

Speech level reduction of office furniture and booths

There is a strong need to reduce noise and provide spaces for confidential conversations in offices, libraries, and public spaces. There is no standardized method for the testing of sound attenuation of such products. Hongisto *et al.* (2016) have developed a method that is the basis of a standard **ISO 23351-1**, which was accepted in 8th June 2020. The method has been already applied in many countries. Furniture manufacturers are advised to prepare to the new standard by testing their products according to this method. Such tests can be conducted in the acoustic laboratory of Turku University of Applied Sciences, Finland. The test laboratory is FINAS accredited for sound absorption (ISO 354) and sound insulation (ISO 10140-2) tests. See more information at: <https://www.tuas.fi/en/services/furniture-ensemble/>.

Furniture ensembles

ISO 23351-1 can be used to test all kinds of enclosed, partially enclosed, or open furniture ensembles, such as

- workstations,
- phone booths,
- meeting furniture ensembles,
- working or meeting booths.

Method

The test is conducted in a reverberation chamber within frequencies 125–8000 Hz. The main result is the **speech level reduction, $D_{S,A}$** . It describes how many decibels the product reduces the A-weighted sound level of speech compared to the situation when the furniture is absent.

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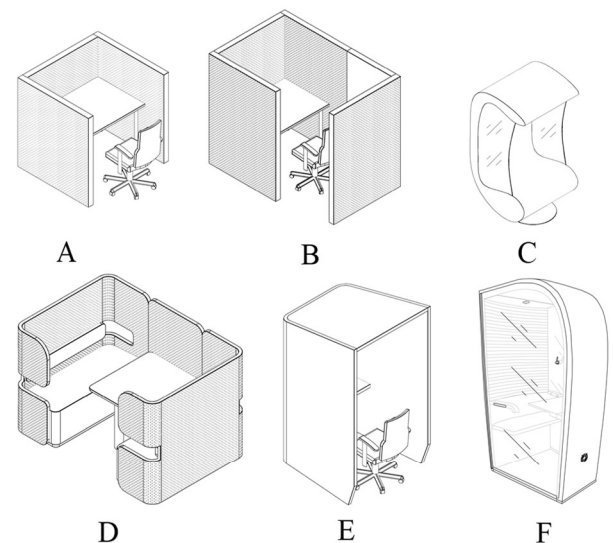
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	$D_{S,A}$ [dB]
A	1.8
B	4.0
C	3.9
D	1.9
E	2.8
F	19.8

Figure 1. Examples of $D_{S,A}$ values for six different furniture ensembles that were tested according to ISO 23351-1.