

HVAC Products



BETEC CAD.
Beyond the Comfort Air.

COMPANY PROFILE



CONTROLS *FLOW BY* **VARIABLE AIR VOLUME**



TESTED PRODUCTS

BETEC CAD. Manufactures variable Air Volume (VAV) control assemblies, which are normally, used in HVAC Applications. These VAV boxes are designed to suit to control the volume flow rate of the conditioned air in to an occupied zone in response to a duct static pressure or, zone temperature control signal.

Features:

BETEC CAD. VAV Single duct relief unit provides energy saving by maintaining constant room temperature with low-pressure drops, by Variable Air Volume supplies with options of pneumatic, electronic or digital controls to suit most of the various applications.

These controls allow the VAV units to monitor the desired flow rate as directed by the thermostat and compensate the requirement instantly for any changes in supply air pressure which tend to alter the supply air volume.

Room temperature control is achieved by supplying the required quantity of cool or hot air, to the conditioned zone without the incorporation of any additional attenuation, under normal design conditions.

“These VAVs Data is Tested & Certified by ETL Intertek U.S.A. As per AHRI Standards 880”

By Pass Type VAVs



VAV - B10

Pressure Dependent – VAVs



VAV - B20

Pressure Independent – VAVs



VAV - B30

Induction Type VAVs



VAVI - B40

Constant Air Volumes CAVs



CAV - B50

VAV – With Duct Heater



VAV – B30 DH

ULTRA LOW LEAKAGE FIRE & SMOKE DAMPERS

BETEC CAD's Product are designed based on **SMACNA, NFPA & UL** standards, in the interest of improving the safety for the public benefit.

“BETEC CAD. – BUILDING CONDITIONED AIR FOR HUMAN SAFETY”

MSFD-GB-30 – LIFE SAFETY DAMPERS

Today as per **BOCA & IBC** standards, Building safety is a demandable choice by the public, increase of fire accidents. **BETEC CAD's** Fire, Smoke and combination of Fire / Smoke dampers are produced in accordance with **UL** and **AMCA** performance standards to prevent and spread of Smoke / Fire breakups.

APPLICATION FOR BUILDING & COMMERCIAL VENTILATION



MSFD



555 / 555S



MFD

Fire Rating : 3 Hrs/ 1-1/2 Hrs; Leakage Rating: Class – I/ Class – II

For more details about **BETEC CAD's** UL classified Products.

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BREAKS

FIRE & SMOKE

Applications for Commercial, Industrial and Tunnel Ventilation

Type TVD B40 / TVFD B40 – Life Safety Dampers

As per **BOCA** International Standards, **NFPA** – Fire Protection Authority Standards UL Tested, BS Tested and AMCA tested **BETEC CAD's FIRE & SMOKE DAMPERS** for Industrial Applications like Nuclear, Chemical off shore and Tunnel ventilations installation.

TVD – B40 / TVFD – B40 Dampers are suitable for Fire, Volume control, Balancing, Fire Rated Actuators, Pneumatic or Electric or Hydraulic or Manual with Auxillary Feedback signals for computer Aided Monitoring and Controlling.



TVD B40

Fire Rating : 4 Hrs. as per BS : 476 (LPCB – BRE – UK)



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Volume Control Dampers



Variable Air Volumes



Fire Dampers



Motorized Fire / Smoke Dampers



Sound Attenuators



Acoustic Louvers



Weather Louvers

Sand Trap Louvers

Pressure Relief Dampers



(In-house)

Access Doors



(In-house)

Plenums , Grills & Diffusers



Intertek

Valves & Nozzles



Intertek

Filters



(In-house)

Duct Heaters



(In-house)

Tunnel Ventilation Dampers



Gas Tight Dampers



(In-house)

Marine Dampers



(Under Process)

Sunshade Louvers



(In-house)

Fire Rated Doors



(Under Process)



(In-house)

Jet Fans



(In-house)

ABOUT US

Established in the year 1994, **BETEC CAD** now stands as one of the leading HVAC (Heating Ventilating and Air-Conditioning) manufacturer and supplier in U.A.E. offering a wide range of products, services and technology in various sectors such as construction, commercial, industrial sectors etc. bestowed with all the well-established engineering capabilities to match with all the international standards.

BETEC CAD is serving for HVAC industry, where high-end infrastructure are coming and beating the World's latest designs. "UNDERWRITERS LABORATORIES", World's leading Fire and safety authority, have Tested, Certified and Classified "**BETEC CAD**" Dampers for fire and Safety applications.

OBJECTIVE

Our objective is to become a leading manufacture for the best products meeting with all the Technical Specifications and keep up the high degree of respect and moral values in terms of customers satisfaction, reliability and experience.

QUALITY

Quality plays a major role in achieving these objectives and every operational area of the Company is expected to adhere to Company standards, procedures and specifications. All activities associated with product integrity are tightly controlled and documented by its strict quality assurance programs.

CUSTOMER SERVICE

BETEC CAD believes in 100% customer satisfaction and strives meticulously for maintaining enduring and healthy relationship with its customers. We are proud to offer the most comprehensive and complete offering of products in the Air Movement and Control Customer Association Industry. The Company recognizes the vital importance of meeting or exceeding Customers, expectations, and will respond promptly, courteously and efficiently to Customers at all times. Keeping industry trends and client requirements in mind, we seek to continually innovate in a quest for greater customer satisfaction.

TECHNICAL EXPERTISE

Our Technical and experienced professionals committed to providing the best products meeting with all major market requirements of HVAC, Air handling products. Qualified and talented manpower, including engineering professionals serve to meet the high demand for our products. We also supply customized products to our clients on request, besides supplying the ever popular standard range of products, ensuring compliance with international Quality and Safety Standard.





COMPETITIVE RATES & TIMELY DELIVERY

Competitive rates and timely delivery of the products are some of our other hallmarks that add to our edge over others.



R&D

We have taken the utmost care to build up a complete R&D unit with modern facilities in an aim to bring smart products with wealth of innovative features. We are consistently expanding upon this position by means of intensive research and development activities, with in house Lab facilities.

PRODUCTS & SERVICES

- Volume Control Dampers
- Variable Air Volumes
- Fire Dampers
- Motorized Fire / Smoke Dampers
- Sound Attenuators
- Acoustic Louvers
- Weather Louvers
- Sand Trap Louvers
- Pressure Relief Dampers
- Access Doors
- Plenums, Grills & Diffusers
- Valves & Nozzles
- Filters
- Duct Heaters
- Tunnel Ventilation Dampers
- Gas Tight Dampers
- Jet Fans
- Fire Rated Doors
- Sunshade Louvers

PRODUCT TESTING & CERTIFICATIONS

Our Product Testing or Certifications from the below mentioned internationally renowned Certified bodies are adding up another milestone to our brand image. As a fully certified ISO 9001 company, we make sure that our products are designed, manufactured and delivered, meeting the international standards.

Product	Standards
MSFD	AMCA, Cert Aire , & UL (Underwriters Laboratories) & BRE - Uk
FD	UL (Underwriter Laboratories)& BRE - Uk
TVD	BRE-UK-BS-476
VAV Terminals	AHRI & ETL Intertek
Leakage Dampers	Cert Aire
Louvers	AMCA (500 D)
Grilles	ETL Intertek
Diffusers	ETL Intertek
Fire Rated Door	UL (Under Process)

CIVIL DEFENSE CERTIFICATIONS

We proudly announce that our Fire Dampers (FD), Motorized Fire Dampers (MFD), Motorized Smoke Dampers (MSD) & Motorized Smoke Fire Dampers (MSFD) have already certified by Civil Defense Authorities of Dubai, Sharjah & Abu Dhabi (including all Emirates of U.A.E). And Kuwait (KFD), Qatar, Oman.

PAST PROJECTS

BETEC CAD. has to its credit many mega projects including Airports, Metros & Tunnels, Power Plants, Villas, High end and Luxurious Towers, Malls, Commercial Buildings, Residential Buildings etc. and few of them are;

- International Airport Hangers – Dubai
- Dubai Int'l Financial Centre – DIFC
- Dubai Convention Centre – Dubai
- Jumeirah Village Triangle Zone-II, 770 Nos. Villas
- Dubai Police Force & Army Accom.(11 Bldgs.)
- AL Ghurair City (Refurbishment) - Dubai
- Emirates Towers – Dubai
- Palm Jumeirah Marina Apartments
- Palm Jumeirah Monorail Project
- Madinat Zayed Passport Office Bldg- Abu Dhabi
- Shuweihat Desalination Station. - Abu Dhabi
- Fujairah water & Power Station
- Snow Centre (Mall of the Emirates)
- Qatar Petroleum – Qatar
- Porto Arabia, The Pearl Qatar, Doha, Qatar
- ARAMCO, Kingdom of Saudi Arabia
- Al Ahli Bank – Bahrain
- Delhi Metro Railway Corporation – India
- Microsoft Asian Headquarters- Hyderabad
- Jebel Ali Power & Desali 'L' Stn. Ph.-I&II
- K-Race Track, YAs Island, Abu Dhabi
- Al Jazira Club Towers, Abu Dhabi

Attached the detailed list of past prestigious projects carried out by **BETEC CAD.**

IN-HOUSE TESTING FACILITIES

It is absolutely necessary that all the products should meet the requirements demanded from its specifications. In-House Testing Facilities are available for Performance and Endurance Testing for all the products.

BETEC CAD. has been leader for over 20 years, in designing, manufacturing, durable, high performance control Dampers for industrial and commercial building ventilation applications. Constructed from heavy-duty, high quality steel with the most advanced equipment's in the industry. **BETEC CAD.** Dampers can stand up to the toughest and most demanding environments and can be custom-built to meet the exact needs of virtually any ventilation or process applications.

BETEC CAD. manufactures, **UL** classified dampers to meet the standards of **NFPA** - National Fire Protection Authority, for human, life and property safety. To meet the demands of fire and smoke protection, these dampers are available in a range of classifications and with a variety of custom built features and options.

BETEC CAD. fire dampers are designed to operate as an integral part of Engineered smoke management system for building controls, and are used in walls, ceiling and floors. They are suitable for both dynamic or static fan on systems. Fire Dampers are required by the International Uniform Building Code to maintain the required fire resistance rating of walls, partitions, and floors when they are penetrated by air ducts or other ventilation openings.

A duct or ventilation openings in any of the fire rated partitions would permit a fire to spread from the compartment of origin to adjoining compartments or space. Fire Dampers or Fire-Smoke dampers are installed in these ducts or ventilation openings. They close automatically upon detection of heat by a Thermal responsive device (TRD), blocking the openings and preventing the spread of fire or smoke in to the adjoining compartment.

BETEC CAD's experienced and professional team, provide quality product through continued commitment to research and development and with the introduction of new technologies.

Standards and Codes.

Fire-resistive construction requirements usually are determined by the local or state code authority. Local and state codes are usually adaptations of the national and model codes, such as the International Building Code, published by the International Code Council, Inc. (ICC); BOCA National Building Code published by the Building Officials and Code Administrators International, Inc. (BOCA); the Uniform Building Code published by the International Conference of Building Officials (ICBO); and the Standard Building Code published by the Southern Building Code Congress International, Inc. (SBCCI).

The National Fire Codes published by the National Fire Protection Association (NFPA) contain recommended practices and technical data for determining fire-resistive requirements. Standards for fire-resistive tests may be found through the American National Standards Institute (ANSI), ASTM, UL, and the NFPA.

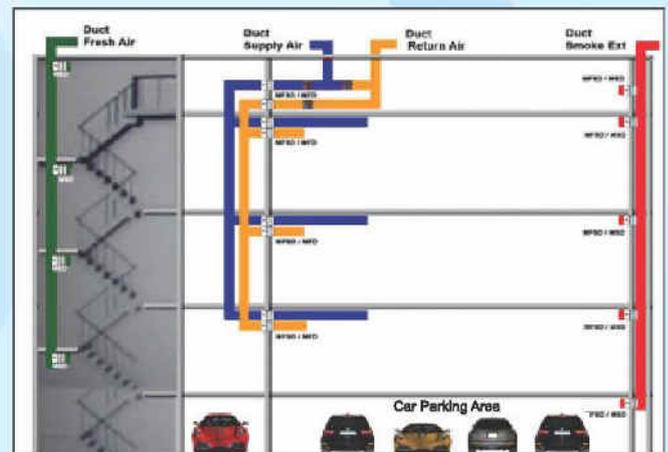
Testing of fire-resistive components and assemblies may be conducted by any of several independent testing laboratories. The most prominent testing laboratories evaluating fire resistive materials and assemblies are **UL** - Under Writers Laboratories of USA.

DISCLAIMER OF WARRANTIES

BETEC CAD's products are designed based on "SMACNA", "NFPA", technological data in the interest of improving the safety for the public benefit. **BETEC CAD** disclaims any liability for any personal injury, loss of life, property damage, or other damage of any nature whatsoever, whether special, indirect, consequential or compensatory, direct or indirectly resulting from any accident, regardless of legal theory. In no event shall **BETEC CAD's** liability exceed the amount paid by customer / contractor to that individual product cost OR US\$1000/- whichever is lesser, regardless of legal theory.

Note: Damper once installed, needs to be strictly maintained for every month and operation performance should be recorded by trained engineer or concern department experts, as per the Operation and Maintenance manual.

Engineered Fire & Smoke management system in a building.



Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.



FIRE DAMPERS

Motorized Fire Dampers

MFD - GB 20/30, Stainless Steel / Galvanized Steel Construction

3V Single Skin Blades; Static / Dynamic; Fire Rating : 1.1/2 Hr./ 3 Hrs.

Models For 1.1/2Hrs: MFD-GB-20-A; MFD-SB-20-A; MFD-SGB-20-A; MFD-GSB-20-A

Models For 3Hrs: MFD- GB-30-A; MFD-SB-30-A; MFD-SGB-30-A; MFD-GSB- 30-A

MFD B-20/30 Series is a high performance UL 555 Classified with 1.1/2 hr. / 3hr. rating Motorized fire damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage in either direction.

	Module	Width x Height	Mounting Position
Size Limitations	Single	24" x 48"	V/H
	Single	36" x 36"	V/H
	Single	48" x 48"	V/H
	Multiple	144" x 96"	V/H



MFD - GB 30



MFD - GBF 30



Motorized Fire Dampers with DTRD.

MFD - SBF / GBF 20/30, Stainless Steel / Galvanized Steel Construction

3V Single Skin Blades; Static / Dynamic; Fire Rating : 1.1/2 Hr./ 3 Hrs.

Models For 1.1/2Hrs: MFD-GB-F-20-A; MFD-SB-F-20-A; MFD-SGB-F-20-A; MFD-GSB-F-20-A

Models For 3Hrs: MFD-GB-F-30-A; MFD-SB-F-30-A; MFD-SGB-F-30-A; MFD-GSB-F-30-A

MFD SBF / GBF -20 Series is a high performance UL 555 Classified with 1.1/2 hr. / 3hr. rating Motorized fire damper, to ensure damper closing with DTRD - dual heat response with melting fuse and TRD, may be installed vertically or horizontally (with blades running horizontally) with fire resistance rating in either direction.

	Module	Width x Height	Position
Size Limitations	Single	4" x 4"	V/H
	Single	36" x 36"	V/H

Fire Dampers

FD - GB 20/30 Galvanized Steel Construction

Curtain Blades, Static / Dynamic; Fire Rating : 1.1/2 Hr./ 3 Hrs.

Models For 1.1/2Hrs: FD-GB-20-AS; FD-GB-20-BS; FD-GB-20-AF; FD-GB-20-BF;

Models For 3Hrs: FD-GB-30-AS; FD-GB-30-BS

FD GB-30/20 Series is a high performance UL 555 Classified with 1.1/2 hr. / 3hr. rating Fire damper with Curtain blades, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally for static application and vertically (with blades running horizontally) for dynamic application and is rated for fire resistance in either direction.

	Module	Width x Height	Mounting Position
Size Limitations	Single	4" x 4"	V/H
	Single	36" x 36"	V/H
	Single	30" x 48"	V/H
	Multiple	144" x 96"	V/H



FD - GB - 30

Motorized Smoke Dampers

MSD-SB/GB 20, Stainless Steel/Galvanized Construction.

3V Single Skin Blades; Static / Dynamic;

Leakage Rating to Class-1, Class-2, Class-3 at 250°F.

Models for class I : MSD-GB-20-C1-A; MSD-SB-20-C1-A; MSD-SGB-20-C1-A; MSD-GSB-20-C1-A

Models for class II : MSD-GB-20-C2-A; MSD-SB-20-C2-A; MSD-SGB-20-C2-A; MSD-GSB-20-C2-A

MSD B-20 Series is a high performance UL 555S Classified, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage in either direction. **BETEC CAD** smoke dampers are all UL 555S Classified and cover leakage Classes Class-1, Class-2, Class-3 at ambient and elevated temp. 250°F



Size Limitations	Module	Width x Height	Position
	Single	6" x 6"	V/H
	Single	36" x 36"	V/H
	Multiple	72" x 36"	V
	Multiple	144" x 96" *	V/H

Motorized Fire Smoke Dampers

MSFD - SB/GB 20/30, Stainless Steel/Galvanized Steel Construction

3V Single Skin Blades; Static / Dynamic; Fire Rating : 1.1/2 Hr./ 3 Hrs.

Leakage Rating to Class-2, and Class-3 at 250°F.

Models: For Class-2; 1. 1/2 Hr Rating : MSFD-GB-20-C2-A; MSFD-SB-20-C2-A; MSFD-SGB-20-C2-A; MSFD-GSB-20-C2-A

Models: For Class-2; 3 Hr Rating : MSFD-GB-30-C2-A; MSFD-SB-30-C2-A; MSFD-SGB-30-C2-A; MSFD-GSB-30-C2-A

MSFD B-30/20 Series is a high performance UL 555 / 555S Classified with 1.1/2 hr./ 3hr. rating Motorized Fire Smoke damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage Class 2 / Class 3 in either direction.



Size Limitations	Module	Width x Height	Position
	Single	9" x 9"	V/H
	Single	36" x 36"	V/H
	Multiple	72" x 36"	V
	Multiple	144" x 96" *	V/H

Motorized Fire Smoke Dampers

MSFD - SBC1/GBC1 20, Stainless Steel / Galvanized Steel Construction

3V Single Skin Blades; Static / Dynamic; Fire Rating : 1.1/2 Hr./ 3 Hrs.

Leakage Rating to Class-1 at 250°F.

Models: For Class-1; 1. 1/2 Hr Rating : MSFD-GB-20-C1-A; MSFD-SB-20-C1-A;

MSFD-SGB-20-C1-A; MSFD-GSB-20-C1-A Models: For Class-2; 3 Hr Rating :

MSFD-GB-30-C1-A; MSFD-SB-30-C1-A; MSFD-SGB-30-C1-A; MSFD-GSB-30-C1-A

MSFD B-20/30 Series is a high performance UL 555 / 555S Classified with 1.1/2 hr. / 3hr. rating Motorized Fire Smoke Damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage Class 1 in either direction.

Size Limitations	Module	Width x Height	Position
	Single	6" x 6"	V/H
	Single	36" x 36"	V/H
	Multiple	72" x 36"	V
	Multiple	144" x 96" *	V/H



Smoke Dampers can be used in two different applications, where they simply close and prevent the circulation of air and smoke through duct or a ventilation opening in a smoke barrier. Or they may be designed to control the spread of smoke using walls and floors as barriers and using the building's HVAC system and or dedicated fans to create pressure differences. Higher pressures surround the fire area and prevent the spread of smoke from the fire zone into other areas of the building. Smoke Dampers are motorized with electric actuator. They may be controlled by a smoke or heat detector signal, a fire alarm signal, or in a variety of ways by the building control system to accomplish the intent of the design.

* indicates tests are under process

INDUSTRIAL VENTILATION DAMPERS

Tunnel Ventilation Dampers

BETEC CAD. Industrial Dampers can stand up to the toughest and most demanding environments and can be custom-built to meet the exact needs of virtually any ventilation or process applications.

TVD - SB / GB 40, Stainless Steel / Galvanized Construction

Aerofoil Blades; Static / Dynamic;

Fire Rating : 4Hrs Fire Resistance as per LPCB – BRE – UK

Test Standard : BS476 Part 20-22.

Leakage Rating: as per UL555S (Tests Under Process)

Drive : Electric / Pneumatic.

Models: TVD-B-40D-E; TVD-B-40D-Pn

TVD B-40 Series is a stainless steel high performance 3hrs. rating fire damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 4000 fpm and 24" w.g. (6000Pa) and is rated for airflow and leakage class 2 in either direction.



TVD - B40

Size Limitations	Module	Width x Height	Position
	Single	12" x 12"	V/H
	Single	40" x 48"	V/H
	Multiple	80" x 96"	V

Oil & Gas Dampers

GSD-SB-40-E; GSD-SB-40-E; Stainless steel Galvanized Steel Construction.

Aerofoil Blades; Static / Dynamic;

Leakage Rating to As per Standards KTA 3601

Drive : Electric / Pneumatic.

Model For Electric Drive: GSD-B-40-E (ExProof)

Model For Pneumatic Drive: GTD-B-40-Pn (High Temp)

BETEC CAD. Gas tight dampers are designed such that they can isolate sections of a ventilation system with a very high level of sealing (gas tight). This can be required for safety reasons in certain operational conditions. GTD-B-40 shut off dampers are designed so that after closure, even with failure of power supply to the actuator, the damper maintains the sealed closure, even in accordance with KTA 3601 (Guidelines for Nuclear Plant) and A0 A60 (type approved) for Marine, Oil & Gas applications. The compact design and robust actuator mechanisms of these shut-off dampers enable them to be installed in any orientation.



GSD-B-40D -E

Marine & Off- Shore fire Dampers

BETEC CAD Marine & off - Shore fire Dampers can stand up to the toughest and most demanding environments and can be custom-built to meet the exact needs of virtually any ventilation or process applications.

MOFD-SB / GB 60, Galvanized / Stainless Steel Construction

Aerofoll Blades; Stalle / Dynamic; Fire Rating : 3 Hrs.

Drive : Electric / Pneumatic.

Models: MOFD - SB60-B; MOFD - GB60-B

MOFD - SB/GB-60 Series is a stainless / Galvanized to airflow in HVAC systems with velocities to 3000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage in either direction.



MOFD-SB-60

Size Limitations	Module	Width x Height	Position
	Single	6" x 6"	V/H
	Single	40" x 48"	V/H



Volume control dampers

Volume control dampers are square and rectangular type with both parallel blade operation and opposed blade operation, Low leakage blade construction, is to suit for high performance applications where dampers are subjected to face quite, efficient, rattle free operation.

VCD - GB-10 (Tested by Certaire as per AMCA 500D) Galvanized Steel Construction.

3V Single; Low Leakage Rating to Class-1, Class-2; Drive : Manual Quadrant

Models: VCD-GB-10 / 20 A/B

VCD GB 10 Series is a galvanized steel high performance low leakage volume control damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage Class-1, Class-2 in either direction. The standard construction is suitable for a leakage of Class-1 <1%, Class-2 <3% when fully closed position. The square and rectangular type VCDs are designed for handling maximum air capacities at minimum pressure drop.



Single Skin Damper
VCD - GB-11



Double Skin Damper
VCD - GAB - 22



Volume Control Dampers

VCD - GB-20 (Tested by Certaire as per AMCA 500D) Galvanized Steel Construction.

Aerofoil Blades; Low Leakage Rating to Class-1, Class-2; Drive : Manual Quadrant

Models: VCD-GB-10 / 20 A/B

VCD GB 20 Series is a galvanized steel high performance low leakage volume control damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage Class-1, Class-2 in either direction. The standard construction is suitable for a leakage of Class-1 <1%, Class-2 <3% when fully closed position. The square and rectangular type VCDs are designed for handling maximum air capacities at minimum pressure drop.

Round Volume Control Dampers

RVCD - GB-30, Galvanized Steel Construction.

Single Butterfly Blade; Low Leakage Rating to Class-1, Class-2 ;

Drive : Manual Quadrant

Models: RVCD-GB-30

RVCD GB 30 Series is a galvanized steel high performance low leakage volume control damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally and is rated for airflow and leakage Class-1, Class-2 in either direction. The standard construction is suitable for a leakage of Class-1 <1%, Class-2 <3% when fully closed position. RVCDs are designed for handling maximum air capacities at minimum pressure drop.



VCD - GB - 30



VCD - BR - 12



MCD - GAB - 21 A



Motorized Control Damper

MCD - GB-20 (Tested by Certaire as per AMCA 500 D) Galvanized Steel Construction.

Aerofoil Blades; Leakage Rating to Class-1, Class-2 at 250°F; Drive : Electric Actuator Models:

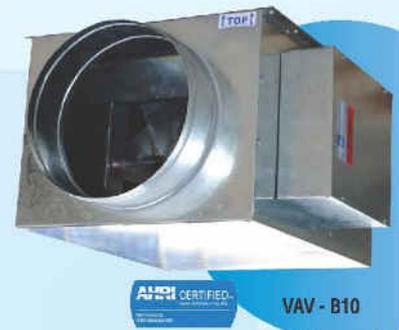
MCD-GB-20 A/B

MCD GB 20 Series is a galvanized steel high performance low leakage volume control damper, to ensure lowest resistance to airflow in HVAC systems with velocities to 2000 fpm (10.2 m/sec.) and 4" w.g. (1000Pa) may be installed vertically or horizontally (with blades running horizontally) and is rated for airflow and leakage Class-1, Class-2 in either direction. The standard construction is suitable for a leakage of Class-1 <1%, Class-2 <3% when fully closed position. The square and rectangular type MCDs are designed for handling maximum air capacities at minimum pressure drop.

By Pass Type : VAV-B10

By-pass VAVs combine the advantages of proven air handling concepts to give complete zoning flexibility at lower cost from a single zone source. **BETEC CAD** By-Pass VAVs complement by providing excellent temperature control and central air distribution by individually By-passing excess conditioned air to the main unit. VAV - Temp dependent.

The added costs of multi-zone systems can be avoided, and the need for duct mounted reheat coils can be minimized. Easy and simple to install, can be used with any Air conditioning units in any buildings or offices and can be easily modified or relocated as interior requirements.



VAV - B10



VAV - B20

Pressure independent Type : VAV-B20

Pressure Dependent Type VAVs combine the advantages of proven air handling concepts to give complete zoning flexibility at lower cost from a single zone source.

These VAVs complement by providing excellent temperature control and central air distribution with unlimited zoning, combined with common By-passing with **VZD - Variable Zone Damper**. The added advantage of multi-zone systems are by supplying centralized air distribution from unwanted zones to demand related zones. VAV - Temp and pressure dependent.

Easy and simple to install, can be used with packaged / ducted / Air handling units in any buildings or offices and can be easily modified or relocated as interior requirements

Pressure independent Type : VAV-B30

Pressure Independent Type VAVs combine the advantages of proven air handling concepts to give complete zoning flexibility at a medium cost from a single zone source.

These VAVs deliver variable / constant air volume as designed by providing excellent performance and temperature control for central air distribution with unlimited zoning, combined with common By-passing with **VZD - Variable Zone Damper (or VFD)**.

The added advantage of multi-zone systems is by supplying centralized air distribution from unwanted zones to demand related zones. Easy and simple to install, can be used with packaged / ducted / Air handling units in any buildings or offices and can be easily modified or relocated as per interior requirements. VAV - Temp dependent and pressure independent.



VAV - B30

Induction Type : VAV-B40

The **BETEC CAD** model VAV-B40 variable air volume induction terminals are designed to provide the benefits of precise, efficient control of conditioned air supply to match the room temperature loads and energy conscientious by use of ceiling plenum return air combines with the primary supply air to ensure satisfactory room air condition. The conditioned supply air (primary air) flowing through a carefully engineered variable aperture "flow slot" provides the induction of the warm plenum air without the use of integral fans.



VAVI - B40

When primary air enters the Induction VAV, the flow grid determines the static and damper controls the primary airflow as well as it creates a negative pressure in the entrance of the induction port. This creates plenum air to be induced through induction into the induction port, where it is mixed with primary air flow. The mixed airflow is equally distributed by the multiple outlet section. VAV - Temp dependent and pressure independent.

CAVs : CAV-B50

Pressure Independent Type CAVs combine the advantages of proven air handling concepts to give complete zoning flexibility at a medium cost from a single zone source. These CAVs deliver constant air volume as designed by program, by providing excellent performance and temperature control for central air distribution systems with unlimited zoning capacity, by supplying constant air volumes to individual zones. The added advantage of multi-zone systems is by supplying centralized air distribution from unwanted zones to demand related zones. VAV / CAV - Pressure independent.

Easy and simple to install, can be used with packaged / ducted / Air handling units in any buildings or offices and can be easily modified or relocated as interior requirements.



CAV - B50



Sound Attenuators - AMCA Tested

AS B-10, Galvanized Steel Construction.
Bell nosed splitters ; Low Leakage Rating.
Models : AS-B-10

AS B 10 Series Sound attenuators are galvanized steel construction high performance, to ensure lowest resistance to airflow in HVAC systems with velocities to 1600 fpm (8 m/sec.) and at 2" w.g. (500Pa) may be installed vertically or horizontally and rated for airflow and leakage DW-144 class C. The standard construction is suitable for a leakage of <0.5%. The square and rectangular type attenuators are designed for handling maximum air capacities at minimum pressure drop.

The shell noise radiation is minimized by double skin splitter construction. The turbulence of the airflow is minimized due to the bell nose design of the splitter at the entrance of the air inlet.

Better economy results by using properly designed **BETEC CAD** factory calibrated and fabricated Sound Attenuators.



SA - GB - 20

Sound Attenuators Cylindrical Type

CS B-30, Galvanized Steel Construction.
Bell nosed splitters; Low Leakage Rating.
Models: CS-8-30

CS B 30 Series Cylindrical Sound attenuators are galvanized steel construction high performance, to ensure lowest resistance to airflow in HVAC systems with velocities to 1600 fpm (8 m/sec.) and at 2" w.g. (500Pa) may be installed vertically or horizontally and rated for airflow and leakage DW-144 class C. The standard construction is suitable for a leakage of <0.5%. The cylindrical type attenuators are designed for handling maximum air capacities at minimum pressure drop.

The cylindrical type Sound Attenuators are installed in the duct work between spaces, which must provide noise reduction of air borne noise to at least match the sound transmission loss of the separating structure.

The cylindrical type Attenuators can be used where there is a demand for large amount of low frequency attenuation.

All models of Sound Attenuators are shorter in length, smaller in cross-section and easy to install at site.



CS - GB - 30

Jet Fans

JFD B-10 Series, Cylindrical Construction.
Fire rating : 1hr. at 392°F (200°C) ; 1/2 hr. at 572°F (300°C);.
Models: JFD-B10 - 12; JFD-B10 - 16

BETEC CAD's Jet Fans Ventilation System provides an efficient and cost effective solution for normal ventilation or smoke extraction in enclosed, multi-storey and underground car parks. The jet fans principle offers different possibilities for two different targets: normal ventilation for CO removal and High Temperature ventilation for smoke extraction in case of fire. A combination of both is possible through dual purpose jet fans.

JFD B 10 Series Jet Fans are galvanized steel construction high performance, to ensure lowest resistance to airflow in HVAC systems with velocities to 2400 fpm (12 m/sec.) and at 4" w.g. (1000Pa), installed horizontally for airflow extract applications. The standard construction Jet Fans are designed for handling maximum air capacities for the extract of smoke or air, in the event of excess CO / CO2 formation.

Models

Available in two different sizes of jet fan JFD-B10- 12; JFD-B10-16 depending on the performance required, with impeller diameter of 12" or 16" (310 mm or 400 mm)

High Temperature Resistance

Ratings: for 200°C 1 hour; 300°C for 1/2 hour.



JFD - B - 10

LOUVERS

Weather Louvers - WL

WL B-10 / 20 / 30 / 40, Aluminium / GI Construction.

BETEC CAD's a variety of louvers to meet wide range of needs. Available with a highly weather-resistant PVDF / Powder coated finishers to match any color.

Available in various frame styles, **BETEC CAD's** louvers accommodate various blade angle with high free area for low pressure drop.

BETEC CAD manufactures weather louvers, with adjustable louvers and louver/Damper combinations, which are designed for both intake and exhaust air applications.

The weather louvers have been designed to ensure that the basic parameters of minimum pressure loss, low self-generated aerodynamic noise and minimal water ingress are satisfied and also construction includes aesthetically appearance when view from outside.



WL - BC - 20



Size Limitations	Module	Width x Height	Position
	Single	6" x 6"	V
	Single	48" x 48"	V
	Multiple	96" x 96"	V

Sand Trap Louvers - STL

STL B-10 / 20, Aluminium / GI Construction.

Vision proof Blades ; Low Leakage Frame styles.

Models: STL-B10-4 ; STL-B10-8

BETEC CAD manufactures Sand Trap Louvers for fresh air intake in HVAC systems, which are designed to separate large size sand particles at low air velocities thus avoiding excessive dust loading on conventional secondary stage filters. They give excellent performance for air filtration and moderate pressure drops at low air velocities.

Models

Available in two different sizes of Sand Trap louvers STL-B-10-4 ; STL-B-10-8, depending on the performance required. 4" or 8" (100 mm or 200 mm) Blade styles with matching depth frame styles



STL - BC - 20



Size Limitations	Module	Width x Height	Position
	Single	6" x 6"	V
	Single	48" x 48"	V
	Multiple	96" x 96"	V

Acoustic Louvers - AL

AL B-10, Aluminium / GI Construction.

Acoustic Blades ; Low Leakage Frame styles.

Models: AL-B10-8 ; AL-B10-12

BETEC CAD's B 20 Series Acoustic Louvers, with the design of this product, the aim is to combine outstanding standards of acoustic performance with a clean, stylish visual appearance, in tune with aesthetic trends in modern architecture and these are provided on the adjacent walls of the sound generating units where there are no larger spaces available.

Models

Available in two different sizes of Acoustic louvers AL-B-10-8 ; AL-B-10-12, depending on the performance required. 8" or 12" (200 mm or 300 mm) depth frame styles.



AL - B - 20

Size Limitations	Module	Width x Height	Mounting Position
	Single	6" x 6"	V
	Single	48" x 48"	V
	Multiple	96" x 96"	V



Grilles (Square & Rectangular)

Grilles B-10 / 20, Aluminium / GI Construction. Aerofoil Blades ; Low Leakage Frame styles.

BETEC CAD manufactures Grilles for air distribution in HVAC systems, they provide excellent performance for air distribution and low pressure drops at different air passage velocities.

All models of Square or Linear Grilles are designed to give full flexibility in volume and air pattern control.

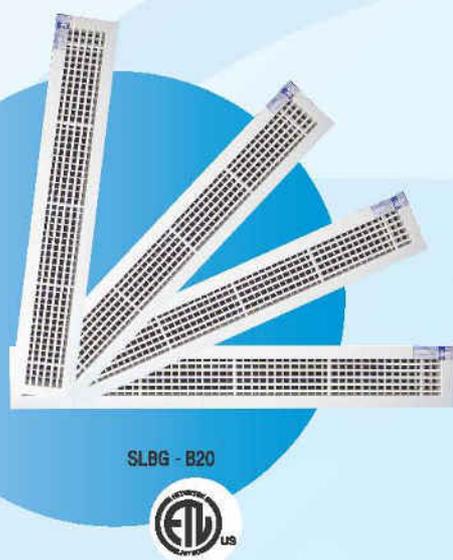
Air distribution pattern can be made horizontal or vertical along the wall or ceiling.

Deflecting vanes and opposed volume damper can be adjusted from the grill face.

By adjusting the volume damper, flow volume can be adjusted. The volume damper is designed in a unique way that it can be used as an equalizing grid.

Single or multiple length arrangement will provided positive alignment of adjacent sections using alignment strips, provided with each linear sections.

The grill is constructed from high quality aluminium extruded profiles.



Linear Bar Grilles

Linear Grilles B-10 / 20, Aluminium / GI Construction. Aerofoil Blades ; Low Leakage Frame styles.

BETEC CAD manufactures Linear Grilles for air distribution in HVAC systems, they provide excellent performance for air distribution and low pressure drops at different air passage velocities.

All models of Square or Linear Grilles are designed to give full flexibility in volume and air pattern control.

Air distribution pattern can be made horizontal or vertical along the wall or ceiling.

Deflecting vanes and opposed volume damper can be adjusted from the grill face.

By adjusting the volume damper, flow volume can be adjusted.

The volume damper is designed in a unique way that it can be used as an equalizing grid.

Single or multiple length arrangement will provided positive alignment of adjacent sections using alignment strips, provided with each linear sections.

The grill is constructed from high quality aluminium extruded profiles.

Perforated Grilles / Security Grilles

Perforated Grilles B-10 / 20, Aluminium / GI Construction. Perforated face ; Low Leakage Frame styles.

BETEC CAD manufactures perforated Grilles / Security Grilles for air distribution in HVAC systems, they provide excellent performance for air distribution and low pressure drops at different air passage velocities.

All models of Perforated Grilles are designed to give full flexibility in volume and air pattern control.

Air distribution pattern can be made horizontal or vertical.

Opposed volume damper can be adjusted from the grill face. By adjusting the volume damper, flow volume can be adjusted.

The volume damper is designed in a unique way that it can be used as an equalizing grid.

The grill is constructed from high quality aluminium / GI materials and profiles.



Diffusers

Diffusers B-10 / 20, Aluminium / GI Construction

Extruded Aerofoil Blades; Low Leakage Frame styles.

BETEC CAD manufactures Diffusers for air distribution in HVAC systems, they provide excellent performance for air distribution and low pressure drops at different air passage velocities.

All models of Square Diffusers are designed to give full flexibility in volume and air pattern control.

Air distribution pattern can be made horizontal or vertical along the ceiling.

Deflecting vanes and opposed volume damper can be adjusted from the diffuser face. By adjusting the volume damper, flow volume can be adjusted.

The volume damper is designed in a unique way that it can be used as an equalizing grid.

The grill is constructed from high quality aluminium extruded profiles.



SAD - B10



BJD - B20

JN - B10

Jet Nozzle / Ball Diffusers

JN / JB B-10 / 20, Aluminium / GI Construction Adjustable; Low Leakage Frame styles.

BETEC CAD manufactures Jet Ball Diffusers, they provide excellent air performance, at low pressure drops at different air velocities. The supply of conditioned (cool / hot) air from the jet diffuser, has to travel a large distance to the occupied zone. Where the distribution of air via ceiling diffusers is not possible. The jet nozzles are placed in the corners and at high level areas. Air distribution pattern can be made any desired angle.

Opposed butterfly damper can be adjusted from the nozzle face. By adjusting the volume damper, flow volume can be adjusted.

The Jet nozzle / Jet ball is constructed from high quality aluminium.

Jet Diffusers are designed to use mainly in HVAC applications. These are used normally in Malls, Airports, Auditoriums, Sports Arenas, Hyper markets, Zoo etc.

Linear Slot Diffusers

Linear Flow Diffusers B-10 / 20, Aluminium Construction.

Aerofoil Blades ; Low Leakage Frame styles.

BETEC CAD manufactures Linear flow bar diffusers for air distribution in HVAC systems, they provide excellent performance for air distribution and low pressure drops at different air passage velocities.

All models of Linear flow diffusers are designed to give full flexibility in volume and air pattern control.

Air distribution pattern can be made horizontal or vertical along the wall or ceiling.

Deflecting vanes and integral volume damper can be adjusted from the diffuser face. By adjusting the volume damper, flow volume can be adjusted.

The volume damper is designed in a unique way that it can be used as an equalizing grid.

Single or multiple length arrangement will provide positive alignment of adjacent sections using alignment strips, provided with each linear sections.

The diffuser is constructed from high quality aluminium extruded profiles.



SLD - B20



Plenums

Linear Plenums B-10 / 20, Aluminium / GI Construction.

Aerofoil Vanes ; Insulated, Leakage proof Plenum styles.

BETEC CAD manufactures Square / Linear Plenums for air distribution in HVAC systems, they provide excellent air performance characteristics at low pressure drops at different air passage velocities.

Plenums are designed to ensure even distribution of air over surface of the associated diffuser or grill with minimum noise turbulence, there by are maintaining the correct airflow performance characteristics.

All models of Square or Linear Plenums are designed to give full flexibility in volume and air pattern control.

Deflecting vanes and volume damper can be adjusted from the grill / diffuser face. By adjusting the volume damper, flow volume can be adjusted.

Single or multiple length arrangement will provide positive alignment of adjacent sections using alignment strips, provided with each linear sections.

The grill / diffuser is constructed from high quality aluminium extruded profiles.



LP - B - 20

Variable Plenums

Variable Plenums B-10 / 20, Aluminium / GI Construction.

Aerofoil Vanes ; Insulated, Leakage proof Plenum styles.

BETEC CAD manufactures Variable Square / Linear Plenums for air distribution in HVAC systems, they provide excellent air performance characteristics at low pressure drops at different air passage velocities.

Plenums are designed to ensure even distribution of air over surface of the associated diffuser or grill with minimum noise turbulence, there by are maintaining the correct airflow performance characteristics.

All models of Square or Linear Plenums are designed to give full flexibility in volume and air pattern control.

Single or multiple length arrangement will provide positive alignment of adjacent sections using alignment strips, provided with each linear sections.

The grill / diffuser is constructed from high quality aluminium extruded profiles.



LPV - B - 20

Fire Rated Doors - FDR

FDR - B-10 / 20, Galvanized / Stainless steel Construction.

Fire rating : 2 hr. ; 3 hr.

Models : (FDR B-10) ; FDR B-20

Single / Double Doors ; Insulated, Leakage proof Frame styles.

BETEC CAD manufactures Fire rated Doors single or double doors that are designed for use in building systems to provide access for emergency exits or for regular maintenance works.

The strong and robust construction of the fire door guarantees leakage resistance for fire even with high positive or negative pressures. Double walled door panels filled with thick mineral rock wool insulation of density. 6.1 Pnds / Cuft (98kg/cu.met) will act as better resistance for transfer of heat.



FDR - B10

Access Doors

AD B-10 / 20, Galvanized / Stainless steel Construction.

Door rating : Leakage 0.2% at 4" w.g. (1000Pa)

Models: AD-B-10 ; AD-B-20. Insulated, Leakage proof Frame styles.

BETEC CAD manufactures Access Doors that are designed for use in air conditioning ductwork systems to provide access for resetting of Fire Dampers, Heaters, Filters and product fire alarm panels or any other sensitive or security required equipment and for other maintenance works.

The strong and robust construction of the access door guarantees low leakage of air even with high duct pressures. Double walled door panel with mineral wool insulation will act as better resistance for transfer of heat



AD - B - 10



AD - B - 20

DUCT HEATERS

Duct Heaters - DH

DH- B-10 / 20, Galvanized / Stainless steel Construction.

Voltage Rating : 110 V / 220 V / 400 V

Models: DH-B-10 ; DH-B-20

**Single Door control Box: Insulated, Leakage proof Frame and Box styles.
Slip in Heater**

It is designed so that the frame dimensions are slightly smaller than the duct dimensions. The entire Heater except the terminal box slides through a rectangular opening in the side of the duct with 1/4" clearance all around. When installed, the face area of the heater is at right angle to the air stream. Slip in heater is widely used because it allows duct work to be installed before the heaters are available, simplified on changes, in heater location and it is easily installed into existing duct systems.

Furthermore, small slip-in heaters may be installed without any special arrangements for their support.



DHS - B - 20



DHF - B - 20

Duct Heaters - DH

DH- B-10 / 20, Galvanized / Stainless steel Construction.

Voltage Rating : 110 V / 220 V / 400 V

Models: DH-B-10 ; DH-B-20

Single Door control Box: Insulated, Leakage proof Frame and Box styles.

Flanged Heater (With Removable Heater Section)

Flanged Heater Consists of, heater coils, mounted in a flanged duct section. Frame dimensions are made to match exactly duct dimensions. The frame is then attached directly to external flanges of the duct flanges from the duct.

All controls are mounted in the terminal box.

VAV with Duct Heater

VAV - DH- B-10 / 20 / 30, Galvanized Construction.

Voltage Rating : 220 V

Single Door ; Insulated, Leakage proof Frame and Box styles.

VAV with Slip in Heater

The reheat coils are factory fitted in to the corresponding VAV or CAV.

It is designed so that the VAV or CAV followed by a heater battery are used, in excessive humid places, to avoid condensation of the equipment.

Slip in heater-VAVs are widely used because it allows the duct work can be installed before the VAV+ heaters are available, simplifies the design and changes.

Furthermore, VAV with slip-in heaters may be installed without any special arrangements for their support.



VAV - DHS - B - 30



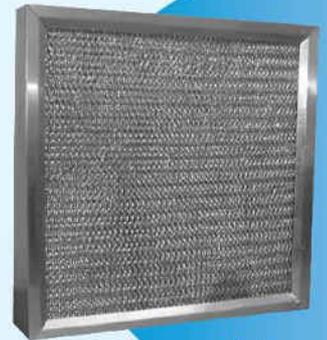
Metallic Filters - BF 1

BF 1 - Aluminium / Galvanized / Stainless steel Frames.

Models: BF 1- 4" / 6". Leakage proof Frame styles.

BETEC CAD manufactures a complete line of metallic filters for various residential, commercial and industrial applications. These are available in a wide range of standard, special and custom sizes, designs and shapes to meet virtually every air filtration requirement. They are the highest quality and efficiency obtainable and feature for long lasting optimum performance.

BETEC CAD. manufactures a wide range of metallic filters with media as Aluminium or Stainless Steel, with frame styles, Aluminium / GI / Stainless steel frame construction to serve all kinds of air filtration requirements.



BF - 1



BF - 2

Synthetic Filters - BF 2

BF 2 - Aluminium / Galvanized / Stainless steel Frames.

Models : BF 2 - 4" / 6". Leakage proof Frame styles.

BETEC CAD manufactures a complete line of synthetic filters for various residential, commercial and industrial application. These are available in a wide range of standard, special and custom sizes, designs and shapes to meet virtually every air filtration requirement. They are the highest quality and efficiency obtainable and feature for long lasting optimum performance.

These synthetic filters with medium, made of non-woven cotton, plus polyester which has been specially manufactured for high dust holding air filtration with minimum efficiency rating. Frame styles, with Aluminium / GI / Stainless steel frame construction to serve all kinds of air filtration requirements.

Bag Filters - BF 3

BF 3 - Galvanized / Stainless steel Frames.

Models: BF 3 - 4" / 6" / 8" . Leakage proof Frame styles.

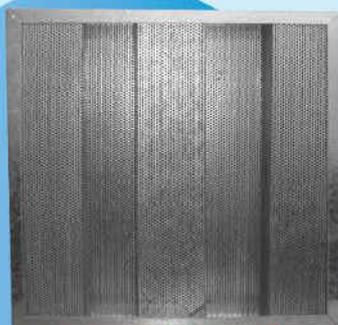
BETEC CAD manufactures a complete line of bag filters for various residential, commercial and industrial applications. These are available in standard, special and custom sizes, to meet virtually every air filtration requirement. They are the highest quality and efficiency obtainable and feature for long lasting optimum performance.

Bag filters, which are effective filters and are specially for applications in centralized air-conditioning systems for separating fine dust where arduous operating conditions are exist.

Strong ducted casing in galvanized / stainless sheet steel with standard cell frames is used for mounting bag filters. The filter medium is from high quality chemical fiber or glass fiber for separation of fine dust down to aerosols. The bag filters are fixed in to the casing by means of standard cell frames complete with perimeter sealing strips and quick release clamps. This system ensures accurate sealing between the frame and the bag. The material used, manufacture and finish of the bag filters provide good distribution of air and good corrosion resistance.



BF - 3



BF - 4

Carbon Filters - BF 4

BF 4 - Galvanized / Stainless steel Frames.

Models: BF 4 - 4" / 6" / 8" . Leakage proof Frame styles.

BETEC CAD manufactures carbon filters for use in air conditioning and ventilation systems for the removal of odorous gases and harmful vapours from existing conditioned air zone.

These carbon filters are enclosed in a strong galvanized steel frame casing with internal perforated galvanized steel splitters for mounting filter cells. The casing can be supplied to match specific dimensions. The filter media is impregnated moisture-resistant board with activated carbon cells in a securely fixed wedge shaped arrangement.

Activated carbon filter material is treated with an anti-microbial treatment to inhibit the growth of germs, bacteria, and mold fungi on the filter.

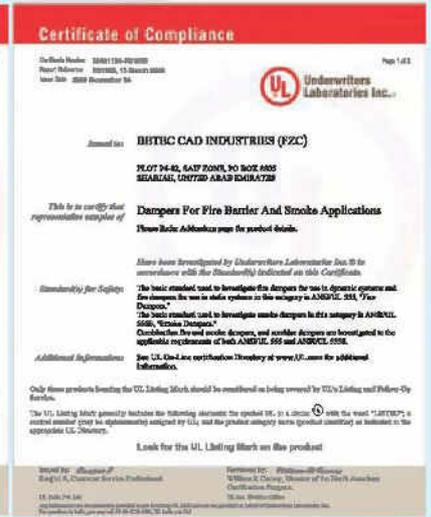
Neoprene/Silicon seals are used for sealing the carbon cells, which prevents air bypass in the filter rack.



Laboratory Tests and Certifications. (Tests Conducted at UL Head Quarters - Chicago, U.S.A)



UL 555 Laboratory Tests



UL 555 Laboratory Tests Fire Damper After 2 hours - UL Laboratory



Fire Damper After 3 hours - UL Laboratory

BETEC CAD's Tunnel Ventilation Damper 4Hrs. Fire Resistance Tests Conducted by LPCB – BRE – UK Test Standard : BS476 Part 20-22.



Damper condition After 2 Hours



Damper condition After 4 Hours

BS476 Part 20-22. (4 hrs Fire Test)

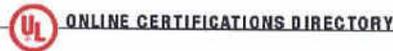


Hose Stream Test - UL Laboratory

UL555/555s - MFD / MSD / MSFDs

EMME.R21925 - Dampers for Fire Barrier and Smoke Applications

Page 1 of 2



EMME.R21925 Dampers for Fire Barrier and Smoke Applications

Page Bottom

Dampers for Fire Barrier and Smoke Applications

[See General Information for Dampers for Fire Barrier and Smoke Applications](#)

BETEC CAD INDUSTRIES (FZC)
 PLOT P4-D2
 SAIF ZONE
 PO BOX 8805
 SHARJAH, UNITED ARAB EMIRATES

R21925

Fire Dampers for Use in Static Systems

Model	Hr Class	Damper Mounting Position	Single Section Damper Size, in.		Multiple Section Damper Size, in.	
			W	H	W	H
FD-GB-20-AS/BS/AF/BF/R	1 ½	V	39 ½	39 ½	72	72
		H	36	36	—	—
FD-GB-30-AS/BS/R	3	V	39 ½	39 ½	72	72
FD-GB-31-A/R	3	V	30	48	144	96
		H	30	48	144	96
MFD-GB -20-A/R	1 ½	V	36	36	72	72
		H	36	36	—	—
MFD-SB -20-A/R	1 ½	V/H	36	36	—	—
MFD-GSB-20-A/R	1 ½	V/H	36	36	—	—
MFD-SGB-20-A/R	1 ½	V/H	36	36	—	—
MFD/QFD-GB/SB/GSB/SGB-F-20-A/R	1 ½	H	36	36	—	—
MFD-GB -30-A/R	3	V	36	36	72	72
		H	36	36	—	—
MFD-SB-30-A/R	3	V/H	36	36	—	—
MFD-GSB-30-A/R	3	V/H	36	36	—	—
MFD-SGB-30-A/R	3	V/H	36	36	—	—
MFD/QFD-GB/SB/GSB/SGB-F-30-A/R	3	H	36	36	—	—
MFD-GB-31-A/R	3	V	24	48	144	96
		H	24	48	144	96

Fire Dampers for Use in Dynamic Systems

Dampers rated 2000 fpm / 4.0 in. WC:

Model	Hr Class	Damper Mounting Position	Single Section Damper Size, in.		Multiple Section Damper Size, in.	
			W	H	W	H
FD-GBD-20-AS/BS/AF/BF/R	1 ½	V	36	36	—	—
FD-GBD-30-AS/BS/R	3	V	36	36	—	—
MFD-GB/SB/GSB/SGB-D-20-A/R	1 ½	V/H	36	36	—	—
MFD-GB/SB/GSB/SGB-D-30-A/R	3	V/H	36	36	—	—


<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/showpage.html?name...> 6/21/2015

Combination Fire and Smoke Dampers

Dampers rated 2000 fpm / 4.0 in. WC:

Model	Hr Class	Leakage Class	Damper Mounting Position	Single Section Damper Size, in.				Multiple Section Damper Size, in.	
				W		H		W	H
				Min	Max	Min	Max		
MSFD-GBD-20C2-A/R	1 ½	II-250	V	9	24	9	24	—	—
			V	9	36	9	36	72	36
MSFD-GB-20C2-A/R	1 ½	II-250	H	9	36	9	36	—	—
			V	6	36	6	36	72	36
MSFD-GB-20C1-A/R	1 ½	I-250	H	6	36	6	36	—	—
			V	9	36	9	36	72	36
MSFD-GB-30C2-A/R	3	II-250	H	9	36	9	36	—	—
			V	6	36	6	36	72	36
MSFD-GB-30C1-A/R	3	I-250	H	6	36	6	36	—	—
			V	9	36	9	36	72	36

Smoke Dampers

Dampers rated 2000 fpm/4.0 in. WC:

Model	Leakage Class	Damper Mounting Position	Single Section Damper Size, in.				Multiple Section Damper Size, in.	
			W		H		W	H
			Min	Max	Min	Max		
MSD-GBD-20C2-A/R	II-250	V/H	9	24	9	24	—	—
MSD-GB-20C2-A/R	II-250	V/H	9	36	9	36	72	36
MSD-GB-20C1-A/R	I-250	V/H	6	36	6	36	72	36

For Curtain type fire damper

A: Blades In air stream, B: Blades above air stream, S: with sleeve, F: with mounting frame, R: with Round spigot & D: for dynamic application.

For Motorized fire damper

GB: GI Frame / GI Blade, SB: SS Frame / SS Blade, GSB: GI Frame / SS Blade, SGB: SS Frame / GI Blade & R: Round Spigot

Last Updated on 2015-02-03

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DUBAI - Civil Defence

إدارة السلامة الوقائية - قسم إلتزام الشركات



دولة الإمارات العربية المتحدة
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الهجري العالمية للمعدات

اسم الشركة

رقم الترخيص: **K112**

سنة الترخيص: **2015**

حدود الترخيص: **(3 - 2)**

رقم الترخيص	نوع الترخيص	تاريخ الترخيص	نوع الترخيص	اسم الشركة	العنوان	المنتجات
20160018	سبي	10007	العزل الحوائط العزل الزجاج	DL-USA	EDIME R21925	DETEC CAD

ملاحظات:

1. 1.5 Hours for Vertical Mounting Position.
2. 1.5 Hours for Vertical & Horizontal Mounting Position.
3. 1.5 Hours for Vertical & Horizontal Mounting Position.
4. 1.5 Hours for Vertical & Horizontal Mounting Position.
5. 1.5 Hours for Vertical & Horizontal Mounting Position.

يتمتع عن مدير الإدارة العامة للوقاية من الحرائق



إدارة السلامة الوقائية - قسم إلتزام الشركات



دولة الإمارات العربية المتحدة
وزارة الداخلية
الإدارة العامة للوقاية من الحرائق
United Arab Emirates
Ministry of Interior
DCD General Directorate

Tel.: 009714 2611111
Fax : 009714 2612449
P.O. Box 11377 Dubai
United Arab Emirates

للتوارئ
Emergency
997

www.dcd.gov.ae

الهجري العالمية للمعدات

اسم الشركة

رقم الترخيص: **K112**

سنة الترخيص: **2015**

حدود الترخيص: **(3 - 3)**

رقم الترخيص	نوع الترخيص	تاريخ الترخيص	نوع الترخيص	اسم الشركة	العنوان	المنتجات
201601/04	سبي	10003	العزل الحوائط العزل الزجاج	DL-USA	EDIME R21925	DETEC CAD

ملاحظات:

1. 1.5 Hours for Vertical Mounting Position.
2. 1.5 Hours for Vertical & Horizontal Mounting Position.
3. 1.5 Hours for Vertical & Horizontal Mounting Position.
4. 1.5 Hours for Vertical & Horizontal Mounting Position.
5. 1.5 Hours for Vertical & Horizontal Mounting Position.

يتمتع عن مدير الإدارة العامة للوقاية من الحرائق



SHARJAH - Civil Defence

United Arab Emirates
Ministry of Interior
Civil Defence G.H.Q.
General Directorate of Civil Defence Sharjah

دولة الإمارات العربية المتحدة
وزارة الداخلية
2013-3-42471
سنة الترخيص: 2015
عدد الترخيص: 1

ترخيص
تم إصدار الترخيص استناداً إلى القرار الوزاري رقم (24) لسنة 2012 . في شأن تنظيم خدمات الدفاع المدني

الإسم التجاري للمنشأة: بيتك عاد أنتستريز (ش.م.ح)
اسم صاحب الترخيص: بيدياتي فينكاتا رامانا مورتى
اسم صاحب الترخيص: فينكاتا راديفا بيدياتي
اسم صاحب الترخيص: راماشانبرا مورتى بيدياتي
نوع النشاط: مصنع لمعدات الدفاع المدني و أبواب الحريق
رقم الهاتف: 0552629242
عنوان الشركة: هيئة المنطقة الحرة لمطار الشارقة الدولي - فالنطار . المنطقة الحرة - المطار الشارقة الشارقة

رقم السجل: 2013-3-42471
رقم الرخصة: 03009
الجنسية: الهند
الجنسية: الهند
الجنسية: الهند
منطقة النشاط: ص 8805
الشارقة

تاريخ الإصدار: 05/04/2015
تاريخ الانتهاء: 09/03/2016
عدد المهتمين المعتمدين: 1
عدد المعات والأجهزة المراد ترخيصها: 4

عدد الفنيين المعتمدين: 7
يعتمد

شعار الدفاع المدني
Civil Defence
2

رقم الترخيص: 2013-3-42471
سنة الترخيص: 2015
عدد الترخيص: 1
الإسم التجاري للمنشأة: بيتك عاد أنتستريز (ش.م.ح)

م	اسم المادة/المواد/النظام	الإسم التجاري	نوع الصنع	رقم شهادة السلامة	اسم المنتج الصادر للشهادة
1	خاتق حريق ودخان خاتق ملاوم للحريق والدخان لمدة 180 دقيقة	خاتق ملاوم للحريق والدخان لمدة 180 دقيقة	الإمارات العربية المتحدة	UL-EMMER2 1924	UL
2	خاتق حنان خاتق ملاوم للحريق والدخان لمدة 180 دقيقة	خاتق مقاوم للحريق والدخان لمدة 180 دقيقة	الإمارات العربية المتحدة	UL-EMMER2 1925	UL
3	خاتق حريق ودخان خاتق مقاوم للحريق بموتور لمدة 180 دقيقة	خاتق ملاوم للحريق بموتور لمدة 180 دقيقة	الإمارات العربية المتحدة	UL-EMMER2 1925	UL
4	خاتق حريق ودخان خاتق ملاوم للحريق بموتور لمدة 180 دقيقة	خاتق مقاوم للحريق بموتور لمدة 180 دقيقة	الإمارات العربية المتحدة	UL-EMMER2 1925	UL

- يعتبر الصانع يرخس من قبل الإمارة العامة للدفاع المدني - الشارقة و يجب له تزويد نشاطه في إمارة الشارقة فبعد استناداً إلى قرار مجلس الوزراء رقم (24) لسنة 2012 في شأن تنظيم خدمات الدفاع المدني الملحة التنفيذية رقم (505) لسنة 2012 . و لا يحق له مزولة نشاطه في باقي الإمارات إلا بعد استخراج ترخيص موزع من قبل الإمارات العامة ذات الاختصاص بكل إمارة.
- إبلاغ الإمارة العامة للدفاع المدني في حالة تغيير أو تعديل في البيانات المتعلقة في الترخيص الصادر من قبل الإمارة العامة للدفاع المدني.





SHARJAH - Civil Defence

United Arab Emirates
Ministry of Interior
General Headquarters of Civil Defense
General Directorate of Civil Defense / Sharjah
الرقم: 2018-3-42471



دولة الإمارات العربية المتحدة
وزارة الداخلية
القيادة العامة للدفاع المدني
الإدارة العامة للدفاع المدني / الشارقة

شهادة استيفاء شروط السلامة الوقائية

صدرت هذه الشهادة استناداً إلى قرار مجلس الوزراء رقم (24) لسنة 2012 م في شأن تنظيم خدمات الدفاع المدني بالدولة

رقم الأرض :	03009 (صناعي)	رقم الرخصة :	بيتك كاد أمستريز (ش.م.ح)	الاسم التجاري للمنشأة :
تاريخ الانتهاء :	03/09/2015	تاريخ الإصدار :	المنطقة الحرة- المطار	الكائن بمنطقة :
18/06/2016				

وله وجد مستوفي لشروط السلامة الوقائية

ملاحظات:

- تم تسجيل الرسوم بإيصال رقم (0074242406150915).
- يجب الالتزام بإعتماد عقود الصيانة التورية لأجهزة ومعدات السلامة والوقاية من الحريق من إحدى الشركات المعتمدة.
- أي تعديلات في أنظمة وأجهزة السلامة والوقاية من الحريق أو النشاط يتطلب موافقة مسبقة من الدفاع المدني.
- يجب ربط المنشأة بالأنظمة النكبة (7X24).
- في حال الإخلال بأي من اشتراطات السلامة الوقائية سيتم مخالفة المنشأة (تتوجب المخالفات خلف الشهادة).
- توضع الشهادة في مكان بارز وواضح للعيان.
- مراجعة الدفاع المدني سنوياً للتأكد على المعنى.



هاتف: 06 - 5163333
فاكس: 06 - 5654278
نظام المقترحات: www.fms.ae
الموقع الإلكتروني: www.shjcd.gov.ae

رؤيتنا أن نعمل بفعالية لتصبح دولة الإمارات العربية المتحدة إحدى أفضل دول العالم أمناً وسلامة



التاريخ: ٢٠١٢/٨/١٤

الرقم: م ط . وق / ١٥٠ - ٦١٤

الإدارة العامة للاطفاء
Kuwait Fire Service Directorate

المحترمين

السادة / مؤسسة هاي كواليتي للتجارة العامة و المقاولات

تليفون : ٢٥٣٤٨٨٩٩ / ٢٥٣٤٨٨٥٥

فاكس : ٢٥٣٢٢٢٥٧

تحية طيبة وبعد ،،،

الموضوع : اعتماد خوائق حريق و دخان من صنع شركة **BETEC CAD**الشارقة - الامارات العربية المتحدة

بالاشارة إلى الموضوع ، وردا على طلبكم المؤرخ في (٢٠١٢/٦/١٨) وبعد دراسة
الكتلوجات الفنية والشهادات المقدمة ، وبعد إجتماع لجنة المعدات (٢٠١٢/١٦) بتاريخ
٢٠١٢/٨/٧ نود أن نعلمكم بأنه لا مانع لدينا من اعتماد خوائق الحريق - صناعة السادة
BETEC CAD - الامارات العربية المتحدة حسب شهادة مختبر (UL) رقم (R21925)
للمعدات التالية :-

- Fire Dampers for use in Statics systems:

Itm	Model	HR Class
1	FD-G	1-1/2
2	FD-GB 20	1-1/2
3	FD-GB 20	3
4	MFD-GB-21-A	3
5	MFD-GB-21-AH	3



KUWAIT - Civil Defence



التاريخ: ٢٠١٤/٨/١٤

الرقم: م.ط.وق / ١٥٠ -

الإدارة العامة للإطفاء
Kuwait Fire Service Directorate

Fire Dampers for use in Dynamic systems:

Item	Model	HR Class
6	MFD-G21-AD	1-1/2

Combination Fire and Smoke Dampers:

Item	Model	HR Class
7	MFSD-GB22-AD	1-1/2
8	MFSD-GB21-AD	3

Smoke Dampers:

Item	Model	HR Class
9	MSD-GB21-AD	3

شريطة التقيد بجميع لوائح و مواصفات الادارة العامة للإطفاء و الخاصة بتجارة و صيانة معدات و أنظمة الأذار و المكافحة و توفير قطع الغيار و عمل الصيانة اللازمة لها ، حيث يجب توفير اسم و موديل المعدة ، و أيضا اسم وشعار المختبر ، ورقم تسجيل المعدة ، و تقديم الكاتالوجات الفنية للدراسة و الاعتماد لكل مشروع على حده قبل التنفيذ ، علما بأن هذه الموافقة صالحة لمدة سنتين من تاريخه.

نائب المدير العام لشئون الوقاية

محمد بن عبد الرحمن
نائب المدير العام



نسخة :-

مدير التراخيص

قسم دراسة المعدات

الملف



شرطة عمان السلطانية
 الإدارة العامة للدفاع المدني
 إدارة الوقاية من أخطار الحريق
 رقم الشهادة (دفاع مدني / وقاية/ ٢٠١٢/٠٢٦ م)

شهادة مطابقة للمعدات والأجهزة والمواد الخاصة بالدفاع المدني للمواصفات القياسية
تشهد الإدارة العامة للدفاع المدني بأن الأجهزة والمعدات والمواد المبينة أدناه :
١- مخمدات الحريق

المصنعة من قبل : بتك كاد إنديستريز ، وقد تم فحصها من قبل مختبرات دولية معتمدة لدينا .
 وعليه يصرح للوكيل المحلي : شركة ديبيلو جي تاوول ش.م.م ، باستيرادها والإتجار فيها .
 هذه الشهادة صالحة اعتباراً من : ٢٠١٢/٠٢/١٥ م إلى : ٢٠١٤/٠٢/١٤ م
 إمضاء القم بالدراسة : الملازم مهندس/مازن بن سلام اليعربي

المقدم / حمد بن علي الوهبي
 عن/ مدير عام الدفاع المدني

أي مخطط أو تعديل يلغى هذه الشهادة .
 ملاحظات :
 * يجب تجديد هذه الشهادة عند إنتهاء المدة المحددة دون تأخير .



QATAR - Civil Defence

بسم الله الرحمن الرحيم



**وزارة الداخلية
الإدارة العامة للدفاع المدني
إدارة الوقاية**

التاريخ: ٢٠١٣/٠٦/١٧
الموافق: ١٤٣٤/٠٨/٠٩
رقم الطلب: ٨٧١٧٧

ترخيص الإدارة العامة للدفاع المدني

نوع الترخيص	تجديد - تاهيل الشركات والمؤسسات العاملة في مجال الإطفاء والحريق	رقم الترخيص	٥٧٠٠٤٨٠١١٨
رقم رخصة البناء	٢١٢١٣	التاريخ	٢٠١٣/٠٦/١١
اسم المرخص له	صالح مبارك الخلفي	اسم المالك	.
الاسم التجاري	مؤسسة صالح بن مبارك الخلفي	رقم السجل التجاري	١٠٢٦٣
رقم الوحدة	٥٧	هاتف المكتب	٤٤٦٨٠٠٢٩
الهاتف الجوال	٥٥٥٠٨٢٠١	رقم الفاكس	٤٤٦٨٠٠٣٧
صندوق البريد			
البريد الإلكتروني	gbaer_1971@hotmail.com		

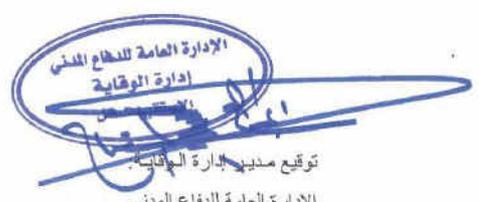
رقم المنطقة:	٥٧	رقم الشارع:	٤٨	اسم الشارع:	شارع ٤٨
رقم قطعة الأرض:	١١٨	رقم المبنى:			

تفاصيل الترخيص

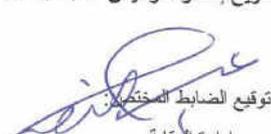
تمت الموافقة على المنتج (DAMPERS FOR FIRE BARRIER AND SMOKE APPLICATIONS) وذلك حسب التقرير الفني رقم ٨٧١٧٧ والصادر بتاريخ ٢٠١٣/٠٦/١١ والمرفق عليه صورته منه

ملاحظة :-
(يرجى الإطلاع على الإشتراطات في خلف الشهادة والإلتزام بها)

تاريخ إصدار الترخيص ٢٠١٣/٠٦/١٧ تاريخ انتهاء الترخيص ٢٠١٤/٠٦/١٧



توقيع مدير إدارة الوقاية
الإدارة العامة للدفاع المدني



توقيع الضابط المختص
إدارة الوقاية

بسم الله الرحمن الرحيم

DATE: 11-Jun-13 التاريخ:
PERMIT # PS-87177-PA رقم الطلب:



وزارة الداخلية
الإدارة العامة للدفاع المدني
إدارة الوقاية

TECHNICAL REPORT

التقرير الفني لمعدات الإطفاء والسلامة

PRODUCT:	Dampers for Fire Barrier and Smoke Applications	المنتج:
PRODUCT APPLICATION:	SMOKE CONTROL AND VENTILATION SYSTEM	تصنيف المعدة:
APPLICANT / P.O. BOX	SALEH BIN MUBARAK ALKHULAIFI EST. / 5092	مقدم الطلب/صندوق البريد:
MANUFACTURER / LOCATION:	BETEC CAD INDUSTRIES (FZC) / UAE	الشركة المصنعة:
PRODUCT/MODEL	DAMPERS FOR FIRE BARRIER AND SMOKE APPLICATIONS MODELS AS PER LISTED IN UL CERTIFICATION DIRECTORY FILE NO. EMME.R21925	فائمة المنتجات:
3RD PARTY CERTIFICATE / APPROVAL	UL LISTED No. EMME.R21925	شهادات المختبرات المساندة(من هيئات معتمدة):

RECOMMENDATIONS

التوصيات

The QCDD has reviewed the submission of the above mentioned applicant and finds NO OBJECTION to the sale and use of the Fire Safety Product/ Equipment stated herein as verified from the 3rd Party Testing Authority. The approval of this product is only valid upon installation by person certified by the manufacturer.
The product shall bear the mark of the certifying body and shall be verified by the engineer prior to installation.
This product approval is valid up to one (1) year from the date of issue.

MANUFACTURER NAME/LOGO & UL MARK

ENGINEERS

المهندسين OFFICERS

الضابط المختص

[Handwritten signatures of engineers and officers]



*Air Movement and Control
Association International, Inc.*

Certifies that

Betec Cad Industries (FZC)

*Having satisfied the membership requirements, has been granted membership in the
Air Movement and Control Association International, Inc.*

August 2009

Donald

AMCA International President



Stephen L. Morrison

Executive Director

BRE-UK Tunnel Ventilation Dampers

bre

www.bre.co.uk

BRE Global Test Report

Ad-hoc fire resistance test on a galvanised steel Tunnel Ventilation Damper employing procedures and criteria from BS 476: Part 20 : 1987.

Prepared for: Betec Cad Industries
Date: 22nd April 2015
Report Number: 301386 Issue: 1

BRE Global Ltd
Watford, Herts
WD25 9XX

Customer Services 0333 321 8811

From outside the UK:
T + 44 (0) 1923 664000
F + 44 (0) 1923 664010
E enquiries@bre.co.uk
www.bre.co.uk

Prepared for:
Betec Cad Industries,
Plot of Land P4-02,
Saif Zone,
P.O. Box 8805,
Sharjah,
U.A.E.

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.



Intertek

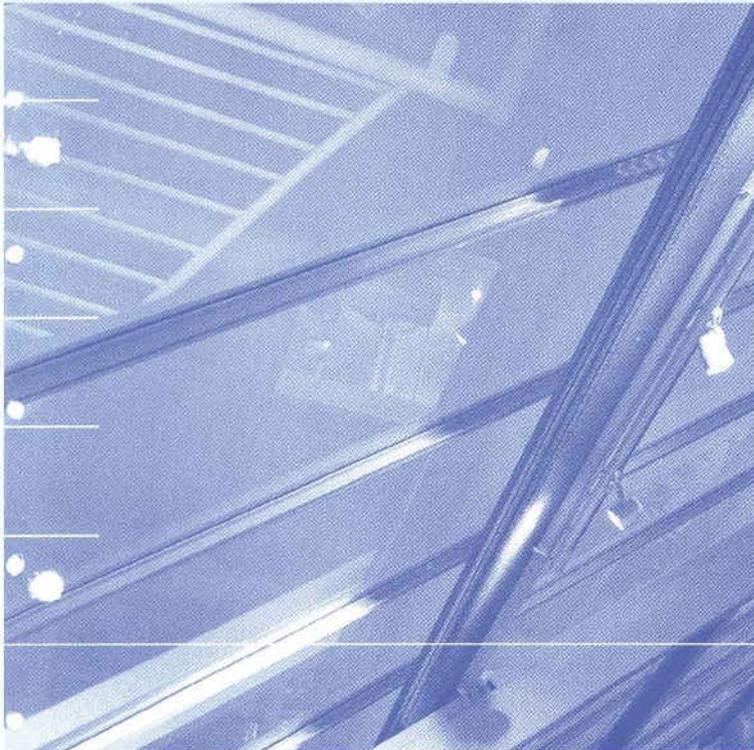


CertAire
The INDEPENDENT
Testing Laboratory





BRE - UK - Fire Dampers / MSFDs



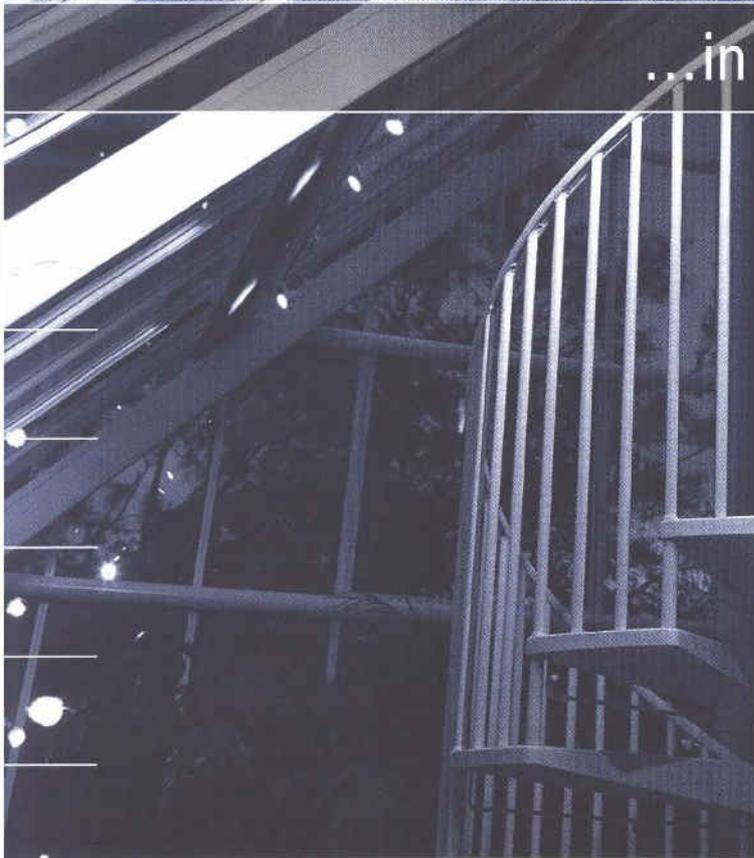
Test Report :

Ad-hoc fire resistance test on a BETEC damper, installed in a section of duct in an aerated concrete block wall.

Test report number 209155



...in partnership



Prepared for :

Betec Ltd
P.O. Box 24137,
Sharjah,
UAE,
15 December 2003



0578

Page 1 of 18

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.





AIR MOVEMENT AND CONTROL ASSOCIATION INTERNATIONAL, INC.

International Headquarters
30 West University Drive
Arlington Heights, Illinois
60004-1893 USA

Phone: 847-394-0150
Fax: 847-253-0088
E-Mail: jparent@amca.org
Website: www.amca.org

Test No. 28424-W1

May 24, 2012

TO: Betec Cad Industries (FZC)
P.O. Box 8805
Plot # P4-02
Sharjah, Sharjah UNITED ARAB EMIRATES Sharjah

ATTN: Rahul Zutshi
rahul@beteccad.com

**SUBJECT: CONTRACT TESTING
MODEL No. STL B 11 A**

Attached are the test results of the subject model performed on May 14, 2012.

If you should have any questions concerning these data, please let us know.

Sincerely,
AIR MOVEMENT AND CONTROL
ASSOCIATION INTERNATIONAL, INC.

Josh Parent
Laboratory Manager

Attachment

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.





WEATHER LOUVERS - AMCA -500L



**AIR MOVEMENT AND CONTROL
ASSOCIATION INTERNATIONAL, INC.**

International Headquarters
30 West University Drive
Arlington Heights, Illinois
60004-1893 USA

Phone: 847-394-0150
Fax: 847-253-0088
E-Mail: jparent@amca.org
Website: www.amca.org

Test No. 28428-W1

April 03, 2012

TO: Betec Cad Industries (FZC)
P.O. Box 8805
Plot # P4-02
Sharjah, Sharjah UNITED ARAB EMIRATES 8805

ATTN: Rahul Zutshi
rahul@beteccad.com

**SUBJECT: CONTRACT TESTING
MODEL No. WL BC 20**

Attached are the test results of the subject model performed on March 20, 2012.

If you should have any questions concerning these data, please let us know.

Sincerely,
AIR MOVEMENT AND CONTROL
ASSOCIATION INTERNATIONAL, INC.

Josh Parent
Laboratory Manager

Attachment

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.



Intertek



CertAire
THE INDEPENDENT
Testing Laboratory



SOUND ATTENUATORS - AMCA



**AIR MOVEMENT AND CONTROL
ASSOCIATION INTERNATIONAL, INC.**

International Headquarters
30 West University Drive
Arlington Heights, Illinois
60004-1893 USA

Phone: +1 847-394-0150
Fax: +1 847-253-0068
E-Mail: jparent@amca.org
Website: www.amca.org

Test No. 31455-ADS

January 29, 2015

TO: Betec Cad Industries (FZC)
P.O. Box 8805
P4-02 SAIF Zone
Sharjah, Sharjah UNITED ARAB EMIRATES 8805

ATTN: Rahul Zutshi
rahul@beteccad.com

**SUBJECT: CONTRACT TESTING
MODEL No. SA GB 20**

Attached are the test results of the subject model performed on January 29, 2015.

If you should have any questions concerning these data, please let us know.

Sincerely,
AIR MOVEMENT AND CONTROL
ASSOCIATION INTERNATIONAL, INC.

Josh Parent
Laboratory Manager

Attachment

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.





Certificate of Product Ratings

AHRI Certified Reference Number: 5612860

Date: 3/4/2015

†Status: Active

Product: Single Duct Terminal Units (Supply)

Model Number: VAV-B31/32A

Manufacturer: BETEC CAD IND. FZC.

Country of Origin: United Arab Emirates/India

Trade/Brand name: BETEC CAD

Rated as follows in accordance with the latest edition of ANSI/AHRI Standard 880 (I-P), Performance Rating of Air Terminals and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

Rated Duct Width x Height (decimal inches):	275.00 X 200.00
Fan Powered:	No
Primary Air Flow Rate (CFM):	400
Minimum Supply Operating Pressure Required:	0.05

Radiated Sound Power Level in dB at 1.5 in. H₂O Differential Static Pressure and 100% of Rated Airflow.

125:	65
250:	59
500:	54
1000:	46
2000:	36
4000:	38

Discharge Sound Power Level in dB at 1.5 in. H₂O Differential Static Pressure and 100% of Rated Airflow.

125:	73
250:	75
500:	70
1000:	63
2000:	57
4000:	55

† Models with an 'Active' status are those that are currently in production. Models with a 'Discontinued' status are those that the manufacturer has elected to stop producing, yet stock is still available. Models with an 'Obsolete' status are those that the manufacturer is required to stop manufacturing due to an AHRI certification program test failure.

* Ratings followed by an asterisk (*) indicate a voluntary rerate of previously published data, unless accompanied with a WAS, which indicates an involuntary rerate.

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CERTIFICATE NO.: 130699301438516146

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By - Pass VAV - AHRI



Certificate of Product Ratings

AHRI Certified Reference Number: 5613723

Date: 3/4/2015

†Status: Active

Product: Bypass Air Terminal Units

Model Number: VAV-B11/12A

Manufacturer: BETEC CAD IND. FZC.

Country of Origin: United Arab Emirates/India

Trade/Brand name: BETEC CAD

Rated as follows in accordance with the latest edition of ANSI/AHRI Standard 880 (I-P), Performance Rating of Air Terminals and subject to verification of rating accuracy by AHRI-sponsored, independent, third party testing:

Rated Duct Width x Height (decimal inches):	275.00 X 200.00
Fan Powered:	No
Primary Air Flow Rate (CFM):	400
Minimum Supply Operating Pressure Required:	0.05

Radiated Sound Power Level in dB at Minimum Differential Static Pressure in. H₂O and 100% of Rated Airflow.

125:	67
250:	60
500:	56
1000:	49
2000:	43
4000:	44

Discharge Sound Power Level in dB at Minimum Differential Static Pressure in. H₂O and 100% of Rated Airflow.

125:	80
250:	82
500:	74
1000:	67
2000:	64
4000:	60

† Models with an 'Active' status are those that are currently in production. Models with a 'Discontinued' status are those that the manufacturer has elected to stop producing, yet stock is still available. Models with an 'Obsolete' status are those that the manufacturer is required to stop manufacturing due to an AHRI certification program test failure.
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Grilles & Diffusers - ETL- Intertek



REPORT

3933 US ROUTE 11 CORTLAND, NEW YORK 13045

Order No. 3185702

Date: November 20, 2009

**REPORT NO. 3185702CRT-001a
STATIC PRESSURE, SOUND POWER LEVEL,
AREA FACTOR AND THROW TESTS ON AN
18" BY 18" SQUARE CEILING DIFFUSER
MODEL NUMBER SAD-B10/RAD-B10**

RENDERED TO
BETEC CAD Ind. (Fzc)
Plot No. P4-02, PO Box 8805
Sharjah Airport International Free Zone,
Sharjah-U.A.E.
Tel: +971-6-5575252
Fax: +971-6-5575151/61

Branch:
Kross Air Distribution Systems
Plot No. 90-93, Road No. 9
EPIP Zone, Pashamylaram
Hydrabad-502307, A.P. India
Tel: 009140-8455224212

INTRODUCTION

This report gives the results of tests conducted on an 18" by 18" square ceiling diffuser model number SAD-B10/RAD-B10. The test results include Static Pressure, Area Factor, Throw and Sound Power Level. The sample was selected and supplied by the client and was received at the laboratories on October 22, 2009. The sample appeared to be in new unused condition upon receipt.

AUTHORIZATION

Signed Intertek Quotation No. 500161069.

TEST METHOD

The diffuser was tested in accordance with the ASHRAE 70-2006 Standard "Method of Testing for Rating the Performance of Air Outlets and Inlets", which incorporates ADC 1062: GRD-84 Test Code for Grilles, Registers and Diffusers. Acoustical data was obtained employing a Bruel & Kjaer Digital Frequency Analyzer Type 2131 and analyzed on a Compaq Prolinea 4/33 Computer and Epson LQ-850 printer. The reference sound source used for this test was a calibrated Bruel & Kjaer Type 4204, which conforms to the above standard. The octave band sound power levels were plotted on graph of Noise Criteria Curves which is in the ADC Test Code. These curves are reprinted with permission from the ASHRAE Handbook and Product Directory, 1976. The diffuser was installed in the facility and supplied with measured volumes of air. The static pressure was measured 1½ duct diameters upstream of the diffuser inlet.

This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program. Measurement uncertainty budgets have been determined for applicable test methods and are available upon request.

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MSD/MSFDs - Cert - Aire

UL 555/555S TEST		Developed By: CERTAIRE TECH		NICAL SERVICES, LTD.		Issue: CA/UL Rev. 0					
Test No.		BT-FD-3636-MNL01-EXT-UP-250-DYC-01-PASS		UL File No.		R21925					
Lab		Cert-Aire		UL Project No.		10CA58398					
Manufacturer		Beteq Cad		UL Representative: Mike Nicasio							
Test Date		2011-01-04		Signature:							
Test Seq. No. Select>		01		Date: 2011-01-04							
Test Type: Select>		Dyr. Closure DYC		Lab Technician: Jeff Partipilo							
Test Temp. F Select>		250		Signature:							
Trade Name Select>		Fire Damper		Date: 2011-01-04							
Model No.		FD-GB 20 Series		UL Notes:							
Sample No.		BT02A									
Size: Dia. or Width In.		36									
00 or Height In.		36									
Area Sqft		9.00									
Operator Select>		MNL01 Manual									
Mounting Select>		EXTERNAL									
Flow Dir Select>		UP Upstream									
Define		Locking ramps									
AMCA Standard		AMCA Standard 500-D-98 Figure 5.9									
UL Standard		UL555 Seventh Edition Section 14									
Notes/Comments:		Tested with Elsie 165 F fuseable link.									
Test Data		Det. 1		Det. 2		Test Results		Det. 1		Det. 2	
SP (Damper) In.Wg		0.15		4.51		At Air Density		0.0781		0.0625	
PD (Nozzles) In.Wg.		2.15		0		Inlet Temp. F		36		166	
DB Dry Bulb Temp. F		36		36		SP as Tested In.Wg.		0.15		4.51	
WB Wet Bulb Temp. F		30		30		CFM w/o Syst		21654.72		0.00	
DB5 - Nozzle Inlet F		36		36		System CFM		0.00		0.00	
DBI - Damper Inlet F		36		166		Total CFM		21654.72		0.00	
Barometer In. Hg.		29.26		29.26		VELOCITY fpm		2406.08		0.00	
Number of 10" Nozzles		7		7		Test Results At Std. Air Density .075 Lbs/cuft.					
Small Nozzles dia.String						Closure SP In.Wg.		4.51			
Pass/Fail Select>		PASS				CFM Std.		22093.71			
Additional Notes						VELOCITY fpm		2454.86			
										Page No.	
										1	
										Total Pages	
										6	

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Testing Laboratory





ISO - Certificate



Certificate of Registration

BETEC CAD INDUSTRIES FZC

PB No. 8805, P4-02, 03 & 04 Sharjah International Airport Freezone,
Sharjah, U.A.E

Operate a management system that complies with the requirements of

ISO 9001:2008

With the scope:

Design, Manufacture & Services of HVAC Systems & Central Air
Distribution Associated Equipment

EA Code: 18

Certificate No. QS 4091

Originally Registered: 25th October 2013

Registered by WQA: 25th October 2013

Re-Certification: 06th February 2016

Latest Issue: 06th February 2015


Signed on behalf of WQA

Validity of this certificate can be checked by contacting:
Worldwide Quality Assurance Ltd
Derwent House,
Mandale Business Park,
Belmont Industrial Estate,
Durham,
DH1 1TH
www.worldwideqa.com



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WQA 14C, Issue 7

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Intertek



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Chamber of Commerce

غرفة تجارة وصناعة الشارقة
Sharjah Chamber of Commerce & Industry

شهادة عضوية
Membership Certificate
الإمارات العربية المتحدة
United Arab Emirates

شهادة تسجيل عضوية لعام
Membership Registration Certificate For Year
2014
()

إن غرفة تجارة وصناعة الشارقة بتسليم على قانونها رقم (١) لعام ٢٠٠٦م
Sharjah Chamber of Commerce and Industry according to the Law no. (1) 2003
بيك كد انديستريز اس م ح

قد سجلت:

BETEC CAD INDUSTRIES FZC	: Company Name
700605	: رقم العضوية Membership Number:
3009	: رقم الترخيص License No
0	: رقم السجل التجاري Commercial Registration No
منطقة حره - م. ا.	: في الفئة Category
هندي، هندي، هندي	: جنسية الشركاء Partners' nationalities
الامارات	: الجنسية Nationality
رخصه المنطقه الحره	: الشكل القانوني Legal Status
المنطقه الحره لمطار الشارقة	: العنوان Address
SHARJAH AIRPORT FREEZONE	: العنوان Address
تصنيع سعات انابيب التهوية والقواطع الاوتوماتيكية ضد الحريق الخاصة باجهزة التكيف	: لممارسه النشاط Activity
MANUFACTURING A/C HVAC EQUIP. WITH FIRE DAMPER, MOTORIZED FIRE & SMOKE DAMPER,	: ملاحظات Remarks

تاريخ الانتهاء
29/11/2015

تاريخ الاصدار
30/05/2005

M.

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Some of Supplied Major Projects

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT
AIRPORTS		
Emirates New Engineering Centre (Emirates Hangers)	Emirates Trading Agency	ADPi
Dubai Airport - CUC4	Emirates Trading Agency	Dar Al Handasah
Dubai Intl Air Show	A & P Sharjah	Dar Al Handasah
Dubai Airport - Terminal 2	Thermo	Dar Al Handasah
Doha Int'l Airport	Diplomat Tech	Bechtel
METROS AND TUNNELS		
Delhi Metro Rail Corporation (INDIA)- Kashmir Gate Station	Emirates Trading Agency	Maunsell
W3	Emirates Trading Agency	Maunsell
DMRC - Vidhaan Sabha Station	Emirates Trading Agency	Maunsell
DMRC - Vishwa Vidyalaya Station	Emirates Trading Agency	Maunsell
DMRC - Barakhamba Station	Emirates Trading Agency	Maunsell
Nadd Al Hamar Beirut Road Tunnel (Dubai)	B.K Gulf LLC.	Halcrow
DISTRICT COOLING PLANTS		
Sowwah Island District Cooling Plant, Abu Dhabi	Kharafi National	Hill International
Dubai Metro Sub-station, Dubai	Bin Darwish	Road & Transport Auth. (RTA)
National Tower, Abu Dhabi	Al Bani	Est Crown Engineering
SUB- STATIONS		
Muzairah Sub-station, Dubai	Emirates Trading Agency	Kennedy & Donkin
Munai Sub-station	Emirates Trading Agency	Kennedy & Donkin
Hamda Sub-station	Emirates Trading Agency	Kennedy & Donkin
Golden Sand Sub-station	Emirates Trading Agency	DEWA
Emirates Hills Sub-station	Emirates Trading Agency	DEWA
JAFZA Sub-station	Emirates Trading Agency	DEWA
Salauddin Street Sub-station	Emirates Trading Agency	DEWA
Qatar Petroleum, Doha, Qatar	Al Owais Electromech	Qatar Design Consortium

Some of Supplied Major Projects

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT
RESORTS, RECREATION CENTERS AND VILLAS		
Khawaneej Villas	Trans Gulf	Mott Mc Donald
Al Hajri 5 Villas	Rasco Sharjah	Bin Khadim
Rulers Villa	Emirates Trading Agency	Space Consultnts
Golf Club House	Drake & Scull	
Rashid Al Shamsi	CBE	Adnan Saffarini
Majid Al Shamsi	CBE	Adnan Saffarini
Al Ghurair City Mall	Emirates Trading Agency	Turner
Deira City Center-Major Exp	Emirates Trading Agency	Holford Assocts
Mall of Emirates	Emirates Trading Agency	W.S.P.
IBN Battutta Mall	Emirates Trading Agency	
HIGH END TOWER AND LUXURY BUILDINGS		
Pearl Qatar, Doha, Qatar	Al Arrab Electromechanical	KEO /Dar Al Handasah
7WX Dubai Marina	Emirates Trading Agency	Hyder
Ajman Corniche Tower, Dubai	Industrial Enterprises Co.	Adnan Saffarini
Al Ahli United Bank, Qatar	F. N. C.	Michel Tannous
Al Ain Police Head Quarters, Dubai	ELMACS	EHAF Consultancy
Al Fattan Tower	Intl. Elec-Mech. Co. LLC	GKR Consulting Engrs.
Al Ghurair Investment Building, Dubai	Emirates Trading Agency	RPW
Al Salam Tower	Intl. Elec-Mech. Co. LLC	Atkins
Al Salam Tower, Sharjah	Emirates Trading Agency	Horizon / Consultair
Al Yamamah Residence	Emirates Trading Agency	ATKINS
Al Yassat Tower	Verger et Delport	NEB
Beach Tower	Emirates Trading Agency	Consultair
Burj Residence Ph-I, 6 Towers	Emirates Trading Agency	Hyder Consultant
Burj Residence Ph-II, 3 Towers	Emirates Trading Agency	Hyder Consultant
Burj Residence Ph-III, 6 Towers	Emirates Trading Agency	Hyder Consultant
City Centre, Mirdif, Dubai	Emirates Trading Agency	Atkins

Some of Supplied Major Projects

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT
City Max Hotel, Dubai	Galadari Electromech	Arch Group
Creek Side Apartments	Thermo	Atkins
DAFZA Building, Dubai	Emirates Trading Agency	Al Gurg
DALMA Tower	Verger et Delport	NEB
Deira Island Palm Sales Office, Dubai	Bin Belaila AE-Arma Electropank MEP Co. LLC.	Shadid Engg. Consultants
DIFC- Bldg-3	Bilt Middle East	Halcrow
DIFC- Bldg-4	Bilt Middle East	Halcrow
DIFC Gate Building	Emirates Trading Agency	Hyder & Halcrow
DIFC Gate Building	Emirates Trading Agency	Halcrow
Discovery Garden, Dubai	Emirates Trading Agency	ECC
DMCC Ind Bldg.	Seidco Gen Contract	
Down Town, Phase-I, Jebel Ali, Dubai	B.K. Gulf	Burt Hill
Dubai Convention Centre	Emirates Trading Agency	R M J M
Dubai Convention Centre	Emirates Trading Agency	R M J M
Dubai Festival City, Dubai	Kharafi National	Hyder Consultant
Dubai Islamic Bank	Emirates Trading Agency	Ian Banham Associate
Dubai Marina Mansion	Drake & Skull	W.S. Atkins
Dubai Office Land	Verger et Delport	
Dubai Poly Film	Emirates Trading Agency	
Dubai Rulers Office (Ext New)	Bin Ladin	Arif Bintok
Dubai Police Force & Army Accommodation	Al Naboodah MEP	Arif Bintok
Emerald Palace Towers, Dubai	Al Habtoor Specon	Atkins
Emirates Engineering Centre (Hanger - H), Dubai	Emirates Trading Agency	ADPi
Emirates Tower	Aster Airmech	DSSR
Emirates Towers	Aster Airmech / E T A	D S SR
Gate Precinct Bldg., Abu Dhabi	Bilt Middle East	Halcrow
H S B C	Emirates Trading Agency	R M J M
H-50 Emirates Hills	ARAB TEC	
Hyatt Regency	Emirates Trading Agency	Free Line Engg.

PROJECTS

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT
SCHOOLS AND INSTITUTIONS		
Dubai British School		
Higher Secondary School	Tamam Central Air-condition	Team Consultants
Higher Institute for Judicial & Juristic	Nile Electro Mech	Al Thurath Engg. Consults
Shamka School	BIN Darwish Electromech	

ON-GOING PRESTIGIOUS PROJECTS

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT	REMARKS
Mid Field Terminal Complex	Effeco	AECOM	Abu Dhabi
ZADCO UZ 750	HLG	Technip	Abu Dhabi
Dragon Mart 2	KELE	Dar Al handash	Dubai
North Gate Mall	HLG	Callison	Qatar
Sidra Villages	Sinohydro		Qatar
4 New School for Ashghal	Lotus Trading & Contacting	"Gulf Engineering & Industrial Consultancy"	Qatar
Jeddah South Thermal Power Plant	Jamed		KSA
KAFP	Unistar		KSA
Sadara Power Distributor	Nesma		KSA
Abudhabi Airport Terminal 3	Alec	KBR	Abu Dhabi
Queen Alia International Airport	Paraske Vaides		Jordan
ADNOC Admin	Nell Energy	ADNOC	UAE

ON-GOING PROJECTS

PPM Concord	EFECO	WS Atkins & Partners Overseas
KM - 2	Smodia - Malaysia	
DEWA - Dubai	Nexus	Nexus
Jebel Ali Power Plant	Doosan Heavy Industries	Lamehoel
Runab Power		KOAM
Barac Nuclear Plant	Honbo	Advae
Shah Gas	Thermo	Samsung
Jubail Omar	Nesma & partners	KSA
CMR	Voltas Limited	Atkins
CMR	Thermo	Atkins
Areai	Cooling Jordan	
KAI - Egypt	Al Futtaim Carolin - Dubai	
Cleve Land Clinic	ETA	Jacobs
Ittihad Towers	Voltas Limited	Atkins
Central Market	Voltas Limited	Atkins
Yas Retail Mall	Voltas Limited	Atkins
Yas Retail Water Park	Voltas Limited	Atkins
Seraj Tower	Al Ittihad Electro Mech.	NEB

ON-GOING PROJECTS

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT	REMARKS
Jebel Ali Metro Station	Doosan Heavy Ind.	Fitcher	
Aluminum Plant, KSA	Samsung	Fitcher	
Queen Alia Airport	Cooling Industries Company	Fitcher	
Jordan Power Plant	Voltas, Oman	Fitcher	
Aztec Polysilicon Project	Arabian Mep.	Fitcher	
KOC - Pipeline Qatar Project	Hyundai	Fitcher	
Wave Hotel Oman Kuwait	Voltas Oman	Fitcher	
Dubai Dam Project	Six Construction	Atkins	
Jaipur Metro India	ETA		
Delhi Metro	Samsung		
W - Hotel, Jordan	Cooling Industries Company		
Saint Regis Hotel	Cooling Industries Company		
Sarya Aqaba Project	Drake & Skull	DEC	
QP Project Salalah Airport Expansion (MES)	Larsen & Toubro LLC (Oman)	Cowi & Partners LLC	
Dragon Mall 2 Project (Expansion of Dragon Mall)	UNEC	Dar Al Handasah	
Upper Zakum 750 K Project	HLG Leighton Group Contracting	LCAD/ Bomesse	
Air Base Abu Dhabi	Penguin	Airport Consultant	
North Gate Mall	Voltas Qatar	KEO - Qatar	
Sidra Village	Syno Hydro - Qatar		
Down Town Jebel Ali, Dubai	BK Gulf	Bovis	
Pearl Qatar	ETA	KEO	
Barwa Financial District	Bouygues Batiment Intl.	KEO - Qatar	

ON-GOING PROJECTS - KSA

Jabal Omar Development Makkah	M/s.Nesma & Partners	Khatib & Alami
KAFD - Saudi	Gartner	
Moda Sub-station, Jeddah	M/s. Zamil	Saudi Electric Company
Sanabil Sub-station	M/s. Zamil	Saudi Electric Company
ABB 6 Sub-stations	M/s. Zamil	Saudi Electric Company
Qurayyah Independent Power Plant	M/s. Youlim C & T	Saudi Electric Company
Sadara Power Distribution	M/s. Nesma & Partners	Aramco
Rabigh Power Plant	M/s. Zamil	Saudi Electric Company
Taibah University	M/s. Al Khodari & Sons	University
King Abdullah Financial District	M/s. Hastie	
ANB HQ Riyadh	M/s. Tala al Baraka Contg.	
Cardiac Imaging Center	M/s. Manazel	
King Faisal Specialist Hospital & Research Center - Jeddah	M/s. Saudi Binladin Group-BD	
Prince Naif Center For Health Science & Research	M/s. Hamad Ali Al Alaiwi & Partners	
Yanbu IWIP II Project	M/s. SETE Energy Saudi	
SS-380 KV Sub-station	M/s. Al Alamiah Technical	
Prince Salman Hopsital & 300 Bed Hospital	M/s. Art Trade	
Jeddah South Thermal Power Plant	M/s. Jamed	

Past Highlights of Power Plant Projects

PROJECT NAME	MAIN CONTRACTOR	CLIENT
Zadco (Upper Zakum 750 Island)	Petrofac	Pertofac
Zadco (Upper Zakum 750 Island)	Prekons	HLG
Zadco (Upper Zakum 750 Island)	Bomsec	HLG
Explosive Storage Facilities at Western	Ammana	ADNOC
Design & Construction of Administration	Fadwa Al hammani	ADNOC
Ruwais Housing Complex		ADNOC
Construction of resigistration building & additional facilities in existing service station in Abu Dhabi, Ras Al Khalmah		ADNOC
NDC5&6, Jindal Pioneer, Greatship -2, ENSCO 140	Lamprell	
Sarb	Denholm yam	Adma Opco
Taza Gas Plant Iraq	AHI Carrier FZC	
Borouge3 XLPE Project U.A.E.	HANBO E & C	
Borouge3 XLPE Project U.A.E.	Hyundai	
Borouge3 XLPE Project U.A.E.	Koam	
Borouge3 XLPE Project U.A.E.	Samho	
Jebel Ali Power and Desalination, Station 'L', Ph-II, Dubai	Samho Khorem	Lahmeyer
Jebel Ali Power and Desalination, Station 'L', Phase I	Shin Nippon	Lahmeyer
Shuweihat Desalination & Power Plant, Abu Dhabi	Thermo Electromech	Tebodin
Al Aweer Power Project, Dubai	Emirates Trading Agency	Kennady & Donkin
Fujairah Water & Power Project	Thermo Electromech	Fichtner Consultants

International / Overseas Projects

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT
Pearl Qatar, Doha, Qatar	Al Arrab Electromechanical	KEO /Dar Al Handasah
Pearl Qatar, Viva Bahriya VB 20 & 21, Doha, Qatar	ETA Star Electromechanical	KEO Consultant
Pearl Qatar, Viva Bahriya VB 11 & 17, Doha, Qatar	Qatar Electromechanical-Al Mana	KEO Consultant
Silatech Project, Doha, Qatar	Qatar Electromechanical-Al Mana	Bluu
City Centre Expansion Project, Doha, Qatar	Hastie International	GHD Global Pty Ltd.
Traders Hotel, Doha, Qatar	Target Rotary	Diwan Engineering
Tornado Tower, Doha, Qatar	Target Rotary	CICO Consultant Arch. & Engrs.
Qatar Tower Project	Al Huda Engineering	Consultant Engg. Group (CEG)
Fauchon Paris, Doha, Qatar	Qatar Electromechanical-Al Mana	Qatari Engineers & Associates
Barzan Camp, Doha, Qatar	Qatar Electromechanical-Al Mana	MZ & Partners
Silhouette Tower, Doha, Qatar	Qatar Electromechanical-Al Mana	Hill International
Ministry of Education Head Quarters, Kuwait	Kharafi National	Cambridge Seven Associates
Jabel Omar Developments, Mekkah, KSA	Nesma & Partners	Hill Intl. / Ateliers Lion Arch.
Taibah University, Madina, KSA	Al Khodari General Contractors	Al Naim Arch. Engrs. Urban Planner
King Abdullah Financial District, Ph- 1&2, Riyadh-KSA	Permaisa Steel	Saudi Bin Laden
Hamad Medical Corporation, Doha, Qatar	Marine Airconditioning	HMC / MZ & Partners
SAUDI ARAMCO (Ras Tanura Refinery), KSA	Samsung/Zamil Airconditioners	ARAMCO
Qatallum Power Plant	LS Mtron	Qatar Electricity & Water

International / Overseas Projects

PROJECT NAME	MAIN CONTRACTOR	CONSULTANT
Jebel Ali Power and Desalination, Station 'L', Phase I	Shin Nippon	Lahmeyer
Jebel Ali Power and Desalination, Station 'L', Ph-II, Dubai	Samho Khorem	Lahmeyer
Shuweihat Desalination & Power Plant, Abu Dhabi	Thermo Electromech	Tebodin
Al Aweer Power Project Dubai	Emirates Trading Agency	Kennady & Donkin
Fujairah Water & Power Project	Thermo. Electromech	Fichtner Consultants
Dubai Electricity & Water Authority (DEWA), Dubai	Hyundai	Lahmeyer

Other Projects Handled

ADCO Gas Compression Project	Control Contg & Trading Co.	
Ajman Phase 1 Res Tower J 05/07//D	Remco	
AL 829477	Maritime Industrial Services	
AUIS Iraq	Cooling Industries Company	
B+2p+G+26 roof on Dubai	ARJ Engineering	
B+G+3 University Campus, Academic City	Gold Line Contracting	Dubai Consultants
Canal Residence	Fawaz Ref & A/C Co. LLC	ECC Dubai Consultant
Central Market - Abu Dhabi	Voltas Limited	
Dewa 'M' Station	Doosan Heavy Industries &	Fichtner Consultants
Egypt	Al Andalusia for Air Outlets	
Elite Tower on Plot No. 392-190 at Dubai	Remco Electro Mechanical	
Generator Plant - RAK	UTICO	
Grosvenor PH II	Bilt Middle East	
Jumeirah Park Package - 3	Al Huda Contracting	
Lupp Middle East	Prism International	
Mazaya Tower	Prime Star Electromech Works	NEB
Mirdif City Centre	E.T.A	
Nilona Tower / Marriott Hotel	Trans Gulf Electromechanical	
Oud Medha	Al Ahmadiyah Contracting	
PPM Conard Hotel	Efeco LLC	WS Atkins & Partners Overseas
Princess Noura Uni	Zamil Air Condition	
Princess Tower	ETA Hittachi Plant JV	
Sheikh Khalifa Hospital	ETA	
Silverin Twin Tower	Efeco	
Steel Factory at Mussafah - Abu Dhabi	E.T.A Abu Dhabi	
U-Bora	Sensaire Services	
Zahra Hospital- Sharjah	Dynamo	
Zaroq Court	Cooling Industrial company	N/A
Jubail Export Refinery Project @ KSA.		
Saudi Aramco		
Green Diesel Project		

Selected Products of the company have been Classified / Listed / Tested by various international testing authorities.



MOTORIZED SUNSHADE LOUVERS

Sunshade Louvers are designed for zero solar heat gain by shutting out light. Easily managed by the buildings environmental control system, this product solves many light infusion issues.

Sunshades are an attractive means to obstruct undesired sun and heat gain while allowing natural light into your building. Sunshade louvers add an attractive design element to your building.

BETEC CAD's Aluminium Extruded aerofoil sunshade louvers deflect thermal gain from incident sun, integrating light control into the building envelope. With a touch of the remote button, louvers can be positioned anywhere within their 120-degree range of motion for the exact amount of protection or ventilation desired.

The objective of a sunshade louver is to block the entry of direct sunshine into your building throughout the cooling season, while allowing direct sunlight during the heating season. This combination provides the greatest benefit for reducing energy consumption over the life of your building. Sunshades should blend with other building design elements and provide the desired appearance.

Aerofoil louver Controller's are available in a variety of colors. The frame and blades are made of enamel or kynar powder-coated or anodized aluminium.

Properly engineered, these structures can resist wind loads of up to 120 km/h. A variety of blade control options include manual by friction, mechanical or electrical remote control.

Key Features

Extruded louvers are more durable, while fabricated designs can include perforation to modify their performance

Sunshade louver shapes, composition, and finish also can be used to create specific day lighting effects as well as establishing a different aesthetic.

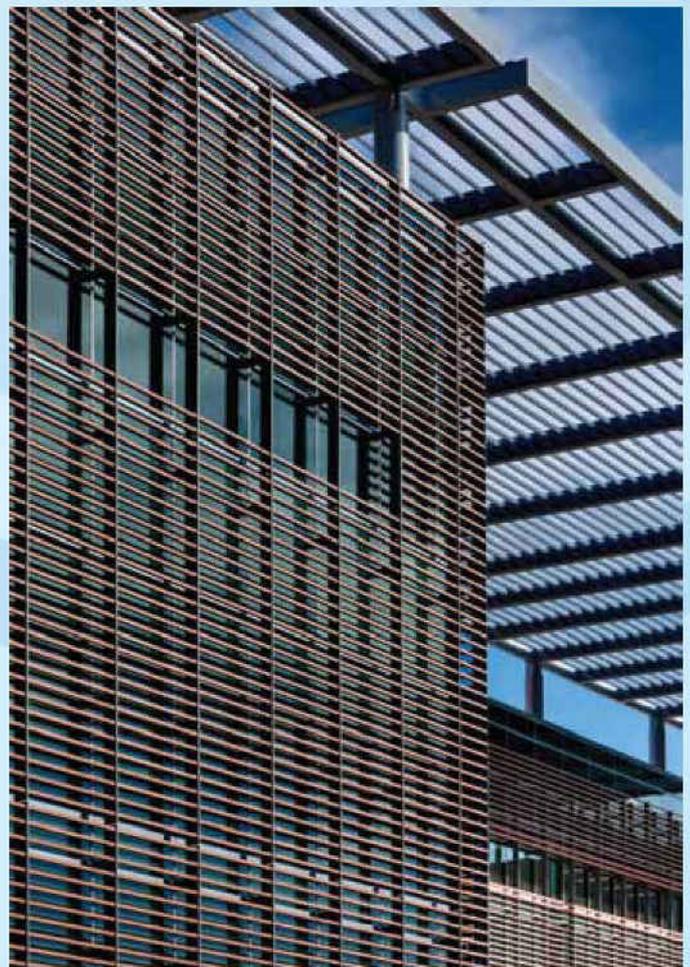
BETEC CAD. Sunshade louvers typically have an anodized aluminium finish to ensure long product life and minimal maintenance. Other finishes include polyester powder coating and fluor polymer painting. All resist damage to sun or weather.

Electrical Remote control

Enable control from inside by means of a simple switch, allowing remote operation of the sun shade louver at any distance. The motor is built for external operation and is not effected rain or humidity.



Sunshade Louver



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BETEC CAD.
Beyond the Comfort Air.

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🌐 Doha - Qatar 🌐 Kuwait 🌐 Oman 🌐 Jordan 🌐 Egypt



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