
APPROVED
DOCUMENT E

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ACOUSTICS

Approved Document E of UK Building Regulations – England & Wales

Amongst many other things, Part E lists the requirements for the 2 types of sound created in buildings, airborne sound and impact sound. Airborne sound is created by talking, TVs, sound systems etc. and mainly travels in the air, whereas impact sound is created by footsteps, washing machines, dryers and things dropping on the floor and travels mainly through the structure in vibrations.

The airborne requirement is a **minimum** of 45dB for new build and 43dB for conversions, this is a DnTw+Ctr reading.

The impact requirement is a **maximum** of 62dB for new build and 64dB for conversions and this is a L'nTw reading.

DnTw+Ctr

This is an onsite weighted sound reduction index in dBs (the equivalent in the laboratory is Rw) and it describes the airborne sound insulating power of a building element. So, the **higher** the number the greater the sound insulating power of the building element being tested. Ctr is a low frequency sound correction factor.

So, to comply with Part E a building element must achieve an **insulation performance** of at least 45dB for new build or 43dB for conversions.

With DnTw+Ctr the **higher** the dB number the **better**.

L'nTw

This measure describes how easily impact sound travels through a building element, mainly the floor/ceiling. As it relates to how easily a sound will travel through, the **lower** the number the better the building element is performing. There isn't a low frequency correction factor applied because sound from impact is not at such low frequencies.

So, to comply with Part E a building element must achieve a **transmission** level of no more than 62dB for new build or 64dB for conversions.

With L'nTw the **lower** the dB number the **better**.



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