



ACOUSTIC



DESIGN • COMFORT • INSULATION

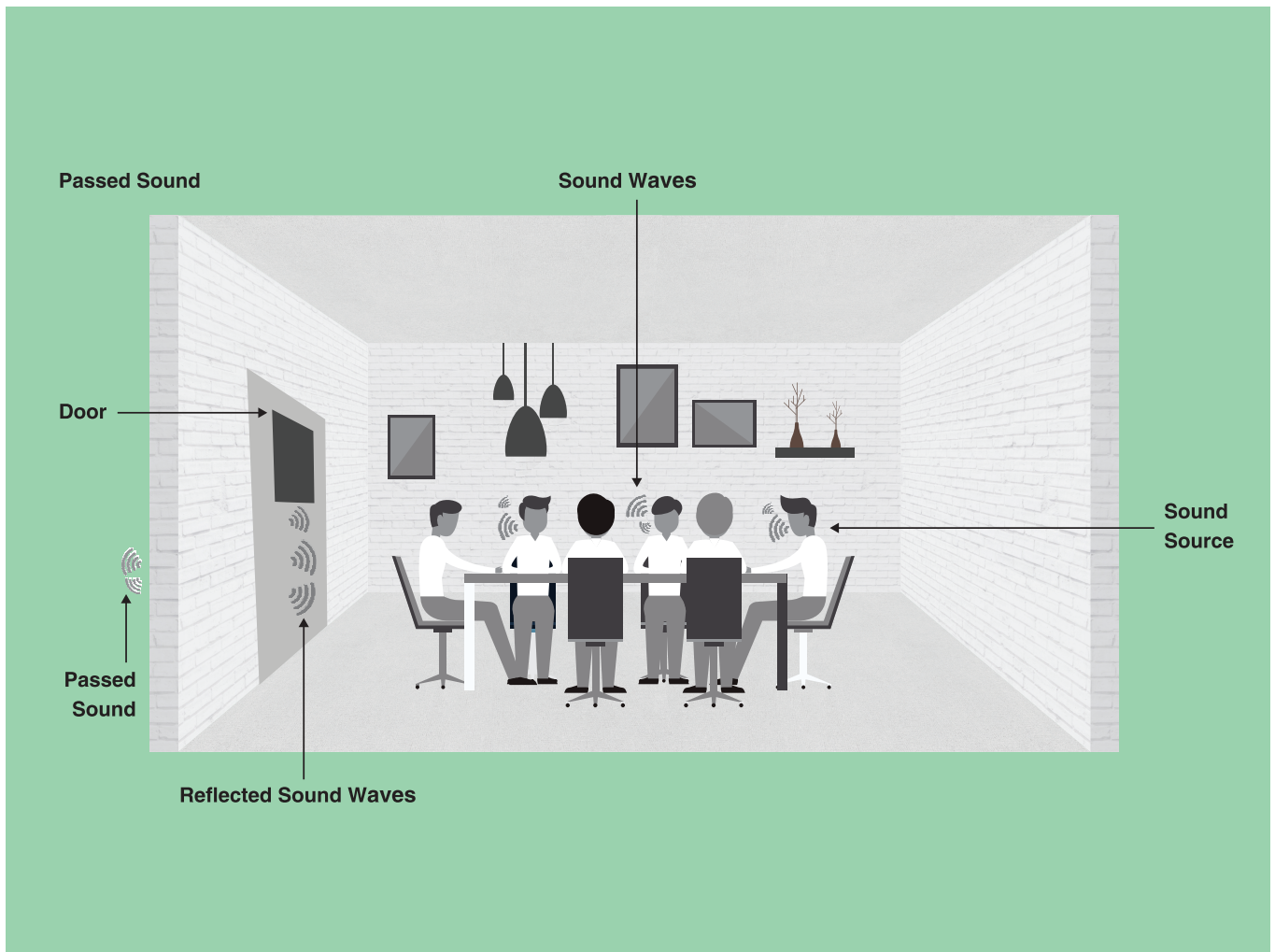
KEEP
OUTSIDE
NOISE
OUTSIDE

INDOOR SYSTEMS®

DOOR ACOUSTIC INSULATION

DOORS ABSORB SOUNDS PARTIALLY

Doors are usually made of plywood or glass. These are closed cell materials, which partially absorb and partially reflect the sound waves. These doors create acoustic pockets, which cause acoustic breach. Even if the walls are well insulated with acoustic insulation, if proper attention is not given to the door then it can reduce the overall insulation performance.



NRC & STC VALUES ARE IMPORTANT

Important and confidential talk can leak through the door joints. If the door material has lower STC value then it allows more sound to pass through it. STC value is defined as the ability of material to stop the sound. In some applications, it is required to use materials which have high NRC value so the sound cannot pass through and desired reverberation time of the room is maintained. In disco, pub, theatre, etc. a lot of sound escapes through the door, creating disturbance in the immediate foyer area.

- **Doors do not absorb sound completely**
- **So they allow the sound to pass through to the other side**
- **This is a problem if the doors are not insulated properly**

INDOOR SHOWS THE WAY

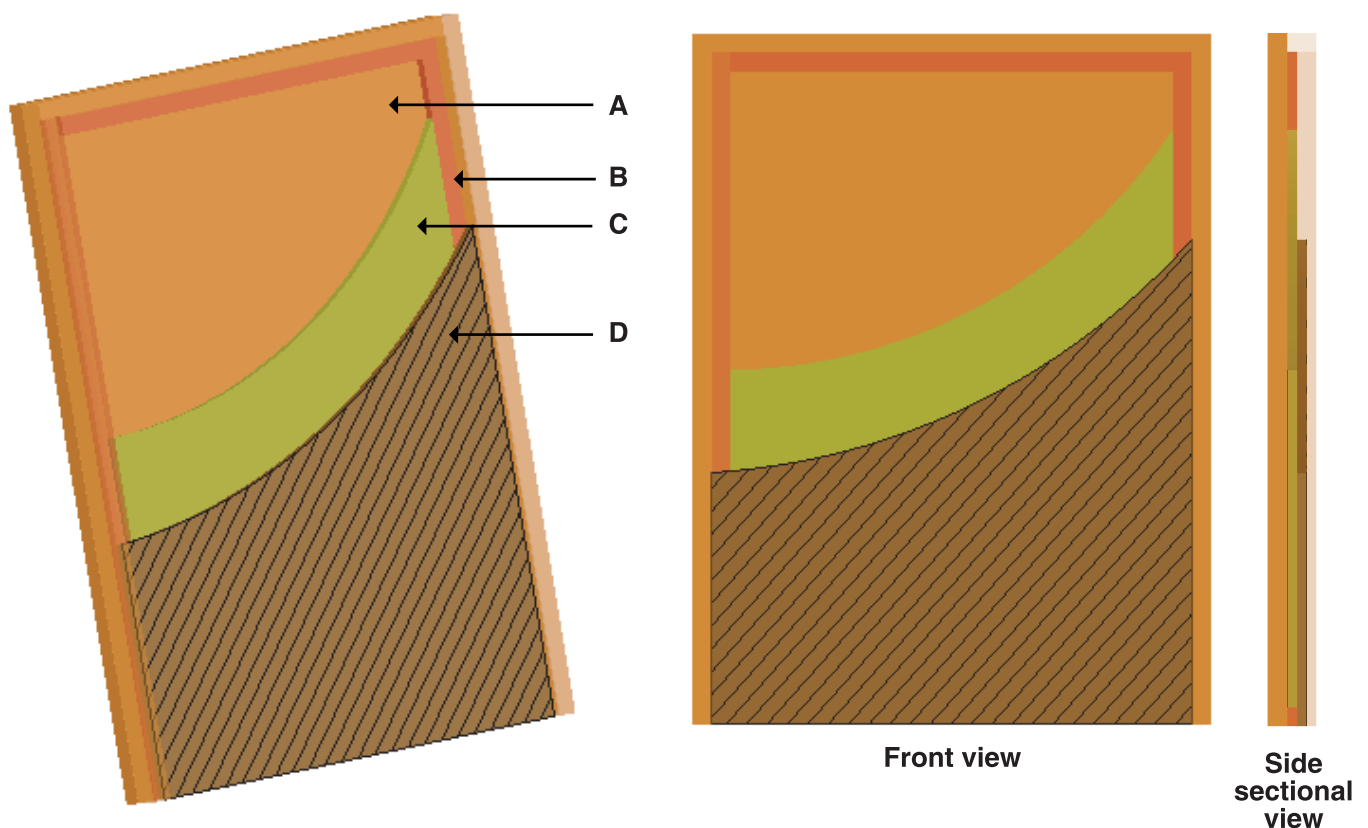
In discos, pubs, and cinema halls, door joints should be properly sealed and insulated with acoustic insulation. The door can be insulated with material that has high NRC and STC value. If the NRC value of the material is high then it will absorb the sound better. The high STC value material will not allow the sound to pass through it easily. The density of the material is a very important factor in acoustic insulation.

Designing The System

In this system, insulation material is fixed inside the frame of the door. The insulation material is covered with the finishing material, usually the mother material of the door like wood, metal, etc. Extra care should be taken while using the finishing material. If the acoustic insulation is designed for sound absorption then some part of the material in the door should be exposed to the source of sound, a perforated sheet is ideal here. If the end use is to isolate sound completely, then the finishing material can be completely opaque.

Ideal For

Discos, Pubs, Theatre halls, etc.



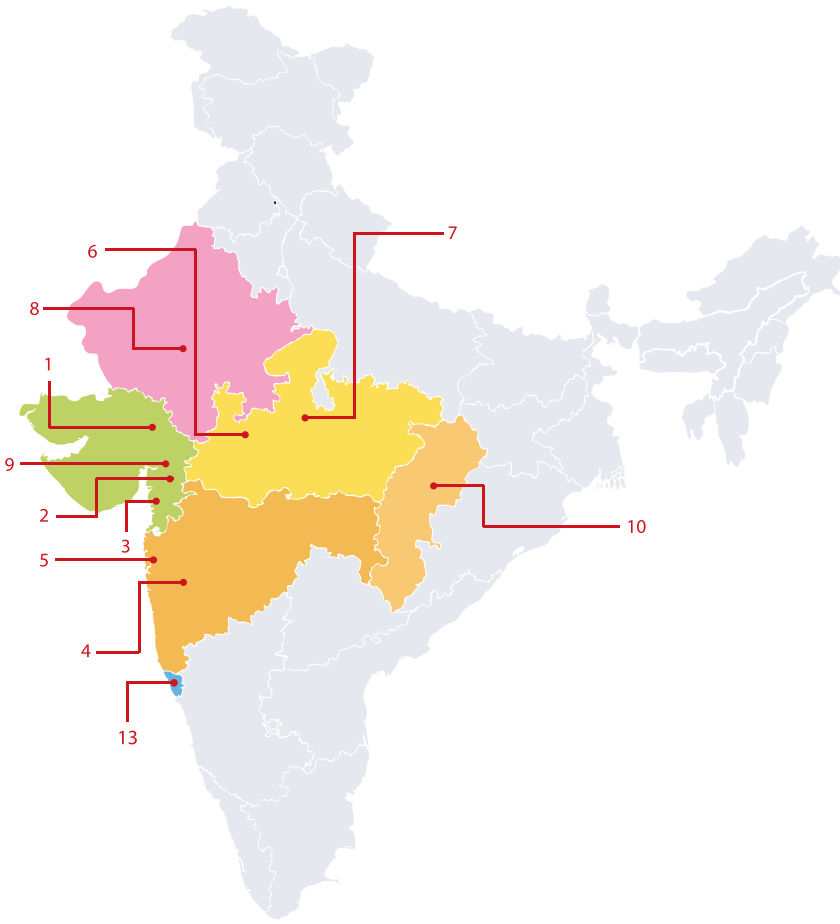
A) Wooden base

B) Frame for insulation

C) Insulation material

D) Ply

- InDoor Systems help block the sound
- The insulation material should have high NRC and STC value



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