BLUE WEST
GENERAL ACOUSTICS

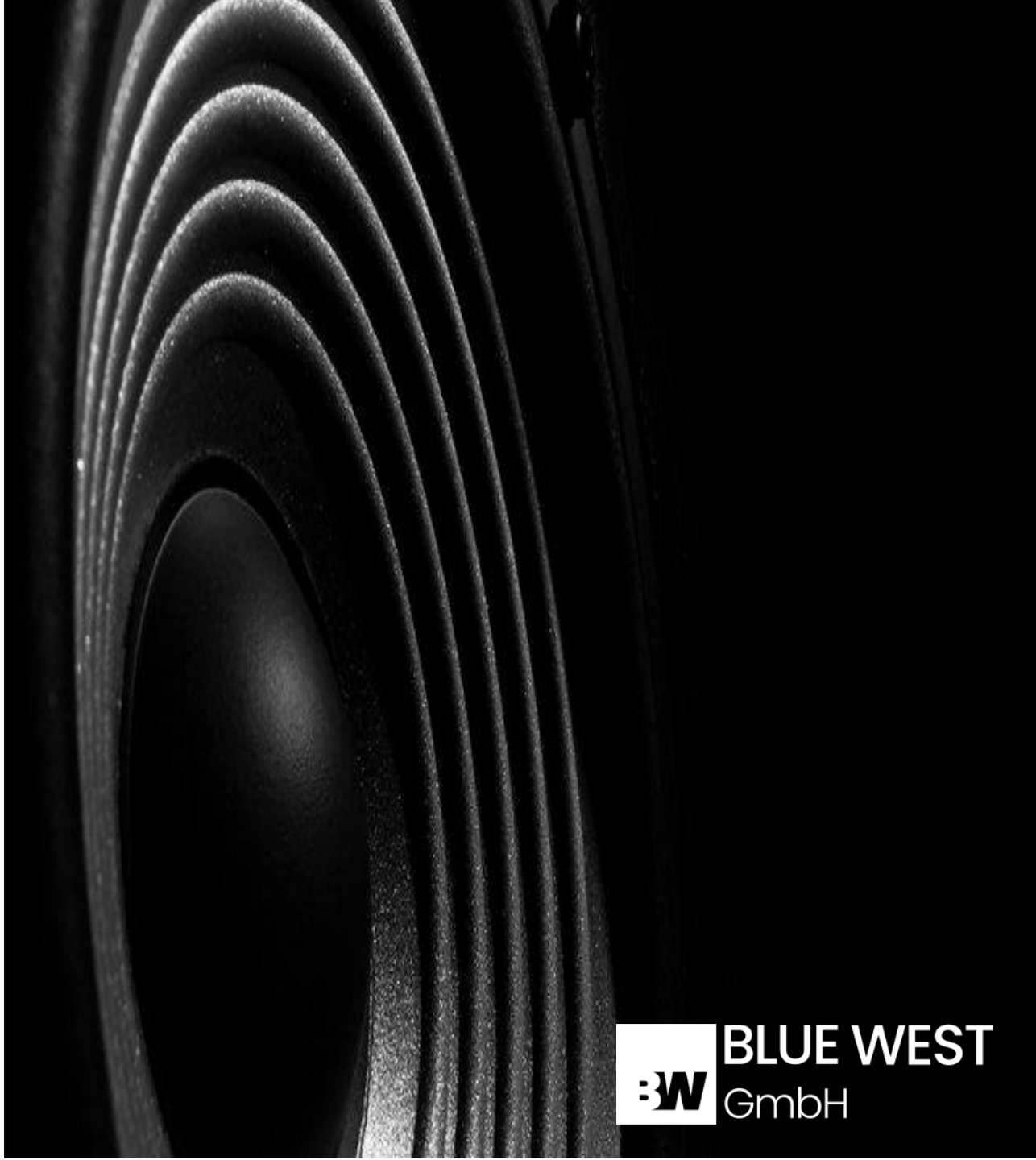
BLUE WEST GmbH

Define SOUND.

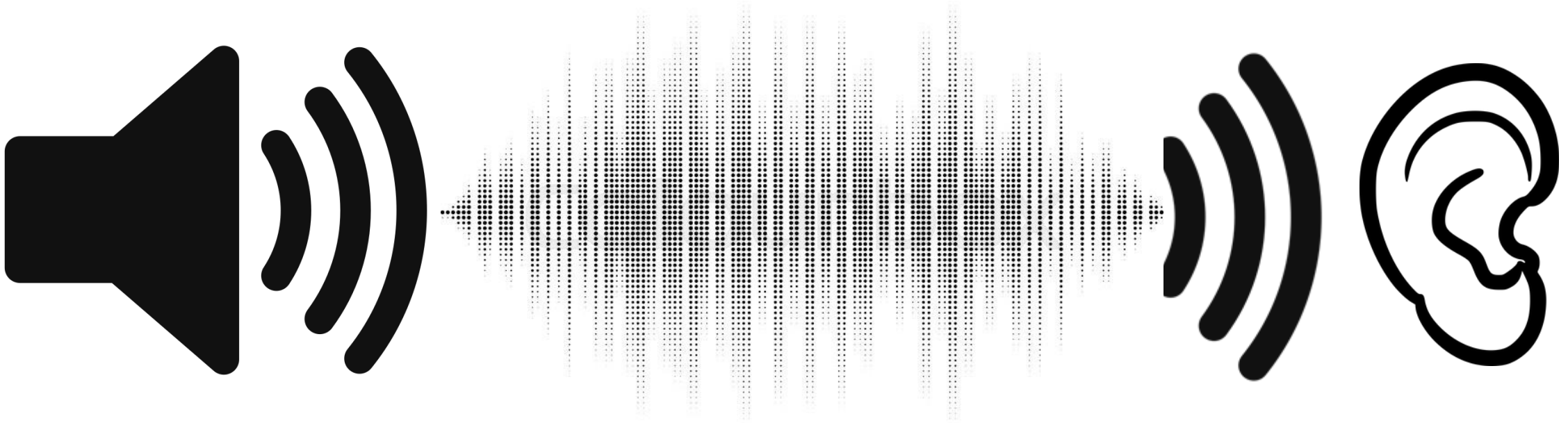
1. Vibrations that the human ear can detect, traveling at 3.10686 seconds per Km (1231 Kilometers per hour). When this atmospheric pressure occurs at least 20 times per second, it is called SOUND.

   In simple words……..

2. Sound is an Energy in motion which is generated by a Source, transmitted through a Medium and received by a Receiver.



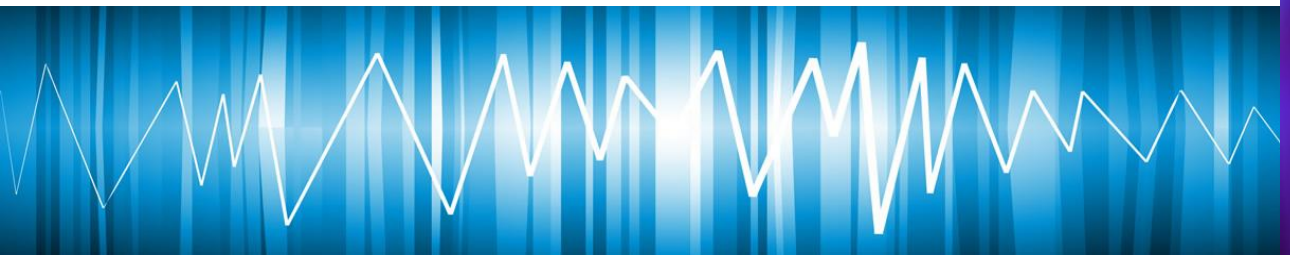
GENERAL ACOUSTICS

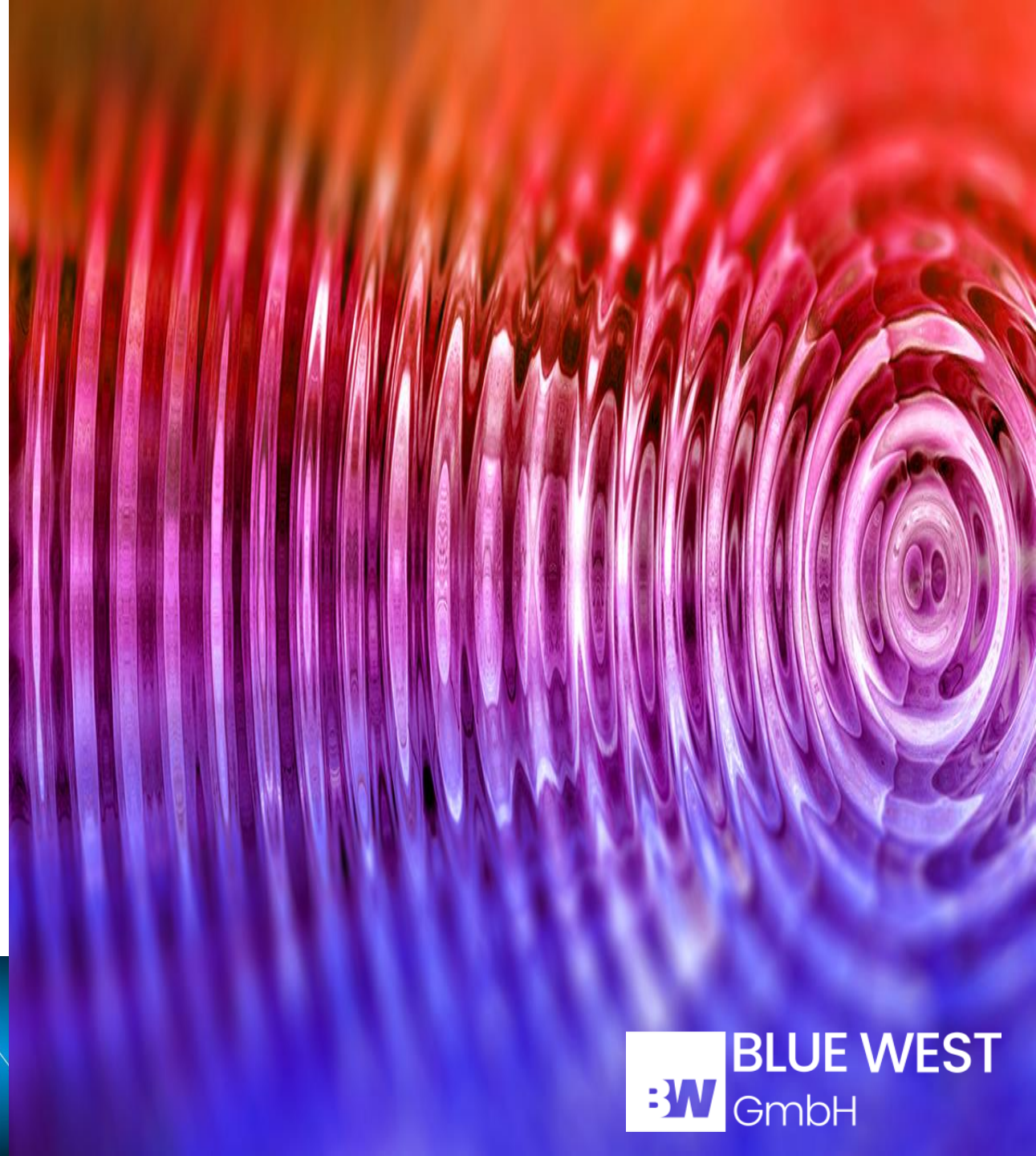


TRANSMITTER | **MEDIUM** | **RECIEVER**

Sound travels through air, but acts like water

- Sound finds the path of least resistance.
- A lot of sound will build pressure.
- Sound will flow around an obstruction.
- Sound travels outward from the source in a pool or circle.





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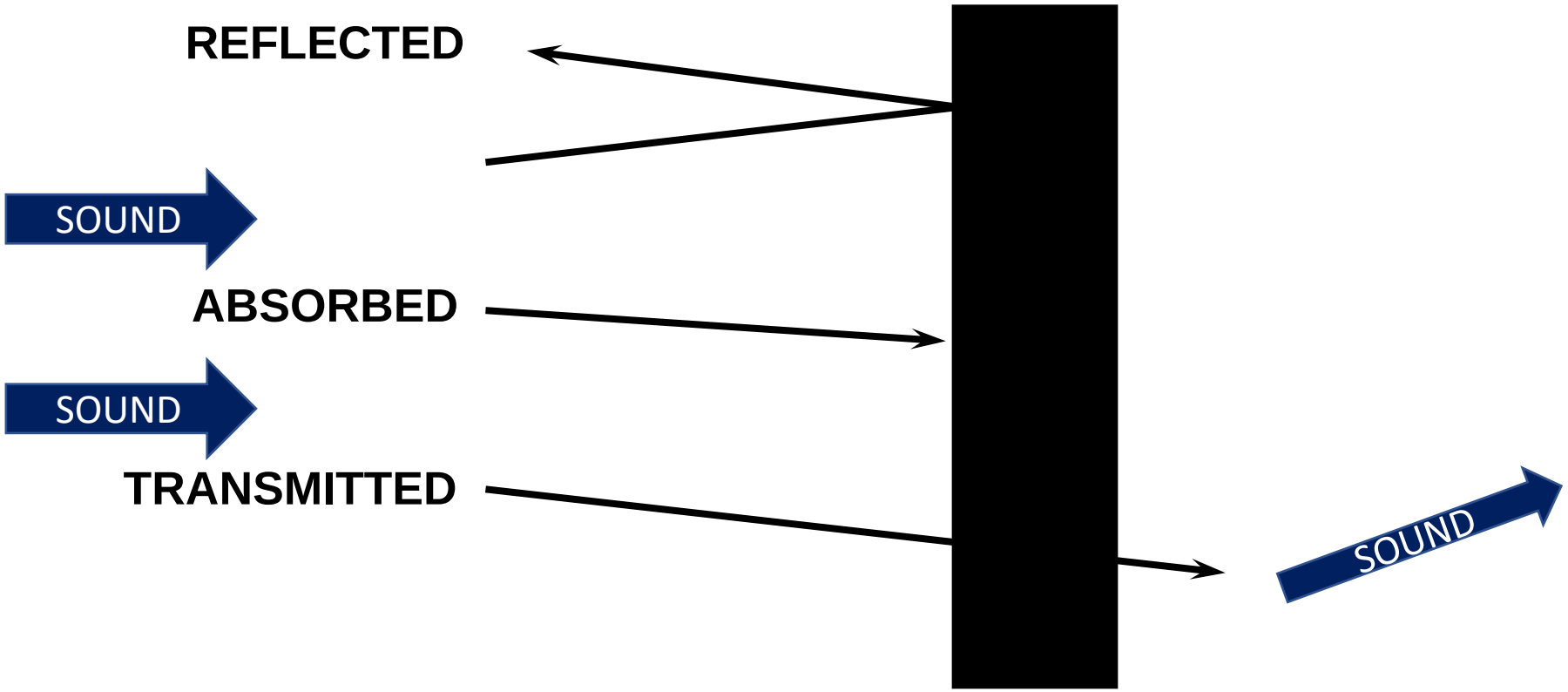
Sound pressure of everyday sounds;

Levels dB	Common Sounds
140	Jet take off
130	Jack Hammer
120	Siren
110	Thunder Hard Rock Band
100	Machine Shop
90	25 piece Orchestra
80	Printing Press Kitchen Equipment
70	Sport Car (50mph) 25 piece Orchestra
60	Speech Average Factory Accounting Office
50	Average Business Office
40	Average Residence Quiet Radio
30	Private Office
20	Quiet Conversation Sound Stage (Movie)
10	Whisper
0	Sound Proof Room

When sound hits a barrier;



GENERAL ACOUSTICS

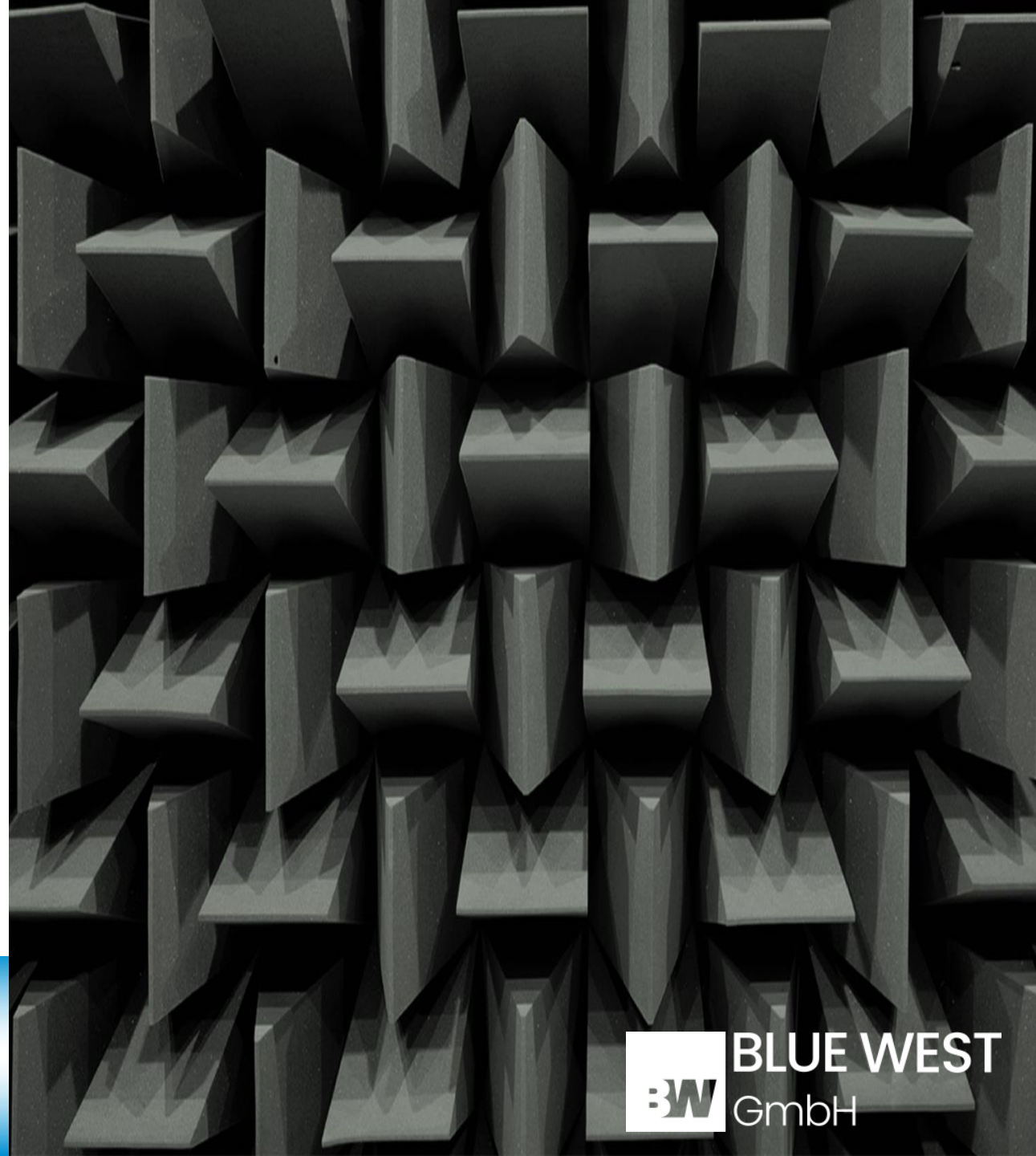
Role of our partition wall in terms of Acoustics;

- Restricts passing of sound from one area to its adjoining area;

SOUND INSULATION (Rw)

- Absorbs the sound and avoids reverberation of sound into the same area**;**

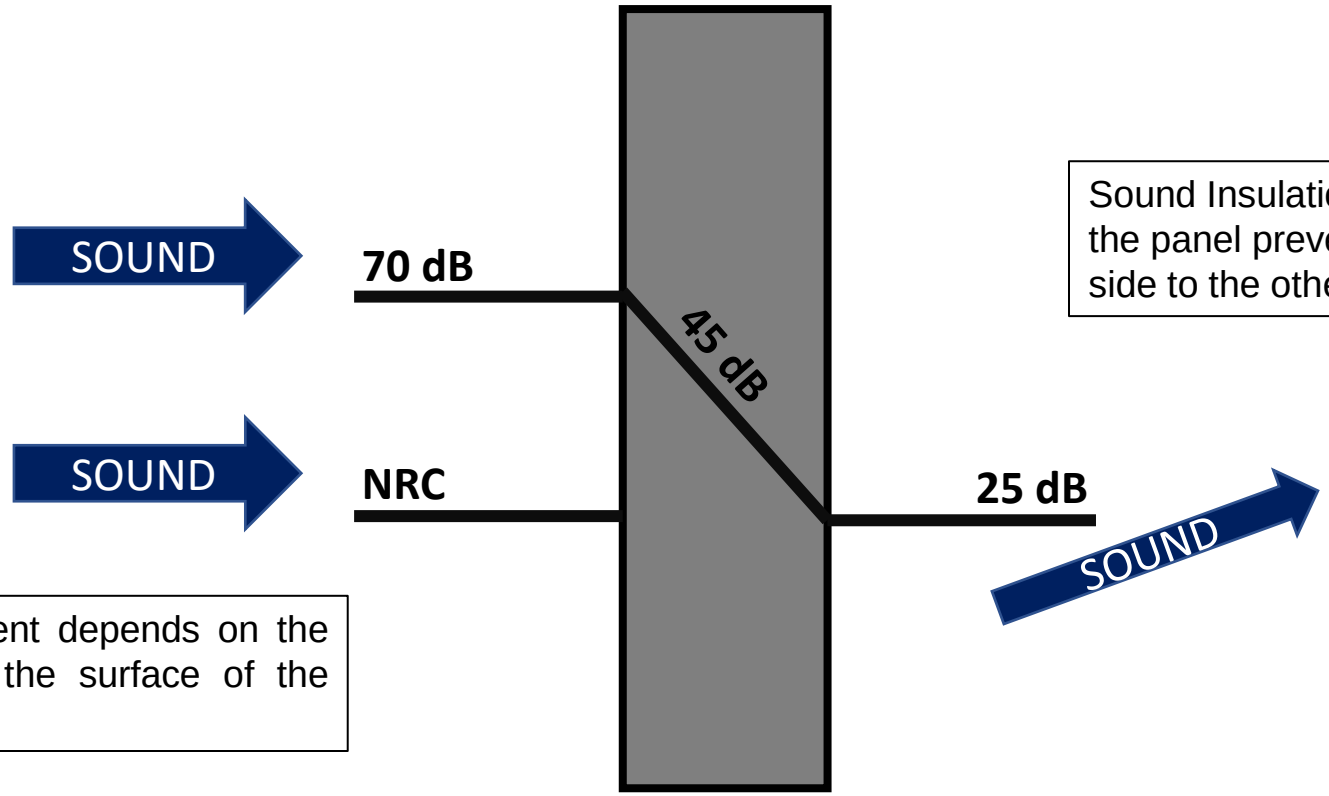
NOISE REDUCTION COEFFICIENT (NRC)



for instance; consider a partition wall with Rw 45 dB

ROOM A

ROOM B



Sound Insulation depends on the effectiveness of the panel preventing sound from getting from one side to the other.

Noise Reduction Coefficient depends on the absorbtion properties of the surface of the panel.

Laboratory Testing of partition;

The testing of our Partitions in their fully functional condition is performed in laboratory facilities of accredited test and approved institutes.

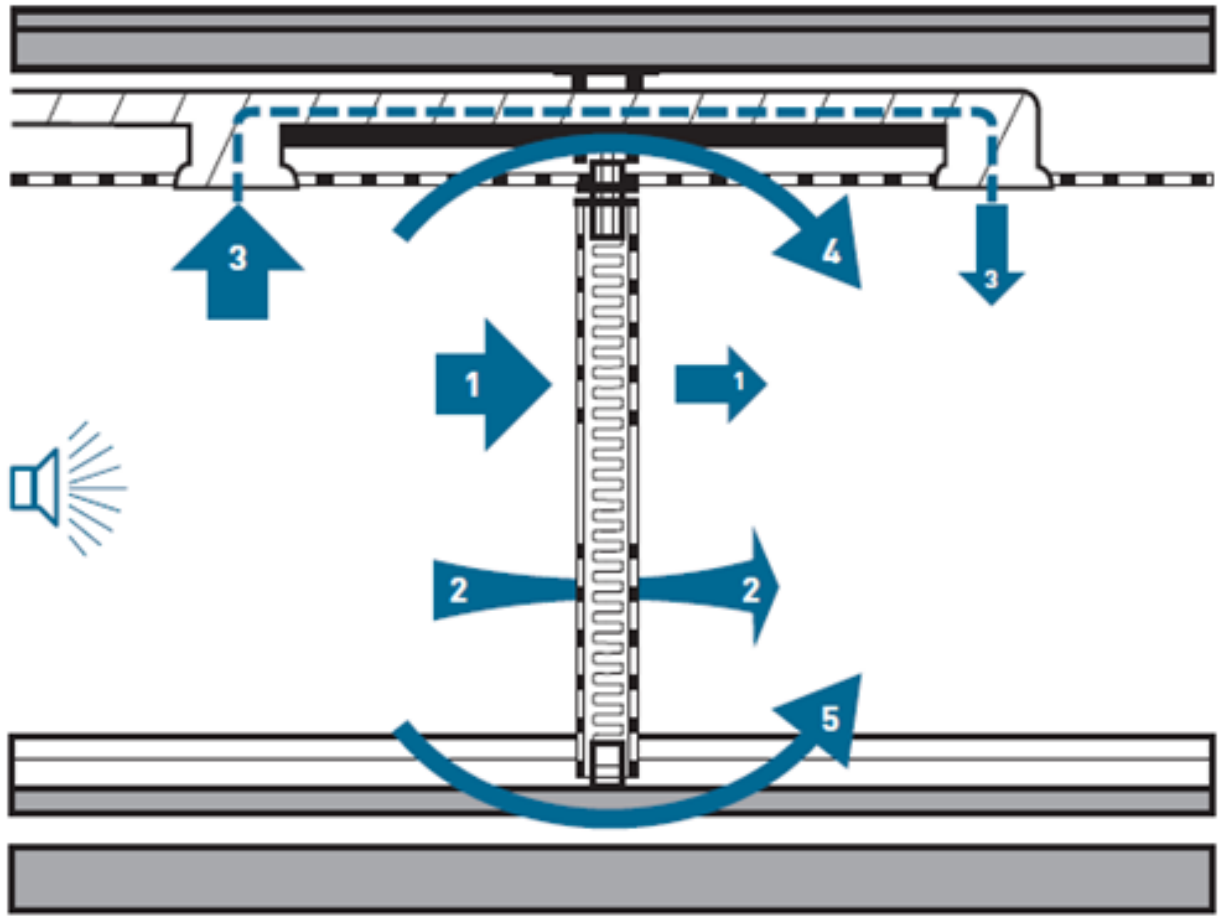
Site Testing of partition;

Testing at site determines the efficiency of the room and not the partition as it is just one part of the room. Good design of the room will improve the efficiency of the room.

NOTE: Given the fact that a partition frequently only accounts for around 10% of all the surface areas present in a room, it becomes immediately clear what influence the floor, ceiling, fixed walls and fixtures and fittings have on effective sound attenuation achieved at site.

Common flanking path;

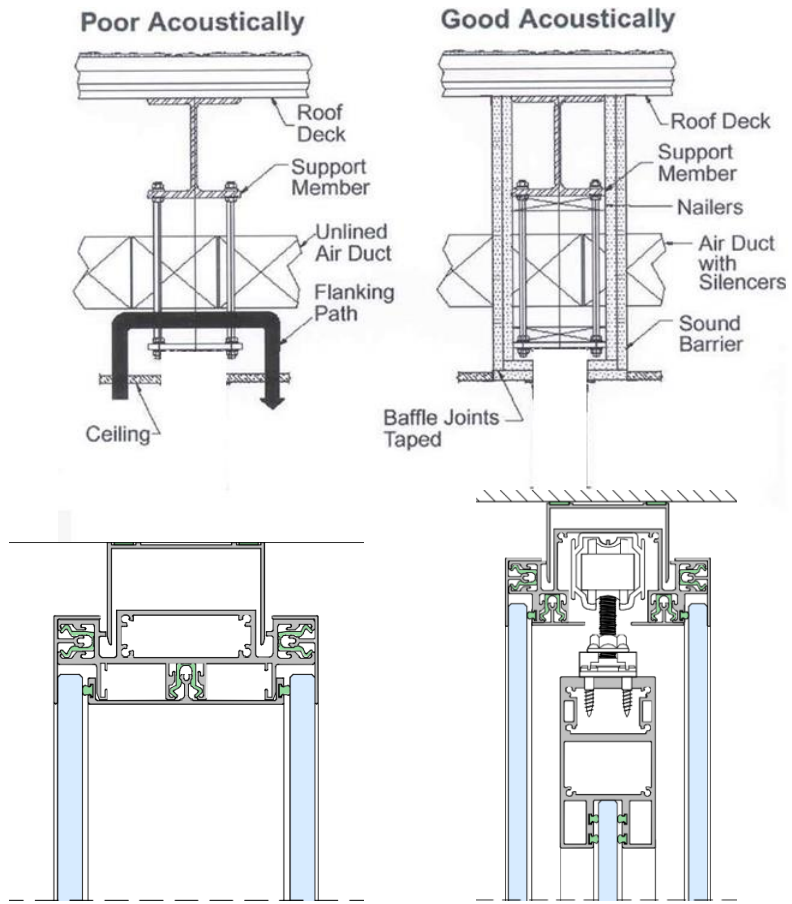
- ❑ Duct Work
- ❑ Sprinkler, Gas or Hot Water Pipes
- ❑ Access Panels
- ❑ Lighting Fixtures
- ❑ Room Layout & Door Placement
- ❑ False Flooring
- ❑ Carpeting
- ❑ Inadequate Building Material



Solution for sound leakage around our partition

The ceiling has to be protected with sound barriers;

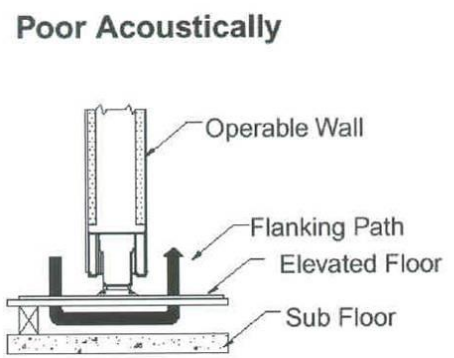
- The track rail is always suspended from the true ceiling.
- There is a gap between the true ceiling and false ceiling.
- Baffling is done in order to reduce the sound leakage through that gap.

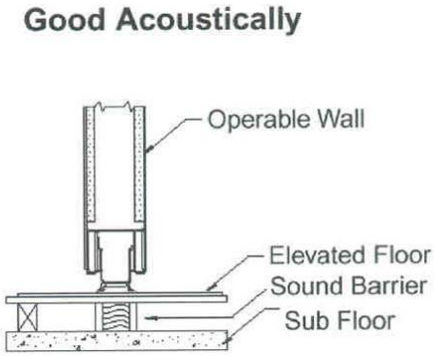


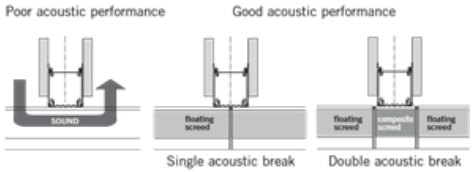
Solution for sound leakage around our partition

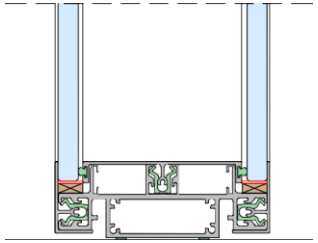
The sub floor to elevated floor has to be protected with sound barriers;

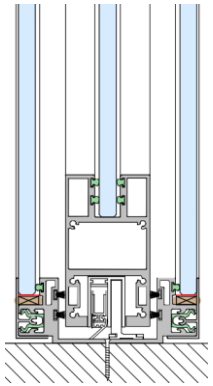
In rooms with cavity floors, noise may pass under the partition and, as a result of vibration in the floor, it may be transferred from one room to another. This problem can be avoided by installing a foot-fall sound barrier or Carpet seam seals under the partition.



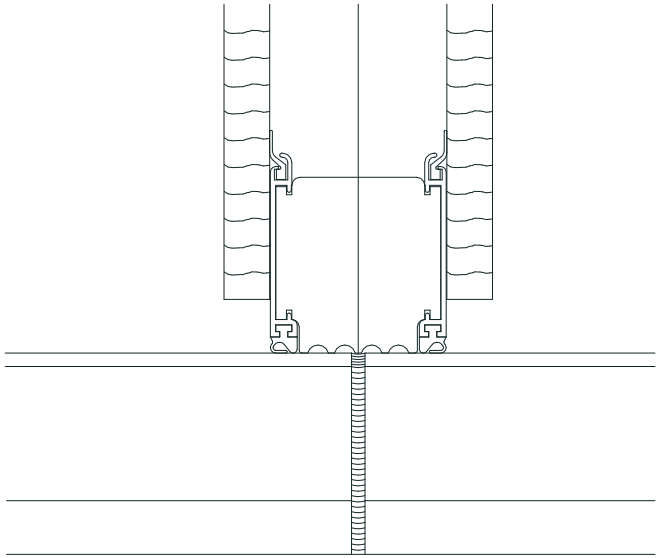




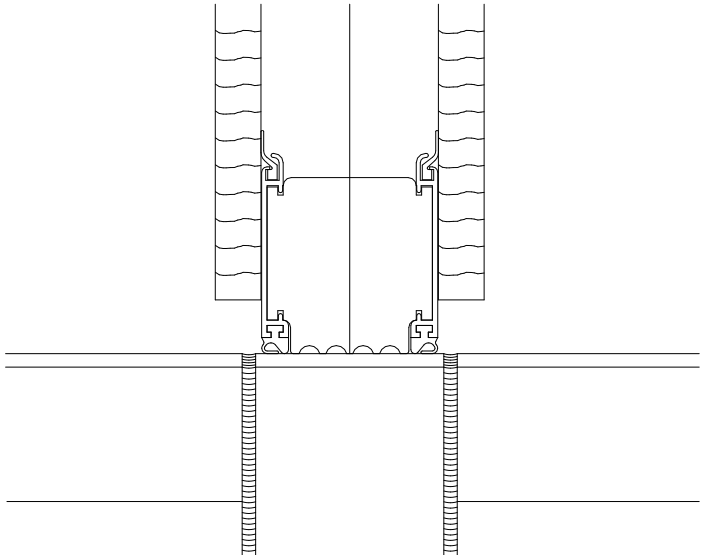




Solution for sound leakage around our partition



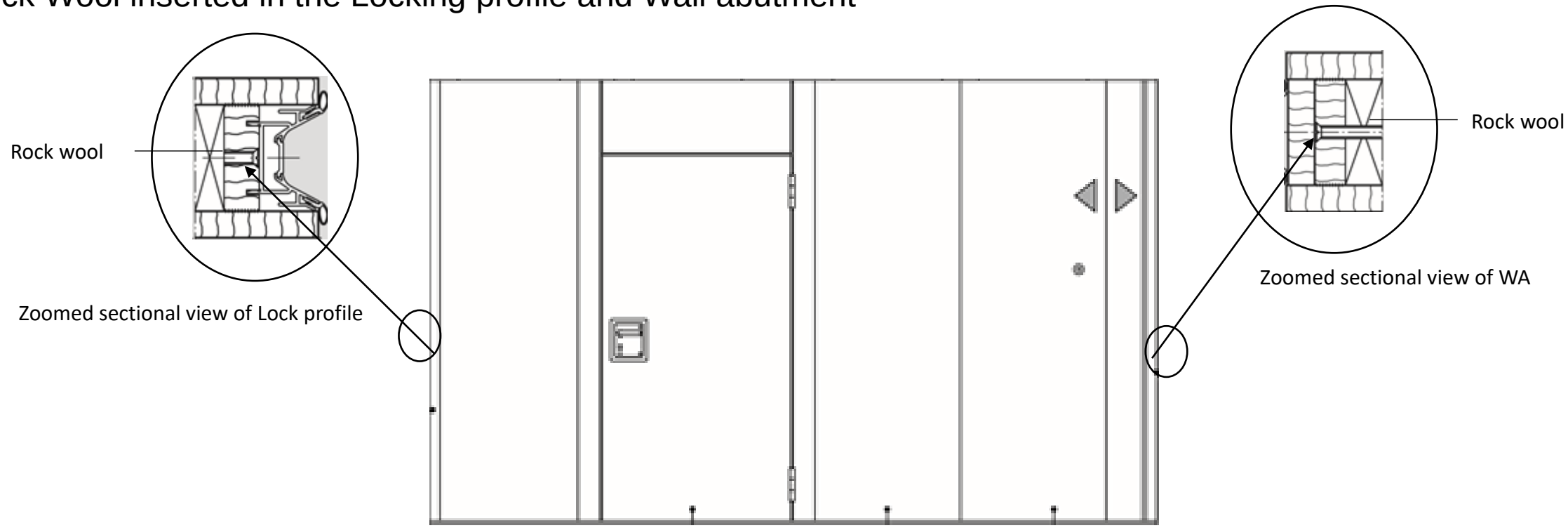
Single separation joint up to Rw 52 dB



Double separation joint for more than Rw 52 dB

Solution for sound leakage around our partition

Rock Wool inserted in the Locking profile and Wall abutment



ADDRESS:
Neuer Wall 71, c/o WorkRepublic
20354 Hamburg
Germany
TEL & FAX: +49 40 99 99 94 42 9
EMAIL: Info@bluewest.de

BLUE WEST GmbH