



NOISE AND VIBRATION CONTROL



Green Label
Your portal for Green Label applications & directory of products

INNOVATIVE DESIGNS,
INSPIRED BY THE FUTURE



Making Future Sounds Good

We aim to provide total Acoustic solutions and products within Egypt, U.A.E. and Middle East, we reliably deliver turnkey systems and solutions, in pursuit of our vision to become the most respected building services provider in the Middle East Region. By listening to the individual needs of the customer, we offer tailor made solutions.

We understand how important our environment is. A good environment is a factor in your quality of life, whether outside in the open air or in an enclosed space, we only feel truly well with tranquility and fresh air. Air is the elixir of life, lets us breathe freely. It is invigorating, inspiring, and gives us the energy to live and work. Our whole company and products are positioned around providing good quality energy efficient air and tranquil spaces, continuously trying to improving you environment.

Why Control Sound?

INCREASED AND BETTER AUDIBILITY: A good acoustical sound absorption ceiling/ panels will help to talk , converse at a lower tone and drain lesser energy with clear deliveries thus establishing clarity in communication.

REDUCES STRESS LEVELS: A good acoustical sound absorption system helps in proper deflection of communication thereby reducing stress levels and contributing to better health conditions for all.

REDUCES NOISE POLLUTION: Good acoustical system in general , greatly reduces noise pollution and thus regulating body pressure. This , in turn , leads to higher output and energy levels.

Our Specialities are:

- Acoustic and Vibration solutions & consultancy services.
- Noise and Vibration Testing.
- Acoustic / Noise Impact Assessment and EIA's
- Acoustic Treatment Works



Decibel Acoustic Solutions to assist in the preparation of specifications through our well qualified team who are available to offer full technical advice and selection of the relevant product needed for your projects. This ensures that the "best fit" solution is offered saving both time and money and ensuring the highest possible performance.

ACOUSTIC ENGINEERING AND DESIGN

Further to Acoustic Engineering and Design, our expertise extends to Noise & Vibration Control of equipment in the HVAC Field including a variety of services for wide ranging applications such as auditoriums, lecture halls, cinemas & Environmental noise studies. Decibel A. S. offers consultancy service for all HVAC noise control applications as well as assisting in the design of the right systems to take care of any noise related problems.

Typical Services offered by our Acoustics Division include:

- Full turnkey projects For Acoustic Installations including auditoriums and cinemas
- Acoustic Consultancy Services
- Interior Installations of Acoustic Materials
- Specific Noise Control Measures for Auditorium's
- Site Testing & Level Recordings

We also offer solutions for industrial and other related noise control problems. Benefiting from our knowledge and experience our clients are able to understand the issues concerned with acoustics. We, believe that a knowledgeable client is an asset to the industry and awareness ensures good designs and their successful implementation.

Some of the areas of our expertise include:

- Predicting noise and vibration from transportation sources on development sites
- Prediction and measurement of noise emissions from industrial processes and environmental impact assessment
- Long or short term monitoring of building sites to control noise emissions for nearby residents or to ensure compliance with local authority conditions
- Noise assessments to ascertain compliance with Health and Safety Noise at Work Regulations

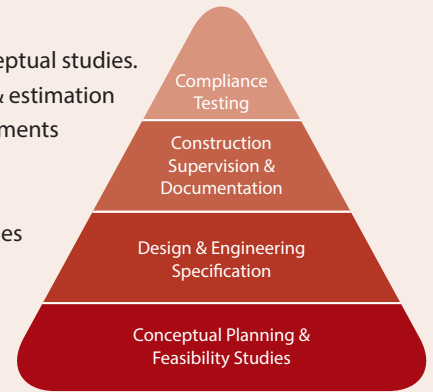
Our Philosophy

The foundation of our working principle is a philosophy that embodies one unique statement. "From Concept to Commission". Armed with this key objective and with our integrated expertise we are able to offer our clients a full spectrum of services in Acoustic Consulting all the way from generating initial ideas to the development to fully operational systems and demonstration of their capabilities.

Life Cycle of an Acoustic Project

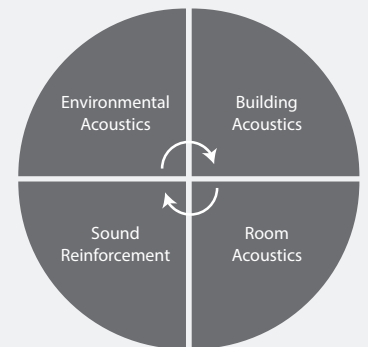
The life cycle of our Acoustic projects are considered to fall into a logical position within a process flow that has been predetermined. Our services follow a similar pattern of work strategies which can be tailored to the needs of the project and / or the client such as:

- Strategic and conceptual studies.
- Feasibility studies & estimation
- Engineering assessments
- Schematic design
- Peer reviews
- Due diligence studies
- Risk assessments
- Value engineering
- Detailed design
- Supervision

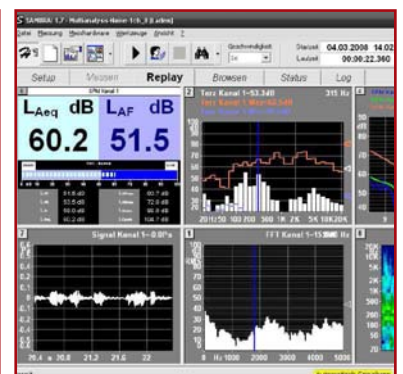
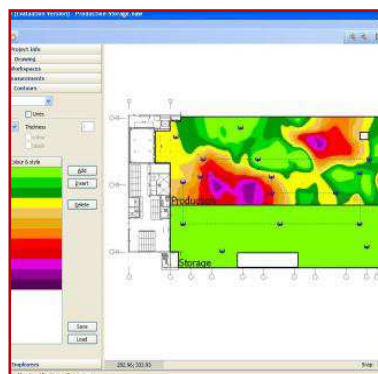
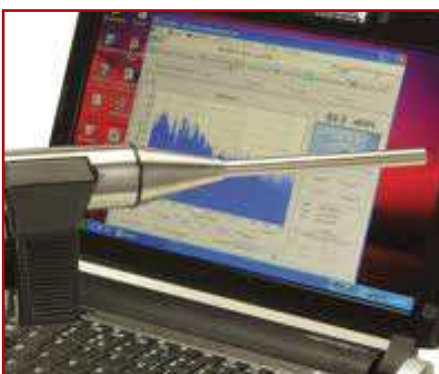


Acoustic Expertise

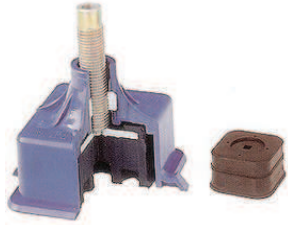
From abroad perspective, our expertise in the field of Acoustic Consulting can be categorized into four key disciplines. As it is these four disciplines themselves also cover a vast scope of sub engineering categories, all of which is offered by us. Some of the most important



items lying under four key disciplines. Our expertise in Acoustic Consulting has been acquired from many years of training and experience. Apart from the formal training obtained from prestigious institutions we have also acquired considerable expertise by self – training which has helped reinforce our capacity to offer world class quality in all our services. We have also obtained accreditations and associations with reputed organizations with whom we hold full time memberships. We believe that with all our accomplishments achieved so far, we are on par in terms of capability, maturity and ambition with many world class organizations offering professional consulting services in the field of Acoustic Engineering.



NOISE CONTROL BUILDING MATERIALS

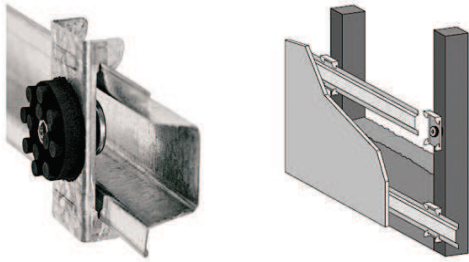
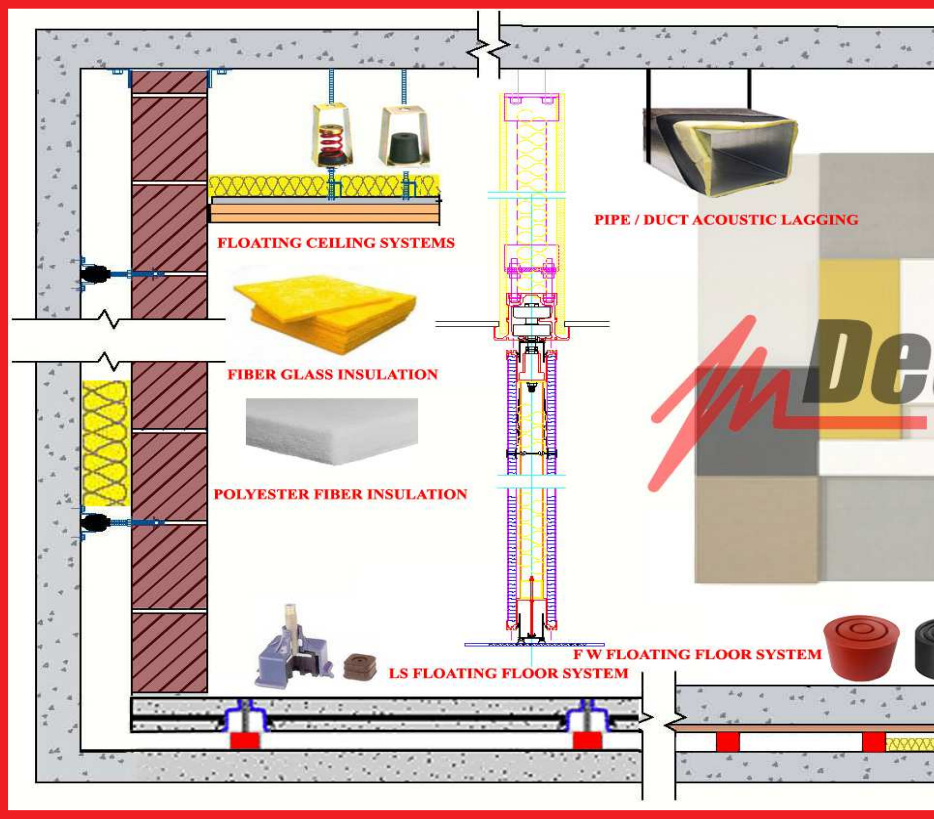


Jack-up Floating Floor System

Consists of a resilient decoupler, cast housing, and leveling bolt. The housing incorporates two opposing side lugs for carrying concrete rebar. The leveling bolt is screwed into a threaded opening in order to lift or "jack-up" the concrete slab into final position i.e., floating the floor.

Together with Perimeter Isolation Board, poly sheeting, and perimeter sealant, it is a complete floor isolation system.

It permits flexible design of a floating floor. Further, the top of the casting may be extended with an adapter to allow for any thickness of floating concrete slab.



Wall Resilient Clip for Floating Wall System

Acoustic Clip is an engineered, patented acoustic resilient mounting bracket, for reducing airborne vibration and structure-borne vibration in wall and ceiling applications.

- Engineered thermoplastic rubber outperforms standard rubber because of its sound absorbing characteristics
- Simple design makes it adaptable to hundreds of applications
- Consistent and reliable quality - manufactured under ISO9001 quality control system
- Resilimount is the most cost effective way to isolate airborne noise
- Does not use metal washer or metal insert in rubber
- Clips can be used to suit 7/8" and 1 1/2" furring channels
- Clips are provided with a 1/4" hole for a variety of fasteners



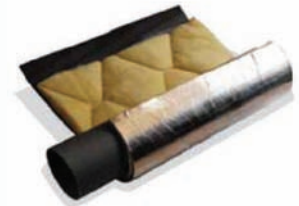
Form Work Floating Floor System

Floor isolation systems are incorporated into building design to minimize floor impact noise and airborne sound transmissions. Additional designed floor slab is supported by resilient mounts installed on the structural main slab. The design of an effective isolation system is dependent on several factors including:

- Required noise criteria to achieve
- Mass & Stiffness of the structural slab
- Isolation mount natural frequency and damping characteristics
- Space or Air gap
- Design of the floated slab
- Control of sound flanking paths

Creating air gap between the main and floated floors while decoupling the two floors with the appropriate resilient mount effectively reduce noise transmission.

Floating floor system offers the largest variety of isolation mounts to fit specific applications. These include resilient neoprene or natural rubber pads.



Fiber Glass Pipe/Duct Lagging Material

It is an acoustic insulation material designed for indoor or outdoor use. It meets Class 1 requirements for smoke development and flame spread when properly installed.

It is manufactured from a 2.5mm thick highly flexible polymeric barrier with a 25mm glass fiber quilt stitched both sides to a scrim backing to form a spacer layer on the inner face and a reinforced aluminum foil on the outer surface.

It is designed to reduce the sound transmission of piping, ductwork and equipment housings greater than achieved by adding mass alone by combining a fire rated limp mass with a decoupling quilted fiber glass lining.



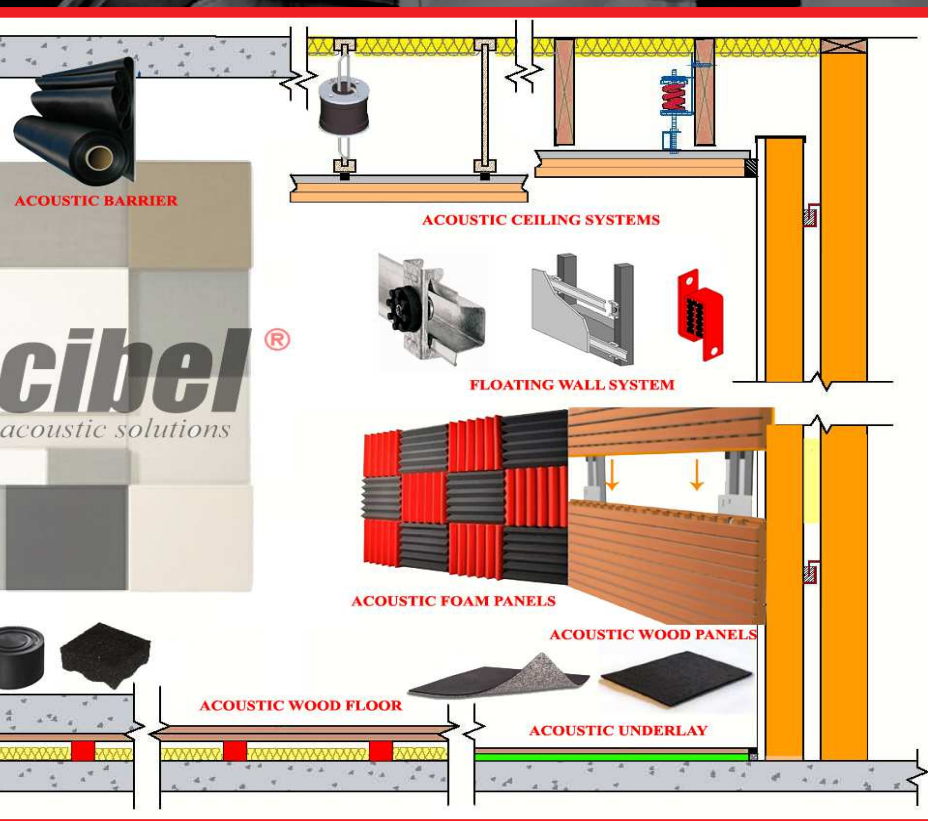
Sound Masking Systems

The use of sound masking systems has become essential to ensure an adequate level of acoustic comfort that facilitates mental concentration. This is why professionals are increasingly integrating such systems into their office designs. We can help to implement such systems.



Acoustic Blocks

Where masonry partitions need to be acoustically decoupled from the floor to reduce sound transmission and are also used as absorber blocks to enhance the reverberation control wherever required.



Foam Pipe/Duct Lagging Material

Product can reduce pipe noise by up to 27 dB (A). It is cost effective, long lasting and easy to install. When controlling noise from pipes, It contains a heavy mass-loaded barrier, which acts to stop noise, deflecting it back into the noise source.

A layer of acoustic foam separates the barrier from the noise source, preventing the barrier from taking on the noise of the pipe.

It is used In ventilation systems, walls, ceiling, construction and drainage piping, with its multilayer behavior reducing the transmission of sound.

Sound Insulation Viscolastic Rolls

It increases the transmission loss of walls and ceilings, and especially in light/dry construction. Thanks to their their high surface weight, their small thickness, their high mechanical resistance and flexibility, these are the most practical sound insulation products for light and dry partitions.

They are produced from high density elastomeric viscolastic EPDM. They are environment friendly.

They function in a wide temperature range without softening, melting, cracking etc, maintaining the same insulation performance.

Acoustic Wall Resilient Clips

Used to Avoid direct connection between double walls, increases stiffness and prevents wall buckling during earthquakes.

Useful when a secondary wall is applied for improved sound insulation. The Clip consists of a metal sheet, suitable modulated, vibration elastic support and can be placed internally to absorb positive and negative axial forces.

Isolated Floating Ceiling

Secured to concrete, metal deck, or structural framing, Model SH incorporates a one-inch (1") rated deflection spring in series with or without a neoprene cup to resiliently support one or more layers of gypsum board. Attachment can be direct to concrete or metal ceiling or it can be suspended from threaded rod that is properly anchored. Drywall furring channel is attached to the carrying channel. The system provides the installer with a means for leveling the isolated ceiling framing. Incorporate our ceiling hangers into any isolated ceiling design where one-inch (1") rated spring deflection and a 250 mm void are needed for great performance.

Benefits

- Maximum natural frequency of 4.4 Hz under lightest typical load conditions.
- STC 84, IIC 70 with two (2) layers of gypsum board suspended under a 6-inch concrete with 50 mm medium density fiberglass insulation in airspace.
- Actual installed load can vary between 75% and 150% of rated load without significant impact to ceiling performance.

Acoustic Foldable Partitions

We manufactures and installs a complete range of Acoustic moveable Wall and sliding folding partition systems, we offer our expertise and service to the industry. Our acoustic foldable partitions can receive different kind of facing such as perforated wood panels, slotted / Grooved wood panels, fabric panels, etc.

We provide solutions to schools and colleges, auditoria, training centers, hospitals, offices, restaurants, council chambers, hotels, sports halls and gymnasias, medical centers and race courses.

Type 65 / 85 / 100 Flexible partition include the single and double piece types enable for all direction and wide turning angle by using these types and suspension wheels.

All frames, acc. Are made of high quality aluminum alloy material.

ROOM ACOUSTIC FOR INTERIOR SPACES



Acoustic Wall Panels

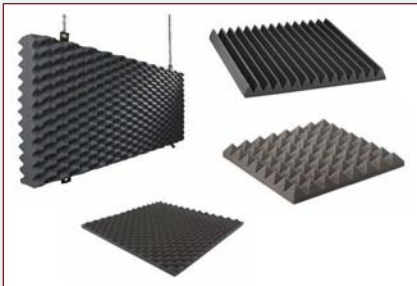
Acoustic Fabric panels are designed to reduce reverberation and enhance a room's acoustical properties. Constructed of high quality fibreglass substrate and face laminated fabric, panels provide the ultimate in performance with excellent NRC ratings. Combining form and function, they are ideally suited for a variety of interior design applications. Panels can be applied to existing walls including block and gypsum walls, and metal cabinetry to absorb reflected sound. Each panel is face laminated in the fabric and available in custom sizes with a variety of fabrics.



Acoustic Ceiling Tiles

Acoustic ceiling tiles comprises a medium and high density glass wool panel covered with a sandy surface, painted glass wool tissue for decorative ceiling effect.

Its backside is open or covered with glass fleece ,it is an economical ceiling for application where basic requirements are needed ; acoustic, fire and moisture resistance and installation / removal. It is installed on standard grid system to create esthetic effect.



Acoustic Foam Panels

Acoustic foam acoustic Panels are polyurethane foam panels with a sculpted design that effectively traps sound and reduces the reverberation time. It is flexible and can be easily installed (no advanced equipment is required).



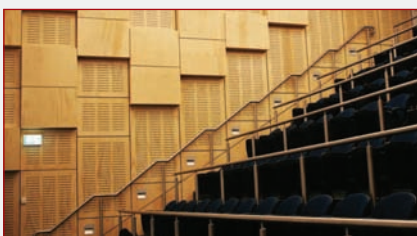
Home Theater Acoustics



Acoustic Wooden Panels

Wooden Sound absorptive panels are available in different types and perforation. It is designed to significantly improve the acoustic of a room. It can be used in different combinational formations and match the architectural and acoustical requirements of each room. Our wooden panels are fabricated from MDF core panels. The panel surface can be timber veneer, melamine coated or painted in different colors. The standard panel size is 1200 mm x 600 mm and can be customized. We offer different kinds of perforation, grooving or any other panel constructions with verity of dimensions to suit the application as well as the required absorption.

Wooden panels can be installed on room walls and ceiling such as conference centers, lecture halls, studios, restaurants, music halls and theaters.





Acoustic Spray

The acoustic spray is a spray applied acoustical texture designed for a wide range of project types. It provides an attractive, high performance solution to acoustical and lighting design objectives. Typical installations include: schools, churches, passenger terminals, libraries, cafeterias, offices, hotels and condominiums.

It is available in White and Arctic White. Specially matched colors are also a design option. It is a one coat joint free decorative acoustic finish. It is a sound absorber that is a spray applied to virtually any clean surface and any shape of surface; It has a lightly textured firm finish. It will conform to most surface contours, barrel vaults, domes, corrugated decks, and other complex surfaces.



Acoustical Baffles



Wall Panels



Wave Panels



Mirage Wall and Ceiling Panels



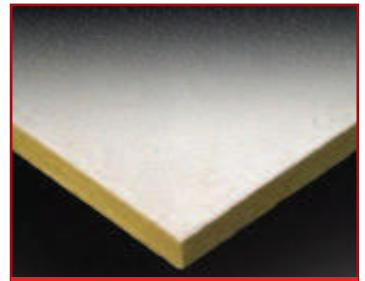
GreenLine Acoustical Products



Weather Resistant Exterior Panels



Pocket Panel



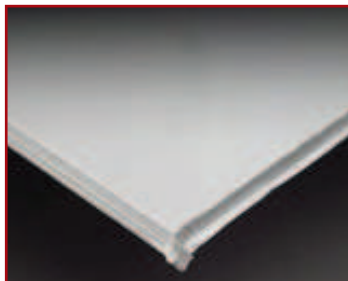
Ceiling Tiles



Spectrum Acoustical Panels



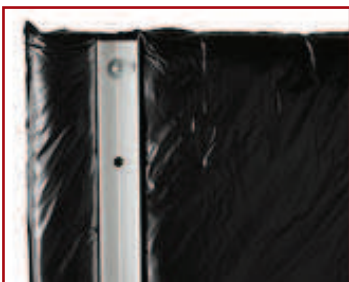
Acoustical Pads



Sanitary Panels



Bandit Engineered Wall System



Sound Stop Blanket



Low Emissivity Lapendary



Acoustic Spray



Acoustic Screens

INDUSTRIAL NOISE CONTROL



Acoustic Doors

Acoustic steel / Timber acoustic doors comprise a choice of single and double leaf available in STC35 to STC51 ratings.

This product is well suited for projects where high noise attenuation and sound privacy are required. Doors are designed to reduce sound transmission between rooms in any architectural or industrial environment. They are manufactured using high quality, durable hardware to give a long lasting and cost effective product. Acoustic doors are constructed from galvanized steel with vertical interlock seams, acoustic core infill to comprise different leaf thicknesses. The leaf is single swing, suitable for hanging on heavy duty stainless steel hinges. Frame is manufactured from galvanized steel, in a single or double rebated profile to a maximum of 147mm width, fully welded, complete with acoustic infill. Door frames / sets are structurally reinforced and prepared to receive required hardware.

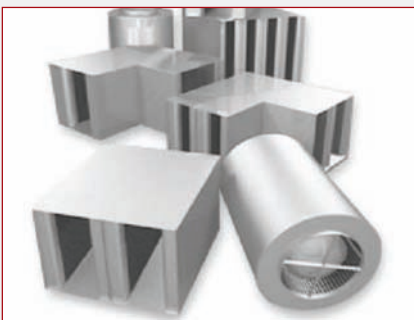
Door sets are supplied complete with an acoustic seal system, aluminum threshold with gasket and supplementary spring seals to the door leaf as required.

Applications: Broadcasting / Studios, Language Laboratories, Cinemas & Theatres, Conference rooms, Plant rooms & Kitchens, Offices and Machinery enclosures.



Acoustic Composites

Acoustic composites absorbers are high performance, acoustical attenuating fiberglass blankets that are used to reduce reverberant (reflected) airborne noise. Flexible quilted absorbers are easily installed. It is acoustically absorptive, fiberglass batting. Facing materials are quilted directly to the fiberglass batting using high strength thread and locking stitches. The quilting forms a matrix diamond stitch patterns which encapsulate the glass fibers. It can be produced in single or double layer with nominal thickness of 25 mm or 50 mm.



Sound Attenuators

Sound attenuators are designed, tested and manufactured to meet the requirements of modern industrial and commercial projects. Where specialized noise and ventilation requirements are present, we have the ability to design and test products to meet project specific requirements.

Our manufacturing facility enables attenuators to be built to any size and configuration. our sound attenuators are designed to reduce the noise level between two areas while still allowing the passage of air flow and we can manage having it with minimum pressure drop.

Attenuators are built to suit both industrial and commercial applications.



Acoustic Enclosures / Barriers

Acoustic enclosures are a modular design which utilize our acoustic panel system to provide a high level of noise reduction for both internal and external applications. Enclosures typically achieve acoustic performance between 20dB (A) and 40dB (A), with higher performance systems available. Enclosures are custom designed and manufactured to individual customer requirements. This flexibility of design allows a range of options to be incorporated during manufacture including personnel and machinery access doors, visual panels and acoustic louvers or attenuators for ventilation. Depending on size and configuration, Our acoustic enclosures can be supplied as a complete assembly or as individual parts for assembly on site, Installation also can be provided by our specialized team of installation.



Acoustic Louvers

Acoustic Louvers are designed to provide optimal acoustic performance (noise reduction) with minimal airflow restrictions. Acoustic Louvers are typically manufactured from galvanized steel sheet or aluminum to suit any opening size. Where required, the acoustic Louvers can be assembled in a modular fashion. Acoustic Louvers can be supplied in multiple finishes including plain galvanized, powder coated or painted. Acoustic Louvers can be also manufactured as a hinged or sliding door. The doors are fitted to stiffened galvanized iron frames and fitted with hardware as required for the individual applications. The Louvers are tested to International Standards. As with all our products, we employ our own installation staff familiar with the installation methods required to ensure acoustic integrity. Where required or preferred we can easily assemble a complete turnkey solution. It is available in two models, single (type 1) and double (type 2). The aerodynamically designed splitters are filled with the sound absorber material. The louver can be treated with anti-corrosion finish if necessary.

Accessories: Flanges, Bird Screen, Powder-Coat Finish and Structural Design of Large Louver Banks

Pipe Supports

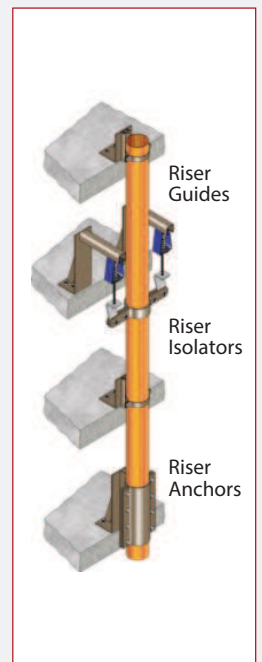


Perforated Acoustic Metal Panels

Acoustic Absorber Metal Panel are highly durable perforated panels which are used to control background and reverberant noise. Although primarily intended as an absorber, the panels will act as a barrier when a solid sheet metal back is added, further performance enhancement can be done by applying intermediate sheet metal as custom design. Panels are excellent sound absorbers over a wide frequency range. perfect choice for test chambers, generator rooms, factories, auditoriums, mechanical equipment rooms, gymnasiums, theatres, garages, hallways and other spaces where reverberant noise is a problem. Panels are also suitable for outdoor use (extra water proofing layer will be added for the core infill). Panels can be attached to walls, ceilings or other surfaces. In addition, Panels can be faced with perforated material on both sides and used as hanging absorptive baffles. Panels are constructed from galvanized steel or aluminum perforated facing. Each panel can be filled with a 2" or 4" thick, encapsulated glass fiber sound absorber .

The perforated metal face is powder coat painted in a variety of specified colors. The Noise Reduction Coefficient (NRC) vary from 0.8 to 0.95.

Pipe Riser Isolation Products



VIBRATION ISOLATION OF HVAC SYSTEMS

Free Standing Spring Isolators

Free-standing, unhooused, single/multiple, wide load range



Rubber Pads

General purpose, economical yet effective for noise & vibration isolation of almost all HVAC equipment. Floating floor or other higher performance demanding isolation requirement.



Housed Extra Horizontally Restrained Springs

Housed & horizontally restrained with extra side snubbings for more secured & controllable mode.



Rubber Mounts

Floor mounted. Work well in equipment running at high RPMs and not allocated at critical area. Economical.



Housed Vertically Restrained Springs

Housed & vertically restrained. Floor Mounted. In single or multiple springs. For equipment that undergo large amount of fluid load changes during service of maintenance & roof top application.



Rubber Hangers

Rubber hangers. Economical & effective in reducing noise & vibration. For equipment hanging with high operating RPMs



Inertia Bases

Our Designed inertia base frames are specifically engineered to receive poured concrete, and support mechanical equipment requiring a reinforced concrete inertia base. Inertia bases are used to reduce vibration amplitude, provide for attachment of vibration isolators, prevent differential movement between driving and driven members, reduce rocking by lowering equipment center of gravity, reduce motion of equipment during start-up and shut-down, act to reduce reaction movement due to operating loads on equipment, and act as a partial noise barrier.



Spring Hangers

Spring hanger, single/ multiple, wide load range



Pre-Compressed Hangers

Spring hanger with factory pre-compressed for fixed elevation of horizontal piping support.



Spring / Neoprene Hangers

Spring hanger in series with Duo-Deflection neoprene elements. Single/multiple. Usually for critical area applications.



Compact Restrained Spring Isolators

Variant models but more compact and lighter loading capacity



Housed Horizontally Restrained Springs

Floor Mounted. Housed & horizontally restrained. Single or twin springs.



Composite Hose

Expansion Joint/Bellow

Stainless Steel Flanges

PTFE/Teflon[®] Hose

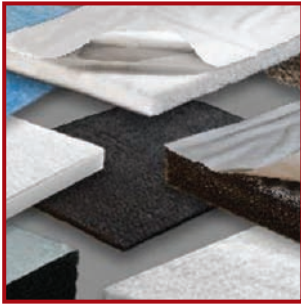
Stainless Steel Hose

PTFE Expansion Joint

Wide Selection of Products

THERMO ACOUSTIC INSULATION FOR BUILDING

THE LAST GENERATION OF THERMO-ACOUSTIC INSULATION



TERMOBOND

Panel made from polyester fibers via thermo-mechanical processes (carding, lapping, heat-bonding), designed by the Thermoacoustic Division.



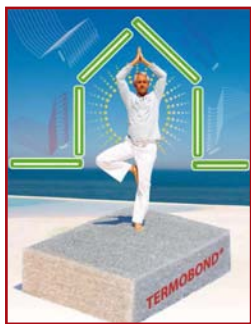
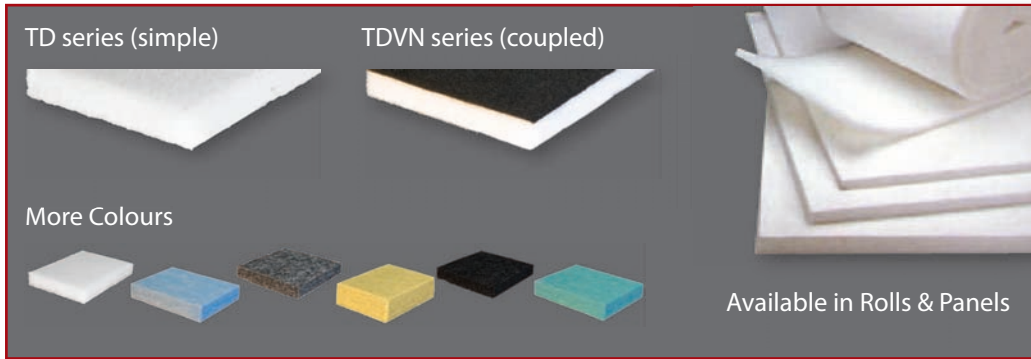
GEOFLOOR

Used as geotextile for land drainage and compacting for the construction of roads and railways; also be used as floor acoustic insulator in construction of floating floors.



ISOFLOR

Non woven fabric of 100% polyester fiber needle-punched. used to prevent the transmission of impact noise in floors, by creating a floating floor system.



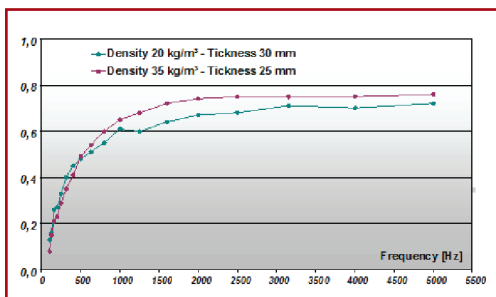
TECHNICAL SPECIFICATION

- Trade name: TERMOBOND "TD density / thickness"
- Panel: in polyester fibres
- Panel size: width 300 upto 3000 [mm], length 300 upto 3000 [mm]
- Panel thickness: 10 upto 150 [mm]
- Panel density: 10 upto 100 [Kg/m³]
- Installation temperature: -50°C upto +120°C
- Fire & smoke behavior: Italian Class 1, French Class M1/F1,

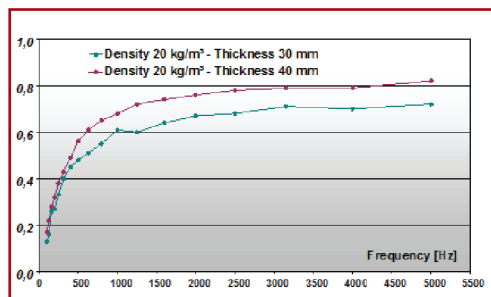


TERMONOND has the "ECOLABEL MARK" according to the European Environmental Directive Characteristics maintained till temperature of +125 °C; High resistance deformation it work also after strong deformation (high impact strength); Good acoustic absorption (see diagrams below).

ACOUSTIC PERFORMANCE

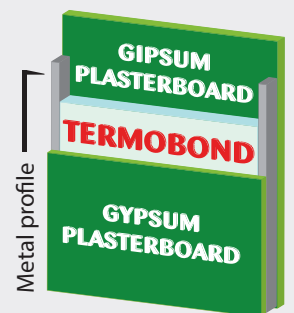
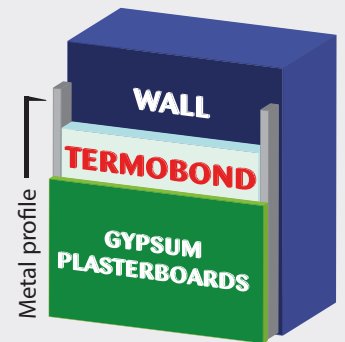
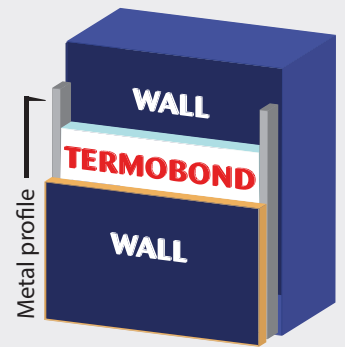
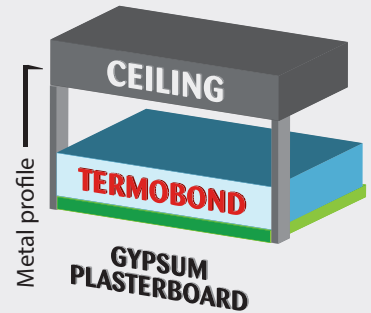


Sound absorption coefficient a according to the density



Sound absorption coefficient a according to the thickness

BUILDING APPLICATIONS



100% RECYCLABLE
100% POLYESTER
VERY GOOD
FLAME RETARD



Decibel Acoustic Solutions H.O.

Acoustic Engineers, Suppliers, Acoustic Products Manufacturer, Trader & Contractors

Worldwide Offices:

Egypt, UAE, Qatar, PK & GCC

www.decibel.ae