



ACOUSTIC LOUVERS



Our Product Ranges

Dampers

- 1 Fire Dampers
- 2 Fire / Smoke Dampers
- 3 Volume Control Dampers
- 4 Motorized Control Dampers
- 5 Pressure Relief Dampers /Non Return Dampers

Variable Air Volumes

- 6 Pressure Independent VAV
- 7 Constant Air Volume VAV
- 8 By Pass VAV

Louvers

- 9 Sand Trap Louvers
- 10 Acoustic Louvers
- 11 Stationery Louvers / Architectural Louvers
- 12 Storm Louvers
- 13 Weather Louvers

Sound Attenuators

- 14 Rectangular Sound Attenuators
- 15 Circular Sound Attenuators
- 16 Crosstalk Attenuators

Electric Duct Heaters

- 17 Flange & Slip 'n' Type
- 18 Modulating & On/Off Type

Air Outlets

- 19 Registers & Grilles
- 20 Diffusers (Linear Diffusers, Sq. & Rect. Ceiling Diffusers, Round Diffusers, Jetflow Diffusers)
- 21 Swirl Diffusers & Disc Valves
- 22 Drum Louvers

INDEX

	Page
Introduction.....	04
Louver Model - ASB 150 AL (Single Bank).....	05
Louver Model - ASB 200 AL (Single Bank).....	06
Louver Model - ASB-250 AL (Single Bank).....	07
Louver Model - ASB 300 AL (Double Bank).....	08
Louver Model - ADB 300 AL (Double Bank).....	09
Louver Model - ADB 600 AL (Double Bank).....	10
Louver Model - ASB 300 AF (Aerofoil Type).....	11
Acoustic Louvered Doors.....	12
Finish, Colour & Optional Construction.....	13
Frame & Louver Blade configuration.....	14
Construction Details.....	15
Engineering Guidelines.....	16-20
Material Storage, Operation & Maintenance.....	21
Installation Details.....	22

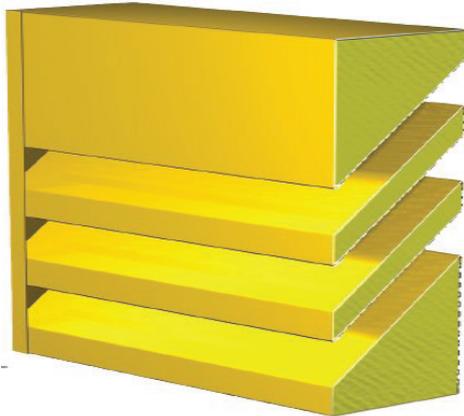


Overview

Airwellcare Acoustic Louvers are effectively restrict the transmission of high and low frequency sound energy produced by the operation of mechanical equipment of building openings.

Forecasting the ever increasing noise reduction demands of future, Airwellcare is striving towards enhancement of our ability to reduce the unwanted and excessive noise in industrial, commercial as well residential environment with a faster, innovating and delivering solutions for the upcoming generation.

Acoustic Louvers are constructed of customized options in galvanized steel or high quality Aluminium with variety of finishes, to meet the Architecture and project requirements.



Selection & Design

Airwellcare Acoustic Louvers are designed and manufactured in compliance with international standards, to achieve the optimum results through Acoustic Louver Software Selection Method supported by our Acoustic Engineering Consultant.

Acoustic and aerodynamic performance varies with the design, and the sizing of the louvers are important to minimize concerns of pressure drop and water ingress.

All Airwellcare Acoustic Louvers are designed for multi purpose, permitting air to flow, while protecting the environment from unwanted noise, to suit the application, from offshore environments to extreme weather and ambient temperature.

Airwellcare Acoustic Louvers can produce a highly engineered solution to your unwanted noise problem and any noise control issue.

Acoustic Louver Application

Airwellcare Acoustic Louver solutions will help to combat environmental noise problems that affect mixed, commercial and residential areas, reducing noise from a wide variety of applications that include:

- District Cooling Plants.
- Generator Rooms in Commercial & Industrial Sectors.
- Electrical Substations.
- Power Generating plants.
- Healthcare & Hospitals.
- Offshore & Onshore.
- Chemical treatment plants.
- Aviation industries.
- Commercial and Industrial Duct Systems.
- Fresh air intakes for ventilation systems.

Acoustic Louvers

Model : ASB 150 AL (Single Bank)

Airwellcare 150mm Deep single bank Acoustic Louvers are manufactured in Galvanized Steel, as standard.

Louver Frame

Louver frame is made of 1.2mm Galvanized Formed Steel.

Louver Depth: 150mm (6 Inches)

Frame with 1.5mm 2.0mm Thick. Galvanized Steel, Stainless Steel & Aluminium are optional.

Louver Blade

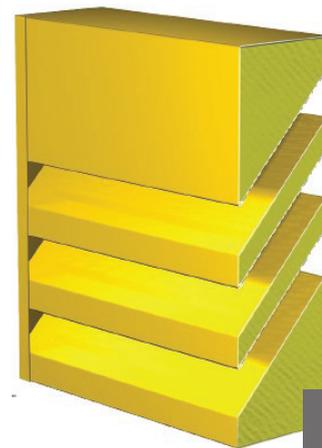
100mm thick. exterior blades are made of 1.0mm thick. formed Galvanized Steel with 0.7mm Thick. Galvanized steel Perforated interior surface. Blades with Aluminium or Stainless Steel exterior surface & interior perforation of thickness with 1.2mm, 1.5mm & 2.0mm are optional. Blades are positioned at 45° Angle.

Acoustic In-fill

Each Blade, Top and Bottom frame cavity shall be filled with Rockwool Slab Insulation of 48-50 Kg/M³ density, to absorb the transmission of sound.

Bird Screen / Insect Screen

12 x 12 x 1.0 mm thick. Galvanized Screen
(Refer to Page No.10 —optional accessories)



Acoustic Property

- 75mm Thick. Rockwool Slab of 48-50 Kg/M³ Density.
- Non combustible when tested in accordance with BS 476 : Part 4: 1970 & ASTM E-136.
- Fill material is class-1 as tested in accordance with ASTM-84.
- Fiberglass shall be density calculated to provide the acoustic and aerodynamic performance.
- Tested for Temp. upto 750° C in accordance with DIN 52271.
- Meet the requirements of BS 2972 Sec.22 & ASTM C-871, ASTM-C-795, ASTM C-692. ASTM C-177/C-518 & DIN 52612 for low thermal conductivity.
- Sound absorption in accordance with BS 3638 & ISO 0354.
- Inert, vermin-proof, weather rated non combustible acoustic infill.

KEY FEATURES

- Design Flexibility.
- Hurdle free installation.
- Swift delivery upon 100% Production confirmation & drawing approval.
- Technical & after sales support.
- AutoCAD drawings are incorporated in compliance with project requirement for every project.
- Customized material selection with galvanized or aluminum construction.
- Architecturally aesthetic appearance.
- All sizes are custom fabricated to meet project requirements.
- Acoustical attenuation across all eight octave bands.

Model : ASB 200 AL (Single Bank)

Airwellcare 200mm Deep single bank Acoustic Louvers are manufactured in galvanized steel, as standard.

Louver Frame

Louver frame is made of 1.2mm Galvanized Formed Steel.

Louver Depth: 200mm (8 Inches)

Frame with 1.5mm 2.0mm Thick. Galvanized Steel, Stainless Steel & Aluminium are optional.

Louver Blade

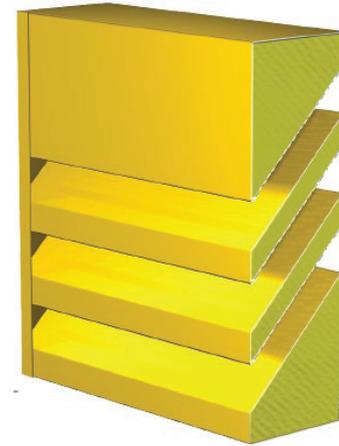
100mm thick. exterior blades are made of 1.0mm thick. formed Galvanized Steel with 0.7mm Thick. Galvanized steel Perforated interior surface. Blades with Aluminium or Stainless Steel exterior surface & interior perforation of thickness with 1.2mm, 1.5mm & 2.0mm are optional. Blades are positioned at 45° Angle.

Acoustic In-fill

Each Blade, Top and Bottom frame cavity shall be filled with Rockwool Slab Insulation of 48-50 Kg/M³ density, to absorb the transmission of sound.

Bird Screen / Insect Screen

12 x 12 x 1.0 mm thick. Galvanized Screen
(Refer to Page No.10 —optional accessories)



Acoustic Property

- Rockwool Slab of 48-50 Kg/M³ Density.
- Non combustible when tested in accordance with BS 476 : Part 4: 1970 & ASTM E-136.
- Fill material is class-1 as tested in accordance with ASTM-84.
- Fiberglass shall be density calculated to provide the acoustic and aerodynamic performance.
- Tested for Temp. upto 750° C in accordance with DIN 52271.
- Meet the requirements of BS 2972 Sec.22 & ASTM C-871, ASTM-C-795, ASTM C-692. ASTM C-177/C-518 & DIN 52612 for low thermal conductivity.
- Sound absorption in accordance with BS 3638 & ISO 0354.
- Inert, vermin-proof, weather rated non combustible acoustic infill.

KEY FEATURES

- Design Flexibility.
- Hurdle free installation.
- Swift delivery upon 100% Production confirmation & drawing approval.
- Technical & after sales support.
- AutoCAD drawings are incorporated in compliance with project requirement for every project.
- Customized material selection with galvanized or aluminum construction.
- Architecturally aesthetic appearance.
- All sizes are custom fabricated to meet project requirements.
- Acoustical attenuation across all eight octave bands.

Model : ASB 250 AL (Single Bank)

Airwellcare 250mm Deep Single Bank Acoustic Louvers are manufactured in galvanized steel, as standard.

Louver Frame

Louver frame is made of 1.2mm Galvanized Formed Steel.

Louver Depth: 250mm (10 Inches)

Frame with 1.5mm 2.0mm Thick. Galvanized Steel, Stainless Steel & Aluminium are optional.

Louver Blade

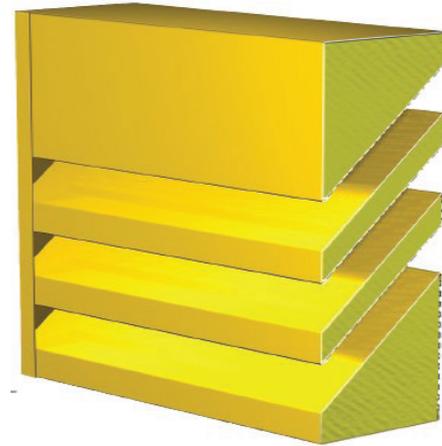
100mm thick. exterior blades are made of 1.0mm thick. formed Galvanized Steel with 0.7mm Thick. Galvanized steel Perforated interior surface. Blades with Aluminium or Stainless Steel exterior surface & interior perforation of thickness with 1.2mm, 1.5mm & 2.0mm are optional. Blades are positioned at 45° Angle.

Acoustic In-fill

Each Blade, Top and Bottom frame cavity shall be filled with Rockwool Slab Insulation of 48-50 Kg/M³ density, to absorb the transmission of sound.

Bird Screen / Insect Screen

12 x 12 x 1.0 mm thick. Galvanized Screen
(Refer to Page No.10 —optional accessories)



Acoustic Property

- Rockwool Slab of 48-50 Kg/M³ Density.
- Non combustible when tested in accordance with BS 476 : Part 4: 1970 & ASTM E-136.
- Fill material is class-1 as tested in accordance with ASTM-84.
- Fiberglass shall be density calculated to provide the acoustic and aerodynamic performance.
- Tested for Temp. upto 750° C in accordance with DIN 52271.
- Meet the requirements of BS 2972 Sec.22 & ASTM C-871, ASTM-C-795, ASTM C-692. ASTM C-177/C-518 & DIN 52612 for low thermal conductivity.
- Sound absorption in accordance with BS 3638 & ISO 0354.
- Inert, vermin-proof, weather rated non combustible acoustic infill.

KEY FEATURES

- Design Flexibility.
- Hurdle free installation.
- Swift delivery upon 100% Production confirmation & drawing approval.
- Technical & after sales support.
- AutoCAD drawings are incorporated in compliance with project requirement for every project.
- Customized material selection with galvanized or aluminum construction.
- Architecturally aesthetic appearance.
- All sizes are custom fabricated to meet project requirements.
- Acoustical attenuation across all eight octave bands.

Model : ASB 300 AL (Single Bank)

Airwellcare 300mm Deep Single Bank Acoustic Louvers are manufactured in galvanized steel, as standard.

Louver Frame

Louver frame is made of 1.2mm Galvanized Formed Steel.

Louver Depth: 300mm (12 Inches)

Frame with 1.5mm 2.0mm Thick. Galvanized Steel, Stainless Steel & Aluminium are optional.

Louver Blade

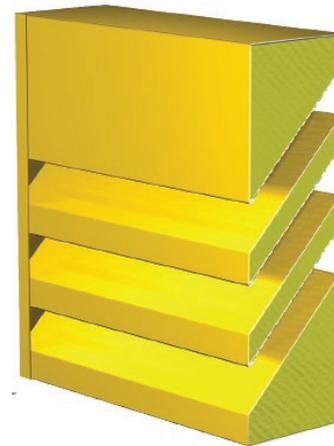
100mm thick. exterior blades are made of 1.0mm thick. formed Galvanized Steel with 0.7mm Thick. Galvanized steel Perforated interior surface. Blades with Aluminium or Stainless Steel exterior surface & interior perforation of thickness with 1.2mm, 1.5mm & 2.0mm are optional. Blades are positioned at 45° Angle.

Acoustic In-fill

Each Blade, Top and Bottom frame cavity shall be filled with Rockwool Slab Insulation of 48-50 Kg/M³ density, to absorb the transmission of sound.

Bird Screen / Insect Screen

12 x 12 x 1.0 mm thick. Galvanized Screen
(Refer to Page No.10 —optional accessories)



Acoustic Property

- Rockwool Slab of 48-50 Kg/M³ Density.
- Non combustible when tested in accordance with BS 476 : Part 4: 1970 & ASTM E-136.
- Fill material is class-1 as tested in accordance with ASTM-84.
- Fiberglass shall be density calculated to provide the acoustic and aerodynamic performance.
- Tested for Temp. upto 750° C in accordance with DIN 52271.
- Meet the requirements of BS 2972 Sec.22 & ASTM C-871, ASTM-C-795, ASTM C-692. ASTM C-177/C-518 & DIN 52612 for low thermal conductivity.
- Sound absorption in accordance with BS 3638 & ISO 0354.
- Inert, vermin-proof, weather rated non combustible acoustic infill.

KEY FEATURES

- Design Flexibility.
- Hurdle free installation.
- Swift delivery upon 100% Production confirmation & drawing approval.
- Technical & after sales support.
- AutoCAD drawings are incorporated in compliance with project requirement for every project.
- Customized material selection with galvanized or aluminum construction.
- Architecturally aesthetic appearance.
- All sizes are custom fabricated to meet project requirements.
- Acoustical attenuation across all eight octave bands.



Acoustic Property

- Rockwool of 32-35 Kg/M³ Density.
- Thickness & density can be changed according to the Technical Acoustic Calculations, to obtain the optimum performance of the Louver.
- Non combustible when tested in accordance with BS 476 : Part 4: 1970 & ASTM E-136.
- Fill material is class-1 as tested in accordance with ASTM-84.
- Fiberglass shall be density calculated to provide the acoustic and aerodynamic performance.
- Tested for Temp. upto 750° C in accordance with DIN 52271.
- Meet the requirements of BS 2972 Sec.22 & ASTM C-871, ASTM-C-795, ASTM C-692, ASTM C-177/C-518 & DIN 52612 for low thermal conductivity.
- Sound absorption in accordance with BS 3638 & ISO 0354.
- Inert, vermin-proof, weather rated non combustible acoustic infill.

Model : ADB 300 AL (Double Bank)

Airwellcare ADB 300 AL is a Double Bank sightproof Acoustic Louver manufactured in galvanized steel, as standard with chevron blade configurations.

Louver Frame

Louver frame is made of 1.2mm Galvanized Formed Steel.

Louver Depth: 300mm (12 Inches)

Frame with 1.5mm 2.0mm Thick. Galvanized Steel, Stainless Steel & Aluminium are optional.

Louver Blade

100mm thick. exterior blades are made of 1.0mm thick. formed Galvanized Steel with 0.7mm Thick. Galvanized steel Perforated interior surface. Blades with Aluminium or Stainless Steel exterior surface & interior perforation of thickness with 1.2mm, 1.5mm & 2.0mm are optional. Blades are positioned at 45° Angle.

Acoustic In-fill

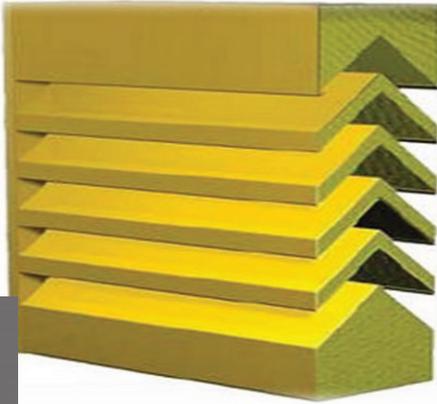
Each Blade, Top and Bottom frame cavity shall be filled with Rockwool Slab Insulation of 48-50 Kg/M³ density, to absorb the transmission of sound.

Bird Screen / Insect Screen

12 x 12 x 1.0 mm thick. Galvanized Screen (Refer to Page No.10 —optional accessories)

KEY FEATURES

- Design Flexibility.
- Hurdle free installation.
- Swift delivery upon 100% Production confirmation & drawing approval.
- Technical & after sales support.
- AutoCAD drawings are incorporated in compliance with project requirement for every project.
- Customized material selection with galvanized or aluminum construction.
- Architecturally aesthetic appearance.
- All sizes are custom fabricated to meet project requirements.
- Acoustical attenuation across all eight octave bands.



Acoustic Property

- Rockwool Slab of 48-50 Kg/M³ Density.
- Non combustible when tested in accordance with BS 476 : Part 4: 1970 & ASTM E-136.
- Fill material is class-1 as tested in accordance with ASTM-84.
- Fiberglass shall be density calculated to provide the acoustic and aerodynamic performance.
- Tested for Temp. upto 750° C in accordance with DIN 52271.
- Meet the requirements of BS 2972 Sec.22 & ASTM C-871, ASTM-C-795, ASTM C-692. ASTM C-177/C-518 & DIN 52612 for low thermal conductivity.
- Sound absorption in accordance with BS 3638 & ISO 0354.
- Inert, vermin-proof, weather rated non combustible acoustic infill.

Model : ADB 600 AL (Double Bank)

Airwellcare ADB 600 AL is a high performance double bank sightproof Acoustic Louver manufactured in galvanized steel, as standard, with chevron blade configurations, for excessive noise attenuation.

Louver Frame

Louver frame is made of 1.2mm Galvanized Formed Steel.

Louver Depth: 600mm (24 Inches)

Frame with 1.5mm 2.0mm Thick. Galvanized Steel, Stainless Steel & Aluminium are optional.

Louver Blade

100mm thick. exterior blades are made of 1.0mm thick. formed Galvanized Steel with 0.7mm Thick. Galvanized steel Perforated interior surface. Blades with Aluminium or Stainless Steel exterior surface & interior perforation of thickness with 1.2mm, 1.5mm & 2.0mm are optional. Blades are positioned at 45° Angle.

Blade Material thickness with 1.2mm, 1.5mm & 2.0mm Galvanized Steel, Stainless steel or Aluminium are optional.

Acoustic In-fill

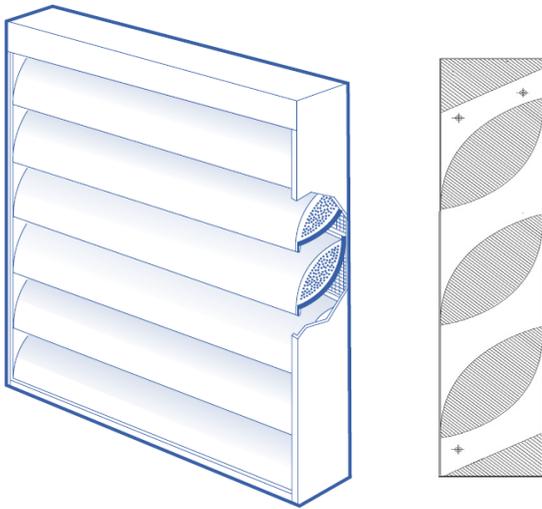
Each Blade, Top and Bottom frame cavity shall be filled with Rockwool Slab Insulation of 48-50 Kg/M³ density, to absorb the transmission of sound.

Bird Screen / Insect Screen

12 x 12 x 1.0 mm thick. Galvanized Screen
(Refer to Page No.10 —optional accessories)

KEY FEATURES

- Design Flexibility.
- Hurdle free installation.
- Swift delivery upon 100% Production confirmation & drawing approval.
- Technical & after sales support.
- AutoCAD drawings are incorporated in compliance with project requirement for every project.
- Customized material selection with galvanized or aluminum construction.
- Architecturally aesthetic appearance.
- All sizes are custom fabricated to meet project requirements.
- Acoustical attenuation across all eight octave bands.
- Good water penetration performance.



Acoustic Property

- Rockwool Slab of 32-100 Kg/M³ Density.
- Non combustible when tested in accordance with BS 476 : Part 4: 1970 & ASTM E-136.
- Fill material is class-1 as tested in accordance with ASTM-84.
- Fiberglass shall be density calculated to provide the acoustic and aerodynamic performance.
- Tested for Temp. upto 750° C in accordance with DIN 52271.
- Meet the requirements of BS 2972 Sec.22 & ASTM C-871, ASTM-C-795, ASTM C-692, ASTM C-177/C-518 & DIN 52612 for low thermal conductivity.
- Sound absorption in accordance with BS 3638 & ISO 0354.
- Inert, vermin-proof, weather rated non combustible acoustic infill.

Model : ASB 300 AF (Aerofoil Type)

Airwellcare ASB 300 AF is a Single bank sightproof Acoustic Louver designed to reduce the noise transmission between areas. This louver is specifically designed for weather protection of intake and exhaust exterior wall applications. Aerofoil blade design provides low airflow resistance with sound absorbing insulated blades for areas that require noise separation.

Louver Frame

Louver frame is made of 1.2mm formed Galvanized Steel.

Louver Depth: 300mm (12 Inches)

Frame with 1.5mm & 2.0mm Thick. formed Galvanized Steel, Stainless Steel & Aluminium are optional.

Louver Blade

Aerofoil designed exterior blades are made of 1.0mm thick. formed Galvanized Steel with 0.7mm Thick. Galvanized steel Perforated interior surface. Blades with Aluminium or Stainless Steel exterior surface & interior perforation of thickness with 1.2mm, 1.5mm & 2.0mm are optional. Blades are positioned at 45° Angle.

Acoustic In-fill

Each Blade, Top and Bottom frame cavity shall be filled with Rockwool Slab Insulation of 32-50Kg/M³ density, to absorb the transmission of sound.

Bird Screen / Insect Screen

12 x 12 x 1.0 mm thick. Galvanized Screen as Standard.
10 x 20 x 1.0 mm & 16 x 38 x 1.0mm thick. Expanded Galvanized Screen/Aluminium & Stainless steel Screens are optional.

(Refer to Page No.10 —optional accessories)

KEY FEATURES

- Design Flexibility.
- Hurdle free installation.
- Swift delivery upon 100% Production confirmation & drawing approval.
- Technical & after sales support.
- AutoCAD drawings are incorporated in compliance with project requirement for every project.
- Customized material selection with galvanized or aluminum construction.
- Architecturally aesthetic appearance.
- All sizes are custom fabricated to meet project requirements.
- Acoustical attenuation across all eight octave bands.
- Good water penetration performance.

ACOUSTIC LOUVERED DOORS



Door Features

- Single and double doors are available based on the project requirements.
- The standard single door is available upto 1250 x 2950mm height & Double Door is upto 2500 x 2950mm height.
- Customized optional dimensions for the doors are also available upon request.
- All doors are supplied with heavy duty hinges, lock and pull handle.
- Acoustic louvered doors can be fitted with birdscreen and or insect screens on request.
- Please refer to page No 10 for Louver Door powder coated finishes and colours.

FINISH / COLOUR / OPTIONAL CONSTRUCTION

All sound calculations meet international standards ASTM E90, ASTM E477, ISO 7235, ISO 3741, ISO 140, ISO 3744, ISO 3746, ISO 6798, ISO 8528-10, ASHRAE Handbook & Sound Research Laboratory.

Airwellcare Acoustic Louvers design flexibility and Sound Calculations allows to adjust :

- **The Louver depth**
- **Louver blade shape**
- **Louver blade thickness**
- **Airway gap between blades**
- **Acoustic filling properties**

The design flexibility and calculations are based on Louver Application & nature of project.

FINISH & COLOUR

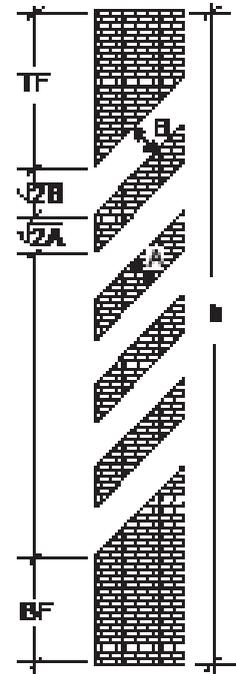
Standard Powder Coating finish as per RAL Colour Codes. The following custom based optional coatings / finish are also available on request.

- Super-Durable Polyester Powder Coating (SDF)
- Hyper-Durable Fluorocarbon Polymer Coating (HDF)
- Polyvinylidene fluoride coating/KYNAR Coating (PVDF/KYNAR)

The above finishes complies to AAMA 2603 / 2604 / 2605 requirements with 20-year limited warranty against failure or excessive fading.

WARRANTY

- All materials and workmanship are warranted for a period of one year from date of shipment / Delivery.
- Extended Warranty is available upon request at an additional cost.



TF : Top frame dimension.

BF : Bottom frame dimension.

H : Total height of the louver (aperture height).

A : Blade thickness.

B : Air way width.

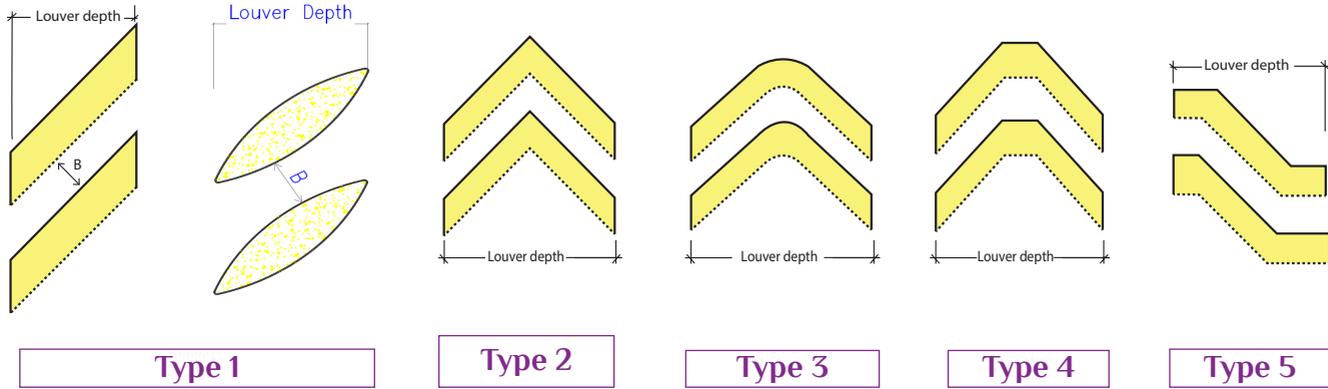
Optional Construction, Accessories and Fittings

Many optional accessories to the basic design are available at an additional cost.

They include:

- Construction with Aluminium material.
- Extended sill flashing.
- Bird Screen / Insect Screen in Galvanized Steel / Stainless Steel / Aluminium in various sizes.
- Flanged frames of various sizes.
- Hinged access panels Sub-frames.
- Continuous perimeter / Support angles.
- Visible mullions for multiple section requirements.
- Anodized, Baked Enamel or Kynar finish.

FRAME & LOUVER BLADE CONFIGURATIONS



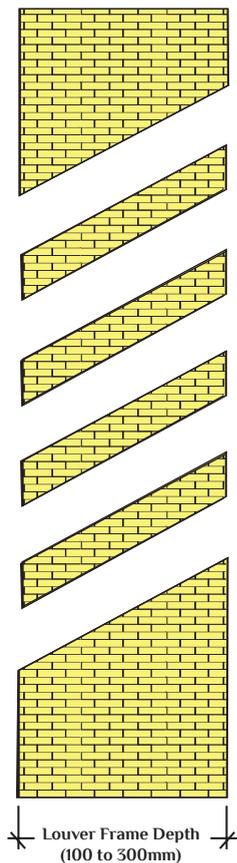
Type 1 : Straight 45 degrees blade.

Type 2 : Chevron 90 degrees sharp bend.

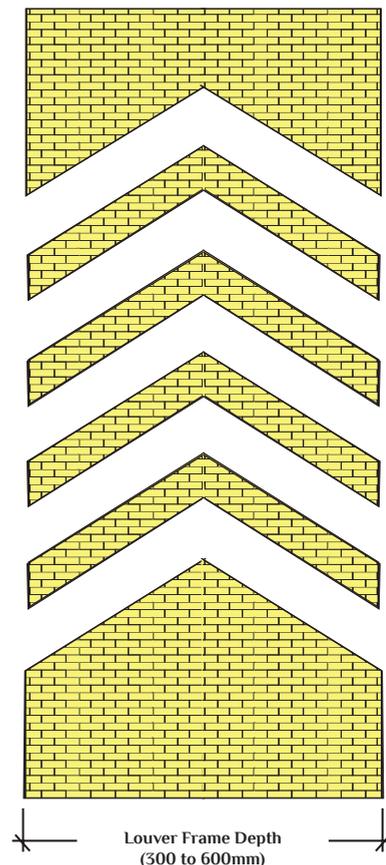
Type 3 : Chevron 90 degrees rounded bend.

Type 4 : Chevron two 45 degrees bends.

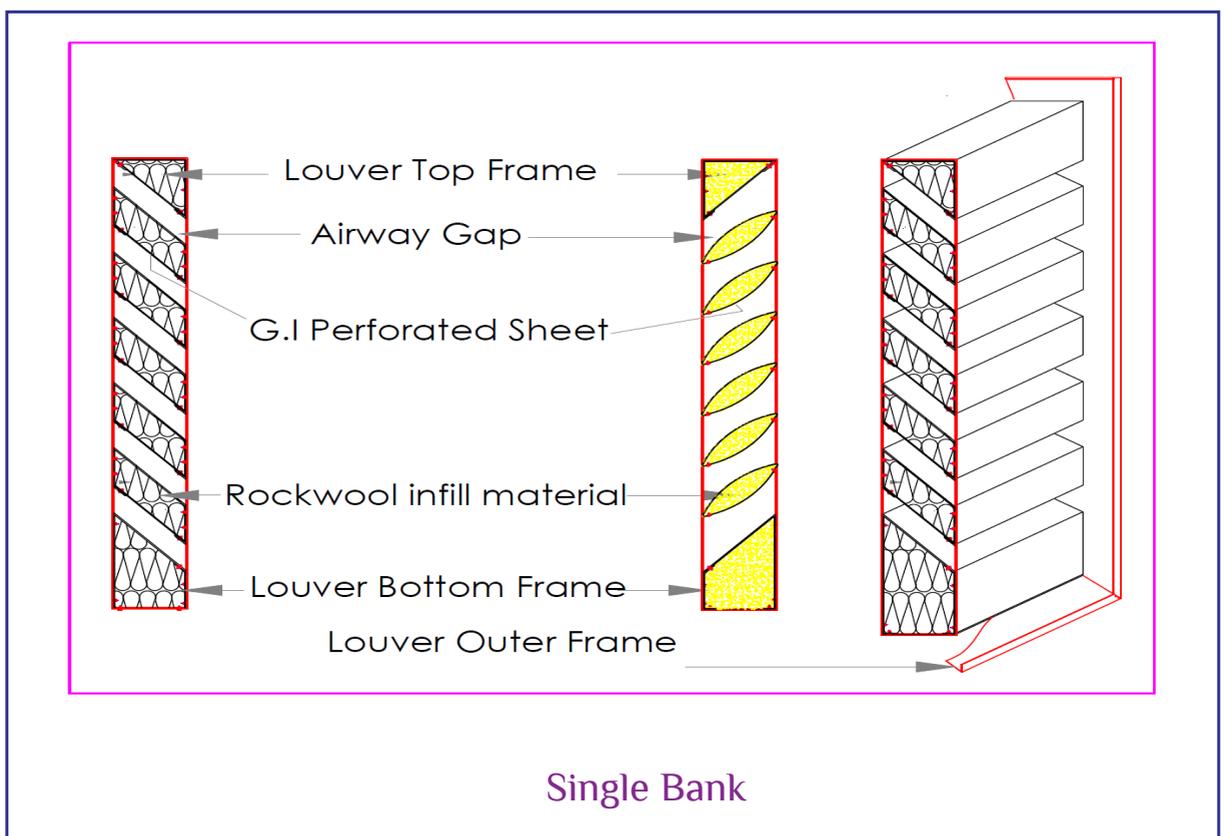
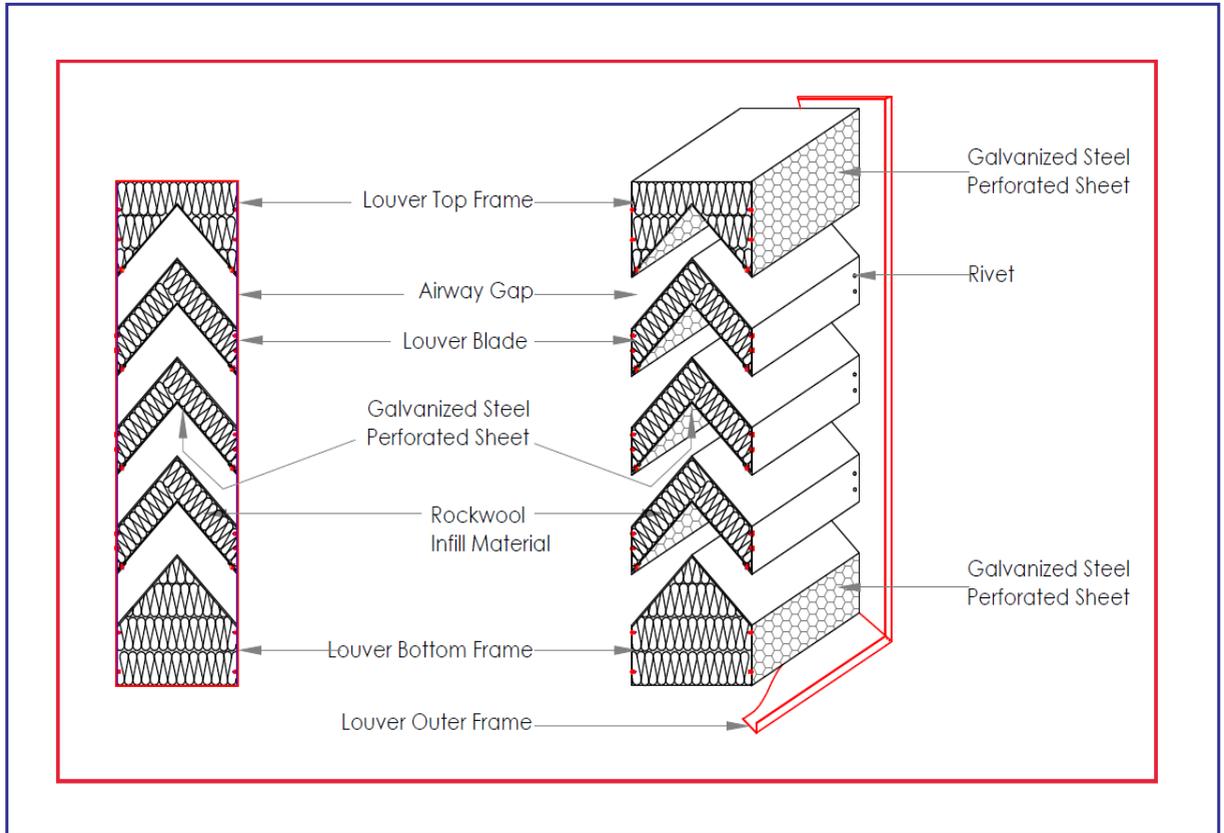
Type 5 : Straight 45 degrees blade with two bends of 45 degree each.



Airwellcare Acoustic Louvers with different blade configurations and styles can match perfectly the overall scale and aesthetics of a new building.



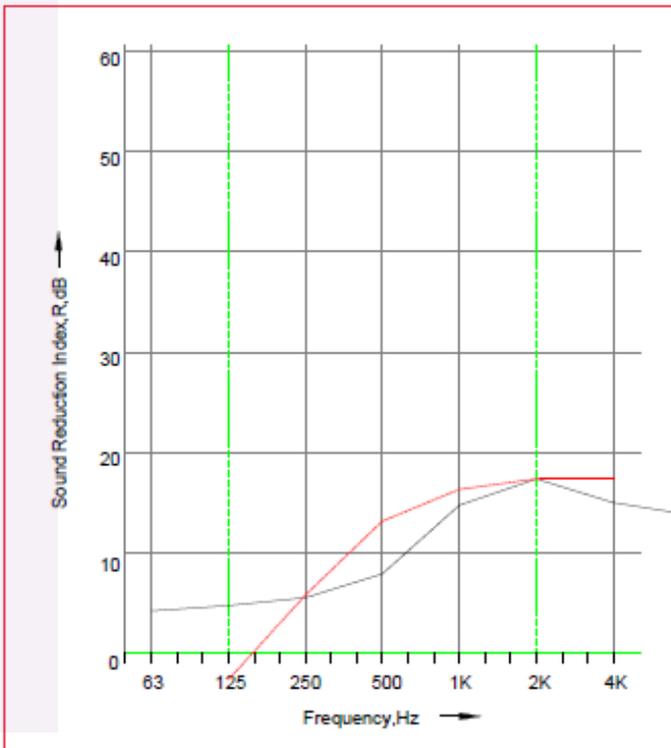
CONSTRUCTION DETAILS



ENGINEERING GUIDELINES

Model : ASB 150 AL (Single Bank)

Acoustic Performance



Airwellcare Acoustic Louver has been Tested in accordance with UKAS Accredited Technical Competence Lab

- *BS EN ISO 10140 - 2 : 2010 Measurement of Airborne Sound Insulation of Elements.*
- *BS EN ISO 717 - 1 : 2013 Measurement of Airborne Sound Insulation in Buildings and of Building Elements.*
- *ASTM E 413 Sound Transmission Class (STC)*
- *ASTM E 1332-16 Outdoor Indoor Sound Transmission Class (OITC)*



Data required for Technical Calculations

The following Technical details of the project to be forwarded to us, to design and to submit the technical calculation of the Acoustic Louver :

- Louver Type (Single Bank / Double Bank)
- Louver Dimensions (Width x Height)
- Sound Pressure Level Or Power level of Equipment / Engine (SPL or SWL)
- Total Airflow through Louver
- The Maximum (permissible) Pressure Drop
- Room / Area Dimensions (W x H x L)

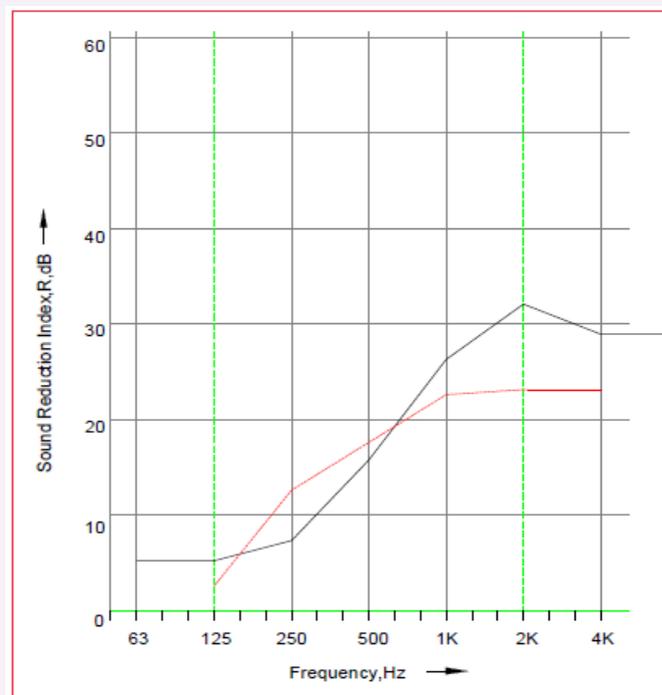
Refer to final project technical acoustic calculation for the exact Louver Free Area (%), Resultant Noise (dBA), Transmission Loss (TL), Pressure Drop (Pd), Airway Velocity (V), Free field Noise Reduction etc. which may vary based on Engine / Equipment's parameters and Louver applications.

ENGINEERING GUIDELINES

Model : ADB 300 AL (DOUBLE BANK)

Airwellcare Acoustic Louver has been Tested in accordance with UKAS Accredited Technical Competence Lab as per :

Acoustic Performance



- *BS EN ISO 10140 - 2 : 2010 Measurement of Airborne Sound Insulation of Elements.*
- *BS EN ISO 717 - 1 : 2013 Measurement of Airborne Sound Insulation in Buildings and of Building Elements.*
- *ASTM E 413 Sound Transmission Class (STC)*
- *ASTM E 1332-16 Outdoor Indoor Sound Transmission Class (OITC)*



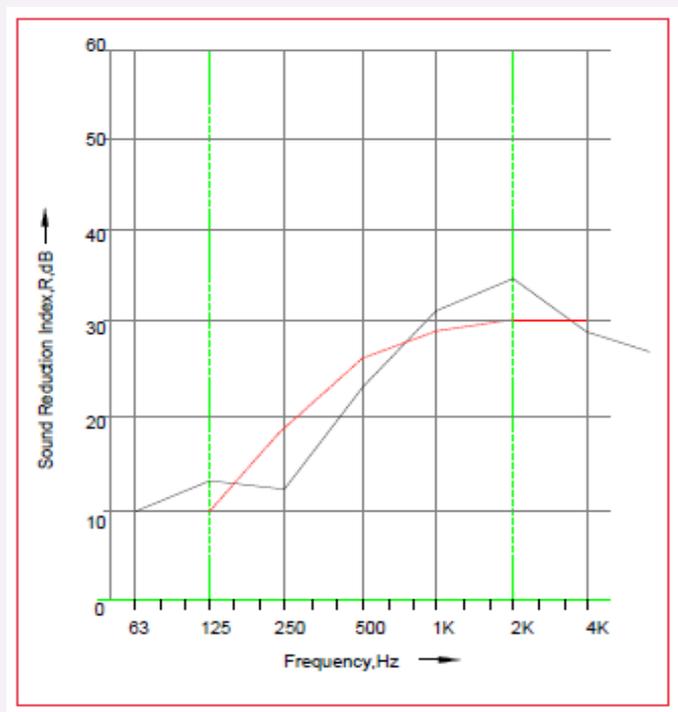
Refer to final project technical acoustic calculation for the exact Louver Free Area (%), Resultant Noise (dBA), Transmission Loss (TL), Pressure Drop (Pd), Airway Velocity (V), Free field Noise Reduction etc. which may vary based on Engine / Equipment's parameters and Louver applications.

ENGINEERING GUIDELINES

Model : ADB 600 AL (DOUBLE BANK)

Airwellcare Acoustic Louver has been Tested in accordance with UKAS Accredited Technical Competence Lab as per :

Acoustic Performance



- *BS EN ISO 10140 - 2 : 2010 Measurement of Airborne Sound Insulation of Elements.*
- *BS EN ISO 717 - 1 : 2013 Measurement of Airborne Sound Insulation in Buildings and of Building Elements.*
- *ASTM E 413 Sound Transmission Class (STC)*
- *ASTM E 1332-16 Outdoor Indoor Sound Transmission Class (OITC)*

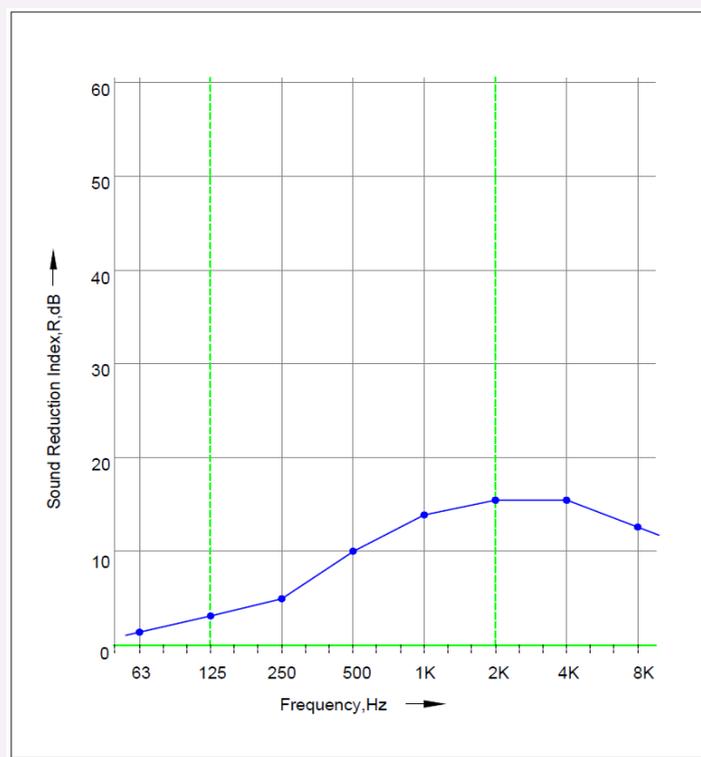


Refer to final project technical acoustic calculation for the exact Louver Free Area (%), Resultant Noise (dBA), Transmission Loss (TL), Pressure Drop (Pd), Airway Velocity (V), Free field Noise Reduction etc. which may vary based on Engine / Equipment's parameters and Louver applications.

ENGINEERING GUIDELINES

Model : ASB 300 AF (AEROFOIL TYPE)

Acoustic Performance



- *BS EN ISO 10140 - 2 : 2010 Measurement of Airborne Sound Insulation of Elements.*
- *BS EN ISO 717 - 1 : 2013 Measurement of Airborne Sound Insulation in Buildings and of Building Elements.*
- *ASTM E 413 Sound Transmission Class (STC)*
- *ASTM E 1332-16 Outdoor Indoor Sound Transmission Class (OITC)*

Refer to final project technical acoustic calculation for the exact Louver Free Area (%), Resultant Noise (dBA), Transmission Loss (TL), Pressure Drop (Pd), Airway Velocity (V), Free field Noise Reduction etc. which may vary based on Engine / Equipment's parameters and Louver applications.



ENGINEERING GUIDELINES

MULTIPLE SECTIONS

Louvers larger than 60 ln. wide x 120 ln. height will be fabricated in multiple sections.

SOUND TRANSMISSION CLASS (STC)

The Sound Transmission Class (STC) is a rating of the effectiveness of an assembly in isolating or reducing airborne sound transmission. STC is a single number that summarizes airborne sound transmission loss data.

OUTDOOR / INDOOR TRANSMISSION CLASS (OITC)

Transmission Loss (TL) is a measurement of the reduction of sound power transmission (dB) through an assembly at a given frequency. The more sound power that is reduced, the greater the TL.

SUBMITTALS

Airwellcare shall submit shop drawings incorporating Elevations, Section details and other details showing profiles of louver blades and frames, unit dimensions to Louver openings and construction etc. Submit theoretical calculations prepared by a professional engineer specialized in Acoustic application.

SAMPLES

Airwellcare provides Sample of proposed louvers, showing the full range of colors available, for each type of product specified.

WIND LOAD

Airwellcare shall design and furnish all supports required to withstand a Windforce of not less than 11.0kgs per Square foot.

Pressure Drop varies depending on louver application (Inlet or Discharge), nature of project & final Technical Acoustic calculation. Free Area Velocities shown above are higher than average velocity through the over all louver size.

MATERIAL STORAGE, OPERATION AND MAINTENANCE

Material Storage

The Louvers required to be handled carefully during offloading as per the upright arrow marks given on the unit in the right position. Care should be taken in lifting the product in all 4 corners and placing them on a raised floor level. Store the product always in dry environment. After receiving the Louvers, check for both obvious and hidden damages. If damage is found due to manufacturing defect / workmanship, record all necessary information with photographs and forward to Airwellcare.

Maintenance

Airwellcare Acoustic Louvers are designed for least maintenance. However, it is recommended to have periodical inspection of blades for damage, wear and tear etc.

Once installed, it is important to ensure the louvers are not damaged, as this may affect both their acoustic and airflow performance. The louvers may, over time begin to collect dust and grime due to their location and exposure to varying weather conditions. The louvers should be cleaned to refresh their visual appearance at six monthly intervals.

Airwellcare Louvers are not designed to be used in areas where they may be exposed to contaminants such as water treatment or cleaning chemicals.

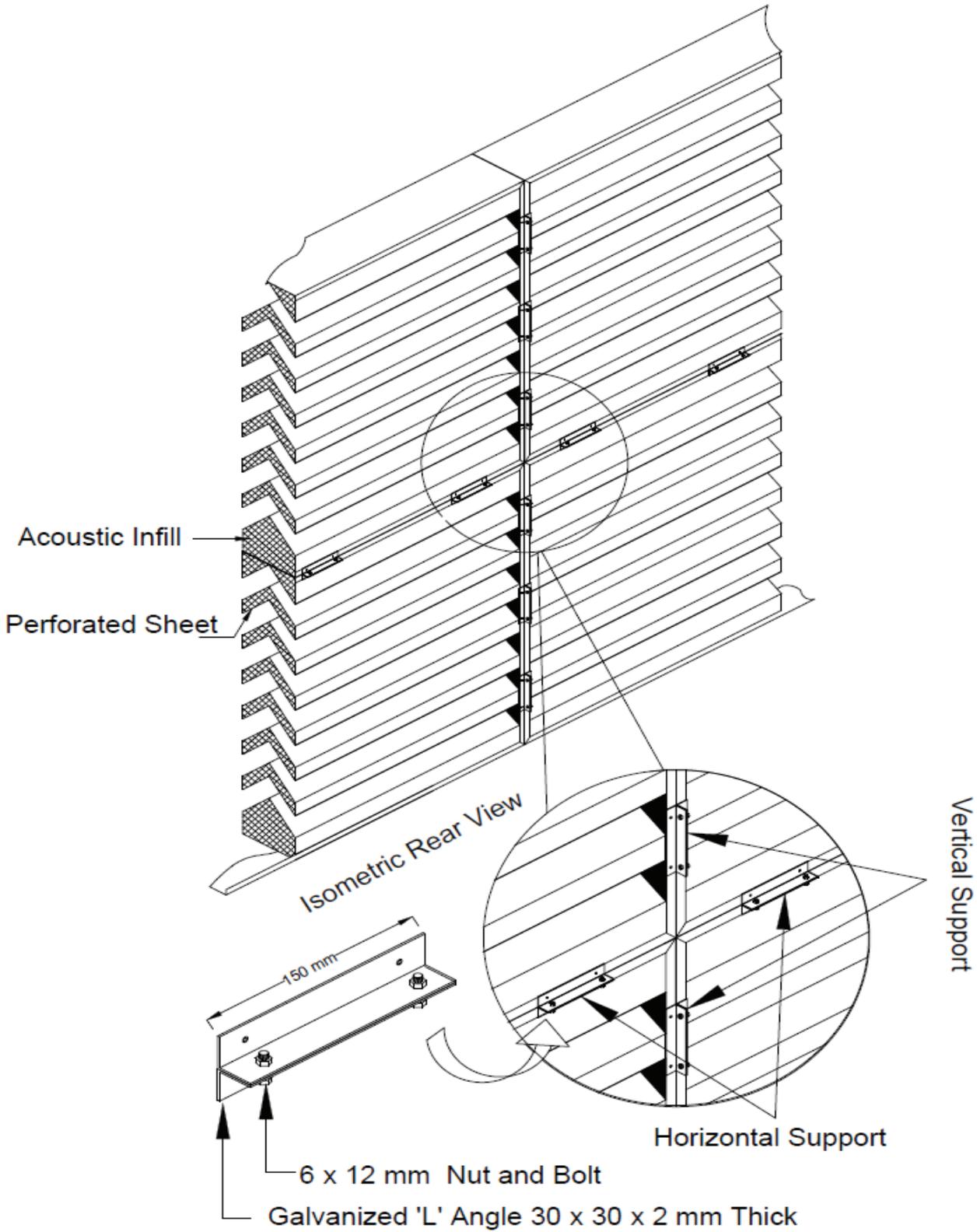
If the louvers are exposed to such contaminants, they should be cleaned immediately to reduce the detrimental impact of the chemicals.

Cleaning of the louvers should be completed using a soft, clean cloth and soft wash gel cleaner. Surfaces should be thoroughly rinsed with fresh water after cleaning.

In coastal or industrial environments, cleaning should be carried out more frequently paying particular attention to areas that are not normally washed by rain.

DO NOT use harsh cleaning fluids, strong solvents or abrasive cleaning materials, as these will damage the surface finish on the acoustic louvers. Once the louver surface finish is damaged, it cannot be repaired and in many cases may lead to deterioration of the base metal.

INSTALLATION DETAILS





PROJECT HIGHLIGHTS



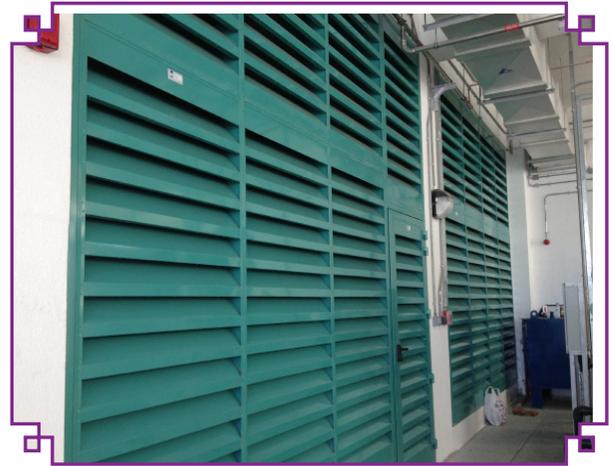
IKEA - District Cooling Plant at Doha Festival city Doha, Qatar



ADNOC - New Head Quarters District Cooling Plant at Abu Dhabi, U.A.E.

PROJECT HIGHLIGHTS

**Etisalat - Data Center
Generator Room at Fujairah, U.A.E.**



**Dubai Metro
District Cooling Plant at Dubai, U.A.E.**



**ASTER
HOSP.
GEN.
ROOM
SHARJAH
UAE**





An ISO 14001:2015 Certified



ISO 9001:2015 Certified



An ISO 45001:2018 Certified



P.O Box 2620

Office / Factory # 3 Umm Al Thoub,
Modern Industrial Area, Umm Al Quwain

United Arab Emirates, Tel. +971 (6) 768 0473 / + 971 (6) 767 5262

Email : sales@airwellcare.com

Web : www.airwellcare.com