

AIRRO

Efficient Air
Distribution System

CONTENTS

		PAGE NO.
1	Introduction	
2	Mission, Vision, Values	
3	Duct Solution	
A	Galvanized (G.I) Ducts	AGI01-AGI02
B	Stainless Steel (S.S)	ASS01-ASS02
C	The TDF System	TDF01-TDF04
E	Flexible Ducts	AFD01-AFD04
F	Pre-Insulated Ducts (P.I)	PID01-PID01
4	Exhaust and Fresh Air Louvers	EFL01-EFL07
5	Acoustic Louvers	AAL01-AAL03
6	Sand Trap Louvers	STL01-STL09
7	Grills and Registers	AGR01-AGR13
8	Volume Control Damper (VCD)	VCD01-VCD08
9	Square Diffuser	SD01-SD118
10	Linear Bar Grills and Registers	LGR01-LGR11
11	Linear Slot Diffuser	LSD01-LSD10

AIRPRO Industries - Integrity and Excellence.

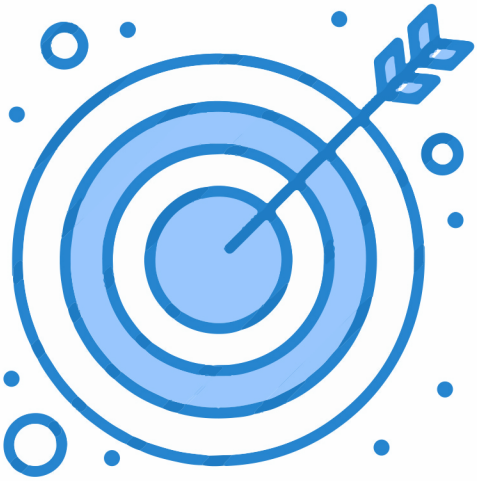
AADTRA Group introduces their latest division, AIRPRO Industries. At AIRPRO Industries, we believe in creating high quality, efficient Air Distribution Solutions by manufacturing Grills, Diffusers, Dampers, Fire Rated Air Ducts, Louver Systems and a range of other products and services while maintaining the highest accredited and certified industry standards including Edison Testing Laboratory (ETL) & Air Movement Association (AMCA).



Our high standards and visit in-house combined experience of over 75 years has seen grow to become one of the well known manufacturers of HVAC products in UAE and surrounding GCC countries as well.

MISSION

To provide innovative and varied energy flow solutions



VISION

To be the leading Energy Flow Solution Provider in the Middle East & Africa (Mena) Region

VALUES

Ethical: Ethical business practice, loyalty and keeping our promises characterize our relationship with customers and amongst our people.

Career Development: We realize the necessity for continuous learning and motivation of all our employees, creating an environment where opportunities and job security equal exists and excellence is given recognition.

Empowerment: Our employees are given authority to make decisions and understand that with authority comes responsibility and respect.

Teamwork: The value of teamwork is inculcated in the minds of everyone whose cooperation, positive and enthusiasm to work as teams result in effective coordination and communication.



DUCT SOLUTION

MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)









Efficient Air Distribution System

GALVANIZED IRON DUCTS (G.I)

MANUFACTURER OF AIR OUTLETS :

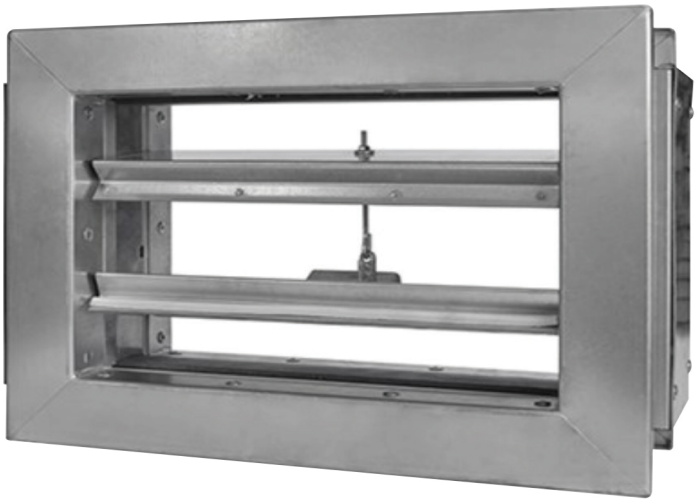
Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

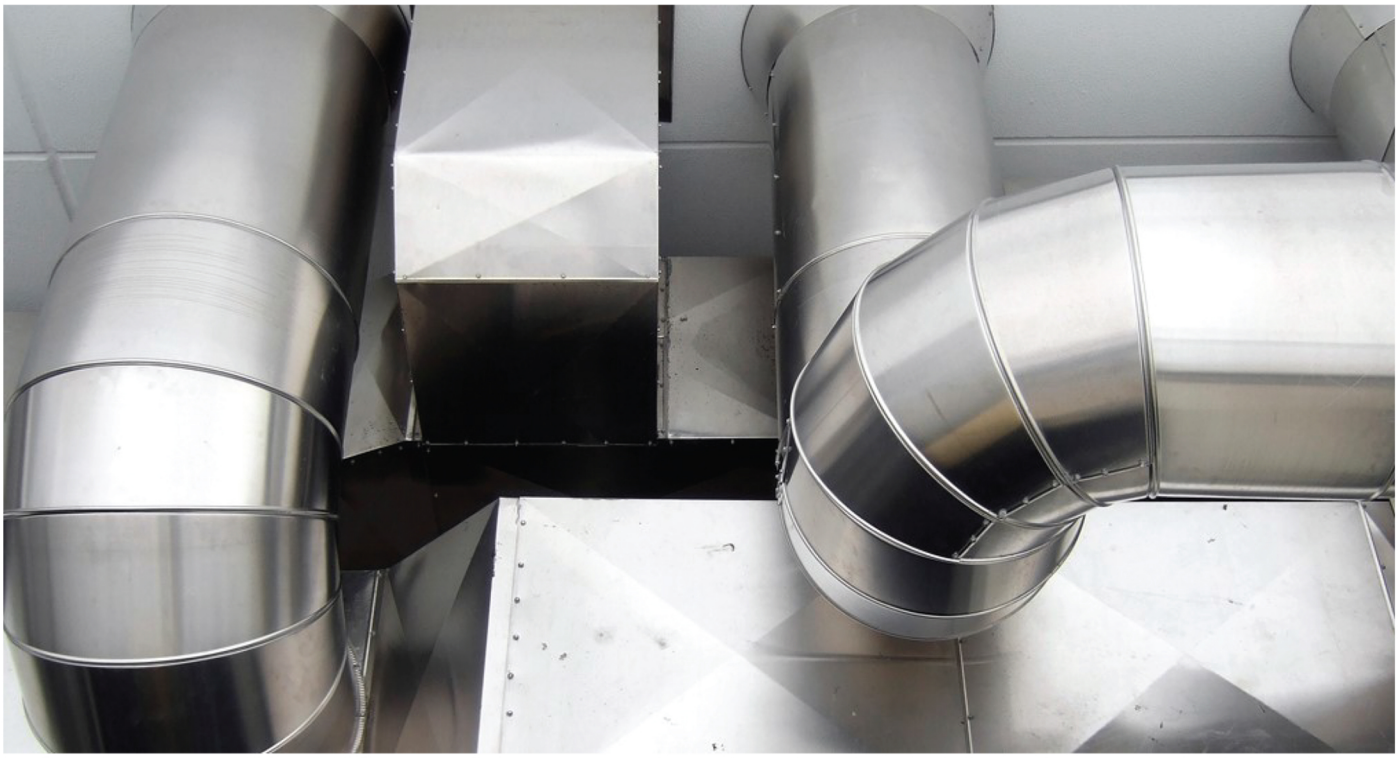
SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)







GALVANIZED IRON DUCTS (G.I)



Construction

We can fabricate ducting as per the clients specifications and can design GI duct system to correspond with the clients existing system. We can even provide various ducts accessories such as fittings; attachments, components and other goods are manufactured as finest grade material cutting edge technology.

Features:

- Aipro possess a long functional life and are durable.
- Airpro are made available to the clients at a very reasonable price.
- Airpro are built in accordance with the set industry standards and safety norms highly durable.
- Exclusive supply air ducts, exhaust air ducts and return - air ducts for outdoors are manufactured to handle various pressures.

Galvanized Iron Duct

G.I Rectangular Ducts are fabricated our factory according to the requirements of customers. Ducts are fabricated using high grade G.I steel coils and processing of operations is on ultra modern automatic duct making machines operated by experienced and skilled staff . Each duct piece passes through strict Quality Control checks and ensures adhere to specifications and standards, whether it is a normal G.I duct. The complete range of ducting offered by AIRPRO is competitively priced and is insured for full protection against air leakages, fire, smoke and sound.



Features:

- Ducts are fabricated from high quality (G-90, Z-275) grade G.I coils of reputed make Jindal, Nippon, POSCO, AGIS etc.
- To strengthen, beading is done to all of our straight ducts at a distance of 300mm.
- Pittsburgh longitudinal joints are associated with large pocket size, hence generating extra strong and leak proof joint.
- Special CGF integral flanges with auto double stitching ensures a product suitable for all applications.



ALUMINIUM DUCT

AIRPRO is experienced in fabricating aluminium ducts which is, as mentioned in ASTM B209, BS EN485,BS EN515, BS EN573 subject to the uncovered surroundings.

Aluminium ducts are manufactured from AA1100 sheets of aluminium/sheets with Tailored "S" & Drive "C" cleats of equal grade or flanged type joint.

Plain type (Reflector quality) is also generally utilized as air ducts is places like clean rooms for sensitive industrial application, swimming pool, etc. Stucco engraved form is relatively dent & scratch resistant which is mostly used as cladding on exposed G.I ducts.



AIRPRO Stainless Steel (SS) ducts are manufactured from SS of 316/304 grades with transverse & fully welded longitudinal joints.

We employ special skilled workforce to manufacture SS ducts and fittings. Stainless Steel ducts are fabricated as per the standards of NFPA,BS and ASHRE.

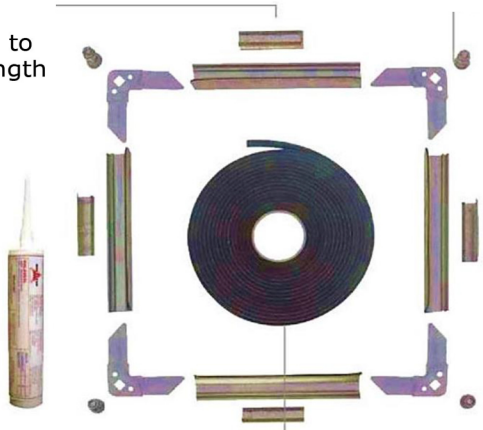
Stainless Steel ducts are widely utilized in open surroundings to observe zones to observe zones and in the zones where cleanliness is the main concern and in extremely abrasive environments. Stainless Steel ducts are stronger, stiffer and finest quality in comparison with G.I ducts. SS duct has the characteristics of corrosion resistant & fire resistance.

- Flanges have been designed to meet the appropriate SMACNA/DW144 standard classes and to meet the rigidity and leakage requirement as per SMACNA/DW144 standards.
- It is mandatory to use all system components to obtain the desired performance.

DUCT JOINING

SLIP-ON FLANGES: Roll-formed G.I Section with embedded sealant. Available in different cross-sections to provide a range of rigidity and strength characteristics

CORNERS: To be inserted into the hollow we of the slip-on flange, 4 corner pcs. Are required for each rectangular frame, 8 corner pcs. Per joint.



GASKET: Self-adhesive, micro-cellular, cross-linked, Polyethylene foam type.
(Alternative PVC or Neoprene)

CARRIAGE BOLTS WITH FLANGED NUTS: Electro-galvanized, square-necked carriage bolts, with flanged nuts. Each joint required 4 sets.

- Flanges have been designed to meet the appropriate SMACNA/DW144 standard classes and to meet the rigidity and leakage requirement as per SMACNA/DW144 standards.
- It is mandatory to use all system components to obtain the desired performance.

CONSTRUCTIONAL REQUIREMENTS

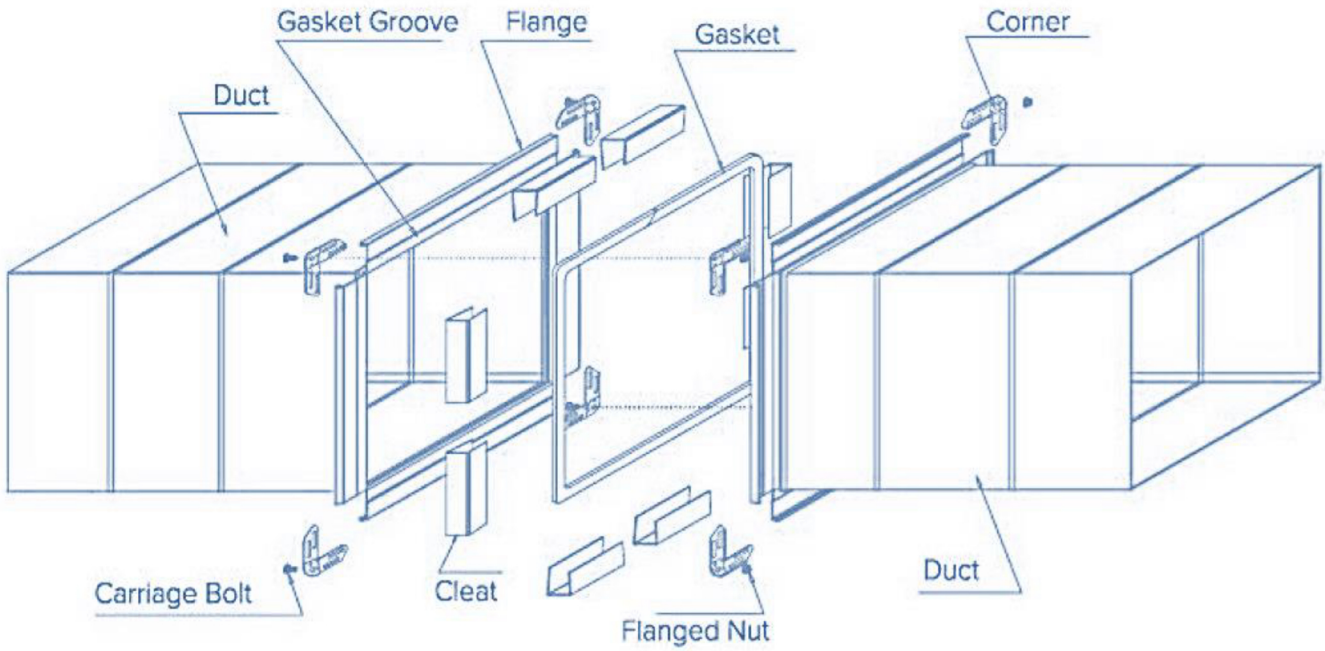
Rectangular Ducts
Pressure: Low Pressure – 500Pa

SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA)			
Duct Dimensions	G.I Sheet Thickness	Longitudinal Joint	Transverse Joint
0 - 450	0.56 mm	Pittsburgh Seam	S & C Cleats
451 - 750	0.56 mm	Pittsburgh Seam	20 mm Slide on Flanges with 20 mm Corners and 1 pc. Of 20 mm Cleat per side.
751 - 1000	0.70 mm	Pittsburgh Seam	20 mm Slide on Flanges with 20 mm Corners and 1 pc. Of 20 mm Cleat per side.
1001 - 1200	0.90 mm	Pittsburgh Seam	20 mm Slide on Flanges with 20 mm Corners and 1 pc. Of 20 mm Cleat per side.
1201 - 1400	0.90 mm	Pittsburgh Seam	30 mm Side on Flanges with 30 mm Corners and 1 pc of 30 mm Cleat per side. Reinforcement Stiffener 30 mm flange at 600 mm centre.
1401 - 1600	1.00 mm	Pittsburgh Seam	30 mm Side on Flanges with 30 mm Corners and 1 pc of 30 mm Cleat per side. Reinforcement Stiffener 30 mm flange at 600 mm centre.
1601 - 2000	1.00 mm	Pittsburgh Seam	40 mm Side on Flanges with 40 mm Corners and 40 mm G-Clamp. Reinforcement Stiffener 40 mm flange at 600 mm centre.
2001 - 2500	1.20 mm	Pittsburgh Seam	40 mm Side on Flanges with 40 mm Corners and 40 mm G-Clamp. . Reinforcement Stiffener 40 mm flange at 600 mm centre
2501 - 3000	1.20 mm	Pittsburgh Seam	50 mm GI angle with nuts & bolts.Reinforcement Stiffener 50 mm GI angle at 600 mm center.

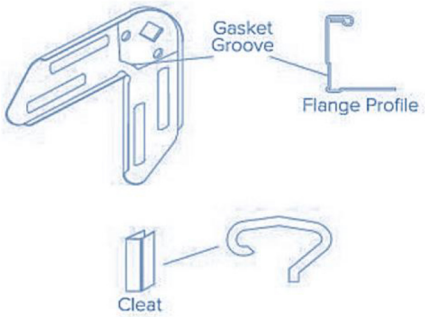
DUCTWORK (DW144)			
Duct Dimensions	G.I Sheet Thickness	Longitudinal Joint	Transverse Joint
0 - 400	0.60 mm	Pittsburgh Seam	Opposite sides flat hemmed S & Drive Cleat
401 - 600	0.80 mm	Pittsburgh Seam	20 mm Slide on Flanges with 20 mm Corners & 1 pc of 0 mm Cleat per side
601 - 1000	0.80 mm	Pittsburgh Seam	20 mm Slide on Flanges with 20 mm Corners & 1 pc of 0 mm Cleat per side
1001 - 1400	1.00 mm	Pittsburgh Seam	30 mm Side on Flanges with 30 mm Corners and 1 pc of 30 mm Cleat per side. Reinforcement Stiffener 30 mm flange at 600 mm centre.
1401 - 2000	1.00 mm	Pittsburgh Seam	30 mm Side on Flanges with 30 mm Corners and 1 pc of 30 mm Cleat per side. Reinforcement Stiffener 30 mm flange at 600 mm centre.
2001 - 2500	1.00 mm	Pittsburgh Seam	40 mm Side on Flanges with 40 mm Corners and 40 mm G-Clamp. Reinforcement Stiffener 40 mm flange at 600 mm centre.
2501 - 3000	1.20 mm	Pittsburgh Seam	50 mm GI angle with nuts & bolts.Reinforcement Stiffener 50 mm flange at 600 mm center.

- TDF flanges and Corners can also be provided as optional.
- CGF flanges and Corners can be also be provided as optional.
- Ducts are Stiffened by beading at every 300 mm pitch.
- Galvanized Iron (GI) sheet thickness and type of transverse joints vary base on project specifications and costumer requirements.

THE TDF SYSTEM



TDF is a flanging system that consists of forming a flange profile on the duct ends, thus made out of a sheet from which the duct is fabricated. TDF is a 4 bolt duct connection system that eliminates time wastage. Rather than using separate connections to assemble your system. TDF flanges are roll formed onto the duct during the manufacturing process. This connection minimizes leakage and installation costs. These TDF flange eliminates the additional internal sealing around the edges of duct & thereby saves the labour and material.



Features:

- Highly accurate flange profiles and components ensure ease of fitting and high quality assembly.
- A recessed groove on flange and radial groove on corner pieces for proper gasket seating.
- Snap fit corner pieces to allow easy fitting at the sites.

SLIP & DRIVE CLEATS SYSTEM

Slip and Drive Cleats System is generally used for low-end, class critical applications. Traditionally, only the Drive Cleats ("C") which are positioning cleats were used for all four sides, this was giving a poor joint. The Slip Cleats ("S"/" Standing 8) on the alternate opposite sides provide the moderate rigidity to joint.

Note: While installing, Drive Cleats are always fitted on the shorter sides and Slip Cleats on the longer sides

Special notes:

- It does not subscribe to usage of red-oxide painted Angle Iron flanges as red-oxide is a known carcinogen.
- Conventional G.I flanges have now become obsolete as they are totally substituted by Slip and Drive Cleats system.
- TDF cannot be made below 250 mm of the duct. We suggest to use C & S cleat instead of TDF.

Accepts short pieces without the need for clamping the product the minimum length is 250 mm.





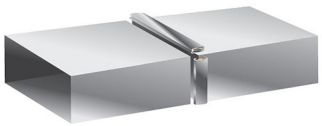
'C'-Cleat





'S'-Cleat

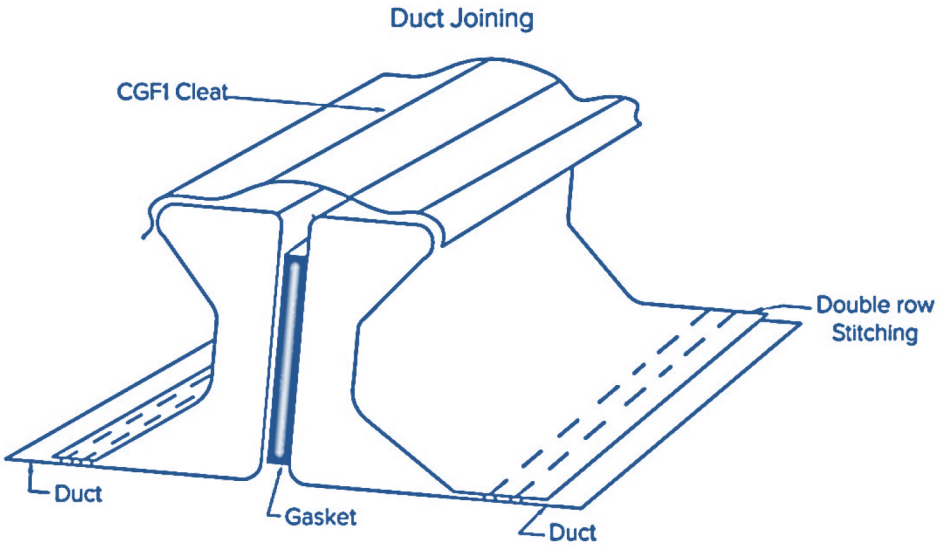




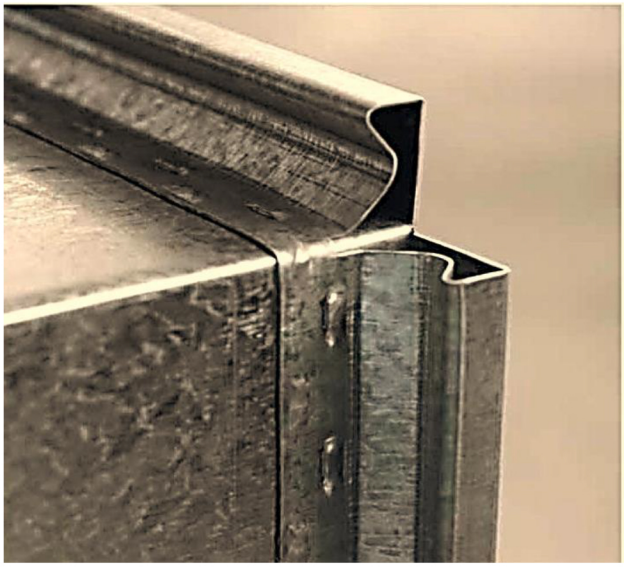


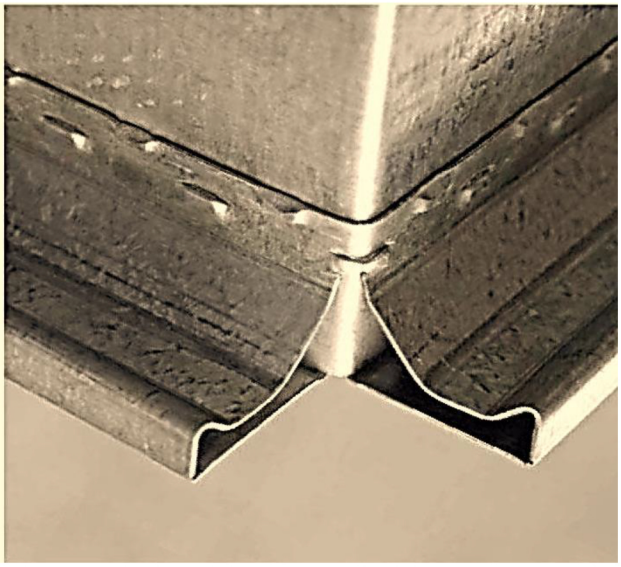


AIRPRO FLANGE SYSTEM/ NEW ENGINEERING DESIGN



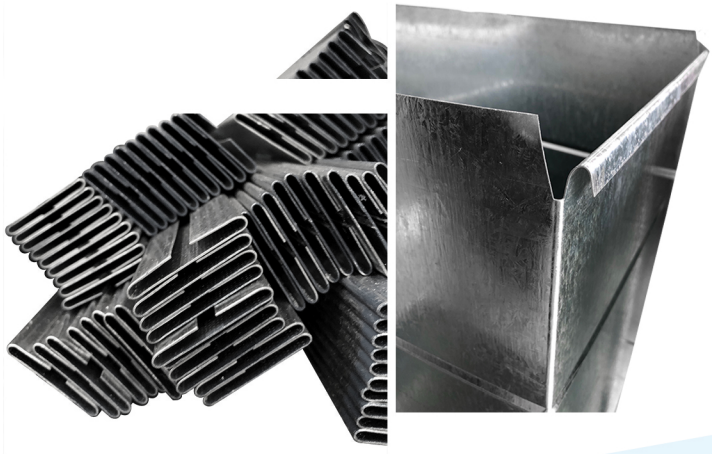
Accepts short pieces without the need for clamping the product the minimum length is 250 mm





20 mm Profile

30 mm Profile



FLEXIBLE DUCTS

MANUFACTURER OF AIR OUTLETS :

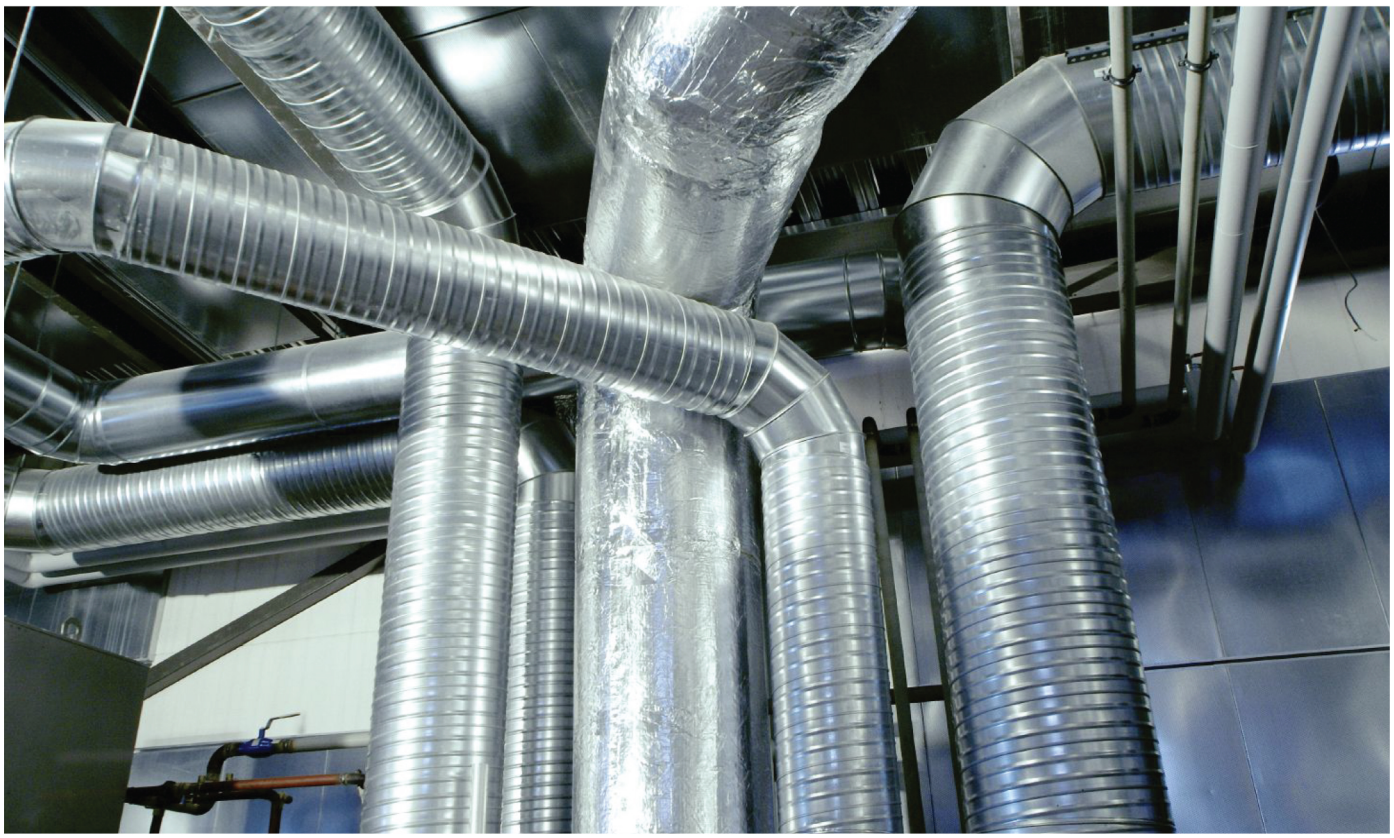
Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)



FLEXIBLE DUCTS



AIRPRO Flex Ducts is a tough, completely flexible and low weight duct which is extensively employed in ventilation and air conditioning structure for residential, commercial and industrial applications. Our manufactured ducts shows great efficiency when installed correctly and is a perfect option for all air ventilation systems including homes, hotels, offices and commercial buildings since it is very suitable for connecting supply air outlets to rigid ductwork. Airflex flexible Ducts are available in **Insulated and Un–Insulated models** these give high degree of flexibility, which permit us to easily connect in any preferred position and save us costs, where fitted and fabricated ducts would be highly difficult and costly to install.

Main Features:

- Economical solution or connecting equipment in air conditioning and ventilation systems, across a broad spectrum of application such as residential, commercial and industrial projects.
- Airflex flexible construction renders ease of installation in areas where rigid ducts cannot be fixed.
- Ideal for use in low to medium pressure ductwork systems.
- Options for insulated and un-insulated models.
- Tear and puncture resistant construction.

FLEXIBLE DUCTS

AIRPRO Flexible Insulated Ducts



Specification Data:






Specification Model No.	Insulated AF11	Insulated AF12	Insulated- Reinforced Barrier AFIR-1	Insulated-Reinforced Barrier AFIR-2
Inner Core	Double laminated polyester film with black pigmented adhesive, permanently bonded to corrosion resistant steel wire helix	Triple laminated aluminum foil, polyester film permanently bonded to corrosion resistant steel wire helix.	Double laminated polyester film with black pigmented adhesive permanently bonded to corrosion resistant steel wire helix	Triple laminated aluminum foil polyester film, permanently bonded to corrosion resistant steel wire helix
Outer Core	Strong vapor barrier made from metalized polyester film laminate.	Strong vapor from metalized polyester film laminate	Triple laminated aluminum foil, polyester and metalized polyester and metalized polestar film with fiberglass scrim reinforced vapor barrier	Triple laminated foil, polyester and metalized polyester film fiberglass scrim reinforced vapor barrier.
Insulation Thickness	25mm/38mm/50mm	25mm/38/50mm	25mm/38/50mm	25mm/38/50mm
Density	16kgm³ / 24kgm³	16kgm³ / 24kgm³	16kgm³ / 24kgm³	16kgm³ / 24kgm³
R value	4.2	4.2	4.2	4.2
Maximum Positive Pressure	10" w.g. -4" to 16" 10" w.g. -18" to 20"	10" w.g. -4" to 16" 10" w.g. -18" to 20"	10" w.g. -4" to 16" 10" w.g. -18" to 20"	10" w.g. -4" to 16" 10" w.g. -18" to 20"
Maximum Negative Pressure	3/4" w.g All diameters	3/4" w.g All diameters	3/4" w.g All diameters	3/4" w.g All diameters
Maximum Velocity	5000 fpm	5000 fpm	5000 fpm	5000 fpm
Operating Temperature	-30°C to 150°C -20°F to 300°F	-30°C to 150°C -20°F to 300°F	-30°C to 150°C -20°F to 300°F	-30°C to 150°C -20°F to 300°F
Standard Length	25 feet	25 feet	25 feet	25 feet
Diameter	4" to 20"	4" to 20"	4" to 20"	4" to 20"
Fire Rating		BS 476, part 7 Class 1 BS 476, part 6 Class 0		BS 476, part 7 Class 1 BS 476, part 6 Class 0

- Customized Lengths available on request

FLEXIBLE DUCTS

AIRPRO Flexible Un-Insulated Ducts



Specification Data:







Specification Model No.	Un-insulated AF13	Un-insulated AF14	Un-insulated AF15
Inner Core	Triple laminated aluminum foil, polyester film, permanently bonded to corrosion resistant steel wire helix	Double laminated metal metalized film, permanently bonded to corrosion resistant steel wire helix	Double laminated polyester film with black pigmented adhesive, permanently bonded to corrosion resistant steel wire helix
Maximum Positive Pressure	10" w.g. -4" to 16" 6" w.g. -18" to 20"	10" w.g. -4" to 16" 6" w.g. -18" to 20"	10" w.g. -4" to 16" 6" w.g. -18" to 20"
Maximum Negative Pressure	1" w.g All diameters	1" w.g All diameters	1" w.g All diameters
Maximum Velocity	5000 fpm	5000 fpm	5000 fpm
Operating Temperature	-30°C to 150°C -20°F to 300°F	-30°C to 150°C -20°F to 300°F	-30°C to 150°C -20°F to 300°F
Standard Length	25 feet	25 feet	25 feet
Diameter	4" to 20"	4" to 20"	4" to 20"
Fire Rating	BS 476, part 7 Class 1 BS 476, part 6 Class 0		

- Customized Lengths available on request

DUCTS WITH ANTIMICROBAL COATING

Over the last 10 years or so, we have become increasingly aware of the germs and mold that live in our homes and offices. Homeowners and building occupants are more focused than ever on reducing microbes (bacteria, molds, fungi) and allergens and improving indoor air quality (IAQ).

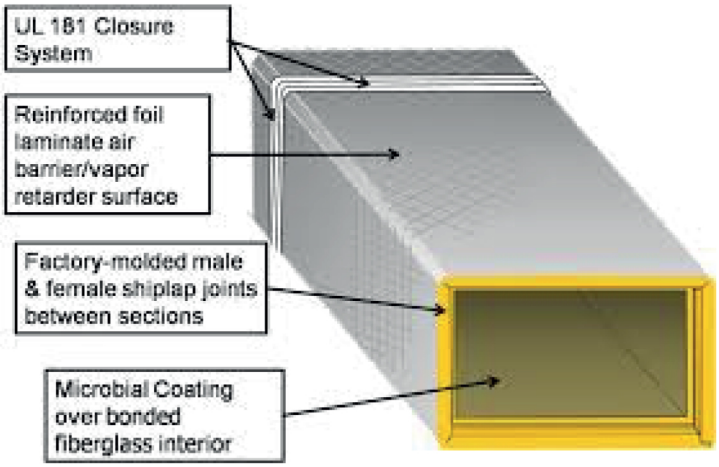
The interest in good IAQ has increased significantly in the last few years, due to numerous highly publicized stories regarding mold infestations all across the country.

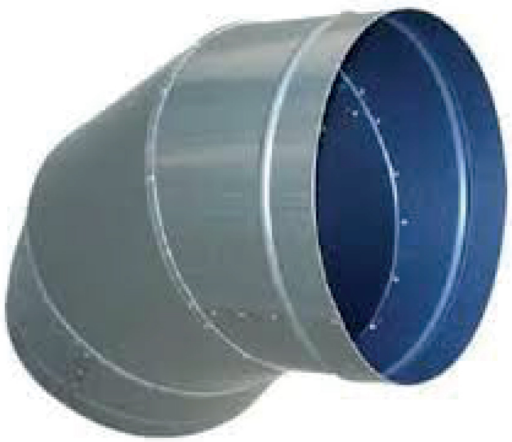
Manufacturers have responded with all sorts of antibacterial soaps and cleaning agents. The HVAC industry has responded with a dizzying array of products designed to improve IAQ.

Companies that manufacture duct products are very much aware of consumers' IAQ worries. Ironically, one of those worries is that buildings have become much better insulated. While a "tight" building is great for reducing energy costs, it can lead to higher levels of pollutants and poor IAQ.

Since damp ductwork is a perfect breeding ground for mold, preventing that growth with an antimicrobial agent on duct products makes sense.

Our anti microbial coating kills bacteria, virus and prevents fungal growth.





PRE-INSULATED DUCTS

MANUFACTURER OF AIR OUTLETS :

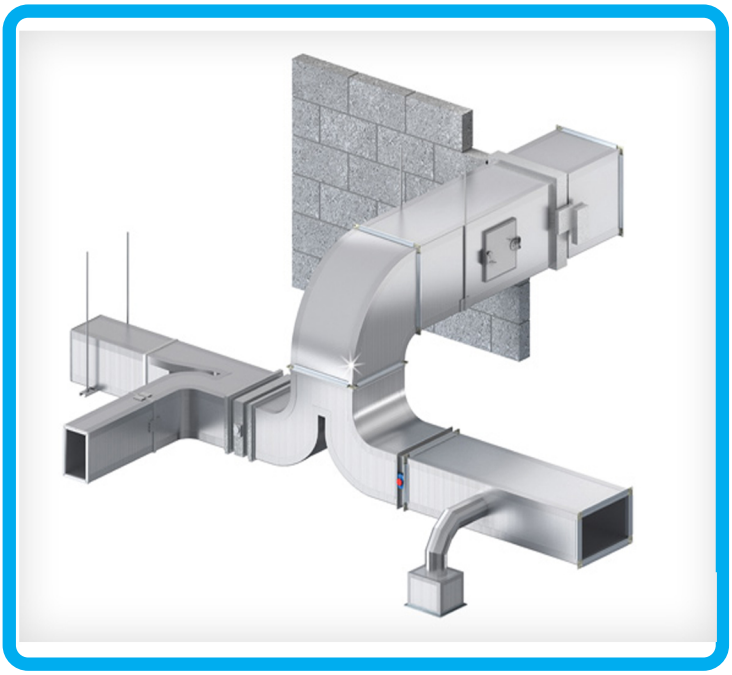
Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)

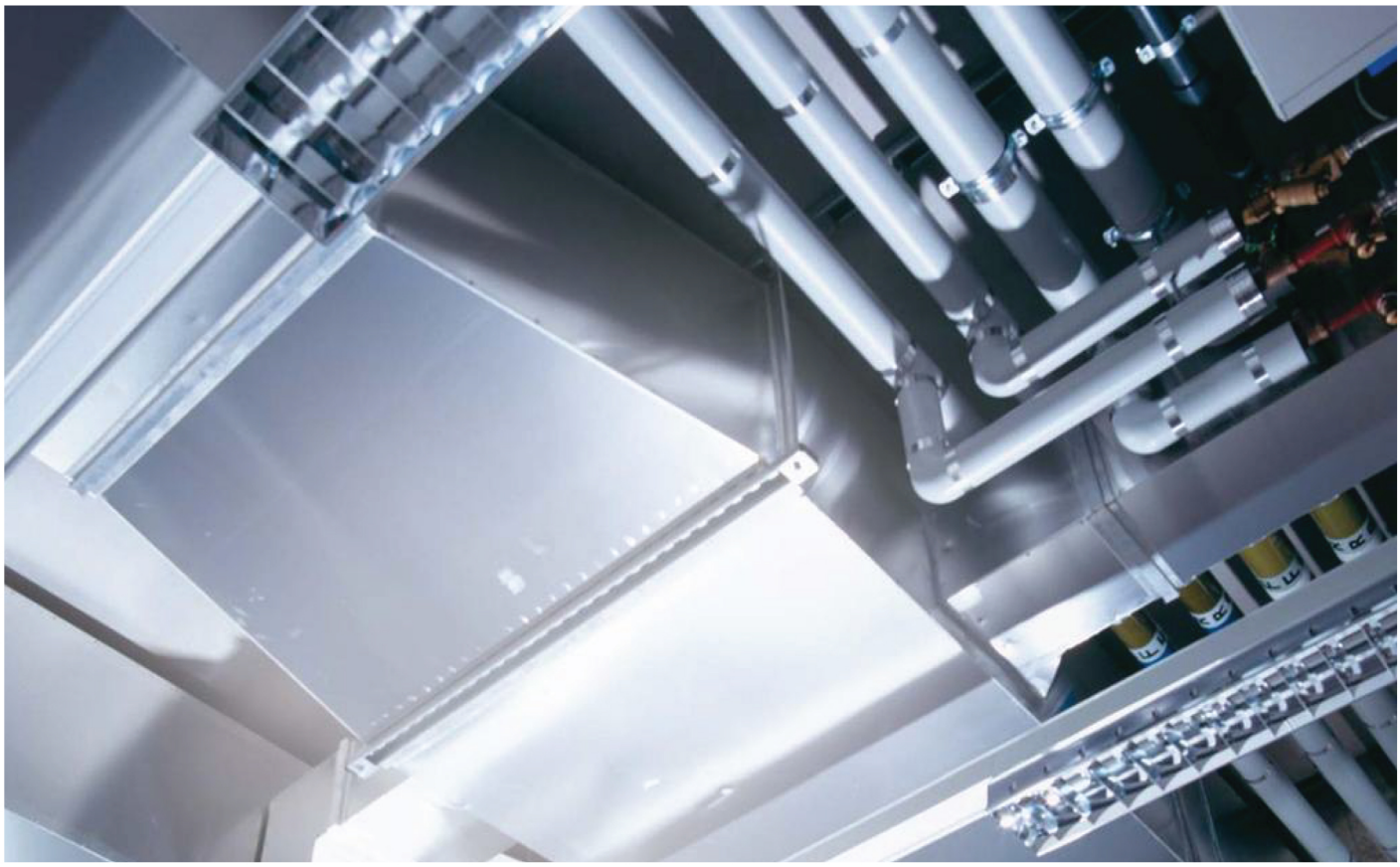






Efficient Air Distribution System

PRE-INSULATED (P.I) DUCTS



Construction:

- Pre-Insulated ducts panel is an innovative technology for HVAC ductwork system. Airpro Pre-Insulated ducting systems are used as an alternative for fresh air supply, return and exhaust air ductwork for HVAC system. These panels are suitable for the construction of air distribution in air-conditioning and heating system.
- Pre-Insulated ducts panel have been specially developed for used in Residential, Commercial and Industrial units of HVAC duct system to satisfy the thermal fire and acoustical requirements.

EXHAUST AND FRESH AIR LOUVERS

MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)



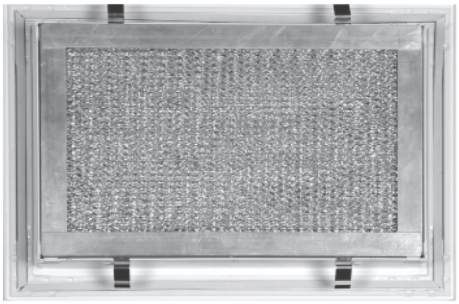




EXHAUST AND AIR FRESH LOUVERS

The Aluminum Exhaust and Fresh Air Louvers of **Airpro** are used both internally and externally in buildings for the extraction of re-cycled air, intake of external fresh air of the expulsion of contaminated air. The quality of the material used and the particular inclination of the blades at 60° angle downward offer weather resistant louvers which gives good protection against the direct ingress of rain water, leaves and birds.
Can also be used directly installed on walls for the ventilation –of industrial areas. Also suitable for the use with an adjustable overpressure damper for airflow and pressure control.





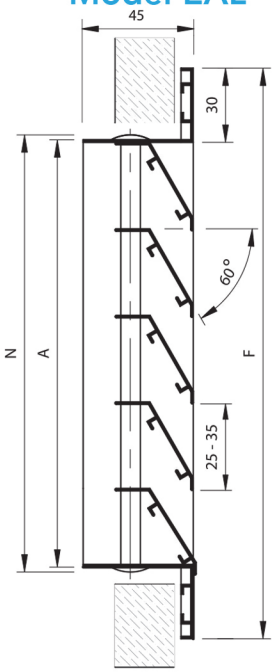
Features:

- **Construction:** Frame & blades are made of high quality Extruded Aluminum profiles of 6063 Alloy.
- **Frame Flange width:** 30mm
- **Blades:** Louver type arranged horizontal and inclined downward to 60° angle in order to:
    - Prevent the ingress of rain water
    - Prevent the ingress of light.
    - Block vision while straight viewing.
    - Be suitable for external walls and screening application.
- The blades are positioned on 25 mm minimum centers up to 35mm maximum centers resulting in a high area to provide minimum resistance to airflow.
- Available in wide variety of neck sizes with 100 x 100 minimum single section size and 2mtr. Single section height. Louvers height exceeding 2 mtr. to be fabricated and supplied in multiple sections depending on length and height dimensions as well as site conditions.
- The assembly of multiple sections is unlimited where each section operates independently.
- Multiple sections: Supplied as separate sections and assembly by other on site.
- The fresh louvers are suitable for the use in air inlet of fresh air ducts and air handling units. It's also suitable for the use at dirty air exhaust discharge.
- Wire mesh screen of galvanized steel is attached to the interior face of the louver as an option, mesh size 3 x 3mm.
- Exhaust air louvers are available with different type of attachment such as:
    - Opposed blade Damper (Model EAL + D)
    - Aluminum Filter (Model FAL c/w Filter)
    - Both the Damper and Filter (Model FAL + D c/w Filter)
- Available with foam type Rubber Gasket for air sealing (provided as an option)

EXHAUST AND AIR FRESH LOUVER

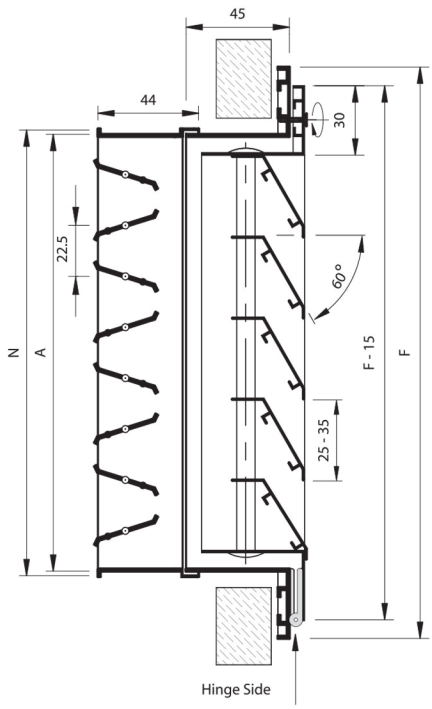
Exhaust Air Louvers
Construction and Dimensional Dimensional Details

Model EAL



- Wire Mesh (Optional)

Model EAL + D (Double Frame)



- Wire Mesh (Optional)
- For opposed blade damper details and construction to chapter 1 & 2
- Double Frame Louvers are provided with door hinge from one and screw from other side allowing the second frame (inner one) to act as an access door to the opposed blade damper



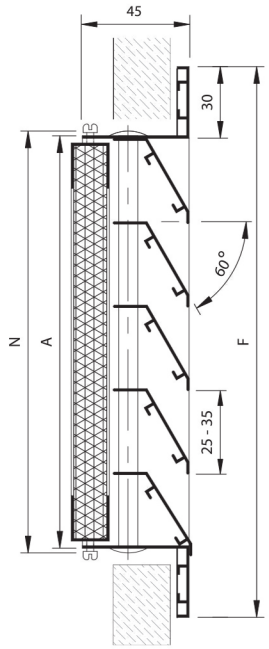


N: Nominal/ Listed Size = Length (L) x Height (H)
A: Actual Size = (L-10) x (H-10)
F: Face Size = (L +50) x (H+50)
Exhaust Air Louvers furnished approximately 10mm less than the Nominal/ Listed size
All Dimensions are in mm and subject to ±1mm tolerance

EXHAUST AND AIR FRESH LOUVER

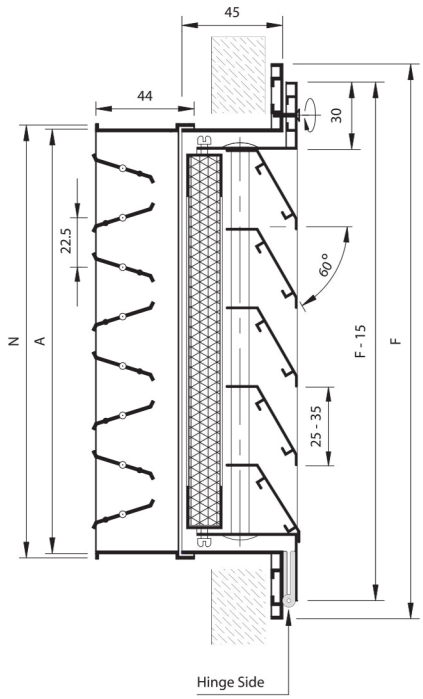
Air Fresh Louvers
Construction and Dimensional Dimensional Details

Model EAL FAL c/w Filter



- Wire Mesh (optional)
- Filter: Aluminum washable filter media of ½ " standard thickness (1" & 2") thicknesses also available on request as an option)

Model FAL + D c/w Filter (Double Frame)



- Wire Mesh (Optional)
- For opposed blade damper details and construction refer chapter (1) or (2).
- Filter: Aluminum washable filter media of ½" standard thickness (1" & 2" thicknesses also available on request as an option)
- Double Frame louvers are provided with door hinge from one side and screw from other side allowing the second frame (inner one) to act as an access door to the filter and /or opposed blade damper.

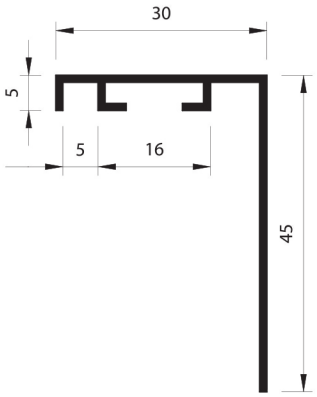




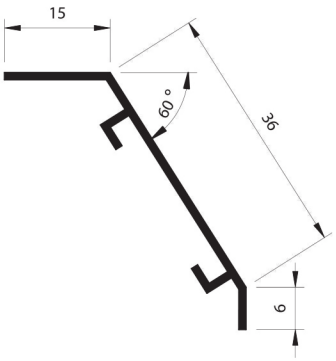
N: Nominal/ Listed Size = Length (L) x Height (H)
A: Actual Size = (L-10) x (H-10)
F: Face Size = (L +50) x (H+50)
Exhaust Air Louvers furnished approximately 10mm less than the Nominal/ Listed size
All Dimensions are in mm and subject to ±1mm tolerance

EXHAUST AND AIR FRESH LOUVER

Cross Sectional Drawings for Profiles in Exhaust and Fresh Air Louvers



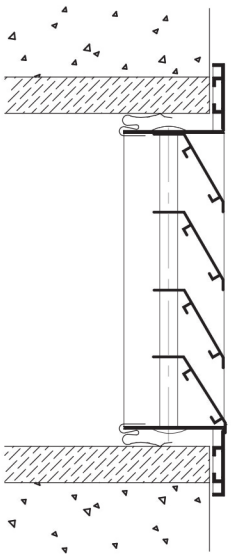
Frame Profile Section
Exhaust and Fresh Air Louver



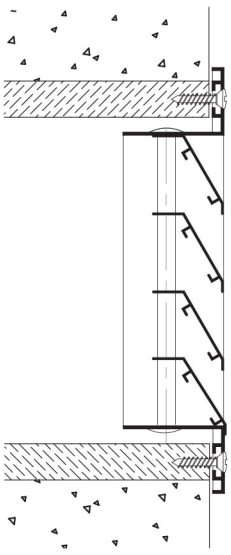
Louver Blade Profile Section
Exhaust and Fresh Air Louver

- All dimensions are in mm and subject to±0.2mm tolerance

Available Mixing Mounting



A. Concealed Fixing (Spring Clip Mounting
The louver is fixed by means of spring clips to the wall or partition where no screws are visible



B. Face Screw Fixing
The louver is fixed to the wooden frame by means of visible screws

EXHAUST AND AIR FRESH LOUVER

Engineering and Performance Data
Effetive Area for Exhaust and Fresh Air Lover in m²

Table EL- 01

L H	100	150	200	250	300	350	400	450	500	550	600
100	0.004										
150	0.006	0.009									
200	0.008	0.012	0.016								
250	0.010	0.015	0.021	0.026							
300	0.012	0.018	0.025	0.031	0.037						
350	0.016	0.024	0.032	0.039	0.047	0.055					
400	0.018	0.027	0.036	0.045	0.054	0.063	0.072				
450	0.020	0.030	0.041	0.051	0.061	0.071	0.081	0.091			
500	0.025	0.038	0.050	0.063	0.075	0.088	0.100	0.113	0.125		
550	0.028	0.041	0.055	0.069	0.083	0.096	0.110	0.124	0.138	0.151	
600	0.033	0.05	0.066	0.083	0.099	0.116	0.132	0.149	0.165	0.182	0.198
650	0.036	0.054	0.072	0.089	0.107	0.125	0.143	0.161	0.179	0.197	0.215
700	0.041	0.061	0.081	0.102	0.122	0.142	0.162	0.183	0.203	0.223	0.244
750	0.044	0.065	0.087	0.109	0.131	0.152	0.174	0.196	0.218	0.239	0.261
800	0.048	0.072	0.096	0.120	0.144	0.168	0.192	0.216	0.24	0.264	0.288
850	0.051	0.077	0.102	0.128	0.153	0.179	0.204	0.23	0.255	0.281	0.306
900	0.057	0.085	0.113	0.142	0.17	0.198	0.227	0.255	0.284	0.312	0.340
950	0.060	0.090	0.120	0.150	0.180	0.209	0.239	0.269	0.299	0.329	0.359
1000	0.065	0.098	0.130	0.163	0.195	0.289	0.26	0.293	0.325	0.358	0.390
1050	0.068	0.102	0.137	0.171	0.205	0.239	0.273	0.307	0.341	0.375	0.410
1100	0.068	0.107	0.143	0.179	0.215	0.250	0.286	0.322	0.358	0.393	0.429
1150	0.075	0.112	0.150	0.187	0.224	0.262	0.299	0.336	0.374	0.411	0.449
1200	0.078	0.117	0.156	0.195	0.234	0.273	0.312	0.35	0.390	0.429	0.468

Table EL- 02

L H	650	700	750	800	850	900	950	1000	1050	1100	1150	1200
650	0.232											
700	0.264	0.284										
750	0.283	0.305	0.326									
800	0.312	0.336	0.360	0.384								
850	0.332	0.357	0.383	0.408	0.434							
900	0.369	0.397	0.425	0.454	0.482	0.510						
950	0.389	0.419	0.449	0.479	0.509	0.539	0.57					
1000	0.423	0.455	0.488	0.52	0.553	0.585	0.62	0.650				
1050	0.444	0.478	0.512	0.546	0.580	0.614	0.65	0.683	0.72			
1100	0.465	0.501	0.536	0.572	0.608	0.644	0.68	0.715	0.75	0.787		
1150	0.486	0.523	0.561	0.635	0.635	0.673	0.710	0.748	0.79	0.822	0.860	
1200	0.507	0.546	0.585	0.624	0.663	0.702	0.74	0.78	0.82	0.858	0.897	0.936

L & H Dimensions are in mm
Damper at full open position (if any)

EXHAUST AND AIR FRESH LOUVER

Engineering and Performance Data
Tabular Section for Exhaust and Fresh Air Lover in m²

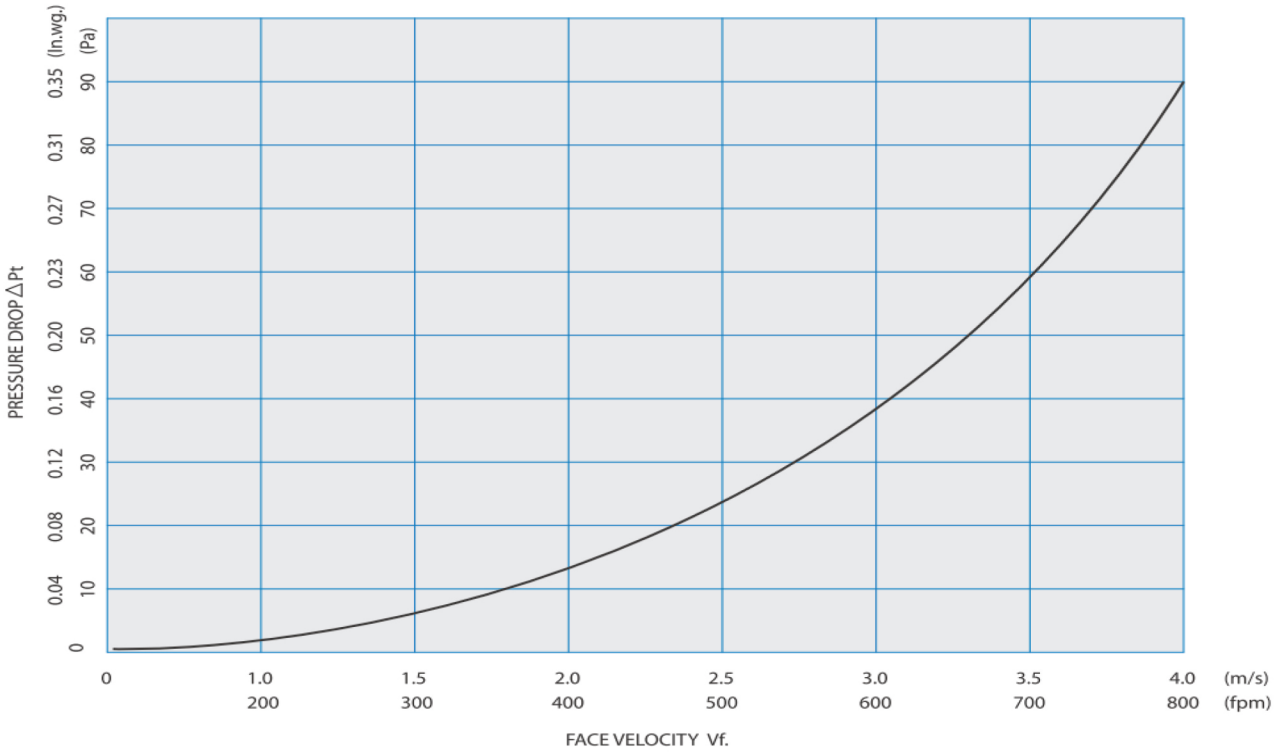
Table EL- 03

Vf. m/s	(FPM)	1.0(200)	1.5(300)	2.0(400)	2.5(500)	3.0(600)	3.5(700)	4.0(800)
ΔPt Pa	(Inwg)	3.0(0.01)	8.5(0.03)	14(0.05)	24(0.09)	39(0.15)	59(0.23)	90(0.35)
Flow L /S)	Rate cfm	A eff.(m^2)						
(12)	25	0.012	0.008	0.006	0.005	0.004	0.003	0.002
(24)	50	0.023	0.015	0.012	0.009	0.008	0.007	0.006
(47)	100	0.046	0.031	0.023	0.019	0.015	0.013	0.012
(71)	150	0.070	0.046	0.035	0.028	0.023	0.020	0.017
(94)	200	0.093	0.062	0.046	0.037	0.031	0.027	0.023
(118)	250	0.116	0.077	0.058	0.046	0.039	0.033	0.0929
(142)	300	0.139	0.093	0.070	0.056	0.046	0.040	0.035
(165)	350	0.163	0.108	0.081	0.065	0.054	0.046	0.041
(189)	400	0.186	0.124	0.093	0.074	0.062	0.053	0.046
(212)	450	0.209	0.139	0.105	0.084	0.07	0.06	0.052
(236)	500	0.232	0.155	0.116	0.093	0.077	0.066	0.058
(260)	550	0.255	0.17	0.128	0.102	0.085	0.073	0.064
(283)	600	0.279	0.186	0.139	0.111	0.093	0.080	0.070
(307)	650	0.302	0.201	0.151	0.121	0.101	0.086	0.075
(330)	700	0.325	0.217	0.163	0.13	0.108	0.093	0.081
(354)	750	0.348	0.232	0.174	0.139	0.116	0.100	0.087
(378)	800	0.372	0.248	0.186	0.149	0.124	0.106	0.093
(401)	850	0.395	0.263	0.197	0.158	0.132	0.113	0.099
(425)	900	0.418	0.279	0.209	0.167	0.139	0.119	0.105
(448)	950	0.441	0.294	0.321	0.177	0.147	0.126	0.110
(472)	1000	0.465	0.310	0.232	0.186	0.155	0.133	0.116
(496)	1050	0.488	0.325	0.244	0.195	0.163	0.139	0.122
(519)	1100	0.511	0.341	0.255	0.204	0.170	0.146	0.128
(543)	1150	0.534	0.356	0.267	0.214	0.178	0.153	0.134
(566)	1200	0.557	0.372	0.279	0.223	0.186	0.159	0.139
(590)	1250	0.581	0.387	0.290	0.232	0.194	0.166	0.145
(613)	1300	0.604	0.403	0.302	0.242	0.201	0.173	0.151
(637)	1350	0.627	0.418	0.314	0.251	0.209	0.179	0.157
(661)	1400	0.650	0.434	0.325	0.260	0.217	0.186	0.163
(684)	1450	0.674	0.449	0.337	0.269	0.225	0.192	0.168
(708)	1500	0.697	0.465	0.348	0.279	0.232	0.199	0.174
(731)	1550	0.720	0.480	0.360	0.288	0.24	0.206	0.180
(755)	1600	0.743	0.495	0.372	0.297	0.248	0.212	0.186
(779)	1650	0.766	0.511	0.383	0.307	0.255	0.219	0.192
(802)	1700	0.790	0.526	0.395	0.316	0.263	0.226	0.197
(826)	1750	0.813	0.542	0.406	0.325	0.271	0.232	0.203
(849)	1800	0.836	0.557	0.418	0.334	0.279	0.239	0.209
(873)	1850	0.859	0.573	0.430	0.344	0.286	0.246	0.215
(897)	1900	0.883	0.588	0.441	0.353	0.294	0.252	0.221
(920)	1950	0.906	0.604	0.453	0.362	0.302	0.259	0.226
(944)	2000	0.929	0.619	0.465	0.372	0.310	0.265	0.232

Damper at full open position (if any)

EXHAUST AND AIR FRESH LOUVER

Engineering and Performance Data
Airflow Resistance Diagram (all models)
Pressure Drap (Pt) Versus Face Velocity (Vf)



Selection Procedure

Case 01:

Illustrative Example:
Given Data: Required Model:EAL
Air flow Rate : 650 cfm (307 L/S)
Assume Vf. not exceeding 1.5 m/s (300 FPM)
Vf =1.5 m/s to read the related data as below:
Pressure drop = 8.0 Pa (0.03Inwg)
A eff = 0.201m²
By applying the A eff. value to table no. EL-01, simply you can select the size of 700 x 500mm which having the nearest area value to the required one.

Case 02:

Illustrative Example:
Given Data: Required Model: FAL c/w filter
Air flow Rate: 3500ncfm (1652 L/S)
Assume Vf. not exceeding 1.5 m/s (300 FPM)
Since the CFM given is out of the range of Table No.EL-03 divide the (3500) by (2) to give 1750 CFM and read the related data at this value as below:
Pressure drop = 8.0 Pa (0.03Inwg)
A eff = 0.542m²
By applying the A eff. value to table EL-02, simply you can select the size of 950 x 900 mm which is having the nearest area value to the required one.
Now, to obtain the required 3500 CFM, double the ara while maintaining the same height as below:
(L x 2) x (H) = (950 x 2) x (900)mm
Final size = 1900 x 900mm.

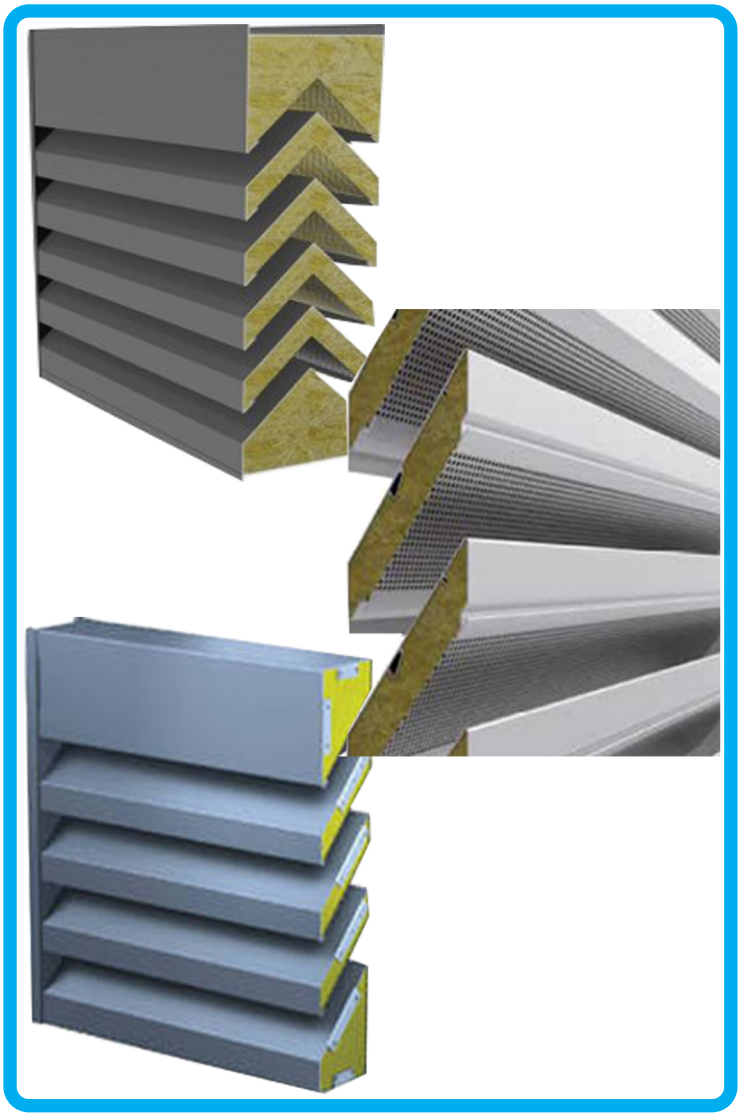
ACOUSTIC LOUVER

MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)

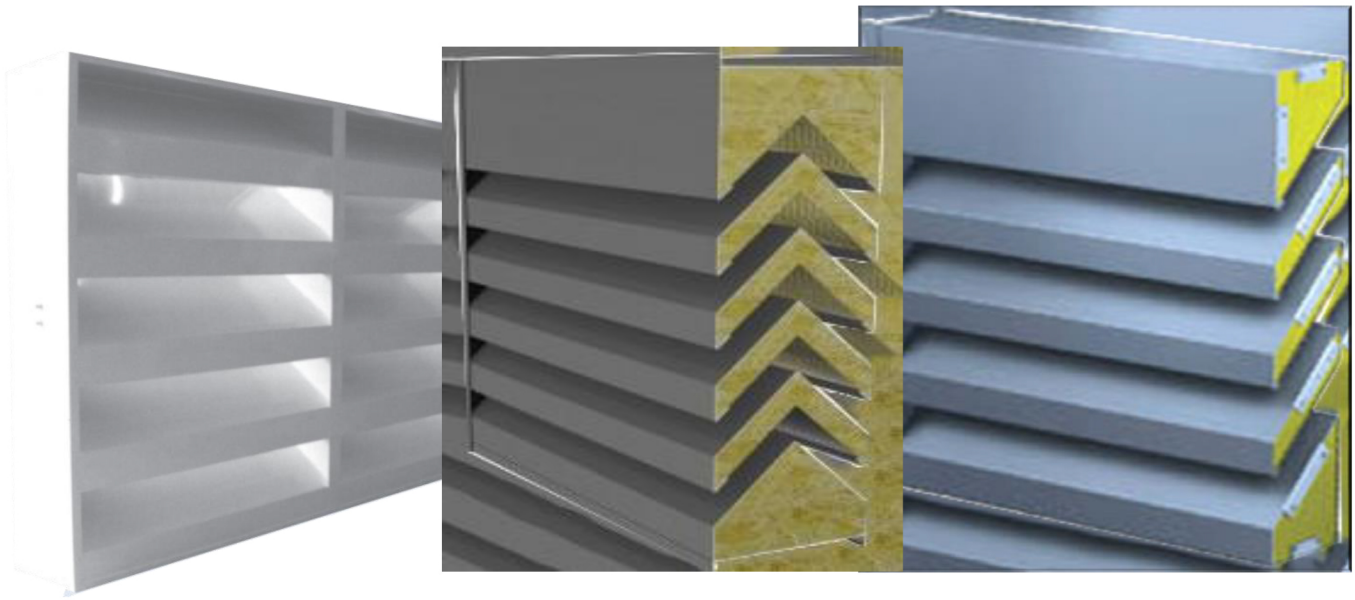






Efficient Air Distribution System

ACOUSTIC LOUVER



Acoustic Louvers are economical, effective and attractive. They are designed for maximum sound reduction when space is limited. They are aesthetically pleasing and available in various material types intended to be used where space is limited.

Acoustic Louvers are used as part of the intake/exhaust air system of buildings, structures, or equipment to help reduce noise produced by the system equipment. They have a relatively large surface area which compensates for their lack of depth. Models are available in varying depths, percent open area and blade configurations yielding various pressure loss and noise reduction performance.

ACOUSTIC LOUVER

AIRPRO Systems' **AAL** (standard blade), **AAL-S** (sight-proof) and **AAL-F** (airfoil shaped) Acoustic Louvers are designed to provide optimal acoustic performance (Transmission Loss; dB) with minimal airflow restrictions for a variety of space restricted applications. Acoustic louvers are manufactured with a choice of finishes and material options. If required by the system or in-field conditions, the acoustic louver may be assembled in a modular fashion. AIRPRO Systems offers a range of blade geometries that will meet your acoustic, aerodynamic and security requirements.



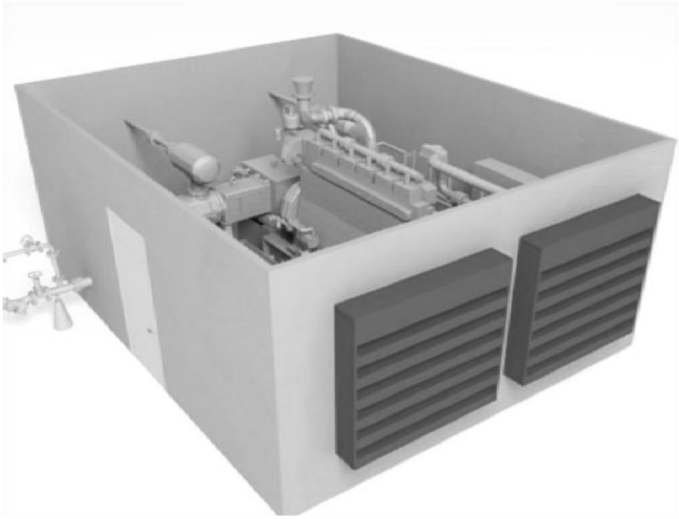
AIRPO STANDARD BLADE ACOUSTIC LOUVER (AAL)



AIRPO SIGHT PROOF, V - BLADE ACOUSTIC LOUVER (AAL-S)



AIRPO AIRFOIL BLADE (AAL-F)



AIRPO AIR INTAKE ACOUSTIC LOUVERS
FOR A MECHANICAL EQUIPMENT ROOM

ACOUSTIC LOUVER

Applications

- Plant and mechanical room ventilation
- Replace standard rain louvers for improved acoustic performance
- Relief air from factories and workshops
- Ventilation for acoustic enclosures
- Air conditioning and cooling tower barriers (with airflow)
- Power generation equipment
- Noise barrier ventilation systems

Accessories

- 1x1 wire mesh protection
- Access Doors

Standard Features

- Casing materials: 18 ga. Galvanized
- Depth range: 4 – 12 in. (other sizes available)
- Cross-section (max. piece size): 48 in. wide by 120 in. tall
- Acoustic grade fiberglass media fill

Construction Options

- Heavy casings: 10 and 14 ga.
- Casing materials: stainless steel, satin coat, and aluminum constructions
- Mounting flange
- Wire mesh protection
- Fiberglass cloth media protection
- Custom configurations for space and weight restrictions
- Paint finish and corrosion protection
- Hinged or door mountings

SAND TRAP LOUVER

MANUFACTURER OF AIR OUTLETS :

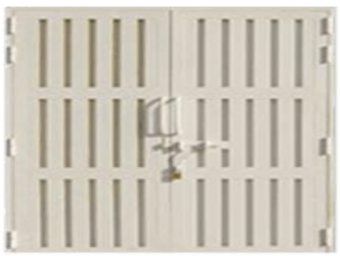
Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

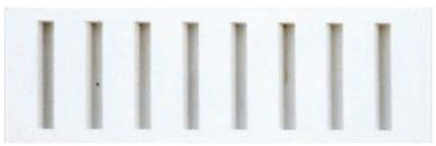
SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)










Efficient Air Distribution System

SAND TRAP LOUVER



Sand Trap Louver is used to lower the dust loading of conventional filtration as it is designed to separate large size sand particles at low to medium speeds, it is also fitted with a bird screen mesh made of galvanized steel to protect against undesired objects. Insert screen of stainless steel can be installed as optional.

Sand Trap Louver is self emptying system, it has a set of holes at the bottom face of the casing to discharge separated sand particles.

Sand Trap Louver(STL) is made of aluminium sections. It is composed of two sets of inverted U channels, mounted vertically on two opposite rows. Aluminium washable filter (optional) can be installed on the neck of the louver.

SAND TRAP LOUVER

Features & Characteristics

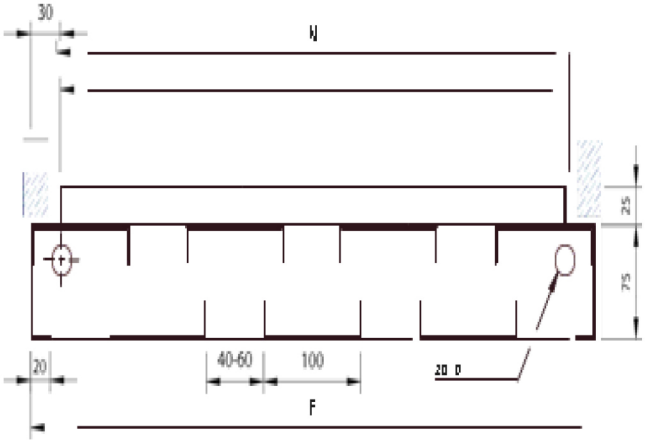
- Construction : Frame & blades are made of high quality Extruded Aluminium Profiles of 6063 Alloy.
- Frame and Blades general wall thickness: 1.5 - 1.8 mm and 1.2 - 1.5 mm respectively.
- Frame Flange width :20 mm.
- Blades width : 100 mm.
- The vertically U — Inverted blades are assembled in a double bank opposite style configuration which enables the unit to fulfill the requirements for not only a sand or dust filtration but also being a standard weather resisting assembly.
- Flush Mounted Sand Trap Louver type (Model FSTL) is also available. It's convenient to fix on the same plane of the wall with a sand chute tray fixed and inclined at the lower part of the Louver (suitable for all external wall installations).
- Since the STL is only a Pre-Filter unit, it's not recommended to be used alone in a system.

- The adjacent blades are positioned on 40 mm minimum spacing up to 60 mm maximum spacing providing maximum separation of sand or dust from inlet air at low air velocities, thus avoiding excessive dust loading of conventional filters.
- The lower part of the Louver frame contains of 20 mm drain holes arranged in two parallel row for the captured sand or dust.
- Available in wide variety of neck sizes with 150 x 150 mm minimum single section size and 2 mtr maximum single section height. Louvers height exceeding 2 mtr to be fabricated and supplied in multiple sections depending on length and height dimensions as well as site conditions.
- The assembly of multiple sections is unlimited where each section operates independently.
- Multiple sections: Supplied as separate sections and assembly by others on site.
- As a standard, the STL.'s are always provided with Bird Screen (Bird Guard) of galvanized steel with 12 x 12 mm grids attached behind the frame to prevent large flying objects and animals to pass through the system. Also available with Insect Screen as an option (on request).
- Sand Trap Louvers are available with different type of attachments such as :
    - Aluminium Filter (Model STL + F).
    - Opposed Blade Damper (Model STL + D).
    - Both the Filter and Damper (Model STL + F + D).

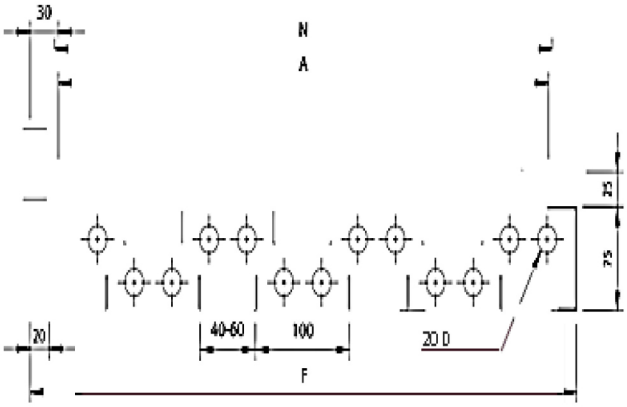
SAND TRAP LOUVER

Construction and Dimension Details

Model: ASTL



Model:ASTL + L







- Bird Screen (standard).
- Filter : Aluminium Washable Filter Media of 1/2 "standard thickness (1 and 2 " thicknesses also available on request as an option)

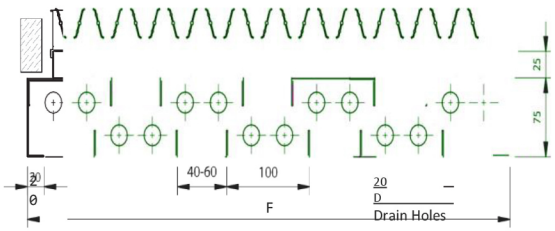
N: Nominal/Listed Size = Length (L) x Height (H)
A : Actual Size = (L-S) x (H-5)
F : Face Size = (L+55) x (H+55)

- Sand Trap Louvers furnished approximately 5 mm less than the Nominal/Listed Size.
- All Dimensions are in mm and subject to +J mm tolerance.

SAND TRAP LOUVER

Construction and Dimension Details

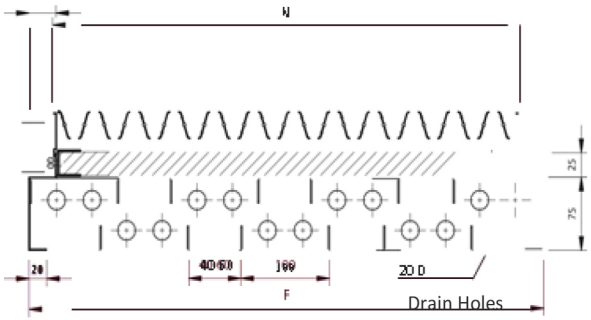
Model: ASTL + D

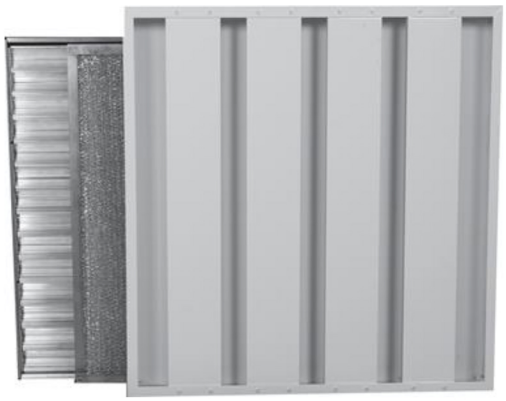




- Bird Screen (standard).
- For Opposed Blade Damper details and construction refer to chapter (1) or (2).
- For large sizes of STL it's not recommended to use this type of local Opposed Blade Damper due to it's weakness, thus for more rigidity the Opposed Blade Damper has to be replaced by Volume Control Damper (VCD).

Model:ASTL + F + D





- Bird Screen (standard).
- Filter : Aluminium Washable Filter Media of 1/2 "standard thickness (1 and 2 " thicknesses also available on request as an option).
- For Opposed Blade Damper details and construction refer to chapter (1) or (2).

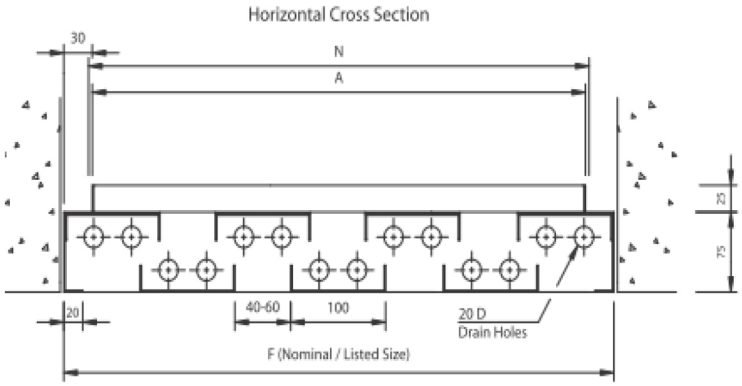
N: Nominal/Listed Size = Length (L) x Height (H)
A: Actual Size = (L-S) x (H-5)
F : Face Size = (L+55) x (H+S5)

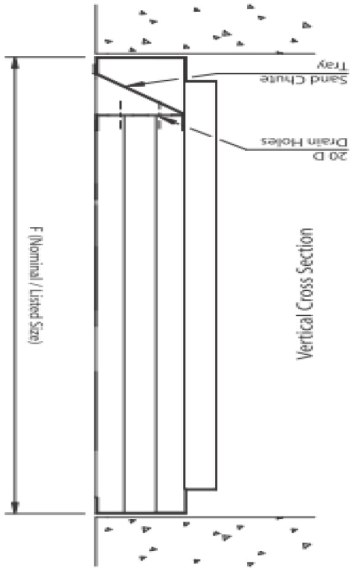
- Sand Trap Louvers furnished approximately 5 mm less than the Nominal/Listed Size.
- All Dimensions are in mm and subject to +1 mm tolerance.

SAND TRAP LOUVER

Flash Mounted Sand Trap Louvers
Construction and Dimensional Details

Model: AFSTL





* Louver Immerged inside the wall level

- Bird Screen (standard).
- This model usually used when the Sand Trap Louver is required to be installed in plane with the external wall of the building from outside.
- It's provided with especially designed sand chute tray as shown in order to ensure the discharge of captured sand or dust to outside the building.
- Also it's available with different Type of attachments such as:
  - * Aluminium Filter (Model FSTL + F).
  - * Opposed Blade Damper (Model FSTL + D).
  - * Both the Filter and Damper (Model FSTL + F + D).
- As a unique case, the sizing of this type of Louvers should be specified in outer frame dimensions i.e. the Face size will be treated as a Nominal / Listed Size to fit the external wall opening as shown.

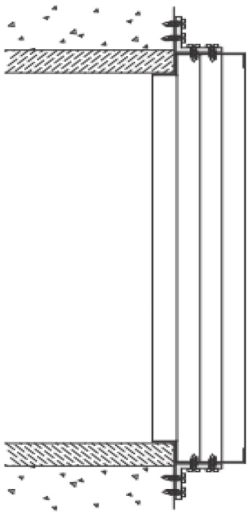


N: Nominal/Listed Size = Length (L) x Height (H)
A: Actual Size = (L-S) x (H-5)
F : Face Size = (L+55) x (H+S5)

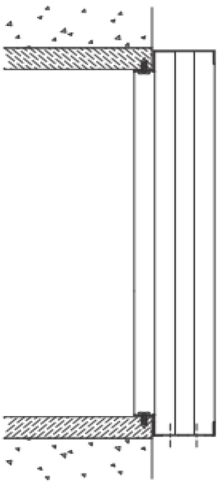
- Sand Trap Louvers furnished approximately 5 mm less than the Nominal/Listed Size.
- All Dimensions are in mm and subject to +1 mm tolerance.

SAND TRAP LOUVER

Available Fixing Mounting

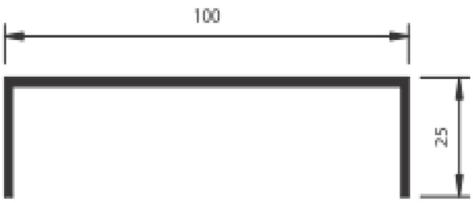


Angle Fixing (By Others)
For large sizes, it's recommended to use supporting Steel or Aluminium 90 ° angle as shown above to reinforce holding of the louver by outside wall

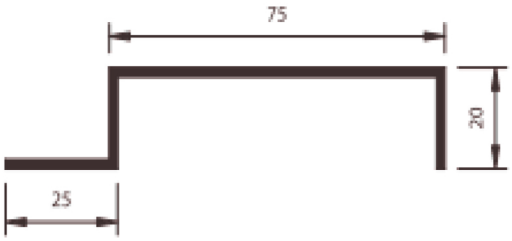


Screw Fixing (Fixing to Wall)
Sand Trap Louver is fixed to the wall through it's neck by means of screws as shown

Cross Sectional Drawings for Profiles used in Sand Trap Louvers



Blade Profile Section
Sand Trap Louvers

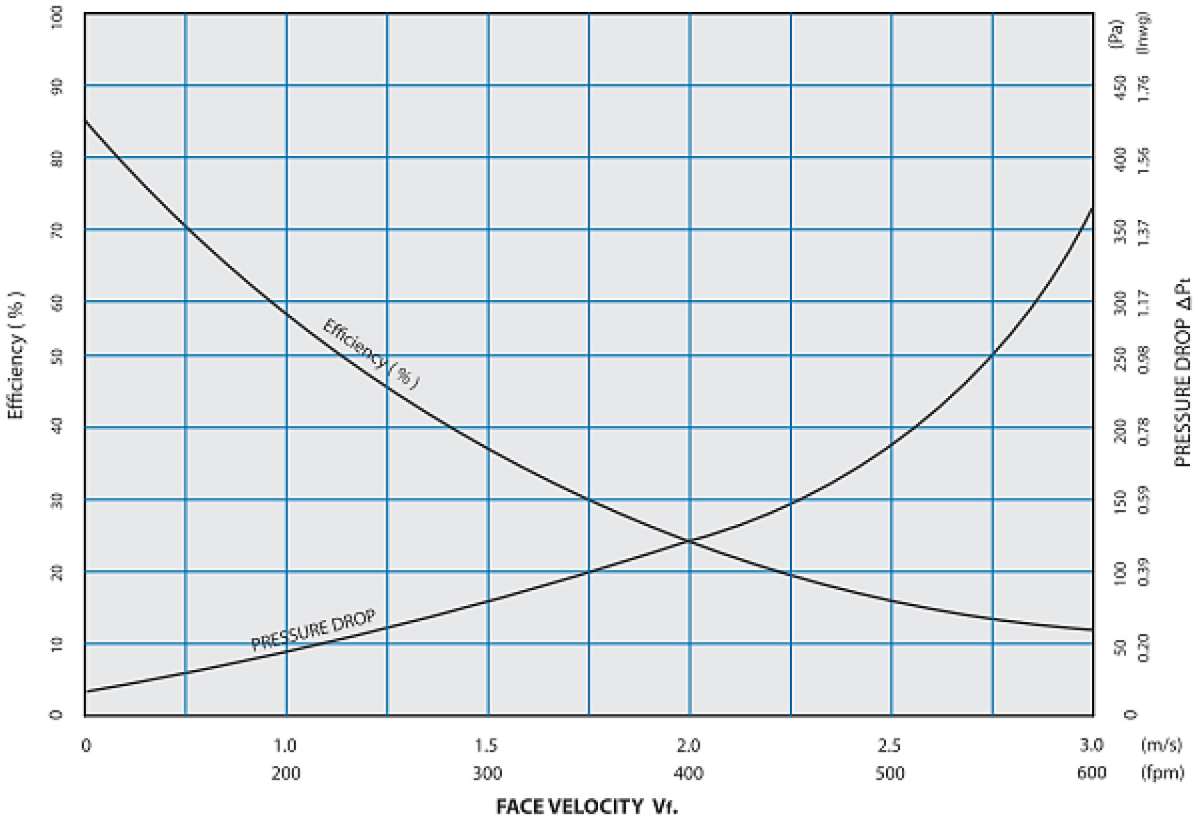


Frame Profile Section
Sand Trap Louvers

- All Dimensions are in mm and subject to ± mm tolerance

SAND TRAP LOUVER

Engineering and Performance Data



To Calculate the Air Flow Rate (All Models)

Air flow Rate in (L/S) = 0.33 x $\frac{L\ (mm) \times H\ (mm) \times V\ f.\ (m/s)}{1000}$

or

Air flow Rate in (CFM) = 0.33 x $\frac{L\ (inch) \times H\ (inch) \times V\ f.\ (fpm)}{151}$

L: Louver Length
H: Louver Height

Filtration Efficiency:

The filtration performance is dependent on the dust type and the velocity of the air, thus :

Particle Size Range	**Filtration** Efficiency in (%)	
	@ 1.0 m/s	@ 2.0 m/s
350 — 700	90	70
75 —700	60	approx. 30

For normal operation conditions, Sand Trap Louvers used for natural ventilation purpose are rated at a recommended Face velocity not exceeding 1.0 - 1.5 m/s.

SAND TRAP LOUVER

Air Flow Rate Values in CFM for Selected Sizes of Sand Louver @Vf = 1.0 (m/s)

L	H	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
100		7														
150		10														
200		14	28													
250		17	35													
300		21	42	63												
350		24	49	73												
400		28	56	84	112											
450		31	63	94	126											
500		35	70	105	140	175										
550		38	77	115	154	192										
600		42	84	126	168	210	252									
650		45	91	136	182	227	273									
700		49	98	147	196	245	294	343								
750		52	105	157	210	262	315	367								
800		56	112	168	224	280	336	392	448							
850		59	119	178	238	297	357	416	476							
900		63	126	189	252	315	378	441	503	566						
950		66	133	199	266	332	399	465	531	598						
1000		70	140	210	280	350	420	489	559	629	699					
1050		73	147	220	294	367	441	514	587	661	734					
1100		77	154	231	308	385	462	538	615	692	769	846				
1150		80	161	241	322	402	482	563	643	724	804	885				
1200		84	168	252	336	420	503	587	671	755	839	923	1007			
1250		87	175	262	350	437	524	612	699	787	874	961	1049			
1300		91	182	273	364	455	545	636	727	818	909	1000	1091	1182		
1350		94	189	283	378	472	566	661	755	850	944	1038	1133	1227		
1400		98	196	294	392	489	587	685	783	881	979	1077	1175	1273	1371	
1450		101	203	304	406	507	608	710	811	913	1014	1115	1217	1318	1420	
1500		105	210	315	420	524	629	734	839	944	1049	1154	1259	1364	1468	1573
1550		108	217	325	434	542	650	759	867	975	1084	1192	1301	1409	1517	1626
1600		112	224	336	448	559	671	783	895	1007	1119	1231	1343	1454	1566	1678
1650		115	231	346	462	577	692	808	923	1038	1154	1269	1385	1500	1615	1731
1700		119	238	357	476	594	713	832	951	1070	1189	1308	1427	1545	1664	1783
1750		122	245	367	489	612	734	857	979	1101	1224	1346	1468	1591	1713	1836
1800		126	252	378	503	629	755	881	1007	1133	1259	1385	1510	1636	1762	1888
1850		129	259	388	517	647	776	906	1035	1164	1294	1423	1552	1682	1811	1940
1900		133	266	399	631	664	797	930	1063	1196	1329	1461	1594	1727	1860	1993
1950		136	273	409	545	682	818	955	1091	1227	1364	1500	1636	1773	1909	2045
2000		140	280	420	559	699	839	979	1119	1259	1399	1538	1678	1818	1958	2098

- L & H Dimension are in mm
- Damper at full open position (if any)

SAND TRAP LOUVER

Air Flow Rate Values in CFM For Selected Sizes of Sand Trap Louvers @V f = 1.5

L	H	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500
100		10														
150		16														
200		21	42													
250		26	52													
300		31	63	94												
350		37	73	110												
400		42	84	126	168											
450		47	94	142	189											
500		52	105	157	210	262										
550		58	115	173	231	288										
600		63	126	189	252	315	378									
650		68	136	205	273	341	409									
700		73	147	220	294	367	441	514								
750		79	157	236	315	393	472	551								
800		84	168	252	336	420	503	587	671							
850		89	178	267	357	556	535	624	713							
900		94	189	283	378	472	566	661	755	850						
950		100	199	299	399	498	598	698	797	897						
1000		105	210	315	420	524	629	734	839	944	1049					
1050		110	220	330	441	551	661	771	881	991	1101					
1100		115	231	346	462	577	692	808	923	1038	1154	1269				
1150		121	241	362	482	603	724	844	965	1086	1206	1327				
1200		126	252	378	503	629	755	881	1007	1133	1259	1385	1510			
1250		131	262	393	524	656	787	918	1049	1180	1311	1442	1573			
1300		136	273	409	545	682	818	955	1091	1227	1364	1500	1636	1773		
1350		142	283	425	566	708	850	991	1133	1274	1416	1558	1699	1841		
1400		147	294	441	587	734	881	1028	1175	1322	1468	1615	1762	1909	2056	
1450		152	304	456	608	760	913	1065	1217	1369	1521	1673	1825	1977	2129	
1500		157	315	472	629	787	944	1101	1259	1416	1573	1731	1888	2045	2203	2360
1550		163	325	488	650	813	975	1138	1301	1463	1626	1788	1951	2114	2276	2439
1600		168	336	503	671	839	1007	1175	1343	1510	1678	1846	2014	2182	2350	2517
1650		173	346	519	692	865	1038	1211	1385	1558	1731	1904	2077	2250	2423	2596
1700		178	357	535	713	892	1070	1248	1427	1605	1783	1961	2140	2318	2496	2675
1750		184	367	551	734	918	1101	1285	1468	1652	1836	2019	2203	2386	2570	2753
1800		189	378	566	755	944	1133	1322	1510	1699	1888	2077	2266	2454	2643	2832
1850		194	388	582	776	970	1164	1358	1552	1746	1940	2135	2329	2523	2717	2911
1900		199	399	598	797	996	1196	1395	1594	1794	1993	2192	2392	2591	2790	2989
1950		205	409	614	818	1023	1227	1432	1636	1841	2045	2250	2454	2659	2864	3068
2000		210	420	629	839	1049	1259	1468	1678	1888	2098	2308	2517	2727	2937	3147

- L & H Dimension are in mm
- Damper at full open position (if any)

GRILLS AND REGISTERS

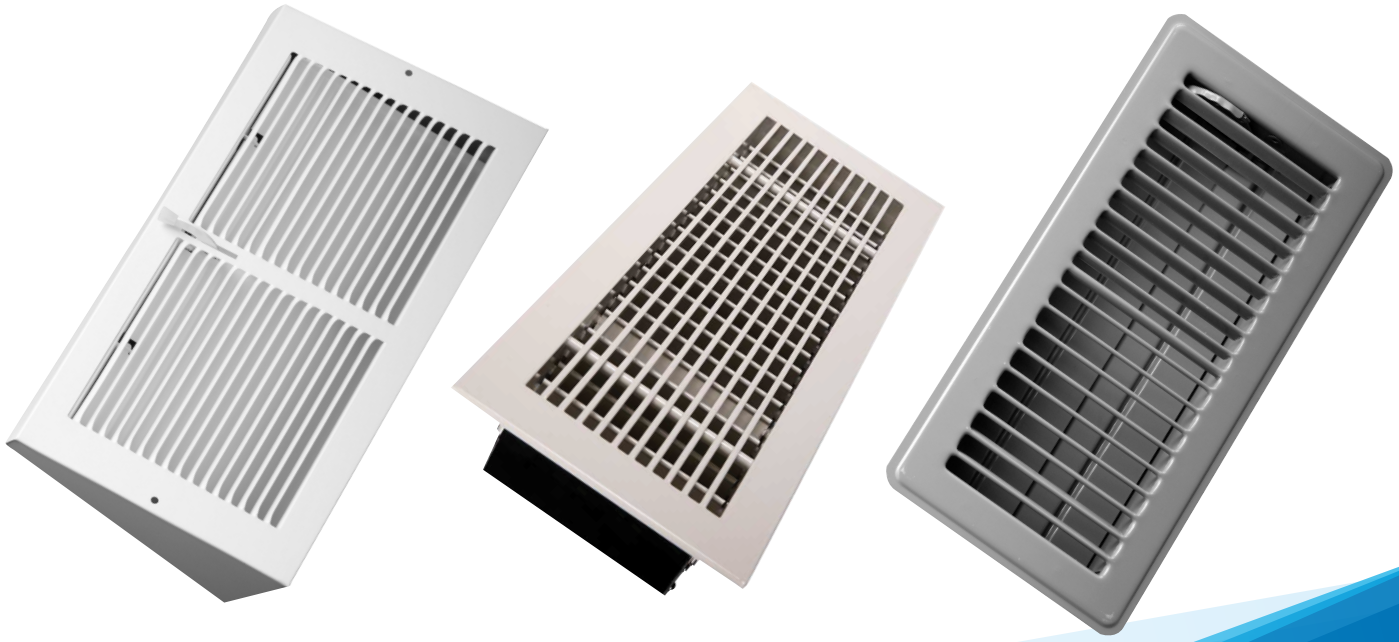
MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)





Efficient Air Distribution System

GRILL & REGISTERS

DOUBLE DEFLECTION REGISTER

Construction:

- **Frame:** AirPro Grills & Registers are constructed with high quality extruded Aluminum Profiles and with 30mm Flange Width. Flange Width below 30mm is optional.
- **Blades & Spacing:** Extruded Aluminum aerofoil blades. Standard Blade Spacing of 20mm.
- **Damper frame & Blades:** Extruded aluminum profiles with mill finish. Black Matt finishes as optional.

Standard Finishes

- Powder coated finishes as per RAL Color codes.
- Also flexible to the customer's requirement.

Description:

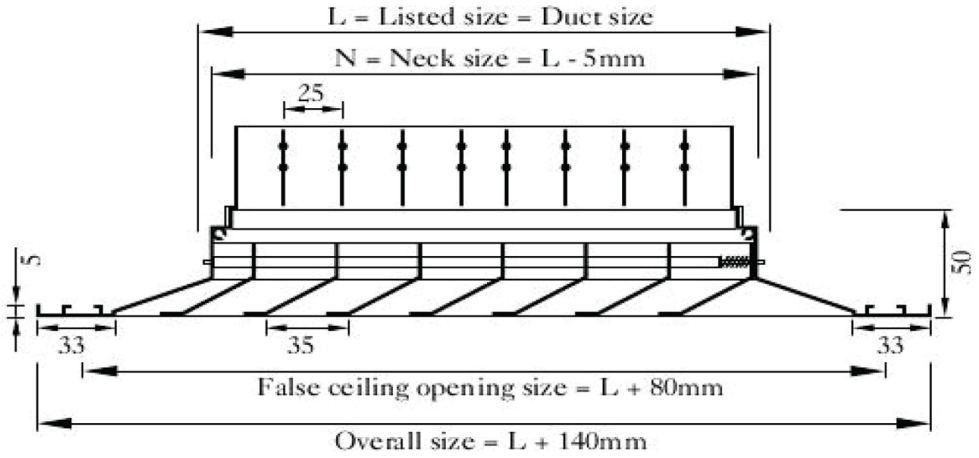
- Opposed Blade Dampers are rigidly secured with the frame by grippers. Damper blades are adjustable from the face of Register by rotating the screw manually.
- Registers will have two deflection blades arranged with front blades in horizontal position and the rear blades in vertical position, as shown in the picture.
- Deflection Blades can be manually adjustable to the desired position, to provide air deflection in both horizontal and vertical directions.
- Bushes are of Nylon and properly positioned in the frame through which the deflection blades pass through, to provide rattle free smooth operations.
- Foam Gasket (Optional) can be provided all around the back of frame, to prevent the leakage of air.

SQUARE DIFFUSER

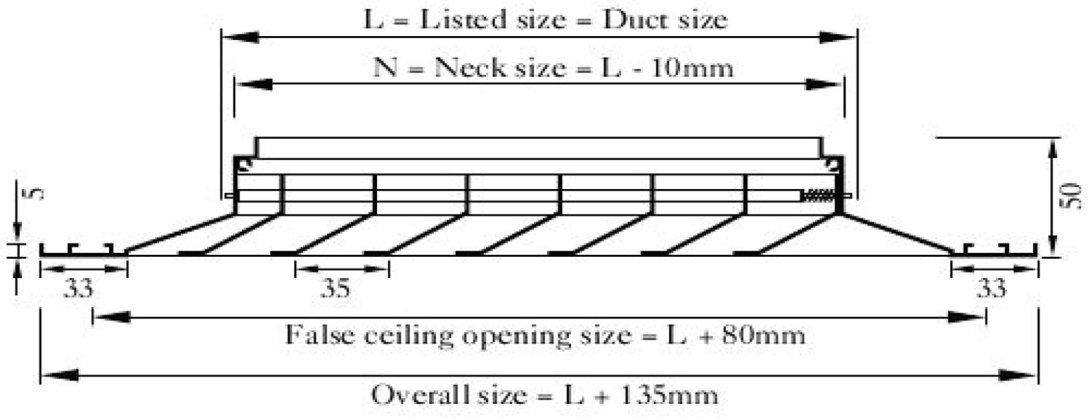
AIRPRO Square Diffuser - Supply One Way Throw



- **Model Name: AP-DS1-D**



- **Model Name: AP-DS1**



SINGLE DEFLECTION GRILLS

Construction:

- **Frame:** AirPro Grills & Registers are constructed with high quality extruded Aluminum Profiles and with 30mm Flange Width. Flange Width below 30mm is optional.
- **Blades & Spacing:** Extruded Aluminum aerofoil blades. Standard Blade Spacing of 20mm.

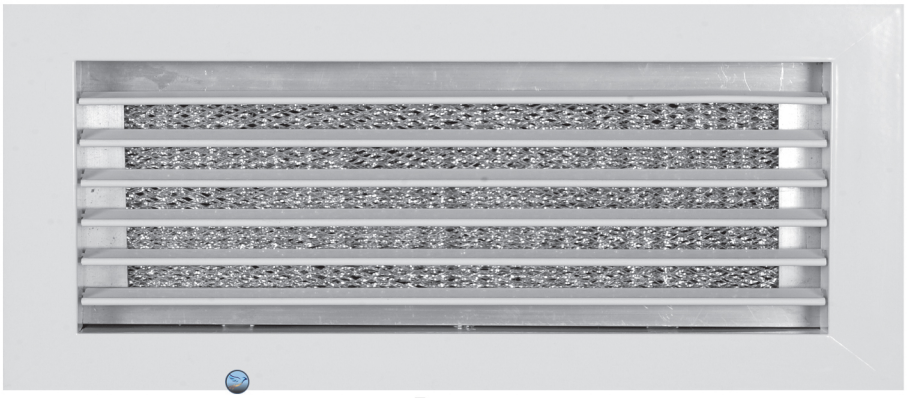
Standard Finishes:

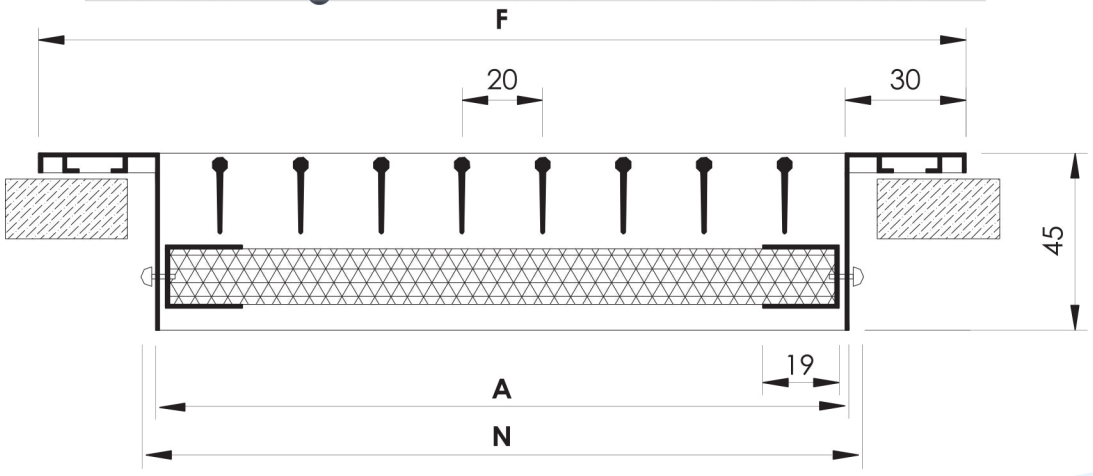
- Powder coated finishes as per RAL Color codes.
- Also flexible to the customer's requirement.

Model: AP-DF-H

- The frame and blades are made of high quality extruded aluminum corrosion resistance profile.
  Deflection blades are fixed rigidly to the frame at an angle of 45 to the horizontal plane.

Fixed Horizontal Blades





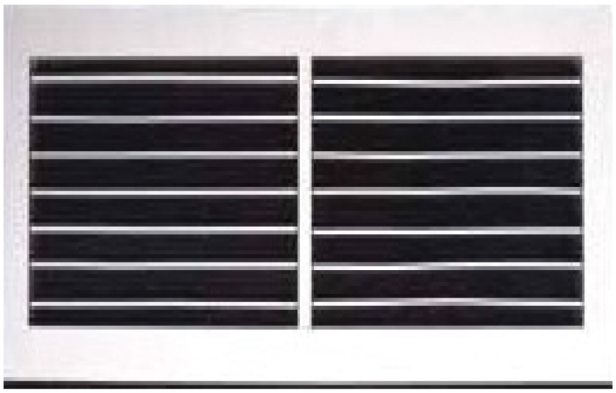
GRILLS & REGISTERS

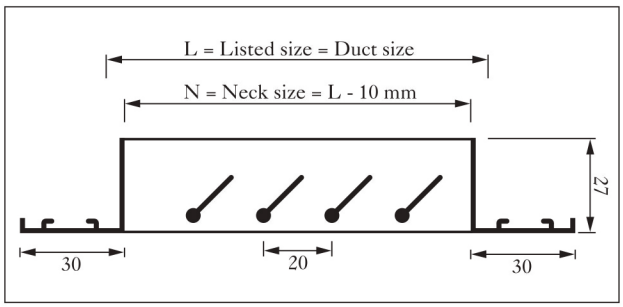
SINGLE DEFLECTION GRILLS

Model:AP-D-AH/D-AV

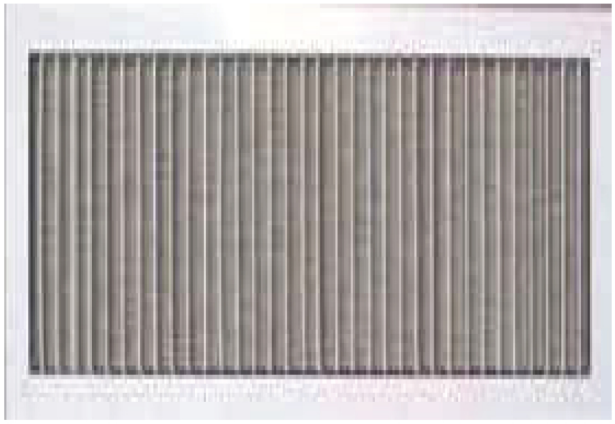
- The frame and blades are made of high quality extruded aluminum corrosion resistance profile.
- Frame is separated from the aerofoil deflection blades with help of nylon bushes, assuring quiet, smooth and rattles free operation.
- Deflection blades can be adjusted manually and individually both in the horizontal and vertical plane to sustain maximum air distribution.

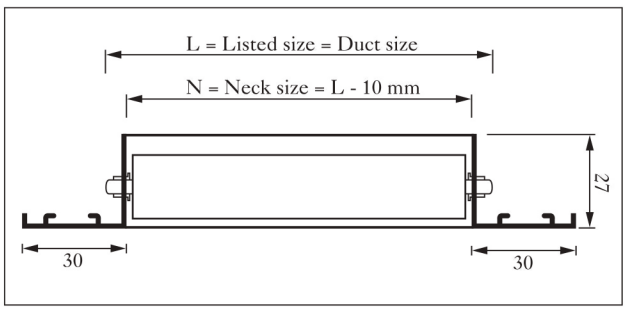
Adjustable Horizontal Blades





Adjustable Vertical Blades





GRILL & REGISTERS

FRESH AIR GRILL

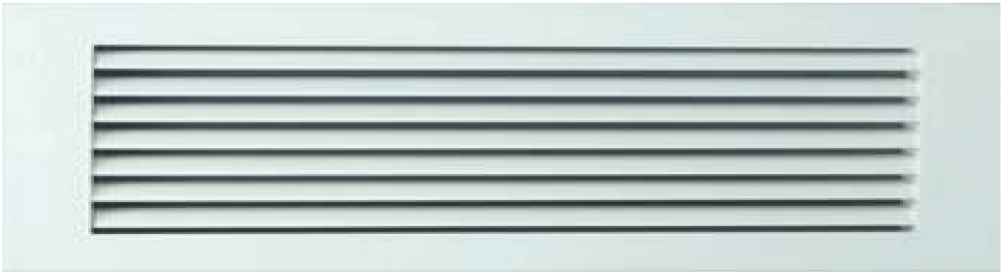
Model: AP-FAG-FH

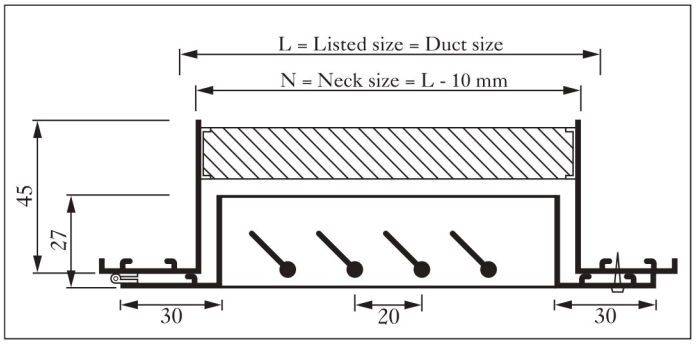
Construction:

- **Frame:** AirPro Grills & Registers are constructed with high quality extruded Aluminum Profiles and with 30mm Flange Width. Flange Width below 30mm is optional.
- **Blades & Spacing:** Extruded Aluminum aerofoil blades. Standard Blade Spacing of 20mm.
- **Filter frame**: 1.0 mm thick aluminum sheet.
- **Filter media**: Aluminum mesh.

Description:

- The frame and blades are of highly quality extruded aluminum profiled construction with the advantage of corrosion resistance and rigidity.
- Deflection blades are fixed rigidly to the frame at an angle of 45º to the horizontal plane.
- The removable and washable aluminum filter of ½ inch thick (1 inch is optional) placed at the back of the grille. Filter can be removed easily by opening the grille frame. Grille frame is fixed to the main frame by hinges on one side and screw on the other side.
- Total assembly will be same as AP-DF-H, with removable 12 mm thick aluminum filter.
- Foam gasket is sealed around the back of the frame as optional to avoid air leakage.



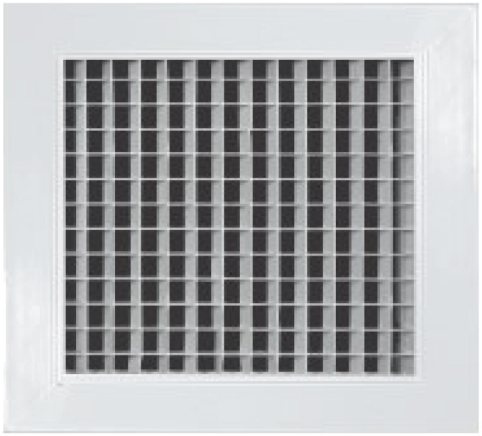


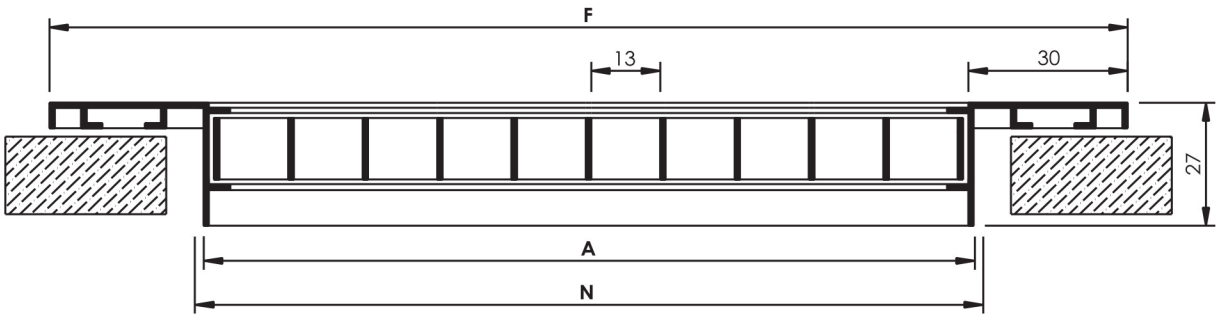
EGG CRATE GRILL

Model: AP-ECG

Construction:

- **Frame:** Frame is made of high quality Extruded Aluminum comprising 30mm Flange Width as Standard, 12, 16 & 24mm Flange widths are optional.
- **Core:** Aluminum Standard Core size of ½" x ½" x ½" (12.5mm x 12.5mm x 12.5mm) which will be fixed rigidly to the frame.
- **Damper (optional):** Opposed Blade volume damper is made of aluminum with mill finish, provided with Egg Crate Grill as an optional supply. Black matt finish is also available upon request.
- **Foam Gasket:** Foam Gasket is fixed to the back of frame, preventing the air leakage.





GRILL & REGISTERS

DOUBLE DEFLECTION REGISTERS & GRILLS WITH 0° & 45° DEFLECTION

Model: AP-SAR-H/SAR-V,AP-RAR-H/RAR-V Air Flow Data

CFM	Listed sized in mm x mm	200 x 100		250 x 100 200 x 125 150 x 150		200 x 150 250 x 125 300 x 100		250 x 150 300 x 125 400 x 100		300 x 150 350 x 125 450 x 100	
M³/sec	Area factor Deflection	0.0191 0°	0.0093 45°	0.0199 0°	0.0102 45°	0.0214 0°	0.0113 45°	0.0246 0°	0.0142 45°	0.0269 0°	0.0169 45°
100	Face vel. Pt mm H2O Throw in (M)	2.47 0.43 4.2-5.4	5.08 1.45 2.7-4.8	2.37 0.35 3.9-5.5	4.63 1.22 3.0-4.9	2.21 0.33 3.9-5.2	4.18 1.04 3.0-4.9	1.92 0.23 4.0-5.2	3.32 0.69 2.7-4.6		
0.0472	N.C	15	19	‹15	16	‹15	‹15	‹15	‹15		
150	Face vel. Pt mm H2O Throw in (M)	3.71 0.99 4.9-6.4	7.6 3.23 3.6-5.8	3.56 2.72 4.6-6.1	6.94 2.72 3.7-5.5	3.31 0.74 4.3-6.1	6.27 2.31 3.7-5.2	2.87 0.53 4.3-6.1	4.98 1.55 3.4-5.2	2.63 0.46 4.0-5-.8	4.19 1.07 3.4-4.9
0.0708	N.C	18	24	16	21	‹15	16	‹15	‹15	‹15	‹15
200	Face vel. Pt mm H2O Throw in (M)	4.95 1.77 5.2-7.3	10.16 5.76 4.3-6.4	4.75 1.39 5.2-7.0	9.26 4.88 4.3-6.1	4.42 1.3 04.9-7.0	8.36 4.12 3.9-6.1	3.84 0.94 4.9-6.7	6.65 2.77 4.0-5.8	3.51 0.81 4.6-6.7	5.59 1.88 4.0-5.8
0.0945	N.C	21	28	19	25	17	25	15	20	‹15	15
250	Face vel. Pt mm H2O Throw in (M)	6.18 2.76 5.8-7.9	12.69 9.02 4.8-7.0	5.93 2.18 5.8-7.9	11.58 7.62 4.9-7.0	5.52 2 5.5-7.6	10.45 6.45 4.9-6.7	4.8 1.45 5.4-7.6	8.32 4.32 4.6-6.7	4.39 1.24 5.2-7.6	6.988 2.95 4.6-6.7
0.1181	N.C	28	35	27	32	24	31	21	27	17	23
300	Face vel. Pt mm H2O Throw in (M)	7.42 3.96 5.8-8.2	15.24 13.21 5.2-7.3	7.12 3.15 5.8-8.2	13.89 10.92 4.2-7.3	6.62 2.9 5.8-8.2	12.54 9.27 5.2-7.3	5.76 2.1 5.8-8.2	9.98 6.22 5.2-7.3	5.27 1.8 5.8-8.2	8.38 4.24 5.2-7.3
0.1417	N.C	34	40	31	38	28	36	26	33	23	30
350	Face vel. Pt mm H2O Throw in (M)	8.65 5.38 7.0-9.8	17.77 17.53 5.8-8.2	8.31 4.32 6.7-9.5	16.21 14.98 5.8-8.2	7.72 3.9 6.7-9.5	14.63 12.57 5.4-7.9	6.72 2.87 6.4-9.2	11.64 8.51 5.4-7.9	6.14 2.46 6.4-9.1	9.78 5.77 5.4-7-9
0.1253	N.C	37	45	35	42	32	39	30	37	28	35
400	Face vel. Pt mm H2O Throw in (M)			9.49 5.61 7.6-1.0.4	18.52 19.56 6.7-9.1	8.83 5.13 7.3-10.4	16.72 16.51 6.4-8.8	7.68 3.76 7.0-10.1	13.3 11.06 6.1-8.5	7.022 3.2 6.7-9.8	11.18 7.52 6.1-8.5
0.1889	N.C			38	45	36	42	34	40	32	38
450	Face vel. Pt mm H2O Throw in (M)							8.64 4.72 7.3-10.7	14.96 13.97 6.7-9.1	7.899 4.06 7.0-10.4	12.57 9.53 6.4-8.8
0.2125	N.C							39	43	36	42
500	Face vel. Pt mm H2O Throw in (M)									8.8 5 7.3-10.9	13.97 11.74 6.7-7.4
0.2362	N.C									40	45

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H2O & Area factor in square meter
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec
- NC based on a room attention of 10 D

GRILL & REGISTERS

DOUBLE DEFLECTION REGISTERS & GRILLS WITH 0° & 45° DEFLECTION

Model: AP-SAR-H/SAR-V,AP-RAR-H/RAR-V Air Flow Data

CFM	Listed sized in mm x mm	200 x 100		250 x 100 200 x 125 150 x 150		200 x 150 250 x 125 300 x 100		250 x 150 300 x 125 400 x 100		300 x 150 350 x 125 450 x 100	
M³/sec	Area factor Deflection	0.0191 0°	0.0093 45°	0.0199 0°	0.0102 45°	0.0214 0°	0.0113 45°	0.0246 0°	0.0142 45°	0.0269 0°	0.0169 45°
100	Face vel. Pt mm H2O Throw in (M)	2.47 0.43 4.2-5.4	5.08 1.45 2.7-4.8	2.37 0.35 3.9-5.5	4.63 1.22 3.0-4.9	2.21 0.33 3.9-5.2	4.18 1.04 3.0-4.9	1.92 0.23 4.0-5.2	3.32 0.69 2.7-4.6		
0.0472	N.C	15	19	‹15	16	‹15	‹15	‹15	‹15		
150	Face vel. Pt mm H2O Throw in (M)	3.71 0.99 4.9-6.4	7.6 3.23 3.6-5.8	3.56 2.72 4.6-6.1	6.94 2.72 3.7-5.5	3.31 0.74 4.3-6.1	6.27 2.31 3.7-5.2	2.87 0.53 4.3-6.1	4.98 1.55 3.4-5.2	2.63 0.46 4.0-5-.8	4.19 1.07 3.4-4.9
0.0708	N.C	18	24	16	21	‹15	16	‹15	‹15	‹15	‹15
200	Face vel. Pt mm H2O Throw in (M)	4.95 1.77 5.2-7.3	10.16 5.76 4.3-6.4	4.75 1.39 5.2-7.0	9.26 4.88 4.3-6.1	4.42 1.3 04.9-7.0	8.36 4.12 3.9-6.1	3.84 0.94 4.9-6.7	6.65 2.77 4.0-5.8	3.51 0.81 4.6-6.7	5.59 1.88 4.0-5.8
0.0945	N.C	21	28	19	25	17	25	15	20	‹15	15
250	Face vel. Pt mm H2O Throw in (M)	6.18 2.76 5.8-7.9	12.69 9.02 4.8-7.0	5.93 2.18 5.8-7.9	11.58 7.62 4.9-7.0	5.52 2 5.5-7.6	10.45 6.45 4.9-6.7	4.8 1.45 5.4-7.6	8.32 4.32 4.6-6.7	4.39 1.24 5.2-7.6	6.988 2.95 4.6-6.7
0.1181	N.C	28	35	27	32	24	31	21	27	17	23
300	Face vel. Pt mm H2O Throw in (M)	7.42 3.96 5.8-8.2	15.24 13.21 5.2-7.3	7.12 3.15 5.8-8.2	13.89 10.92 4.2-7.3	6.62 2.9 5.8-8.2	12.54 9.27 5.2-7.3	5.76 2.1 5.8-8.2	9.98 6.22 5.2-7.3	5.27 1.8 5.8-8.2	8.38 4.24 5.2-7.3
0.1417	N.C	34	40	31	38	28	36	26	33	23	30
350	Face vel. Pt mm H2O Throw in (M)	8.65 5.38 7.0-9.8	17.77 17.53 5.8-8.2	8.31 4.32 6.7-9.5	16.21 14.98 5.8-8.2	7.72 3.9 6.7-9.5	14.63 12.57 5.4-7.9	6.72 2.87 6.4-9.2	11.64 8.51 5.4-7.9	6.14 2.46 6.4-9.1	9.78 5.77 5.4-7-9
0.1253	N.C	37	45	35	42	32	39	30	37	28	35
400	Face vel. Pt mm H2O Throw in (M)			9.49 5.61 7.6-1.0.4	18.52 19.56 6.7-9.1	8.83 5.13 7.3-10.4	16.72 16.51 6.4-8.8	7.68 3.76 7.0-10.1	13.3 11.06 6.1-8.5	7.022 3.2 6.7-9.8	11.18 7.52 6.1-8.5
0.1889	N.C			38	45	36	42	34	40	32	38
450	Face vel. Pt mm H2O Throw in (M)							8.64 4.72 7.3-10.7	14.96 13.97 6.7-9.1	7.899 4.06 7.0-10.4	12.57 9.53 6.4-8.8
0.2125	N.C							39	43	36	42
500	Face vel. Pt mm H2O Throw in (M)									8.8 5 7.3-10.9	13.97 11.74 6.7-7.4
0.2362	N.C									40	45

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H2O & Area factor in square meter
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec
- NC based on a room attention of 10 D

GRILL & REGISTERS

DOUBLE DEFLECTION REGISTERS & GRILLS WITH 0° & 45° DEFLECTION
Model: AP-SAR-H/SAR-V,AP-RAR-H/RAR-V Air Flow Data

CFM	Listed sized in mm x mm	350 x 350 400 x 300 500 x 250 600 x 200 900 x 150		400 x 400 500 x 300 600 x 250 500 x 125 750 x 200		360 x 350 600 x 300 700 x 250 900 x 200 1200 x 150		450 x 450 500 x 400 800 x 250 1000 x 200	
M³/sec	Area factor Deflection	0.0633 0°	0.0529 45°	0.0827 0°	0.072 45°	0.0926 0°	0.0853 0°	0.1069 0°	0.097 45°
0.2362	Face vel. Pt mm H2O Throw in (M) N.C	3.37 4.48 7.3-10.9 <15	4.47 1.02 5.8-9.1 16	2.86 0.28 6.7-10.7 <15	3.28 0.45 5.5-9.1 <15	2.46 0.2 9.5-10.4 <15	2.77 0.31 5.2-9.1 <15	2.21 0.15 6.1-10.1 <15	2.43 0.23 4.9-8.8 <15
0.2834	Face vel. Pt mm H2O Throw in (M) N.C	4.47 0.71 8.2-11.9 16	5.36 1.45 6.4-10.1 20	3.43 0.41 7.6-11.6 <15	3.94 0.63 6.4-10.1 18	2.95 0.31 7.3-11.3 <15	3.32 0.43 6.1-10.1 <15	2.65 0.23 7.0-10.7 <15	2.92 0.31 6.1-9.8 <15
0.3307	Face vel. Pt mm H2O Throw in (M) N.C	5.22 0.96 8.8-12.8 22	6.25 1.98 7.3-10.9 26	4 0.56 8.5-12.5 19	4.59 0.86 7.0-11.0 23	3.44 0.41 8.5-12.2 16	3.88 0.56 7.0-10.9 20	3.09 0.31 8.2-11.9 15	3.4 0.43 6.7-10.7 19
0.1889	Face vel. Pt mm H2O Throw in (M) N.C	5.97 1.27 9.8-13.4 30	7.14 2.59 8.2-11.9 32	4.57 0.71 9.5-13.1 26	5.25 1.14 7.9-10.6 28	3.93 0.53 9.5-13.1 21	4.43 0.74 7.9-11.6 25	3.53 0.38 9.1-12.5 20	3.89 0.56 7.6-11.3 24
0.425	Face vel. Pt mm H2O Throw in (M) N.C	6.71 1.6 10.1-14.6 33	8.03 3.25 8.5-12.5 36	5.14 0.91 10.1-14.3 30	5.9 1.45 8.5-12.2 33	4.42 0.68 10.1-14.0 25	4.98 0.94 8.5-12.2 30	3.98 0.48 9.8-13.7 24	4.38 0.71 8.2-12.2 29
0.472	Face vel. Pt mm H2O Throw in (M) N.C	7.44 1.98 10.7-15 37	8.92 4.01 9.1-13 40	5.69 1.11 10.4-15 34	6.55 1.78 9.1-13.1 36	4.92 0.84 10.4-14.6 30	5.55 1.17 9.1-13.1 33	4.45 0.61 10.1-14.3 29	4.86 0.86 9.2-13.1 32
0.519	Face vel. Pt mm H2O Throw in (M) N.C	8.18 2.39 10.9-16 40	9.81 4.88 9.8-14 45	6.25 1.35 10.7-15 36	7.21 2.16 9.8-14 40	5.41 1.02 10.7-15.0 33	6.11 1.42 9.8-14 36	4.89 0.74 10.4-14.9 32	5.36 1.07 9.8-14 35
0.567	Face vel. Pt mm H2O Throw in (M) N.C			6.83 1.6 11.3-16 38	7.87 2.54 10.4-15 43	5.91 1.22 11.3-15.9 36	6.67 1.68 11-15.2 40	5.35 1 10-14.8 35	5.84 1.24 8.2-11.9 39
0.661	Face vel. Pt mm H2O Throw in (M) N.C			7.96 2.18 12.2-17 44	9.18 3.51 11-15.5 49	6.88 1.65 12.2-16.8 41	7.77 2.28 10.9-15.2 44	6.23 1.19 11.6-16.2 40	6.81 1.73 10.4-15 43

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H2O & Area factor in square meter
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec
- NC based on a room attention of 10 D

GRILL & REGISTERS

DOUBLE DEFLECTION REGISTERS & GRILLS WITH 0° & 45° DEFLECTION
Model: AP-SAR-H/SAR-V,AP-RAR-H/RAR-V Air Flow Data

CFM	Listed sized in mm x mm	600 X 400 900 X 250 800 X 300 1200 X 200		800 x 350 900 x 300 1100 x 250 1400 x 200		600 x 600 900 x 400 1000 x350 1200 x 300		750 x 600 900 x 500 1000 x 450 1500 x 300 1200 x 375		800 x 750 900 x 700 100 x 600 1200 x 500	
M³/sec	Area factor Deflection	0.1352 0°	0.1 45°	0.162 0°	0.1159 45°	0.216 0°	0.162 45°	0.27 0°	0.216 45°	0.354 0°	0.288 45°
1100	Face vel.	3.84	5.19	3.2	4.48	2.4	3.2	1.92	2.4		
	Pt mm H2O	0.64	0.98	0.59	0.84	0.52	0.76	0.42	0.62		
	Throw in (M)	9.8-14.3	9.2-13.2	9.2-13.6	8.6-12.8	8.8-13.0	8.1-11.3	7.0-9.1	6.2-8.3		
0.519	N.C	30	33	28	29	25	27	20	24		
	Face vel.	4.19	5.67	3.5	4.89	2.63	3.5	2.1	2.63	1.6	1.97
1200	Pt mm H2O	0.87	1.09	0.69	0.92	0.58	0.81	0.48	0.71	0.38	0.51
	Throw in (M)	13.3-14.8	9.8-14.0	9.1-13.2	9.3-13.8	8.4-11.9	7.5-10.8	6.8-9.4	6.8-9.4	6.3-9.2	5.7-8.1
0.567	N.C	32	35	30	32	27	29	24	26	20	22
	Face vel.	4.89	6.61	4.1	5.7	3.06	4.08	2.45	3.06	1.87	2.29
1400	Pt mm H2O	0.93	1.51	0.76	1.21	0.63	0.98	0.51	0.79	0.43	0.58
	Throw in (M)	10.8-15.4	10.2-14.6	10.1-15.0	9.7-13.8	9.7-14.3	8.8-11.3	8.1-11.3	7.3-10.1	6.8-10.1	6.1-8.8
0.661	N.C	35	38	33	35	30	32	27	29	23	25
1600	Face vel.	5.59	7.56	4.67	6.52	3.5	4.82	2.8	3.5	2.13	2.63
	Pt mm H2O	1.03	1.82	0.84	1.43	0.71	1.12	0.63	0.91	0.51	0.64
	Throw in (M)	11.5-16.9	10.8-15.1	10.1-14.5	10.1-14.8	10.1-14.8	9.3-12.1	8.8-12.1	7.9-10.7	7.3-10.9	6.7-9.2
0.756	N.C	38	40	36	37	33	34	29	31	25	28
	Face vel.	6.29	8.5	5.25	7.33	3.94	5.32	3.15	3.94	2.4	2.95
1800	Pt mm H2O	1.32	2.24	0.97	1.73	0.82	1.34	0.72	1.13	0.58	0.78
	Throw in (M)	12-6-18.2	11.4-17.3	11.8-16.7	10.7-15.3	10.9-16.1	9.8-14.1	10.1-14.2	5.2-12.2	7.9-11.6	7.1-9.8
0.85	N.C	41	44	39	41	36	37	31	33	28	31
	Face vel.	6.99	9.78	5.83	8.15	4.38	5.83	3.5	4.38	2.7	3.28
2000	Pt mm H2O	1.61	2.53	1.03	1.92	0.88	1.52	0.52	0.7-8-1.23	0.61	0.83
	Throw in (M)	13.8-19.7	12.4-18.6	13.2-18.1	11.6-16.5	12.1-17.3	10.3-14.8	10.7-15.1	8.8-13.1	8.2-11.8	7.4-10.4
0.945	N.C	44	47	41	43	39	41	33	36	28	32
	Face vel.			6.41	8.96	4.81	8.41	83.85	4.81	2.94	3.61
2200	Pt mm H2O			1.16	2.42	0.95	1.82	0.83	1.45	0.72	0.93
	Throw in (M)			14.3-19.5	12.4-17.7	12.8-18.1	10.9-15.7	11.2-16.4	9.3-13.8	8.9-13.0	8.1-11.3
1.039	N.C			44	47	41	44	35	39	30	33
	Face vel.					5.25	7	4.2	6.25	3.2	3.94
2400	Pt mm H2O					1.03	2.04	0.93	1.63	0.81	1.03
	Throw in (M)					13.7-19.2	11.4-16.4	12.2-17.3	9.9-14.7	9.6-13.8	8.7-12.1
1.134	N.C					43	46	37	42	32	35
	Face vel.					5.69	7.58	4.55	5.69	3.47	4.26
2600	Pt mm H2O					1.43	2.43	1.07	1.93	0.92	1.32
	Throw in (M)					14.4-21.3	12.1-17.6	13.1-18.4	10.7-15.4	10.7-15.7	9.3-13.2
1.1228	N.C					45	48	40	44	33	37

- Face velocity is measured in m/sec.
- Total pressure loss is in mm of H2O & Area factor in square meter
- Throw (meters) is measured for a terminal velocities of 0.5 & 0.25 m/sec
- NC based on a room attention of 10 D

GRILL & REGISTERS

SINGLE DEFLECTION GRILLS FIXED HORIZONTAL BLADES & 45° DEFLECTION

Model: AP-DF-H - Air Flow Data

Listed size in mm x mm	Face Value	1.5	2	2.5	3	3.5	4	4.5	5
	Ps mm H2O	0.91	1.63	2.54	3.68	4.97	6.5	8.33	10.16
200x100/200x125	CFM	60	80	100	120	140	160	180	200
	M³/sec	0.0283	0.0378	0.0472	0.0567	0.0661	0.0756	0.085	0.0945
150x150	NC	< 15	16	24	27	31	36	41	46
200x150/250x125	CFM	81	108	135	162	189	216	243	270
	M³/sec	0.0838	0.051	0.0638	0.765	0.0893	0.102	0.1148	0.1275
300x100	NC	< 15	16	24	27	31	36	41	46
250x150/300x125	CFM	102	136	170	204	238	272	306	340
	M³/sec	0.0482	0.0642	0.0803	0.0964	0.1124	0.1285	0.1445	0.1606
400x100	NC	< 15	15	24	27	31	36	41	46
300x150/350x125	CFM	120	160	200	240	280	320	360	400
	M³/sec	0.0567	0.0756	0.0945	0.1134	0.1322	0.1512	0.17	0.1889
450x100	NC	< 15	15	25	28	31	36	41	47
250x200/350x150	CFM	141	188	235	282	329	376	423	470
	M³/sec	0.0666	0.088	0.1109	0.1332	0.1554	0.178	0.199	0.222
400x125/500x100	NC	< 15	16	24	27	31	35	40	47
250x250/ 300x200	CFM	162	216	270	324	378	432	486	540
400x150/500x125	M³/sec	0.0765	0.102	0.1275	0.153	0.0179	0.204	0.2295	0.255
600x100	NC	< 15	16	24	27	31	36	42	47
300x250/450x150	CFM	180	270	300	360	420	480	540	600
500x150/600x125	M³/sec	0.085	0.1133	0.142	0.17	0.198	0.2267	0.255	0.2833
750x100	NC	< 15	17	23	27	31	35	40	46
300x300/350x250	CFM	240	320	400	480	560	640	720	800
	M³/sec	0.1133	0.151	0.1889	0.2267	0.2645	0.302	0.34.01	0.3778
450x200/600x150	NC	< 15	18	23	27	31	35	40	47
350x300/400x250	CFM	300	400	500	600	700	800	900	1000
	M³/sec	0.1416	0.1889	0.236	0.283	0.331	0.3778	0.425	0.4723
500x200/750x150	NC	< 15	19	23	27	32	36	40	48
350x350/400x300	CFM	360	480	600	720	840	960	1080	1200
500x250/600x200	M³/sec	0.17	0.2267	0.283	0.34	0.3967	0.453	0.51	0.5667
700x200	NC	< 15	21	24	27	32	36	40	48
400x400/500x300	CFM	420	560	700	840	980	1120	1260	1400
	M³/sec	0.198	0.264	0.331	0.397	0.463	0.529	0.595	0.661
600x250/800x200	NC	< 15	21	24	28	33	37	41	49
500x350/600x300	CFM	480	640	800	960	1120	1280	1440	1600
700x250/900x200	M³/sec	0.2267	0.3023	0.3778	0.453	0.529	0.6046	0.68	0.7556
1000x150	NC	16	22	25	29	33	38	42	49
450x450/500x400	CFM	540	720	900	1080	1260	1440	1620	1800
750x250	M³/sec	0.255	0.3401	0.4251	0.51	0.51	0.6801	0.765	0.85
1000x200	NC	17	22	25	29	34	42	43	50
500x500/550/450	CFM	600	800	1000	1200	1400	1600	1800	2000
750x300/900x250	M³/sec	0.2834	0.3778	0.4723	0.5668	0.6612	0.7556	0.85	0.9446
1000x200	NC	18	23	27	31	36	40	44	52

- Face velocity is measured in m/sec.
- Ps: Static pressure loss in mm of H2O
- NC based on a room attenuation of 10 D

GRILL & REGISTERS

SINGLE DEFLECTION REGISTERS & GRILLS WITH 0° DEFLECTION

Model: AP-D-AH/AV - Air Flow Data

Listed size in mm x mm	Face Value	2.5	3	3.5	4	4.5	5	5.5	6
	Ps mm H2O	1.7	2.5	3.35	4.37	5.59	6.86	8.38	9.9
250x100/200x125	CFM	150	180	210	240	270	300	330	360
	M³/sec	0.071	0.05	0.99	0.113	0.127	0.142	0.156	0.17
150x150	NC	< 15	19	22	25	29	33	36	38
200x150/250x125	CFM	180	210	240	280	320	350	390	420
	M³/sec	0.085	0.099	0.113	0.132	0.151	0.165	0.184	0.198
300x100	NC	< 15	18	22	26	29	33	35	37
250x150/300x125	CFM	220	260	310	350	400	440	490	530
	M³/sec	0.104	0.123	0.146	0.165	0.189	0.208	0.231	0.25
400x100	NC	16	20	25	28	31	35	38	40
300x150/350x125	CFM	240	290	340	390	440	490	540	590
	M³/sec	0.113	0.137	0.161	0.184	0.208	0.231	0.255	0.279
450x100	NC	15	20	24	27	30	34	37	40
250x200/350x150	CFM	270	320	370	420	480	530	590	640
	M³/sec	0.127	0.151	0.165	0.198	0.227	0.25	0.279	0.302
400x125/500x100	NC	< 15	17	21	24	28	31	35	38
250x250/ 300x200	CFM	310	370	430	490	550	610	680	740
400x150/500x125	M³/sec	0.146	0.165	0.203	0.231	259	0.288	0.321	0.349
600x100	NC	15	19	23	26	30	34	36	39
300x250/450x150	CFM	360	440	510	580	660	730	810	800
500x150/600x125	M³/sec	0.17	0.208	0.241	0.274	0.312	0.345	0.382	0.416
750x100	NC	15	20	24	27	31	34	37	39
300x300/350x250	CFM	420	500	590	670	750	840	930	1020
	M³/sec	0.198	0.236	0.279	0.316	0.354	0.397	0.439	0.482
450x200/600x150	NC	< 15	15	23	27	30	34	37	40
350x300/400x250	CFM	450	540	630	720	810	900	1000	1090
	M³/sec	0.213	0.255	0.297	0.34	0.382	0.425	0.472	0.514
500x200/750x150	NC	< 15	16	21	25	29	33	37	40
350x350/400x300	CFM	510	620	720	820	930	1030	1140	1240
500x250/600x200	M³/sec	0.241	0.293	0.34	0.387	0.439	0.486	0.538	0.586
900x150	NC	15	20	24	29	32	37	40	43
400x400/500x300	CFM	580	700	820	940	1050	1170	1290	1400
	M³/sec	0.274	0.331	0.387	0.444	0.496	0.553	0.609	0.661
600x250/800x200	NC	15	20	25	30	34	38	41	44
500x350/600x300	CFM	660	800	930	1060	1200	1330	1470	1600
700x250/900x200	M³/sec	0.312	0.378	0.439	0.501	0.567	0.628	0.694	0.756
1000x150	NC	16	22	26	32	35	39	42	45
450x450/500x400	CFM	700	840	980	1120	1270	1400	1550	1690
750x250	M³/sec	0.331	0.397	0.463	0.529	0.599	0.661	0.732	0.798
1000x200	NC	16	21	25	30	33	35	39	43
500x500/550/450	CFM	800	970	1130	1280	1440	1600	1770	1930
750x300/800x250	M³/sec	0.378	458	0.533	0.605	0.68	0.756	0.836	0.912
1000x200	NC	18	23	27	33	38	40	43	45

- Face velocity is measured in m/sec.
- Ps: Static pressure loss in mm of H2O
- NC based on a room attention of 10 D

SINGLE DEFLECTION REGISTERS & GRILLS WITH 45° DEFLECTION
Model: AP-SAR-H/SAR-V, AP-RAR-H/RAR-V- Air Flow Data

Listed size in mm x mm	Face Value	2.75	3.25	4	4.5	5	5.5	6	6.5
	Ps mm H2O	2.16	3.1	4.32	5.59	7.11	8.89	10.92	12.95
250x100/200x125	CFM	150	180	210	240	270	300	330	360
	M³/sec	0.071	0.085	0.099	0.113	0.127	0.142	0.156	0.17
150x150	NC	18	22	25	28	32	36	39	41
200x150/250x125	CFM	180	210	240	280	320	350	390	420
	M³/sec	0.085	0.099	0.113	0.32	0.151	0.165	0.184	0.198
300x100	NC	17	21	25	29	32	36	38	40
250x150/300x125	CFM	220	260	210	350	400	440	490	530
	M³/sec	0.104	0.123	0.146	0.165	0.189	.0.208	0.231	0.25
400x100	NC	19	23	28	31	34	38	41	43
300x150/350x125	CFM	240	290	340	300	440	490	540	590
	M³/sec	0.1132	0.137	0.161	0.184	0.208	0.231	0.255	0.279
450x100	NC	18	23	27	30	33	37	40	43
250x200/350x150	CFM	270	320	370	420	480	530	590	640
	M³/sec	0.127	0.151	0.165	0.198	0.227	0.25	0.279	0.302
400x125/500x100	NC	16	20	24	27	31	34	38	41
250x250/ 300x200	CFM	310	370	430	490	550	610	680	740
400x150/500x125	M³/sec	0.146	0.165	0.203	0.231	0.259	0.288	321	0.349
600x100	NC	18	22	26	29	33	37	39	42
300x250/450x150	CFM	360	440	510	580	660	730	810	800
500x150/600x125	M³/sec	0.17	0.208	0.241	0.274	0.312	0.345	0.382	0.416
750x100	NC	18	23	27	30	34	37	40	42
300x300/350x250	CFM	420	500	590	670	750	840	930	1020
	M³/sec	0.198	0.236	0.279	0.316	0.354	0.397	0.439	0.482
450x200/600x150	NC	‹ 15	18	26	30	33	37	40	43
350x300/400x250	CFM	450	540	630	720	810	900	1000	1090
	M³/sec	0.213	0.256	0.297	0.34	0.382	0.425	0.472	0.514
500x200/750x150	NC	15	19	24	28	32	36	40	43
350x350/400x300	CFM	510	620	820	820	930	1030	1140	1240
500x250/600x200	M³/sec	0.241	0.293	0.34	0.387	0.439	0.486	0.538	0.586
900x150	NC	18	23	27	32	35	40	43	46
400x400/500x300	CFM	580	700	820	940	1050	1170	1290	1400
	M³/sec	0.274	0.331	0.387	0.444	0.469	0.553	0.609	0.661
600x250/800x200	NC	15	20	25	30	37	41	44	47
500x350/600x300	CFM	660	800	930	1060	1200	1330	1470	1600
700x250/900x200	M³/sec	0.312	0.378	0.439	0.501	0.567	0.628	0.694	0.756
1000x150	NC	19	25	29	35	38	42	45	48
450x450/500x400	CFM	700	840	980	1120	1270	1400	1550	1690
750x250	M³/sec	0.331	0.397	0.463	0.529	0.599	0.661	0.732	0.798
1000x200	NC	19	24	28	33	36	38	42	46
500x500/550/450	CFM	800	970	1130	1280	1440	1600	1770	1930
750x300/800x250	M³/sec	0.378	0.458	0.533	0.605	0.68	0.756	0.836	0.912
1000x200	NC	21	26	30	36	41	43	46	48

- Face velocity is measured in m/sec.
- Ps: Static pressure loss in mm of H2O
- NC based on a room attention of 10 D

VOLUME CONTROL DAMPER (VCD)

MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

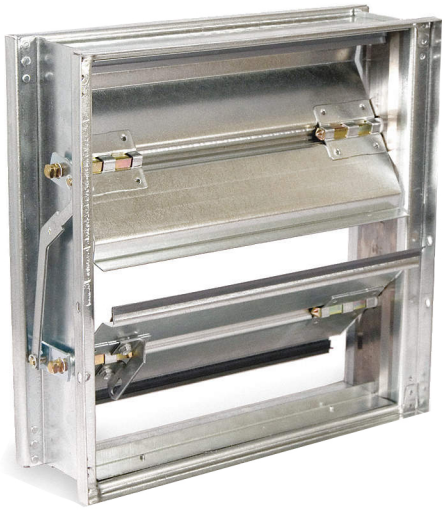
FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)









Efficient Air Distribution System

VOLUME CONTROL DAMPER

FLANGE TYPE GA-VCD/ GG-VCD/GAM-VCD

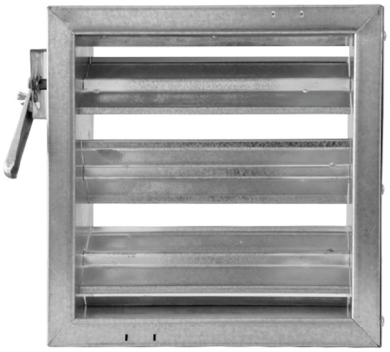


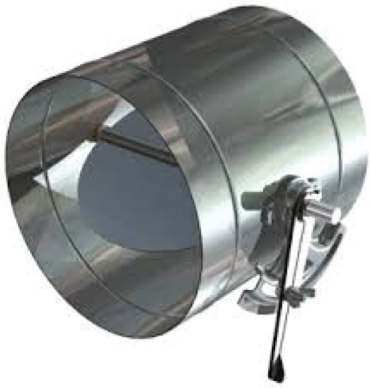
- **GA- VCD** – Flange type Galvanized steel frame with aluminium blade and hand- operated quadrant.
- **GG-VCD –** Flanged type galvanized steel frame with Galvanized steel blade and hand-operated quadrant.
- **GAM – VCD –** Flange type Galvanized steel frame with aluminium blade and control electric motor. Generally used for application in G.I Ducts and Pre- Insulated Ducts.

Application:

- The Flange type Volume Damper has been specially designed for installation in system where high/ medium/ low pressure is experienced. These dampers are designed to operate one control point.
- The dampers blade opening is controlled by hand locking quadrant. (**GA-VCD & GG-VCD**)
- The Dampers blade opening is controlled by electric motor.(**GAM-VCD**)

VOLUME CONTROL DAMPER




VCD are installed to control and manage the efficient airflow within the designed area. Hence its selection process will important to assure good operating characteristics in any airflow system, to maximize energy efficiency and minimize installation cost.

Air damper are being manufactured by Airpro to meet varied requirements of air ventilation systems .These dampers constitute of fire damper, volume control damper and duct dampers.

VOLUME CONTROL DAMPER

Dimensions of Dampers:

- Minimum size of 100mm (width) x 100mm (height) and maximum size of 2000mm (width) x 2000mm (height)
- Standard size of the flange is 20mm
- Standard length is 170mm.

Material Specifications:

- **Casing** – 1.2 thickness (18 gauge) GI sheet
- **Blades** – Airfoil blades made of 1.1mm thick Aluminium extruded **(GA-VCD)** Blades made of 0.9 mm thickness (21 gauge) GI sheet **(GG-VCD)**
- **Bushes** – PVC bushes 12mm x 12mm sq. with drive/bronze.
- **Linkage** – Linkages are made of 3mm thick Galvanized sheet.
- **Handle** – Handle is made of 1.2mm thick (18 gauge) Galvanized steel with integral rotation slot indicating blade open & close position**.(GA/GG–VCD)**
- **Spindle** – Spindles are made of 12mm x 12mm square Galvanized Steel.
- **Operating** – 10° to 110° as standard.

Selection of Motors (GAM-VCD)

- Motors are selected by torque requirements and application type in relation to the size of the dampers.

Size of Damper (mm)	Torque of Motor (Nm)	Type of Motor
From 100x100 to 500x500	5	On/ Off or Modulating
From 550x550 to 1000x1000	10	On/ Off or Modulating
From 1050x2000 to 1050x2000	20	On/ Off or Modulating

VOLUME CONTROL DAMPER

SLIP & CLIP TYPE GAS-VCD/GGS-VCD





- **GAS – VCD –** Slip & Clip type Galvanized steel frame with aluminium blade and hand-operated quadrant.
- **GGS- VCD –** Slip & Clip type Galvanized steel frame with Galvanized steel blade and hand-operated quadrant. Generally used for majority applications in GI ducts. Sizes are limited to 600mm (width) x 400mm (height) only.

Application:

- The Slip & Clip Type Volume Damper has been specially designed for installation in system where medium/ low pressure is experienced .These dampers are designed to operate from one control point. The damper's blade opening is controlled by hand locking quadrant.

Dimensions of Dampers:

- Minimum size of 100mm (width) x 100mm (height) and maximum size of 600mm (width) x 400mm (height).
- Standard length is 170mm.

Material Specifications:

- **Casing** – 0.7mm thickness (23 gauge) GI sheet or custom built.
- **Blade** – Airfoil blades made of 1.1mm thick aluminium extruded**.(GAS-VCD)**
  Blades made of 0.7mm thickness (23 gauge) GI sheet. **(GGS –VCD)**
- **Bushes** – PVC bushes 12mm x 12mm square with drive/bronze.
- **Linkage** – Linkages are made of 3mm thick Galvanized steel.

VOLUME CONTROL DAMPER

- **Handle –** is made of 1.2mm thick (18 gauge). Galvanized steel with integral rotation slot indicating blade open and close position.
- **Spindles –** are made of 12mm x 12mm square Galvanized steel.
- **Operating Temperature –** 10 C° to 110° as standard.

BOX TYPE-GAB-VCD

- Box type Galvanized steel frame with aluminium blade and hand-operated quadrant. Generally used for majority applications in GI ducts and Pre-Insulated ducts. Sizes are limited to 600mm (width) x 400mm (height) only.
- A Box type volume control damper for installation is system where medium/ low pressure is experienced. These dampers are designed to operate from one control point. The dampers blade opening is controlled by hand locking quadrant.

Dimensions of Dampers:

- Minimum size of 100mm (width) x 100mm (height) and maximum size of 600mm (width) x 400mm (height).
- Standard length 170mm.

Material Specification:

- **Casing** – 0.9mm thickness (21 gauge) GI sheet.
- **Blades** – Airfoil Blades made of 1.1mm thick aluminium extruded.
- **Bushes** – PVC bushes 12mm x 12mm sq. w/drive.
- **Linkage** – are made of 3mm thick Galvanized steel.
- **Handle** – is made of 1.2mm thick (18 gauge). Galvanized steel with integral rotation slot indicating blade open & close position.
- **Spindle** – are made of 12mm x 12mm square Galvanized steel.
- **Operating Temperature –** 10 ° x 110° as standard.

VOLUME CONTROL DAMPER

ROUND TYPE GGR-VCD



- Round type Galvanized steel frame with Galvanized blade and hand-operated quadrant. Generally used for applications in GI ducts and pre-insulated ducts.
- Round type volume control damper has been specially designed fork installation in system where high/medium/low pressure is experienced. These dampers are designed to operate from one control point. The dampers blade opening is controlled by hand locking quadrant.

Dimensions of Dampers:

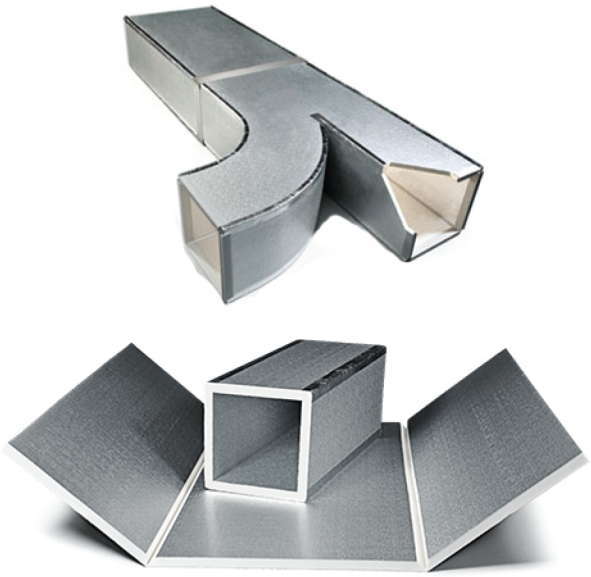
- Minimum size of VCD is 100mmØ and maximum size is 400mmØ.
- Standard length is as follows:

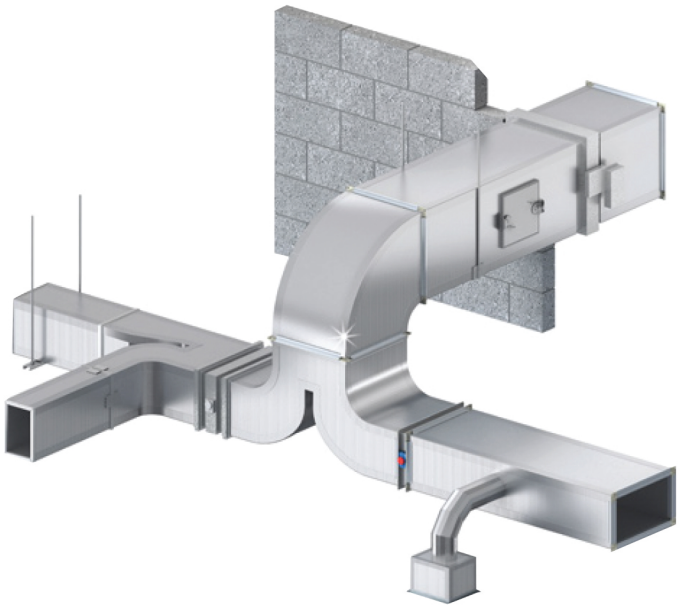
VOLUME CONTROL DAMPER

Material Specifications:

- Blades - made of 0.9mm thickness (21 gauge) GI sheet.
- Bushes – PVC bushes 8mm x 8mm square with drive.
- Handle – is made of 1.2mm thick (18 gauge).Galvanized steel with integral rotation slot indicating blade open and close position.

PRE-INSULATED TYPE





- **VCD -** Sandwich panel frame with aluminium blade and hand – operated quadrant.

Application: The Pre-Insulated Type volume control damper has been specially designed for installation in system where high/medium/low pressure is experienced. These dampers are designed to operate from one control point. The dampers blade opening is controlled by locking quadrant.

VOLUME CONTROL DAMPER

Dimensions of Dampers:

- Minimum size of 100mm (width) x 100mm (height) maximum size of 2000mm (width) x 2000mm (height).
- Standard thickness of the flange is 20mm.

Material Specifications:

- **Casing** – Sandwich Panel 20mm/30mm thickness 80/80micron/80mm/20mm micron.
- **Blades** – Airfoil blades made of 1.1mm thick aluminium extruded.
- **Bushes** – PVC bushes 12mm x 12mm square with drive. **(PAVCD)**

  Brass bushes with 12mm diameter. **(PAM-VCD)**
- **Linkage** – are made of 3mm thick. Galvanized steel.
- **Handle** – is made of 1.2mm thick (18 gauge). Galvanized steel with integral rotation slot indicating blade open and close position.**(PA-VCD)**
- **Spindles –** are made of 12mm x 12mm square Galvanized steel.
- **Operating Temperature –** 10 ° to 110° as standard.

Pre-Insulated Type - PAM - VCD Selection of Motors

Size of Damper (mm)	Torque of Motor (Nm)	Type of Motor
From 100x100 to 500x500	5	On/ Off or Modulating
From 550x550 to 1000x1000	10	On/ Off or Modulating
From 1050x2000 to 1050x2000	20	On/ Off or Modulating

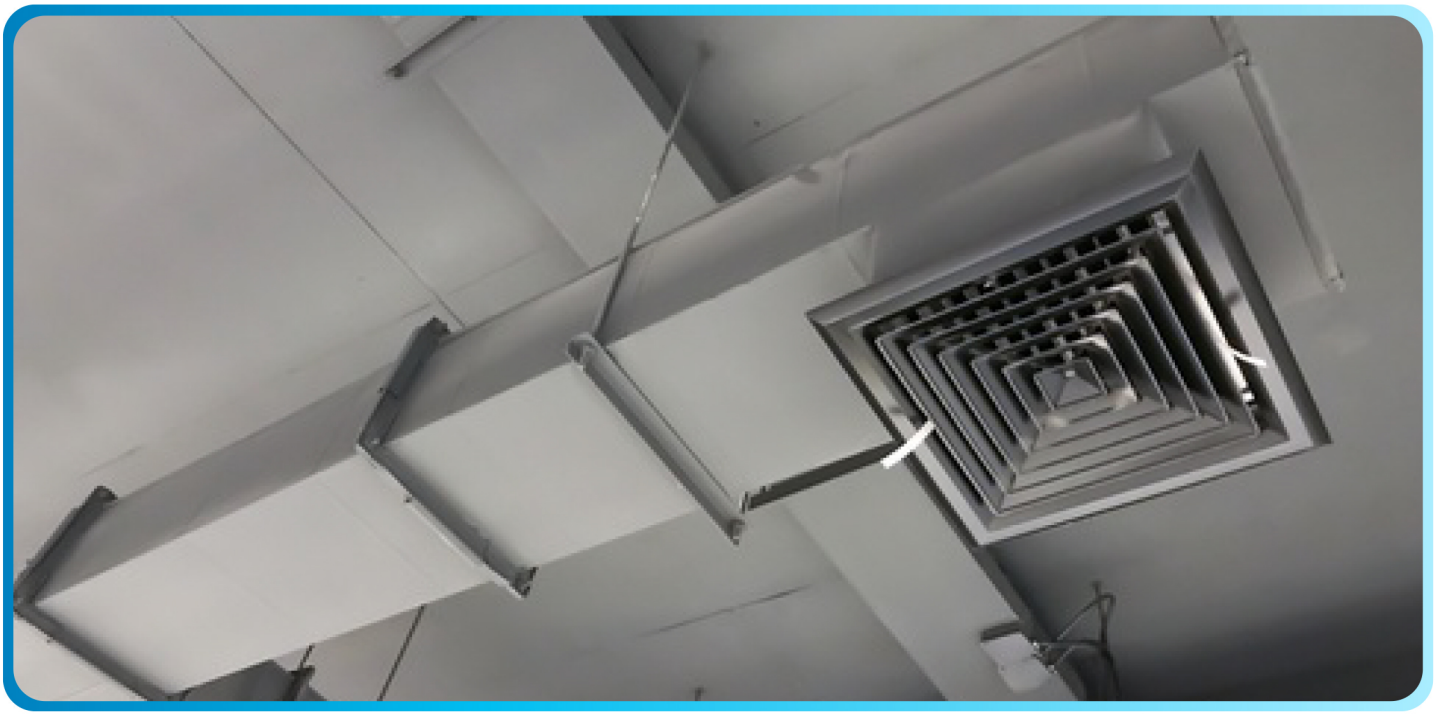
SQUARE DIFFUSER

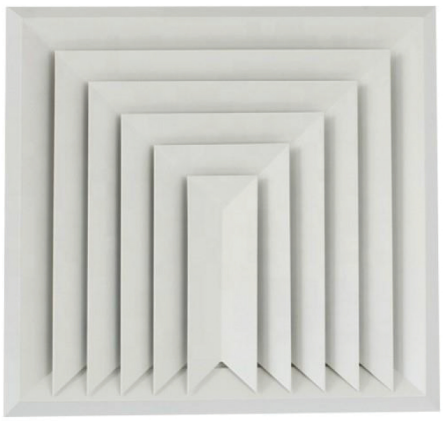
MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)









SQUARE DIFFUSER

AIRPRO Multi directional diffusers represent an optimum solution for the diffusion of air from ceiling in modern concept areas with huge use of extruded aluminum profiles. The different shape of the cones in respect to the number of airflows (1, 2, 3 & 4 ways) can itself create an aesthetic element to be utilized.

Features:

Material: Outer frame is extruded aluminum section cut to length and joined at corners and deep drawn aluminum sheets. Available in both square and rectangular shapes.

Units are flush mounted and available with different pattern arrangements 1, 2, 3 and 4 ways (i.e. different way of air discharge directions).

Available in a wide variety of standard neck sizes ranging from 150 x 150 up to 600 x 600 mm in 75 mm increments.

Square diffusers have a pleasing appearance and synch with the ceiling. The inner cones are fully removable which also provide for easy:

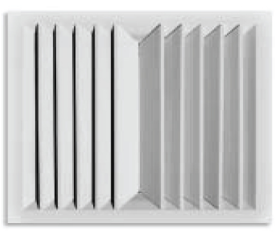
- Installation
- Adjustment of key operated OBD
- Maintenance
- Core exchange by different pattern

The core is held in place and fixed to the frame by two loaded spiral galvanized steel springs.

Popular sizes of Square Diffusers, duct size, neck size and opening size on ceiling are given below for reference:

Nominal Size		Neck Size	Outer Size	Duct Size	Ceiling Opening
mm	inches	mm	mm	mm	mm
150 x 150	6″ x 6″	145 x 145	293 x 293	150 x 150	233 x 233
225 x 225	9″ x 9″	220 x 220	368 x 368	225 x 225	308 x 308
300 x 300	12″ x 12″	295 x 295	443 x 443	300 x 300	383 x 383
375 x 375	15″ x 15″	370 x 370	518 x 518	375 x 375	458 x 458
450 x 450	18″ x 18″	445 x 445	593 x 593	450 x 450	533 x 533
525 x 525	21″ x 21″	520 x 520	668 x 668	525 x 525	608 x 608
600 x 600	24″ x 24″	595 x 595	743 x 743	600 x 600	683 x 683



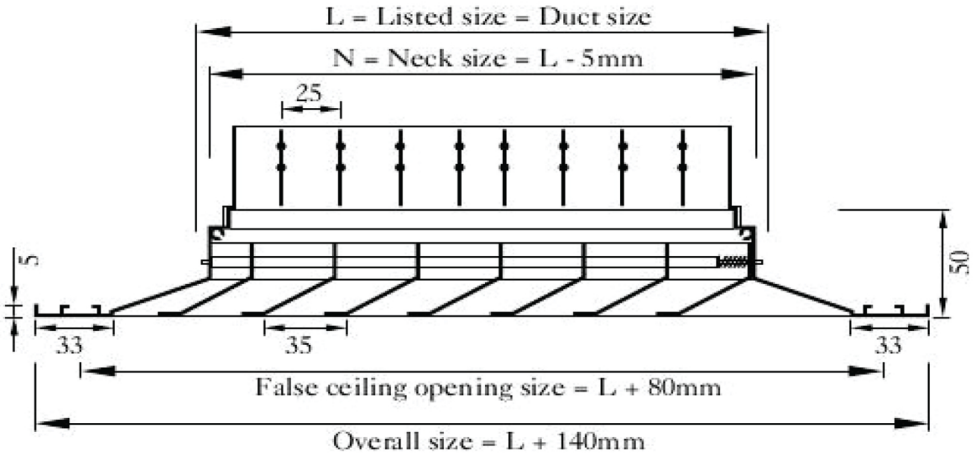



SQUARE DIFFUSER

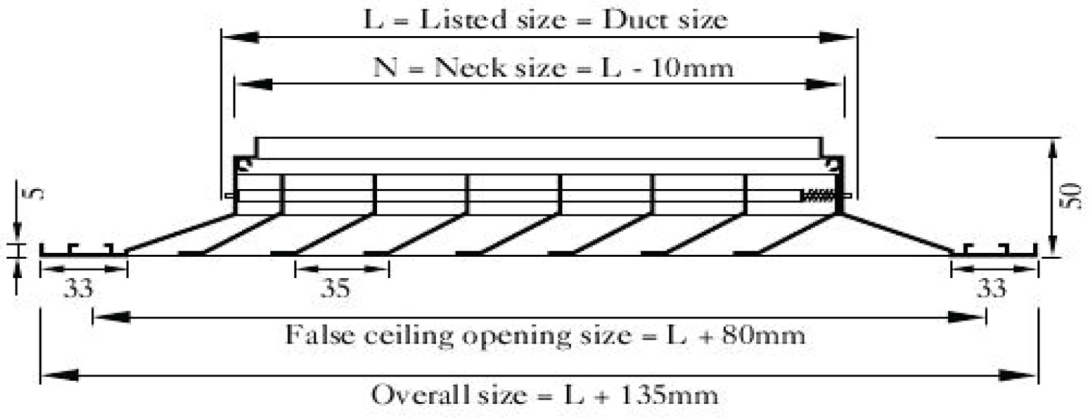
AIRPRO Square Diffuser - Supply One Way Throw



- **Model Name: AP-DS1-D**

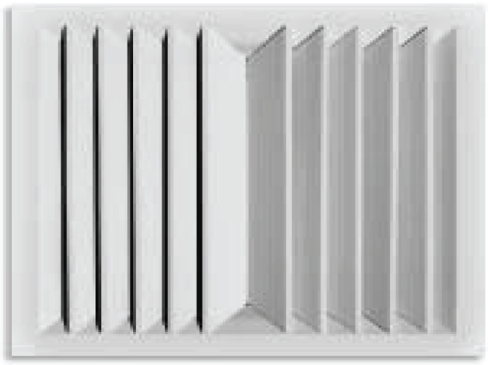


- **Model Name: AP-DS1**

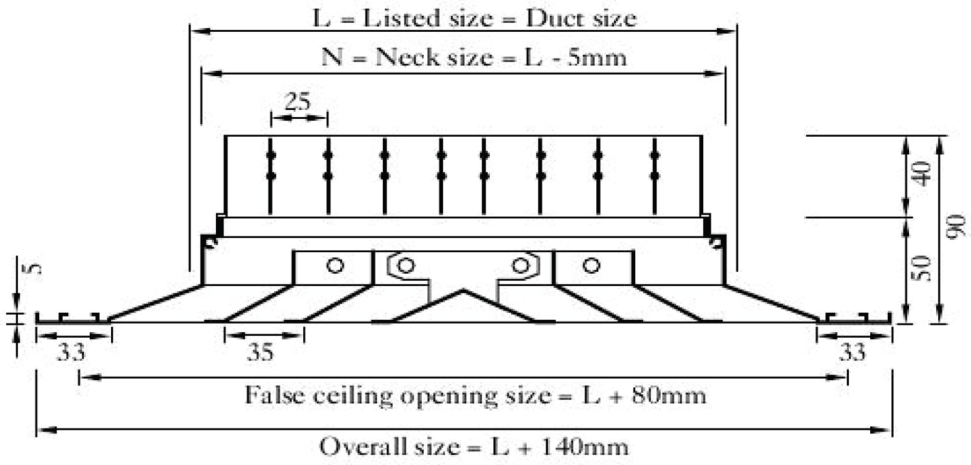


SQUARE DIFFUSER

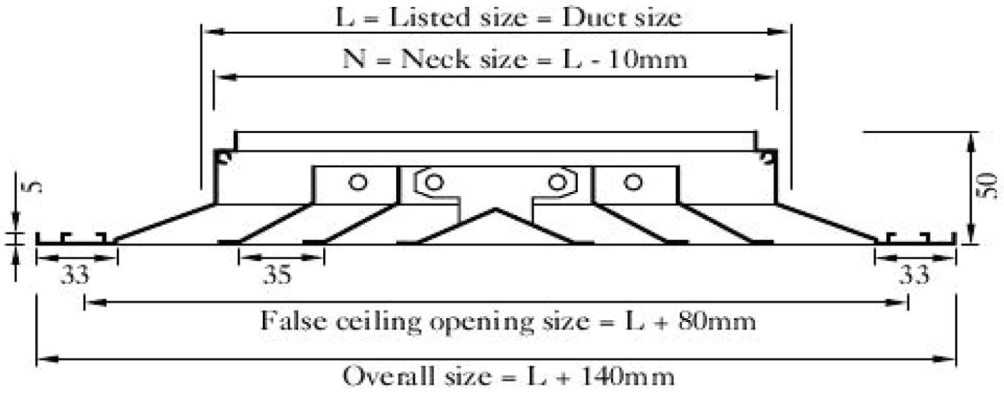
AIRPRO Square Diffuser - Supply Two Way Throw



- **Model Name: AP-DS2-D**



- **Model AP-DS2**

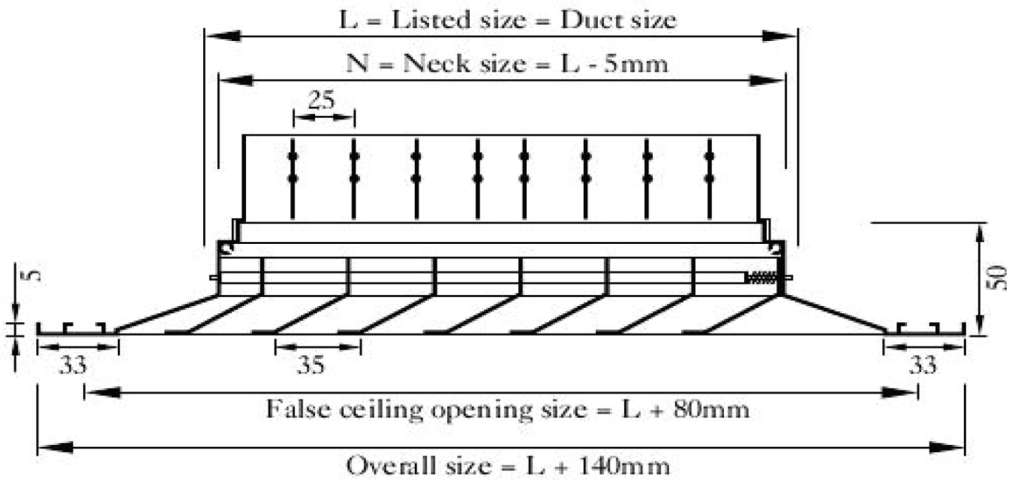


SQUARE DIFFUSER

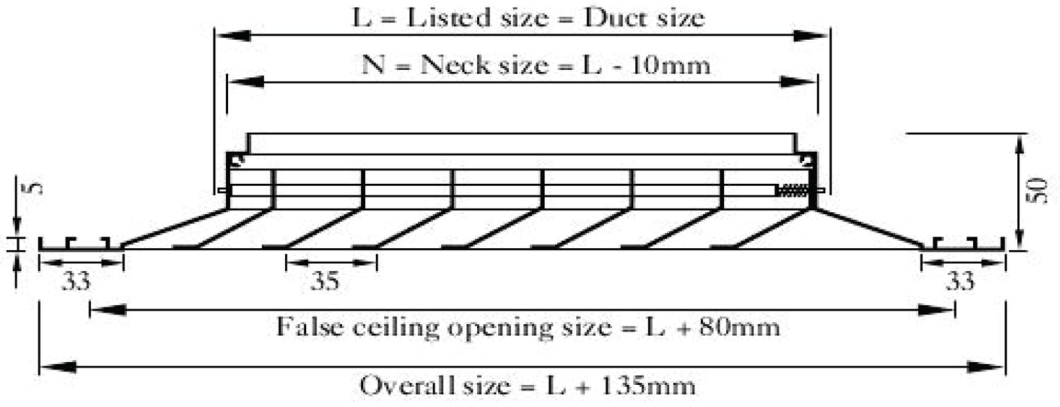
AIRPRO Square Diffuser - Supply Three Way Throw



Model Name: AP-DS3-D

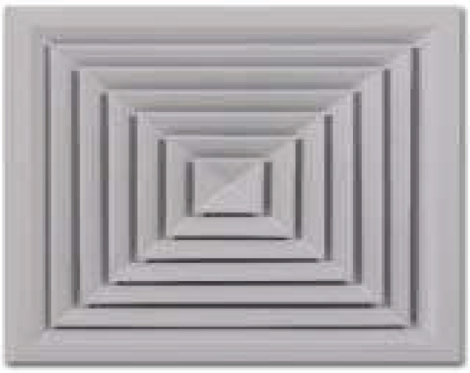


Model Name: AP-DS3

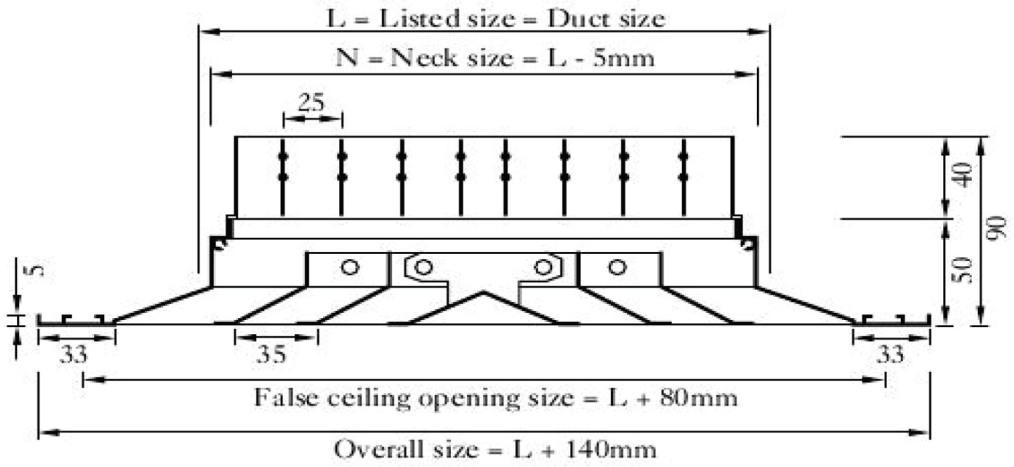


SQUARE DIFFUSER

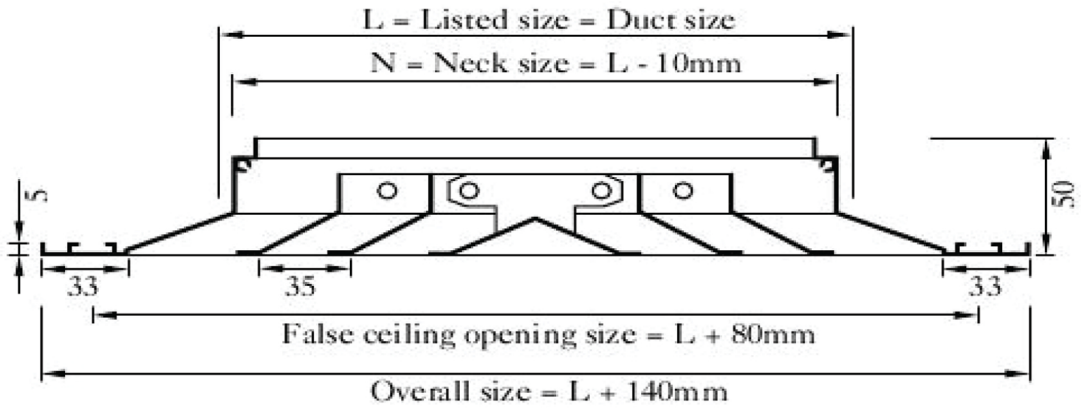
AIRPRO Square Diffuser - Supply Four Way Throw



Model Name: AP-DS4-D



Model Name: AP-DS4



SQUARE DIFFUSER

Diffuser without opposed blade and foam gasket. Suitable for return air applications

Frame and core: High-quality extruded aluminum profile with 33mm flange width.

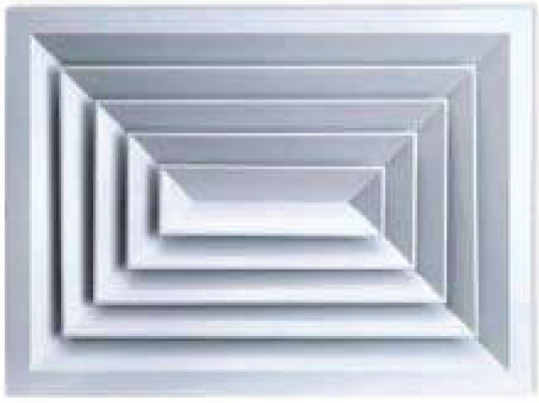
Damper Frame and core: High-quality extruded aluminum profile with a natural aluminum finish. Black matt finish as an option.

Description:

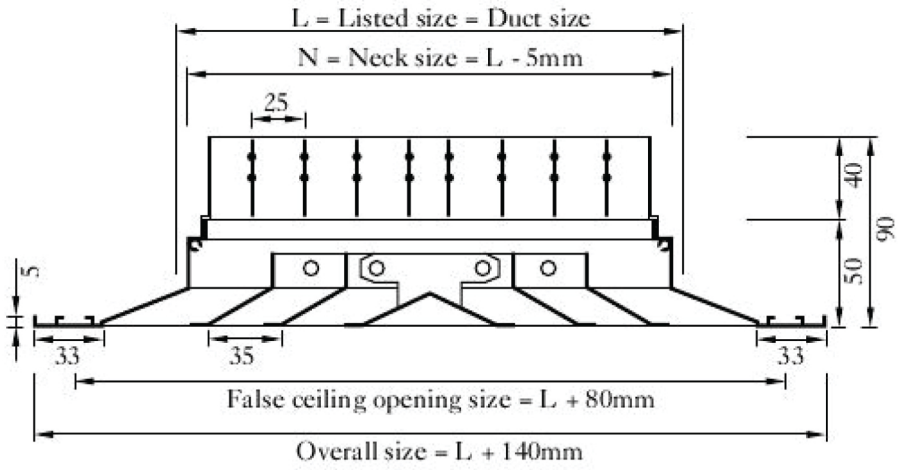
- The frame and blades are of high-quality extruded aluminium profile construction with the advantages of corrosion resistance and rigidity.
- Louvered type core is fixed to the frame with aluminium pins loaded with steel springs. The core can be easily removable and interchangeable to allow for maximum flexibility in installation, maintenance, and damper adjustment.
- The damper is fixed rigidly to the frame by aluminium rivets. Fixing by spring clips as an option.
- Damper blades are separated from its frame by nylon bushes.
- Opposed blade damper is screw operated from the face opening of the diffuser after removing the internal core. Lever operated damper as option.
- Discharges air horizontally in one way, either X or Y directions as per pattern arrangement.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.
- Available in rectangular sizes as option.
- Suitable for flush mounting inlay in type ceiling.

SQUARE DIFFUSER

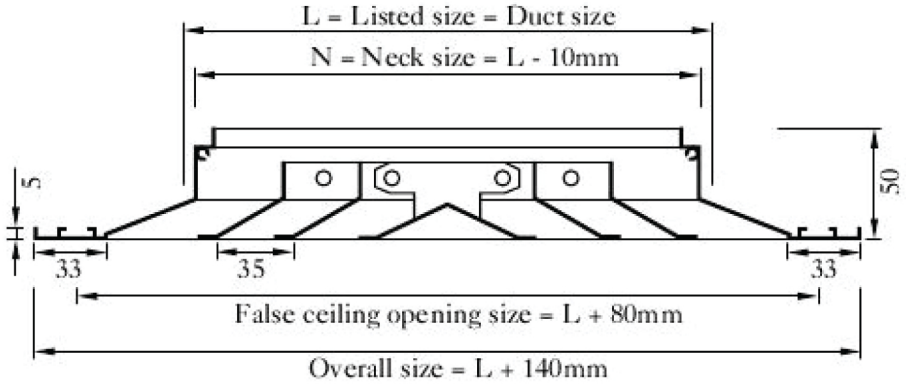
AIRPRO Rectangular Diffuser - Supply Four Way Throw



- **Model Name: AP-DR4 -D**



- **Model Name: AP-DR4**



SQUARE DIFFUSER

Diffuser without opposed blade damper and foam gasket. Suitable for return air applications

Frame and core: High-quality extruded aluminum profile with 33mm flange width.

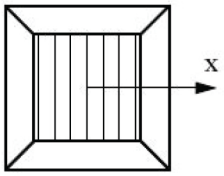
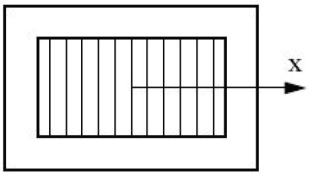
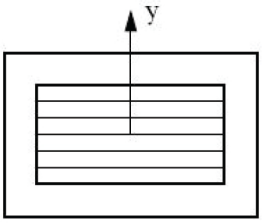
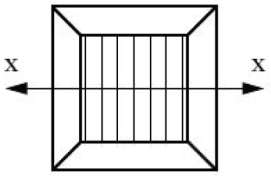
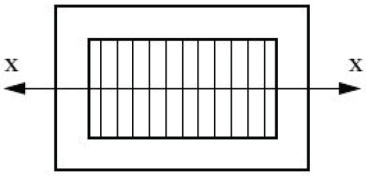
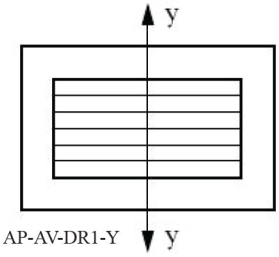
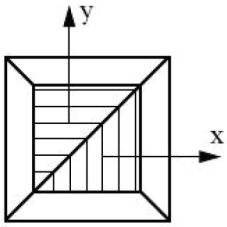
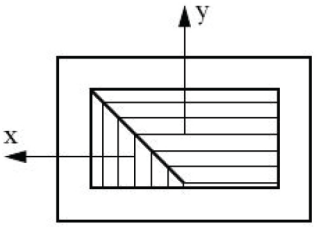
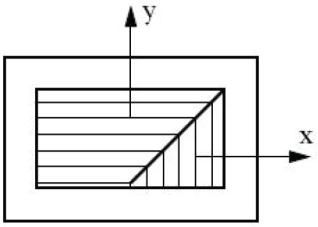
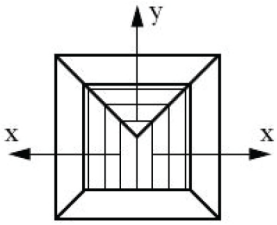
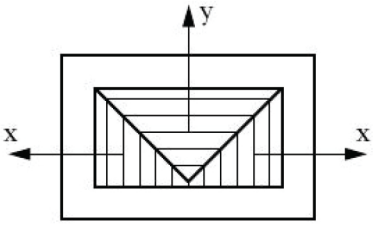
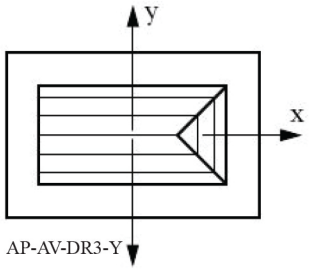
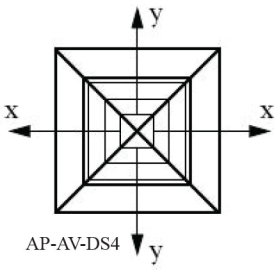
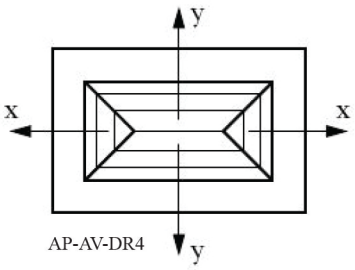
Damper Frame and core: High-quality extruded aluminum profile with a natural aluminum finish. Black matte finish as an option.

Description:

- The frame and blades are of high-quality extruded aluminium profiled construction with the advantages of corrosion resistance and rigidity.
- Diffusers shall be coned type with each cone manufactured by extruded aluminium louvered profiles, arranged in concentric cones to defect air equally in four directions.
- The damper is fixed rigidly to the frame by aluminium rivets. Fixing by spring clips as an option.
- Damper blades are separated from its frame by nylon bushes.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.
- This product can be manufactured for one, two, three and four way throws.
- Available in rectangular sizes as option.

SQUARE DIFFUSER

Core Pattern Ceiling Diffuser

Air pattern	Square	Rectangular
One way	 AP-AV-DS1	 AP-AV-DR2-X  AP-AV-DR1-Y
Two way	 AP-AV-DS2	 AP-AV-DR2-X  AP-AV-DR1-Y
Two way corner	 AP-AV-DS2-C	 AP-AV-DR2-C1  AP-AV-DR2-C2
Three way	 AP-AV-DS3	 AP-AV-DR3-X  AP-AV-DR3-Y
Four way	 AP-AV-DS4	 AP-AV-DR4

SQUARE DIFFUSER

Diffuser Accessories

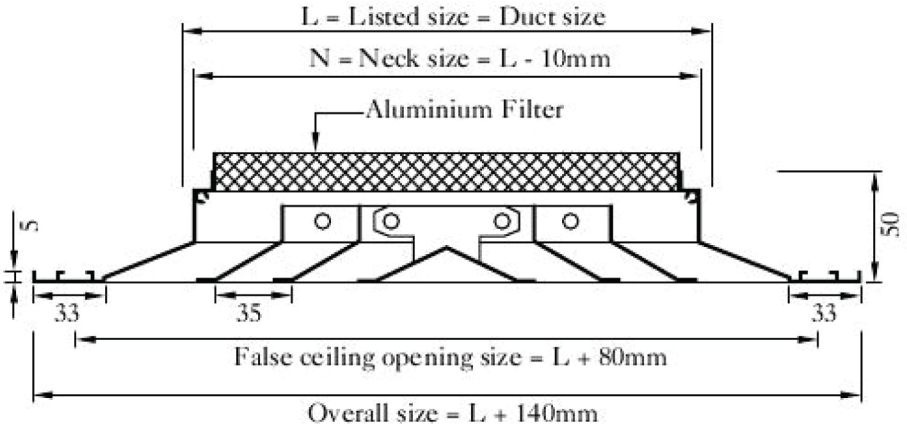
Equalizing Grid:



- Equalizing grid is fixed to the damper with rivets.
- Equalizing grid is manufactured from high quality aluminium profiles with aerofoil blades connected by plastic bushes. Finish will be the same as the damper
- This assembly will provide air distribution over the neck of the diffuser, which ensures reduction in pressure drop, noise and turbulence.

Filters:

- Ceiling diffusers available with removable type washable aluminium filters with aluminium mesh as the filter media.
- Fabricated from 1 mm thick aluminium sheet with aluminium mesh as the filter media.
- Structure will have high dust holding capacity and low resistance to air flow.
- Other insulating materials available as option.
- Filter frame is screw fixed to the diffuser.
- Generally available in 12, 25, 40 and 50 mm thickness as standard.



SQUARE DIFFUSER

Supply Air Diffuser - Air Flow Data

- Neck velocity is measured in m/sec.
- PS: Static pressure loss across the diffuser in inch of water gauge.
- Throw in (m) is measured for terminal velocities of 0.75, 0.5 and 0.25 m/sec.
- Noise criteria based on room attenuation of 10 dB.

One Way Throw - AP-DS1-D

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	(0.0098)	0.018	(0.03)	(0.046)	(0.0695)	(0.099)	(0.139)
1	Total CFM	50	110	192	300	432	586	760
	(Ps) Inwg	0.026	0.026	0.026	0.042	0.042	0.042	0.042
	Throw in M	1.3-2-2.7	1.3-2-2.7	2.4-3.5-5.5	2.7-4.1-6.2	3.5-5.2-8.5	4.1-5.8-9.5	4.5-6.5-11.6
	Noise level	‹15	‹15	‹15	‹15	‹15	15	16
1.5	Total CFM	74	162	284	448	642	876	1142
	(Ps) Inwg	0.042	0.055	0.07	0.084	0.084	0.095	0.095
	Throw in M	2-2.8-3.6	2.0-2.8-3.9	3.6-5.0-7.1	4.6-6.4-8.8	5.3-7.4-10.6	6-8.8-12.6	6.7-9.1-14
	Noise level	16	17	17	18	20	23	26
2	Total CFM	96	216	382	594	860	1166	1526
	(Ps) Inwg	0.084	0.111	0.126	0.14	0.154	0.164	0.164
	Throw in M	2.8-3.7-4.4	2.9-3.7-5.2	4.8-5.9-8.8	6.2-7.3-10.6	7.9-9.1-12.8	8.4-10.2-15	9.1-12-17.1
	Noise level	21	24	26	28	30	32	33
2.5	Total CFM	19	270	478	744	1072	1462	1908
	(Ps) Inwg	0.14	0.166	0.21	0.223	0.252	0.265	0.265
	Throw in M	3.3-4.2-4.9	3.8-5.3-6.8	5.7-7.2-9.8	7.2-8.7-12.5	8.3-10.5-5-15	9.8-12-17.4	10.5-14-20
	Noise level	27	30	33	35	36	37	38
3	Total CFM	145	324	574	890	1285	1755	2288
	(Ps) Inwg	0.198	0.24	0.295	0.322	0.365	0.38	0.38
	Throw in M	4-4.7-5.9	5.1-7-9.3	6.3-7.4-11	7.8-9-7-14.5	9.7-11.8-17	10.9-14-20	12.16-20.23
	Noise level	34	36	38	40	41	42	42
3.5	Total CFM	168	377	670	1045	1502	2032	1665
	(Ps) Inwg	0.252	0.326	0.41	0.452	0.452	0.446	0.468
	Throw in M	4.4-5.5-6.2	7-8.6-11.6	7-8.6-12.5	8.6-10.5-15.6	10.5-13-18	12-14.8-12.5	12.8-18.2-24
	Noise level	39	41	43	44	44	45	45

SQUARE DIFFUSER

Two Way Throw - AP-DS2-D

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	-0.0098	-0.018	-0.03	-0.046	-0.0695	-0.099	-0.139
1	Total CFM	48	110	192	300	432	586	764
	(Ps) Inwg	0.026	0.026	0.026	0.04	0.04	0.04	0.04
	Throw in M	1.3-2-2.7	1.3-2-2.7	2.4-3.5-5.5	2.7-4.1-6.2	3.4-5.2-8.5	4.1-5.8-9.5	4.5-6.5-11
	Noise level	‹15	‹15	‹15	‹15	‹15	15	16
1.5	Total CFM	74	162	288	448	646	875	1142
	(Ps) Inwg	0.035	0.052	0.064	0.078	0.078	0.092	0.092
	Throw in M	2-2.8-3.6	2-2.8-3.9	3.6-4.9-7	4.6-6.3-8.7	5.3-7.4-10	6-8.7-12.6	6.6-9-14
	Noise level	16	17	17	18	20	23	26
2	Total CFM	96	216	382	596	860	1166	1153
	(Ps) Inwg	0.082	0.108	0.122	0.148	0.162	0.162	0.162
	Throw in M	2.8-3.7-4.4	2.9-3.7-5.1	4.7-5.8-8.6	6.1-7.2-10.4	8.3-10-15	8.3-10-15	9-11.8-16.9
	Noise level	21	24	26	28	30	32	33
2.5	Total CFM	120	270	478	746	1072	1461	1908
	(Ps) Inwg	0.134	0.162	0.202	0.218	0.263	0.258	0.258
	Throw in M	3.2-4-4.8	3.7-5.2-6.6	5.5-6.9-9.5	6.9-8.4-12.1	8-10.2-14.6	9.5-11.8-17	10.2-13.6-19
	Noise level	27	30	33	35	36	37	38
3	Total CFM	145	323	572	895	1288	1758	2289
	(Ps) Inwg	0.192	0.232	0.287	0.314	0.352	0.368	0.368
	Throw in M	3.8-4.5-5.6	4.8-6.7-9	5.9-7.1-11	7.4-9.3-14	9.3-11-16-3	10.4-13.4-19	11.4-15.2-22
	Noise level	34	36	38	40	41	42	42
3.5	Total CFM	168	375	668	1045	1502	2035	2670
	(Ps) Inwg	0.242	0.307	0.388	0.428	0.479	0.435	0.435
	Throw in M	4.1-5.2-6	6.7-8.2-11	6.7-8.4-12	8.1-10-14.9	10-12.3-17	11.6-14.1-30	12.2-16-23
	Noise level	39	41	43	44	44	45	45

SQUARE DIFFUSER

Three Way Throw - AP-DS3-D

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	(0.0098)	(0.018).	(0.03).	(0.046).	(0.0695).	(0.099).	(0.139).
1	Total CFM	48	110	192	300	432	586	762
	(Ps) Inwg	0.025	0.025	0.025	0.031	0.031	0.031	0.031
	Throw in each side of X - (M)	1.2-1,8-2.4	1.2-1.8-2.4	2.1-3.1-4.9	2.1-3.7-5.5	3.1-4.6-7.6	3.7-5.2-8.5	4-5.8-10.1
	Throw Y side - (M)	1.2-1.8-2.5	1.2-1.8-2.5	2.1-3.3-5.2	2.5-3.9-5.8	3.2-4.9-8.1	3.9-5.6-9.2	4.2-6.2-10.7
	Noise level	‹15	‹15	‹15	‹15	‹15	15	16
2	Total CFM	75	163	286	450	642	875	1145
	(Ps) Inwg	0.035	0.048	0.057	0.069	0.069	0.08	0.08
	Throw in each side of X - (M)	1.8-2.4-3.1	1.8-2.4-3.4	3.1-4.3-6.1	4.0-5.5-7.6	4.6-06.4-9.1	5.2-7.6-11	5.8-8-12.2
	Throw Y side - (M)	1.8-2.6-3.4	1.826-3.7	3.4-4.8-6.5	4.3-5.9-8.2	4.9-6.8-9.5	5.6-8.2-11.9	6.2-8.3-13.1
	Noise level	16	17	17	18	20	23	26
3	Total CFM	97	216	381	596	860	1167	1526
	(Ps) Inwg	0.07	0.092	0.105	0.115	0.125	0.14	0.14
	Throw in each side of X - (M)	2.4-3.1-3.7	2.4-3.1-4.3	4.0-4.9-7.3	5.2-6.1-8.8	6.6-7.6-10.7	7.0-8.5-12.5	7.6-10-14.3
	Throw Y side - (M)	2.6-3.4-4.0	2.6-3.4-4.7	4.3-5.4-8.0	5.8-6.7-9.4	7.2-8.7-12.5	7.0-8.5-12.5	8.4-10.9-15.4
	Noise level	21	24	26	28	30	32	33
4	Total CFM	122	271	478	746	1075	1465	1908
	(Ps) Inwg	0.115	0.138	0.175	0.183	0.205	0.216	0.216
	Throw in each side of X - (M)	2.7-3.4-4	3.1-4.3-5.5	4.6-5.8-7.9	5.8-7.0-10.1	6.7-8.5-12.2	7.9-9.8-14	8.5-11.3-16.1
	Throw Y side - (M)	3.0-3.7-4.4	3.4-4.8-6.1	5.1-6.3-8.5	6.4-7.6-10.9	7.2-9.2-13.4	8.5-10.4-5.4	9.3-12.1-17.6
	Noise level	27	30	33	35	36	37	38
5	Total CFM	146	325	573	895	1290	1760	2290
	(Ps) Inwg	0.162	0.196	0.24	0.264	0.298	0.31	0.31
	Throw in each side of X - (M)	3.1-3.7-4.6	4.0-5.5-7.3	4.9-5.8-9.1	6.1-7.6-11.3	7.6-9.2-13.4	8.5-11-15.9	9.4-12.5-18
	Throw Y side - (M)	3.5-4.1-5.1	4.4-6.1-8.2	5.4-6.6-10.1	6.7-8.3-12.5	8.3-10.2-15.4	9.4-12.5-17.7	10.2-14.0-20
	Noise level	34	36	38	40	41	42	42
6	Total CFM	170	373	670	1045	1503	2034	2670
	(Ps) Inwg	0.208	0.23	0.334	0.368	0.414	0.38	0.38
	Throw in each side of X - (M)	3.4-4.3-4.9	5.5-6.7-9.1	5.5-6.7-9.8	6.7-8.2-12.2	8.2-10.1-14	9.5-11.6-16.8	10-13.4-19.5
	Throw Y side - (M)	3.7-4.7-5.4	6.1-7.5-10.1	6.2-7.7-10.6	7.4-9.1-13.4	9.1-11.3-15.6	10.6-13.1-17.8	11.2-15.0-21.6
	Noise level	39	41	43	44	44	45	45

SQUARE DIFFUSER

Four Way Throw - AP-DS4-D

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	(0.0098)	(0.018)	(0.03)	(0.046)	(0.0695)	(0.099)	(0.139)
1	Total CFM	50	110	95	300	432	588	765
	(Ps) Inwg	0.022	0.022	0.022	0.032	0.032	0.032	0.032
	Throw in M	1.2-1,8-2.4	1.2-1.8-2.4	2.1-3.1-4.9	2.1-3.7-5.5	3.1-4.6-7.6	3.7-5.2-8.5	4-5.8-10.4
	Noise level	‹15	‹15	‹15	‹15	‹15	15	16
1.5	Total CFM	72	162	288	449	645	876	1142
	(Ps) Inwg	0.032	0.038	0.048	0.06	0.06	0.072	0.072
	Throw in M	1.8-2.4-3.1	1.8-2.4-3.4	3.1-4.3-6.1	4.0-5.5-7.6	4.6-06.4-9.1	5.2-7.6-11	5.8-8-12.2
	Noise level	16	17	17	18	20	23	26
2	Total CFM	98	216	382	595	856	1162	1525
	(Ps) Inwg	0.062	0.08	0.093	0.1	0.11	0.122	0.122
	Throw in M	2.4-3.1-3.7	2.4-3.1-4.3	4.0-4.9-7.3	5.2-6.1-8.8	5.6-7.6-10.7	7.0-8.5-12.5	7.6-10-14.3
	Noise level	21	24	26	28	30	32	33
2.5	Total CFM	120	270	475	745	1070	1460	1905
	(Ps) Inwg	0.101	0.123	0.152	0.162	0.182	0.192	0.192
	Throw in M	2.7-3.4-4	3.1-4.3-5.5	4.6-5.8-7.9	5.8-7-10.1	6.7-8.5-12.2	7.9-9.8-14	8.5-11.3-16.1
	Noise level	27	30	33	35	36	37	38
3	Total CFM	146	325	573	895	1290	1760	2290
	(Ps) Inwg	0.142	0.172	0.212	0.23	0.262	0.275	0.275
	Thr ow in M	3.1-3.7-4.6	4-5.5-7.3	4.9-5.8-9.1	6.1-7.6-11.3	7.6-9.2-13.4	8.5-11-15.9	9.4-12.5-18
	Noise level	34	36	38	40	41	42	42
3.5	Total CFM	165	378	670	1045	1502	2035	2670
	(Ps) Inwg	0.182	0.232	0.29	0.322	0.36	0.332	0.332
	Throw in M	3.4-4.3-4.0	5.5-6.7-9.1	9.5--6.7-9.8	6.7-8.2-12.2	8.2-10.1-14	9.511-.6-16.8	10-13.4-10.9
	Noise level	39	41	43	44	44	45	45

SQUARE DIFFUSER

Return Air Diffuser - Air Flow Data

- Neck velocity is measured in m/sec.
- PS: Static pressure loss in inch of water gauge
- Noise criteria (NC) based on room attenuation of 10 dB.

One Way - AP-DSI

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	(0.0098)	(0.018)	(0.03)	(0.046)	(0.0695)	(0.099)	(0.139)
1	Total CFM	52	110	195	300	432	588	765
	(Ps) Inwg	0.028	0.03	0.032	0.036	0.04	0.042	0.04
	Noise level	‹15	‹15	‹15	‹15	‹15	18	23
1.25	Total CFM	63	136	240	375	540	732	955
	(Ps) Inwg	0.043	0.042	0.048	0.52	0.063	0.065	0.075
	Noise level	‹15	‹15	‹15	‹15	17	25	30
1.5	Total CFM	76	154	288	450	646	878	1145
	(Ps) Inwg	0.062	0.068	0.07	0.083	0.09	0.092	0.104
	Noise level	‹15	‹15	16	19	24	30	36
1.75	Total CFM	88	188	336	521	753	1023	1336
	(Ps) Inwg	0.083	0.089	0.098	0.114	0.124	0.132	0.144
	Noise level	‹15	16	21	25	31	36	40
2	Total CFM	99	218	385	599	862	1170	1525
	(Ps) Inwg	0.108	0.122	0.132	0.15	0.164	0.178	0.19
	Noise level	19	21	25	32	36	40	42
2.5	Total CFM	125	273	475	754	1075	1460	1905
	(Ps) Inwg	0.168	0.188	0.205	0.235	0.255	0.278	0.298
	Noise level	25	28	32	38	40	44	46
3	Total CFM	148	325	575	895	1290	1755	2290
	(Ps) Inwg	0.242	0.269	0.3	0.345	0.364	0.398	0.425
	Noise level	30	34	38	43	45	47	49
3.5	Total CFM	172	380	670	1048	1506	2045	2670
	(Ps) Inwg	0.338	0.382	0	0.47	0.512	0.545	0.598
	Noise level	34	40	43	47	48	51	54
4	Total CFM	198	435	765	1195	1720	2340	3050
	(Ps) Inwg	0.442	0.498	0.55	0.616	0.672	0.728	0.792
	Noise level	40	45	49	51	52	55	58

SQUARE DIFFUSER

Two Way - AP-DS2

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	(0.0098)	(0.018)	(0.03)	(0.046)	(0.0695)	(0.099)	(0.139)
1	Total CFM	50	110	195	300	432	584	765
	(Ps) Inwg	0.028	0.03	0.032	0.035	0.039	0.043	0.046
	Noise level	‹15	‹15	‹15	‹15	‹15	18	23
1.25	Total CFM	63	136	240	375	536	732	955
	(Ps) Inwg	0.043	0.046	0.058	0.058	0.062	0.064	0.071
	Noise level	‹15	‹15	‹15	‹15	17	25	30
1.5	Total CFM	76	165	288	450	648	880	1145
	(Ps) Inwg	0.06	0.069	0.075	0.085	0.09	0.098	0.105
	Noise level	‹15	‹15	16	19	24	30	36
1.75	Total CFM	88	190	338	525	755	104	1334
	(Ps) Inwg	0.082	0.085	0.096	0.114	0.124	0.134	0.145
	Noise level	‹15	16	21	25	31	36	40
2	Total CFM	100	218	382	600	862	1170	1525
	(Ps) Inwg	0.105	0.12	0.13	0.148	0.164	0.174	0.186
	Noise level	19	21	25	32	36	40	42
2.5	Total CFM	126	274	478	748	1078	1464	1908
	(Ps) Inwg	0.166	0.185	0.205	0.23	0.25	0.272	0.295
	Noise level	25	28	32	38	40	44	46
3	Total CFM	148	325	575	898	1290	1755	2288
	(Ps) Inwg	0.238	0.265	0.296	0.338	0.36	0.39	0.422
	Noise level	30	34	38	43	45	47	49
3.5	Total CFM	174	380	670	1048	1506	2048	2670
	(Ps) Inwg	0.328	0.371	0.403	0.456	0.498	0.53	0.583
	Noise level	34	40	43	47	48	51	54
4	Total CFM	195	432	762	1194	1719	2337	3049
	(Ps) Inwg	0.426	0.48	0.532	0.595	0.648	0.702	0.765
	Noise level	40	45	48	51	52	55	58

SQUARE DIFFUSER

Three Way-AP-DS3

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	(0.0098).	(0.018).	(0.03).	(0.046).	(0.0695).	(0.099).	(0.139).
1	Total CFM	52	110	195	300	432	585	755
	(Ps) Inwg	0.03	0.032	0.036	0.04	0.045	0.048	0.049
	Noise level	‹15	‹15	‹15	‹15	‹15	18	23
1.25	Total CFM	61	135	239	372	538	730	953
	(Ps) Inwg	0.046	0.05	0.056	0.062	0.068	0.072	0.08
	Noise level	‹15	‹15	‹15	‹15	17	25	30
1.5	Total CFM	76	165	288	450	648	880	1145
	(Ps) Inwg	0.06	0.068	0.074	0.082	0	0.098	0.105
	Noise level	‹15	‹15	16	19	24	30	36
1.75	Total CFM	87	190	336	523	753	104	1336
	(Ps) Inwg	0.083	0.085	0.1	0.11	0.126	0.126	0.14
	Noise level	‹15	16	21	25	31	36	40
2	Total CFM	100	218	382	598	862	1170	1525
	(Ps) Inwg	0.105	0.12	0.128	0.146	0.159	0.17	0.184
	Noise level	19	21	25	32	36	40	42
2.5	Total CFM	125	273	478	748	1078	1462	1906
	(Ps) Inwg	0.165	0.182	0.202	0.227	0.25	0.27	0.29
	Noise level	25	28	32	38	40	44	46
3	Total CFM	148	320	575	898	1290	1755	2288
	(Ps) Inwg	0.236	0.263	0.295	0.335	0.358	0.386	0.417
	Noise level	30	34	38	43	45	47	49
3.5	Total CFM	172	380	667	1048	1508	2045	2670
	(Ps) Inwg	0.325	0.368	0.398	0.448	0.492	0.522	0.573
	Noise level	34	40	43	47	48	51	54
4	Total CFM	198	435	765	1195	1720	2340	3050
	(Ps) Inwg	0.422	0.475	0.53	0.59	0.642	0.695	0.756
	Noise level	40	45	48	51	52	55	58

SQUARE DIFFUSER

Four Way - AP-DS4

Neck Velocity in m/sec	Neck size in mm x mm	150 x150	225 x 225	300 x 300	375 x 375	450 x 450	525 x 525	600 x 600
	Area factor in (m2)	(0.0098).	(0.018).	(0.03).	(0.046).	(0.0695).	(0.099).	(0.139).
1	Total CFM	52	110	195	300	432	586	765
	(Ps) Inwg	0.027	0.028	0.032	0.035	0.04	0.042	0.046
	Noise level	‹15	‹15	‹15	‹15	‹15	18	23
1.25	Total CFM	63	138	240	372	540	732	953
	(Ps) Inwg	0.042	0.04	0.05	0.057	0.06	0.066	0.072
	Noise level	‹15	‹15	‹15	‹15	17	25	30
1.5	Total CFM	76	165	288	450	648	880	1143
	(Ps) Inwg	0.06	0.06	0.072	0.082	0.088	0.95	0.1
	Noise level	‹15	‹15	16	19	24	30	36
1.75	Total CFM	86	189	337	521	752	1023	1334
	(Ps) Inwg	0.078	0.085	0.095	0.11	0.12	0.128	0.138
	Noise level	‹15	16	21	25	31	36	40
2	Total CFM	97	216	381	597	860	1168	1524
	(Ps) Inwg	0.1	0.115	0.126	0.142	0.156	0.168	0.18
	Noise level	19	21	25	32	36	40	42
2.5	Total CFM	125	273	476	748	1078	1463	1906
	(Ps) Inwg	0.16	0.174	0.198	0.22	0.24	0.26	0.28
	Noise level	25	28	32	38	40	44	46
3	Total CFM	146	324	572	896	1289	1753	2287
	(Ps) Inwg	0.226	0.252	0.282	0.322	0.342	0.372	0.4
	Noise level	30	34	38	43	45	47	49
3.5	Total CFM	174	380	670	1049	1508	2048	2670
	(Ps) Inwg	0.312	0.352	0.38	0.43	0.472	0.5	0.55
	Noise level	34	40	43	47	48	51	54
4	Total CFM	196	435	765	1195	1720	2340	3050
	(Ps) Inwg	0.402	0.45	0.5	0.562	612	0.66	0.72
	Noise level	40	45	48	51	52	55	58

LINEAR BAR GRILLS & REGISTERS

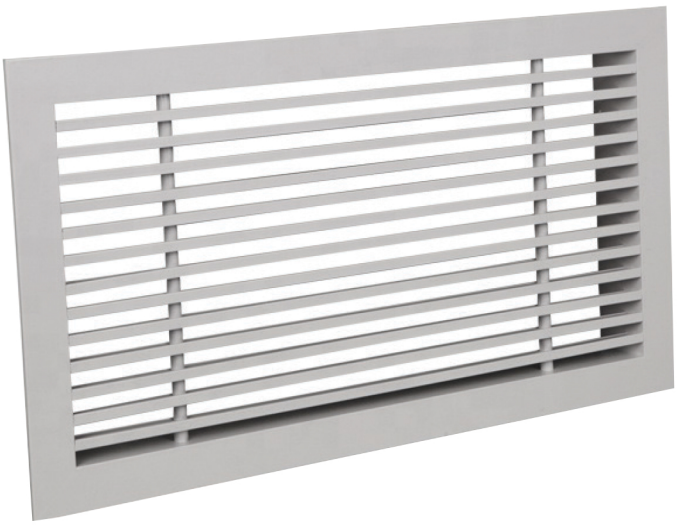
MANUFACTURER OF AIR OUTLETS :

Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

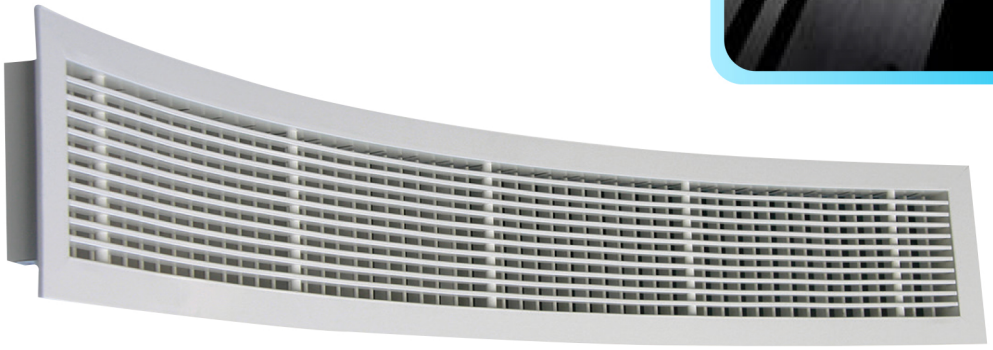
FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)



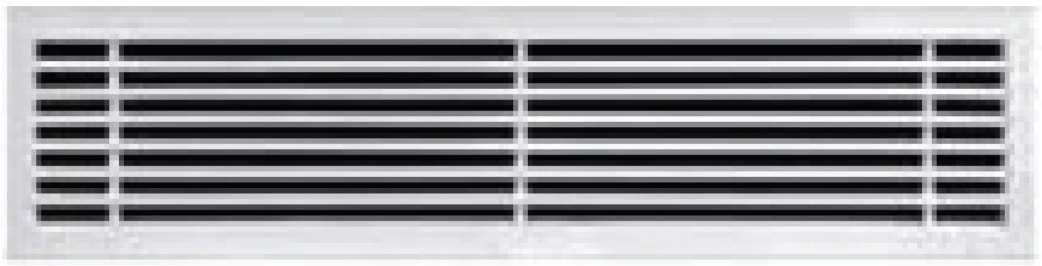






Efficient Air Distribution System

LINEAR BAR GRILLS & REGISTERS



Model: AP-SLG-DD - Double Deflection Linear Bar Grill

Construction:

- **Frame**: High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.

Description:

- Frame and face bars are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Vertical aluminum aerofoil blades are fixed at the rear side of the frame by nylon bushes. These blades can be adjusted manually and individually in the vertical plane to obtain optimum air distribution.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.
- Total structure is manufactured by mechanical assembly, assuring rigidity and to maintain straight line appearance.

LINEAR BAR GRILLS & DIFFUSER

Model: AP-SLR-DD - Double Deflection Linear Bar Registers

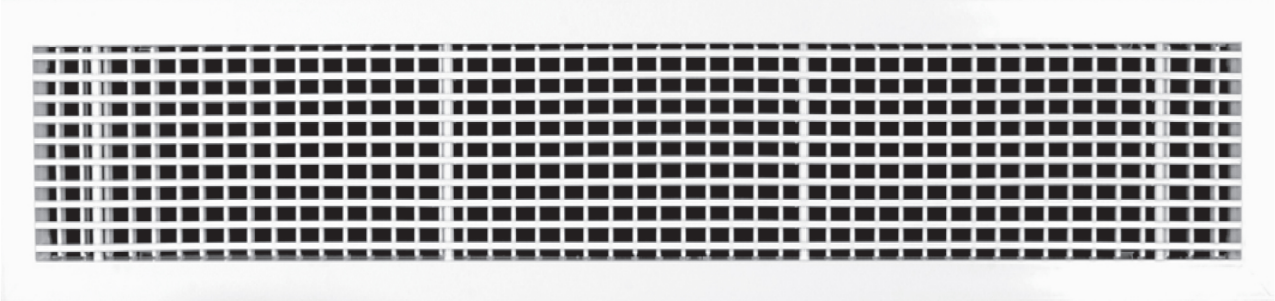
Construction:

- **Frame**: High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.
- **Damper frame and blades:** High quality extruded aluminum profiles with natural aluminum finish. Black matt finish as option.

Description:

- Frame and face bars are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Vertical aluminum aerofoil blades are fixed at the rear side of the frame by nylon bushes. These blades can be adjusted manually and individually in the vertical plane to obtain optimum air distribution.
- Grilles are fixed rigidly with an opposed blade damper by grippers to ensure positive control over the air stream. Damper blades can be screw operated from the face opening of the grill.
- Provided with alignment strip for continuous appearance. Foam gasket is sealed around the back of the frame to avoid air leakage.

Model: AP-RLG-D – Single Deflection Linear Bar Grills.



LINEAR BAR GRILLS & REGISTERS

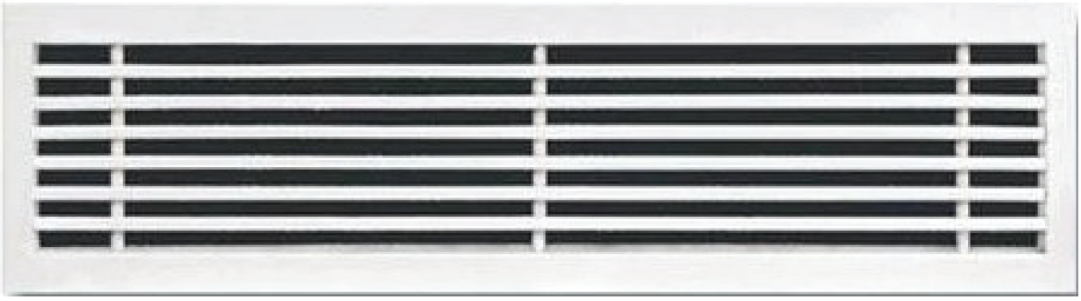
Construction:

- **Frame**: High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option

Description:

- Frame and face bars are of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.
- Total structure is manufactured by mechanical assembly, assuring rigidity and to maintain straight line appearance.

Model: AP-RLR-D – Single Deflection Linear Bar Registers.



Construction:

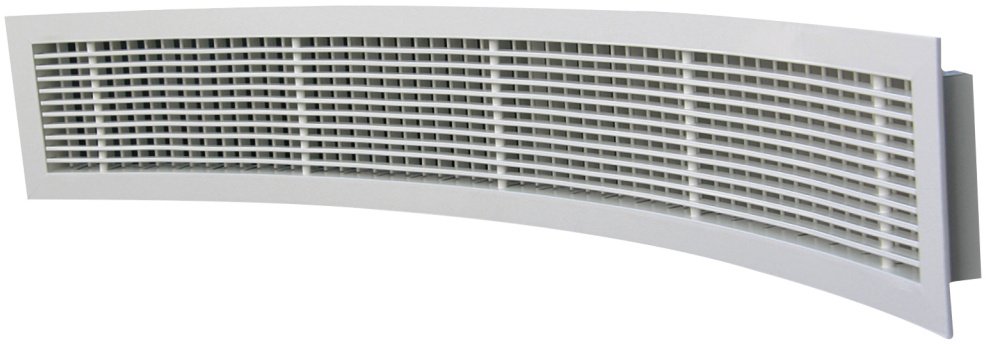
- **Frame:** High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.
- **Damper Frame and Blades:** High quality extruded aluminum profiles with natural aluminum finish. Black matt finish as option.

LINEAR BAR GRILLS & DIFFUSER

Description:

- Frame and face bars are of high quality extruded aluminum profile construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Grilles are fixed rigidly with opposed blade damper by grippers. This ensures positive control over the air stream. Damper blades can be screw operated from the face opening.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.

Model: AP-SLG(C)-DD – Double Deflection Curved Linear Bar Grill:



Description:

- **Frame:** High quality extruded aluminum profile with 30 mm flange width as standard. 12, 20, 24 mm flange widths are optional.
- **Face bars:** High quality aluminum profiles of 0°, 15°-1 way throw and 15°-2 way throw.
- **Bar spacing:** 12 mm as standard. 6 and 9 mm as option.

Description:

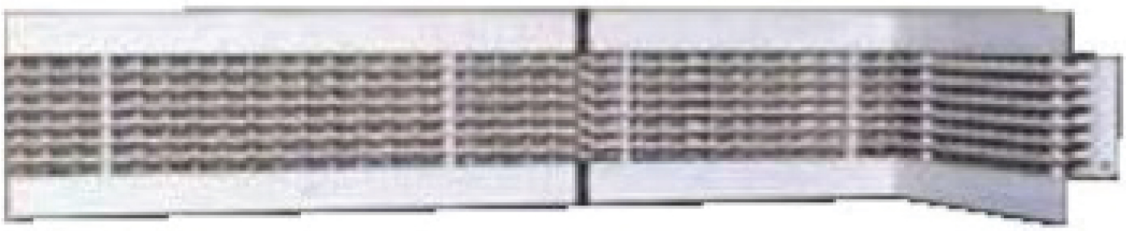
- Frame and face bars are of high quality extruded aluminum profile construction with the advantages of corrosion resistance and rigidity.
- Horizontal face bars with 0°, 15°- l way throw and 15°-2 way throw are fixed rigidly to the frame with 8 mm pipes.
- Vertical aluminum aerofoil blades are fixed at the rear side of frame by nylon blushing. These blades can be adjusted manually and individually in the vertical plain to obtain.
- Optimum Air Distribution.
- For perfect unbroken appearance of continuous runs, alignment strips are provided with no additional cost.

LINEAR BAR GRILLS & REGISTERS

- Curved linear bar grills are available up to a length of 3 meter with minimum radius of curvature of 1 meter.
- Available without damper. Dampers can be provided to use in plenum boxes as option.
- Foam Gasket is sealed around the back of the frame option to avoid air leakage
- Standard application on curved wall.

Model: AP-RLG-C-DD same as **AP-SLG-C-DD** without vertical aerofoil blades.

STANDARD FINISHES AND MITERED OPTIONS



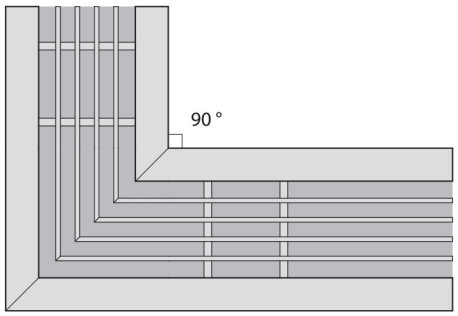
Standard Finishes:

- Natural anodized aluminium finish. Powder coated colour finish as per RAL colour codes. Flexibility of finishing is available as option.

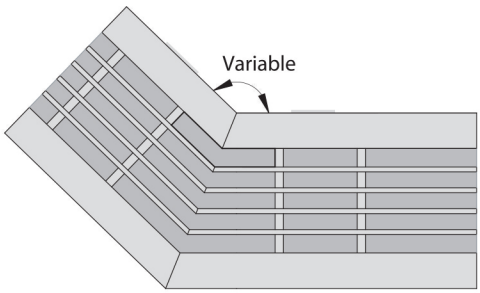
LINEAR BAR GRILLS & DIFFUSER

OPTIONAL MITERED CORNERS

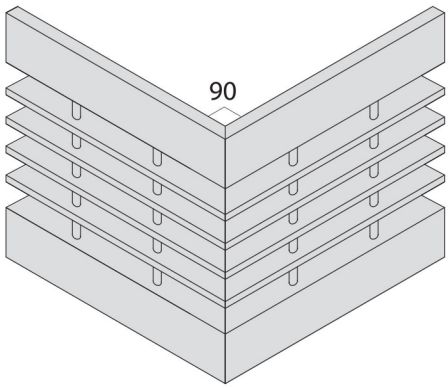
- **90 ° Horizontal -** Standard 90° horizontal metered corner available for floor, sill and ceiling applications in 0° , 15° - 1 way throw and 15° – 2 way throw without damper.



- **Variable angle (90° - 180°) and 90° Vertical Inside** – Special horizontal metered corner selection available for floor, sill and ceiling applications includes an angle greater than 90° and less than 180° available in 0° , 15° – 1 way throw and 15° -2 way throw without damper.



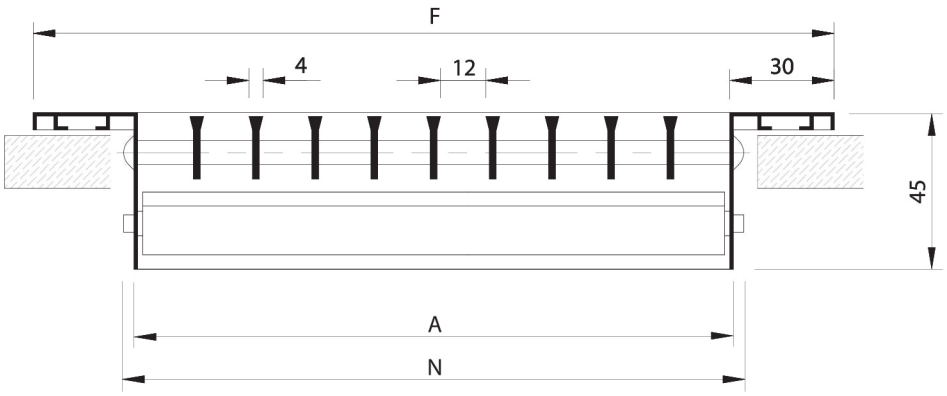
- **90 ° Vertical Outside –** metered corner are available for wall application at the junction of two outside walls with a standard angle of 90° . Available in 0, 15° - 1 way throw and 15° - 2 way throw without damper.



LINEAR BAR GRILLS & REGISTERS

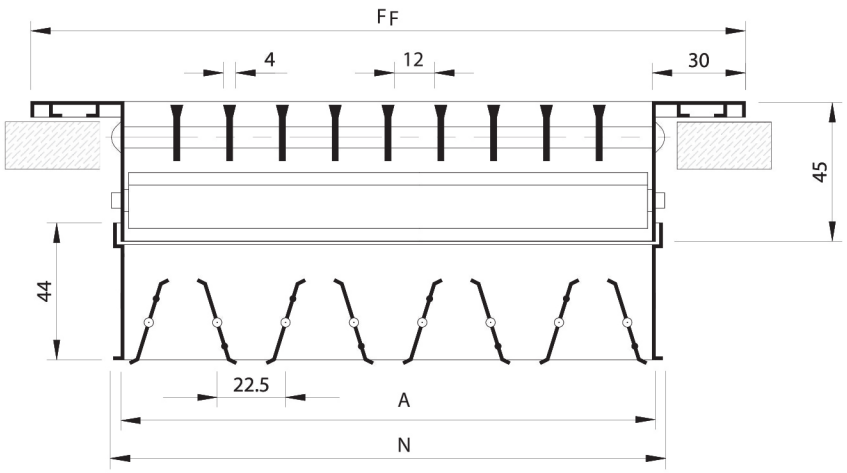
Linear Bar Grills with Vertical Rear Blades

- **Model: AP-SLG-DD**



Bar Spacing = 12 mm (standard)

- **Model: AP-SLR-DD**



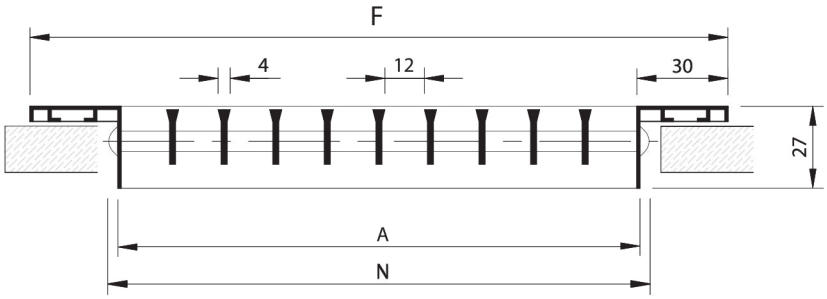
Bar Spacing = 12 mm (standard)

- Fixed horizontal front bar blades, adjustable vertical rear blades w/o Opposed Blade Damper
- Grills called Supply Air Bar Grill and coded as AP-SLG-DD are usually supplied w/o Opposed Blade Damper.
- Grills called Supply Air Bar Register and coded as AP-SLR-DD.

LINEAR BAR GRILLS & DIFFUSER

Linear Bar Grills without Rear Blades

- **Model: AP-RLG-D**

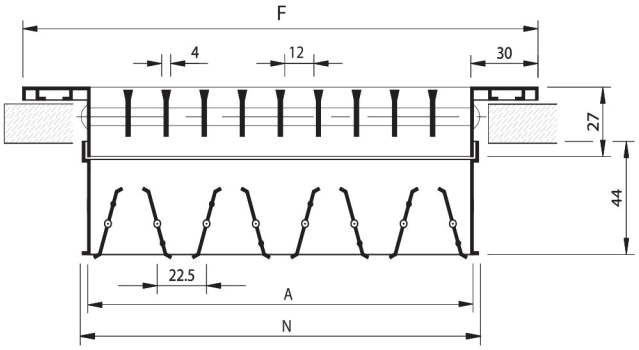


Bar Spacing = 12 mm (standard)

- AP-RLG-D is Return Air Linear Bar Grill, w/o rear blades and Opposed Blade Damper.
- Grills called Return Air Linear Bar Grill and coded as AP-RLG-D are usually supplied w/o Opposed Blade Damper.

Linear Bar Registers without Rear Blades

- **Model: AP-RLR-D**



Bar Spacing = 12 mm (standard)

- AP-RLR-D is Return Air Linear Bar Register, fixed horizontal front bar blades, w/o rear blades and c/w Opposed Blade Damper.
- Registers called Return Air Linear Bar Register and coded as AP-RLR-D are always equipped with Opposed Blade Damper.

N- Nominal/Listed size =Length (L) x Height (H)
A -Actual size = (L -10) x (H-10)
F- Face size = (L+50) x (H+50)

- Linear Grills/Registers approximately 10mm less than the Nominal/Listed size.
- All dimensions are mm and subject to +/-1 mm tolerance

LINEARBAR GRILLS & REGISTERS

DOUBLE DEFLECTION LINEAR BAR REGISTERS (15°1 Way & 0°)
Model: AP-SLR-DD/AP-SLG-DD-Air Flow Data

Listed size in mm x mm	Face Value	2.75	3.25	4	4.5	5	5.5	6	6.5
	Ps mm H2O	2.16	3.1	4.32	5.59	7.11	8.89	10.92	12.95
250x100/200x125	CFM	150	180	210	240	270	300	330	360
	M³/sec	0.071	0.085	0.099	0.113	0.127	0.142	0.156	0.17
150x150	NC	18	22	25	28	32	36	39	41
200x150/250x125	CFM	180	210	240	280	320	350	390	420
	M³/sec	0.085	0.099	0.113	0.32	0.151	0.165	0.184	0.198
300x100	NC	17	21	25	29	32	36	38	40
250x150/300x125	CFM	220	260	210	350	400	440	490	530
	M³/sec	0.104	0.123	0.146	0.165	0.189	.0.208	0.231	0.25
400x100	NC	19	23	28	31	34	38	41	43
300x150/350x125	CFM	240	290	340	300	440	490	540	590
	M³/sec	0.1132	0.137	0.161	0.184	0.208	0.231	0.255	0.279
450x100	NC	18	23	27	30	33	37	40	43
250x200/350x150	CFM	270	320	370	420	480	530	590	640
	M³/sec	0.127	0.151	0.165	0.198	0.227	0.25	0.279	0.302
400x125/500x100	NC	16	20	24	27	31	34	38	41
250x250/ 300x200	CFM	310	370	430	490	550	610	680	740
400x150/500x125	M³/sec	0.146	0.165	0.203	0.231	0.259	0.288	321	0.349
600x100	NC	18	22	26	29	33	37	39	42
300x250/450x150	CFM	360	440	510	580	660	730	810	800
500x150/600x125	M³/sec	0.17	0.208	0.241	0.274	0.312	0.345	0.382	0.416
750x100	NC	18	23	27	30	34	37	40	42
300x300/350x250	CFM	420	500	590	670	750	840	930	1020
	M³/sec	0.198	0.236	0.279	0.316	0.354	0.397	0.439	0.482
450x200/600x150	NC	< 15	18	26	30	33	37	40	43
350x300/400x250	CFM	450	540	630	720	810	900	1000	1090
	M³/sec	0.213	0.256	0.297	0.34	0.382	0.425	0.472	0.514
500x200/750x150	NC	15	19	24	28	32	36	40	43
350x350/400x300	CFM	510	620	820	820	930	1030	1140	1240
500x250/600x200	M³/sec	0.241	0.293	0.34	0.387	0.439	0.486	0.538	0.586
900x150	NC	18	23	27	32	35	40	43	46
400x400/500x300	CFM	580	700	820	940	1050	1170	1290	1400
	M³/sec	0.274	0.331	0.387	0.444	0.469	0.553	0.609	0.661
600x250/800x200	NC	15	20	25	30	37	41	44	47
500x350/600x300	CFM	660	800	930	1060	1200	1330	1470	1600
700x250/900x200	M³/sec	0.312	0.378	0.439	0.501	0.567	0.628	0.694	0.756
1000x150	NC	19	25	29	35	38	42	45	48
450x450/500x400	CFM	700	840	980	1120	1270	1400	1550	1690
750x250	M³/sec	0.331	0.397	0.463	0.529	0.599	0.661	0.732	0.798
1000x200	NC	19	24	28	33	36	38	42	46
500x500/550/450	CFM	800	970	1130	1280	1440	1600	1770	1930
750x300/800x250	M³/sec	0.378	0.458	0.533	0.605	0.68	0.756	0.836	0.912
1000x200	NC	21	26	30	36	41	43	46	48

- Data based on one meter unit length of the grill with damper in full open position
- Face velocity is measured in m/sec.
- Ps- Static pressure loss is in mm of H2O
- Throw (meter) is measured for terminal velocities of 0.75, 0.5 and 0.25 m/sec.
- NC based on a room attenuation of 10 dB

LINEAR BAR GRILLS & REGISTERS

DOUBLE DEFLECTION LINEAR BAR REGISTERS (15°1 Way & 0°)
Model: AP-SLR-DD/AP-SLG-DD-Air Flow Data

With in mm Ak in m²	Face Velocity in m/sec	15°- 2 Way	15°-1 Way	0°	15°- 2 Way	15°-1 Way	0°	15°- 2 Way	15°-1 Way	0°	15°- 2 Way	15°-1 Way	0°
		3.5	3.5	3.5	4	4	4	4.5	4.5	4.5	5	5	5
50	Cfm	290	296	296	330	339	339	373	381	381	413	423	423
	M³/sec	0.137	0.14	0.14	0.156	0.16	0.16	0.176	0.18	0.18	0.195	0.2	0.2
0.039	Ps in mm H2o	0.25	0.25	0.23	0.32	0.31	0.28	0.4	0.99	0.96	0.51	0.5	0.46
	Throw in m	4.3-5.2-7.3	4.5-5.4-7.7	4.6-5.6-7.9	4.6-5.5-7.6	4.8-5.8-8.1	4.9-5.6-8.3	4.9-8.8-8.2	5.1-6.1-8.9	5.4-6.4-9.3	4.9-6.0-8.5	5.2-6.4-9.3	5.5-6.8-9.8
	NC	16	17	17	22	22	22	25	25	25	30	31	31
100	Cfm	498	483	483	500	550	550	563	620	620	625	688	688
	M³/sec	0.207	0.228	0.228	0.236	0.26	0.26	0.266	0.293	0.293	0.295	0.325	0.325
0.059	Ps in mm H2o	0.3	0.3	0.28	0.39	0.38	0.35	0.51	0.5	0.46	0.61	0.6	0.56
	Throw in m	5.2-6.8-5	5.4-6.2-9	5.6-6.4-9.3	5.5-6.7-9.1	5.8-7.9-7	5.9-7.2-10	5.8-7.3-10	6.1-7.5-10.8	6.4-8.1-11.2	6.7-6-10.7	6.4-8.1-11.7	6.8-8.6-12.4
	NC	17	18	18	22	23	23	27	27	27	31	32	32
150	Cfm	578	652	652	660	745	745	743	838	838	825	932	932
	M³/sec	0.273	0.308	0.308	0.312	0.352	0.352	0.351	0.396	0.396	0.39	0.44	0.44
0.078	Ps in mm H2o	0.36	0.36	0.33	0.46	0.45	0.42	0.58	0.57	0.53	0.71	0.7	0.65
	Throw in m	5.8-7.3-10	6.7-6.10-6	6.2-7.8-11	6.4-8-10.7	6.7-8.4-11.4	6.9-8.7-11.7	6.7-8.5-11.6	7.8-9.12.5	7.4-9.3-13	7.8-8-12.2	7.4-9.9-13.3	7.8-9.8-14
	NC	17	18	18	23	24	24	28	29	29	32	34	34
200	Cfm	718	824	824	821	940	940	925	1058	1058	1022	1175	1175
	M³/sec	0.339	0.389	0.389	0.388	0.444	0.444	0.437	0.499	0.499	0.485	0.555	0.555
0.097	Ps in mm H2o	0.39	0.39	0.36	0.53	0.52	0.48	0.66	0.65	0.6	0.91	0.9	0.84
	Throw in m	6.7-8-11.9	6.9-8.3-12	7.1-8.5-12.3	7.3-8.8-11.9	7.7-9.2-12.7	7.9-9.5-13	7.6-9.5-12.8	8.9-9-13.8	8.4-10.4-14.5	8-9.8-13.7	8.5-10.4-15	9.11-15.8
	NC	21	21	21	26	26	26	31	32	32	35	36	36
250	Cfm	860	993	993	982	1135	1135	1105	1277	1277	1228	1419	1419
	M³/sec	0.406	0.469	0.469	0.464	0.536	0.536	0.522	0.603	0.603	0.58	0.67	0.67
0.116	Ps in mm H2o	0.43	0.42	39	0.58	0.5	0.52	0.76	0.77	0.7	0.94	0.92	0.86
	Throw in m	7.3-8.8-12.2	7.6-9.2-12.9	7.8-9.5-13.3	8.9-5-13.1	8.4-10-14	8.6-10.3-14.4	8.2-10-14	8.6-10.5-15	9-11-15.9	8.5-10.7-15	9-11.3-16.4	9.5-12-17.4
	NC	25	27	27	31	31	34	35	35	35	37	40	40
300	Cfm	1008	1200	1200	1125	1372	1372	1295	1543	1543	1440	1715	1715
	M³/sec	0.476	0.567	0.567	0.544	0.648	0.648	0.612	0.73	0.73	0.68	0.8	0.8
0.136	Ps in mm H2o	0.47	0.47	0.44	0.64	0.64	0.99	0.85	0.84	0.78	1.02	1	0.94
	Throw in m	7.9-9.8-19.1	8.2-10.2-14	8.4-10.5-14.3	8.5-10.4-14	8.9-11-15	9.2-11.2-15.4	8.8-11-15	9.2-11.6-16	9.6-12.2-17	9.1-11.6-16	9.6-12.3-17.6	10.2-13-18.6
	NC	28	30	30	32	33	33	35	37	37	40	42	42

- Data based on one meter unit length of the grill with damper in full open position
- Face velocity is measured in m/sec.
- Ps- Static pressure loss is in mm of H2O
- Throw (meter) is measured for terminal velocities of 0.75, 0.5 and 0.25 m/sec.
- NC based on a room attenuation of 10 dB

LINEARBAR GRILLS & REGISTERS

SINGLE DEFLECTION LINEAR BAR REGISTERS (15° Way & 0°)
Model: AP-RLR-DD/AP-RLG-DD-Air Flow Data

Nominal Width mm		15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°	15°-2 Way	15°-1 Way	0°
50	Cfm	332	332	332	417	417	417	500	500	500	585	585	585	667	667	667	750	750	750
	M^3/sec.	0.157	0.157	0.157	0.197	0.197	0.197	0.236	0.236	0.236	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354
	Ps in mm H2O	0.48	46	0.43	0.74	0.72	0.69	1.07	1.03	0.99	1.47	1.42	1.37	1.91	1.88	1.83	2.41	2.32	2.23
	NC	<15	<15	<15	18	<18	17	26	25	24	32	31	30	36	31	33	42	40	38
100	Cfm	417	417	417	500	500	500	585	585	585	667	667	667	750	750	750	833	833	833
	M^3/sec.	0.197	0.197	0.197	0.236	0.236	0.236	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393
	Ps in mm H2O	0.51	0.48	0.45	0.71	0.69	0.66	0.97	0.93	0.89	1.27	1.2	1.14	1.6	1.55	1.48	1.98	1.88	1.78
	NC	15	<15	<15	20	19	18	27	24	23	32	31	31	35	34	33	40	38	36
150	Cfm	500	500	500	585	585	585	667	667	667	750	750	750	833	833	833	1000	1000	1000
	M^3/sec.	0.236	0.236	0.236	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472
	Ps in mm H2O	0.51	0.48	0.45	0.69	0.67	0.64	0.89	0.86	0.81	1.14	1.1	1.04	1.4	1.34	1.27	2.01	1.92	1.83
	NC	17	15	15	22	20	17	28	27	26	32	31	28	34	31	30	38	37	36
200	Cfm	585	585	585	667	667	667	750	750	750	833	833	833	1000	1000	1000	1167	1167	1167
	M^3/sec.	0.276	0.276	0.276	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472	0.551	0.551	0.551
	Ps in mm H2O	0.48	0.45	0.43	0.64	0.64	0.64	0.81	0.78	0.65	0.99	0.99	0.91	1.42	1.37	1.4	1.91	1.85	1.8
	NC	16	17	17	23	23	22	26	25	24	32	30	27	35	34	33	40	38	37
250	Cfm	667	667	667	750	750	750	833	833	833	1000	1000	1000	1167	1167	1167	1332	1332	1332
	M^3/sec.	0.315	0.315	0.315	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472	0.551	0.551	0.551	0.629	0.629	0.629
	Ps in mm H2O	0.48	0.45	0.43	0.61	0.59	0.56	0.74	0.71	0.66	1.07	1.02	0.94	1.45	1.36	1.27	1.9	1.79	1.67
	NC	19	19	19	23	22	21	25	24	23	31	30	29	35	33	32	40	38	36
300	Cfm	750	750	750	833	833	833	1000	1000	1000	1167	1167	1167	1333	1333	1330	1500	1500	1500
	M^3/sec.	0.354	0.354	0.354	0.393	0.393	0.393	0.472	0.472	0.472	0.551	0.551	0.551	0.629	0.629	0.629	0.708	0.708	0.708
	Ps in mm H2O	0.5	0.48	0.45	0.64	0.6	0.58	0.77	0.74	0.69	1.13	1.05	0.98	1.52	1.45	1.32	2	1.8	1.7
	NC	20	19	19	25	23	22	27	25	24	31	30	28	38	37	36	44	42	40

- Data based on one meter unit length of the grill.
- Ps- Static pressure loss is in mm of H2O
- NC based on a room attenuation of 10 dB.

LINEAR SLOT DIFFUSER

MANUFACTURER OF AIR OUTLETS :

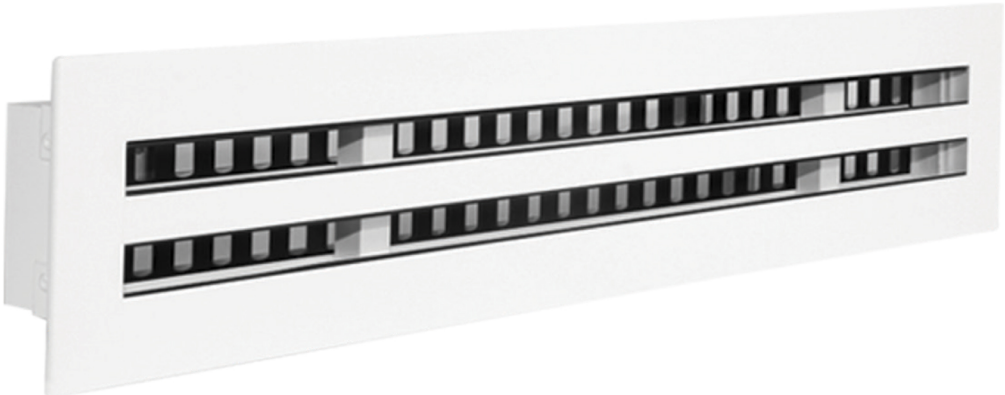
Grills, Diffusers, Control Volume Damper (VCD), Non Return Damper (NRD), Fire Rated Air Ducting and Louvers Systems.

FABRICATION OF GI DUCTS, PI DUCTS, FLEXIBLE DUCTS & EXHAUST AND FRESH AIR LOUVERS

SALE OF FIRE DAMPERS, MOTORIZED SMOKE FIRE DAMPER (MSFD)







LINEAR SLOT DIFFUSER

Construction:

- **Frame & Blades:** High quality extruded aluminium profiles.
- **Frame width:** 28 mm standard; 20 mm also available.
- **Damper:** Hit and miss damper.
- **Slot width:** 20 mm as standard. 16 mm, 25 mm and non standard sizes available as option.
- Number of slots available: 1, 2,3,4,5, 6, 7,8.
- **Length:** Up to 5.8 mtr. available in a single piece.
- Optional accessories: Plenum box unlined internally insulated or externally insulated.

Standard Finishes:

- Natural anodized aluminum finish.
- Powder coated color finish as per RAL color code.
- Flexibility of finish available.

Model: AP-SLD Supply Linear Slot Diffuser



Description:

- Frame and deflection blades are made of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Air distribution can be changed vertically or horizontally by means of deflection blades without changing the air flow rate. These blades can be fully adjusted from face opening.
- Dampers are designed in a unique way that it can be used as an equalizing grid. Positive alignment of adjacent sections can be made by using alignment strips.
- Suitable for installation for ceiling and sills.
- Foam gasket sealed around the back of the frame to avoid air leakage.

LINEAR SLOT DIFFUSER

Model: AP-RLD Return Linear Slot Diffuser



Description:

- Frame and deflection blades are made of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Positive alignment of adjacent sections can be made by using alignment strips that are provided with each diffuser.
- Structure is manufactured by mechanical assembly to ensure rigidity and straight line appearance.
- Available without hit and miss damper as standard. Damper will be provided as option. Suitable for installation into ceiling and sills.

Model: APSLD (C) Curved Supply Linear Slot Diffuser



Description:

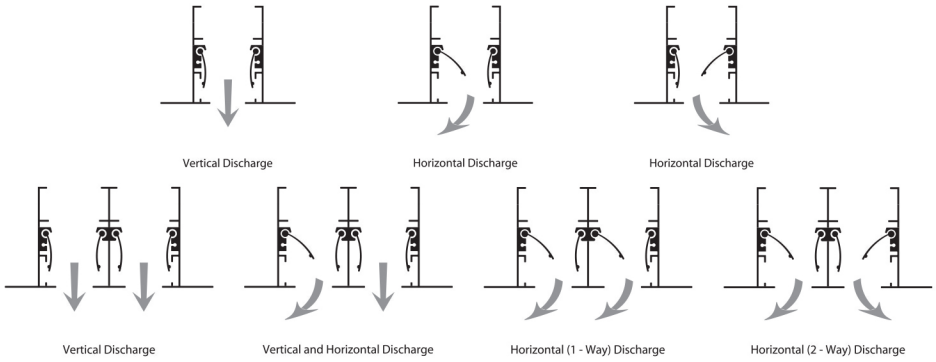
- Frame and deflection blades are made of high quality extruded aluminum profiled construction with the advantages of corrosion resistance and rigidity.
- Hit and miss damper will be fixed rigidly at the rear side of the diffuser as option.
- Positive alignment of adjacent sections can be made by using alignment strips.
- Foam gasket is sealed around the back of the frame as option to avoid air leakage.

LINEAR SLOT DIFFUSER

- Suitable for installation in ceiling and sills.
- Supply and return air curved linear slot diffusers are available up to a length of 3 meters with a minimum radius of curvature of 1 meter.
- Standard application on the ceiling.

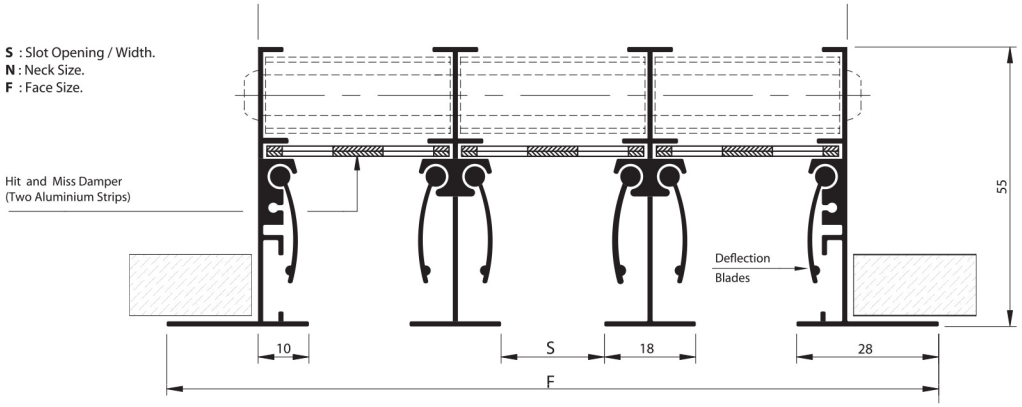
Model: APRLD(C): Same as APSLD(C), without hit and miss damper.

Single and Multiple Slot Pattern Adjustment



- Two deflection per slot provide an adjustable air pattern of fully 180°

Construction Dimension Detail



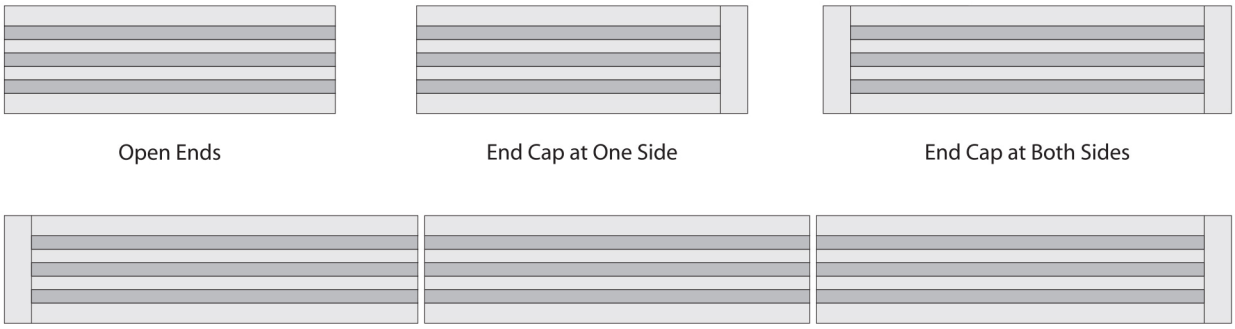
Neck and Overall Dimensions for Linear Slot Diffusers

No. Of Slots	S= 16 mm		S=20 mm (Standard)		S=25 mm	
	N	F	N	F	N	F
1	36	72	40	76	46	82
2	70	106	78	114	90	126
3	104	140	116	152	134	170
4	138	174	154	188	178	214
5	172	208	192	228	222	258
6	206	242	230	266	266	302
7	240	276	268	304	310	346
8	274	310	306	342	354	390

All dimensions are in mm d subject to ±1mm tolerance

LINEAR SLOT DIFFUSER

End Cap/Flange Arrangements



Open Ends

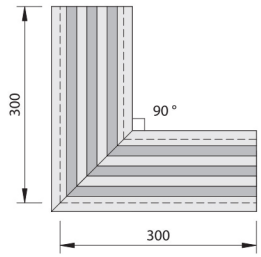
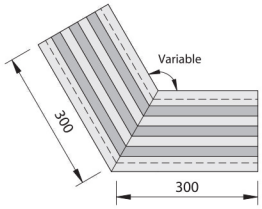
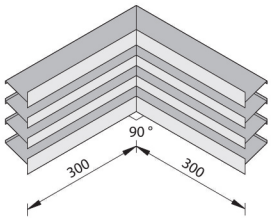
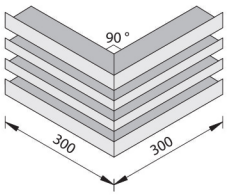
End Cap at One Side

End Cap at Both Sides

End Cap at Both Terminal Sides (Multi Sections)

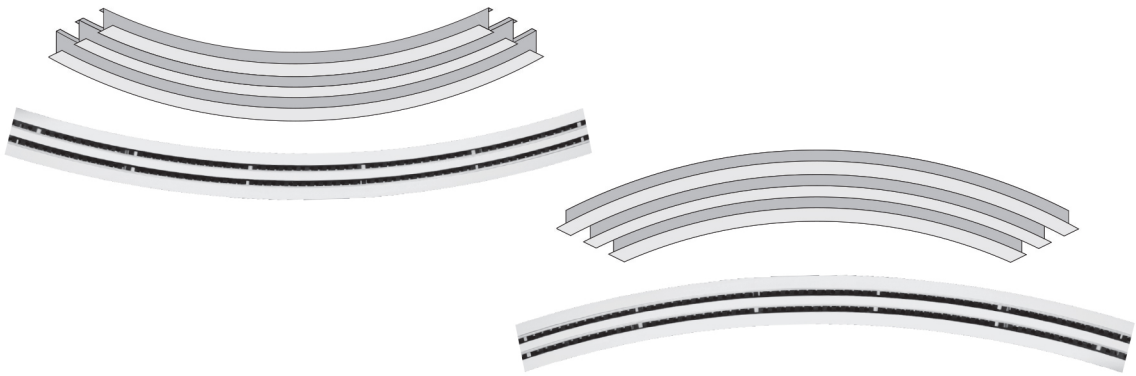
Metered Corners

TABLE LD - 03

Ceiling Mounted Corners		Wall Mounted Corners	
			
90 ° Corner Standard	Variable Angle Corner Optional	Inside 90 ° Corner Optional	Outside 90 ° Corner Optional

- Corners are always supplied in 300 mm adjacent sides as standard unless otherwise specified or required.

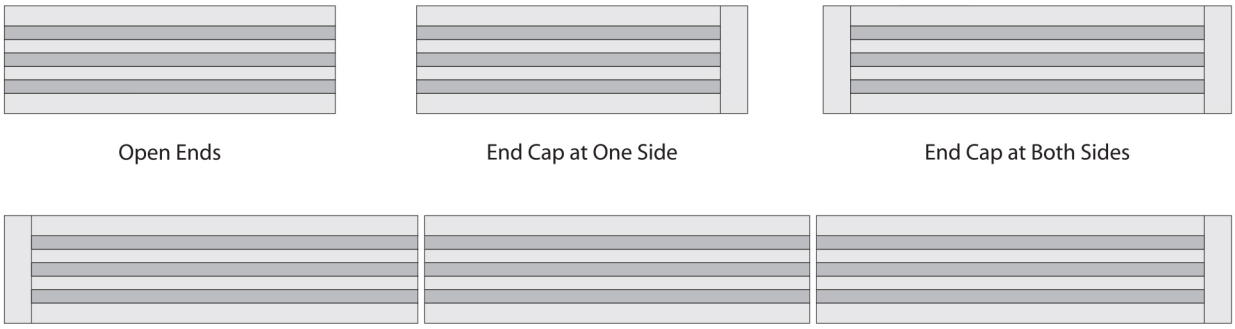
Linear Slot Diffusers in Curve Shape



- Curves can be fabricated in minimum curvature radius = 1mtr.
- Curved Applications are not possible for side wall instalments.

LINEAR SLOT DIFFUSER

End Cap/ Flange Arrangements



Open Ends

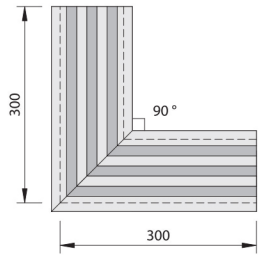
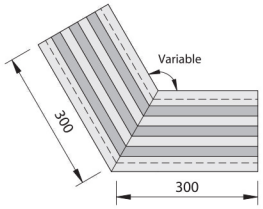
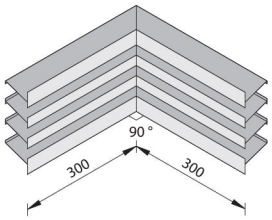
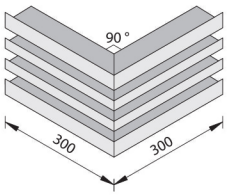
End Cap at One Side

End Cap at Both Sides

End Cap at Both Terminal Sides (Multi Sections)

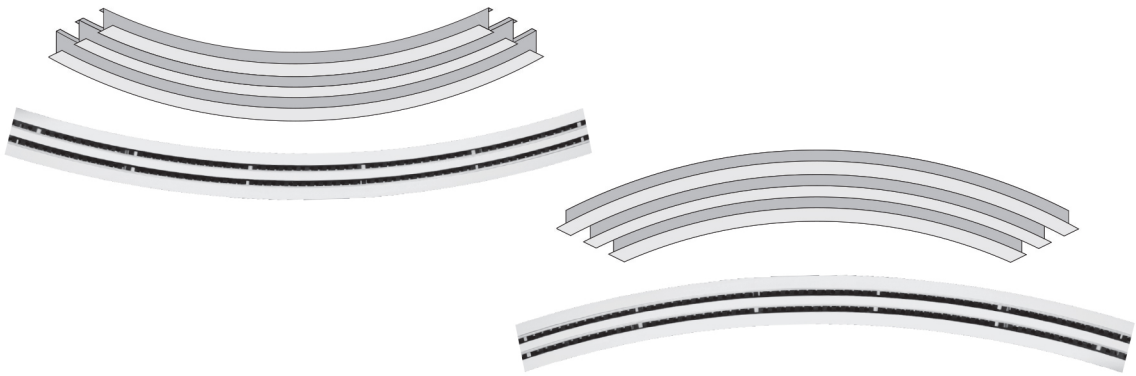
Metered Corners

TABLE LD - 03

Ceiling Mounted Corners		Wall Mounted Corners	
			
90 ° Corner Standard	Variable Angle Corner Optional	Inside 90 ° Corner Optional	Outside 90 ° Corner Optional

- Corners are always supplied in 300 mm adjacent sides as standard unless otherwise specified or required.

Linear Slot Diffusers in Curve Shape



- Curves can be fabricated in minimum curvature radius = 1mtr.
- Curved Applications are not possible for side wall instalments.

LINEAR SLOT DIFFUSER

SUPPLY LINEAR SLOT DIFFUSER VERTICAL
Model: AP-SLD-Air Flow Data

NO. OF SLOTS	AIR FLOW	16 MM SLOT WIDTH				20 MM SLOT WIDTH				25 MM SLOT WIDTH			
	(L/s)/LM	AREA (m2/LM)	Pt (Pa)	Throw (M)	NC	AREA (m2/LM)	Pt (Pa)	Throw (M)	NC	AREA (m2/LM)	Pt (Pa)	Throw (M)	NC
1	25	0.006	10	2.5	15	0.008	7	2.2	‹15	0.01	4	1.9	‹15
	40		28	3.5	23		18	3.1	18		12	2.7	‹15
	55		38	5.5	32		33	4.9	25		21	4.3	21
	60		42	6.2	35		39	5.6	28		25	5	22
2	25	0.017	4	2.5	16	0.019	2	2.2	‹15	0.26	2	1.9	‹15
	50		14	5.4	21		9	4.8	17		6	4.2	‹15
	75		31	6.7	30		20	6.1	24		13	5.5	19
	100		56	8.7	42		36	8	32		23	7.3	27
3	50	0.024	7	3.3	17	0.029	4	2.9	‹15	0.038	3	2.6	‹15
	75		14	5.5	21		9	4.9	17		6	4.3	‹15
	100		26	2.7	30		11	6.6	24		11	6	19
	125		40	9	38		16	8.6	30		16	7.7	24
4	75	0.03	9	4.5	17	0.037	6	4.2	‹15	0.046	4	3.9	‹15
	100		15	5.05	22		10	5.1	18		6	4.8	‹15
	125		24	6.9	29		15	6.3	28		10	5.7	19
	150		35	8.9	35		22	8.2	28		14	7.5	22
5	100	0.036	11	4.8	16	0.046	7	4.5	‹15	0.058	4	4.2	‹15
	125		16	5.9	21		10	5.6	16		6	5.2	‹15
	150		23	7.5	27		14	6.9	22		9	6.3	17
	175		31	9.1	33		20	8.4	25		13	7.7	21
6	125	0.043	11	5	16	0.057	7	4.6	‹15	0.068	5	4.2	‹15
	150		16	6.2	20		10	5.6	16		7	5	‹15
	15		22	7.8	25		14	7.2	20		9	6.6	‹15
	200		29	9.7	29		18	9	23		12	8.2	19

Symbols:

- L/S – Air volume in litres per second
- Pi – Total pressure in Pascal
- Th – Throw in Meters
- NC –Noise Criteria

Conditions:

- Supply
- Noise Criteria values are based on (10 db) room attenuation
- Damper is fully open.
- Maximum room height 4.0m.

Notes:

- The large values are based on the minimum terminal velocity of 0.25m/sec.

LINEAR SLOT DIFFUSER

SUPPLY LINEAR SLOT DIFFUSER VERTICAL
Model: AP-SLD-Air Flow Data

NO. OF SLOTS	AIR FLOW	16 MM SLOT WIDTH				20 MM SLOT WIDTH				25 MM SLOT WIDTH			
	(L/s)/LM	AREA (m2/LM)	Pt (Pa)	Throw (M)	NC	AREA (m2/LM)	Pt (Pa)	Throw (M)	NC	AREA (m2/LM)	Pt (Pa)	Throw (M)	NC
1	25	0.006	10	2.5	15	0.008	7	2.2	‹15	0.01	4	1.9	‹15
	40		28	3.5	23		18	3.1	18		12	2.7	‹15
	55		38	5.5	32		33	4.9	25		21	4.3	21
	60		42	6.2	35		39	5.6	28		25	5	22
2	25	0.017	4	2.5	16	0.019	2	2.2	‹15	0.26	2	1.9	‹15
	50		14	5.4	21		9	4.8	17		6	4.2	‹15
	75		31	6.7	30		20	6.1	24		13	5.5	19
	100		56	8.7	42		36	8	32		23	7.3	27
3	50	0.024	7	3.3	17	0.029	4	2.9	‹15	0.038	3	2.6	‹15
	75		14	5.5	21		9	4.9	17		6	4.3	‹15
	100		26	2.7	30		11	6.6	24		11	6	19
	125		40	9	38		16	8.6	30		16	7.7	24
4	75	0.03	9	4.5	17	0.037	6	4.2	‹15	0.046	4	3.9	‹15
	100		15	5.05	22		10	5.1	18		6	4.8	‹15
	125		24	6.9	29		15	6.3	28		10	5.7	19
	150		35	8.9	35		22	8.2	28		14	7.5	22
5	100	0.036	11	4.8	16	0.046	7	4.5	‹15	0.058	4	4.2	‹15
	125		16	5.9	21		10	5.6	16		6	5.2	‹15
	150		23	7.5	27		14	6.9	22		9	6.3	17
	175		31	9.1	33		20	8.4	25		13	7.7	21
6	125	0.043	11	5	16	0.057	7	4.6	‹15	0.068	5	4.2	‹15
	150		16	6.2	20		10	5.6	16		7	5	‹15
	15		22	7.8	25		14	7.2	20		9	6.6	‹15
	200		29	9.7	29		18	9	23		12	8.2	19

Symbols:

- L/S – Air volume in litres per second
- Pi – Total pressure in Pascal
- Th – Throw in Meters
- NC –Noise Criteria

Conditions:

- Supply
- Noise Criteria values are based on (10 db) room attenuation
- Damper is fully open.
- Maximum room height 4.0m.

Notes:

- The large values are based on the minimum terminal velocity of 0.25m/sec.

LINEAR SLOT DIFFUSER

RETURN LINEAR SLOT DIFFUSER Model: AP-SLD-Air Flow Data

NO.OF SLOTS	AIR FLOW (L/s)/LM	16 MM Slot Width		20 MM Slot Width		25 MM Slot Width	
		Pt(Pa)	NC	Pt(Pa)	NC	Pt(Pa)	NC
1	40	46	18	29	18	19	<15
	50	70	22	45	21	29	15
	65	118	33	76	31	49	20
	80	180	45	115	40	74	28
2	75	47	18	30	17	19	<15
	90	69	28	44	27	28	19
	100	84	32	54	31	35	21
	125	129	42	83	38	53	28
3	100	47	21	30	21	19	<15
	125	72	29	46	27	30	19
	150	104	35	66	32	43	23
	200	187	48	120	42	77	30
4	150	74	24	47	22	30	<15
	175	100	31	64	29	41	20
	200	128	37	82	34	53	24
	250	198	40	127	35	81	25
5	150	52	22	33	21	21	<15
	200	92	31	59	29	38	19
	250	144	39	92	35	59	25
	300	206	44	132	39	84	33
6	200	72	25	46	24	30	15
	250	113	32	72	30	46	20
	300	16	40	104	36	66	26
	350	220	45	141	40	90	30

Symbols:

- L/S – Air volume in litres per second
- Pi – Total pressure in Pascal
- Th – Throw in Meters
- NC –Noise Criteria

Conditions:

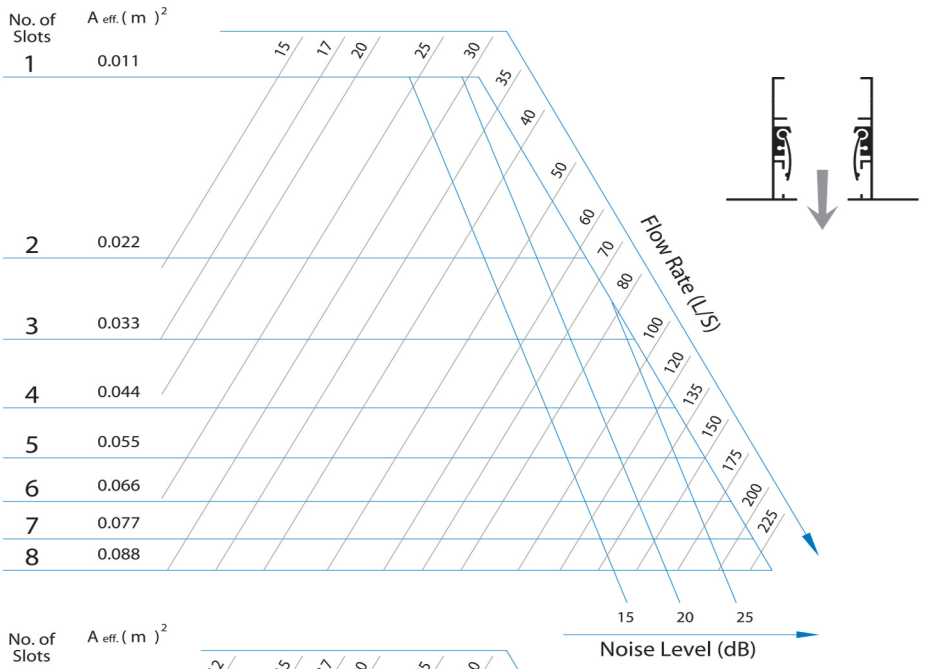
- Return
- Noise Criteria values are based on (10 db) room attenuation
- Damper is fully open.
- Maximum room height 4.0m.

LINEAR SLOT DIFFUSER

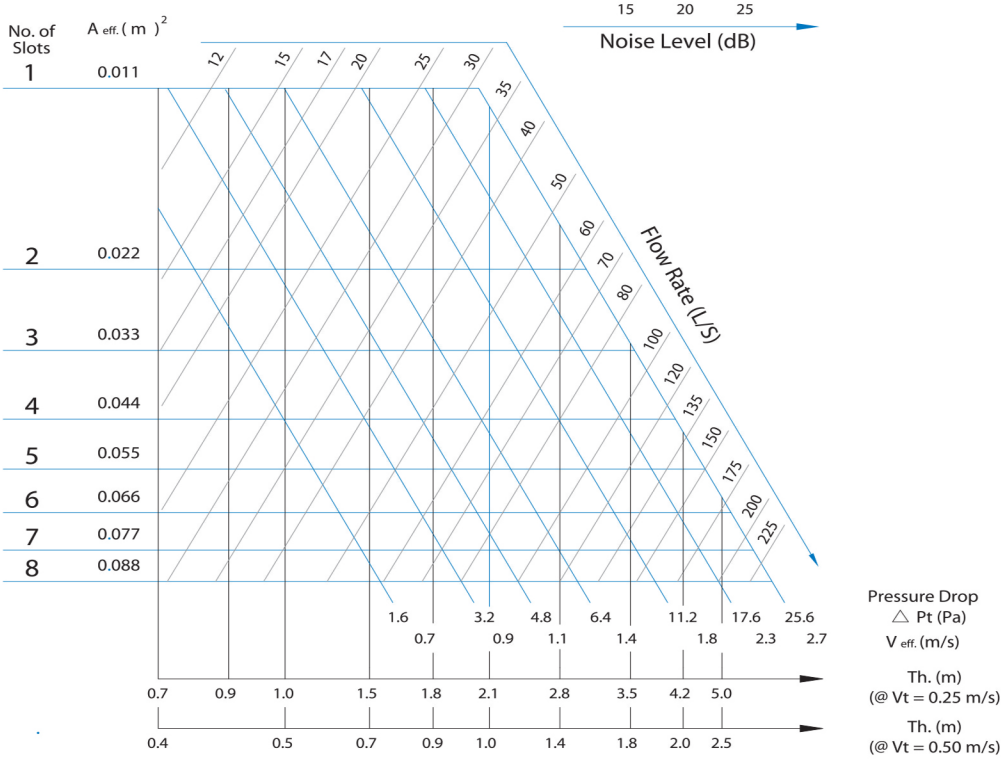
Vertical Discharge

Slot Opening/ Width = 16mm

Correction table for other Lengths:		
Length m()	Noise Level	Throw (m)
1.0	0	x1.00
1.5	+2	x1.05
2.0 2.5 3.0 4.0 5.0	+3 +4 +5 +6 +7	x1.10
6.0 8.0 10.0	+8 +9 +10	x1.15



Correction table for Return/Extract Applications:	
V eff.(m/s)	x0.45
Pt(Pa)	x0.65
NC	-10



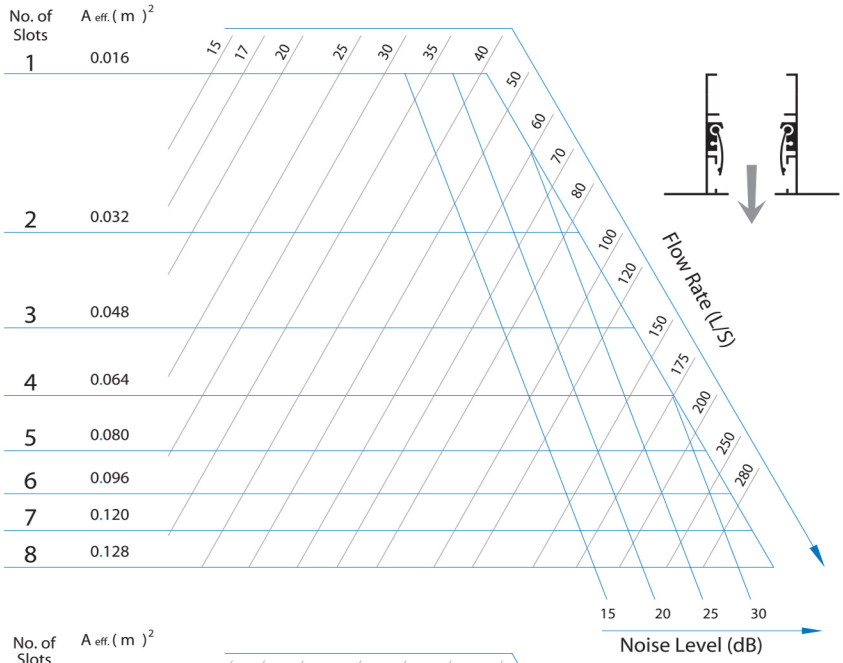
- Performances are based on a length of one metre and with no wall effect.
- Hit - Miss Damper at full open position.
- For Return/Extract Applications select performance data using above charts and correction table after ignoring throw values.
- Noise Level values are based on 10 dB room attenuation

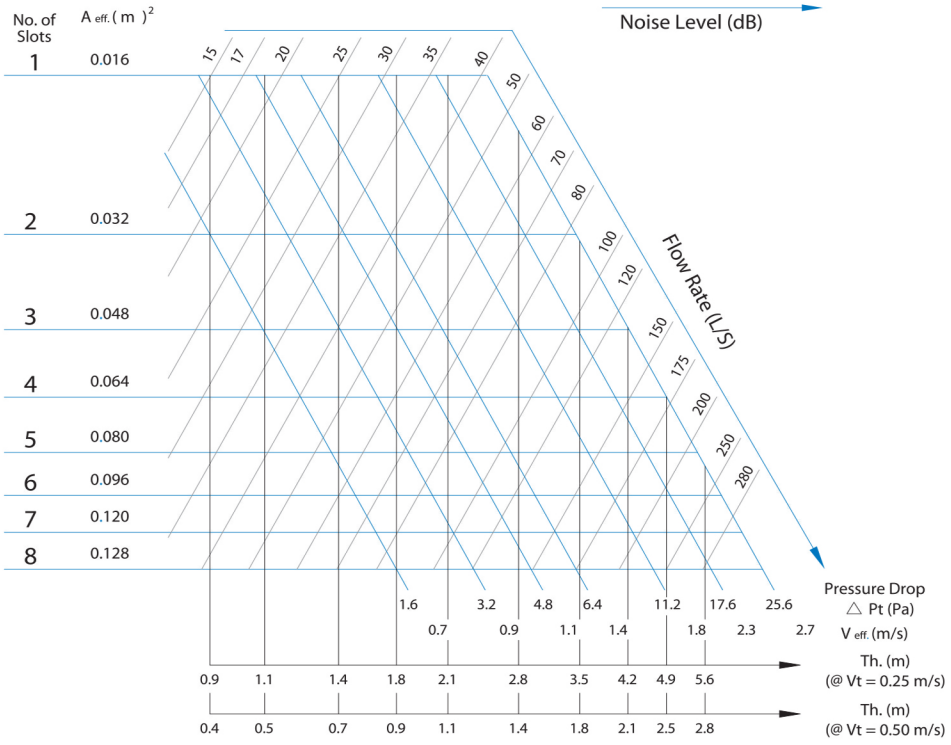
LINEAR SLOT DIFFUSER

Vertical Discharge

Slot Opening/ Width = 20 mm

Correction table for other Lengths:		
Length (m)	Noise Level	Throw (m)
1.0	0	x1.00
1.5	+2	x1.05
2.0 2.5 3.0 4.0 5.0	+3 +4 +5 +6 +7	x1.10
6.0 8.0 10.0	+8 +9 +10	x1.15





Correction table for Return/Extract Applications:	
V eff.(m/s)	x0.45
Pt(Pa)	x0.65
NC	-10

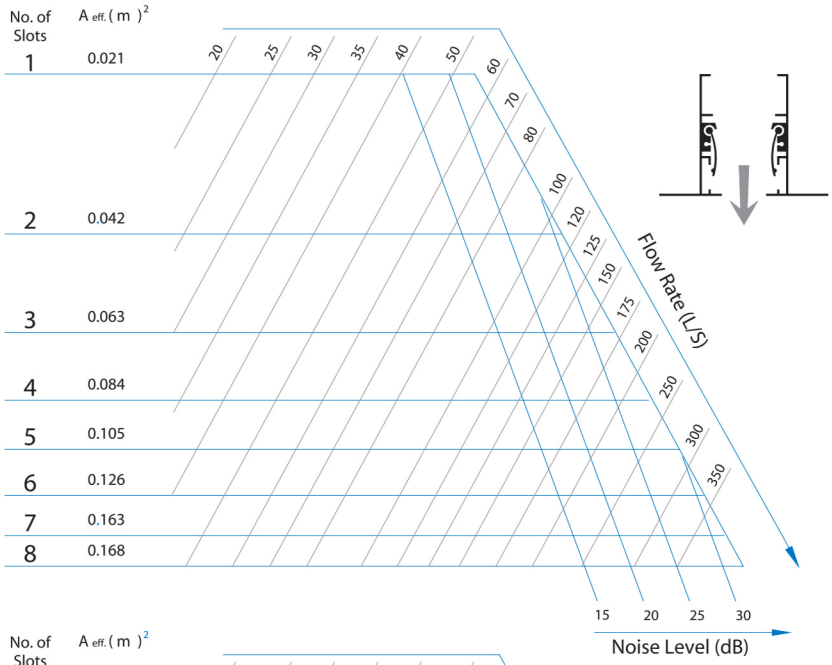
- Performances are based on a length of one metre and with no wall effect.
- Hit - Miss Damper at full open position.
- For Return/Extract Applications select performance data using above charts and correction table after ignoring throw values.
- Noise Level values are based on 10 dB room attenuation

LINEAR SLOT DIFFUSER

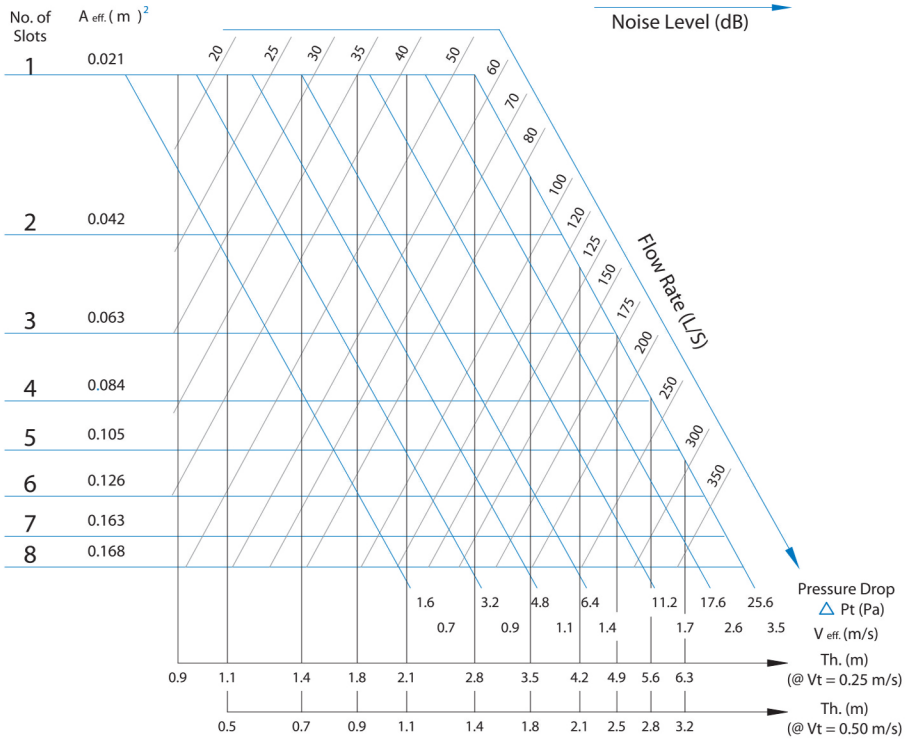
Vertical Discharge

Slot Opening/ Width = 25mm

Correction table for other Lengths:		
Length (m)	Noise Level	Throw (m)
1.0	0	x1.00
1.5	+2	x1.05
2.0 2.5 3.0 4.0 5.0	+3 +4 +5 +6 +7	x1.10
6.0 8.0 10.0	+8 +9 +10	x1.15



Correction table for Return/Extract Applications:	
V eff.(m/s)	x0.45
Pt(Pa)	x0.65
NC	-10



- Performances are based on a length of one metre and with no wall effect.
- Hit - Miss Damper at full open position.
- For Return/Extract Applications select performance data using above charts and correction table after ignoring throw values.
- Noise Level values are based on 10 dB room attenuation

A Member of AADTRA Group
AIRPRO INDUSTRIES LLC

Tel: +971 4 340 8535

Sector No. 6 Plot No.12, P.O Box. 2890
Umm Al Quwain, United Arab Emirates
Email: info@airprome.com
www.airprome.com