i - acowall

**THE MOST INOVATIVE SOLUTION
TO ACOUSTIC IMPERFECTIONS ....**

How is Acoustic Wall related to Sound ....

Sound is a form of energy transmitted through air and perceived by human ear, it can not be destroyed but can be converted to heat energy through sound absorption process. Sound is described as 'sound pressure level' which is measured by decibels dB, and its sound frequency is measured in Hz.

Sound absorption measure a given material's ability to absorb sound energy at various frequency normally measured at 1/3 octave band center frequency, i.e 125 Hz, 250 Hz, 500 Hz, 1000 Hz, 2000 Hz, 4000 Hz.

The human ear can typically hear sound from 0-120 dB and can detect sound from 20-20 000 Hz, but not equally sensitive across these range.

Acoustic Wall System was developed according to the need of sound absorption and sound reflection requirements. These acoustic requirements can work in harmony with a wide variety of finishes and allowing design freedom. Our prefabricated panel system allows economical and quick assembly by avoiding costly build-on-site carpentry method.

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Advantages of Pre-Fabricated Panels

- Quality control during fabrication
- Rigid 'TOUCH' feel system with well defined edges
- Panels are interchangeable, configured easily by simply detach & reattach
- Tounge and groove fixed system. Do-it-yourself concept.
- Replacement of any damaged panels is cheap and easy.
- Faster site installation
- Modular system
- Aesthetically Impressive

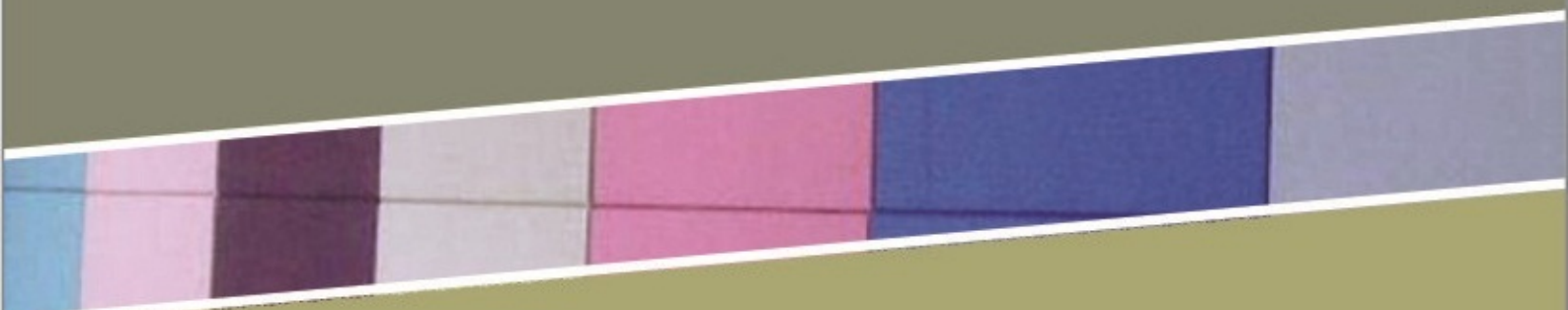## ABBREVIATED SPECIFICATION GUIDE

The installation of the i-ACOWALL track system shall be performed by a manufacturers authorized contractor. Installation shall be warranted for at least one year by installation company, limited to defect in materials and workmanship.

The tighter the fabric is pulled, the tighter the jaws close. Taut, slip-proof is assured. While closure is finger-tip easy, opening is not. Accidental opening is insured against, yet installers can easily release fabric for replacement or repair. Installation calls for framing of the perimeter treated. Individual panels will facilitate redecoration, but size and shape of framework is versatile and unlimited-dependent only on fabric length or width.
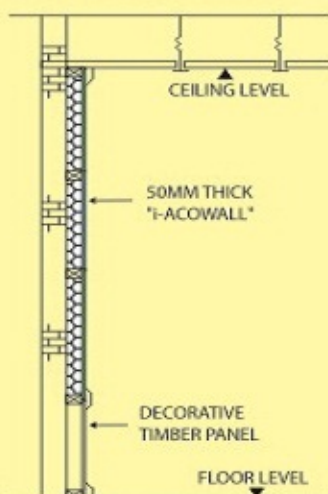
NO LIMITATIONS

Obstructions or wall elements pose no problem. Curves as tight as 18" radius on vertical plane, to 6" on horizontal plane, are possible through simple notching of border pieces. Tighter radius are handled by adoption of specialized techniques by contractors. Installation is possible on any clean, sound, reasonably smooth interior surface: PLASTER, GYPSUM, CONCRETE, BRICK, TILE, METAL, etc. Practical system to integrate unlimited selections.

i-ACOWALL system is available through a net-work of exclusive, factory trained and experienced contractors.

CONSTRUCTION DETAILS

INSULATION DETAILS SECTION

CEILING LEVEL

50MM THICK "i-ACOWALL"

DECORATIVE TIMBER PANEL

FLOOR LEVEL

TYPICAL SIDE VIEW DETAILS

CEILING LEVEL

CONTROL ROOM

"i-ACOWALL" ACOUSTIC WALL PANEL

DECORATIVE TIMBER PANEL

FLOOR LEVEL

SOUND AND ACOUSTIC WALL

Sound absorption coefficient of 1.0 means the material has 100% efficiency in absorbing. Sound at particular frequency 0.6 means the material has 60% efficiency in absorbing sound at a particular frequency.

Sound absorption coefficient = Reverberation Time (**RT**) of a given enclosed area. RT is defined as time taken for the sound pressure level to drop by 60dB. RT can range from 0.3 seconds to 7.0 seconds.

The shorter the Rt the better providing clear distinctive sound picture, which means good speech intelligibility.

RT is calculated with formula of $RT = 0.16 \times V/A$

(V=volume of room, A=absorption area of room x Sabines / absorption coefficient)

| General Description	Fabric Wrapped Fiberglass Wall Panel System
Panel MAterial	High Density Fiberglass
Density	80 Kg/M3
Panel Thickness	25mm, other thickness available on request
Panel Sizes	600x600mm, 600x1200mm, 1200x1200mm, 1200x2400mm
	Other custom sizes available on request
Edges Details	square, Beveled, Mitered, Radius
Edge Treatment	Wooden Frame
Mounting System	Clip or Velcro
Panel Finish	Decorative Fabric
Acoustic Performance	NRC Rating : 0.9 - 1.0

MODULE

SQUARE   RADIUS   HALF RADIUS   BEVEL   HALF BEVEL
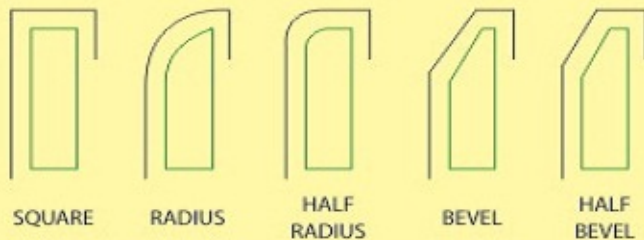
THICKNESS / MM	WIDTH / MM	LENGTH / MM
50	300	600
50	600	600
50	600	1200
50	1200	1200
50	1200	2400

NOISE REDUCTION COEFFICIENT

- 25MM THICK ACOUSTIC INSULATION INFILL
- 50MM THICK ACOUSTIC INSULATION INFILL

TYPICAL NRC VALUES / ECHOSOFT INFILL

FREQ (HZ): 125, 250, 500, 1000, 2000, 4000
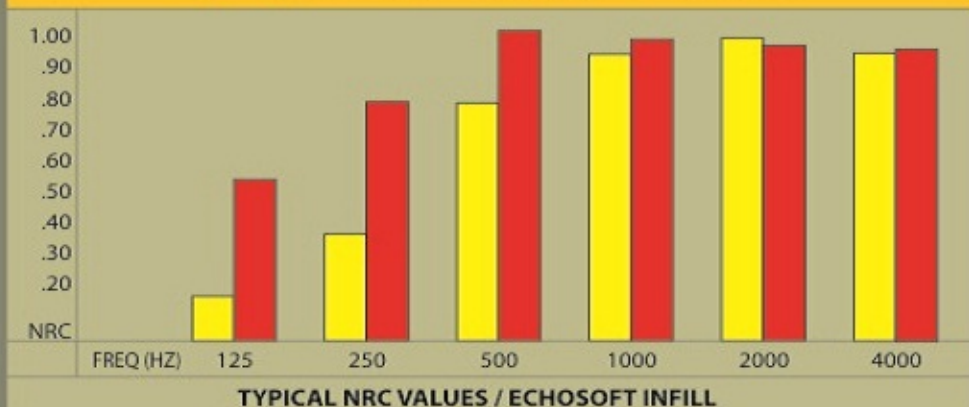
NOTE :

Special sizes and thickness can be manufactured according to project or job specification and unique attenuation needs.