

# **ECCOBOARD GROOVED WOODEN ACOUSTIC WALL PANELS**

**System Description-** Acoustic panel system with high technical and aesthetic qualities. At the technical level it has a high absorption coefficient. Aesthetically it has a linear design, elegant and discreet, very suitable for acoustic conditioning that requires a high level.

**Support materials and finishes & Material Specification-** The support material is always HDHMR Prelaminated waterproof board fiberboard wood panels, Made out of High density Moisture Resistance fiber board substrate with a melamine laminate facing finish and a melamine balancing layer on the reverse side, Panel Density will be (600Kg/m<sup>3</sup> - 900Kg/m<sup>3</sup>) as per IS 14587:1998, Water Absorption % (Max.) after 02 Hours 4.05% as per IS 14587:1998 , Screw Withdrawal Strength (Min.) N at face 2200 as per IS 14587:1998 also test Passed to Resistance of Steam, Resistance of Cracking of Lamination under Heat, Resistance of Cigarette burn & Resistance to stain, Fire Performance (Flammability, Flame Penetration, Rate of Burning) Test Passed as per IS 1734 - 1983 (Pt-03), Other options available on request

**Acoustic Performance & Fleece Backing-** Panel features saw cuts (mills) on the face and perforations on the back. Panel is typically installed with 50mm of acoustic insulation to the rear. Acoustic performance varies dependent on the "open area, Non-woven, acoustically invisible fleece is typically fixed to the acoustic foam for a black-out effect in the panel opening

**Installation-** Groove acoustic panels are typically installed on to aluminium Grid Channel system with MS Clips in a simple tongue and Groove fashion to create a seamless finish. The cavity should include a sound absorbing Insulation which will increase the acoustic performance. Panels can be mounted either with the Grooves running horizontally or vertically.

**Technical Properties With Slats Patterns-** Our wooden grooved acoustic panel is made up of a series of slats and grooves. Each panel has a machined tongue and groove joint for a seamless joinery. wooden grooved panels come in 5 different patterns: 28-4, 14-4, 28-2, 14-2 and Random. The first number refers to the slat size (mm) and second number refers to the groove size (mm). The surface comes in melamine finishing, The base material can be made of MDF and HDHMR.

## **Panel Specification-**

Standard Measurements      2440 x 384 mm , 2440 x 1184 mm , 2440 x 128 mm and Size can be customized  
Thickness                      16 mm

Sound Absorption Upto 0.75 NRC, tested as per IS: 8225 / ISO: 354 / ASTM 423C

Density (600Kg/m<sup>3</sup> - 900Kg/m<sup>3</sup>) as per IS 14587:1998

Materials                      Melamine laminate facing finish MDF as per IS 14587:1998

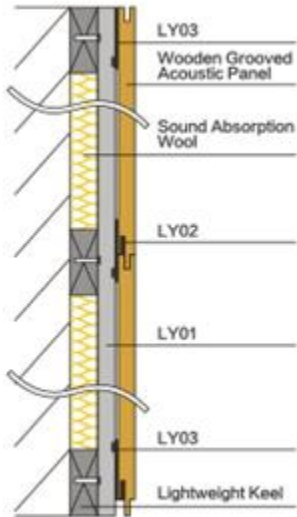
Fire Performance              Flammability, Flame Penetration, Rate of Burning Passed as per IS 1734 - 1983 (Pt-03)

Slotted Standard Pattern      28/4 , 28/2 , 14/4 , 14/2 and Random Design as per Client or Ar. Choice.

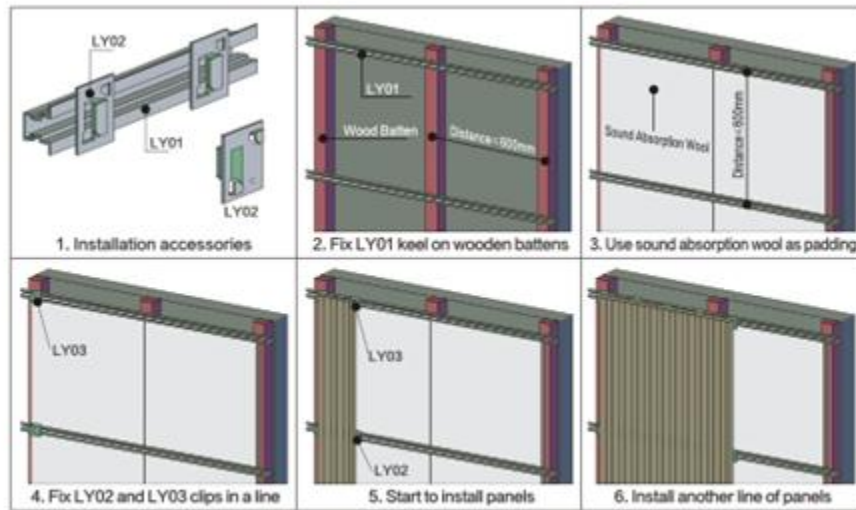
**HOW THE PANELS ABSORB SOUND-** As well as the slits in the face, Groove panels have large cut-outs to the rear or the centre which meet with the slits in the front, creating perforations. These perforations, combined with a cavity behind the panel create resonance, due to the air in the cavity which acts like a spring. In combination with damping, typically provided by a layer of Acoustic Insulation in the cavity, to reduce sound energy. This is know as a Helmholtz absorber. Changing the perforation pattern (in this case by selecting the width between the slits) alters the acoustic performance. Differences in the cavity depth and absorbent material in the void also have consequences.



**Installation Accessories**



Cross-section Structure



Installation: Lightweight Steel Keel System