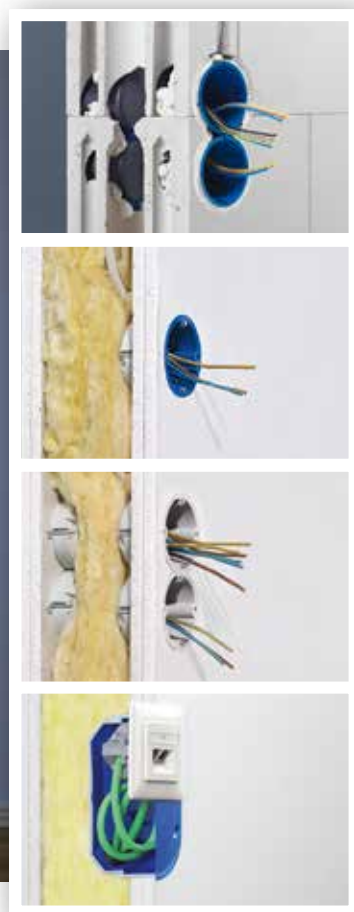


# Sound insulation.

Electrical installation in sound insulation walls.





# Music, speech, 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 which their neighbours make. This means that sound insulation gives 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 even a telephone call in a hotel room - nobody should be able to overhear any of these. A school class taking its final exams, a baby sleeping near its celebrating parents, or a patient in a hospital room - they all need peace and quiet.

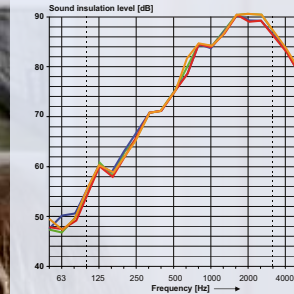
**Building construction sound insulation** means privacy, peace and quiet, but also intimacy and a feeling of security. This is just as important in public and commercial buildings as in private life, including in schools, hospitals, old people's homes, conference rooms, hotel rooms or doctors' practices. 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 life at home and at work, which also makes it an important criterion for 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".

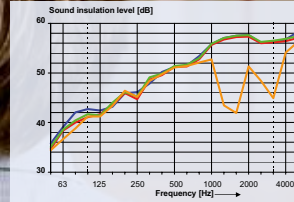
**Building owners and planners** call for clearly defined criteria and functional solutions in order to implement appropriate sound insulation which is easy to install and prevents exposure to legal liability.



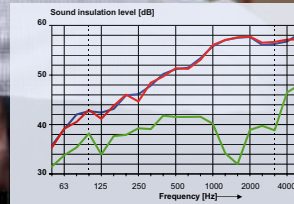
The sound insulation test certificate can be downloaded from our website [www.kaiser-elektro.de](http://www.kaiser-elektro.de)



- 1 Wall, without installations, 54 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 accessories, 77 dB.



- 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, 54 dB
- 2 Sound insulation box 1569-01, 5-way, with accessory, 54 dB
- 3 One-gang junction box 1555-04, 5-way, with accessory, 38 dB.

# 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 construction 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 (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.

**KAISER sound insulation boxes** ensure that the demands made on sound insulation walls are maintained 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.

## 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: <b>apartments in apartment blocks</b>	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: <b>semi-detached and terraced houses</b>	between habitable rooms and external rooms			63	68
from table 4*: <b>internally</b> (apartment or house used by owner/tenant)	between habitable rooms	horizontal	R'w in dB	48	48
		vertical		55	55





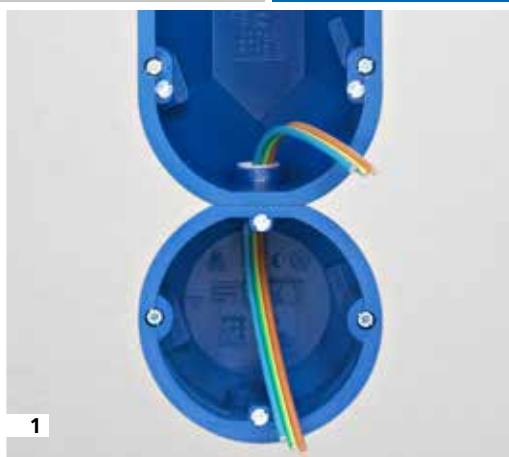
# Peace and quiet behind the wall. Sound insulation boxes for cavity walls.

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

- Maintains the wall's sound insulation function
- Also for retrofitting
- Installation up to 5-way combination
- An extra-large terminal compartment for communications and network technology
- Also for opposing installation
- Electronics boxes can be combined with each other and also with one-gang junction boxes
- Can be used as a junction box when fitted with a sound insulation cover

The sound insulation box is fitted just as easily in a  $\varnothing$  74 mm opening as a conventional cavity wall box. The exact cable entry is created with the universal opening cutter. For combinations with a standard combination distance of 71 mm, simply remove the marked holding ring. Fully-insulated through-wirings can be created with the help of the support connector. When fitted with a sound insulation cover, the box can be used as a junction box.





**KAISER sound insulation boxes** for cavity wall installation, and many accessories, are included as halogen-free articles in the product range. For individual marking, these products are available in white.

- 1 The electronics box can easily be combined with the sound insulation one-gang junction box.
- 2 Use the universal opening cutter to make the exact cable entry.
- 3 The electronics box also provides space for the fitting of electronic components.
- 4 A 5-way combination of the boxes is possible without any negative effects on sound insulation.



**3D animations**  
Sound insulation box  
[www.kaiser-elektro.org/de25](http://www.kaiser-elektro.org/de25)



Electronics box  
[www.kaiser-elektro.org/de26](http://www.kaiser-elektro.org/de26)



**Sound insulation box**  
Art. No 9069-01



**Sound insulation box halogen-free**  
Art. No 9069-77



**Sound insulation electronics box**  
Art. No 9069-94



**Sound insulation electronics box halogen-free**  
Art. No 9069-74



**Support connector**  
Art. No 9060-88



**Sound insulation cover**  
Art. No 1184-69



The sound insulation test certificate can be downloaded from our website [www.kaiser-elektro.de](http://www.kaiser-elektro.de)



**Centering insert 68/74 (Art. No 1083-99)**  
For extending existing installation openings from Ø 68 mm to Ø 74 mm exact guide for cavity wall cutter MULTI 4000.



# Sound insulation in solid walls.

## One-gang junction box

## Sound insulation flush-mounting.

The innovative one-gang junction box guarantees the demands made of sound insulation in solid walls. The solid box body with additional sound insulation sheathing absorbs and reflects sound, so negative effects in adjacent rooms can be excluded. Sound insulation is maintained as if no installation boxes were fitted.

- Maintains the wall's sound insulation function
- Opposing installation is also possible
- Variable combination connection piece for M20/M25 conduits
- Flexible for screw and expanding claw fixing of the accessories
- Can be used as a junction box when fitted with a sound insulation cover

The sound insulation box flush-mounting offers 6 entry options for conduits up to M25 and cables up to Ø 11.5 mm. The sound insulation box is easily installed in an Ø 82 mm installation opening in the same way as a standard flush-mounting box. Use the universal opening cutter to make the exact cable and conduit entry. Plaster or fast cement can be used for fixing. The combination distance of 71 mm, and the sound-proof and fully-insulated through-wiring, are ensured by the connector combination.







The **KAISER sound insulation box flush-mounting** is suitable for use in all solid sound insulation walls. Even with the strictest requirements regarding sound insulation, it maintains the wall's sound insulation function. Even in the event of complete penetration and weakening caused by installation work, the wall's sound insulation is completely retained.

- 1** Cables up to Ø 11.5 mm and conduits up to M25 can be fed into the sound insulation box. Plaster can be used for easy fixing of the sound insulation box.
- 2** Simple connection of the boxes makes multiple combinations possible.
- 3** Exact opening of the cable entries with the aid of the universal opening cutter.

**3D animations**  
 Sound insulation box flush-mounting  
[www.kaiser-elektro.org/de25](http://www.kaiser-elektro.org/de25)



**Flush-mounting sound insulation box**  
 Art. No 1569-01



**Sound insulation cover**  
 Art. No 1184-69



# KAISER sound insulation systems. At a glance.



Installation in walls.

[www.kaiser-elektro.org/schallschutz](http://www.kaiser-elektro.org/schallschutz)



## Sound insulation box



**Sound insulation box**  
9069-01



**Sound insulation box, halogen-free**  
9069-01



**Electronics box**  
9069-94



**Electronics box, halogen-free**  
9069-74



**Sound insulation box, flush-mounting**  
1569-01



**Sound insulation cover**  
1184-69



**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 AMZ 2**  
1190-02



**Diamond grinding head**  
1088-02/00

## Systems and solutions for professional electrical installation.

Since 1904, KAISER has developed and manufactured systems and products as a basis for good installation. Planners and users benefit internationally from the practical solutions for their daily operations in all areas of installation.



Energy efficiency.



Radiation protection.



Fire protection.



Sound insulation.

### Technical information and advice

You can find more information about products, system solutions and communication media on our website: [www.kaiser-elektro.de](http://www.kaiser-elektro.de)

For additional questions or information, please contact our team of technical advisers. KAISER Tel.: ++49(0)2355.809.61  
KAISER email: [technik@kaiser-elektro.de](mailto:technik@kaiser-elektro.de)

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