

Planning examples

EN Room acoustics significantly influence our well-being and performance. Since noise and disruptive sounds not only affect our concentration but also act as a source of stress, one of the main challenges in planning is to create a calm and functional acoustic atmosphere that is adapted to the respective activity in the room. That is why we have developed a product portfolio in which lighting and room acoustics harmoniously interact. On the following pages you will find a selection of acoustic calculations for various room types and configurations.

IT L'acustica condiziona fortemente la nostra vita, in termini di benessere e prestazioni. Suoni fastidiosi e rumori disturbanti incidono negativamente sulla concentrazione e costituiscono un vero e proprio fattore di stress. A livello progettuale la creazione di un'atmosfera acusticamente tranquilla e adatta allo svolgimento delle attività previste per ogni ambiente rappresenta una sfida importante. Ecco perché abbiamo creato una linea di prodotti nella quale luce e acustica interagiscono in armonia. Nelle pagine a seguire, faremo vedere una selezione di calcoli acustici per diversi tipi di ambienti e layout.

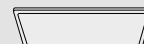
Seminar space

EN During lectures and conferences, a room's acoustics should enable speakers to communicate without effort and ensure that they are easily understood by other participants.

IT In occasione di covegni e conferenze l'acustica della stanza deve permettere ai relatori di parlare senza sforzo e di essere compresi senza difficoltà dai partecipanti.



TASK acoustic surface



TASK S surface



Parameters

Calculation basis DIN 18041

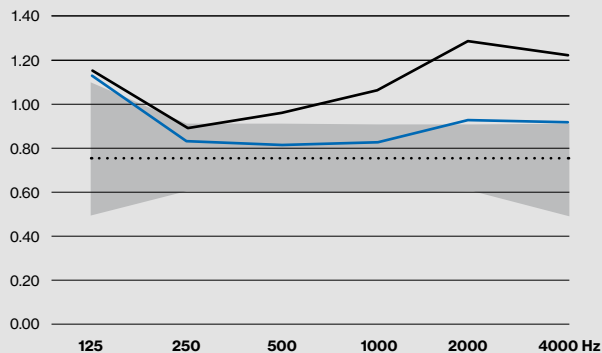
Room group A2

Target reverberation time 0.76 s

Surfaces concrete ceiling, concrete floor, reverberant exterior walls, glazing, light curtains, wood-paneled interior walls, upholstered chairs

Products 9 × TASK acoustic square 1200

Reverberation time



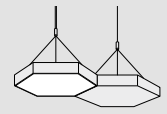
- Reverberation time without TASK acoustic
- Reverberation time with TASK acoustic
- Target reverberation time according to DIN 18041
- Tolerance area according to DIN 18041

Kindergarten

EN It is only natural that kindergartens are noisy places. Noise-related stress leads to irritability and can promote aggressive behaviour. This makes it all the more important to create a harmonious atmosphere through targeted acoustic planning. The product portfolio also offers a range of special colours that support vibrant interior design.

IT Le scuole materne sono ambienti rumorosi per definizione. Lo stress rumore correlato può provocare irritabilità e comportamenti aggressivi, motivo per cui è importante creare un'atmosfera acusticamente tranquilla mediante la progettazione mirata dell'intervento. I nostri prodotti sono disponibili in una vasta gamma di colori, contribuendo alla creazione di interni dalle tinte vivaci.

HEX-O suspended



Parameters

Calculation basis DIN 18041

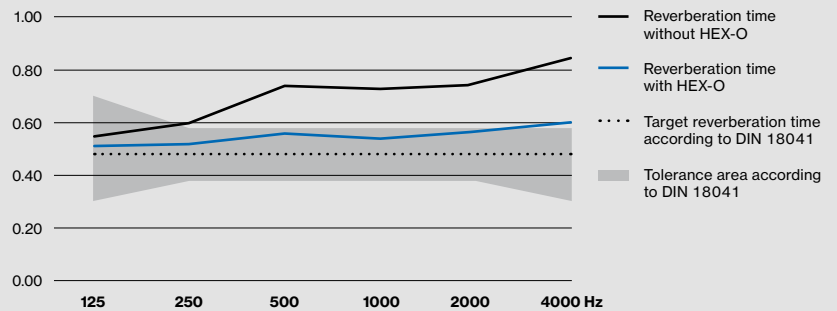
Room group A3

Target reverberation time 0.49 s

Surfaces wooden ceiling, parquet floor, wood-panelled walls, glazing, carpet, upholstery

Products 5 × HEX-O MODULE 1000, 5 × HEX-O MODULE 750, 2 × HEX-O MODULE 500

Reverberation time

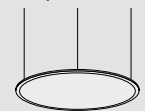


Meeting room

EN Effective mutual understanding is the key to a successful meeting. The aim is to achieve even sound absorption in the frequency range relevant to speech. In small meeting rooms, acoustic elements close to the sound source, directly above the conference table, have proven effective.

IT La mutua comprensione tra le persone è fondamentale per la riuscita di una riunione. L'obiettivo è assorbire perfino l'intervallo delle frequenze sonore rilevanti per il parlato conversazionale. Nelle sale piccole si sono rivelati efficaci gli elementi acustici posizionati in prossimità della sorgente sonora, ovvero sopra il tavolo.

TASK acoustic suspended



Parameters

Calculation basis DIN 18041

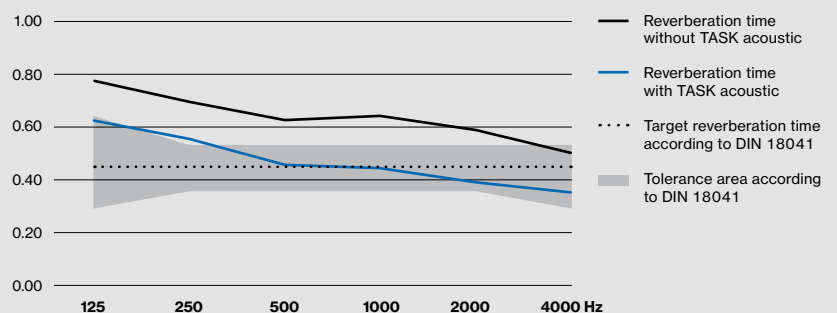
Room group A3

Target reverberation time 0.44 s

Surfaces wooden ceiling, stone floor, wood-panelled walls, glazing, lightly upholstered chairs

Products 3 × TASK acoustic round 1200 susp., 4 × TASK acoustic round 900 susp., 2 × TASK acoustic round 600 suspended

Reverberation time



TASK suspended

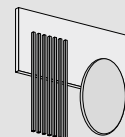


Canteen

EN In canteens, a constant background noise is created by conversations, clattering tableware, or chairs being moved. To nonetheless facilitate a pleasant environment for conversation, it is important to significantly reduce reverberation. The even distribution of absorbing acoustic elements on the ceiling and walls supports a balanced acoustic environment.

IT Nelle mense il costante rumore di fondo è costituito dalle conversazioni, dall'acciottolio delle stoviglie e dalle sedie che si spostano. Per far sì che l'ambiente favorisca l'intelligibilità del parlato è fondamentale ridurre la riverberazione. La distribuzione uniforme dei pannelli acustici lungo i muri e il controsoffitto garantisce un ambiente acusticamente bilanciato.

FELT 9 lamella



Parameters

Calculation basis DIN 18041

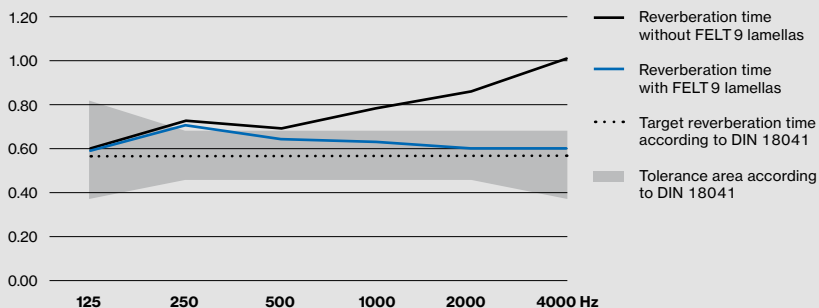
Room group A3

Target reverberation time 0.57 s

Surfaces gypsum board ceiling, gypsum board wall, stone floor, glazing, lightly upholstered chairs, bench with cushions

Products 25 m² FELT 9, lamellas

Reverberation time

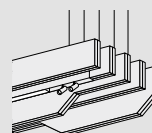


Classroom

EN The most important thing in a classroom for both teachers and students is intelligibility of speech. Particularly in larger classrooms, it is essential to reduce reverberation time to achieve good speech intelligibility throughout the room. Ideal room acoustics improve both speech and reading comprehension as well as memory performance.

IT Fondamentale è l'intelligibilità del parlato, sia per gli studenti che per gli insegnanti; ragion per cui nelle aule di dimensioni maggiori è necessario ridurre il tempo di riverberazione. Un'acustica ottimale migliora la comprensione scritta e orale nonché la memoria.

baffle 50 system



Parameters

Calculation basis DIN 18041

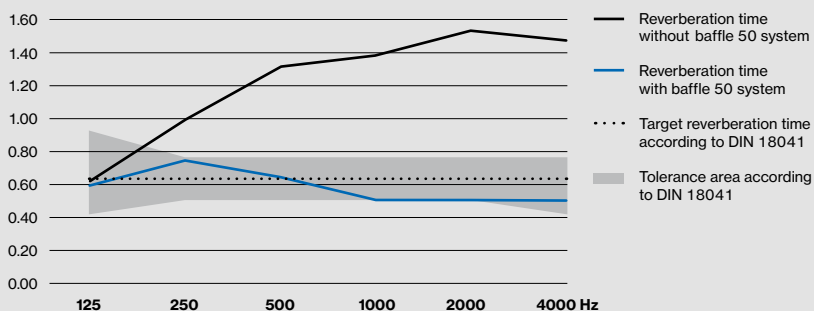
Room group A3

Target reverberation time 0.64 s

Surfaces gypsum board ceiling, parquet floor, reverberant walls, partly wood panelling, glazing

Products baffle 50 system, height 28 cm, distance 50 cm

Reverberation time



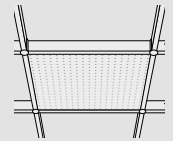
Open-plan office

EN Planning the acoustics of open-plan offices is particularly challenging. While conversations require good speech intelligibility, the rest of the team should be able to focus on their work, which is impeded by too high speech intelligibility. This means that too much sound can also be absorbed. VDI 2569 therefore specifies both an upper and a lower limit for the reverberation time.

IT La progettazione acustica degli uffici open space è particolarmente impegnativa. Le conversazioni richiedono una buona intelligibilità del parlato, ma il resto dei collaboratori deve potersi concentrare sul proprio lavoro, cosa che diventa difficile se l'intelligibilità del parlato è troppo alta. Ciò significa che il suono può essere assorbito in modo eccessivo. Per questo la norma VDI 2569 specifica per il tempo di riverbero un limite inferiore oltre che superiore.



MOVE IT 45
square grid inlay
suspended



Parameters

Calculation basis DIN 18041, VDI 2569

Room group B4

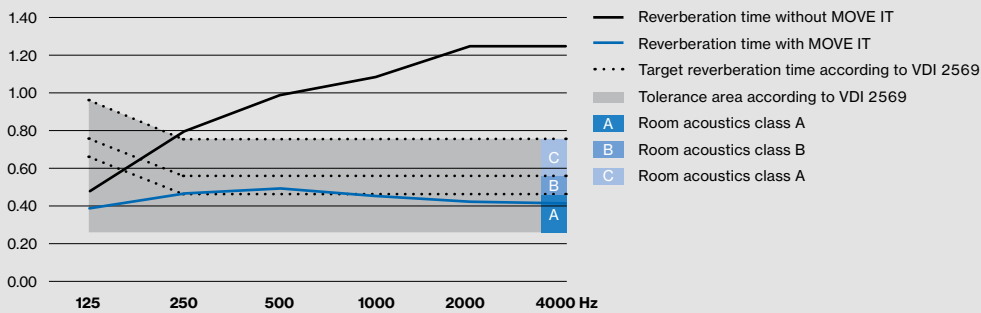
Minimum A/V ratio 0.25

Target reverberation time 0.4–0.9s

Surfaces gypsum board ceiling, gypsum board walls, parquet floor, reverberant exterior walls with glazing, cupboards, open shelving, lightly upholstered chairs

Products 24 × MOVE IT acoustic square grid

Reverberation time



A/V ratio

