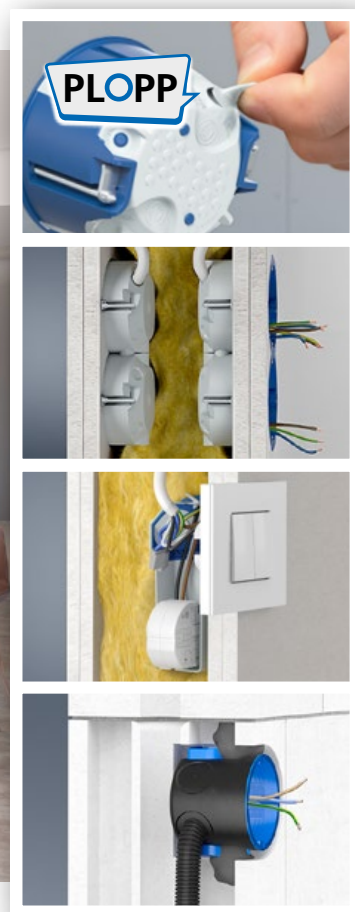
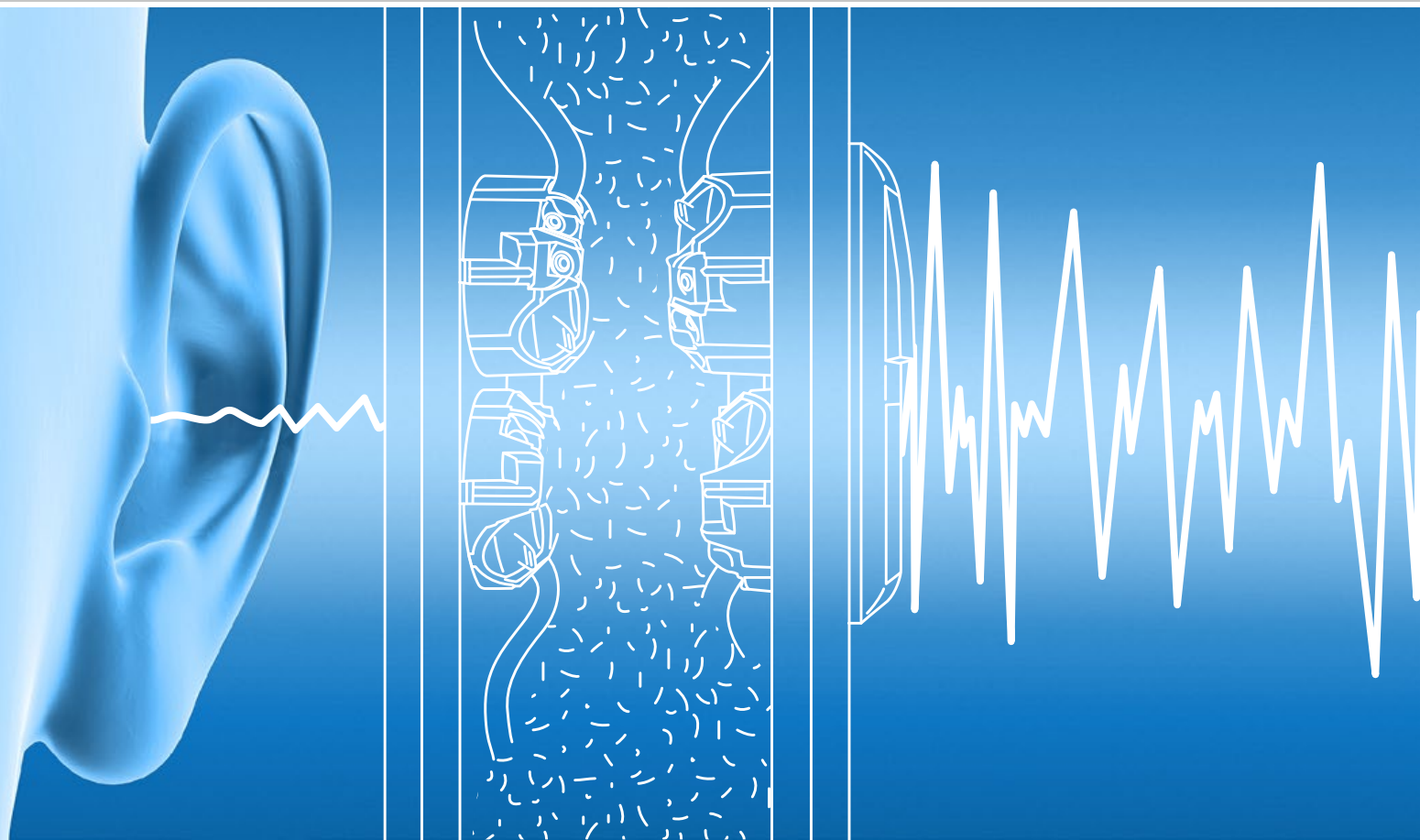


Sound insulation.

Electrical installation
in sound insulation walls.





Small difference – major impact. A comparison of KAISER sound insulation systems.

Innovative product solutions for sound insulation in electrical installations. The KAISER range of sound insulation boxes was introduced in 2010, with regular additions since then. The ideal solution for every use in dry and solid wall construction and to ensure peace and quiet in the home. For all levels of sound insulation.

In its DEGA recommendation 103, the Deutsche Gesellschaft für Akustik e.V. specified seven different classes of sound insulation in order to indicate the quality of their sound insulation. Thanks to these sound insulation classes, it is easy for the user to take the right decisions. The classification of apartments makes it possible to produce a simple and understandable assessment of the planned and constructional quality of the acoustic characteristics of buildings. The criteria are listed according to how noticeable the sound levels are, and indicate what levels of considerate behaviour between neighbours are necessary

Increasing sound insulation by 6 dB halves the level of perceived noise.

Sound insulation classes: Sound insulation between neighbouring apartments

A* Walls [R _w] 72 dB	Apartment with very good sound insulation, no disturbance, consideration unnecessary
A Walls [R _w] 67 dB	Apartments with very good sound insulation, no disturbance, little consideration necessary
B Walls [R _w] 62 dB	Apartment with good sound insulation, peaceful life when neighbours are considerate
C Walls [R _w] 57 dB	Compared with class D, apartments have noticeably better sound insulation, normal level of considerate behaviour
D Walls [R _w] 53 dB	Apartments with sound insulation which does not comply with DIN 4109, mutual consideration necessary
E Walls [R _w] 50 dB	Apartments with sound insulation which does not comply with DIN 4109, absolute need for mutual consideration
F Walls [R _w] < 50 dB	Apartments with poor sound insulation, well below requirements of DIN 4109, conscious consideration of neighbours, no privacy

Sound insulation in solid walls.

Sound insulation box - flush-mounting | Page 6

For use in solid construction sound insulation walls with enhanced requirements of sound insulation.



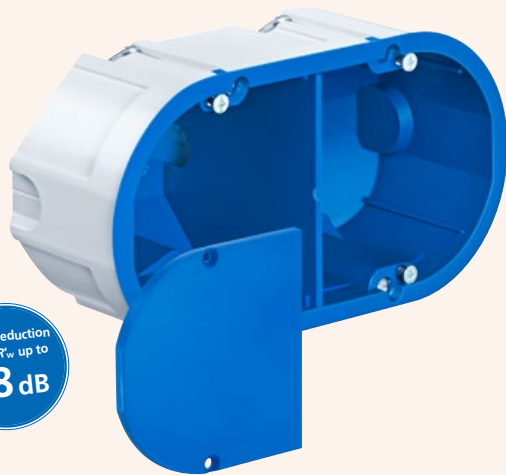
Sound reduction index R_w up to **56 dB**

Maximum sound insulation for cavity walls.

Sound insulation box for cavity walls

Ø 74 mm | Page 10

The one-gang junction box completely retains the sound-insulating characteristics of sound insulation walls.



Sound reduction index R_w up to **78 dB**

Sound insulation electronics box for cavity walls

2x Ø 74 mm | Page 8

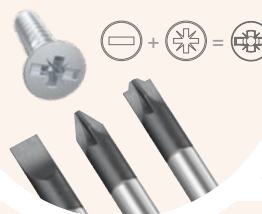
With additional internal space. The tried-and-tested range of KAISER sound insulation boxes has been specially designed for the fitting of switches, sockets and installation accessories in sound insulation walls.



Sound reduction index R_w up to **77 dB**

NEW

All cavity wall boxes with +/- profile!



The basis for sound insulation.

Sound insulation box 68 for cavity walls

Ø 68 mm | Page 12

New one-gang boxes and one-gang junction boxes for Ø 68 mm component openings. Toolless entry for cables up to Ø 11.5 mm and conduits up to M25.



Sound reduction index R_w up to **69 dB**

ECON flex 68 for Ø 68 mm cavity walls | Page 15

The new electronics box with its flexible tunnel provides additional space for electronic components, cable reserves and terminals.



Sound reduction index R_w up to **68 dB**



You can find corresponding product videos on www.youtube.de/kaiserelektro.

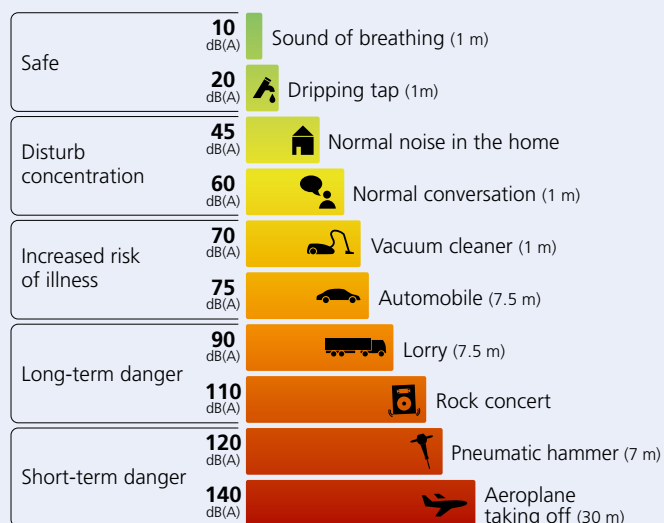


Peace and quiet, privacy and discretion. Sound insulation.

Good sound insulation is an important feature 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. 94% say that good sound and noise insulation is "important", and for 57%, it is "extremely important".

Building owners and planners call for clearly-defined criteria and functional solutions so that they can fit suitable sound insulation which is easy to install and prevents exposure to legal liability.

A comparison of the sound levels of various noises:





Regulations and standards. DIN 4109 and VDI 4100.

DIN 4109 contains the regulations for maintaining sound insulation and lists the sound insulation values which are to be adhered to in the individual sectors and the use of buildings. However, they only state the minimum requirements for what is necessary, and not always what appears to be sufficient for the well-being of the people who live there. For this reason, the requirements of VDI 4100 are often contractually agreed. VDI 4100 includes three levels of sound insulation, with sound insulation level 1 taking over the details according to DIN 4109. Higher requirements are specified in sound insulation levels 2 and 3 (see our table).

The sound insulation levels are specified in accordance with use and requirements, and sound insulation level 2 is used most.

KAISER sound insulation boxes demonstrably ensure and guarantee higher requirements made of sound insulation drywalls or solid walls. Even when electrical installation work has been carried out, the sound insulation wall's function is maintained, and there is no measurable difference in comparison with an unopened wall.

Awareness of noise from adjacent apartments and allocation to sound insulation levels

Insulation against airborne noise as per table 2-4 / VDI 4100		Classifying acoustic factor	SSt I *	SSt II *	SSt III *
from table 2: apartments in apartment blocks	between habitable and external rooms	R'w in dB	Requirements acc. to DIN 4109 (* The recommendation for increased sound insulation is an increase of 3 dB based on the minimum value acc. to E DIN 4109-1:2009-07.)	59	64
	between habitable rooms and external staircases and/or corridors	R'w in dB		50	55
from table 3: semi-detached and terraced houses	between habitable rooms and external rooms	R'w in dB		69	73
from table 4*: internally (apartment or house used by owner/tenant)	between habitable rooms	R'w in dB		48	52

*Variables for levels of sound insulation (SSt)



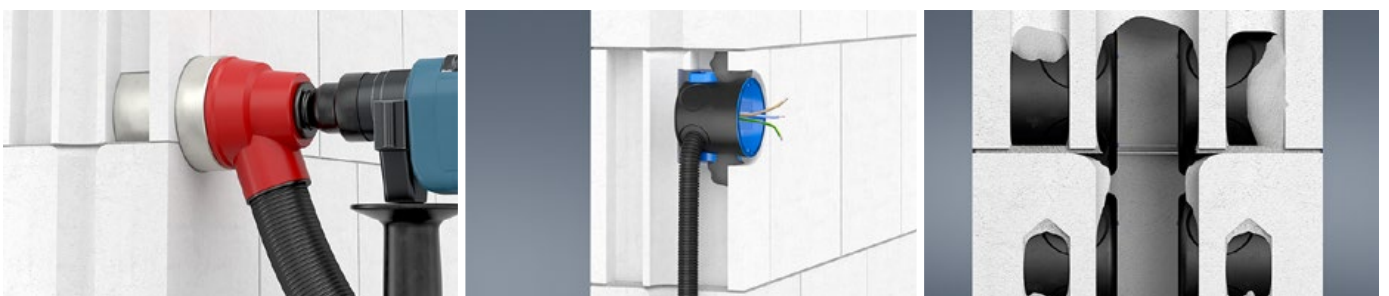
Sound insulation in solid walls. One-gang junction box Flush-mounting sound insulation.

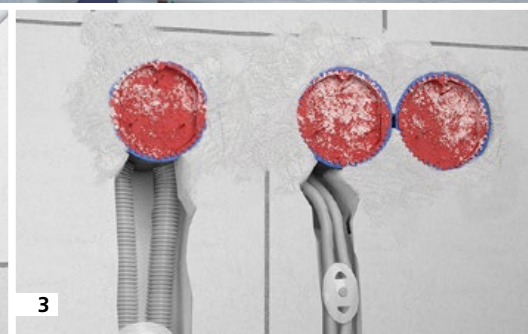
The innovative one-gang junction box for flush-mounting installation ensures that the requirements made of sound insulation in solid walls are met. The solid box body with additional sound insulation sheathing absorbs and reflects sounds, so there is no possibility of noise from adjacent rooms, and sound insulation is the same as if no installation boxes were fitted.

- Maintains the wall's sound insulation function
- Installation up to 5-way combination
- Also possible for opposing installation
- Variable combination supports 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 flush-mounting sound insulation box provides 6 entry opportunities for conduits up to M25 and cables up to \varnothing 11.5 mm.

The sound insulation box is fitted in the same way as a standard flush-mounting box in a \varnothing 82 mm component opening. The precise cable and conduit entry is made with the universal opening cutter. Plaster or quick cement can be used for fixing. The combination distance of 71 mm and the sound-proof and fully-insulated through-wiring are guaranteed by the connector connection.

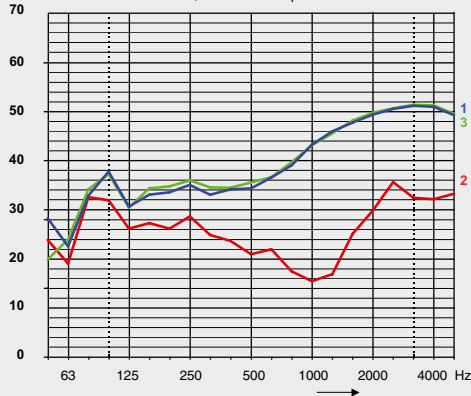




- 1 Easy connection of the boxes makes multiple combinations possible.
- 2 Exact opening of the cable entries using the universal opening cutter.
- 3 Tried-and-tested accessories such as KAISER signal covers are easy to insert and can be used multiple times.

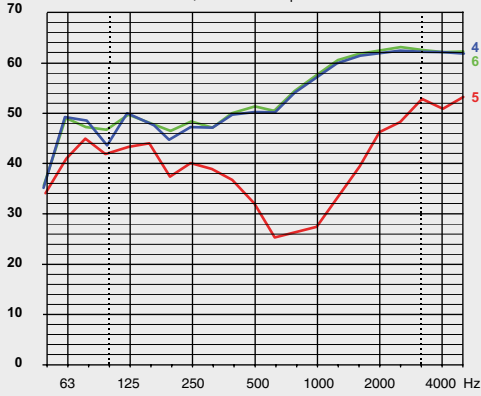
Comparison of sound insulation measurements.

dB Solid wall 11.5 cm, 10 mm of plaster on both sides.



- 1 Base wall without installations, 52 dB
- 2 with one-gang junction box type 1555-04, 32 dB
- 3 with one-gang junction box type 1569-01, 52 dB

dB Solid wall 17.5 cm, 10 mm of plaster on both sides.



- 4 Base wall without installations, 56 dB
- 5 with one-gang junction box type 1555-04, 41 dB
- 6 with one-gang junction box type 1569-01, 56 dB
- 7 with one-gang junction box type 1569-01, 56 dB

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



Sound insulation cover
Art. No. 1184-69



You can find the matching universal opening cutter (Art. No. 1085-80) on page 17.



Maximum sound insulation. Sound insulation boxes for cavity walls.

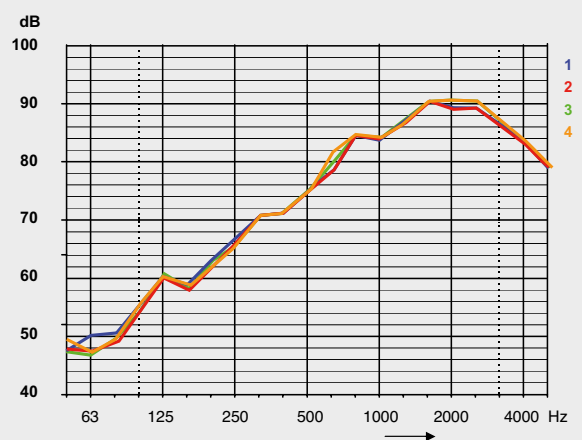


KAISER's sound insulation one-gang junction box – tried-and-tested for years – ensures the constructional demands made of sound insulation walls in spite of the presence of installation openings. The specially-developed boxes with sound insulation sheathing completely absorb and reflect sound. There is no measurable difference when compared with an unopened wall. The sound insulation boxes are also available in a halogen-free version.

- Maintains the wall's sound insulation function up to 77 dB
- No loss in the audible range even at low frequencies
- Retrofitting is possible
- Installation up to 5-way combination
- Also for opposing installation for a wall thickness of 125 mm and greater
- When fitted with a sound insulation cover, also for use as a junction box

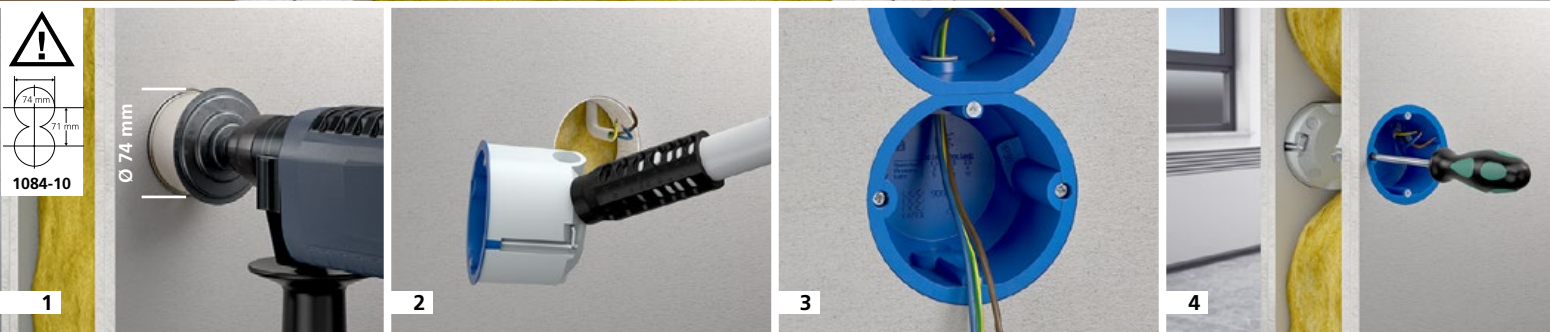
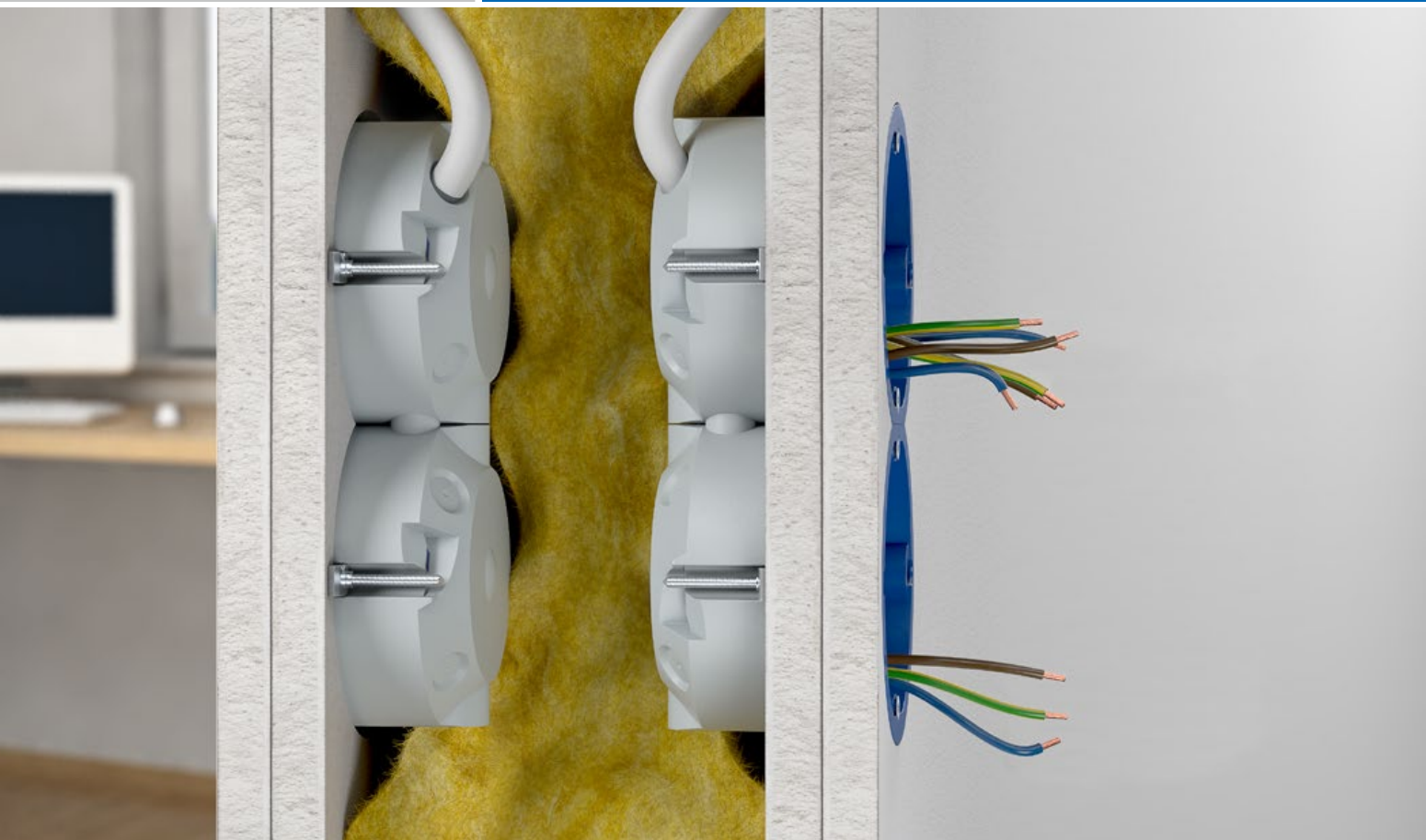


Comparison of sound insulation measurements.
Lightweight wall (double layer, each 3-way boarded).



- 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 accessories, 77 dB





1 The sound insulation box is fitted just as easily in a $\varnothing 74$ mm opening as a conventional cavity wall box.

2 Use the universal opening cutter to make the exact cable entry.

3 For combinations with a standard combination distance of 71 mm, simply remove the marked edge strip.

Fully-insulated through-wirings can be created with the help of the support connector.

4 Directly opposing installation of the sound insulation box.



Sound insulation box
Art. No. 9069-01



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



Sound insulation cover
Art. No. 1184-69



Support connector
Art. No. 9060-88



Support connector, halogen-free
Art. No. 9060-78



You can find the matching MULTI 4000 turbo cutter (Art. No. 1084-10 / $\varnothing 74$ mm) and the universal opening cutter (Art. No. 1085-80) on page 17.



Plenty of space. Sound insulation electronics box.



The **sound insulation electronics box** for use in walls with increased requirements of sound insulation. It maintains the wall's sound insulation function and creates generous space for electronic switch devices, data boxes, cables and terminals. The electronics box makes possible population with cables and installation conduits up to M25.

- Maintains the wall's sound insulation function
- Easy cutting of 2 x Ø 74 mm installation opening
- Also for retrofitting
- Also for use as a double box
- Extra-large terminal compartment for communications and network technology
- Additional space for electric components (e.g. KNX actuators or relays)

The sound insulation electronics box can easily be combined with the sound insulation **one-gang junction box**. Use the universal opening cutter to make the precise cable entry.

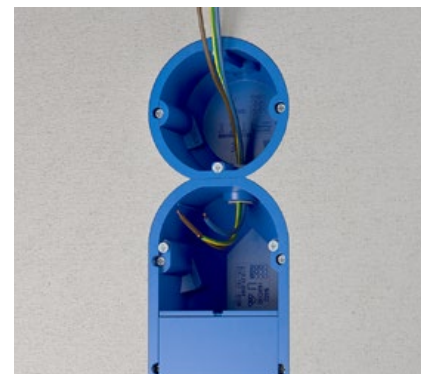
An optional **separator wall** allows the fitting of different voltage types in a housing.

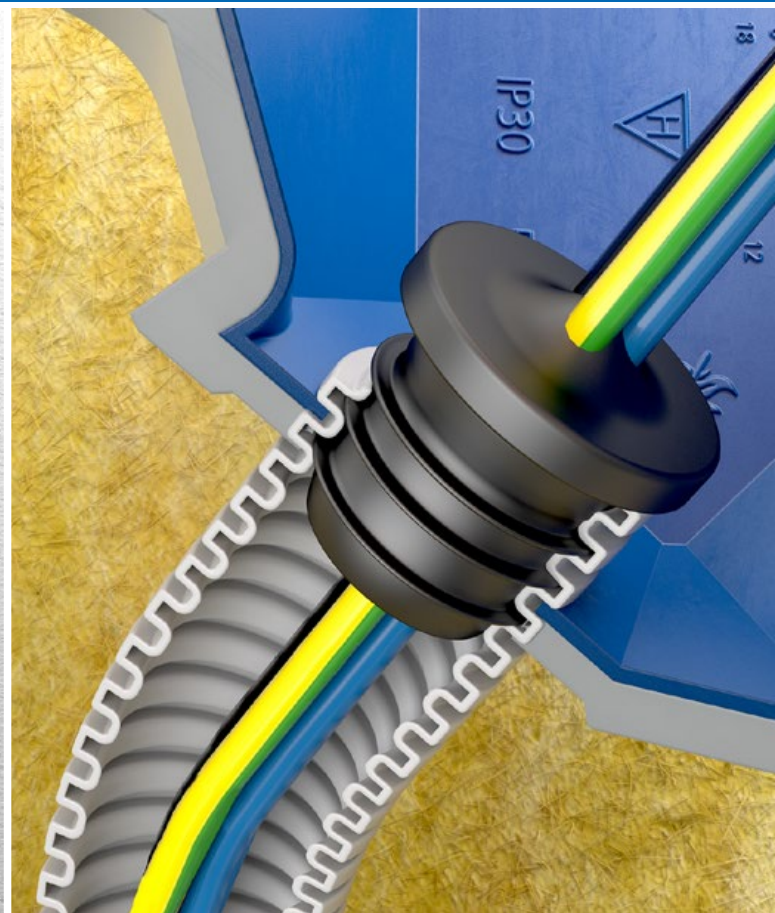


Sound insulation electronics box
Art. No. 9069-94

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

Support connector
Art. No. 9060-88/78

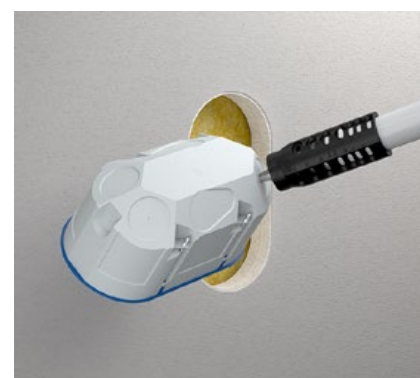




Prevent sound from spreading in the electrical installation conduit. **Sealing plugs.**

Sealing plugs ensure the sealing of all standard electrical installation conduits. The long sealing plug with three sealing lips and different widths adapts itself to the installation conduit in use and guarantees an airtight closure. It also reduces sound transmission, even when conduits are cut at an angle. From conduit size M25 and greater, the membrane surfaces are separated by bridges which ensure secure, safe cable routing and also prevent damage and gaps between cables.

- For airtight empty conduit installations including reduced sound transmission
- Sealing plug with three sealing lips and different widths adapts optimally to the installation conduit and guarantees airtight closure
- Elastic sealing membrane for guaranteed airtightness
- Toolless cable feed-through
- Bridges in the membrane prevent gaps between cables
- For all M16 - 25 installation conduits



Sealing plug M16
Art. No. 1040-16



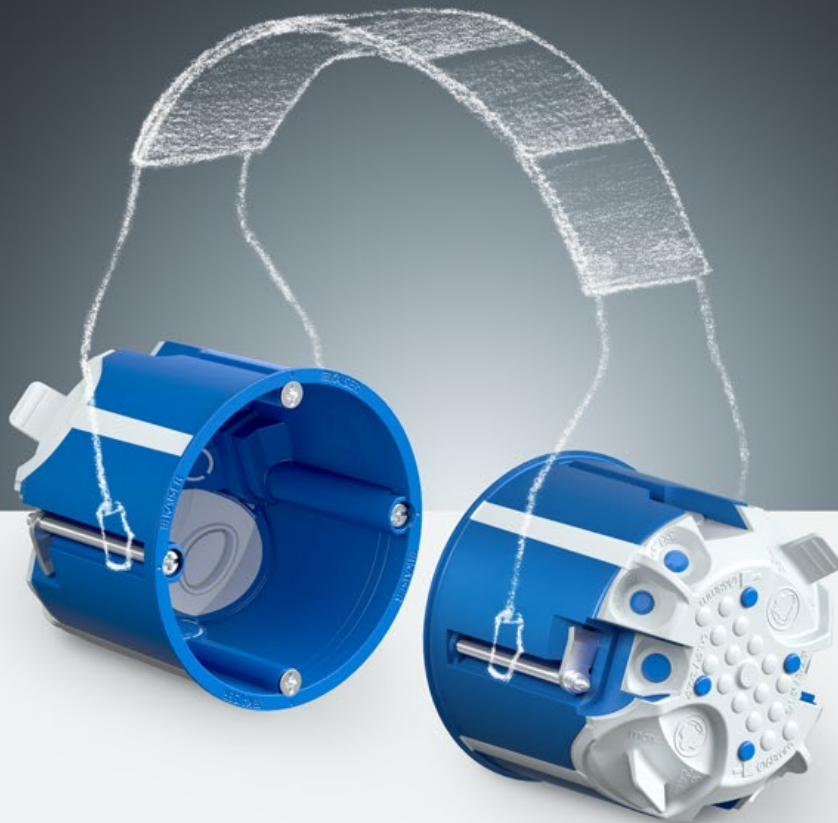
Sealing plug M20
Art. No. 1040-20



Sealing plug M25
Art. No. 1040-25



You can find the matching MULTI 4000 turbo cutter (Art. No. 1084-10 / Ø 74 mm) on page 17.



Sound reduction
index R_w up to
69 dB

The basis in sound insulation. Sound insulation box **68**.

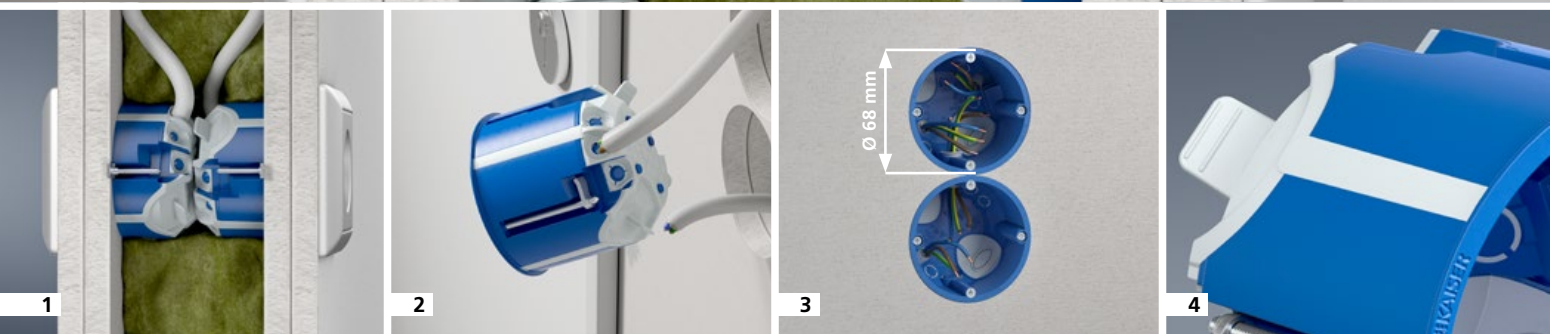
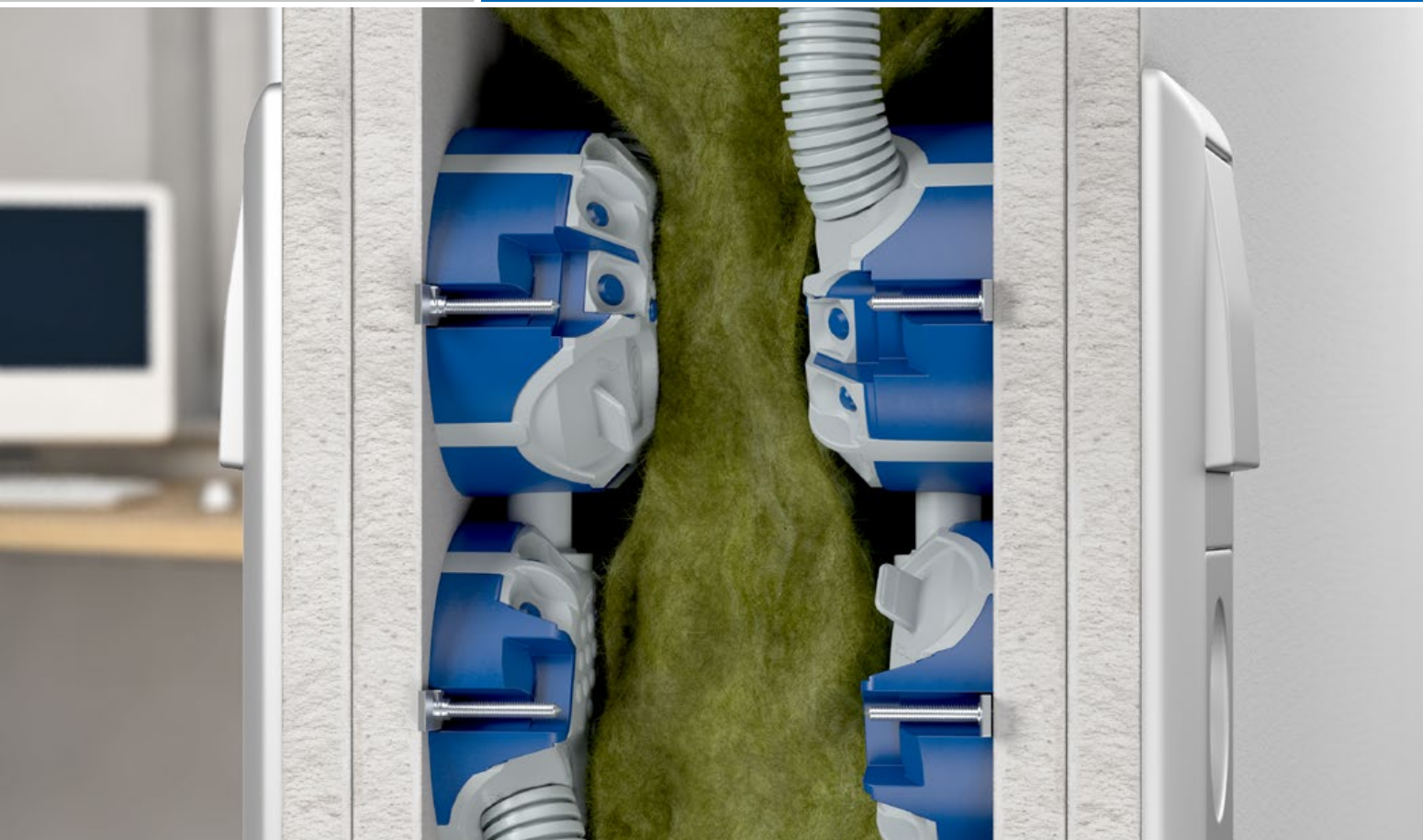


Thanks to their solid box body together with the sound-absorbing surface on the base of the box, the **one-gang and one-gang junction boxes sound insulation 68** ensure the wall's sound insulation. Even with directly opposing installation, the wall's sound insulation function is completely maintained. The easy opening process for cables and conduits, and the 68 mm installation opening, make possible fast installation and easy retrofitting in existing electrical installations.

- Maintains the wall's sound insulation function
- Also for retrofitting
- For \varnothing 68 mm installation openings
- For opposing installation
- Easy entry for cables up to \varnothing 11.5 mm and conduits up to \varnothing M25

Innovative opening tabs allow the toolless defined opening of the conduit membrane and guarantee permanent air tightness of the conduit – bending up to 90° is possible.

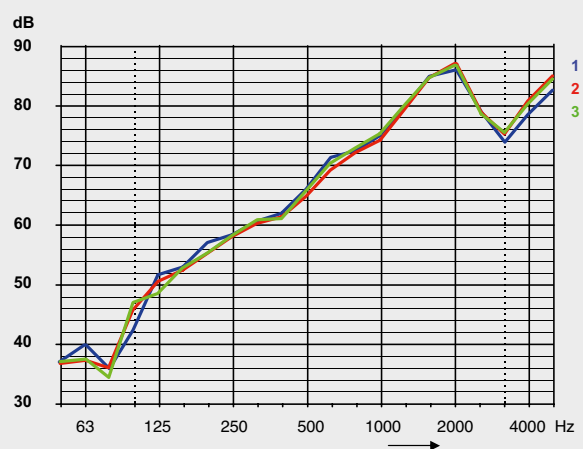




- 1 Minimum wall thickness of 100 mm possible with one-gang box.
- 2 Easy-to-cut cable and conduit entries.
- 3 Fully-insulated through-wiring can be achieved by using the support connector.
- 4 Sound-insulated strips on the box wall to absorb the transmission of sound.

Comparison of sound insulation measurements.

Lightweight wall (double layer, each 3-way boarded).

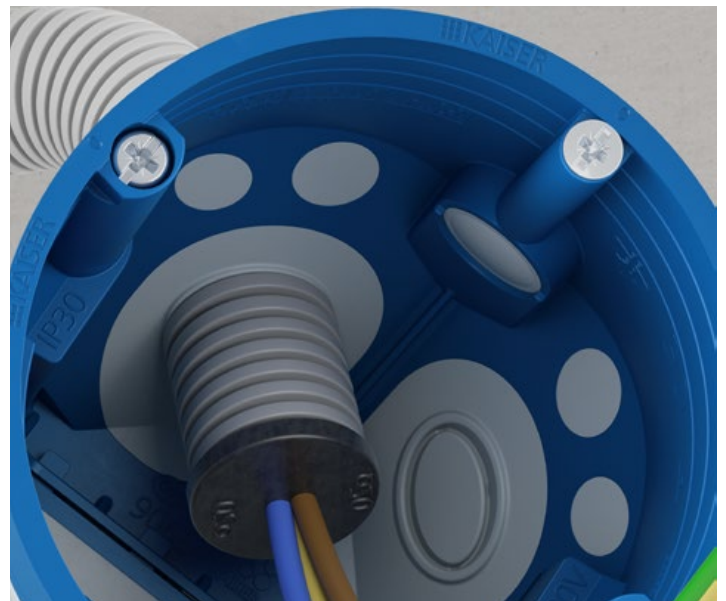


- 1 Wall, without installations, 69 dB
- 2 Sound insulation box 9069-03/75, 1-way, with accessory, 69 dB
- 3 Sound insulation box 9069-04/76, 1-way, with cover, 69 dB





The **sound insulation 68 series** one-gang and one-gang junction boxes are fitted with innovative opening tabs. These allow the toolless defined opening of the conduit membrane and guarantee permanent air tightness of the conduit entry – bending up to 90° is possible. The elastic ECON technology sealing membrane wraps itself round the cable or conduit during insertion. This means that uncontrolled airflows are excluded, and sound insulation is maintained.



**One-gang box
sound insulation 68**
Art. No. 9069-03



**One-gang box
sound insulation 68,
halogen-free**
Art. No. 9069-75



**One-gang
junction box
sound insulation 68**
Art. No. 9069-04



**One-gang junction box
sound insulation 68,
halogen-free**
Art. No. 9069-76



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



Support connector
Art. No. 9060-88/78





Sound reduction
index R_w up to
68 dB

Sound insulation with additional installation space.



Sound insulation 68 Flex electronics box.

Thanks to fast installation, the sound-absorbing **sound insulation 68 Flex electronics box** is ideal for modernising or expanding existing installations. The flexible tunnel allows easy installation and creates more space for electronic components, cable reserves and terminals.

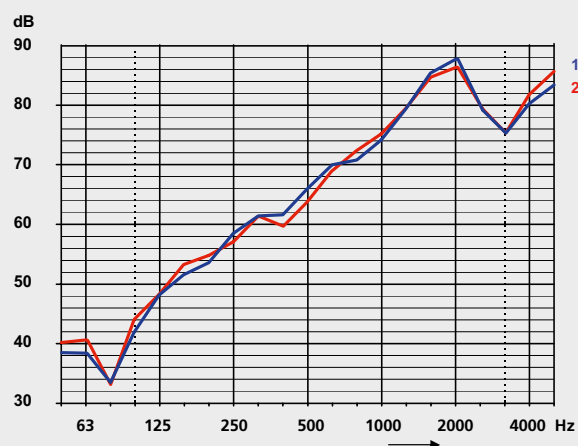
In addition to this system's sound insulation and air tightness, toolless fitting with cables or conduits is one of the practical advantages which the everyday installations provide - efficiently and safely.

Details such as the opening tab for conduits, or the support connector for an insulated, sound-absorbing and air-tight combination with the sound insulating box 68, give the fitter user-friendly solutions..

- Maintains the wall's sound insulation function
- For \varnothing 68 mm installation openings
- Additional side-mounted terminal compartment for communications and network technology
- Toolless cable and conduit entry
- Combinable – air-tight and fully-insulated – with support connectors

Comparison of sound insulation measurements.

Lightweight wall (double layer, each 2-way boarded).



1 Wall, without installations, 68 dB

2 with accessories, 68 dB



- 1 Innovative opening tabs allow the toolless, defined opening of the conduit membrane and prevent subsequent tearing of the membrane. This guarantees permanent air-tightness of the conduit or cable entry, even when conduits are bent up to 90°.
- 2 Standardised conduit retention. Elastic sealing membrane allows toolless cable entry, and conduit entries up to M25, in an air-tight version.
- 3 The flexible tunnel is folded in for installation in a 68 mm opening.
- 4 Combination with sound insulation boxes 68 is possible..



Sound-insulation box 68 Flex
Art. No. 9068-94

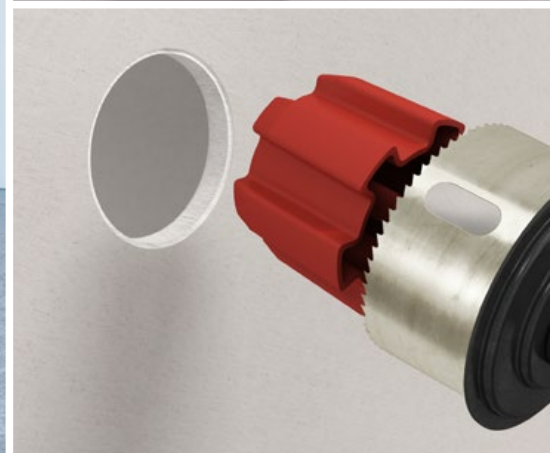


Sound insulation cover
Art. No. 1184-69



Support connector
Art. No. 9060-88/78





For professional installations. **KAISER system tools.**

The **high-quality system tools** for professional electrical installation work are perfectly designed for the processing and fitting of KAISER installation systems. Tried-and-tested quality and innovative technology guarantee excellent time-saving and the long operating life of the tools. The comprehensive series of accessories completes the range of products.

The **exact wall opening** is the first important processing detail for sound-insulating electrical installation. **KAISER's range of cutter products** includes the matching tool for the usual installation diameter and materials, whether for the cavity wall or composite thermal insulation system.

Diamond grinding head

Art. No. 1088-02/00

Ø 82 mm



Cavity wall box template

Art. No. 1085-99



Turbo cutter

MULTI 4000

Art. No. 1083-10/1084-10

Ø 68 mm Ø 74 mm



Drilling template

Art. No. 1190-65



MULTI 2000 HM

Art. No. 1083-70/1084-70

Ø 68 mm Ø 74 mm



Universal opening cutter for plastics

Art. No. 1085-80



Centering insert 68/74

Art. No. 1083-99

Ø 68 mm



AM 2 stripping pliers

Art. No. 1190-02





KAISER Service.

Any questions about our products? Our product and application specialists are here to help you. Just call +49 (0) 23 55 / 809-61 for reliable support.



Just take a look at the video about our sound insulation production! Simply scan the QR Code!



The sound insulation test certificates can be downloaded on www.kaiser-elektro.de

KAISER provides planners, architects, engineers and specialist companies with comprehensive support for the planning, carrying-out and operation of BIM constructional products:



You can use the <https://to.kaiser-elektro.de/planung> link to access the area for information on planning and tenders on KAISER's website..

Go to <https://kaiser.partcommunity.com> to find 3D-Multi-BIM-CAD data on concrete construction, cavity wall and flush-mounting installation, and also for use with luminaire and loudspeaker housings. Additionally, engineering data can be downloaded in more than 100 common formats in 3D and 2D for all common planning programmes.

KAISER sound insulation systems. At a glance.



www.kaiser-elektro.org/soundinsulation

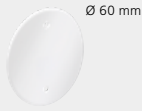
Installation in masonry.



Sound insulation box and accessories



Sound insulation box, flush-mounting
1569-01 | p.6



Sound insulation cover
1184-69 | p.6



Signal cover
1181-60 | p.6

Werkzeuge



Diamond grinding head
1088-02/00 | p.17



Universal opening cutter
1085-80 | p.17



Stripping pliers AMZ 2
1190-02 | p.17



Drilling template
1190-65 | p.17

Installation in cavity walls.



Sound insulation boxes



Sound insulation box
9069-01 | p.8



Sound insulation box, halogen-free
9069-77 | p.8



Electronics box
9069-94 | p.10



Electronics box, halogen-free
9069-74 | p.10



One-gang box sound insulation 68
9069-03 | p.12



One-gang box sound insulation 68, halogen-free
9069-75 | p.12



One-gang junction box sound insulation 68
9069-04 | p.12

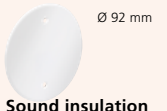


One-gang junction box sound insulation 68, halogen-free
9069-76 | p.12



Sound-insulation box 68 Flex
9068-94 | p.15

Accessories



Sound insulation cover
1184-69 | p.9



Support connector
9060-88 | p.9



Support connector, halogen-free
9060-78 | p.9



Sealing plug M16
1040-16 | p.11

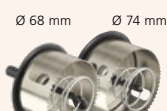


Sealing plug M20
1040-20 | p.11



Sealing plug M25
1040-25 | p.11

Tools



Turbo cutter MULTI 4000
1083-10/1084-10 | p.17



Turbo cutter MULTI 2000 HM
1083-70/1084-70 | p.17



Centering insert 68/74
1083-99 | p.17



Universal opening cutter
1085-80 | p.17



Stripping pliers AMZ 2
1190-02 | p.17



Cavity wall box template
1085-99 | p.17



Drilling template
1190-65 | p.17

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.

Innovative KAISER products support you in satisfying the requirements of the EU guidelines and the national regulations such as the Energy Conservation Regulations (EnEV).



Fire protection.

KAISER fire protection systems offer you reliable protection for electrical installations in fire protection walls and ceilings.



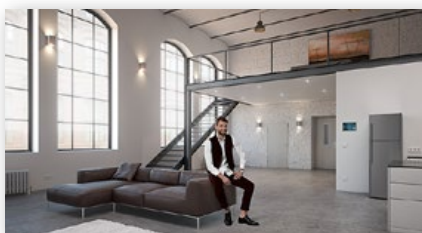
Sound insulation.

KAISER's innovative sound insulation boxes ensure the structural requirements for sound insulation walls, even with pre-fitted installations.



Radiation protection.

The use of the new radiation protection boxes maintains the wall's radiation protection without the need for any additional screening measures.



Building.

KAISER has matching product system solutions which are used safely, consistently and in accordance with building-site practices for redeveloping, renovating and modernising work.

Technical information and advice

You will find more information about products, system solutions and communication media on our website: www.kaiser-elektro.de and on Youtube at www.youtube.com/kaiserelektro.

For additional questions or information, please contact our technical staff.
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