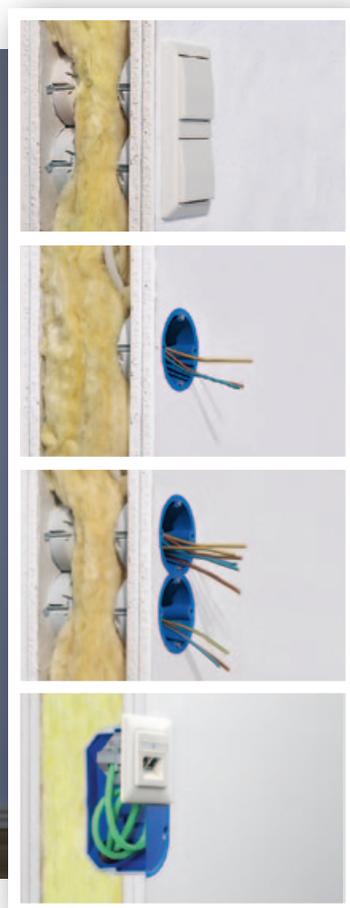


Sound insulation.

Electrical installation in
sound insulation walls.

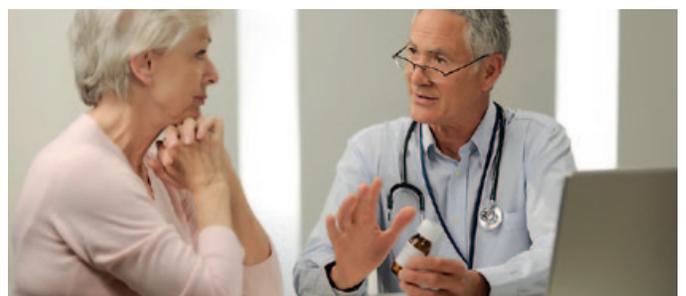




Music, talking, sounds, noise. **Peace and quiet.**

Noise is what we mean by unwanted sound. In our daily lives, we are exposed to very high levels of background noise, and we are becoming more and more sensitive to it. Over 40% of the population complain about the noise that their neighbours make. This means that sound insulation is protection against noise pollution, but it also maintains our privacy in both our home and business lives. A personal chat in the doctor's office, negotiating a contract, or a telephone call in a hotel room - nobody should be able to overhear any of these. A school class taking its final exam, a baby sleeping near its celebrating parents, or a patient in a hospital room - they all need peace and quiet.

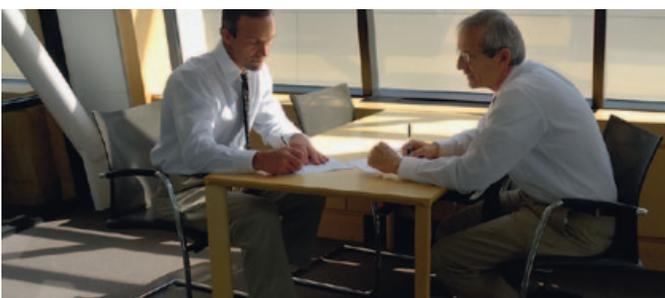
Building construction sound insulation means privacy, peace and quiet, but also intimacy and a feeling of security. This is just as important in public and commercial buildings as in private life, including in schools, hospitals, old people's homes, conference rooms, hotel rooms or doctors' practices. It's the same situation in terraced houses and apartment blocks. Sound insulation walls are necessary wherever people need privacy or to be able to concentrate.





Good sound insulation is an important factor in the quality of home life and work, which also makes it an important criterion in buildings. According to a current survey, good sound insulation is one of the most important quality features of a house. 82% of the people asked are not prepared to economise on sound insulation, and 94% say that good sound and noise insulation is "important". For 57%, it is "extremely important".

Building owners and planners call for clearly defined criteria and functional solutions in order to implement appropriate sound insulation which is easy to install and prevents exposure to liability.





Regulations and standards. DIN 4109 and VDI 4100.

Sound insulation in structural engineering is regulated by DIN 4109. However, this standard is no longer up-to-date - it only represents the limits of what is tolerable. For a long time, building experts have been making use of new technologies which offer better methods of sound insulation. The latest court judgements, including the one issued by the Federal Supreme Court of Germany, confirm that sound insulation according to DIN 4109 does not conform to the accepted rules of technology.

Modern building materials and manufacturing methods offer much better sound insulation standards than those specified in DIN 4109. In 1994, the VDI (the Association of German Engineers) published a guideline (VDI 4100 - Sound insulation in homes) to which separate reference can be made in tenders. It recommends considerably higher standards than those specified in DIN 4109.

Awareness of sounds from adjacent apartments and allocation to sound insulation levels (VDI 4100 table 1 / E-DIN 4109-10 table A1)

Variables for levels of sound insulation (SSt) Insulation against airborne noise as per table 2-4 / VDI 4100		Acoustic value	SSt I	SSt II	SSt III
from table 2: apartments in apartment blocks	between habitable and external rooms	horizontal	R'w in dB	56	59
		vertical		57	60
		between habitable rooms and external staircases and/or corridors		56	59
from table 3: semi-detached and terraced houses	between habitable rooms and external rooms		R'w in dB	63	68
from table 4*: internally (apartment or house used by owner/tenant)	between habitable rooms	horizontal	R'w in dB	48	48
		vertical		55	55

Requirements acc. to
DIN 4109
 (* recommendations for
 normal sound insulation
 acc. to supplement 2 to
 DIN 4109)



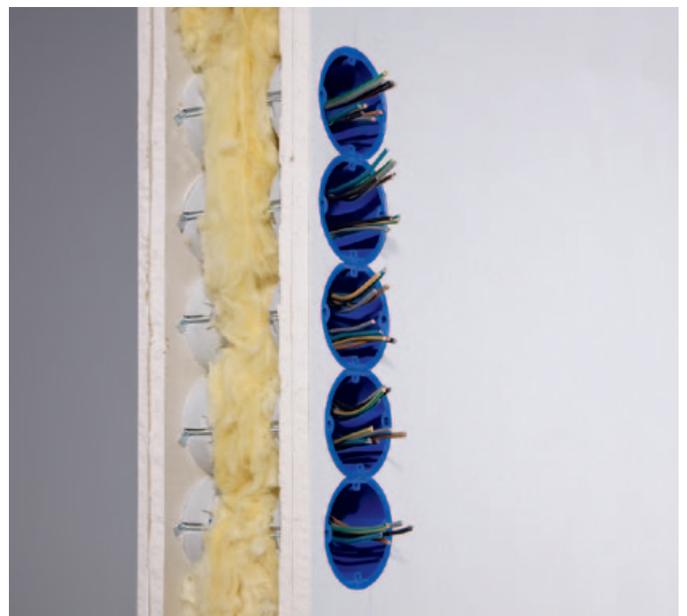
Technical data.

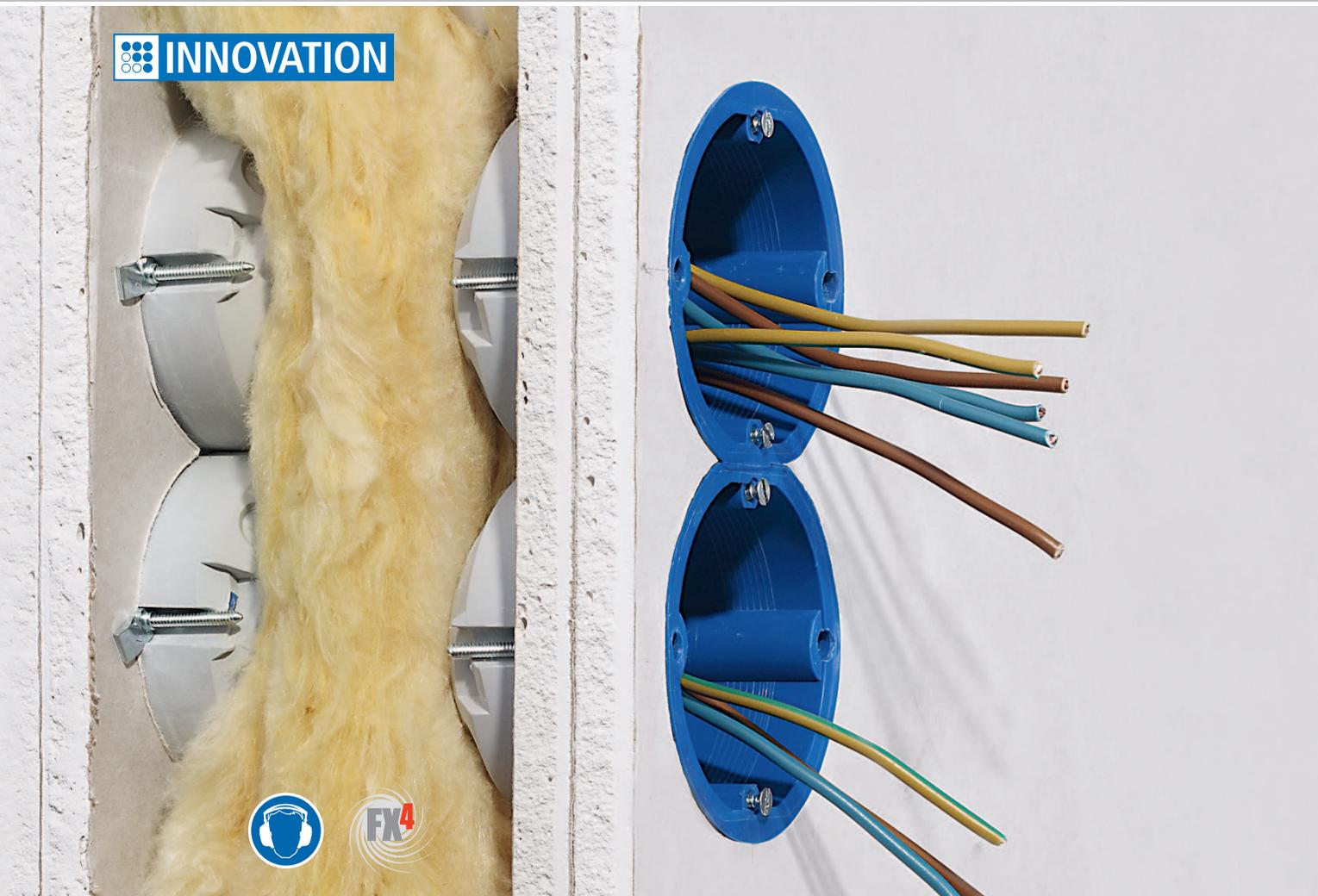
Sound insulation walls.

In most cases, **sound insulation walls** are single or double stud wall constructions with one, two or three layers of planking using plasterboard or mineral fibreboard. The walls are normally insulated with mineral or glass wool and are at least 100 mm thick.

Any weakening of a sound insulation wall, for example caused by an installation opening, affects the acoustic properties. Series of tests have shown that the opposing installation of traditional cavity wall boxes can result in a deterioration of the wall element by up to 15 dB. This means almost four times the impression of noise as perceived subjectively. For example, the sound of a telephone ringing in the next room would be heard much more clearly.

KAISER sound insulation boxes can even be used as up to a 5-way combination in opposing installation without any negative effects on the sound pressure level.

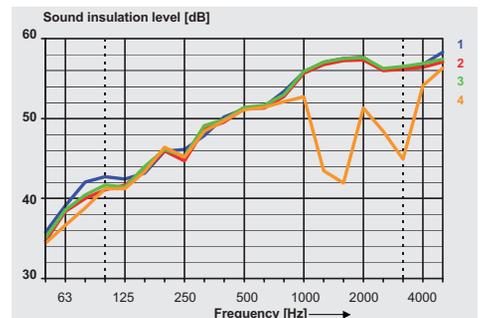




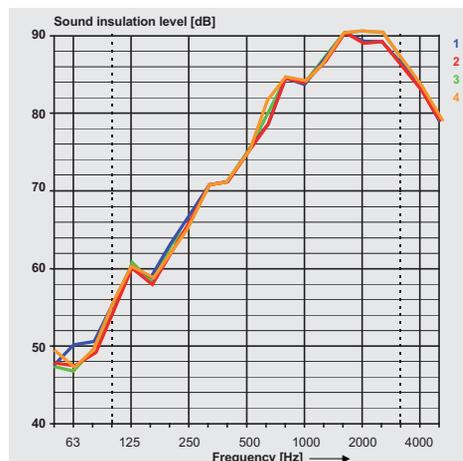
Quiet behind the wall. Sound insulation box.

The innovative one-gang junction box ensures the constructional demands made on sound insulation walls - in spite of installation openings. The specially-developed one-gang junction box with sound insulation sheathing completely absorbs and reflects sound. There is no measurable difference when compared with a wall which has not been opened. The box is also available as a halogen-free version. When fitted with a sound insulation cover, the box can also be used as a junction box.

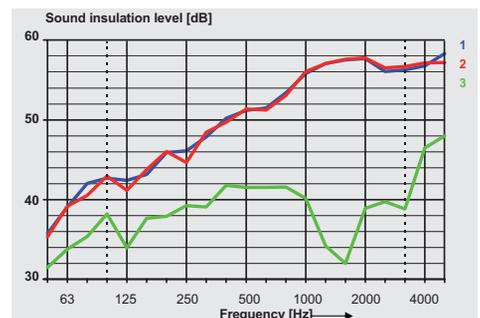
- Maintains the wall's sound insulation function
- Also for retrofitting
- Installation up to 5-way combination
- Also for opposing installation
- Can be used as a junction box when fitted with a sound insulation cover



1 Wall, without installations, 54 dB
 2 Sound insulation box 9069-01, 1-way, with accessory, 54 dB
 3 Sound insulation box 9069-01, 1-way, with cover, 54 dB
 4 One-gang junction box 9064-01, 1-way, with accessory, 48 dB.



1 Wall, without installations, 77 dB
 2 Sound insulation box 9069-01, 1-way, with accessory, 77 dB
 3 Sound insulation box 9069-01, 1-way, with cover, 77 dB
 4 Sound insulation box 9069-01, 5-way, with accessory, 77 dB



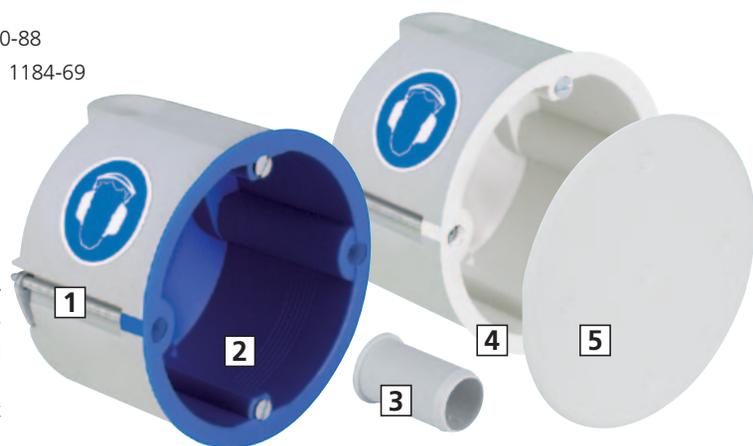
1 Wall, without installations, 54 dB
 2 Sound insulation box 9069-01, 5-way, with accessory, 54 dB
 3 One-gang junction box 9064-01, 5-way, with accessory, 38 dB.



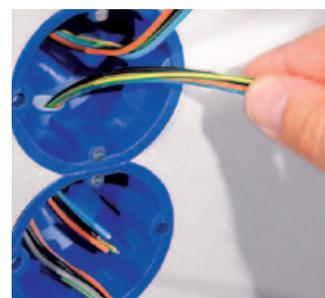
- Sound insulation box** | Art. No. 9069-01
- Halogen-free** | Art. No. 9069-77
- Support connector** | Art. No. 9060-88
- Sound insulation cover** | Art. No. 1184-69

The sound insulation test certificate can be downloaded from our website at www.kaiser-elektro.de

The **sound insulation box** is just as easy to fit as a conventional cavity wall box in a $\varnothing 74$ mm. Use the universal opening cutter to make the exact-fitting cable entry. To create combinations at a standardised combination distance of 71 mm, simply cut off the marked edge strip. Fully-insulated through-wirings can be achieved by using the support connector. With the sound insulation cover, the box can be used as a junction box.



1 FX⁴ screw attachment | 2 Sound insulation box | 3 Support connector
4 Halogen-free | 5 Sound insulation cover



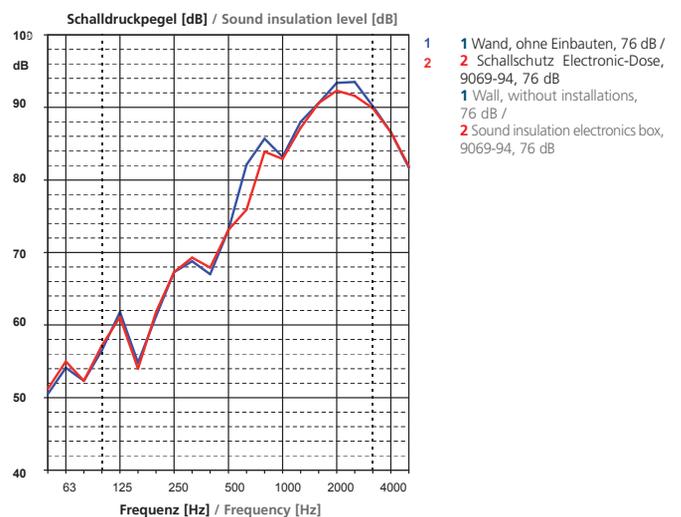


More installation space. Sound insulation electronics box.

The innovative electronics box provides additional space for fitting electronic components which need more installation space. In this way, installation of the specially developed electronics box with sound insulation encasing meets the constructional requirements made of the wall's sound insulation - in spite of the installation openings. The expert's report confirms that the sound insulation is fully maintained in comparison with a wall which has not been opened. The electronics box is also available as a halogen-free version.

- Maintains the wall's sound insulation function
- Also for retrofitting
- Extra-large terminal compartment for communication and network technology
- Electronics boxes can be combined with each others and also with a one-gang junction box
- For cables and conduits up to M25
- Also for use as a double box

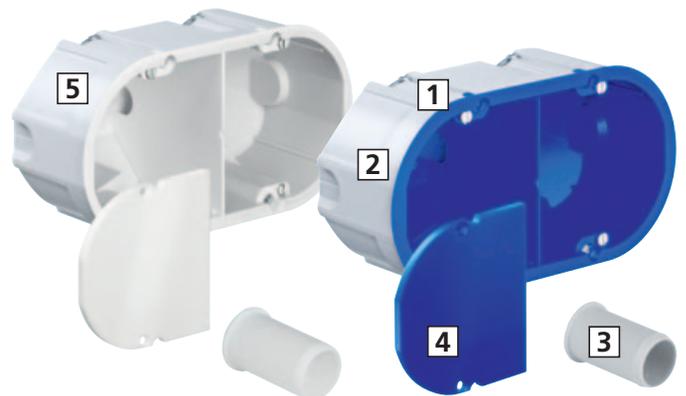
Vergleich der Schalldämmmaße, Leichtbauwand 76 dB: Schallschutz Electronic-Dose 2fach gegenüberliegend / Comparison of sound-absorbing dimensions, lightweight wall 76 dB: Sound insulation electronics box double opposing





The sound insulation test certificate can be downloaded from our website at www.kaiser-elektro.de

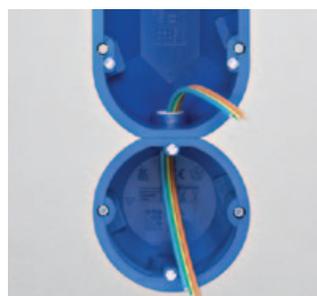
- Sound insulation electronics box** | Art. No. 9069-01
- Sound insulation electronics box halogen-free** | Art. No. 9069-02
- Support connector** | Art. No. 9060-88
- Support connector halogen-free** | Art. No. 9060-78



1 FX⁴ screw attachment | 2 Electronics box | 3 Support connector
4 Sound insulation cover | 5 Halogen-free



The electronics box offers many opportunities for conduit entry up to M25 and cable entry up to Ø 11.5 mm.



The electronics box can easily be combined with the sound insulation one-gang junction box.



More installation space. **Sound insulation electronics box - halogen-free.**

The electronics box is ideal for fitting electronic components such as EIB actuators, communications technology, radio-controlled elements, network technology and many more. By using separator walls, different voltage types can be kept separate from each other. The cover (included) can be turned by 180°. It can be wallpapered over, and plastered. Without the accessories (supplied), the electronics box can also be used as a double box.

The sound insulation electronics box is mounted in a 2x Ø 74 mm opening which is cut at a centre distance of 71 mm. The exact-fitting cable or conduit entries are cut using the universal opening cutter. The electronics box can be combined with others and with the sound insulation one-gang junction boxes. In order to create combinations at a standardised combination distance of 71 mm, simply cut off the marked edge strip.



KAISER sound insulation systems. At a glance.



Product animation
Sound insulation box 9069-01



Product animation
Electronics box 9069-94



Installation in walls

Sound insulation boxes



Sound insulation box
9069-01



Sound insulation box,
halogen-free
9069-77



Sound insulation cover,
halogen-free
1184-69



Electronics box
9069-94



Electronics box,
halogen-free
9069-74



Support connector
9060-88



Support connector,
halogen-free
9060-78

Tools



Universal opening
cutter
1085-80



Turbo cutter
MULTI 4000
1084-10



Centering insert 68/74
1083-99



Stripping pliers
1190-02

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Sound insulation

Electrical installation in sound insulation walls



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For other questions or information, please contact our team of technical consultants, who look forward to talking to you.

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Refurbishing

For modernising and renovating private and commercial buildings

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