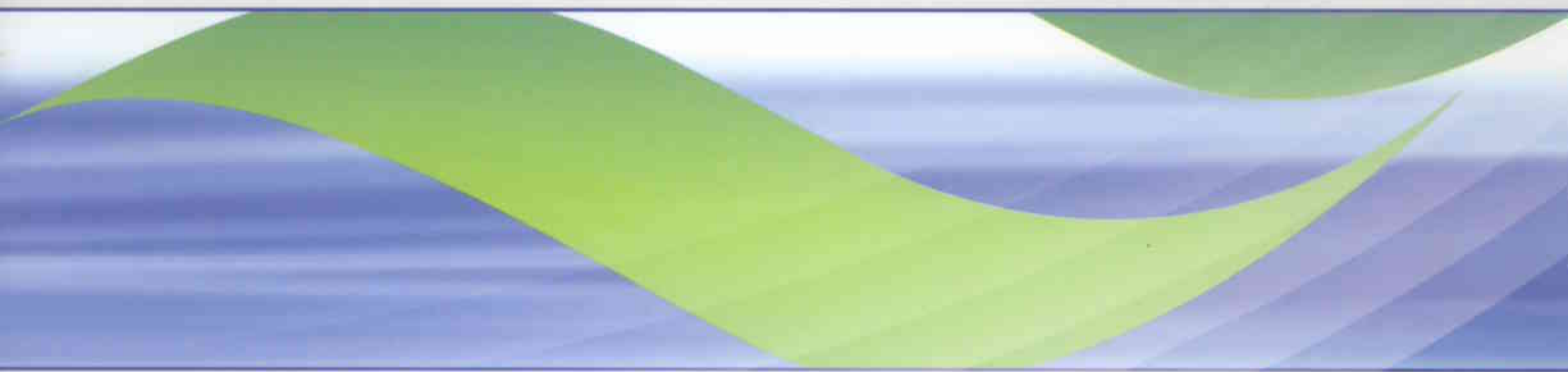




PRODUCT BROCHURE



INTRODUCTION

Flowtech Air Distribution has been launched by Faisal Jassim Industries (FJ Ind) in 2000 in association with a group of specialists in the manufacturing of Air Terminals. M/s Faisal Jassim Industries is a well-established group, specializing in the engineering manufacturing and trading of equipment for the building services industry, in general, and the air conditioning sector, in particular.

Our range of products includes: Grilles, Registers, Linear Diffusers, Ceiling Diffusers, Sand Trap Louvers, Fresh Air Louvers, Non Return Dampers, Volume Dampers, and other air terminal devices.

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

Flowtech have tested their range of Air Terminals and obtained **ETL** Certification on most of the performance data. In fact, our Air Terminals are tested in accordance with the **ASHRAE 70-1991** Standard "Method of Testing for Rating Performance of Air Outlets and Inlets", which incorporate **ADC 1062: GRD-84** Test Code for Grilles, Registers and Diffusers. We are committed to follow up on this, by obtaining all relevant quality assurances, ensuring reliability and total customer satisfaction.

Our factory is located in Dubai industrial zone, close to the powder coating plants, giving us flexibility to offer, our customer our standard finishes or any special coating needed on their project. Our raw material is procured locally from Dubai, who have built worldwide name for the purity and quality of its Aluminium. This has ensured a continuous availability of raw material at very competitive rates, with a world-renowned quality.

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.

The Management



LIST OF FLOWTECH PRODUCTS

- Supply Air Grilles & Registers
- Return Air Grilles & Registers
- Egg Crate Return Air Grilles & Registers
- Door Grilles
- Linear Bar Grilles
- Linear Slot Diffusers
- Ceiling Diffusers
- Round Ceiling Diffusers
- Jet Diffusers
- Disc Valves
- Louvers
- Sand Trap Louvers
- Gravity louvers
- Volume Control Dampers
- Fire Dampers

ETL TEST REPORTS

Intertek ETL SEMKO	ETL SEMKO	ETL SEMKO
<p>Intertek 3933 U.S. Rd. Cortland, NY 13045 Phone: 607-753-6711 Fax: 607-758-6506</p> <p>Order No. 3063712 REPORT NO. 3063712-001</p> <p>September 13, 2004</p> <p>TEST OF AREA FACTOR, THROW PATTERN, STATIC PRESSURE AND SOUND POWER LEVEL ON A 300 X 150 MM DOUBLE DEFLECTION SUPPLY AIR REGISTER</p> <p>RENDERED TO FLOWTECH PO BOX 1871 DUBAI, U.A.E.</p> <p>INTRODUCTION This report gives the results of tests conducted on a Double Deflection Supply Air Register. The test results include Static Pressure, Area Factor, Throw and Sound Power Level. The sample was selected and supplied by the client and received at the laboratories on August 5, 2004. The register appeared to be in new unused condition upon receipt.</p> <p>AUTHORIZATION Purchase Order No. GD-02-04 dated July 24, 2004 from Faisal Jassim Trading Co. (LLC).</p> <p>TEST METHOD The register was tested in accordance with the ASHRAE 70-1991 Standard "Method of Testing for Rating the Performance of Air Outlets and Inlets". The register was installed in the facility and supplied with measured volumes of air. The static pressure was measured 1 1/2 duct diameters upstream of the register inlet.</p> <p><small>An independent organization testing for safety, performance, and certification</small></p>	<p>September 13, 2004</p> <p>OR, THROW PATTERN, SOUND POWER LEVEL AND DOUBLE DEFLECTION AIR REGISTER</p> <p>RENDERED TO FLOWTECH PO BOX 1871 DUBAI, U.A.E.</p> <p>Double Deflection Supply Air Register. The test results include Static Pressure, Area Factor, Throw and Sound Power Level. The sample was selected and supplied by the client and received at the laboratories on August 5, 2004. The register appeared to be in new unused condition upon receipt.</p> <p>70-1991 Standard "Method of Testing for Rating the Performance of Air Outlets and Inlets". The register was installed in the facility and supplied with measured volumes of air. The static pressure was measured 1 1/2 duct diameters upstream of the register inlet.</p>	<p>September 13, 2004</p> <p>VERSUS STATIC PRESSURE AND SOUND POWER LEVEL TESTS ON A DOUBLE DEFLECTION RETURN AIR GRILLE</p> <p>RENDERED TO FLOWTECH PO BOX 1871 DUBAI, U.A.E.</p> <p>Double Deflection Return Air Grille. The test results include Static Pressure, Area Factor, Throw and Sound Power Level. The sample was selected and supplied by the client and received at the laboratories on August 5, 2004. The register appeared to be in new unused condition upon receipt.</p> <p>70-1991 Standard "Method of Testing for Rating the Performance of Air Outlets and Inlets". The register was installed in the facility and supplied with measured volumes of air. The static pressure was measured 1 1/2 duct diameters upstream of the register inlet.</p>

TERMINOLOGY

Air Distribution

The transportation of a specified air flow to or from the treated space by means of ductwork.

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.

Terminal Velocity

The point at which the discharged air from an outlet decreases to a given velocity usually 0.25 m/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 centre of an outlet and the bottom of the airstream at the end of horizontal throw.

Envelope

The geometrical surface of the points of an air jet corresponding to terminal velocity.

Spread

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

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 at the static & velocity pressure.

Induction

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

Coanda Effect

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

Noise Levels

Decibel is the unit used to measure sound. It is logarithmic ratio of two 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 (N.C. level), Noise rating curves (N.R. levels) and dB (A).

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 airflow leaving the treated space by means of following methods. Extraction, Relief, Recirculation & Transfer.

Register

A grille with a damper.

Grille

An air terminal device with multiple passages for the air, usually placed on side walls, 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 square rectangular or circular usually placed in the ceiling and consists of deflecting members for diffusion.

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 & direction.

Nozzle

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

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 air from atmosphere with bird screen and the blades at 45° inclination to eliminate rainwater.

Fire Damper

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

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

SUPPLY AIR GRILLES & REGISTERS



DDR

MODELS	DESCRIPTION
SDG	Single Deflection Grille
SDR	Single Deflection Register
DDG	Double Deflection Grille
DDR	Double Deflection Register

RETURN AIR GRILLES & REGISTERS



FBG

MODELS	DESCRIPTION
FBG	Fixed Blades Grille
FBR	Fixed Blades Register

EGG CRATE RETURN AIR GRILLES & REGISTERS



ECG

MODELS	DESCRIPTION
ECG	Egg Crate Grille
ECR	Egg Crate Register

Product Description:

Frame and blades are made from extruded aluminium bars. Blades are of airfoil shape individually adjustable to set from 0° - 45° deflection. Single deflection grille is formed of one set of blades either on horizontal direction, or on vertical direction. Double deflection grille consists of two sets of blades, front horizontal set and rear vertical set, or vice-versa. A register is a grille with opposed blade damper attached on the grille's neck. Standard colour finish is white powder coating to RAL 9010 or RAL 9016. Other colours are available upon request.

Product Description:

Frame and blades are made from extruded aluminium bars. Composed of one set of blades. Blades are of airfoil shape fixed horizontally at 45° down setting. A register is a grille with opposed blade damper connected to the neck. Standard colour finish is white powder coating to RAL 9010. Other colours are available upon request.

Product Description:

Frame is made from extruded aluminium bars. Core is made from aluminium grooved strips arranged horizontally and vertically to form cubic egg crate of 1/2"x1/2"x1/2" opening. The egg crate return register is fitted with opposed blade damper made from extruded aluminium bars. Suitable for ceiling or sidewall for heating, ventilating, and cooling applications. Painted of powder coating system. Standard colour finish is white RAL 9010 or RAL 9016. Other colours are available upon request.

DOOR GRILLES



DG

MODELS	DESCRIPTION
DG	Non-Vision Door Grille

LINEAR BAR GRILLES



SLBG

MODELS	DESCRIPTION
SLBG	Supply Linear Bar Grille without opposed blade damper
SLBR	Supply Linear Bar Register with opposed blade damper
RLBG	Return Linear Bar Grille without opposed blade damper
RLBR	Return Linear Bar Grille with opposed blade damper

LINEAR SLOT DIFFUSERS



RLSD

MODELS	DESCRIPTION
SLSD	Supply Linear Slot Diffuser
RLSD	Return Linear Slot Diffuser

Product Description:

Non-vision door grilles are made of extruded aluminium blades and frames. Blades are of V shape. Door grille is made of two frames; one is fixed on one side, and adjustable one is on the opposed side. Standard colour finish is white powder coating. Other colours are available upon request.

Product Description:

The frame and bars are made of extruded aluminium. The bars are available with from 0° or 15° deflection. The SLBG and SLBR are made of two sets of bars; front horizontal fixed bars, and rear adjustable vertical bars. The RLBG and RLBR are made of one set of fixed horizontal bars. Standard colour finish is white powder coated to RAL 9010 or RAL 9016. Other are available upon request.

Product Description:

Constructed of extruded aluminium bars, slot diffusers can be manufactured of 1 - 8 slots, with options of slot opening of 16mm, 20mm. Supply linear slot diffuser includes two deflectors per slot and with hit & miss damper of perforated strips, which is used as equalizing grid. Return linear slot diffuser is without deflectors, but with hit & miss damper. Linear slot diffuser can also be made of corner shape and of curved shape, as per site measurement. Standard colour finish is white powder coated to RAL 9010 or RAL 9016. Other colours are available upon request.

CEILING DIFFUSERS



SCD

MODELS	DESCRIPTION
SCD	Supply Ceiling Diffuser
RCD	Return Ceiling Diffuser

ROUND CEILING DIFFUSERS



CDR

MODELS	DESCRIPTION
CDR-BD	Supply Round Ceiling Diffuser with butterfly damper
CDR	Supply Round Ceiling Diffuser without butterfly damper

JET DIFFUSERS



JN 151S

MODELS	DESCRIPTION
JN 150	Jet Diffuser with multi-elements
JN 151S	Jet Diffuser with single element

Product Description:

Ceiling diffusers are made of extruded aluminium construction with multi-pattern, square or rectangular of 1, 2, 3, and 4 way patterns. Ceiling diffuser is composed of flush mounted frame with spring loaded removable cores for easy installation. Supply ceiling diffuser is provided with opposed blade damper; it can also be provided with equalizing grid, as optional, for proper air stream throw. Standard colour finish is white powder coated to RAL 9010 or RAL 9016. Other colours are available upon request.

Product Description:

Round ceiling diffusers are made of aluminium construction with adjustable and removable core. The "UP" position of core provides vertical throw, and the "DOWN" position provides horizontal throw. Standard colour finish is powder coated to RAL 9010 or RAL 9016. Other colours are available upon request.

Product Description:

Jet diffusers are air terminal devices used for high air volume and long throw. Jet diffuser construction is of galvanised steel, or aluminium as optional. The model JN 150 consists of jet diffusers mounted on a panel in a series of one, two, three, or four elements. The model JN 151 S is a single element jet diffuser without panel suitable for installations on a round duct. The core of the jet diffuser element is adjustable and can be rotated of 360° and tilted up to max. 30° from center to produce a wide variation in air jet angles. Standard colour finish is powder coated to RAL 9010 or RAL 9016. Other colours are available upon request.

DISC VALVES



EDV

MODELS	DESCRIPTION
EDV	Exhaust Air Disc Valve
SDV	Supply Air Disc Valve

LOUVERS



EAL

MODELS	DESCRIPTION
EL	Exhaust Air Louver
FAL	Fresh Air Louver
FL	Filter Louver

SAND TRAP LOUVERS



STL

MODELS	DESCRIPTION
STL	Sand Trap Louver

Product Description:

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

Product Description:

The louvers are constructed from extruded aluminium frame and blades. Blades are fixed horizontally at 45° down setting. The fresh air louver is provided with aluminium washable filter of 1" thick. Other filter media can be installed upon request. Bird screen, or mesh screen are optional. Standard colour finish is white powder coated to RAL 9010 or RAL 9016. Other colours are available upon request.

Product Description:

The sand trap louvers are for external air intakes and made of extruded aluminium profiles. Blades are of "U" channel shape fixed vertically on the frame. Bottom frame is with holes for self emptying drain. The unit is provided with galvanised steel bird screen as standard. Other mesh screens are optional. Also it can be provided with aluminium washable filter of 1" thick as optional. Standard colour finish is white powder coated to RAL 9010 or RAL 9016. Other colours are available upon request.

GRAVITY LOUVERS



GL

MODELS	DESCRIPTION
GL	Wall Gravity Louver
DGL	Duct Gravity Louver

VOLUME CONTROL DAMPERS



AVD

MODELS	DESCRIPTION
GVD	Volume Control Damper with galvanised steel blades
AVD	Volume Control Damper with aluminium aerofoil blades

FIRE DAMPERS



FDA

MODELS	DESCRIPTION
FDA	Curtain Type Fire Damper blades inside air stream
FDB	Curtain Type Fire Damper blades outside air stream
FDC	Curtain Type Fire Damper 100% free area, blades outside air stream
FDR	Curtain Type Fire Damper 100% free area, blades outside air stream, with round sleeves connection

Product Description:

The gravity louver is composed of a set of horizontally mounted blades that are normally closed and designed to open due to airflow pressure and to close by means of gravity upon pressure reduction. This louver serves as a non-return damper and can be manufactured with one side frame, as wall gravity louver, or with two sides frame as duct gravity louver. The blades are made from light weight aluminium, while the frame is made from extruded aluminium. Standard colour finish is white powder coated to RAL 9010 or RAL 9016. Other colours are available upon request.

Product Description:

Volume control damper is made of multi-blades, opposed blades, or parallel blades. Frame is flanged type of galvanised steel construction, blades are of single skin interlocking galvanised steel for model GVD, or of double skin aluminium aerofoil construction for model AVD. Hand locking quadrant is provided for manual operation. Extended shaft and motor base is provided for motorised operation. The blades are mounted on nylon bushings and operated by external linkage.

Product Description:

Fire dampers are made of 20 ga. galvanised steel frame, and 24 ga. galvanised steel blades. Blades are curtain type of gravity shutter without negator closure spring for static operation, or with stainless steel negator closure spring for dynamic operation. Fire rating is 1 1/2 hr UL, 2 hrs BS standard. Fusible link is 165°F UL listed.

QUICK SELECTION TABLES OF FLOWTECH PRODUCTS

SUPPLY AIR REGISTERS

FRONT VELOCITY RANGE: $2 < V_f < 5 \text{ m/s}$ NC RANGE: $15 < NC < 35$

S.No.	SIZE (MM)	M ³ /H
1	300 x 150	150 - 375
2	450 x 150	230 - 575
3	500 x 150	260 - 650
4	600 x 150	350 - 875
5	300 x 200	200 - 500
6	450 x 200	350 - 875
7	500 x 200	410 - 1025
8	600 x 200	525 - 1300
9	750 x 200	700 - 1750
10	500 x 250	550 - 1400
11	600 x 250	700 - 1750
12	900 x 250	1300 - 3275
13	600 x 300	870 - 2175
14	750 x 300	1300 - 3275
15	900 x 300	1640 - 4100

RETURN AIR GRILLES & REGISTERS

NECK VELOCITY RANGE: $2 < V_k < 5 \text{ m/s}$ NC RANGE: $15 < NC < 35$

S.No.	SIZE (MM)	M ³ /H
1	300 x 150	295 - 738
2	450 x 150	445 - 110
3	600 x 150	600 - 1500
4	300 x 200	395 - 990
5	600 x 200	800 - 2000
6	300 x 250	495 - 1240
7	500 x 250	850 - 2100
8	750 x 250	1200 - 3200
9	300 x 300	600 - 1500
10	600 x 300	1200 - 3060
11	750 x 300	1540 - 3850
12	900 x 300	1850 - 4640

EGG GRATE RETURN AIR GRILLES & REGISTERS

CORE VELOCITY RANGE: $2 < V_f < 5 \text{ m/s}$ NC RANGE: $15 < NC < 35$

S.No.	SIZE (MM)	M ³ /H
1	150 X 150	120 - 300
2	300 X 150	260 - 650
3	450 X 150	400 - 1000
4	200 X 200	260 - 650
5	300 X 200	400 - 1000
6	400 X 200	540 - 1350
7	250 X 250	400 - 1000
8	500 X 250	800 - 2000
9	600 X 250	1070 - 2680
10	600 X 300	1200 - 3000
11	600 X 400	1640 - 4100
12	600 X 600	2400 - 6000
13	900 X 600	3700 - 9300

LINEAR BAR GRILLES

FRONT VELOCITY RANGE: $2 < V_f < 5 \text{ m/s}$ NC RANGE: $15 < NC < 35$

S.No.	SIZE (MM)	M ³ /H/L.M
1	100mm	430 - 1050
2	150mm	650 - 1650
3	200mm	750 - 1800
4	250mm	1100 - 2700
5	300mm	1200 - 3000

LINEAR SLOT DIFFUSERS

FRONT VELOCITY RANGE: $2 < V_f < 5 \text{ m/s}$ NC RANGE: $15 < NC < 35$

S.No.	SLOT	M ³ /H/L.M
1	1	60 - 150
2	2	100 - 300
3	3	150 - 400
4	4	200 - 540
5	5	250 - 650
6	6	300 - 800

SQUARE CEILING DIFFUSERS

FRONT VELOCITY RANGE: $2 < V_f < 5 \text{ m/s}$ NC RANGE: $15 < NC < 35$

S.No.	SIZE (MM)	M ³ /H
1	150 X 150	65 - 160
2	225 X 225	150 - 380
3	300 X 300	260 - 650
4	375 X 375	400 - 990
5	450 X 450	550 - 1400
6	525 X 525	740 - 1850
7	600 X 600	920 - 2300

ROUND CEILING DIFFUSERS

FRONT VELOCITY RANGE: $2 < V_f < 5 \text{ m/s}$ NC RANGE: $15 < NC < 40$

S.No.	SIZE (MM)	M ³ /H
1	150 Ø	135 - 330
2	200 Ø	240 - 600
3	250 Ø	375 - 925
4	300 Ø	535 - 1335
5	350 Ø	730 - 1800
6	400 Ø	950 - 2380
7	450 Ø	1200 - 3000
8	500 Ø	1480 - 3700

JET DIFFUSERS

FRONT VELOCITY RANGE: $4 < V_f < 7 \text{ m/s}$ NC RANGE: $35 < NC < 55$

S.No.	SIZE (MM)	M ³ /H
1	200 Ø	450 - 700
2	250 Ø	700 - 1200
3	300 Ø	1000 - 1700
4	350 Ø	1300 - 2400
5	400 Ø	1800 - 3000

DISC VALVES

NC RANGE: $15 < NC < 40$

S.No.	SIZE (MM)	M ³ /H
1	100 Ø	20 - 150
2	150 Ø	60 - 270
3	200 Ø	80 - 300

FLOWTECH FACTORY





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