Acoustic Modular Panels

ISTIQ Acoustic Modular Panels are available in modular forms and they come in with frame less, none welded and none bolted concepts. This unique design makes the whole enclosure to be installed at site fast and easy. Furthermore, it can easily dismantle and relocated, saving both time and money.
Due to the versatility of this paneling system, the modular panels can be used for designing from a small pump motor acoustic enclosure up to 2500 kW Genset Room. The system can be used even to built 3 storey plant building,

APPLICATIONS

ISTIQ Acoustic Modular Panels System is one of the most effective means for containment of excessive noise and for isolation of workers from the noise. Even where silencers are used, these can treat only the air-borne noise. The treatment of mechanical noise from the blower, motor etc. is beyond the scope of the silencer. Thus, in order to achieve low noise levels that are often specified, noise enclosures are often required. By using ISTIQ Acoustic Modular Panels, acoustic enclosure can be designed acoustically to give the required noise attenuation. The unique interlocking system (male/female) provides a good seals without having any rubber or gasket thus, give the maximum transmission loss. A well designed enclosure can help reduce the noise to a specified noise limits.

Typical application can be applied on the following equipments: -

- Turbine Rooms
- Press Machines
- Compressors Room
- Pumps Room
- Generator Sets
- Control Rooms
- Sound Measuring Room
- Anechoic Room
- And many more...

CONSTRUCTION

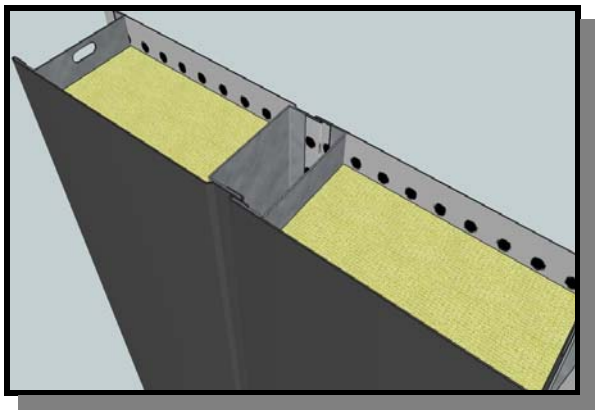
ISTIQ Acoustic Enclosures are made of from high quality galvanized steel and perforated sheet. In between, acoustic infill (rockwool or fibre glass) is used to absorb noise. The thickness of these panels are available in 50 mm, 75mm and 100 mm. Different acoustic infill and different thickness of metal sheet are used depending on the application to ensure excellent performance and cost effectiveness without sacrificing quality. Specific percentage of perforation of galvanized sheets, which hold the infill, is specially selected to give the optimum overall noise absorption coefficient.

Alternatively, materials such as zincanneal, mild steal or stainless steel can also be used to replace galvanized steel.

For finishing, powder coating system is highly recommended. The painting system, thus can last up to 20 years depending on the type of powder coating to be used.

MATERIAL SPECIFICATIONS

a)	Outer casing	1.2 mm thk. Galvanized Iron Plate
b)	Inner casing	0.6 mm thk. Perforated Galvanized Iron
c)	Percentage of perforation	10% to 20%
d)	Panel thickness	50 mm, 75mm, and 100 mm
e)	Intermediate	60 kg/m^3 density Rockwool with or without Gypsum Board
f)	Weight	32 kg, 35 kg and 38 kg per square meter.
g)	Finishing	60 - 80 micron Powder Coat



A unique male/female interlocking system which gives high transmission loss without having any rubber seals

PERFORMANCE DATA

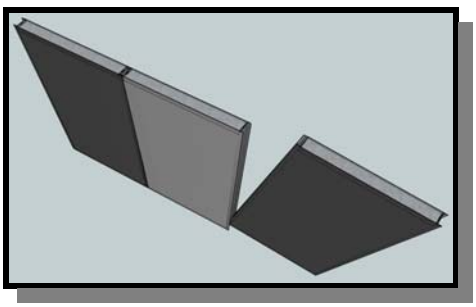
Transmission Loss (dB) Measured at Octave Band Centre Frequencies								
Model	Panel Thickness	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	STC
IMP-50	50 mm	16	20	29	38	42	48	35
IMP-75	75 mm	17	24	32	40	47	53	38
IMP-100	100 mm	19	28	37	44	53	55	42

Absorption Coefficient (a) Measured at Octave Band Centre Frequencies								
Model	Panel Thickness	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	NRC
IMP-50	50 mm	0.50	0.83	1.05	0.95	0.97	0.89	0.95
IMP-75	75 mm	0.60	0.85	1.05	0.95	0.97	0.90	0.95
IMP-100	100 mm	0.71	1.09	1.03	1.05	0.98	0.89	1.00

Test data is obtained in accordance to ASTM E90 and C423 test standards for transmission loss ans absorption coefficient respectively.

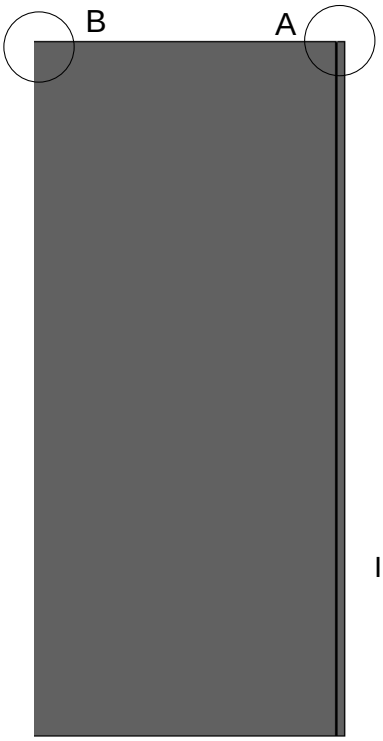
STANDARD DIMENSION LIMITS

Panel Width		Panel Thicknesses	
Minimum	Maximum	Minimum	Maximum
300 mm	1140 mm	50 mm	150 mm

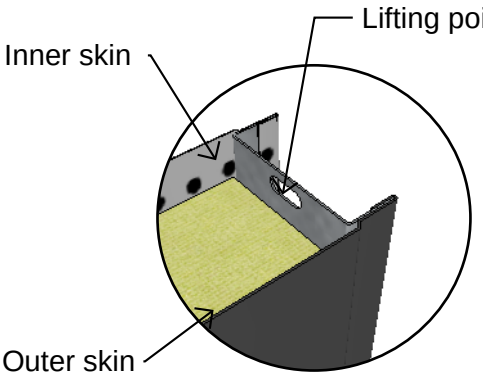


- Standard sizes is based on common raw material and acceptable structural engineering practices
- For sizes outside the standard range, please contact us to discuss on your requirement.

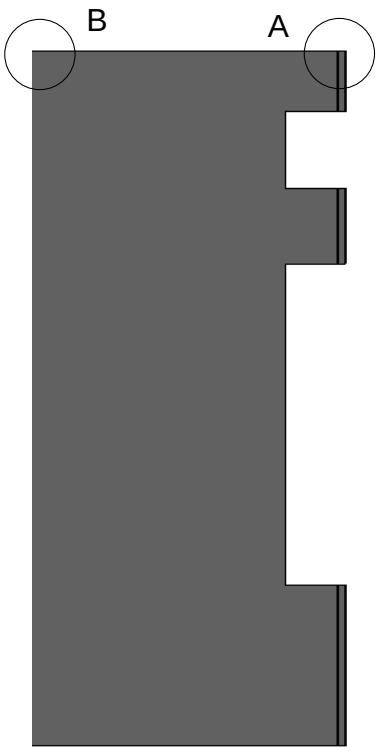
TYPES OF MODULAR PANELS



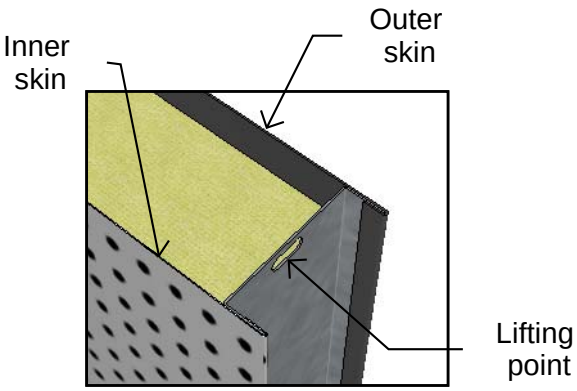
Standard Panel



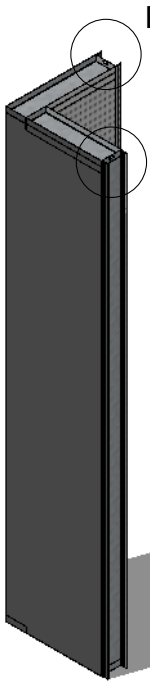
Detail A (male)



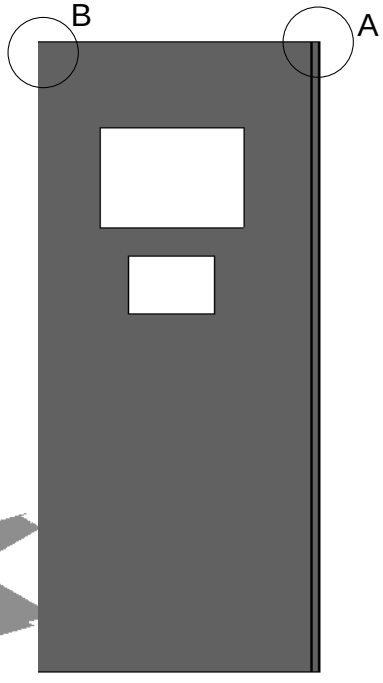
Notch Panel



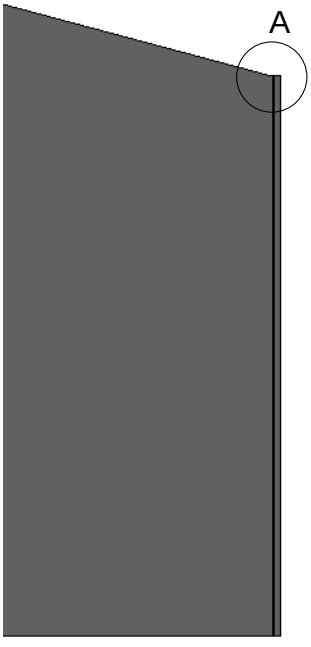
Detail B (female)



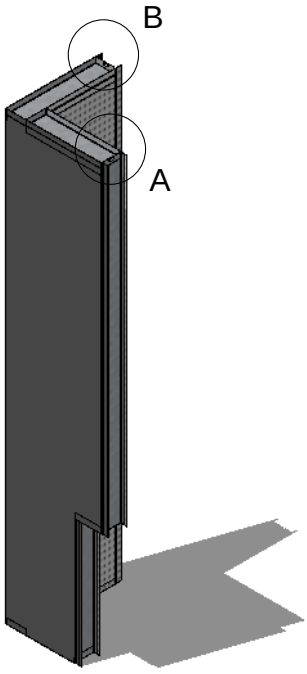
Corner Panel



Penetration Panel



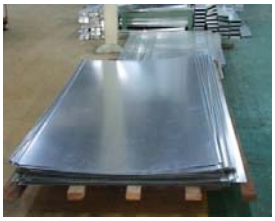
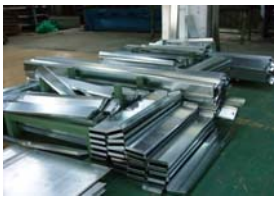
Slope Panel



Corner & Notch Panel

FROM PRODUCTION TO INSTALLATION

Bending and Cutting Process


Assembly Process




Final Checking & Delivery Process




APPLICATION OF ACOUSTIC MODULAR PANELS

Acoustic Barrier

1560 kW Gas Engine Acoustic Enclosure

Semi Anechoic Room

Compressor Process Plant

Field Gas Compressor Station

ISTIQ NOISE CONTROL SDN BHD
28-2, Jalan Sri Permaisuri 9, Bandar Sri Permaisuri, Cheras, 56000 Kualal Lumpur, Malaysia.
Tel: 603-9172 7205 / 9172 7206 Fax: 603-9172 7204
www.istiq.net