

WE CARE FOR THE AIR YOU BREATHE





FUTURE AIR FLOW





FUTURE AIR FLOW

Our factory is located in Erbil with an area of 1200 sq. meter. Future Air Flow invested and using latest automated machine to produce high quality product according to international standards.

We have set up our production lines to allow maximum flexibility that can adapt quickly to demand changes and can ensure best deliveries with consistent qood quality.







INTRODUCTION

THE COMPANY

Air Flow Air Distribution has been launched by Future Air Flow in 2018 in association with a group of specialists in the manufacturing of Air Terminals.

TRADE MARK

Our products are branded as Air Flow

PRODUCTS

Our range of products includes: Grilles, Registers, Linear Bar Grilles, Linear Slot Diffusers, Ceiling Diffusers, Jet Diffusers, Swirl Diffusers, Round Ceiling Diffusers, Flowbar Diffusers, Sand Trap Louvers, Fresh Air Louvers, Disc Valves, Security Grilles, Non Return Dampers, Volume Control Dampers, Pressure Relief Dampers, Variable Air Volume, Constant Air Volume, Sound Attenuators, Acoustic Louvers, Fire Dampers and Motorized Fire & Smoke Dampers.

GENERAL

From its inception, Air Flow invested in the best machinery available in the field, to build a product to international standards. We have recruited a team of experienced craftsmen with proven experience and are able to manufacture standard Air Terminals, as per our range of product or special designs and as per the project requirement. We have set up our production lines to allow maximum flexibility can adapt quickly to demand changes and can ensure best deliveries with consistent good quality.

CUSTOMER SERVICE

Our service oriented staff have a complete understanding of Air Distribution Engineering and will assist you to meet your needs and requirements, to create a thermally balanced, comfortable and highly efficient environment in your building.

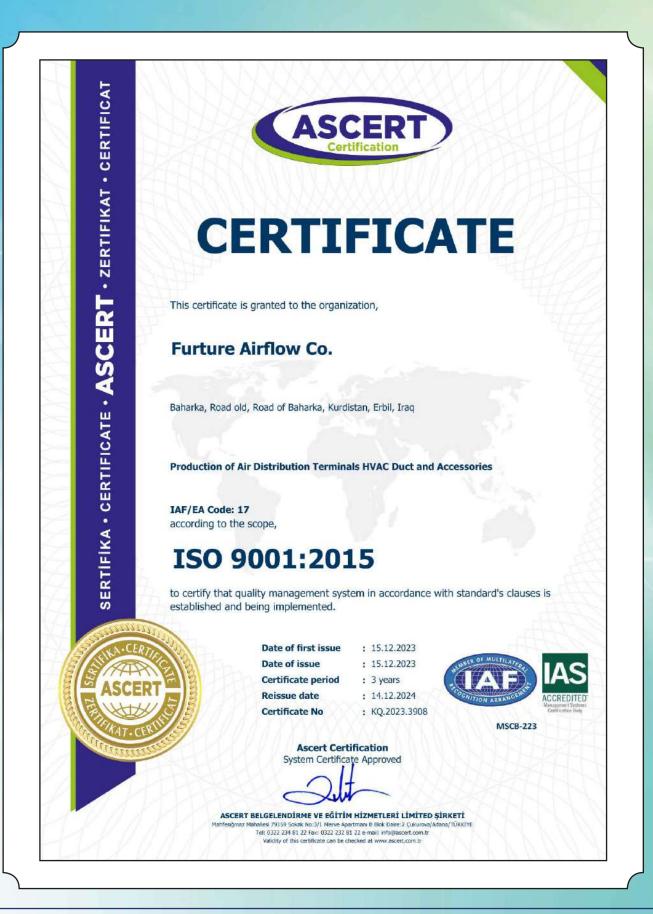
PRODUCTS

- * Grille & Register
- * Linear Bar Grille & Register
- * Linear Slot Diffuser
- * Ceiling Diffuser
- * Round Ceiling Diffuser
- * Disc Valve
- * Louver
- * Jet Diffuser
- * Fixed Swirl Diffuser
- * Flowbar Diffuser
- * Laminar Flow Diffuser

- * Security Grille
- * Floor Grille
- * Step Swirl Diffuser
- * Fire Damper
- * Pressure Relief Damper
- * Volume Control Damper
- * Non Return Damper
- * Access Door
- * Sound Attenuator
- * Acoustic Louver
- * Variable Air Volume



CERTIFICATIONS





TERMINOLOGY

Air Distribution

The transportation of a specified air flow to / from the treated space by means of duct work.

Air Diffusion

Distribution of the air in a space (called the treated space) by means of devices called air terminal devices in a manner so as to meet certain specified conditions such as air change rate, pressure, cleanliness, temperature, humidity, air velocity and noise level.

The point at which the discharged air from an outlet decreases to a given velocity usually 0.25m/s or 50fpm.

Throw

The distance, measured in meters or in feet that the airstream travels from the outlet to the point of terminal velocity.

Drop

The vertical distance between the center of an outlet and the bottom of the airstream at the end of horizontal throw

Envelope

The geometrical surface of all the point of an air jet corresponding to terminal velocity

Air Flow

The air flow is the rate of quantity of air passing through the air outlet to the room so as to achieve the desired design conditions such as temperature, noise level etc.

Static Pressure

Pressure inside the duct which is necessary to overcome friction resistance measured in Pa or In. Wg.

Total Pressure

Sum of the static and velocity pressure.

Induction

Process by which the primary air sets into motion air volume, called secondary air, in the room

Coanda Effect

Also called ceiling or wall effects. Tendency of an air stream to follow a wall plane when the stream is in contact with the wall. This effect increased throw and reduces drop.

Noise Levels

Decibel is the unit used to measure sound. It is logarithmic ration of 2 sound pressure levels (SPL Lp) or sound power levels (SWL Lw) where one is a reference level. The most commonly used criteria are Noise criteria curves (NC Level), Noise rating curves (NR Levels and dB(A).

Nozzle

An air terminal device designed to generate a low energy loss and to produce a maximum throw by minimum entrainment.

Register

A grille with a damper.

Air Terminal Devices

A device located in an opening provided at the boundaries of the treated space in order to improve a predetermined air movement within the space.

Supply

The air flow entering the treated space.

Exhaust

The air flow leaving the treated space by means of following methods: Extraction, Relief, Recirculation and Transfer.

Spread

The maximum total width of the air pattern in the envelope.

Grille

An air terminal device with multiple passages for the air. Usually placed on sidewalks and bulkheads.

Linear Grille

A grille with fixed linear blades, usually used in large continuous lengths.

Adjustable Grille

A grille with aerofoil blades (louvres) which can be adjusted to vary the air diffusion direction.

Diffuser

Supply air terminal device that can be square, rectangular or circular. Usually placed in the ceiling and consists of deflecting member to vary the air flow rate and direction.

Slot Air Terminal Device

A device with one or multiple slots for continuous long rectangular opening with or without adjustable member to vary the air flow rate and direction.

Damper

A device used to control the volume of air passing through a terminal by varying cross sectional area.

Louvre

A device used for intake from atmosphere with bird screen and the blades at -45degree inclination to eliminate rain meter

Fire Damper

A device which is installed in an air distribution system between two fire separating compartments and is designed to prevent propagation of fire and smoke.

Sound Attenuator

A device which is inserted into the air distribution system and designed to reduce airborne noise which is propagated along the ducts.

VAV

A device which is inserted into the air distribution system to control the air volume flow rate on variable volume system.



GRILLES & REGISTERS

Single & Double Deflection Grille & Register

Model	Description
SDG	Single Deflection Grille
SDR	Single Deflection Register
DDG	Double Deflection Grille
DDR	Double Deflection Register

Product Description

Frame & blades are made from extruded aluminum bars. Blades are of airfoil shape individually adjustable to set from 0° to 90° deflection. Single deflection grille consists of oneset of blades either in horizontal or vertical direction. Double deflection grille consists of two set of blades, front horizontal and rear vertical or vice versa. A register is a grille with opposed blade damper attached to the grilles' neck to facilitate precise air volume control. Flanges are available in 30mm width. Standard color finish is white powder coating - RAL 9010 or RAL 9016. Other colors are available upon request. OBD are easily removable and attached to the frame by means of (S) clips to ensure tight grip and maximum flexibility. The damper is made of extruded aluminium bars. The damper opening is easily adjusted by means of a control lever that is driven by a screw driver from the front face of the register.



SDR



Fixed Blade Grille & Register

Model	Description
FBG	Fixed Blade Grille
FBR	Fixed Blade Register

Product Description

Frame & blades are made from extruded aluminum bars. Consists one set of blades. Blades are of airfoil shape fixed horizontally at a 45° setting. A register is a grille with opposed blade damper connected to the neck. Standard color finish is white powder coating-RAL 9010 or RAL 9016. Other colors are available upon request.



Egg Crate Grille & Register

Model	Description
ECG	Egg Crate Grille
ECR	Egg Crate Register

Product Description

Frame is made from extruded aluminum bars. Core is made from aluminum grooved stripes arranged horizontally & vertically to form $(2/1" \times 2/1")$ cubic egg crate opening. The egg crate register is fitted with opposed blade damper made from extruded aluminum bars. Suitable for ceiling or sidewall mounting and heating, ventilating or cooling applications. Standard color finish is white powder coating RAL 9010 or RAL 9016. Other colors are available upon request.





GRILLES & REGISTERS

Perforated Grille & Register

Model	Description
PAG	Perforated Air Grille
PAR	Perforated Air Register

Product Description

PAG and PAR are grilles and registers with perforated sheet core that allows uniform supply or return. These grilles are commonly used in ceiling applications where uniform air supply is required and in some aesthetic appliactions. PAR is provided with an OBD, while PAG is supplied without an OBD. Standard color finish is white powder coating - RAL 9010 or RAL 9016. OTher colors are available upon request.

Door Grille & Filter Grille

PAG

Model	Description
DG	Door Grille
FLG	Filter Grille

Product Description

Non-vision door grilles are made of extuded aluminum blades and frames. Blades are of V shape. Door grilles are made of two frames; one is fixed on one side and the other adjustable on the opposite side. Standard color finishing is white powder coating -RAL 9010 or RAL 9016. Other colors are available upon request



LINEAR BAR GRILLES & REGISTERS

Single & Double Deflection Linear Bar Grille & Register

Model	Description
SDLBG	Single Deflection Linear Bar Grille
SDLBR	Single Deflection Linear Bar Register
DDLBG	Double Deflection Linear Bar Grille
DDLBR	Double Deflection Linear Bar Register

Product Description

The frame & bars are made of extruded aluminum. The bars are available with 0 or 15° deflection. The DDLBG & DDLBR consists of two sets of bars; front horizontal fixed bars & rear adjustable vertical bars. The SDLBR & SDLBG consist of one set of fixed horizontal bar. Linear Bar Grille can also be made into corner or curved shape. Standard color finish is white powder coating RAL 9010 or RAL 9016. Other colors are available upon request.





LINEAR SLOT DIFFUSERS

Linear Slot Diffuser

Model	Description
SLSD45°	Supply Linear Slot Diffuser with Hit & Miss Damper and
JEJE IJ	Deflector - 45° Diffuser Profile
RLSD45°	Return Linear Slot Diffuser with Hit Damper and
RL3D43	Deflector - 45° Diffuser Profile
SLSD90°	Supply Linear Slot Diffuser with Hit & Miss Damper and
SLSD 90°	Deflector - 90° Diffuser Profile
RLSD90°	Return Linear Slot Diffuser with Hit Damper and
RESD90°	Deflector - 90° Diffuser Profile

Product Description

Constructed of extruded aluminum bars, slot diffusers can be manufactured as 8-1 slots, with a standard slot width of 16mm, 20mm or 25mm. Supply linear slot diffusers include two deflectors per slot with hit & miss damper of perforated strip which is used as equalizing grid. Return linear slot diffusers are without deflectors but with hit damper. Linear slot diffuser can also be made into corner or curved shape. Standard color finish is white powder coating-RAL 9010 or RAL 9016. Other colors are available upon request.



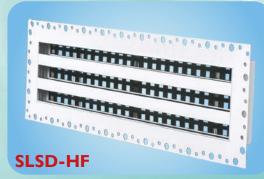


Linear Slot Diffuser Hidden Frame

Model	Description
SLSD45°	Supply Linear Slot Diffuser with Hit & Miss
JLJD IJ	Damper and Deflector - 45° Diffuser Profile Return Linear Slot Diffuser with Hit Damper
RISD45°	Return Linear Slot Diffuser with Hit Damper
RLSD45°	and Deflector - 45° Diffuser Profile

Product Description

Hidden Frame Linear Slot Diffusers can be installed in the ceiling where the frame is not visible from the face after installation. It is constructed of extruded aluminum bars, slot diffusers can be manufactured as 8-1 slots, with a standard slot width of 16mm, 20mm or 25mm. Supply linear slot diffusers include two deflectors per slot with hit & miss damper of perforated strips which is used as equalizing grid. Return linear slot diffusers are without deflectors but with hit damper. Standard color finish is white powder coating RAL 9010 or RAL 9016. Other colors are availableupon request.



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CEILING DIFFUSERS

Square Ceiling Diffuser

Model	Description
SCD	Supply Ceiling Diffuser
RCD	Return Ceiling Diffuser

Product Description

Ceiling Diffusers are made of extruded aluminum construction with multi-patterns, square or rectangular and with 3,2,1 and -4way patterns. Ceiling diffuser is composed of flush mounted frame with spring loaded removable cores for easy installation. Supply ceiling diffuser is provided with an opposed blade damper. It can also be provided with an equalizing grid as optional for proper air stream throw. Standard color finish is powder coating-RAL 9010 or RAL 9016. Other colors are available upon request.



Perforated Ceiling Diffuser

Model	Description
SPCD	Supply Perforated Ceiling Diffuser
RPCD	Return Perforated Ceiling Diffuser

Product Description

Perforated Ceiling Diffuser is designed to provide laminar flow with low velocities by evenly distributing the downward moving conditioned air. The perforated ceiling diffuser is effective especially in areas with heavy localized internal loads, as in computer rooms. The column of air delivered by the perforated ceiling diffuser cools the load source directly without generating high velocities in the occupied space. Optional accessories: Opposed blade damper supply, Equalizing grid, GI Adaptors.



Round Ceiling Diffuser

Model	Description
SRD	Supply Round Diffuser
RRD	Return Round Diffuser

Product Description

Round ceiling diffusers are made of aluminium and can be with adjustable or removable core. Standard color finish is powder coating-RAL 9010 or RAL 9016. Other colors are available upon request.





DISC VALVE

Exhaust Disc Valve

Model	Description
EDV	Exhaust Disc Valve

Product Description

Disc valves are constructed from steel with powder coating color RAL 9010 or RAL 9016. The outer body is fitted with a foam-rubber gasket to form an airtight seal with a galvanized steel mounting. The center core is adjustable by screw and nut for air volume control.



EDV

STLW

LOUVERS

Sand Trap Louver

	Model	Description
[STLW	Sand Trap Lover - Wall Mounted
	STLF	Sand Trap Lover - Flush Mounted

Product Description

The sand trap louvers are for external air intakes and made of extruded aluminum profiles. Blades are of U shape fixed vertically on the frame. Bottom frame is with holes for self emptying drain. Flush mounted type with drain pans are also available. The unit is provided with galvanized steel bird screen as a standard. Other mesh screens are optional. Also, it can be provided with an aluminum washable filter of 1" thick as an option. Standard color finish is white powder coating-RAL 9010 or RAL 9016. Other colors are available upon request.

Exhaust Air Louver

Model	Description
EAL	Exhaust Air Louver

Product Description

The Exhaust Air Louver is a weather proof external cover for air inlets and discharge openings, suitable for most external walls and screening applications. The EAL with a free area of %41 is composed of frame and horizontal blade assembly, manufactured from 1.2mm thick high quality extruded aluminium profiles. Blades are fixed rigidly to the main frame by rivets and set at an angle of °45 to the horizontal with 40mm spacing inclined downward to protect against rain water. 30mm frame as a standard. 20mm and 25mm are available, if required. A heavy duty option (EAL-H) also is available with 2mm thick extruded Aluminium frame and blades with 40mm frame and 50mm depth



EAL



LOUVERS

Gravity Louver

Model	Description
GL	Gravity Louver

Product Description

The Gravity Louver is composed of a set of horizontally mounted blades that are normally closed and designed to open due to excess airflow pressure and to close by means of gravity upon pressure reduction. The blades are made from lightweight aluminum while the frame is made from extruded aluminum. Standard color finish is white powder coating RAL 9010 or RAL 9016. Other colors are available upon request.

GL

Fresh Air Louver & Filter Louver

Model	Description
FAL	Fresh Air Louver
FL	Filter Louver

Product Description

The Fresh Air Louver is a simple form of filter louvers. It is composed of an exhaust louver with an aluminium filter fixed at the back. The fresh air louver with a free area of %38 is suitable for use in air inlets of fresh air ducts and air handling units. It is also suitable for use at dirty air exhaust discharge. 30mm frame as a standard. 20mm and 25mm are available, if required. A heavy duty option (FAL-H) also is available with 2mm thick extruded Aluminium frame and blades with 40mm frame and 50mm depth.

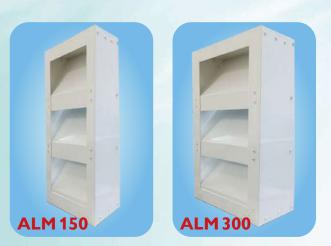
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Aluminium Acoustic Louver

Model	Description
ALM150	Aluminium Acoustic Louver with 150 mm Depth
ALM300	Aluminium Acoustic Louver with 300 mm Depth
ALM-150F	Aluminium Acoustic Louver Type F with 150 mm Depth
ALM-200F	Aluminium Acoustic Louver Type F with 200 mm Depth
ALM-250F	Aluminium Acoustic Louver Type F with 250 mm Depth
ALM-300F	Aluminium Acoustic Louver Type F with 300 mm Depth

Product Description

The Acoustic Louvers are mainly used in AHU / Generator rooms. They are designed to act as a noise barrier along with providing the required ventilation. Louver construction is available in galvanized and aluminium. For aluminium, the frame and blades are made from extruded aluminium profiles. Optional Bird/Fly Screen, Filter (25/12mm Aluminium).





JET DIFFUSERS

Jet & Ring Jet Diffuser

Model	Description	
JD-A	Jet Diffuser	
JD-C	Ring Jet Diffuser	

Product Description

Jet diffuser consists of discharge nozzle with spherical outlet mounted in a house, mounting flange and a circular duct rear connection spigot. Jet diffusers are used for air conditioning system in large rooms (halls, assembly rooms, malls, airport). Standard color finish is powder coating-RAL 9010 or RAL 9016. Other colors are available upon request.





Drum Jet Diffuser

Model	Description
DJD	Drum Jet Diffuser

Product Description

Drum jet diffusers are used for large rooms & arranged on the side wall areas, e.g. : airport, waiting room, factory, theater, museum etc. They are designed to handle large air volumes and long throws. Drum jet diffusers are designed with adjustable blade in drum body so that the direction of air stream can be adjusted. It can be supplied with OBD to facilitate precise air volume control. Standard color finish is white powder coating RAL 9010 or RAL 9016. Other colors are available upon request.



SWIRL DIFFUSER

Square and Round Swirl Diffuser

Model	Description
SSD	Square Swirl Diffuser
RSD	Round Swirl Diffuser

Product Description

Swirl diffusers are manually adjustable. It can adjust the direction of the current to adapt to any change of the pattern of the building. Air is blown by means of swirls which guarantees high inductivity as well as the rapid reduction in wind speed and temperature. Standard color finish is white powder coating-RAL 9010 or RAL 9016. Other colors are available upon request.





SSD



FLOWBAR SLOT DIFFUSERS

Flowbar Slot Diffuser - Flange Type

Model	Description
FTFB-F	Flowbar Slot Diffuser - Flange Type

Product Description

Flowbar Diffuser are designed for high air flow quantities, suitable for ceiling applications. Air pattern can be controlled using pattern controllers, powder coated black, if required. Flowbar can be manufactured in 1 and 2 slots. 3 Slot Diffuser is available upon request.



FTFB-F

Flowbar Slot Diffuser - Hidden Frame

Model	Description
FTFB-HF45-°	Flow Bar Slot Diffusers - Hidden Frame 45°
FTFB-HF90-°	Flow Bar Slot Diffusers - Hidden Frame 90°

Product Description

Flowbar Diffuser are designed for high air flow quantities, suitable for ceiling applications. Air pattern can be controlled using pattern controllers, powder coated black, if required. Flowbar can be manufactured in 1 and 2 slots. 3 Slot Diffuser is available upon request. Hidden Frame Flowbar Slot Diffusers can be installed in the ceiling where the frame is not visible from the face after installation. Available in 45° and 90°



FTFB-HF90-^O

LAMINAR FLOW DIFFUSERS

Model	Description
LFD	Laminar Flow Diffuser

Product Description

Laminar Flow Diffuser is designed to be used in clean space environments such as medical facilities, research industries and hospital operation rooms. With a capability to provide uniform velocity air and temperature to the occupied zone. With removable perforated face and optional safety chain for easy cleaning. Plenum from Aluminium (standard), galvanized steel or stainless steel sheet. Standard finish RAL 9010. Stainless Steel / Galvanized Steel Perforated Face. Inlet Damper constructed of Extruded Aluminium (optional). With Hepa Filter H13 or H14 grade





SECURITY GRILLES & REGISTERS

Model	Description
FSG	Security Grille
FSR	Security Register

Product Description

Security Grilles and Registers wall sleeves are made of heavy gauge galvanized steel. Frame are made of heavy duty extruded aluminium profile with 30 mm flange width as standard. Face bars are made of heavy duty extruded aluminium profiles of 1-°15,°0 way throw or 2-°15 way throw. Opposed Blade Damper are made of high quality extruded. Adjustable vertical rear blades are available if required. With Opposed blade damper as required. Aluminium profiles with natural aluminium finish. Black matt finish shall be provided ifrequired. Available in powder coated RAL 9010 or 9016 as standard. Other powder coated color finishes are available upon request.

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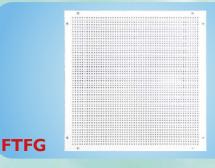
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FLOOR GRILLE

Model	Description
FTFG	Floor Grille

Product Description

Floor Grille is a floor mounted grille, used in cooling, heating or air ventilation applications. They are composed of a set of perforated sheets fixed to the front and back of a frame. Standard perforated face is with (16/3) inch diameter holes on (4/1) inch staggered centers. The perforated sheet is made of 1.8mm thick Galvanized steel powder coated. 4mm blades at 16mm pitch is made of extruded aluminium. Removable face for cleaning and maintenance. Standard size of 600x600mm face and 550x550 mm neck.



ROUND STEP SWIRL DIFFUSER

Model	Description
RSSD	Round Step Swirl Diffuser

Product Description

Step swirl diffusers are used in theatres, halls, music halls, cinemas and other places. The diffuser is installed on the vertical side of steps or on the ground. There are four sections on the panel for blowing air producing a swirl motion. Every blade is vertical to each other. The seams on the panel guarantee a horizontal blow. The panel is fixed to the internal beam by central bolt with a trim lid to cover. For better conformability, the max. temperature difference shall not exceed +/- 6T.



RSSD

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VOLUME CONTROL DAMPERS

Product Description

Volume Control Dampers are specially designed for high / medium / low pressure systems. They are designed to operate from one control point. The damper blade opening is controlled by a hand locking quadrant. An option with electric motor is also available for the Flange type (GAM) and the Pre-Insultaed type (PAM) VCDs.

Depending on the appliaction, casings are made from 14 gauage to 23 gauge Galvanized sheets. For Pre-Insulated type, casings are made from Pre-Insulated Sandwich Paned of 20mm or 30mm thickness. Similarly depending on the application, blades are made from 1.1mm thick extruded aluminium (airfoil shaped) or 16 gauge to 23 gauge Galvanized sheet. Standard length is 170m except. Standard length is 170mm except for the Round type where the length depends on the diameter.

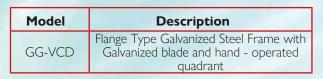


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Model	Description
GA-VCD	Flange Type Galvanized Steel Frame with Aluminum blade and hand - operated quadrant



Model	Description
GAM-VCD	Flange Type Galvanized Steel Frame with Aluminum blade and control electic motor





Model	Description		
GGM-VCD	Flange Type Galvanized Steel Frame with Galvanized steel blade and control electric motor		



VOLUME CONTROL DAMPERS

Product Description

Volume Control Dampers are specially designed for high / medium / low pressure systems. They are designed to operate from one control point. The damper blade opening is controlled by a hand locking quadrant. An option with electric motor is also available for the Flange type (GAM) and the Pre-Insultaed type (PAM) VCDs.

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Model	Description
GAB-VCD	Box Type Galvanized Steel Frame with Aluminum blade and hand - operated quadrant

Model	Description
GGB-VCD	Box Type Galvanized Steel Frame with Galvanized steel blade and hand operated quadrant

Slip & Clip Type



Model	Description
gas-vcd	Slip & Clip Type Galvanized Steel frame with aluminum blade and hand - operated quadrant



Model	Description		
GGS-VCD	Slip & Clip Type Galvanized steel frame with galvanized blade and hand - operated quadrant		

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VOLUME CONTROL DAMPERS

Product Description

Volume Control Dampers are specially designed for high / medium / low pressure systems. They are designed to operate from one control point. The damper blade opening is controlled by a hand locking quadrant. An option with electric motor is also available for the Flange type (GAM) and the Pre-Insultaed type (PAM) VCDs.

Depending on the appliaction, casings are made from 14 gauage to 23 gauge Galvanized sheets. For Pre-Insulated type, casings are made from Pre-Insulated Sandwich Paned of 20mm or 30mm thickness. Similarly depending on the application, blades are made from 1.1mm thick extruded aluminium (airfoil shaped) or 16 gauge to 23 gauge Galvanized sheet. Standard length is 170mm except for the Round type where the length depends on the diameter.

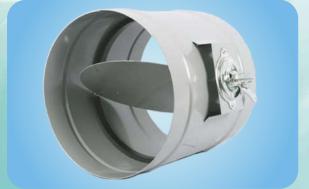
Pre-Insulated Type



Model	Description
PA-VCD	Pre - Insulated Sandwich panel frame with aluminum blade and hand - operated quadrant

Model	Description
PAM-VCD	Pre - Insulated Sandwich panel frame with aluminum blade and control electric
	motor

Round Type



Model	Description
GGR-VCD	Round Type Galvanized Steel Frame with Galvanized blade and hand-operated quadrant



-	Model	Description
	GGRM-VCD	Round Type Galvanized Steel Frame with Galvanized blade and control electric motor.



PRESSURE RELIEF DAMPER

Model	Description
GGPRD	Galvanized Pressure Relief Damper
GAPRD	Aluminium Pressure Relief Damper

Product Description

Pressure Relief Dampers protect the HVAC systems and various industrial processes from excess air pressure when it exceeds the desired limit. They are designed to maintain a constant pressure level inside pressurized areas by relieving the excess air. PRDs are provided with weighed metal strips. Each damper is tested after fabrication to operate at the required pressure. Casing and blade is made from galvanized steel sheet. Standard is mill finish.



NON RETURN DAMPER

Model	Description
GIH-NRD	Galvanized Non-Return Damper for Medium & High Pressure
GIL-NRD	Galvanized Non-Return Damper for Low & Medium Pressure
PA-NRD	Pre-Insulated Non-Return Damper for Low & Medium Pressure

Product Description

The NRD is a duct mounted device composed of horizontal blades that are normally closed and are free to rotate in their horizontal axis. They are used at the exit terminal of exhaust ducts and fans. The damper opens against a certain pressure in order to expel the exhaust air, also preventing back flow. GIH-NRD has 1.5mm galvanized casing and 1.5mm extruded aluminium blade, while GIL-NRD has 1.2mm galvanized casing, and 1.0mm extruded aluminium blade. PA-NRD, casings are made from Pre-insulated Sandwich Panel (20mm/30mm thickness) and blades are made from 1.0mm extruded aluminum. Operating temperature is °10-C to °110C.





ACCESS DOOR

Model	Description
GAD	Duct Access Doors
GAD-H	Duct Access Doors with Hinges

Product Description

Access Doors are durable and practical means of gaining access to components inside the duct work. They are suitable for low, medium and high pressure applications. Construction may be Pre-Insulated or galvanized steel.







SOUND ATTENUATOR

ModelDescriptionSASound Attenuator

Product Description

Sound attenuators are used in HVAC systems to absorb and thus reduce the excess noise that is produced by the fan or various air handling units. Sound Attenuators are constructed from Pre-galvanized steel in accordance with DW144 HVCA duct work standard. They have been tested in accordance with ASTM E477. Upon availability of the equipment's Octave Band Sound Power Level, Air Flow Quantity and proper Duct Layout drawing, an attenuator could be selected in order to achieve the required Noise Level.



GALVANIZED ACOUSTIC LOUVER

SA

Model	Description
ALG300	Galvanized Acoustic Louverswith 300 mm depth
ALG600	Galvanized Acoustic Louverswith 600 mm depth

Product Description

The Acoustic Louvers are mainly used in AHU / Generator rooms. They are designed to act as a noise barrier along with providing the required ventilation. Louver construction is available in galvanized and aluminium. For Galvanized, frame is made from 1.5mm galvanized steel sheet and blades are double skin with an outer face (1mm roll formed galvanized steel sheet) and an inner face (0.8mm perforated galvanized steel sheet). Optional Bird/Fly Screen, Filter (25/12mm Aluminium).

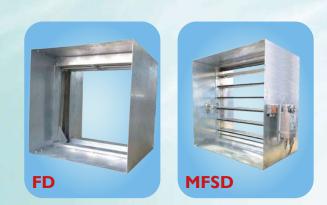


FIRE DAMPER

Model	Description
FD	Curtain Type Fire Damper
MFD	Motorized Fire Damper
MSD	Motorized Smoke Damper
MFSD	Motorized Fire Smoke Damper

Product Description

Fire Dampers are curtain type recommended for usage in low, medium and high velocity applications. Duct connections to the same are breakaway style transverse joints. The assembly and installation adheres to ASTM A 653, NFPA 90A, and SMACNA.





VARIABLE AIR VOLUME

Bypass Terminal Unit

Model	Description
BPTU	Bypass Terminal Unit

Product Description

For BPTUs, casings are made from 0.9mm galvanized steel sheet with circular inlet spigot and rectangular outlet connection and damper blades are made from 1.5mm galvanized steel sheet. The damper blades are double-walled galvanized steel plate sandwiching a closed cell neoprene gasket lined with acoustic mineral insulation and black tissue facing which meets UL 181 standard. The damper blade has a precision die cast zinc alloy shaft which rotates in self-lubricating brass bushes which facilitates extremely low friction in operations.



Pressure Independent Terminal Unit

Model	Description
PITU	Pressure Independent Terminal Unit

Product Description

PITU casings are made from 0.9mm galvanized steel sheet with circular inlet spigot and rectangular outlet connection. The damper blades are double-walled galvanized plate sandwiching a closed cell neoprene gasket lined with acoustic mineral insulation and black tissue facing which meets UL 181 standard. This enables better flow management and facilitates low leakage. Cross flow differential pressure sensor (Multi-point averaging inlet type) are used for measuring volume. Shaft indicator is used for damper positioning. Also available are factory fitted and in-house calibrated control components (encased in control panel as an option) viz. actuators and transformers. Rectangular discharge outlet is with clip and drive cleat duct connection. Air flow capacity ranges from 3776 - 35 lps with minimum inlet static pressure of 20Pa.

They are AHRI certified as per AHRI Standard 2011-880 and ASHRAE Standard 1996-130. NC calculations are made based on the procedures outlined as per AHRI Standard 2008-885.



PITU

Diffuser Pressure Independent Terminal Unit

Model	Description
DPITU	Diffuser Pressure Independent Terminal Unit

Product Description

Diffuser PITUs consist of a casing with circular inlet spigot, rectangular outlet connection. Circular damper blade and cross flow differential pressure sensor for measuring air volume. The casing design and optimized silencer geometry reduce self-generated noise, minimize pressure drop. Casing is 0.9mm galvanized steel sheet and blades are double-skin 0.9mm thick galvanized steel sheet each.





VARIABLE AIR VOLUME

Round Pressure Independent Terminal Units

Model	Description
RPITU	Round Pressure Independent Terminal Unit

Product Description

Round Pressure Independent Terminal Units consist of a casing with circular inlet spigot and integral 900mmlong attenuator. Circular damper blade and cross flow differential pressure sensor for measuring air volume. The casing design and optimized silencer geometry reduce self-generated noise and minimize pressure drop. Pressure independent terminal units are designed to control air volume flow rate for supply air on variable volume system. These units are designed to supply the air flow rate of conditioned air into an occupied zone in response to control signal from a thermostat or building management system. These could also be used as stand alone system. Casing are made from 0.9mm (21 gauge) galvanized steel sheet. The Blades are double-skin 0.9mm thick (21 gauge) galvanized steel sheet each. The Bearing is Brass Bush 12mm Round. Aluminum Flow Grid.

Data are tested in accordance with AHRI Standard 2011-880 and ASHRAE Standard 1996-130. NC calculations are made based on the procedures outlined as per AHRI Standard 2008-885.are made based on the procedures outlined as per AHRI Standard 2008-885.



Pressure Independent Terminal Units with Electric Heater

Model	Description
PITU-EH	PITU with Electric Heater

Product Description

For PITU-EHs, casings are made from 0.9mm galvanized steel sheet with circular inlet spigot and rectangular outlet connection. The damper blades are double-walled galvanized steel plate sandwiching a closed cell neoprene gasket lined with acoustic mineral insulation and black tissue facing which meets UL 181 standard. This enables better flow management and facilitates low leakage. Cross flow differential pressure sensor (Multi-point averaging inlet type) are used for measuring volume. Shaft indicator is used for damper positioning. Also available are factory fitted and in-house calibrated control components (encased in control panel as an option) viz. actuators and transformers. Rectangular discharge outlet is with clip and drive cleat duct connection. Air flow capacity ranges from 3776 - 35 lps with minimum inlet static pressure of 50Pa.

Data are tested in accordance with AHRI Standard 2011-880 and ASHRAE Standard 1996-130. NC calculations are made based on the procedures outlined as per AHRI Standard 2008-885.

The heater is UL listed and are available in three types: Open Coil, Tubular and Finned Tubular. Modulating / On-Off and Single Phase / Three Phase options are available.













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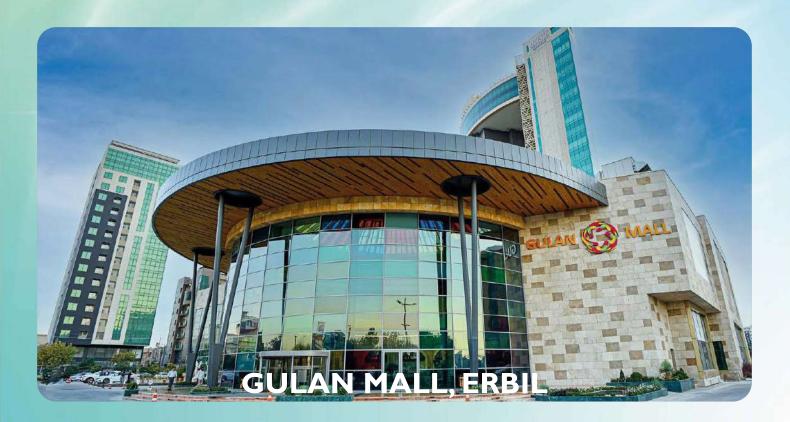






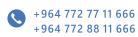








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