

# KAISER installation catalogue

Boxes, housings and systems

2022 / 2023



The basis for professional installation

 **KAISER**



## Energy efficiency.

An essential component of the energy transition is energy efficiency. Considerable energy savings can be achieved in buildings with professional insulation that complies with current standards and regulations. This reduces operating costs over the entire life cycle of the building and, at the same time, protects the environment.

Electrical installations often also run in the insulation level or penetrate it. KAISER has developed innovative installation systems for energy-efficient and standard-compliant electrical installation to prevent the creation of thermal bridges with often fatal consequences for the building fabric. More details can be found in our "Energy Efficiency" information brochure and at [www.kaiser-elektro.de](http://www.kaiser-elektro.de).



### Flush-mounting

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### Cavity wall

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## Fire protection.

Structural fire protection measures serve the purpose of preventing the spread of flames and smoke in the event of a fire, so that escape and rescue routes remain usable. The focus is particularly on the electrical installation, because this can impair the fire resistance of a fire protection wall or ceiling.

KAISER fire protection systems, which function automatically and maintain the required fire rating despite the embedded electrical installations, enable electricians to offer tested and certified fire protection from a single source. Specially built encasings as well as filling with fire protection mortar or mineral wool are now things of the past. Further information can be found in our "Fire Protection" brochure or on the Internet at [www.kaiser-elektro.de](http://www.kaiser-elektro.de).



Flush-mounting	pg. 283
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## Sound insulation.

Soundproof walls make a significant contribution to well-being in buildings, as they allow for quiet, confidentiality and security. These aspects play a role not only in the private sector, such as in terraced houses and apartment buildings, but also in public and commercial buildings – for example in schools, hospitals, retirement homes, doctors' surgeries, hotels and conference centres. The "Sound Insulation" information brochure and the website [www.kaiser-elektro.de](http://www.kaiser-elektro.de) provide further information on this topic.



Flush-mounting pg. 20  
 Cavity wall pg.125



## Radiation protection.

Structural radiation protection measures are used in hospitals, doctors' surgeries and any facility where X-ray and gamma irradiation equipment is used. Electrical installations in radiation-protection walls pose a special challenge, as they must not interfere with the specified radiation-protection values of the wall. You can find out more about this topic in the "Radiation Protection" information brochure or on the Internet at [www.kaiser-elektro.de](http://www.kaiser-elektro.de).



Cavity wall pg.135





## Construction.

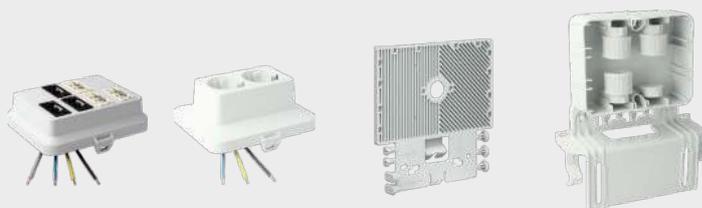
KAISER offers the best basis for efficient, safe electrical installation for all projects – regardless of whether these involve new construction or conversion, extension, renovation or refurbishment. Our installation systems cover the entire range: from flush-mounted boxes for solid walls and a wide variety of cavity wall boxes to installation components for concrete construction in on-site mixed concrete or precast concrete. KAISER offers the optimum solution for every application.



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## Pluggable installation.

Simple, fast and secure. Pre-assembled components and systems are in demand as a solution for planning and installation, especially for efficient, on-time construction. Thus, a time-consuming, cost-intensive electrical installation on the construction site can be economically optimized by pre-assembled, pluggable systems. The specialist planner or electrician plans such installations with modular, prefabricated components and cables. At the construction site, these just have to be assembled according to the specified plan for commissioning. This enables time savings of up to 70% at the construction site. And if schedules are tight, selected system partners from the electrical trade can be deployed on site as required. The "Pluggable Installation" information brochure and the website [www.kaiser-elektro.de](http://www.kaiser-elektro.de) provide further information on this topic.



Pluggable installation	pg. 322
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**NEW**



## Connectivity.

Fibre-optic technology is today's state-of-the-art cabling technology for telephony, Internet and television, not only in the wide-area network and street distribution, but also in the building distribution right down to the residential unit. Fibre-optic cables transmit data optically at the speed of light. At the same time, fibre-optic technology offers a far higher bandwidth compared to conventional copper transmission technology. This enables the transfer of a significantly larger amount of information or data per unit of time. The "Connectivity" information brochure and the website [www.kaiser-elektro.de](http://www.kaiser-elektro.de) provide further information on this topic.



### Connectivity

E3S Connect®  
Network level 4

pg. 332  
pg. 352



## Cable glands.

AGRO cable glands made from plastic, brass or stainless steel ensure the highest quality and practicality. The innovative complete range offers everything for professional cable entry in any trade or for industrial purposes. This also includes products with increased requirements, such as EMC, Ex, elbow cable glands or universal cable glands up to completely customised products as well as an extensive range of accessories. Further information on the over 3,500 products can be found in our special catalogue "AGRO cable glands" or at [www.kaiser-elektro.de](http://www.kaiser-elektro.de).

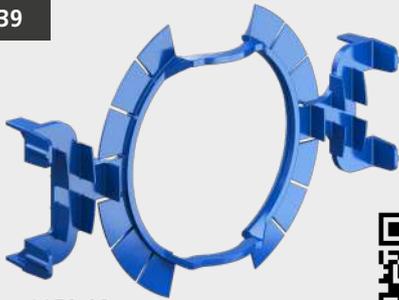


Cable glands

pg. 376



pg. 39



1159-03

Product video



## You can forget about plastering! Plaster-free assembly with KLEMMFIX®.

The **KLEMMFIX® system** saves up to 50% installation time compared to the conventional installation of KAISER flush-mounting boxes with plaster. KLEMMFIX® fixes the box securely in the wall before plastering and holds it in position. The blue KLEMMFIX®. Now also for bricks with chambers.



pg. 23



1555-21

Product video



## Air-tight flush-mounting boxes with ECON® multi-membrane.

Flush-mounting boxes with ECON® technology and multi-membrane enable guaranteed air-tight installation. They offer a variety of options for air-tight conduit and cable entries and can be either plastered or processed using Klemmfix®. The new **ECON® multi-membrane** allows the insertion of several cables without gusset formation.



pg. 104



9264-12

Product video



## PLUG - ALIGN - CLAMP - READY! O-range ECON® Fix.

Mounted without lugs. With the new O-range ECON® Fix one-gang junction box, installation is significantly faster and easier thanks to the lug-free ribs for fastening in various wall material combinations, such as OSB panels, board plywood or solid wood, plasterboards or even in facing masonry.



pg. 109



9280-22

Product video



## The new standard for data and network installation. Accessory connection box O-range ECON® data.

With the new air-tight O-range ECON® data accessory connection box, KAISER offers unprecedented ease of installation for connecting and installing communication and network connection boxes.



pg. 285



9462-94

9464-01

9463-01

**F30-B  
F60-B certified**

Sound insulation value  $R_w$  up to **77 dB**

## Now also available for timber panel and timber frame construction. HWD 90 fire-protection boxes.

HWD 90 fire-protection boxes are now also approved for timber walls in timber frame or timber panel construction. They maintain the fire protection properties of the wall with a fire-resistance duration of F30-B and F60-B.



Product video



# Flush-mounting installation



## Flush-mounting base installation

- Complete system for all flush-mounting / masonry applications
- UP-PLUS technology with combination spigot M20/M25 and up to 15% more installation space
- Plaster-free assembly with KLEMMFIX®
- Easy retrieval of boxes and casings through the use of signal lids
- International products for device installation according to national standards
- Halogen-free



## Air-tight flush-mounting installation

- Air-tight installation as per GEG
- ECON® technology: air-tight device, one-gang junction boxes for toolless cable and conduit entries
- Air-tight sleeves for the air-tight feed-through of cables and conduits



## Flush-mounted special solutions

- Fire protection products
- Sound insulation products
- Universal installation housing with mineral fibreboard for all common unit sizes (e.g. displays, LED luminaires, etc.)
- Installation solutions for environmentally-friendly construction



## Insulated walls and ceilings

- Installation solutions for insulated walls and ceilings (ETICS)
- Secure fastening
- Prevention of heat bridges



## Tools

- Professional system tools for fast, safe installation
- Extensive system accessories

	<b>Basis installation</b> 	<b>GEG Air-tight</b> 	<b>Sound insulation</b> 	<b>Insulated interior wall</b> 	<b>Shielded</b> Environmentally-friendly construction 	<b>Fire protection</b> 
<b>For installation accessories</b>						
One-gang boxes	pg. 18	pg. 25			-	-
One-gang junction boxes	pg. 18	pg. 25	pg. 20	pg. 50	pg. 37	pg. 283
Device boxes for nail fastening	pg. 31	-			-	-
Two-gang junction boxes	pg. 31	pg. 27			-	-
Electronics box	pg. 19	pg. 27			-	-
Perilex® one-gang boxes	pg. 33	-			-	-
CEE one-gang boxes	pg. 33	-			-	-
Universal installation housing	pg. 49	-			-	-
<b>For cable exits</b>						
Wall light connection	pg. 36	-			-	-
Luminaire connection	pg. 36	-			-	-
<b>For cable and conduit feed-through</b>						
Sealing sleeves	-	pg. 117			-	-
Sealings	-	-			-	pg. 299
<b>For cable connections</b>						
Junction boxes	pg. 34	-			-	-
Junction casings	pg. 46	-			pg. 37	-
Potential equalisation casings	pg. 47	-			-	-
<b>Accessories</b>						
Plaster-free assembly with KLEMMFIX®	pg. 41	pg. 41			-	-
subsequent sealing (air-tight)	pg. 28/115	-			-	-
Sealing of electrical installation conduits (air-tight and smokeproof)	-	pg. 29			-	pg. 29
Plaster compensation	pg. 43	pg. 43			-	-
Plaster protection	pg. 42/187	pg. 42/187			-	-
End cover	pg. 43/114/209	pg. 43/114/209			pg. 37	-

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

PLUGGABLE

## Installation on or in insulated exterior walls/ceilings | Product overview

	 <b>Universal equipment carrier</b> pg. 55	 <b>System equipment carrier / telescopic equipment carrier</b> pg. 61/pg. 68	 <b>ThermoX® Iso + installation housing.</b> pg. 64	 <b>Telescope switch box</b> pg. 68	 <b>Mini equipment carrier</b> pg. 73	 <b>ISO box set</b> pg. 69	 <b>ECON® styro55 / ECON® Iso + one-gang junction boxes</b> pg. 76/pg. 78
<b>Installation variant</b>							
prepared installation	•	•	•	•	-	•	- / •
retrofitting	-	-	-	-	•	-	•
<b>Application</b>							
Accessories	•	•	-	-	•	-	-
Built-in luminaires / accessories	-	-	•	-	-	-	-
Corner accessories	-	-	-	-	•	-	-
Installation accessories 1-fold combination*	•	-	-	•	-	•	•
Installation accessories up to 3-fold combinations	•	-	-	-	-	•	•
Installation accessories up to 5-fold combinations	-	-	-	-	-	•	•

\* Universal screw-on surface

CONNECTIVITY

CABLE GLANDS

TOOLS

SERVICE



## Flush-mounting installation boxes

With the innovative KAISER UP-PLUS technology, the flush-mounting range impresses with a PLUS in terms of fitting convenience and flexibility. This range with the practical combination connection piece for quick, safe combinations ensures a torsion-proof pluggable connection for combinations with the snap-in connector, as well as a guaranteed standardised combination distance of 71 mm. The variable combination connection pieces are suitable for M20/M25 conduits and cables, and are standard for KAISER flush-mounting boxes. There are further entries for M20/M25 conduits and cables around the circumference of the box, as well as an entry for M20 conduits or cables at the bottom of the box. Four screw domes and two expanding claw fields offer secure, flexible mounting options for all types of devices, and thus round off the flush-mounting range.

- Variable combination connection piece for conduits up to M25 and cables
- Snap-in connector for torsion-proof and guaranteed standardised combination distance of 71 mm
- Flexible for screw and expanding claw fixing
- Optimum installation space
- UP-PLUS – with distance support, tunnel connector and KLEMMFIX® for quick, secure installation



### Entries for cables and DIN EN conduits



### Secure combination with the new combination connection piece

An audibly secure combination with the KAISER combination connection piece. Place the boxes next to each other. Place the centering piece in the groove and press together until you hear a „click“. Now you have a torsion-proof combination with a standardised combination distance of 71 mm.



## Fitting instructions



After breaking out the cable or conduit, ...



... simply insert it into the box.



The simple break-out opening for cable and conduit entry reduces the installation effort and simplifies the fitting.



Installation example for a switch/socket combination.

## Combination with one-gang box and one-gang junction box, conduit entry and KLEMMFIX®



Position the KLEMMFIX® on the bottom of the box...



...then latch on.

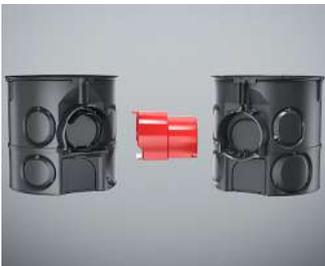


Since the plaster penetrates up to the lamella ring...



...the box is securely and permanently fixed in place.

## Mounting and connection option with distance support



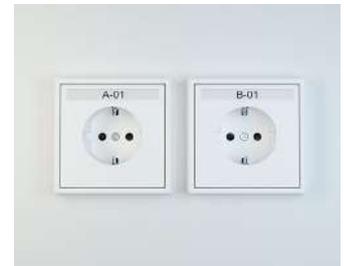
Position the distance support on the support connector...



...and create the box combination at a 91-mm spacing.



The distance support (item no. 1159-34) ensures an exact, safe distance of 91 mm.



Example of installation with a 91-mm spacing.

## Assembly and connection option with tunnel connector



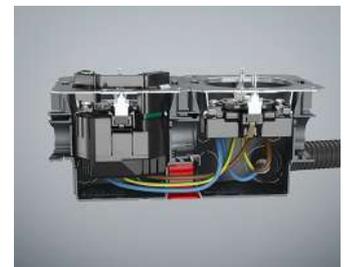
Remove the break-out openings under the support connector on both one-gang junction boxes.



Plug the one-gang junction boxes together and insert the tunnel connector (item no. 1159-36) between the two one-gang junction boxes...



...then plug the support connector in from below for fully insulated through-wiring in the floor area.



Cable entry through the tunnel connector. For installation with low-seated installation accessories.

# One-gang boxes, One-gang junction boxes

for flush-mounting installation

## One-gang box

- with 4 screw domes and 2 expanding claw fields
- dimensions in accordance with German DIN 49073
- For M20/M25 conduits and cables



<b>Depth</b>	<b>46 mm</b>	<b>46 mm</b>
Screw spacing	60 mm	60 mm
Conduit entries M20	3	3
Conduit entries M25	2	2
Combination conduit entries M20/25	2	2
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1055-04</b>	<b>1056-04</b>
Inner packaging/shipping	25 / 500	25 / 500

## Flush mounting one-gang junction box

- with 4 screw domes and 2 expanding claw fields
- dimensions in accordance with German DIN 49073
- For M20/M25 conduits and cables



<b>Depth</b>	<b>66 mm</b>	<b>66 mm</b>
Screw spacing	60 mm	60 mm
Conduit entries M20	9	9
Conduit entries M25	2	2
Combination conduit entries M20/25	2	2
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1555-04</b>	<b>1556-04</b>
Inner packaging/shipping	25 / 250	25 / 250

## One-gang junction box with side cavities for connections

- with side cavities for connections
- with 4 screw domes
- from above 4 x multi-lead wiring
- dimensions in accordance with German DIN 49073
- For M20/M25 conduits and cables



<b>Length x Width x Depth</b>	<b>110 x 71 x 49 mm</b>
Screw spacing	60 mm
Conduit entries M20	6
Conduit entries M25	4
Combination conduit entries M20/25	2
Device screws	2
	Yes
<b>Art.-No.</b>	<b>1069-02</b>
Inner packaging/shipping	10 / 100

## Electronics box

The electronics box has space for electronic components. The accompanying separator wall also enables you to have different kinds of voltages in one box.

- For accessories and electronic components such as EIB actuators, communication and network technology, radio-controlled elements, alarm modules, etc.
- Can be combined with KAISER one-gang boxes via snap-in connector
- Optimal for use as an entry box for combinations
- The separator wall (supplied) turns it into a twin-chamber box



## Application



The range of possibilities is as diverse as their solutions.



Here for example is a relay for central control of several roller blind drives or a flush mounting EIB interface with a conventional button.



For communication equipment, the box volume is ideal for accommodating cable reserves.



Concealed installation of electronic components such as radio-controlled modules, EIB actuators, emergency lighting or cable lengths in data network technology.

## Electronics box

- with 4 screw domes
- Twin-chamber box (with separator wall)
- dimensions in accordance with German DIN 49073
- For M20/M25 conduits and cables



<b>Length x Depth</b>	<b>149 x 67 mm</b>
Screw spacing	60 mm
Conduit entries M20	11
Conduit entries M25	2
Combination conduit entries M20/25	4
Device screws	2
	Yes
<b>Art.-No.</b>	<b>1068-02</b>
Inner packaging/shipping	10 / 100



Sound insulation value  $R_w$  up to **56 dB**

## Flush-mounting sound insulation one-gang junction box

Sound insulation box for use in solid construction sound insulation walls with stringent sound insulation requirements. The solid box body with additional sound insulation coating absorbs and reflects the sound, so that interference in adjacent rooms is excluded and the sound insulation remains intact as if no installation box were present.

- Maintains the wall's sound insulation protection
- Installation up to 5-unit combinations
- Opposing installation is also possible
- Variable combination connection piece for conduits up to M25
- Flexible for screw and claw fixing of the accessories
- Can be used with sound protection cover as a junction box



### Examples of use



Example of installation using a switch-socket combination.



Use of an opposing sound insulation box.



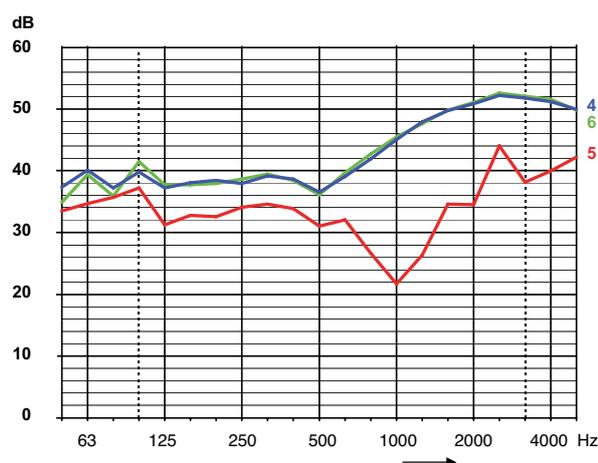
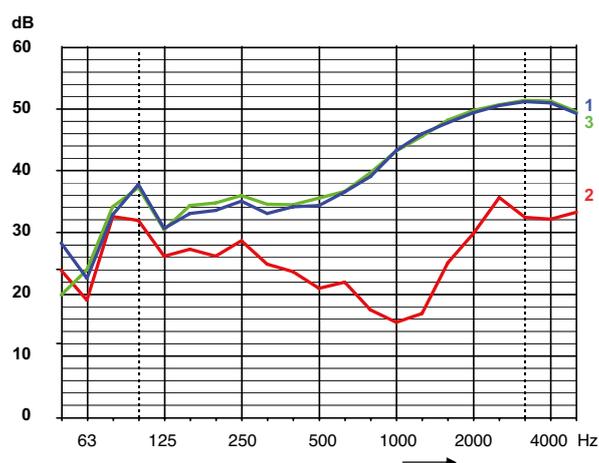
Cables up to  $\varnothing$  11.5 mm and conduits up to M25 can be fed into the sound insulation box.



With sound insulation cover it can also be used as junction box.

### Comparison of sound insulation

Solid wall 11.5 cm and 17.5 cm with 10 mm plaster on both sides.



1 Wall, without installations, 52 dB | 2 with one-gang junction box 1555-04, 32 dB | 3 with one-gang junction box 1569-01, 52 dB | 4 Wall, without installations, 56 dB | 5 with one-gang junction box 1555-04, 41 dB | 6 with one-gang junction box type 1569-01, 56 dB

## Installation



Cut a Ø 82 mm installation opening using a grinding head (e.g. Art. No. 1088-02).



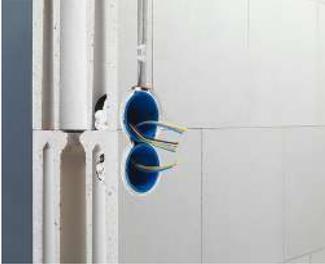
Make exact cable and conduit entries with the universal opening cutter (Art. No. 1085-80).



For combinations, the one-gang junction boxes are snapped together.



The sound insulation box is simply fixed with plaster.



Combinations at a standard spacing of 71 mm.



Soundproof and fully insulated through wiring is ensured by the support connectors.



Example of installation using a switch-socket combination.

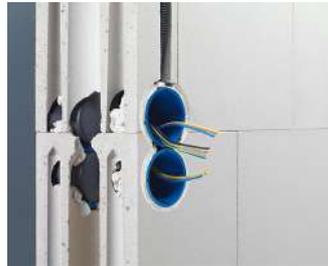


With the sound insulation cover (Art. No. 1184-69), the box can also be used as junction box.

## Processing instructions



The flush-mounting sound insulation box offers 6 possible entries for conduits up to M25 and cables up to Ø 11.5 mm.



The support connector makes it easier to feed conduits up to M25 in the connection area.



In opposing installation, the sound insulation is guaranteed up to a five-way combination.

# One-gang boxes, One-gang junction boxes

for flush-mounting installation

## Allocation table for universal opening cutters



Flush-Mounting installation for sound insulation boxes		Ø setting
<b>NYM cable</b>	3 x 1.5 mm <sup>2</sup>	7.5
	4 x 1.5 mm <sup>2</sup>	8.5
	5 x 1.5 mm <sup>2</sup> ; 3 x 2.5 mm <sup>2</sup>	9.5
	7 x 1.5 mm <sup>2</sup> ; 5 x 2.5 mm <sup>2</sup>	10.5
<b>Low-voltage cables</b>	Integrated high voltage and MSR-Bus cable (N)Y(YSt)Y)M-J 3 x 1.5 mm <sup>2</sup>	10.5
	EDV cable, S/STP 4 x 2 AWG23/1	7.5
	EDV cable, 100 MB S/STP 4 x 2 x AWG23/1	6.0
	Coaxial cable, double screening	6.0
	Coaxial cable, single screening	5.0
	Bus cable YCYM 2 x 2 x 0.8	5.0
	EDV cable screened, plus outer screening	5.0
	Cable for telephone and signal transmission with screening	4.0
	Telephone cable without screening	4.0
<b>Support connector</b>	9060-98	Connector
<b>Conduits according to DIN EN 60423 flexible (curled)</b>	DIN EN 16 - Ø 16 mm	14.0
	DIN EN 20 - Ø 20 mm	17.0
	DIN EN 25 - Ø 25 mm	21.0

You can create cable entries with the prescribed strain relief easily and to the exact required size with the universal opening cutter (Art No. 1085-80).

## Flush-mounting sound insulation one-gang junction box

INNOVATION



3D animation

- with 4 screw domes and 2 expanding claw fields
- One-gang junction box for solid construction sound insulation walls
- For conduits up to M25 and cables up to Ø 11.5 mm
- Combination distance: 71 mm



<b>Depth</b>	<b>60 mm</b>
Screw spacing	60 mm
Tube entries up to M25	6
Cable entries of up to Ø 11.5 mm	6
for sound insulation walls up to	56 dB
<b>Art.-No.</b>	<b>1569-01</b>
Inner packaging/shipping	10 / 100

## Sound insulation cover

- for sound insulation box
- Sound insulation function in conjunction with sound insulation box



<b>Diameter</b>	<b>92 mm</b>
Halogen-free	Yes
	Yes
<b>Art.-No.</b>	<b>1184-69</b>
Inner packaging/shipping	10 / 100

## Air-tight flush-mounting boxes

Flush-mounting boxes with ECON® technology permit guaranteed air-tight installation. They offer a variety of options for air-tight conduit and cable entries and can be either plastered or processed using Klemmfix®. The new ECON® Multi-Membrane allows the insertion of several cables without gusset formation or the insertion of conduits up to M25.

- Air-tight design with ECON® sealing membranes
- Avoids leaks in exterior facades made from hollow chamber blocks
- Variable and tool-free cable and conduit entries
- Torsion-proof, guaranteed standardised combination distance of 71 mm



### Entries for conduits and DIN EN conduits



### Secure combination with the new combination connection piece

The audibly secure combination with the new combination connection piece. Place the boxes next to each other. Place centering piece in groove and press together until you hear a „click“. Now you have a non-distorting combination with a standard distance of 71 mm.



# Air-tight one-gang boxes, One-gang junction boxes

for flush-mounting installation

## Processing instructions



The tool-free cable and conduit entries reduce installation time and make processing easier.



The elastic sealing membrane fits air-tight around the conduit or cable.



Each cable and conduit diameter up to Ø 25 mm can be installed quickly and air-tight.



Vertical draughts occur in hollow chamber blocks. The UP boxes with ECON® technology prevent air exchange.

## Combination with one-gang box and one-gang junction box, conduit entry and KLEMMFIX®



Position the KLEMMFIX® on the bottom of the box...



...then latch on.



Since the plaster penetrates up to the lamella ring...



...the box is securely and permanently fixed in place.

## Mounting and connection option with distance support



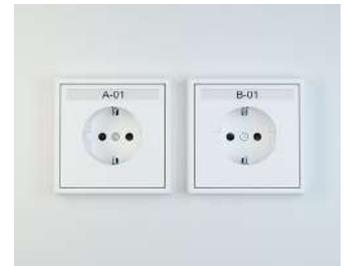
Position the distance support on the support connector...



...and create the box combination at a 91-mm spacing.



The distance support (item no. 1159-34) ensures an exact, safe distance of 91 mm.



Example of installation with a 91-mm spacing.

## Assembly and connection option with tunnel connector



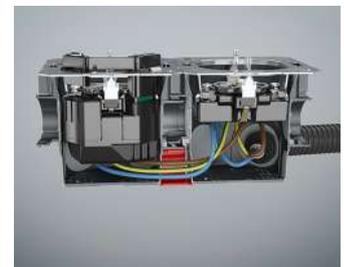
Plug the one-gang junction boxes together...



...insert the tunnel connector (item no. 1159-36) between the two one-gang junction boxes...



...and then plug the support connector in from below for fully insulated through-wiring in the floor area.



Cable entry through the tunnel connector. For installation with low-seated installation accessories.

## One-gang box ECON® 10

- Air-tight design with ECON® sealing membranes
- with 4 screw domes
- dimensions in accordance with German DIN 49073
- For M20/M25 conduits and cables



3D animation

<b>Depth</b>	<b>46 mm</b>	<b>46 mm</b>
Screw spacing	60 mm	60 mm
Conduit entries M20	2	2
Conduit entries M25	2	2
Tool-free cable and conduit entries in the connector area up to M25	2	2
Air-tight	Yes	Yes
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1055-21</b>	<b>1056-21</b>
Inner packaging/shipping	25 / 500	25 / 500

## One-gang junction box ECON® 15

- Air-tight design with ECON® sealing membranes
- 4 screw domes, 2 expanding claws fields
- dimensions in accordance with German DIN 49073
- For M20/M25 conduits and cables



3D animation

<b>Depth</b>	<b>66 mm</b>	<b>66 mm</b>
Screw spacing	60 mm	60 mm
Tool-free cable and conduit entries in the connector area up to M25	2	2
Tool-free cable and conduit entries up to 11 mm below the connector	2	2
Tool-free cable and conduit entries up to M25 around the box	4	4
Tool-free cable and conduit entries up to 11 mm around the box	4	4
Air-tight	Yes	Yes
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1555-21</b>	<b>1556-21</b>
Inner packaging/shipping	25 / 250	25 / 250



## Electronics box ECON® and Two-gang junction box ECON®

The electronics box and two-gang junction box using ECON® technology are ideal for installation in masonry walls in which the interior plaster forms the air-tight closure on the room side. The ECON® electronics box provides a generously-sized accessory installation compartment and additional space for fitting small switch actuators, etc. The matching separator wall allows the standardised installation of bus and operating voltage in one box. The ECON® two-gang junction box makes it easier than ever to install special accessories. The large installation opening and the very large installation compartment make it possible to install block and pre-wired accessories, and they create space for the configuring of cables for multi-media connections.

- Elastic sealing membrane for guaranteed air-tightness
- Variable and toolless insertion of single cables, duplex cables and DIN EN conduits
- Additional space for decentral installation of KNX / LON UP actuators, Venetian blinds UP cut-off relays, and many more
- Separator wall for standardised fitting of two voltage types in one box
- Maintenance of cable bending radii for network connection boxes - optimal data transfer
- Easy installation of pre-wired accessories and multi-media connection boxes



### Processing instructions



The permanently elastic sealing membrane used in ECON® technology guarantees the airtight connection of cables up to Ø 11 mm, and conduits up to Ø 25 mm.



Even duplex cables can be installed securely and air-tight without an installation conduit.



The sealing membrane fits tightly around the cable or conduit and permanently prevents leakage in external walls and in interior walls next to external walls.



The peripheral sealing lip between the box body and the front part ensures an air-tight connection i.e. retention of the building's air-tight seal.

### Examples of applications for the electronics box ECON®



By inserting the separator wall, two different voltage types can be fitted in a standardised way in the electronics box. In addition, they provide a generously-sized installation space...



...for the decentral installation of, for example, small window actuators for controlling Venetian blinds and heating in the external wall.



Thanks to the electronics box, it is easy to install radio-controlled actuators etc. without putting excessive strain on cables or accessories.



Network connection boxes can be used while maintaining the cable bending radii and with the best possible data transfer speeds.

# Air-tight one-gang boxes, One-gang junction boxes for flush-mounting installation

## Examples of applications for the two-gang junction box ECON®



Thanks to its large installation opening without a central bridge, the two-gang junction box allows...



...the use of pre-wired accessories, block inserts, and many more.



It also provides an easy-to-use basis for the installation of multi-media connection boxes. The very large installation compartment has plenty of space for configuring cables.



Reserve cables and connection plugs can easily be inserted into the box and are then concealed behind the installation accessories.

## Mounting and connection option with distance support



Two-row combination with the double junction box ECON® (Article No. 1656-21) with two spacers (Article No. 1159-34)...



...for an optimal installation view (2 x 2-fold combination).



Two-row combination with the double junction box ECON® (Article No. 1656-21) and airtight junction box (Article No. 1556-21) with two spacers (Article No. 1159-34)...



...for an optimal installation view (2 x 3-fold combination).

## Electronics box ECON®

- Partition for circuit separation
- Air-tight design with sealing membranes
- 4 screw domes



## Two-gang junction box ECON®

- Air-tight design with sealing membranes
- 6 screw domes



<b>Length x Width x Depth</b>	<b>149 x 80 x 68 mm</b>	<b>149 x 80 x 68 mm</b>
Screw spacing	60 mm	60 mm
Device screws	2	4
Cable entries up to Ø 11 mm	4	4
Duplex cable entries 2 x up to 11 mm	4	4
Conduit entries M25	4	4
Tool-free cable and conduit entries in the connector area up to M25	4	4
	Yes	Yes
<b>Art.-No.</b>	<b>1068-21</b>	<b>1656-21</b>
Inner packaging/shipping	10 / 100	10 / 100



## Sealing inserts

The sealing insert ensures air-tight closing of previously-installed one-gang boxes and one-gang junction boxes. It can be used in both flush-mounting and cavity wall installation. Its low installation depth makes use in one-gang junction boxes possible without restricting the wiring.

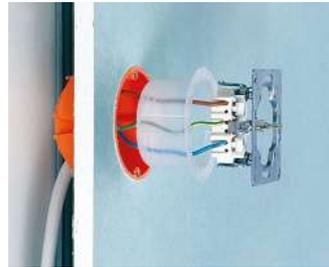
- Ensures later air-tight closing of one-gang boxes and one-gang junction boxes
- Toolless connection wire penetration is possible
- Guarantees later and permanent air-tightness



## Application



Later air-tight closing of flush-mounting boxes.



Later air-tight closing of cavity wall boxes.



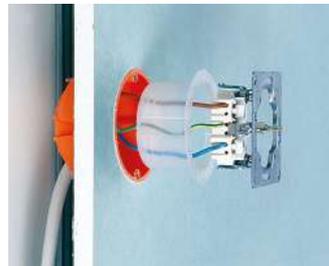
Pre-punched entry markings permit toolless connection wire penetration up to 2.5 mm<sup>2</sup>.



Press sealing insert and installation accessories into the box and tighten with device screws.

## Sealing inserts

Sealing insert for retrofit sealing of existing installation boxes in air-tight building shells. The insert encloses the cables and creates a guaranteed air-tight installation space.



## Sealing inserts

- for retrofit sealing of all existing one-gang boxes and one-gang junction boxes
- permanently flexible plastic



<b>Depth</b>	<b>36,5 mm</b>
Diameter	60 mm
Air-tight	Yes
<b>Art.-No.</b>	<b>1040-01</b>
Inner packaging/shipping	10 / 100

## Sealing plugs 16-40

Sealing plugs with ECON® technology for sealing all standard electrical installation conduits in installation boxes or at cable outlets. The long sealing plug with three sealing lips and in different widths adapts itself to the installation conduit in use and guarantees air-tight and smoke-tight closing, even when the conduits are cut at an angle. From conduit size M25 and up, the membrane surfaces are separated by bridges, which ensure secure cable routing and prevent damage and gaps between cables.

- For empty conduit installations in an air-tight design or in fire protection areas
- Sealing plug with three sealing lips and different widths adapts itself perfectly to the installation conduit and guarantees an air-tight end
- Elastic sealing membrane for guaranteed air-tightness
- Toolless cable entry
- Reinforcing ribs in the membrane ensure air-tightness for the cables
- For all installation conduits M16 - M40, Pg 9 – Pg 36, 3/4" and 5/8"



FLUSH-MOUNTING

CAVITY WALL

CONCRETE

### Product advantages of sealing plugs



When pushed through, the elastic sealing membrane using ECON® technology wraps itself around the cable or individual leads,...



...and prevents uncontrolled air flow.



From conduit size M25 upwards, the membrane areas are reinforced with ribs...



...which prevent damage and ensure air-tightness where the cables pass through.

HOUSINGS

FIRE PROTECTION

PLUGGABLE

### Processing instructions



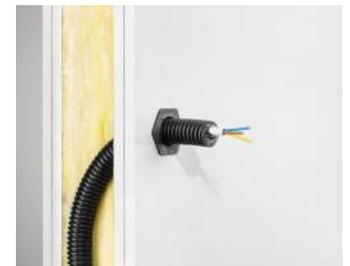
The long sealing plug with three sealing lips and different widths adapts itself perfectly to the installation conduit...



...and guarantees an air-tight end even when conduits are cut at an angle.



When air-tight installation is necessary, the sealing plugs prevent leakage at the conduit ends.



For installations in the field of fire protection, the sealing plug closes the conduit ends and ensures smoke-tight room separation.

CONNECTIVITY

CABLE GLANDS

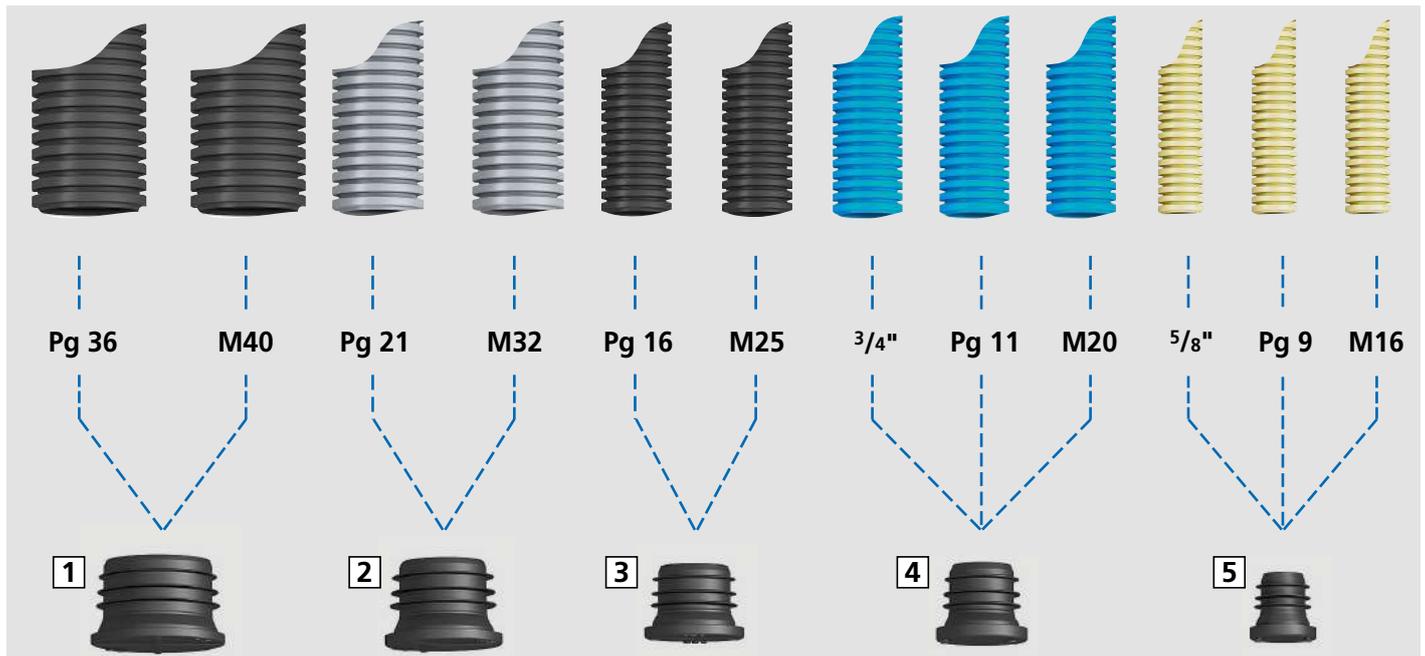
TOOLS

SERVICE

# One-gang boxes, One-gang junction boxes

for flush-mounting installation

## Assignment of conduit sizes and sealing plugs



**1** Sealing plug M40 Art. No. 1040-40 | **2** Sealing plug M32 Art. No. 1040-32 | **3** Sealing plug M25 Art. No. 1040-25 | **4** Sealing plug M20 Art. No. 1040-20 | **5** Sealing plug M16 Art. No. 1040-16

## Air-tightness certificate

In comprehensive blower-door tests, a neutral institute tested and confirmed the air-tightness of the M16 - M40 sealing plugs.



## Sealing plugs 16-20

- for sealing electrical installation conduits
- ECON® technology for easy cable entry
- permanently flexible plastic



3D animation

Sealing plug	M16	M20
DIN EN conduit Ø	16 mm	20 mm
<b>Art.-No.</b>	<b>1040-16</b>	<b>1040-20</b>
Inner packaging/shipping	25 / 100	25 / 100

## Sealing plugs 25-40

- for sealing electrical installation conduits
- ECON® technology for easy cable entry
- permanently flexible plastic



3D animation

Sealing plug	M25	M32	M40
DIN EN conduit Ø	25 mm	32 mm	40 mm
<b>Art.-No.</b>	<b>1040-25</b>	<b>1040-32</b>	<b>1040-40</b>
Inner packaging/shipping	25 / 100	25 / 50	- / 25

## Two-gang junction box

- can also be used as a one-gang junction box (incl. 2 device inserts)
- for use as a junction box cover Art. no. 9062-90 is additionally needed
- use separator wall to separate electrical circuits Art. No. 1656-22 (not illustrated)
- dimensions in accordance with German DIN 49073



Length x Width x Depth	140 x 60 x 42 mm	140 x 60 x 42 mm
Conduit entries M20	12	12
Combination distance	71 mm	71 mm
Device screws	-	4
	Yes	Yes
<b>Art.-No.</b>	<b>1655-02</b>	<b>1656-02</b>
Inner packaging/shipping	10 / 100	10 / 100

## One-gang box

- with nail straps as fitting aid
- nail Ø max. 3 mm
- plaster depth min. 6 mm
- dimensions in accordance with German DIN 49073
- for M20 conduits



Depth	42 mm	42 mm
Screw spacing	60 mm	60 mm
Conduit entries M20	7	7
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1055-62</b>	<b>1056-62</b>
Inner packaging/shipping	- / 100	- / 100

# One-gang boxes, One-gang junction boxes

for flush-mounting installation

## Cavity wall one-gang junction box

- with nail straps as fitting aid
- nail Ø max. 3 mm
- plaster depth min. 6 mm
- dimensions in accordance with German DIN 49073
- for M20 conduits



<b>Depth</b>	<b>63 mm</b>	<b>63 mm</b>
Screw spacing	60 mm	60 mm
Conduit entries M20	13	13
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1555-62</b>	<b>1556-62</b>
Inner packaging/shipping	- / 100	- / 100

## One-gang box without support

- for use in facing masonry
- for combinations: use supports Art. No. 1159-01
- dimensions in accordance with German DIN 49073
- for M20 conduits



<b>Depth</b>	<b>42 mm</b>	<b>42 mm</b>
Screw spacing	60 mm	60 mm
Conduit entries M20	7	7
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1050-00</b>	<b>1051-00</b>
Inner packaging/shipping	25 / 500	25 / 500

## One-gang junction box without support

- for use in facing masonry
- for combinations: use supports Art. No. 1159-01
- dimensions in accordance with German DIN 49073
- for M20 conduits



<b>Depth</b>	<b>63 mm</b>	<b>63 mm</b>
Screw spacing	60 mm	60 mm
Conduit entries M20	13	13
Device screws	-	2
	Yes	Yes
<b>Art.-No.</b>	<b>1550-00</b>	<b>1551-00</b>
Inner packaging/shipping	25 / 250	25 / 250

## One-gang box PERILEX®

- for PERILEX® 16 A inserts
- only for screw fixing
- dimensions in accordance with German DIN 49073
- for M20 conduits



<b>Depth</b>	<b>48 mm</b>
Screw spacing	67 mm
Device screws	2
Conduit entries M20	8
<b>Art.-No.</b>	<b>1076-04</b>
Inner packaging/shipping	10 / 100

## One-gang box CEE

- for CEE 16 A connectors
- only for screw fixing
- with sealing ring, protection class IP3X
- dimensions in accordance with German DIN 49073
- For M20/M25 conduits and cables



<b>Depth</b>	<b>50 mm</b>
Screw spacing	67 mm
Raised head accessory screws 4 mm	Yes
Conduit entries M20	2
Conduit entries M25	2
	Yes
<b>Art.-No.</b>	<b>1075-04</b>
Inner packaging/shipping	- / 100

# Junction boxes

for flush-mounting installation

## Junction box

- with nail straps as fitting aid
- nail Ø max. 3 mm
- plaster depth min. 6 mm
- without cover and cover screws
- dimensions in accordance with German DIN 49073
- for M20 conduits



<b>Depth</b>	<b>36 mm</b>
Screw spacing	67 mm
Conduit entries M20	8
For 6 terminals 1.5 mm <sup>2</sup> or 5 terminals 2.5 mm <sup>2</sup>	Yes
	Yes
<b>Art.-No.</b>	<b>1172-62</b>
Inner packaging/shipping	- / 100

## Junction box

- KLEMMFIX® mounting possible
- according to German DIN VDE 0606, junction box covers may only be removable using tools
- dimensions in accordance with German DIN 49073
- for M20 conduits



<b>Depth</b>	<b>36 mm</b>	<b>36 mm</b>	<b>36 mm</b>
Screw spacing	67 mm	67 mm	67 mm
Conduit entries M20	8	8	8
For 6 terminals 1.5 mm <sup>2</sup> or 5 terminals 2.5 mm <sup>2</sup>	Yes	Yes	Yes
For mounting with Klemmfix® (Art. No. 1159-12)	Yes	Yes	Yes
With cover and 2 cover screws	-	-	Yes
	-	-	Yes
<b>Art.-No.</b>	<b>1172-02</b>	<b>1172-08</b>	<b>1172-92</b>
Inner packaging/shipping	25 / 500	- / 100	25 / 250

## Junction box

- with plaster disc, cover and cover screw
- KLEMMFIX® mounting possible
- For M20 conduits and cables up to 5 x 2.5 mm<sup>2</sup>



<b>Depth</b>	<b>36 mm</b>	<b>36 mm</b>	<b>36 mm</b>
Screw spacing	67 mm	67 mm	67 mm
Conduit entries M20	8	8	8
For 6 terminals 1.5 mm <sup>2</sup> or 5 terminals 2.5 mm <sup>2</sup>	Yes	Yes	Yes
without terminal block	Yes	-	-
Terminal block, no. of poles	-	5-pole	6-pole
	Yes	-	-
<b>Art.-No.</b>	<b>1172-09</b>	<b>1172-05</b>	<b>1172-06</b>
Inner packaging/shipping	25 / 100	10 / 100	- / 100

## Junction box

- for 8 terminals 1.5 mm<sup>2</sup>, for 6 terminals 2.5 mm<sup>2</sup> or for 5 terminals 4 mm<sup>2</sup>
- without cover and cover screws
- For M16/M20 conduits



<b>Depth</b>	<b>56 mm</b>
Screw spacing	67 mm
M16-20 combination conduit entry	14
	Yes
<b>Art.-No.</b>	<b>1572-02</b>
Inner packaging/shipping	10 / 250

## In-plaster junction box

- for flat multi-lead wiring (NYIF) 1.5 and 2.5 mm<sup>2</sup>
- terminal block permanently attached
- with plaster disc, cover and cover screw
- Junction box fire-resistant up to 960°C, cover to 850°C in accordance with DIN EN 60670



<b>Depth</b>	<b>16 mm</b>
Screw spacing	80 mm
Terminal block, no. of poles	5
	Yes
<b>Art.-No.</b>	<b>1081-05</b>
Inner packaging/shipping	25 / 250

# Light connection boxes, Ceiling exits

for flush-mounting installation

## Wall light connection box

- With integrated cover
- not to be used as a junction box!



<b>Length x Width x Depth</b>	<b>60 x 32 x 30 mm</b>
Break-out openings Ø 20 mm	4
	Yes
<b>Art.-No.</b>	<b>1048-00</b>
Inner packaging/shipping	25 / 250

## Cover

- for wall light connection boxes Art. No. 1048-00 and Art. No. 9148-00
- With Ø 3.2 x 15 mm cover screws



<b>Length x Width</b>	<b>75 x 40 mm</b>
<b>Art.-No.</b>	<b>1148-90</b>
Inner packaging/shipping	25 / 250

## Luminaire connection box

- for casting into concrete ceilings
- 2 parts with snap-in connection
- sealed against concrete
- delivery unit: 1 ceiling light connection box pre-cut for DIN EN conduits 20 mm Ø, 2 reducers/stoppers for use with cable, 1 sealing plug-in cover, 1 light hook (fully-insulated) max. load 100 N (10 kg) in accordance with German VDE
- Marking for cables and DIN EN conduits up to 25 mm



<b>Depth</b>	<b>55 mm</b>
Ceiling exit (CE) Ø	35 mm
Light hook length	55 mm
Conduit entries M20	1
	Yes
<b>Art.-No.</b>	<b>1248-55</b>
Inner packaging/shipping	1 / 100

## Ceiling exit bush

- for multi-lead wiring (NYIF) 1.5 mm<sup>2</sup> and 2.5 mm<sup>2</sup>
- to prevent cable being ripped out



<b>Cable entry</b>	<b>5,5 x 23 mm</b>	<b>5,5 x 23 mm</b>
With light hook and expanding dowel Ø 10 mm	-	Yes
with brass wedge nut, max. load 100 N (10kg) to German VDE norm	-	Yes
<b>Art.-No.</b>	<b>1144-00</b>	<b>1144-05</b>
Inner packaging/shipping	100 / 500	50 / 250

## Screened one-gang junction box

Screened one-gang junction box for flush-mounting installation. The conductive coating suppresses interference with a high alternating field component, whether radiated or received.

- For environmentally-safe electrical installation
- With screening and potential conductivity
- The functional earth of the box must only be connected to the potential equalisation and not to the equipment grounding conductor (PE conductor)



### Installation



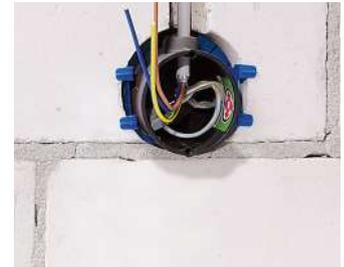
Cut an accurate wall opening (Ø 82 mm) with the diamond grinding head.



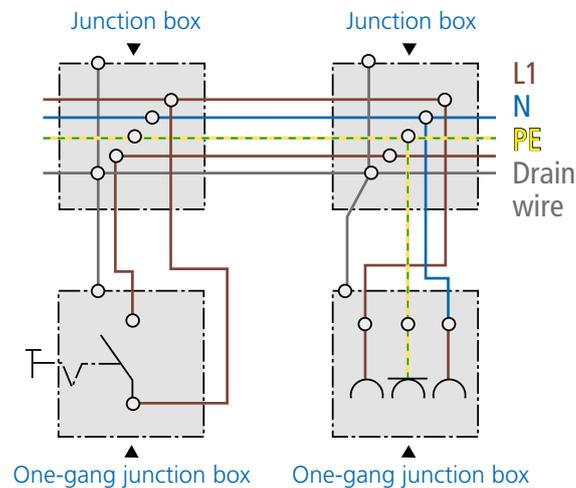
Remove cable sheath and screen with AMZ 2 (Art. No. 1190-02). Fit bare tracer wire with transparent insulating hose.



Connect functional earth of the box to tracer wires of screened cable.



One-gang junction box is ready for installation of a socket for biological design.



### Technical processing instructions/standards

- dimensions in accordance with German DIN 49073
- for rooms used for medical purposes, environmentally-friendly construction, etc.
- the conductive coating suppresses interference with a high alternating field component, whether radiated or received
- The functional earth of the box must only be connected to the potential equalisation and not to the equipment grounding conductor (PE conductor)
- Not suitable for use in X-ray or radiation rooms!

## Screened one-gang junction box

- with screening and functional earth of the box
- dimensions in accordance with German DIN 49073
- protection class IP 2X



<b>Depth</b>	<b>63 mm</b>
Screw spacing	60 mm
Cable entries 3 x 2.5 mm <sup>2</sup> or 5 x 1.5 mm <sup>2</sup>	6
Cable entries 3 x 1.5 mm <sup>2</sup>	4
Halogen-free	Yes
<b>Art.-No.</b>	<b>1555-88</b>
Inner packaging/shipping	10 / 100

## Screened cover

- for making screened one-gang junction boxes
- for one-gang junction boxes Art. No. 9064-88 and Art. No. 1555-88



<b>Diameter</b>	<b>80 mm</b>
Screw spacing	60 mm
<b>Art.-No.</b>	<b>1164-88</b>
Inner packaging/shipping	10 / 100

## Screened junction casing

- for cavity wall and flush-mounting installation
- with screened cover
- With Ø 3.2 x 15 mm cover screws
- protection class IP 3X



<b>Length x Width x Depth</b>	<b>107 x 107 x 53 mm</b>
Cut hole Ø	4 x 35 mm
Break-out openings Ø 20 mm	8
Cable entries for NYM and low-voltage cabling	Yes
For terminals up to	4 mm <sup>2</sup>
<b>Art.-No.</b>	<b>9195-88</b>
Inner packaging/shipping	1 / 10

## Note

Other installation boxes/housings with screening available on request. Please use our radiation protection box in X-ray areas or areas with ionising radiation.

## Plaster-free installation with KLEMMFIX®

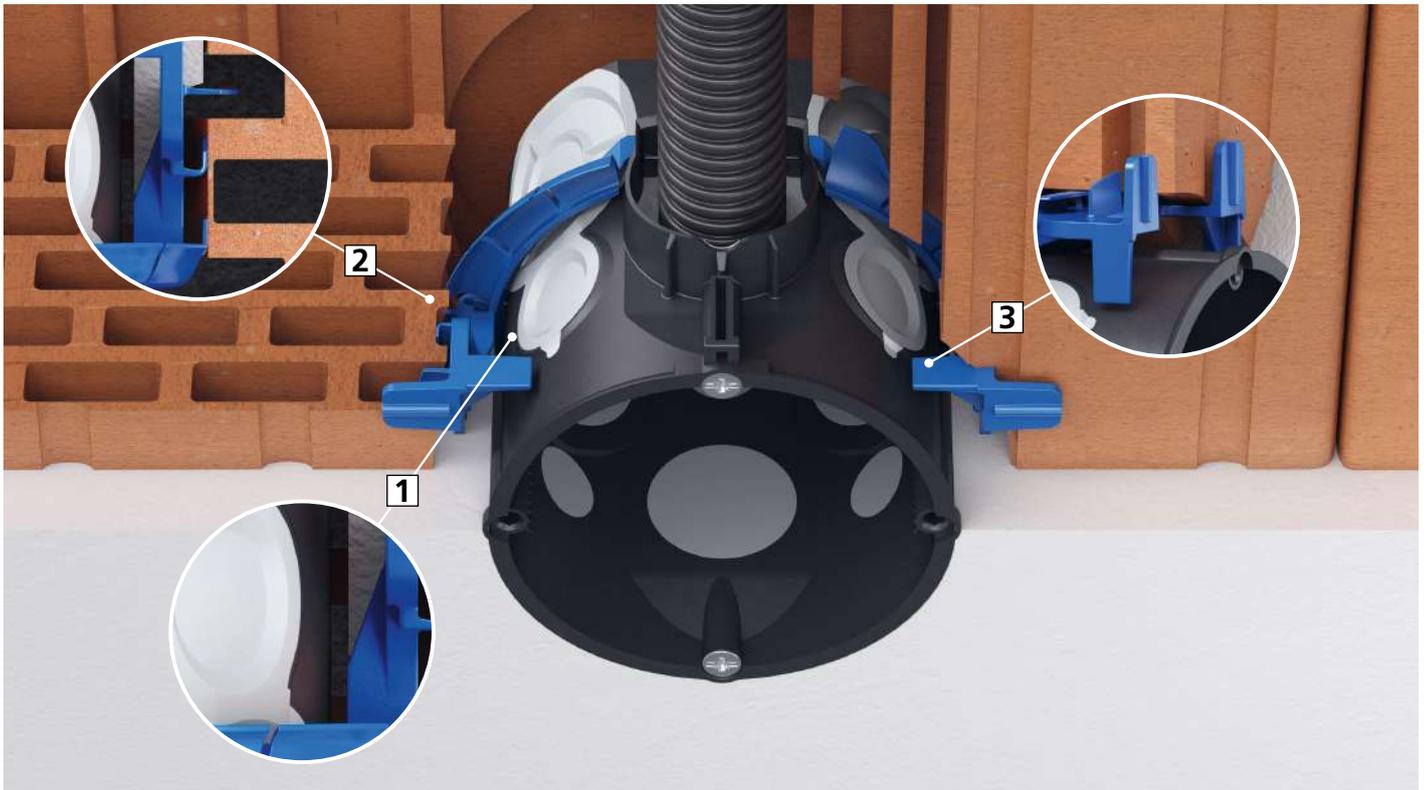
The KLEMMFIX® system saves up to 50% installation time compared to the conventional installation of flush-mounting boxes with plaster. KLEMMFIX® fixes the box securely in the wall before plastering and holds it in position. No plaster, quick cement or similar is required. You no longer need to clean your tools after use. The possible health hazard caused by the use of chemicals is avoided. Storage conditions such as frost, heat, shelf life, etc. do not have to be taken into account either.

- For fitting boxes without plaster
- For all common bricks such as lime sand brick, cellular concrete, lightweight concrete, vertically perforated bricks with and without filling
- Secure, clean and time-saving
- Alignment and secure mounting even before plastering
- Can also be used at sub-zero temperatures
- By plastering the wall and allowing the plaster to penetrate into the lamella ring around the box, the box is finally and permanently fixed.
- Not applicable when using clay or thin plaster



### Plaster-free installation with KLEMMFIX®

The most important features at a glance.



**1** Occurring forces are transferred to the Klemmfix®. The box stays in shape. | **2** Fastening with lamellar ring and clamping ribs on several levels for secure fixation in all common bricks. | **3** Forces that occur are diverted to the flush-mounted boxes.

# Accessories

for flush-mounting installation



Fastening with lamellar ring and clamping ribs on several levels for secure fixation in all common bricks.



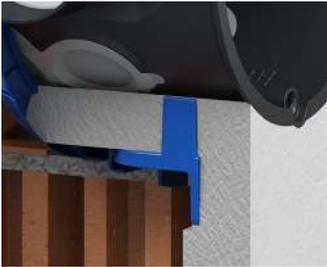
Depth stop to ensure minimum plaster thickness.



Designed for precisely fitting use with the KAISER flush-mounted boxes.



Occurring forces are transferred to the Klemmfix®. The box stays in shape.



The plaster penetrates up to the lamellar ring and thus ensures that the box is securely and permanently fixed.



Forces that occur are diverted to the flush-mounted boxes.

## Installation



Make the installation opening  $\varnothing 82$  mm with the diamond grinding crown (Art. No. 1088-02).



Push in box with KLEMMFIX® latched on.



Fit signal cover (Art. No. 1181-60).



The fine marker bristles of the signal cover indicate the exact position of the one-gang box after plastering.

## Examples of use



Vertically perforated bricks with and without filling, solid bricks.



Light concrete.



Cellular concrete.



Lime sand brick.

## Proof of stability:

Tests carried out show that all boxes remain unchanged. Long-term use in practice confirms this result. Deviations in plastering material and application of the plaster have no effect.

## KLEMMFIX® system

KLEMMFIX® fixes the box securely in the wall before plastering and holds it in position. The subsequently applied plaster penetrates up to the lamella ring and thus ensures the secure and permanent fixing of the box.



## KLEMMFIX® for one-gang and one-gang junction boxes

**NEW**

INNOVATION



3D animation

- for the pre-fixing of flush-mounting boxes without plaster
- in openings made with a diamond grinding crown Ø 82 mm
- can be used with the UP-PLUS one-gang boxes 1055/1056-04 and one-gang junction boxes 1555/1556-04 as well as with the air-tight flush-mounting ECON® 10 1055/1056-21 one-gang boxes and ECON® 15 1555/1556-21 one-gang junction boxes



<b>Cut hole Ø</b>	<b>82 mm</b>
with depth stop	Yes
<b>Art.-No.</b>	<b>1159-03</b>
Inner packaging/shipping	25 / 250

### KLEMMFIX® for junction boxes

- for the pre-fixing of flush-mounting boxes without plaster
- in openings made with a diamond grinding crown Ø 82 mm



<b>For junction boxes Ø 70 mm (1172-02, -08, -09, -92)</b>	<b>Yes</b>
<b>Art.-No.</b>	<b>1159-12</b>
Inner packaging/shipping	25 / 250

### Signal cover

- reusable
- protects interior of box, screwing dome and screw heads when plastering



<b>Length x Width</b>	-	-	-	<b>131 x 60 mm</b>
For installation opening	35 mm	60 mm	70 mm	-
For one-gang boxes and one-gang junction boxes 60 mm Ø	-	Yes	-	-
For junction boxes, PERILEX® boxes and CEE one-gang boxes Ø 70 mm	-	-	Yes	-
For two-gang junction box Art. No. 1656-02/1655-02	-	-	-	Yes
<b>Art.-No.</b>	<b>1181-35</b>	<b>1181-60</b>	<b>1181-70</b>	<b>1181-56</b>
Inner packaging/shipping	- / 50	50 / 1000	25 / 250	- / 50

### Signal cover

- reusable
- protects interior of box, screwing dome and screw heads when plastering



<b>Length x Width</b>	<b>80 x 80 mm</b>	<b>100 x 100 mm</b>	<b>60 x 32 mm</b>
For wall light connection boxes Art. No. 1048-00	-	-	Yes
<b>Art.-No.</b>	<b>1181-94</b>	<b>1181-95</b>	<b>1181-48</b>
Inner packaging/shipping	- / 50	- / 50	- / 100

### Distance supports

- For combination distance 91 mm, e.g. for antenna sockets, telephone boxes or EDP connection boxes with sockets which are not touch-safe.



<b>Art.-No.</b>	<b>1159-34</b>
Inner packaging/shipping	25 / 100

## Tunnel connector

- For fully-insulated floor through-wiring of one-gang junction boxes Art. Nos. 1555/56-04, 1555/56-21, 1068-02, 1068-21 and 1656-21



<b>Art.-No.</b>	<b>1159-36</b>
Inner packaging/shipping	10 / -

## Plaster compensation rings

- to compensate for deep-seated boxes
- to maintain IP protection class
- with 2 screwed-in device screws
- with 2 ring attachment screws



Height	12 mm	24 mm	12 mm	24 mm
Screw spacing	60 mm	60 mm	67 mm	67 mm
For all one-gang boxes and one-gang junction boxes Ø	60 mm	60 mm	-	-
For junction boxes Ø	-	-	70 mm	70 mm
	Yes	Yes	Yes	Yes
<b>Art.-No.</b>	<b>1155-61</b>	<b>1155-62</b>	<b>1155-71</b>	<b>1155-72</b>
Inner packaging/shipping	25 / 250	25 / 250	10 / 100	10 / 100

## Universal VDE cover

- for all one-gang, one-gang junction and junction boxes
- with central exit for light hook
- flat cover edge
- surface roughened



Diameter	92 mm	92 mm
Screw spacing	60 / 67 mm	60 / 67 mm
Fireproof	850 °C	850 °C
Halogen-free	-	Yes
	Yes	Yes
<b>Art.-No.</b>	<b>1184-90</b>	<b>1184-77</b>
Inner packaging/shipping	25 / 250	25 / 250

## Universal waterproof cover

- central entry with stoppers
- for countersunk screws Ø 4 mm



Diameter	90 mm
Screw spacing	67 mm
Fireproof	850 °C
Halogen-free	Yes
<b>Art.-No.</b>	<b>1174-99</b>
Inner packaging/shipping	10 / -

# Accessories

for flush-mounting installation

## Spring cover

- with permanent elastic spring



Diameter	72 mm	85 mm	95 mm
for boxes Ø	60 mm	70 mm	80 mm
Art.-No.	<b>1159-25</b>	<b>1174-25</b>	<b>1184-25</b>
Inner packaging/shipping	50 / 500	50 / 500	25 / 250

## Screw box

- suitable for fixing accessories and covers
- self-tapping Ø 3.2 mm
- corrosion-resistant in accordance with German DIN VDE standard
- RoHS-compliant



Length	<b>15, 25, 40 mm</b>
Filled with device screws +/-, 100 of each	Yes
Art.-No.	<b>2472-91</b>
Inner packaging/shipping	- / 8

## Device screws +/-

- self-tapping Ø 3.2 mm
- Countersunk head with PZ1/S combination drive
- surface double-treated
- corrosion-resistant in accordance with German DIN VDE standard



Length	<b>15 mm</b>	<b>20 mm</b>	<b>25 mm</b>	<b>40 mm</b>
Art.-No.	<b>2472-15</b>	<b>2472-20</b>	<b>2472-25</b>	<b>2472-40</b>
Inner packaging/shipping	100 / 10000	100 / 10000	100 / 10000	100 / 10000

## Sealing screws

- in pure brass
- self-tapping Ø 3.2 mm
- with cross-hole in the screw head through which sealing wire can be pulled



Length	<b>15 mm</b>	<b>40 mm</b>
Art.-No.	<b>2444-15</b>	<b>2444-40</b>
Inner packaging/shipping	100 / 1000	100 / 1000

## Junction casings

Flush-mounting junction casings in all sizes and for almost any kind of jobs. This programme features practical housing sizes as well as robust housing design perfect for building sites.

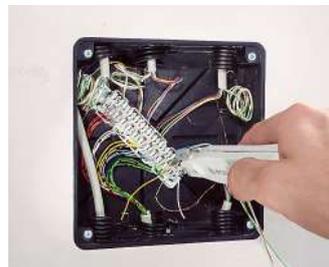
- As central junction casings for star-shaped cable laying
- Easy to rewire when changing the way rooms are used
- With separator walls to separate electrical circuits
- For installation of DIN terminal strips, TS 35 standard rails for terminal blocks, LSA+ terminal strips and much more
- End cover with screw fastening for VDE-compliant installation



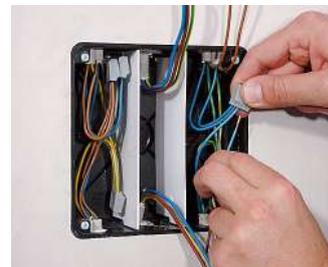
## Processing instructions



Space for installation of TS 35 standard rails for the installation of terminal blocks, terminal installation devices etc.



Space for installation of LSA+ terminals for distribution of telecommunication equipment.



Several electrical circuits can be safely separated in one casing using separator walls that can be inserted.



After breaking out a side wall, the casings (Art. No. 1092-90) can be clipped together and expanded to twice the size.

## Junction casing 80

- for max. 2 circuits using separator wall
- suitable for installation of DIN terminal strips, TS 35 standard rails for terminal strips, terminal blocks up to 16 mm<sup>2</sup>, etc.
- including cover



Length x Width x Depth	87 x 87 x 60 mm	87 x 87 x 60 mm
Conduit entries M20	8	8
Cable entries from top	16	16
For terminals up to	4 mm <sup>2</sup>	4 mm <sup>2</sup>
Halogen-free	-	Yes
 VDE	Yes	-
<b>Art.-No.</b>	<b>1094-91</b>	<b>1094-01</b>
Inner packaging/shipping	- / 100	- / 100

# Junction casings

for flush-mounting installation

## Junction casings 100 / 150

- for max. 2 circuits using separator wall
- suitable for installation of DIN terminal strips, TS 35 standard rails for terminal strips, terminal blocks up to 16 mm<sup>2</sup>, etc.
- including cover



Length x Width x Depth	107 x 107 x 57 mm	107 x 107 x 57 mm	159 x 159 x 75 mm	159 x 159 x 75 mm
M16 conduit entries	4	4	-	-
Conduit entries M20	12	12	16	16
Conduit entries M25	4	4	8	8
Cable entries	12	12	12	12
For terminals up to	6 mm <sup>2</sup>	6 mm <sup>2</sup>	16 mm <sup>2</sup>	16 mm <sup>2</sup>
Halogen-free	-	Yes	-	Yes
M32 conduit entries	-	-	4	4
	Yes	-	Yes	-
<b>Art.-No.</b>	<b>1095-91</b>	<b>1095-01</b>	<b>1096-91</b>	<b>1096-01</b>
Inner packaging/shipping	- / 100	- / 100	- / 30	- / 30

## Junction casing

- suitable for installation of DIN terminal strips, TS 35 standard rails for terminal strips, terminal blocks up to 16 mm<sup>2</sup>, etc.
- including cover



Length x Width x Depth	240 x 142 x 87 mm	238 x 208 x 68 mm
Conduit entries M20	24	20
Conduit entries M25	12	8
M32 conduit entries	6	4
Cable entries	12	-
For terminals up to	16 mm <sup>2</sup>	16 mm <sup>2</sup>
Halogen-free	Yes	Yes
Suitable for standard equipment with 70 mm installation height	Yes	-
Casings can be combined once with each other, dimensions are then	240 x 284 x 87 mm	-
For max. 4 electrical circuits using separator walls	Yes	-
Maximum of 3 electrical circuits with separator walls	-	Yes
	Yes	Yes
<b>Art.-No.</b>	<b>1092-90</b>	<b>1097-92</b>
Inner packaging/shipping	- / 10	- / 10

## Potential equalisation casing 10<sup>2</sup> and 16<sup>2</sup>

- for bathrooms or similar
- with potential equalisation rail, protected against corrosion
- including cover



Length x Width x Depth	107 x 107 x 57 mm	238 x 208 x 68 mm
Circular conductor 6–16 <sup>2</sup> , also uncut	1	-
Cables 1.5–10 <sup>2</sup> (for bathrooms or similar)	6	-
Cables up to 16 <sup>2</sup> , single and stranded wire	-	7
Circular conductors Ø 8–10 mm	-	1
Flat strip up to 30 mm wide	-	1
	-	Yes
<b>Art.-No.</b>	<b>1095-73</b>	<b>1097-75</b>
Inner packaging/shipping	- / 10	- / 1

## Note

Other earthing products can be found at our website.

## Replacement cover

- flat cover edge
- surface roughened



For casing size - flush-mounting boxes	Fire-proof	For casing size - concrete construction boxes	For casing size - cavity wall boxes	Art.-No.	Inner packaging/shipping
<b>87 x 87 mm</b>	650 °C	-	-	<b>1094-13</b>	10 / 450
<b>107 x 107 mm</b>	650 °C	-	-	<b>1095-13</b>	10 / 500
<b>159 x 159 mm</b>	650 °C	-	-	<b>1096-13</b>	10 / 200
<b>107 x 107 mm</b>	850 °C	128 x 128 mm	105 x 105 mm	<b>1095-93</b>	10 / 500
<b>159 x 159 mm</b>	850 °C	180 x 180 mm	165 x 165 mm	<b>1096-93</b>	10 / 200
<b>240 x 142 mm</b>	850 °C	-	238 x 142 mm	<b>1092-93</b>	5 / -
<b>238 x 208 mm</b>	850 °C	250 x 220 mm	235 x 205 mm	<b>1097-93</b>	5 / 100
<b>240 x 284 mm</b>	850 °C	-	-	<b>1092-95</b>	5 / -

## Separator walls

- for junction casings
- can be retrofitted to separate electrical circuits



for casing size	Fireproof	Halogen-free	Art.-No.	Inner packaging/shipping
<b>87 x 87 mm</b>	650 °C	Yes	<b>1094-20</b>	10 / -
<b>107 x 107 mm</b>	650 °C	Yes	<b>1095-20</b>	10 / -
<b>159 x 159 mm</b>	650 °C	Yes	<b>1096-20</b>	10 / -
<b>238 x 208 mm</b>	650 °C	Yes	<b>1097-22</b>	10 / -
<b>240 x 142 mm</b>	650 °C	Yes	<b>1092-20</b>	10 / -

# Universal installation housings

for flush-mounting installation



## Universal installation housings

Universal installation housings for a wide range of device installations always ensure optimum installation space for all kinds of devices. The intelligent housing design of all six housings ensures stability and secure hold in the wall.

- For displays, LED lights and much more
- For installing almost all shapes and sizes
- Mineral fibreboard allows individual installation opening



### Examples of use



### Installation



Make an appropriate wall opening, feed the cables and conduits into the housing and fasten it (using plaster) in the wall.



You can create the installation opening before or after inserting the housing. The equipment is attached by simply clamping it in or screwing it into the mineral fibreboard.



Use only screws that go into but not through the mineral fibreboard when attaching the device! (e.g. SPAX countersunk head screw 3.5 x 15 mm)!

### Note

Observe the maximum stroke length of the saw blade when sawing the installation opening.

## Universal installation housing with mineral fibreboard

- two-part, consisting of a housing and a mineral fibreboard cover
- all-round groove indicates the maximum opening size



Length x Width x Depth	87 x 87 x 75 mm	107 x 107 x 72 mm	159 x 159 x 90 mm
Conduit entries M20	10	14	20
Cable entries	16	12	-
Universal opening size up to max.	57 x 57 mm	77 x 77 mm	129 x 129 mm
For devices with an installation depth of max.	60 mm	60 mm	75 mm
M16 conduit entries	-	4	-
Conduit entries M25	-	4	10
M32 conduit entries	-	-	4
<b>Art.-No.</b>	<b>1094-22</b>	<b>1095-22</b>	<b>1096-22</b>
Inner packaging/shipping	- / 10	- / 10	- / 10

## Universal installation housing with mineral fibreboard

- two-part, consisting of a housing and a mineral fibreboard cover
- all-round groove indicates the maximum opening size



Length x Width x Depth	240 x 142 x 102 mm	240 x 280 x 102 mm	238 x 208 x 83 mm
Conduit entries M20	24	36	20
Conduit entries M25	12	16	8
M32 conduit entries	6	10	4
Cable entries	16	12	-
Universal opening size up to max.	199 x 102 mm	189 x 240 mm	198 x 168 mm
For devices with an installation depth of max.	90 mm	90 mm	70 mm
<b>Art.-No.</b>	<b>1092-27</b>	<b>1092-28</b>	<b>1097-28</b>
Inner packaging/shipping	- / 10	- / 10	- / 10

## My housing. Made just for me!

You manufacture modern operating elements for building technology, or sensitive control panels for industrial equipment? For concrete, masonry or cavity walls?

### We have the housing solution that you need!

- A high-quality, flexible, plastic housing.
- Developed on the basis of our many years of experience in plastics technology.
- Whatever dimensions your product has, we will create the best possible shape!
- Look for yourself – it couldn't be easier!



Configure the housing you need  
the configurator on our website makes it possible: [www.myhousing.eu](http://www.myhousing.eu)



## Interior Insulation box



One-gang junction box for electrical installations in internal insulation systems. For permanently secure and heat-bridge-free installation of switches, sockets and other devices in internally insulated exterior walls. For optimal room climate with proven protection from moisture damage. For use in many internal insulation systems.

- For installation in insulated interior walls
- Guarantees installation without heat bridges
- Moisture regulating and insulating
- Prevention of moisture induced structural damage
- Suitable for use in many insulation systems
- For insulation thicknesses 30 to 100 mm
- Installation on masonry without plaster



### Examples of use



Historically significant facades in exposed masonry or stucco facades.



Facade of a listed half-timbered house.

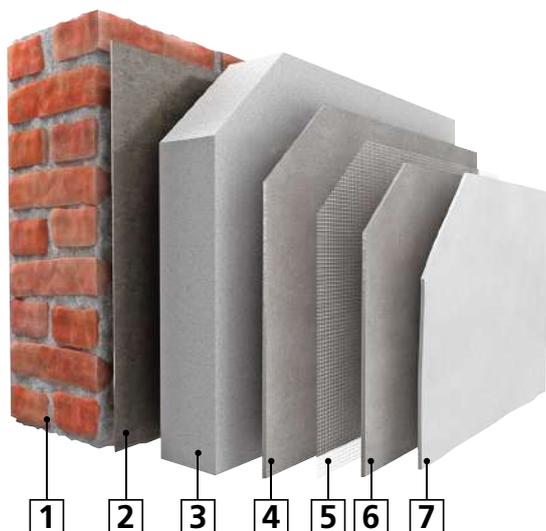


Suitable for e.g. diffusion-open insulation systems made of mineral insulation materials.



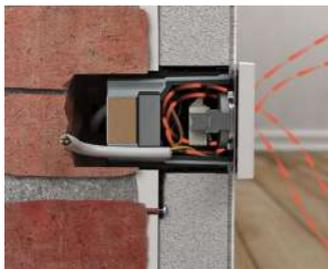
Can be used in existing masonry with different insulation thicknesses.

Specially developed for expert installation in diffusion-open internal insulation systems.



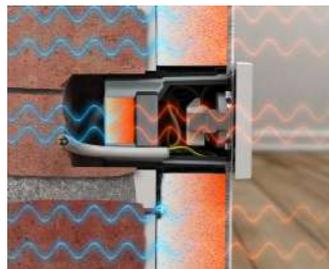
1 Masonry wall | 2 Adhesive | 3 Insulating board | 4 Reinforcement plaster | 5 Reinforcement fabric | 6 Reinforcement plaster | 7 Finish coat of plaster, decorative plaster

## Technical information



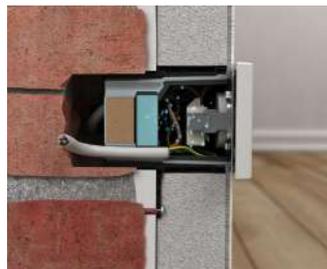
### Airtightness:

- Maintains the level of airtightness
- No air through-flow possible
- Air flow behind the insulation system is prevented
- No convection
- No entry of mould spores



### Heat insulation:

- No heat bridge
- Room heat enters the box not the cold wall
- Insulation component replaces function of the insulation system



### Moisture regulation:

- Room-side moisture (caused by bad ventilation, many people in the room) is stored
- Moisture is dispersed in a targeted way
- No corrosion on the accessory terminals



### Heat conductivity:

- Highly heat-conductive plastic for the inner box
- Room heat is transferred to the box
- The raised surface temperature prevents the formation of condensate

## Proof of functionality

A comprehensive components test carried out by the TU Dresden – Institut für Bauklimatik – confirms demonstrably the functionality of the KAISER internal insulation systems. The study of internal insulation systems with  $\lambda > 0.03/\text{mK}$  in insulation thicknesses from 30 to 100 mm confirms that by using the new internal insulation box, hygrothermic damage can be excluded. The certificate can be downloaded as a pdf file from our website.



## Processing instructions



Installation on masonry without using plaster or mortar.



Dimension details on the adapter allow easy adaptation to the insulation thickness.



The box allows 4 cables up to  $\varnothing 11.5$  mm to be entered.



Cut exact and air-tight cable entry using a drill.

## Creation of combinations



Combination of boxes by simply snapping the adapters into place.



Combination distance 71 mm by removing the premarked Edge.



Fully insulated through-wiring via support connector (Art. No. 9060-88).



Example of installation of a double socket

## Installation



Determine insulation thickness, adjust fastening lugs of the Adapter.



For insulation thicknesses < 100mm, cut wall opening (Ø 82mm).



Define location on the wall and mark it.



Insert cable on rear side of adapter, fix adapter to the wall.



Insert cables into box, screw box to Adapter.



Strip cable, insert signal cover.



Apply the internal insulation around the box.



Remove signal cover and install required accessory.

## Interior Insulation box

- One-gang junction box for insulated interior walls
- including attachment adapter
- rear cable entries
- circumferential airtight sealing lip
- Can be combined with each other



3D animation

<b>Depth</b>	<b>90 mm</b>
Adapter dimensions (LxWxD)	75 x 81 x 100 mm
for insulation thicknesses	30 - 100 mm
Device screws	2
Screw spacing	60 mm
Cable entries of up to Ø 11.5 mm	4
Support connectors for each package	3
<b>Art.-No.</b>	<b>1159-90</b>
Inner packaging/shipping	5 / 50

## Fixing adapter internal insulation box

- For secure fixing of the internal insulation box
- For installation on masonry
- For standard combinations 71 mm



<b>Adapter dimensions (LxWxD)</b>	<b>75 x 81 x 100 mm</b>
for insulation thicknesses	30 - 100 mm
<b>Art.-No.</b>	<b>1159-91</b>
Inner packaging/shipping	5 / 50

## Support connector

- For fully insulated through-wiring in combinations
- For Art. Nos. 1159-90, 1555-51, 9069-03, 9069-04 and 9074-03



<b>Art.-No.</b>	<b>9060-88</b>
Inner packaging/shipping	25 / 100

## Assignment table for making entry openings



HSS drill		Ø setting
NYM cable	3 x 1.5 mm <sup>2</sup>	8.0
	5 x 1.5 mm <sup>2</sup>	9.5
	3 x 2.5 mm <sup>2</sup>	9.5



Universal opening cutter		Ø setting
Support connector	9060-88	14
Conduits	M16	17





## Universal equipment carrier

Universal equipment carrier for securely attaching electrical installations in or to heat-insulating external facades. Stable attachment of external lights, sockets, motion detectors, external temperature sensors, radio receivers, anemometers, cameras, letter boxes and much more.

- Secure attachment of various equipment to or in insulated external facades.
- Prevents heat bridges
- Quick installation with snap-in connections
- For insulation thicknesses of 60 to 360 mm

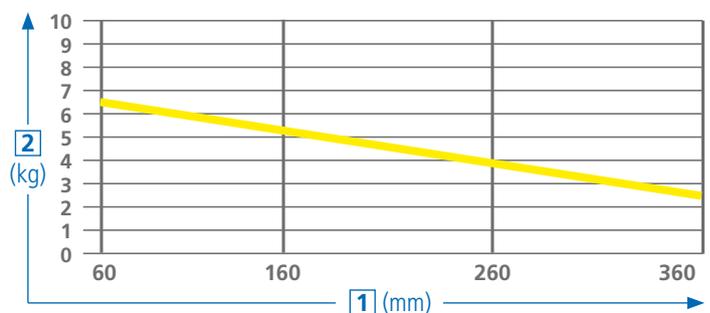
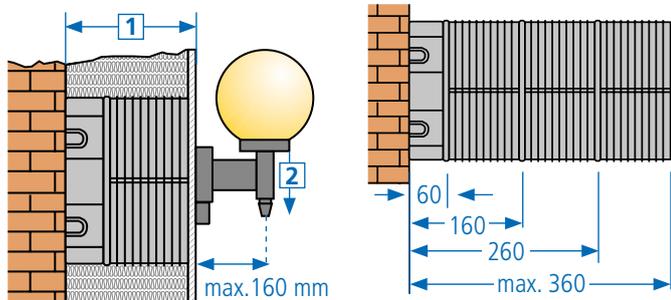


### Examples of use



### Processing instructions

Weight-bearing load dependent on the insulation thickness. The universal equipment carrier is only suitable for vertical installation (upright)!



1 External insulation - insulation thickness | 2 Permissible load

#### Heat bridge calculation

Temp. in °C

not insulated    insulated

+ 20 °C    - 10 °C

When the equipment carrier is correctly installed, hardly any heat losses are measured.

Calculation and source:  
PASSIV HAUS INSTITUT  
Dr. W. Feist

[mm]	insulated [m <sup>2</sup> ]	not insulated [m <sup>2</sup> ]
160	0.027	0.300
360	0.039	0.520

## Installation



Screw the housing base to the wall.



If necessary, adjust the extension element to suit the insulation thickness.



Fit the rock wool provided. (supplied)



Fit the mounting plate (closing clip underneath) and close.



If you do not have a universal equipment carrier with combination insert (Art. No. 1159-26) available, you can use the rear markings to cut the installation opening for the fitting of one-gang boxes.



Fit and close the mounting plate with one-gang boxes.

## Universal equipment carrier

- for use with externally-insulated walls
- for secure fixing of lights, intercoms, motion detectors etc.
- can be extended in steps of 100 mm each (max. 360 mm) using extension elements Art. No. 1159-27
- can be reduced in 10 mm steps
- With pre-cut rock wool parts through which the equipment carrier can be fed



<b>Length x Width x Height</b>	<b>220 x 100 x 60-160 mm</b>
Combination conduit entries M20/25	6
	Yes / Yes
<b>Art.-No.</b>	<b>1159-24</b>
Inner packaging/shipping	- / 5

## Extension element

- to extend the Universal equipment carrier by 100 mm simply by latching on
- can be reduced in 10 mm steps by cutting
- with rock wool pre-cut parts to fill the extension panel



<b>Length x Width x Depth</b>	<b>220 x 100 x 100 mm</b>
<b>Art.-No.</b>	<b>1159-27</b>
Inner packaging/shipping	- / 5



## Universal equipment carrier with combination insert

Universal equipment carrier with combination insert for the installation of entryphones and installation accessories on the insulated external facade. The perfect basis for intercoms, sockets, switches and much more, and also for two-unit and three-unit combinations.

- Guarantees installation without heat bridges
- For entryphones and variable accessory installation combinations of 1 to 3 units
- For future expansion without damaging the external facade
- For insulation thicknesses up to 360 mm



### Examples of use



The product is suitable for single, double or triple combinations...



...and also permits future expansion without damage to the facade.

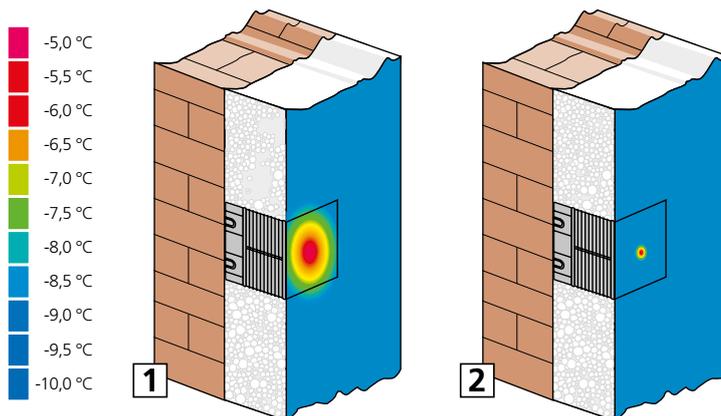


The equipment carrier with combination insert can be mounted horizontally or vertically.

### Heat bridge calculation

If installed correctly, heat losses are hardly measurable.

Calculation and source: inside: +20°C, outside: -10°C | PASSIV HAUS INSTITUT Dr. W. Feist



1 not insulated | 2 insulated

## Installation



Define location on the wall and mark it.



Screw the housing base to the wall.



If necessary, adjust the extension element to suit the insulation thickness.



Attach the extension element and snap it into place.



Fit the rock wool insulation (supplied).



Position the combination insert (mounting clip at bottom) and snap into place.



The installation can now be fitted and installed.



After applying the plaster, attach the desired accessory.

## Universal equipment carrier with combination insert

- for use with externally-insulated walls
- For secure mounting of intercoms, switches, sockets and many more
- Can be extended in steps of 100 mm using extension element
- With pre-cut rock wool parts through which the equipment carrier can be fed



3D animation

<b>Length x Width x Depth</b>	<b>220 x 100 x 160 mm</b>
DIN EN conduit Ø	max. 25 mm
Cable entries	max. Ø 15 mm
Insulation thickness	60 - 160 mm
<b>Art.-No.</b>	<b>1159-26</b>
Inner packaging/shipping	- / 5

## Extension element

- to extend the Universal equipment carrier by 100 mm simply by latching on
- can be reduced in 10 mm steps
- with rock wool pre-cut parts to fill the extension panel



<b>Length x Width x Depth</b>	<b>220 x 100 x 100 mm</b>
<b>Art.-No.</b>	<b>1159-27</b>
Inner packaging/shipping	- / 5



## System equipment carrier

The system equipment carrier is designed to fit perfectly into the external insulation and in this way reliably prevents heat bridges. Easy, fast fixing with the screw dowles included in the scope of delivery permanently anchors the system equipment carrier on many surfaces. Ideal for stable fixing of external lamps, sockets, door intercom devices and many more. nd permanently. Heavy loads are not a problem.

- Extra-fast, easy installation
- 2 product types allow a wide range of applications
- Heat bridges are efficiently prevented
- Adaptable to insulation thickness in 10 mm steps – no cutting necessary
- Modular design for insulation thicknesses from 160 to 310 mm

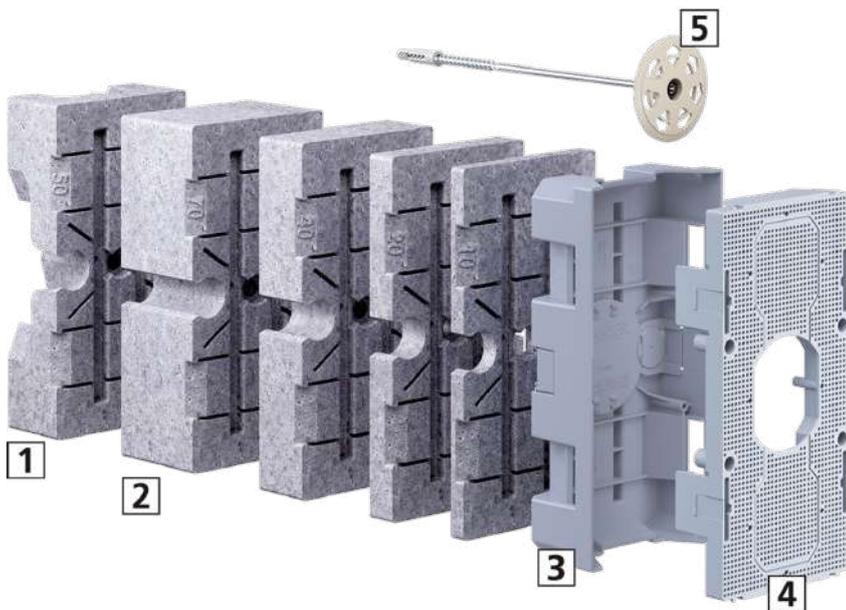


### Examples of use



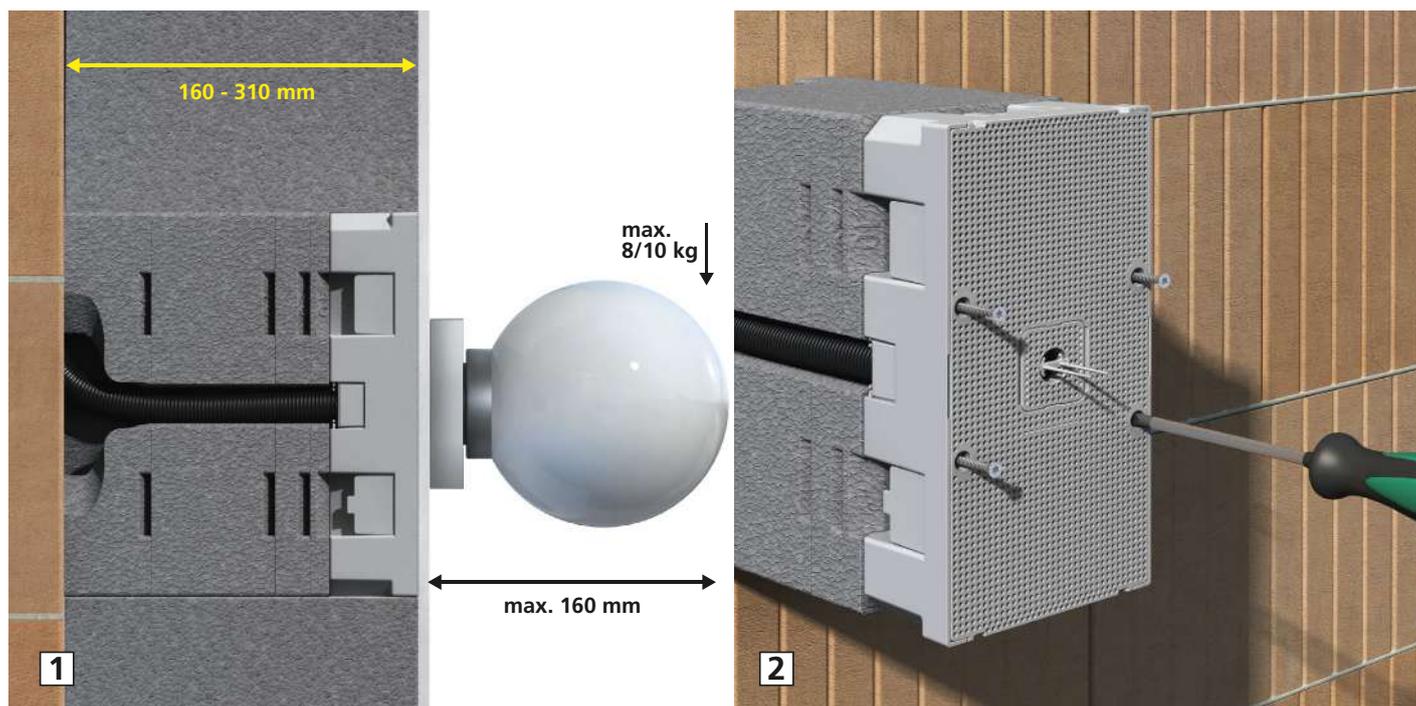
### Versatile in use

The choice of two front parts and the modular design make the system equipment carrier a product which is extremely versatile in use. Cutting to size is not necessary because of adaptation to the insulation in 10 mm steps. Fixing by means of a single impact dowel reduces fitting time to a minimum, and at the same time it ensures secure anchoring to the base, e.g. masonry, concrete or wood materials.



1 Basic element | 2 Intermediate elements | 3 Housing base | 4 Front plate | 5 Screw-in wall-plug

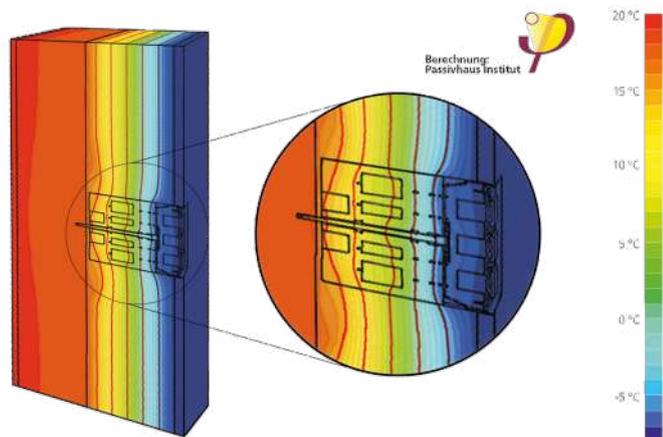
## Weight-bearing loads



**1** Weight-bearing loads – independently of the insulation thickness: For an overhang of 160 mm and insulation thicknesses of 160 - 310 mm; 8 kg without additional screwing of the front plate; 10 kg with additional screwing of the front plate. The system equipment carrier must be fitted vertically. The hole for the dowel must be drilled to make an exact fit. | **2** Increasing the weight-bearing loads: To fix heavier loads, we recommend additional securing of the mounting plate by means of four  $\varnothing 3.5 \times 25$  screws

## Heat bridge calculation

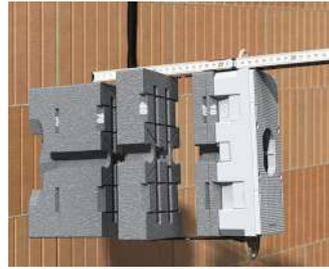
A heat bridge calculation carried out by the Passivhaus Institut in Darmstadt shows that the system equipment carrier has a point-specific heat bridge loss coefficient of  $xWB < 0,01 \text{ W/K}$  and meets the requirements of a heat bridge-free facade.



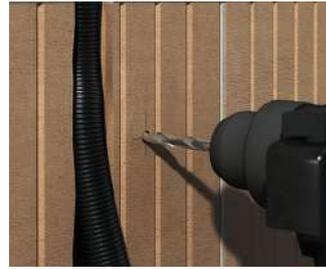
## Installation



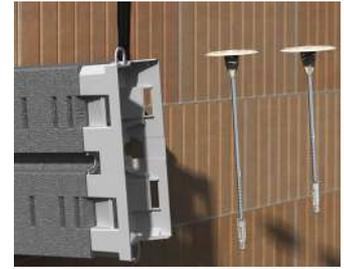
Masonry with conduit Exit.



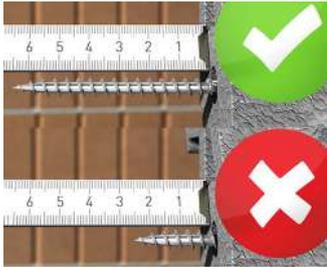
Adapt equipment carrier to insulation thickness by selecting suitable components.



Cut Ø 8 mm drill hole at least 50 mm deep.



Remove the side lugs from the screw dowel. Note the different lengths!



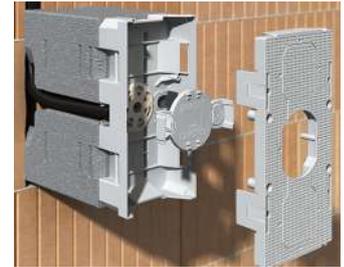
The dowel screw must protrude from the basic element by at least 40 mm.



Hold the equipment carrier against the wall, align it, and fix it using the dowel.



Press the conduit into the side guide and cut it to length.



Snap on the required front part. Fit Styrofoam cap and the dowel cover.

## Tips and tricks



For an additional conduit, remove the bridges next to the Neopor® parts...



...and the perforated entry broken out in the case of the dowel cover.



For air-tight installation, fit a suitable air-tight sleeve to the conduit exit site...

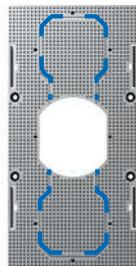


...and fit a sealing plug to the conduit.

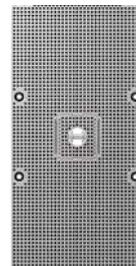
## Combinations with front panels



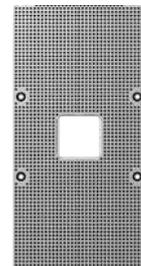
Multiple accessories front panel (Art. Nos. 9966.31 and 9966.32); opening Ø 1 x 68 mm.



2-way and 3-way combinations can be made by breaking out the covers.



Delivery status of (Art. Nos. 9966.21 and 9966.22), universal mounting plate.



Universal mounting plate with broken-out exit for luminaires.

## Modular support for devices 160 – 240 mm

- Adaptation to insulation thickness possible in 10 mm steps
- including 2 screw dowels
- Material: Polyethylene
- Insulation material: Neopor
- Processing temperature: - 5 °C / + 60 °C



3D animation

Length x Width x Height	220 x 110 x 160-240 mm	220 x 110 x 160-240 mm
Combination conduit entries M20/25	2	2
Combination	1x1 / 2x1 / 3x1	Luminaire outlet / mounting plate
Screw-in wall-plug	1 x 200 mm, 1 x 240 mm	1 x 200 mm, 1 x 240 mm
Halogen-free	Yes	Yes
  850 °C	Yes	Yes / Yes
	-	Yes
<b>Art.-No.</b>	<b>9966.31</b>	<b>9966.21</b>
Inner packaging/shipping	- / 5	- / 5

## System equipment carrier 240 - 310 mm

- Adaptation to insulation thickness possible in 10 mm steps
- including 2 screw dowels
- Material: Polyethylene
- Insulation material: Neopor
- Processing temperature: - 5 °C / + 60 °C



3D animation

Length x Width x Height	220 x 110 x 240-310 mm	220 x 110 x 240-310 mm
Combination conduit entries M20/25	2	2
Combination	1x1 / 2x1 / 3x1	Luminaire outlet / mounting plate
Screw-in wall-plug	1 x 280 mm, 1 x 320 mm	1 x 280 mm, 1 x 320 mm
Halogen-free	Yes	Yes
  850 °C	Yes	Yes / Yes
	-	Yes
<b>Art.-No.</b>	<b>9966.32</b>	<b>9966.22</b>
Inner packaging/shipping	- / 5	- / 5



## Installation housing ThermoX® Iso +

Installation housing for the secure and heat-bridge-free installation of rigid and swivelling built-in LED luminaires or other installation accessories in insulated ceilings. The housing protects the surrounding insulation material against the high operating temperatures of the LED luminaire and protects the LED luminaire itself against dirt. The integrated insulation element reliably prevents heat bridges.

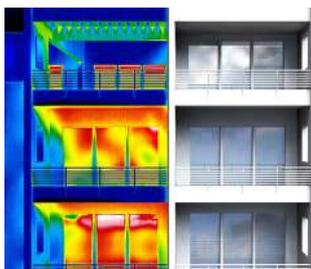
- For the installation of luminaires and installation accessories in insulated ceilings
- Suitable for all standard insulation materials
- Thermically-protected installation space
- The integrated insulation element prevents heat bridges
- For insulation thicknesses from 100 mm to 160 mm (170 mm to 350 mm with extension element)
- Adjustment to the insulation thickness in 10 mm steps.
- Installation diameter up to  $\varnothing$  86 mm



Awarded with the  
BAKA-Award 2019



### Examples of use



Buildings are constructed heat-bridge-free using the ETICS composite thermal insulation systems, e.g. ...



...insulated external ceilings of built-over terraces with lighting.



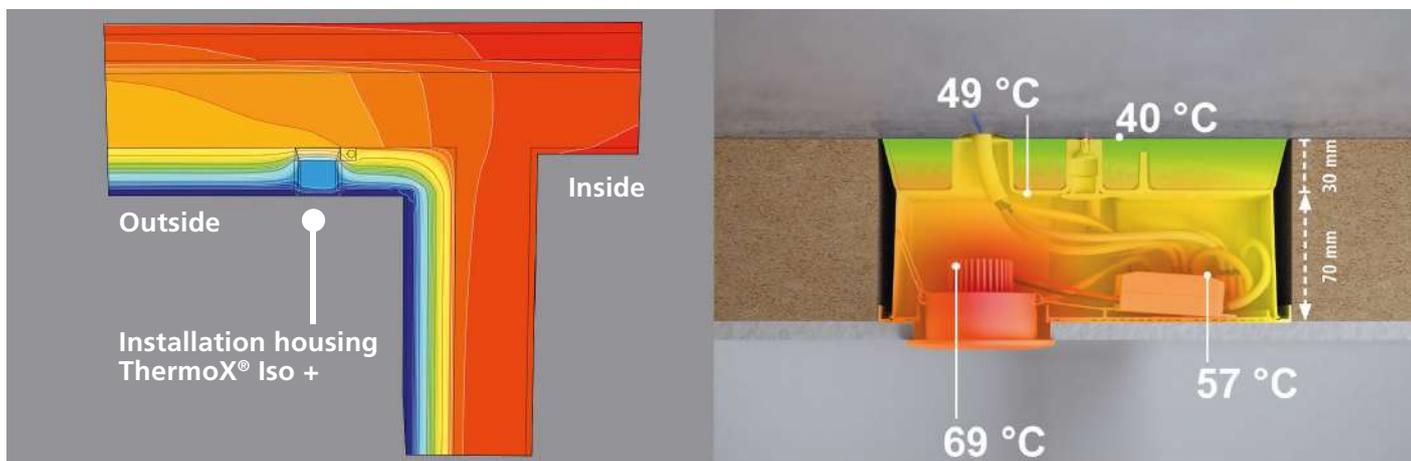
...insulated, recessed entrance areas with lighting.



...insulated facades with outdoor lighting over the entrance and garage door.

### Heat-bridge calculation / temperature profile

A heat bridge calculation by the Passivhaus Institut, Darmstadt, shows that heat bridges can be reliably prevented by the installation housing for the external insulation. The installation housing is also suitable for use in passive houses.



1 Heat bridge profile | 2 Installation housing for external insulation (ambient temperature 25°C) with 8 Watt LED illumination.

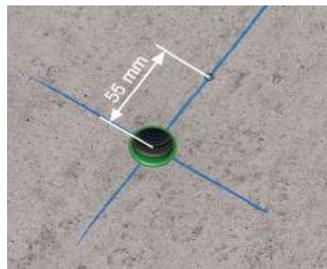
## Installation



Ceiling with conduit or cable exit. Measuring the insulation thickness.



Adapt installation housing to the insulation thickness.



Mark fixing point 55 mm from the luminaire centre point.



Alternative: Position the installation housing with the alignment markings for the luminaire and mark the drill hole.



Drill a  $\varnothing 8$  mm hole for a standard dowel and insert the dowel.



Break out the conduit entry or cut an exact cable entry for airtight installation, e.g. by using the KAISER universal opening cutter (Art. No. 1085-80).



Screw installation housing to the ceiling.



Fit the screw covering.



Insert the conduit or cable into the installation housing; fit sealing plug to the conduit.



Ceiling exit  $\varnothing 68$  mm for knocking in, ceiling outlet up to  $\varnothing 86$  mm for cutting out.



Depending on the required installation diameter ceiling exit of  $\varnothing 68$  mm or up to  $\varnothing 86$  mm, turn the front part by  $180^\circ$  and latch into Position.

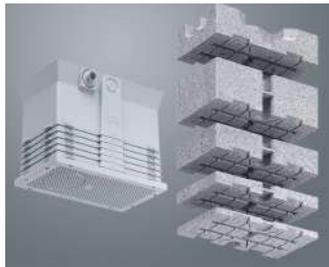


Applying insulation and plaster. Fitting the LED installation spotlight with plenty of space for the ballast device.

## Processing instructions



Many entry possibilities for conduits and cables.



Adaptation to the insulation thickness (< 160 mm) simply by cutting-off using measuring scale or (> 160 mm) with extension element.



Universal front part for installation diameter of  $\varnothing$  68 mm for knocking in or universal up to  $\varnothing$  86 mm for cutting out (turn by 180°).



Alignment markings for the luminaire position and the fixing point.



Adaptation to the insulation thickness (<160 mm) in 10 mm steps, e.g.:



Installation depth 70 mm (insulation thickness 100 mm).



Installation depth 100 mm (insulation thickness 130 mm).



Installation depth 130 mm (insulation thickness 160 mm).

## Installation housing ThermoX® Iso +

- with external insulation of ceilings
- for insulation thicknesses of 100 mm and above
- Adjustment to the insulation thickness in 10 mm steps.
- for LED luminaires up to 8 Watt
- max. luminaire installation depth 70 mm to 130 mm (insulation thickness less 30 mm)
- Front panel with ceiling exit (CE)  $\varnothing$  68 mm or universal up to  $\varnothing$  86 mm
- Space for ballast devices 120 mm x 30 mm x 28 mm (installation diameter 68 mm, installation depth 70 mm)



3D animation

<b>Length x Width x Height</b>	<b>220 x 110 x 160 mm</b>
Insulation thickness	100 - 160 mm
Ceiling exit (CE) $\varnothing$	68 - 86 mm
max. lamp output	8 Watt
max. installation depth for the LED luminaires	70 - 130 mm
Cable or conduit entries up to max. $\varnothing$ 25 mm	5
<b>Art.-No.</b>	<b>1159-70</b>
Inner packaging/shipping	- / 6

## Extension element

- for installation housing for external insulation
- for insulation thicknesses 170 - 350 mm
- Adjustment to the insulation thickness in 10 mm steps.



<b>Length x Width x Height</b>	<b>220 x 110 x 190 mm</b>
Insulation thickness in combination with Art. No. 1159-70	170 - 350 mm
<b>Art.-No.</b>	<b>1159-71</b>
Inner packaging/shipping	- / 6



FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

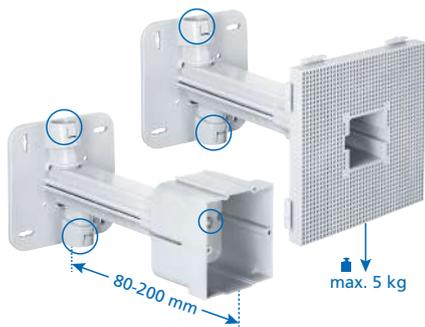
PLUGGABLE

CONNECTIVITY

CABLE GLANDS

TOOLS

SERVICE



## Telescope equipment carrier and switch box.

For the safe installation of luminaires, motion detectors and many other accessories in and on insulated facades. Optimised for the latest insulation thicknesses, the telescopic products permit a wide range of applications in external faces with insulation thicknesses from 80 to 200 mm. The two conduit entries on the basic carrier guarantee secure conduit connection. The cable routing which is integrated in the carrier arm ensures a fast, easy cable pull-in.

- Stable fit to walls and ceilings
- For insulation thicknesses from 80 to 200 mm
- Equipment carriers for accessories up to max. 5 kg
- One-gang boxes can be combined with a standardised 71 mm combination distance
- Conduit entries on the carrier with internal cable routing
- Integrated indicated dimension allows easy cutting off to insulation thickness
- Front fixing and depth stop prevent incorrect installation
- Front fixing of the mounting plate/one-gang box



### Examples of use



### Installing the basic carrier



Prepare the cable routes. Try to avoid direct cable routing through masonry and insulation.



The internal cable routing can easily be broken off to permit cable routing from the rear.



Saw the carrier to the required length. The integrated indicated dimension ensures exact reading of the dimension.



Slotted holes allow precise alignment even when the drill holes are not exact.

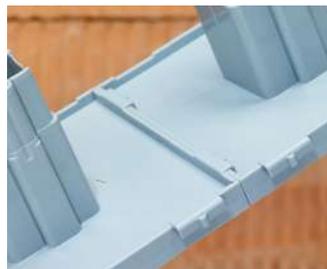
## Installing the equipment carrier



Push the one-gang box onto the supporting arm as far as the stop.



The front fixing and the depth stop always ensure exact fitting and prevent incorrect installation.



Side fixings allow the secure positioning of several equipment carriers next to each other...



...and stable installation for accessories when the attachment points are far apart.

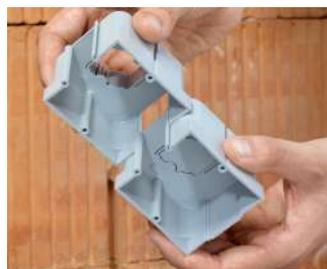
## Installing the one-gang box



Push the one-gang box onto the supporting arm as far as the stop.



The front fixing and the depth stop always ensure exact fitting and prevent incorrect installation.



For multiple combinations, cut out the side separator walls and connect the one-gang boxes.



For multiple combinations, cut out the side separator walls and connect the one-gang boxes.

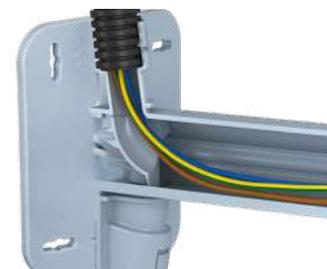
## Product advantages



Dimensions shown on the carrier ensure that the carrier length can easily be sawn off to match the insulation thickness – no need for measuring!



Slotted holes allow precise alignment even when the drill holes are not exact.



The two conduit entries on the carrier guarantee secure conduit support. The integrated cable routing ensures fast, easy cable insertion.



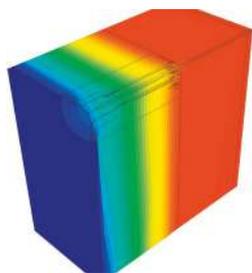
Luminaires and many other accessories are easily fitted in the mounting plate through the plaster using screws up to 4 mm Ø.

## Front fixing of telescope equipment carrier and box

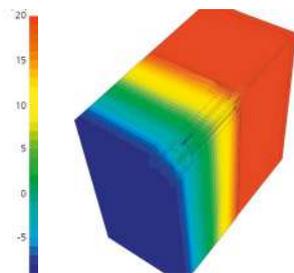


## Heat bridge calculation / weight-bearing load

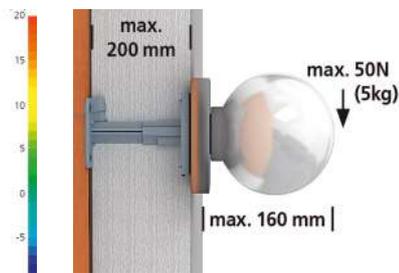
A heat bridge analysis produced by the Passivhaus Institut Dr. Feist, Darmstadt, showed that heat conductivity is only changed to a negligible extent and consequently it is demonstrated that no heat bridges result. When the space between the basic carrier and mounting plate / one-gang box is filled with insulating material, the loss coefficient „x WB“ for the telescope equipment carrier is 0.0085 W/K, and 0.0077 W/K for the telescope switch box.



Telescope equipment carrier



Telescope switch box



When fitting an equipment carrier to a wall, ensure that the cable entries are positioned vertically.

## Telescope equipment carrier

- for secure installation of luminaires and much more
- for use with external insulation of walls and ceilings
- installation area for dowel-free installation of accessories



3D animation

<b>Length x Width</b>	<b>120 x 120 mm</b>
Insulation thickness	80 - 200 mm
max. attachment surface for devices	120 x 120 mm
Conduit entry M20 on the carrier	2
Weight when attached to ceiling	5 kg
Weight when attached to wall	5 kg
<b>Art.-No.</b>	<b>1159-60</b>
Inner packaging/shipping	- / 10

## Telescope switch box

- for secure fixing of sockets and much more
- for use with external insulation of walls and ceilings
- with 2 screw domes
- Standardised combination distance 71 mm



## Combination one-gang box

- for combinations with telescope switch box (Art. No. 1159-61)



<b>Depth x Length x Width</b>	<b>50 x 68 x 70 mm</b>	<b>50 x 68 x 70 mm</b>
Insulation thickness	80 - 200 mm	-
Screw spacing	60 mm	-
Conduit entry M20 on the carrier	2	-
Cable entries up to Ø 16 mm	2	2
<b>Art.-No.</b>	<b>1159-61</b>	<b>1159-62</b>
Inner packaging/shipping	- / 10	- / 10

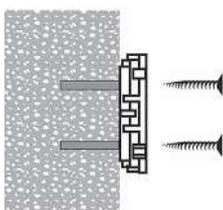
## ISO box set

ISO box set for securely attaching one-gang boxes on the masonry in insulated facades.

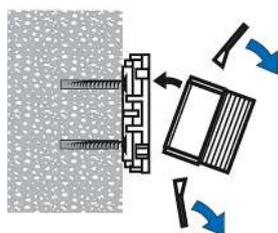
- For securely attaching switches, sockets etc. in the external insulation
- Can be extended as required
- High torsional strength, and can be combined by means of snap-in connector
- Guaranteed standard combination distance of 71 mm



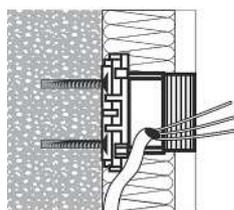
### Installation



Secure front part to the wall.



Break off the nail straps of the extension ring and screw the ring to the front part (device screws 40 mm).



Extension rings can be fitted for adaptation to insulation thickness.



### Note

Pay attention to expert cable entry and cable length! If necessary, extend cable prior to installation. All cavities in the ISO box set must be completely filled with insulating material in order to prevent heat bridges. Not suitable for internal insulation – please use Art. No. 1159-90 for this purpose!

### ISO box set

- mounts on wall surface
- for exterior insulation
- consists of front part, extension ring and 2 ring attachment screws 40 mm
- compensation height 70 mm, can be reduced by 3 x 5 mm to 55 mm
- multiple extensions possible with extension ring



<b>Installation opening</b>	<b>60 mm</b>
<b>Art.-No.</b>	<b>1155-03</b>
Inner packaging/shipping	5 / 10

## UP extension ring

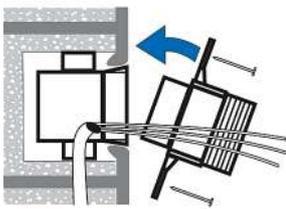


UP extension rings for extending existing one-gang boxes or one-gang junction boxes.

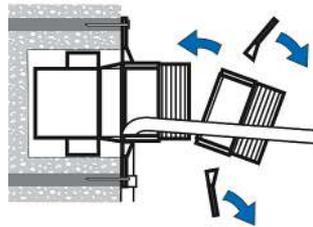
- For extending existing one-gang boxes
- Can be attached on top of existing one-gang boxes and one-gang junction boxes
- For securely attaching switches, sockets etc.
- Can be extended as required
- High torsional strength, and can be combined by means of snap-in connector
- Guaranteed standard combination distance of 71 mm



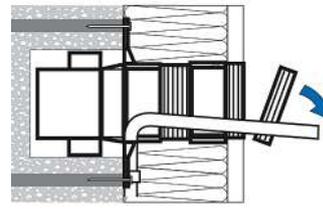
### Installation



The existing one-gang box must be fitted flush to the wall and securely anchored. Using 40 mm device screws, screw the ISO extension ring to the existing box. (If necessary, also secure with nails.)



For multiple extensions: break off the nail straps on all additional extension rings and connectors. Fit with an offset of 90° and screw to the last ring.



Every extension ring can be shortened to adapt to the insulation thickness. Fill all cavities in the one-gang box and extension rings with insulating material (no heat bridge created).

### Note

Pay attention to expert cable entry and cable length! If necessary, extend cable prior to installation. All cavities in the ISO box set must be completely filled with insulating material in order to prevent heat bridges. Not suitable for internal insulation – please use Art. No. 1159-90 for this purpose!

### UP extension ring

- compensation height 50 mm, can be reduced by 3 x 5 mm to 35 mm
- multiple extensions possible
- 2 x 40 mm ring attachment screws needed, Art. No. 2472-40



<b>Installation opening</b>	<b>60 mm</b>
<b>Art.-No.</b>	<b>1155-02</b>
Inner packaging/shipping	10 / 50

## Mini equipment carrier

Mini equipment carrier for later attachment of a variety of accessories to insulated and already plastered composite thermal insulation systems. Luminaires, motion detectors, external sensors etc. can be permanently attached easily, quickly, securely and without creating heat bridges.

- For retrofitting in insulated facades
- Exact flush aligning of attachment devices
- Guarantees installation without heat bridges
- 4 swivels for secure anchoring
- No moisture penetration



### Examples of use



The small mini device carriers are concealed by luminaires and smaller accessories.



Secure attachment of motion detectors.

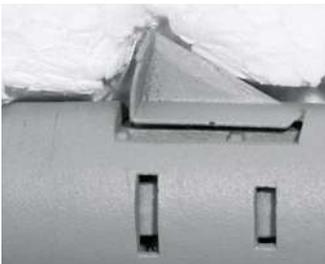


Invisible even when close to edges.



Secure, easy fitting of the corner mounting.

### Technical information



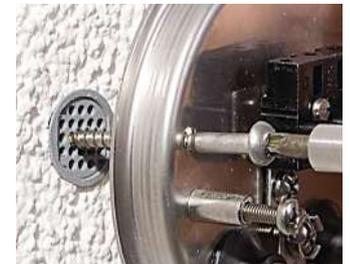
The swivels anchor the KAISER mini equipment carrier in the insulation.



Clamping ribs, sealing lip and holding ring provide additional stability.



The adjustable screw-on surface accommodates a tolerance of up to 10 mm.



The screw-on surface is concealed even when the attachment points are close to the edge.

### Hardened metal cutter Ø 20 mm for KAISER mini equipment carrier



The hardened metal cutter Ø 20 mm with hardened metal cutters for exact installation openings. (Art. No. 1088-06).



By simply unscrewing the cutter head, the drilled core can be removed quickly using a centering drill.



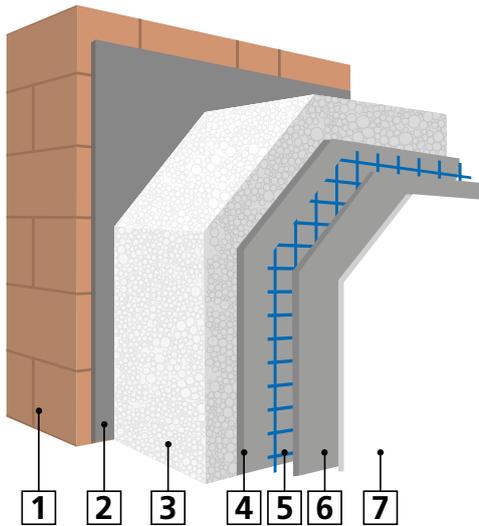
The drilling depth stop ensures that only the amount of insulation material is removed which is necessary to secure the mini equipment carrier.



The insulating capacity remains intact despite the installation opening.

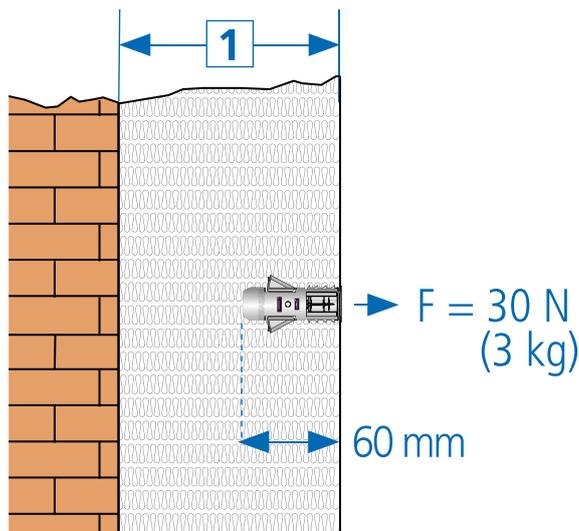
## Structure of an organic ETICS

The mini equipment carrier was developed especially for later installation in organic composite thermal insulation systems.



1 Masonry wall | 2 Adhesive | 3 Insulating board | 4 Reinforcement plaster | 5 Reinforcement fabric | 6 Reinforcement plaster | 7 Finish coat of plaster, decorative plaster

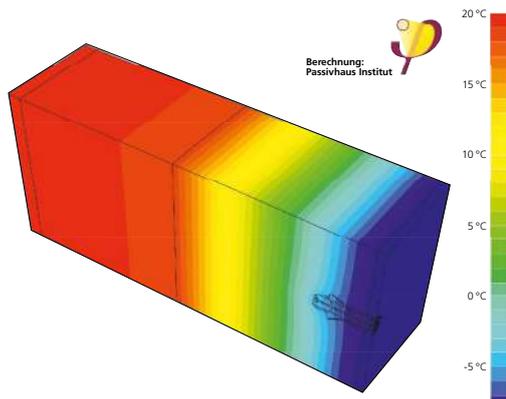
Maximum pull-out force for the mini equipment carrier.



1 External insulation - insulation thickness

## Heat bridge calculation

A heat bridge analysis produced by the Passivhaus Institut Dr. Feist, Darmstadt, showed that heat conductivity is only changed to a negligible extent and consequently it is demonstrated that there are no heat bridges in the electrical installation. The loss coefficient „x WB“ is 0.000054 W/K.



## Installation

The two-piece mini equipment carrier can be anchored securely in the insulated external facade in a few simple steps.



Create installation openings of Ø 20 mm (e.g. KAISER hardened metal cutter with depth stop).



Release the cutter head and remove the drilled core.



Press the anchor sleeve of the mini equipment carrier into the installation opening so that it is flush with the wall.



Press in the attachment core until it locks into the anchor sleeve.



Pressing in the attachment core anchors the swivels in the insulation material and provides a secure fit for the mini equipment carrier.



The mini equipment carriers now provide stable and wall-flush screw-on surfaces...



...and provide a tolerance compensation of up to 10 mm. This permits later exact alignment of all installation accessories.



The luminaire is securely and permanently flush-mounted to the wall.

## Mini equipment carrier

- Retrofitting in existing composite thermal insulation systems
- consisting of anchor sleeve and attachment core
- for insulation thicknesses of 80 mm and upwards
- Screw-on surface with 10 mm tolerance compensation
- 4 swivel cutters
- 2 ribs
- Sealing lip on all sides
- Weight loading up to 30 N (3 kg)
- equipment attached with self-tapping screws with Ø of 3.2 - 4 mm



3D animation

<b>Length</b>	<b>60 mm</b>
Installation opening	Ø 20 mm
<b>Art.-No.</b>	<b>1159-50</b>
Inner packaging/shipping	10 / 100

## One-gang junction box ECON® Styro55



One-gang junction box ECON® Styro55 for later attachment of a wide range of installation accessories to insulated and pre-plastered composite thermal insulation systems (ETICS). Switches, sockets, intercoms etc. can be permanently attached easily, quickly, securely and without heat bridges.

- For retrofitting in insulated facades
- Cutter system prevents damage to cables
- Guarantees installation without heat bridges
- 4 swivels for secure anchoring
- No moisture penetration



### Examples of use



Secure attachment to a ETICS without adhesive.



Accessory installation without disrupting the insulation or creating heat bridges.



Secure and flush-mounting installation including multiple combinations.

### Technical information



Tool-free and wind-tight cable entry prevents air draughts along the cable.



The swivels anchor the box securely in the insulation material. The ribs at the front also give the box additional support.



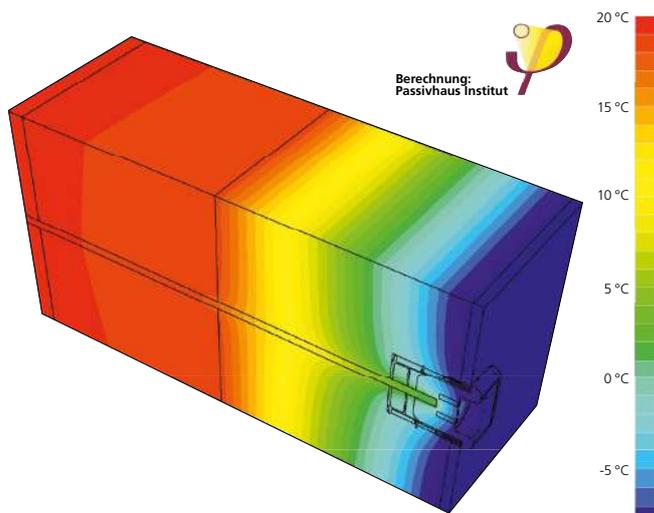
The lip at the back forms a sealing barrier to the insulation material and prevents air draughts along the box.



The all-round sealing lip seals the ETICS, so no moisture can penetrate.

## Heat bridge calculation

A heat bridge analysis produced by the Passivhaus Institut Dr. Feist, Darmstadt, showed that heat conductivity is only changed to a negligible extent and consequently it is demonstrated that no heat bridges result. The loss coefficient „x WB“ is 0.005044 W/K.



## Installation with an existing cable



Ensure that the cable was fed through the insulation material panel. Shorten the existing cable to approximately 10 cm.



Fasten the KAISER centering aid Ø 68 mm (Art. No. 1090-68) to the composite thermal insulation system using steel nails.



Using carbide cutter 180 (Art. No. 1088-07), cut the installation opening precisely as far as the depth stop.



Remove the drilled core from the opening.



The opening is now only as deep as necessary. The insulation remains intact and the cable is undamaged.



The ECON® technology elastic sealing membrane ensures a wind-tight seal around the cable as it is pushed through.



Simply insert the ECON® Styro55 one-gang junction box in the installation opening.



Press the box in the holding ring until the rim is flush with the wall.



Use KAISER tool (Art. No. 1090-22) to position the four swivels in the catch mechanism.



Flush-mounting and secure fit of the one-gang box.



Using the KAISER stripping pliers, (Art. No. 1190-02), remove the insulation from the cable.



The swivel sheaths on the box seat themselves securely in the insulation material.

## Installation of combinations



Using the combined cutting aids (Art. No. 1090-68), cut installation openings at the standard spacing of 71 mm.



Before inserting the support connector, remove the strap without using a tool.



Fully-insulated through-wiring is accomplished using the KAISER support connector (Art. No. 9060-88).



Secure and permanent attachment of multi-gang combinations, intercoms and much more.

## One-gang junction box ECON® Styro 55

- Retrofitting in existing composite thermal insulation systems
- for insulation thicknesses of 80 mm and upwards
- 4 swivel cutters
- Clamping ribs
- Sealing lip on all sides
- including setting tool (Art. No. 1090-22) per packaging unit



3D animation

<b>Depth</b>	<b>60 mm</b>
Cut hole Ø	68 mm
Cable entries up to Ø 15 mm	2
Device screws	2
Screw spacing	60 mm
Support connectors for each package	5
	Yes
<b>Art.-No.</b>	<b>1555-51</b>
Inner packaging/shipping	10 / 100

## One-gang junction box - ECON® Iso +

The ECON® Iso + one-gang junction box is the solution for electrical installation work in wood fibre insulation boards. Four swivels, specially designed for use in solid heat insulation and plaster base boards, ensure secure anchoring – also for retrofitting! The ECON® technology elastic sealing membrane guarantees air tightness and allows the toolless insertion of conduits or cables. This means that switches, sockets, intercoms and many more can be installed permanently and securely and heat bridge-free.

- Air-tight and heat bridge-free electrical installation in accordance with DIN 18015-5
- Suitable for pressure-resistant insulation panels of 60 mm thickness and greater
- 4 swivels for secure mechanical anchoring
- Making of combinations is possible



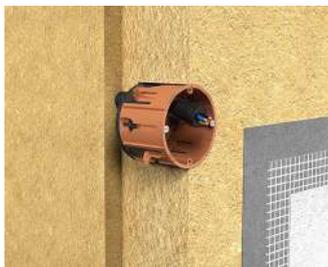
**NEW**

3 times awarded in 2019:

**B+B Bauen im Bestand**  
**Produkt des Jahres 2019**  
Sieger in der Kategorie Energetische Sanierung



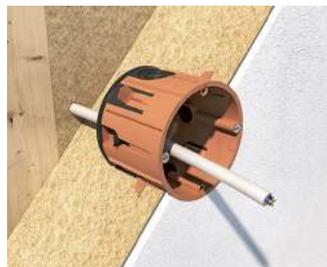
### Examples of use



Ecological wall insulation in old and new buildings in both wood and solid constructions.



Suitable for mounting in pressure-resistant wood fibre insulation boards with a medium gross density of 110 - 180 kg/m<sup>3</sup>.

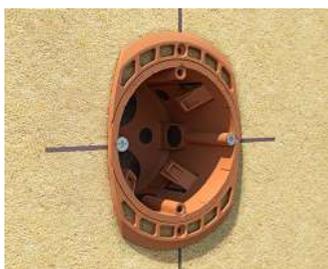


Retrofitting is possible. For retrofitting on the plastered wall, fit the box without a mounting frame.

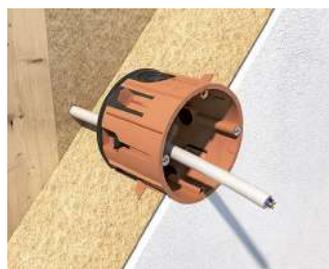


User-friendly mounting of the installation of accessories - also in combination - possible.

### Processing instructions



Mounting in an unplastered insulation panel – use a mounting frame.



Mounting in a plastered insulation panel is possible, even with an existing cable.



The membrane which seals the swivel guarantees airtightness.

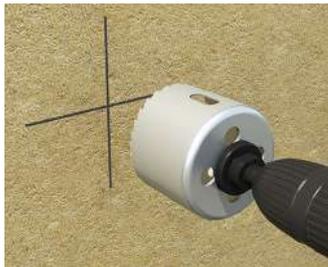


Plenty of entry options using ECON® technology for conduits and cables.

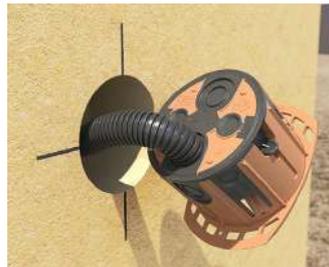


Plenty of installation space and four attachment points for user-friendly mounting of the installation accessories.

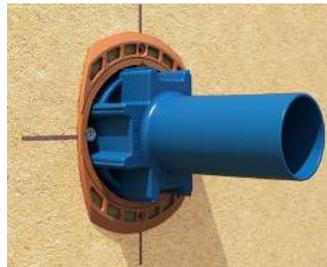
## Mounting on unplastered insulation panel



Cut the Ø 68 mm installation opening using a suitable cutter (e. g. Art. No. 1083-70; countersink hole cutter and ejector spring must be removed).



Fit mounting frame, then feed the cable or conduit through the airtight membrane and into the box.



Using gentle pressure, insert the setting tool (Art. No. 1090-22) into the box as far as the stop. The swivels much expand completely.



Before plastering, fit the signal cover (Art. No. 1181-60). Protects the interior of the box, the screw domes and the screw heads.

## Mounting on plastered insulation panel in a combination



Using cutter (Art. No. 1088-07) and two centering aids (Art. No. 1090-68), cut two installation openings at least 55 mm deep and with a diameter of 68 mm.



The ECON® technology sealing membrane wraps itself airtight round the cable during insertion.



Through-wiring takes place after removal of the opening tabs and fitting of the support connector.



Installation of various installation accessories is possible – including in combinations.

## One-gang junction box - ECON® Iso +

**NEW**

INNOVATION



3D animation

- Sealing lip on all sides
- 4 swivel cutters
- 4 screw domes
- with 2 device screws +/-
- including centering aid
- including setting tool (Art. No. 1090-22) per packaging unit



<b>Depth</b>	<b>55 mm</b>
for insulation thicknesses	> 60 mm
Cut hole Ø	68 mm
Device screws	2
Screw spacing	60 mm
Cable entries of up to Ø 11.5 mm	4
Conduit entries M20	4
Support connectors for each package	5
Halogen-free	Yes
	Yes
<b>Art.-No.</b>	<b>1159-55</b>
Inner packaging/shipping	10 / 100

## International products

For international projects, we offer a large range of products which meet the relevant national standards and regulations.

- Dimensions and approvals based on national standards
- Suitable installation tools
- Many combination options



### Q-range® one-gang boxes

- For masonry installation
- With screw domes
- Conduit entries on all sides
- Suitable for 60 / 71 mm combinations
- Protection class IP 2X



Length x Width x Depth	60 x 60 x 50 mm	60 x 60 x 65 mm	60 x 60 x 50 mm	60 x 60 x 65 mm
Fixing screw spacing	60 mm	60 mm	60 mm	60 mm
Device screws	2	2	-	-
Screw domes for device attachment	V: 2 x 3, H: 2 x 1	V: 2 x 3, H: 2 x 1	V: 2 x 3, H: 2 x 1	V: 2 x 3, H: 2 x 1
Horizontal conduit entry	2 x M20, 2 x M16/20 mm	2 x M20, 2 x M16/20 mm	2 x M20, 2 x M16/20 mm	2 x M20, 2 x M16/20 mm
Vertical conduit entry	2 x M16, 4 x M16/20 mm	2 x M16, 4 x M16/20, 4 x M20 mm	2 x M16, 4 x M16/20 mm	2 x M16, 4 x M16/20, 4 x M20 mm
Base conduit entry	2 x M20, 2 x M16, 2 x Ø 10,5 mm	2 x M20, 2 x M16, 2 x Ø 10,5 mm	2 x M20, 2 x M16, 2 x Ø 10,5 mm	2 x M20, 2 x M16, 2 x Ø 10,5 mm
Through-wiring fields	1	2	1	2
Halogen-free	Yes	Yes	Yes	Yes
 CEBEC	Yes	Yes	Yes	Yes
<b>Art.-No.</b>	<b>7500</b>	<b>7650</b>	<b>7501</b>	<b>7651</b>
Inner packaging/shipping	10 / 100	10 / 100	10 / 100	10 / 100

### Q-range ECON® one-gang box

- Air-tight design with sealing membranes
- Centre distance 60 mm horizontally as well as 71 mm horizontally and vertically
- 2 x 3 fixed entries, 2 x 2 fixed entries, 4 base entries



Length x Width x Depth	60 x 60 x 50 mm
for screw fixing	Yes
Horizontal conduit entry	2 x 20 + 2 x 16 mm
Base conduit entry	2 x 20 + 2 x 16 mm
Vertical conduit entry	2 x 20 + 1 x 16 mm
Halogen-free	Yes
<b>Art.-No.</b>	<b>752</b>
Inner packaging/shipping	10 / 100

# International products

for accessory installation in accordance with national standards

## Q-up®

- Plaster compensation frame with 2 screws  
40 mm, Pozidriv drive
- For boxes which are placed too deeply



<b>Art.-No.</b>	<b>994</b>
Inner packaging/shipping	10 / 100

## Q-signal®

- Protects the box interior, the screw domes  
and screw heads during plastering
- reusable



<b>Art.-No.</b>	<b>975</b>
Inner packaging/shipping	10 / 100

## One-gang box - Swiss standard



- Suitable for screw or claw fixing of  
accessories
- For device connection screws  $\varnothing$  3 mm
- Max. tightening torque 0.5 Nm
- With injection-moulded signal cover
- For assembling combinations, centre  
distance 60 mm
- Low-lying plaster grips



<b>Depth</b>	<b>59 mm</b>
Diameter	71 mm
Break-out openings $\varnothing$ 20 mm	11
Combination conduit entries M20/25	1
 650 °C / 	Yes / Yes
<b>CE</b>	Yes
<b>Art.-No.</b>	<b>9921</b>
Inner packaging/shipping	50 / 100

## One-gang box - Swiss standard



- suitable for screw attachment of  
equipment
- to create combinations in both axis  
directions, centre distance 60 mm
- with separator wall



<b>Length x Width x Depth</b>	<b>72 x 72 x 57 mm</b>
Break-out openings $\varnothing$ 20 mm	13
Combination conduit entries M20/25	5
<b>CE</b>	Yes
<b>Art.-No.</b>	<b>99.1234</b>
Inner packaging/shipping	- / 50

## Signal cover

· for one-gang box Art. No. 99.1234



<b>Length x Width</b>	<b>67 x 67 mm</b>
<b>Art.-No.</b>	<b>99.1234.06</b>
Inner packaging/shipping	- / 25

## One-gang box (Italian and American standard)

· with 2 screw domes (without screws)



<b>Length x Width x Depth</b>	<b>100 x 60 x 52 mm</b>	<b>121 x 60 x 52 mm</b>
Screw spacing	83 mm	108 mm
M16 conduit entries	1	1
Conduit entries M20	12	12
Conduit entries M25	3	6
<b>Art.-No.</b>	<b>662</b>	<b>663</b>
Inner packaging/shipping	5 / 100	5 / 100

## One-gang box acc. to EN 60670 and ÖVE

· variable screw fitting 57-63 mm  
· 4 expanding claw fields



<b>Depth</b>	<b>51 mm</b>
Cable entries 1 x 5 x 1.5 mm <sup>2</sup> or 3 x 2.5 mm <sup>2</sup>	Yes
Conduit entries M16-M20	10
Telephone cable J-Y(ST)Y	1
	Yes
<b>Art.-No.</b>	<b>1076-20</b>
Inner packaging/shipping	- / 100



## AFS – Active Fire Stop

Guarantees preventive fire protection. Whether fire load from above, below, from the front or the back: the quick-active fire-retardant coating in boxes, housings and bulkheads reacts immediately in case of fire and foams out the installation opening safely. The fire resistance class F30-F120, EI30/EI60 or EI30-EI120 of the wall or the ceiling of F30-F90 or EI30-EI90 remains unchanged. The transmission of fire and smoke is thus safely prevented. In case of fire, the KAISER AFS technology maintains the fire protection class in walls and ceilings even when installed opposite each other without encasing. The ready-to-install systems with AFS technology guarantee certified safety and smooth installation.

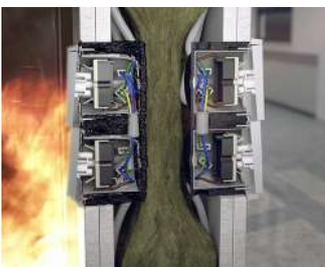
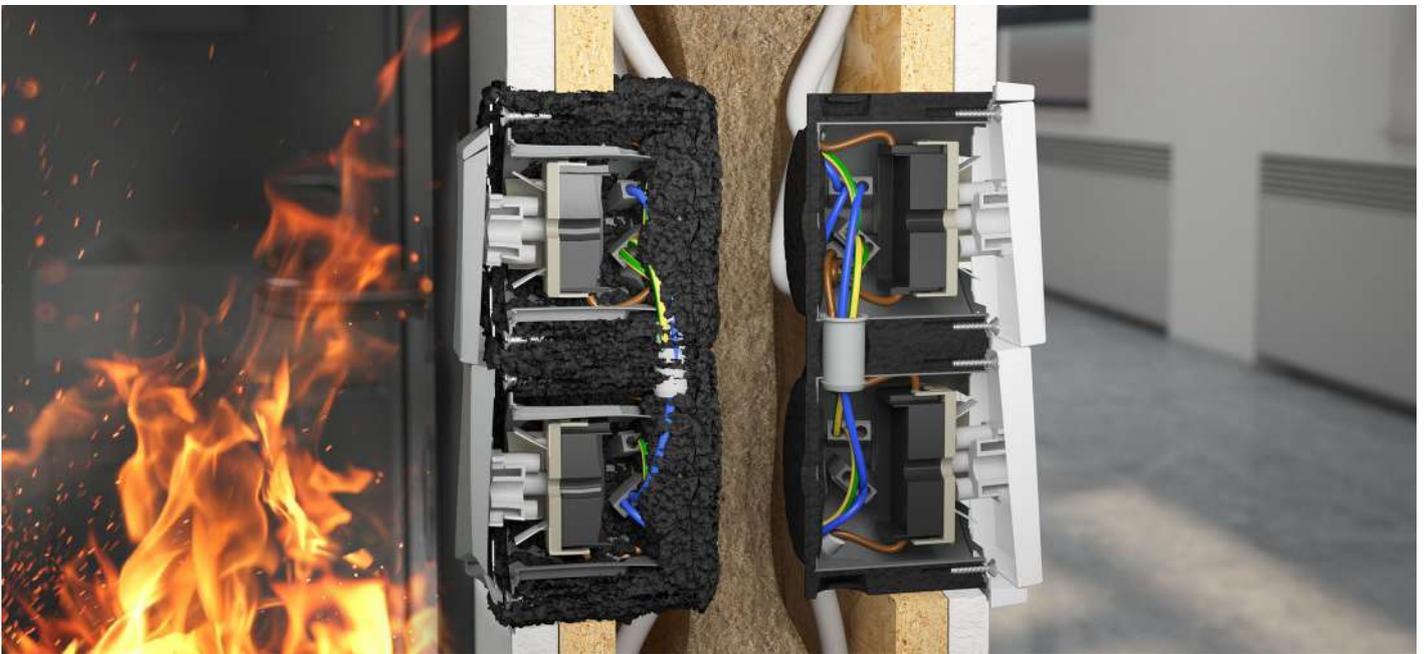
- Fire protection – without encasing
- Smokeproof and halogen-free
- For walls and ceilings
- For buildings and shipbuilding
- Maintains the wall's sound insulation protection

DIBt approval  
General type  
approval



## Fire-protection walls

According to EN 13501-2, fire-protection walls are single- or double-skinned, non load-bearing, internal separator walls in drywall or solid construction with wall thicknesses from 100 mm. The insulation material used is defined according to EN 13501 Part 1. Often 2 x 12.5 mm gypsum plaster fire protection board plasterboards are used as boarding. According to DIN 4102, the installation of opposing standard cavity wall boxes is not permitted, and the installation of single installation boxes is only permitted depending on the melting point, the gross density and the thickness of the insulating material. This means that an on-site sheathing is required, e.g. with plaster, fibre silicate or similar. In addition, with solid constructions, ensure that there is a remaining wall thickness of 60 mm behind flush-mounting boxes installed on one side or between flush-mounting boxes with opposing installation.



## Flush-mounting fire-protection box

In solid construction F30-F120 or EI30 - EI120 fire-protection walls, the fire-protection box receives the fire-protection period classification instead of fitted electrical installations. Even if the minimum wall thickness of 60 mm is not achieved in single-sided installation, or even in directly opposing installation, the fire-protection box ensures secure and smokeproof room separation. In the event of a fire, the integrated fire-retardant coating quickly and reliably seals the installation opening, so preventing smoke and flue gas from spreading. At the same time, the risk of the fire spreading because the remaining wall is not thick enough is prevented.

- For F30-F120 or EI30-EI120 fire-protection walls
- For minimum remaining wall thicknesses  $\leq 60$  mm
- Also for directly opposing installation
- Variable combination connection piece for conduits up to M25
- With fire-protection cover, can be used as a junction box
- Maintains the wall's sound insulation protection



Sound insulation value  $R'_{w}$  up to 56 dB



### Examples of use



For F30-F120 or EI30-EI120 fire-protection walls.



For one-sided (minimum remaining wall thicknesses  $\leq 60$  mm) and for directly opposing installation.



Installation also possible in combinations.



With fire-protection cover (Art. No. 1184-94) can also be used as a junction box.

### Processing instructions



The flush-mounting fire-protection box provides 6 entry options for conduits up to M25 and cables up to  $\varnothing 11.5$  mm.



The combination connection piece ensures a stable connection for combinations and makes possible the entry of conduits up to M25.



Fire protection is guaranteed with directly opposing installation and with less than the minimum remaining wall thickness.



The flush-mounting fire-protection box can be fitted in all fire-protection walls e.g. made of cellular concrete, sand-lime or vertically perforated chamber stones.

## Installation



Cut a Ø 82 mm installation opening using a grinding head (e.g. Art. No. 1088-02).



Make exact cable and conduit entries with the universal opening cutter (Art. No. 1085-80).



For combinations, the one-gang junction boxes are securely joined to each other by means of the connector.



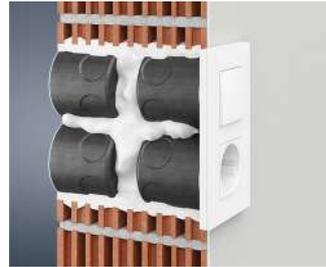
Fixing simply with plaster or mortar. Special fire-protection mortar is not necessary.



Sturdy support connectors make possible standardised combination distance of 71 mm.



Smokeproof and fully-insulated through-wiring takes place by means of the support connector



Example of installation of a combination.



With the fire-protection cover (Art. No. 1184-94), the box can also be used as a junction box.

## Flush-mounting fire-protection box

- for F30-F120 or EI30 - EI120 fire-protection walls
- also for minimum remaining wall thickness ≤ 60 mm
- also for directly opposing installation
- with 4 screw domes and 2 expanding claw fields



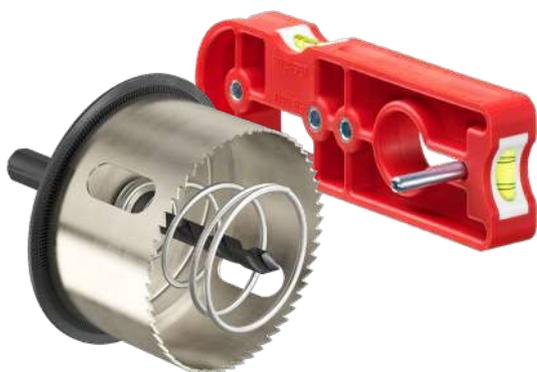
3D animation

<b>Depth</b>	<b>60 mm</b>
Fixing screw spacing	60 mm
Tube entries up to M25	6
Cable entries of up to Ø 11.5 mm	6
for sound insulation walls up to	56 dB
DIBt approval	Z-19.21-2413
ETA approval	ETA-18/0091
Halogen-free	Yes
	Yes / Yes
<b>CE</b>	Yes
<b>Art.-No.</b>	<b>1564-01</b>
Inner packaging/shipping	10 / 100



## Flush-mounting

- Grinding heads for flush-mounting installation
- Considerable time savings and durability
- Professional system tools for fast, safe installation



## Cavity wall

- Cavity wall cutter
- Professional system tools for fast, safe installation
- Proven quality and technology



## Concrete construction

- Professional system tools for fast, safe installation
- Perfectly matched to the processing and installation of KAISER electrical installation systems

	recommended revolutions min <sup>-1</sup>											
Material	pg. 396	pg. 397	pg. 402	pg. 405	pg. 407	pg. 407	pg. 400	pg. 401	pg. 406	pg. 407	pg. 409	pg. 409
	Diamond grinding head for dust extractor Diamond grinding head MULTI 4000 turbo cutter MULTI 2000 HM Hardened metal cutter Hardened metal cutter Hardened metal cutter for sheet metal boarding Hardened metal cutter for WDVS 20 mm diameter Standard cutter Bi-metal cutter for WDVS 180 VARIOCUT universal-hole cutter 120 mm diameter VARIOCUT universal-hole cutter 24-68 VARIOCUT universal-hole cutter 65-120											
Plasterboard	-	-	1,000		-	-	1,000	500	1,000	500	800-1,400	700-1,400
Plywood (up to V20), uncoated	-	-	600	600	-	-	800	450	-	450	800-1,400	800-1,400
Chipboard, coated	-	-	-	450	-	-	700	400	-	450	800-1,400	800-1,400
OSB panels	-	-	-	650 <sup>1</sup>	-	-	600	400	-	-	300-400 <sup>1</sup>	200-400 <sup>1</sup>
Wood, soft	-	-	850	850	-	-	1,000	500	850	550	800-1,400	800-1,400
Wood, hard	-	-	-	650	-	-	600	400	-	450	800-1,400	800-1,400
Laminated press fabric (Pertinax or similar)	-	-	-	450	-	-	500	350	-	450	-	-
Mineral fibre board	-	-	-	600	-	-	800	500	-	500	800-1,400	800-1,400
MdF panels	-	-	-	-	700	-	-	-	-	450	800-1,400	800-1,400
Sheet steel	-	-	-	-	-	150 <sup>2</sup>	-	-	-	200 <sup>2</sup>	300-600 <sup>3</sup> diameter 20-64 mm	200-600 <sup>3</sup> diameter 65-120 mm
Aluminium sheet	-	-	-	-	-	350	-	-	200	-	300-600 <sup>3</sup> diameter 20-64 mm	200-600 <sup>3</sup> diameter 65-120 mm
Multiplex boards	-	-	-	-	700	-	-	-	-	-	-	-
Panels	-	-	-	-	-	-	-	-	-	-	800-1,400 <sup>4</sup>	700-1,400 <sup>4</sup>
Ceiling modules	-	-	-	-	-	-	-	-	-	-	800-1,400	800-1,400
Wall tiles	-	-	-	-	-	-	-	-	-	-	400 <sup>4</sup>	250 <sup>4</sup>
Hard rubber	-	-	-	-	-	-	-	-	-	-	1,200 <sup>5</sup>	1,200 <sup>5</sup>
medium-hard masonry bricks (sand-lime bricks, Poroton, Ytong, etc.)	1,600-2,000	1,600-2,000	-	-	-	-	-	-	-	-	-	-
insulated and plastered facade	-	-	-	-	-	-	1,000	500	-	-	-	-
<b>Technical requirement</b>												
Required drill power	1,300 W	1,300 W	600 W	600 W	600 W	1,000 W	600 W	600 W	600 W	600/1,000 W	max. 700 W	max. 700 W
<b>Cut hole diameter</b>												
20 mm	-	-	-	-	-	-	•	-	-	-	-	-
35 mm	-	-	•	-	-	-	-	-	-	-	-	-
68 mm	•	•	•	•	•	•	-	•	•	-	-	-
74 mm	-	-	•	•	-	•	-	-	-	-	-	-
82 mm	•	•	-	-	-	-	-	-	-	-	-	-
120 mm	-	-	-	-	-	-	-	-	-	•	-	-
variable 24-68 mm	-	-	-	-	-	-	-	-	-	-	•	-
variable 65-120 mm	-	-	-	-	-	-	-	-	-	-	-	•
<b>Technical properties</b>												
with dust extraction	-	-	-	-	-	-	-	-	-	-	•	•
with direct attachment	•	•	-	-	-	-	-	-	-	-	-	-
with drill chuck attachment	•	•	•	•	•	•	•	•	•	•	•	•
with drilling depth limitation	-	-	-	-	-	-	-	•	-	-	-	-

Accessories (optional)	Page	pg. 396	pg. 397	pg. 402	pg. 405	pg. 407	pg. 407	pg. 400	pg. 401	pg. 406	pg. 407	pg. 409	pg. 409
Dust extraction	397	•	-	-	-	-	-	-	-	-	-	-	-
ProfiX distance cutter	404	-	-	•	•	•	•	-	-	•	-	-	-
ProfiX distance cutter with dust extraction	404	-	-	•	•	•	•	-	-	•	-	-	-
Centering aid	401	-	-	-	-	-	-	-	•	-	-	-	-
Centering tool 68/74	403	-	-	•	-	-	-	-	-	-	-	-	-

<sup>1</sup> air more often <sup>2</sup> use cutting oil <sup>3</sup> up to 1 mm <sup>4</sup> with restrictions <sup>5</sup> up to 10 mm



## Diamond grinding head and drilling template

Diamond grinding head for precise and quick installation openings for one-gang boxes and one-gang junction boxes in all types of walls. Clean and low-dust handling due to dust extraction.

- Quick creation of installation openings in all types of walls
- For electric drills with direct attachment or 13 mm chuck
- With optional dust extraction
- Drilling template for exact marking of the centering hole

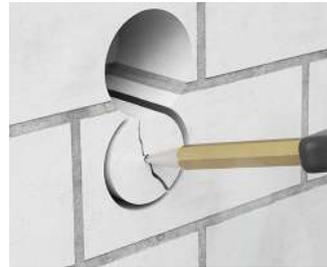
### Installation



Pre-drilling. Create centering hole at a combination distance for multiple boxes using drilling template.



Fit diamond grinding head and diamond cut  $\varnothing$  68 mm or  $\varnothing$  82 mm holes.

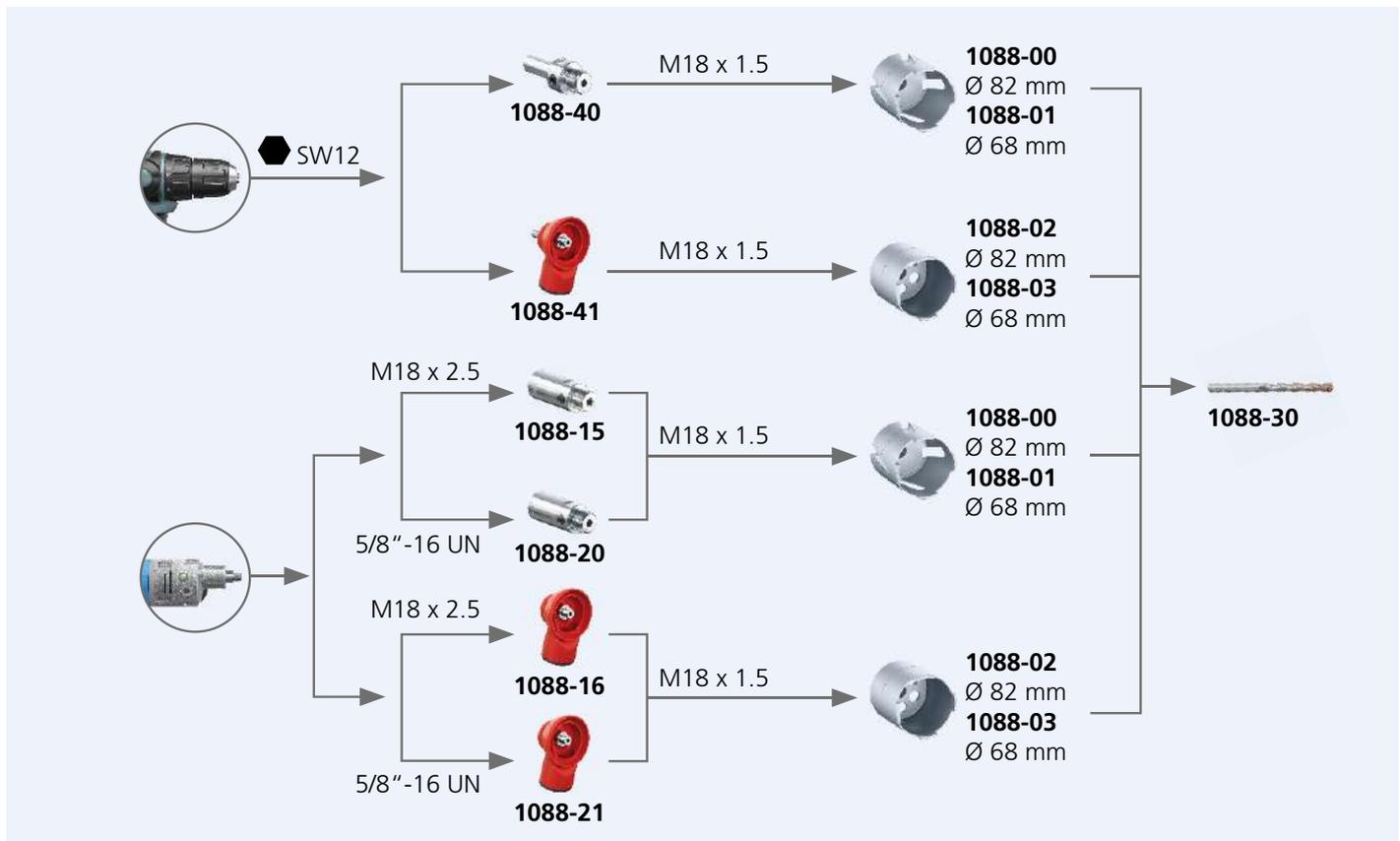


Chisel out drilled core.



Clean and even installation openings for quick further processing with plaster or KLEMMFIX®.

### System overview - with and without dust extraction



## Diamond grinding head with dust extractor

- Thread connection M18 x 1.5
- for use with dust extraction



3D animation

<b>Drill Ø</b>	<b>82 mm</b>	<b>68 mm</b>
Cutting depth	max. 70 mm	max. 70 mm
<b>Art.-No.</b>	<b>1088-02</b>	<b>1088-03</b>
Inner packaging/shipping	- / -	- / 10

## Dust extraction with direct attachment / Chuck attachment

- for diamond grinding head Ø 82 or Ø 68 mm with connecting thread M18x1.5
- Fits vacuum cleaner hoses from Ø 31 - 36 mm



<b>UN-Thread for Bosch and Flex</b>	<b>5/8"-16 UN</b>	-	-
ISO thread	-	M18 x 2,5	-
Chuck attachment with hexagonal	-	-	12 mm
<b>Art.-No.</b>	<b>1088-21</b>	<b>1088-16</b>	<b>1088-41</b>
Inner packaging/shipping	- / -	- / -	- / -



# Flush-mounting and masonry tools

for masonry installation

## Diamond grinding head without dust extractor

- Thread connection M18 x 1.5
- for use with dust extraction



3D animation

<b>Drill Ø</b>	<b>82 mm</b>	<b>68 mm</b>
Cutting depth	max. 70 mm	max. 70 mm
<b>Art.-No.</b>	<b>1088-00</b>	<b>1088-01</b>
Inner packaging/shipping	- / -	- / 10

## Direct attachment / Chuck attachment

- for screwing onto the drilling machines-spindle (Art. No. 1088-15, 1088-20)
- for clamping in the drill chuck (Art. No. 1088-40)



<b>Connection drilling machine: internal thread</b>	<b>5/8"-16 UN</b>	<b>M18x2,5</b>	-
Connection grinding head: External thread	M18x1,5	M18x1,5	M18x1,5
Connection drilling machine: hexagon wrench size	-	-	12 mm
<b>Art.-No.</b>	<b>1088-20</b>	<b>1088-15</b>	<b>1088-40</b>
Inner packaging/shipping	- / -	- / -	- / -

## Centering drill

- for all direct and chuck attachments
- with hardened metal cutter
- Drill length: 125 mm



<b>Diameter</b>	<b>6 mm</b>
<b>Art.-No.</b>	<b>1088-30</b>
Inner packaging/shipping	- / -

## Drilling template

- for exact pre-drilling of vertical or horizontal combination distances
- 71 mm for standard combinations
- 91 mm for separate covers on low-voltage devices
- with hardened drilling bushes
- with fold-out guide pin for first drill hole



3D animation

<b>Art.-No.</b>	<b>1190-65</b>
Inner packaging/shipping	- / -

## Spirit level cover

Spirit level cover for quick and exact positioning of one-gang boxes and one-gang junction boxes in the masonry.

- For all KAISER one-gang boxes and one-gang junction boxes
- Guaranteed horizontal or vertical fit of the screw domes
- Quick assembly in a single action



### Installation



Prepare the wall opening with plaster as usual.



Insert the spirit level cover into the upper box.



Push the box combination into the wall opening and align.



The spirit level immediately indicates the perfect fit.

### Spirit level cover

- Box spirit level
- To straighten one-gang boxes and one-gang junction boxes for horizontal and vertical assembly with plaster



<b>Art.-No.</b>	<b>1190-60</b>
Inner packaging/shipping	5 / 100

### Marking chalk

- for marking of switch symbols and wiring instructions
- colour: blue, waterproof



<b>Art.-No.</b>	<b>1190-55</b>
Inner packaging/shipping	- / 12

# Flush-mounting and masonry tools

for masonry installation

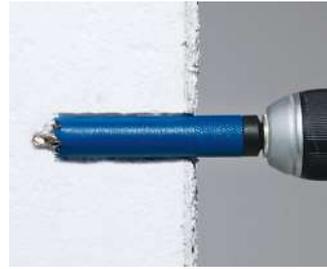
## Hardened metal cutter Ø 20 mm for KAISER mini equipment carrier



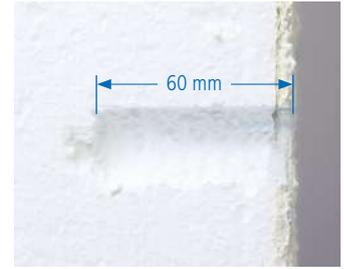
The hardened metal cutter Ø 20 mm with hardened metal cutters for exact installation openings. (Art. No. 1088-06).



By simply unscrewing the cutter head, the drilled core can be removed quickly using a centering drill.



The drilling depth stop ensures that only the amount of insulation material is removed which is necessary to secure the mini equipment carrier.



The insulating capacity remains intact despite the installation opening.

## Hardened metal cutter 180 for one-gang junction boxes ECON® Styro55 and ECON® Iso +



If a cable is present, you can drill 68 mm installation openings using the hardened metal cutter 180.



The centering aid Ø 68 mm and depth stop on the cutter ensure a precise opening without damaging the existing cable.



The depth stop ensures minimal interference with the insulation, which prevents the creation of heat bridges.



KAISER carbide metal cutter 180 with depth stop, (Art. No. 1088-07).

## Processing instructions

Make sure that the cable has been vertically fed through the insulation material panel. The hardened metal cutter 180 must not be used with cables which are directly under the plaster layer of the external insulation.

## Hardened metal cutter Ø 20 mm

- Making installation openings in existing composite thermal insulation systems or lightweight walls
- Ø 20 mm, for the KAISER mini equipment carrier and for KAISER cable seals
- with bit stop to prevent heat bridges
- with hard metal centering drill for precise positioning
- fits all battery-powered drills and electric drills with 10 mm chuck
- removable cutter head for easy removal of the drilled core



3D animation

<b>Length</b>	<b>80 mm</b>
Drill Ø	20 mm
Cutting depth	max. 60 mm
<b>Art.-No.</b>	<b>1088-06</b>
Inner packaging/shipping	- / 48

## Hardened metal cutter 180

- Creating installation openings in existing thermal insulation composite systems for an existing cable
- for ECON® Styro55 one-gang junction boxes
- fits all electric drills with 10 mm chuck
- with bit stop to prevent heat bridges
- inclusive 2 centering aids Ø 68 mm (Art. No. 1090-68) for exact cutter guiding



3D animation

<b>Length</b>	<b>180 mm</b>
Drill Ø	68 mm
Cutting depth	max. 70 mm
<b>Art.-No.</b>	<b>1088-07</b>
Inner packaging/shipping	- / -

## Technical information on centering aid Ø 68 mm



KAISER centering aid Ø 68 mm for nailing on (Art. No. 1090-68).



For combinations position the centering aid at a distance of 71 mm.



The ECON® Iso + or Styro55 with the swivel cutters are mounted quickly and easily with the setting tool.



KAISER setting tool ECON® Iso + and Styro55 (Art. No. 1090-22).

## Centering aid Ø 68 mm

- for exact installation openings in existing composite thermal insulation system
- Exact guiding of the hardened metal cutter 180 (Art. No. 1088-07)
- can be combined for standard combinations of 71 mm
- for exact positioning and easy fastening by nailing to the insulation board



<b>Diameter</b>	<b>68 mm</b>
<b>Art.-No.</b>	<b>1090-68</b>
Inner packaging/shipping	10 / 100

## Setting tool ECON® Iso + / ECON® Styro55

- for fast and secure attaching of the ECON® Iso + (Art. No. 1159-55) and ECON® Styro55 (Art. No. 1555-51) one-gang junction box



<b>Art.-No.</b>	<b>1090-22</b>
Inner packaging/shipping	10 / 100

# Universal opening cutter

Universal opening cutter for creating exact openings for cable and conduit entries in plastics. Creating exact openings for boxes and housings always results in exact air-tight, smoke-tight and concrete-tight entries.

- For conduit and cable entries
- For air-tight and smoke-tight openings
- For strain-relieved openings
- For all types of plastic



## Operation



Depending on the use, find the required diameter in the corresponding table and locate on tool.



Press snap-in button. Turn the handle and push to required position until the arrow point is visible in the opening. Turn handle back and click into place.



Push the point into the housing and cut out required opening by turning to the right.



TIP: To cut several openings or work with hard plastic, you can fit the opening cutter on the 1/4" bit of a battery-powered drill.

## Assignment table for universal cavity wall opening cutter

Air-tight cavity wall installation		Ø setting
<b>NYM cable</b>	3 x 1.5 mm <sup>2</sup>	7.5
	4 x 1.5 mm <sup>2</sup>	8.5
	5 x 1.5 mm <sup>2</sup> ; 3 x 2.5 mm <sup>2</sup>	9.5
	7 x 1.5 mm <sup>2</sup> ; 5 x 2.5 mm <sup>2</sup>	10.5
<b>Low-voltage cables</b>	Integrated heavy current and MSR-Bus cable (N)Y(Y(St)Y)M-J 3 x 1.5 mm <sup>2</sup>	10.5
	EDP cable, S/STP 4 x 2 AWG23/1	7.5
	EDP cable, 100 Mb, S/STP 4 x 2 x AWG23/1	6.0
	Coaxial cable, double screening	6.0
	Coaxial cable, single screening	5.0
	BUS cable YCYM 2 x 2 x 0.8	5.0
	Screened EDP cable, plus external screening	5.0
	Cable for telephone and signal transmission with screening	4.0
	Telephone cable without screening	4.0
<b>Support connector</b>	9060-98	Connector
<b>Flexible conduits (crimped) in acc. with DIN EN 60423</b>	DIN EN 16 - Ø 16 mm	14.0
	DIN EN 20 - Ø 20 mm	17.0
	DIN EN 25 - Ø 25 mm	21.0

Cavity wall installation for fire-protection boxes HWD 30, HWD 90 and HWD B15		Ø setting
<b>NYM cable</b>	3 x 1.5 mm <sup>2</sup>	8.5
	5 x 1.5 mm <sup>2</sup>	9.5
	3 x 2.5 mm <sup>2</sup>	9.5

## Assignment table for universal concrete construction opening cutter

Concrete construction		Ø setting*
NYY cable	3 x 1.5 mm <sup>2</sup>	10.5
	4 x 1.5 mm <sup>2</sup>	10.5
	5 x 1.5 mm <sup>2</sup> ; 3 x 2.5 mm <sup>2</sup>	10.5
	7 x 1.5 mm <sup>2</sup> ; 5 x 2.5 mm <sup>2</sup>	14.5
Conduits flexible (corrugated) in acc. with DIN EN 60423	DIN EN 20 — Ø 20 mm	19.5
	DIN EN 25 — Ø 25 mm	22.5
Conduits flexible (corrugated with smooth sheath) in acc. with DIN EN 60423	DIN EN 20 — Ø 20 mm	19.0
	DIN EN 25 — Ø 25 mm	22.5

## Universal opening cutter for plastics

- for manufacture of exact entry size
- for low-voltage wiring of Ø 4 - 7.5 mm
- for sheathed cabling up to 5 x 2.5 or 7 x 1.5
- for cable NYY up to 5 x 2.5
- for DIN EN conduits (flexible) with outer Ø of up to 20/25 mm
- with 1/4" chuck size for battery-powered drills



3D animation

<b>For exact openings</b>	<b>4 - 22,5 mm</b>
<b>Art.-No.</b>	<b>1085-80</b>
Inner packaging/shipping	- / 10

## AMZ 2 stripping pliers

- for longer cables: integrated knife for longitudinal cutting
- ergonomic design - easy-to-use
- hardened and polished cutting knife



<b>For stripping NYM cables</b>	<b>3 x 1,5, 5 x 2,5 mm</b>
<b>Art.-No.</b>	<b>1190-02</b>
Inner packaging/shipping	- / 10

## Hole punch and expanding dowel fitting tool

- for concrete construction installation
- for fixing to steel formwork with expanding dowel 1217-02
- for all boxes, casings, bushes, etc.



Length	150 mm	340 mm
<b>Art.-No.</b>	<b>1284-62</b>	<b>1284-63</b>
Inner packaging/shipping	- / -	- / -

## Nail inserter

- for concrete construction installation
- for fixing to wooden formwork with steel nails max. head Ø 4 mm
- for all boxes, casings, bushes, etc.



3D animation

<b>Length</b>	<b>150 mm</b>	<b>340 mm</b>
<b>Art.-No.</b>	<b>1284-69</b>	<b>1284-68</b>
Inner packaging/shipping	- / -	- / -

## Punch pliers

- for concrete construction installation
- for exact entries for installation conduits
- with plate ejector
- punch bits exchangeable



<b>DIN EN conduit Ø</b>	<b>20 mm</b>	<b>25 mm</b>
<b>Art.-No.</b>	<b>1286-33</b>	<b>1286-34</b>
Inner packaging/shipping	- / -	- / -

## Punch bit inserts for punch pliers

- consists of cutter plate and cutting punch, hardened and polished



<b>DIN EN conduit Ø</b>	<b>20 mm</b>	<b>25 mm</b>
<b>Art.-No.</b>	<b>1285-33</b>	<b>1285-34</b>
Inner packaging/shipping	- / -	- / -

## Reamer

- for concrete construction installation
- for enlarging pre-cut holes



<b>DIN EN conduit Ø</b>	<b>25 mm</b>	<b>32 mm</b>	<b>40 mm</b>
<b>Art.-No.</b>	<b>1284-34</b>	<b>1284-35</b>	<b>1284-36</b>
Inner packaging/shipping	- / -	- / -	- / -

## Step drill

- for concrete construction installation
- for manufacturing conduit entry openings
- can be adapted for battery-powered drills



<b>DIN EN conduit Ø</b>	<b>10 - 40 mm</b>
<b>Art.-No.</b>	<b>1284-32</b>
Inner packaging/shipping	- / 10



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## Energy efficiency. Electrical installation for energy-saving buildings.

- Air-tight installation as per GEG
- Installation on or in insulated facades.



## Fire protection. Box, housing and sealing systems for fire-protection walls and ceilings

- Fire protection – without encasing
- Smokeproof and halogen-free
- For buildings and shipbuilding



## Sound insulation technology – sound insulation boxes for use in walls with increased sound insulation requirements.

- Maintains the wall's sound insulation protection
- Also for retrofitting



## Radiation protection technology – radiation-protection boxes for use in lead-free and leaded radiation-protection walls.

- Protection against X-rays
- Retrofitting possible
- Fast installation without additional screening measures



## The fastest cavity wall assembly ever. FX4 Technique.

- 40% faster assembly
- High self-locking



## Lead-free

Use of lead-free materials.



## Multimedia content on the internet

Available in just one click at [www.youtube.com/kaiserelektro](http://www.youtube.com/kaiserelektro) and [www.kaiser-elektro.de](http://www.kaiser-elektro.de).



## Multimedia content for your smartphone.

Scan and view immediately!

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

PLUGGABLE

CONNECTIVITY

CABLE GLANDS

TOOLS

SERVICE



## Conduits and cables

DIN 60423 contains the dimensions for electrical conduits. DIN EN 61386 regulates the designations and properties. This results in clear statements about dimensions, designations and qualities of the conduits. Seven different outer diameters are available – uniform for all installation types from flush-mounting to concrete construction:

Outside diameters 16, 20, 25, 32, 40, 50 and 63 mm.

The following conduit types and cables may be used for the individual construction methods:

### Flush-mounting (masonry) construction

Sheathed cables (e.g. NYM, cables e.g. NYY) and multi-lead wiring (e.g. NYIF) are permissible in the so-called in-plaster technique for dry rooms.

In conduits for light construction – classification 2 (min. compressive strength 320N/5 cm) or higher – core HO7V cables... (insulated single wires) and sheathed cables (e.g. NYM) can be guided.



#### Manufacturer's designation for the conduits, e.g.

<b>Fränkische Rohrwerke:</b>	FBY-EL (flexible) FBY-EL-F (smooth, flexible)
<b>Hegler:</b>	Heglerflex EYL (flexible) Heglerplast EL (rigid)
<b>PIPELIFE:</b>	FB-E-L (flexible) IPM-E-LF (rigid)

### Cavity wall construction

Cables without protective conduits whose sheaths are made of flame-retardant plastic, e.g. PVC for sheathed NYM cable are permissible. Multi-lead wiring is not permissible.

In conduits for light construction – classification 2 (min. compressive strength 320 N/5 cm) or higher – as well as additional flame resistance, core HO7V cables... (insulated single wires) and sheathed cables, e.g. NYM, can be guided



#### Manufacturer's designation for the conduits, e.g.

<b>Fränkische Rohrwerke:</b>	FBY-EL-F (flexible) FFKu-EL-F-HO (flexible)
<b>Hegler:</b>	Heglerflex EYLF (flexible) Heglerflex-EL (flexible) Heglerplast-EL (rigid)
<b>PIPELIFE:</b>	FB-E-LF (flexible) KuMS-E-MF (flexible)

### Concrete construction

Cables without a protective tube are permissible, e.g. NYY or NYZXY.

Feed-throughs or connections at joints (e.g. wall-ceiling) can only be carried out in the case of stripped core cables or cables in concrete installation boxes or casings only according to DIN EN 60670.

In conduits for medium construction – classification 3 (min. compressive strength 750 N/5 cm) or higher –, core HO7V cables... (insulated single wires) or sheathed cable, e.g. NYM, can be guided.



#### Manufacturer's designation for the conduits, e.g.

<b>Fränkische Rohrwerke:</b>	FFKuS-EM-F (flexible) FFKuS-EM-F105 (flexible)
<b>Hegler:</b>	Heglerflex-ESPM (flexible) Heglerflex-ESPM105 (flexible) Heglerplast-EPKM (rigid)
<b>PIPELIFE:</b>	Ku-P-AS-E-MF-105 (flexible) RP-E-SF-UV (flexible) KuMS-E-MF (flexible) PSM-v-E-SF (rigid)

As there are currently no specifications in the standard regarding the minimum compressive strength in relation to the type of installation, the conduit manufacturer's specifications must be followed, especially in the concrete construction sector.

**Notice:** The maximum temperature during the casting process for our concrete construction installation boxes with VDE certification is -5 to 90°.

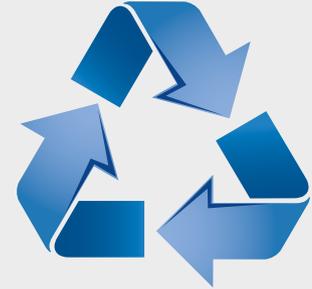
## Intelligent building system technology (KNX, LON, etc.)

For the installation of flush-mounting and cavity walls, special one-gang boxes (electronics boxes) are included in the corresponding programme parts.



## Disposal

KAISER products are not subject to the electrical/electronic scrap ordinance and are therefore currently not subject to compulsory labelling. For disposal of the packaging, KAISER's trade partners in Germany (electrical wholesalers) offer the installer or end user the option of taking it back (and thus returning it to the cycle).



## Fire resistance according to DIN EN 60670

The test is carried out according to DIN EN 60695 S. 2-11. It is carried out as a glow wire test with subsequent test temperatures.

650°C	U	Flush-mounting	
650°C	B	Concrete construction	
650°C	I	In-plaster	
650°C	A	Surface-mounting	
650 °C / 850 °C		Covers / Lids	/
850°C	H	Cavity wall	
850°C	i	Terminals	





## Functional maintenance of cables/cable systems

Functional integrity is given if no short circuit and no interruption of the current flow in the cable/cable systems occurs in the electrical system during a fire test. The functional integrity is divided into classes from E30-E120 according to DIN 4102 P.12. This means that the installations must withstand a fire for 30-120 minutes. The materials used for such measures must consist of non-combustible building materials (building material class A).



## One-gang junction boxes

One-gang junction boxes have, in addition to the accessory volume, space for at least 3 connection terminals. All KAISER one-gang junction boxes may be used as junction boxes when using screwed lids with a fire resistance of 650°/850° C according to DIN EN 60670.



## Halogen-free materials (preventive fire protection)

To prevent personal injury or damage to property, the use of halogen-free materials may be mandatory. All KAISER flush-mounting and concrete building boxes, casings, luminaire and loudspeaker housings are halogen-free. Boxes and casings for cavity wall mounting as well as some accessories are included in the range as halogen-free items.



## Cavity wall boxes

According to DIN EN 60670, cavity wall boxes are subjected to special safety tests and must be marked with the symbol .



## Combinations

Combinations for multiple cover frames of the units are made by stringing together one-gang boxes and/or one-gang junction boxes. The combination distance for this is 71 mm according to DIN 49075.

Combinations of high voltage and low voltage equipment, e.g. antenna sockets, can be shared if only touch-proof sockets are used.

When using sockets that are not safe to touch (still available), a separate cover must be provided for. Usually, the distance between the installation boxes is then 91 mm (more if necessary) and is created by means of spacer sleeves or the use of appropriate tools.

## Light hook

Suspension devices for luminaires, e.g. light hooks, must be able to bear at least 50 N according to DIN EN 60670 P. 21 / DIN VDE 0100 P. 559 or the specified luminaire weight with 5-fold safety.



## Equipotential bonding

There must be a main equipotential bonding in every building. A so-called additional equipotential bonding must also be carried out according to DIN VDE 0100 P.701 in rooms with bathtubs or showers, as well as for covered swimming facilities. Due to the easier accessibility for disconnecting and measuring at a later stage, it is expedient to carry out this additional potential equalisation in a corresponding housing with an equipotential bonding busbar. In rooms used for medical purposes, special equipotential bonding must be carried out in accordance with DIN VDE 0100 P.710.



## Plaster protection

According to DIN 18382, protection of the executed service as well as the objects handed over for completing an installation is usually part of the installer's ancillary services. The installation boxes are normally sealed with so-called plaster or signal covers.



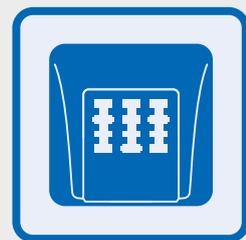
## Protected areas

For the installation of installation boxes in bathrooms and similar rooms, the requirements according to DIN VDE 0100 P.701 must be observed.



## Telephone sockets

According to standard sheet FTZ 731 TR1 issued by Deutschen Bundespost, Fernmeldetechnisches Zentralamt in Darmstadt, only one-gang boxes according to DIN 49073 are approved for the installation of telecommunication inserts.



FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

PLUGGABLE

CONNECTIVITY

CABLE GLANDS

TOOLS

SERVICE



## Environmental compatibility – RoHS

Restriction of the placing on the market and use of certain hazardous substances according to EU Directive 2011/65/EU and EU Directive 76/769/EEC: The materials we use comply with the valid guidelines of the Ordinance on Hazardous Substances and fulfil the legal regulations for placing substances on the market. Emissions during normal use are not known. For more information on RoHS, please visit our website.



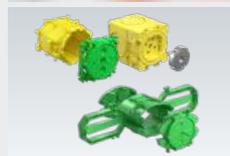
### Flush-mounting programme:

impact-resistant polystyrene, polyethylene



### Cavity wall programme:

Polypropylene



### Concrete construction programme:

Polyethylene



### Luminaires and loudspeaker housing programme:

Polyethylene/polyamide



### Fire protection programme:

galvanised steel sheet, fire-retardant coating



### Cable glands:

Polyamide, nickel-plated brass



## Wall light connection boxes

According to DIN VDE 0100 P.559, wall light connection boxes must be used wherever feed lines for wall luminaires end. KAISER wall-mounted light connection boxes have space for at least 3 connection terminals and cable reserves, as well as a screw fastening for luminaire mounting.

**For more technical information on our solutions and products, please visit our website.**

The installer of the installation system remains responsible for the selecting suitable types of flush-mounting boxes or enclosures and for their proper installation in terms of safety, in compliance with the installation regulations (for an overview of test marks, see table on p. 328). The technical advice we provide is given to the best of our knowledge and is deemed to be non-binding, also with regard to any third-party property rights.

### Max. number of terminals per one-gang box, one-gang junction box, junction box and junction casing, according to DIN EN 60670

For safety reasons (avoidance of excessive heating in junction boxes), according to DIN EN 60670, the number of terminals and conductors in a junction box is limited.

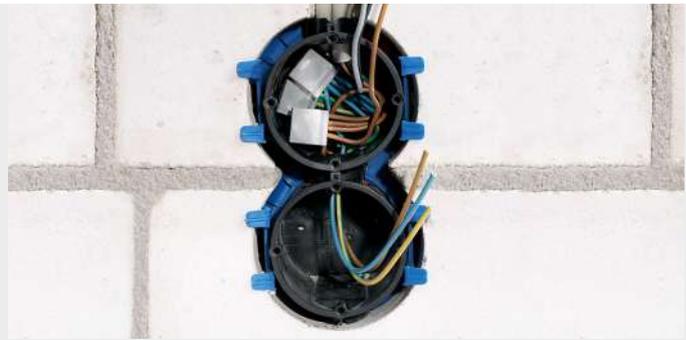
A certain volume (terminal space unit) is required for each terminal point. This volume includes the space for the connection terminals, the conductors and the movement of the conductors in the junction box.

### Max. number of terminals. Values in () are with mounted units.

Item no.	Conductor cross-section (in mm <sup>2</sup> )					
	1.5	2.5	4	6	10	16
<b>10...</b>						
1050-00	6	5				
1051-00	6	5				
1055-..	6	5				
1056-..	6	5				
1068-02	9 (7)	7 (6)	6 (4)			
1068-21	9 (7)	7 (5)	6 (4)			
1069-02	8(7)	6 (5)				
1081-..	6	6				
1092-..	18	15	12	8	6	5
1094-..	9	7	5			
1095-..	11	9	7	5		
1096-..	18	15	12	8	6	5
1097-..	18	15	12	8	6	5

<b>11...</b>						
1159-90	6	5				
1172-..	6	5				

<b>12...</b>						
1211-01	7 (7)	6 (6)	5 (4)			
1211-02	7	6	5			
1227-50	11	9				
1227-55	10	8				
1245-62	7	5				
1245-63	7	5	4			
1248-..	6	5				
1249-11	5	4				
1249-12	5	3				
1248-55	4	3				
1255-01	6 (5)	5				
1255-43	6	5				
1255-45	6	5				
1260-01	10(8)	8(6)	6(5)			
1260-11	10(8)	8(6)	6(5)			
1262-..	7 (4)	6(5)	5 (4)			
1263-..	8 (7)	6(5)	5 (4)			
1264-60/61	8 (7)	6 (5)	5 (4)			
1265-01	10(8)	8(6)	6(5)			
1265-11	10(8)	8(6)	6(5)			
1265-12	10	8	6			
1265-13	10	8	6			
1268-01	11 (9)	9 (7)	8 (6)			
1269-01	11 (9)	9 (7)	8 (6)			
1276-70	8	6	5			
1295-02	18	15	12	8		
1296-02	18	15	12	8	6	5
1297-02	18	15	12	8	6	5
9907	17	14	11	7	5	4
9908.21	18	15	12	8	6	5
9916	18	15	12	8	6	5
9917	18	15	12	8	6	5
9914.01	18	15	12	8	6	5
9917.21	18	15	12	8	6	5
9916.21	18	15	12	8	6	5
9909.01	12	10	8	5	4	3
9908.01	17	10	11	7	5	4
9911.01	18	15	12	8	6	5
9912.01	18	15	12	8	6	5



Item no.	Conductor cross-section (in mm <sup>2</sup> )					
	1.5	2.5	4	6	10	16
<b>15...</b>						
1550-..	6 (5)	5 (4)				
1551-..	6 (5)	5 (4)				
1555-..	6 (5)	5 (4)				
1555-21	7 (5)	5 (4)				
1556-21	7 (5)	5 (4)				
1556-..	6 (5)	5 (4)				
1572-02	8	6	5			
1569-01	6 (3)	4				

<b>16...</b>						
1656-02	9 (6)	7 (5)				
1656-21	9 (7)	7 (5)	6 (4)			

<b>17...</b>						
1756-02						

<b>90...</b>						
9061-..	5	4				
9062-..	10 (7)	8 (5)	6			
9062-74/94	10 (12)	8 (10)	6 (8)	5 (6)	4 (5)	
9062-21	10	8	6			
9062-94	12 (10)	10 (8)	8 (6)	6 (5)	5 (4)	
9063-..	6	5				
9063-50	6	5				
9064-..	7 (5)	5 (4)				
9064-..	6 (4)	4 (3)				
9068-01/79	6 (3)	5				
9068-04/74	6	5				
9068-03/76	7 (5)	5 (4)				
9068-94	7(7)	6(6)	5(4)			
9069-01	6 (3)	4				
9069-94	6 (5)	5 (4)				
9071-..	7	5				
9073-..	11	9	7			
9074-01	6 (3)	4				
9074-03	6 (3)	4				

<b>91...</b>						
9192-..	18	15	12	8	6	5
9195-..	10	8	6	5		
9196-..	18	15	12	8	6	5
9197-..	18	15	12	8	6	6

<b>92...</b>						
9263-..	6	5				
9264-..	7 (5)	5 (4)				
9462-94	6 (5)	5 (4)				
9463-01	4	3				
9464-01	6 (3)	4				
9464-15	6 (3)	4				
9273-91/77	12	10	8			
9266-22/77	7 (5)	5 (4)				
9268-94/74	7 (7)	6 (6)	5 (4)			
9252-22	9(7)	7(5)	5(4)	4(3)		
9252-78	9(7)	7(5)	5(4)	4(3)		
9253-22	11(9)	9(7)	7(6)	5(4)	4(3)	
9253-78	11(9)	9(7)	7(6)	5(4)	4(3)	
9254-22	14(12)	11(10)	9(8)	6(5)	4(4)	3(3)
9254-78	14(12)	11(10)	9(8)	6(5)	4(4)	3(3)
9280-22	8(6)	6(5)				
9280-78	8(6)	6(5)				

### Glass fibres insensitive to bending

are fibre optic cables with a smaller bending radius.

While the permissible bending radii of an optical fibre are normally at least 30 mm, the bend-insensitive optical fibre cables according to the ITU-T G.657 specification are 10 mm and 7.5 mm respectively.

#### ITU-T G.657.A1

(Single mode fibre optic cable) bending radius 10 mm

#### ITU-T G.657.A2

(Single mode fibre optic cable) bending radius 7.5 mm

FTTX cabling (EN 50173-1)					
Class	Link length	Fibre class	Channel attenuation (dB)		Application
OF-5000	5,000 m	OS2	1310 nm 4.0 dB	1550 nm 4.0 dB	10GBase SR

### Factors influencing the transmission rate

The attenuation on the fibre optic cabling route is decisive for the best possible transmission rate of a subscriber's internet connection.

### The following factors are decisive:

- possible losses due to scattering or absorption
- natural line losses (length) or signal propagation delay
- losses due to splice connection

Calculation of channel attenuation (single mode fibre 150 m with 3× connectors)					
Description	Attenuation standard	Length Quantity	Calculation	Loss (dB)	
Fibre attenuation loss	1.00 dB/km	150 m	0.001 x 150	0.15 dB	
Insertion loss per connector	0.25 dB	4	4 x 0.25	1.00 dB	
Insertion loss per splice	0.05 dB	3	3 x 0.05	0.15 dB	
Total channel attenuation				1.30 dB	

The maximum permissible channel attenuation (PoP to FO-SC) of 4.0 dB is not exceeded, therefore, interference-free data transmission can be guaranteed. The calculated channel attenuation must be confirmed and recorded with a certifier (measuring device) after installation of the cabling.

### Fibre optic connectors

Fibre optic connectors are mounted on both sides of a fibre optic cable to create a fibre optic patch cable. In addition, the plugs are linked with a connector. The coupling is specially designed for the connectors and positions the end faces (connector end faces) against each other so that the light signal can be transmitted optimally. The connectors are polished after the manufacturing process and protected against dirt and dust with a dust cap. Before using the connectors, the front surface must be cleaned with a cleaning agent (dust-free cloth, alcohol, cleaning pen, etc.), as

the slightest contamination has a great effect on the attenuation. In the FTTX environment, only connectors with 8° APC (Angular Physical Contact) are used. The front surface is bevelled and polished. The reflections on the fibre optic cable are not transmitted through the connector, thus improving the channel attenuation.

Plug	Max. insertion loss	Typical insertion loss	Ferrules diameter	Number of fibres	Standard	Locking
SC	0.25 dB	0.15 dB	2.50 mm	1	IEC 61754-4	Draw/Plug
LC	0.25 dB	0.15 dB	1.25 mm	1	IEC 61754-20	Clamp
E2000®	0.25 dB	0.12 dB	2.50 mm	1	IEC 61754-15	Draw/Plug
E3S Connect®	0.25 dB	0.15 dB	1.25 mm	1	IEC 61754-20*	Clamp

(Test method IEC 61300-3-34; guarantees a maximum insertion loss of 0.25 dB when using Grade B connectors)

\*E3S Connect® connector becomes standard LC/APC connector after assembly with housing and locking housing

### Fibre Recognition

The fibre optic categories and connectors are differentiated by colour. This means that the colour code can be used to draw immediate conclusions about the installed system.

Category	Connectors	Patch cables
OS2 Single Mode	Blue	Yellow
OS2 Single Mode APC	Green	Yellow

### Splice detection

The individual fibre optic lines in a fibre optic cable are defined by standard to simplify processing during splicing. In Germany, DIN IEC 60304 and DIN VDE 0888 applies; outside Germany, IEC 60794-2 and TIA 598-B are also applicable.

Colour code (VDE-0888)					
1		Red	7		Brown
2		Green	8		Purple
3		Blue	9		Aqua
4		Yellow	10		Black
5		White	11		Orange
6		Grey	12		Pink

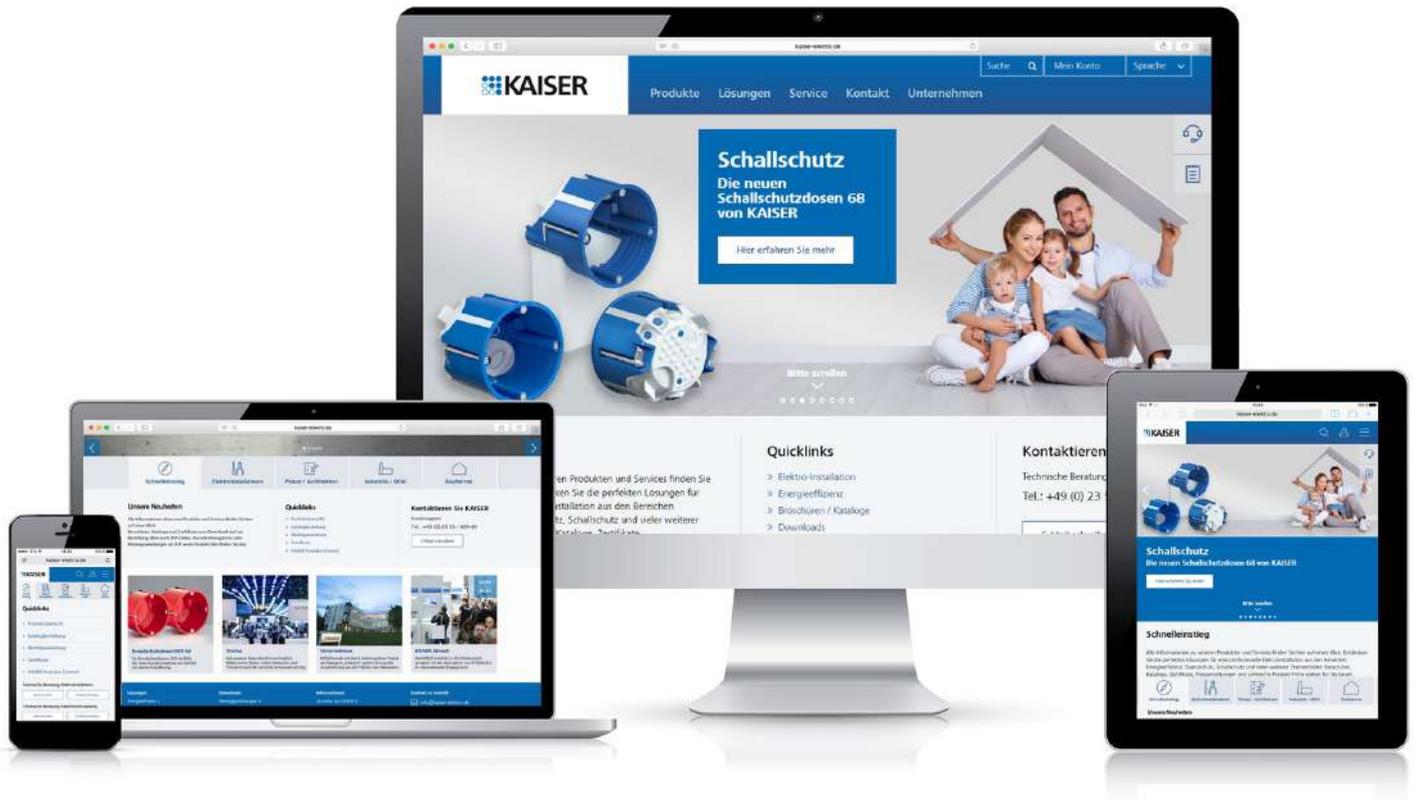
Depending on the network operator and project (subsidised project), an up to 4x fibre optic cable per subscriber is laid for FTTH cabling. In an apartment building or larger residential complex, 2x fibre optic cables must also be provided for the building. Usually the fibre colour code 1-4 (red, green, blue and yellow) is used per subscriber, as the connection/customer cables have the same colour coding, so a clean and structured splice work is ensured.

### KAISER GROUP- General Glossary

<b>Network level 1</b>	Wide area network
<b>Network level 2</b>	Regional distribution network
<b>Network level 3</b>	Access network
<b>Network level 4</b>	Building network
<b>Network level 5</b>	Unit network
<b>Broadband</b>	In communications engineering, the term broadband communication describes a transmission channel whose magnitude frequency response is not constant and in which signal distortions occur as a result. Broadband channels, unlike narrowband channels, require channel equalization with adaptive filters to compensate for signal distortion.
<b>DSL</b>	The end customer is connected to the telecommunications network exclusively on a copper basis. In this case, the telecommunications cable runs from the main distribution frame (HVT) to the cable distribution frame (KVZ) and from there to the house connection.
<b>Vectoring</b>	Vectoring technology is an extension of VDSL2; with the help of vectoring the crosstalk (NEXT) between the individual wires in the copper telecommunication cable can be minimized, and the transmission speed as well as the number of connected subscribers around a KVZ can be increased.
<b>FTTX</b>	Fibre to the "X", in the case of fibre optic networks, a distinction is made between the types of connection depending on how the end customer is connected, between FTTC (Fibre to the Curb), FTTB (Fibre to the Building) and FTTH (Fibre to the Home).
<b>HFC</b>	Hybrid Fibre Coax is used by cable network operators to connect cable television networks (CATV) via fibre optic cable from the cable head-end (exchange) to the end branch (fibre node). The data signals are transmitted from the end splitter via coaxial cable to the antenna socket in the house.
<b>FTTC</b>	Fibre to the Curb; the fibre optic line is only laid to the cable distribution frame (KVZ)/multifunctional housing (MFG), (integrated DSLAM (Digital Subscriber Line Access Multiplexer) at the roadside. From there, the existing copper telecommunication cables (Cu-DA) of the distribution network lead to the end customer.
<b>FTTB</b>	Fibre to the Building; in contrast to FTTC/VDSL, FTTB/FTTH networks consist entirely of a fibre optic infrastructure. The fibre optic line extends from the exchange (PoP) via the network distributor (OP-NVt) to the building transfer point (BTP).
<b>FTTH</b>	Fibre to the Home; with FTTH, the entire cabling in the building up to the FO-SC also consists of fibre optic lines.
<b>PoP</b>	Point of Presence, different designation for the switching station
<b>Gf-ND</b>	The fibre optic network distributor is a passive distributor for cable distribution of fibre optic communication lines within a local network.
<b>Supply sleeve</b>	The sleeve is a passive distribution box for cable distribution of fibre optic communication lines within a local area network.
<b>FTU</b>	Fibre Termination Unit
<b>FO-TP / BTP</b>	The fibre optic termination point of the network operator, other designation Building Transfer Point, other designation BEP (Building Entry Point)
<b>FO-BD</b>	Fibre optic building distributor, different designation PD (primary distributor)
<b>FO-FD</b>	THE fibre optic floor distributor, different designation FO-CP (fibre optic collection point)
<b>FO-SC</b>	The fibre optic subscriber connection, different designation fibre optic subscriber outlet

### KAISER GROUP- Product Glossary

<b>FMP</b>	Splice distributor housing (fibre management plate)
<b>FMB</b>	Splice distributor housing with cover (fibre management box)
<b>MFD</b>	Hood sleeve (midi fibre dome)
<b>CFD</b>	Repair sleeve (compact fibre dome)
<b>DP</b>	"Distribution Point" is a distribution point between PoP and BTP, e.g. supply sleeve (underground) or FO-NVt (above ground)



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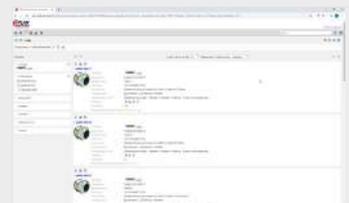
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# Service

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1210-02	173	130	1227-54	226	130	1262-61	220	140
1211-00	171/192	130	1227-55	226	110	1263-06	220	140
1211-01	179	130	1245-62	186	130	1263-60	221	140
1211-02	179	130	1245-63	186	130	1263-61	220	140
1211-20	191	130	1247-01	183	130	1264-06	220	140
1211-25	192	130	1248-01	166	130	1264-60	221	140
1211-32	192	130	1248-03	166	130	1264-61	220	140
1212-04	174	130	1248-55	36	130	1265-01	165	130
1212-06	174	130	1249-11	180	130	1265-11	181	130
1212-08	174	130	1249-12	180	130	1265-12	181	130
1212-10	174	130	1249-13	182	130	1265-13	182	130
1212-12	174	130	1255-01	164	130	1266-25	221	140
1212-14	174	130	1255-43	167	130	1268-01	170	130
1212-16	174	130	1259-04	170	130	1269-01	170	130
1212-18	174	130	1259-96	211	130	1269-03	205	130
1212-20	174	130	1260-01	165	130	1269-04	205	130
1212-98	174	130	1260-11	181	130	1270-00	211	130
1212-99	174	130	1261-00	230	140	1273-43	195	130
1217-02	211	130	1261-06	224	140	1273-44	195	130
1219-00	176	140	1261-07	224	140	1273-45	195	130
1219-10	410	170	1261-08	224	140	1275-40	168	130
1223-22	201	130	1261-09	224	140	1276-40	168	130
1223-41	205	130	1261-10	223	140	1276-70	167	130
1224-22	201	130	1261-11	223	140	1276-71	167	130
1224-41	205	130	1261-12	231	140	1281-00	246	150
1224-99	205	130	1261-14	232	140	1281-01	248	150
1225-10	186	130	1261-16	232	140	1281-02	248	150
1225-12	186	130	1261-18	222	140	1281-03	248	150

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1281-06	248	150	1282-66	250	150	1290-30	257	150
1281-07	248	150	1282-71	260	150	1292-90	254on request	
1281-08	249	150	1282-72	260	150	1295-02	172/206	130
1281-09	249	150	1282-73	260	150	1295-22	201	130
1281-10	249	150	1282-74	261	150	1295-73	173	130
1281-11	249	150	1282-75	261	150	1296-02	172	130
1281-15	247	150	1282-76	261	150	1296-20	209	130
1281-20	256	150	1283-00	246	150	1296-22	202	130
1281-21	252/256/257	150	1283-01	251	150	1297-02	172	130
1281-25	252/257	150	1283-02	251	150	1297-20	209	130
1281-27	252	150	1283-03	251	150	1297-22	202	130
1281-30	247	150	1283-04	251	150	1297-34	202	130
1281-31	253/262	150	1283-05	251	150	1297-35	202	130
1281-32	253/262	150	1283-06	251	150	1297-75	173	130
1281-33	253/262	150	1283-10	251	150	1298-37	202	130
1281-50	252/257	150	1283-11	251	150	1298-38	202	130
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1281-62	248	150	1283-27	252/263	150	1299-61	252	150
1281-63	248	150	1283-33	193	130	1299-62	252	150
1281-64	248	150	1283-34	193	130	1299-63	252	150
1281-65	248	150	1283-40	247	150	1299-64	252	150
1281-66	248	150	1283-50	252/263	150	1299-65	252	150
1281-67	248	150	1283-61	251	150	1299-66	252	150
1281-68	249	150	1283-62	251	150	1299-69	216/262	140
1281-69	249	150	1283-63	251	150	1299-70	217/262	140
1282-00	246	150	1283-64	251	150	<b>15...</b>		
1282-01	250	150	1283-65	251	150	1545.12.06	379	560
1282-02	250	150	1283-66	251	150	1545.12.1.06	380	560
1282-03	250	150	1283-71	260	150	1545.17.06	379	560
1282-04	250	150	1283-73	260	150	1545.17.1.06	380	560
1282-05	250	150	1283-74	261	150	1545.17.1.10	380	560
1282-06	250	150	1283-76	261	150	1545.17.10	379	560
1282-10	250	150	1284-32	413	170	1545.20.08	379	560
1282-11	250	150	1284-34	413	170	1545.20.1.08	380	560
1282-25	252/263	150	1284-35	413	170	1545.20.1.13	380	560
1282-27	252/263	150	1284-36	413	170	1545.20.13	379	560
1282-30	247	150	1284-62	412	170	1545.25.1.11	380	560
1282-40	247	150	1284-63	412	170	1545.25.1.17	380	560
1282-50	252/263	150	1284-68	413	170	1545.25.11	379	560
1282-61	250	150	1284-69	413	170	1545.25.17	379	560
1282-62	250	150	1285-33	413	170	1545.32.1.25	380	560
1282-63	250	150	1285-34	413	170	1545.32.25	379	560

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1545.50.1.38	380	560	1571.20.3.060	384	510	4250002	360	730
1545.63.1.44	380	560	1571.20.3.065	384	510	4250005	371	730
1546.12.06	381	560	1571.20.4.050	384	510	4250006	371	730
1546.17.08	381	560	1571.20.4.060	384	510	4250007	371	730
1546.20.07	381	560	1571.25.2.070	384	510	4250008	371	730
1546.20.12	381	560	1571.25.2.090	384	510	4250009	371	730
1550-00	32	120	1571.25.2.100	384	510	4250010	371	730
1551-00	32	120	1571.25.3.070	384	510	4250011	371	730
1555-04	18	110	1571.25.3.090	384	510	4250012	372	730
1555-21	25	110	1571.25.4.070	384	510	4250013	372	730
1555-51	76	180	1571.25.6.060	384	510	4250014	372	730
1555-62	32	120	1571.32.2.115	384	510	4250015	372	730
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1555.12.06	379	560	1571.32.3.105	384	510	4250017	372	730
1555.12.1.06	380	560	1571.32.4.090	384	510	4250018	372	730
1555.17.06	379	560	1571.32.6.070	384	510	4250019	341	730
1555.17.1.06	380	560	1572-02	35	120	4250020	341	730
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1555.17.10	379	560	1576.17.08	381	560	4250022	341	730
1555.20.08	379	560	1576.20.07	381	560	4250023	341	730
1555.20.1.08	380	560	1576.20.12	381	560	4250024	342	730
1555.20.1.13	380	560	<b>16...</b>			4250025	342	730
1555.20.13	379	560	1655-02	31	120	4250026	342	730
1555.25.1.11	380	560	1656-02	31	120	4250027	342	730
1555.25.1.17	380	560	1656-21	27	180	4250028	342	730
1555.25.11	379	560	<b>20...</b>			4250029	344	730
1555.25.17	379	560	2000-00	392	120	4250030	344	730
1555.32.1.25	380	560	2000-80	393	120	4250031	344	730
1555.32.25	379	560	2000-90	393	120	4250032	344	730
1555.40.1.33	380	560	<b>24...</b>			4250033	344	730
1555.50.1.38	380	560	2444-15	44/144	120	4250034	345	730
1555.63.1.44	380	560	2444-40	44/144	120	4250035	345	730
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1556-21	25	180	2445-50	144	120	4250037	345	730
1556-62	32	120	2472-15	44/144	120	4250038	345	730
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1569-01	22	190	2472-25	44/144	120	4252002	356	730
1571.17.2.030	384	510	2472-40	44/144	120	4252003	357	730
1571.17.2.040	384	510	2472-91	44	120	4252004	356	730
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1571.20.2.050	384	510	2521	329	250	4252006	363	730
1571.20.2.060	384	510	<b>42...</b>			4252007	363	730
1571.20.2.075	384	510	4240001	347	730	4252008	363	730

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4252011	363	730	4264002	346	730	<b>82...</b>		
4252012	363	730	4264003	349	730	8245.12	385	560
4252013	367	730	4264004	349	730	8245.17	385	560
4252014	367	730	4264005	349	730	8245.20	385	560
4252015	367	730	4264006	349	730	8245.25	385	560
4252016	367	730	4264007	349	730	8245.32	385	560
4252017	367	730	4264008	350	730	8245.40	385	560
4252018	367	730	4264009	350	730	8245.50	385	560
4252019	367	730	4264010	350	730	8245.63	385	560
4252020	364	730	4264011	350	730	8255.12	385	560
4252021	364	730	4264012	350	730	8255.17	385	560
4252022	364	730	4264013	348	730	8255.20	385	560
4252023	364	730	<b>45...</b>			8255.25	385	560
4252024	364	730	4551	194	130	8255.32	385	560
4252025	364	730	4551.14	194	130	8255.40	385	560
4252026	364	730	4552	193	130	8255.50	385	560
4252027	368	730	4555	194	130	8255.63	385	560
4252028	368	730	4558	193	130	<b>87...</b>		
4252029	368	730	4560	194	130	8745.12	387	550
4252030	368	730	4561	195	130	8745.17	387	550
4252031	368	730	<b>50...</b>			8745.20	387	550
4252032	368	730	5000	100	120	8745.25	387	550
4252033	368	730	<b>54...</b>			8745.32	387	550
4252034	335	730	5421	318	190	8745.40	387	550
4252035	335	730	5429	318	190	8745.50	387	550
4252036	335	730	<b>66...</b>			8745.63	387	550
4252037	335	730	662	81	120	<b>88...</b>		
4252038	335	730	663	81	120	8845.12	386	560
4252039	336	730	<b>75...</b>			8845.17	386	560
4252040	336	730	7500	79	120	8845.20	386	560
4252041	336	730	7501	79	120	8845.25	386	560
4252042	336	730	752	79	180	8845.32	386	560
4252043	336	730	<b>76...</b>			8845.40	386	560
4252044	338	730	7650	79	120	8845.50	386	560
4252045	338	730	7651	79	120	8845.63	386	560
4252046	338	730	<b>80...</b>			8855.12	386	560
4252047	338	730	8000.12	387	540	8855.17	386	560
4252048	338	730	8000.17	387	540	8855.20	386	560
4252049	339	730	8000.20	387	540	8855.25	386	560
4252050	339	730	8000.25	387	540	8855.32	386	560
4252051	339	730	8000.32	387	540	8855.40	386	560
4252052	339	730	8000.40	387	540	8855.50	386	560

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9000-02	124	180	9066-77	111	180	9089-45	122	180
9059-44	120	180	9067-01	88	120	9089-46	122	180
9059-45	120	180	9067-77	88	120	9089-47	122	180
9059-46	120	180	9068-01	111	180	9089-48	122	180
9059-47	120	180	9068-03	90	120	9089-49	122	180
9059-48	120	180	9068-04	90	120	9089-51	122	180
9059-49	120	180	9068-74	90	120	9089-52	122	180
9059-51	120	180	9068-76	90	120	9089-53	122	180
9059-52	120	180	9068-79	111	180	9089-54	122	180
9059-53	120	180	9068-88	143	120	9089-55	122	180
9059-54	120	180	9068-94	134	190	9098-77	151	120
9059-55	120	180	9069-01	127	190	9098-77.02	151	120
9059-61	121	180	9069-03	132	190	9098-77.03	151	120
9059-62	121	180	9069-04	132	190	<b>91...</b>		
9060-40	94	120	9069-74	129	190	9148-00	92	120
9060-41	115	180	9069-75	132	190	9155-61	94	120
9060-42	94	120	9069-76	132	190	9155-62	94	120
9060-68	293	190	9069-77	127	190	9155-71	94	120
9060-74	138	190	9069-94	129	190	9155-72	94	120
9060-77	94	120	9071-01	88	120	9192-20	148	120
9060-78	94/113/127/289	180	9071-77	88	120	9192-22	150	120
9060-88	53/127/141	190	9073-01	147	120	9192-27	150	120
9060-95	211	130	9073-20	148	120	9192-77	146	120
9060-97	94	120	9073-78	147	120	9192-91	146	120
9060-98	94/113	180	9073-79	148	120	9195-20	148	120
9061-00	87	120	9073-93	148	120	9195-22	150	120
9061-01	90	120	9074-01	137	190	9195-27	150	120
9061-77	87	120	9074-03	141	190	9195-73	147	120
9061-78	90	120	9075-01	88	120	9195-77	146	120
9062-02	87	120	9075-12	112	180	9195-88	38/143	120
9062-50	92	120	9075-77	88	120	9195-91	146	120
9062-74	92/113	180	9075-78	112	180	9196-20	148	120
9062-77	87	120	9079-44	123	180	9196-22	150	120
9062-90	87	120	9079-45	123	180	9196-27	150	120
9062-94	92/113	180	9079-46	123	180	9196-77	146	120
9063-02	86	110	9079-47	123	180	9196-91	146	120
9063-50	93	120	9079-48	123	180	9197-20	148	120
9063-78	86	120	9079-49	123	180	9197-22	150	120
9063-88	143	120	9079-51	123	180	9197-27	150	120
9064-02	86	110	9079-52	123	180	9197-77	146	120
9064-78	86	120	9079-53	123	180	9197-91	146	120
9064-88	143	120	9079-54	123	180			

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9252-22	99	180	9350-99	269	160	99.1234	80	120
9252-78	99	180	<b>94...</b>			99.1234.06	81	120
9253-22	99	180	9400-05	288	190	9902.22	207	130
9253-78	99	180	9435-03	317	190	9902.23	207	130
9254-22	100	180	9435-04	317	190	9902.24	207	130
9254-78	100	180	9459-01	302	190	9902.24.40	207	130
9263-22	97	110	9459-02	303	190	9902.26	207	130
9263-78	97	180	9459-03	306	190	9902.28	207	130
9264-12	106	180	9459-04	309	190	9902.29	207	130
9264-22	97	110	9459-05	313	190	9907	175	130
9264-72	106	180	9459-06	313	190	9907.21	175	130
9264-78	97	180	9461-14	297	190	9907.68	175	130
9266-22	101	180	9462-94	291	190	9907.68.45	175	130
9266-77	101	180	9463-01	289	190	9908.01	174	130
9268-74	108	180	9463-02	293	190	9908.21	174	130
9268-94	108	180	9463-14	297	190	9908.68	175	130
9273-77	103	180	9463-15	297	190	9909.01	174	130
9273-91	103	180	9463-50	295	190	9909.02 S	176	130
9280-22	110	180	9464-01	289	190	9909.03	176	130
9280-78	110	180	9464-02	293	190	9909.10	175	130
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9298-21.02	151	180	9464-15	298	190	9909.20	175	130
9298-21.03	151	180	9464-50	295	190	9909.22	175	130
<b>93...</b>			9473-91	314	190	9911.01	197	130
9300-01	274	160	9473-92	314	190	9911.02	199	130
9300-02	274	160	9473-95	313	190	9911.03	199	130
9300-03	274	160	9473-96	313	190	9911.12	199	130
9300-22	274	160	9498-77	319	190	9912.01	197	130
9300-41	274	160	9498-77.02	319	190	9914.01	197	130
9300-42	274	160	9498-77.03	319	190	9914.02	199	130
9300-43	274	160	9499-77	319	190	9914.03	199	130
9300-93	275	160	9499-77.02	319	190	9916	197	130
9301-01	275	160	9499-77.03	319	190	9916.02	199	130
9301-02	275	160	9499-77.04	319	190	9916.03	199	130
9301-03	275	160	9499-77.06	319	190	9916.06	198	130
9301-11	275	160	<b>97...</b>			9916.21	197	130
9301-12	275	160	975	80	120	9916.68	198	130
9301-13	275	160	9798-77	152	190	9917	198	130
9310-10	277	160	9798-77.02	152	190	9917.02	199	130
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9320-11	266	160	9799-77	152	190	9917.06	198	130

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9917.68	198	130	AT2297	326	200
9918	206	130	AT2304	326	200
9921	80	120	AT2306	326	200
994	80	120	AT29231	375	730
9940	208	130	AT29235	375	730
9940.20	200	130	AT29236	375	730
9940.25	200/208	130	AT6021	324	200
9940.50	200/208	130	AT6025	325	200
9941	208	130	AT6031	324	200
9941.25	208	130	AT6041	324	200
9941.35	208	130	AT6045	325	200
9951	187	130	AT6061	324	200
9955	187	130	AT6071	325	200
9957	203	130	AT6197	326	200
9959	186	130	AT6199	326	200
9966.21	61	180	AT6396	325	200
9966.22	61	180	AT7703	324	200
9966.31	61	180	AT7704	325	200
9966.32	61	180	AT7705	324	200
<b>AT...</b>			AT7706	324	200
AT2215	324	200	AT7707	325	200
AT2216	322	200	AT7708	324	200
AT2218	327	200	AT7710	326	200
AT2219	327	200	AT7719	325	200
AT2228	324	200	AT7721	326	200
AT2229	322	200	AT7722	325	200
AT2238	327	200			
AT2239	327	200			
AT2244	324	200			
AT2249	324	200			
AT2250	323	200			
AT2251	323	200			
AT2252	323	200			
AT2254	327	200			
AT2256	323	200			
AT2258	322	200			
AT2264	323	200			
AT2274	327	200			
AT2275	326	200			
AT2276	326	200			
AT2277	326	200			
AT2278	326	200			
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The "General Terms and Conditions of Delivery of the ZVEI for Products and Services of the Electrical Industry – Green Terms and Conditions of Delivery" in the 2018 version issued by the ZVEI (hereinafter referred to as the "Green Terms and Conditions of Delivery" – available on our website [www.kaiser-elektro.de](http://www.kaiser-elektro.de)), as well as the following supplementary terms and conditions of KAISER GmbH & Co.KG, shall apply to all our business relationships with our customers ("Customers"). In the event of unintended contradictions, our supplementary terms and conditions shall prevail.

**Deviating, conflicting or supplementary general terms and conditions of the customer shall only become part of the contract if and insofar as we have expressly agreed to their validity. This requirement of consent shall apply in any case, for example even if we carry out the delivery to the customer without reservation in the knowledge of the customer's GTC.**

### 1. Orders, scope of deliveries or services

The order of the goods by the buyer is considered a binding offer of contract. Unless otherwise stated in the order, we are entitled to accept this contractual offer within 4 weeks of its receipt by us. Acceptance can be declared either in writing (e.g. by order confirmation) or by delivery of the goods to the customer.

The scope of the deliveries or services shall be determined by the written declarations of both parties (Article I No. 1 of the "Green Terms of Delivery"). In addition to the "Green Terms of Delivery", the following shall apply: If a contract has been concluded without such mutual declarations being available, either the written order confirmation of the supplier or service provider (hereinafter referred to as "Supplier"), or, if no such confirmation has been issued, the written order of the Customer shall be decisive. Individual agreements made with the Customer in individual cases (including ancillary agreements, supplements and amendments) shall take precedence in all cases. Subject to proof to the contrary, a written contract or our written confirmation shall be authoritative for the content of such agreements.

### 2. Prices and payment terms

Supplementary to Article II of the "Green Terms of Delivery" the following shall apply:

The catalogue prices are recommended retail prices and do not include statutory VAT in euros. The prices of brass products are subject to certain fluctuations, which are based on the respective DEL quotation. These prices are based on a DEL quotation of 150 euros for Ms58. In the event of a change in this rate by more than 15 euros upwards or downwards, a five percent premium or discount will be applied for every 15 points. For the calculation of the surcharges or discounts, the DEL note of the date on which the order was received by us shall be taken as the basis in each case. You can find our current range prices, without taking into account a possible surcharge or discount, at: [www.kaiser-elektro.org/preise](http://www.kaiser-elektro.org/preise)  
If no other terms of payment have been agreed, 10 days shall apply ./ 3% discount, 30 days net, in each case from the date of invoice.

### 3. Value added tax

1. The Customer assures the correctness of the details of their address and VAT number. If a delivery is treated as taxable due to deficiencies in the address or VAT number details, the Customer will reimburse the tax payable by us.
2. In the event of a VAT-exempt intra-Community delivery pursuant to Sections 4(1)(b) in conjunction with Section 6 a of the Turnover Tax Act (UStG), the Customer is obliged to submit a confirmation of receipt upon request, which complies with the principles of Section 17a Turnover Tax Implementing Regulation (UStDV). If the Customer does not fulfil their obligation within 30 days of our request, the value added tax can be charged subsequently. Ownership of the object of purchase shall remain reserved until receipt of the confirmation of receipt or until payment of the subsequently invoiced turnover tax. The retention of title according to Article III of the included "Green Terms of Delivery" issued by the ZVEI as well as Clause 4 of these supplementary conditions shall not be affected by this.

### 4. Retention of title

Supplementary to Article III of the "Green Terms of Delivery" the following shall apply:

If external storage capacities are to be used for goods delivered under retention of title, this must be notified to the Supplier. The Customer shall ensure by individual agreement with the warehouse keeper that any liens on the goods owned by the Supplier do not come into existence. Upon delivery, the warehouse keeper shall be informed in writing that the goods in question are the property of the Supplier and shall only be stored with the Supplier on condition that a warehouse keeper's lien is avoided.

### 5. Shipping

The prices apply to delivery conditions ex works with acceptance of closed shipping cartons free of packaging costs. Opened packaging units cause a surcharge of 5.00,- Euro per packaging unit, regardless of the order amount. Orders for closed delivery within the Federal Republic of Germany with a net value of 800 euros or more shall be delivered free of charge. For small orders under 100.00,- Euro net order value we charge a processing surcharge of 25.00,- Euro net. At the request and expense of the Customer, the consignment shall be insured by the Supplier against breakage, transport and fire damage.

### 6. Returns

Goods can only be returned in exceptional cases and only after our approval. The Customer's statutory right of withdrawal remains unaffected by this. In the event of non-notification, returns will also not be accepted by our delivery warehouses and will be returned at the sender's expense. You can find our return conditions at [www.kaiser-elektro.org/retouren](http://www.kaiser-elektro.org/retouren).

### 7. Liability for defects

Articles VIII to XII of the "Green Terms of Delivery" issued by the ZVEI apply to our liability for material defects and defects of title.

### 8. Place of performance, choice of law and place of jurisdiction

1. The place of performance for our deliveries and any subsequent performance is Schalksmühle.
2. These Supplementary Terms and Conditions and the contractual relationship between us and the Customer shall be governed by the laws of the Federal Republic of Germany to the exclusion of international uniform law, in particular the UN Convention on Contracts for the International Sale of Goods.
3. If the Customer is a merchant within the meaning of the German Commercial Code, a legal entity under public law or a special fund under public law, the exclusive – also international - place of jurisdiction for all disputes arising directly or indirectly from the contractual relationship is our registered office in Schalksmühle. The same shall apply if the Customer is an entrepreneur within the meaning of Section 14 of the German Civil Code. However, we are also entitled in all cases to bring an action at the place of performance of the delivery obligation in accordance with these GT&Cs or a prior individual agreement or at the Customer's general place of jurisdiction. Overriding statutory provisions, in particular on exclusive competences, shall remain unaffected.

### General notes

1. With the publication of this catalogue, all previous editions become invalid.
2. This edition contains only KAISER standard programmes. Special programmes and developments on request.
3. Further foreign language KAISER catalogues are available on request.
4. Technical advice provided by us is given to the best of our knowledge and is deemed to be non-binding. Installers of electrical installation systems remain responsible for selecting suitable installation boxes, their materials and for proper installation in terms of safety.

Last updated 02/2018

Errors and technical modifications excepted.

The current terms of delivery and payment terms can be found on our website at: [www.kaiser-elektro.de](http://www.kaiser-elektro.de)

To ensure that you can rely on both our guaranteed product quality and our delivery promise, both us and our subsidiaries are members of many relevant associations and cooperations. With an international network of partnerships, we always know what the market demands.



The initiative "**Elektromarken. Starke Partner**" (**Electric brands. Strong partners**) of the 17 leading brand manufacturers brings together the reliable competence and proven quality of the German electrical industry. At the very least, this means an incomparable range of high-quality products and services for the electrical trade.  
[www.elektromarken.de](http://www.elektromarken.de)



The initiative **ELEKTRO+** provides objective information for the planning and execution of electrical installations to principals and experts for new installations as well as modernisations.  
[www.elektro-plus.com](http://www.elektro-plus.com)



The **Export Initiative Energy Efficiency** was established by the Federal German Government. It supports German providers with exporting products and services in the field of energy efficiency.  
[www.efficiency-from-germany.info](http://www.efficiency-from-germany.info)



The **ETIM** association develops and distributes a classification model for the electrical industry in collaboration with renowned enterprises.  
[www.etim.de](http://www.etim.de)



The **Gemeinsame Ausschuss Elektronik im Bauwesen** (Joint Committee for Electronics in Construction) supports the use of data processing in construction with respect to the common language of everyone involved in the construction process.  
[www.gaeb.de](http://www.gaeb.de)



**VDE** - these three letters stand for one of the major European associations for branches and professions in electrical engineering and information technology. An international expert platform for science, standardisation and product testing.  
[www.vde.com](http://www.vde.com)



The **VEG** is the professional association of electrical wholesalers in Germany. The purpose of the association according to its statutes is the protection, perception and promotion of the general idealistic and economic interests of its members.  
[www.veg.de](http://www.veg.de)



The **ZVEH** represents the economic and political interests of approximately 76,000 electrical and information technology companies at the national and international level.  
[www.zveh.de](http://www.zveh.de)



**ZVEI** is one of the most important industrial associations in Germany. It represents the interests of a high-tech industry with a very wide and extremely dynamic product portfolio.  
[www.zvei.org](http://www.zvei.org)

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

PLUGGABLE

CONNECTIVITY

CABLE GLANDS

TOOLS

SERVICE

# We guarantee quality

Endorsements

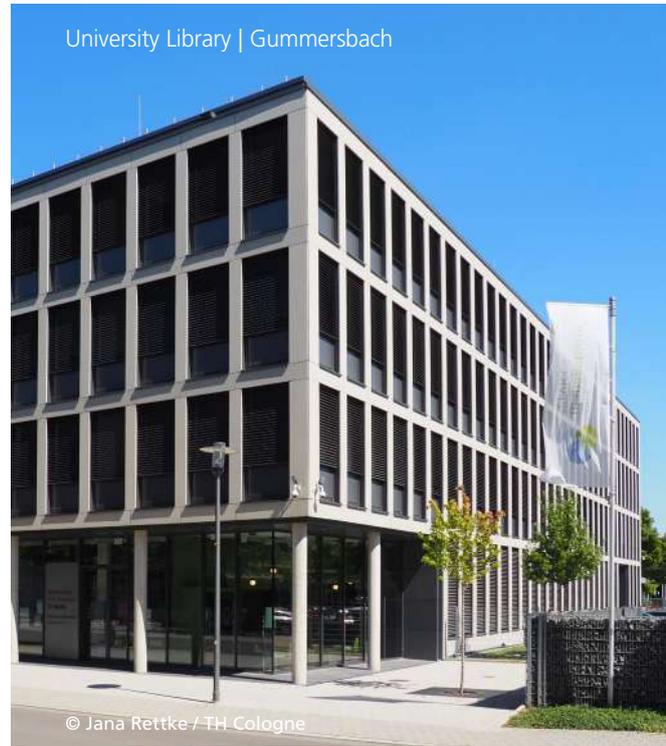
## Confidence from experience.

**KAISER installation systems** provide you with a high degree of flexibility for planning creative, technical installations of any kind. KAISER product and system solutions are at home in all types of buildings; architects and planners rely on our product know-how, which is just as innovative, forward-looking and durable as the items in which they perform their function. These decades of experience, as well as the knowledge gained from discussions with users and fabricators, give you the flexibility you need every day for your planning and installation. We give you the security of working with quality products that are further developed in a future-oriented manner parallel to the increasing requirements of the markets and installation habits.

Tech Gate | Vienna, Austria



University Library | Gummersbach



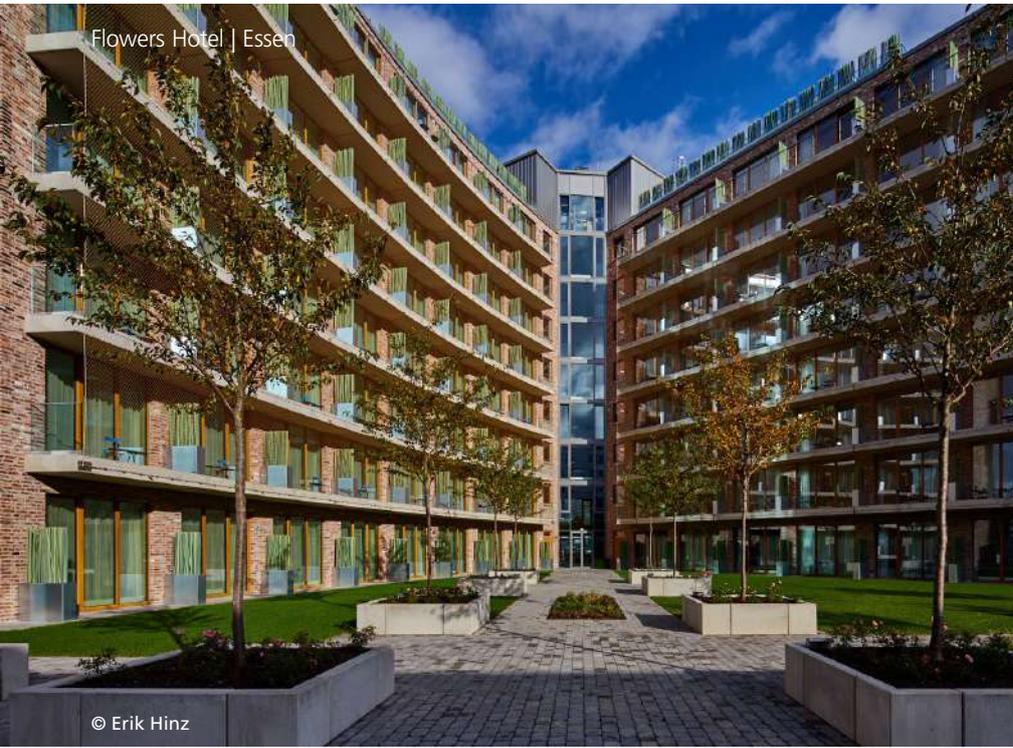
© Jana Rettke / TH Cologne

### KAISER is behind it!

KAISER has been developing and manufacturing high-quality electrical installation products for flush-mounting, cavity wall and concrete installations in Germany since 1904. Accordingly, many innovative ideas and reliable solutions from KAISER can also be found in important buildings. For example, in the "Tech Gate" office building in Vienna, in the Hardeck furniture store in Bochum, in the Constantin Quartier in Hanover, and in the modern and minimalist design hotel and apartment building Flowers Hotel in Essen. KAISER products can also be found in the new, modernly designed university library at the Gummersbach campus for Cologne University of Applied Sciences, as well as in the former administration building, which has been converted into an apartment hotel with student accommodation, and the Venloer 4711 housing complex in Cologne. Australians also appreciate KAISER quality, and are using the HWD B15 fire protection box, which is certified for shipbuilding, in the new yacht "Silver Loft".

Venlo 4711 | Cologne





More about our business areas:

- Energy efficiency
- Fire protection
- Concrete construction
- Sound insulation
- Radiation protection
- Construction
- Cable glands
- Pluggable installation
- Connectivity

at [www.kaiser-elektro.de](http://www.kaiser-elektro.de)



FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

PLUGGABLE

CONNECTIVITY

CABLE GLANDS

TOOLS

SERVICE



**As an innovative manufacturer** of products and system solutions for professional electrical installation, the KAISER GROUP is now one of the market leaders in Europe. With an international sales network and the subsidiaries AGRO in Switzerland, HELIA in Belgium and Attema in the Netherlands, we are always there for our customers. The close collaboration of the four companies generates considerable synergies from which our partners in the trade, commerce and industry benefit.

## Shaping the future **together.**

The KAISER, AGRO, ATTEMA and HELIA brands consistently offer you installation solutions that meet the needs of the market, efficiently supporting you in your daily work. Through their continuous future-oriented product innovations, these four strong brands can always keep you supplied with state-of-the-art products – today and tomorrow.



**KAISER headquarters**  
Schalksmühle, Germany

With a large network of distribution partners and representatives as well as our clearly structured warehouse logistics, we always guarantee the fastest availability of our products. With our personal advisory service, we always get quickly on site with you – no matter where your project is being built.

# Across Europe. Close to you.



**AGRO**  
Hunzenschwil, Switzerland



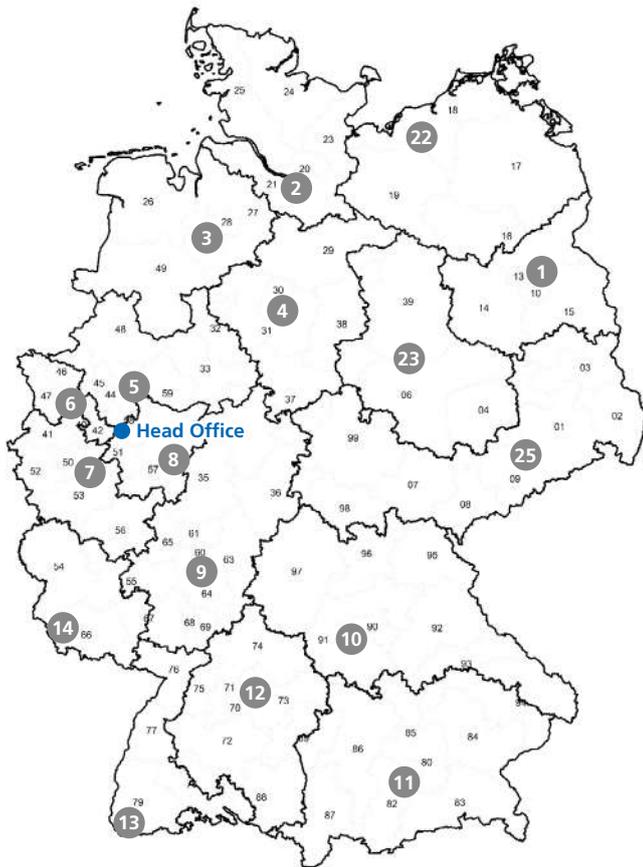
**ATTEMA**  
Gorinchem, The Netherlands



**HELIA**  
Erembodegem, Belgium

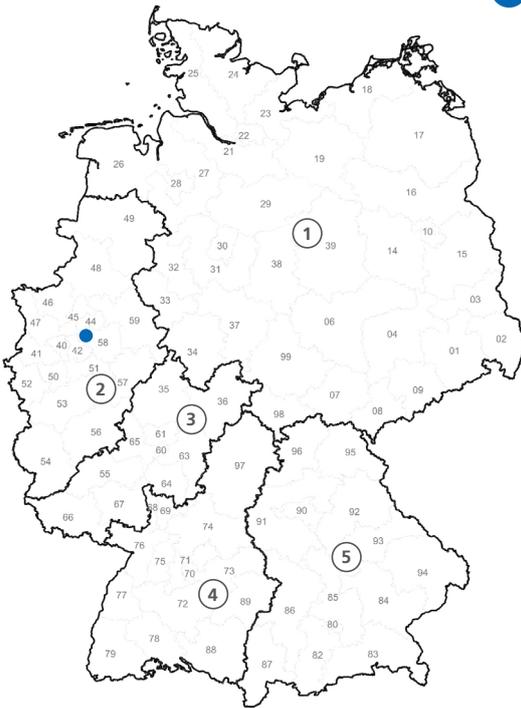


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## Sales industry

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# Solutions and systems for professional installations.

KAISER has been developing and producing systems and products as the basis for professional installation work since 1904. Planners and fitters all over the world use our practice-oriented solutions for their daily work in all installation areas.



## Electrical installation.

Innovative, safe and economically viable solutions for a wide range of applications in buildings and ships. They make daily work easier and ensure safe, sustainable installation results in both traditional and pluggable electrical installations.



## Connectivity / Optic fibre broadband expansion.

A practical, innovative solution offer for professionals. From street distribution to building distribution to flat distribution, pluggable and pre-assembled, ready-to-splice products are available for efficient installation.



## Cable glands / industrial products.

AGRO cable glands made from plastic, brass or stainless steel for the highest quality and practicality. The complete programme for trade and industry also includes products with enhanced requirements (EMC, EX), elbow cable glands or universal and multi-cable entries.

### Technical information and advice

All further information on products, system solutions and communication media can be found on our website at [www.kaiser-elektro.de](http://www.kaiser-elektro.de)

For any additional questions or information, please do not hesitate to contact our technical support team who will be happy to assist you: **+49(0)23580961** · [technik@kaiser-elektro.de](mailto:technik@kaiser-elektro.de)

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