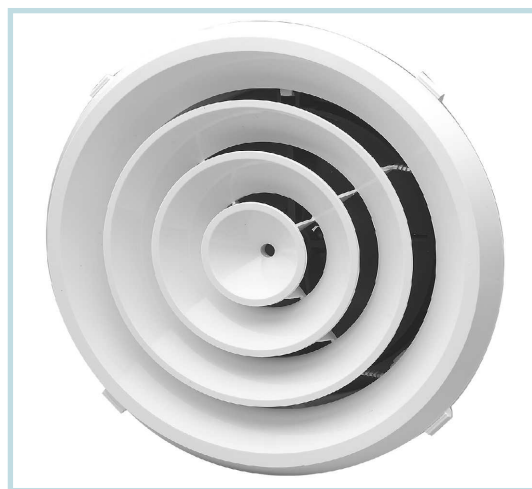


SQUARE DIFFUSERS DIMENSIONS		
Size (Inch)	Size (mm)	CFM Range
6 x 6	150 x 150	50 - 220
9 x 9	225 x 225	100 - 510
12 x 12	300 x 300	200 - 900
15 x 15	375 x 375	300 - 1400
18 x 18	450 x 450	450 - 2100
21 x 21	525 x 525	600 - 2800
24 x 24	600 x 600	800 - 3500

Round Ceiling Diffusers

Supply or exhaust round ceiling diffusers with fully adjustable cores to provide horizontal or vertical air pattern. The "UP" position of the core provides vertical throw and "DOWN" position provides horizontal throw.

Expanded cones feature gives a high degree of mixing of primary and secondary air that provides excellent air distribution and efficiency. Removable inner core permit easy installation and access to duct for maintenance.



ROUND DIFFUSERS DIMENSIONS		
Size (Inch)	Size (mm)	CFM Range
6" Dia	150 Dia	50 - 300
8" Dia	200 Dia	100 - 550
10" Dia	250 Dia	150 - 850
12" Dia	300 Dia	200 - 1200
14" Dia	350 Dia	300 - 1700
16" Dia	400 Dia	400 - 2200
18" Dia	450 Dia	550 - 2800

Volume Control Damper

Ever Green Series Volume Control Damper are square and rectangular type with both parallel blade opposed blade operation, (Single skin or Double skin blade construction). To suit for high performance applications where dampers are subjected to face quiet, efficient, rattle free and heavy duty operation.

The standard construction is suitable for use up to a maximum pressure of 3000 pa. The square and rectangular type VCD's are designed for handling maximum air capacities at minimum pressure drop.



Motorized Square



Self Flange



Duct Made Flange



Self Flange



Motorized Round



Round

EVER GREEN STANDARD CONSTRUCTION

- **FRAME:** Volume Control Damper frame is made of galvanized sheet thickness 0.9mm for series F.B & CS and 0.7mm for R Series. All Spotted “welded” joints are protected by trust proof or aluminum paint coating.
- **BLADE:** Aluminum Aerofoil Blades width 100mm are installed in Series F, B & CS white G.I. blade is also installed on customer's demand. For R Series 0.9mm to 1.2mm G.I. Single or Double Blades (Single or Double blades depend upon the VCD size or pressure of air flow) are install according to the size of damper, S.S. blades are also available on demand.
- **BUSHES:** The Bushes are of heat resistant. Nylon and property positioned in the damper frame through which the galvanized steel bare of the damper blade pass through to provide rattle free smooth operation.
- **MECHANICAL LINKAGE:** Mechanical linkage is of galvanized angle formed bars of thickness 1.5mm to 2mm (depends upon the load of Blades) with punched holes and couple with damper blade externally in a concealed portion. Mechanical linkages are installing in all series instead of R Series.
- **SHAFT:** Shaft is of galvanized steel bar material and is extended out of the damper frame for easy coupling to the damper quadrant or actuator for duct mounting type applications.
- **QUADRANT:** Quadrant is made of heavy gauge galvanized steel material with indication of Shut & Open and EVER GREEN logo. Normally Dq10 is installing in all average size of dampers while Dq12 use for big size and DQ8 and DQ6 are use for small size.

Note:

- Different type of quadrant are manufacturing in EGI workshop .
- All Series are designed to ensure airtight operations with low leakage factor +5%.
- All VCD's are manufactured as per international.

EVER GREEN OPTIONAL FITTING:

- **GASKET:** Damper blade edges are sealed with neoprene gasket to prevent any leakage through blade arrangement.
- **LOW LEAKAGE:** For low leakage construction G.I. or S.S. Curved horizontal plates are installed at blade vertical positions with neoprene blade tip seals at blade's edges on prior request to make leakage down to +2%.
- **BRASS BUSHES:** EGI Heat resistant Brass Bushes are optional.
- **LIMIT SWITCHES:** To indicate whether the damper is open or close in position the limit switch are optional.



دائم الخضرة

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