



YAS FLEX FLEXIBLE DUCT
YAS FLEX DUCT CONNECTOR
CATALYST GRILLS & DIFFUSERS



CATALYST INDUSTRIES



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About Us

Catalyst established in 2008 with the Vision to serve and the zeal to achieve a good position in the high profile Air conditioning & Electro mechanical market in the U.A.E

We are one of the leading suppliers of quality HVACR (Heating, Ventilation, Air Conditioning & Refrigeration) products, components, equipments, spare parts and tools for the industry.

We represent, distribute and stock wide range of products from well-established and most reputed brands from different parts of the world.

Following vision of UAE Leaders to develop a sustainable and diversified economy involving local industries. "CATALYST" with primary focus on manufacturing and distribution of flexible ducts and connectors and air outlets by brand name "YAS" is now expanded in other HVAC products & accessories.

The company is one of the most outstanding and fast growing in the field of HVAC. All the products are manufactured in U.A.E factory with high quality material imported from Europe, Asia, and Middle East.

We have full-fledged factory in the Emirates of Sharjah, empowered by a team of highly talented and experienced personal for production, sales and logistics ensuring the best product and timely delivery.

Our manufacturing product line includes following:

1. High quality insulated and non-insulated flexible ducts in sizes ranging from 100 mm to 300 mm.
2. High quality non-insulated flexible ducts connectors.
3. Grills, Diffusers and other air outlets and Aluminum tapes.

We will be happy to render our services with customized solutions in supplying above products of your interest.

Together with the teams and well experienced professionals, CATALYST provides the quality products and services on a very competitive price to our esteemed clients.

1 Flexible Ducts



Flexible Duct Insulated

Description

A spiral wire-reinforced inner air conduit is wrapped with resilient fibrous glass and jacketed with a flexible vapor retarder of reinforced foil or plastic film. Flexible ducts insulated with fibrous glass are an efficient, economical way to install connections between trunk ducts and room diffusers or registers. These flexible products can conform to bends when connecting trunk ducts to diffusers, or when routing ductwork through obstructed areas.

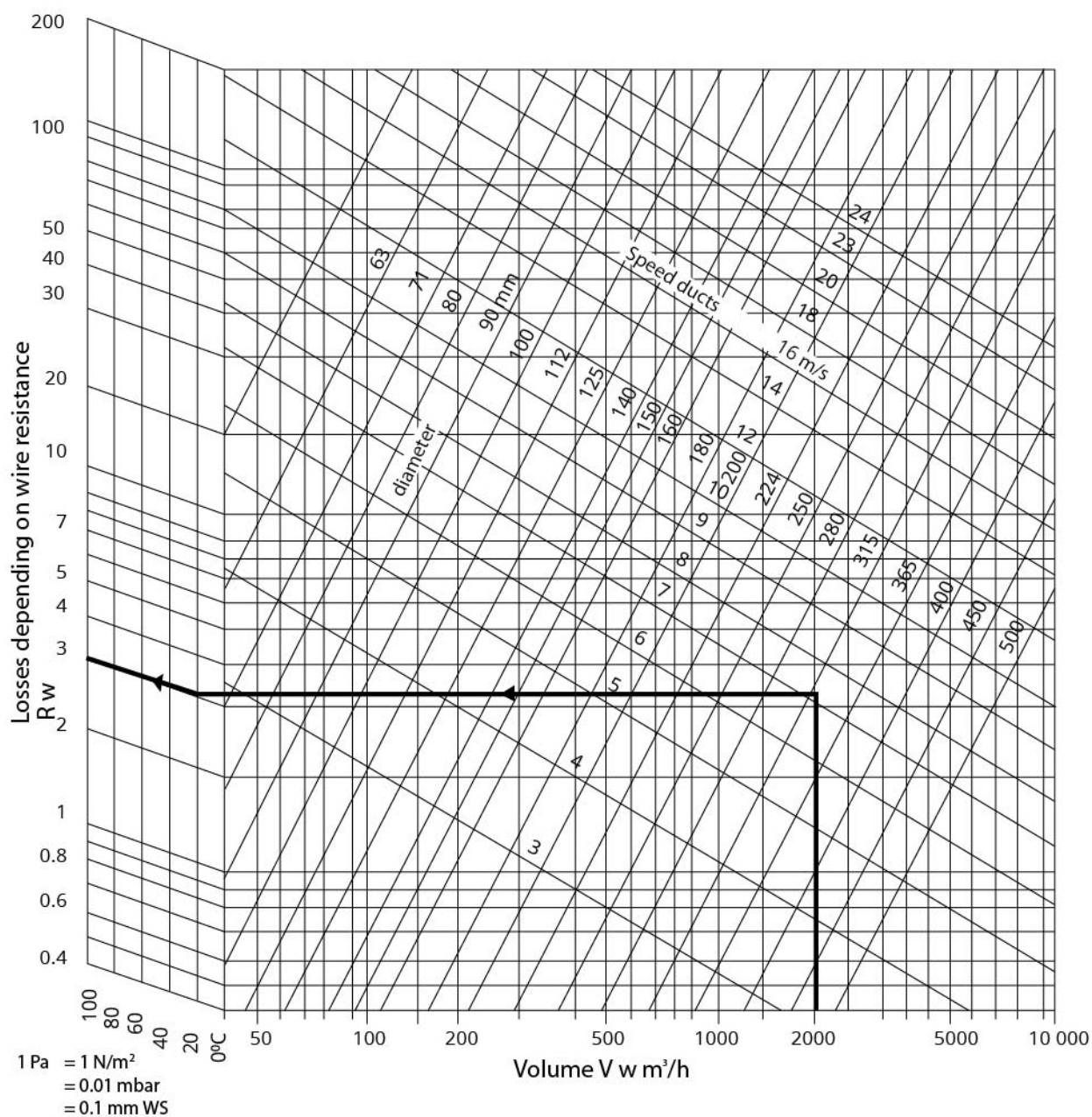
Fibrous glass insulated flexible ducts can be used in applications where internal air temperatures do not exceed 300°F (150°C).

Catalyst manufacture's both insulated and non-insulated flexible ducts which are used for suitable applications. The Product is manufactured from 100mm dia to 500mm dia and other dimensions if required by the client.

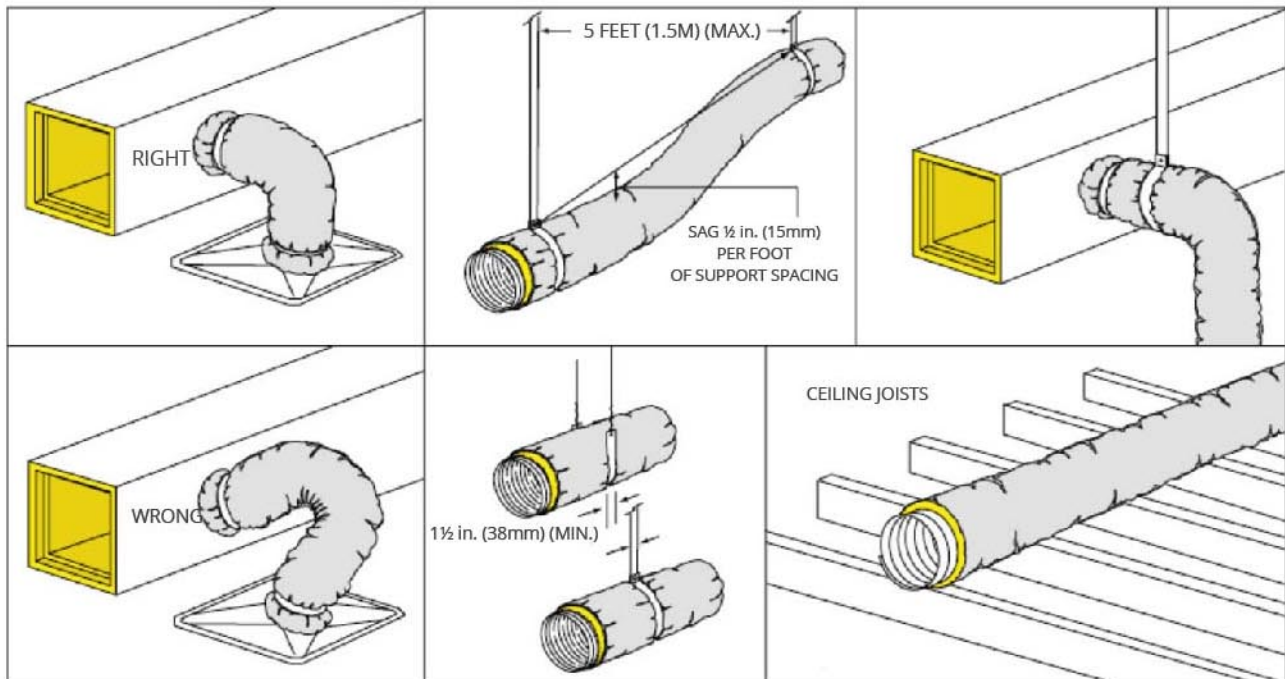
Specification

Item	Flexible Duct Insulated
Range of sizes [mm]	100mm – 500mm
Air duct base	Multiple layer product made up of aluminium and PET film
Air duct wire	Spring Steel Wire 0.9mm Diameter
Insulation	Fiber Glass wool Insulation, 25 mm thickness
Outer sleeve	Multiple layer product made up of aluminum and PET film
Operating temperature range [°C]	30 ° C to +150 ° C
Standard length [m]	25 ft (7.5 M)
Air speed [m/s]	30
Maximum operating pressure [Pa]	3000

Pressure drop chart for straight sections



Installation methods:



Connections

Insulated flexible ducts are connected to fiber glass or sheet metal trunk ducts using standard sheet metal dove-tail or spin-in collars. The flexible duct is mechanically attached either with plastic closure straps, metal clamp straps, or approved tape. Connections should be made without bends in excess of 90 degrees, using the shortest possible lengths of flexible duct material.

Support

Insulated flexible ducts are supported at intervals as recommended by manufacturers, but at a distance not greater than 5 feet (1.5 m), with maximum permissible sag of 1/2 in. per foot (15mm per 300 mm) of spacing between support points.

Advantages

- Encapsulated wire helix.
- Smooth inner core.
- Air tight.
- High flexibility.
- Durable materials.
- Does not unravel when cut.
- Keeps friction to a minimum.
- Energy efficient.
- Makes for easy installation.
- Resists tearing and puncturing.



Flexible Duct Non-Insulated



Description

A spiral wire-reinforced inner air conduit is wrapped with resilient fibrous glass and jacketed with a flexible vapor retarder of reinforced foil or plastic film.

Specification

Item	Flexible Duct Insulated
Range of sizes [mm]	100-500
Air duct base	Multiple layer product made up of aluminium and PET film
Air duct wire	Spring Steel Wire 0.9mm Dia
Operating temperature range [°C]	30 ° C to +150° C
Standard length [m]	25 ft (7.5 M)
Air speed [m/s]	30
Maximum operating pressure [Pa]	3000

Applications For Flexible Ducts Insulated and Non Insulated

Ideal for low to high pressure air conditioning and ventilation systems. Suitable for use in general ventilation applications including fresh air intake, exhaust and kitchen and bathroom.



Semi-Rigid Duct

Description

A semi-rigid duct is ideal for applications that require flexibility and stability. The applications that require hoses to move with the needs of the operator and maintain their shape when needed, we offer several semi-rigid duct. These self-supporting hose products are designed to be bent into position and remain in place to handle the demands of the job. At CATALYST we have several semi rigid duct products to meet your specific requirements.

Our self-supporting duct products can be bent to send airflow in your desired direction without creating sharp bends that restricts airflow and there is no need for additional support. This reduces labor hours and the amount of tools and contraption required to hold the exhaust system in place. Once the rigid-ductwork is moved into place it will only move if bent and twisted into another direction. These features all act to make semi-rigid ducting one of the most varied and versatile types of self-supporting hoses on the market, and it is frequently utilized by commercial, industrial, and residential entities.

Specification

Construction:	Single-ply, helically corrugated aluminum alloy wall hose construction with a four-ply finished seam that is folded flat and crimped for tightness and strength.
Product Features:	<p>Light weight & hand bendable allowing for elbows and turns to be formed easily during installation.</p> <p>Self supporting construction allows for bends to stay in place</p> <p>Designed for extreme temperature applications</p> <p>Resists metal fatigue, weathering, and most corrosive fumes and chemicals</p>
Applications:	Air, Fume.
Temperature Range:	-100 F to +400 F
Sizes I.D. (inches):	2, 4, 6, 8, 10, and 12
Wall Thickness:	0.008 Inch
ID Tolerances:	-0.00 to +0.250 Inch
Standard Length:	10 feet (3 Meter)
Standard Colors:	Metallic silver.
End Finish:	Plain Cut (connectors available).
Markets:	Chemical Fumes, Circuit Board Cooling, Exhaust Systems, HVAC, Oil Mist, Ozone, Pollution Control, Ventilation

2 Flexible Duct Connectors

Description

The most efficient way of eliminating the vibrations arising from the equipment and being transmitted to the duct work and eventually to the finished area. Catalyst manufacture's both insulated and non-insulated flexible duct connectors which are used to connect HVAC Equipment and Duct Work.

The flexible DUCT CONNECTOR has been manufactured out of an already existing steel-to fabric-to-steel connection, which enables a fast and simple connection between two (rigid) ducts. Once the galvanized steel overlap has been bent into the correct shape it can be fastened with self-drilling screws or pop rivets. Another possibility is spot welding. The result is a solid flexible connection which can be mounted simply and quickly. It meets the constructional demands.



Specification

Fabric	PVC Fabric both side vinyl coated
GSM	610gms/sq.mtr(180z/Sq.yard)
Colour	Matte Black
Width	100MM
Metal	G.I. Coil (28Gauge)
Metal Size	1 ¾" Both sides.

Standard Production Length

The standard production length of the DUCT CONNECTOR are 75Ft. 100Ft. 150Ft. Other lengths available on request. The Standard Production Length Of The Duct Connector Are 75ft. 100ft. 150ft. Other Lengths Available On Request.



Air Duct Connector Insulated

Description

The most efficient way of eliminating the vibrations arising from the equipment and being transmitted to the duct work and eventually to the finished area, without any heat loss.

Manufactured with GI strips on either sides or PVC fabric- with insulation in between to eliminate the vibration.



Specification:

Fabric	PVC Fabric both side vinyl coated
GSM	610gms/sq.mtr(180z/sq.yard)
Colour	Matte Black
Width	100MM
Metal	G.I. Coil (28Gauge)
Metal Size	1 ¾" Both sides
Insulation	4.2 R Value

3 Aluminium Foil Tapes



Description

Yas Tapes provides high quality Aluminium tapes in various sizes to meet specific requirements. With excellent conformability and easy tear, aluminium tape / foil tapes are total vapour barrier making them ideal for building and HVAC professionals who are looking for a consistent quality sealing solution. Designed to incorporate a high temperature acrylic adhesive, the aluminium tape product line is designed to cover all key application areas where high temperature resistance and electrical or thermal conductivity are required. Aluminium foil HVAC tape for joining and sealing joints, connections and seams on rigid fiber glass duct board and flexible air duct.



Specification

Backing Description	Aluminum
Adhesive	Acrylic Conductive
Total Thickness (Microns)	30-40 microns
Elongation (% at Break)	5%
Adhesion to Steel oz/in	36 oz/in
Thermal Resistance °F	30 °F to 250 °F
Breaking Strength lb/in	16 lb/in
Standard Sizes (Inches)	2" & 3"

Product Features

- Excellent adhesion to rigid fiberglass duct board and flexible air duct.
- Flexible and easy to create airtight bonds.
- Superior stability during extreme fluctuations in temperature.
- Resists water vapor and other HVAC duct contaminations.
- Indefinite product life after application.

Product Characteristics

- Superior stability during extreme fluctuations in temperature
- Resists water vapor, odor and smoke transmission
- Flame, weathering and UV retardant and high shear adhesion.
- Resistant to chemicals to protect surfaces during de-paint process and other chemical masking operations
- Highly engineered acrylic adhesive provides long term durability, but removes cleanly after harsh masking applications
- Heat and light reflective tape protects surfaces and enhances lighting efficiency
- Dead soft aluminum foil backing conforms to curved and uneven surfaces.

Shelf Life: 12 Months from the date of manufacture.

4 Foam Tapes



Description

Yas Tapes Provides high quality Foam tapes in various sizes to meet specific requirements. NBR foam tape is used for duct gasket insulation purpose. This tape is ideal for hot or cold piping and fittings. Due to high flexibility and conformability this tape is used in insulation purpose. It's Very high sealant to use with Air Conditioning, Duct work flexibility and conformability this tape is used in insulation purpose. For Inside A/c Machines units, Air Handling Units as an Air Tight sealant to prevent air leakage, to reduce vibration & Noise.

Physical Properties

Physical Property	Value
Raw Material Base	Polyurethane Foam
Color	Black, Light Grey
Specific Gravity	0.010 – 0.20
Elongation	<200 %
Odor	Odorless
Solids by Weight	100%
Physical State	Saturated Open Cell foam

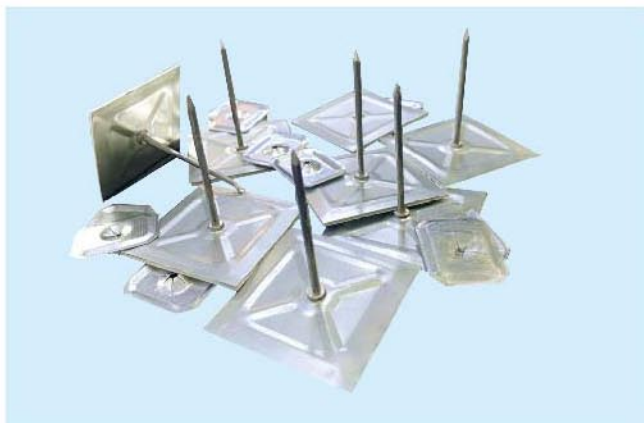


Specification

- Compressible foam sealant
- Molds to irregular surfaces
- Expands and conforms to fill gaps
- Resists vibrations, jolts and shock
- Resists ozone and UV degradation
- Won't dry out or crack
- Available gauges: 0.125" - 1.25"

5 Stuck Up Pins

Stuck up pins manufactured at Catalyst is designed for long life. Stuck up pins provide a firm grip to hold the glass wool to the duct or to any fixing panel.



Description

Insulation Stuck up pins are dependable, long-lasting and safe for fixing insulation to HVAC, ceiling and ducting purpose. These hangers are perfect to fix to substrate with blind rivets, adhesive or other mechanical fixing methods. HVAC stuck up pin comes up with a self sticking base for insulation hanger. These pins are designed for fixing insulation material to highly smooth surfaces such as air duct chambers & enclosures. They consist of a nail and washer which holds the insulation.

Specification

Product Name	
Base Material	Stainless steel or Galvanized steel
Pin Material	Stainless steel, Aluminum, galvanized steel
Base size	50×50mm(2"×2")
Pin diameter	2.7mm(12 Gauge)
Pin length	32mm,38mm,45mm, 50mm, 63mm, 89mm 114mm, 203mm
Application	Duct insulation, marine insulation, building insulation

Installation Instruction

- For using it, no need any tools. Peel the release paper from the stuck up pins and press to the duct surface or other surface where to install the insulation, but the surface need to be cleaned.
- Put the insulation material onto the stuck up pins and use a self locking washers to lock the stuck up pins, bend over or cut off the pin tip. Then it is done for a job.

6 Single/Double Deflection Grills & Registers



Description

- Single/Double deflection grills are generally used in sidewall application.
- Consist of two separate rows of individually adjustable vanes –front and rear vanes.
- Front vanes-horizontal so primary air leaving the outlet is directed above the room occupant and does not reach the occupied zone until well mixed with the secondary room air.
- Rear vanes- vertical and are used to direct the air in a straight blow or spread the air as required by the room layout. If required air flow can be directed at an angle to one or both sides and still retain a near parallel stream pattern.
- Construction is all extruded aluminium horizontal and vertical blade retain in a fixed or removable core.
- Standard finish is powder coat white while other finishes are available to suit the interior and architectural design requirements.
- Alternative finishes are available on special request with extra cost.

Construction

- Frame: High quality extruded aluminium profile with 30 mm flange width as standard 12, 16, 24 mm flange width are optional.
- Blades: Aerofoil blade from aluminium profile.
- Blade spacing: 20mm as standard



7 Linear Bar Grills & Registers



Description

- It is equally suitable as one place individual grill as a continuous linear grill. Having a low noise level and uniform airflow. It's suitable for supply or return air and may be installed in a ceiling, side wall and floor.
- Front blades are available in two deflection angles 0° and 15°. This 15 degree deflection blade is available in one way air pattern or two way air pattern.
- We can provide LBG with concave or convex curved section.
- Grills are supplied with the powder coating with colour as per RAL colour code.
- Alternative finishes are available on special request with extra cost.

Construction

- Manufactured from high quality aluminium extrusion, having different flange option.
- A set of individually adjustable rear mounted aerofoil vanes are available as option.
- Blade with the streamline shape with front width 3 mm and 5 mm are available.
- Face bar High quality aluminium profiles of 0°, 15°-1 way throw and 15°-2 ways throw.
- Minimum nominal grill height is 50mm up to 300mm as standard. Other grill height may be provided as per request.
- Minimum angle piece length is 1800 mm joining strips can be supplied for continuous unbroken appearance.
- Installation of grills can be with either spring clips or duct mounting using concealed brackets or screws.



8 Decorative Grill



Description

We manufacture products to meet the needs of architects, designers and contractors in all segments of the construction industry. Our manufacturing process allows us to rapidly design, customize and configure products desired by our clients in a limited timeframe.

Construction

Frame:

High quality extruded aluminium profile with 25mm flange width as standard and 12, 30mm flange widths as optional.

Core:

Core is made up of aluminium sheet, machined to the desired design patterns required by the customer.

Damper frame and blades:

High quality extruded aluminium profiles with black matt finish. Natural aluminium finish as option.



Standard finishes:

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

9 Linear Slot Diffuser



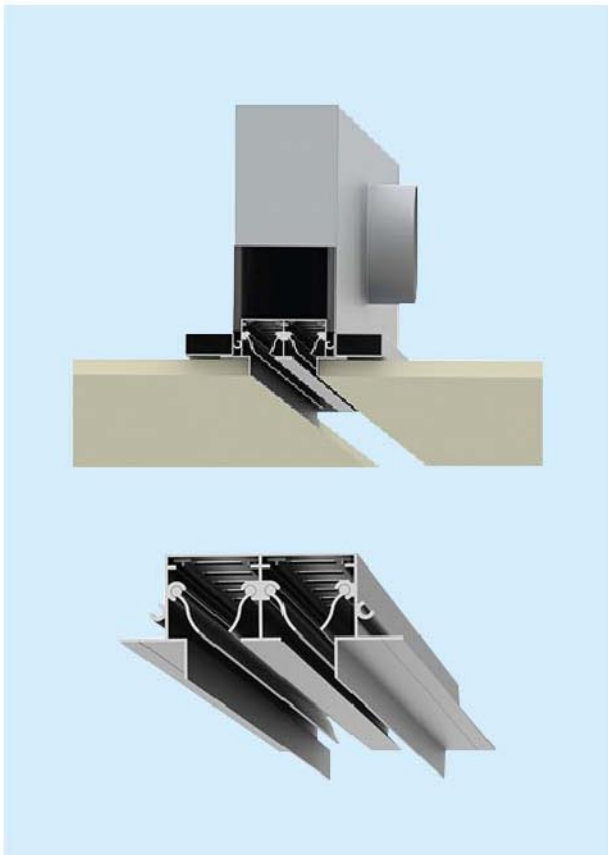
Description

- Linear as Linear slot diffuser are designed for a variable air volume system. They ensure a uniform blanket of air that adheres to ceiling even at low flow rates.
- Pattern controllers can be adjusted to adjust the air flow direction Right, Left or Down.
- Linear slot diffusers are available in three slot width 12.5mm, 20mm and 25mm with up to eight slots.
- Return diffusers are similar but without pattern controller.
- Factory made metered concerns are accurately assembled and carefully finishes for a smooth and unbroken corner treatment.
- Ideal for continuous length application.
- Slot diffuser is supplied with the powder coating with colour as per RAL colour code.
- Alternative finishes are available on special request with extra cost.

Construction

- Manufactured from high quality aluminium extrusion.
- Maximum pattern control length is 900mm.
- Hit and miss damper is supplied as per request.
- Integral volume damper is in mill finish, available on request in black matt finish.

10 Hidden Linear Slot Diffusers



It is designed to be used in ceiling applications where traditional slot diffusers border profiles are not desired to appear. Catalyst manufacture concealed ceiling slot diffusers are suitable for the installation of suspended ceilings and they are used to supply or exhaust air from the environment. It is suitable to use in places with ceiling height of 2.5 - 4 meters. They should be selected with 1, 2, 3 or 4 slots according to the air flow rate and noise criteria.

Plenum box installation should be done with hanger brackets to the ceiling or should be located on the box profile. Depending on the heating and cooling season, the adjustable wings must be set to the correct position. For adjustable air flow adjustment, a sliding damper is located behind rotatable wings.

Material:

Extruded aluminum frame and deflector.

Finishing:

- Standard colours are RAL 9010 and RAL 9016. Other colours are available as per requirement.

11 Square Diffuser

Description

- Yas diffuser can handle large amounts of air for a given pressure drop and noise level. It maintains an unbroken horizontal flow pattern for maximum cfm, down to minimum. Its pleasing appearance harmonizes with most of the interior design especially modular ceiling system.
- Central core is easily removable from face of the diffuser.
- Extremely flexible configuration with cores available for one, two, three or four way horizontal flow.
- Volume control damper can be adjusted from the face of the diffuser by removing the central core.
- Diffusers are supplied with the powder coating with colour as per RAL colour code.
- Alternative finishes are available on special request with extra cost.



Construction

- Outer frame and central core are manufactured from aluminium extrusion material.
- Yas diffuser are available in standard neck size of 150x150, 225x225, 300x300, 375x375 and 450x450mm
- Bigger sizes are available on request.



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