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technology
in
air control



The Company

We made a humble beginning in the year 1995 under the brand name of "Air Products" and ever since have promptly catered to the needs of the market, offering excellent quality backed up by efficient after sales service. Since its inception, we have continuously strived for providing the best in the industry with timely completion of orders and have introduced innovative products from time to time.

To cater to the Gujarat region, a separate manufacturing unit was established at Baroda in 1999 under the brand name of "Dynamic Engineers".

In the year 2002, we acquired "George Rao & Co.", a name synonymous with quality, durability and patented products. This company also has more than 25 years experience in engineering and execution of large air conditioning and refrigeration projects.

We have now signed a joint MOU with 'S.W. Hart & Co.' - Australia as a partner for technical support and manufacture of new range of products. The National Association of Testing Authorities (NATA), Australia, have tested and certified many of the products for performance. This authenticates all the performance parameters furnished by us.

The group now looks forward to establish benchmark standards in the industry in terms of quality and development.

The air distribution products have two distinct user functions viz :

1. Ergonomics and Aesthetics
2. Energy Efficiency

Our expertise in both these fields are extended to architects, interior designers and air-conditioning consultants. We strongly believe that our services should not be limited to only supplying quality products. Our relation with the client starts from the very first contact, whether a casual consultation or a large order. At the concept stage of a new project, the inputs on critical parameters like air velocity, control of air volume, static pressure on fan, air distribution, throw, noise level etc. are given to the user to select product design best suitable for the application. This ensures cost savings and reduces the margin of error in the later stages of the project. Our philosophy is to provide total solutions to satisfy your needs. Our product design capabilities and manufacturing facilities have been put to use by the consultants to supply unique products tailor-made to suit the specific requirements of the customer. This has helped us to expand our product range continuously.

Presented in this catalogue is our current range of products. Due to our continuous ongoing development process some of the products may not appear on the list. We shall gladly provide you with all such information personally on request.

The technical data and design parameters can be provided as per your project requirements on request.



Welcome to our World!

We are delighted to present our new and expanded range of products for the air-conditioning and the ventilation industry. The classic range of air terminal units under the brand name of "Air Products" is supplemented by a wide range of volume control dampers / fire dampers, air washers, filters and kitchen hoods, under the well-known brand name of "George Rao". We can now boast of having the most comprehensive range of air distribution products under one roof.

Our aim is to be a market leader in development, manufacture and distribution of quality air distribution products backed by top-class service.





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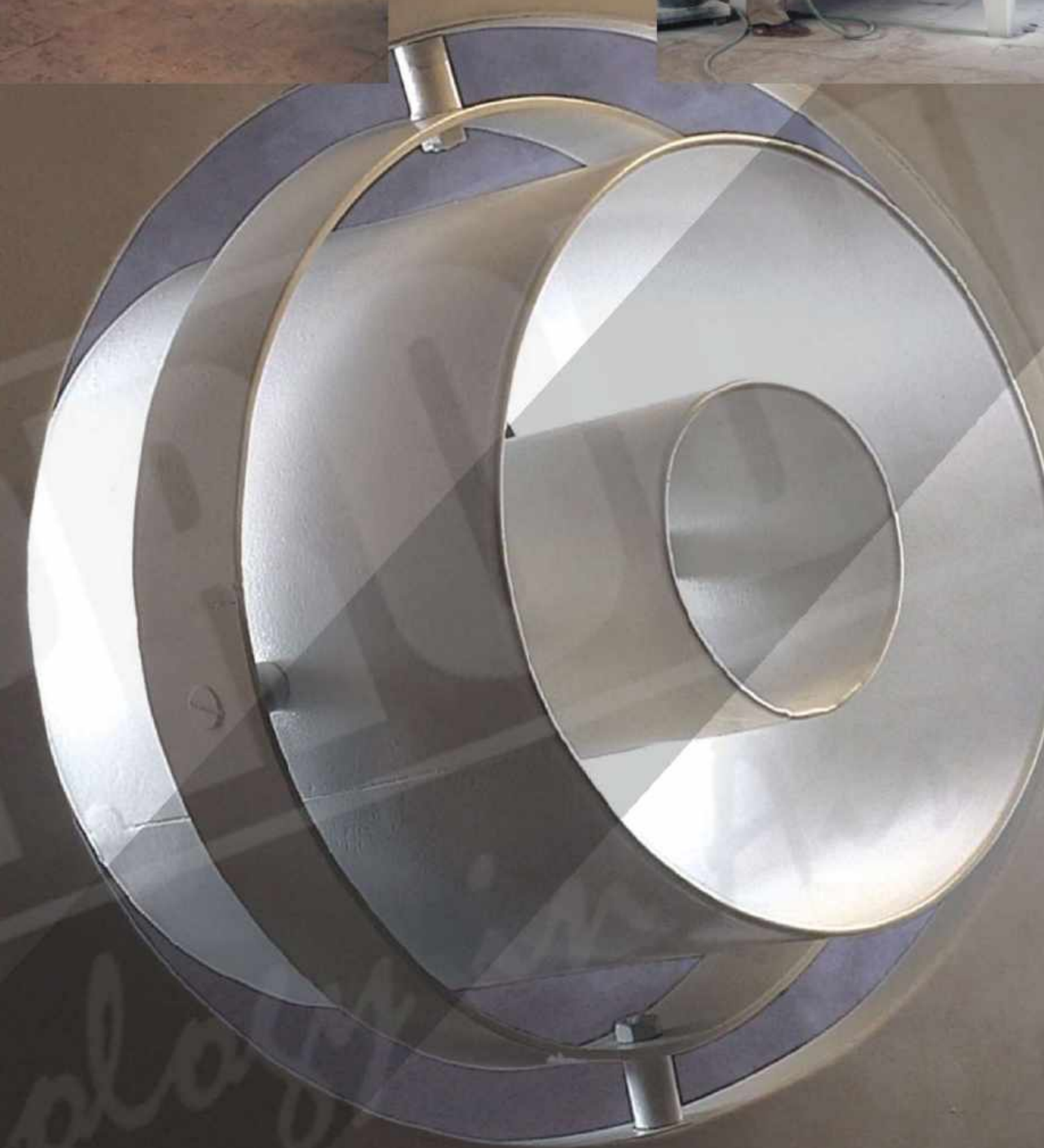
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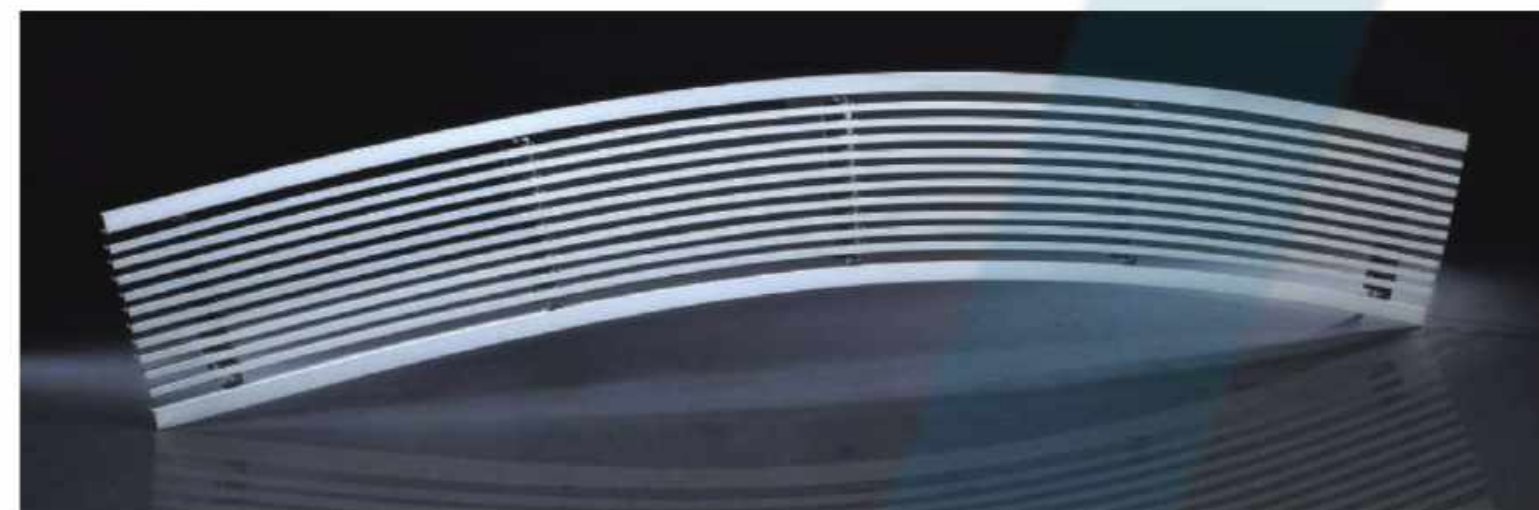
LINEAR BAR GRILLES

Linear Bar Grilles are available in extruded Aluminium construction suitable for sidewall or ceiling applications. Full-length sections to suit the site requirement provides a uniform look, with near perfect alignment between sections. Mitred Corners are optional features. Flanges shall be provided as per requirement. Colour to match the interiors / architect's requirements are available. Louvres are available as an option for proper flow pattern control, as per the details mentioned elsewhere in this catalogue. Custom-made designs can be worked out as per specific project's requirement.



Single Direction

Deflection 0/15/30/45deg.
Model no. AP01 / LBG - 1



Two Way

Deflection 0/15/30/45deg Combination of any two.
Model no. AP01 / LBG - 2



Curved

Deflection 0/15 deg for sidewall mounting.
Deflection 0/15/30deg for ceiling mounting.

Model no. AP01 / LBG - 3..... (C or S ceiling or sidewall)

Removable Core

Deflection 0/15/30/45 deg or PF perforated panel
Model no. AP01 / LBG 4



Removable Bars

Deflection 0/15/30 deg

Model no. AP01 / LBG - 5

ADJUSTABLE DEFLECTORS

Adjustable Deflectors are available in Aluminium, M.S., S.S. construction mainly used for sidewall applications. The individual blades are adjustable for any angle and are aerofoil in shape for lesser pressure drop. Colour to match the interiors / as per the architect's requirements are available. Damper fitted directly on to the deflector is an optional item.



Single Deflection

Horizontal / Vertical deflectors are available.
Model no. AP02 / AD - 1(V - vertical or H - horizontal) 1

Double Deflection

Position of horizontal deflectors can be specified at the back or front.
Horizontal deflectors in front - HF
Horizontal deflectors at back - HB

Model no. AP02 / AD - 2(HF or HB)

Also separate frame is available for mounting on flange face so that no screws are visible from front side.



Removable Core

Available in both single or double deflection option.

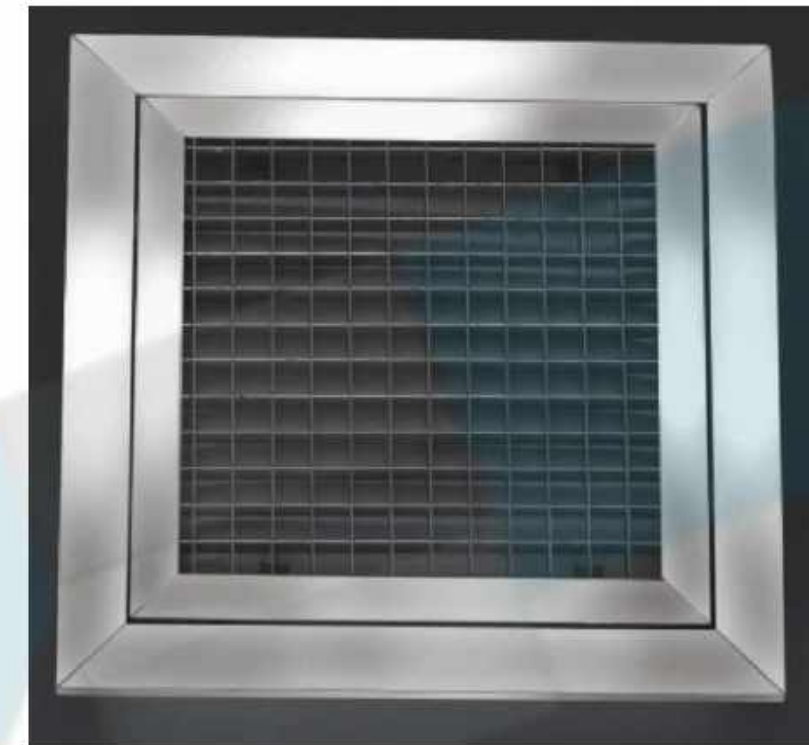
Model no. AP02 / AD - 3

EGG CRATE GRILLES

Egg Crate Grilles are available in aluminium construction and are extensively used in lobbies and rest rooms. They are also used in ventilation application. Grilles are provided with removable core as a standard feature to facilitate easy cleaning. Volume control damper can be optional.



Model no. AP03 / ECG - I



FILTER GRILLES

Filter Grilles are available in extruded aluminium construction and are extensively used in clean room applications. These are also used as return air grilles in Fan coil units. The filter can be easily removed for cleaning. The front panel is available in fixed bar grilles or perforated sheet. Volume control damper is not provided.



Model no. AP04 / FG - I

DOOR TRANSFER GRILLES

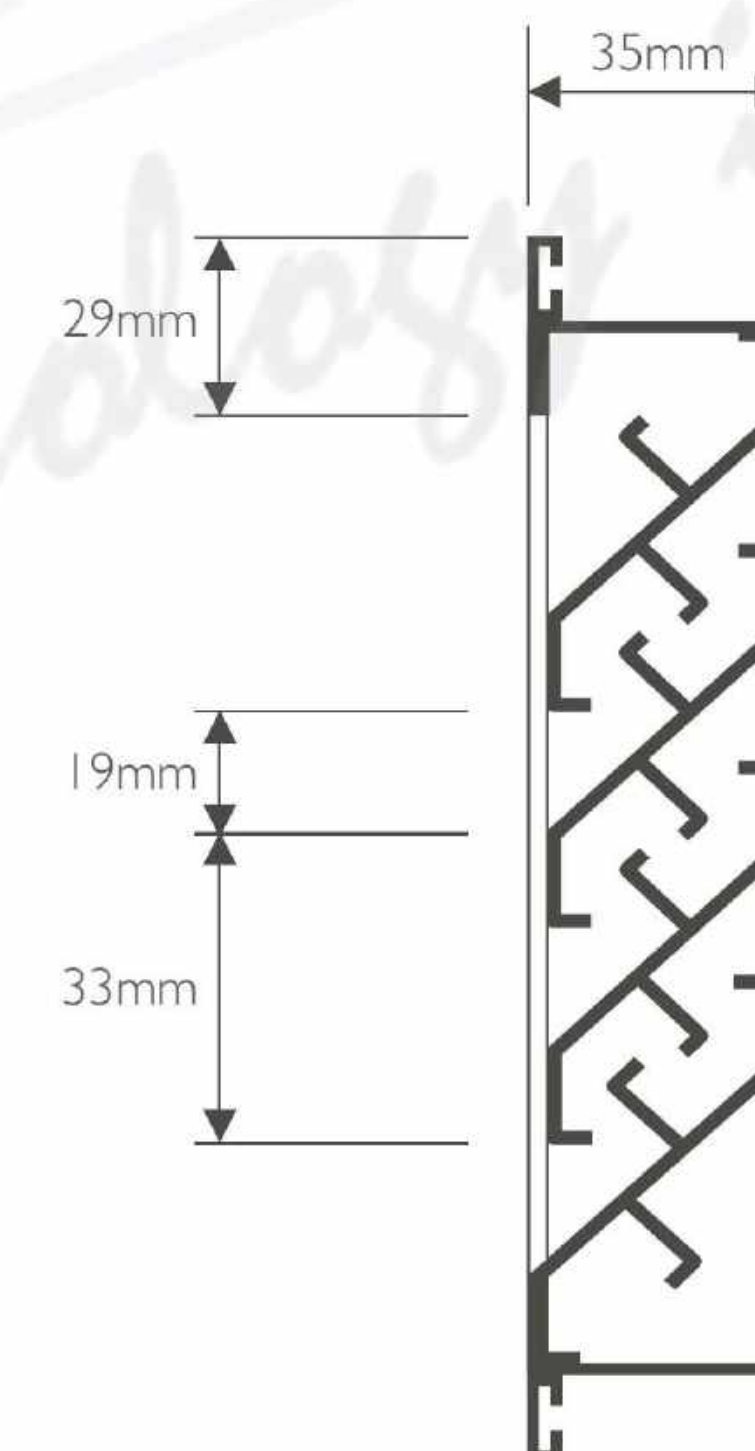
Door Transfer Grilles are available in aluminium construction and are extensively used in places where air is to be transferred from one space to the other. It is also used in rest rooms. Available with double frame for finished look on both sides of the door.



Door Transfer Grille Standard

Available in various colours.

Model no. AP05 / DTG - I



Door Transfer Grille Light Proof

Special construction of the blades do not allow even light to pass from one area to the other. Particularly used for dark rooms and studios.

Model no. AP05 / DTG - 2

SECURITY GRILLES

Security Grilles provide reliable and quiet ventilating or conditioning air distribution through tamper and vandal proof perforated steel plates. These special grilles are secured by heavy gauge frames and mounting assemblies with built in security features. The construction is robust and can be customized for various applications. These are widely used in prison cells, currency note printing press, court house holding and transfer cells and hospital psychiatric wards.



Model no. AP06 / SG -I

FLOOR GRILLES

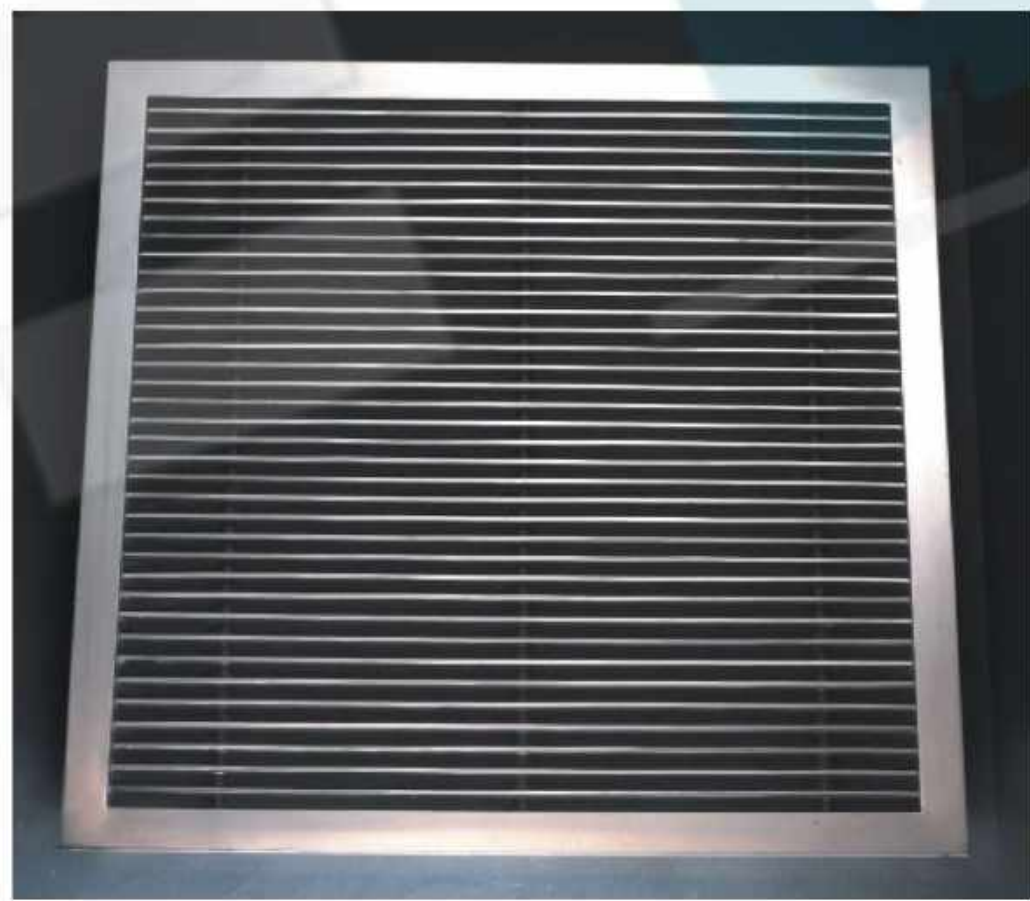
Floor Grilles are available in various materials of construction and are extensively used in server rooms with precision air conditioners. The damper can be easily operated without removing the grille.



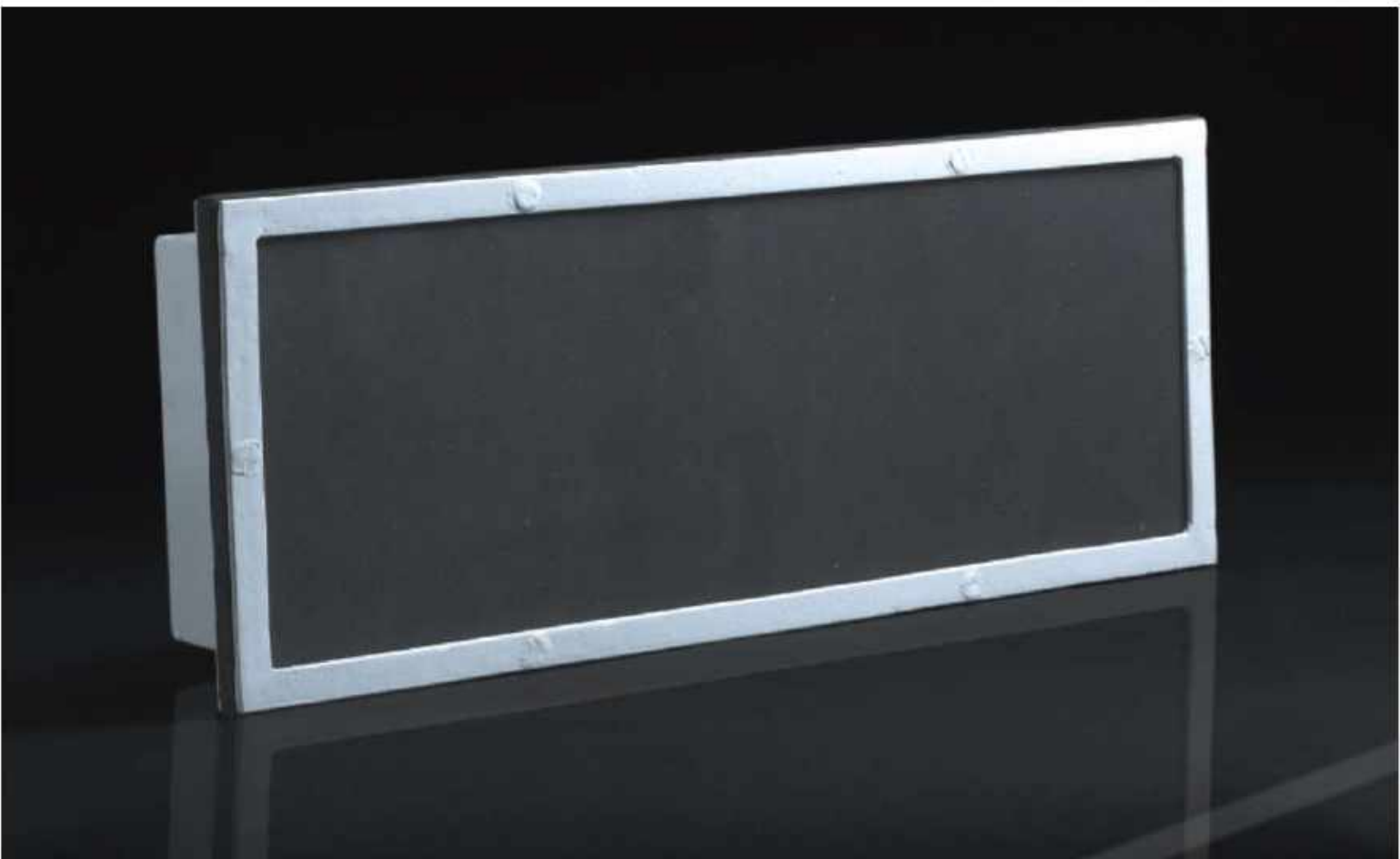
Extruded aluminium heavy duty frame and bar grilles on top.
Model no. AP07 / FG - 2



Extruded aluminium heavy duty frame and CRCA powder coated perforated sheet on top.
Model no. AP07 / FG -I



Entire SS construction.
Model no. AP07 / FG - 3



Cable shroud™

Cable Shroud is specially created for preventing air leakage around cables in precision a/c areas. These are specially designed as per the number of cables and are available in powder coated M.S. Construction.

Model no. AP07 / FG - 4

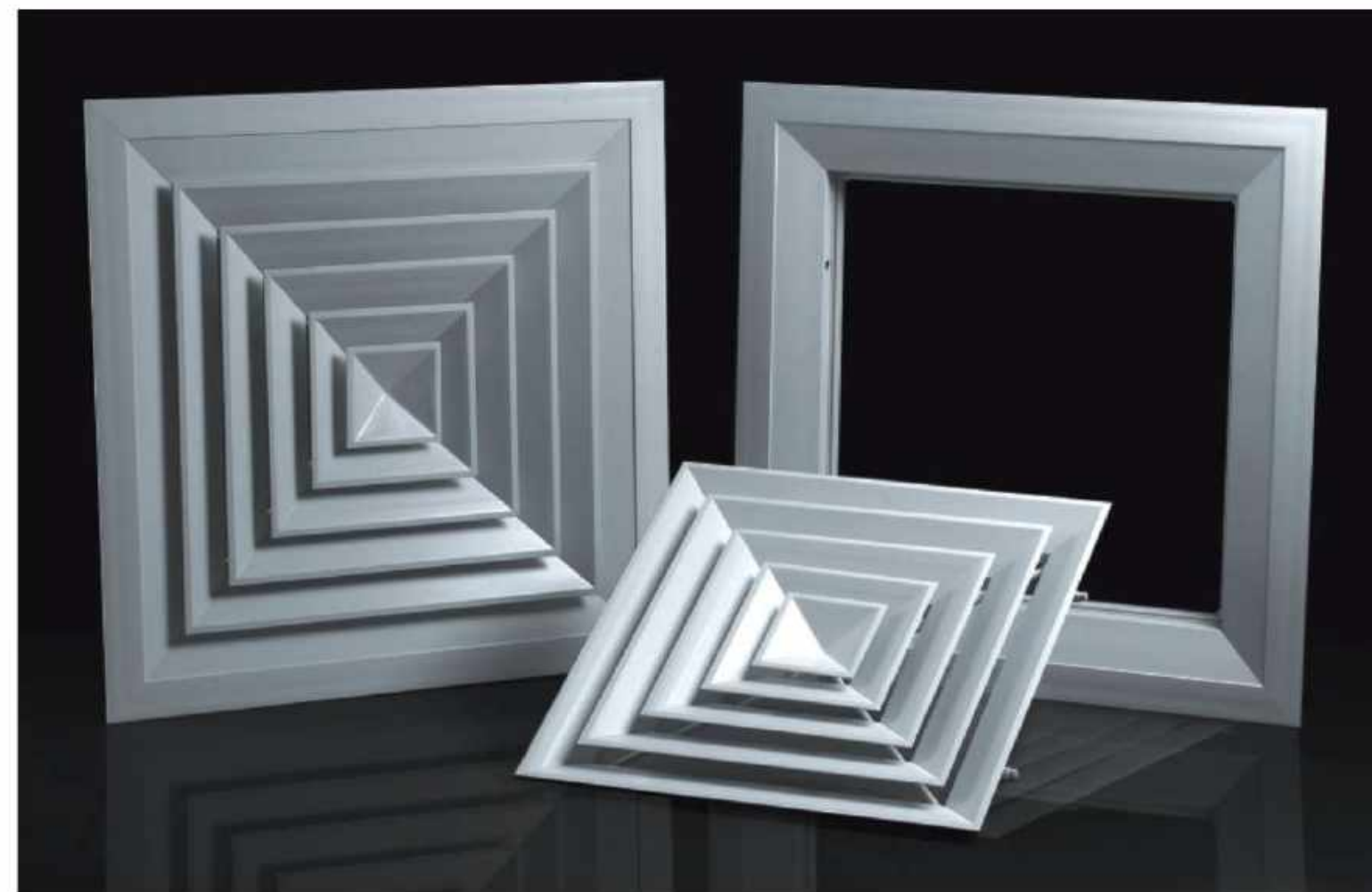
CEILING DIFFUSERS

Ceiling Diffusers are available in extruded Aluminium, M.S., S.S., Unitary construction ("One-piece") Aluminium, Extruded aluminium frame with imported ABS plastic cores, suitable for ceiling applications. Various options are available as under:

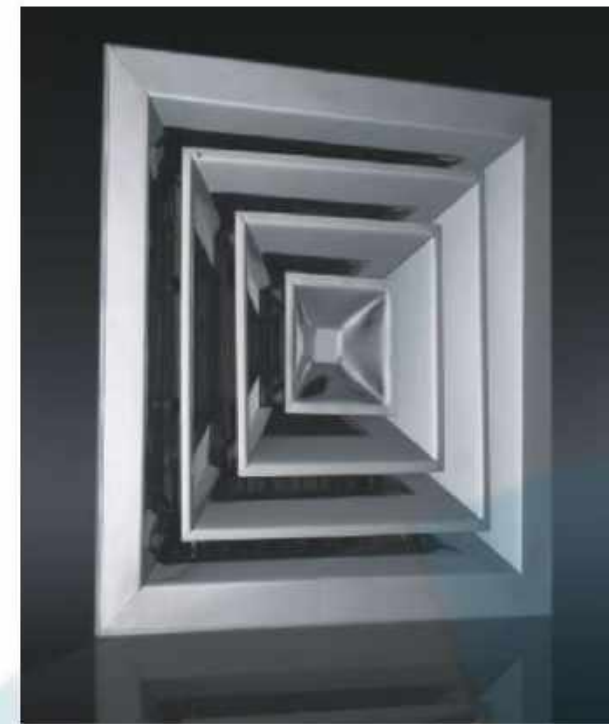


4-way distribution	4W	Rectangular shape	RE
3-way distribution	3W	Anti smudge	SM
2-way distribution	2W	Decorative Moulded ring	DR
Diagonal 2-way distribution	2DW	With	VCDS
1-way distribution	1W	Without	VCDE
Square shape	SQ	Removable core	RC
		Non removable core	NRC

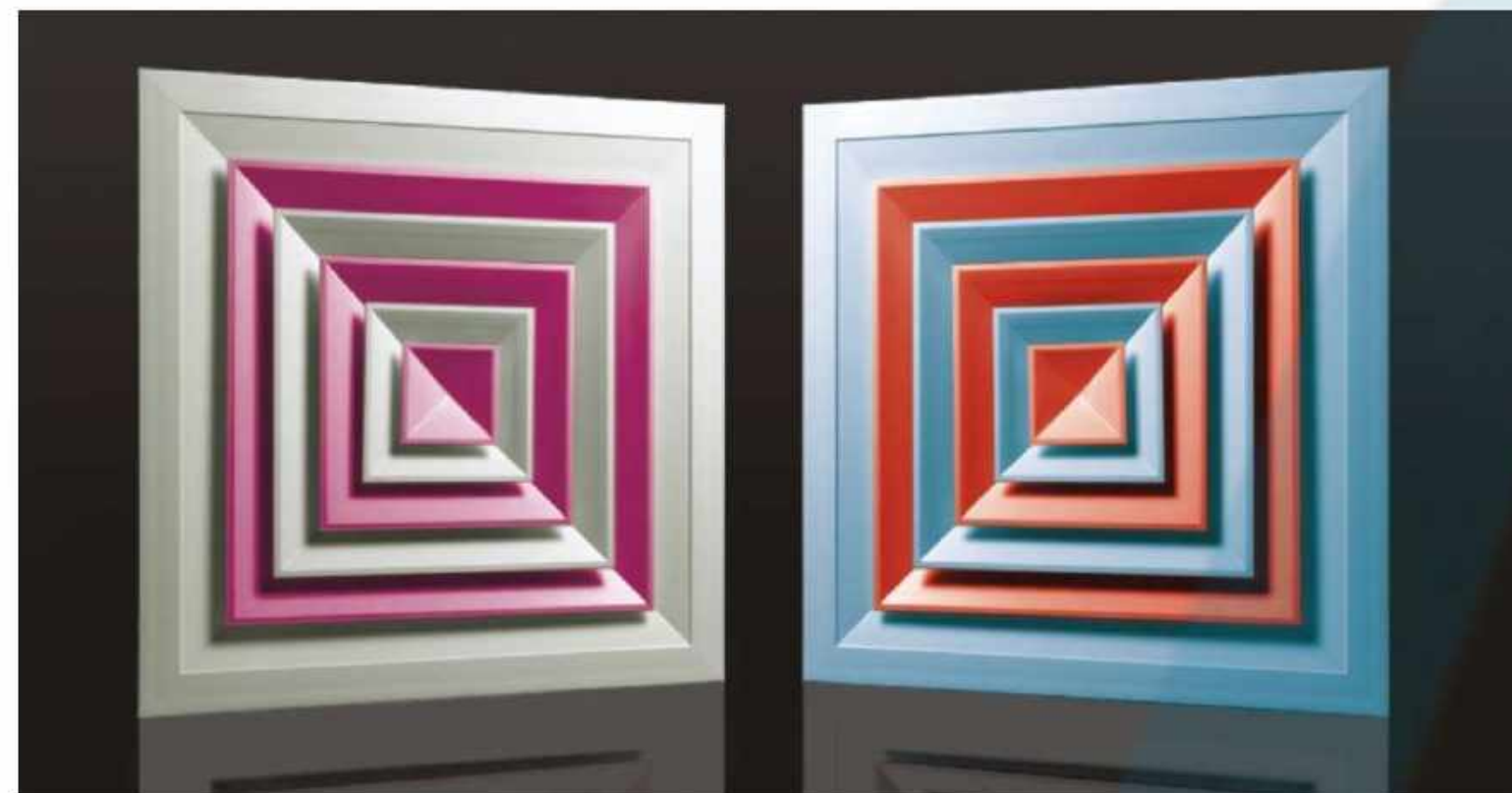
All diffusers are available with factory fitted pre-insulated plenum boxes with circular / rectangular connection, on order. These plenum boxes have a special suspension system, which does not put load on the false ceiling framework.



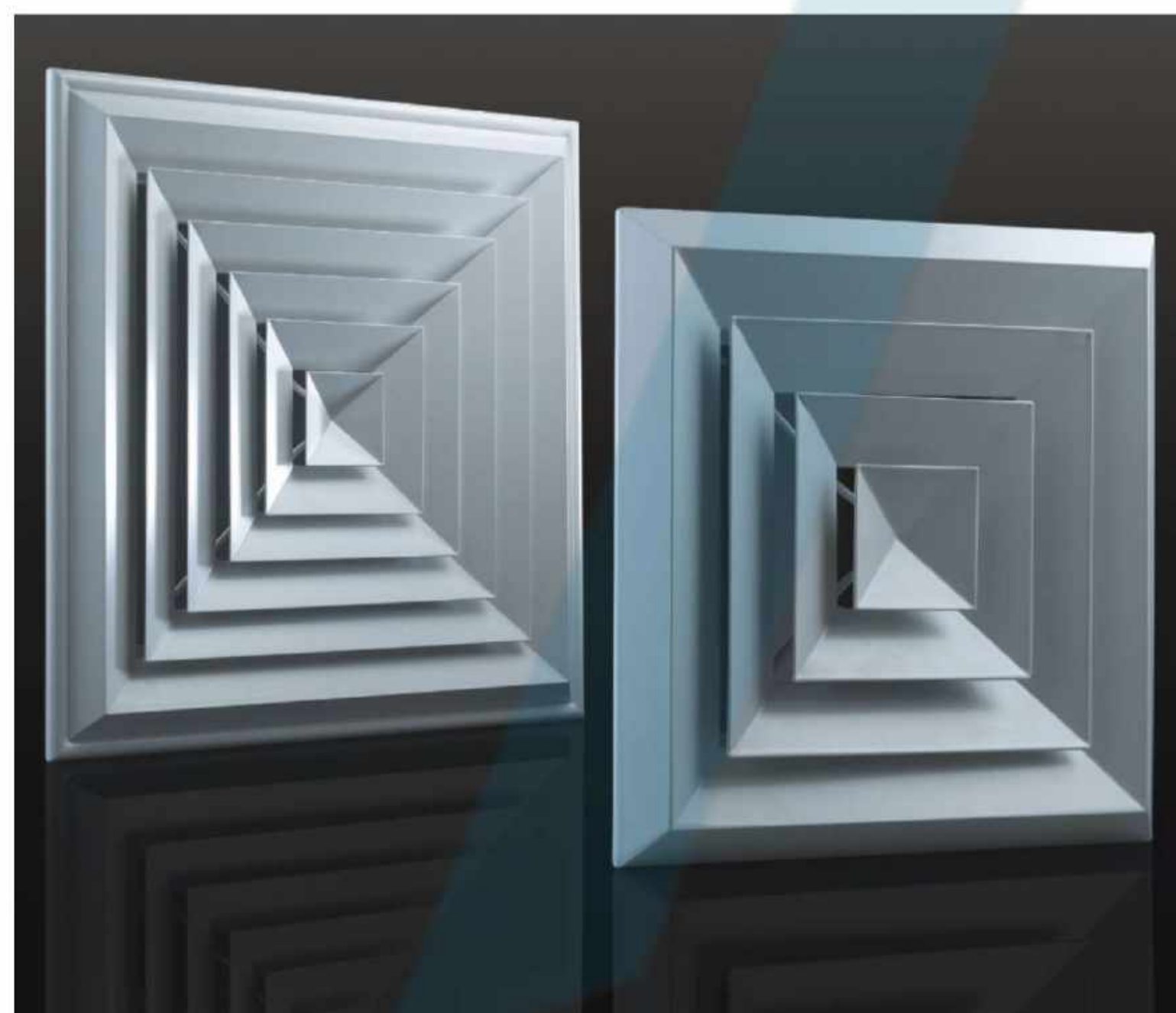
Standard Ceiling Diffusers



Extensively used in the industry for uniform diffusion of air, eliminating the problem of air draft as in grilles. Available in a variety of colours to suit the interior requirements. Can be available in Extruded aluminium (Al), M.S. (MS) or stainless steel construction (SS).



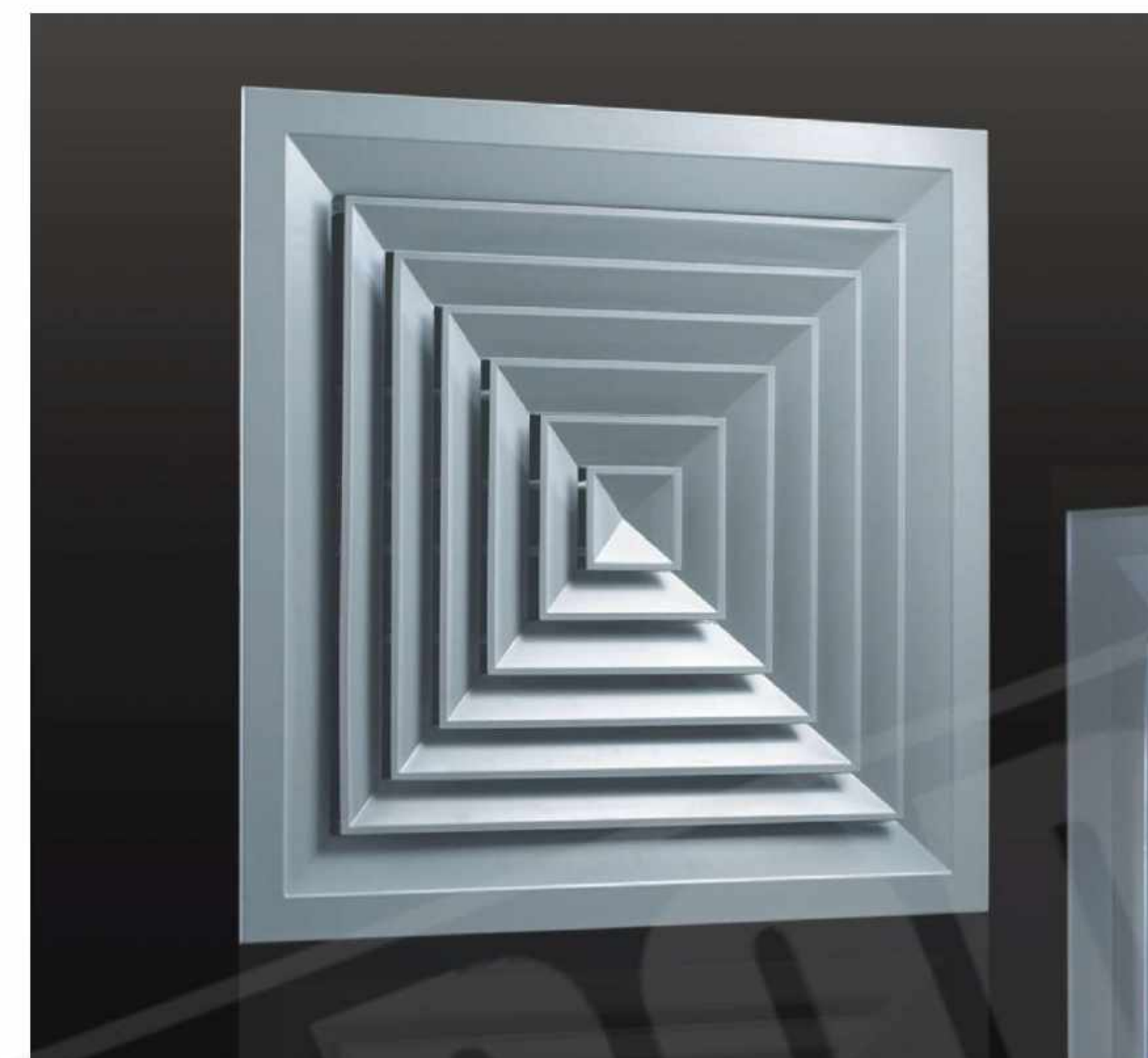
Model no. AP08 / CD - 1



Anti Smudge Ceiling Diffusers

Prevent the formation of black smudges due to dirt and smoke around the diffuser on the ceiling. Are available in Extruded aluminium (Al) construction only.

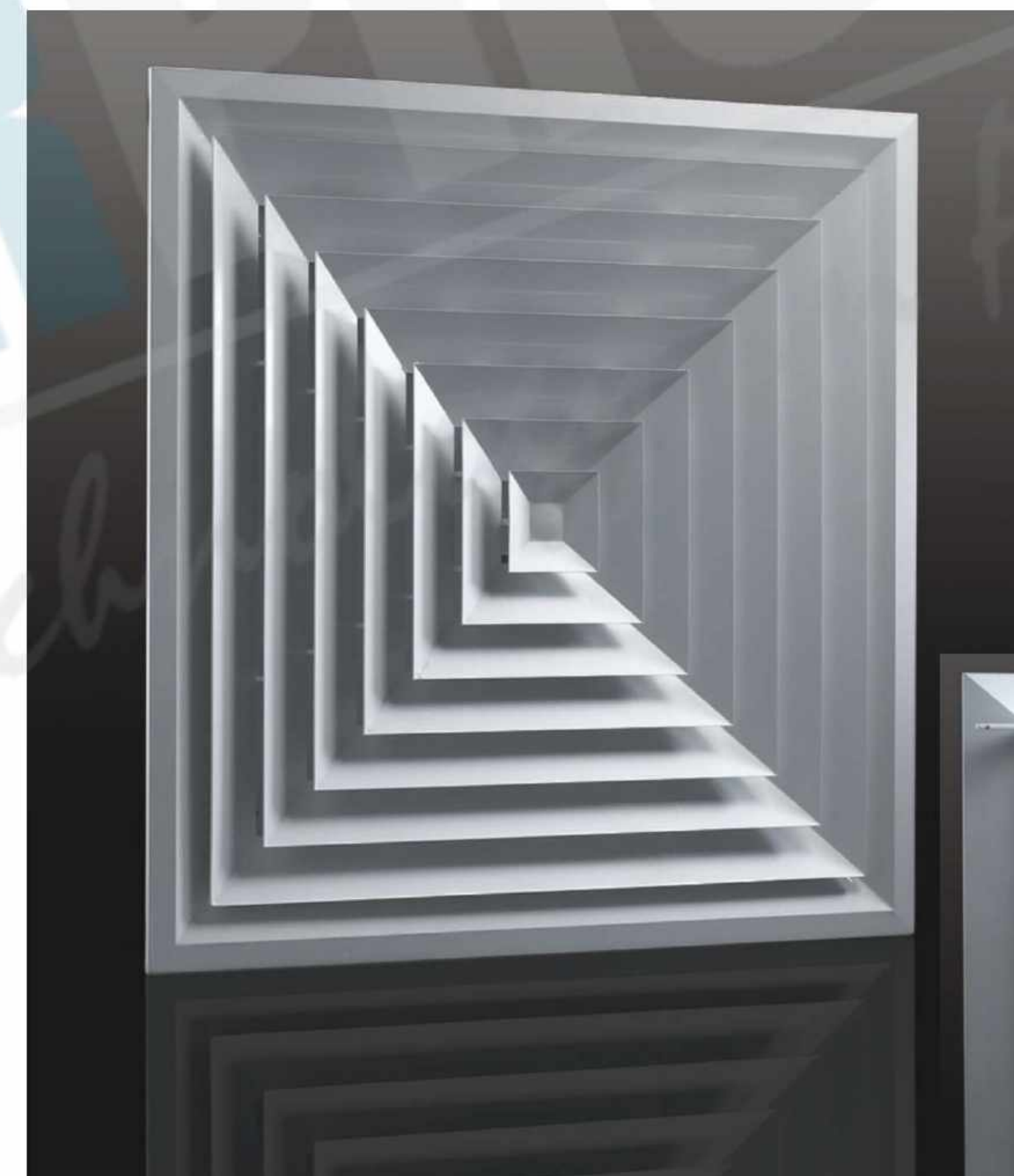
Model no. AP08 / CD - 2



Ceiling Diffusers-Unitary Construction

These are the new generation diffusers wherein the entire diffuser is manufactured from a single aluminium sheet eliminating all joint corners and ribs. Due to the monocoque construction, the problem of eddy current formation in the air path is eliminated. Available in square sizes upto 24 inches. Removable core is a standard.

Model no. AP08 / CD - 3



ABS Cores

These are the latest type of diffusers wherein the frame of the diffuser is manufactured from special extruded aluminium section. The central core is a single piece extremely light ABS core, which is imported from Australia. The ABS material is tested and certified as fire retardant by the Australian authorities. This diffuser is extremely light in comparison to the standard ones and the linearity in the edges obtained by virtue of the single piece casting is unmatched by others. The extremely low sound levels and space savings above the false ceiling obtained from specially designed low height plenum boxes are a treat for the user. Standard size available is 24" x 24" to suit modular ceilings with adapter plates available for reduced airflow. The friction offered to the airflow is extremely low. Other sizes are also available. Removable core is standard.

Model no. AP08 / CD - 4

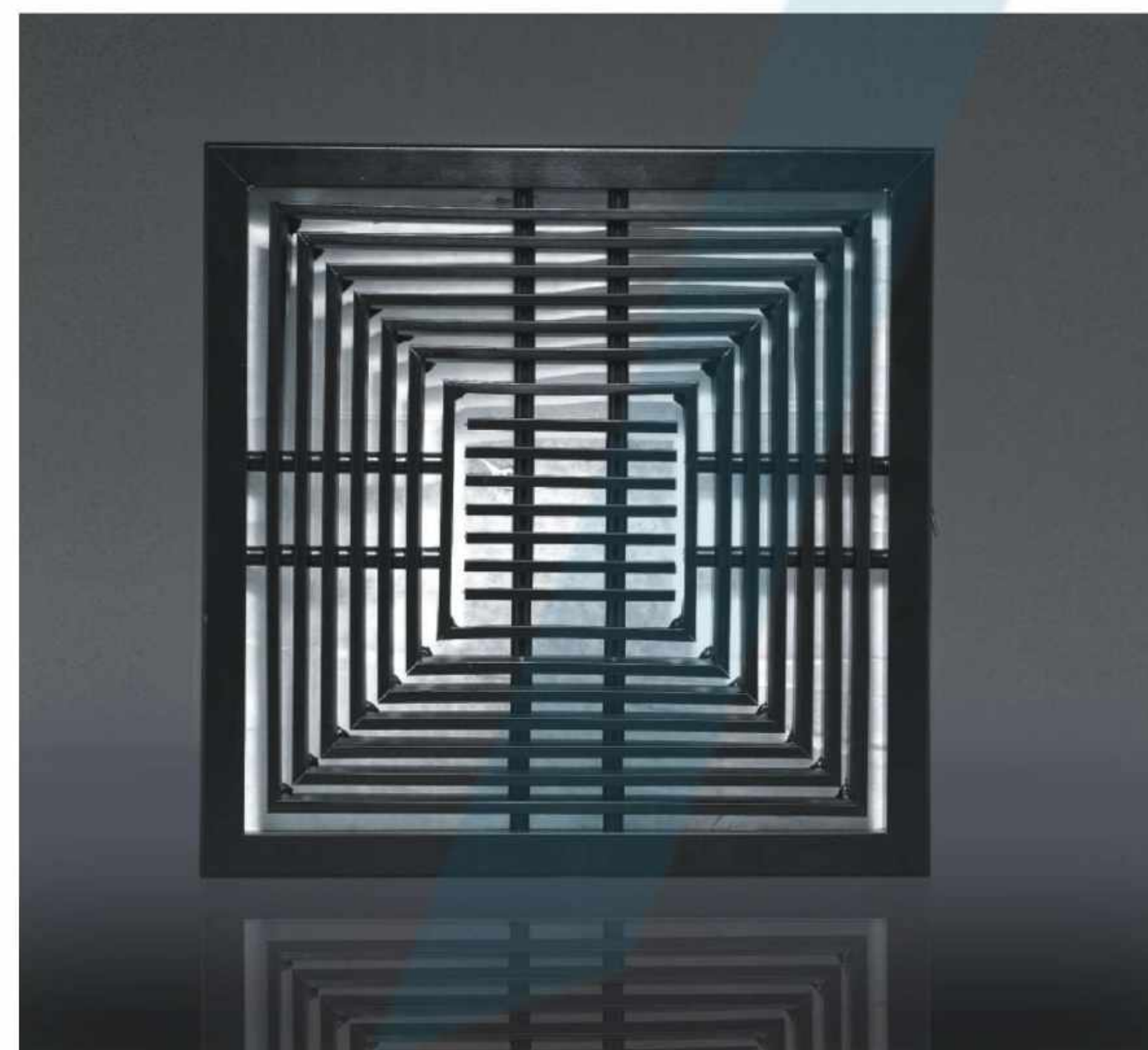
Ceiling Distributors



Combination Ceiling Distributor

This unique diffuser combines the throw of a grille along with diffusion properties. It is particularly useful in tapered ceilings with low heights at one end like theatres. It has a standard extruded aluminium outer core and a separate 4-way deflection fixed bar central core. A separate VCD is provided as option for the central core. Alternatively an entire core of bars fixed in extruded aluminium diffuser frame is also available (Model FX)

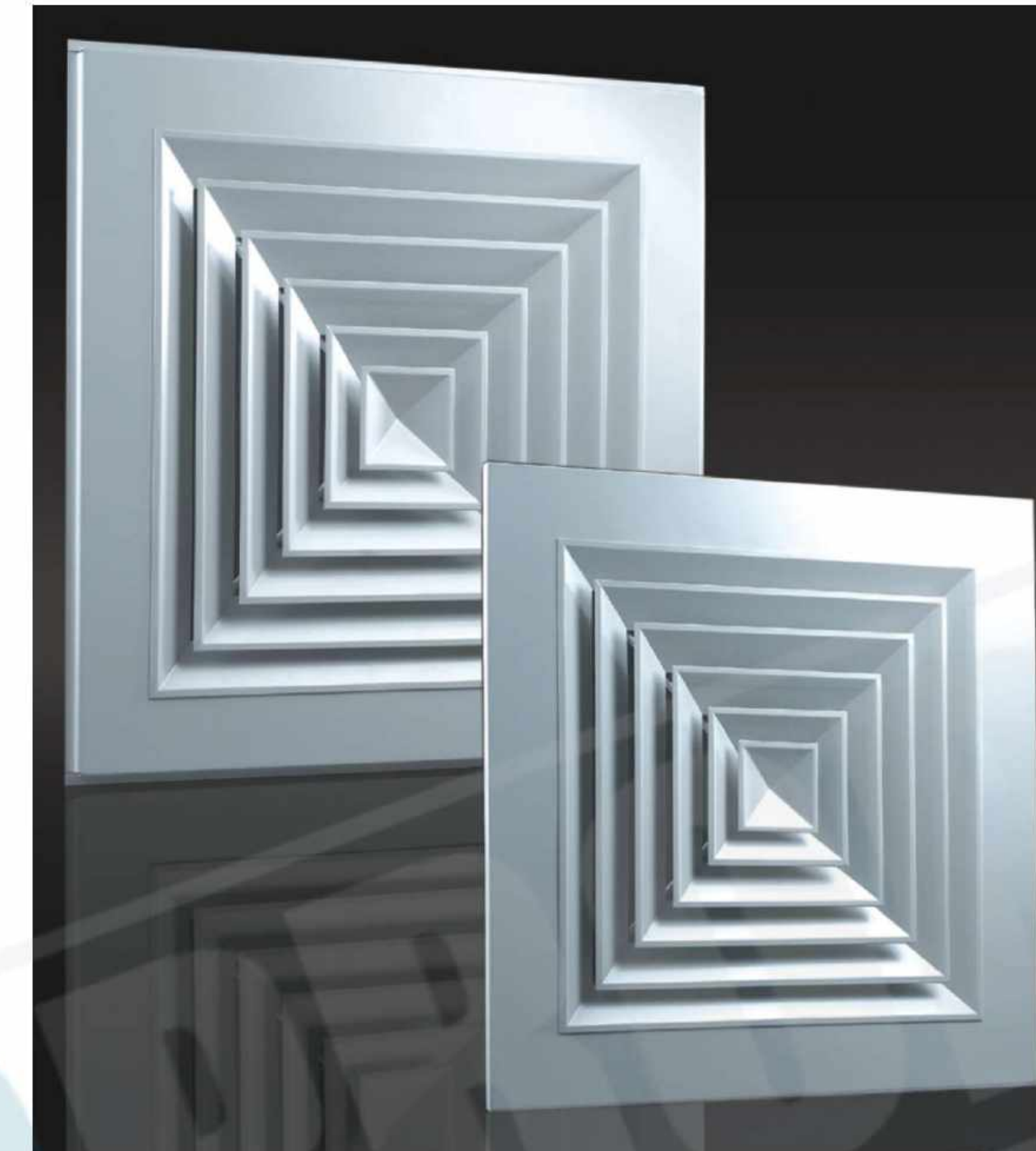
Model no. AP08 / CD - 5 /(FX - optional)



Pentaflow Ceiling Distributor

These distributors ensure flow in all possible directions in a small space and are used for direct fan discharge. Elevator manufacturers extensively use these for air distribution.

Model no. AP08 / CD - 6



Ceiling Diffusers- Modular Ceiling

With the advent of modular ceilings, the conventional diffuser looks out of place with alignment problems also coming to the fore. This has lead to the popularity of modular ceiling diffusers that are available in flush type (FL) as well as step down "teegular" type (TG). Neck sizes are available as per the airflow quantity.

Model no. AP08 / CD - 7(FL/TG)



Perforated Ceiling Diffuser

These are also used in modular ceilings, where architects prefer a clean and uniform look for the ceiling. The perforated face of the diffuser perfectly blends with the modular ceiling providing an uncluttered look. These come with specially designed aerofoil louvers for uniform air distribution in all directions. Also available without louvers for return air applications. Neck sizes are available as per the airflow quantity.

Model no. AP08 / CD - 8

Swirl Diffusers

The primary feature of this product is the discharge of air in a helical pattern resulting in a high induction ratio and a rapid consolidation of supply and room air temperature. The performance is absolutely draft free even for high air change rates. Typical applications are in industries and studio halls with high ceilings.

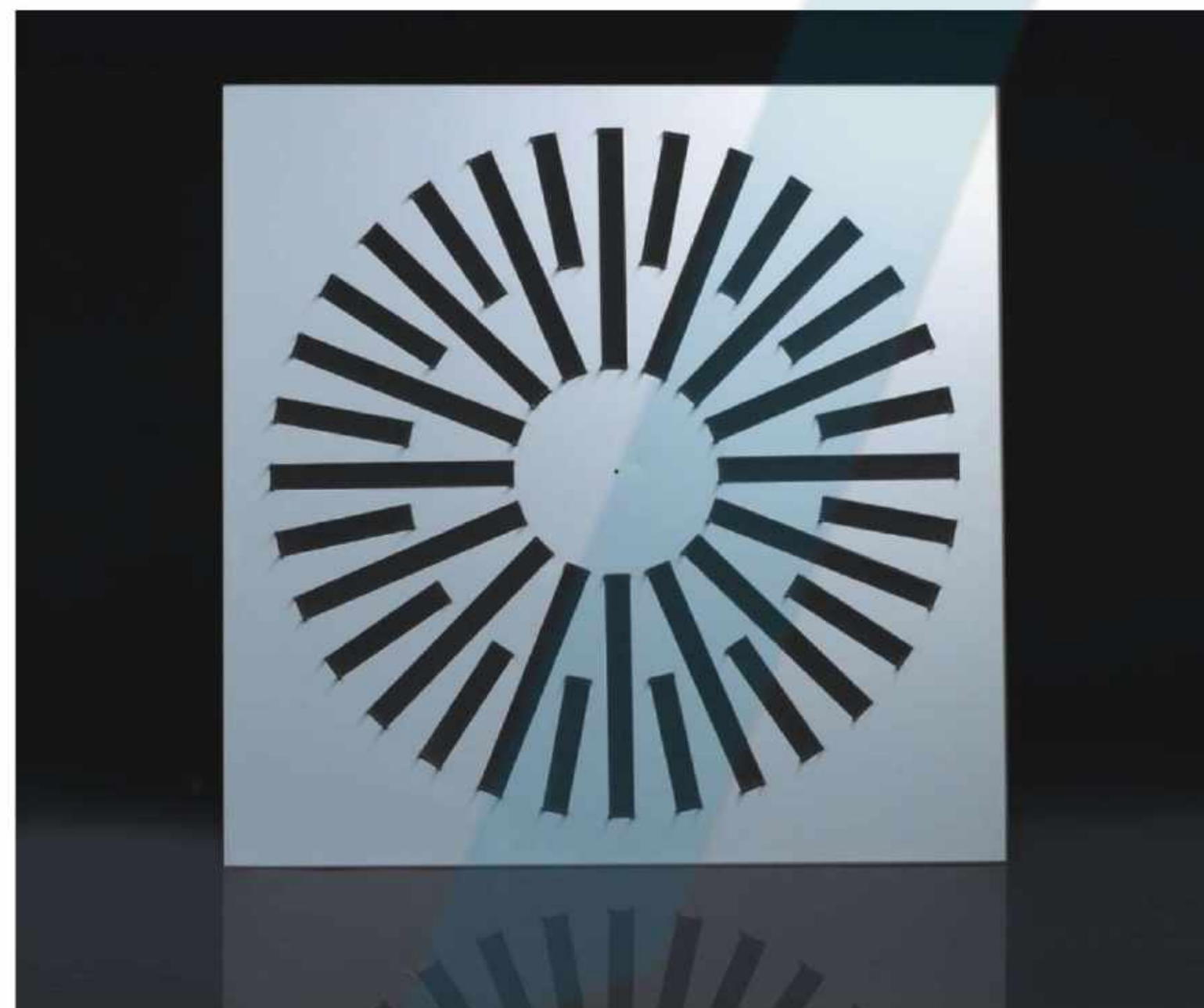


Four Way Swirl Diffuser



These are excellent for variable air flow applications. The louvers are individually adjustable from the front face and are used to regulate the air volume as well as the angle of discharge.

Model no. AP08 / CD - 9..... (C - Circular)



Helical Swirl Diffuser

These are used for modular ceilings. It has supply air apertures arranged in a radial pattern with acute angled deflectors for achieving a helical airflow pattern.

Model no. AP08 / CD - 10

Circular Diffusers

A modification of the standard square diffuser is preferred by many architects for the aesthetic looks and modern feel it lends to the ceiling.



Standard Round Diffuser

It is available with standard flush type or a decorative moulded outer ring. These are removable core with flap type or spiral dampers for volume control.

Model no. AP08 / CD - 11



Round Helical Diffuser

It combines the advantage of a helical swirl diffuser in a round diffuser. It generates a helical discharge of air creating a high induction ratio and rapid reduction in the temperature differential - providing better comfort conditions than a conventional diffuser. It is provided with special factory fabricated plenum boxes for direct connection to the ductwork through a flexible duct. Special cleats are used for supporting the assembly, to avoid load on the false ceiling grid. The vanes on the front face are fixed or can be made adjustable (specify M for motorized option) for controlling the airflow volume as well as direction by means of an electrical actuator. The actuator receives signal from a controller, which can be fed with settings to suit individual requirements.

Model no. AP08 / CD - 12..... (M for motorized option)



Jet Diffuser

The jet diffuser is designed for applications involving long throw and large air quantities. The pressure drop is also low. It is ideal for use in high ceiling industrial units, exhibition and sport halls. It is available in a combination of 1, 2, 3 or 4 diffusers in a single panel to suit various air quantity requirements.

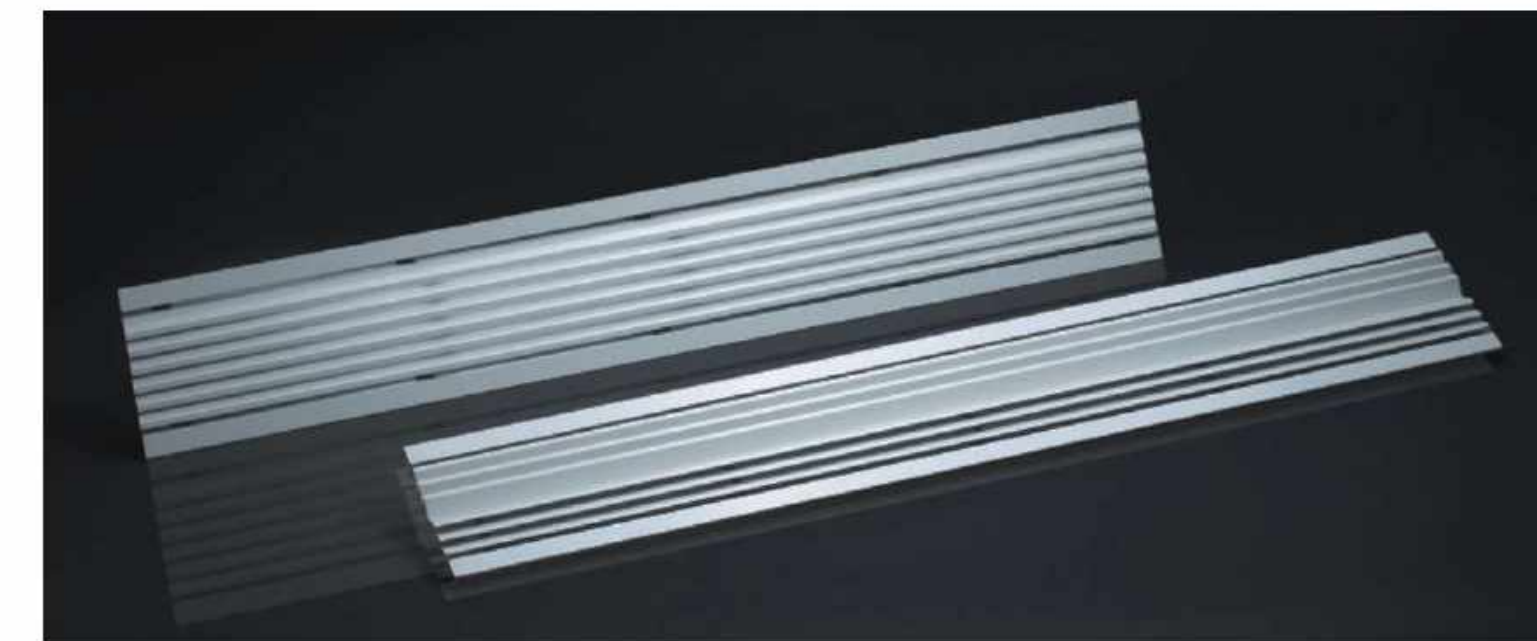
Model no. AP08 / CD - I3



Spot Diffuser

The spot diffuser is specifically used for spot cooling or cooling complex areas where normal air distribution products cannot be provided. Also called as "Eye Ball Diffuser", a rotation of almost 42 degrees in all directions. It has excellent acoustic and air diffusion qualities due to which it can be used for a throw of 10 feet to a maximum of 90 feet. It has a knob for controlling the airflow from the external face itself. Finds application in Kitchens, shopping malls, auditoriums.

Model no. AP08 / CD - I4



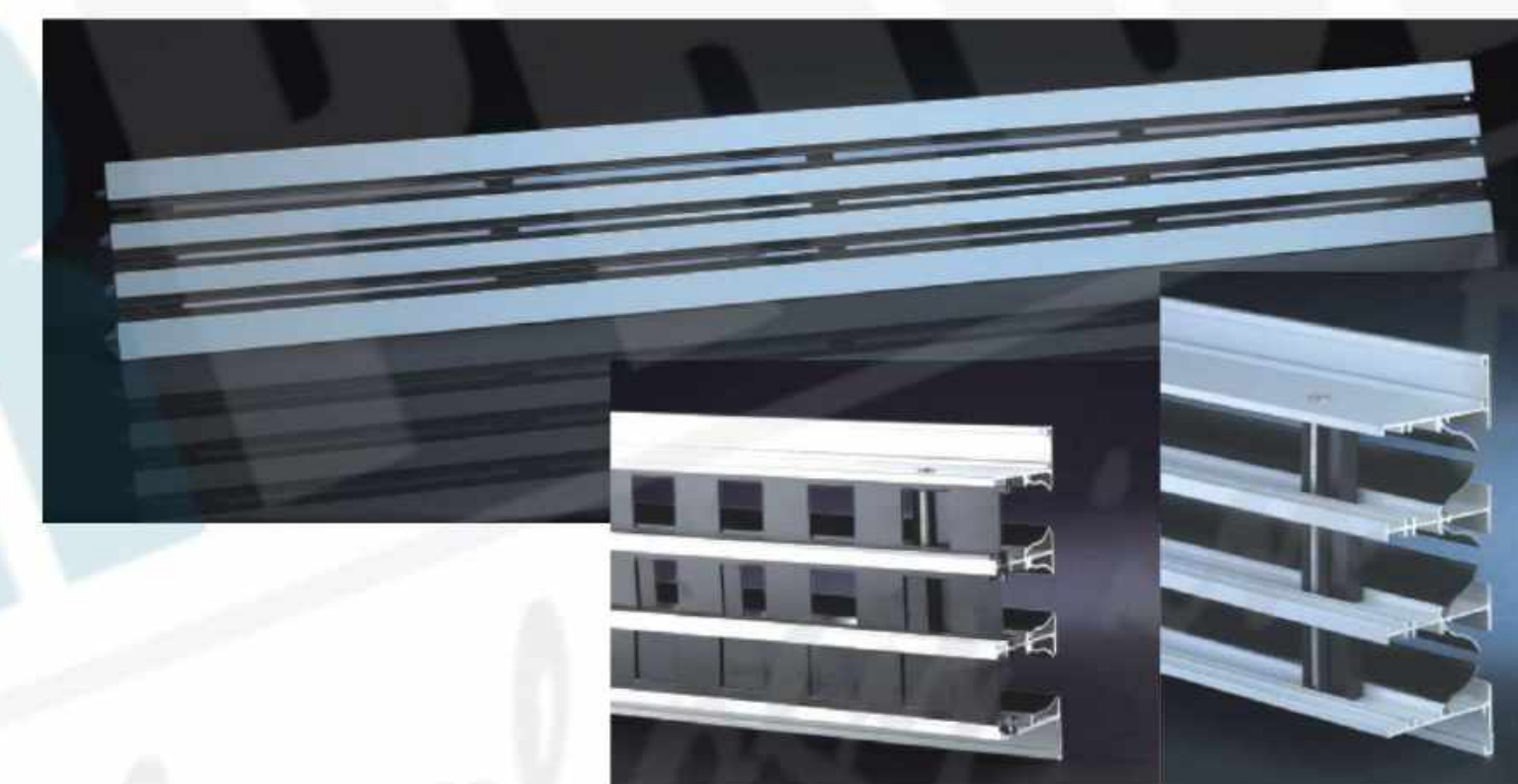
Linear Diffuser

These are used for diffusion of air instead of a linear bar grille thus giving a draft free distribution of air. Available in single way or two way pattern. Removable core is also available as an option.

Model no. AP08 / CD - I5

Slot Diffusers

Slot diffusers offer a smooth distribution of air and enhancing the ceiling appearance at the same time.



Standard Slot Diffusers

Available in various slot sizes and two directional air control vanes in each slot. Hit and Miss dampers are provided for controlling the airflow. Special suspension arrangement is available on demand.

Model no. AP08 / CD - I6



Slot Deflector Diffuser with Deflectrol

A totally new concept in slot diffusers whose performance is tested by laboratories in Australia. It imparts a clean look to the ceiling with extremely fast installation and less weight. Special Deflectrols with specially designed plenum boxes are provided for whisper silent performance. The deflectrol can be adjusted from the bottom face by means of a special gear to control the direction of air flow .

Model no. AP08 / CD - I7

Architectural Diffuser

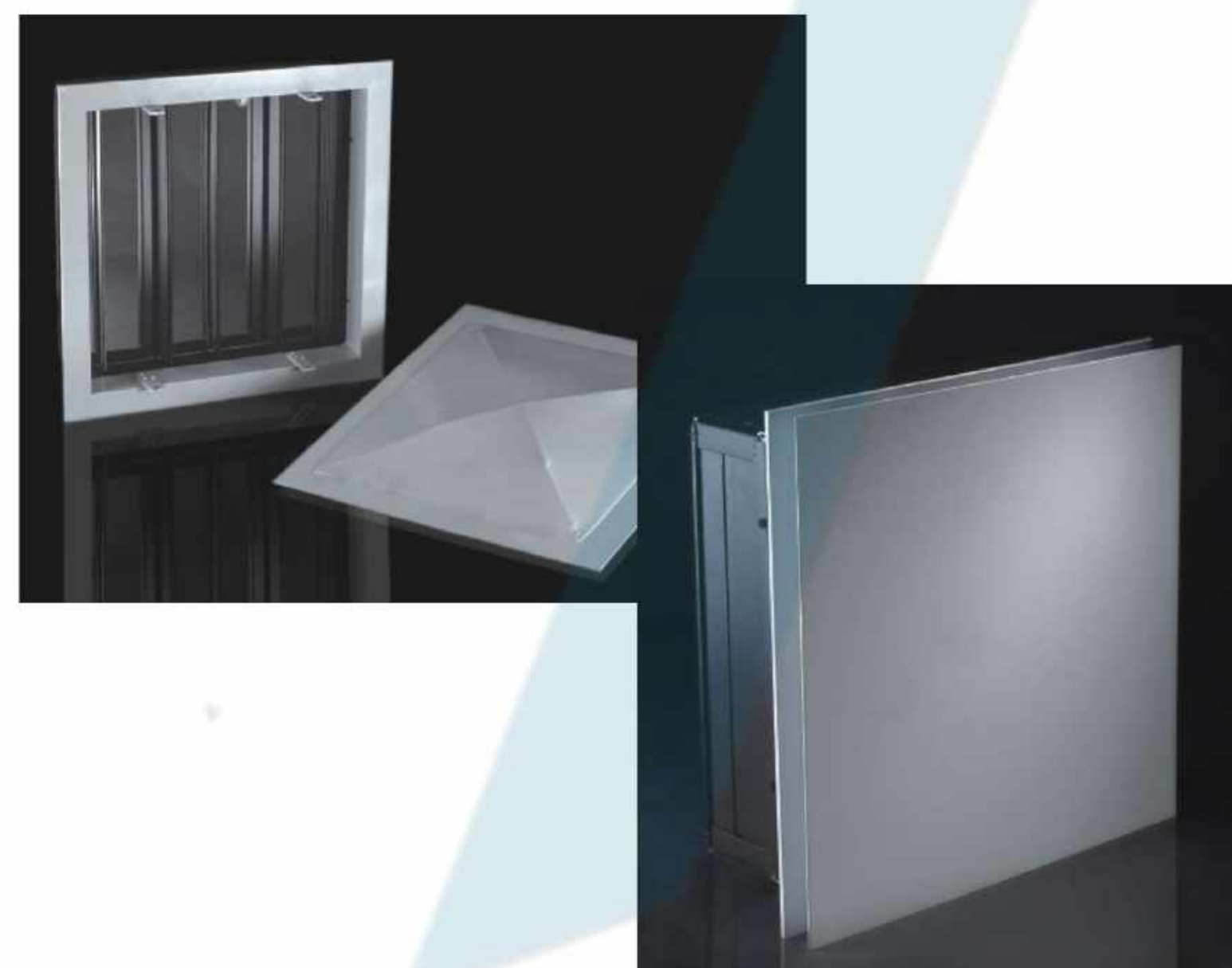
Architectural Diffusers are designed with the specific purpose of creating an amalgamation of architectural as well as engineering criteria. These create a perfect symphony of clean, unobtrusive look to the ceiling without sacrificing performance.



‘FFP’ Series

It is a design marvel with the front flat panel being set flush with the ceiling level. The conical back pan achieves the flow distribution pattern. Teegular pattern is also available to suit modular ceilings. The face panel size is varied as per the airflow volume requirements and is removable for adjusting the damper fitted on the neck of the back pan.

Model no. AP08 / CD - 18



‘PFP’ Series

This is a smart design that cleverly conceals the air diffusion system thus giving a clean look to the false ceiling. It is especially used in modular ceilings where it is difficult to see from where the air is being distributed. The air distribution is achieved by specially formed hump at the back of the face panel. The face panel is removable for adjusting the volume control damper.

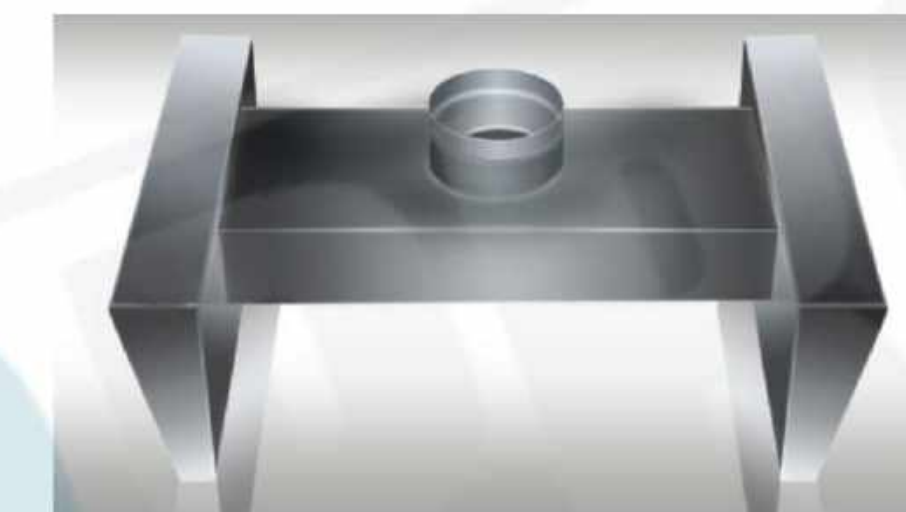
Model no. AP08 / CD - 19



Fire Rated Diffuser

The **Fire Rated Diffuser** is specially designed to work in conjunction with fire rated exposed grid, suspended ceilings. The construction is made from heavy gauge steel with thermal protection blanket on the back surface to prevent heat transfer to the front panel. The fire damper is operated by a fusible link set to go off at 70 deg C. Front face is available as perforated or standard cones. Various sizes are available to suit various airflow requirements. Engineering input for installation will be provided on demand.

Model no. AP08 / CD - 20

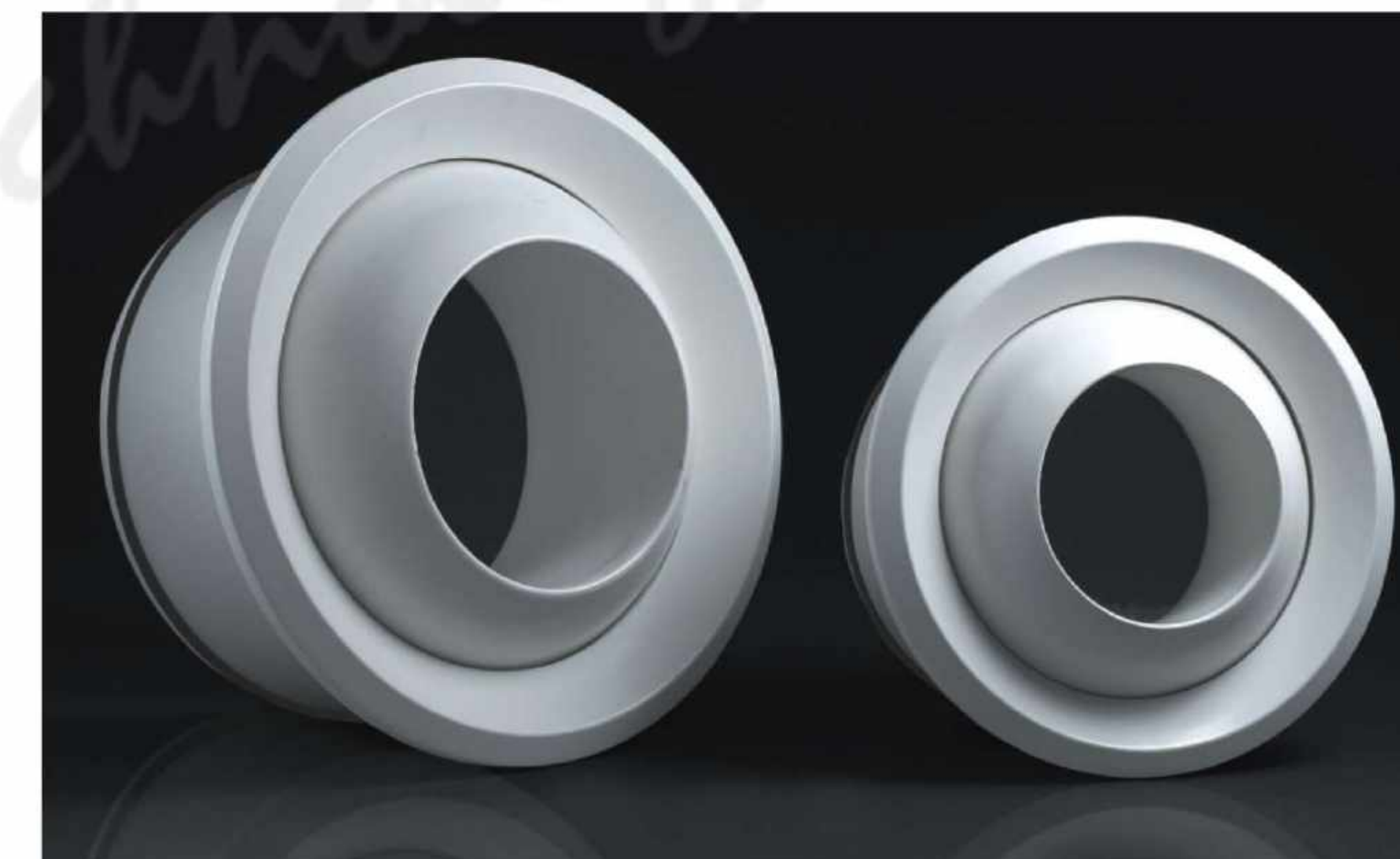


Model no. AP08 / CD - 21

Light Troffers

These are specifically designed to cope with the problems of confined ceiling spaces where lighting and air distribution is provided through a single ceiling opening. Air is distributed through a small crevice like opening at the edge of the light fixture. The two individual boots are coupled via a bridging duct. The bridging duct lengths and boot heights can be varied to suit individual light fixtures. A strategically located inlet spigot enables an even air distribution to each boot eliminating the need for individual damper control. It is available in single or double configurations.

JET NOZZLES



Jet Nozzles are ideal for long throw and achieving optimum performance of air distribution in large rooms and halls.

The creative design has excellent acoustic characteristics and is hence suitable for high acoustical applications like auditoriums, concert halls, conference rooms, stages and museums. It can be directly mounted on the face of the ductwork to suit various requirements.

Model no. AP09 / JN - 1

DISC VALVE

Disc Valves are ideal for handling exhaust of greasy and damp areas like kitchen, restroom, etc. They can be used for ventilation as well as supply applications. It has an aerodynamically shaped valve cone which is rotated to adjust the pressure and consequently the air volume. It can be used on ceiling as well as wall applications.



Model no. AP10 / DV - I

BOX TYPE DAMPERS

The **Box Type Dampers** are robust in construction and are used behind grilles and diffusers as per required sizes.

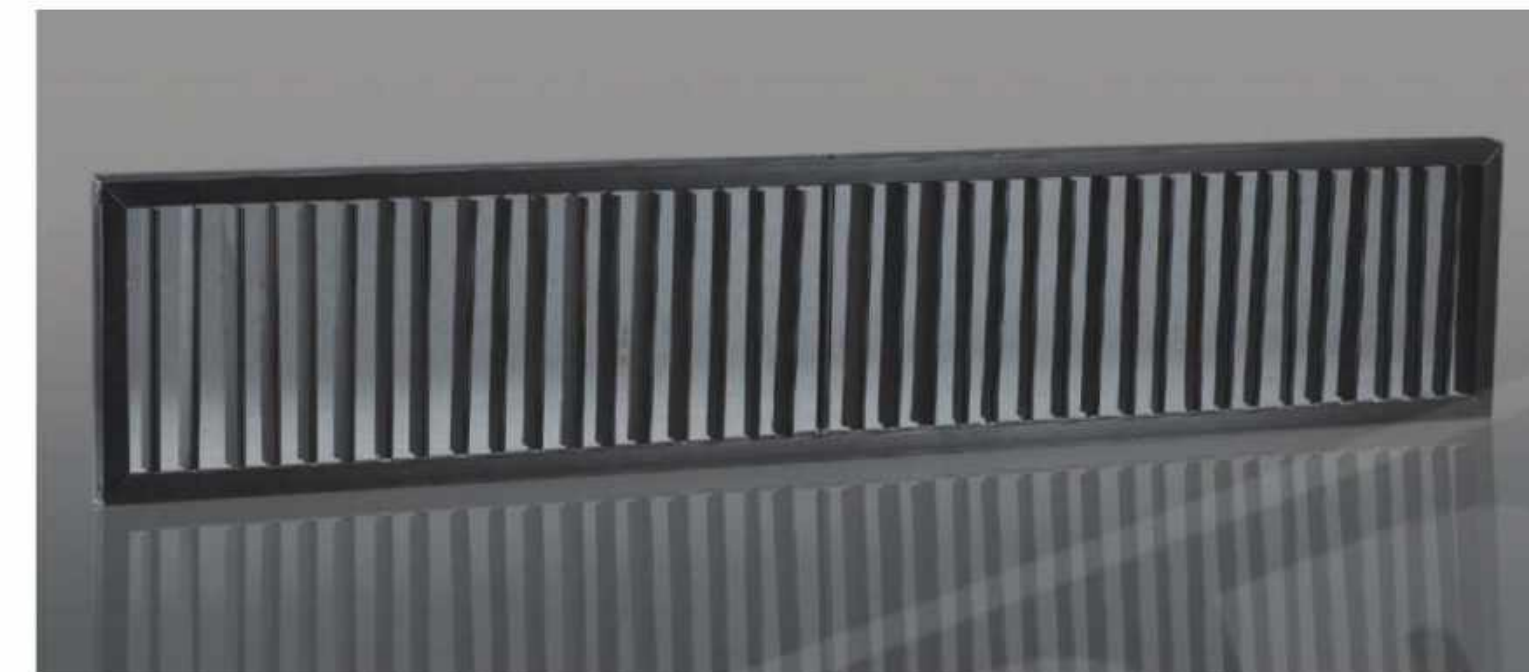


These can be adjusted for required air flow from a die cast gear assembly for precise movement. Also available are air stream splitter dampers where space restricts the installation of a deflector. The casing itself acts as an air deflector.

Model no. AP11 / BTD - I..... (SSD in case of Stream Splitter Damper)

GRILLE LOUVERS

Grille Louvers are specially designed to direct the flow in the horizontal plane as per individual requirement. It is mounted between Box type dampers and Linear Bar grilles.



Model no. AP12 / GL - I

TRAP DOORS

The **Trap Doors** are made from aluminium and are specially designed to suit the interior designer's requirement. These can be installed in False ceilings wherever required especially for gaining access to Volume control dampers in ductwork.



A trap door is always an eye sore in a standard gypsum false ceiling. The 'Air Product Trap Door' is a boon for all such applications providing a clean and uniform look to the ceiling. It can also be cleaned after every use as the aluminium construction ensures long life of the product. Can be provided in various shapes and sizes to suit individual requirements.



Model no. AP13 / TD - I

The 'George Rao Range Of Products' continues the tradition of quality and engineering excellence that have been the hallmark for the past twenty six years. Due to these values we cherish, the name finds itself as a standard supplier for all Atomic power and Thermal power stations throughout India, including several other comfort applications. We have now added new products to the existing range to enhance the performance of the well acclaimed product range. An overview is presented in this catalogue. Special products can be developed according to specific project requirements.



VOLUME CONTROL DAMPERS

The Volume Control Dampers are specially developed for the air conditioning industry and are robust and rigid in construction to meet all critical site installations.



Standard GI Volume Control Dampers

Our GI volume control dampers are extremely popular in the industry and are built in 18G construction for rigidity. These are well known for their long life and trouble free operation for decades. Dampers are with parallel blades or opposed blades and have a quadrant assembly for indicating the position of the damper. Lubrication free nylon bushes are used as standard. Sintered Bronze can also be provided on request.

Model no. GR14 / VCD - I



Aerofoil Blade Volume Control Dampers

Our specially designed aerofoil dampers have a number of advantages over the conventional damper like higher blade strength, low static pressure loss, excellent sealing ability and minimal noise produced. The noise level difference between our aerofoil blade and the standard blade is almost 40 percent. A low leakage option is also available with stainless steel corner edge seal that further reduces the leakage across the damper.



Model no. GR14 / VCD - 2 (LL - Low leakage)



Round Volume Control Dampers



These are specifically designed for use in round ducts or fan connections. The construction is robust. Presently available as a single flap version, the multi flap option is under development.

Model no. GR14 / VCD - 3 (SF / MF - Single / Multi Flap)



Motorised Volume Control Dampers

The volume control dampers are also available with electrical actuators for automatic operation through a control signal. These can also be provided with a sensor cum controller (with / without display) for stand-alone operation. These are available in both aerofoil as well as standard blades.

Model no. GR14 / VCD - 4 (TH - With thermostat)



Pneumatically Operated Volume Control Dampers

These dampers are supplied with Pneumatic Cylinders and Valve assembly. The dampers operate on input air pressure signal.

Model no. GR14 / VCD - 5

SELF ACTING DAMPERS

The **Self Acting Dampers** are designed to prevent backflow and to provide shutoff in HVAC or industrial process system. The damper is opened by air pressure differential and closed by gravity. These are available in circular shape also.

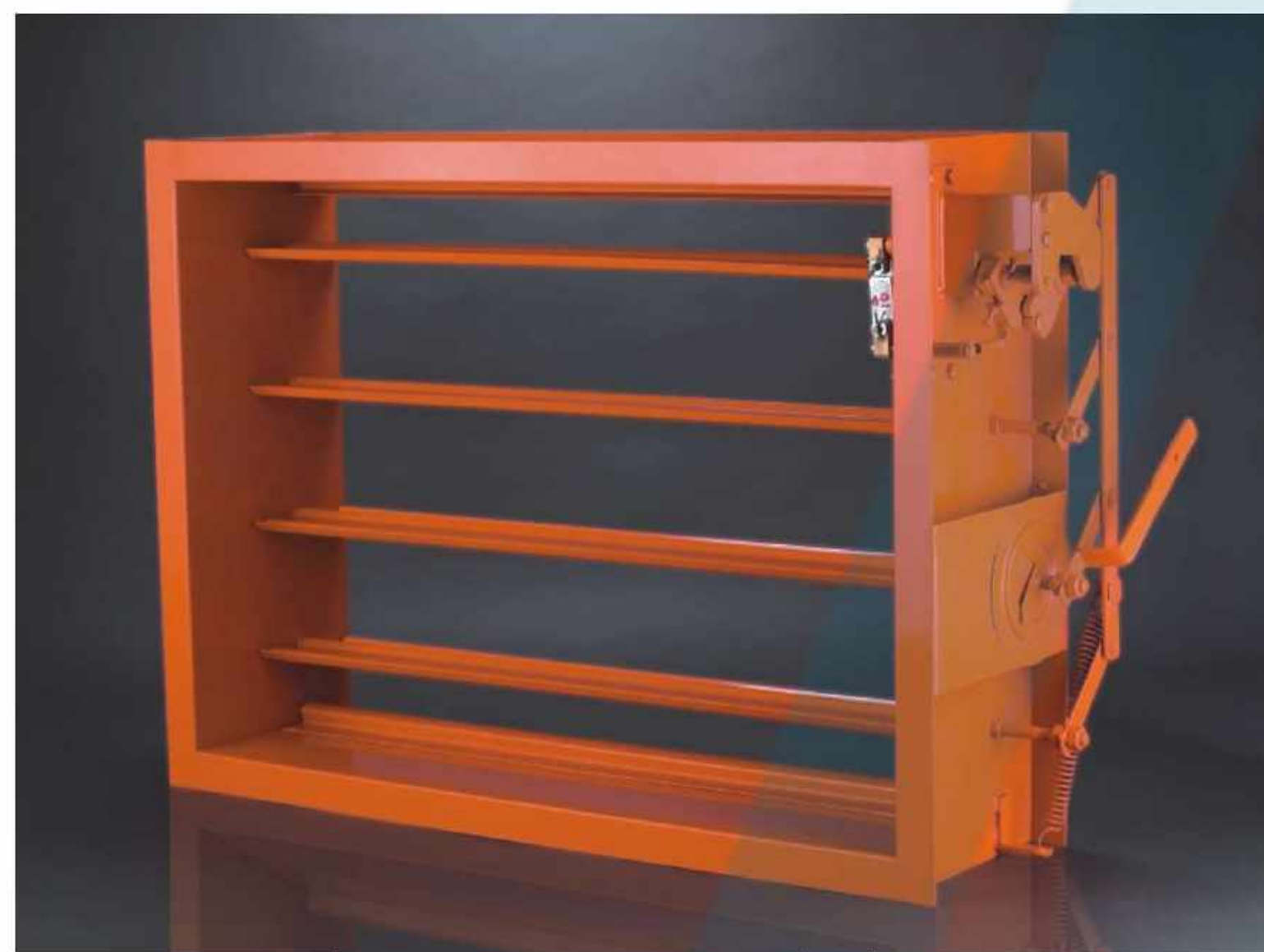


Model no. GR15 / SAD - I

FIRE DAMPERS



George Rao Fire Dampers have a patented system that will close the damper in case of a fire. Central Building Research Institute, Roorkee (CBRI) has tested our dampers as per UL555 specifications and the dampers have successfully withstood standard fire severity for ninety minutes. An integral / separate wall sleeve can be supplied as an option. Round cross section with single flap blade is also available. Various options for actuation are available.



Fusible Link Operated

These dampers are ruggedly built and require absolutely no maintenance for lifetime. The dampers are operated by an ingeniously patented system. A choice of temperatures is available for the fusible link operation. The normal recommended temperature is 70 deg C. The construction of the damper is such that the fusible links can be replaced from the side of the damper without having to remove the damper from its installed position. The fusible link is a specially designed assembly with brass ends for longer life and precise operation.

Model no. GR16 / FD - 1



Solenoid Operated

These dampers are supplied with normally de-energized Solenoid coils. The damper is operated when an electrical signal energizes the coil. An option of 24V AC or 230V AC signal is available.

Model no. GR16 / FD - 2



Combined Solenoid and Fusible Link Operated

This is a unique arrangement pioneered by us in India. These dampers are supplied with normally de-energized Solenoid coils as well as a standard fusible link assembly. The damper is operated either when an electrical signal energizes the coil or if the fusible link snaps on sensing the local temperature. An option of 24V AC or 230V AC signal is available. This ensures the system is safe mechanically as well as electrically.

Model no. GR16 / FD - 3



Motorised

These dampers are supplied with a spring return type of actuator. An additional in-built thermal switch can also be provided. An electrical control panel is supplied along with the damper which gives LED indications for the status of the damper as well as provision for interlocking with Fire detection system. The details of the panels are mentioned elsewhere in the catalogue. The actuators are selected by us based on Torque required, thus making it 100% reliable. An option of 24V AC or 230V AC signal is available.

Model no. GR16 / FD - 4



Pneumatically Operated

These dampers are supplied with Pneumatic cylinders and Valve assembly. The dampers operate on input of air pressure signal.

Model no. GR16 / FD - 5

CONTROL PANEL FOR FIRE DAMPERS



George Rao Control Panel For Fire Dampers is specially designed for providing accurate information regarding the status of the damper and its operation capabilities. It's features include an in-built transformer, interlock facility with building management system, position indicators for the actuator, local hooter and facility to test the damper. These panels can be interlocked with fire detection system for accepting the fire signal and in turn tripping the damper. The status of the damper can be also taken to the building management system.



Standard

This panel is suitable for individual operation and comes mounted on the body of the damper itself. It is extremely compact in size and has a simple tamper proof and robust two-pin system for incoming supply.

Model no. GR17 / CP - 1

Corded Remote

An innovative design in which all the indications of the damper status, TEST / RESET facility are available on a display panel which can be mounted at a convenient location in the AHU room. A single cord runs from the panel mounted on the damper, up to the display unit. This eliminates all the trouble of reaching dampers located at awkward places and testing them, taking information or resetting the alarm.

Model no. GR17 / CP - 2

Cordless Remote

Another breakthrough innovation in which any cord is eliminated. The testing and resetting of the damper can be done through a hand held cordless remote unit.

Model no. GR17 / CP - 3

Custom Made Panels

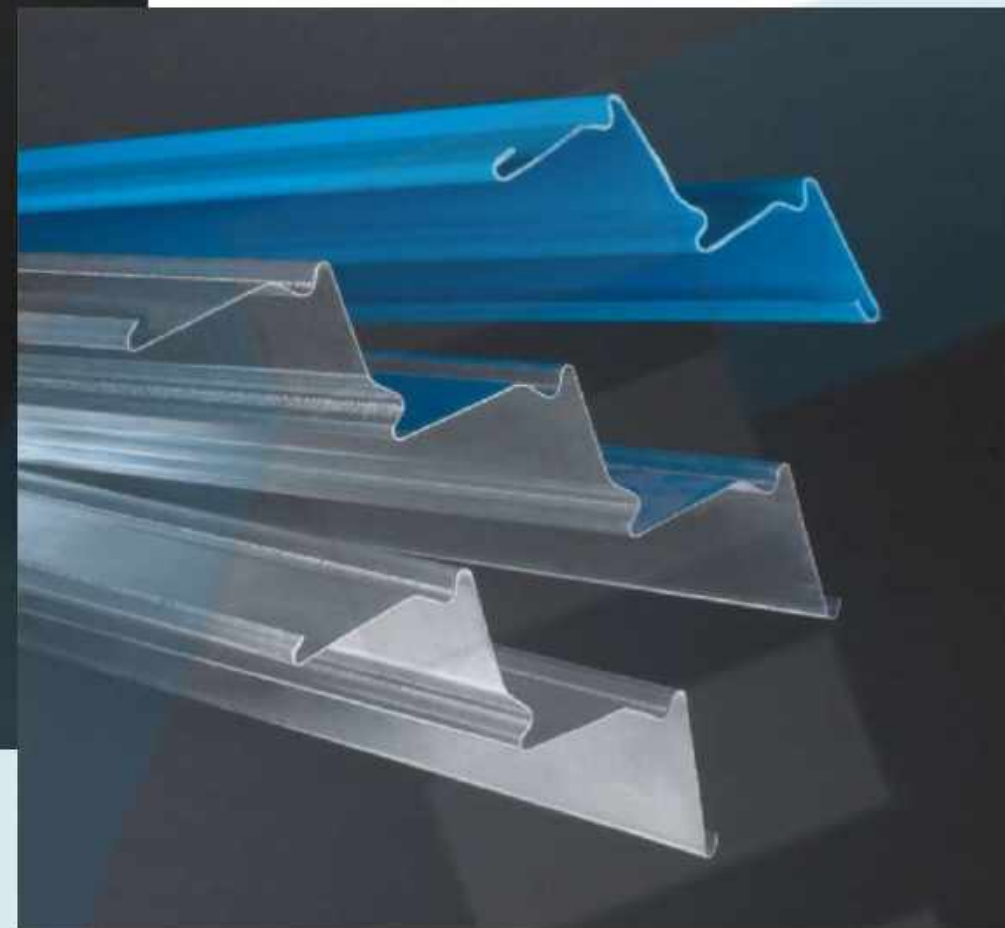
We make control panels as per individual site requirements. A number of fire dampers can be combined into one single unit depending upon the availability of the control signal and supply. It enables all the data for several dampers in one particular area available at one single panel.

Model no. GR17 / CP - 4

WATER ELIMINATORS



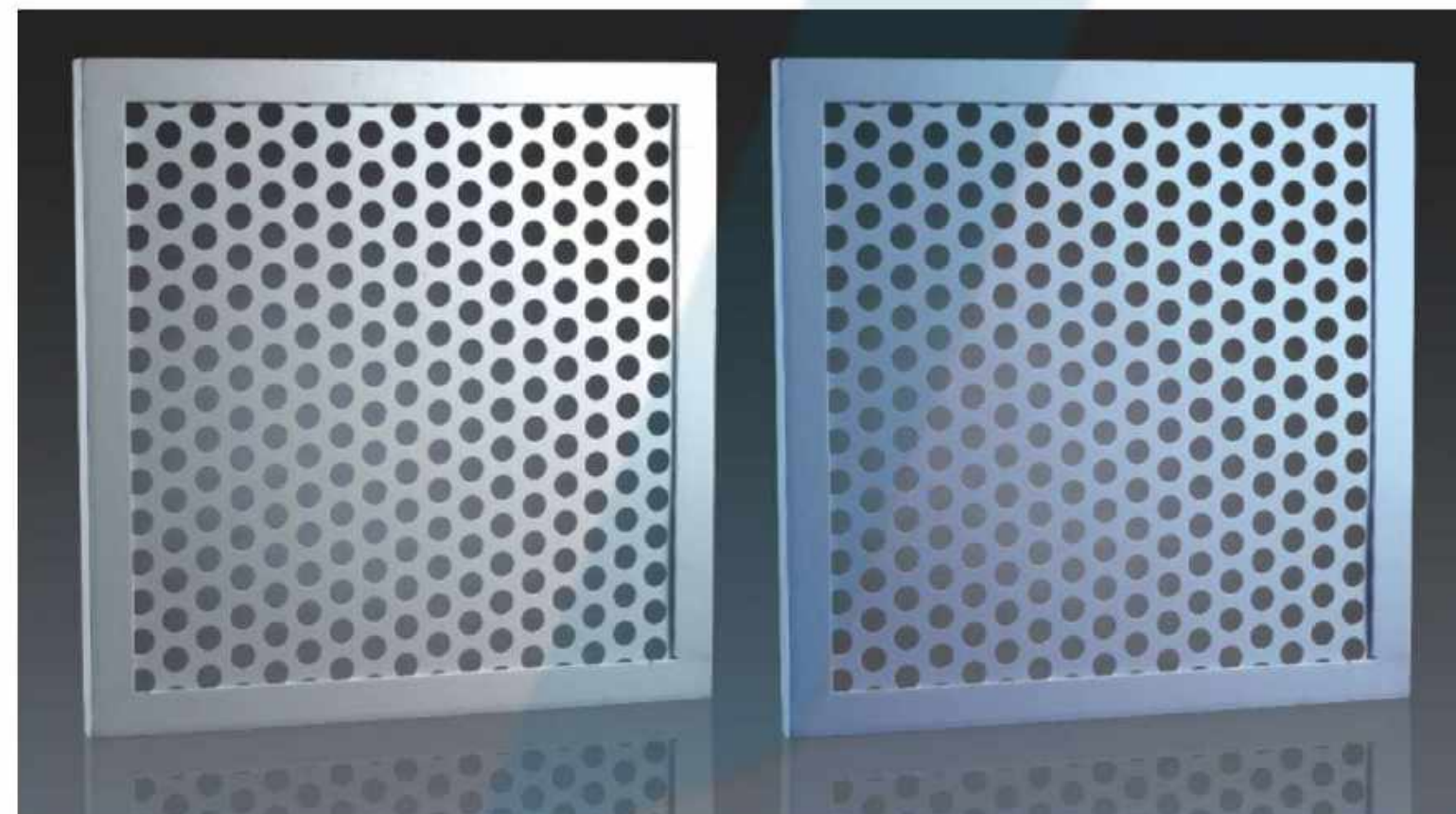
George Rao Water Eliminators are designed for effective removal of water particles in air washers. All the components are made with specially designed dies, so that the close tolerances and uniformity are maintained. These are available in 2pass, 3pass, 4pass and 6pass construction. The specially designed blades available in GI, Aluminium or PVC construction, have a series of bends and deflections that offer a large surface area against which the water and dust particles impinge, to be flushed down in the air washer tank.



Model no. GR18 / WE - I

DISTRIBUTION PLATES

The Distribution Plates are made with precisely drilled holes and are used extensively for distributing the air uniformly over a large surface area. A hot dip galvanised angle frame is provided for fixation and rigidity.



Model no. GR19 / DP - I

AIR TIGHT DOORS



The Air Tight Doors are developed after a lot of study for total prevention of air leakage through the doors. Areas like laboratories, clean room areas, atomic energy establishments, studios etc. are typical installations for these products. A unique gasketing arrangement all around the door ensures that the rubber gasket sits firmly on the angle iron frame. The doors are made up of 16G MS sheets sandwiching 50mm thick EPS, glass wool or PUF insulation. The angle frame provided with the door has arrangement for grouting or flush installation. The handles are made of brass and chromium plated to give an excellent appearance and are rust proof. The doors are also available in SS or Aluminium construction. The doors can be single or double shutter as per requirement. The double shutter doors also come with the option of a gearbox handle at the centre instead of the top and bottom ones. The gearbox handle has a round conical handle at the centre for ease of operation.

Model no. GR20 / ATD - I



Access Window

This is a modification of the standard door with four handles and provides easy access within ducts, air washers etc.

Model no. GR20 / ATD - 2

AIR FILTERS



Wire Mesh Filters

These are five ply viscous metallic and are used as pre-filters at a number of places. These are reusable and can be cleaned by washing with any household detergent. The service life of the filters is approximately 12,000 working hours.

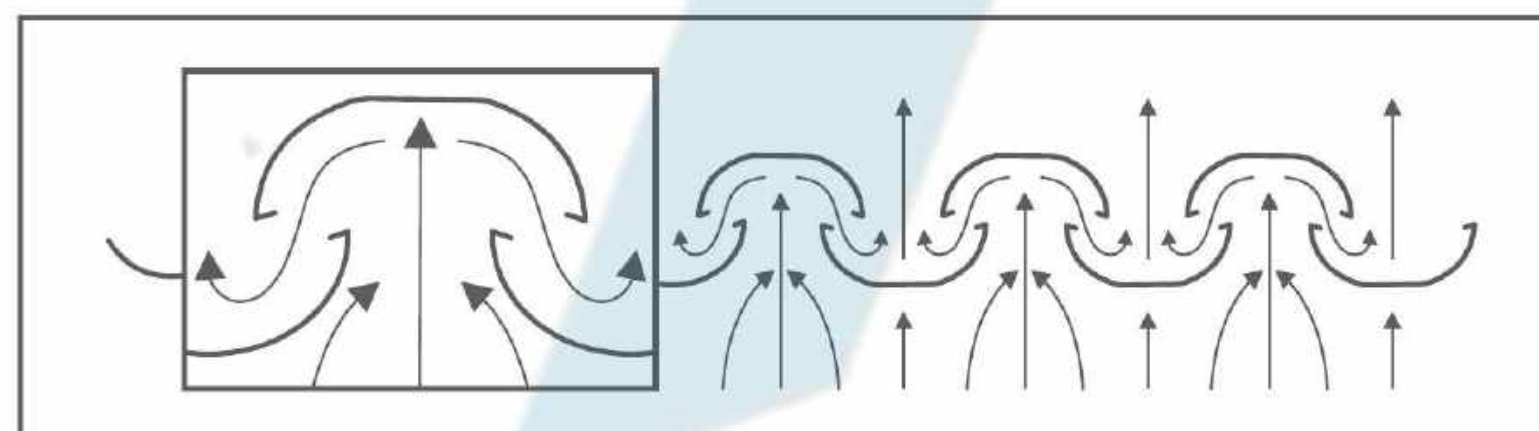
Model no. GR21 / AF - 1



Baffle Type Grease Filters

Baffle Type Grease Filters have been specially designed to extract grease from grease laden air particularly found in kitchen. The heavy-duty construction together with the unique design gives the filters highly effective flame arrestor capability by providing a barrier to prevent spreading of range top fires. The high efficiency of the filters protects the blower equipment, prolongs the motor life and reduces the cost of duct cleaning. The lightweight facilitates easy removal and cleaning in warm soapy water. The series of offset baffle plates are arranged in a casing of 1 7/8" thick and are custom made as per the hood sizes. Material option available is in Aluminium or Stainless Steel.

Model no. GR21 / AF - 2



KITCHEN HOODS

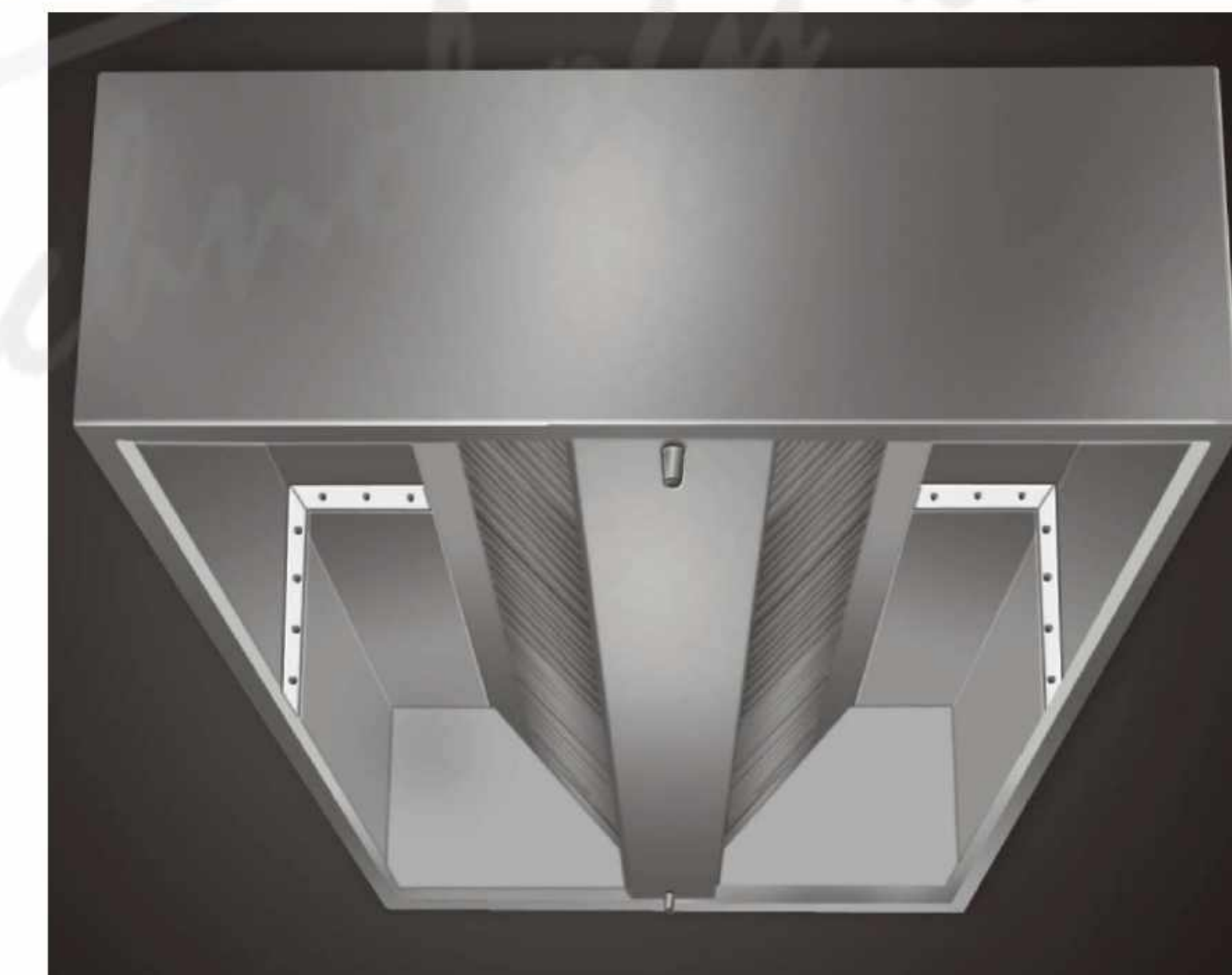
'George Rao Kitchen Hoods' offers a perfect solution for the needs of commercial food service applications. These have been extensively used for the past two decades in a large number of luxury hotels and restaurants all over India. Specially mounted tube lights fitted with enclosure box (optional) are available. The hoods can be provided with compensating arrangement with neatly deigned supply air grille integrated into the hood. These are custom designed based on specific applications.



Wall type hoods

These are specifically meant for wall applications or when the cooking range is supplemented by an enclosure on the backside. It comes with a single bank of filters.

Model no. GR22 / KH - 1



Island type hoods

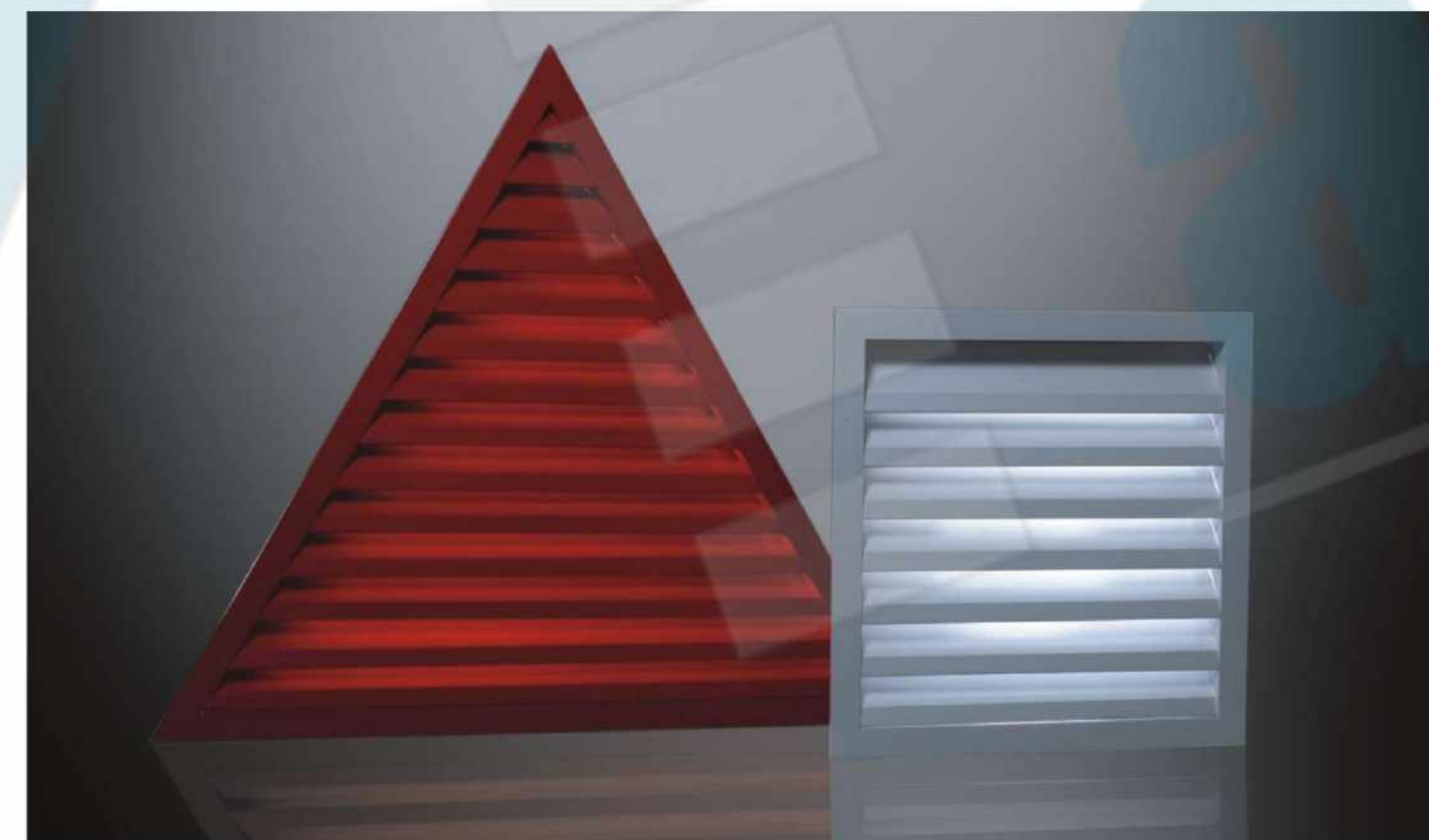
These are used where the cooking range is in the middle of a room and cooking is carried out from both the sides. The double bank of filters ensures effective coverage of the entire area.

Model no. GR22 / KH - 2

We also undertake total turnkey projects for designing and installing kitchen ventilation systems.

WEATHER LOUVERS

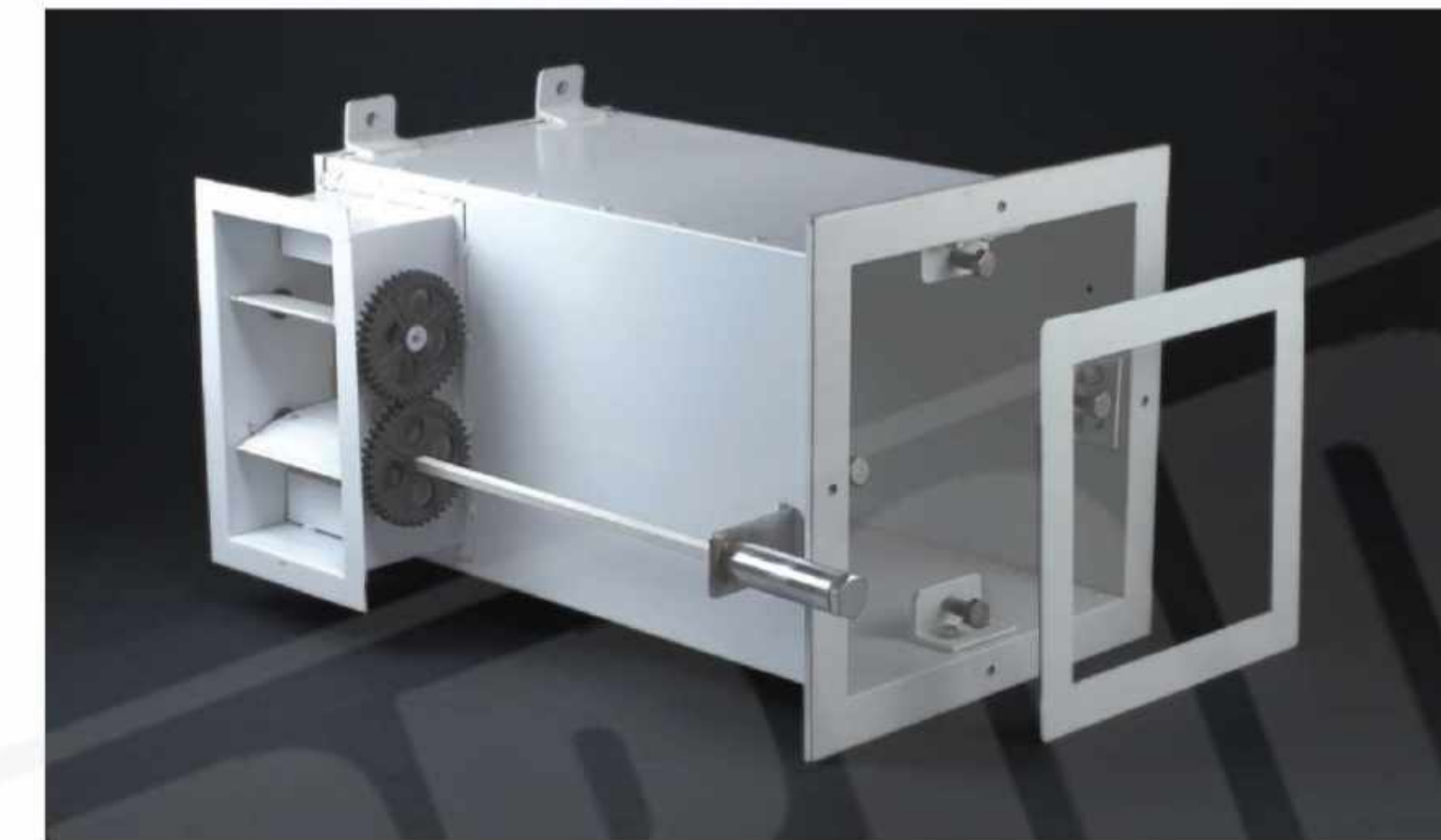
The **Weather Louvers** are specially designed to match the exteriors of the buildings. These are available in GI or Aluminium construction for Industrial purposes or in sleek looking extruded aluminium construction to suit the modern architecture. The blades are contoured at a specific angle to minimize water ingress. Available in attractive colors or coatings to suit various exteriors. A special bird / insect screen is provided as optional to prevent the entry of any flying objects. Coarse filters can also be supplied along with the louver.



Model no. GR23 / WL - I

TERMINAL BOXES

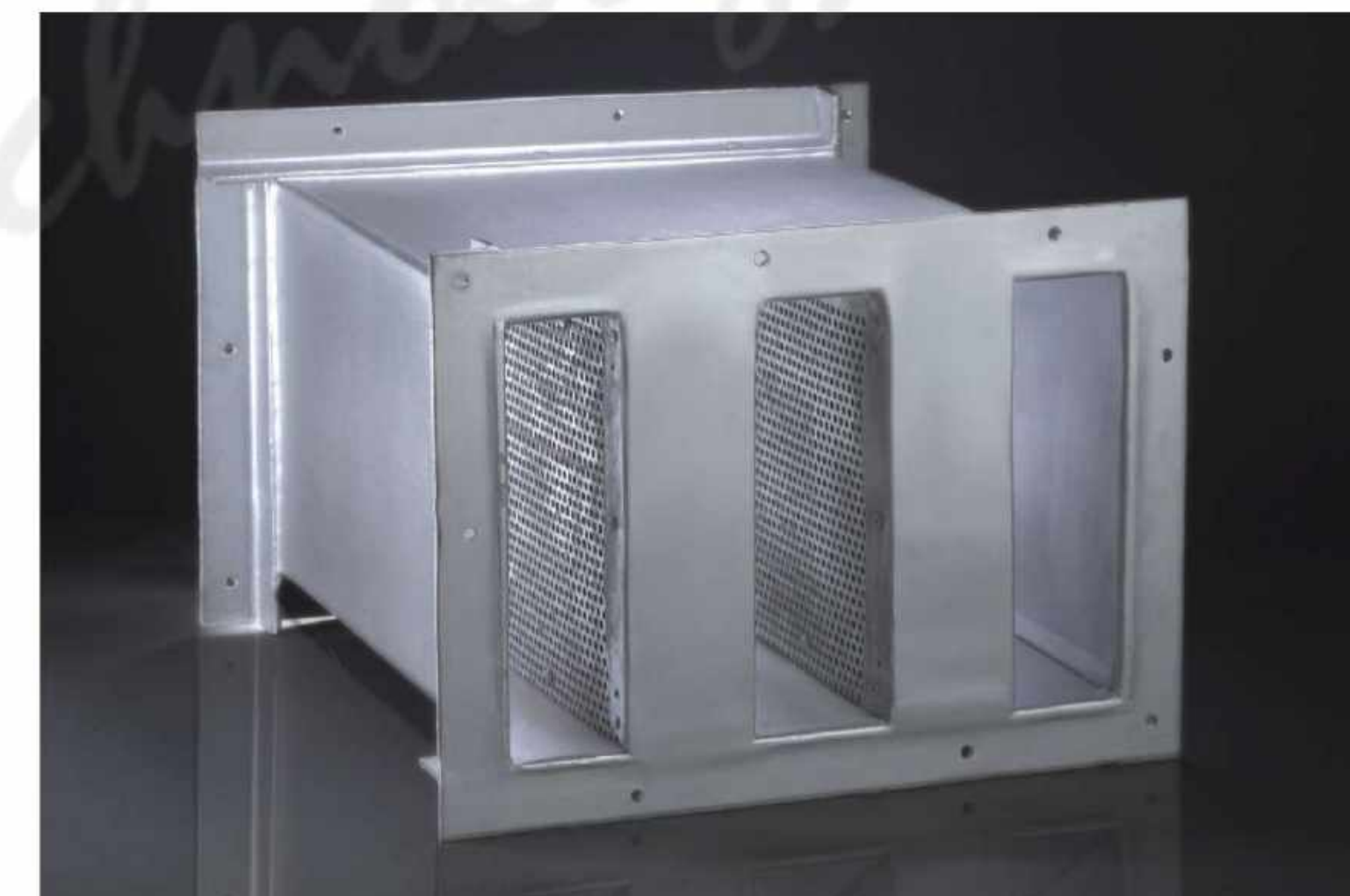
The **Terminal Boxes** are manufactured under close tolerances for a trouble free filter fitment at site. The parts are of extremely high finish to satisfy the air quality requirements at the critical places where the same are used. A perforated face is available on demand. A special arrangement for operation of the damper is provided. The operating handle is enclosed in a neat looking sleeve that fits in well in the false ceiling. We can design and manufacture any other design as per your requirement.



Model no. GR24 / TB - I

SOUND ATTENUATORS

The **Sound Attenuators** are designed for sound attenuation with minimum pressure drop. The front ends also can be provided with entry cones for lesser drop. These can be custom-made based on job-specific requirements. Technical data is available on request.



Model no. GR25 / SA - I

AIR VOLUME CONTROLLER



The Air Volume Controller are basically bypass type variable air volume controllers (VAV) and come with a special temperature sensor cum controller with digital display unit. Various sizes as per different air volumes are available.

Model no. GR26 / AVC - I

ACTUATORS FOR DAMPERS



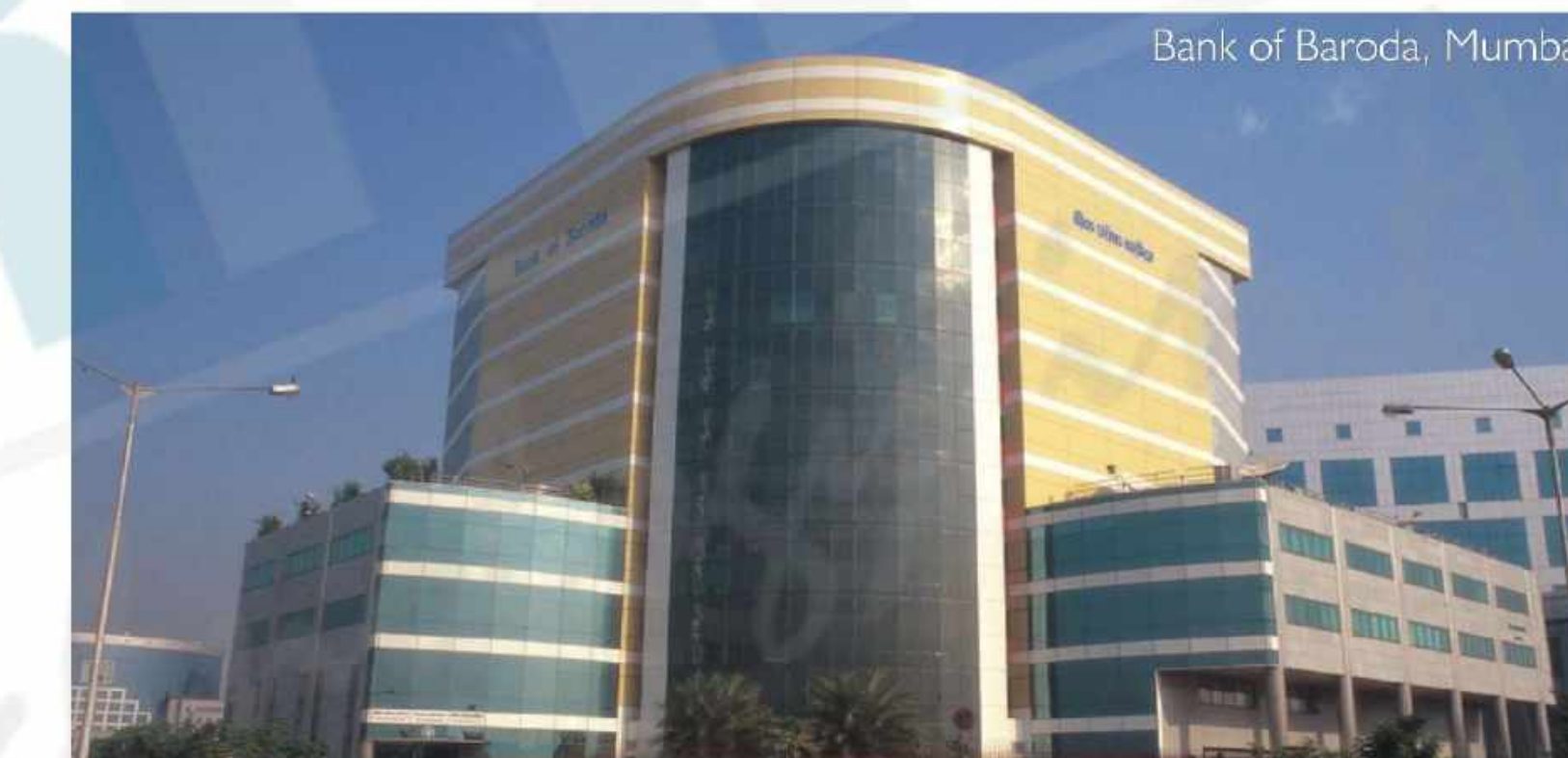
We offer a range of actuators ON/OFF, Modulating, Spring Return, With thermal switch, With auxiliary switches. We have a strategic alliance with several actuator manufacturers and we select the optimum actuator based on your requirement, to suit your specifications and cost. Please get in touch with our office for further details.



JW Marriott Hotel, Mumbai



Bank of India, Mumbai



Bank of Baroda, Mumbai



IL & FS, Mumbai

We have a long list of reputed and satisfied clients under our belt. Our products find application in a variety of installations in all the major Hotels, Corporate Offices, Hospitals, Multiplexes, Theaters, Shopping Malls, Residences, Factories etc.... The list is endless.

We also have a separate project division that undertakes turnkey projects for air - conditioning and ventilation. We have a dedicated staff for designing and executing the projects within the schedule of the client. Our in-house manufacturing capability gives us a cutting edge over the competition in terms of cost, quality and timely completion of the projects. No compromise is made on the use of equipment, ducting sheets and ancillaries, in terms of quality. We are proud to have many repeat customers for almost all our projects - BARC, J.W. Marriott Group Of Hotels, The Taj Group of Hotels, Rahejas, International Airport - Mumbai, Sahara - Amby Valley project at Lonavala, .. to name a few.



Dena Bank, Mumbai

Our manufacturing range of colours

GLOSSY FINISH



MATT FINISH



ORDERING DATA

For ordering any of the product please mention the following additional parameters in addition to the respective model numbers mentioned against each product and sizes.

1. Linear Bar Grilles

Linear Bar Grilles Single direction, Two way & Curved

a. Deflection

00	zero degrees
15	fifteen degrees
30	thirty degrees
45	forty five degrees

b. Surrounding Flange

4SF	Four side Flange
3SF	Three side Flange & LH or RH Left or Right Hand side
2SF	Two side Flange

Linear Bar Grilles Removable Core

a. Deflection

00	zero degrees
15	fifteen degrees
30	thirty degrees
45	forty degrees
PF	perforated front panel

b. Surrounding Flange

4SF	Four side Flange
3SF	Three side Flange & LH or RH Left or Right Hand side
2SF	Two side Flange

Linear Bar Grilles Removable Bars

a. Deflection

00	zero degrees
15	fifteen degrees
30	thirty degrees

b. Surrounding Flange

4SF	Four side Flange
3SF	Three side Flange & LH or RH Left or Right Hand side
2SF	Two side Flange

2. Adjustable Deflectors

Adjustable Deflectors Single deflection, Double deflection

a. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

b. Volume Control

S	With volume control damper
R	Without volume control damper

Adjustable Deflectors Removable Core

a. Deflection

SD	Single deflection
DD	Double deflection

b. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

c. Volume Control

S	With volume control damper
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3. Egg Crate Grilles

Model number only

4. Filter Grilles

a. Front Panel

BG	Linear Bar Grille with degree and horizontal or vertical bars.
PP	Perforated Panel

5. Door Transfer Grilles

Model number only

6. Security Grilles

Model number only

7. Floor Grilles

a. Front Panel

BG	Linear Bar Grille
PP	Perforated Panel

b. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

c. Volume Control

S	With volume control damper
R	Without volume control damper

8. Ceiling Diffusers

a. Distribution

4W	Four way
3W	Three way
2W	Two way
2DW	Two way diagonal
1W	One way

b. Shape

SQ	Square
RE	Rectangular

c. Outer Ring

DR	With decorative outer ring.
----	-----------------------------

d. Central Core

RC	With removable central core
----	-----------------------------

e. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

f. Volume Control

S	With volume control damper
R	Without volume control damper

Linear Diffusers

a. Distribution

1W	One way
2W	Two way

b. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

Slot Diffusers

a. Number of slots

1/2/3/4/5/6

b. Volume Control

HM	with Hit & Miss damper
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c. Suspension system

SM	with special suspension system
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9. Jet Nozzles

Model number only

10. Disc Valve

Model number only

11. Box type Dampers

a. Application

LBG	For Linear Bar grilles
DIF	For ceiling diffusers
CD	For circular diffusers

b. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

12. Grille Louvres

Model number only

13. Trap Doors

Model number only

14. Volume Control Dampers

a. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

b. Type of Bearings

Standard	Nylon
SB	Sintered Bronze bush

15. Fire Dampers

Model number only

16. Control Panel For Fire dampers

Model number only

17. Water Eliminators

a. Material Of Construction

Al	Aluminium
GS	Galvanised Steel
PV	PVC

b. Number of passes

2	2 pass (width 120mm)
3	3 pass (width 170mm)

4 4 pass (width 220mm)

6 6 pass (width 320mm)

18. Distribution Plate

Model number only

19. Air Tight Doors

a. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

b. Number of shutters

SL	Single shutter
DL	Double shutter
DLG	Double shutter with gearbox handle.

c. Type Of Insulation material

EP	Expanded Polystyrene
GW	Glass wool
PU	Poly Urethane Foam

20. Air Filters

a. Material Of Construction

Al	Aluminium
MS	Mild Steel
SS	Stainless Steel specify grade also

21. Kitchen Hoods

a. Material Of Construction

Al	Aluminium
GI	Galvanised Steel
SS	Stainless Steel specify grade also

b. Ventilation arrangement

c. Compensating Type with buit in Fresh air arrangement

22. Weather Louvers

a. Material Of Construction

Al	Aluminium (depth 125 / 100 mm)
GI	Galvanised Steel (depth 125 / 100 mm)
SS	Stainless Steel specify grade also (depth 125 / 100 mm)
Xal	Extruded Aluminium(depth 50 mm)

b. Add on

BS	Bird Screen
CF	Coarse Filters

23. Terminal Boxes

Model number only

24. Sound Attenuators

Model number only

25. Air Volume Controller

Model number only

26. Actuators For Dampers

Specify make, Model and Ratings.

