KAISER Electrical installation

The basis for good installation

∷KAISER

Dear partners and friends of the KAISER company,

We are delighted to be able to provide you with the new "KAISER Elektro-Installation 2018/2019" catalogue. Our intention is that the new products in the current catalogue will make life easier for you and help you to design the basis for the good installations of the future.

As the inventors of the cavity wall box, and on the occasion of its 50th anniversary, we are introducing a completely new and future-oriented generation of cavity wall boxes: the O-range® series.

Many other products are waiting for you to discover them.

We are very proud that the trade has awarded KAISER, as an E-brand industrial partner, the annual "Electrical branch's Oscar". To us at KAISER, this represents both an incentive and an obligation to continue to follow our chosen path as a source of inspiration for quality, innovation and customer focus.

You, as our partners, can put your faith in our brand name promise:
KAISER – The basis for good installation.

Burkard Kaiser   Ulrich Kaiser
CEO
KAISER GmbH & Co. KG   KAISER GmbH & Co. KG

Contents

KAISER

ECON

Energy efficiency.

Energy efficiency is an important part of the "energy revolution". Considerable energy savings can be achieved in buildings by using professional insulation which complies with the current standards and regulations. This reduces the operating costs over the building's entire life cycle, and at the same time it protects the environment.

Electrical installations are often carried out within the insulation level or penetrate it. To ensure that no heat bridges occur – these can often have fatal consequences for the fabric of the building – KAISER has developed innovative installation systems for energy-efficient and standardised electrical installation work. Further details can be found in our "Energy efficiency" brochure and on our website at www.kaiser-elektro.de.

The KAISER range comprises products and systems for electrical installation used for both external insulation and for walls with internal insulation. Our tried-and-tested cavity wall and flush-mounted boxes with ECON® technology and installation housings are ideal for air-tight electrical installation in cavity or solid walls. Sealing plugs and sealing sleeves are available.

KAISER has continued to add to the product range for energy-efficient electrical installation with **numerous innovations**. These include the installation housing for LED built-in luminaires in external insulation, the extended ThermoX® installation range for the air-tight fitting of LED built-in luminaires in hollow ceilings, and the ECON® Flex electronic cavity wall box which provides additional, flexible space for connections.

Fire protection.

The aim of constructional fire-protection measures is to prevent the spread of fire and smoke if a fire breaks out and to ensure that emergency and escape routes can still be used. In doing this, the focus is especially on the electrical installation, because it can have a major effect on the fire-resistance of a fire protection wall or ceiling.

By using the KAISER fire protection systems, which activate automatically and maintain the fire resistance class in spite of the embedded electrical installation, the electrical trade can provide tested and certified fire protection from a single source. No more home-made encasings, filling work using fire-protection mortar or stuffing with mineral wool! Further details can be found in our "Fire protection" brochure and on our website at www.kaiser-elektro.de.

For more than a decade, the KAISER name has stood for fire-protection competence. In 2006, the HWD 90 was the first fire-protection box for cavity walls to establish itself on the market. Further developments mean that it is now approved for fire protection walls up to EI120. HWD 68 fire protection boxes form the basis for good fire protection, and the flush-mounting fire protection box is available for solid walls.

The HWD 30 ceiling boxes and the new generation of FlamoX® fire protection boxes are designed for fire protection ceilings up to fire resistance class EI30. KAISER's product range includes a very wide selection of wall and ceiling sealings for feeding cables and conduits through walls or ceilings. All fire protection products are equipped with tried-and-tested AFS technology – if a fire breaks out, installation openings are reliably and automatically closed.

KAISER

Sound insulation.

Sound insulation walls play an important part in feelings of well-being in buildings because they make possible peace, quiet, privacy and comfort. These factors are not only important in the private sector, such as terraced houses and apartment blocks, but also in public and commercial buildings, for example in schools, hospitals, retirement homes, doctors' practices, hotels and conference centres. Further information can be found in our "Sound insulation" brochure and on our website at www.kaiser-elektro.de.

KAISER's **innovative sound insulation boxes** maintain the sound insulation characteristics of separator walls. This also applies especially in the case of sound insulation walls with increased demands on the sound insulation despite fitted electrical installations. The sound insulation electronics box provides additional installation space for electronic switch devices.

The basis for sound insulation is provided by the Schallschutz 68 one-gang and one-gang junction boxes. Thanks to their installation diameter of 68 mm, they are also suitable for the upgrading of existing buildings to conform with modern sound insulation requirements. In flush-mounting installation, the sound insulation one-gang junction box guarantees the wall's sound insulation function – even for opposing installation.

Radiation protection.

Constructional measures for radiation protection are found in hospitals, medical practices and all places in which X-ray and gamma radiation equipment is used. Electrical installations in radiation protection walls represent a major challenge because they are not allowed to affect the wall's specified radiation protection values. More information can be found in our special "Radiation protection" brochure and on our website at www.kaiser-elektro.de.

KAISER radiation protection boxes ensure that the function of radiation protection walls is fully maintained despite fitted electrical installations – without any additional screening measures. The radiation protection boxes which we supply – for both lead-free and lead-lined radiation protection walls – can easily be retrofitted.

Cable glands   p. 284

Building.

For all projects, KAISER offers the right basis for efficient and secure electrical installation work – whether for a new building or conversion, extension, restructuring or renovation. Our installation systems cover the whole spectrum from flush-mounting boxes for solid walls to an extremely wide range of cavity wall boxes to installation components for concrete construction in on-site mixed concrete or precast concrete. KAISER has the optimal solution for every application.

With its O-range brand name, KAISER has now combined the basic range of cavity wall boxes and added innovative products.

The new HaloX® simplifies the everyday work of concrete constructors. It creates space for new light and sound options in new buildings using on-site mixed concrete or precast concrete.
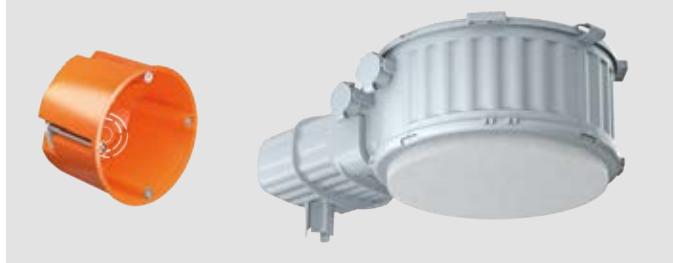
Cable glands.

AGRO cable glands made of plastic, brass or stainless steel represent the best possible quality and practicality. The innovative complete range provides everything for professional cable entries for both trade and industry. This also includes products for enhanced requirements such as EMC, Ex or elbow cable glands and universal cable entries. There are also completely individualised products and a comprehensive range of accessories. More information on the more than 3,500 products can be found in our special "AGRO cable glands" catalogue and on our website at www.kaiser-elektro.de.

A new product is the PROGRESS® EMV powerCONNECT cable gland which stands out not only because of its compact design but also because of its high leakage currents. It makes possible not a strong connection and reliable clamping of the cable shield.

One of the latest innovations in the cable glands sector is the PROGRESS® aqua. This is the world's first cable gland which is certified for use in drinking water plants.

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O·range®
The new cavity wall box!

Variable: Combination entry for cable and conduit M20/M25 for easy breaking out.

Flexible: 90° conduit entry angle

Secure: Device screws with plus-minus drive

Compatible: Standardised support connector for standard and ECON® boxes

O·range ECON®
Innovative opening technology!

Innovative opening tab: guaranteed permanently air-tight

Practical: Conduit entries up to M25 with all ECON® boxes

Secure: Air-tightness and retention of cable and conduit

Helpful: Marking on the membrane

Fast: FX⁴ screws

90° conduit entry angle

Visible brand name quality – original KAISER!
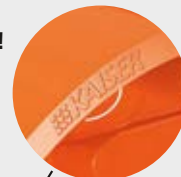
3D animation

O·range®

FX⁴ screws:
The fastest screw fixing that exists for cavity wall boxes!
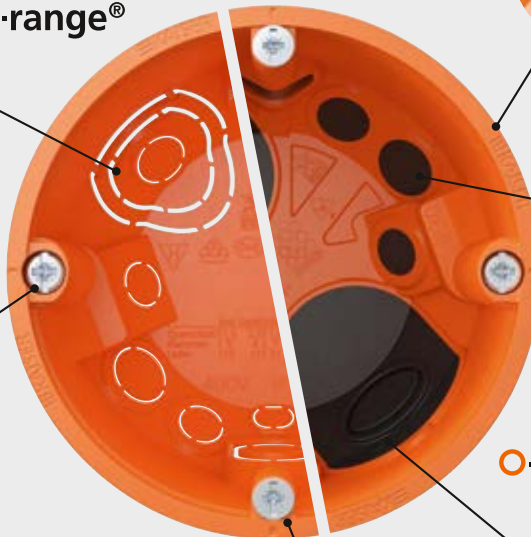
Cable entries:
Six cable entries – firm fit thanks to cable retention.
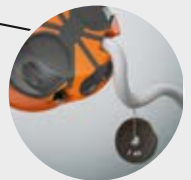
O·range ECON®

Strengthened membrane:
Prevents further tearing of the entry

Air-tight electrical installation acc. to DIN 18015-5

No matter what screwdriver you are using – it fits!

Device screws:
with plus-minus drive!
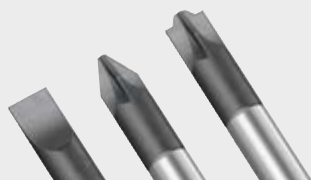
Four conduit entries.
Conduit one-gang junction box.

Air-tight one-gang junction box with ECON® technology especially for installation with electrical installation conduit. 4 entries are optimal for continuous conduit installation e.g. in prefabricated house construction or with data networks. Extremely easy fitting thanks to toolless conduit insertion with opening tab.

Available from 3rd quarter 2018.

Big installation space.
Junction box 120 mm air-tight.
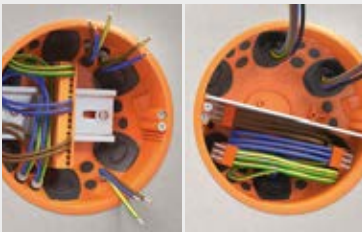
Air-tight Ø 120 mm junction box with ECON® technology for an energy-efficient electrical installation in accordance with EnEV. Extremely easy fitting thanks to tool-less cable and conduit entry. The sealing membranes guarantee permanent air-tight-ness and at the same time retention of the cable or conduit.

Available from 3rd quarter 2018.

Marking for conduits and cables:
Clear and unambiguous assign-ment of cable and conduit to all entry openings.

O·range®

PLOPP

Only from us! Combination entry for cables and conduits:
Proven selection of diameters with optimal assignment. Permanently tight fit, thanks to cable retention acc. to DIN EN 60670.

The opening tab:
Toolless: new opening techno-logy for defined opening of the conduit membrane – guaranteed permanently air-tight!

Enlarged conduit entries up to M25

Simplest opening technology

O·range ECON®

5×1,5²   M20   M25
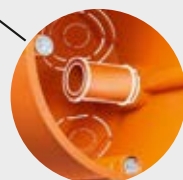
Round support connector:
Easy to connect! Now standardised for all KAISER O-range cavity wall boxes!

⚫⚫ **KAISER** | 9

Welcome, new HaloX®!

For luminaires. For loudspeakers.

HaloX®
for on-site-mixed
concrete   p. 198
for precast concrete p. 211
for retrofitting   p. 208

HaloX® concrete installation housing.

The new HaloX® housing system offers space for new light or sound in concrete ceilings and walls. Shape-retaining, loadable and in a modular design, the HaloX® system provides a secure installation compartment for loudspeakers and luminaires with LED, halogen or compact fluorescent lamps. Round, square or universal front parts ensure that any device up to a ceiling cut-out of 250 mm can be installed, even when facing concrete is required. Optional extension rings provide more space for greater installation depths. The toolless combination entry for M20/M25 conduits is easy to open and, even with incorrect occupancy, is easily closed again. It provides secure conduit retention with depth stop, so there is no need for later internal shortening of the conduits.

3D animation

One system for all situations.

HaloX® for on-site mixed concrete
The modular housing system for ceilings and walls is available in three housing sizes with fixed or variable installation diameters up to 250 mm even for facing concrete requirements.

HaloX® for precast concrete
The modular housing system for walls and ceilings is available in two housing sizes with fixed or variable installation diameters up to 250 mm (up to 210 mm with tolerance compensation).

HaloX® for retrofitting
HaloX® for the retrofitting of installation housings in slab ceilings and solid ceilings. After a core drilling has been made, the housings can be expanded in accordance with the ceiling thickness.

One system for all situations – for fitting in on-site mixed concrete, the front parts can be nailed to the working formwork. Prefix® installation sets are available for fixing to the opposing formwork. For precast concrete, the housings can be fitted using glue or a magnet.

Combination entry for M20/M25 conduits – toolless opening technology with secure conduit retention and depth stop with no need for internal shortening of the conduits. Can be repopulated for later alterations or incorrect population.

PRESS

M20 / M25

Shape-retaining and loadable. Compact housing with stabilising wave profile provides the necessary stability during concreting – even under extreme loads.

Pressure-resistant tunnel for holding operating devices. Minimal effect on the statics – no reinforcement cuts required in the tunnel area

Continuous housing system – modular, flexible for luminaires and loudspeakers in all heights and with installation diameters up to 250 mm.
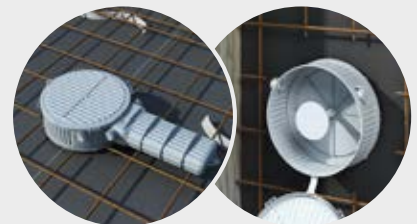
For ceilings and walls
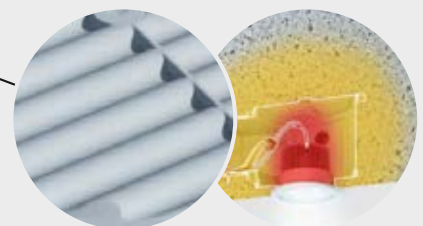
Wave-shaped surface profile ensures maximum housing surface for optimal heat dissipation via the concrete

The basis in sound insulation.
Sound insulation box 68.

For use in walls when sound insulation is important! The installation diameter of 68 mm, together with toolless cable and conduit entry, makes fast processing possible. The sound insulation function is retained without any additional mounting work.

Sound reduction index R'_w up to **69** dB
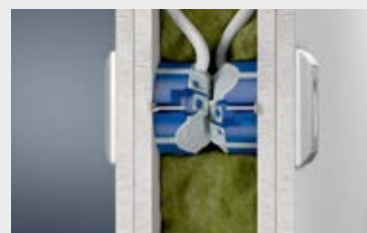
3D animation

KAISER sound insulation systems:

For built-in LED luminaires in insulated ceilings.
Installation housing ThermoX® ISO +.

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

ECON

3D animation

Perfect for EMC applications.
Progress® MS EMV powerCONNECT.

Our five different EMC-compliant AGRO cable glands provide the customer with the suitable product and the ideal contacting variant for every application. On the new Progress® MS EMC powerCONNECT, contacting takes place directly at the base. In addition, the tried-and-tested Progress® EM Rapid Brass, Progress® EMC easyCONNECT Brass, Progress® EMC Messing and the Progress® Serie 85 Brass series are still part of our product range.

3D animation
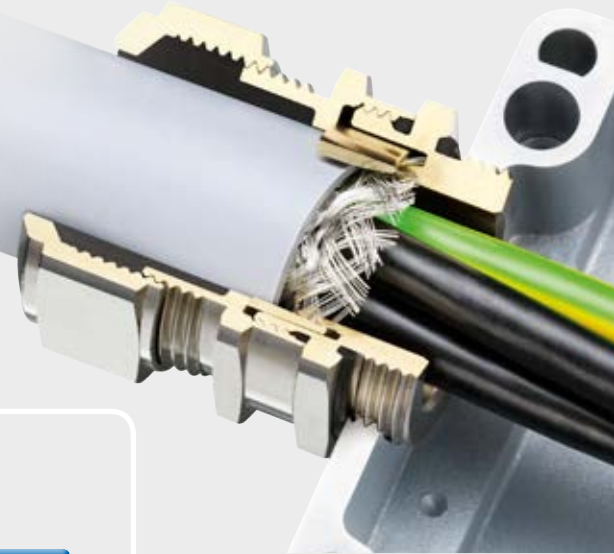
More information can be found at www.kaiser-elektro.de

Catalogue
AGRO Cable Glands

AGRO Kabelverschraubungen
AGRO Cable Glands

New for drinking water applications.
Progress® aqua.

Progress® aqua is the first cable gland which is certified for drinking water applications. Products which are used in the drinking water sector must comply with the requirements specified in the German Foodstuffs Act. All the materials used to make the Progress® aqua have KTW W270 approval, so they comply with the drinking water ordinance and the new set of rules.
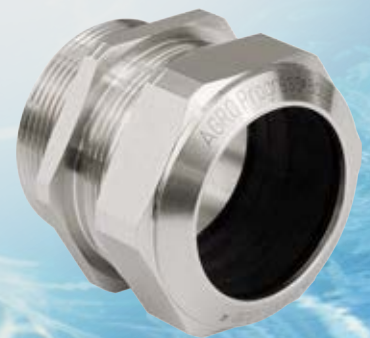
The most important advantages at a glance:

- Complete system for all flush-mounting and masonry applications
- UP-Plus technology with combination connection pieces M20/M25 and up to 15% more installation space
- Installation solutions for insulated external walls (composite thermal insulation systems)
- Air-tight installation in accordance with EnEV energy-saving ordinance
- ECON®-technology: air-tight one-gang boxes and one-gang junction boxes for toolless cable and conduit entries
- Air seal sleeves for air-tight feed-through of cables and conduits
- Fire-protection products for flush-mounting and masonry applications
- Universal installation housing with mineral fibreboard for all standard accessory sizes (e.g. displays, LED luminaires and many more)
- Plasterless mounting with Klemmfix®
- Easy locating of boxes and casings by using signal covers
- International products for accessory installation in accordance with national standards
- Environmentally-friendly installation solutions
- Professional system tools for fast and secure installation
- Wide range of system accessories
- Halogen-free

Product film
www.kaiser-elektro.org/flushmounting

Flush-mounting | Product lines

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Flush-mounting | Product overview

	Basic installation	Energy saving air-tight	Sound Insulation	Insulated interior wall	Screened Environmentally-friendly	Fire-protection buildings
For installation accessories						
One-gang boxes	p. 17	p. 22			-	-
One-gang junction boxes	p. 17	p. 23	p. 21	p. 48	p. 36	p. 248
One-gang boxes for nailing	p. 29	-			-	-
Two-gang junction boxes	p. 29	p. 25			-	-
Electronics boxes	p. 18	p. 25			-	-
Perilex® one-gang boxes	p. 31	-			-	-
One-gang boxes CEE	p. 31	-			-	-
Universal installation housings	p. 45	-			-	-
For cable exits						
Wall light connection	p. 34	-			-	-
Luminaire connection	p. 34	-			-	-
For cable and conduit feed-throughs						
Sealings	-	p. 102			-	-
Sealing sleeves	-	-			-	p. 262
For cable connections						
Junction boxes	p. 32	-			-	-
Junction casings	p. 41	-			p. 36/126	-
Potential equalisation casings	p. 43	-			-	-
Accessories						
Fixing	p. 38	p. 38			-	-
Retrofitting sealing (air-tight)	p. 26/100	-			-	-
Sealing of electrical installation conduits (smoke-tight and air-tight)	-	p. 27			-	p. 28/101/277
Plaster compensation	p. 39	p. 39			-	-
Plaster protection	p. 38	p. 38			-	
End cover	p. 39/99/189	p. 39/99/189			p. 36/126	-

Installation on or in insulated external walls / ceilings | Product overview

	Universal equipment carrier p. 50	Modular support for dev. / Telescope equipment car. p. 54 / p. 64	Installation housing ThermoX® ISO + p. 60	Telescope switch box p. 64	Mini equipment carrier p. 67	ISO box set p. 65	One-gang junction box ECON® Styro55 p. 70
Installation option							
Prepared installation	●	●	●	●	-	●	-
Retrofitting	-	-	-	-	●	-	●
Application							
External accessories	●	●	-	-	●	-	-
Built-in luminaires / accessories	-	-	●	-	-	-	-
External corner accessories*	-	-	-	-	●	-	-
Installation accessories 1-unit combination*	●	-	-	●	-	●	●
Installation accessories up to 3-unit combinations	●	-	-	-	-	●	●
Installation accessories up to 5-unit combinations	-	-	-	-	-	●	●

* universal screw-on surface

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One-gang boxes, One-gang junction boxes
for flush-mounting installation

UP-PLUS flush-mounting installation

UP-PLUS, the new generation of flush-mounting installation with the innovative combination connection piece for quick and non-distorting combinations. With variable conduit entry for M20/M25 conduits and large installation space.

• Variable combination connection piece for conduits up to M25
• Flexible for screw and claw fixing of the accessories
• More installation space
• High torsional strength, guaranteed standard distance of 71 mm for combinations

halogen-free | IP 2X | 650 °C | UP PLUS

Combination entry, interconnecting options

The combination entry permits exact and solid fit for Ø 20 or Ø 25 mm conduits.

Simply break out the reducing bend for Ø 25 mm conduits.

The distance support (Art. No. 1159-34) ensures an exact and safe distance of 91 mm.

The tunnel connector (Art. No. 1159-36) permits fully-insulated through-wiring in the floor area.

Entries for conduits and DIN EN conduits

M20

M20/M25

M25   M20

M20   M20

M20   M20/M25

M25   M20

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.

Klick

One-gang box

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

UPPLUS

Depth	**46 mm**	**46 mm**
Installation opening	60 mm	60 mm
Device screws	-	2
Conduit entries M20	3	3
Conduit entries M25	2	2
Combination conduit entries M20/25	2	2
⚠ DVE	●	●
Art. No.	**1055-04**	**1056-04**
Inner packaging/shipping	25 / 500	25 / 500

One-gang junction box

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

UPPLUS

Depth	**66 mm**	**66 mm**
Installation opening	60 mm	60 mm
Device screws	-	2
Conduit entries M20	9	9
Conduit entries M25	2	2
Combination conduit entries M20/25	2	2
⚠ DVE	●	●
Art. No.	**1555-04**	**1556-04**
Inner packaging/shipping	25 / 250	25 / 250

One-gang junction box

· 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

UPPLUS

Length x Width x Depth	**110 x 71 x 49 mm**
Installation opening	60 mm
Device screws	2
Conduit entries M20	6
Conduit entries M25	4
Combination conduit entries M20/25	2
⚠ DVE	●
Art. No.	**1069-02**
Inner packaging/shipping	10 / 100

Subject to modifications

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

halogen-free | IP 2X | 650 °C | UP PLUS

Application
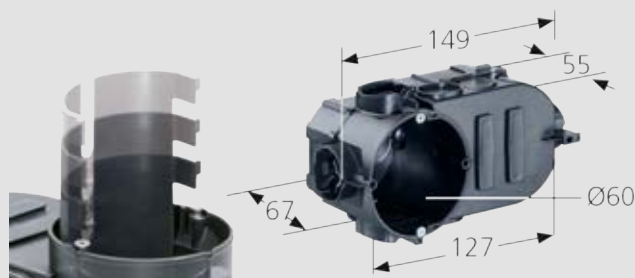
The range of possibilities is as diverse as their solutions.

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

UP PLUS

Length x Depth	149 x 67 mm
Installation opening	60 mm
Device screws	2
Conduit entries M20	11
Conduit entries M25	2
Combination conduit entries M20/25	4
	•
Art. No.	1068-02
Inner packaging/shipping	10 / 100

Flush-mounting one-gang junction box sound insulation 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
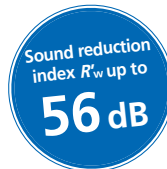
INNOVATION | halogen-free | 650 °C | WWW |

Sound reduction index R'_w up to
56 dB

Examples of use

Example of installation using a switch-socket combination.

Use of an opposing sound insulation box.

Cables up to Ø 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.
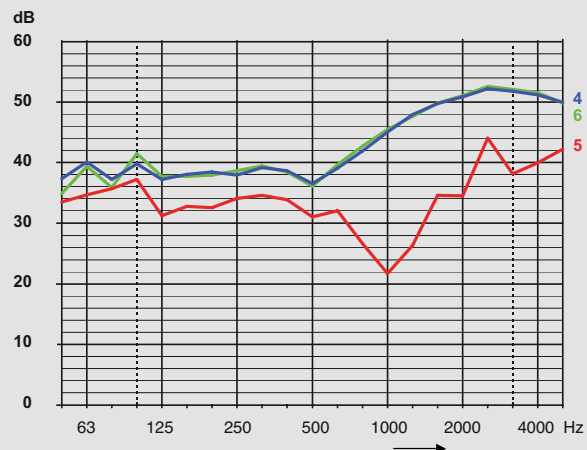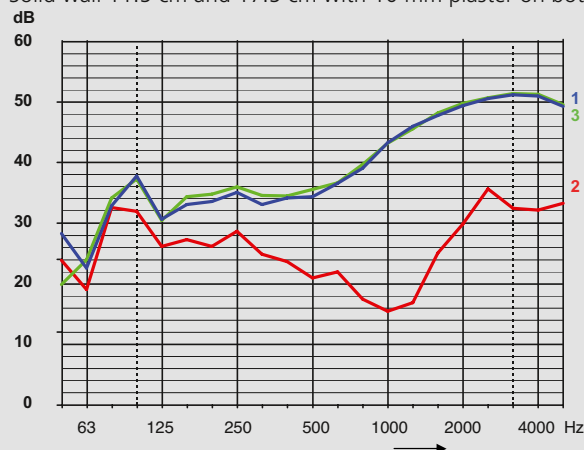
1 Wall, without installations, 52 dB | **2** with one-gang junction box 1555-04, 32 dB | **3** with one-gang junction box 1569-01, 52 dB |
4 Wall, without installations, 55 dB | **5** with one-gang junction box 1555-04, 41 dB | **6** With one-gang junction box type 1569-01, 55 dB

CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

One-gang boxes, One-gang junction boxes
for flush-mounting installation

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.
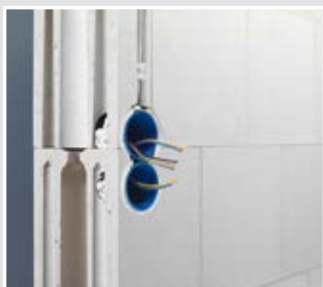
Combinations at a standard spacing of 71 mm.

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 combination connection piece 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.

Allocation table for universal opening cutters

Flush-Mounting installation for sound insulation boxes		Ø setting
NYM cable	3 x 1.5 mm²	7.5
	4 x 1.5 mm²	8.5
	5 x 1.5 mm²; 3 x 2.5 mm²	9.5
	7 x 1.5 mm²; 5 x 2.5 mm²	10.5
Low-voltage cables	Integrated high voltage and MSR-Bus cable (N)Y(YSt)Y)M-J 3 x 1.5 mm²	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
Support connector	9060-98	Connector
Conduits according to DIN EN 60423 flexible (curled)	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).

▓ INNOVATION

Flush-mounting sound insulation box

· 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

SOUND INSULATION

3D animation

Depth	**60 mm**
Installation opening	60 mm
Tube entries up to M25	6
Cable entries of up to Ø 11.5 mm	6
for sound insulation walls up to	55 dB
Art. No.	**1569-01**
Inner packaging/shipping	10 / 100

Sound insulation cover

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

Diameter	**92 mm**
halogen-free	•
VDE	•
Art. No.	**1184-69**
Inner packaging/shipping	10 / 100

CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

One-gang boxes, One-gang junction boxes
for flush-mounting installation

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®.

- Air-tight design with 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

Processing instructions

Vertical draughts occur in hollow chamber blocks. The UP boxes with ECON® technology prevent air from escaping through the one-gang boxes.

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.

One-gang box ECON® 10

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

3D animation

AIR-TIGHT

Depth	**46 mm**	**46 mm**
Installation opening	60 mm	60 mm
Device screws	-	2
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	•	•
⚠	•	•
Art. No.	**1055-21**	**1056-21**
Inner packaging/shipping	25 / 500	25 / 500

Subject to modifications

One-gang boxes, One-gang junction boxes
for flush-mounting installation

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

One-gang junction box
ECON® 15

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

UPPLUS **ECON** TECHNIK) **AIR-TIGHT**

Depth	66 mm	66 mm
Installation opening	60 mm	60 mm
Device screws	-	2
Tool-free cable and conduit entries up to 11 mm around the box	4	4
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 in the connector area up to M25	2	2
Air-tight	•	•
⚠ DVE	•	•
Art. No.	**1555-21**	**1556-21**
Inner packaging/shipping	25 / 250	25 / 250

Entries for conduits and DIN EN conduits

max 11 mm — max 11 mm

max M25   max M25   max M25

max M25   max M20   max M25

max 11 mm

Electronics box ECON®
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

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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.

One-gang boxes, One-gang junction boxes
for flush-mounting installation

Processing instructions

The permanently elastic sealing membrane used in ECON® technology guarantees the air-tight 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.
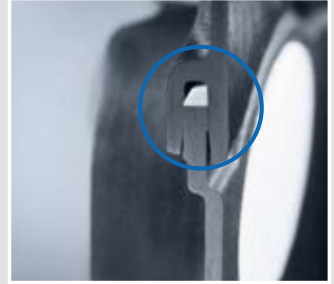
The peripheral sealing lip between the box body and the front part ensures an air-tight connection i.e. retention of the building's air-tight seal.

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.

Electronics box ECON®
· Separator wall to separate electrical circuits
· Air-tight design with sealing membranes
· 4 screw domes

air-tight ECON TECHNIK

Two-gang junction box ECON®
· Air-tight design with sealing membranes
· 6 screw domes

air-tight ECON TECHNIK

Length x Width x Depth	**149 x 80 x 68 mm**	**149 x 80 x 68 mm**
Installation opening Ø	60 mm	2 x 60 mm
Device screws	2	4
Conduit entries M25	4	4
Tool-free cable and conduit entries in the connector area up to M25	4	4
Duplex cable entries 2 x up to 11 mm	4	4
Cable entries up to Ø 11 mm	4	4
⚠ DVE	•	•
Art. No.	**1068-21**	**1656-21**
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
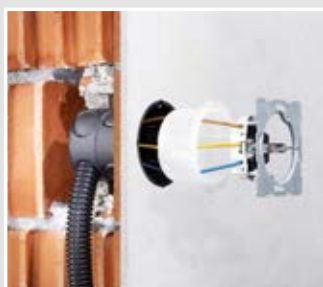
Later air-tight closing of flush-mounting boxes.	Later air-tight closing of cavity wall boxes.	Pre-punched entry markings permit toolless connection wire penetration up to 2.5 mm².	Press sealing insert and installation accessories into the box and tighten with device screws.
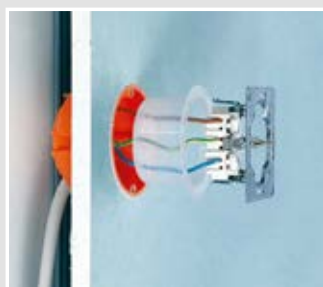
Sealing inserts

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

AIR-TIGHT

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

Sealing plugs 16-40
for electrical installation conduits

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"

air-tight | halogen-free | ECON TECHNIK | WWW | ECON |

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.

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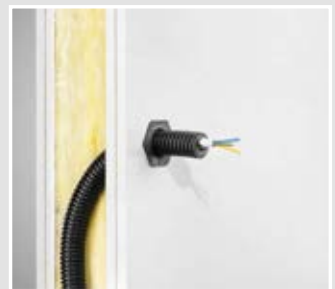
For installations in the field of fire protection, the sealing plug closes the conduit ends and ensures smoke-tight room separation.

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Assignment of conduit sizes and sealing plugs

Pg 36	M40	Pg 21	M32	Pg 16	M25	¾"	Pg 11	M20	⅝"	Pg 9	M16
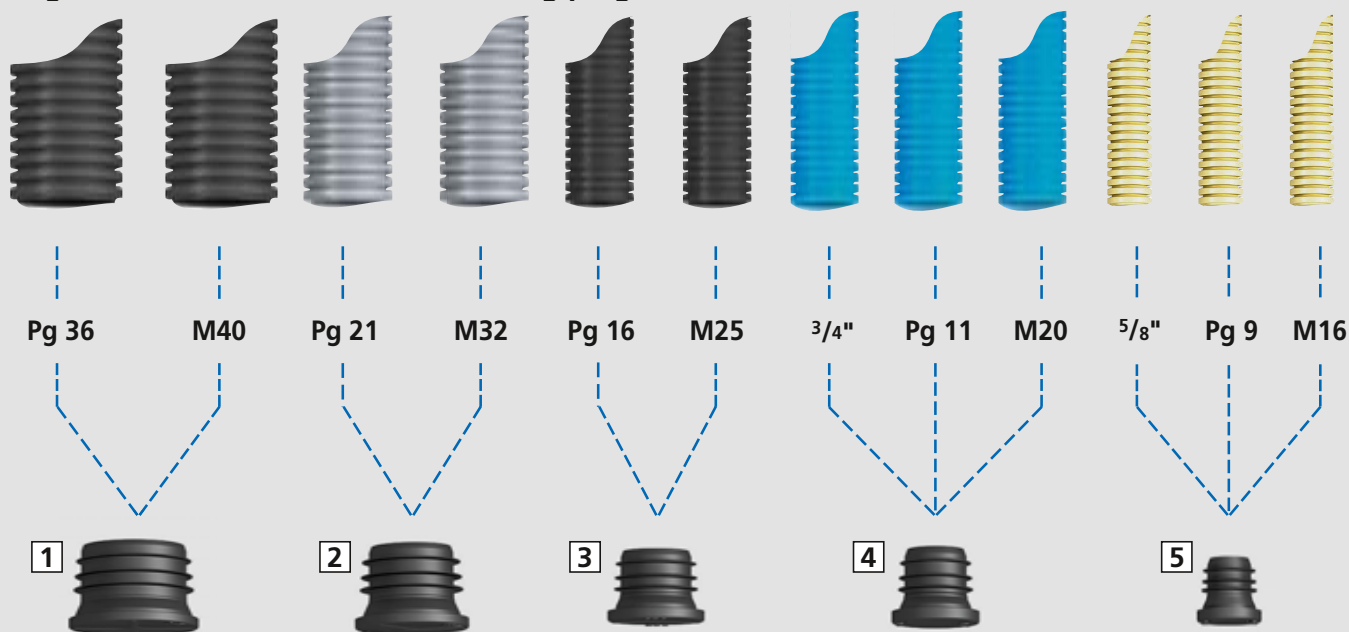
1 Sealing plug M40 Art. No. 1040-40 | **2** Sealing plug M32 Art. No 1040-32 | **3** Sealing plug M25 Art. No 1040-25 | **4** Sealing plug M20 Art. No 1040-20 | **5** Sealing plug M16 Art. No 1040-16

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

ECON TECHNIK AIR-TIGHT

3D animation

Sealing plug	M16	M20
DIN EN conduit Ø	16 mm	20 mm
Art. No.	**1040-16**	**1040-20**
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

ECON TECHNIK **AIR-TIGHT**

3D animation

Sealing plug	M25	M32	M40
DIN EN conduit Ø	25 mm	32 mm	40 mm
Art. No.	**1040-25**	**1040-32**	**1040-40**
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
Screw spacing	71 mm	71 mm
Device screws	-	4
Conduit entries M20	12	12
VDE	●	●
Art. No.	**1655-02**	**1656-02**
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
Installation opening	60 mm	60 mm
Device screws	-	2
Conduit entries M20	7	7
VDE	●	●
Art. No.	**1055-62**	**1056-62**
Inner packaging/shipping	- / 100	- / 100

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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One-gang boxes, One-gang junction boxes
for flush-mounting installation

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

Depth	63 mm	63 mm
Installation opening	60 mm	60 mm
Device screws	-	2
Conduit entries M20	13	13
⚠ D·V·E	•	•
Art. No.	**1555-62**	**1556-62**
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

Depth	42 mm	42 mm
Installation opening	60 mm	60 mm
Device screws	-	2
Conduit entries M20	7	7
⚠ D·V·E	•	•
Art. No.	**1050-00**	**1051-00**
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

Depth	63 mm	63 mm
Installation opening	60 mm	60 mm
Device screws	-	2
Conduit entries M20	13	13
⚠ DVE	•	•
Art. No.	1550-00	1551-00
Inner packaging/shipping	25 / 250	25 / 250

PERILEX® one-gang box

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

Depth	48 mm
Screw spacing	67 mm
Installation opening	70 mm
Device screws	2
Conduit entries M20	8
Art. No.	1076-04
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

Depth	50 mm
Screw spacing	67 mm
Installation opening Ø	70 mm
Raised head accessory screws 4 mm	•
Conduit entries M20	2
Conduit entries M25	2
⚠ DVE	•
Art. No.	1075-04
Inner packaging/shipping	- / 100

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

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Subject to modifications

KAISER | 31

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

Depth	36 mm
Installation opening	70 mm
Conduit entries M20	8
For 6 terminals 1.5 mm² or 5 terminals 2.5 mm²	•
Art. No.	1172-62
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

Depth	36 mm	36 mm	36 mm
Installation opening	70 mm	70 mm	70 mm
Conduit entries M20	8	8	8
For 6 terminals 1.5 mm² or 5 terminals 2.5 mm²	•	•	•
For mounting with Klemmfix® (Art. No. 1159-12)	•	•	•
With cover and 2 cover screws	-	-	•
⚠ VDE	-	-	•
Art. No.	1172-02	1172-08	1172-92
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 mm²

Depth	36 mm	36 mm	36 mm	36 mm
Installation opening	70 mm	70 mm	70 mm	70 mm
Conduit entries M20	8	8	8	8
For 6 terminals 1.5 mm² or 5 terminals 2.5 mm²	•	•	•	•
Terminal block, no. of poles	-	4-pole	5-pole	6-pole
without terminal block	•	-	-	-
⚠ VDE	•	-	-	-
Art. No.	1172-09	1172-04	1172-05	1172-06
Inner packaging/shipping	25 / 100	10 / 100	10 / 100	- / 100

Junction box

· for 8 terminals 1.5 mm², for 6 terminals
  2.5 mm² or for 5 terminals 4 mm²
· without cover and cover screws
· For M16/M20 conduits

Depth	56 mm
Installation opening	70 mm
M16-20 combination conduit entry	14
Art. No.	**1572-02**
Inner packaging/shipping	10 / 250

In-plaster junction box

· for flat multi-lead wiring (NYIF) 1.5 and
  2.5 mm²
· 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

Depth	16 mm
Installation opening	80 mm
Terminal block, no. of poles	5
⚠ D/E	●
Art. No.	**1081-05**
Inner packaging/shipping	25 / 250

Wall light connection box

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

Length x Width x Depth	60 x 32 x 30 mm
Break-out openings Ø 20 mm	4
⚠ DVE	•
Art. No.	**1048-00**
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

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

Ceiling light 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

Depth	55 mm
Ceiling exit (CE) Ø	35 mm
Light hook length	55 mm
Conduit entries M20	1
⚠ DVE	•
Art. No.	**1248-55**
Inner packaging/shipping	- / 100

Ceiling exit bush

· for multi-lead wiring (NYIF) 1.5 mm² and
  2.5 mm²
· to prevent cable being ripped out

Cable entry	5,5 x 23 mm	5,5 x 23 mm
With light hook and expanding dowel Ø 10 mm	-	•
with brass wedge nut, max. load 100 N (10kg) to German VDE norm	-	•
Art. No.	**1144-00**	**1144-05**
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 to 84 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.
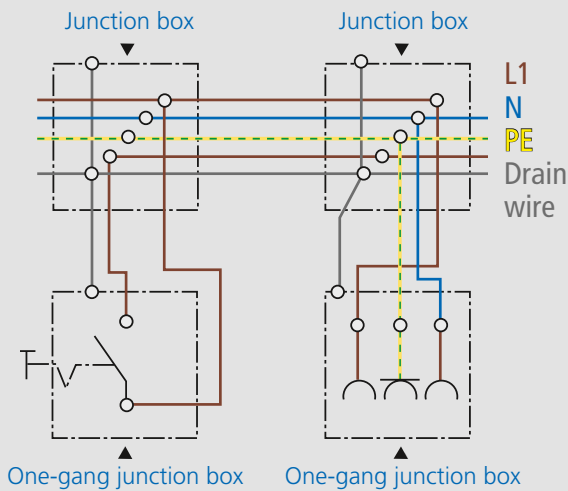
Junction box   Junction box

L1
N
PE
Drain wire

One-gang junction box   One-gang junction box

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!

CAVITY WALL

CONCRETE

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Screened electrical installation

Screened one-gang junction box

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

Depth	63 mm
Installation opening	60 mm
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	6
Cable entries 3 x 1.5 mm²	4
halogen-free	•
Art. No.	1555-88
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

Diameter	80 mm
Screw spacing	60 mm
Art. No.	1164-88
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

FX4

Length x Width x Depth	107 x 107 x 53 mm
Cut hole Ø	4 x 35 mm
Break-out openings Ø 20 mm	8
Cable entries for NYM and low-voltage cabling	•
For terminals up to	4 mm²
Art. No.	9195-88
Inner packaging/shipping	- / 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.

Subject to modifications

Plaster-free mounting with Klemmfix®

The Klemmfix® system reduces mounting time by up to 50% compared with plastering. Thanks to the signal cover, the assembly position of the one-gang boxes can be seen immediately once plastering has taken place.

- For fitting boxes without plaster
- Efficient, clean and time-saving
- Alignment and secure mounting even before plastering
- Can also be used in sub-zero temperatures.
  The special plastic remains tough but elastic
- Not suitable for use with lime or thin plaster

halogen-free | 650 °C
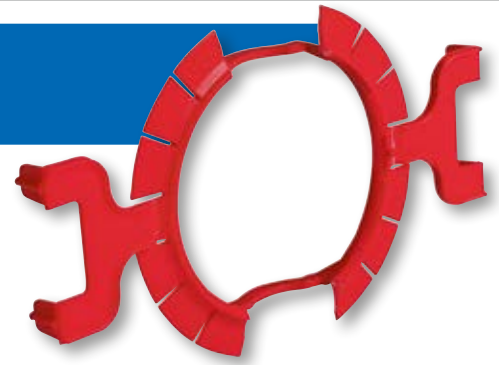
Klemmfix® system
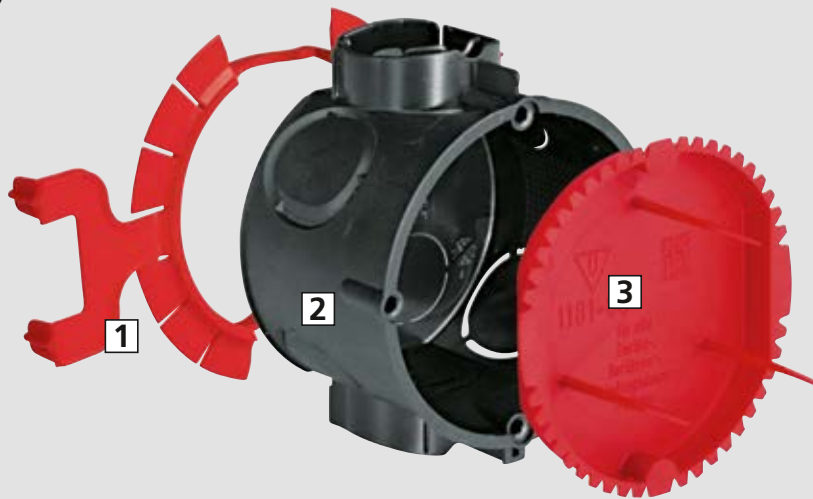
1 Klemmfix® | **2** One-gang box | **3** Signal cover

Installation

Creating installation opening.

Push in box with Klemmfix® clipped on.

Fit signal cover.

Fine marker bristles on the signal cover show the exact position of the one-gang box after plastering.

Proof of stability:

Tests carried out with 500 N (50 kg) tension force 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.

Accessories
for flush-mounting installation

Klemmfix®

· for fitting boxes without plaster
· in openings made with Ø 82 mm hole saw
· for all types of masonry

For one-gang boxes and one-gang junction boxes Art. Nos. 1055/1056-04, 1555/1556-04, 1055/1056-21, 1555/1556-21, 1555-88	•	-
For junction boxes Ø 70 mm (1172-02, -08, -09, -92)	-	•
with depth stop	•	-
Art. No.	**1159-02**	**1159-12**
Inner packaging/shipping	25 / 250	25 / 250

Signal cover

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

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

Signal cover

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

Length x Width	**80 x 80 mm**	**100 x 100 mm**	**60 x 32 mm**
For wall light connection boxes Art. No. 1048-00	-	-	•
Art. No.	**1181-94**	**1181-95**	**1181-48**
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.

UPPLUS

Art. No.	**1159-34**
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

UPPLUS

Art. No.	1159-36
Inner packaging/shipping	- / 10

Plaster compensation ring

· 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
⌂	•	•	•	•
Art. No.	1155-61	1155-62	1155-71	1155-72
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
halogen-free	-	•
Fireproof	850 °C	850 °C
⌂	•	•
Art. No.	1184-90	1184-77
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
Art. No.	1174-99
Inner packaging/shipping	- / 10

Spring cover
· with permanent elastic spring

Diameter	72 mm	85 mm	95 mm
for boxes Ø	60 mm	70 mm	80 mm
Art. No.	1159-25	1174-25	1184-25
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
· Countersunk head with PZ1/S combination drive

NEW

Art. No.	2472-91
Inner packaging/shipping	- / 100

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

NEW

Length	15 mm	20 mm	25 mm	40 mm
Art. No.	2472-15	2472-20	2472-25	2472-40
Inner packaging/shipping	100 / 1000	100 / 1000	100 / 1000	100 / 1000

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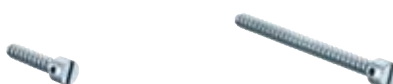
Length	15 mm	40 mm
Art. No.	2444-15	2444-40
Inner packaging/shipping	- / 100	100 / 1000

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

| halogenfree available | IP 2X | 650 °C | VDE |

Processing instructions

Space for installation of TS 35 standard rails for the installation of terminal blocks, terminal installation devices etc.
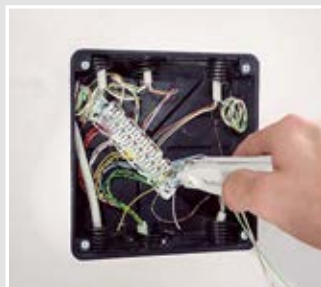
Space for installation of LSA+ terminals for distribution of telecommunication equipment.

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 mm², 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 mm²	4 mm²
halogen-free	-	•
VDE	•	-
Art. No.	1094-91	1094-01
Inner packaging/shipping	- / 100	- / 100

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

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 mm², 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
M32 conduit entries	-	-	4	4
Cable entries	12	12	12	12
For terminals up to	6 mm²	6 mm²	16 mm²	16 mm²
halogen-free	-	•	-	•
⚠DVE	•	-	•	-
Art. No.	**1095-91**	**1095-01**	**1096-91**	**1096-01**
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 mm², 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 mm²	16 mm²
halogen-free	•	•
Suitable for standard equipment with 70 mm installation height	•	-
Casings can be combined once with each other, dimensions are then	240 x 284 x 87 mm	-
Maximum of 3 electrical circuits with separator walls	-	•
For max. 4 electrical circuits using separator walls	•	-
⚠DVE	•	•
Art. No.	**1092-90**	**1097-92**
Inner packaging/shipping	- / 10	- / 10

Subject to modifications

Junction casings
for flush-mounting installation

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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CABLE GLANDS

TOOLS

SERVICE

Potential equalisation casing 10² and 16²

· 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
Cables up to 16², single and stranded wire	-	7
Circular conductors Ø 8–10 mm	-	1
Circular conductor 6–16², also uncut	1	-
Cables 1.5–10² (for bathrooms or similar)	6	-
Flat strip up to 30 mm wide	-	1
Art. No.	1095-73	1097-75
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	For casing size - cavity wall boxes	For casing size - concrete construction boxes	Fireproof	Art. No.	Inner packaging/ shipping
87 x 87 mm	-	-	650 °C	1094-13	10 / 450
107 x 107 mm	-	-	650 °C	1095-13	10 / 500
159 x 159 mm	-	-	650 °C	1096-13	10 / 200
107 x 107 mm	105 x 105 mm	128 x 128 mm	850 °C	1095-93	10 / 500
159 x 159 mm	165 x 165 mm	180 x 180 mm	850 °C	1096-93	10 / 200
240 x 142 mm	238 x 142 mm	-	850 °C	1092-93	- / 5
238 x 208 mm	235 x 205 mm	250 x 220 mm	850 °C	1097-93	5 / 100
240 x 284 mm	-	-	850 °C	1092-95	- / 5

Separator walls

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

for casing size	halo-gen-free	Fireproof	Art. No.	Inner packaging/ shipping
87 x 87 mm	•	650 °C	1094-20	- / 10
107 x 107 mm	•	650 °C	1095-20	- / 10
159 x 159 mm	•	650 °C	1096-20	- / 10
238 x 208 mm	•	650 °C	1097-22	- / 10
240 x 142 mm	•	650 °C	1092-20	- / 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 lamps 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.

Subject to modifications

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Universal installation housing with mineral fibreboard

· 2 parts, consisting of housing and mineral fibreboard
· all-round groove denotes the maximum opening dimension

Length x Width x Depth	87 x 87 x 75 mm	107 x 107 x 72 mm	159 x 159 x 90 mm
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 M20	10	14	20
Conduit entries M25	-	4	10
M32 conduit entries	-	-	4
Cable entries	16	12	-
Art. No.	1094-22	1095-22	1096-22
Inner packaging/shipping	- / 10	- / 10	- / 10

Universal installation housing with mineral fibreboard

· 2 parts, consisting of housing and mineral fibreboard
· all-round groove denotes the maximum opening dimension

Length x Width x Depth	240 x 142 x 102 mm	240 x 280 x 102 mm	238 x 208 x 83 mm
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
Conduit entries M20	24	36	20
Conduit entries M25	12	16	8
M32 conduit entries	6	10	4
Cable entries	16	12	-
Art. No.	1092-27	1092-28	1097-28
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**

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 thcknesses 30 to 100 mm
• Installation on masonry without plaster

halogen-free | 850 °C | INNOVATION | WWW | ECON

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
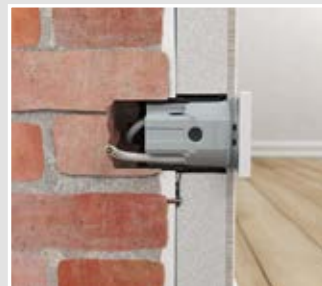
Can be used in existing masonry with different insulation thicknesses

Specially developed for expert installation in diffusion-open internal insulation systems.
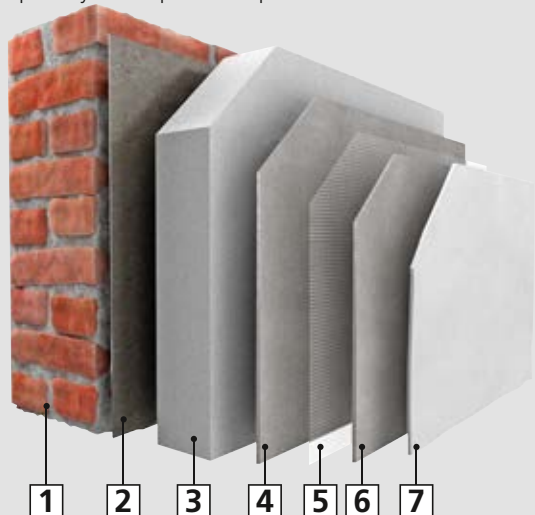
1 Masonry wall | **2** Adhesive | **3** Insulating board | **4** Reinforcement plaster | **5** Reinforcement fabric | **6** Reinforcement plaster |
7 Finish coat of plaster, decorative plaster

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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CABLE GLANDS

TOOLS

SERVICE

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 box · The study of internal insulation systems with   > 0.03/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 Ø 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 systems

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

▦ INNOVATION

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

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

Installation systems
for insulated interior walls

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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TOOLS

SERVICE

Fixing adapter internal insulation box

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

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

Support connector

· for through-wiring of combinations to IP 3X standard air-tight
· For Art. Nos. 1159-90, 1555-51 and 9074-03

Art. No.	**9060-88**
Inner packaging/shipping	25 / 100

Assignment table for making entry openings

HSS drill		Ø setting
NYM cable	3 x 1.5 mm^2	8.0
	5 x 1.5 mm^2	9.5
	3 x 2.5 mm^2	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)!
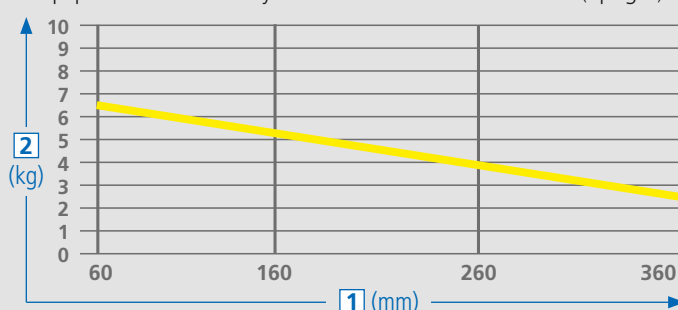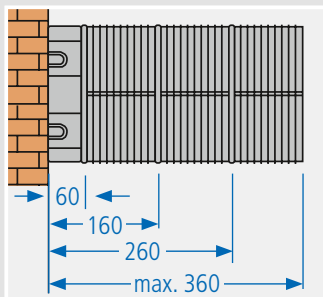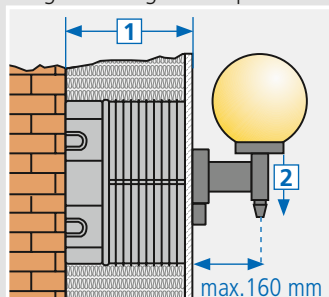
1 External insulation - insulation thickness | 2 Permissible load

Heat bridge calculation

Temp. in °C

not insulated   insulated

+ 20 °C   - 10 °C
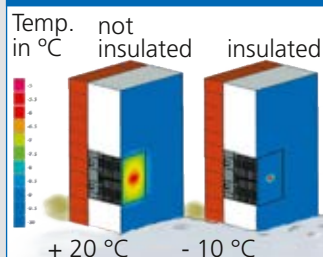
When the equipment carrier is correctly installed, hardly any heat losses are measured.

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

[mm]	insulated [m²]	not insulated [m²]
160	0.027	0.300
360	0.039	0.520

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

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

Length x Width x Height	220 x 100 x 60-160 mm
Combination conduit entries M20/25	6
Art. No.	1159-24
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

Length x Width x Depth	220 x 100 x 100 mm
Art. No.	1159-27
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

-5,0 °C
-5,5 °C
-6,0 °C
-6,5 °C
-7,0 °C
-7,5 °C
-8,0 °C
-8,5 °C
-9,0 °C
-9,5 °C
-10,0 °C
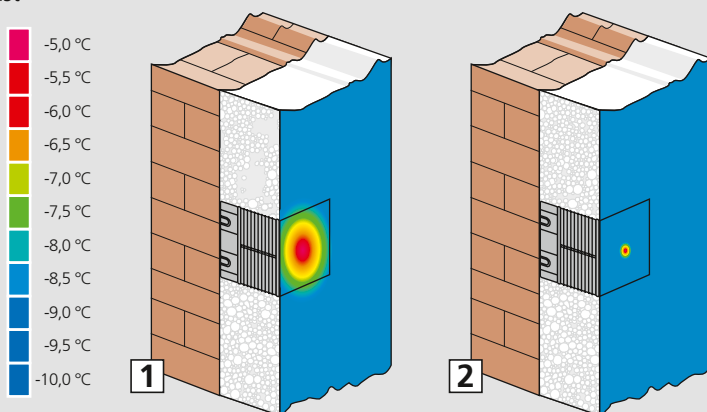
1 not insulated | **2** insulated

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

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SERVICE

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

Length x Width x Depth	220 x 100 x 160 mm
Insulation thickness	60 - 160 mm
DIN EN conduit Ø	max. 25 mm
Cable entries	max. Ø 15 mm
Art. No.	1159-26
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

| Length x Width x Depth	220 x 100 x 100 mm
Art. No.	1159-27
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
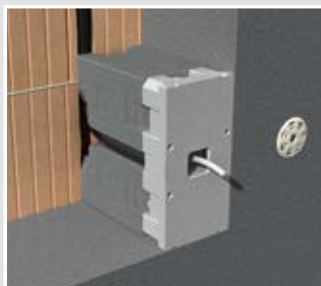
Versatile in use

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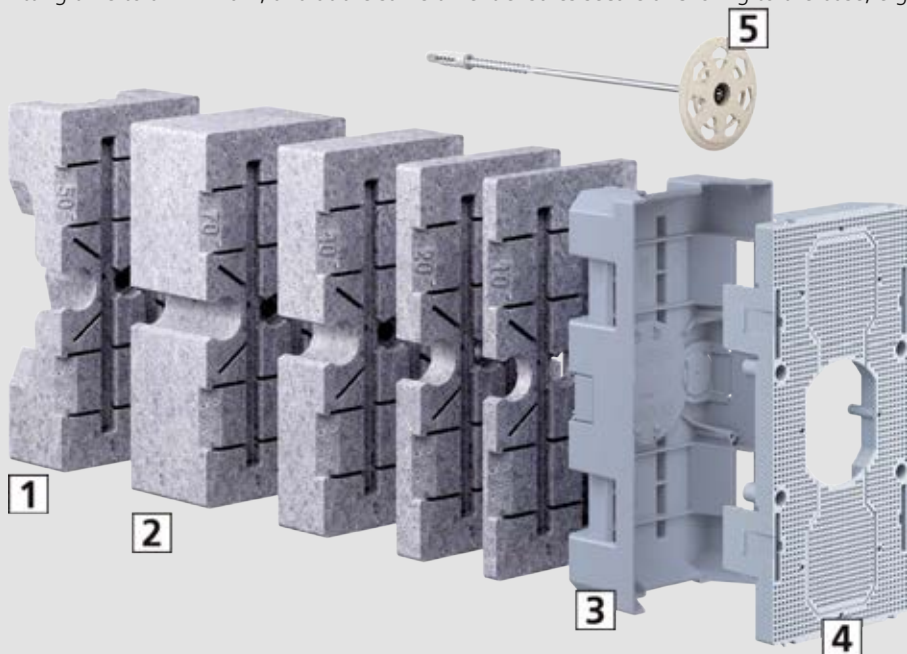
1 Basic element | **2** Intermediate elements | **3** Housing base | **4** Front plate | **5** Screw-in wall-plug

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

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Weight-bearing loads

160 - 310 mm

max. 8/10 kg

max. 160 mm

1 | **2**
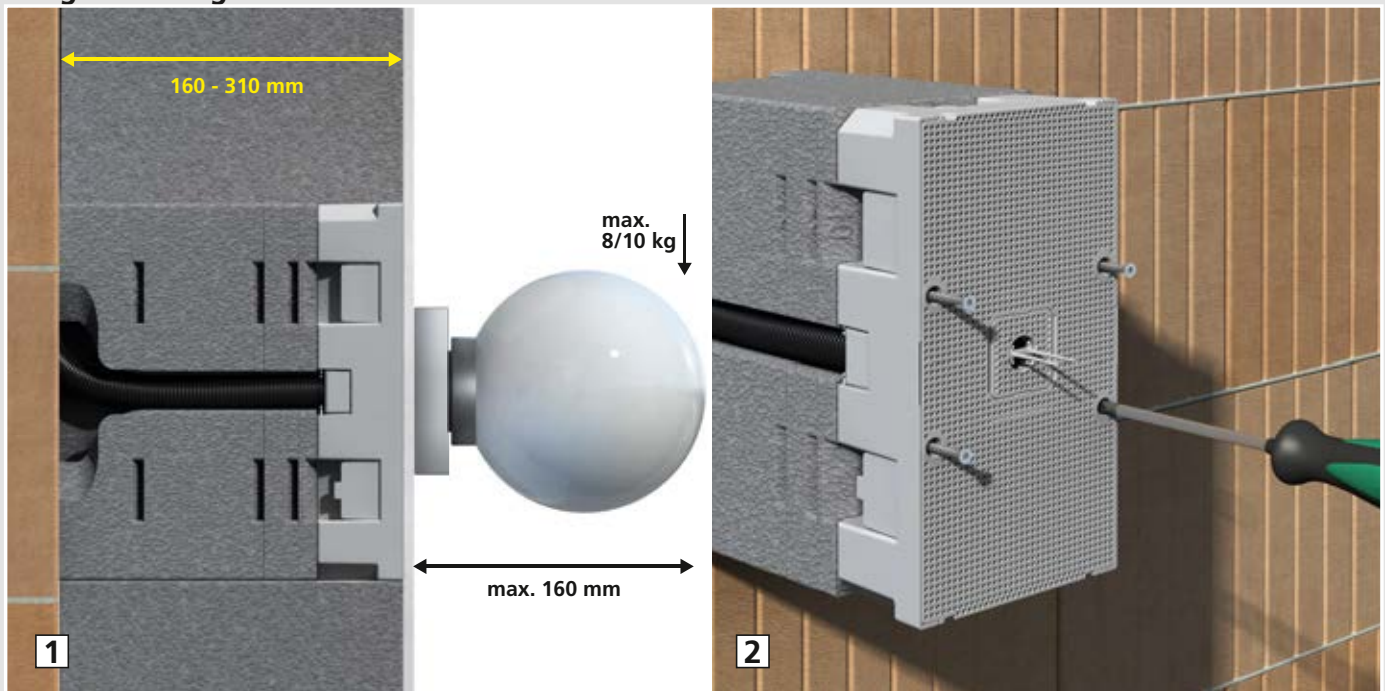
**1** Weight-bearing loads – independently of the insulation thickness: For an overhang of 160 mm and insulation thicknesses of 160 - 310 mm; 8 kg without additional screwing of the front plate; 10 kg with additional screwing of the front plate. The system equipment carrier must be fitted vertically. 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 Ø 3.5 x 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 W/K and meets the requirements of a heat bridge-free facade.>
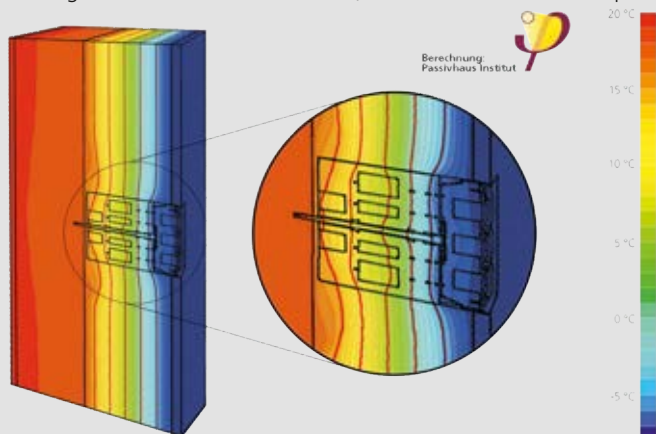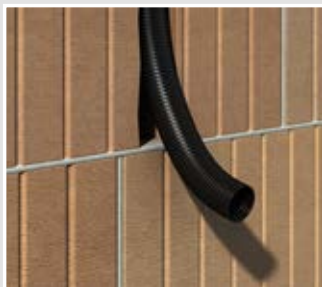
Installation systems
for insulated facades

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!
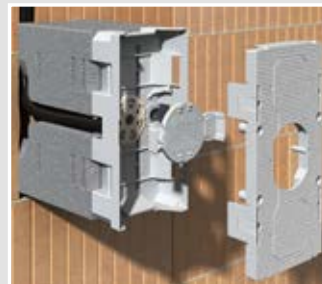

The dowel screw must protrude from the basic element by at least 40 mm.

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 ...

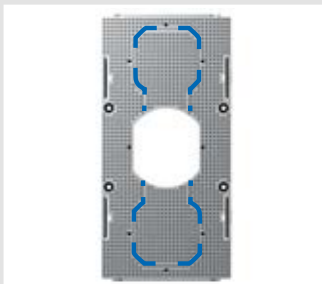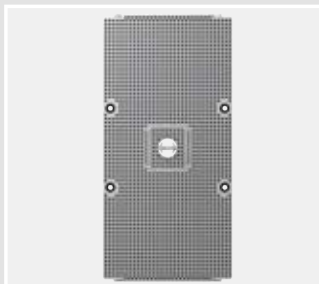… and fit a sealing plug to the conduit.
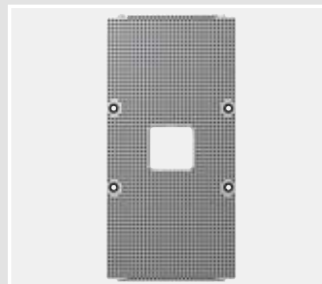
Combinations with front panels

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.

Subject to modifications

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

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▦ INNOVATION

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	1x1 / 2x1 / 3x1	Luminaire outlet / mounting plate
Combination conduit entries M20/25	2	2
halogen-free	•	•
Screw-in wall-plug	1 x 200 mm, 1 x 240 mm	1 x 200 mm, 1 x 240 mm
CE	•	•
Art. No.	9966.31	9966.21
Inner packaging/shipping	- / 5	- / 5

▦ INNOVATION

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	1x1 / 2x1 / 3x1	Luminaire outlet / mounting plate
Combination conduit entries M20/25	2	2
halogen-free	•	•
Screw-in wall-plug	1 x 280 mm, 1 x 320 mm	1 x 280 mm, 1 x 320 mm
CE	•	•
Art. No.	9966.32	9966.22
Inner packaging/shipping	- / 5	- / 5

Installation systems
for insulated facades

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 ø 86 mm

NEW

INNOVATION | halogen-free | LED | ECON | WWW

Examples of use
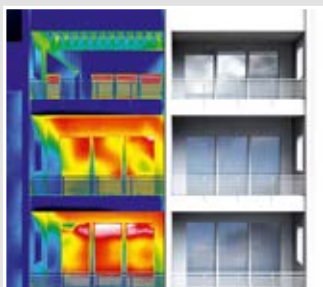
Buildings are constructed heat-bridge-free using the WDVS composite thermal insulation systems, e.g …

… 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.

Outside

Inside

Installation housing for external insulation

49 °C 40 °C 30 mm 70 mm 69 °C 57 °C
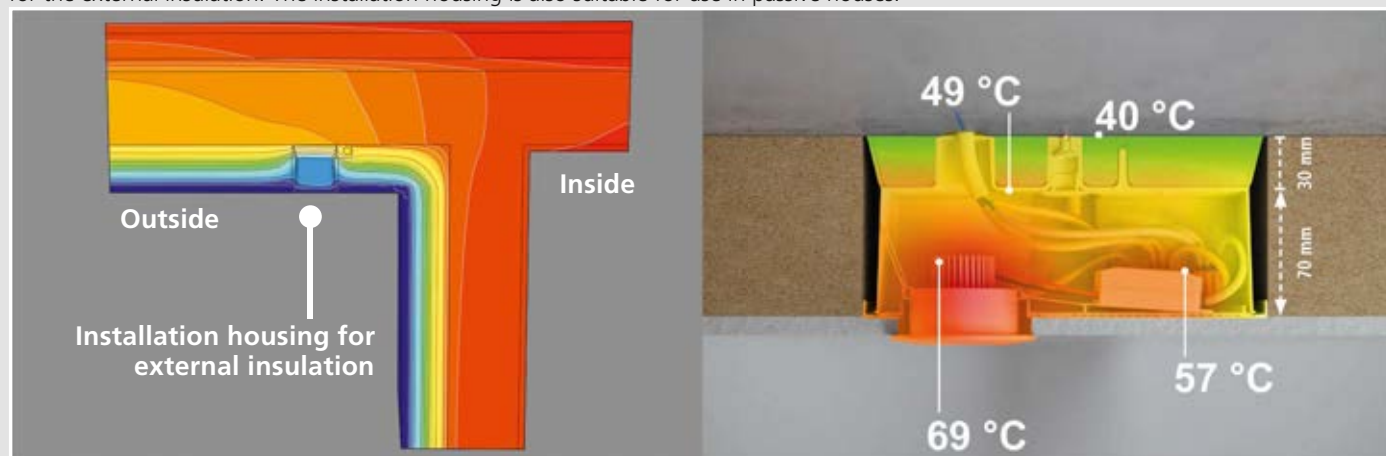
1 Heat bridge profile | **2** Installation housing for external insulation (ambient temperature 25°C) with 8 Watt LED illumination.

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Installation

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

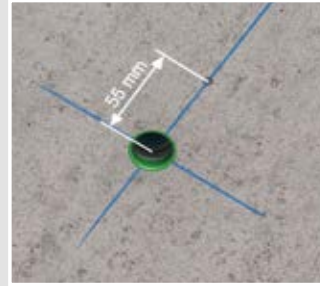Adapt installation housing to the insulation thickness.

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 ø 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 ø 68 mm for knocking in, ceiling outlet up to ø 86 mm for cutting out.

Depending on the required installation diameter ceiling exit of ø 68 mm or up to ø 86 mm, turn the front part by 180° 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.
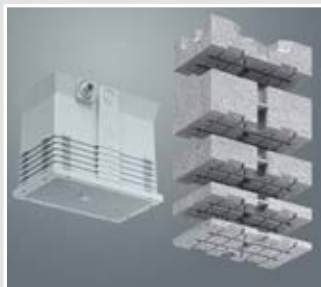
Adaptation to the insulation thickness (<160 mm) simply by cutting-off using measuring scale or (> 160 mm) with extension element.

Universal front part for installation diameter of ø 68 mm for knocking in or universal up to ø 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) Ø 68 mm or universal up to Ø 86 mm
· Space for ballast devices 120 mm x 30 mm x 28 mm (installation diameter 68 mm, installation depth 70 mm)

3D animation

INNOVATION

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

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Extension element

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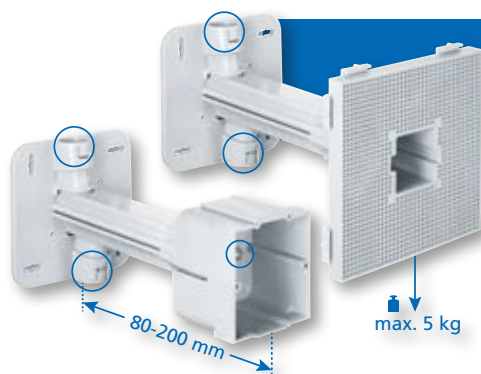· Adjustment to the insulation thickness in 10 mm steps.

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

Telescope equipment carrier and switch box.

80-200 mm

max. 5 kg

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

INNOVATION   halogen-free   650 °C   WWW   ECON

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.

Subject to modifications

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.
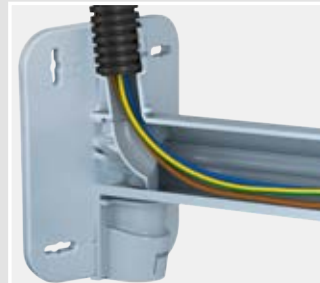
Product advantages

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

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

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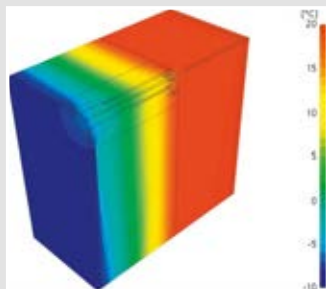
Telescope equipment carrier
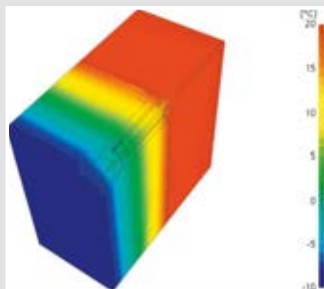
Telescope switch box
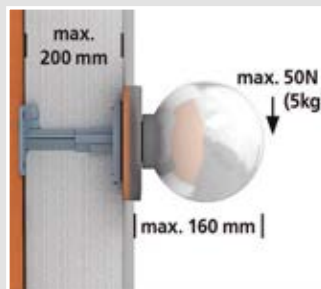
When fitting an equipment carrier to a wall, ensure that the cable entries are positioned vertically.

:::: INNOVATION

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

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

:::: INNOVATION

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)

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

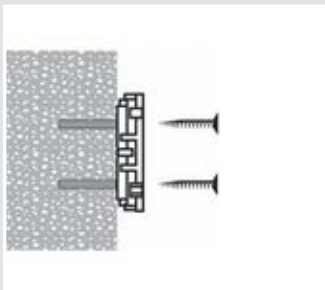**Accessories:** Combination one-gang box, page 64

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

halogen-free | 650 °C

Installation

Secure front part to the wall.
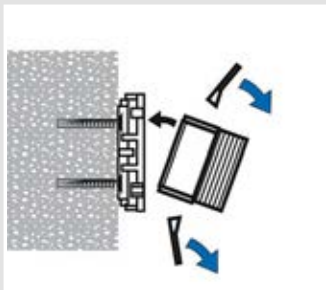
Break off the nail straps of the extension ring and screw the ring to the front part (device screws 40 mm).
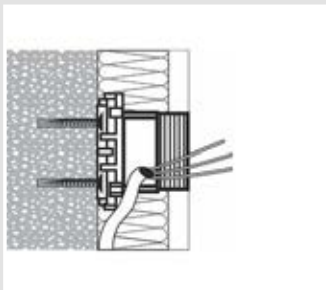
Extension rings can be fitted for adaptation to insulation thickness.

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

Installation opening	60 mm
Art. No.	1155-03
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
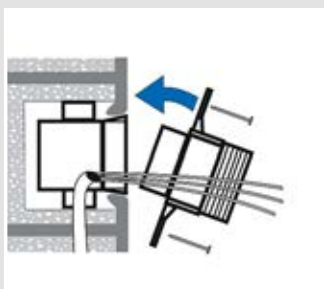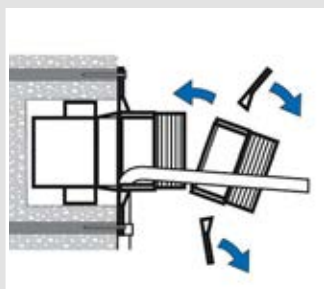- Guaranteed standard combination distance of 71 mm

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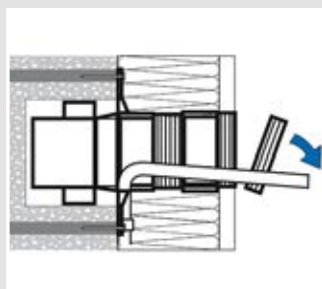
Every extension ring can be shortened to adapt to the insulation thickness. Fill all cavities in the one-gang box and extension rings with insulating material (no heat bridge created)

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. 2471-40

Installation opening	**60 mm**
Art. No.	**1155-02**
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

INNOVATION halogen-free WWW ECON

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

60 mm

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.

CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

Installation systems
for insulated facades

Structure of an organic WDVS

The mini equipment carrier was developed especially for later installation in organic composite thermal insulation systems.
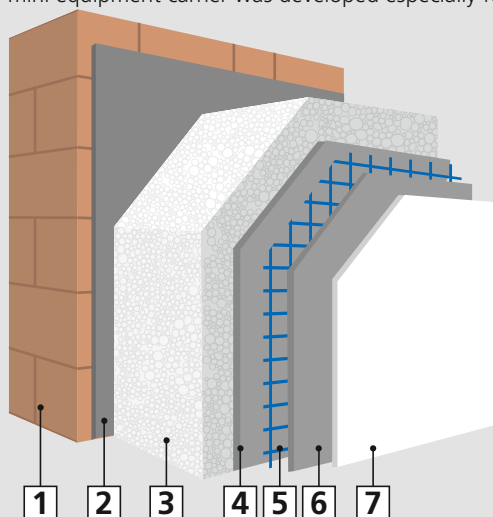
1 Masonry wall | **2** Adhesive | **3** Insulating board | **4** Reinforcement plaster | **5** Reinforcement fabric | **6** Reinforcement plaster | **7** Finish coat of plaster, decorative plaster

Maximum pull-out force for the mini equipment carrier.

$$F = 30 \text{ N}$$
$$(3 \text{ kg})$$

60 mm
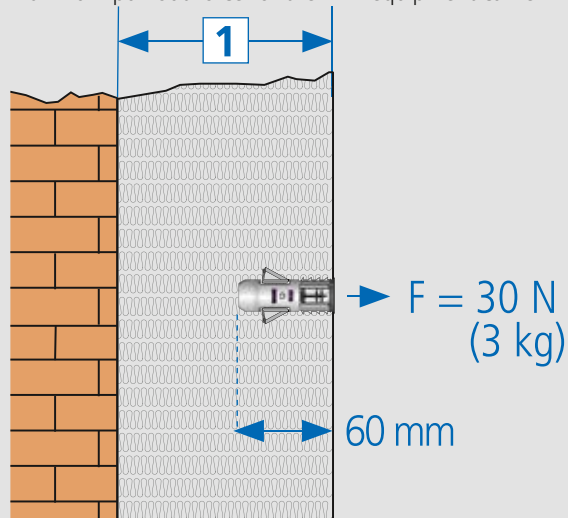
1 External insulation - insulation thickness

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 „× WB" is 0.000054 W/K.

Berechnung:
Passivhaus Institut

20 °C

15 °C

10 °C

5 °C

0 °C

-5 °C

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE
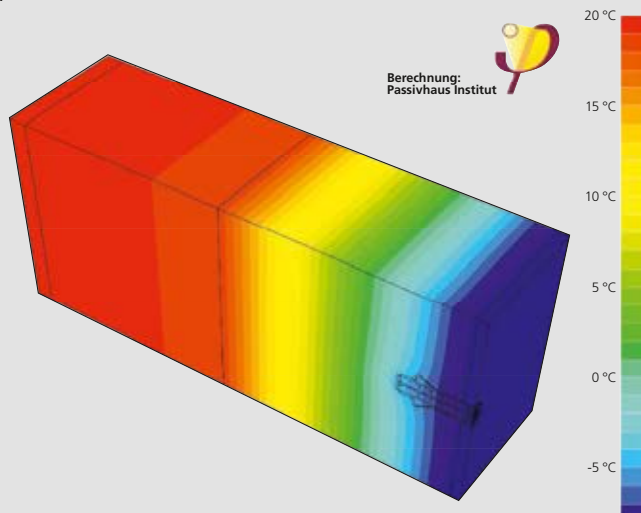
Installation

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.

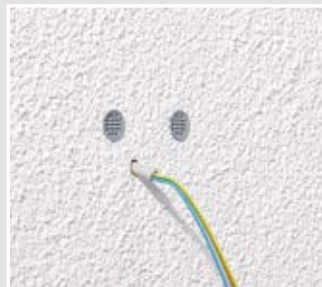The mini equipment carriers now provide stable and wall-flush screw-on surfaces ...

... 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

Length	60 mm
Installation opening	Ø 20 mm
Art. No.	1159-50
Inner packaging/shipping	10 / 100
Accessories: Hardened metal cutter 20 mm, page 303	

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 (EIFS). 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 EIFS 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 EIFS, so no moisture can penetrate.

Installation systems
for insulated facades

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

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 „× WB" is 0.005044 W/K.

Berechnung:
Passivhaus Institut

20 °C
15 °C
10 °C
5 °C
0 °C
-5 °C
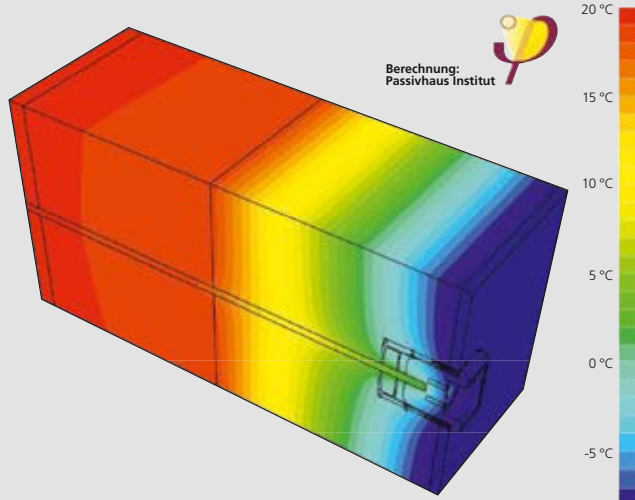
Installation with an existing cable

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. 1090-21 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.

::: INNOVATION

One-gang junction box
ECON® Styro55

· 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
· Styro55 tool

3D animation

Depth	60 mm
Installation opening	68 mm
Device screws	2
Tool-free cable entries up to Ø 15 mm	2
Support connectors for each package	5
VDE	●
Art. No.	**1555-51**
Inner packaging/shipping	10 / 100

Accessories: Hardened metal cutter 180 , page 303; Centering aid Ø 68 mm, page 304; Styro55 tool, page 304

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

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

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
Device screws	2	2	-	-
Fixing screw spacing	60 mm	60 mm	60 mm	60 mm
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
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
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
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
Through-wiring fields	1	2	1	2
CEBEC	●	●	●	●
Art. No.	7500	7650	7501	7651
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

AIR-TIGHT

Length x Width x Depth	60 x 60 x 50 mm
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
for clamp fixing	-
for screw fixing	●
Art. No.	752
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

Art. No.	994
Inner packaging/shipping	10 / 100

Q-signal®

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

Art. No.	975
Inner packaging/shipping	10 / 100

One-gang box - Swiss standard

· suitable for screw or claw fixing of
  accessories
· with injection-moulded signal cover
· for assembling combinations, centre distance
  60 mm
· low-lying plaster grips

Depth	59 mm
Diameter	71 mm
Break-out openings Ø 20 mm	11
Combination conduit entries M20/25	1
CE	•
Art. No.	9921
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

Length x Width x Depth	72 x 72 x 57 mm
Break-out openings Ø 20 mm	13
Combination conduit entries M20/25	5
CE	•
Art. No.	99.1234
Inner packaging/shipping	- / 50

Subject to modifications

Signal cover
· for one-gang box Art. No. 99.1234

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

One-gang box (Italian and American standard)
· with 2 screw domes (without screws)

Length x Width x Depth	100 x 60 x 52 mm	121 x 60 x 52 mm
Screw spacing	83 mm	108 mm
M16 conduit entries	1	1
Conduit entries M20	12	12
Conduit entries M25	3	6
Art. No.	662	663
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

Depth	51 mm
Cable entries 1 x 5 x 1.5 mm² or 3 x 2.5 mm²	•
Conduit entries M16-M20	10
Telephone cable J-Y(ST)Y	1
ÖVE	•
Art. No.	1076-20
Inner packaging/shipping	- / 100

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Cavity wall installation

The most important advantages at a glance:

- Complete system for all cavity wall applications
- FX⁴ quick assembly technology for time-saving installation
- Air-tight installation in accordance with EnEV energy-saving ordinance.
- ECON®-technology: Air-tight one-gang boxes and one-gang junction boxes for toolless cable and conduit entries
- HWD fire protection boxes for **fire-protection walls** and ceilings and also shipbuilding walls
- Secure, visible and certified protection without smoothing or filling by using KAISER sealing systems for cables and conduits
- Sound insulation boxes for use in **sound insulation walls**
- Radiation protection boxes for use in lead-containing and lead-free **radiation protection walls**
- Universal installation housings with mineral fibreboard for all standard accessory types (e.g. displays, LED luminaires and many more)
- International products for accessory installation in accordance with national standards
- Air-tight sleeves for air-tight feed-through of cables and conduits
- Professional system tools for fast, secure installation
- Wide range of system accessories
- Halogen-free product range

Product film
www.kaiser-elektro.org/cavitywall

Cavity wall | Product lines

Tools for cavity wall installation can be found in the "Tools" section starting on page 305.

	Basic installation	Energy saving Air-tight	Sound insulation	Radiation protection	Screened Environmentally-friendly	International products	Fire protection Buildings	Fire protection Ship-building
For installation accessories								
One-gang boxes	p. 80	p. 90	-	-	-	p. 134	p. 251/256	p. 260
One-gang junction boxes	p. 80	p. 90	p. 112	p. 121	p. 125	p. 134	p. 251/256	p. 261
One-gang boxes for thin boarding	p. 82	-	-	-	-	-	-	p. 260
One-gang junction boxes for thin boarding	p. 82	-	-	-	-	-	-	p. 261
One-gang junction boxes for solid wood	p. 97	-	-	-	-	-	-	-
Two-gang junction boxes	p. 81	-	-	-	-	-	-	-
Electronics boxes	p. 84	p. 84/92/98	p. 115	-	-	-	p. 254	-
Perilex® one-gang boxes	p. 83	-	-	-	-	-	-	-
CEE one-gang boxes	p. 83	p. 97	-	-	-	-	-	-
Universal installation housings	p. 132	-	-	-	-	-	-	-
Versions								
Available halogen-free	●	●	●	●	-	●	●	●
For cable exits								
Wall light connection boxes	p. 85	p. 98	-	-	-	-	-	-
Luminaire connection boxes	p. 86	-	-	-	-	-	p. 258	-
For cable entries								
Air-tight sleeves	-	p. 102	-	-	-	-	-	-
Sealings	-	-	-	-	-	-	p. 262	-
For cable connections								
Junction boxes	p. 83	-	-	-	-	-	-	-
Junction casings	p. 129	-	-	-	p. 36/126	-	-	-
Potential equalisation casings	p. 130	-	-	-	-	-	-	-
Accessories								
Fixing	p. 127	p. 127	p. 127	-	p. 127	p. 127	p. 127	p. 127
Retrofitting sealing air-tight)	p. 26/100	-	-	-	-	-	-	-
Sealing of electrical installations (air-tight and smoke-tight)	-	p. 28/101/277	-	-	-	-	p. 28/101/277	-
Plaster compensation	p. 87	p. 86	-	-	-	-	-	-
Support connector	p. 87	p. 87/98	p. 113	p. 122	-	-	p. 251	p. 251
End cover	p. 81	p. 99	p. 21/113	-	p. 36/126	-	p. 258	p. 258

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

KAISER | 77

Plus-minus device screw

The new screw allows the installer to fit screws and devices screws with the same screwdriver. In addition, the new screw drive can be used with many other components, e.g. switches, sockets, terminal blocks, etc. Optimal shape for +/- or PZ1 screwdrivers, and at the same time a slot screwdriver up to max. 4mm width can be used. A closed long-slot ensures that the blade does not slip out.

NEW

Processing instructions

Device screw with extra-flat countersunk head for low installation height.

Combination drive Pozidrive1/ slot provides the best grip.

NEW

Suitable for fitting using cordless screwdriver.

Optimal for fitting with +/- screwdriver.

FX⁴ technology - the fastest means of screw attachment

FX⁴ technology provides the fastest-ever screw fixing for cavity wall boxes and installation housings. The special thread shape enables up to 40% quicker mounting with simultaneous high self-locking effect.

• 40% quicker mounting
• Patented thread shape
• High self-locking effect
• In cavity wall boxes and installation housings

Processing instructions

The new patented screws with the steep thread design and the 3-part thread reduce installation time by up to 40%.

Standard screw

KAISER standard

Example of use for universal housing

Example of use of EnoX®

Cavity wall installation boxes

O·range® – The new KAISER cavity wall installation boxes with proven mounting lug technology and improved product features. A practical design and a large selection of cable and conduit entries allow a large number of applications. Additional boxes for installation in thinly boarded walls or solid wood walls complete the wide range. VDE certification documents the high level of quality.

- Installation in Ø 68 mm cut hole
- Screws ensure permanent fixing
- Entries can be broken out for cables and conduits
- Combinable and through-wiring by using support connectors
- Fixing of devices by means of pre-mounted device screws

NEW

850 °C   IP 30   FX4   :::: INNOVATION   O·range®   WWW

Processing instructions

New boxes provide a large number of entry options.

Marking of the openings simplifies the assignment of the correct diameter.

Combination entry for cable and conduits up to max. Ø 25 mm.

Specific openings can be made simply by breaking out.

Bending of the conduit up to 90° is easily possible in the case of slim wall constructions or in the installation level.

Cable and conduit retention prevents slipping-out of live parts.

Standardised round support connector for fast installation.

Easy-to-fit device fixing thanks to new +/- screw.

Technical processing instructions/standards

- in accordance with DIN EN 60670
- standardised combination distance 71 mm
- fully-insulated through-wiring in combinations of one-gang boxes and one-gang junction boxes for switches and sockets possible
- with holding ring
- break-out openings for sheathed cabling, low-voltage wires and DIN EN conduits
- integrated retention of NYM cables in accordance with DIN 60670/DIN 49073, self-locking of the conduits
- can also be used as junction box in accordance with DIN EN 60670

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

▓ INNOVATION

O-range® one-gang box

· with holding ring
· Art. No. 9063-02 replaces Art. No. 9063-01,
  Art. No. 9063-78 replaces Art. No. 9063-77

3D animation

NEW

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	49 mm	49 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Ø 20 / 25 mm combination entries	2	2
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	2	2
Cable entries 3 x 1.5 mm²	2	2
Cable entries for low voltages	2	2
Support connectors for each package	7	7
halogen-free	-	•
D'E / ÖVE	• / •	• / •
Art. No.	**9063-02**	**9063-78**
Inner packaging/shipping	25 / 250	25 / 250

Accessories: Support connector, page 87

▓ INNOVATION

O-range® one-gang junction box

· with holding ring
· Art. No. 9064-02 replaces Art. No. 9064-01,
  Art. No. 9064-78 replaces Art. No. 9064-77

3D animation

NEW

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	62 mm	62 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Ø 20 / 25 mm combination entries	2	2
Conduit entries Ø 20 mm	1	1
Cable entries 5 x 2.5 mm² or 7 x 1.5 mm²	1	1
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	3	3
Cable entries 3 x 1.5 mm²	3	3
Cable entries for low voltages	2	2
Support connectors for each package	7	7
halogen-free	-	•
D'E / ÖVE	• / •	• / •
Art. No.	**9064-02**	**9064-78**
Inner packaging/shipping	25 / 250	25 / 250

Accessories: Support connector, page 87

One-gang box
· with holding ring

For panel thickness	7 - 28 mm	7 - 28 mm
Depth	35 mm	35 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Cable entries 3 x 1.5 mm²	4	4
halogen-free	-	•
Art. No.	9061-00	9061-77
Inner packaging/shipping	25 / 250	25 / 250

Accessories: Support connector, page 87

Two-gang junction box
· for 2 electrical inserts or 1 block insert
· with cover (Art. No. 9062-90), for use as a junction box
· use separator wall to separate electrical circuits Art. No. 9062-22
· with holding ring

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	47 mm	47 mm
Cut hole Ø	2 x 68 mm	2 x 68 mm
Device screws	4	4
Centre distance	71 mm	71 mm
Conduit entries Ø 20 mm	6	6
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	2	2
Cable entries 3 x 1.5 mm²	4	4
halogen-free	-	•
DVE / ÖVE	• / •	• / -
Art. No.	9062-02	9062-77
Inner packaging/shipping	10 / 100	10 / 100

Accessories: Connecting clip for stacking boxes, page 85; Support connector, page 87

Replacement cover
· for junction box Art. No. 9062-02

Length x Width	145 x 75 mm
Art. No.	9062-90
Inner packaging/shipping	- / 10

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

One-gang box for thin boardings

· for boardings that do not permit stepped face cutting
· with thin holding ring
· protection class IP 2X

For panel thickness	0,5 - 40 mm	0,5 - 40 mm
Depth	41 mm	41 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Conduit entries Ø 20 mm	2	2
Cable entries 3 x 1.5 mm²	4	4
halogen-free	-	•
△ DVE	•	•
Art. No.	**9068-04**	**9068-74**
Inner packaging/shipping	25 / 250	25 / 250

One-gang junction box for thin boardings

· for boarding that does not permit edge countersinking (e.g. metal-covered boarding)
· with thin holding ring

For panel thickness	0,5 - 40 mm	0,5 - 40 mm
Depth	61 mm	61 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Conduit entries Ø 20 mm	4	4
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	2	2
Cable entries 3 x 1.5 mm²	4	4
Cable entries for low voltages	2	2
halogen-free	-	•
△ DVE	•	•
Art. No.	**9068-03**	**9068-76**
Inner packaging/shipping	25 / 250	25 / 250

PERILEX®/CEE One-gang box

· with holding ring
· for device inserts 16 A

For panel thickness	12,5 - 40 mm	12,5 - 40 mm	12,5 - 40 mm	12,5 - 40 mm
Depth	50 mm	50 mm	50 mm	50 mm
Cut hole Ø	74 mm	74 mm	74 mm	74 mm
halogen-free	-	•	-	•
with 2 countersunk device screws 4 mm Ø, 16 mm in length to facilitate use of 16 A PERILEX inserts	•	•	-	-
With sealing ring for protection class IP 34 and 2 raised head 4 mm Ø device screws, length 20 mm, for use with 16 A CEE equipment inserts	-	-	•	•
⊿ / ⓄⓋE	• / •	• / -	• / -	• / -
Art. No.	**9067-01**	**9067-77**	**9075-01**	**9075-77**
Inner packaging/shipping	10 / 100	10 / 100	10 / 100	10 / 100

Junction box

· with universal VDE cover Art. No. 1184-90
· with holding ring
· with 2 Ø 4 x 16 mm countersunk head screws

For panel thickness	12,5 - 40 mm	12,5 - 40 mm
Depth	50 mm	50 mm
Cut hole Ø	74 mm	74 mm
halogen-free	-	•
⊿	•	•
Art. No.	**9071-01**	**9071-77**
Inner packaging/shipping	10 / 100	10 / 100

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Electronics box

Cavity wall electronics box for switching units, electronic components, cables and terminals in cavity walls. The box can be subdivided and combined, so it offers a wide range of usage options.

• For different kinds of voltages by using the associated separator wall
• Integrating radio or EIB actuators
• With cover that can be wallpapered and filled
• Can be combined with each other and with one-gang boxes and one-gang junction boxes

850 °C   IP 30   FX⁴

Processing instructions

Using turbo cutter Multi 4000 Ø 68 mm (Art. No. 1083-10), cut two installation openings with a centre distance of 71 mm.

You can cut a precision cable entry for air-tight installation with the KAISER universal opening cutter (Art. No. 1085-80).

The electronics box offers space for all kinds of installations. Can also be used as a network box with sufficient space for reserve cables.

The cover can also be turned by 180° and mounted and filled. This will reduce any possible switching sounds.

Electronics box

· air-tight version with additional sealing lip
· Tunnel twin-chamber box with enclosed separator wall and cover that can be wallpapered over.
· for one-gang inserts and electronic components such as EIB actuators, communications equipment (Cat 7), radio control elements, alarm modules, etc.
· with holding ring

FX⁴ **AIR-TIGHT**

Depth	75 mm	75 mm
Cut hole Ø	2 x 68 mm	2 x 68 mm
Centre distance	71 mm	71 mm
halogen-free	-	•
Air-tight	•	•
⬠	•	•
Art. No.	9062-94	9062-74
Inner packaging/shipping	10 / 100	10 / 100

Accessories: Connecting clip for stacking boxes, page 85; Support connector, page 87

Cover ready for papering and filling

The cover can be fitted flush with the wall for papering over or turned 180° for filling.

Connecting clip for stacking boxes

· for horizontal combination of two-gang junction boxes 9062-02 or electronics boxes 9062-94

Art. No.	9062-50
Inner packaging/shipping	- / 10

Wall light connection box

· with inner fitting cover
· not to be used as a junction box!
· with holding ring

FK4 AIR-TIGHT

For panel thickness	7 - 30 mm	7 - 40 mm	7 - 40 mm
Depth	40 mm	45 mm	45 mm
Cut hole Ø	2 x 35 mm	35 mm	35 mm
Centre distance	30 mm	-	-
Conduit entries Ø 20 mm	1	-	-
Cable entries 3 x 1.5 mm²	2	1	1
halogen-free	-	-	•
Air-tight	-	•	•
If necessary use screw cover 1148-90	•	-	-
⚠ / ÖVE	• / •	- / -	- / -
Art. No.	9148-00	9248-01	9248-77
Inner packaging/shipping	25 / 100	25 / 100	25 / 100

Cover

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

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

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Ceiling light connection box

· with M5 metal thread for light hooks min. length 55 mm
· maximum load 20 N (2 kg)
· can also be used as ceiling light junction box
· with holding ring
· Important! Always screw in light hook fully.

For panel thickness	7 - 40 mm
Depth	47 mm
Cut hole Ø	68 mm
Conduit entries Ø 20 mm	2
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	2
Cable entries 3 x 1.5 mm²	2
Art. No.	9063-50
Inner packaging/shipping	- / 10

Light hook

· for retrofitting ceiling boxes (DIN EN 60670)
· with M5 thread, fully-insulated

Length of shank	55 mm	65 mm
Diameter hook	26 mm	26 mm
Thread length	10 mm	10 mm
Overall length	81 mm	91 mm
Art. No.	1226-55	1226-65
Inner packaging/shipping	- / 150	- / 150

Plaster compensation ring

· to compensate for deep-seated boxes
· plaster compensation rings with same diameter can be stacked
· with 2 screws for attaching equipment and 2 ring attachment screws

Height	10 mm	20 mm	12 mm	24 mm
Screw spacing	60 mm	60 mm	67 mm	67 mm
for boxes with an outer Ø	68 mm	68 mm	74 mm	74 mm
Art. No.	9155-61	9155-62	9155-71	9155-72
Inner packaging/shipping	25 / 250	25 / 250	10 / 100	- / 100

Support connector

· for through-wiring of combinations to IP 3X standard air-tight
· to make air-tight combinations
· Support connectors for new boxes
· for Art. Nos. 9062-94/74, 9063-02, 9064-02, 9066-01/12, 9068-01, 9263-.., 9264-.., 9062-02/77, 9268-94/74, 9266-22/77

AIR-TIGHT

halogen-free	-	•
Art. No.	9060-98	9060-78
Inner packaging/shipping	25 / 100	25 / 100

Support connector

· for through-wiring of combinations to IP 30 standard
· Support connectors for old boxes
· for Art. Nos. 9061-00/-77, 9068-03/-76

halogen-free	-	•
Art. No.	9060-97	9060-77
Inner packaging/shipping	50 / 250	- / 50

Compensation ring

· for all Ø 68 mm cavity wall boxes
· for oversize drill holes
· compensation up to Ø 71 mm
· can also be used for combinations where the formed surfaces are located next to each other

Art. No.	9060-40
Inner packaging/shipping	25 / 250

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Air-tight one-gang boxes, one-gang junction boxes, accessories
for cavity wall installation

NEW

Air-tight cavity wall installation

O·range® – The new cavity wall box! Air-tight O-range® cavity wall boxes with ECON® technology for energy-efficient electrical installation according to EnEV and for installations under clean-room and hygiene conditions. The elastic ECON® technology sealing membrane allows air-tight electrical installation.

• Elastic sealing membrane for guaranteed air-tightness
• Innovative clamp technology with integrated cable retention
• Tool-free cable and conduit entry
• Air-tight combined with support connector

O·range ECON®   air-tight   850 °C   IP 30   FX4   ECON TECHNIK

Technical information

As a key component of the new German Energy Saving Ordinance (EnEV), the energy performance certificate is a prerequisite for both commercial and residential properties. It creates more transparency for both buyers and tenants regarding the energy efficiency of a property. This factor is set to become more important in the real estate industry, not only for new build projects but also for renovation projects (existing housing).
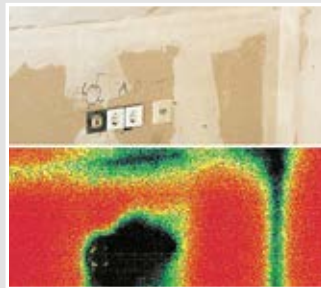
Thermographic photographs highlight the thermal losses, which occur in conventional electrical installations.

With the help of various test procedures such as thermographic photographs, the blower-door-test and thermo anemometer measurements, we and various neutral institutions have proven the level of air tightness achieved by KAISER installation systems.

Especially in cavity wall construction, an air-tight building shell, guaranteed largely through the moisture barrier foil, plays an important role in complying with permissible energy values. Each conventional installation opening breaks this air-tight shell and results in uncontrolled artificial currents, which often weaken other energy saving measures significantly.

Average heat energy consumption in houses with a living surface area of 100 m²					
House type	"Normal house" (housing)	Low-energy house	Passive house	Zero-heating energy house	Energy-autonomous house (special case)
Fuel oil consumption	approx. 2200 l/year	approx. 850 l/year	approx. 180 l/year	approx. 0 l/year	approx. 0 l/year
Use of energy	187 kW h/m² a	73 kW h/m² a	15 kW h/m² a	8.3 kW h/m² a	0 kW h/m² a

Air-tight one-gang boxes, one-gang junction boxes, accessories

for cavity wall installation

Processing instructions

Air-tight cavity wall box with ECON® technology for energy-efficient electrical installation in accordance with the German Energy Saving Ordinance (EnEV), as well as for installation under clean-room or hygiene conditions. The elastic ECON® technology sealing membrane allows electrical installation acc. to EnEV.

The ECON® technology elastic sealing membrane fits itself around the conduit or cable during piercing. This prevents uncontrolled air flows.

The flexible and tool-free insertion of the conduit or cable significantly simplifies the process and reduces installation time.

Reinforcement around the opening prevents tearing of the membrane.

Easy opening of the conduit entry by means of pre-defined opening tab.

Permanently air-tight conduit entry up to conduit size M25.

The conduit can be angled in the entry by up to 90° …
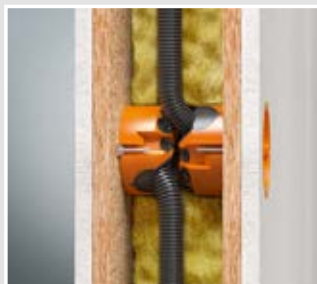
… which is ideal for use in slim wall constructions and installation levels.

The marking of the entry openings simplifies the correct choice of opening size.

Easy-to-fit device fixing thanks to new +/- screw.

The support connector ensures the air-tight combination of the cavity wall boxes and is inserted via the removable metal plates without the use of tools.

Subject to modifications

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FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

::: INNOVATION

O-range ECON® 63
one-gang box

· Air-tight design with sealing membranes
· fully-insulated air-tight through-wiring for combinations using support connectors
· tool-free cable or conduit entries
· integrated strain relief of NYM cables, self-locking of conduits
· Art. No. 9263-22 replaces Art. No. 9263-21, Art. No. 9263-78 replaces Art. No. 9263-77

AIR-TIGHT ECON TECHNIK FIX4

3D animation

NEW

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	49 mm	49 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Tube entries up to M25	2	2
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	2	2
Cable entries 3 x 1.5 mm²	2	2
Support connectors for each package	7	7
halogen-free	-	•
Air-tight	•	•
⬙ DʸE / ⓞVE	• / •	• / •
Art. No.	**9263-22**	**9263-78**
Inner packaging/shipping	25 / 250	25 / 250

::: INNOVATION

O-range ECON® 64 one-gang
junction box

· Air-tight design with sealing membranes
· fully-insulated air-tight through-wiring for combinations using support connectors
· tool-free cable or conduit entries
· integrated strain relief of NYM cables, self-locking of conduits
· Art. No. 9264-22 replaces Art. No. 9264-21, Art. No. 9264-78 replaces Art. No. 9264-77

AIR-TIGHT ECON TECHNIK FIX4

3D animation

NEW

| For panel thickness	7 - 40 mm	7 - 40 mm
Depth	62 mm	62 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Tube entries up to M25	2	2
Cable entries 5 x 2.5 mm² or 7 x 1.5 mm²	1	1
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	3	3
Cable entries 3 x 1.5 mm²	3	3
Support connectors for each package	7	7
halogen-free	-	•
Air-tight	•	•
⬙ DʸE / ⓞVE	• / •	• / •
Art. No.	**9264-22**	**9264-78**
Inner packaging/shipping	25 / 250	25 / 250

Electronics box ECON® Flex

Air-tight ECON® Flex electronics box with ECON® technology for energy-efficient electrical installation in accordance with EnEV and for installation under clean room or enhanced hygiene conditions. Fast installation is ideal for modernising or extending existing systems. The flexible tunnel makes it easy to install, and creates space for electronic components, cable reserves and terminals.

• Additional sideway terminal compartment for communications and network technology
• Elastic sealing membrane for guaranteed air-tightness
• Tool-free cable and conduit entry
• Integrated cable retention
• Can be combined with support connectors, air-tight and fully-insulated

air-tight | 850 °C | IP 30 | **INNOVATION** | FK4 | ECON TECHNIK | WWW

NEW

Examples of use
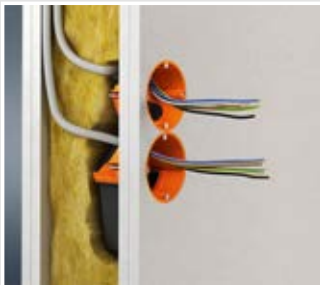
Combination with ECON® cavity wall boxes is possible.

Additional space for connection terminals

Accepts electronic components e.g. actuators
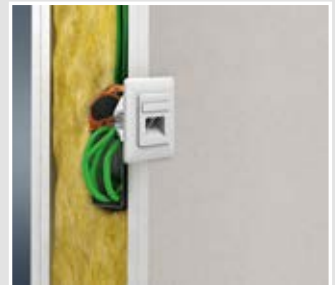
Space for cable reserves.

Processing instructions

Existing Ø 68 mm installation openings can be used.

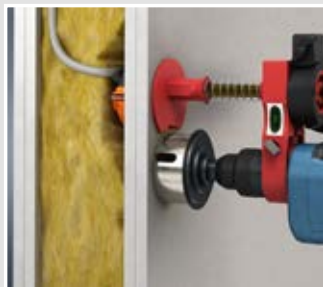Air-tight and fully-insulated combination using support connector Art. No. 9060-98.

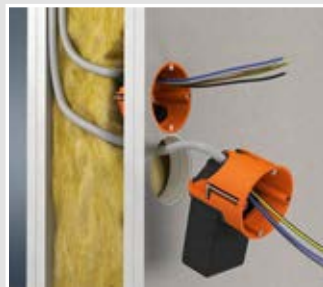Standardised cable retention. Elastic sealing membrane permits toolless cable entry…

… and conduit entries up to M25 in an air-tight version

Air-tight one-gang boxes, one-gang junction boxes, accessories
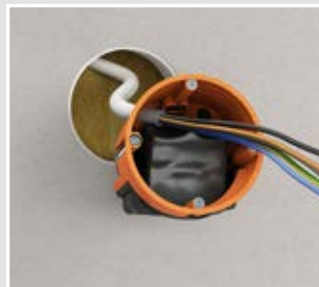for cavity wall installation

Installation

Cut Ø 68 mm installation opening; for refurbishing, centre distance 71 mm, using Profix.

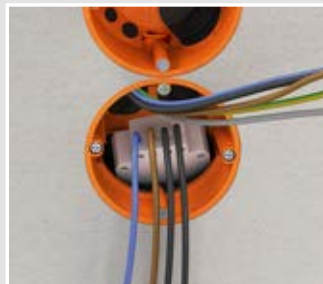Feed cable or conduit air-tight through the elastic sealing membrane

For easy installation, fold in the elastic tunnel

Insert the box into the component opening.

Tighten box lug screws and fold out the tunnel.

Insert electronic component into the tunnel

Through-wiring takes place by means of support connector Art. No. 9060-98.

Guaranteed airtight - secure terminal compartment for electronic components.

⠿ INNOVATION

Electronics box ECON® Flex

· for accessories and electronic components
· Air-tight design with sealing membranes
· Elastic tunnel
· Combinable with ECON® one-gang junction boxes

ECON TECHNIK **AIR-TIGHT**

3D animation

For panel thickness	7 - 30 mm	7 - 30 mm
Length x Width x Depth	122 x 71 x 75 mm	122 x 71 x 75 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Tube entries up to M25	2	2
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	2	2
Cable entries 3 x 1.5 mm²	2	2
halogen-free	-	•
Air-tight	•	•
⬙ᴅⱽᴱ / Ⓞⱽᴱ	• / •	• / •
Art. No.	9268-94	9268-74
Inner packaging/shipping	10 / 100	10 / 100

Subject to modifications

Conduit one-gang junction box

Air-tight one-gang junction box with ECON® technology especially for installation with electrical installation conduit. The box is VDE-certified and suitable for energy-efficient electrical installation acc. to EnEV. 4 entries are optimal for continuous conduit installation e.g. in prefabricated house construction or with data networks. Extremely easy fitting thanks to toolless conduit insertion with opening tab. The sealing membrane guarantees permanent air-tightness and at the same time retention of the conduit.

- Installation in Ø 68 mm cut hole
- Elastic sealing membrane for guaranteed air-tightness
- Toolless conduit entry
- Can be combined with support connectors, air-tight and fully-insulated

O·range ECON®

air-tight · 850 °C · IP 30 · ECON TECHNIK

INNOVATION FX4 WWW

M20   M25

NEW

Processing instructions

Easy opening of the conduit entry by means of the opening tab – without any tearing of the membrane.	Air-tight conduit entry up to conduit size M25.	Bending of the conduit up to 90° is easily possible in the case of slim wall constructions or in the installation level.	Air-tight and fully-insulated combination using support connector Art. No. 9060-98.

INNOVATION

O-range ECON® conduit one-gang junction box

· Air-tight design with sealing membranes
· fully-insulated through-wiring for combinations of one-gang junction boxes with support connectors
· toolless conduit entries
· available from 3rd quarter 2018

AIR-TIGHT ECON TECHNIK FX4

NEW

3D animation

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	62 mm	62 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Tube entries up to M20	2	2
Tube entries up to M25	2	2
Support connectors for each package	7	7
halogen-free	-	•
Air-tight	•	•
Art. No.	**9266-22**	**9266-77**
Inner packaging/shipping	25 / 250	25 / 250

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Air-tight one-gang boxes, one-gang junction boxes, accessories
for cavity wall installation

Junction box 120 mm air-tight

Air-tight Ø 120 mm junction box with ECON® technology for an energy-efficient electrical installation in accordance with EnEV. Extremely easy fitting thanks to toolless cable and conduit entry. The sealing membranes guarantee permanent air-tightness and at the same time retention of the cable or conduit. The large box volume provides plenty of installation space for various cable connections.

• Installation in Ø 120 mm cut hole
• Elastic sealing membrane for guaranteed air-tightness
• Tool-free cable and conduit entry

O·range ECON®   air-tight   850 °C   IP 30   INNOVATION

FX4   ECON TECHNIK   WWW

Processing instructions
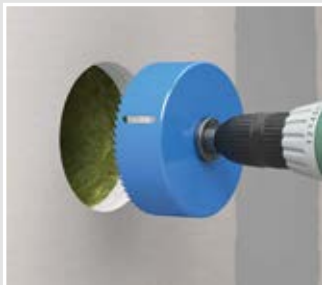
Cut installation opening with bi-metal cutter Art. No. 1082-20.

Elastic sealing membrane allows toolless cable and conduit entries in air-tight version.

Fitting of fixing adapter for connection terminals on top-hat rail.

For separation of 2 electrical circuits, use separator wall Art. No. 9073-20.

Installation zones in accordance with DIN 18015-3:2016-09

The following preferred dimensions apply to the laying of cables inside buildings.
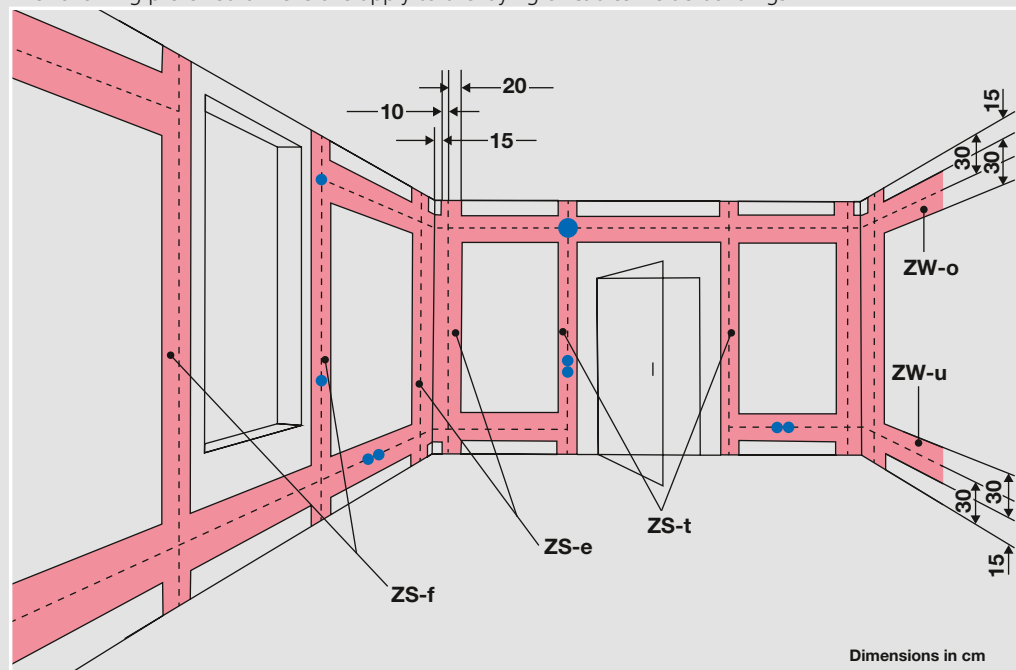
Legend

ZS-t vertical installation zones at doors: from 10 cm to 30 cm next to the constructional edges

ZS-f vertical installation zones at windows: from 10 cm to 30 cm next to the constructional edges

ZS-e vertical installation zones at wall corners: from 10 cm to 30 cm next to the constructional corners

ZW-u lower horizontal installation zone: from 15 cm to 45 cm above the floor

ZW-o upper horizontal installation zone: from 15 cm to 45 cm below the ceiling covering

Dimensions in cm

Subject to modifications

FLUSH-MOUNTING
CAVITY WALL
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CABLE GLANDS
TOOLS
SERVICE

::: INNOVATION

Junction box Ø 120 mm
O-range ECON®

· Air-tight design with sealing membranes
· for 2 electrical circuits through separator wall 9073-20
· receptacle for TS 35 standard rail
· with stable holding ring
· Cutting the installation opening with bi-metal cutter 1082-20 or Variocut 1089-00
· including cover and screws
· available from 3rd quarter 2018

3D animation

AIR-TIGHT FIX4 ECON TECHNIK

NEW

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	65 mm	65 mm
Cut hole Ø	120 mm	120 mm
Tube entries up to M25	6	6
Cable entries 5 x 2.5 mm² or 7 x 1.5 mm²	4	4
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	6	6
Cable entries 3 x 1.5 mm²	6	6
halogen-free	-	•
Air-tight	•	•
DVE / OVE	• / •	• / •
Art. No.	**9273-91**	**9273-77**
Inner packaging/shipping	- / 10	- / 10

Accessories: Separator wall, page 131

::: KAISER | 95

One-gang box for thin boardings

· for boardings that do not permit stepped face cutting
· Combinations only possible with boxes with the same Art. No.
· with thin holding ring

AIR-TIGHT

For panel thickness	0,5 - 40 mm	0,5 - 40 mm
Depth	47 mm	47 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Cable entries up to max. Ø 10.5 mm can be made using universal opening cutter Art. No. 1085-80	•	•
halogen-free	-	•
Air-tight	•	•
⚠	•	•
Art. No.	**9068-01**	**9068-79**
Inner packaging/shipping	10 / 100	10 / 100

One-gang junction box

· incl. 10 connection pieces (for every 25 boxes)
· with holding ring

AIR-TIGHT

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	65 mm	65 mm
Cut hole Ø	68 mm	68 mm
Device screws	2	2
Cable or conduit entries to max. Ø 25 mm cut using universal opening cutter Art. No. 1085-80	•	•
halogen-free	-	•
Air-tight	•	•
⚠ / Ⓥ	• / •	• / -
Art. No.	**9066-01**	**9066-77**
Inner packaging/shipping	25 / 250	25 / 250

Accessories: Support connector, page 87; Support connector, page 98

FLUSH-MOUNTING

CAVITY WALL

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SERVICE

Air-tight one-gang boxes, one-gang junction boxes, accessories
for cavity wall installation

One-gang junction box for solid wood

· for clamped attachment in solid wood from 10 mm thickness upwards
· not suitable for use with plasterboard or mineral fibreboard!
· with holding ring

AIR-TIGHT

Depth	65 mm
Cut hole Ø	68 mm
Cable or conduit entries to max. Ø 25 mm cut using universal opening cutter Art. No. 1085-80	•
Air-tight	•
⚠ DVE / ÖVE	• / •
Art. No.	9066-12
Inner packaging/shipping	25 / 250

One-gang box CEE

· for use with 16A CEE equipment inserts
· with holding ring

FX4 AIR-TIGHT

For panel thickness	12,5 - 40 mm	12,5 - 40 mm
Depth	50 mm	50 mm
Cut hole Ø	74 mm	74 mm
Screw spacing	67 mm	67 mm
Cable entries up to max. Ø 10.5 mm can be made using universal opening cutter Art. No. 1085-80	•	•
halogen-free	-	•
Air-tight	•	•
⚠ DVE	•	•
Art. No.	9075-12	9075-78
Inner packaging/shipping	10 / 100	10 / 100

Cavity wall boxes, air-tight version, without sealing membrane

Air-tight making of cable or conduit entries and of box combinations.

Cut all required entry points for cavity wall boxes (except ECON® = without the use of tools) with the opening cutter.

Insert cables or conduit with a slight turn. To insert the box with ease, push folding base together towards the centre.

Tighten both screws of the FX4 fast screw attachment.

For combinations: Insert support connectors.

Air-tight one-gang boxes, one-gang junction boxes, accessories
for cavity wall installation

Electronics box
· air-tight version with additional sealing lip
· Tunnel twin-chamber box with enclosed separator wall and cover that can be wallpapered over.
· for one-gang inserts and electronic components such as EIB actuators, communications equipment (Cat 7), radio control elements, alarm modules, etc.
· with holding ring

FK⁴ AIR-TIGHT

Depth	**75 mm**	**75 mm**
Cut hole Ø	2 x 68 mm	2 x 68 mm
Centre distance	71 mm	71 mm
halogen-free	-	•
Air-tight	•	•
⚠	•	•
Art. No.	**9062-94**	**9062-74**
Inner packaging/shipping	10 / 100	10 / 100

Accessories: Connecting clip for stacking boxes, page 85

Wall light connection box
· with inner fitting cover
· not to be used as a junction box!
· for 3 terminal blocks

FK⁴ AIR-TIGHT

For panel thickness	**7 - 40 mm**	**7 - 40 mm**
Depth	45 mm	45 mm
Cut hole Ø	35 mm	35 mm
Cable entries 3 x 1.5 mm²	1	1
halogen-free	-	•
Air-tight	•	•
Art. No.	**9248-01**	**9248-77**
Inner packaging/shipping	25 / 100	25 / 100

Support connector
· for through-wiring of combinations to IP 3X standard air-tight
· to make air-tight combinations
· Support connectors for new boxes
· for Art. Nos. 9066-01/12, 9068-01, 9263-..., 9264-… , 9062-02/-77, 9062-94/-74, 9268-94/-74, 9266-22/-77

AIR-TIGHT

halogen-free	-	•
Art. No.	**9060-98**	**9060-78**
Inner packaging/shipping	25 / 100	25 / 100

Subject to modifications

Air-tight one-gang boxes, one-gang junction boxes, accessories
for cavity wall installation

FLUSH-MOUNTING

CAVITY WALL

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CABLE GLANDS

TOOLS

SERVICE

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
halogen-free	-	•
Fireproof	850 °C	850 °C
⬡ VDE	•	•
Art. No.	1184-90	1184-77
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
Art. No.	1174-99
Inner packaging/shipping	- / 10

Internal cover

· for flush closure of one-gang boxes and one-
  gang junction boxes
· suitable for wallpapering
· for all one-gang boxes and one-gang
  junction boxes

Diameter	64 mm
Art. No.	1158-90
Inner packaging/shipping	25 / 250

Sealing foil

Sealing foil for later sealing of over-sized, non-circular or broken-out openings, as often found with combinations in plasterboard, mineral fibreboard or similar materials, which are guaranteed to be sealed air-tight with the sealing foil.

Sealing foil

· for sealing between box edge and boarding material with oversized, non-circular or broken-out drill holes (e.g. in combination areas with plasterboard, mineral fibreboard or similar materials)

· for Art. No. 9066-01/77, 9068-01/79, 9248-01, 9263-..., 9264-...

AIR-TIGHT

Air-tight	•
Art. No.	**9060-41**
Inner packaging/shipping	- / 25

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

AIR-TIGHT

Depth	**36,5 mm**
Diameter	60 mm
Air-tight	•
Art. No.	**1040-01**
Inner packaging/shipping	10 / 100

Sealing plugs 16-20

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

ECON TECHNIK AIR-TIGHT

3D animation

Sealing plug	M16	M20
DIN EN conduit Ø	16 mm	20 mm
Art. No.	1040-16	1040-20
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

ECON TECHNIK AIR-TIGHT

3D animation

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

FLUSH-MOUNTING

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SERVICE

Sealing sleeves
Reliable sealing of installation feed-throughs.

Sealing sleeves

The KAISER range of sealing sleeves offers perfect sealing for all standard cable and conduit sizes, both indoors and outdoors. The range consists of single and double sleeves for one or two cables or conduits respectively, and of two multiple air-tight sleeves for up to six cables or conduits. The self-adhesive KAISER sealing sleeves can be fitted without the need for any tools. Talcum is applied to the sleeves before they leave the factory. They ensure easy cable or conduit feed-through, and fast processing on the building site. In contrast to the conventional improvised method, KAISER sealing sleeves guarantee the permanent air-tight sealing of installation penetrations.

• For cables Ø 4 - 12 mm and conduits Ø 15 - 110 mm
• Large contact area to cables and conduits
• Anti-kink sleeve also permanently seals very kinked cables
• Completely toolless wall installation
• Extremely good adhesion

Applications for sealing sleeves
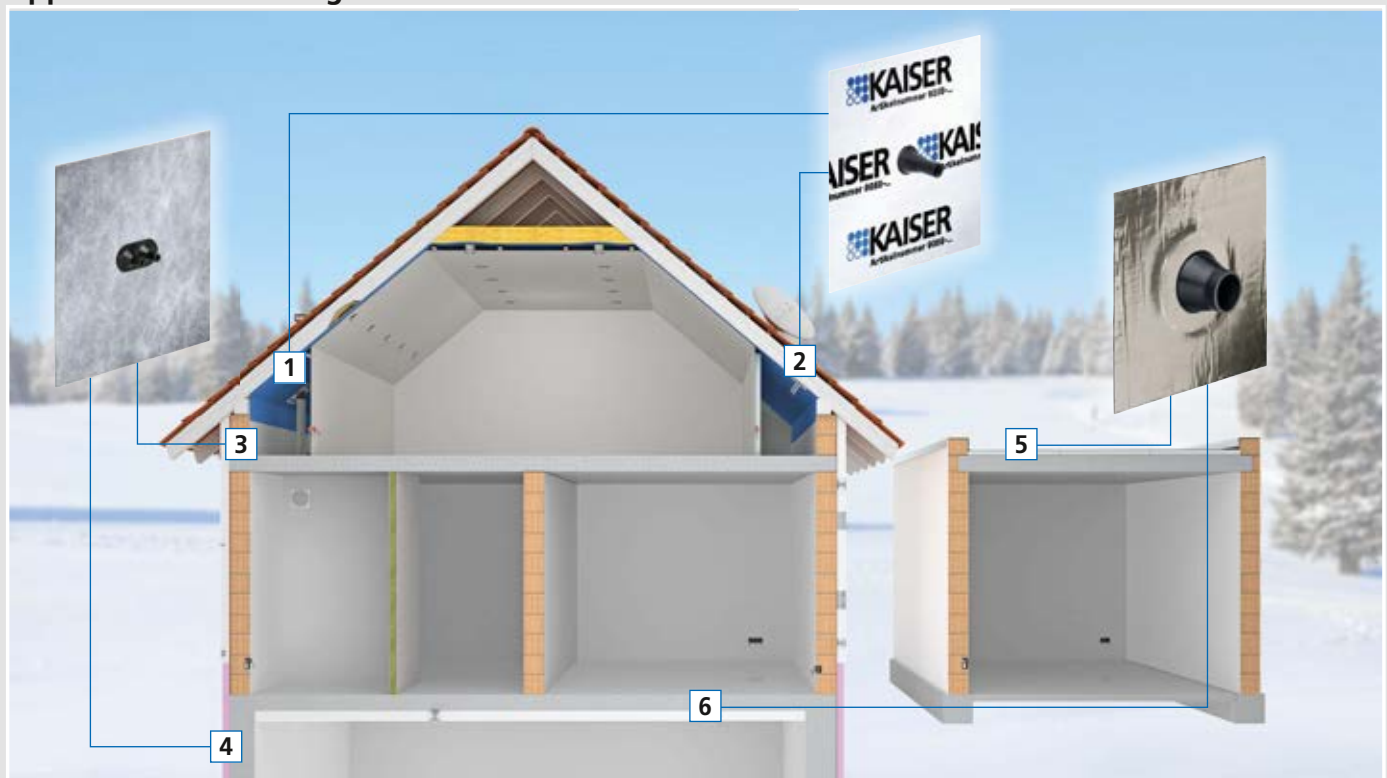
1 Sealing of a ventilation conduit through the vapour or moisture barrier | **2** Sealing of more than one cable through the vapour or moisture barrier | **3** Sealings in plastered walls | **4** Sealings in the cellar area | **5** Sealings in flat roof areas | **6** Sealing of the cellar ceiling or the foundation baseplate

Subject to modifications

FLUSH-MOUNTING

CAVITY WALL

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TOOLS

SERVICE

			Air-tight sleeve	Fleece-butyl sealing sleeve	Aluminium butyl sealing sleeve
Applications			Indoors	Indoors & outdoors	Indoors & outdoors
L x B	**H**	**Ø mm**	**Art. No.**	**Art. No.**	**Art. No.**
Cables (coaxial, NYM, underground, solar, etc.)					
Single □150	30	4 - 8 mm	**9059-44**	**9089-44**	**9079-44**
		8 - 12 mm	**9059-46**	**9089-46**	**9079-46**
Double □150	30	4 - 8 mm	**9059-45**	**9089-45**	**9079-45**
		8 - 12 mm	**9059-47**	**9089-47**	**9079-47**
6 combinations □230	25	4 - 11 mm	**9059-61**	-	-
Conduits (electrical installation, waste water, ventilation, heating, etc.)					
Single □150	30	15 - 22 mm	**9059-48**	**9089-48**	**9079-48**
		25 - 32 mm	**9059-49**	**9089-49**	**9079-49**
Double □150	30	15 - 22 mm	**9059-55**	**9089-55**	**9079-55**
Single □230	50	42 - 55 mm	**9059-51**	**9089-51**	**9079-51**
		50 - 75 mm	**9059-52**	**9089-52**	**9079-52**
		75 - 90 mm	**9059-53**	**9089-53**	**9079-53**
		100 - 110 mm	**9059-54**	**9089-54**	**9079-54**
6 combinations □320	30	16 - 25 mm	**9059-62**	-	-
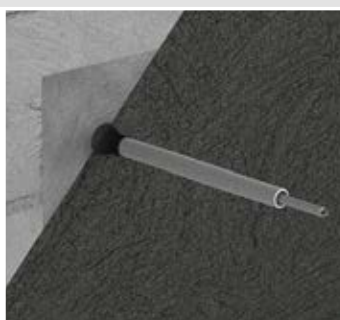
Sealing sleeves
Reliable sealing of installation feed-throughs.

Air-tight sleeve

Air-tight sleeve for sealing conduit and cable entries in the interior of air-tight building shells.

- extremely strong adhesion
- For guaranteed air-tight feed-throughs, especially in the attic
- 10 types for different conduit and cable diameters
- Suitable for moisture barrier foils, sarking membranes, OSB boards *

halogen-free   air-tight   ECON

Examples of use

Measuring the air-tightness

Processing instructions

Air-tight conduit entries can be made cleanly and easily by using the self-adhesive KAISER air-tight sleeves.
The sleeves create faster, more stable and, above all, more air-tight transitions than improvised methods.
Please ensure that the base is dry and free from dust and grease. Processing should be carried out at a temperature higher than -5°C, and full adhesive strength is achieved after 24 hours. The sleeves have an unlimited shelf life when stored cool and dry at room temperature. * For fibreboard, we recommend a pre-coat using primer

Installation

Push the sleeve over the cable or conduit.

Remove the foil from the sleeve.
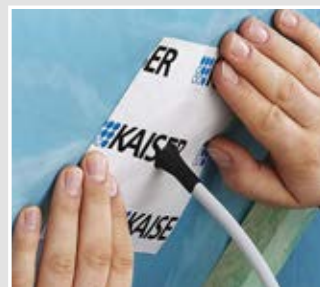
Stick on the sleeve and press firmly on to the base, working outwards from the centre.

FLUSH-MOUNTING

CAVITY WALL

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SERVICE

Sealing sleeves
Reliable sealing of installation feed-throughs.

Air-tight sleeves for cables and conduits

· Continuous sealing by means of air-tight
  layers for penetration of cables

· extremely strong adhesion

· Temperature resistance -30°C to +80°C,
  in the feed-through area up to +120°C

· UV-resistant, halogen-free

AIR-TIGHT

Length x Width x Height	Number of ca-bles/conduits	Diameter of cable / pipe	Air-tight	Art. No.	Inner packaging/ shipping
150 x 150 x 30 mm	1 item	4 - 8 mm	•	9059-44	10 / 30
150 x 150 x 30 mm	2 item	4 - 8 mm	•	9059-45	10 / 30
150 x 150 x 30 mm	1 item	7,5 - 12 mm	•	9059-46	10 / 30
150 x 150 x 30 mm	2 item	7,5 - 12 mm	•	9059-47	10 / 30
150 x 150 x 30 mm	1 item	15 - 22 mm	•	9059-48	10 / 30
150 x 150 x 30 mm	2 item	15 - 22 mm	•	9059-55	10 / 30
150 x 150 x 30 mm	1 item	25 - 32 mm	•	9059-49	10 / 30
230 x 230 x 50 mm	1 item	42 - 55 mm	•	9059-51	- / 8
230 x 230 x 50 mm	1 item	50 - 75 mm	•	9059-52	- / 4
230 x 230 x 50 mm	1 item	75 - 90 mm	•	9059-53	- / 4
320 x 320 x 50 mm	1 item	100 - 110 mm	•	9059-54	- / 4

Multiple air-tight sleeves ECON®

Cable and conduit sleeve ECON® for reliable sealing of up to 6 cable or conduit entries through the air-tight building shell - ideal for digital satellite units.

• Flexible sealing of 1 to 6 cables or conduits

• Low space requirement, powerful adhesion

• Completely toolless wall installation

• Sealing even when cables are extremely kinked

• Unused entries are reserved for later installations

Examples of use

Connection of a digital satellite receiver unit.	4 coaxial cables are connected here for reception.	The mast which supports the parabolic mirror must also be incorporated in the equipotential bonding.	The cables are fed through the building's air-tight seal. This entry must be permanently sealed air-tight.

Sealing sleeves
Reliable sealing of installation feed-throughs.

Installation

ECON® technology's toolless cable or conduit entry offers maximum ease of installation and permits fast processing.

Before the sleeve can be glued in position, make sure that the surface is free of dust. Then remove the protective foil,…

… glue the sleeve in position and thoroughly smooth it onto the surface, working from the inside to the outside.

The sleeves guarantee permanent sealing of entries, even when cables are extremely kinked. Retrofitting is easy.

Product advantages

Cable-sleeve ECON®

· 1-piece
· extremely strong adhesion
· Temperature resistance from -25°C to +80°C
· UV-resistant, halogen-free

AIR-TIGHT ECON

3D animation

Length x Width x Height	230 x 230 x 25 mm
Number of cable entries	1 - 6
Cable diameter	4 - 11 mm
Art. No.	9059-61
Inner packaging/shipping	- / 5

Conduit-sleeve ECON®

· 1-piece
· extremely strong adhesion
· Temperature resistance from -25°C to +80°C
· UV-resistant, halogen-free

AIR-TIGHT ECON

3D animation

Length x Width x Height	320 x 320 x 30 mm
Number of conduit entries	1 - 6
Conduit diameter	16 - 25 mm
Art. No.	9059-62
Inner packaging/shipping	- / 5

Subject to modifications

Fleece-butyl sealing sleeves

For permanent, secure sealing of installation penetrations in masonry, concrete or wood materials, etc. The highly-elastic sleeves are fitted with fleece-butyl flanges as plaster bases and provide maximum adhesion. Some surfaces must be pre-treated with KAISER primer.

- Permanently moisture-proof - for use indoors and outdoors
- The fleece sleeve can be plastered over, and is for use in plastered walls and behind composite thermal insulation systems
- Waterproofing effect with non-pressing water, e.g. against soil moisture

air-tight   **halogen-free**   **ECON**

Installation

If necessary, pre-treat the base, pull the sleeve over the cable/ conduit …

… remove the protective foil and press the sleeve into position.
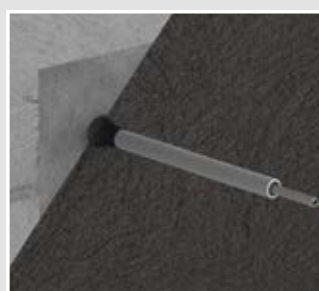
The adhesive flange can be plastered over and ensures permanent sealing of the masonry penetration.

Note

To ensure secure adhesion of all KAISER air-tight sleeves, the bases must be free of dust and grease, and also dry and load-bearing. In particular, mineral and organic bases such as stone, concrete, plasterboard or fibreboard must be pre-treated with KAISER primer.

Fleece-butyl sealing sleeves

· For cables Ø 4 - 12 mm and conduits Ø 15 - 110 mm
· Fleece-butyl sealing sleeve can be plastered over
· adhesive
· 1-piece

Length x Width x Height	Number of cables/conduits	Diameter of cable / pipe	Air-tight	Art. No.	Inner packaging/ shipping
150 x 150 x 30 mm	1 item	4 - 8 mm	•	9089-44	10 / 30
150 x 150 x 30 mm	2 item	4 - 8 mm	•	9089-45	10 / 30
150 x 150 x 30 mm	1 item	8 - 12 mm	•	9089-46	10 / 30
150 x 150 x 30 mm	2 item	8 - 12 mm	•	9089-47	10 / 30
150 x 150 x 30 mm	1 item	15 - 22 mm	•	9089-48	10 / 30
150 x 150 x 30 mm	2 item	15 - 22 mm	•	9089-55	10 / 30
150 x 150 x 30 mm	1 item	25 - 32 mm	•	9089-49	10 / 30
230 x 230 x 50 mm	1 item	42 - 55 mm	•	9089-51	- / 4
230 x 230 x 50 mm	1 item	50 - 75 mm	•	9089-52	- / 4
230 x 230 x 50 mm	1 item	75 - 90 mm	•	9089-53	- / 4
320 x 320 x 50 mm	1 item	100 - 110 mm	•	9089-54	- / 4

FLUSH-MOUNTING

CAVITY WALL

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TOOLS

SERVICE

Sealing sleeves
Reliable sealing of installation feed-throughs.

Aluminium-butyl sealing sleeves

For permanent, secure sealing of installation penetrations through masonry, concrete or wooden materials. The highly-elastic sleeves are fitted with non-tear aluminium butyl adhesive flanges and provide maximum adhesion. Some surfaces must be pre-treated with KAISER primer.

• Permanently moisture-proof - for use indoors and outdoors
• Water-sealing effect with non-pressing water up to 0.02 bar
• Especially suitable for sealing in the cellar socle
• Large contact area to cables and conduits
• Anti-kink sleeve also permanently seals very kinked cables
• Completely toolless wall installation
• Extremely good adhesion

air-tight | halogen-free | ECON

Installation

Pre-treat mineral bases and fibreboards with primer.

Pull the sleeve over the cable/conduit and remove the protective foil

Press the adhesive flange of the sleeve firmly into position

Aluminium-butyl sealing sleeves
· For cables Ø 4 - 12 mm and conduits Ø 15 - 110 mm
· pressing water up to 0.02 bar
· adhesive
· 1-piece

Length x Width x Height	Number of cables/conduits	Diameter of cable / pipe	Air-tight	Art. No.	Inner packaging/ shipping
150 x 150 x 30 mm	1 item	4 - 8 mm	•	9079-44	10 / 30
150 x 150 x 30 mm	2 item	4 - 8 mm	•	9079-45	10 / 30
150 x 150 x 30 mm	1 item	8 - 12 mm	•	9079-46	10 / 30
150 x 150 x 30 mm	2 item	8 - 12 mm	•	9079-47	10 / 30
150 x 150 x 30 mm	1 item	15 - 22 mm	•	9079-48	10 / 30
150 x 150 x 30 mm	2 item	15 - 22 mm	•	9079-55	10 / 30
150 x 150 x 30 mm	1 item	25 - 32 mm	•	9079-49	10 / 30
230 x 230 x 50 mm	1 item	42 - 55 mm	•	9079-51	- / 4
230 x 230 x 50 mm	1 item	50 - 75 mm	•	9079-52	- / 4
230 x 230 x 50 mm	1 item	75 - 90 mm	•	9079-53	- / 4
320 x 320 x 50 mm	1 item	100 - 110 mm	•	9079-54	- / 4

Subject to modifications

Sealing sleeves
Reliable sealing of installation feed-throughs.

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

KAISER primer

KAISER primer is a high-quality, solvent-free coating which optimises adhesion for all KAISER sealing sleeves on absorbent, mineral surfaces, for example masonry, concrete, plasterboard or wood materials. The self-adhesive primer is water and heat resistant. It can also be used on Styrofoam, EPS or XPS etc.

Installation

The base must be dry and free of grease, oil and dust. Stir the primer thoroughly before working. Apply smoothly (apply twice to porous surfaces).

Before pressing the adhesive flange on, allow the primer to air until transparent. Thickened primer can be thinned with water.

KAISER primer

· The self-adhesive primer is water and heat resistant. It can also be used on Styrofoam, EPS, XPS etc.

Contents	250 ml
Art. No.	9000-02
Inner packaging/shipping	- / 1

Sound-insulation box

Sound insulation box for use in walls with increased demands on sound protection. The solid box body with additional sound insulation sheathing absorbs and reflects sound, which prevents disturbances in adjacent rooms. Sound insulation is the same as if no installation boxes were installed.

• Maintains the wall's sound insulation protection
• Also for retrofitting
• Installation up to 5-unit combinations
• Also for opposing installation
• Can be used with sound protection cover as a junction box
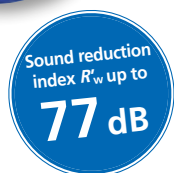
Sound reduction index R'_w up to
77 dB

halogenfree available | 850 °C | IP 30 | FX4 | www

Examples of use

Example of installation of a switch/socket combination.

Use of an opposing sound insulation box.
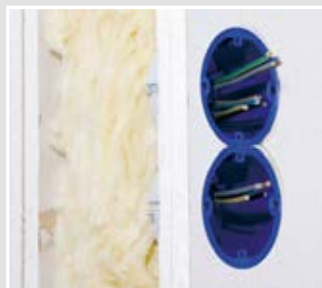
Use of a sound insulation box on one side of a double combination.
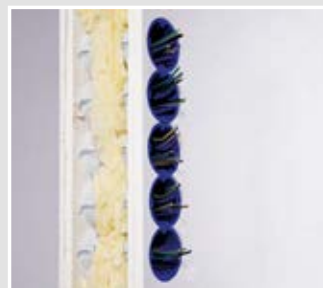
The sound insulation box can be used in up to five opposing combinations without weakening the sound insulation characteristics of the wall.

Comparison of sound insulation

Lightweight wall (2-shell, each triple-boarded) with sound insulation one-gang junction boxes.
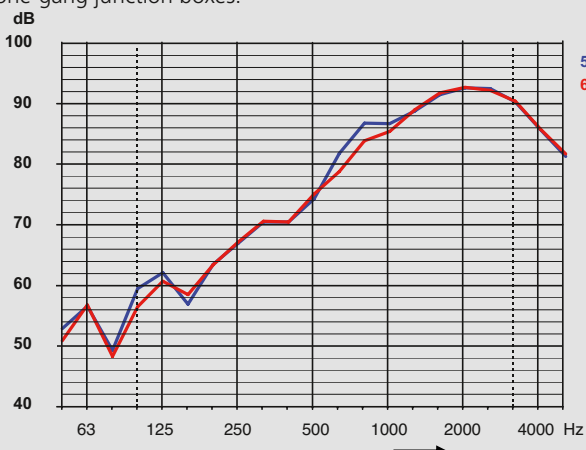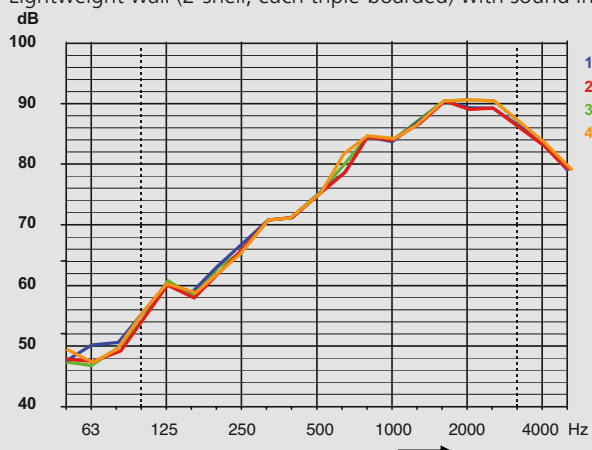
1 Wall, without installations, 77 dB | **2** Sound insulation box 9069-01, single, with accessory, 77 dB | **3** Sound insulation box 9069-01, single, with cover, 77 dB | **4** Sound insulation box 9069-01, 5-way, with accessory, 77 dB | **5** Wall, without installations, 78 dB |
6 with sound insulation electronics box, 9069-94/ 9069-74, 78 dB

Subject to modifications

Comparison of sound insulation

Lightweight wall (two-shell, double-boarded in each case) with sound insulation one-gang junction boxes.
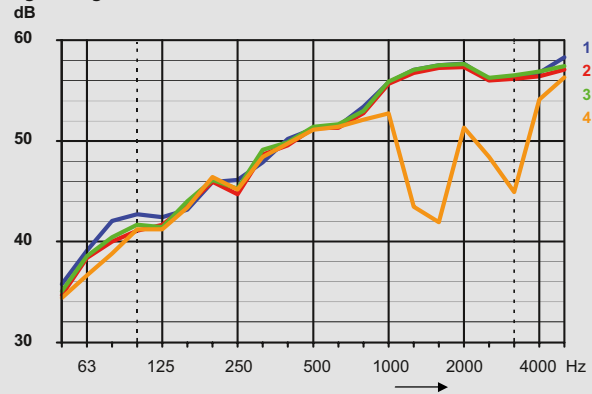
1 Wall, with no installations, 54 dB | **2** Sound insulation box 9069-01, single, with accessory, 54 dB | **3** Sound insulation box 9069-01, single, with cover, 54 dB | **4** One-gang junction box 9064-01, single, with accessory, 48 dB

Comparison of sound insulation

Lightweight wall (two-shell, double-boarded in each case) with sound insulation one-gang junction boxes.
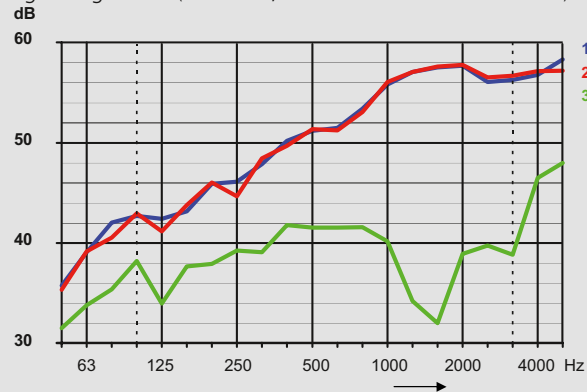
1 Wall, with no installations, 54 dB | **2** Sound insulation box 9069-01, fivefold, with accessory, 54 dB | **3** One-gang junction box 9064-01, fivefold, with accessory, 38 dB

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Sound insulation technology
for cavity wall installation

Installation

Use a cutter (e.g. Multi 4000: Art. No. 1084-10) to make a Ø 74 mm opening.

For combinations, cut off the marked edge strip.

Installation then proceeds as with a conventional cavity wall box.

Secure and fast installation thanks to KAISER FX4 technology.

Accurate entries ensured by using the universal opening cutter, Art. No. 1085-80.

Combinations at a standard spacing of 71 mm.
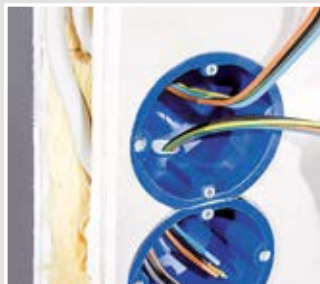
Tight and fully-insulated through-wiring is ensured by the support connector.

With the sound-insulation cover, the box can also be used as a junction box.

Sound-insulation box

· One-gang junction box for sound insulation walls in buildings
· Combination distance of 71 mm through single separation of the pre-embossed edge

SOUND INSULATION FX4

3D animation

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	54,5 mm	54,5 mm
Cut hole Ø	74 mm	74 mm
Fixing screw spacing	60 mm	60 mm
Cable entries of up to Ø 11.5 mm	4	4
Support connectors for each package	5	5
halogen-free	-	•
for sound insulation walls up to	77 dB	77 dB
VDE	•	•
Art. No.	**9069-01**	**9069-77**
Inner packaging/shipping	10 / 100	10 / 100

Subject to modifications

Sound insulation technology
for cavity wall installation

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Sound insulation cover

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

SOUND INSULATION

Diameter	92 mm
halogen-free	•
VDE	•
Art. No.	1184-69
Inner packaging/shipping	10 / 100

Support connector

· for through-wiring of combinations to IP 3X
  standard air-tight
· for Art. No. 1555-51, 9069-01, 9069-77

halogen-free	-	•
Art. No.	9060-88	9060-78
Inner packaging/shipping	25 / 100	25 / 100

Allocation table for universal opening cutters

Cavity wall installation for sound insulation boxes		Ø setting
NYM cable	3 x 1,5 mm^2	8,5
	5 x 1,5 mm^2	9,5
	3 x 2,5 mm^2	9,5
Support connector	9060-88	Connector
	9060-78	Connector, halogen-free

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).

Sound insulation electronics box

Sound insulation electronics box for use in walls with increased demands on sound insulation. The sound insulation electronics box maintains the wall's sound insulation function and creates space for electronic switching devices, data boxes, cables and terminals. The electronics box makes possible population with cables and installation conduits up to M25.

- Maintains the wall's sound insulation protection
- Retrofitting is possible
- Also for use as a double box
- Extra-large terminal area for communications and network technology
- Additional space for electronic components (KNX actuators, relays, radio module, communications technology)

Sound reduction index R'_w up to 78 dB

halogenfree available | 850 °C | IP 30 | FX4 | INNOVATION | www

Examples of use

The electronics box provides space for all possible installations e.g. KNX actuators, Venetian blinds relays, alarm modules and many more.

Also ideal for network connections. The generous box volume offers sufficient space for cable reserves.

The electronics box can also be used as a double box, e.g. for switch and socket combinations.

The electronics box can easily be combined with the sound insulation device junction box.

Processing instructions

The electronics box provides 6 ways for conduit entry up to M25 and cable entry up to Ø 11.5 mm.

There are also 6 ways for cable entry up to Ø 11.5 mm.

By removing the cover ...

... and the bridge can also be used as a double box.

Installation

Cut two installation openings using turbo cutter Multi 4000 Ø 74 mm (Art. No. 1084-10) with a centre distance of 71 mm.

Removal of the bridge.

Using the KAISER universal opening cutter, cut an exact conduit or cable opening for air-tight installation.

Fitting the box using tried-and-tested FX4 technology.

The additional terminal space makes possible the fitting of various electronic components ...

... and creates sufficient space for the cable reserve when communications and network boxes are installed.
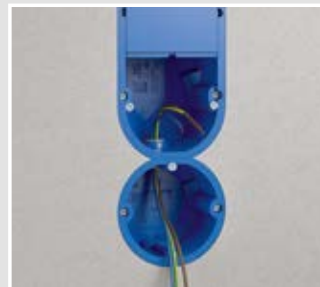
By using support connectors, the box can be combined with itself or with the sound insulation box (Art. No. 9069-01).

The cover can also be fitted turned 180° and filled.

▦ INNOVATION

Sound insulation electronics box

· Electronics box for sound insulation walls in buildings
· Also for use as a double box
· For equipment inserts and electronic components
· Can be combined with each other and also with a sound insulation one-gang junction box

3D animation

SOUND INSULATION FX4 ▶WWW

For panel thickness	7 - 40 mm	7 - 40 mm
Depth	70 mm	70 mm
Cut hole Ø	2 x 74 mm	2 x 74 mm
Centre distance	71 mm	71 mm
Conduit entries for DIN EN conduits up to Ø 25 mm	4	4
Cable entries of up to Ø 11.5 mm	4	4
halogen-free	-	•
for sound insulation walls up to	77 dB	77 dB
⬡VDE	•	•
Art. No.	**9069-94**	**9069-74**
Inner packaging/shipping	5 / 50	5 / 50

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

NEW

Sound-insulation box 68

Sound reduction index R'_w up to
69 dB

Thanks to their solid box body in combination with the sound-absorbing surface on the base of the box, sound insulation 68 one-gang and one-gang junction boxes guarantee the wall's sound insulation. This function is completely maintained even with directly opposing installation. The easy opening process and the 68 mm installation opening ensure fast mounting and also easy retrofitting in existing electrical installations.

• Maintains the wall's sound insulation protection
• Also for retrofitting
• For Ø 68 mm installation openings
• For directly opposing installation
• Easy entry for cables up to Ø 11.5 mm and conduits up to Ø M25

halogen-free | 850 °C | IP 30 | FX4 | INNOVATION | WWW | air-tight

Examples of use

For sound insulation walls with a sound insulation value of up to 69 dB.

Also for directly opposing installation up to a 5-way combination.

Can be combined with one-gang and one-gang junction boxes.

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

Comparison of sound insulation

Lightweight wall (2-layer, each triple-boarded)
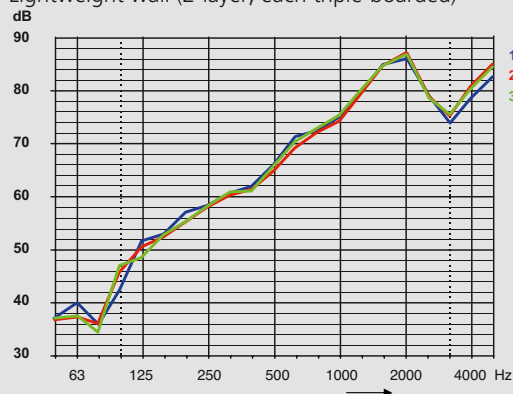
1 Wall, without installations, 69 dB | **2** Sound insulation box 9069-03 / 9069-75, single, with accessory, 69 dB | **3** Sound insulation box 9069-04 / 9069-76, single, with accessory, 69 dB | **4** The solid box body and the sound-absorbing surface on the base of the box guarantee sound insulation up to 69 dB.

Processing instructions

Can be used in Ø 68 mm installation openings

Up to 6 Ø 4 - 11.5 mm cable entries and 2 conduit entries up to M25.

Easy cable and conduit entry with cable retention acc. to DIN EN 60670.

Fully-insulated through-wiring of one-gang and one-gang junction boxes using the support connector (Art. No. 9060-88).

Installation
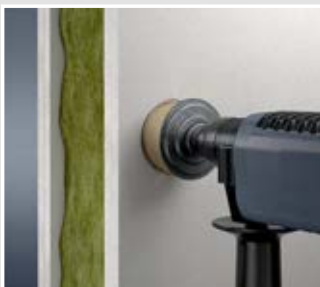
Cut Ø 68 mm installation opening using MULTI 4000 turbo cutter (Art. No. 1083-10). Cut combinations with a centre distance of 71 mm.

Easy opening for the installation of data and power cables or electrical installation conduits.
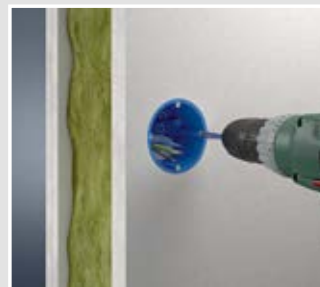
Fix the box using tried-and-tested KAISER FX4 technology.
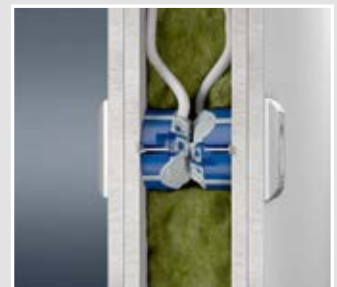
Opposing installation - possible for one-gang boxes with a minimum wall thickness of 100 mm and one-gang junction boxes for a minimum of 125 mm.
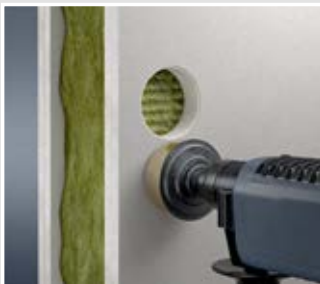
For combinations, create installation openings Ø 68 mm in centre distance 71 mm.

Conduit entry ensures tighter fit of the conduits to the boarding.
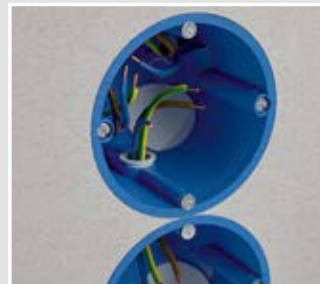
Ensure fully-insulated through-wiring by using support connector (Art. No. 9060-88).

One-gang boxes and one-gang junction boxes can be combined.

INNOVATION

One-gang box sound insulation 68

· for sound insulation walls
· also for directly opposing installation
· minimum wall thickness 100 mm
· can be combined with each other and with the one-gang junction box

FX4 **air-tight** **SOUND INSULATION** WWW

Produkt-Film

Depth	49 mm	49 mm
Cut hole Ø	68 mm	68 mm
Tube entries up to M25	2	2
Cable entries of up to Ø 11.5 mm	4	4
Support connectors for each package	5	5
halogen-free	-	•
For panel thicknesses up to	40 mm	40 mm
for sound insulation walls up to	69 dB	69 dB
DVE / ÖVE	• / •	• / •
Art. No.	**9069-03**	**9069-75**
Inner packaging/shipping	10 / 100	10 / 100

INNOVATION

One-gang junction box sound insulation 68

· for sound insulation walls
· also for directly opposing installation
· minimum wall thickness 125 mm
· combinable with each other and with the one-gang box

FX4 **air-tight** **SOUND INSULATION** WWW

Produkt-Film
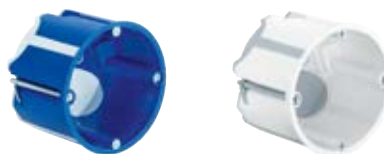
Depth	61 mm	61 mm
Cut hole Ø	68 mm	68 mm
Tube entries up to M25	2	2
Cable entries of up to Ø 11.5 mm	6	6
Support connectors for each package	5	5
halogen-free	-	•
For panel thicknesses up to	40 mm	40 mm
for sound insulation walls up to	69 dB	69 dB
DVE / ÖVE	• / •	• / •
Art. No.	**9069-04**	**9069-76**
Inner packaging/shipping	10 / 100	10 / 100

Radiation protection
for cavity wall installation

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Safety for X-ray rooms. One-gang junction box for radiation protection walls.

KAISER's innovative radiation protection box protects against radiation used for medical purposes, e.g. in X-ray facilities. The high density of the radiation protection compound absorbs soft and hard X-rays. The box is especially suitable for lead-free radiation protection walls (e.g. Knauf Safeboard) and - because of its dose-reducing effect in the tube voltage range between 40 - 150 kV - guarantees a lead-equivalent value for the wall of up to 3 mm Pb even with opposing installation. In addition, the box can easily be used in lead-lined walls. In this case, the radiation protection box achieves a lead-equivalent value of 1.5 mm Pb with walls which are leadlined on one side.

• Protection against X-rays
• Suitable for lead-free radiation protection walls
• Lead-free - no health risks
• Retrofitting is possible
• Fast installation without additional screening measures
• Opposing installation is possible

Use in lead-free radiation protection walls

1	2
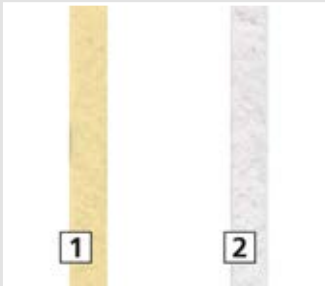
1 lead-free radiation protection panel (e.g. Knauf Safeboard) 2 plasterboard panel
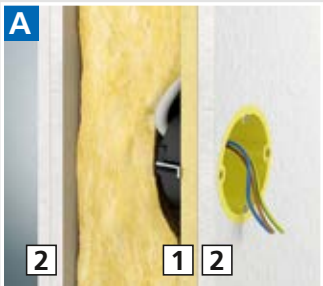
A Lead equivalent: up to 0.6 mm Pb wall construction: 2 layers of boarding on both sides
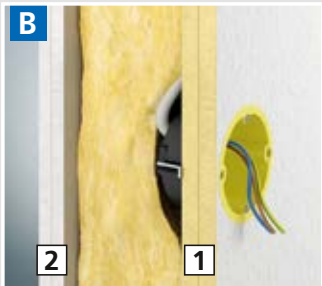
B Lead equivalent: up to 1.1 mm Pb Wall construction: 2 layers of boarding on both sides
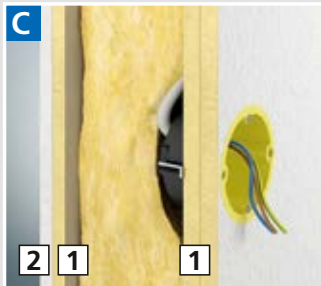
C Lead equivalent: up to 1.75 mm Pb Wall construction: 2 layers of boarding on both sides

0,3 - 0,6	A
1,0 - 1,1	B
≤ 1,75	C
≤ 2,75	D
≤ 3,0	E

Lead equivalent in mm Pb / illustration
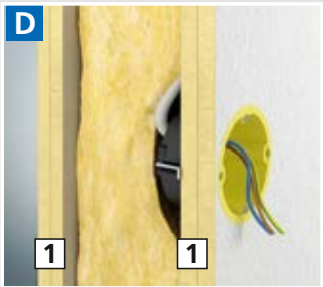
D Lead equivalent: up to 2.75 mm Pb Wall construction: 2 layers of boarding on both sides
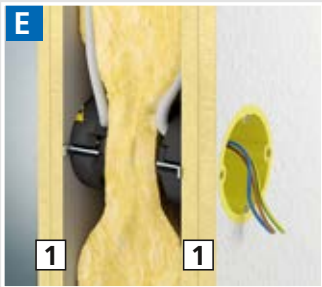
E Two opposing radiation protection boxes achieve a lead equivalent of 3 mm Pb

Radiation protection
for cavity wall installation

Examples of use

Example of installation of a switch/socket combination.

Installation of the radiation protection box in the wall.

Opposing use of the radiation protection box.
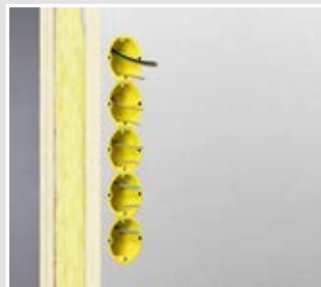
Use of the radiation protection box in a triple combination.

Proof of radiation protection

TÜV-Nord Ensys has demonstrated that in the tube voltage range between 40 and 150 kV, KAISER's lead-free radiation protection box achieves a lead equivalent value of 1.5 mm Pb. This is confirmed by comprehensive series of tests which preceded certification and demonstrated clearly that the wall's radiation protection is completely maintained in this area of application. The certificate can be downloaded as a pdf file from our website.

zertifiziert

Subject to modifications

Radiation protection
for cavity wall installation

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Installation

Use a cutter (e.g. Multi 4000: Art. No. 1084-10) to make a Ø 74 mm opening.

Installation then proceeds as with a conventional cavity wall box.

Secure and fast installation thanks to KAISER FX4 technology.

Accurate entries ensured by using the universal opening cutter, Art. No. 1085-80.

For combinations, cut off the marked edge strip.

Combinations at a standard spacing of 71 mm.

The fully-insulated through-wiring is carried out with the support connector.

Depending on the wall construction, the radiation protection box protects the wall up to a lead equivalent of 3 mm Pb.

INNOVATION

Radiation protection one-gang junction box

· One-gang junction box for radiation protection boxes in buildings
· Combination distance of 71 mm through single separation of the pre-embossed edge

RADIATION PROTECTION

3D animation

For panel thickness	7 - 40 mm
Depth	58,5 mm
Cut hole Ø	74 mm
Fixing screw spacing	60 mm
Cable entries of up to Ø 11.5 mm	2
Support connectors for each package	3
halogen-free	•
Lead-free	•
Lead equivalent value [mm Pb]	bis 3*
◇VDE	•
Art. No.	9074-01
Inner packaging/shipping	5 / 10

Note

*Depending on the wall construction (see p. 98), lead equivalents up to 3 mm Pb can be achieved.

Support connector

· for through-wiring of combinations to IP 3X standard air-tight
· for Art. No. 9074-01

Art. No.	9060-74
Inner packaging/shipping	25 / 100

Allocation table for universal opening cutters

Cavity wall installation for radiation protection boxes		Ø setting
NYM cable	3 x 1.5 mm^2	9.5
	5 x 1.5 mm^2	10.5
	3 x 2.5 mm^2	9.5
Support connector	9060-74	Cut up to the marking of the connector entry

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

Radiation protection one-gang junction box for lead-lined radiation protection walls.

The KAISER radiation protection box for use in lead-lined walls protects against radiation used for medical purposes, e.g. in X-ray equipment. The radiation protection material with an integrated lead function component absorbs the dangerous X-ray radiation with a lead equivalent value of 2,5 mm Pb as effectively as 2,5 mm thick lead.

• Protection against X-rays
• For lead-lined radiation protection walls
• No health risks - no skin contact with lead function component
• Retrofitting is possible
• Fast installation without additional screening measures

Examples of use

Example of installation of a switch/socket combination.

Using the radiation protection box in the wall.

Single-side use of the radiation protection box in a double combination.
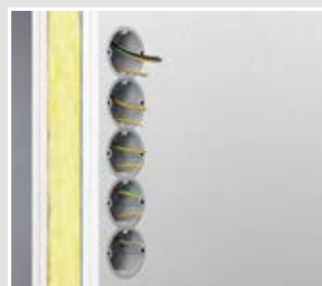
Fitting a triple combination is also easy.

Subject to modifications

Proof of radiation protection

The German TÜV-Nord Ensys demonstrated that within a range of tube voltages between 90 and 150 kV, KAISER's radiation protection box with lead-function component achieves a lead equivalent of 2.5 mm Pb. This was confirmed by a series of comprehensive tests which preceded certification and it was clearly demonstrated that the wall's radiation protection in this range of applications is completely maintained.

certified

Installation

Use a cutter (e.g. Multi 4000: Art. No. 1084-10) to make a Ø 74 mm opening.

By using the HSS drill, it is easy for you to …
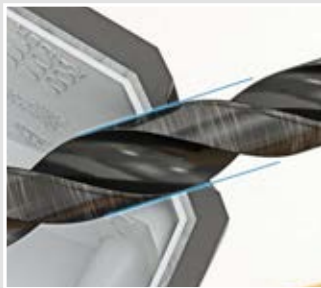
… to create an exact-fitting cable entry with the specified cable retention.

Use the universal opening cutter (Art. No. 1085-80) to cut the matching conical opening.
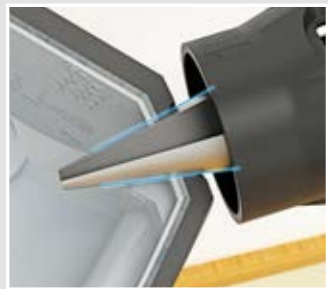
Details of suitable drill settings for the universal opening cutter in respect of cable sizes are shown in the table.

Insert the cables, then fit the box into the installation opening.

The one-gang junction box is now ready for use.

Use in lead-lined radiation protection walls
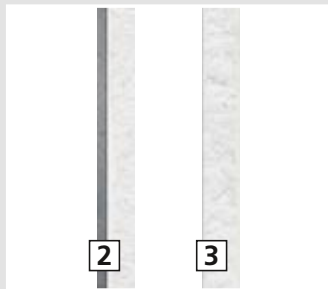
2 lead-lined plasterboard panels; 3 plasterboard panels
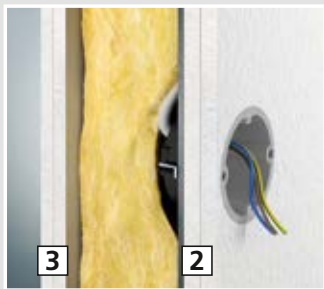
Up to 2.5 mm Pb on both sides, 2-layer boarding, lead-lining on one side

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

▦ INNOVATION

Radiation protection one-gang junction box

· One-gang junction box for lead-lined radiation protection walls in buildings
· Combination distance of 71 mm through single separation of the pre-embossed edge

RADIATION PROTECTION

3D animation

For panel thickness	7 - 40 mm
Depth	58,5 mm
Cut hole Ø	74 mm
Fixing screw spacing	60 mm
Cable entries of up to Ø 11.5 mm	2
Support connectors for each package	3
halogen-free	•
Lead equivalent value [mm Pb]	2,5
⬡VDE	•
Art. No.	**9074-03**
Inner packaging/shipping	5 / 10

Support connector

· for through-wiring of combinations to IP 3X standard air-tight
· For Art. Nos. 1159-90, 1555-51 and 9074-03

Art. No.	**9060-88**
Inner packaging/shipping	25 / 100

Assignment table for Universal opening cutter and HSS drill

Cavity wall installation for radiation protection boxes		Ø setting	HSS drill Ø
NYM cable	3 x 1,5 mm^2	9,5	8,0
	5 x 1,5 mm^2	9,5	9,5
	3 x 2,5 mm^2	9,5	9,5
	5 x 2,5 mm^2	Connector	9,5
Support connector	9060-88	Cut up to the marking of the connector entry.	12

Making an exact-fitting cable entry with the specified cable retention is easy - just use an HSS drill together with the universal opening cutter (Art. No. 1085-80).
The matching drills and universal opening cutter settings are shown in the tables.

Screened one-gang junction box

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

- For environmentally-safe electrical installation, biological construction
- 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)

IP 30 | FK4

Installation
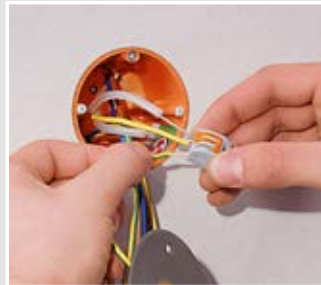
Remove cable sheath and screen with AMZ 2 Art. No. 1190-02. Fit bare tracer wire with transparent insulating hose.	Connect functional earth of the box to tracer wires of screened cable.	As a junction box, connect the box cover's functional earth to the tracer wires of the cables.	Attach cover to box with device screws.
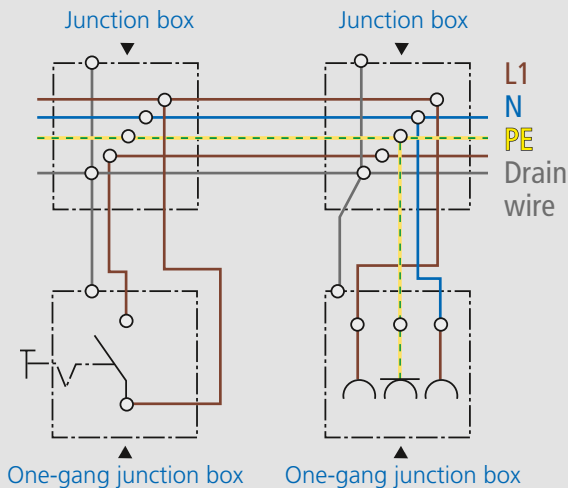
Junction box   Junction box

L1
N
PE
Drain wire

One-gang junction box   One-gang junction box

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!

FLUSH-MOUNTING

CAVITY WALL

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TOOLS

SERVICE

Screened electrical installation

Screened one-gang box / one-gang junction box

· with screening and potential download

FX4

For panel thickness	7 - 40 mm	0,2 - 40 mm	7 - 40 mm
Depth	47 mm	61 mm	68 mm
Cut hole Ø	68 mm	68 mm	68 mm
Device screws	2	2	2
Break-out openings Ø 20 mm	2	4	4
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	2	2	2
Cable entries 3 x 1.5 mm²	2	4	4
Cable entries for low voltages	2	2	2
Art. No.	9063-88	9068-88	9064-88
Inner packaging/shipping	10 / 100	10 / 100	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

Diameter	80 mm
Screw spacing	60 mm
Art. No.	1164-88
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

FX4

Length x Width x Depth	107 x 107 x 53 mm
Cut hole Ø	4 x 35 mm
Break-out openings Ø 20 mm	8
Cable entries for NYM and low-voltage cabling	•
For terminals up to	4 mm²
Art. No.	9195-88
Inner packaging/shipping	- / 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.

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Screws

· for one-gang boxes and one-gang boxes for cavity walls
· for the following articles: 9062-.., 9063-.., 9064-.., 9066-.., 9067-01, 9068-.., 9071-.., 9073-.., 9075-.., 9192-.., 9195-.., 9196-.., 9197-.., 9248-..,9300-.., 9098-77, 9263-.., 9264-..

Length	44,5 mm
Screws Ø	3 mm
Art. No.	2445-25
Inner packaging/shipping	100 / 2000

Metal lugs for screws

· for one-gang boxes and one-gang boxes for cavity walls
· for the following articles: 9061-.., 9062-.., 9063-.., 9064-.., 9066-.., 9067-01, 9068-.., 9071-.., 9073-.., 9075-.., 9148-00, 9195-.., 9248-.., 9300-.., 9098-77, 9263-.., 9264-..

Length x Width	7 x 13 mm
Art. No.	2445-50
Inner packaging/shipping	100 / 2000

Device screws +/-   NEW

· 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	15 mm	20 mm	25 mm	40 mm
Art. No.	2472-15	2472-20	2472-25	2472-40
Inner packaging/shipping	100 / 1000	100 / 1000	100 / 1000	100 / 1000

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	15 mm	40 mm
Art. No.	2444-15	2444-40
Inner packaging/shipping	- / 100	100 / 1000

Junction casings
for cavity wall installation

Junction casings and boxes

Junction casings in all sizes and for almost any kind of installations. This product range features practical housing sizes as well as a robust housing design which is 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 for safe separation of electrical circuits
• Create precise wall openings using the drilling template supplied
• End cover with screw fastening for VDE-compliant installation

halogenfree available | 850 °C | DᵛE | FX4 | IP 30

Installation

Stick drilling template (supplied) to wall. Open four corners with cutter. Cut out edges with cutter or fretsaw.

Cut out intermediate parts with cutter or fretsaw.

Break out pre-cut holes, feed in cables, insert casing and attach with the FX4 screws.

Fasten inserted box or casing with FX4 fast screw attachment.
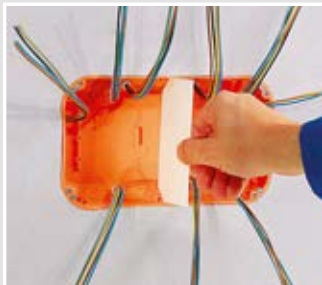
For separation of several electrical circuits, up to three separator walls can be installed, depending on the size of the box.

Junction casings provide a lot of installation space and, with the corresponding covers, ensure VDE-compliant installation.

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SERVICE

Junction casing

· for installation: DIN terminal strips, TS 35 standard rails for terminal strips, etc., terminal blocks up to 16 mm²
· with drilling template (supplied)
· including cover

FX4

Length x Width x Depth	105 x 105 x 53 mm	105 x 105 x 53 mm	165 x 165 x 72 mm	165 x 165 x 72 mm
Cut hole Ø	4 x 35 mm	4 x 35 mm	4 x 68 mm	4 x 68 mm
with 4 screw domes	•	•	-	-
Break-out openings Ø 20 mm	8	8	8	8
Break-out openings Ø 25 mm	-	-	2	2
Break-out openings Ø 32 mm	-	-	2	2
Cable entries for NYM and low-voltage cabling	•	•	•	•
For terminals up to	4 mm²	4 mm²	16 mm²	16 mm²
halogen-free	-	•	-	•
use separator wall for maximum of 2 electrical circuits	•	•	•	•
DVE / ÖVE	• / •	• / -	• / •	• / -
Art. No.	**9195-91**	**9195-77**	**9196-91**	**9196-77**
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

Junction casing

· for installation: DIN terminal strips, TS 35 standard rails for terminal strips, etc., terminal blocks up to 16 mm²
· with drilling template (supplied)
· including cover

FX4

Length x Width x Depth	238 x 140 x 72 mm	238 x 140 x 72 mm	235 x 205 x 72 mm	235 x 205 x 72 mm
Cut hole Ø	4 x 68 mm	4 x 68 mm	4 x 68 mm	4 x 68 mm
Break-out openings Ø 20 mm	8	8	8	8
Break-out openings Ø 25 mm	2	2	2	2
Break-out openings Ø 32 mm	2	2	2	2
Cable entries for NYM and low-voltage cabling	•	•	•	•
For terminals up to	16 mm²	16 mm²	16 mm²	16 mm²
halogen-free	-	•	-	•
Maximum of 3 electrical circuits with separator walls	•	•	•	•
DVE / ÖVE	• / •	• / -	• / •	• / -
Art. No.	**9192-91**	**9192-77**	**9197-91**	**9197-77**
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

Junction box Ø 120 mm

· receptacle for TS 35 standard rail
· Make cut hole with Variocut 1089-00 in fully extended position or bi-metallic cutter 1082-20
· including cover

Depth	65 mm	65 mm
Cut hole Ø	120 mm	120 mm
Break-out openings Ø 20 mm	4	4
Break-out openings Ø 25 mm	2	2
Cable entries for NYM and low-voltage cabling	•	•
For terminals up to	4 mm²	4 mm²
halogen-free	-	•
For max. 2 electrical circuits through separator wall Art. No. 9073-20	•	•
⚠	•	•
Art. No.	9073-01	9073-78
Inner packaging/shipping	- / 10	- / 10

Potential equalisation casing 10²

· for bathrooms or similar
· with potential equalisation rail, protected against corrosion
· with 4 screw domes
· With Ø 3.2 x 15 mm cover screws
· including cover

Length x Width x Depth	105 x 105 x 53 mm
Cut hole Ø	4 x 35 mm
Connections for 6–16² circular conductors (also uncut)	1
Connections for 1.5–10² cables	6
Art. No.	9195-73
Inner packaging/shipping	- / 10

Note

Other earthing products can be found at our website.

Replacement cover

· flat cover edge
· surface roughened
· countersunk for screw heads

For casing size - flush-mounting boxes	107 x 107 mm	159 x 159 mm	240 x 142 mm	238 x 208 mm
For casing size - cavity wall boxes	105 x 105 mm	165 x 165 mm	238 x 142 mm	235 x 205 mm
For casing size - concrete construction boxes	128 x 128 mm	180 x 180 mm	-	250 x 220 mm
Fireproof	850 °C	850 °C	850 °C	850 °C
Art. No.	1095-93	1096-93	1092-93	1097-93
Inner packaging/shipping	10 / 500	10 / 200	- / 5	5 / 100

Junction casings
for cavity wall installation

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Replacement cover for junction boxes Ø 120 mm
· flat cover edge
· surface roughened
· countersunk for screw heads

halogen-free	-	•
For Art. No.	9073-01/-91	9073-78/-77
Art. No.	**9073-93**	**9073-79**
Inner packaging/shipping	- / 10	- / 10

Separator walls
· to separate electrical circuits

for casing size	105 x 105 mm	165 x 165 mm	240 x 140 mm	235 x 205 mm
Art. No.	**9195-20**	**9196-20**	**9192-20**	**9197-20**
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

Separator wall
· to separate electrical circuits
· for junction boxes Ø 120 mm

Art. No.	**9073-20**
Inner packaging/shipping	- / 10

Universal installation housings
for cavity wall installation

Universal installation housings

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

• For displays, LED lamps and much more
• For installing almost all shapes and sizes
• Mineral fibreboard allows individual installation opening
• With FX4 quick assembly technology

| halogenfree available | 850 °C | IP 30 | FX4 |

Installation

Mark installation opening and cut with a fretsaw.
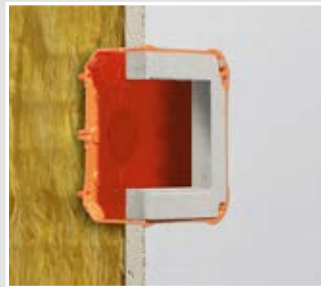
Insert cables or conduits, feed housing into wall and install with FX4 quick-assembly technology.

Lightly smooth edges with filler (use plastic-based filler).

Cover with wallpaper etc. and install the required device.

Mounting instructions

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.

Subject to modifications

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Universal installation housing with mineral fibreboard

· with mineral fibreboard for cutting out individual installation holes
· with drilling template (supplied)
· all-round groove denotes the maximum opening dimension

FX4

Length x Width x Depth	105 x 105 x 53 mm	105 x 105 x 53 mm	165 x 165 x 72 mm	165 x 165 x 72 mm
Cut hole Ø	4 x 35 mm	4 x 35 mm	4 x 68 mm	4 x 68 mm
maximum opening size	70 x 70 mm	70 x 70 mm	110 x 110 mm	110 x 110 mm
For devices with an installation depth of max.	40 mm	40 mm	50 mm	50 mm
Break-out openings Ø 20 mm	8	8	8	8
Break-out openings Ø 25 mm	-	-	2	2
Break-out openings Ø 32 mm	-	-	2	2
Cable entries for NYM and low-voltage cabling	•	•	•	•
halogen-free	-	•	-	•
Art. No.	**9195-22**	**9195-27**	**9196-22**	**9196-27**
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

Universal installation housing with mineral fibreboard

· with mineral fibreboard for cutting out individual installation holes
· with drilling template (supplied)
· all-round groove denotes the maximum opening dimension

FX4

Length x Width x Depth	240 x 140 x 72 mm	240 x 140 x 72 mm	235 x 205 x 72 mm	235 x 205 x 72 mm
Cut hole Ø	4 x 68 mm	4 x 68 mm	4 x 68 mm	4 x 68 mm
maximum opening size	170 x 105 mm	170 x 105 mm	190 x 150 mm	190 x 150 mm
For devices with an installation depth of max.	55 mm	55 mm	50 mm	50 mm
Break-out openings Ø 20 mm	8	8	8	8
Break-out openings Ø 25 mm	2	2	2	2
Break-out openings Ø 32 mm	2	2	2	2
Cable entries for NYM and low-voltage cabling	•	•	•	•
halogen-free	-	•	-	•
Art. No.	**9192-22**	**9192-27**	**9197-22**	**9197-27**
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

International products
for accessory installation in accordance with national standards

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

One-gang box - Swiss standard

· cutting hole Ø 83 mm with template (included)
· for plate thickness 7 - 40 mm
· for assembling combinations, centre distance 60 mm
· 8 break-out openings Ø 20 mm

One-gang box for Swiss accessories ECON®

· cutting hole Ø 83 mm with template (included)
· for plate thickness 7 - 40 mm
· for assembling combinations, centre distance 60 mm

Length x Width x Depth	83 x 83 x 65 mm	83 x 83 x 65 mm
Cut hole Ø	83 mm	83 mm
Conduit entries M20	4	4
Conduit entries M25	4	-
Combination	1x1	1x1
CE	•	•
Art. No.	9098-77	9298-21
Inner packaging/shipping	20 / 100	20 / 100

Bi-metallic cutter

· for Swiss cavity wall boxes
· hexagonal shank spanner size 10 mm
· fits all electric drills with 13 mm chuck

Cut hole Ø	83 mm
Depth of cutting hole	38 mm
For Quickbox Ø 83 mm	•
Art. No.	1082-84
Inner packaging/shipping	- / 10

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▓ INNOVATION

Sound insulation box for Swiss accessories

· One-gang box for sound insulation walls in buildings
· Maintains the wall's sound insulation protection
· also for opposing installation
· for plate thickness 7 - 40 mm
· matching plug-in cover New Look one Art. No. 9919.10

🇨🇭

Length x Width x Depth	83 x 83 x 50 mm
Drill Ø	83 mm
Combination	1x1
CE	•
Art. No.	**9798-77**
Inner packaging/shipping	10 / 100

▓ INNOVATION

Sound insulation box for Swiss accessory combinations

· One-gang boxes for sound insulation walls in buildings
· Maintains the wall's sound insulation protection
· also for opposing installation
· for plate thickness 7 - 40 mm

🇨🇭

Length x Width x Depth	145 x 83 x 50 mm	205 x 83 x 50 mm	145 x 145 x 50 mm	205 x 145 x 50 mm
Drill Ø	83 mm	83 mm	83 mm	83 mm
Combination	2x1	3x1	2x2	3x2
CE	•	•	•	•
Art. No.	**9798-77.02**	**9798-77.03**	**9798-77.04**	**9798-77.06**
Inner packaging/shipping	- / 5	- / 5	- / 5	- / 5

⚏ INNOVATION

Sound insulation box for Swiss accessory combinations

· One-gang boxes for sound insulation walls in buildings
· Maintains the wall's sound insulation protection
· also for opposing installation
· for plate thickness 7 - 40 mm

🇨🇭

Length x Width x Depth	83 x 83 x 73.5 mm
Cut hole Ø	83 mm
Tube entries up to M25	2
Combination	1x1
Art. No.	9799-77
Inner packaging/shipping	10 / 100

⚏ INNOVATION

Sound insulation box for Swiss accessory combinations

· One-gang boxes for sound insulation walls in buildings
· Maintains the wall's sound insulation protection
· also for opposing installation
· for plate thickness 7 - 40 mm

🇨🇭

Length x Width x Depth	145 x 83 x 73.5 mm	205 x 83 x 73.5 mm	145 x 145 x 73.5 mm	205 x 145 x 73.5 mm
Cut hole Ø	83 mm	83 mm	83 mm	83 mm
Tube entries up to M25	2	2	4	4
Combination	2x1	3x1	2x2	3x2
Art. No.	9799-77.02	9799-77.03	9799-77.04	9799-77.06
Inner packaging/shipping	- / 5	- / 5	- / 5	- / 5

One-gang box (Belgian standard)

· with holding ring

🇧🇪

For panel thickness	7 - 35 mm
Depth	45 mm
Diameter	70 mm
Break-out openings Ø 16 mm	2
Break-out openings Ø 20 mm	2
Cable entries	6
Cable entries for low voltages	2
⚠ DVE / CEBEC	• / •
Art. No.	205
Inner packaging/shipping	10 / 100

Installation in clinics and high-hygiene areas

Hospitals and similar institutions have particular requirements with regard to hygiene standards (German Federal Health Journal 31, no. 7). In rooms which are supplied with filtered air, e.g operating theatres or intensive care units, particle-protected installation must be guaranteed in accordance with clean-room and hygiene requirements. The uncontrolled exchange of air must be avoided. As these areas are often made with cavity wall constructions, these requirements also affect the electrical installations. KAISER's air-tight cavity wall systems comply fully with the legal requirements.

Halogen-free cavity wall boxes/fire resistance

All KAISER boxes and casings for cavity wall mounting as well as several accessory parts are available as halogen-free products. The identifying feature of these products is that they are available in white.

• Fire-resistant up to 850°C.

• Heat-resistant up to 105°C.

• Electrically well-insulated, shock and pressure-resistant.

• There are no chemical reactions which cause the oxygen to be bound.

• No corrosive substances such as hydrochloric acid gas or hydrogen bromide are released.

Cavity wall boxes and casings with the VDE symbol have been tested for fire resistance in a glow wire test at 850°C in accordance with VDE 0471/DIN EN 60695-2-11. This test must demonstrate that a fire cannot start in the cavity wall boxes if a fault occurs in the electrical installation. In addition, always ensure compliance with the current fire prevention measures for wall constructions.

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Concrete construction

The most important advantages at a glance:

- Complete systems for on-site mixed concrete and prefabrication
- Sophisticated colour system for easy assignment of system components
- Extremely time-saving thanks to just a few universal B² system components for installation in horizontal prefabrications
- Innovative KSK technology allows conduit entry without special tools
- Wide range of mounting options on the formwork
- Prefix® installation technology for easy and quick installation on the opposing formwork without support
- Universal installation housings with mineral fibre-board for all standard device sizes (e.g. displays, LED luminaires and many more)
- Practical solutions for wall and ceiling transitions
- International products for accessory installation in accordance with national standards
- Professional system tools for fast, secure installation
- Wide range of system accessories
- Halogen-free

Concrete construction | Product lines

One-gang boxes, one-gang junction boxes for on-site mixed concrete	p. 144
Junction casings and accessories for on-site mixed concrete	p. 149
Ceiling boxes and accessories for on-site mixed concrete	p. 156
Wall-ceiling transitions, ceiling strips, conduit supports for on-site mixed concrete	p. 163
Wire-pull casings	p. 168
Universal installation housings	p. 173
B2 system for horizontal prefabrication	p. 176
International products	p. 186
End cover and separator walls	p. 189
Accessories for on-site mixed concrete	p. 191
Sealing systems in fire-protection walls and ceilings	p. 262
Tools for installation in concrete can be found in the "Tool" section starting on page 314.	

Concrete construction | Product overview
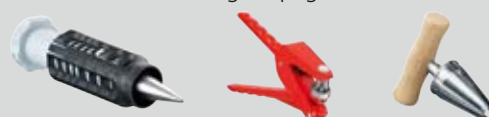
| | On-site mixed concrete | | Prefabrication | International |
	Fixing to the working formwork	Fixing to the reinforcement	Installation in horizontal prefabrication	Installation of international accessories
For installation accessories				
One-gang boxes	p. 144	-	p. 177	p. 186
One-gang junction boxes	p. 145	p. 155	p. 177	p. 186
Large conduit boxes	p. 145	-	p. 177	-
Perilex® one-gang boxes	p. 146	-	-	-
CEE one-gang boxes	p. 146	-	-	-
Electronics boxes	p. 148			
Two-gang junction boxes	p. 148			
Universal installation housings	p. 173	p. 172	-	-
For cable exits				
Wall light connection	p. 145	p. 155	-	-
Luminaire connection	p. 157	-	p. 158/182	-
Luminaire connection and junction	p. 156	-	p. 158	-
For cable connections				
Junction boxes	p. 146	-	-	-
Junction casings	p. 149	-	-	p. 186
Potential equalisation casings	p. 152	-	-	-
Accessories				
Fixing	p. 191	p. 172	p. 179	p. 191
Support	p. 153	-	p. 180	p. 152
Sealing of electrical installations (air-tight and smoke-tight)	p. 28/101/277	p. 28/101/277	p. 28/101/277	-
Plaster compensation	-	-	p. 179	-
End cover	p. 189	-	p. 39/99/189	-

Cable and conduit entry systems | Product overview

	Transitions	Exits	Conduit supports	Wire-pull casings	Sealings in fire-protection ceilings and walls
	p. 163	p. 166	p. 167	p. 168	p. 262
Conduit sizes					
Ø 20 mm	•	•	•	•	•
Ø 25 mm	•	•	•	•	•
Ø 32 mm	•	•	•	•	•
Ø 40 mm	•	•	•	•	•
Ø 50 mm	-	-	-	•	•
Ø 63 mm	-	-	-	•	•
Cables/cable bundle	-	-	-	-	•

Technical information

Installation in on-site mixed concrete

The KAISER concrete construction system. For all concrete construction processes and systems. It offers a comprehensive product range with many wall and ceiling boxes as well as practical solutions for wall and ceiling transitions.
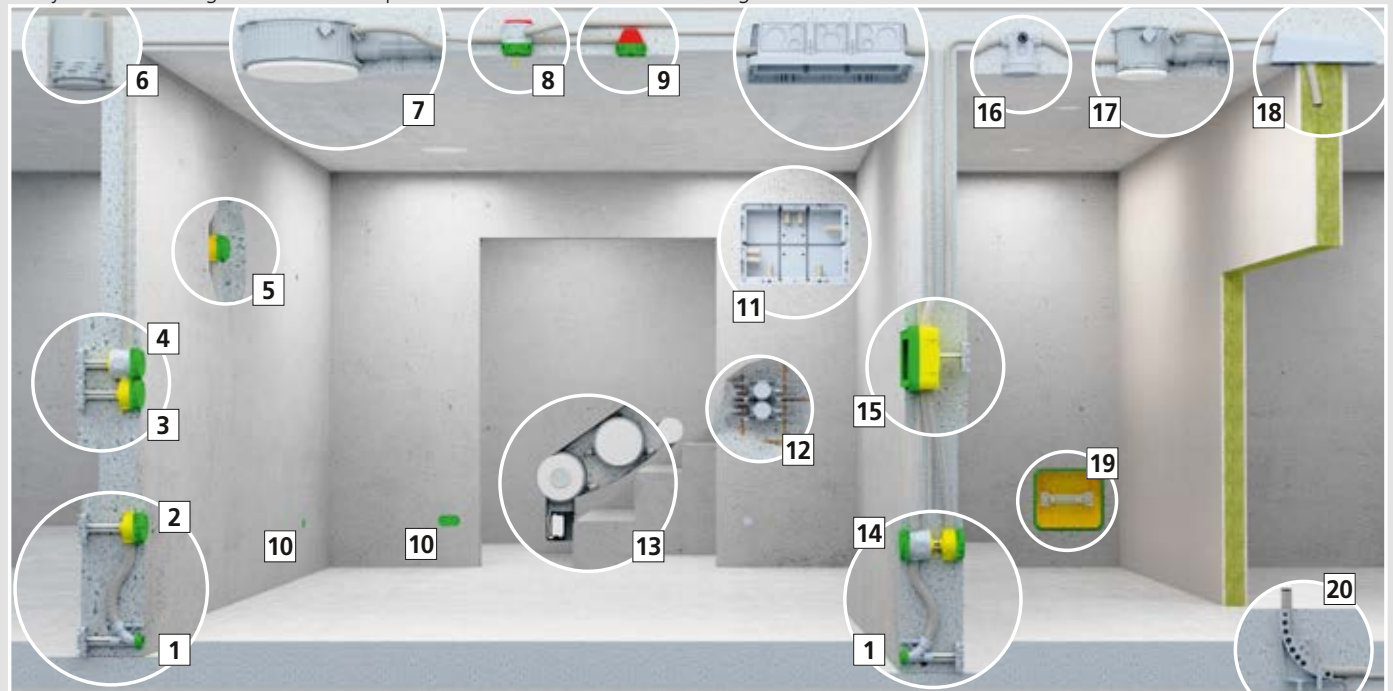
1 Wall and ceiling transition 30° with abutment and support element. | **2** One-gang box for plug-in A.C. device | **3** One-gang box with abutment and support element | **4** One-gang junction box with abutment and support element | **5** Wall light connection box | **6** HaloX® 100 (retrofitting in solid ceiling) | **7** HaloX® 250 with tunnel 325 for on-site mixed concrete | **8** Ceiling junction box | **9** Ceiling box 45° | **10** Electronics box and two-gang junction box | **11** Wire-pull casing | **12** Prefix® concrete building box 60 | **13** HaloX® 180 with and without tunnel | **14** One-gang box and one-gang junction box with support element | **15** Junction casing with abutment and support element | **16** Universal wall and ceiling exit | **17** HaloX® 100 with tunnel 190 for on-site mixed concrete | **18** Ceiling strip (ceili | **19** Potential equalisation casing | **20** Conduit bend support

Wall installation in on-site concrete
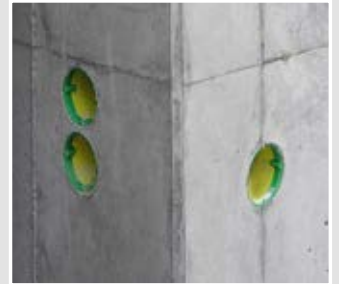
Ceiling installation in on-site concrete

The KAISER colour system.

The different colours of the individual components make correct installation easier.

Green: Front parts

Yellow: Rear parts for wall installation

Red: Rear parts for ceiling installation

Grey: Intermediate parts and attachment accessories

Combination in accordance with DIN
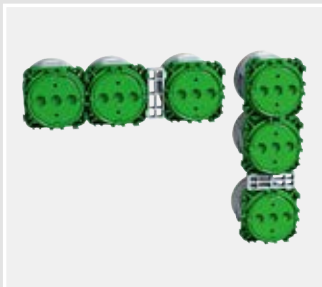
Single row combination: The combination distance for one-gang boxes or one-gang junction boxes is 71 mm (DIN 49075). The swallow-tail catches enable the front parts of the boxes to be joined easily horizontally …
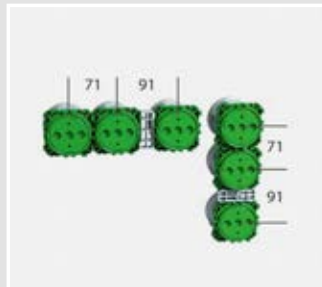
… and vertically at the correct distance. Distance piece 91 is used to achieve the 91 mm distance for separated low-voltage covers.
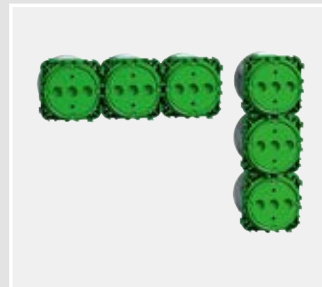
Multi-row combinations: In multi-row installations, the rows are separated…
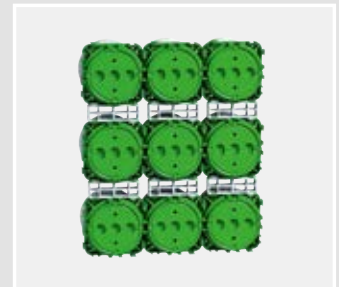
…(multi-row cover frame) using distance pieces 91. (Spacing between rows 91 mm)

Support technology with support elements:

Concrete walls can be manufactured in upright (vertical) or flat (horizontal) formwork. Horizontal formwork has only one formwork side, while vertical formwork has two formwork sides: the working formwork and the opposing formwork. All installations, the fitting of the reinforcement, and all other attachments are always carried out on the same formwork side – on vertical formwork this is on the working formwork. Installation boxes and casings for one side of the wall are fixed directly to the formwork. The boxes and casings for the rear side of the wall are fitted using support elements. After completion of the installation work, the casting mould is closed. The spring effect of the rear side of the box ensures that the box sits flush to the wall when the concrete is poured (travel of the spring E = max. 5 mm). For greater wall thickness (e.g. 300 mm and greater) or in the case of extreme loads, the support element should be secured to the reinforcement by additional means (e.g. with tie wires).

Mounting instructions
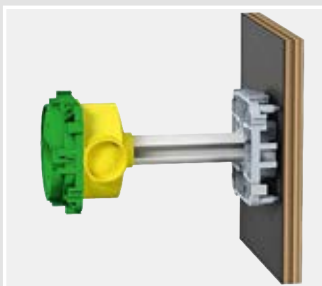
Boxes on the opposing formwork are mounted on the working formwork with abutments. This is where the support element is secured which maintains the box on the opposing formwork side.
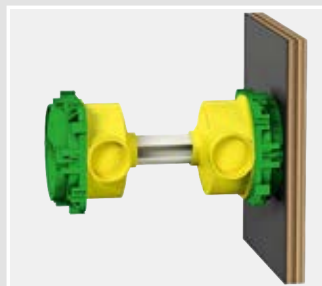
For opposing boxes, a box is mounted on the working formwork, and the second box is set at the required distance using the support element.
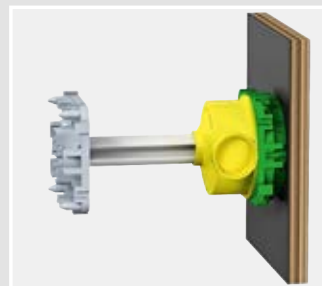
Boxes and casings held by a magnet or adhesive foil where no installation is planned for the opposite side must be secured with abutments and support elements.

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Technical information
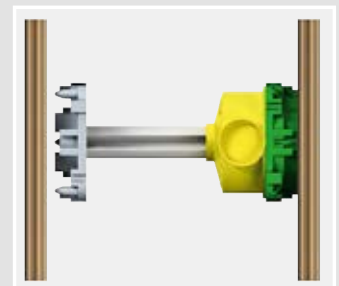
Calculation for the supporting elements

A - Wall thickness
B - Article constant
C - Support element length
D - Working formwork
E - Travel
F - Opposing formwork
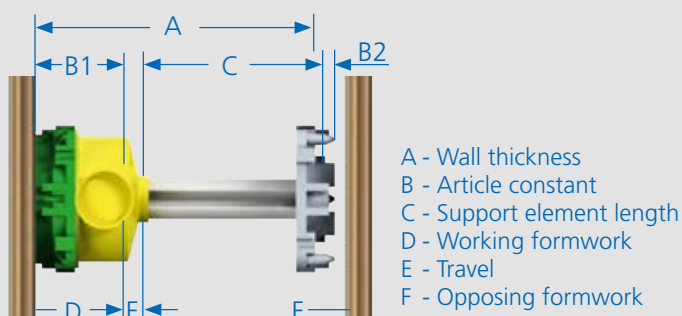
Length of the support elements. (e.g. vertical formwork)

General formula:	$C = A - (B1 + B2)$
Wall thicknesses:	A = 200 mm
Article constants for one-gang box 1255–40:	B1 = 38 mm
Article constants for abutments 1210-02:	B2 = 5 mm
Length support element	C = 200 mm - (38 mm + 5 mm)
	C = 157 mm

Important: Take formwork inaccuracies as opposed to planned wall thickness into account! Always specify length of support elements accurately in mm when ordering!

Product description	Art. no.	Standard article thickness "B"	
		Vertical	Horizontal
One-gang box	**1255-40**	38	44
One-gang junction box	**1265-40**	62	68
Large conduit box	**1260-40**	59	65
Wall light connection box	**1248-40**	38	44
Electronics box	**1268-40**	75	81
Two-gang junction box	**1269-40**	75	81
Junction casings	**1295-02/73**	58	64
Junction casings	**1296-02**	64	70
Junction casings	**1297-02/75**	60	66
PERILEX® one-gang box	**1276-40**	45	51
CEE one-gang box	**1275-40**	45	51
Junction box	**1276-70/-71**	45	51
Abutment	**1210-02**	5	7
Abutment with adhesive	**1205-02**	5	7
One-gang box	**1223-41**	44	50
Two-gang box	**1224-41**	47	53
Box for Italian / American standard	**1200-00**	39	45
Universal installation housings	**1223-22**	57	63
Universal installation housings	**1224-22**	60	66
Universal installation housings	**1295-22**	71	77
Universal installation housings	**1296-22**	77	83
Universal installation housings	**1297-22**	73	79
Wall and ceiling transition 30°	**1202-04**	62	62
Wall and ceiling transition 30°	**1202-34**	62	62
Wall and ceiling transition 30°	**1202-29**	62	62

Support technology for one-gang and one-gang junction boxes

The stable support element with star-shaped cross-section and the abutment provide support in the case of boxes that are positioned opposite one another or located on the opposite side of the formwork. The built-in spring travel in installation boxes ensures a secure fit in the support.
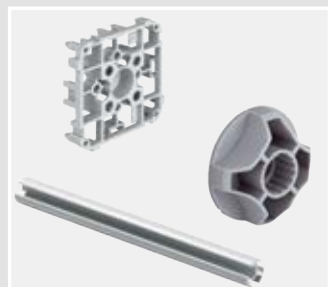
Support element 1212-04 and abutment 1205-02 / 1210-02

Subject to modifications
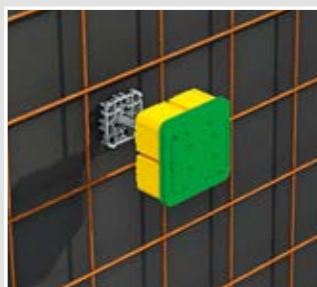
Support technology for boxes and installation housings

The telescope support is used to support opposing housings or housings on the other side of the formwork,
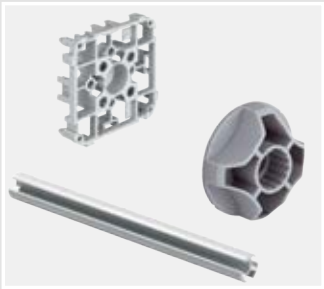
while the support element with star-shaped cross-section and the abutment are used in the case of junction casings with yellow rear part.

In this case, we offer moulded parts as an internal support element or styrofoam inserts that are adjusted precisely to the interior dimension of the boxes.
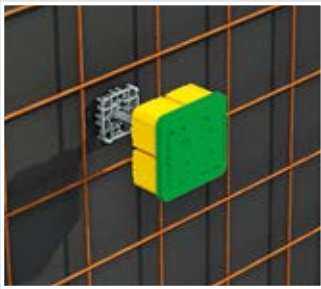
With this sturdy support technology, the spacing between the formworks can be maintained reliably and securely.

Ways of attaching to various types of formwork

Product description	For wood formwork			For steel formwork				
	Nail Ø 2 mm	Wood screw Ø 4 mm	M6 threaded dowel	Expanding dowel	Magnet	Adhesive foil	M6 weld-on screw	Hot glue
Wall and ceiling box	•	•	•	•	•		•	•
Boxes*	•	•	•	•		•	•	•
Bushes	•	•						•
transitions	•	•						•
Abutment	•	•	•	•		•	•	•
Ceiling strips	•	•						•
Conduit and cable distance spacer	•	•	•	•				•

*After removing the formwork, simply use pliers to pull out of the housing the nails used for fixing through the interior of the casings.

One-gang boxes, One-gang junction boxes
for on-site mixed concrete
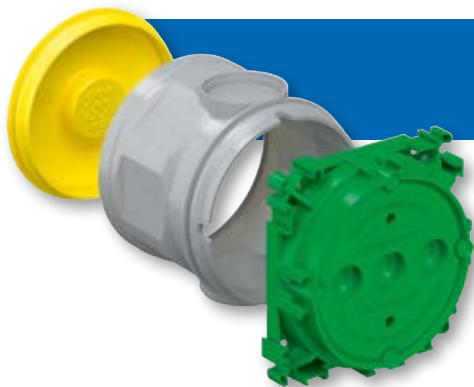
One-gang and one-gang junction boxes

One-gang box and one-gang junction box for installation in vertical formwork. A modular programme with 2-piece or 3-piece boxes, which are easily nailed to the formwork with the flat front parts. The extra-flexible design ensures integrated spring travel and provides secure support between the formwork.

• Suitable for all types of formwork
• High torsional strength, can be combined with a standard distance of 71 mm
• Combinations have fully-insulated cable transitions
• Support in base of box does not block any conduit entry
• Integrated spring travel ensures secure support
• dimensions in accordance with German DIN 49073

halogen-free 650 °C IP 30

Installation

Attach front part to formwork.

Create a conduit or cable entry (punch pliers or opening cutter).

Clip rear part with conduit or cable to front part and concrete.

Open concrete building boxes or casings, then fit equipment or cover.

One-gang box
· with 4 screw domes and 2 expanding claw fields
· suitable for all types of formwork
· combinations have fully-insulated cable transitions
· standardised combination distance 71 mm

Depth	58 mm	41 mm
Installation opening Ø	60 mm	60 mm
Markings for cables and DIN EN conduits to Ø 16 mm	-	2
Markings for cables and DIN EN conduits up to Ø 25 mm	2	-
Rear part with holder for support element	•	-
Number of parts	2	2
⚠ DVE	•	-
Art. No.	1255-40	1255-43
Inner packaging/shipping	10 / 250	10 / 100

One-gang junction box

· with 4 screw domes and 2 expanding claw fields
· rear part of box with holder for support element
· suitable for all types of formwork
· combinations have fully-insulated cable transitions
· standardised combination distance 71 mm

Depth	82 mm	79 mm
Installation opening Ø	60 mm	60 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	8	2
Markings for cables and DIN EN conduits up to Ø 32 mm	–	2
Number of parts	3	2
(DVE)	•	•
Art. No.	**1265-40**	**1260-40**
Inner packaging/shipping	10 / 100	10 / 100

Note

According to DIN VDE 0100, Part 559, feed lines for wall lights must terminate in connection boxes. Wall light connection boxes must have at least one option for attaching wall lights. According to DIN VDE 60670, wall and ceiling luminaire connection boxes must provide enough room for 3 individual terminals or be fitted with a 3-pole connector.

Wall light connection box

· space for 3 terminal blocks and associated cables
· not to be used as a junction box!
· suitable for all types of formwork

Exit opening Ø	35 mm
Depth	58 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	2
Rear part with holder for support element	•
Number of parts	2
(DVE)	•
Art. No.	**1248-40**
Inner packaging/shipping	10 / 100

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One-gang boxes, One-gang junction boxes
for on-site mixed concrete

Junction box
· cover screw distance 67 mm
· suitable for all types of formwork

Depth	66 mm	66 mm
Installation opening Ø	70 mm	70 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	•	•
Rear part with holder for support element	•	•
Number of parts	2	2
with cover and cover screws	•	-
Art. No.	1276-70	1276-71
Inner packaging/shipping	10 / 100	10 / 100

One-gang box PERILEX®
· device screws distance 67 mm
· with 2 countersunk device screws Ø 4 mm, length 16 mm
· for use with 16 A PERILEX® inserts
· suitable for all types of formwork

Depth	66 mm
Installation opening Ø	70 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	•
Rear part with holder for support element	•
Number of parts	2
Art. No.	1276-40
Inner packaging/shipping	10 / 100

One-gang box CEE
· device screws distance 67 mm
· With sealing ring for protection class IP 34 and 2 raised head 4 mm Ø device screws, length 20 mm
· for use with 16A CEE equipment inserts
· suitable for all types of formwork

Depth	66 mm
Installation opening Ø	70 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	•
Rear part with holder for support element	•
Number of parts	3
Art. No.	1275-40
Inner packaging/shipping	10 / 100

Subject to modifications

FLUSH-MOUNTING

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Electronics box and two-gang junction box

The KAISER electronics box and two-gang junction box are ideal for installation in standing on-site mixed concrete formwork. The electronics box offers a generously-sized installation space, and additional space for switch actuators, other electronic components etc. The separator wall ensures standardised installation of bus and operating voltage in a single box. Two-gang junction boxes allow the installation of block and pre-wired accessories, and provide space for the assembling of cables for multi-media connections.

- Plenty of space for accessories and cables
- Separator wall for standardised fitting of two voltage types in one box
- Flat front part for simple and quick nailing
- Can be combined torsion-proof with full-insulated cable transition
- Support element does not block conduit entries
- Spring travel ensures secure fit in standing formwork

halogen-free | 650 °C | IP 30
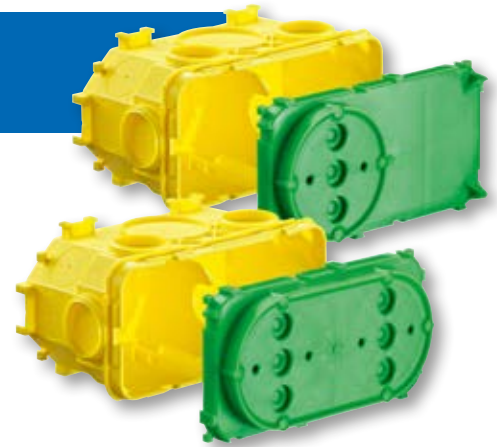
Examples of applications for the electronics box

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.

Examples of applications for the two-gang junction box

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

… the use of pre-wired accessories, pre-wired 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.

Subject to modifications

Electronics box and two-gang junction box
for on-site mixed concrete

Installation

Flat front part for easy nailing

Use the KAISER punch pliers or the opening cutter to make exact cable or conduit entries.

Easy fitting of cables and conduits through exact openings.

The snap-in connection ensures fast installation.

Opposing installation, cable entry behind the reinforcement.
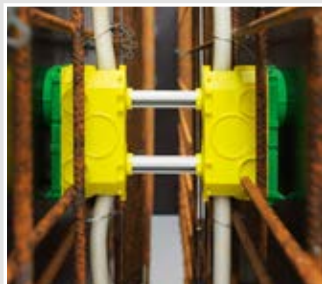
Installation on opposing formwork is easy with the tried-and-tested KAISER support element. Also, the integrated spring travel ensures a secure fit and compensates for any dimensional tolerances.
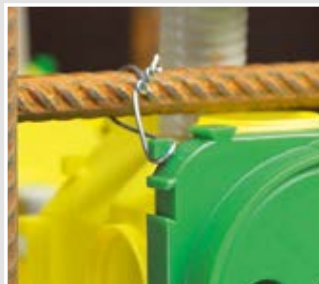
Tie lugs provide additional security if extreme loads are expected.

Can be combined at the standardised combination distance of 71 mm or 91 mm with one-gang or one-gang junction boxes.

▓ INNOVATION

Electronics box

· With separator walls to separate electrical circuits
· 4 screw domes
· suitable for all types of formwork
· combinations have fully-insulated cable transitions
· Can be combined at the standardised combination distance of 71 mm or 91 mm with one-gang or one-gang junction boxes.

Two-gang junction box

· 6 screw domes
· suitable for all types of formwork
· combinations have fully-insulated cable transitions
· Can be combined at the standardised combination distance of 71 mm or 91 mm with one-gang or one-gang junction boxes.

Length x Width x Depth	145 x 71 x 94 mm	145 x 71 x 94 mm
Installation opening	60 mm	60 x 131 mm
Tube entries up to M25	16	8
Tube entries up to M40	2	2
⚠ DVE	•	•
Art. No.	1268-40	1269-40
Inner packaging/shipping	5 / 50	5 / 50

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Junction casings

Junction casings in all sizes and for almost any kind of installations. This product range features practical housing sizes as well as a robust housing design which is perfect for building sites.

• As central junction casings for star-shaped cable laying.
• Easy to rewire when changing the way rooms are used.
• Separator walls to separate electrical circuits.
• End cover with screw attachment for VDE-compliant installation.

halogen-free | 650 °C | D'E | IP 30 | KSK TECHNIK

Processing instructions

Open the universal conduit entry with one hammer blow.
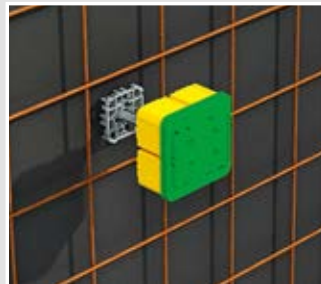
The junction casing and the support on the working formwork create a stable unit.
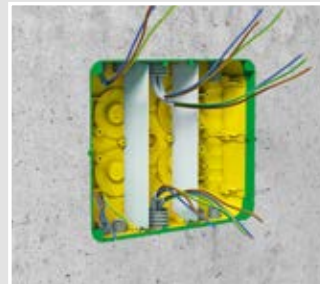
KAISER junction casings offer plenty of space for electrical installation according to DIN 18015-3.

Separator walls ensure that electrical circuits are safely separated.

Junction casing

· for terminals up to 16 mm²
· suitable for all types of formwork
· rear parts of casing with holder for support element
· for loose terminals up to 4 mm²

Length x Width x Depth	128 x 128 x 80 mm	180 x 180 x 84 mm	250 x 220 x 82 mm
possible DIN EN conduit sizes per entry field: 4 x 16 mm Ø, 3 x 20 mm Ø, 1 x 25 mm Ø, 1 x 32 mm Ø, 1 x 40 mm Ø	•	-	-
possible DIN EN conduit sizes per entry field: 4 x 16 mm Ø, 4 x 20 mm Ø, 1 x 25 mm Ø, 1 x 32 mm Ø, 1 x 40 mm Ø	-	•	-
possible DIN EN conduit sizes per entry field: 6 x 16 mm Ø, 3 x 20 mm Ø, 2 x 25 mm Ø, 1 x 32 mm Ø, 1 x 40 mm Ø	-	-	•
use separator wall for maximum of 2 electrical circuits	-	•	-
Maximum of 3 electrical circuits with separator walls	-	-	•
Number of parts	2	2	2
Entry fields	8	8	8
Art. No.	**1295-02**	**1296-02**	**1297-02**
Inner packaging/shipping	- / 10	- / 10	- / 5

Accessories: Cover, page 189

Junction casings and accessories
for on-site mixed concrete

Junction casing

· for wood and steel formwork in on-site mixed concrete as well as flush-mounting (masonry) installations

· with inner fitting cover as adhesive attachment surface

· for vertical formwork attached with adhesive, the casings must be secured with the telescopic support 9957

· for loose terminals up to 4 mm²

Length x Width x Depth	115 x 115 x 76 mm	115 x 115 x 101 mm	115 x 115 x 150 mm
Break-out openings Ø 20 mm	16	16	16
Combination conduit entries M20/25	4	8	8
Number of nails	4	4	4
CE	•	•	•
Art. No.	**9909.01**	**9908.01**	**9908.21**
Inner packaging/shipping	- / 50	- / 20	- / 5
Accessories: Telescope support, page 175			

Junction casing

· for wood and steel formwork in on-site mixed concrete as well as flush-mounting (masonry) installations

· with inner fitting cover as adhesive attachment surface

· for vertical formwork attached with adhesive, the casings must be secured with the telescopic support 9957

· for loose terminals up to 4 mm²

Length x Width x Depth	115 x 115 x 105 mm	115 x 115 x 150 mm
Break-out openings Ø 20 mm	12	12
Combination conduit entries M20/25	4	4
Combination conduit entries M25/32	2	2
Number of nails	4	4
CE	•	•
Art. No.	**9907**	**9907.21**
Inner packaging/shipping	- / 20	- / 5
Accessories: Telescope support, page 175		

Upper frame

· extension size 12 - 45 mm

· for 2 screws

· multiple extensions possible

Length x Width x Depth	115 x 115 x 13 mm	115 x 115 x 12 mm	115 x 115 x 45 mm
Number of screws	-	2	2
CE	•	•	•
Art. No.	**9908.68**	**9907.68**	**9907.68.45**
Inner packaging/shipping	- / 10	- / 10	- / 5

Subject to modifications

Plug-in cover
· smooth surface with rounded edge

Length x Width x Height	130 x 130 x 7 mm	130 x 130 x 3.5 mm	130 x 130 x 3.5 mm	130 x 130 x 3.5 mm
Colour	RAL 9010	RAL 9010	RAL 9010	RAL 9010
CE	•	•	•	•
Art. No.	9909.22	9909.20	9909.10	9909.12
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

Screw-in cover
· smooth surface with rounded edge

Length x Width x Height	130 x 130 x 3.5 mm
Number of plastic screws	4
Art. No.	9909.02 S
Inner packaging/shipping	- / 10

Waterproof cover
· aluminium (polished surface)
· with full-surface neoprene seal, thickness
  4 mm
· cover fastening with 4 screws, 4 x 45 mm
  (included), non-rusting
· for Art. Nos. 9909.01, 9908.01, 9908.21,
  9907

Length x Width x Height	130 x 130 x 1.5 mm
Screws	4
Art. No.	9909.03
Inner packaging/shipping	- / 100

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Potential equalisation casing 10² and 16²

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

Length x Width x Depth	250 x 220 x 82 mm	128 x 128 x 80 mm
Cables 1.5–10²	-	6
Cables up to 16², single and stranded wire	7	-
Circular conductors Ø 8–10 mm	1	-
Circular conductor 6–16²	-	1
Flat strip up to 30 mm wide	1	-
Entry fields	8	8
possible DIN EN conduit sizes per entry field: 4 x 16 mm Ø, 3 x 20 mm Ø, 1 x 25 mm Ø, 1 x 32 mm Ø, 1 x 40 mm Ø	-	•
possible DIN EN conduit sizes per entry field: 6 x 16 mm Ø, 3 x 20 mm Ø, 2 x 25 mm Ø, 1 x 32 mm Ø, 1 x 40 mm Ø	•	-
Art. No.	1297-75	1295-73
Inner packaging/shipping	- / 1	- / 10

Note

Other earthing products can be found at our website.

Abutment for adhesive foil

· for support element 20 mm Ø
· fixing to formwork using 1219-00 adhesive foil
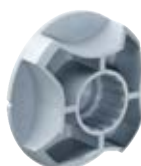
Art. No.	1205-02
Inner packaging/shipping	- / 250

Abutment

· for support element 20 mm Ø
· can be combined with itself, with one-gang boxes, one-gang junction boxes, junction casing, universal installation housings and distance pieces 91
· attachment to formwork using expanding dowels, nails or screws

Art. No.	1210-02
Inner packaging/shipping	- / 250

Junction casings and accessories
for on-site mixed concrete

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Support conduit Ø 20 mm

Length	Art. No.	Inner packaging/shipping
<= 40 mm	1212-04	- / 1
41 - 60 mm	1212-06	- / 1
61 - 80 mm	1212-08	- / 1
81 - 100 mm	1212-10	- / 1
101 - 120 mm	1212-12	- / 1
121 - 140 mm	1212-14	- / 1
141 - 160 mm	1212-16	- / 1
161 - 180 mm	1212-18	- / 1
181 - 200 mm	1212-20	- / 1
1.000 mm	1212-98	- / 1
3.000 mm	1212-99	- / 1

Note
On request we can supply support conduits with Ø 20 mm for wiring through the support element.

Adhesive foil
· for anti-shock fixing of boxes and casings in horizontal formwork
· for vertical formwork, additional support by means of support element and abutments is necessary
· for degreasing formwork
· double-sided adhesion

Art. No.	1219-00
Inner packaging/shipping	200 / 1000

Distance piece 91
· for separate covers for antenna sockets in combinations with sockets without electric shock protection
· Centre distance 91 mm
· for multiple row combinations
· fits one-gang boxes, one-gang junction boxes, abutments

Length	60 mm
Art. No.	1259-04
Inner packaging/shipping	10 / 100
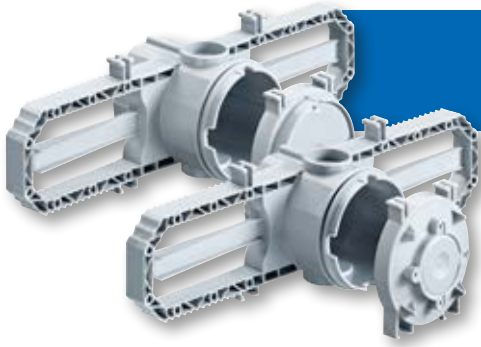
Prefix® concrete building box for attaching to the reinforcement

Concrete building boxes with Prefix® installation technology and two integrated front parts ensure an additional improvement during fitting to the formwork. The Prefix concrete building boxes can be pre-fitted using spring-loaded installation clamps. A peripheral, pronounced corrugated profile along the installation clamps for use with tie wires prevents slipping during fixing. If extreme loads are expected, additional opportunities for attaching tie wires exist along the mounting profile. Together with a more compact form, this simplifies working, which ensures exact positioning of the box and a clean wall appearance.

• Fast, easy installation directly onto the opposing formwork without support element and abutment
• Prefixing using Prefix® installation technology leaves both hands free for attaching with wires
• A pronounced corrugated profile and additional fixing opportunities for secure fixing using tie wires
• Suitable for 20-60 mm concrete covers
• For facing concrete installation to the opposing formwork
• Can be combined to create standardised stable multiple combinations

Installation
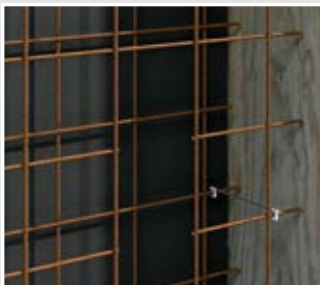
Prepared working formwork with reinforcement from the opposing formwork side.

It is easy to make conduit entries using KAISER punch pliers …

… or cut with the KAISER opening cutter.

Markings on the front part and box ensure correct assembly of the box.

Insert the conduit, then quickly and easily pre-fit the box in the reinforcement using Prefix® installation technology.

The Prefix® concrete building box is now pre-fitted, and you have both hands free …

… for fast, secure attachment to the reinforcement using wires.

For use on both sides for 20 mm to 60 mm concrete covers.

Note

According to DIN VDE 0100, Part 559, feed lines for wall lights must terminate in connection boxes. Wall light connection boxes must have at least one option for attaching wall lights. According to DIN VDE 60670, wall and ceiling luminaire connection boxes must provide enough room for 3 individual terminals or be fitted with a 3-pole connector.

Prefix® concrete building box for attaching to the reinforcement
for on-site mixed concrete

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Example of installation on a 24 cm wall

Pre-fix the one-gang junction box to the reinforcement using Prefix® technology, and check the wall thickness on the front side.

The front side of the one-gang junction box must protrude between 5 mm and 20 mm outside the wall thickness. This creates optimal pressure on the opposing formwork.

Prefix® concrete building box 60 one-gang junction box ...

... and Prefix® concrete building box 35 wall light connection box for fixing to the reinforcement.

Prefix concrete building box 60

· One-gang junction box for attaching to the reinforcement
· One-piece with moulded-on front part
· With 4 screw domes and 2 expanding claw fields on each opening side
· combinations have fully-insulated cable transitions
· standardised combination distance 71 mm

3D animation

Installation opening Ø	60 mm
Depth x Width	95 x 290 mm
for concrete covers	20-60 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	6
⚠ DVE	•
Art. No.	1211-61
Inner packaging/shipping	25 / 50

Prefix concrete building box 35

· Wall-light connection box for attachment to the reinforcement.
· One-piece with moulded-on front part

3D animation

Exit opening Ø	35 mm
Depth x Width	95 x 290 mm
for concrete covers	20-60 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	6
⚠ DVE	•
Art. No.	1211-36
Inner packaging/shipping	25 / 50

Ceiling boxes and accessories
for on-site mixed concrete / prefabrication

Ceiling junction box

Ceiling junction box to accommodate electrical connections. With the optional light hook, the box is also ideally suited for installing and attaching luminaires. The wide range of ceiling boxes permits almost all conceivable installations.

• Suitable for all types of formwork
• Flat front part for simple and quick nailing
• Integrated cap nut ensures secure fitting of an M5 light hook acc. to DIN EN 60670
• The colour system ensures that the installation can be checked quickly

halogen-free · 650 °C · IP 30

Processing instructions

Ceiling box 45° with light hook for fixing suspended luminaires.
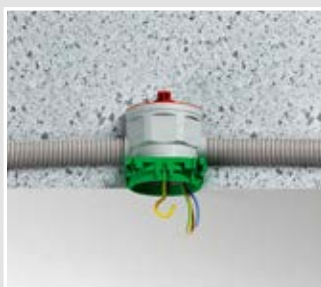
Ceiling junction box with integrated M5 light hook acc. to DIN EN 60670.

You can very easily open slab ceiling boxes for filigree ceilings with the KAISER punch pliers.

The conduit is inserted tightly and accurately and the box is sealed with the cover.

Ceiling junction box
· with M5 metal nut for light hook (hook length min. 85 mm + plaster thickness)
· suitable for all types of formwork
· maximum light hook load to DIN EN 60670 100 N (10 kg)

	35 mm	60 mm
Exit opening Ø	35 mm	60 mm
Depth	82 mm	82 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	8	8
Number of parts	3	3
⬦ DVE	•	•
Art. No.	1264-50	1265-50
Inner packaging/shipping	10 / 100	10 / 100

Subject to modifications

Ceiling large conduit box

· with M5 metal nut for light hook (hook length min. 75 mm + plaster thickness)
· especially suitable for hot glue attachment
· maximum light hook load to DIN EN 60670 100 N (10 kg)

Exit opening Ø	60 mm
Depth	79 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	2
Markings for cables and DIN EN conduits up to Ø 32 mm	2
Number of parts	2
⚠	•
Art. No.	1260-50
Inner packaging/shipping	10 / 100

Ceiling box 45°

· with M5 metal nut for light hook (hook length min. 55 mm + plaster thickness)
· suitable for all types of formwork
· maximum light hook load to DIN EN 60670 100 N (10 kg)

Exit opening Ø	35 mm	60 mm
Depth	55 mm	55 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	4	4
Number of parts	2	2
⚠	•	•
Art. No.	1248-50	1249-50
Inner packaging/shipping	10 / 250	10 / 250

Domed box 45°

· simple light or ceiling exit
· without hook attachment
· suitable for all types of formwork

Exit opening Ø	35 mm	60 mm
Depth	46 mm	46 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	4	4
Number of parts	2	2
Art. No.	1248-44	1249-44
Inner packaging/shipping	10 / 100	10 / 100

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Slab ceiling large box 115

· Installation height 115 mm, with metal
  nut M5 for light hook (min. hook length:
  115 mm + plaster thickness)
· with screw-down cover for onsite fitting of
  conduits
· suitable for all types of formwork
· maximum light hook load to DIN EN 60670
  100 N (10 kg)

Exit opening Ø	60 mm
Depth	115 mm
Diameter	102 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	8
Markings for cables and DIN EN conduits up to Ø 32 mm	4
Number of parts	3
⚠ D/E	•
Art. No.	1227-50
Inner packaging/shipping	- / 100

Slab ceiling box for retrofitting

· for retrofitting on the building site
· installation height 100 mm, with metal nut
  M5 for light hook (min. hook length 95 mm
  + plaster thickness)

Depth	100 mm
Number of parts	2
required drilling hole	65 mm
Art. No.	1247-01
Inner packaging/shipping	- / 100

Light hook

· for retrofitting ceiling boxes (DIN EN 60670)
· maximum light hook load to DIN EN 60670
  100 N (10 kg)
· with M5 thread, fully-insulated

Length of shank	Diameter hook	Thread length	Overall length	Art. No.	Inner packaging/ shipping
30 mm	26 mm	10 mm	71 mm	1226-30	- / 150
55 mm	26 mm	10 mm	81 mm	1226-55	- / 150
65 mm	26 mm	10 mm	91 mm	1226-65	- / 150
75 mm	26 mm	10 mm	101 mm	1226-75	- / 150
85 mm	26 mm	10 mm	112 mm	1226-85	- / 100
95 mm	26 mm	10 mm	121 mm	1226-95	- / 100
105 mm	26 mm	10 mm	132 mm	1226-97	- / 100
115 mm	26 mm	10 mm	143 mm	1226-98	- / 100
125 mm	26 mm	10 mm	151 mm	1226-99	- / 100

Universal ceiling and wall exit

Universal ceiling and wall exit with KSK technology for especially quick and safe installation. The universal Ø 85 mm screw-on surface permits the clean installation of luminaires, smoke detectors etc. without the need for drilling.

- Open the conduit entry with a hammer blow
- Combination entry for two conduit sizes
- Thanks to the integrated conduit stopper, it is not necessary to shorten the conduit inside.
- Clean installation of accessories on the universal screw-on surface without the need for drilling or using dowels

halogen-free | 650 °C | IP 30 | KSK TECHNIK

KSK TECHNOLOGY
KSK technology, KAISER impact coupling for quick, secure and variable conduit entry in concrete construction. Crimped or unsheathed installation conduits with diameters of 20 or 25 mm can be inserted securely and accurately in a single action. You can open the KSK technology with a single hammer blow offering an integrated conduit limit and extension lock for both conduit sizes.
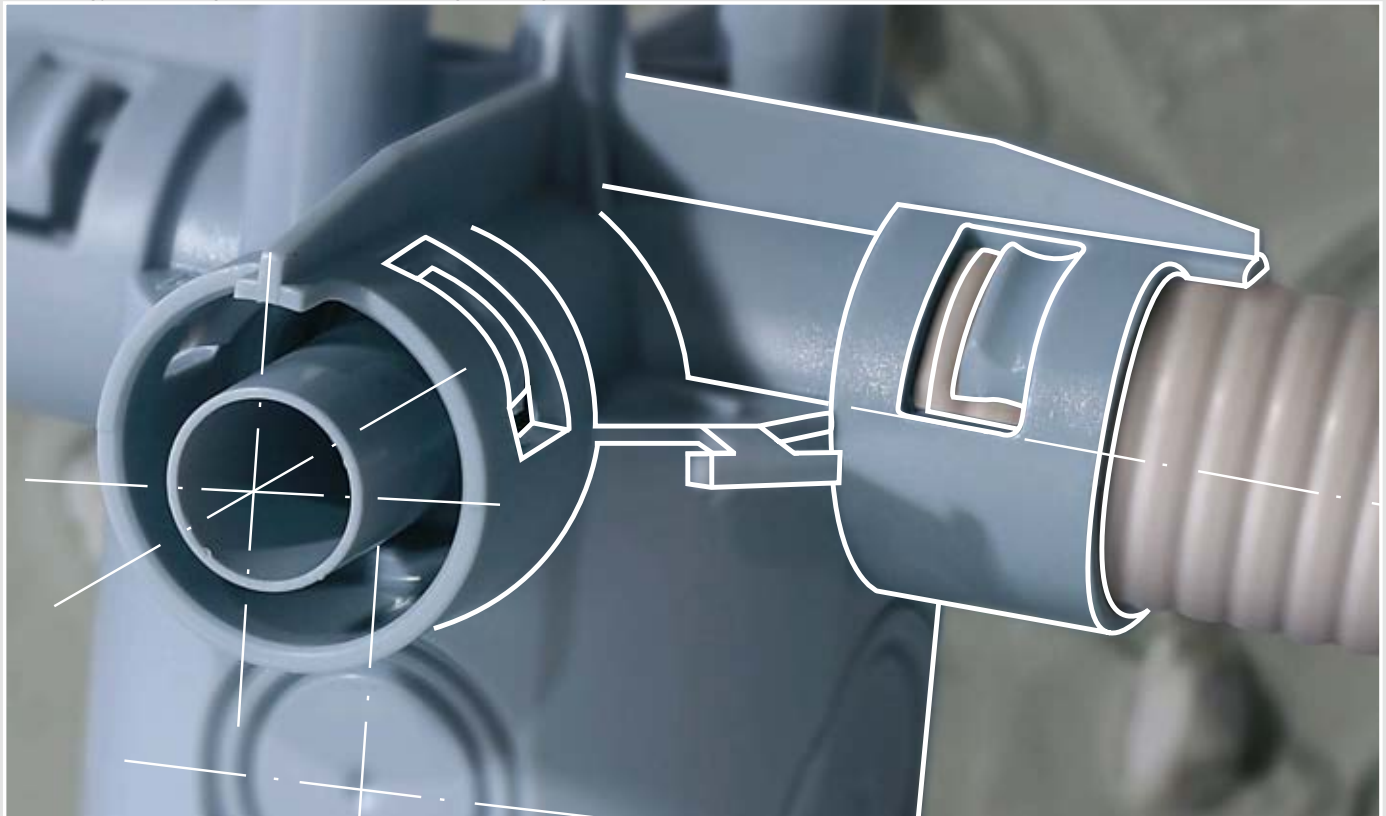
Universal screw-on surface
The screws for the attachment of the device can be easily screwed into the universal mounting plate.

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FLUSH-MOUNTING · CAVITY WALL · CONCRETE · HOUSINGS · FIRE PROTECTION · CABLE GLANDS · TOOLS · SERVICE

Ceiling boxes and accessories

for on-site mixed concrete / prefabrication

Front parts

The different front parts offer exit openings of Ø 35, Ø 48 or Ø 60 mm and allow the attachment of a fully-insulated light hook according to DIN EN 60670-21.
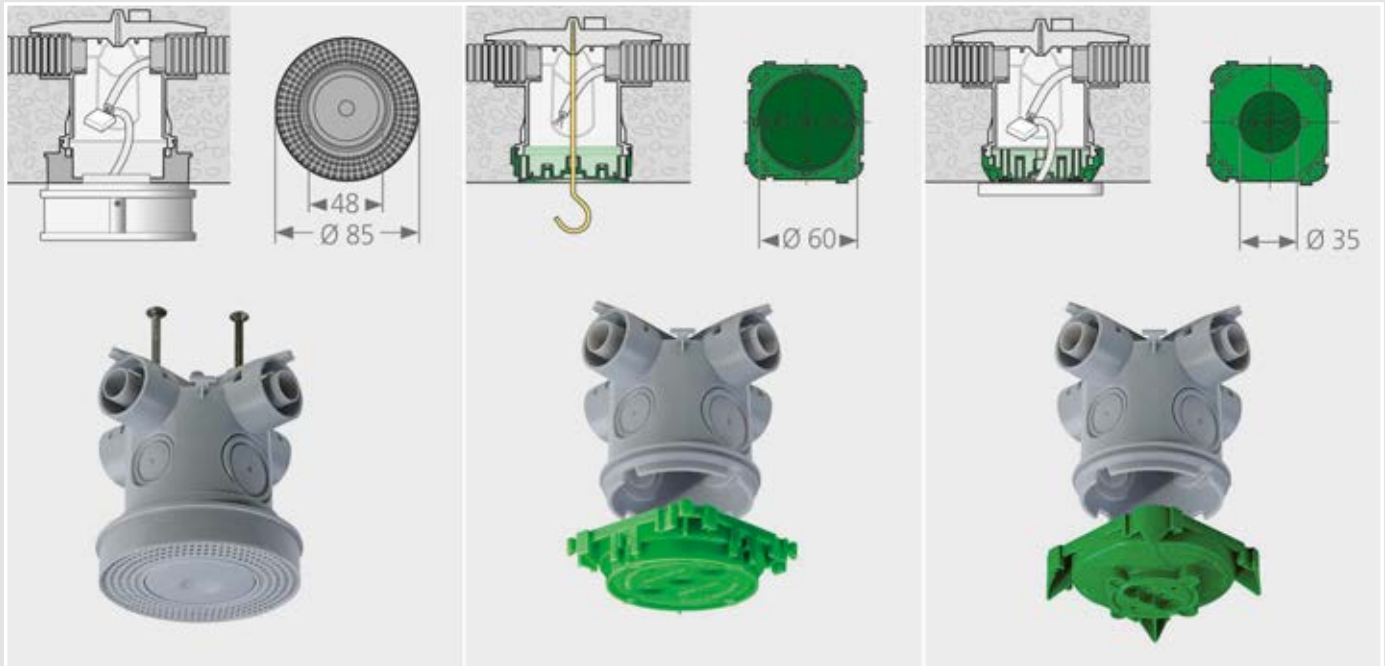
Combi-entry
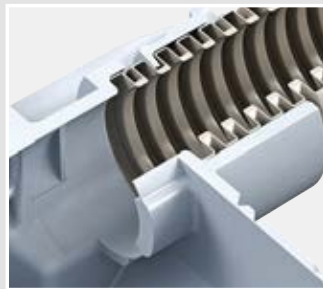
M20 combi-entry   M25 combi-entry   5/8" combi-entry   3/4" combi-entry
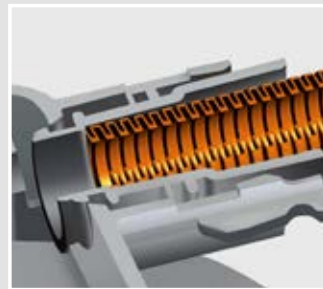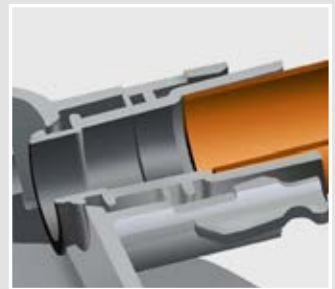
Installation

The front part with screw-on surface (1245-60) offers quick and secure support for accessories.

Open the universal conduit entry with one hammer blow.

You can now insert up to four conduits (M20 or M25).

The front part with screw-on surface (1245-60) offers quick and secure hold for accessories.

Universal ceiling and wall exit
· with universal screw-on surface Ø 85 mm
· Conduit entry limit to prevent the need for inside shortening of the conduit
· 2 plaster compensation covers per pack
· suitable for all types of formwork

Exit opening Ø	48 mm
Depth	105 mm
Outer diameter	85 mm
M20/M25 impact couplings	4
Number of parts	1
Number of nails	2
M25/M32 break-out opening	2
M20/M25 break-out opening	2
CE	•
Art. No.	9959
Inner packaging/shipping	- / 25

Ceiling junction box
· Conduit entry limit to prevent the need for inside shortening of the conduit
· suitable for all types of formwork
· max. light hooks load in accordance with DIN EN 60670 (50 N)

Exit opening Ø	60 mm	35 mm
Depth	99 mm	99 mm
M20/M25 impact couplings	4	4
Number of parts	2	2
Screw domes for device attachment	4	-
M25/M32 break-out opening	2	2
M20/M25 break-out opening	2	2
CE	•	•
Art. No.	1245-63	1245-62
Inner packaging/shipping	10 / 100	10 / 100

Light hooks, self-tapping
· for retrofitting ceiling boxes (DIN EN 60670)
· with self-forming thread (similar to German DIN 7998) fully-insulated

Length of shank	Art. No.	Inner packaging/ shipping
30 mm	1225-30	- / 100
40 mm	1225-40	- / 100
60 mm	1225-60	- / 100
80 mm	1225-80	- / 100
100 mm	1225-10	- / 50
120 mm	1225-12	- / 50
140 mm	1225-14	- / 50

Subject to modifications

KAISER | 161

Ceiling and wall exit

· for light hook attachment
· 2 entries (support shape) parallel to formwork level for 20 mm or 25 mm DIN EN conduits
· with formwork closing cover for one conduit entry

Length x Width x Depth	90 x 45 x 50 mm
Ceiling exit (CE) Ø	30 mm
Combination conduit entries M20/25	2
CE	•
Art. No.	9951
Inner packaging/shipping	- / 50

Ceiling exit

· for light hook attachment and clamping material holder (box shape)
· with large attachment surface for smoke or motion detectors under the ceiling (no need for dowels)
· 4 entries (support shape) parallel to formwork level, 2 entries (support shape) 30° to formwork level, for 20 mm Ø DIN EN conduit

Depth	69 mm
Ceiling exit (CE) Ø	35 mm
Outer diameter	85 mm
Break-out openings Ø 20 mm	8
CE	•
Art. No.	9955
Inner packaging/shipping	- / 50

Signal cover

· for wall and ceiling lights connection boxes
· for Art. Nos. 1248-40, 1245-62, 1248-50, 1248-44, 1264-50, 1211-36

For installation opening	35 mm
Art. No.	1181-35
Inner packaging/shipping	- / 50

End and transition bushes,
Wall and ceiling transitions 30°

End and transition bushes and wall and ceiling transitions 30° for securing a continuous empty conduit system at transition points. The very small design of the end and transition bushes allows the feeding of empty conduits even between close-fitting reinforcement bars without the need for time-consuming work. The optimal radius of the wall and ceiling transitions and the exact-fitting conduit holders prevent abutment edges at transitions. This ensures the flexible feeding of cables from both directions.

• Small design for easy installation between close-fitting reinforcement bars
• Optimal transition radius - easy cable insertion
• Installation on the opposing formwork with support element and abutment
• 2-piece design with secure catch mechanism
• Easy removal of the plaster skin
• Small visible area - clean wall and ceiling appearance

End and transition bushes installation

The flat front part ensures easy fixing with only one nail.	The new snap-in connection provides a safe connection between the front and rear parts.	Now insert the empty conduit into the bush holder as far as the stop.	The surrounding conduit lock retains the conduit securely in the holder and ensures the correct function of the empty conduit system

Advantages - End and transition bushes
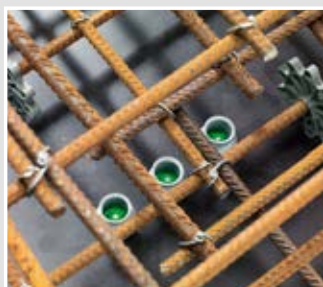
The new design makes it very easy to feed conduits ...	… even between close-fitting reinforcement bars.	The small design also allows many exits on a small wall or ceiling area.	After striking the formwork, there is only a minimal visible area in the concrete.

Wall-ceiling transitions, ceiling strips, conduit supports, sealing plugs
for on-site mixed concrete

Wall and ceiling transition 30° installation

The flat front part ensures easy fixing with only one nail.

The new snap-in connection provides a safe connection between the front and rear parts.

Now insert the empty conduit into the bush holder as far as the stop.

The surrounding conduit lock retains the conduit securely in the holder and ensures the correct function of the empty conduit system

Advantages - Wall and ceiling transitions 30°

The support element holder for the new wall and ceiling transitions now allows …

…installation on the opposing formwork with support element and abutment.

After striking the formwork, use a screwdriver for fast, easy opening of the plaster skin.

The optimal radius of the new transitions makes it easy to pull cables in.

End and transition bushing

· for connecting conduits or as ceiling exit
· closed off on formwork side with plaster skin
· suitable for all types of formwork

3D animation

Height	32 mm	36 mm	41 mm
Diameter	30 mm	35 mm	41 mm
DIN EN conduit Ø	20 mm	25 mm	32 mm
Number of parts	2	2	2
Visible area Ø	23 mm	28 mm	35 mm
Art. No.	1204-24	1204-34	1204-29
Inner packaging/shipping	50 / 500	25 / 100	25 / 100

Wall-ceiling transitions, ceiling strips, conduit supports, sealing plugs
for on-site mixed concrete

End and transition bushes
· for connecting conduits or as ceiling exit
· closed off on formwork side with plaster skin
· suitable for all types of formwork

Length x Width x Height	95 x 65 x 70 mm
DIN EN conduit Ø	40 mm
Number of parts	1
Visible area Ø	95 x 65 mm
Art. No.	1203-28
Inner packaging/shipping	10 / 40

Wall and ceiling transition 30°
· for connecting conduits or as ceiling exit
· closed off on formwork side with plaster skin
· suitable for all types of formwork

3D animation

Length x Width x Height	70 x 30 x 77 mm	72 x 35 x 78 mm	80 x 41 x 83 mm
DIN EN conduit Ø	20 mm	25 mm	32 mm
Number of parts	2	2	2
Visible area Ø	23 mm	28 mm	35 mm
Art. No.	1202-04	1202-34	1202-29
Inner packaging/shipping	25 / 250	25 / 100	25 / 100

Examples of use

Subject to modifications

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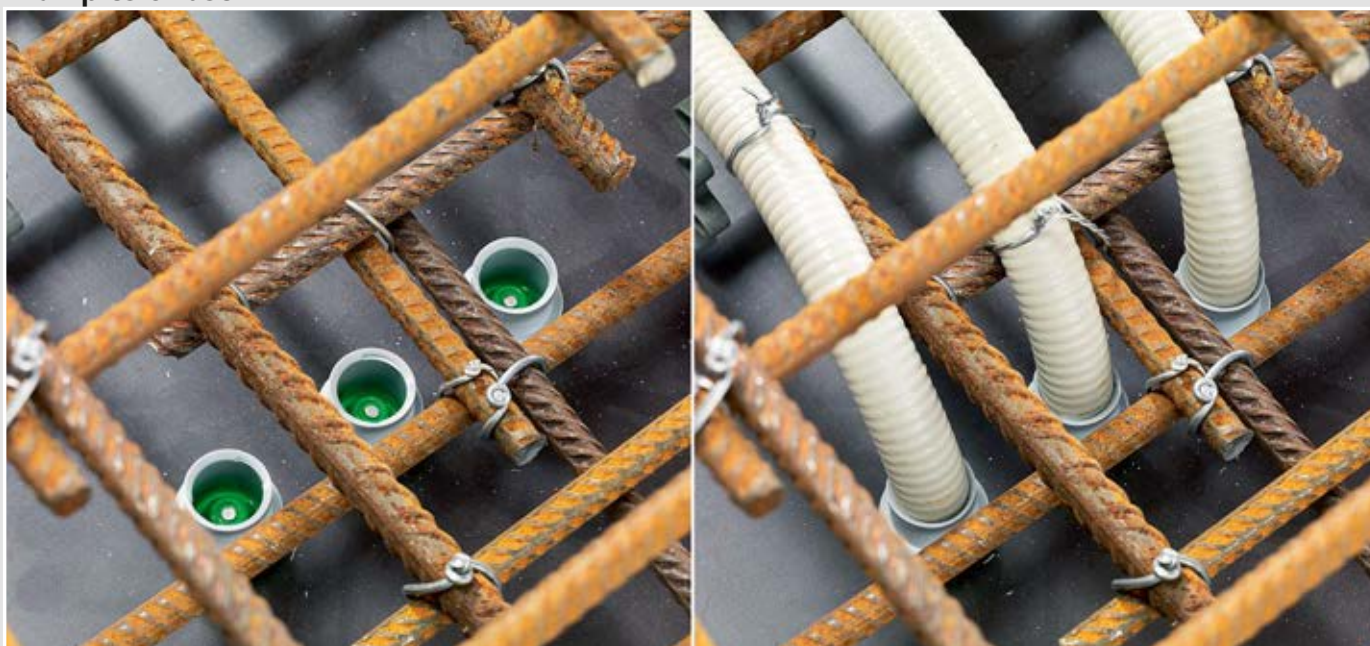
Ceiling strips

Ceiling strips for intermediate wall feeds, as ceiling exit or for connecting installation conduits. The elongated shape allows for compensation of big tolerances for lightweight intermediate wall feeds.

- For DIN EN conduits Ø 20 to Ø 40 mm
- Large tolerance compensation
- Exiting of two conduits at one exit site
- Can be combined for more than one adjacent exit
- Space for conduit ends for extending with conduit bushes

Installation

Position the ceiling strip on the formwork and fix with nails.	The ceiling strips can easily be combined, and offer exact, parallel exits.	Ceiling strip Art. No. 4558 can be occupied on two sides using DIN EN conduits Ø 20 or Ø 25 mm.	After striking of the formwork, ceiling strip Art. No. 4552 can easily be removed from the concrete ceiling and re-used for more installations.

Ceiling strip (ceiling exit)

· ceiling exit for intermediate wall feed, exit or conduit connector
· accepts large tolerance compensation
· open on formwork side
· Use wire-pull casing and junction casing 9914.01 for DIN EN conduits up to Ø 63 mm

Length x Width x Height	138 x 36 x 29 mm	138 x 36 x 29 mm	306 x 40 x 29 mm	270 x 90 x 82 mm
For conduits to DIN EN outer Ø	20 mm	25 mm	-	-
Combination conduit entries M20/25	-	-	2	-
Combination conduit entries M20/25/32	-	-	-	1
Combination conduit entries M25/32/40	-	-	-	1
Number of nails	-	-	4	-
Art. No.	**1283-33**	**1283-34**	**4558**	**4552**
Inner packaging/shipping	25 / 100	25 / 100	- / 50	- / 10

Ceiling strip 25° (ceiling exit)

· with 4 nails 3 x 50 mm
· accepts large tolerance compensation
· open on formwork side
· 25° conduit entry for laying conduit on the first reinforcement level
· for intermediate wall feed

Length x Width x Depth	300 x 45 x 65 mm
Combination conduit entries M20/25	1
Number of nails	4
Art. No.	4555
Inner packaging/shipping	- / 50

Conduit supports

· for secure fixing of conduits from aconcrete ceiling
· Prevents conduits from kinking

Length x Width x Height	130 x 132 x 210 mm	300 x 300 x 300 mm
DIN EN conduit Ø	16-40 mm	-
Steel diameter Ø	-	8 mm
Art. No.	4560	11021
Inner packaging/shipping	- / 50	- / 25

Conduit bend support

· Prevents conduits from kinking

Length x Width x Height	170 x 107 x 225 mm
Number of nails	3
Radius	160
Art. No.	4561
Inner packaging/shipping	- / 25

Conduit sealing cap

· for sealing off conduits
· halogen-free

DIN EN conduit Ø	20 mm	25 mm	32 mm
Art. No.	1273-43	1273-44	1273-45
Inner packaging/shipping	100 / 1000	50 / 250	50 / 250

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Wire-pull casings

KAISER wire-pull casings ensure expert cable routing through conduit networks. According to DIN 18015-1, conduit lengths of more than 12 m and with more than two bends require wire-pull casings that allow cables to be added or retrofitted at any time. WIre-pull casings provide multiple conduit entry options and maximum free space to ensure a continuous cable network, including with subsequent changes to the electrical installation.

• Quick and secure installation with pre-installed nails
• Clean stripping where exposed concrete is required
• High dimensional stability, no internal support required
• Multiple conduit entry options
• Simple mounting in wall using Prefix® installation technology
• Stackable

Examples of use
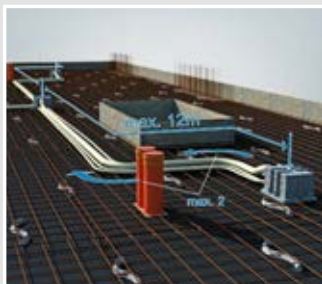
According to DIN 18015-1, pull-wire boxes are required for conduit sections of more than 12 m in length or when more than 2 bends are present

KAISER wire-pull casings provide maximum room for the pulling and retrofitting of cables.

In case of sub-ceiling insulation, the wire-pull casing can be extended via intermediate frames

Also suitable for wall mounting - to be fastened to the reinforcement via Prefix® installation technology.

Processing instructions

Fastening to the ceiling formwork occurs by means of 8 pre-installed nails. The nail domes have a predetermined breaking point, so that the nails are removed together with the formwork removal.

The conduit entries can easily be opened using a step drill or hammer and screwdriver.
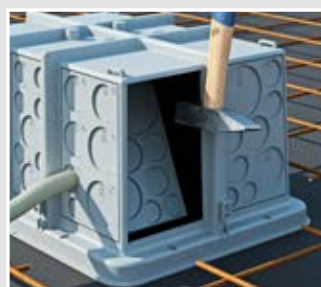
If multiple different conduits are entered, the side walls can be removed with a hammer.

Additional metal plates ensure secure fixing to the reinforcement via tie wires.

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Wire-pull casing

· for wood and steel formwork in on-site mixed concrete as well as flush-mounting (masonry) installations
· for vertical formwork attached with adhesive, the casings must be secured with the telescopic support 9957
· End cover (plastic): fire resistance 750°C

Length x Width x Depth	175 x 120 x 64 mm	170 x 115 x 95 mm	250 x 105 x 94 mm
Break-out openings Ø 20 mm	2	2	-
Combination conduit entries M20/25	14	14	26
Combination conduit entries M20/25/32	4	6	2
Combination conduit entries M40/50/63	-	-	2
Number of nails	4	4	4
CE	•	•	•
Art. No.	**9912.01**	**9911.01**	**9914.01**
Inner packaging/shipping	- / 5	- / 5	- / 10

▓ INNOVATION

Wire-pull casing

· for wood and steel formwork in on-site mixed concrete as well as flush-mounting (masonry) installations
· for vertical formwork attached with adhesive, the casings must be secured with the telescopic support 9957
· Optional accessories: plaster cover, end cover, Prefix® installation set

3D animation

Length x Width x Depth	250 x 180 x 120 mm	250 x 180 x 185 mm
Tube entries up to M20	-	4
Tube entries up to M25	12	20
Tube entries up to M32	8	8
Tube entries up to M40	4	8
Tube entries up to M50	-	4
Extensive pull-out apertures	8	8
Intake for Prefix	4	4
Number of nails	8	8
CE / 🔥 850 °C	• / •	• / •
ⓢ / 🔥 650 °C	• / •	• / •
Art. No.	**9916**	**9916.21**
Inner packaging/shipping	- / 10	- / 5

Wire-pull casings
for on-site mixed concrete

Wire-pull casing

· for wood and steel formwork in on-site mixed concrete as well as flush-mounting (masonry) installations
· for vertical formwork attached with adhesive, the casings must be secured with the telescopic support 9957
· Optional accessories: plaster cover, end cover, set of Prefix® wings

3D animation

Length x Width x Depth	400 x 300 x 120 mm	400 x 300 x 220 mm
Tube entries up to M25	16	24
Tube entries up to M32	8	20
Tube entries up to M40	2	20
Tube entries up to M50	8	12
Tube entries up to M63	-	4
Extensive pull-out apertures	10	10
Intake for Prefix	6	6
Number of nails	8	8
CE / ▨ 850 °C	• / •	• / •
⊕S / ▨ 650 °C	• / •	• / •
Art. No.	**9917**	**9917.21**
Inner packaging/shipping	- / 10	- / 5

Upper frame

· Extension height 45 mm
· including 4 screws
· multiple extensions possible

Length x Width x Depth	246 x 176 x 45 mm	397 x 297 x 45 mm
For type number	9916 / 9916.21	9917 / 9917.21
CE / ▨ 850 °C	• / •	• / •
⊕S	•	•
Art. No.	**9916.68**	**9917.68**
Inner packaging/shipping	- / 5	- / 5

Plaster cover

· For installation on opposing formwork without support

Length x Width x Height	242 x 172 x 1 mm	390 x 290 x 1 mm
For type number	9916 / 9916.21	9917 / 9917.21
CE / ▨ 850 °C	• / •	• / •
⊕S / ▨ 650 °C	• / •	• / •
Art. No.	**9916.06**	**9917.06**
Inner packaging/shipping	- / 30	- / 30

Wire-pull casings
for on-site mixed concrete

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Screw-in cover
· smooth surface with rounded edge
· including 4 screws

Length x Width x Height	270 x 200 x 5 mm	420 x 320 x 5 mm	262 x 112 x 5 mm	185 x 130 x 3.5 mm
Colour	RAL 9010	RAL 9010	RAL 9010	RAL 9010
Screws	4	6	-	4
For type number	9916 / 9916.21	9917 / 9917.21	9914.01	-
CE / 🔥 850 °C	• / •	• / •	• / •	• / •
S / 🔥 650 °C	• / •	• / •	• / -	• / -
Art. No.	**9916.02**	**9917.02**	**9914.02**	**9911.02**
Inner packaging/shipping	- / 100	- / 50	- / 180	- / 5

Cover
· smooth surface with rounded edge
· suitable for Art. Nos. 9912.01 and 9911.01

Length x Width x Height	185 x 130 x 3.5 mm
Colour	RAL 9010
CE	•
Art. No.	**9911.12**
Inner packaging/shipping	- / 5

Waterproof cover
· Anodized aluminium
· with full-surface elastomer sealing
· including stainless steel screws for cover fastening

Length x Width x Height	270 x 200 x 2 mm	420 x 320 x 2 mm	265 x 115 x 2 mm	186 x 130 x 1.5 mm
Screws	4	8	4	4
For type number	9916 / 9916.21	9917 / 9917.21	9914.01	-
CE / 🔥 850 °C	• / •	• / •	- / -	- / -
S / 🔥 650 °C	• / •	• / •	- / -	- / -
Art. No.	**9916.03**	**9917.03**	**9914.03**	**9911.03**
Inner packaging/shipping	- / 50	- / 20	- / 50	- / 50
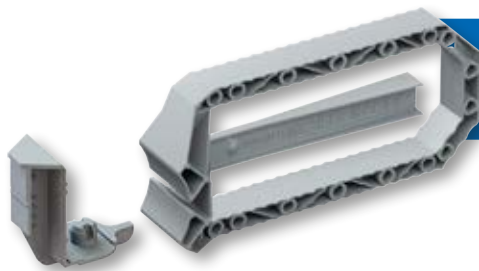
Assembly system Prefix®
for wire-pull casings

Prefix® installation system for wire-pull casings for easy, fast installation on the opposing formwork without support. The wings are simply snapped into place. The spring-loaded clamps exert a strong force on the opposing formwork, thereby ensuring exact fitting of the wire-pull casing and a clean wall appearance.

• Fast, easy installation directly onto the opposing formwork without support element and abutment
• Prefixing using Prefix® installation technology leaves both hands free for attaching with wires
• For facing concrete installation to the opposing formwork

[halogen-free] [650 °C] ••• INNOVATION

Required wings and adapters per product

	9922	9924.40	9924	9926	9928	9929	9916*	9917*
	2	4	4	4	4	4	-	-
	2	4	4	4	4	4	4	4

* For Prefix® applications, please order the cover separately: 9916.06 / 9917.06

Prefix® assembly kit
· Set consisting of wing and adapter

3D animation

Number of wings and adapters	2	4
Art. No.	9940.22	9940.44
Inner packaging/shipping	- / 10	- / 5

••• INNOVATION
Set of Prefix® wings
· allow fastening to the reinforcement

3D animation

Length x Width x Height	137 x 59 x 16 mm	137 x 59 x 16 mm
Number of wings	2	4
Art. No.	9940.20	9940.40
Inner packaging/shipping	- / 10	- / 5

Universal installation housings

Universal installation housing for the installation of almost any types and shapes of accessories in concrete walls and ceilings. The housing system consists of nine different installation housings and an extensive range of accessories.

- For displays, LED lamps and much more
- For installing almost all shapes and sizes
- For installation on walls and ceilings
- For on-site mixed concrete and prefabrication
- For horizontal and vertical formwork and masonry

halogen-free | 650 °C | IP 30

Examples of use

The housing in the concrete is flush-mounted with the mineral fibreboard. The groove in the mineral fibreboard determines the maximum fitting area.

The support in the installation housing prevents it being pressed inward while the concrete is being cast.

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)
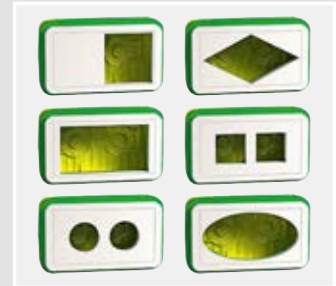
The front panels are easy to process, and almost any shape can be cut out.

Note

The listed wall thickness refers to walls without a fire-protection function. For fire-protection walls: remaining wall thickness = min. 60 mm. For use with halogen luminaires, note maximum output (see product details)

Universal installation housing with mineral fibreboard

· 2-part, consisting of housing and front ring with mineral fibreboard
· all-round groove denotes the maximum opening dimension
· for loudspeakers, displays and LED lamps

Length x Width x Depth	90 x 90 x 70 mm	150 x 90 x 70 mm	128 x 128 x 86 mm
Installation opening	40 x 40 mm	100 x 40 mm	75 x 50 mm
Device installation depth	60 mm	60 mm	65 mm
Ceiling thickness	>= 140 mm	>= 140 mm	>= 140 mm
Wall thickness	>= 110 mm	>= 110 mm	>= 120 mm
suitable for vertical formwork	•	•	•
suitable for horizontal formwork	•	•	•
Art. No.	1223-22	1224-22	1295-22
Inner packaging/shipping	- / 10	- / 10	- / 10

Universal installation housing with mineral fibreboard

· 2-part, consisting of housing and front ring with mineral fibreboard
· all-round groove denotes the maximum opening dimension
· incl. internal support element to stabilise the housing

Length x Width x Depth	180 x 180 x 90 mm	250 x 220 x 90 mm
Installation opening	120 x 100 mm	200 x 145 mm
Device installation depth	65 mm	65 mm
Ceiling thickness	>= 140 mm	>= 140 mm
Wall thickness	>= 120 mm	>= 120 mm
suitable for vertical formwork	•	•
suitable for horizontal formwork	•	•
Art. No.	1296-22	1297-22
Inner packaging/shipping	- / 10	- / 5

▩ INNOVATION

Universal installation housing with mineral fibreboard

· suitable for installation in horizontal and vertical formwork and in masonry
· 2 parts, consisting of housing and mineral fibreboard
· Optional accessory: set of Prefix® wings

Length x Width x Depth	258 x 188 x 135 mm	258 x 188 x 200 mm	408 x 308 x 135 mm	408 x 308 x 235 mm
Installation opening	194 x 124 mm	194 x 124 mm	344 x 234 mm	344 x 234 mm
Device installation depth	105 mm	180 mm	115 mm	215 mm
Ceiling thickness	>= 180 mm	>= 240 mm	>= 180 mm	>= 280 mm
Wall thickness	>= 180 mm	>= 240 mm	>= 180 mm	>= 280 mm
Tube entries up to M20	•	4	•	•
Tube entries up to M25	12	20	16	24
Tube entries up to M32	8	8	8	20
Tube entries up to M40	4	8	2	20
Tube entries up to M50	•	4	8	12
Tube entries up to M63	•	•	•	4
Extensive pull-out apertures	8	8	•	10
Number of nails	8	8	8	8
max. output halogen luminaires	1x35 W QR-CBC, 1x50 W Alu	1x50 W QR-CBC, 1x75 W Alu	1x50 W QR-CBC, 1x75 W Alu	1x75 W QR-CBC, 2x50 W QR-CBC, 2x75 W Alu
Art. No.	1298-37	1298-38	1297-34	1297-35
Inner packaging/shipping	- / 10	- / 10	- / 4	- / 4

FLUSH-MOUNTING

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Support technology for boxes and installation housings

Support technology with telescope support: junction casings and installation housings can also be mounted on both formwork sides during vertical production. This is achieved either by fixing them directly on to the working formwork or by using the telescopic support equipment. If the junction casing is directly attached to the working formwork or if extreme loads are expected (e.g. if the block of concrete is at a great height), extra support is recommended using the telescope support.
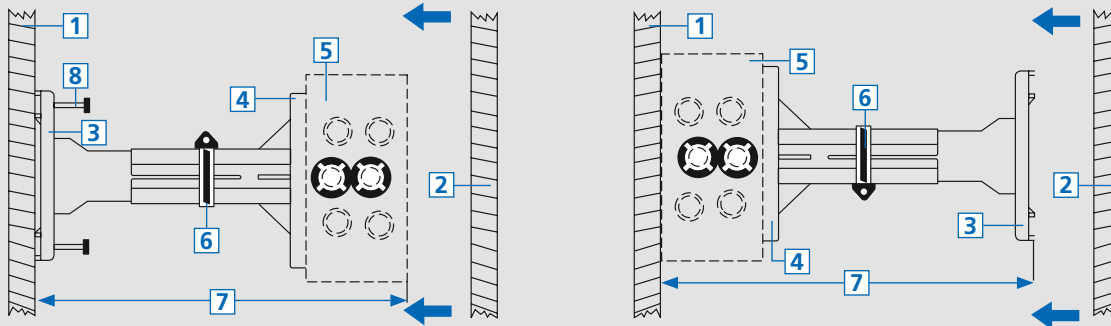
1 Working formwork | **2** Opposing formwork | **3** Base plate | **4** Supporting plate | **5** Junction casing | **6** Hose clamp | **7** Wall thickness +2 cm | **8** Nail

Adjusting the telescope support to different wall thicknesses

Wall thickness up to 20 cm. Shorten the 8-sided conduit on base and supporting plate to the necessary length. Wall thickness 20 to 25 cm. Adjust the telescope support to the necessary length.

Wall thickness 25 to 30 cm. Fit the included extension and adjust the telescope support to the necessary length.

Note

When the formwork is closed, the telescope support and the casing are held between the walls of the formwork. The preset excess length of 2 cm ensures sufficient pressure for a secure fit. Always tighten hose clamp fully!

Telescope support

· for support of all casings (99xx.xx without support element attachment) in vertical wooden formwork
· base plate attached with 4 nails (included)
· casing attached by screwing onto supporting plate
· adjustable size without extensions for wall thicknesses of 135 to 205 mm + casing height. Adjustable size of 195 to 265 mm + casing height using extensions included in delivery.
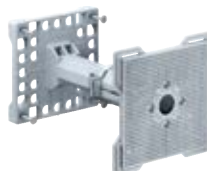
Length x Width x Height	110 x 110 x 150-300 mm
Number of nails	4
Art. No.	9957
Inner packaging/shipping	- / 10

One-gang junction boxes and system components
for horizontal prefabrication
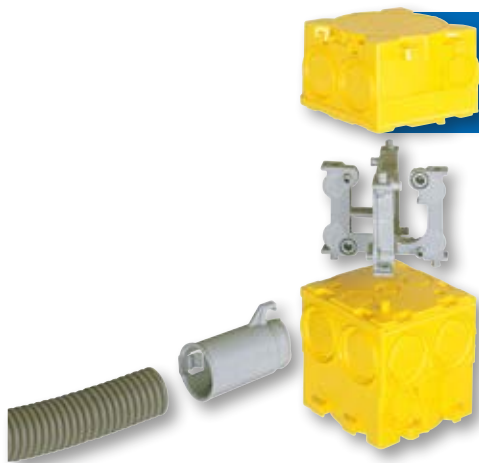
B2 system
for horizontal prefabrication

B2 system for installation in horizontal prefabrication. All installation requirements can be met with a few components. The one-gang boxes are adhesive and the accessories provide a practice-oriented product range.

- Extremely time-saving
- One-piece unit
- Available with or without plaster skin
- Available prefabricated with special adhesive – no glue residues when removing from formwork
- Easy-clip stacking of combinations or opposing boxes

halogen-free | 650 °C | IP 30 | B² | www

The KAISER product range for prefabrication
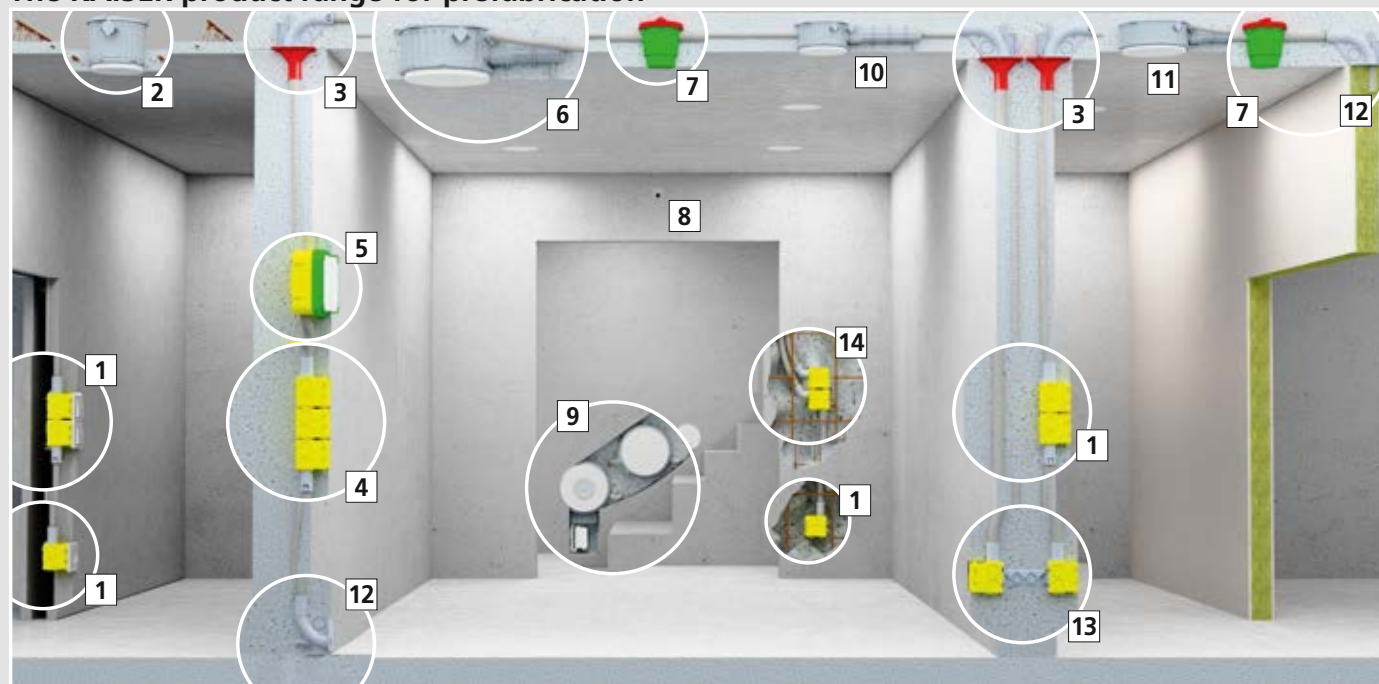
1 B² one-gang junction boxes | **2** HaloX® 100 (retrofitting installation in slab ceiling) | **3** Wall-ceiling transition 90° and oval funnel | **4** B² one-gang junction boxes with conduit connector | **5** Universal installation housings | **6** HaloX® 180 with tunnel 190 for precast concrete | **7** Slab ceiling large box 105 | **8** Wall-ceiling transition 90° as wall exit | **9** HaloX® 180 with and without tunnel 190 | **10** HaloX® 180 with tunnel 325 for precast concrete | **11** HaloX® 250 with tunnel 325 for precast concrete | **12** Wall and ceiling transition 90° | **13** B² one-gang junction boxes with extension element | **14** B² one-gang junction boxes with 60° conduit connector

Mounting options

The KAISER special adhesive is factory-applied (not for 1264-61/62).

The KAISER adhesive foil is suitable for one-gang junction boxes with plaster skin.

The KAISER B2 magnet is secure and reusable with boxes without plaster skin.

The hot glue is suitable for all versions with plaster skin.

Subject to modifications

Conduit connector Ø 20/25

With built-in conduit lock designed especially for corrugated conduits.

Clip the conduit connector to the one-gang junction box.

Press the connector downwards and completely punch out the feed-through.

Insert the conduit into the connector.

Note

The large number of markings for DIN EN conduits or conduit connectors with Ø 16, 20, 25, 32 or 40 mm permits a wide range of feed-throughs and offers a large number of combination possibilities for conduits and installation boxes.

Conduit connector Ø 32/40 mm
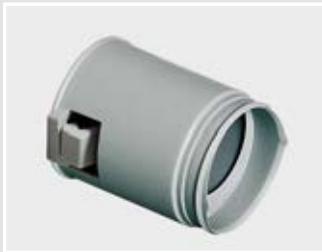
With built-in conduit lock designed especially for corrugated conduits.

Insert the tip of the conduit connector in the marked position.

Turn the conduit connector with pressure against the one-gang box until the feed-through is cut out.

Clip the connector into place, insert the conduit into the connector.

Conduit connector 60°

Latching of the two halves of the 60° conduit connector.

Insert the point of the 60° conduit connector at the required conduit entry and turn until the feed-through is cut out.

Insert the conduit into the latched-in 60° conduit connector.

3-way combination with inserted conduits in the wall area.

One-gang junction box with plaster skin

· 4 screw domes, distance 60 mm
· can be attached to formwork using special adhesive, adhesive foil, magnet or hot glue

3D animation

Depth	48,5 mm	68,5 mm	83,5 mm
Diameter	60 mm	60 mm	60 mm
Markings for cables and DIN EN conduits to Ø 16 mm	4	4	2
Markings for cables and DIN EN conduits up to Ø 25 mm	4	8	-
Markings for cables and DIN EN conduits to Ø 32/40 mm	-	-	4
⚠ DVE / ÖVE	• / •	• / •	• / •
Art. No.	1262-60	1263-60	1264-60
Inner packaging/shipping	- / 100	- / 100	- / 100

Subject to modifications

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One-gang junction boxes and system components
for horizontal prefabrication

One-gang junction box with plaster skin and special adhesive

· 4 screw domes, distance 60 mm
· Attachment to formwork via special adhesive is possible

Depth	48,5 mm	68,5 mm
Diameter	60 mm	60 mm
Markings for cables and DIN EN conduits to Ø 16 mm	4	4
Markings for cables and DIN EN conduits up to Ø 25 mm	4	8
With special adhesive	•	•
⚠ / ÖVE	• / •	• / •
Art. No.	**1262-70**	**1263-70**
Inner packaging/shipping	- / 100	- / 100

One-gang junction box without plaster skin

· 4 screw domes, distance 60 mm
· Attachment to formwork by means of a magnet (1261-80)

Depth	48,5 mm	68,5 mm	83,5 mm
Diameter	60 mm	60 mm	60 mm
Markings for cables and DIN EN conduits to Ø 16 mm	4	4	2
Markings for cables and DIN EN conduits up to Ø 25 mm	4	8	-
Markings for cables and DIN EN conduits to Ø 32/40 mm	-	-	4
⚠ / ÖVE	• / •	• / •	• / •
Art. No.	**1262-61**	**1263-61**	**1264-61**
Inner packaging/shipping	- / 100	- / 100	- / 100

One-gang junction box without plaster skin, with special adhesive

· 4 screw domes, distance 60 mm
· Attachment to formwork via special adhesive is possible

Depth	48,5 mm	68,5 mm
Diameter	60 mm	60 mm
Markings for cables and DIN EN conduits to Ø 16 mm	4	4
Markings for cables and DIN EN conduits up to Ø 25 mm	4	8
With special adhesive	•	•
⚠ / ÖVE	• / •	• / •
Art. No.	**1262-71**	**1263-71**
Inner packaging/shipping	- / 100	- / 100

Subject to modifications

Conduit connector
· for punching out markings without tools
· accepts rigid and flexible DIN EN conduits

DIN EN conduit Ø	20 mm	25 mm	32 mm	40 mm
Art. No.	1261-20	1261-25	1261-32	1261-40
Inner packaging/shipping	- / 100	- / 100	- / 100	- / 100

Conduit connector 60°
· space-saving entry of conduits in confined spaces, e.g. door and window areas
· for punching out markings without tools
· for fitting flexible DIN EN conduits 25 mm

Art. No.	1266-25
Inner packaging/shipping	- / 100

Distance piece 142
· for connecting to all one-gang junction boxes at 142 mm centre distance
· for separate covering, e.g. low-voltage in combinations with sockets with protection against accidental contact.
· also for overhead boxes
· with push-stud connector for extension elements
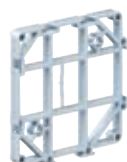
Art. No.	1261-18
Inner packaging/shipping	- / 50

Magnet
· for clamped attachment in box
· for anti-shock fixing of one-gang junction boxes in horizontal formwork
· adhesive force 900 N
· magnet remains on formwork table after removal of formwork. Not necessary to remove concrete separation material on formwork table.

Art. No.	1261-80
Inner packaging/shipping	- / 5

Plaster compensation ring
· for latching on the one-gang junction box
· screw distance to equipment attachment 60 mm
· with moulded-in plaster skin to prevent ingress of cleaning material

Height	14,5 mm
Diameter	60 mm
Art. No.	1261-60
Inner packaging/shipping	25 / 250

FLUSH-MOUNTING

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SERVICE

One-gang junction boxes and system components
for horizontal prefabrication
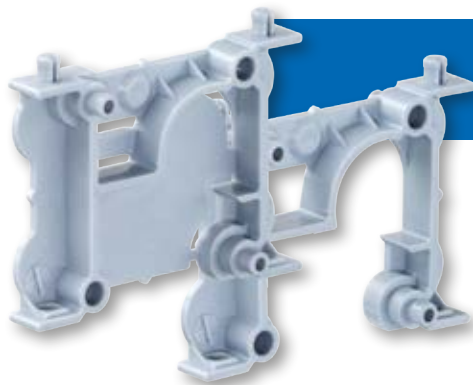
10–100 mm extension element

Extension element for bridging wall thicknesses and supporting one-gang boxes during installation on the opposing formwork. Bridging of up to 100 mm (plus box dimensions) can be underpinned securely in increments of 10 or 50 mm.

- For installation of overhead one-gang junction boxes
- Fitting height: vertical 50 mm, horizontal 10 mm
- can be attached to one-gang junction boxes or abutment using push-stud conduit connector
- Clip the connector into place, insert the conduit into the connector.

Processing instructions

Connected crossways, the elements provide stable and non-distorting support.

A wide range of possibilities for adjusting the installation height.

Different installation heights can be created in 10 mm increments.

The abutment is needed for upper boxes as a starter element on the formwork table. It is available with or without special adhesive and can be combined with extension elements and one-gang junction boxes.

Extension element 10 to 50 mm
· for fitting of overhead one-gang junction boxes at greater heights
· can be attached to one-gang junction boxes or abutment using push-stud conduit connector

Installation heights, horizontal	10 mm
Installation heights, vertical	50 mm
Art. No.	1261-10
Inner packaging/shipping	- / 50

Abutment
· for fitting of overhead one-gang junction boxes at greater heights
· for fixing to formworks

With special adhesive	-	•
Art. No.	1261-11	1261-72
Inner packaging/shipping	- / 50	- / 50

Subject to modifications

Universal extension element from 105 mm

Universal extension element for bridging wall thicknesses of more than 105 mm and supporting one-gang boxes during installation on the opposing formwork. Thanks to the various sizes, heights of 105 mm up to 300 mm (plus box dimensions) can be bridged in increments of 5 mm.

• For installation of overhead one-gang junction boxes
• Height adjustable in increments of 5 mm
• Can be attached to one-gang junction boxes using push-button connection

halogen-free

650 °C
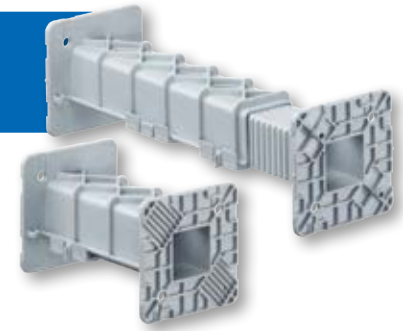
Processing instructions
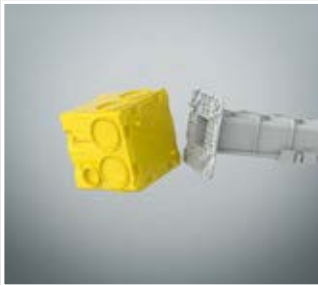
Connect the universal extension element and the one-gang junction box using the push-button connection.

Attach the universal extension element to the formwork table with hot glue.

The correct height is achieved by simply assembling the two halves.

Note
For lengths of less than 105 mm, the two parts are simply shortened and put back together again.

Universal extension element
· for fitting of overhead one-gang junction boxes at greater heights
· height adjustable in increments of 5 mm

Length (+ box installation height)	105 - 170 mm	175 - 300 mm	105 - 170 mm	175 - 300 mm
attached using hot glue on formwork table	•	•	-	-
can be attached to one-gang junction boxes or abutment using push-stud conduit connector	-	-	•	•
Art. No.	1261-06	1261-07	1261-08	1261-09
Inner packaging/shipping	- / 50	- / 50	- / 50	- / 50

FLUSH-MOUNTING

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Large slab ceiling

Large slab ceiling box for factory installation in prefabricated ceilings. The large slab ceiling boxes are already integrated in the ceilings when these arrive at the building site. This permits fast on-site laying of empty conduits.

- Large adhesive area with rough surface structure for a secure fit on the formwork table
- Installation height guarantees optimal transport conditions for prefabricated ceilings
- Quick-release cover for fast cutting of conduit entries using punch pliers
- Integrated cap nut M5 ensures secure fitting of a light hook.

650 °C | IP 30 | halogen-free

Slab ceiling large box 115

· for factory fitting
· Installation height 115 mm, with metal nut M5 for light hook (min. hook length: 115 mm + plaster thickness)
· with screw-down cover for onsite fitting of conduits
· suitable for all types of formwork
· maximum light hook load to DIN EN 60670 100 N (10 kg)

Slab ceiling large box 105

· for factory fitting
· installation height 105 mm, with metal nut M5 for light hook (min. hook length 105 mm + plaster thickness)
· for space frame heights up to 11 cm (incl. distance pieces)
· with screw-down cover for onsite fitting of conduits
· suitable for all types of formwork
· maximum light hook load to DIN EN 60670 100 N (10 kg)

Exit opening Ø	**60 mm**	**60 mm**
Depth	115 mm	105 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	8	8
Markings for cables and DIN EN conduits up to Ø 32 mm	4	-
Number of parts	2	2
especially suitable for hot glue attachment	•	•
⚠	•	•
Art. No.	**1227-55**	**1227-54**
Inner packaging/shipping	- / 100	- / 100

Light hook

· for retrofitting ceiling boxes (DIN EN 60670)
· maximum light hook load to DIN EN 60670 100 N (10 kg)
· with M5 thread, fully-insulated

Length of shank	Diameter hook	Thread length	Overall length	Art. No.	Inner packaging/ shipping
105 mm	26 mm	10 mm	132 mm	**1226-97**	- / 100
115 mm	26 mm	10 mm	143 mm	**1226-98**	- / 100
125 mm	26 mm	10 mm	151 mm	**1226-99**	- / 100

Wall and ceiling transition

Wall and ceiling transition for uninterrupted conduit connections and wall and ceiling exits. The exact distance to the formwork edgings can be set and fixed in 5 mm increments with the integrated measurement strip.

• For secure conduit connections on prefabricated concrete elements
• For fitting to formwork edging
• For rigid and flexible DIN EN conduits Ø 25 mm
• For locating exact height thanks to integrated measurement strip

Installation

The exact position is achieved with the help of the measurement strip and by gluing it to the formwork edging.

The moulded closing cover protects the opening against dirt and concrete. Simply open it prior to installation.

Insert the conduit into the clean installation opening.

Wall exit of a prefabricated wall as transition to the filigree ceiling.

Wall and ceiling transition

· for fitting to formwork edging
· with moulded-in measurement strip to achieve the exact installation height in 5 mm steps
· with closing cover to prevent ingress of material

DIN EN conduit Ø	25 mm	25 mm
With special adhesive	-	•
Art. No.	1261-12	1261-73
Inner packaging/shipping	- / 100	- / 100

90° wall and ceiling transition

90° wall and ceiling transition for uninterrupted conduit connections and wall and ceiling exits. The 90° bend makes it much easier to pull the cables through at a later stage.

• For secure conduit connections on prefabricated concrete elements
• For fitting to formwork edging
• For rigid and flexible DIN EN conduits
• Upper conduit entry above the filigree ceiling, for laying conduits on the building site

 halogen-free   650 °C

Processing instructions

The 90° bend ensures clean transitions and easy cable routing. Just glue the wall and ceiling transition to the formwork edging.

The clip nose is used for securing corrugated conduits with Ø 20 or Ø 25 mm.

Two integrated closing covers protect against dirt and concrete penetration.

Wall and ceiling transition 90°
· for easier drawing of cable through 90° bends
· for fitting to formwork edging
· accepts rigid and flexible DIN EN conduits
· with closing cover to protect against foreign bodies

DIN EN conduit Ø	20 mm	25 mm
Art. No.	1261-16	1261-14
Inner packaging/shipping	- / 100	- / 100

Oval funnel

The oval funnel simplifies the exact joining of prefabricated concrete elements with integrated installation conduits. It guarantees safe conduit entry and provides a tolerance compensation of 1 cm or 2 cm during installation.

- Tolerance compensation when joining the concrete elements
- For industrially prefabricated ceiling and wall elements as well as on-site mixed concrete
- For secure connection of installation conduits on transitions of prefabricated concrete elements
- Precise joining of electrical installation conduits
- Tolerance compensation: 2 cm in longitudinal direction and 1 cm in transverse direction.
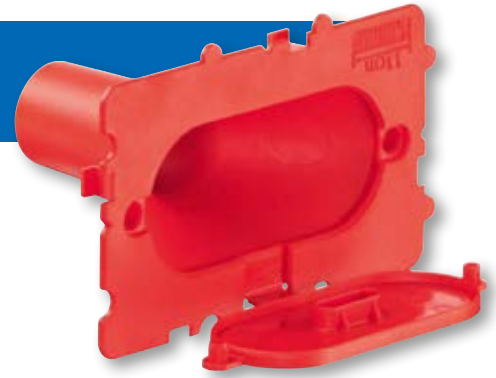
Tolerance compensation when joining the concrete elements

Compensation in longitudinal direction ± 20 mm.

Compensation in transverse direction ± 10 mm.

Wall-ceiling transition 90° using the oval funnel.
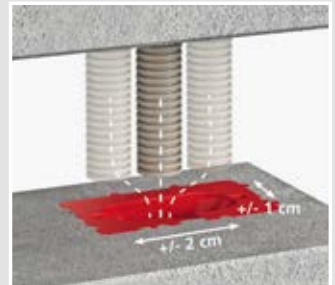
Oval funnel

- · for the simple connection of DIN EN conduits with tolerance compensation for wall-wall and wall-ceiling transitions
- · for installation on the transition edge
- · accepts rigid and flexible DIN EN conduits
- · with closing cover to prevent ingress of material
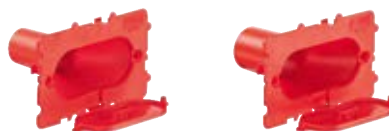
DIN EN conduit Ø	20 mm	25 mm
Art. No.	1261-42	1261-43
Inner packaging/shipping	- / 100	- / 100

FLUSH-MOUNTING

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KAISER | 185

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

One-gang box (Italian and American standard)

· for 3 modules in monoblock construction (single row)
· installation opening 60 x 90 mm

Depth	55 mm
Screw spacing	83 mm
Markings for cables and DIN EN conduits up to Ø 25 mm	8
Number of parts	2
Art. No.	1200-00
Inner packaging/shipping	- / 100

One-gang box (Italian and American standard)

· Screw spacing device 2 x 83.5 mm, for installing Italian and American inserts
· for 2x3 modules in monoblock construction (double row)
· installation opening 72 x 105 mm

Length x Width x Depth	128 x 128 x 80 mm
Number of parts	2
Entry fields	8
possible DIN EN conduit sizes per entry field: 4 x 16 mm Ø, 3 x 20 mm Ø, 1 x 25 mm Ø, 1 x 32 mm Ø, 1 x 40 mm Ø	•
Art. No.	1295-02
Inner packaging/shipping	- / 10

One-gang box

· equipment can be aligned at any time by using to M 3.5 slide nuts
· Certified to BS 4662

🇬🇧

Depth	60 mm
Screw spacing	60,3 mm
Installation opening	68 x 68 mm
Markings for cables and DIN EN conduits up to Ø 32 mm	4
Number of parts	2
Art. No.	1223-41
Inner packaging/shipping	- / 100

Two-gang box

· equipment can be aligned at any time by using to M 3.5 slide nuts
· Certified to BS 4662

🇬🇧

Depth	60 mm
Screw spacing	120,6 mm
Installation opening	68 x 128 mm
Markings for cables and DIN EN conduits up to Ø 32 mm	6
Number of parts	2
Art. No.	1224-41
Inner packaging/shipping	- / 100

Slide nuts for British accessories inserts

· 2 items required per one-gang box
· for clipping into equipment one-gang boxes 1223-41/1224-41
· protected against corrosion

🇬🇧

Art. No.	1224-99
Inner packaging/shipping	- / 100

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One-gang box combinations (Swiss standard)
· incl. stabilising cover

🇨🇭

Length x Width x Depth	78 x 78 x 58 mm	130 x 70 x 70 mm	196 x 70 x 55 mm	250 x 70 x 70 mm
Combination	-	2x1	3x1	4x1
Break-out openings Ø 20 mm	9	-	10	-
Combination conduit entries M20/25	2	8	4	22
Number of nails	●	-	-	-
CE	●	●	●	●
Art. No.	**9918**	**9922**	**9923**	**9924.40**
Inner packaging/shipping	- / 50	- / 50	- / 10	- / 25

One-gang box combinations (Swiss standard)
· incl. stabilising cover

🇨🇭

Length x Width x Depth	130 x 130 x 70 mm	190 x 130 x 70 mm	250 x 130 x 70 mm	190 x 190 x 70 mm
Combination	2x2	3x2	4x2	3x3
Combination conduit entries M20/25	16	20	24	24
CE	●	●	●	●
Art. No.	**9924**	**9926**	**9928**	**9929**
Inner packaging/shipping	- / 5	- / 5	- / 5	- / 5

Prefix® concrete building box

🇨🇭

3D animation

Exit opening Ø	30 mm
Depth	97 mm
Combination	1x1
CE / 🔥 650 °C	● / ●
(+S)	●
Art. No.	**9940**
Inner packaging/shipping	- / 10

End covers and separator walls
for on-site mixed concrete

FLUSH-MOUNTING

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Separator walls

· for separating junction casings from electrical circuit
· can be retrofitted
· halogen-free

for casing size	180 x 180 mm	250 x 220 mm
Art. No.	1296-20	1297-20
Inner packaging/shipping	- / 10	- / 10

Cover

· flat cover edge
· surface roughened
· countersunk for screw heads

For casing size - flush-mounting boxes	107 x 107 mm	159 x 159 mm	238 x 208 mm
For casing size - cavity wall boxes	105 x 105 mm	165 x 165 mm	235 x 205 mm
For casing size - concrete construction boxes	128 x 128 mm	180 x 180 mm	250 x 220 mm
Fireproof	850 °C	850 °C	850 °C
Art. No.	1095-93	1096-93	1097-93
Inner packaging/shipping	10 / 500	10 / 200	5 / 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
halogen-free	-	●
Fireproof	850 °C	850 °C
⚠ DVE	●	●
Art. No.	1184-90	1184-77
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
Art. No.	1174-99
Inner packaging/shipping	- / 10

End covers and separator walls

for on-site mixed concrete

Plug-in cover

· with central plug-in connector

· for Art. Nos. 1245-60/-62/-63 and 1246-57

· for mounting wood screw Ø 3.5 mm, head Ø 6.5 - 7 mm, attach centrally in cover exit

· screw not included

Length x Width x Height	- x - x 5 mm	86 x 86 x 4 mm
Diameter	98 mm	-
Colour	RAL 9010	RAL 9010
CE	•	•
Art. No.	11081	11086
Inner packaging/shipping	- / 10	- / 10

Plug-in cover with cable outlet

· with central plug-in connector

· for Art. Nos. 1245-60/-62/-63 and 1246-57

· for mounting wood screw Ø 3.5 mm, head Ø 6.5 - 7 mm, attach centrally in cover exit

· screw not included

Height	5 mm	22 mm
Diameter	98 mm	80 mm
Colour	RAL 9010	RAL 9010
CE	•	•
Art. No.	11082	11088
Inner packaging/shipping	- / 10	- / 10

Cover with mounting ring

· can also be used as cover for reserve conduit exits

· attach the mounting ring (included) to the exit and place the end cover in position (bayonet fitting)

· for Art. Nos. 1245-60/-62/-63 and 1246-57

Height	15 mm
Outer diameter	100 mm
Art. No.	10100
Inner packaging/shipping	- / 10

Subject to modifications

FLUSH-MOUNTING

CAVITY WALL

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CABLE GLANDS

TOOLS

SERVICE

Conduit and cable distance support
· attachment to formwork using expanding dowels, nails or screws
· halogen-free

Conduit and cable distance piece for 1270-00	-	•
For fixing cable and conduit to formwork	•	-
Art. No.	1270-00	9060-95
Inner packaging/shipping	- / 1000	1000 / 30000

Plug-in cover
· breakout openings for wiring and light hook
· plug-in depth min. 3 mm max. 15 mm

Diameter	35 mm	60 mm
Art. No.	1148-93	1259-96
Inner packaging/shipping	25 / 100	25 / 250

Expanding dowel
· for quick fixing to steel formwork
· 1-piece in plastic
· for boxes, casings, bushes etc.
· drill hole size required Ø 5.5 mm

Diameter	5,5 mm
Art. No.	1217-02
Inner packaging/shipping	500 / 2500

Magnet
· for anti-shock fixing of boxes in horizontal formwork
· for vertical formwork, additional support by means of support element and abutments is necessary
· for degreasing formwork
· for all boxes with Ø 60 mm opening, except for the boxes from the B² range

Diameter	60 mm
Art. No.	1220-02
Inner packaging/shipping	- / 5

Installation housings for concrete and dry construction

Installation housings for concrete

- Free space for luminaires and loudspeakers in concrete ceilings and walls
- Modular and flexible for all installation diameters and depths
- For on-site mixed concrete and precast concrete
- Optionally for facing concrete
- Toolless combination entry for M20/M25 conduits – can also be closed again
- Maximum contact surface to the concrete ensures optimal thermal management
- Shape-retaining and loadable
- All housings are available with and without a tunnel
- Housings and front parts are sturdily latched together and can be aligned later as required

	HaloX® 100 For luminaires and loudspeakers p. 196	**HaloX® 180** For luminaires and loudspeakers p. 196	**HaloX® 250** For luminaires and loudspeakers p. 196	**KompaX®1/ KompaX®2** For luminaires and loudspeakers p. 216
Installation dimensions for luminaire, loudspeaker				
max. installation diameter luminaire/loudspeaker	100 mm	180 mm	250 mm	300 mm
max. installation depth luminaire/loudspeaker	110 mm	110 mm	110 mm	110 mm
Use in **facing concrete**	•	•	•	•
For universal installation diameters	•	•	•	•
Installation option				
Ceiling installation	•	•	•	•
Wall installation	•	•	•	-
Concreting method				
On-site mixed concrete	p. 198	p. 198	p. 198	p. 216
Precast concrete	-	p. 211	p. 211	p. 216
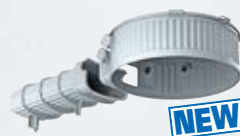
FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Installation housings for energy-efficient walls and ceilings

- Freiraum für Leuchten und Lautsprecher
- Vermeiden die latente Brandgefahr
- Nachweislich, dauerhafter Erhalt der Luftdichtheit nach DIN 18015-5 bzw. DIN 4102-7
- Systeme für die nachträgliche Montage von unten

	ThermoX® LED for rigid and pivoting LED built-in luminaires p. 231	ThermoX® for low-voltage and high-voltage built-in luminaires p. 238	EnoX® for halogen spotlights, LED luminaires and displays p. 235	Installation housing ThermoX® Iso + for LED luminaires up to 8 Watt p. 58
Product details				
Installation under the air-tight level	•	•	•	-
Installation inside the air-tight level	-	-	•	-
Installation in the insulated level	-	-	-	•
Housing height	70/95 mm	90 mm	60 mm	100 - 160 mm
max. installation diameter luminaire/loudspeaker	70/81 mm	up to max. 86 mm	up to max. 120 mm	up to max. 86 mm
max. installation depth luminaire/loudspeaker	60/85 mm	65/70 mm	57 mm	70 - 130 mm
Installation options				
Retrofitting	•	•	-	-
Wall installation	-	-	•	-
Ceiling installation	•	•	•	•

Installation housings for fire-protection ceilings

- Secure certified fire-protection housings for built-in luminaires and loudspeakers in fire-protection ceilings.
- Integrated fire-retardant coating maintains the ceiling's fire-resistance class F30 (EI30) in fire-protection ceilings.
- They prevent the spreading of fire and smoke. and in this way they secure escape routes
- Suitable for fire stress from above and below

	FlamoX® for luminaires and loudspeakers p. 278	FlamoX®-S 30 E for luminaires and loudspeakers p. 281
Installation dimensions for luminaires and loudspeakers		
max. installation diameter luminaire/loudspeaker	180 mm	240 mm
For universal installation diameters	•	•
max. installation depth luminaire/loudspeaker	150 mm	200 mm
Installation options		
Retrofitting	•	-
In self-supporting sub-ceilings EI30/F30	•	•
Installation without additional suspension	•	-
Installation without additional fire-protection materials or sealing compounds	•	-

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HaloX®
Free space for planning, installation and ambience.

One system for all situations

HaloX® for on-site mixed concrete
The modular housing system for ceilings and walls is available in three housing sizes with fixed or variable installation diameters up to 250 mm even for facing concrete requirements.

p. 198

HaloX® for precast concrete
The modular housing system for walls and ceilings is available in two housing sizes with fixed or variable installation diameters up to 250 mm (up to 210 mm with tolerance compensation).

p. 211

HaloX® for retrofitting
HaloX® for the retrofitting of installation housings in slab ceilings and solid ceilings. After a core drilling has been made, the housings can be expanded in accordance with the ceiling thickness.

p. 208

One system for all situations – for fitting in on-site mixed concrete, the front parts can be nailed to the working formwork. Prefix® installation sets are available for fixing to the opposing formwork. For precast concrete, the housings can be fitted using glue or a magnet.

Combination entry for M20/M25 conduits – toolless opening technology with secure conduit retention and depth stop with no need for internal shortening of the conduits. Can be repopulated for later alterations or incorrect population.

PRESS

M20 / M25

Pressure-resistant tunnel for holding operating devices. Minimal effect on the statics – no reinforcement cuts required in the tunnel area

Shape-retaining and loadable.
Compact housing with stabilising wave profile provides the necessary stability during concreting – even under extreme loads.

Continuous housing system – modular, flexible for luminaires and loudspeakers in all heights and with installation diameters up to 250 mm.

For ceilings and walls

Wave-shaped surface profile ensures maximum housing surface for optimal heat dissipation via the concrete

FLUSH-MOUNTING

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SERVICE

HaloX® system
For luminaires and loudspeakers

HaloX® concrete installation housing

The new HaloX® housing system offers space for new light or sound in concrete ceilings and walls. Shape-retaining, loadable and in a modular design, the HaloX® system provides a secure installation compartment for loudspeakers and luminaires with LED, halogen or compact fluorescent lamps. Round, square or universal front parts ensure that any device up to a ceiling cut-out of 250 mm can be installed, even when facing concrete is required. Optional extension rings provide more space for greater installation depths. The toolless combination entry for M20/M25 conduits is easy to internal and, even with incorrect occupancy, is easily closed again. It provides secure conduit retention with depth stop, so there is no need for later internal shortening of the conduits.

• For on-site mixed concrete and precast concrete - for wall and ceiling
• For luminaires and loudspeakers with installation diameters up to 250 mm
• All housings available with and without a tunnel
• Toolless opening technology for entries M20/M25
• Optimal thermal management on the basis of maximum surface contact to the concrete
• Minimal effect on the statics - no cuts to the reinforcement required in the tunnel area

halogen-free | 650 °C | ▦ INNOVATION | LED | ▶ www | **FACING CONCRETE**

Application

HaloX® with innovative toolless opening technology.

Toolless combination entry M20/M25 - secure with high retention force. No internal shortening of conduits is necessary.

HaloX housings are available with and without a tunnel - in all sizes
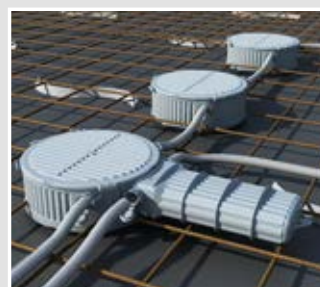
Shape-retaining, loadable and easily fitted. Safe place for new light or sound.

Shape-retaining, resilient and easy to process. HaloX® ensures a secure place for new light or modern sound.

Minimal effect on the statics – no additional cuts to the reinforcement in the area of the tunnel as it has a clearance of 40 mm to the formwork.

The high contact surface of the housings conducts the heat directly away via the concrete and in this way prevents excessively high temperatures in the housing.

HaloX® creates a secure installation compartment for luminaires and loudspeakers in concrete ceilings and walls.

Subject to modifications

Temperature management for HV LED and LV LED luminaires

230V built-in LED luminaire with 68 mm installation diameter
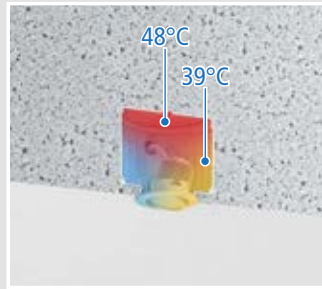
Temperature profile 230V built-in LED luminaire max. 20 W

LV LED luminaire installation diameter 140 mm
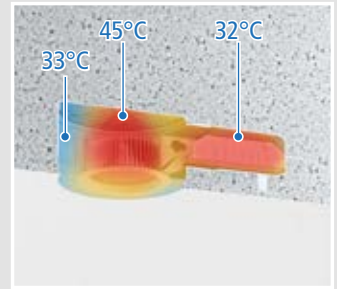
Temperature profile LV LED luminaire max. 35 W

Temperature management for HV halogen and TC luminaires

230V built-in luminaire with 100 mm installation diameter

Temperature profile HV halogen luminaire max. 75 W (230V)

Installation downlight TC-TEL 2 x 26 W with installation diameter of 215 mm
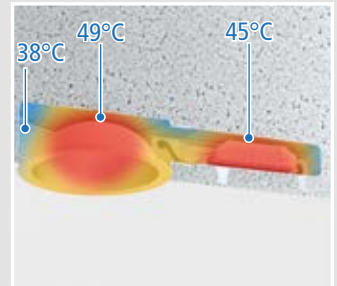
Temperature profile installation downlight TC-TEL with 2 x 26 W

Connection conditions and switching examples for LED and LV halogen luminaires
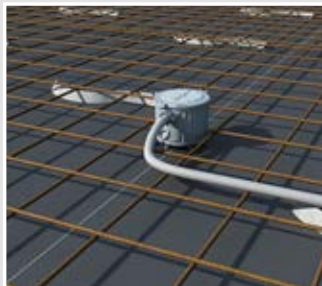
Connection and conduit entry for a 230V LED luminaire
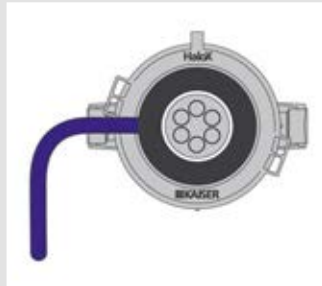
Diagram of single circuit
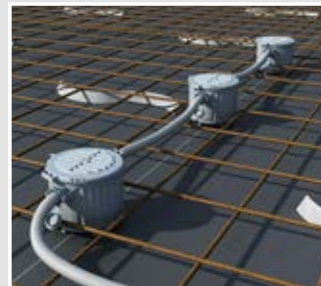
Group switching HV halogen luminaires
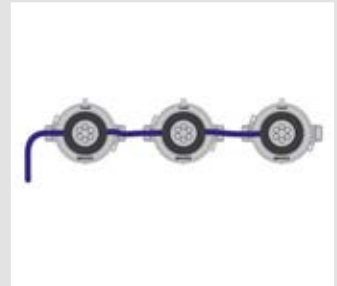
Schematic diagram of group switching
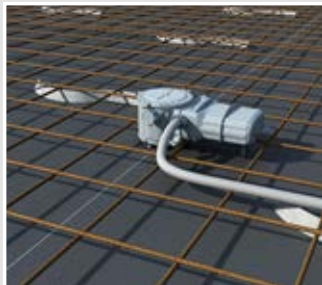
Connection and conduit entry LED luminaire with operating device.

Schematic diagram of luminaire with driver
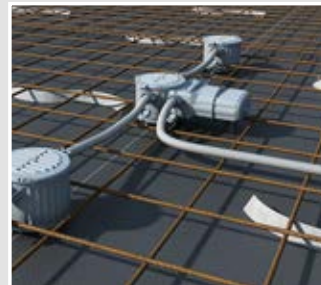
Diagram of group switching with one driver for more than one luminaire

Schematic diagram of group switching with a operating device.

FLUSH-MOUNTING

CAVITY WALL

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HaloX® system overview for on-site mixed concrete
For luminaires and loudspeakers

System overview of HaloX® for on-site mixed concrete

1 Installation space for luminaires / loudspeakers and operating devices

	max. 100 mm	max. 180 mm	max. 250 mm
without additional space for operating devices	**HaloX® 100** 1281-00 | p. 203	**HaloX® 180** 1282-00 | p. 203	**HaloX® 250** 1283-00 | p. 203
Additional space for operating devices up to max. 150 x 90 x 50 mm	**HaloX® 100 with tunnel 190** 1281-30 | p. 203	**HaloX® 180 with tunnel 190** 1282-30 | p. 203	
Additional space for larger operating devices up to max. 280 x 90 x 50 mm		**HaloX® 180 with tunnel 325** 1282-40 | p. 203	**HaloX® 250 with tunnel 325** 1283-40 | p. 203

2 Installation diameter for luminaires/loudspeakers

		max. 100 mm	max. 180 mm	max. 250 mm
round	Front parts round	Ø 68 - 100 mm p. 203	Ø 100 - 180 mm p. 205	Ø 180 - 250 mm p. 206
square	Front parts square	68 x 68 - 75 x 75 mm p. 204	–	–
Facing concrete: round	Front parts with elastomer seal for facing concrete	Ø 68 - 100 mm p. 204	Ø 100 - 180 mm p. 205	Ø 180 - 250 mm p. 206
Facing concrete: square	Front parts square with elastomer seal for facing concrete	68 x 68 - 75 x 75 mm p. 204	–	–
universal	Universal front part plastic (a) or mineral fibreboard (b)	Ø max. 100 mm p. 205	Ø max. 180 mm p. 205	Ø max. 250 mm p. 206
specific	Individual Styrofoam moulded parts (optional for facing concrete)	p. 207	p. 207	p. 207

3 Installation depth

Installation height > 110 mm

max. 100 mm	max. 180 mm	max. 250 mm
Extension rings 10 / 25 / 50 mm 1281-21/25/50 | p. 207	**Extension rings 25 / 50 mm** 1282-25/50 | p. 207	**Extension rings 25 / 50 mm** 1283-25/50 | p. 207

4 Accessories for wall installation

Wall installation in vertical formwork
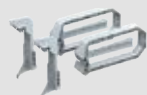
Prefix® installation set for fixing to the reinforcement 1299-65 \| p. 207

Wall installation set for fitting in vertical formwork 1299-60...64 \| p. 207
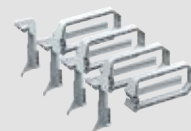
Prefix® installation set for fixing to the reinforcement 1299-66 \| p. 207

Subject to modifications

Concrete installation housing
HaloX® (on-site mixed concrete)

The shape-retaining HaloX® system has a modular design for fitting in on Site mixed concrete. Three housing diameters with a large number of round, square and universal front parts allow the integration of luminaires and loudspeakers up to an installation diameter of 250 mm, including in facing concrete. With a tunnel, the system provides sufficient space for the fitting of operating devices such as LED drivers. Optional extension rings increase the installation depth. All front parts are moisture-repellent and can be positioned exactly and nailed-on even before the first reinforcement is laid. Housings and front parts are firmly and stably latched together and can still be aligned as required afterwards. By means of the toolless,opening technology with M20/M25 combination entry, conduits can be inserted quickly and easily and even if the population is incorrect, the entry can easily be closed again. It provides secure conduit retention with a depth stop, so there is no need for later internal shortening of the conduits. After casting, front parts with a defined installation diameter can be opened with a targeted blow of the hammer. The front parts for universal opening dimensions can be plastered locally or plastered over. Then cut the required installation opening using standard cutting tools e.g. MULTI 4000.

- For walls and ceilings
- For luminaires and loudspeakers with installation diameters up to 250 mm
- Housings and front parts are latched together securely and sturdily and can also be aligned later as required
- All housing sizes are available with and without a tunnel
- Toolless opening technology for entries M20/M25
- Optimal thermal management on the basis of maximum surface contact to the concrete
- Minimal effect on the statics - no cuts to the reinforcement required in the tunnel area

halogen-free | 650 °C | :::INNOVATION | LED | WWW | **FACING CONCRETE**

PRESS

HaloX® system for on-site mixed concrete
For luminaires and loudspeakers

Ceiling installation

Nail the front part onto the formwork. After latching the housing on, it can be turned by 360° for alignment.

Minimal effect on the statics – no additional cuts to the reinforcement in the area of the tunnel as it has a clearance of 40 mm to the formwork.
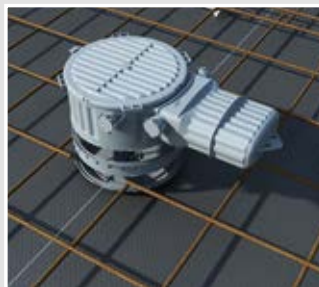
By using an intermediate ring, the installation depth can be increased above or underneath the housing.

Toolless combination entry of M20/M25 conduits with conduit stop - no later shortening of the conduits.

Sturdy and shape-retaining fitting.

After striking the formwork, open the front part with one hammer blow (e.g. Art. No. 1282-65).

Easy and variable creation of the installation opening in the universal front part with e.g. 1083-10.

When the universal front part (e.g. Art. No. 1281-10) is used, smooth the edge area.

Wall installation

Use nails to fasten the front part to the formwork.

When using the housing with a tunnel, align it vertically downwards.

When installing HaloX® 180/250 in addition use wall installation kit 1299-xx

Toolless combination entry for conduits M20/M25.

Wall-mounting fixing opposing formwork

For fitting to the opposing formwork, Prefix® installation sets 1299-65 for HaloX® 100 and 1299-66 for HaloX® 180/250 are available as an option.

When fitting HaloX® 180/250, also use wall installation kit Art. No. 1299-60.
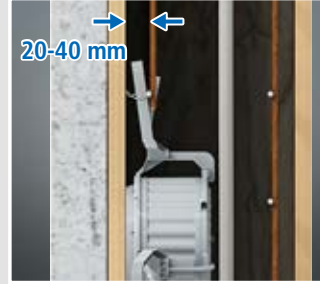
20-40 mm

The Prefix® installation clamps can be latched-on on both sides and are suitable for concrete coverings of 20-40 mm...
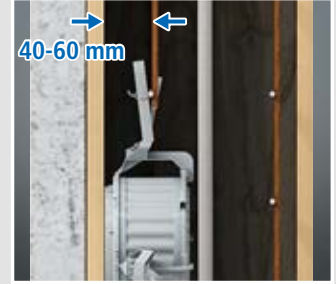
40-60 mm

… and 40-60 mm.

Following pre-fixing by using Prefix® installation clamps, both your hands are free to carry out fast, secure fixing to the reinforcement using tie wires.

Now the housing with conduits M20/M25 can be populated – no tools necessary.

Concrete cover after installation with catch mechanism Prefix® wing for 20-40 mm concrete covering.

Concrete covering after installation with catch mechanism Prefix® wing for concrete covering 40-60 mm.

Wall luminaire installation

The concreting process can start after positioning of the opposing formwork.
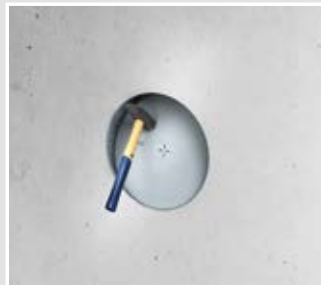
After striking the formwork, open the front part with one hammer blow (e.g. Art. No. 1282-65).

Easy and variable cutting of the installation opening in the universal front part (e.g. with Art. No. 1089-00).

If a universal front part (e.g. Art. No. 1281-10) is used, apply plaster as necessary.

HaloX® system for on-site mixed concrete
For luminaires and loudspeakers

Processing information: Variants | front parts | facing concrete

Front parts with defined exit sizes are available for all housing sizes, including for facing concrete. Styrofoam mouldings are available for individual installation openings in almost any shape; universal mouldings are suitable for variable or as-yet-undefined ceiling exits.
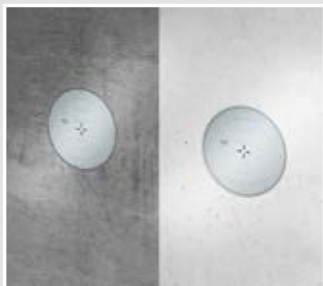
Round front parts with and without elastomer seal.

Square front parts with and without elastomer seal.

Styrofoam mouldings for individual cut-outs in any shape and size (with and without elastomer seal).

Universal front parts for variable or as-yet-undefined ceiling cut-outs.

Position/alignment and wall installation

Position and aligning
The snap-in front parts permit a change to the position of the tunnel after nailing.

Wall installation
For wall installation (housing Ø 180 and Ø 250), use installation set for inner-side support in order to guarantee the secure installation compartment.

Extension rings

Intermediate rings are available to enlarge the installation compartment

HaloX® Ø 100: front-side extension 25 or 50 mm (Art. No. 1281-25, -50).

HaloX® Ø 180: front-side extension 25 or 50 mm (Art. No. 1282-25, -50)

HaloX® Ø 180: rear-side extension 25 or 50 mm (Art. No. 1282-25, -50)

HaloX® Ø 250: extension 25 or 50 mm front or rear (Art. No. 1283-25, -50)

HaloX® system for on-site mixed concrete
For luminaires and loudspeakers

HaloX® 100 / 180 / 250 (on-site mixed concrete)
· Toolless combination entry for M20/M25 conduits
· Conduit entry limit to prevent the need for inside shortening of the conduit

System	HaloX® 100	HaloX® 180	HaloX® 250
Ceiling exit (CE) Ø	0-100 mm	0-180 mm	0-250 mm
max. installation depth luminaire / loudspeaker	110 mm	110 mm	110 mm
LED wattage max.	20 Watt	35 Watt	45 Watt
Lamp wattage max.	50 Watt	75 Watt	100 Watt
Housing diameter Ø	130 mm	210 mm	280 mm
Depth incl. front part	120 mm	120 mm	120 mm
Combination entry for M20/M25 conduits	2	2	2
Art. No.	1281-00	1282-00	1283-00
Inner packaging/shipping	- / 10	- / 10	- / 10

HaloX® 100 / 180 / 250 with transformer tunnel (on-site mixed concrete)
· Toolless combination entry for M20/M25 conduits
· Conduit entry limit to prevent the need for inside shortening of the conduit
· No reinforcement cuts in tunnel section area

System	HaloX® 100	HaloX® 180	HaloX® 180	HaloX® 250
Ceiling exit (CE) Ø	0-100 mm	0-180 mm	0-180 mm	0-250 mm
max. installation depth luminaire / loudspeaker	110 mm	110 mm	110 mm	110 mm
LED wattage max.	20 Watt	35 Watt	35 Watt	45 Watt
Lamp wattage max.	50 Watt	75 Watt	75 Watt	100 Watt
Housing diameter Ø	130 mm	210 mm	210 mm	280 mm
Depth incl. front part	120 mm	120 mm	120 mm	120 mm
Tunnel length	190 mm	190 mm	325 mm	325 mm
Tunnel width	140 mm	140 mm	140 mm	140 mm
Tunnel height	85 mm	85 mm	85 mm	85 mm
Combination entry for M20/M25 conduits	4	4	4	4
Art. No.	1281-30	1282-30	1282-40	1283-40
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

HaloX® 100 front parts
· Suitable for housing with Art. No. 1281-XX and 1290-30

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Art. No.	Inner packaging/shipping
68 mm	75 mm	1281-01	- / 10
75 mm	82 mm	1281-02	- / 10
80 mm	87 mm	1281-03	- / 10
85 mm	92 mm	1281-04	- / 10
90 mm	97 mm	1281-05	- / 10
95 mm	102 mm	1281-06	- / 10
100 mm	107 mm	1281-07	- / 10

HaloX® 100 front parts for facing concrete

· in facing concrete version
· elastomer seal with flexible sealing edge
· prevents ingress of concrete, discolouring and sand blast dust
· for exact flush finishes in facing concrete without additional reworking
· Suitable for housing with Art. No. 1281-XX and 1290-30

FACING CONCRETE

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Art. No.	Inner packaging/ shipping
68 mm	80 mm	1281-61	- / 8
75 mm	87 mm	1281-62	- / 8
80 mm	92 mm	1281-63	- / 8
85 mm	97 mm	1281-64	- / 8
90 mm	102 mm	1281-65	- / 8
95 mm	107 mm	1281-66	- / 8
100 mm	112 mm	1281-67	- / 8

HaloX® 100 front parts, square

· Suitable for housing with Art. No. 1281-XX and 1290-30

Ceiling exit (CE) Ø	68 x 68 mm	75 x 75 mm
Min. luminaire covering	75 x 75 mm	82 x 82 mm
Art. No.	1281-08	1281-09
Inner packaging/shipping	- / 10	- / 10

HaloX® 100 front parts, square for facing concrete

· in facing concrete version
· elastomer seal with flexible sealing edge
· prevents ingress of concrete, discolouring and sand blast dust
· Suitable for housing with Art. No. 1281-XX and 1290-30

FACING CONCRETE

Ceiling exit (CE) Ø	68 x 68 mm	75 x 75 mm
Min. luminaire covering	80 x 80 mm	94 x 94 mm
Art. No.	1281-68	1281-69
Inner packaging/shipping	- / 8	- / 8

HaloX® 100 universal front parts

· Suitable for housing with Art. No. 1281-XX and 1290-30

Ceiling exit (CE) Ø	0-100 mm	0-100 mm
Universal plastic panel	•	-
Universal mineral fibreboard	-	•
Art. No.	**1281-10**	**1281-11**
Inner packaging/shipping	- / 10	- / 8

HaloX® 180 front parts

· Suitable for housing with Art. No. 1282-XX

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Art. No.	Inner packaging/ shipping
100 mm	107 mm	**1282-01**	- / 10
110 mm	117 mm	**1282-02**	- / 10
125 mm	132 mm	**1282-03**	- / 10
145 mm	152 mm	**1282-04**	- / 10
160 mm	167 mm	**1282-05**	- / 10
180 mm	187 mm	**1282-06**	- / 10

HaloX® 180 front parts for facing concrete

· Suitable for housing with Art. No. 1282-XX

FACING CONCRETE

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Art. No.	Inner packaging/ shipping
100 mm	112 mm	**1282-61**	- / 10
110 mm	122 mm	**1282-62**	- / 10
125 mm	137 mm	**1282-63**	- / 10
145 mm	157 mm	**1282-64**	- / 10
160 mm	172 mm	**1282-65**	- / 10
180 mm	192 mm	**1282-66**	- / 10

HaloX® 180 universal front parts

· Suitable for housing with Art. No. 1282-XX

Ceiling exit (CE) Ø	0-180 mm	0-180 mm
Universal plastic panel	•	-
Universal mineral fibreboard	-	•
Art. No.	**1282-10**	**1282-11**
Inner packaging/shipping	- / 10	- / 10

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

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HaloX® system for on-site mixed concrete
For luminaires and loudspeakers

HaloX® 250 front parts
· Suitable for housings with Art. No. 1283-XX

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Art. No.	Inner packaging/ shipping
180 mm	187 mm	1283-01	- / 10
190 mm	197 mm	1283-02	- / 10
200 mm	207 mm	1283-03	- / 10
215 mm	222 mm	1283-04	- / 10
240 mm	247 mm	1283-05	- / 10
250 mm	257 mm	1283-06	- / 10

HaloX® 250 front parts for facing concrete
· Suitable for housings with Art. No. 1283-XX

FACING CONCRETE

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Art. No.	Inner packaging/ shipping
180 mm	192 mm	1283-61	- / 10
190 mm	202 mm	1283-62	- / 10
200 mm	212 mm	1283-63	- / 10
215 mm	227 mm	1283-64	- / 10
240 mm	252 mm	1283-65	- / 10
250 mm	262 mm	1283-66	- / 10

HaloX® 250 universal front parts
· Suitable for housings with Art. No. 1283-XX

Ceiling exit (CE) Ø	0-250 mm	0-250 mm
Universal plastic panel	●	-
Universal mineral fibreboard	-	●
Art. No.	1283-10	1283-11
Inner packaging/shipping	- / 10	- / 10

Replacement mineral fibreboard for HaloX Ø 100, 180 and HaloX Ø 250
· for front parts with Art. Nos. 1281-11, 1282-11 and 1283-11

System	-	HaloX® 180	HaloX® 250
Art. No.	1281-27	1282-27	1283-27
Inner packaging/shipping	- / 10	- / 10	- / 10

Styrofoam moulded parts

· For individual installation openings (round, square)
· With maximum diameter up to 300 mm and max. height up to 50 mm
· for KompaX® with elastomer seal
· For all housings with Art. No. 12XX-XX

Art. No.	1292-90

Extension rings HaloX®

· To increase installation depth

System	Height	max. installation depth luminaire / loudspeaker	For Art. No.	Art. No.	Inner packaging/ shipping
HaloX® 100	10 mm	+ 10 mm	1281-xx/1290-30	1281-21	- / 10
HaloX® 100	25 mm	+ 25 mm	1281-xx/1290-30	1281-25	- / 10
HaloX® 100	50 mm	+ 50 mm	1281-xx/1290-30	1281-50	- / 10
HaloX® 180	25 mm	+ 25 mm	1282-xx	1282-25	- / 10
HaloX® 180	50 mm	+ 50 mm	1282-xx	1282-50	- / 10
HaloX® 250	25 mm	+ 25 mm	1283-xx	1283-25	- / 10
HaloX® 250	50 mm	+ 50 mm	1283-xx	1283-50	- / 10

Wall installation set

· Installation kit for wall installation in vertical formwork
· 2-piece, consists of support element and seating bearing
· For HaloX Ø 210 (1282-XX) and HaloX Ø 280 (1283-XX)

For luminaire or loudspeaker installation height	Art. No.
100 mm	1299-60
125 mm	1299-61
150 mm	1299-62
175 mm	1299-63
200 mm	1299-64

Prefix installation set

· Installation set for wall installation
· for fixing to the opposing formwork

for HaloX® 100	•	-
for HaloX® 180/250	-	•
Art. No.	1299-65	1299-66
Inner packaging/shipping	- / 1	- / 1

FLUSH-MOUNTING

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System overview of HaloX® for retrofitting

Installation diameter for luminaire/ loudspeaker max. 100 mm

1 Installation space for luminaires / loudspeakers and operating devices

	Slab ceiling	Solid ceiling

without additional space for operating devices

HaloX® 100 installation set 1281-20 | p. 209 **+** HaloX® 100 1281-00 | p. 203

HaloX® housing for core drillings in solid ceilings 1290-30 | p. 210

Additional space for operating devices
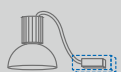
up to 150 x 90 x 50 mm

HaloX® 100 installation set 1281-20 | p. 209 **+** HaloX® 100 with tunnel 190 1281-30 | p. 203

2 Thickness of the slab ceiling

Thickness of the slab ceiling > 50 mm

Extension rings 10 / 25 / 50 mm 1281-21/25/50 | p. 210

3 Installation diameters for luminaires/loudspeakers

round Front parts round		Ø 68 - 100 mm p. 203
square Front parts square		68 x 68 - 75 x 75 mm p. 204
Facing concrete: round Front parts round with elastomer seal for facing concrete		Ø 68 - 100 mm p. 204
Facing concrete: square Front parts square with elastomer seal for facing concrete		68 x 68 - 75 x 75 mm p. 204
universal Universal front part plastic (a) or mineral fibreboard (b)	a b	Ø max. 100 mm p. 205
specific Individual Styrofoam moulded parts (optional for facing concrete)		p. 207

4 Installation depth

Installation height > 110 mm

Extension rings 10 / 25 / 50 mm 1281-21/25/50 | p. 210

HaloX® 100 installation kit
Retrofitting in slab ceilings

HaloX® 100 installation kit can be retrofitted in existing slab ceilings (50 mm thickness and greater) with or without transformer tunnel.

• For retrofitting in slab ceilings
• Minimal effect on statics
• Large selection of opening sizes up to Ø 100 mm
• Extension rings for bridging the slab ceiling element and for increasing the luminaire installation depth

Note

For slabs thicker than 50 mm, the housing can be expanded in 10/25/50 mm steps using the extension rings.

50 mm

—10 mm
—10 mm ⟩ HaloX® installation set
—10 mm
—20 mm — HaloX® front part

HaloX® installation kit mounting
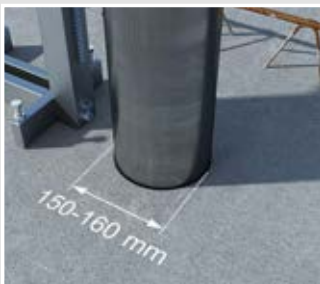
Cut drilling hole (ø 150–160 mm) in the slab ceiling.

Combine the extension ring and front part to correspond to the ceiling thickness and installation depth.

Attach the housing and place in the drilling hole, mark and fasten. Install the conduit in the KSK entry.
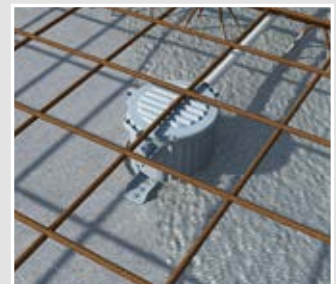
If necessary, secure the fixed housing with wire to the reinforcement

HaloX® 100 installation kit

· for retrofitting of HaloX® 100 housings into slab ceilings
· required hole size Ø 150-160 mm

System	HaloX® 100	HaloX® 100
Height	30 mm	10 mm
max. installation depth luminaire / loudspeaker	-	+ 10 mm
For Art. No.	1281-xx	1281-xx/1290-30
Art. No.	1281-20	1281-21
Inner packaging/shipping	- / 10	- / 10

Order front part separately

FLUSH-MOUNTING

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SERVICE

Retrofitting in concrete ceilings
For luminaires and loudspeakers

For retrofitting
Retrofitting into solid ceilings

HaloX® concrete installation housing for solid concrete ceilings can be inserted into existing and retrofitted drilling holes.

- For retrofitting in solid ceilings
- Minimal effect on statics
- Quick installation with snap-in connections
- Robust construction, ideal for use on building sites
- Large selection of opening sizes up to Ø 100 mm

halogen-free | 650 °C

Installation

Use the universal opening cutter to make accurate conduit entries for the appropriate conduit sizes.

Join the housing components to correspond to the ceiling thickness and installation depth.

Now insert the complete housing, including the installation into the opening or drilling hole. Then …

… fill the free space with concrete and compact it. A formwork board fitted underneath prevents the concrete from running out.

HaloX® housing for drilling holes in solid ceilings

· for retrofitting in solid ceilings
· required hole size Ø 150-160 mm
· Take into consideration the ceiling thickness - at least 3 cm concrete cover is needed on top of the box

Diameter	130 mm
Ceiling exit (CE) Ø	0-100 mm
LED wattage max.	20 Watt
Lamp wattage max.	50 Watt
Art. No.	1290-30
Inner packaging/shipping	- / 10

HaloX® extension rings

· for increasing luminaire fitting depth
· to be clipped between the front part and the housing
· multiple extensions possible

System	HaloX® 100	HaloX® 100	HaloX® 100
Height	10 mm	25 mm	50 mm
max. installation depth luminaire / loudspeaker	+ 10 mm	+ 25 mm	+ 50 mm
For Art. No.	1281-xx/1290-30	1281-xx/1290-30	1281-xx/1290-30
Art. No.	1281-21	1281-25	1281-50
Inner packaging/shipping	- / 10	- / 10	- / 10

Subject to modifications

System overview of HaloX® for precast concrete

1 Installation compartment for luminaires / loudspeakers and operating devices
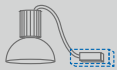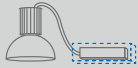
max. 140 mm (with tolerance compensation)
max. 180 mm (without tolerance compensation)

max. 210 mm (with tolerance compensation)
max. 250 mm (without tolerance compensation)

	Adhesive attachment one-piece housing with universal mineral fibre-board	**Magnet attachment** one-piece housing with universal plastic plate for the magnet recess	**Adhesive attachment** one-piece housing with universal mineral fibre-board	**Magnet attachment** one-piece housing with universal plastic plate for the magnet recess
		HaloX® magnet 1299-67 | p. 215		**HaloX® magnet** 1299-67 | p. 215
without additional space for operating devices	**HaloX® 180** 1282-71 | p. 213	**HaloX® 180** 1282-74 | p. 214	**HaloX® 250** 1283-71 | p. 213	**HaloX® 250** 1283-74 | p. 214
Additional space for operating devices up to max. 150 x 90 x 50 mm	**HaloX® 180 with tunnel 190** 1282-72 | p. 213	**HaloX® 180 with tunnel 190** 1282-75 | p. 214		
Additional space for larger operating devices up to max. 280 x 90 x 50 mm	**HaloX® 180 with tunnel 325** 1282-73 | p. 213	**HaloX® 180 with tunnel 325** 1282-76 | p. 214	**HaloX® 250 with tunnel 325** 1283-73 | p. 213	**HaloX® 250 with tunnel 325** 1283-76 | p. 214
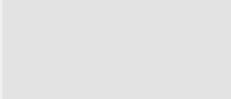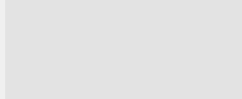
2 Installation depth

Installation height > 110 mm

Extension rings 25 / 50 mm 1282-25/50 \| p. 214

Extension rings 25 / 50 mm 1283-25/50 \| p. 214

3 Accessories for wall installation

Wall installation in vertical formwork

Wall installation set for fitting in vertical formwork 1299-60...64 \| p. 207

Tolerance compensation
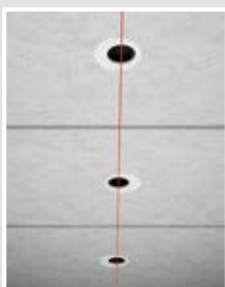
Depending on the installation diameter, at a later date you can correct inaccuracies which occurred during the laying of the slab ceilings. Use the KAISER VARIOCUT hole cutter to make accurate installation openings in the front parts.

HaloX® 180
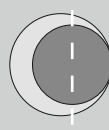
HaloX® 250
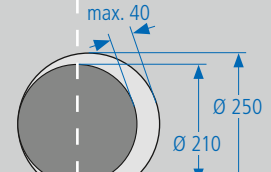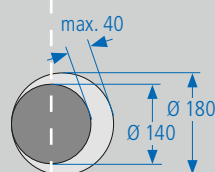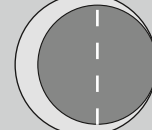
max. 40
Ø 180
Ø 140

max. 40
Ø 250
Ø 210

FLUSH-MOUNTING
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SERVICE

HaloX® for precast concrete
For luminaires and loudspeakers

NEW

HaloX® concrete installation housing (precast concrete)

System HaloX® is designed as a single piece for fitting in precast concrete. The housings can easily be aligned on the formwork table by means of markings on the housing. The housing with pre-fitted mineral fibreboard allows easy glueing and the housings can be turned by 360° on the formwork table even after glueing. Housings with pre-fitted front parts to hold the magnet (Art. No. 1299-67) are available for magnet attachment. Laying tolerances which may occur during the fitting of panel elements are compensated for via the housing sizes in connection with a variable cut-out area. Because of the compact dimensions of the housings, the reinforcement can easily be placed around the housing. For luminaires or loudspeakers with installation depths equal to or greater than 110 mm, the installation compartment of the HaloX® housings can be increased on the on-site concrete building site by means of extension rings. The fitting of the conduits on-site takes place without the need for tools for M20/M25 conduits without any internal shortening of the conduits.

• For precast concrete slab ceilings and wall elements.
• 3 housing sizes with and without tunnel
• Single-part housings with integrated mineral fibreboard for easy adhesive fixing
• One-part housings with plastic panel for magnet attachment
• Toolless opening technology for entries M20/M25
• Compensation for laying tolerances on the concrete building site
• Optimal thermal management on the basis of maximum surface contact to the concrete

[halogen-free] [650 °C] [INNOVATION] [LED] [www]

Installation

Mounting of the single-piece housing with mineral fibreboard.

… fitting of the one-part housing by means of magnets (Art. No. 1299-67).

Prefabricated element with integrated HaloX® housings is laid on concrete building site.

Subsequent adjustment of the housing height on the building site.

PRESS
Toolless combination entry of M20/M25 conduits with conduit stop - no later shortening of the conduits.

After fitting of the conduits, concreting on the planned ceiling thickness takes place with the on-site mixed concrete process.
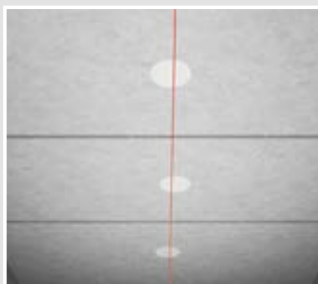
Panel element laying tolerances can be compensated for using the universal front parts (see system overview).
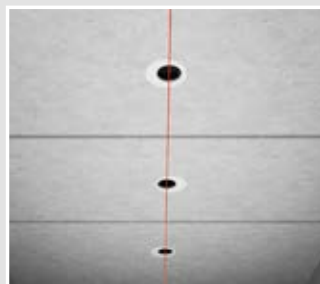
Cut the installation opening e.g. with the MULTI 4000 (Art. No. e.g. with 1083-10).

Subject to modifications

HaloX® for precast concrete
For luminaires and loudspeakers

FLUSH-MOUNTING

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SERVICE

HaloX® 180 / 250 for precast concrete for adhesive attachment

· One-part housing with integrated mineral fibreboard
· Toolless combination entry for M20/M25 conduits
· Conduit entry limit to prevent the need for inside shortening of the conduit

System	HaloX® 180	HaloX® 250
Ceiling exit (CE) Ø	0-180 mm	0-250 mm
max. installation depth luminaire / loudspeaker	110 mm	110 mm
LED wattage max.	35 Watt	45 Watt
Lamp wattage max.	75 Watt	100 Watt
Housing diameter Ø	210 mm	280 mm
Depth incl. front part	120 mm	120 mm
Combination entry for M20/M25 conduits	2	2
Art. No.	**1282-71**	**1283-71**
Inner packaging/shipping	- / 10	- / 10

HaloX® 180 / 250 with transformer tunnel (for precast concrete)

· One-part housing with integrated mineral fibreboard
· Toolless combination entry for M20/M25 conduits
· Conduit entry limit to prevent the need for inside shortening of the conduit

System	HaloX® 180	HaloX® 180	HaloX® 250
Ceiling exit (CE) Ø	0-180 mm	0-180 mm	0-250 mm
max. installation depth luminaire / loudspeaker	110 mm	110 mm	110 mm
LED wattage max.	35 Watt	35 Watt	45 Watt
Lamp wattage max.	75 Watt	75 Watt	100 Watt
Housing diameter Ø	210 mm	210 mm	280 mm
Depth incl. front part	120 mm	120 mm	120 mm
Tunnel length	190 mm	325 mm	325 mm
Tunnel width	140 mm	140 mm	140 mm
Tunnel height	85 mm	85 mm	85 mm
Combination entry for M20/M25 conduits	4	4	4
Art. No.	**1282-72**	**1282-73**	**1283-73**
Inner packaging/shipping	- / 10	- / 10	- / 10

HaloX® for precast concrete
For luminaires and loudspeakers

HaloX® 180 / 250 for precast concrete for magnet attachment

· One-part housing for holding the HaloX® magnet Art. No. 1299-67
· Toolless combination entry for M20/M25 conduits
· Conduit entry limit to prevent the need for inside shortening of the conduit

System	HaloX® 180	HaloX® 250
Ceiling exit (CE) Ø	0-180 mm	0-250 mm
max. installation depth luminaire / loudspeaker	110 mm	110 mm
LED wattage max.	35 Watt	45 Watt
Lamp wattage max.	75 Watt	100 Watt
Housing diameter Ø	210 mm	280 mm
Depth incl. front part	120 mm	120 mm
Combination entry for M20/M25 conduits	2	2
Art. No.	**1282-74**	**1283-74**
Inner packaging/shipping	- / 10	- / 10

HaloX® 180 / 250 with tunnel for precast concrete for magnet attachment

· One-part housing for holding the HaloX® magnet Art. No. 1299-67
· Toolless combination entry for M20/M25 conduits
· Conduit entry limit to prevent the need for inside shortening of the conduit

System	HaloX® 180	HaloX® 180	HaloX® 250
Ceiling exit (CE) Ø	0-180 mm	0-180 mm	0-250 mm
max. installation depth luminaire / loudspeaker	110 mm	110 mm	110 mm
LED wattage max.	35 Watt	35 Watt	45 Watt
Lamp wattage max.	75 Watt	75 Watt	100 Watt
Housing diameter Ø	210 mm	210 mm	280 mm
Depth incl. front part	120 mm	120 mm	120 mm
Tunnel length	190 mm	325 mm	325 mm
Tunnel width	140 mm	140 mm	140 mm
Tunnel height	85 mm	85 mm	85 mm
Combination entry for M20/M25 conduits	4	4	4
Art. No.	**1282-75**	**1282-76**	**1283-76**
Inner packaging/shipping	- / 10	- / 10	- / 10

Extension rings HaloX®

· To increase installation depth

System	HaloX® 180	HaloX® 180	HaloX® 250	HaloX® 250
Height	25 mm	50 mm	25 mm	50 mm
max. installation depth luminaire / loudspeaker	+ 25 mm	+ 50 mm	+ 25 mm	+ 50 mm
For Art. No.	1282-xx	1282-xx	1283-xx	1283-xx
Art. No.	**1282-25**	**1282-50**	**1283-25**	**1283-50**
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

Subject to modifications

HaloX® magnet for HaloX® 180/250

· For housings with Art. Nos. 1282-74/75/76 and 1283-74/76

Art. No.	1299-67
Inner packaging/shipping	- / 10

Replacement mineral fibreboard for HaloX® 180, HaloX® 250

· Replacement mineral fibreboard 1282-27 for housings with Art. No. 1282-71/72/73
· Replacement mineral fibreboard 1283-27 for housing with Art. No. 1283-71/73

System	HaloX® 180	HaloX® 250
Art. No.	1282-27	1283-27
Inner packaging/shipping	- / 10	- / 10

Note

Housings with Art. Nos. 1282-76 and 1283-76 must be secured in the tunnel area against floating!

Peripheral bridges on the tunnel provide additional protection against possible floating. Rebars can be laid on these and tightened together with the reinforcement.

Alternatively, tie lugs fitted at the end of the tunnel provide additional protection against the possible floating of the tunnel in precast concrete.

KompaX® system for on-site mixed concrete and precast concrete
For luminaires and loudspeakers

KompaX® system overview

The KompaX® system is made up of various components which can be individually assembled according to use. Select the required components as follows:

1
Accessory type/ application

KompaX® 1

585 mm
260
131
Ø 440 mm

- Built-in luminaires or loud-speakers + additional components (e.g. ballast device)
- Ceiling exits Ø 160–300 mm

KompaX® 2

470 mm
131
Ø 290 mm

- Built-in luminaires or loud-speakers + additional components (e.g. ballast device)
- Ceiling exits Ø 100–200 mm

2
Installation depth

Optional:
increase in installation depth to max. 200 mm*

Intermediate frame 25/50 mm

Optional:
increase in installation depth to max. 200 mm*

Intermediate frame 25/50 mm

3
Ceiling type

On-site mixed concrete

Slab ceilings for installation in concrete factories

On-site mixed concrete

Slab ceilings for installation in concrete factories

4
Ceiling exit

Variable opening and tolerance compensation by means of mineral fibreboard

1293-27

1293-28

1292-27

1292-28

Variable opening through the use of individual front parts

1293-00

1292-00

KompaX® front rings

KompaX® front rings with elastomer seal for **facing concrete**

Individual styrofoam moulded parts

Individual styrofoam moulded parts with elastomer seal for **facing concrete**

Replacement mineral fibreboards for KompaX®

*) for 200 mm and greater, please contact us

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KompaX® 1 concrete installation housing
for on-site mixed concrete and prefabrication (slab ceilings)

KompaX®1 housing system for fitted downlights and loudspeakers in concrete ceilings with wide range of accessories for almost all applications. Height-adjustable using intermediate frames. The various front parts make it extremely practical.

• Housing system for fitted downlights and loudspeakers
• For on-site mixed concrete and prefabrication
• For precise installation openings from Ø 160–300 mm
• For device installation depths up to 200 mm*
• For ceiling thicknesses from 180–300 mm*
• Tolerance compensation during slab ceiling installation

halogen-free | 650 °C | WWW | LED

Luminaire selection

Built-in installation downlights with TC lamps, lamp output max. 90 W* (e.g. 3 x TC-D 26 W or 2 x TC-T 42 W). Use only built-in luminaires tested to EN 60598-1 suitable for installation on normally flammable building materials. Luminaire installation depth without intermediate frame max. 100 mm. Luminaire installation depth with intermediate frame max. 200 mm. (*Even higher system performance is possible with an intermediate frame)

Technical processing instructions/standards

• for ceiling thicknesses from 18 cm up to 30 cm. Please contact us if the ceiling thickness is greater than 30 cm.
• use only certified (EN 60598) luminaires which are suitable for direct installation on normally flammable materials
• luminaire installation heights up to 200 mm; please contact us for heights greater than 200 mm
• allows installation of additional lighting or loudspeaker accessories, EIB components, emergency supply units, etc.

Note

*For installation depths > 200 mm and ceiling thicknesses > 300 mm, please contact us. Telephone: +49 (0)2355.809.61

KompaX®1 housing for on-site mixed concrete

· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front and rear parts
· only in combination with front rings 1293-16 up to 1293-71, in facing concrete with front rings 1293-80 to 1293-87
· incl. support elements for installation heights 100/150/200 mm

WWW

3D animation

Length x Width x Depth	585 x 440 x 131 mm
Ceiling exit (CE) Ø	160-300 mm
LED wattage max.	45 Watt
Lamp wattage max.	90 Watt
Art. No.	1293-00
Inner packaging/shipping	- / 5

KompaX®1 system for concrete ceilings
For luminaires and loudspeakers

KompaX®1 housing for on-site mixed concrete with mineral fibreboard

· for variable ceiling cut-outs up to 300 mm
· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front ring, assembled mineral fibreboard and rear part
· incl. support elements for installation heights 100/150/200 mm

Length x Width x Depth	585 x 440 x 131 mm
Ceiling exit (CE) Ø	0-300 mm
LED wattage max.	45 Watt
Lamp wattage max.	90 Watt
Art. No.	1293-27
Inner packaging/shipping	- / 5

Accessories: Replacement mineral fibreboards for KompaX®1,2 page 222

KompaX®1 housing for slab ceilings

· for factory fitting
· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front part, fitted mounting ring and rear part
· for ceilings of 18 cm total thickness upwards
· incl. support elements for installation heights 100/150/200 mm

Length x Width x Depth	585 x 440 x 131 mm
Ceiling exit (CE) Ø	0-300 mm
LED wattage max.	45 Watt
Lamp wattage max.	90 Watt
Art. No.	1293-15
Inner packaging/shipping	- / 5

KompaX®1 housing for slab ceilings with mineral fibreboard

· for factory fitting
· for variable ceiling cut-outs up to 300 mm
· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front ring, assembled mineral fibreboard and rear part
· for ceilings of 18 cm total thickness upwards
· incl. support elements for installation heights 100/150/200 mm

Length x Width x Depth	585 x 440 x 131 mm
Ceiling exit (CE) Ø	0-300 mm
LED wattage max.	45 Watt
Lamp wattage max.	90 Watt
Art. No.	1293-28
Inner packaging/shipping	- / 5

Accessories: Replacement mineral fibreboards for KompaX®1,2 page 222

KompaX®1 intermediate frame
· is clipped between the front and rear part of the KompaX® 1 housing

Increasing installation height	25 mm	50 mm
with support elements for installation heights of 125/175 mm	•	-
Art. No.	1293-13	1293-14
Inner packaging/shipping	5 / 10	5 / 10

KompaX®1 front rings
· Other dimensions and shapes (for ceiling exit) are available for fast delivery in the form of Styrofoam moulded parts.

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Height	Art. No.	Inner packaging/ shipping
160 mm	167 mm	14 mm	1293-16	- / 10
165 mm	172 mm	14 mm	1293-66	- / 10
180 mm	187 mm	14 mm	1293-18	- / 10
190 mm	197 mm	14 mm	1293-19	- / 10
200 mm	207 mm	14 mm	1293-20	- / 10
215 mm	222 mm	14 mm	1293-71	- / 10
240 mm	247 mm	14 mm	1293-24	- / 10
300 mm	307 mm	14 mm	1293-30	- / 10

KompaX®1 front rings in facing concrete version
· elastomer seal with flexible sealing edge
· prevents ingress of concrete, discolouring and sand blast dust
· for exact flush finishes in facing concrete without additional reworking

FACING CONCRETE

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Height	Art. No.	Inner packaging/ shipping
160 mm	172 mm	14 mm	1293-80	- / 10
165 mm	177 mm	14 mm	1293-81	- / 10
180 mm	192 mm	14 mm	1293-82	- / 10
190 mm	202 mm	14 mm	1293-83	- / 10
200 mm	212 mm	14 mm	1293-84	- / 10
215 mm	227 mm	14 mm	1293-85	- / 10
240 mm	252 mm	14 mm	1293-86	- / 10
300 mm	312 mm	14 mm	1293-87	- / 10

KompaX®2 system for concrete ceilings
For luminaires and loudspeakers

KompaX® 2 concrete installation housing
for on-site mixed concrete and prefabrication (slab ceilings)

KompaX®2 housing system for fitted downlights and loudspeakers in concrete ceilings with wide range of accessories for almost all applications. Height-adjustable using intermediate frames. The various front parts make it extremely practical.

• Housing system for fitted downlights and loudspeakers
• For on-site mixed concrete and prefabrication
• For precise installation openings from Ø 100–200 mm
• For device installation depths up to 200 mm*
• For ceiling thicknesses from 180–300 mm*
• Tolerance compensation during slab ceiling installation

Luminaire selection

Built-in installation downlights with TC lamps, lamp output max. 90 W* (e.g. 3 x TC-D 26 W or 2 x TC-T 42 W). Use only built-in luminaires tested to EN 60598-1 suitable for installation on normally flammable building materials. Luminaire installation depth without intermediate frame max. 100 mm. Luminaire installation depth with intermediate frame max. 200 mm. (*Even higher system performance is possible with an intermediate frame)

Technical processing instructions/standards

• for ceiling thicknesses from 18 cm up to 30 cm. Please contact us if the ceiling thickness is greater than 30 cm.
• use only certified (EN 60598) luminaires which are suitable for direct installation on normally flammable materials
• luminaire installation heights up to 200 mm; please contact us for heights greater than 200 mm
• allows installation of additional lighting or loudspeaker accessories, EIB components, emergency supply units, etc.

Note

*For installation depths > 200 mm and ceiling thicknesses > 300 mm, please contact us. Telephone: +49 (0)2355.809.61

KompaX®2 housing for on-site mixed concrete

· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front and rear parts
· only in combination with front rings 1292-01 up to 1293-66, in facing concrete with front rings 1292-80 to 1293-84
· incl. support elements for installation heights 100/150/200 mm

3D animation

Length x Width x Depth	470 x 290 x 131 mm
Ceiling exit (CE) Ø	100-200 mm
LED wattage max.	45 Watt
Lamp wattage max.	52 Watt
Art. No.	1292-00
Inner packaging/shipping	- / 10

Subject to modifications

KompaX®2 housing for on-site mixed concrete with mineral fibreboard

· for variable ceiling cut-outs up to 180 mm
· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front ring, assembled mineral fibreboard and rear part
· incl. support elements for installation heights 100/150/200 mm

3D animation

Length x Width x Depth	470 x 290 x 131 mm
Ceiling exit (CE) Ø	0-180 mm
LED wattage max.	45 Watt
Lamp wattage max.	52 Watt
Art. No.	**1292-27**
Inner packaging/shipping	- / 10

Accessories: Replacement mineral fibreboards for KompaX®1,2 page 222

KompaX®2 housing for slab ceilings

· for factory fitting
· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front part, fitted mounting plate and rear part
· for ceilings of 18 cm total thickness upwards
· incl. support elements for installation heights 100/150/200 mm

Length x Width x Depth	470 x 290 x 131 mm
Ceiling exit (CE) Ø	0-200 mm
LED wattage max.	45 Watt
Lamp wattage max.	52 Watt
Art. No.	**1292-35**
Inner packaging/shipping	- / 10

KompaX®2 housing for slab ceilings with mineral fibreboard

· for factory fitting
· for variable ceiling cut-outs up to 180 mm
· installation height for built-in luminaires or loudspeakers max. 100 mm
· consists of front ring, assembled mineral fibreboard and rear part
· for ceilings of 18 cm total thickness upwards
· incl. support elements for installation heights 100/150/200 mm

Length x Width x Depth	470 x 290 x 131 mm
Ceiling exit (CE) Ø	0-180 mm
LED wattage max.	45 Watt
Lamp wattage max.	52 Watt
Art. No.	**1292-28**
Inner packaging/shipping	- / 10

Accessories: Replacement mineral fibreboards for KompaX®1,2 page 222

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KompaX®2 system for concrete ceilings
For luminaires and loudspeakers

KompaX®2 intermediate frame
· is clipped between the front and rear part of
  the KompaX®2 housing

Increasing installation height	25 mm	50 mm
with support elements for installation heights of 125/175 mm	•	-
Art. No.	1292-13	1292-14
Inner packaging/shipping	5 / 10	5 / 10

KompaX®2 front rings
· Other dimensions and shapes (for ceiling
  exit) are available for fast delivery in the form
  of Styrofoam moulded parts.

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Height	Art. No.	Inner packaging/ shipping
100 mm	107 mm	14 mm	1292-01	- / 10
125 mm	132 mm	14 mm	1292-06	- / 10
145 mm	152 mm	14 mm	1292-10	- / 10
160 mm	167 mm	14 mm	1293-16	- / 10
165 mm	172 mm	14 mm	1293-66	- / 10
180 mm	187 mm	14 mm	1293-18	- / 10
190 mm	197 mm	14 mm	1293-19	- / 10
200 mm	207 mm	14 mm	1293-20	- / 10

KompaX®2 front rings in facing concrete version
· elastomer seal with flexible sealing edge
· prevents ingress of concrete, discolouring
  and sand blast dust
· for exact flush finishes in facing concrete
  without additional reworking

FACING CONCRETE

Ceiling exit (CE) Ø	Min. luminaire covering Ø	Height	Art. No.	Inner packaging/ shipping
100 mm	112 mm	14 mm	1292-80	- / 10
125 mm	137 mm	14 mm	1292-81	- / 10
145 mm	157 mm	14 mm	1292-82	- / 10
160 mm	172 mm	14 mm	1293-80	- / 10
165 mm	177 mm	14 mm	1293-81	- / 10
180 mm	192 mm	14 mm	1293-82	- / 10
190 mm	202 mm	14 mm	1293-83	- / 10
200 mm	212 mm	14 mm	1293-84	- / 10

Replacement mineral fibreboards for KompaX®1,2

For Art. No.	Art. No.	Inner packaging/ shipping
1293-27	1293-97	- / 5
1293-28	1293-98	- / 5
1292-27	1292-97	- / 5
1292-28	1292-98	- / 5
1294-27	1294-97	- / 5
1294-28	1294-98	- / 5

KompaX® accessories
for built-in luminaires and loudspeakers

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Styrofoam moulded parts

KompaX® housing with Styrofoam moulded part for customised solutions. The mouldings are available in any shape (round, square, rectangular or triangular) and in various thicknesses or to suit your specific needs. They can be supplied ready-mounted to the housing or provided separately. A facing concrete version is also available. The Styrofoam moulded parts for facing concrete have an additional elastomer sheath, and its elasticity prevents the dry concrete from cracking.

• For individual installation openings
• Any shape possible (for round, square, rectangular and other installation openings)
• For on-site mixed concrete and prefabrication
• Prevents discolouring and sand blast dust in facing concrete version
• For exact flush finishes in facing concrete without reworking

Planning instruction
Almost every conceivable shape can be realised using the Styrofoam moulded parts. The maximum dimensions of the front parts (diameter/diagonals) result from the maximum dimensions of the respective housing front rings. Please note that the clamping range of luminaires and loudspeakers must be at least the thickness of the Styrofoam moulded parts plus 8 mm. In the case of Styrofoam moulded parts with a thickness of > 20 mm, take into account the support provided.

KompaX® Styrofoam moulded parts for ceiling exit (CE)
· all sizes and shapes which deviate from the existing KompaX® front rings for ceiling exits are available as Styrofoam moulded parts
· all Styrofoam facing concrete parts are also available in facing concrete design on request.
· the Styrofoam moulded parts can be attached to the housing before delivery or supplied separately with the housings
· Required ceiling cut-out up to max. Ø 300 mm and max. height 50 mm for round, square or rectangular installation openings. Other shapes possible on request.

Art. No.	1292-90
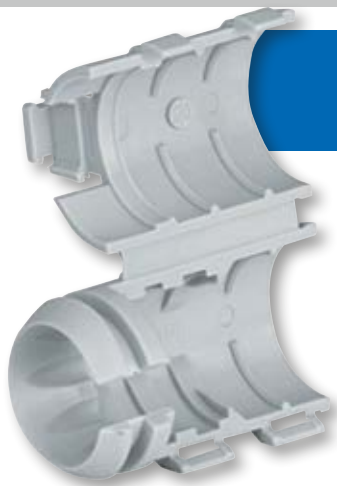
Conduit stopper

Conduit stoppers for secure, precise positioning of installation conduits in installation housings. They prevent conduits from being inserted too far and prevent them from falling out, even under extreme load.

• Guarantees concrete-tight connection of DIN EN conduits
• prevents conduits from being inserted too far
• Prevents conduits from slipping out under high load
• Threaded connecting pieces for inch conduits in conduit stoppers

650 °C

Installation

Use the universal opening cutter to make accurate conduit entries (Ø 21 mm).	Simply push flexible Ø 20 or Ø 25 mm DIN EN conduits into the conduit stopper.	This technology guarantees secure and tight conduit entry in all housings.	For Ø 5/8" or Ø 3/4" conduits, insert the threaded connecting piece into the conduit stopper.

Conduit stopper

· for luminaire or loudspeaker housings
· prevents conduits from being inserted too far
· secures conduit against falling out even under extreme load
· required opening Ø in the housing tunnel: 21 mm (cut using universal opening cutter Art. No. 1085-80)

For conduits to DIN EN outer Ø	20 mm	25 mm
Art. No.	1274-20	1274-25
Inner packaging/shipping	25 / 100	25 / 100

Threaded connecting pieces for inch conduits

· for insertion of smooth and corrugated 5/8" and 3/4" conduits
· in 1274-20 and 1274-25 conduit stoppers

for inserting smooth and corrugated conduits	5/8", 3/4"
Art. No.	1074-04
Inner packaging/shipping	20 / 100

Temperature profile KompaX®1, 2
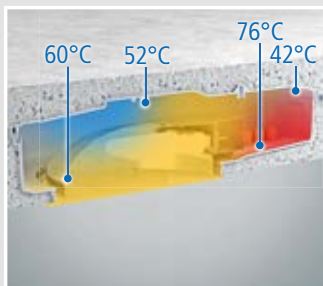
KompaX®1
3 x TC-D 26 W, sealed version of luminaires (matt safety glass disc)
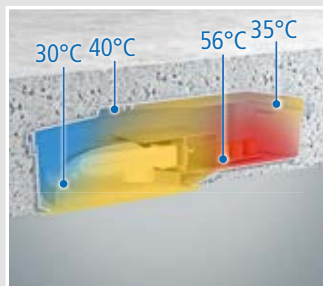
KompaX®2
2 x TC-D 18 W, sealed version of luminaires (matt safety glass disc)

Temperature profile KompaX®1, 2
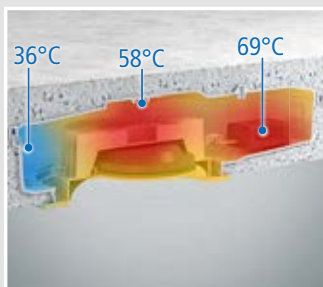
KompaX®1
LED (45 W)
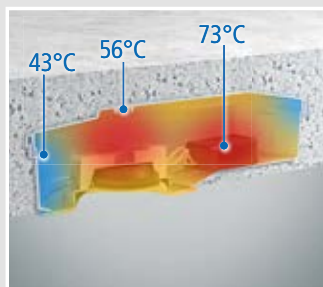
KompaX®2
LED (41 W)

Note

Because of the considerable undershooting of the limit temperatures, higher system performance is possible. If you have questions, please contact our technical department (0049.2355.80961).

KompaX® tolerance compensation with mineral fibreboard

KompaX®1

1 — Ø340 / Ø300

2 — max. 40 / Ø 260

3 — max. 110 / Ø 190

KompaX®2

4 — Ø 216 / Ø 180

5 — max. 20 / ø 160

6 — max. 80 / ø 100
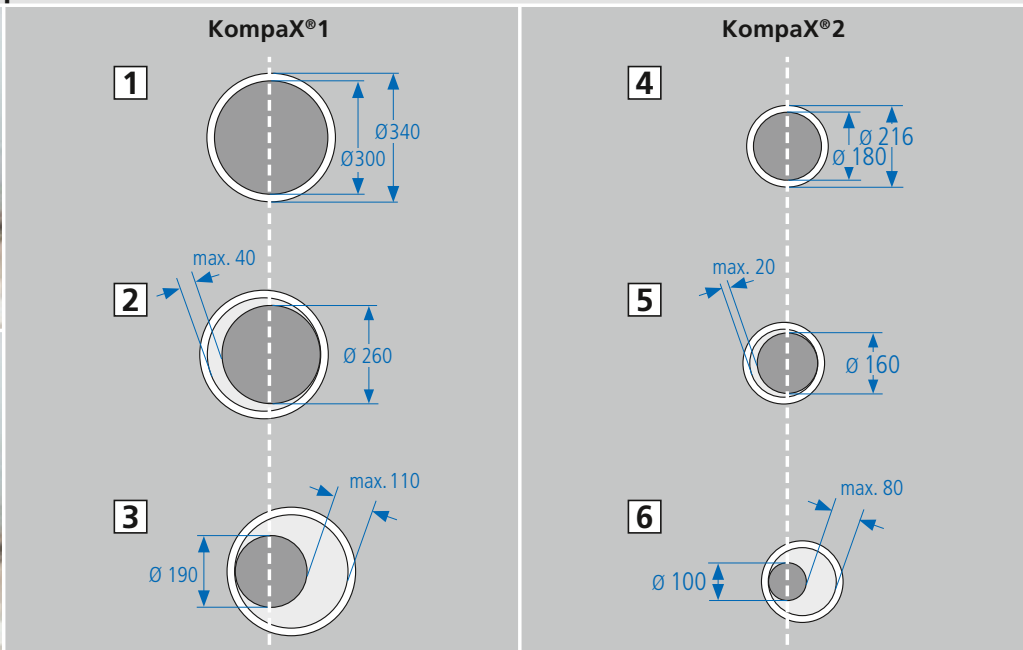
1 = CE max. 300 mm without tolerance compensation | **2** = CE max. 260 mm with 40 mm tolerance compensation (2 x 20 mm) | **3** = CE max. 190 mm with 110 mm tolerance compensation (2 x 55 mm) | **4** = CE max. 180 mm without tolerance compensation | **5** = CE max. 160 mm with 20 mm tolerance compensation (2 x 10 mm) | **6** = CE max. 100 mm with 80 mm tolerance compensation (2 x 40 mm)

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KompaX® system - technical information

Front rings for facing concrete

Front rings with elastomer sheathing for sharp outline ceiling cut-outs in facing concrete. The elasticity of the sheathing prevents the dry concrete from cracking.

- For exact flush finishes in facing concrete without reworking
- Prevents ingress of concrete
- Prevents discolouring and sand blast dust
- As a Styrofoam moulded part for round, square, rectangle and other installation openings

For perfect results, make sure the housing fits correctly, e.g. by bracing on the formwork and inserting an additional joist to restrict the formation of cracks.

without elastomer seal

with elastomer seal

Installation notes

For installation of luminaires with an asymmetrical equipment carrier (e.g. for ballast devices) or loudspeakers with audio processors or similar, the distance between the bottom edge of the accessory and the bottom edge of the concrete ceiling must be at least 40 mm.

40 mm
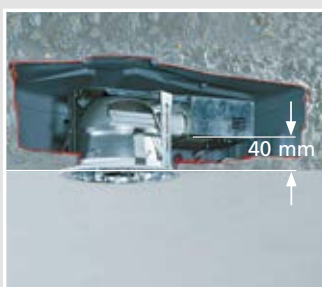
Reducing the ceiling exit (CE) with front rings

If the required ceiling exit is smaller than the front ring used, please remove the cast-in front ring after removing the formwork, insert a smaller front ring or cut out the required dimension. Prime the remaining surface around the ceiling exit using for example thinned Styrofoam adhesive or Beto-Kontakt, and smooth it off.

KompaX® housing with mineral fibreboard

KompaX® housing with mineral fibreboard permits variable, neutral shape and accurate cut-outs for luminaires and loudspeakers. Inaccuracies arising during the installation of industrially prefabricated slab ceiling elements can be corrected using the mineral fibreboard. The mineral fibreboard always offers sufficient opportunities for adjustment. Depending on the installation diameter, you can retrospectively correct inaccuracies arising during the assembly or installation of slab ceilings.

- For luminaires and loudspeakers
- Accurate, variable installation openings
- Any cut-out shape possible
- Tolerance compensation during slab ceiling installation

Installation in on-site mixed concrete ceilings (KompaX®1,2)

Clip the front ring onto the housing and open the required conduit or cable entries. Position the prepared housing and fasten to the formwork using 4 nails. Feed in the conduits and insert the supplied support conduit (KompaX®1 and 2 only). If necessary, fit the intermediate frame, then clip in the rear part. To prevent upward movement, fasten the housing to the reinforcement using wires or cable ties. The ceiling can now be cast. After removing the formwork, use a fretsaw to saw into the visible front part to enable the luminaire or the loudspeaker to be fitted.

Clip the front ring onto the housing.
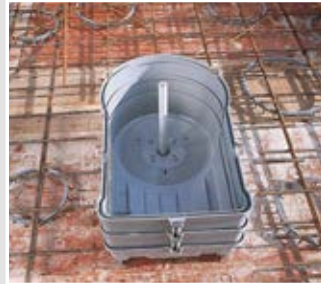
Attach the housing with 2 intermediate frames and a support conduit to the formwork.

Also secure the housing to the reinforcement.

Secure and firm seating of housings during concreting.

Open front part using a fretsaw.

Installation in slab ceilings

Pre-assembly in the concrete factory. Fasten the housing to the formwork table by applying at least four adhesive points to the housing (adhesive foil or hot glue). To prevent upward movement, fasten the housing to the reinforcement with wires or cable ties or by sliding steel bridges under the space frame. Then concrete up.

Final assembly on-site

After removing the installation instructions and the support elements, make the required openings for cables and conduits. If the installation height needs to be increased, fit the intermediate frames. With KompaX®1 and 2, insert the matching support element before closing the housing again. Concreting can now take place.

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KompaX® system - technical information

Final assembly using mineral fibreboard

In the case of housings with mineral fibreboard, the ceiling cut-outs are marked out correctly aligned. Then cut installation openings through the mineral fibreboard and the housing base. Now fit the installation devices without any further reworking (smooth the surface if necessary).
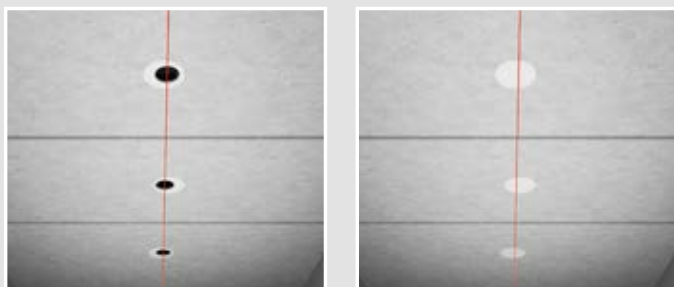
Final assembly using mounting ring

For housings with installation rings, remove the formwork and all fixing screws and simply pull out the mounting rings or plates. Now mark the precise position of the installation openings so that the matching front rings can be inserted or screwed on. Prime the remaining surface between the concrete edge and front ring using thinned Styrofoam adhesive, e.g. Beto-Kontakt, and smooth it off. Use the fretsaw to cut the installation diameter. After plastering and/or painting the ceiling, install the luminaires or loudspeakers.

KompaX® for on-site mixed concrete and prefabrication (slab ceilings)

Installation dimensions KompaX®1 and 2

When installing luminaires, loudspeakers or electronic components in KompaX® housings, use the data provided by the luminaire or loudspeaker manufacturer to guide you. For the KompaX® housing, the following installation dimensions apply (excluding intermediate frame):

Housing	Installation depth	AL	L	B	H
KompaX® 1	100	330	270	160	60
KompaX® 2	100	290	190	160	60
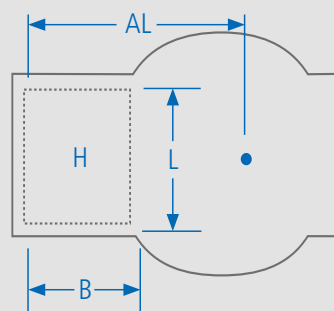
Constructional information on concrete ceilings

To install KAISER installation housings in concrete, please refer to our work instructions and our installation instructions.

1. Statics

The dimensions of the universal housings ensure that they have only a small effect on the statics of concrete ceilings. However, when using this housing, always consider its effects on the static calculations. All values regarding number, size and distance between centres of the housings as well as the fire protection class of the ceiling must be agreed with the structural engineer.

Further points to be taken into account are:
- the housings must be arranged in line with the stress support axis of the reinforcement.
- the distance between centres of the housings must be at least 3 times the housing dimensions.
- supplementary reinforcement (joint beam) must be provided for all housings that break into the existing reinforcement if the statics calculations show that it is required.

2. Fire protection

Fire protection and the fire protection class of a concrete ceiling are only minimally affected by the fitting of luminaire and loudspeaker housings. From the technical fire protection viewpoint, no limitations are necessary on the axial spacing of HaloX® and KompaX® housings in F30 ceilings. In F90 ceilings the axial spacing of HaloX® housings should be at least 1 m and of KompaX® housings 1.3 m. Additional reinforcement must be put in place next to the housings.

The following table gives an overview of the necessary minimum thicknesses of ceilings and walls for fire protection classes F30 and F90.

All data is based on installation heights of the housing without intermediate frames or extension rings. Use float plaster or plaster of class A building materials. A technical fire protection certification can be provided on request.

3. Transmission of sound

KompaX® housings do not generally resonate since they are never fully open. The solid seating in the concrete ceiling does not amplify any vibrations which are registered. Please contact us if you require technical sound transmission certification.

4. Heat conduction/Heat protection

Heat from luminaires and loudspeakers built into HaloX® or KompaX® housings has little or no effect on the concrete and statics of a ceiling. Compared to metal concrete housings, the reflection of heat from the luminaires or loudspeakers is considerably lower. This improves the efficiency and working life of the luminaires and other operating components.
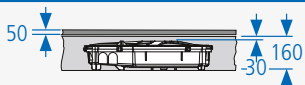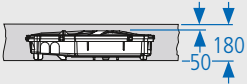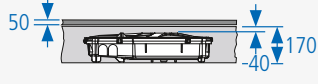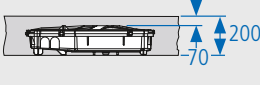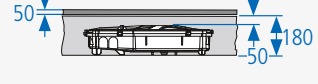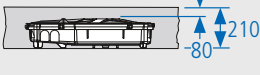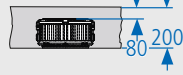
The creation of heat bridges leading to the 'dew point' being reached is avoided by the use of underfloor noise insulation panels and a top plaster layer or through heat insulating measures.

5. Electrical installation

In principle, only VDE approved luminaires and VDE approved fittings should be used; luminaires must conform to DIN VDE 0711/EN60598. The builder of the system retains responsibility for the selection of suitable equipment such as luminaires, ballast devices, loudspeakers or transformers, their materials and their correct installation according to the technical safety standards for installation, lighting and loudspeakers. The manufacturer reserves the right to make changes to the materials, design and product range.

Housing volume (dm³)					
	HaloX® 100	HaloX® 180	HaloX® 250	KompaX® 1	KompaX® 2
Housing	1.2	3.3	6.1	18	10
with tunnel 190	2.4	4.5	-	-	-
with tunnel 325	-	5.3	8.1	-	-
Volume increase with the use of extension rings/intermediate frames in dm³					
Extension ring/intermediate frame 10	0.11	-	-	-	-
Extension ring/intermediate frame 25	0.28	0.8	1.5	5	2.5
Extension ring/intermediate frame 50	0.56	1.6	3.0	10	5

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Fire protection – minimum concrete covering according to fire resistance class

	KompaX® 1/2	HaloX® 100/180/250
EI 30 ceiling plastered	50 / 160 / -30	50 / 150 / -30
EI 30 ceiling unplastered	180 / -50	170 / -50
EI 60 ceiling plastered	50 / 170 / -40	50 / 160 / 40
EI 60 ceiling unplastered	200 / -70	190 / -70
EI 90 ceiling plastered	50 / 180 / -50	50 / 170 / -50
EI 90 ceiling plastered	210 / -80	200 / -80

Installation housing for external insulation

NEW

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.

All information about the product can be found from page 58.

Installation housing ThermoX® LED

ThermoX® LED installation housing for the airtight installation of rigid and pivoting LED built-in luminaires in different ceiling constructions. The housing protects the surrounding material (vapour barrier foil, insulation etc.) against the high operating temperatures and the LED luminaires-themselves from contamination, and creates an airtight separation. In combination with the thermal separation between luminaire and operating device, in this way a maximum operating lifetime is obtained.

• For installation in insulated hollow ceilings
• Retrofitting from underneath
• Toolless installation of the housing
• Guarantees airtight installation
• Rear surface structure ensures optimal heat management
• Permanent and secure retention of the luminaire in the housing

Examples of use

ThermoX® LED installation housings can be installed in slab and tiled ceilings and in seamless sub-ceiling constructions made of plasterboard, mineral fibreboard, MdF board and plywood with wooden frame and exposed insulation.

Temperature profiles ThermoX® LED (room temperature 25°C)
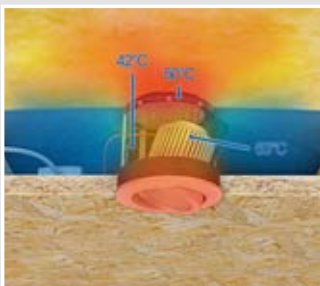
ThermoX® LED 9320-10
LED 6.6 W
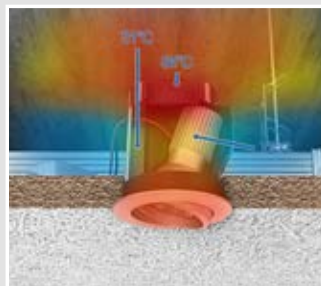
ThermoX® LED 9320-11
LED 9 W

ThermoX® LED 9320-20
LED 8 W
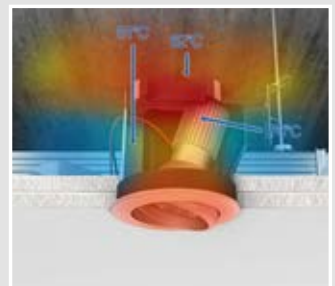
ThermoX® LED 9320-21
LED 10 W

Air-tight installation and fire-preventive protection

The ThermoX® LED housing protects the surrounding material against the extremely high temperatures that may occur during the operation of LED lamps. The housing must be installed without any surrounding insulating material coating. This protective measure can be taken both for new constructions and for retrofitting. The LED housing allows for air-tight installation because it does not destroy the vapour barrier foil that contributes to the air-tight building shell. Because of their air tightness, LED housings are also suitable for use in all suspended ceiling systems where uncontrolled air exchange is to be avoided (e.g. climate or cooling ceilings) and dustproof installation needs to be achieved (e.g. prevention of dust particles due to material removal).

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

System ThermoX® LED for insulated hollow ceilings

For built-in LED luminaires

Installation

Make cut opening (e.g. with turbo cutter Multi 4000 – Art. No. 1084-10)

To expand existing installation openings from Ø 68 mm to Ø 74 mm using centering insert (Art. No. 1083-99).

Installation of the operating device (driver).

Feed connector from below through the entry of the LED installation housing.

Connection of the plug-in contacts. Feed the sealing element round the cable and insert into the opening.

Installation of the ThermoX® LED housing in the installation opening.

Inserting the spotlight into the housing.

Rear surface structure minimises pressure on the vapour barrier and ensures optimal heat dissipation.

System ThermoX® LED for insulated hollow ceilings
For built-in LED luminaires

Processing instructions

Guaranteed air tightness even when the fixing springs are expanded

Expanding pockets ensure secure fit for the built-in luminaire

Swivel pocket permits targeted alignment of the built-in luminaire

For ceiling-flush installation of ThermoX® LED (DA 86), use bi-metal cutter Ø 86 mm (Art. No. 1087-86)

Installation notes
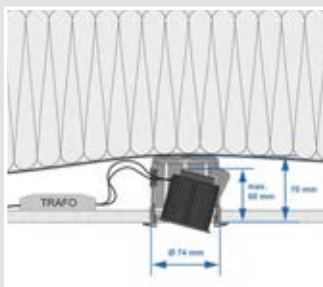
Art. No. 9320-10 ThermoX® LED, Ø 74 x 70 mm
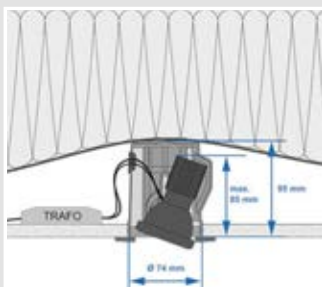
Art. No. 9320-11 ThermoX® LED, Ø 74 x 95 mm
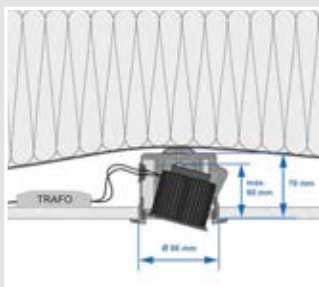
Art. No. 9320-20 ThermoX® LED, Ø 86 x 70 mm
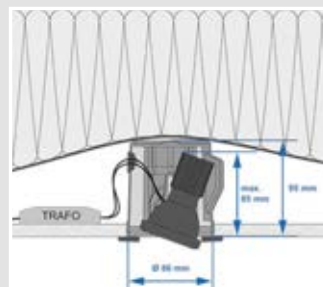
Art. No. 9320-10 ThermoX® LED, Ø 86 x 95 mm

Technical processing instructions/standards

• use only certified (EN 60598) luminaires which are suitable for direct installation on normally flammable materials

FLUSH-MOUNTING

CAVITY WALL

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CABLE GLANDS

TOOLS

SERVICE

System ThermoX® LED for insulated hollow ceilings

For built-in LED luminaires

▤ INNOVATION

ThermoX® LED housing

· for rigid and pivoting LED luminaires
· circumferential airtight sealing lip
· Swivel trough for alignment of the luminaire

3D animation

Depth	75 mm	95 mm	75 mm	95 mm
installation from front, cut hole Ø	74 mm	74 mm	86 mm	86 mm
Cable entries	1	3	3	3
max. installation depth for the LED luminaires	60 mm	85 mm	60 mm	85 mm
max. lamp output	6,6 Watt	9 Watt	8 Watt	10 Watt
max. ceiling exit (DA) Ø	70 mm	70 mm	81 mm	81 mm
Art. No.	9320-10	9320-11	9320-20	9320-21
Inner packaging/shipping	- / 10	- / 10	- / 10	- / 10

Air-tightness certificate

Guaranteed airtight housing for the energy-efficient electrical installation of luminaires. The appropriate certificate can be obtained from us or downloaded from our website.
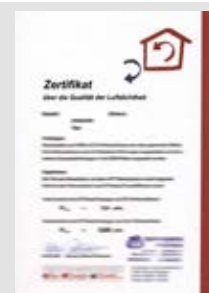
EnoX® installation housing

EnoX® housing for luminaires and other devices in ceilings and walls which are produced in a lightweight design with an air-tight building shell. Variable installation space when there is insufficient room to install electrics in the insulation level.

- Air-tight installation in line with EnEV energy-saving ordinance.
- No additional installation level is necessary
- For ceilings and walls in renovated and new buildings
- Tool-free cable and conduit entry
- Thermally-protected installation space 300 x 200 x 55 mm
- ECON® technology for air-tight and toolless insertion
- FX4 technology for fast cavity wall installation

| halogen-free | air-tight | IP 3X | 850 °C | ECON TECHNIK | FX4 | LED | ECON |

Installation technology for low-voltage luminaires
Temperature profile for room temperature 23°C

| 55°C | 106°C | 60°C |
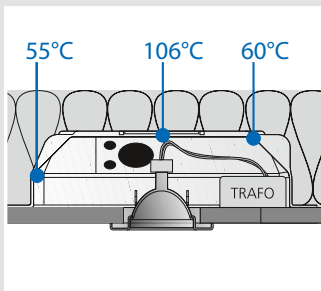
Low-voltage 35 W cool beam

| 40°C | 85°C | 45°C |
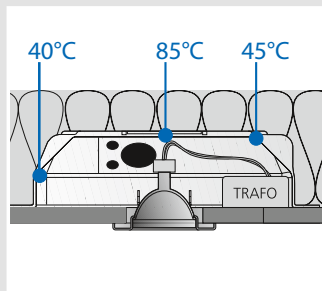
Low-voltage 35 W Alu

| 48°C | 101°C | 58°C |
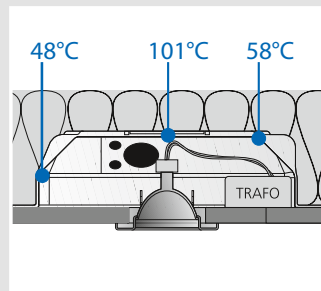
Low-voltage 50 W Alu

Example of installation
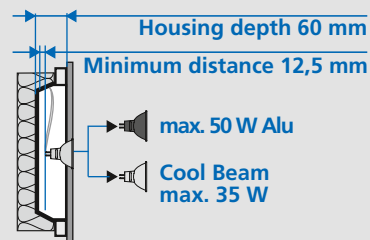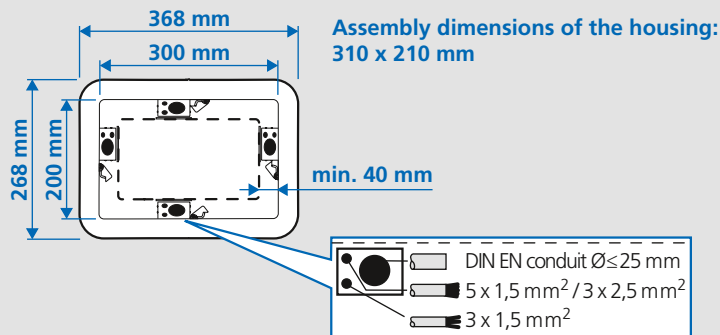
368 mm
300 mm
268 mm
200 mm
min. 40 mm

Assembly dimensions of the housing: 310 x 210 mm

DIN EN conduit Ø≤ 25 mm
5 x 1,5 mm^2 / 3 x 2,5 mm^2
3 x 1,5 mm^2

Housing depth 60 mm
Minimum distance 12,5 mm
max. 50 W Alu
Cool Beam max. 35 W

Technical processing instructions/standards

- use only certified (EN 60598) luminaires which are suitable for direct installation on normally flammable materials
- only for insulation material with heat resistance > 250°C
- use only tested heat-resistant cables (N2 GMH 2G) and temperature-resistant terminals (e.g. T100)
- use of electrical safety transformers up to 105 VA
- max. 35 W Cool Beam, 50 W aluminium reflector, 6.6 W LED luminaires

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

System EnoX® for insulated hollow ceilings and cavity walls
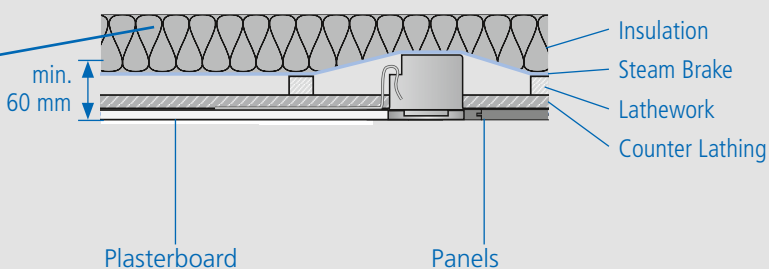
Mounting instructions

The EnoX housing is installed within or on the rafters using the timber or metal joist. In accordance with the cavity wall box principle, the housing is fixed to the joist or to an OSB panel using the FX4 strap fastening system. The cut-off moisture barrier is made air-tight again using sealing adhesive foil or the KAISER sealing foam frame. Before attaching the boarding, completely remove the moisture barrier foil from the housing interior. Together with the moisture barrier, the EnoX housing now forms one unit to ensure air-tight installation in accordance with the EnEV energy-saving ordinance.

Timber joist on the rafter

Timber joist inside the rafter

Installation using OSB panel.
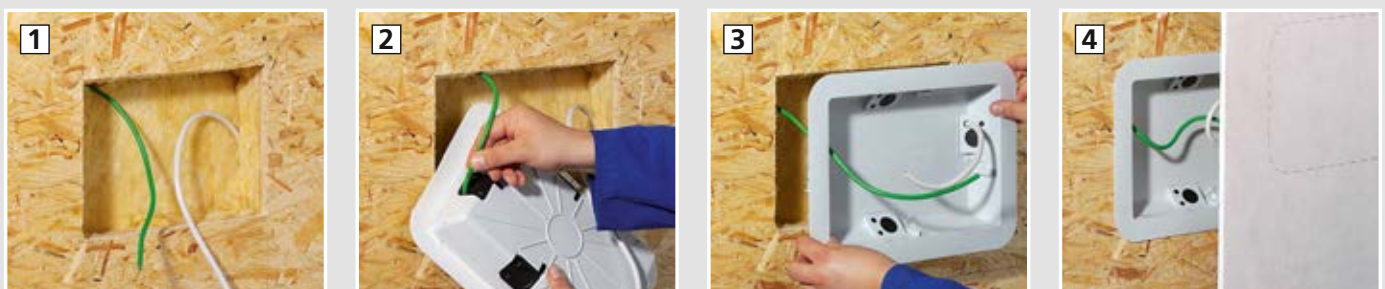
Making the installation opening for luminaires

Subject to modifications

Installation technology

In sloping roofs, for example, EnoX® acts as an air seal and creates a flexible space for the electrical installation in the insulation base.

Application example: LED luminaires

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

EnoX - luminaire and loudspeaker housing

· for installing luminaires, loudspeakers, displays and much more
· Minimum distance inside: min. 40 mm all round
· integrated stress relief (retention force) in accordance with DIN VDE 0606 / DIN EN 60670-1
· only for insulation material with heat resistance > 250°C
· use only tested heat-resistant cables (N2 GMH 2G) and temperature-resistant terminals (e.g. T100)
· for installation devices up to LxW 120 x 220 mm or Ø 120 mm
· Heat distortion resistant to 220°C
· with 4 screws (FX4)

ECON TECHNIK **FX4** **AIR-TIGHT**

Length x Width x Depth	368 x 268 x 60 mm
Length on the inside	300 mm
Width on the inside	200 mm
Depth on the inside	57 mm
Conduit entries for DIN EN conduits up to Ø 25 mm	4
Cable entries 3 x 2.5 mm² or 5 x 1.5 mm²	4
Cable entries 3 x 1.5 mm²	4
Art. No.	9350-21
Inner packaging/shipping	- / 10

EnoX sealing foam frame

· for fixing onto the EnoX housing
· for sealing the moisture barrier to the housing

AIR-TIGHT

Art. No.	9350-99
Inner packaging/shipping	- / 10

ThermoX® system for insulated hollow ceilings
for halogen and LED built-in luminaires

ThermoX® installation housing

ThermoX® installation housing for installing halogen and pivoting recessed LED luminaires in various ceiling structures. The housing protects the surrounding material (moisture barrier foil, insulation etc.) from the lamp's extreme operating temperatures and creates an air-tight closure.

- Installation housing for halogen luminaires (low voltage and high voltage)
- Fire-preventive and air-tight
- For insulated hollow ceilings
- Two different front part types
- Integrated transformer closing cap
- Ceiling exits (CE) up to Ø 86 mm
- Installation from either above or below

Installation technology for low-voltage and high-voltage luminaires
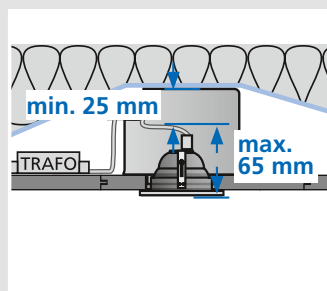
Luminaire selection: halogen, low-voltage (12 V)
Usable lamps: Cool beam max. 20 W, aluminium reflector max. 35 W
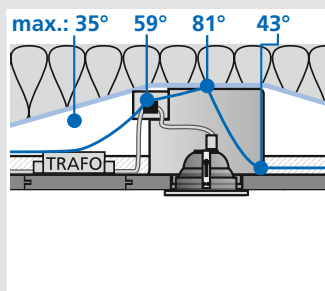
Temperature profile: room temperature (23°C)
Aluminium reflector 35 W
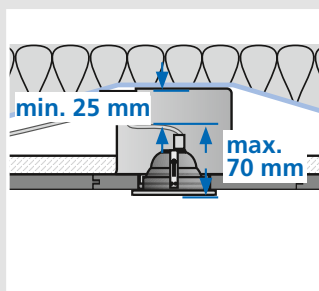
Luminaire selection: halogen, high-voltage (230 V)
Usable lamps: Cool beam max. 20 W, aluminium reflector max. 35 W
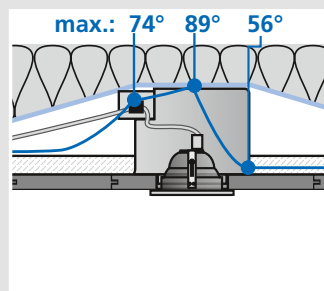
Temperature profile: room temperature (23°C)
Aluminium reflector 35 W
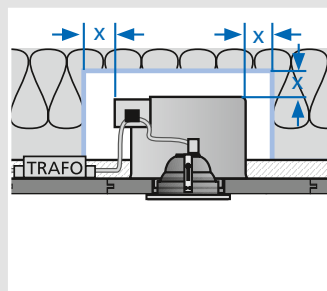
Luminaire selection: halogen (12 V/high-voltage 230 V) x = min. 50 mm
Usable lamps with „x": Cool beam max. 35 W, aluminium reflector max. 50 W
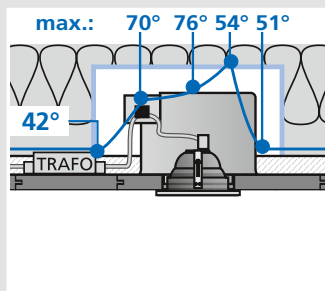
Temperature profile: halogen, low voltage (12 V)
Aluminium reflector 50 W
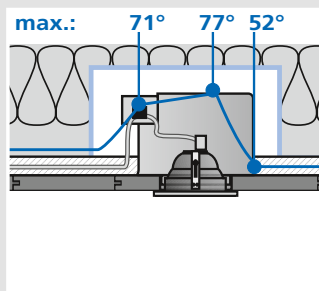
Temperature profile, halogen, high voltage (230 V)
Aluminium reflector 50 W
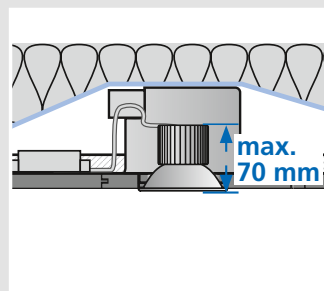
Use of pivoting LED built-in luminaires
up to 6.6 W/ET max. 70 mm

Technical processing instructions/standards

- use only certified (EN 60598) luminaires which are suitable for direct installation on normally flammable materials
- use heat-resistant cable for the SEC side
- electronic safety transformers up to 105 VA can be used. Dimensions max. 123 x 37 x 26 mm. A rounded shape is advantageous for installation and removal (e.g. PC mouse shape)
- Use heat-resistant terminals (e.g. T 100)
- Distance of holder and cable to the housing min. 10 mm

ThermoX® system for insulated hollow ceilings
for halogen and LED built-in luminaires

System components

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE
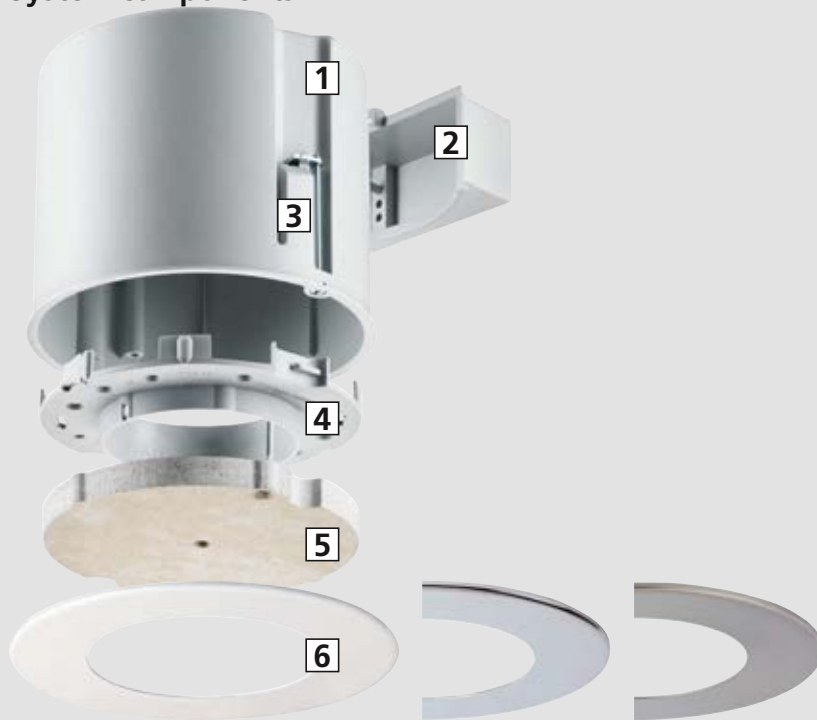
1 Housing | **2** Closing cap of the operating device opening | **3** Quick fastening FX4 for cavity wall installation | **4** Front part with bayonet fitting (both sides can be used) | **5** Mineral fibre front part (for variable installation openings up to Ø 86) | **6** Decorative covering Ø 125 (white, similar to RAL 9016, chrome-plated, matt nickel or gold-plated)

Transformer and luminaire installation
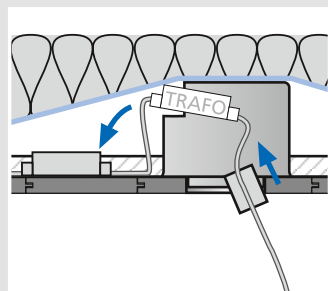
Push the transformer through......insert the closing cap...
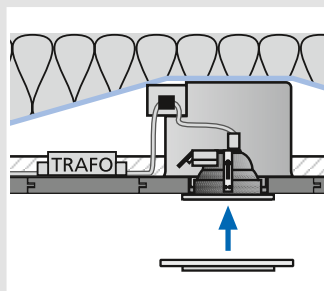
...install luminaires and fit decorative covering if used. Finished.

Air-tight installation and fire-preventive protection

ThermoX® protects the surrounding material against the extreme temperatures that can occur with halogen luminaires or LED lamps (over 200°C).DO NOT install the housing if it is wrapped in insulating material! The distance from the holder and cable to the housing must be at least 25 mm. This protective measure can be taken both in new buildings and later in existing ones for refurbishing work. ThermoX® makes possible air-tight installation as it does not destroy the moisture barrier foil that contributes to the air-tight building shell. Thanks to its air tightness, the ThermoX® housing is also suitable for all suspended ceiling systems where an uncontrolled exchange of air is to be avoided (e.g. air-conditioning or cooling ceilings) and dust-tight installation must be achieved (e.g. prevention of dirt particles caused by material removal).

ThermoX® system for insulated hollow ceilings
for halogen and LED built-in luminaires

Mounting option

ThermoX® - installation instruction

ThermoX® installation housings can be fitted in slab or tiled ceilings, as well as in seamless sub-ceiling structures made of plasterboard, mineral fibreboard, MDF and plywood with cross-battening and a layer of insulation above. Installation can be carried out from above or below (e.g. retro-fitting).

min. 60 mm

Insulation
Steam Brake
Lathework
Counter Lathing

Plasterboard   Panels

Processing instructions

Use the universal opening cutter to make the precise and airtight opening for the cable entry in the transformer flap.

The terminal is fitted firmly in the transformer closing flap so it is protected against the heat from the lamp.

For transformer maintenance, the transformer cap can be removed with a screwdriver or long-nosed pliers even after installation.

Subject to modifications

ThermoX® system for insulated hollow ceilings
for halogen and LED built-in luminaires

Slab ceiling/installation from above: during ceiling installation

Cut the installation opening and insert the housing from above. The shape of the front part ensures a secure and precise fit in the boarding. After the luminaire has been installed, the opening is completely concealed.
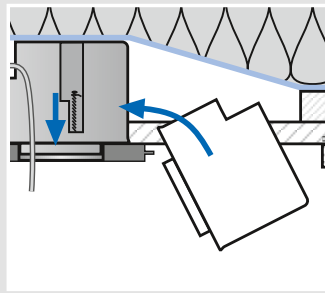
Slab ceilings/installation from below: retrofitting

Cut an installation opening, insert the housing from below and fix in place with a fast screw attachment. The housing is attractively concealed by the KAISER decorative covering and the luminaire.

max. 40 mm
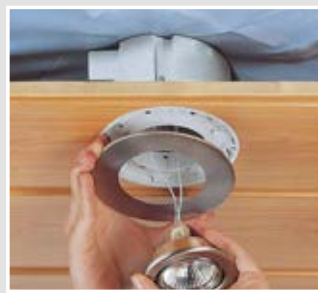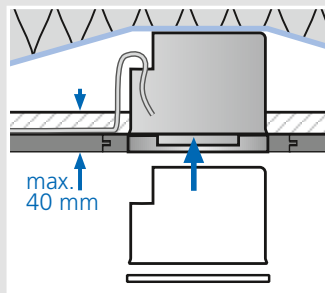
Plasterboard/installation from below: retrofitting/smoothing

Before installation, check the required installation depth! Cut the installation opening, chamfer the bottom edge of the installation opening. Insert the housing from below and fix in place with a fast screw attachment.

max. 40 mm
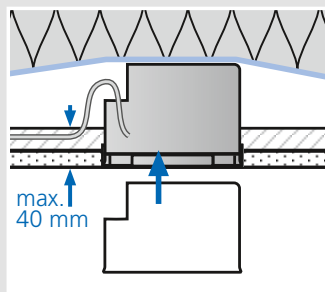
Plasterboard/installation from below: retrofitting with mineral fibreboard

Cut and chamfer the installation opening. Insert the housing from below and fix in place with a fast screw attachment. Mark opening for luminaires and cut. Smooth the joint or simply wallpaper the surface.
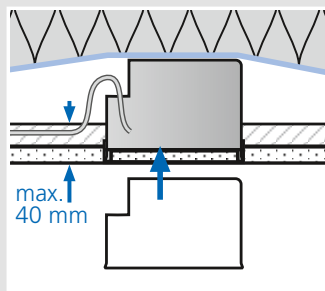
max. 40 mm

ThermoX® system for insulated hollow ceilings
for halogen and LED built-in luminaires

ThermoX® housing for low and high-voltage luminaires

· for halogen luminaires and pivoting LED luminaires
· max. installation height for low-voltage luminaire 65 mm, HV luminaire 70 mm
· Heat distortion resistant to 220°C
· lamp wattage LV: max. 35 W with AL reflector / 20 W Cool-Beam
· lamp wattage for HV luminaires max. 35 W with AL reflector (socket GU 10)
· max. LED lamp output 6.6 W
· Front can be used on both sides

FX⁴ AIR-TIGHT

For panel thickness	7 - 40 mm	7 - 40 mm	7 - 40 mm
Depth	90 mm	90 mm	90 mm
Ceiling exit (CE) Ø	68 mm	75 mm	82 mm
installation from front, cut hole Ø	120 mm	120 mm	120 mm
installation from rear, cut hole Ø	74 mm	79 mm	86 mm
Art. No.	9300-01	9300-02	9300-03
Inner packaging/shipping	- / 10	- / 10	- / 10

ThermoX® universal housing with mineral fibreboard

· saves time - no plastering; close joint gap if necessary
· ceiling exit (CE) up to Ø 86 mm possible
· Heat distortion resistant to 220°C
· max. installation height for low-voltage luminaire 65 mm, HV luminaire 70 mm
· lamp wattage LV: max. 35 W with AL reflector / 20 W Cool-Beam
· lamp power for HV luminaires max. 35 W with AL reflector (base GU 10) /20 W Cool-Beam
· max. LED lamp output 6.6 W

FX⁴ AIR-TIGHT

For panel thickness	7 - 40 mm
Depth	90 mm
Ceiling exit (CE) Ø	0-86 mm
installation from front, cut hole Ø	120 mm
Art. No.	9300-22
Inner packaging/shipping	- / 10

ThermoX® individual front rings

· for retrofitting or as spare part

Ceiling exit (CE) Ø	68 mm	75 mm	82 mm
Art. No.	9300-41	9300-42	9300-43
Inner packaging/shipping	- / 10	- / 10	- / 10

ThermoX® universal front ring

· for retrofitting or as spare part
· Universal front ring

Ceiling exit (CE) Ø	0-86 mm
Art. No.	**9300-93**
Inner packaging/shipping	- / 10

ThermoX® Decorative coverings

· metal with galvanised or powder coating
· only for interiors
· minimum diameter of the luminaire 79 mm
  with ceiling exit Ø 68 and 75 mm
· Minimum diameter of luminaire covering
  86 mm with ceiling exit Ø 82 mm

Ceiling exit (CE) Ø	Outer diameter	Colour	Art. No.	Inner packaging/shipping
68 + 75 mm	125 mm	white	**9301-01**	- / 10
68 + 75 mm	125 mm	chrome	**9301-02**	- / 10
68 + 75 mm	125 mm	matt nickel	**9301-03**	- / 10
82 mm	125 mm	white	**9301-11**	- / 10
82 mm	125 mm	chrome	**9301-12**	- / 10
82 mm	125 mm	matt nickel	**9301-13**	- / 10

FLUSH-MOUNTING

CAVITY WALL

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HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

The most important advantages at a glance:

- AFS - Active Fire Stop - guarantees fire protection
- Fire protection boxes HWD for fire protection walls and ceilings, and also shipbuilding walls
- Secure, visible and certified protection by using KAISER sealing systems for cables, conduits and bundled cables and conduits
- Automatic sealing of the joints and the gaps between cables - no filling and smoothing
- Europe-wide approval for fire sealings ETA-11/0188
- Smoke-tight and halogen-free
- Also for retrofitting
- No encasing necessary
- Reliable sealing of installation conduits by using KAISER sealing plugs

Product film
www.kaiser-elektro.org/fireprotection

Fire protection | Product lines

	Fire protection boxes	Shipbuilding boxes	Sealings	Fire protection housings
For installation accessories				
One-gang boxes	p. 251/256	p. 260	-	-
One-gang junction boxes	p. 248/251/256	p. 261	-	-
One-gang boxes for thin boarding	-	p. 260	-	-
One-gang junction boxes for thin boarding	-	p. 261	-	-
Electronics box	p. 253	-	-	-
For cable exits				
Luminaire connection boxes	p. 258	-	-	-
For luminaires and loudspeakers				
Fire protection housings	-	-	-	p. 278
Housings for preventive fire protection in insulated ceilings	-	-	-	p. 231
Feed-throughs				
Feed-through of cables	-	-	p. 265	-
Feed-through of conduits	-	-	p. 266	-
Feed-through of bundled cables and conduits	-	-	p. 269	-
Field of application				
Wall	●	●	●	-
Ceiling	●	-	●	●
Accessories				
Fixing	p. 127	p. 127	-	-
Sealing of electrical installation conduits (air-tight and smoke-tight)	p. 28/101/277	p. 28/101/277	p. 28/101/277	p. 28/101/277
Support connectors	p. 251	p. 251	-	-
End cover	p. 258	p. 258	-	-

FLUSH-MOUNTING

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SERVICE

Fire-protection boxes with sound insulation function
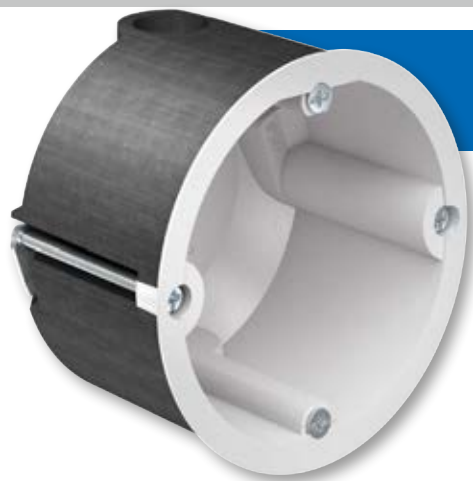
Intelligent fire-protection technology

AFS (Active-Fire-Stop) technology activates the fire-retardant coating immediately in the event of a fire, which intumesces and reliably closes off the installation opening. This guarantees maintenance of the fire-protection class of the ceilings or walls (up to EI120) in spite of the installation openings.

• Fire protection — without encasing
• Smokeproof and halogen-free
• For walls and ceilings
• For buildings and ship construction
• Maintains the wall's sound insulation protection

AFS TECHNIK | ETA Certificate pending | DIBt approval Z-19.21-1788 (German Institute of Building Technology) | WWW | FX4

Fire-protection walls

Fire-protection walls with fire resistance class EN 13501-2 are single or double shell, non load-bearing, internal separator walls with wall thicknesses of 100 mm or above. The insulating material used is defined in accordance with EN 13501 part 1. 2 x 12.5 mm GKF plasterboard fire protection panels are often 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 enclosure 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.

Installation of F90 metal stud walling in compliance with DIN 4102, Part 4

Construction of an EI 90 solid wall made of sand-lime bricks (11.5 cm thick)

Reaction of the fire-retardant coating if a fire breaks out

Flush-mounting fire-protection box

In solid construction 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 EI30-EI120 fire-protection walls
- For minimum remaining wall thicknesses ≤ 60 mm
- Also for directly opposing installation
- Installation up to 5-unit combinations
- 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

halogen-free | IP 2X | 650 °C | INNOVATION | AFS TECHNIK | ETA Certificate pending | WWW

Sound reduction index R'_w up to
56 dB
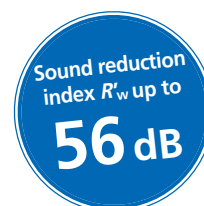
Examples of use

For EI30-EI120 fire-protection walls

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

Installations possible up to 5-way 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 Ø 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.

FLUSH-MOUNTING | CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

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 5-way combination.

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

▓ INNOVATION

Flush-mounting fire-protection box

· for 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

Depth	60 mm
Installation opening Ø	60 mm
Tube entries up to M25	6
Cable entries of up to Ø 11.5 mm	6
halogen-free	•
ETA approval	applied for
for sound insulation walls up to	56 dB
⬙ / ÖVE	• / •
Art. No.	1564-01
Inner packaging/shipping	10 / 100

Cavity wall box HWD 90

HWD 90 cavity wall boxes for EI30-EI120 fire-protection walls ensure certified and fire-protection compliant electrical installation. Intelligent AFS technology reacts immediately to fire and heat and automatically seals the installation opening. This guarantees the fire resistance class of the fire-protection wall and secures escape routes. Use in all fire-protection walls and the fire-resistance duration of up to 120 minutes ensures maximum flexibility, even when the planning is changed. At the same time, it also maintains the wall's sound insulation requirements.

- For EI30-EI120 fire-protection walls
- Maintains the wall's sound insulation protection
- Also suitable for retrofitting
- With fire-protection cover can be used as a junction box
- Also for directly opposing installation
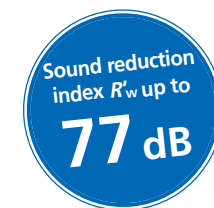
halogen-free · IP 30 · AFS TECHNIK · FX4 · ETA Certificate pending · DIBt approval Z-19.21-1788 (German Institute of Building Technology) · WWW

Sound reduction index R'_w up to **77 dB**
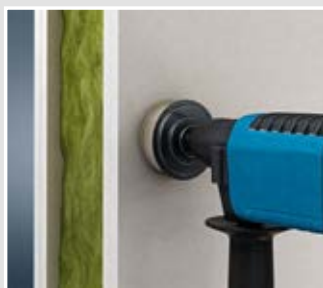
Installation

Cut installation opening Ø 74 mm using the turbo cutter MULTI 4000 Art. No. 1084-10.

The exact opening for the cable is created smokeproof with the KAISER universal opening cutter Art. No. 1085-80. Set the opening cutter to Ø 8.5 for 3 x 1.5², to Ø 9.5 for 5 x 1.5² and to Ø 9.5 for 3 x 2.5².

Fixing of the boxes with tried-and-tested cavity wall technology using KAISER FX4 technology.

The fully-insulated through-wiring of one-gang junction boxes with each other is created using the support connector (Art. No. 9060-78).

Installation in installation shafts

The HWD 90 cavity wall boxes can also be used in shaft walls for fire protection purposes. The cavity wall boxes fulfil the requirements in combinations of up to five. The boxes are installed from the front in the same way as during conventional wall installation - also during retrofitting.

- I30: without insulation material
- I60: Insulating material EN 13501 part 1
- I90: Rockwool/Termarock 100

FLUSH-MOUNTING | CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

Fire-protection boxes with sound insulation function

Note

In addition to the general building approvals issued by the DiBt (German Institute of Building Technology), we can, upon request, provide you with the test report for approval in Austria issued by the „IBS Prüfinstitut für Brandschutztechnik und Sicherheitsforschung in Linz."

Retrofitting in installation shafts

The HWD 90 cavity wall boxes can also be retrofitted in installation shafts (shaft walls). Since retrofitting partly requires adding mineral wool to the opening, a cut-out of at least 300 x 300 mm is needed to make space for perfect installation. Use the following cut-out dimensions for the relevant combinations:

- 1-time: 300 x 300 mm
- 2 to 3-times: 300 x 400 mm
- 4 to 5 times: 300 x 600 mm

Make a 300 x 300 to 300 x 600 mm cut-out (see above). The insert dimension of the additional mineral wool section must be at least 25 mm larger on all sides.

Chamfer the edges on all sides for subsequent filling.

Insert CW profile and attach by screwing quick-fastening screws through the boarding.

Feed the insert into additional mineral wool into the shaft with the upper CW profile.

Fasten insert in lower attached CW profile and attach by screwing quick fastening screws through the boarding.

Added mineral wool in CW profiles (rear view).

Add boarding section (according to Fig. 1) and attach on CW profile.

Seal chamfered boarding on transition to wall using KAISER fire-protection putty.

Smooth out using filler to allow the second boarding to be inserted flush to the wall.

Make a Ø 74 mm installation opening and insert the HWD 90 cavity wall box.

Typical installation using KAISER FX4 technology.

Then fill the chamfer of the second boarding layer.

One-gang box HWD 90

· for fire-protection walls EI30 - EI120
· also for installation shafts/installation channels I30 - I90

FIRE-PROTECTION

For panel thickness	7 - 40 mm
Depth	44 mm
Cut hole Ø	74 mm
Cable entries of up to Ø 11.5 mm	2
Support connectors for each package	-
halogen-free	•
DIBt approval	Z-19.21-1788
Combination distance through single separation of the pre-embossed edge	71 mm
alternatively cable entry for three-phase alternating current of up to 5 x 2.5 mm possible	-
for sound insulation walls up to	77 dB
/	• / •
Art. No.	**9463-01**
Inner packaging/shipping	10 / 100

Accessories: Fire-protection cover HWD 30-120, page 258; Support connector, page 251

One-gang junction box HWD 90

· for fire-protection walls EI30 - EI120
· also for installation shafts/installation channels I30 - I90

FIRE-PROTECTION

For panel thickness	7 - 40 mm
Depth	54,5 mm
Cut hole Ø	74 mm
Cable entries of up to Ø 11.5 mm	4
Support connectors for each package	5
halogen-free	•
DIBt approval	Z-19.21-1788
Combination distance through single separation of the pre-embossed edge	71 mm
alternatively cable entry for three-phase alternating current of up to 5 x 2.5 mm possible	•
for sound insulation walls up to	77 dB
/	• / •
Art. No.	**9464-01**
Inner packaging/shipping	10 / 100

Accessories: Fire-protection cover HWD 30-120, page 258; Support connector, page 251

Support connector

· for through-wiring of combinations to IP 3X standard air-tight
· smoke-tight
· for Art. No. 9464-01, 9464-15, 9464-50

halogen-free	•
Art. No.	**9060-78**
Inner packaging/shipping	25 / 100

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Fire-protection boxes with sound insulation function

Fire-protection box HWD 90 for Swiss accessories

· for EI 30 - EI 90 fire-protection walls
· VKF approval 21042
· also for opposing installation
· for plate thickness 7 - 40 mm
· matching plug-in cover for Art. No. 9498-77
  New Look one Art. No. 9919.10

3D animation

Length x Width x Depth	83 x 83 x 50 mm	145 x 83 x 50 mm	205 x 83 x 50 mm
Cut hole Ø	83 mm	83 mm	83 mm
Combination	1x1	2x1	3x1
Art. No.	**9498-77**	**9498-77.02**	**9498-77.03**
Inner packaging/shipping	10 / 100	- / 5	- / 5

Fire-protection box HWD 90 for Swiss accessories

· for EI 30 - EI 90 fire-protection walls
· VKF approval 21042
· also for opposing installation
· for plate thickness 7 - 40 mm
· matching plug-in cover for Art. No. 9498-77
  New Look one Art. No. 9919.10

3D animation

Length x Width x Depth	83 x 83 x 73.5 mm	145 x 83 x 73.5 mm
Cut hole Ø	83 mm	83 mm
Tube entries up to M25	2	2
Combination	1x1	2x1
Art. No.	**9499-77**	**9499-77.02**
Inner packaging/shipping	10 / 100	- / 5

Fire-protection box HWD 90 for Swiss accessories

· for EI 30 - EI 90 fire-protection walls
· VKF approval 21042
· also for opposing installation
· for plate thickness 7 - 40 mm
· matching plug-in cover for Art. No. 9498-77
  New Look one Art. No. 9919.10

3D animation

Length x Width x Depth	205 x 83 x 73.5 mm	145 x 145 x 73.5 mm	205 x 145 x 73.5 mm
Cut hole Ø	83 mm	83 mm	83 mm
Tube entries up to M25	2	4	4
Combination	3x1	2x2	3x2
Art. No.	**9499-77.03**	**9499-77.04**	**9499-77.06**
Inner packaging/shipping	- / 5	- / 5	- / 5

Electronics box HWD 90

The HWD 90 electronics box maintains the wall's fire resistance class (EI30 - EI120) and creates installation space for electronic switch devices, data boxes, cables and terminals. The electronics box allows population with cables and also with installation conduits up to M25.

- For EI30-EI120 fire-protection walls
- Retrofitting is possible
- Also for use as a double box
- Extra-large terminal area for communications and network technology
- Additional space for electronic components (KNX actuators, relays, radio module, communications technology)
- Maintains the wall's sound insulation protection

halogen-free   IP 30   AFS TECHNIK   WWW   FX4   **Europe-wide ETA Certificate**   **DIBt approval Z-19.21-1788** (German Institute of Building Technology)

Sound reduction index R'_w up to **77 dB**

Examples of use

The electronics box provides space for all possible installations e.g. KNX actuators, Venetian blinds relays, alarm modules and many more.

Also ideal for network connections. The generous box volume offers sufficient space for cable reserves.

The electronics box can also be used as a double box, e.g. for switch and socket combinations.

The electronics box can easily be combined with the one-gang junction box HWD 90.

Processing instructions

The electronics box provides 6 ways for conduit entry up to M25 and cable entry up to Ø 11.5 mm.

By removing the cover ...

... and the bridge can also be used as a double box.

Fire-protection boxes with sound insulation function

Installation

Cut two installation openings using turbo cutter Multi 4000 Ø 74 mm (Art. No. 1084-10) with a centre distance of 71 mm.

Removal of the bridge.

Using the KAISER universal opening cutter or a step drill or reamer, cut an exact conduit or cable opening for smoke-tight installation.

Fitting the box using tried-and-tested FX4 technology.

The additional terminal space makes possible the fitting of various electronic components …
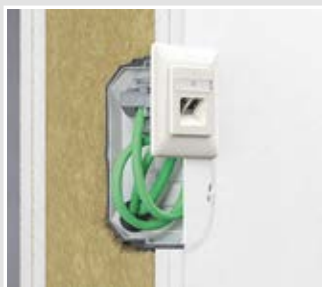
…and sufficient space for the cable reserve when communications and network boxes are installed.

By using support connectors, the box can be combined with itself or with a one-gang junction box (Art. No. 9464-01).

The cover can also be turned by 180° and mounted and filled. This will reduce any possible switching sounds.

Electronics box HWD 90

· For cables and conduits up to M25
· Also for use as a double box
· For EI30-EI120 fire-protection walls
· minimum wall thickness 100 mm
· For equipment inserts and electronic components
· Can be combined with each other and also with HWD 90 one-gang junction boxes

AFS **FIRE-PROTECTION** FX4

3D animation

For panel thickness	7 - 40 mm
Depth	70 mm
Cut hole Ø	2 x 74 mm
Centre distance	71 mm
Conduit entries for DIN EN conduits up to Ø 25 mm	4
Cable entries up to Ø 13.5 mm	4
halogen-free	•
ETA approval	ETA-13/0128
for sound insulation walls up to	77 dB
VDE / CE	• / •
Art. No.	**9462-94**
Inner packaging/shipping	5 / 50

Subject to modifications

Fire-protection box cavity wall

Fire-protection boxes are given the same period of fire resistance in fire-protection walls EI30 - EI90 in spite of fitted electrical installations and ensure secure, smokeproof room separation. In the event of a fire, an integrated fire retardant quickly and reliably closes the installation opening and prevents flames and flue gases from escaping. This ensures that lives are saved and material goods are efficiently protected.

- For fire-protection walls EI30-EI90
- Maintains the wall's sound insulation protection
- Retrofitting is possible
- For Ø 68 mm component openings
- For directly opposing installation
- Break-out cable entry
- With fire-protection cover can be used as a junction box

Sound reduction index R'_w up to 69 dB

halogen-free | IP 30 | 850 °C | INNOVATION | ETA Certificate pending | FX4 | WWW

Examples of use
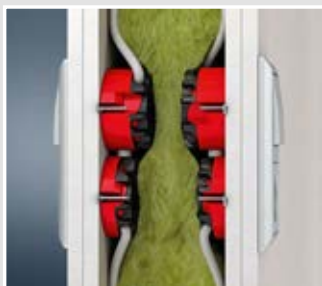
For EI30-EI120 fire-protection walls

Also for directly opposing installation

Combinations possible up to 5-way combinations of one-gang boxes and one-gang junction boxes

With a fire-protection cover, it can also be used as a junction box

Processing instructions
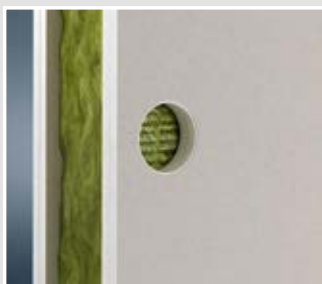
Can be used in Ø 68 mm installation openings

Simple break-out cable entry with cable retention acc. to DIN EN 60670

Up to 6 opportunities for cable entries for sheathed cables with external diameters of 4 - 11.5 mm

Fully-insulated through-wiring of one-gang boxes and one-gang junction boxes with the support connector (Art. No. 9060-68).

FLUSH-MOUNTING
CAVITY WALL
CONCRETE
HOUSINGS
FIRE PROTECTION
CABLE GLANDS
TOOLS
SERVICE

Fire-protection boxes with sound insulation function
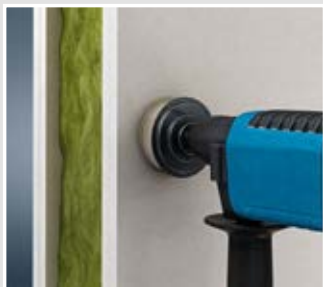
Installation

Cut Ø 68 mm installation opening with turbo cutter Multi 4000 (Art. No. 1083-10).

Break out closing of the cable entry for sheathed cables up to 5x2.5² or communication cables
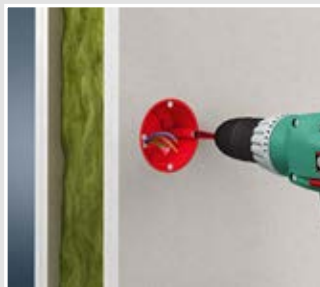
Fitting the box using tried-and-tested KAISER FX4 technology.
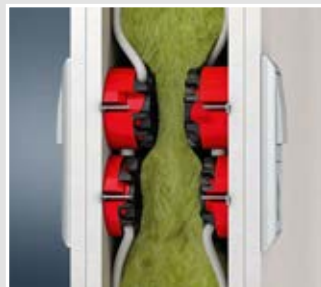
Opposing installation of one-gang boxes in a wall thickness of 100 mm and higher and of one-gang junction boxes in a wall thickness of 125 mm and higher is possible.
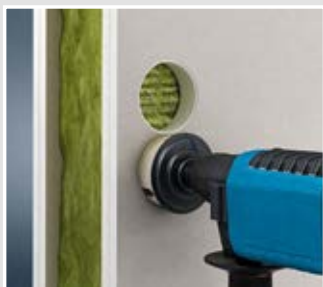
For combinations, create installation openings Ø 68 mm in centre distance 71 mm.

Insert cables.

Fixing the boxes in the installation opening.

Using support connector (Art. No. 9060-68), make fully-insulated through-wiring.

INNOVATION

One-gang box HWD 68
· for EI 30 - EI 90 fire-protection walls
· also for directly opposing installation
· minimum wall thickness 100 mm
· can be combined with each other and with the one-gang junction box

One-gang junction box HWD 68
· for EI 30 - EI 90 fire-protection walls
· also for directly opposing installation
· minimum wall thickness 125 mm
· combinable with each other and with the one-gang box

3D animation

Depth	**49 mm**	**62 mm**
Cut hole Ø	68 mm	68 mm
Support connectors for each package	5	5
halogen-free	•	•
ETA approval	applied for	applied for
Cable entries of up to Ø 11.5 mm	6	6
For panel thicknesses up to	40 mm	40 mm
for sound insulation walls up to	69 dB	69 dB
⌂ / ÖVE	• / •	• / •
Art. No.	**9463-02**	**9464-02**
Inner packaging/shipping	10 / 100	10 / 100

Support connector
· for through-wiring of combinations to IP 3X standard air-tight
· smoke-tight
· for Art. Nos. 9463-02, 9464-02

Art. No.	**9060-68**
Inner packaging/shipping	25 / 100

Subject to modifications

Ceiling box HWD 30

HWD 30 ceiling box guarantees F30 to F90 fire protection. If a fire starts, the integrated fire-retardant coating immediately generates foam and seals the opening in the ceiling. Even when retrofitted, the HWD30 ceiling box provides protection.

- For F30-F90 fire protection ceilings
- Encasing is not necesssary
- For installation of smoke detectors, motion detectors, etc.
- With a fire-protection cover, can be used as a ceiling junction box
- Also suitable for retrofitting

halogen-free | IP 30 | AFS TECHNIK | FX4 | **DIBt approval Z-19.21-1788** (German Institute of Building Technology)

Examples of use

The HWD 30 ceiling box also lets you install for example presence and smoke detectors or LED emergency route lighting in fire-protection ceilings without endangering the fire resistance class.

Processing instructions

Without mineral wool, the installation corresponds to fire resistance class F30.

If mineral wool in accordance with EN 13501 part 1 is used, the installation will withstand a fire up to fire resistance class F60, and with Rockwool/Termarock 100 up to fire resistance class F90.

Allocation table for universal opening cutters

Cavity wall installation for HWD 90 fire protection boxes		Ø setting
NYM cable	3 x 1.5 mm²	8.5
	5 x 1.5 mm²	9.5
	3 x 2.5 mm²	9.5
Support connector	9060-78	Connector

You can create smoke-tight 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 | CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

Fire-protection boxes with sound insulation function

Installation

Cut installation opening Ø 74 mm using the turbo cutter MULTI 4000 Art. No. 1084-10.	Cut the exact opening for the cable with the KAISER universal opening cutter.	Fixing of the boxes with tried-and-tested cavity wall technology using KAISER FX4 technology.	The fire-protection cover for F30 ceilings has fire resistance class F30, for F90 ceilings it has fire resistance class F90.

Ceiling box HWD 30

· for fire protection ceilings F30-F90
· For F30 non-insulated fire-protection ceilings
· For F60 fire-protection ceilings backed with mineral insulation materials in compliance with EN 13501 part 1
· for F90 fire-protection ceilings with Rockwool/Termarock 100

FIRE-PROTECTION FX4 AFS

Ceiling junction box HWD 30

· for fire protection ceilings F30-F90
· For F30 non-insulated fire-protection ceilings
· For F60 fire-protection ceilings backed with mineral insulation materials in compliance with EN 13501 part 1
· for F90 fire-protection ceilings with Rockwool/Termarock 100

FIRE-PROTECTION FX4 AFS

Depth	**44 mm**	**54,5 mm**
Cut hole Ø	74 mm	74 mm
Fixing screw spacing	60 mm	60 mm
Cable entries of up to Ø 11.5 mm	2	4
halogen-free	•	•
DIBt approval	Z-19.21-1788	Z-19.21-1788
VDE /	• / •	• / •
Art. No.	**9463-50**	**9464-50**
Inner packaging/shipping	10 / 100	10 / 100

Accessories: Fire-protection cover HWD 30-120, page 258

Fire-protection cover HWD 30-120

· For one-gang boxes/one-gang junction boxes and ceiling boxes HWD 90, HWD B15, HWD 30 and HWD 68
· Fire resistance class in accordance with ceiling or wall protection (EI30-EI120)
· EI30-EI120 function in conjunction with the one-gang box/one-gang junction box HWD 90
· EI30 function in conjunction with ceiling junction box HWD 30
· EI30-EI60 function in connection with one-gang/one gang junction box HWD 68

DIBt approval	**Z-19.21-1788**
VDE	•
Art. No.	**1184-94**
Inner packaging/shipping	10 / 100

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

HWD B15 cavity wall box for shipbuilding walls

HWD B15 cavity wall box for category B15 partitions reacts to a fire very quickly. The integrated fire-retardant coating intumesces and reliably seals the installation opening. The HWD B15 cavity wall boxes protect against fire and smoke in the fire-protection zone and preserve the B15 function of the fire-protection wall for at least 30 minutes of flames.

• For category B15 partitions
• Encasing is not necesssary
• With fire-protection cover can be used as a junction box
• Also suitable for retrofitting

Certified and designed for fast installation

Expensive and time-consuming encasing, i.e. metal, is avoided with the HWD B15 cavity wall box. The user is guaranteed a certified and fast installation.
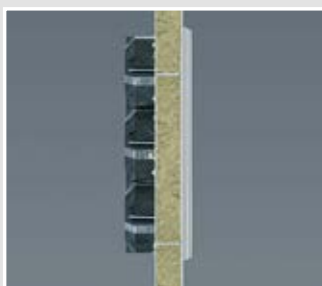
Installation in mineral-based walls

In walls with mineral-based materials, working with the cutter (Art. No. 1084-10) is quick and simple. It cuts the required Ø 74 mm wall hole and creates the basis for an exact box installation that is flush to the wall.

Occupancy can be for a max. of four entries of up to Ø 13 mm as well as for flame-retard-ant cables in accordance with UL-VO. Use the KAISER univer-sal opening cutter to cut the openings for the cable entry.

Fit the HWDB15 cavity wall box in the wall using FX4 screws.

For board thicknesses from 0.2 to 40 mm.

Fire-protection boxes

Installation in metal-covered walls

Cut the installation opening in metal plates with the cutter (Art. No. 1083-74).

Open the cable entry with the KAISER universal opening cutter.

Fit the HWDB15 cavity wall box in the wall using FX4 screws.

For thin boarding, one-gang boxes and one-gang junction boxes attached by straps are available for a clamping range of 0.2 mm and higher.

Combinations

It is very easy to combine one-gang junction boxes. After cutting the cutting holes (Ø 74 mm) at a standard distance (71 mm), remove the marked area of the holding ring.

The fully-insulated through-wiring of one-gang junction boxes with each other is created using the support connector (Art. No. 9060-78).

One-gang box HWD B15

· for shipbuilding walls in the category B 15 interface

FIRE-PROTECTION AFS FX4

For panel thickness	7 - 40 mm	0,2 - 40 mm	7 - 40 mm	0,2 - 40 mm
Depth	44 mm	44 mm	40 mm	40 mm
Cut hole Ø	74 mm	74 mm	74 mm	74 mm
Fixing screw spacing	60 mm	60 mm	60 mm	60 mm
Conduit entries up to Ø 13 mm	4	4	4	4
halogen-free	•	•	•	•
Combination distance through single separation of the pre-embossed edge	71 mm	71 mm	71 mm	71 mm
⚙ 0736 / 15 / CE	• / •	• / •	• / •	• / •
Art. No.	**9463-15**	**9463-14**	**9461-15**	**9461-14**
Inner packaging/shipping	10 / 100	10 / 100	10 / 100	10 / 100

Subject to modifications

One-gang junction box
HWD B15

· for shipbuilding walls in the category B 15
  interface

FIRE-PROTECTION AFS FX4

For panel thickness	7 - 40 mm	0,2 - 40 mm
Depth	54,5 mm	54,5 mm
Cut hole Ø	74 mm	74 mm
Fixing screw spacing	60 mm	60 mm
Conduit entries up to Ø 13 mm	4	4
Support connectors for each package	5	5
halogen-free	•	•
Combination distance through single separation of the pre-embossed edge	71 mm	71 mm
0736 / 15 CE	• / •	• / •
Art. No.	**9464-15**	**9464-14**
Inner packaging/shipping	10 / 100	10 / 100

Fire protection installation in a building at a glance

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Sealing systems in fire-protection walls

Sealings in fire-protection walls are needed when cables or conduits must be fed through walls with a specific fire resistance class. To retain the relevant rating, expert sealing of the opening is needed. KAISER sealings maintain the wall's fire resistance classes (EI30-EI90).

The German Institute for Construction Technology (DIBt) has officially confirmed it: KAISER fire sealings are ideal for professional electrical installations in fire-protection walls. KAISER has received Europe-wide European Technical Assessment for the cable sealing system „System LS 90", the conduit sealing system „System RS 90" and box sealing system „System DS 90". The fire sealings are certified for installation in drywalls, solid masonry and concrete construction walls. Non-destructive retrofitting is easy. Each of the tested products maintains the wall's fire resistance class and does not release any hazardous materials. This means that KAISER fire sealings allow fast, professional and - in every respect – safe sealing in fire-protection walls.

- Entries and feed-throughs in drywalls in accordance with DIN EN 1364-1
- Feed-throughs in solid masonry walls in accordance with DIN 1053
- Feed-throughs in concrete walls in accordance with DIN 1045

Subject to modifications

Cable sealing system LS 90, conduit sealing system RS 90

Pipe and fire-retardant systems for safe closure of passages and entrances in fire-protection walls. The certified retardants are quick and easy to install and can even be superimposed on cables and pipes retrospectively.

- Secure, visible, certified fire sealings
- For wall feed-throughs and entries
- Without filling and smoothing
- Automatic sealing of the joints
- For cables from Ø 5 - 15 mm
- For conduits M16 - M25

Europe-wide ETA Certificate

Populating the sealing system

The cable sealing system LS 90 is suitable for all cable cross-sections from 5 – 15 mm (up to 5 x 2.5²).

The conduit sealing system RS 90 can accommodate the following conduit sizes: M16, M20 and M25.

The conduit sealing system RS 90 can also be used as a reserve seal. For this purpose, the conduits must be sealed with KAISER sealing plugs.

Conduit sealing system RS 90 with M16, M20 and M25 conduits.

Examples of applications for cable sealing system LS 90

Wall feed-through in plasterboard fire-protection wall.
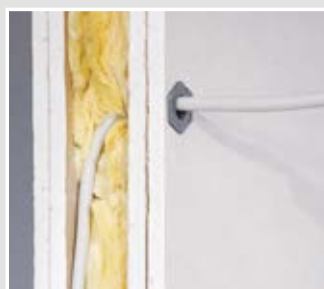
Wall entry in plasterboard fire-protection wall.

Wall feed-through in a sand-lime brick fire-protection wall.

Wall feed-through in concrete fire-protection wall.

FLUSH-MOUNTING
CAVITY WALL
CONCRETE
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SERVICE

Sealing systems in fire-protection walls

Technical information

Cable and conduit sealing systems provide tested safety for cavity wall, masonry or concrete constructions.

The installation openings can be made in solid walls using conventional drills (20 mm or 32 mm) or in plasterboard walls using a drill or cutter Art. No. 1082-10 (35 mm).

The cable and conduit sealing systems are manufactured from a permanently durable and flexible material.

By opening the cable and conduit sealing, it can easily be placed around the cable or conduit.

KAISER seals ensure room separation without the need for additional filler.

Installation of cable sealing system LS 90 in cavity walls

Cut an installation opening Ø 20 mm using a cutter (e.g. KAISER hardened metal cutter Art. No. 1088-06) or drill.

To install, open the sealing sideways and slide it over the cable.

Press both sides of the sealing into each opening.

The cable sealings can be arranged vertically or horizontally to form a group with a centre distance of 50 mm.

Mounting cable sealing system LS 90 in solid walls

Make an installation opening using a Ø 20 mm drill.

Open the side of the cable sealing system LS 90, slide it over the cable and press into the opening.

Attach the identification tag.

Officially required identification of the cable sealing.

Cable sealing system LS 90

· for EI 30 - EI 90 fire-protection walls
· for wall entries and feed-throughs
· without use of fire-protection foam or putty
· made of intumescent material
· automatic room separation of the installation
  opening
· unlimited building material shelf life

3D animation

FIRE-PROTECTION

Min. wall thickness	100 mm
Installation opening (cavity wall)	20 mm
Installation opening (masonry)	20 mm
for cables	5 - 15 mm
ETA approval	ETA-17/0449
CE	•
Art. No.	9459-01
Inner packaging/shipping	10 / 100
Accessories: Sealing identification tag, page 277	

Examples of applications for conduit sealing system RS 90
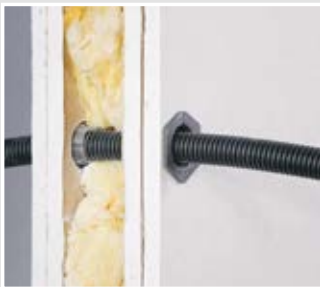
Wall feed-through in plaster-board fire-protection wall.

M16–M25 wall entry, in plasterboard fire-protection wall with M25 conduit.

Wall feed-through in sand-lime brick fire-protection wall.

Wall feed-through in concrete fire-protection wall.

Installation of conduit sealing system RS 90 in cavity walls.

Cut a 35 mm installation opening using e.g. the KAISER Multi 4000 cutter (Art. No. 1082-10).

To install, open the sealing sideways and slide over the conduit.

Press both sides of the sealing into each opening.

The conduit sealings can be arranged vertically or horizontally to form a group with a centre distance of 50 mm.

FLUSH-MOUNTING

CAVITY WALL

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CABLE GLANDS

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SERVICE

Sealing systems in fire-protection walls

Installation of conduit sealing system RS 90 in solid walls

Make an installation opening using a Ø 32 mm drill.

Remove the strap for mounting in masonry (only when installing a conduit sealing in a masonry wall).

After installing the sealing, apply the identification tag.

The sealings can be used in masonry and concrete walls.

Conduit sealing system RS 90

· for EI 30 - EI 90 fire-protection walls
· for wall entries and feed-throughs
· without use of fire-protection foam or putty
· made of intumescent material
· automatic room separation of the installation opening
· unlimited building material shelf life

FIRE-PROTECTION

3D animation

Min. wall thickness	100 mm
Installation opening (cavity wall)	35 mm
Installation opening (masonry)	32 mm
for conduits	M16 - M25
ETA approval	ETA-17/0449
CE	•
Art. No.	9459-02
Inner packaging/shipping	10 / 100
Accessories: Sealing identification tag, page 277	

Box sealing system DS 90 / 74 mm

The box sealing system DS 90 / 74 mm for cables, cable bundles and conduits. The fire-proof and smoke-proof box sealing is quick and easy to install and can also be retrofitted on cables and conduits. The easy-to-fit product offers certified safety and ensures the fire resistance class of the wall (EI30-EI90).

- Secure, visible, certified fire sealings
- For wall feed-throughs and entries
- Automatic sealing of the joints and gaps between cables - no filling and smoothing
- Non-destructive retrofitting
- For cable bundles or individual installation conduits

halogen-free | AFS TECHNIK | FX4 | **Europe-wide ETA Certificate** | WWW

Populating the sealing system

The box sealing system DS 90 / 74 mm provides space for single cables and bundles up to full population.

By choosing individual configurations, power and communication cables can be separated into groups.

The box sealing system DS 90 / 74 mm can be used with all standard sheathed cables currently found in Europe.

Spare sealing, conduits up to M40 and combination of NYM cables.

Examples of use
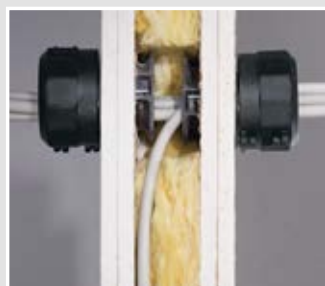
Use the two-part box sealing system DS 90 / 74 mm to create wall entries and feed-throughs.

Horizontal and vertical arrangement with a centre distance of 91 mm is permissible.

The box sealing system DS 90 / 74 can also be used as a spare seal (empty).

The sealing can accommodate conduits of up to M40.

Note

Cable population of the box sealing system DS 90 / 74 mm with all sheathed cable types recognised in Europe e.g. installation cables, data cables, telecommunication cables or fibre optic cables, as wiring bundles or as individual cables. Cable bundles can be populated up to Ø ≤ 40 mm, with a maximum diameter of ≤ 15 mm for a single cable. Single cables can be used up to Ø ≤ 21 mm.

FLUSH-MOUNTING

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SERVICE

Sealing systems in fire-protection walls

Technical information

For use as a spare sealing (empty) for future installations.

Self-explanatory installation based on the tried-and-tested cavity wall box principle.

Easy insertion of the sealing cylinder into the installation opening.

Automatic room separation - no gaps or filling of joints.

Non-destructive retrofitting of individual cables

Loosen the sealing element by turning it a quarter of a turn and open it.

Open the sealing element and remove it.

Insert the new cables.

Place the sealing element around the cable, close it and secure it with a 1/4-turn clockwise.

Installation

The box sealing system DS 90 / 74 mm consists of two parts which easily fit together.

Cut an installation opening using a Ø 74 mm cutter (e.g. Multi 4000: Art. No. 1084-10).

Place the two-part sealing cylinder around the cables and press together.

Press the sealing cylinder into the installation opening.
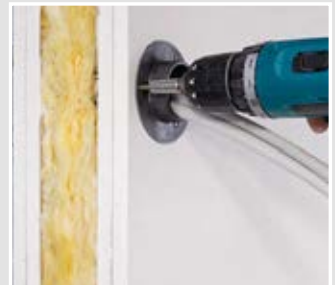
Fasten by tightening the screws (same procedure as for cavity wall boxes).

Place the sealing element around the cables and close it.

Place the sealing element on the seal cylinder and secure it with a 1/4-turn (bayonet fitting).

After installing the sealing, apply the identification tag.

This ensures sealing and the necessary room separation.

Installation of box sealing system DS 90 / 74 mm in masonry

Cut an installation opening depending on wall thickness with an 82 mm diamond grinding head or with a core drill.

Press the sealing cylinder into the installation opening with plaster, mortar or quick cement and feed the cable through.

Place the sealing element on the seal cylinder and secure it with a 1/4-turn (bayonet fitting).

Horizontal and vertical arrangement with a centre distance of 91 mm is permissible.

Installation of box sealing system DS 90 / 74 mm in concrete walls

Box sealing system DS 90 / 74 mm

· for EI 30 - EI 90 fire-protection walls
· for wall entries and feed-throughs
· attachment using tried-and-tested FX4 metal plate screws
· with integrated sealing inserts
· ensures smoke-tight room separation (seals against cold smoke)
· unlimited building material shelf life

FIRE-PROTECTION

3D animation

Cut hole Ø	**74 mm**
Min. wall thickness	100 mm
Cable entries	Maximum population (internal diameter 40 mm)
ETA approval	ETA-14/0159
CE	•
Art. No.	**9459-03**
Inner packaging/shipping	10 / 100

Accessories: Sealing identification tag, page 277

FLUSH-MOUNTING

CAVITY WALL

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Box sealing system DS 90 / 120 mm

The new box sealing system DS 90 / 120 mm covers an additional range of applications in building fire protection. The increased diameter makes it possible to use a larger number of cables and electrical installation conduits and also greater diameters. With this system, it is also possible to mix the installation of conduits and cables. In addition, full population, as with the DS 90 / 74 mm, allows use of the system in all fields of building technology. Because no additional materials are used, non-destructive retrofitting is also possible. The tried-and-tested screw fixing permits clean, safe and secure installation.

• Secure, visible, certified fire sealings
• Seals wall feed-throughs
• Automatic sealing of the joints and gaps between cables - no filling and smoothing
• Non-destructive retrofitting
• Also for mixed population of bundles of cables and conduits

halogen-free   INNOVATION   Europe-wide ETA Certificate   AFS TECHNIK   FX4   WWW

Examples of use

Can also be used as a reserve sealing.

Full population with sheathed cables up to Ø 29 mm.

Mixing of cables and conduits.

Horizontal alignment is possible with a distance of 50 mm.

Technical information DS 90 / 120 mm

Lamellae arranged on the inside of the sealing cylinder ensure fast closing if a fire breaks out.

The sealing element with integrated cooling ribs guarantees clean cable and conduit routing.

Easy insertion of the sealing cylinder into the installation opening.

Automatic room separation - no gaps or filling of joints.

Population of box sealing system DS 90 / 120 mm

Mixed population of sheathed cables and conduits.

Can also be used as a reserve sealing.

Full population with sheathed cables up to Ø 29 mm and conduits up to M63.

Installation conduits can be fitted as reserve conduits.

Installation

The box sealing system DS 90 / 120 consists of two parts which easily fit together.

Cut installation opening with a cutter Ø 120 mm (e.g. bi-metal cutter Art. No. 1082-20).

Press the sealing cylinder into the installation opening.
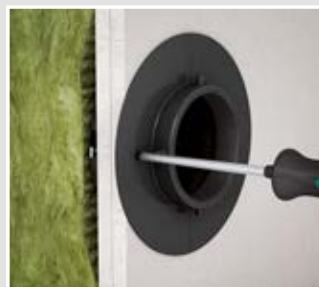
Fix sealing cylinder by tightening the screws (same procedure as with cavity wall boxes).

Feed sheathed cables and conduits through the sealing cylinder.

Close conduit ends smoke-tight (e.g. with KAISER sealing plugs).

Fit the two-part sealing element round the bundle, close it and connect it to the sealing cylinder by means of the bayonet fitting.

The sealing and the necessary room separation can also be used as a reserve sealing.

Horizontal alignment of the sealings is possible with a clearance of 50 mm.

Non-destructive retrofitting of single cables and conduits

Loosen the sealing element by turning it a quarter of a turn and open it.

Open the sealing element and remove it.

Insert the new cables and conduits.

Fit the sealing element and secure with a 1/4 turn to the right.

FLUSH-MOUNTING

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SERVICE

Sealing systems in fire-protection walls

Installation of box sealing system DS 90 / 120 mm in masonry

Cut installation opening - depending on wall thickness - with a core drill 150 mm.

Using plaster, mortar or fast cement, press the sealing cylinder into the installation opening and feed the cables or conduits through.

The sealing collar ensures tight room separation, even when openings are not clean, and prevents plaster, mortar or fast cement from being pressed out.

Place the sealing element on the sealing cylinder and secure it with a 1/4-turn (bayonet fitting).

Installation of box sealing system DS 90 / 120 mm in concrete walls

Table of max. external diameter of sheathed cables (NYM cables)

The table shows examples of cables which can be used on the basis of the maximum permitted diameter. The main factor is the minimum stated standard diameter acc. to DIN VDE 0250-204.

5×6^2	3×10^2	5×10^2	4×16^2	5×25^2	4×35^2	$7 \times 2,5^2$
Ø 14,5 - 17,5 mm	Ø 14,7 - 17,7 mm	Ø 17,7 - 21,3 mm	Ø 19,0 - 23,0 mm	Ø 25,7 - 31,1 mm	Ø 25,7 - 31,1 mm	Ø 12,6 - 15,2 mm

Two box sealing systems DS 90 / 120 are required feed-throughs in a fire-protection wall.

Box sealing system DS 90 / 120 mm

· for EI 30 - EI 90 fire-protection walls
· attachment using tried-and-tested FX4 metal plate screws
· with integrated sealing inserts
· ensures smoke-tight room separation (seals against cold smoke)
· unlimited building material shelf life

AFS FIRE-PROTECTION

3D animation

Cut hole Ø	120 mm
Min. wall thickness	100 mm
Cable entries	Maximum population (Inner diameter 74 mm)
ETA approval	ETA-14/0159
CE	•
Art. No.	9459-04
Inner packaging/shipping	- / 4

Ceiling penetration sealing systems DS 90 / 120 mm and DS 90 / 74 mm

KAISER ceiling penetration sealing systems DS 90 / 120 mm and DS 90 / 74 mm ensure that the ceiling maintains fire-resistance class EI30-EI90. To efficiently prevent the spread of fire and flue gases through cable penetrations and electrical installation conduits through concrete or cellular concrete ceilings, their fire sealing must have the same fire-resistance class as the ceiling. The ceiling penetration sealing system DS 90 accomplishes this easily, quickly and reliably.

- Secure, visible, certified fire sealings
- Sealing especially for ceiling penetrations
- Automatic sealing without filling or smearing
- Non-destructive retrofitting
- Also for mixed population of bundles of cables and conduits
- Easy and quick installation from above

halogen-free | INNOVATION | Europe-wide ETA Certificate | AFS TECHNIK | FX4 | WWW

Examples of use

Use in EI30 – EI90 concrete ceilings.

Use in EI30 – EI90 cellular concrete ceilings.

Mixed population of cables and conduits up to maximum population. They can also be arranged as groups with a distance of 205 mm (DS 90 / 120 mm) or 125 mm (DS 90 / 74 mm).

Mixed population of cables and conduits up to maximum population.

Population of ceiling penetration sealing system DS 90 / 120 mm and DS 90 / 74 mm

Mixed population of sheathed cables and conduits.

Can also be used as a reserve sealing.

Maximum population with sheathed cables Ø 29 mm and conduits up to M63.

Maximum population with sheathed cables Ø 15 mm and conduits up to M40.

FLUSH-MOUNTING | CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

Sealings in fire-protection ceilings

Technical information on ceiling sealing system DS 90 / 120 mm and DS 90 / 74 mm

Divisible installation sleeve with edge protection made of intumescent material.

Retaining springs for quick and secure installation from above.

Cut-outs for receiving the metal plates and for fastening the box sealing system

Divisible installation sleeve for retrofitting of existing cables and conduits.

Making for the location of the screws.

Sealing flange ensures a clean and smoke-tight room separation of the component opening.

For core drill holes Ø 150 mm (DS 90 / 120 mm) and Ø 100 mm (DS 90 / 74 mm).

Two ceiling penetration sealing systems for different applications.

Installation

Installation is identical for ceiling penetration sealing systems DS 90 / 120 and DS 90 / 74 mm, except for the differences in the dimensions.

Making a core drill hole 150 mm or 100 mm.

Insert the installation sleeve from the upper side of the ceiling

Feed sheathed cables and/or conduits through the installation sleeve.

Place sealing cylinder around the cables or conduits and insert into the installation sleeve.

Align plate screws of the sealing cylinder with the markings and tighten.

Place sealing cylinder around the cables or conduits and then snap into place with the sealing cylinder.

The ceiling penetration sealing systems can also be arranged as a group with a distance of 205 mm or 125 mm.

Ceiling penetration sealing systems in concrete or cellular concrete ceilings of 150 – 300 mm ceiling thickness have been approved for use.

Formwork body

For preparation of installation in concrete ceilings, KAISER provides a formwork unit for matching cut-outs.
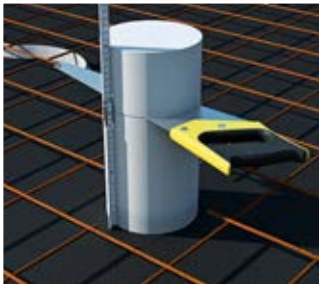
Adapt formwork unit to the ceiling thickness by cutting it to length.

Fix formwork unit with tie wire to the reinforcement.

After formwork removal, remove the formwork unit from the component opening without leaving any residues.

Non-destructive retrofitting of single cables and conduits

Loosen the sealing element by turning it a quarter of a turn and open it.

Open the sealing element and remove it.

Insert the new cables and conduits.

Turn sealing element around, lock and fix by applying a quarter turn to the right.

Table of max. external diameter of sheathed cables (NYM cables)

The table shows examples of cables which can be used on the basis of the maximum permitted diameter. The main factor is the minimum stated standard diameter acc. to DIN VDE 0250-204.

5×6^2	3×10^2	5×10^2	4×16^2	5×25^2	4×35^2	$7 \times 2,5^2$
Ø 14,5 - 17,5 mm	Ø 14,7 - 17,7 mm	Ø 17,7 - 21,3 mm	Ø 19,0 - 23,0 mm	Ø 25,7 - 31,1 mm	Ø 25,7 - 31,1 mm	Ø 12,6 - 15,2 mm

FLUSH-MOUNTING

CAVITY WALL

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TOOLS

SERVICE

Sealings in fire-protection ceilings

Ceiling penetration sealing system DS 90/74 mm

· for fire protection ceilings EI30 - EI90
· Easy installation without filling
· Installation on the upper side of the ceiling
· creates a smoke-tight room separation

FIRE-PROTECTION

3D animation

Installation opening Ø	**100 mm**
Ceiling thickness	150 - 300 mm
Cable entries	Maximum population (internal diameter 40 mm)
ETA approval	ETA-14/0159
PVC conduits up to	M40
CE	•
Art. No.	**9459-05**
Inner packaging/shipping	- / 12

Ceiling penetration sealing system DS 90/120 mm

· for fire protection ceilings EI30 - EI90
· Easy installation without filling
· Installation on the upper side of the ceiling
· creates a smoke-tight room separation

FIRE-PROTECTION

3D animation

Installation opening Ø	**150 mm**
Ceiling thickness	150 - 300 mm
Cable entries	Maximum population (Inner diameter 74 mm)
ETA approval	ETA-14/0159
PVC conduits up to	M50
CE	•
Art. No.	**9459-06**
Inner packaging/shipping	- / 1

Formwork body

· creates matching component openings
· suitable for ceiling penetration sealing systems DS 90 / 120 mm and DS 90 / 74 mm
· for ceiling thicknesses 150 - 300 mm

Formwork body

· creates matching component openings
· suitable for ceiling penetration sealing systems DS 90 / 120 mm and DS 90 / 74 mm
· for ceiling thicknesses 150 - 300 mm

Diameter	**100 mm**	**150 mm**
Ceiling thickness	150 - 300 mm	150 - 300 mm
Art. No.	**9473-95**	**9473-96**
Inner packaging/shipping	- / 8	- / 6

INNOVATION

Sealing identification tag
· universal seal identification tag
· for all KAISER sealings
· can be filled out
· in plastic, with 2 x 4.5 mm drill holes

FIRE-PROTECTION

German	•	•
English	•	•
French	•	•
Dutch	-	•
Italian	•	-
Art. No.	**9473-91**	**9473-92**
Inner packaging/shipping	- / 10	- / 10

Sealing plugs 16-20
· for sealing electrical installation conduits
· ECON® technology for easy cable entry
· permanently flexible plastic

ECON AIR-TIGHT

3D animation

Sealing plug	M16	M20
DIN EN conduit Ø	16 mm	20 mm
Art. No.	**1040-16**	**1040-20**
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

ECON AIR-TIGHT

3D animation

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

Fire-stop box FlamoX®

FlamoX® installation housings for luminaires and loudspeakers protect lives and material goods if a fire breaks out. In luminaire and loudspeaker installations in fire-protection ceilings, the integrated fire-retardant coating gives the housings the fire-protection class F30 (EI30) of the ceiling. They prevent fire and flue gases from spreading, so they secure escape routes in buildings. FlamoX® fire-protection housings provide certified security.

- Safe, certified fire-protection housings for built-in luminaires and loudspeakers
- Fast, easy fitting from the underside of the ceiling
- Suitable for fire resistance from above and below
- Installation without additional suspension
- No use of additional fire protection materials or sealing compounds

halogen-free | INNOVATION | ETA Certificate pending | AFS TECHNIK | WWW

Functioning of the fire-retardant coating in the event of fire (fire load from below)

Functioning of the fire-retardant coating if a fire breaks out (fire load from above)

Examples of use

Fire-stop housing for recessed luminaires...

… and for loudspeakers.

Mounting in suspended fire-protection ceilings F30

Available in two sizes for a range of uses

FlamoX® system for hollow ceilings - fire protection class F30
Housings for LV/HV and energy-saving luminaires and loudspeakers

FLUSH-MOUNTING

CAVITY WALL

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Note

FlamoX® housings are tested fire-protection housings for the fire-protection sealing of built-in luminaires and loudspeakers in independent, two-layer suspended F30 fire-protection ceilings made of plasterboard fire-protection panels with or without insulation. The ETA-certified (European Technical Assessment) housings are approved for fireloads from above and below. The FlamoX® housings were tested according to DIN EN 1363-1 and DIN EN 1366-3, so they can be installed in ceiling systems which were built according to DIN 4102-4 or DIN EN 1364-2 or have certification in the form of a general building approval certificate.

Technical information

Fixing lugs with hole structure for fast, easy screw fitting to the fire-protection ceiling.

Interior consisting of a fire-retardant-forming fire-protection material and, in the event of a fire, automatically closing plate.

Two cable entries for sheathed cables up to Ø 13.5 mm external diameter and two conduit entries for conduits up to M25.

Bendable retention lugs for optional suspension in ceiling profiles.

Installation

After determining the position of the luminaire, use the template to mark the screw positions and the cut-out.

… then create the cut-out for the housing and retain for future use.

Open cable and conduit entries and use the universal opening cutter (Art. No. 1085-80) to cut matching entries.

Insert the housing into the component opening and align it.

Fix housing to the fire-protection ceiling using quick-fastening screws …

… then chamfer the cut-out made previously and fix with dry-wall screws.

Create the component opening for luminaire or loudspeaker

Plastering of the joints

INNOVATION

FlamoX® fire-protection housing

· for luminaires and loudspeakers
· Smokeproof and halogen-free
· for fire loads from above and below
· made of galvanised sheet metal with lining
· made of fire-resistant coating

3D animation

For panel thickness	2 x 12,5 mm	2 x 12,5 mm
Length x Width x Height	230 x 180 x 100 mm	320 x 270 x 150 mm
Exit opening Ø	100 mm	180 mm
Max. luminaire or loudspeaker installation height	100 mm	150 mm
Tube entries up to M25	2	2
Cable entries up to Ø 13.5 mm	2	2
halogen-free	•	•
LED luminaires	14 Watt	34 Watt
Halogen luminaires	50 Watt	75 Watt
ETA approval	applied for	applied for
CE	•	•
Art. No.	9435-04	9435-03
Inner packaging/shipping	- / 1	- / 1

FlamoX®-S 30 E installation housing

FlamoX®-S30 E is suitable for the installation of downlights with compact fluorescent lights and for loudspeakers. The integrated fire-retardant coating maintains fire protection class F30 (EI30).

• Fire protection housing system for luminaires and loudspeakers
• For single or double layer suspended EI30 fire protection hollow ceilings
• Fire resistance from above and below
• Intelligent, automatic sealing
• Smokeproof and halogen-free
• For new build or as a fire protection upgrade in existing buildings

halogen-free | **AFS TECHNIK** | **DIBt approval Z-19.21-1788** (German Institute of Building Technology) | **ETA Certificate pending**

Temperature profile, luminaire selection
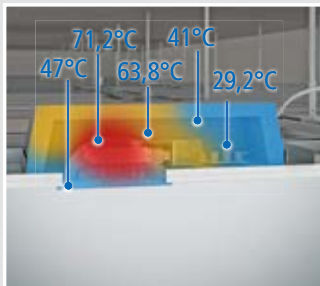
Temperature profile: TC downlight
Room temperature (23°C), 52 W TC

Luminaire selection: TC downlight
min. 10 mm
max. 100 mm
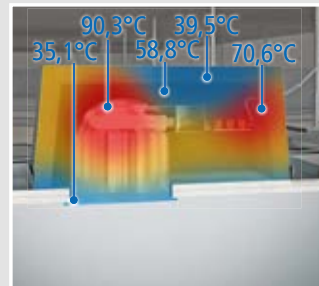
Temperature profile: TC downlight
Room temperature (23°C), 52 W TC
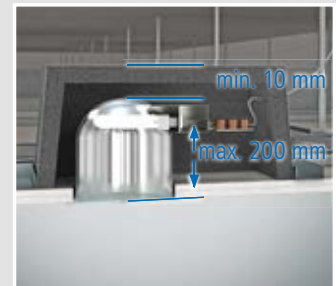
Luminaire selection: TC downlight
min. 10 mm
max. 200 mm

Technical processing instructions/standards

• Exit openings max. Ø 240 mm
• use only certified (EN 60598) luminaires which are suitable for direct installation on normally flammable materials
• Accepts low-loss (VVG) and electronic (EVG) ballast devices.
• max. installation dimension AL 290 mm
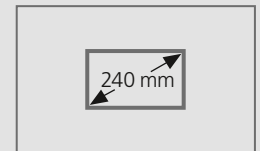
240 mm

240 mm

FLUSH-MOUNTING | CAVITY WALL | CONCRETE | HOUSINGS | FIRE PROTECTION | CABLE GLANDS | TOOLS | SERVICE

FlamoX® system for hollow ceilings - fire protection class F30

Housings for LV/HV and energy-saving luminaires and loudspeakers

FlamoX®-S 30 E installation housing

FlamoX®-S30 E installation example in a double-layer F30 fire protection ceiling
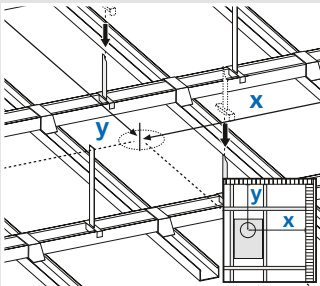
Mark the ceiling cut-out.
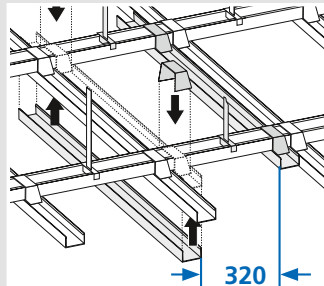
Place the auxiliary frame construction in position.
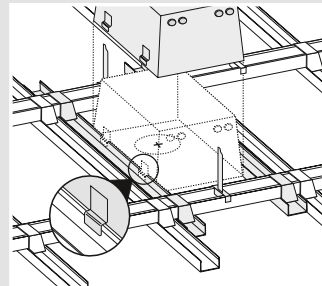
Insert the FlamoX® housing.
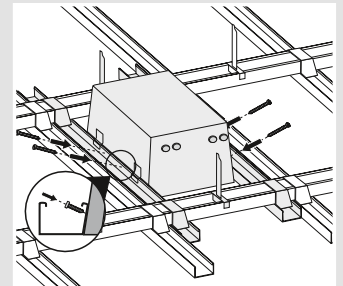
Screw the housing to the profile.
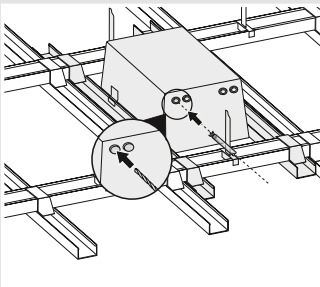
Insert the connection cables. max. 5x2.5² Ø 10.5; 3x1.5² Ø 7.5
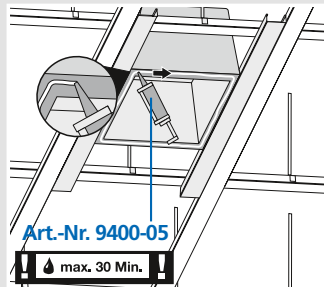
Apply KAISER fire-protection putty to the lower edge.
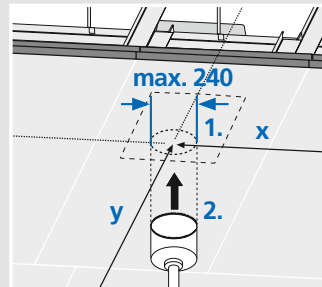
Mark and cut the installation opening.
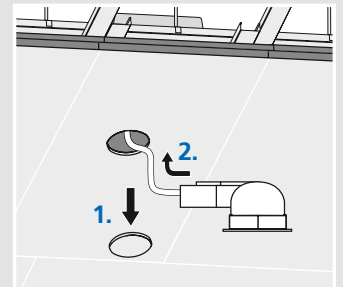
Connect and insert the luminaire or loudspeaker.

Note

The installation of luminaires, loudspeakers etc. depends on the installation dimensions (diameter and height) as specified by their manufacturer. For panel thicknesses of 25 mm and higher and fitted devices with asymmetric equipment carrier, always ensure that the swivel radius and the clamping range are maintained.

FlamoX® housing for hollow ceilings with fire protection class F30

· For energy-saving luminaires, lamp wattage max. 52 W
· made from galvanised plate with fire-retardant coating
· exit opening with Ø of up to 240 mm in square or rectangular cut-out, max. diagonal: 240 mm
· smoke-tight, halogen-free

FIRE-PROTECTION (AFS)

Length x Width x Depth	500 x 320 x 220 mm
Exit opening Ø	<= 240 mm
Max. luminaire or loudspeaker installation height	200 mm
DIBt approval	Z-19.15-1623
	•
Art. No.	**9435-01**
Inner packaging/shipping	- / 1

Note

Important! When using the FlamoX® housings, it is absolutely essential to use KAISER fire-protection putty (Art. No. 9400-05) for adhesion. If this is not carried out, the approval certificate becomes invalid. We recommend in each case the use of a cartridge of fire-protection putty for glueing 2 FlamoX S30 E housings.

FlamoX® fire-protection putty

· fire-retardant material
· for filling joints and gluing board materials
· type 9400
· max. working time 30 mins.
· can be warehoused for up to 12 months

(AFS)

DIBt approval	Z-19.11-1583
	•
Art. No.	**9400-05**
Inner packaging/shipping	- / 20

3D animation

FLUSH-MOUNTING
CAVITY WALL
CONCRETE
HOUSINGS
FIRE PROTECTION
CABLE GLANDS
TOOLS
SERVICE

Cable glands

The most important advantages at a glance:

- Superb quality and practical applications
- Perfectly matched range of products for everyday trade needs
- Complete full range with more than 3,500 products in our special "Cable glands" catalogue or at www.kaiser-elektro.de
- Implementation of individual customer solutions
- Tried and tested - millions of times
- CAD data

Product film
www.kaiser-elektro.org/cableglands

Cable glands
Product lines

SYNTEC® synthetic cable gland	p. 286
SYNTEC® brass cable gland	p. 290
Counternut synthetic and brass with flange	p. 292
Synthetic and brass closing screws	p. 293
MontaX® mounting plate	p. 296
MontaX® mounting angle	p. 297

Syntec® cable glands with lamellar technology

Connection threads		
	metric short	metric long
Synthetic one-piece sealing ring	p. 287	p. 288
Synthetic with anti-kink one-piece sealing ring	p. 289	see catalogue AGRO Cable glands
Brass one-piece sealing ring	p. 291	p. 291

Accessories for Syntec® cable glands

	Counternuts	Closing screws	
Synthetic	p. 292	p. 293	
Brass	p. 292	p. 293	
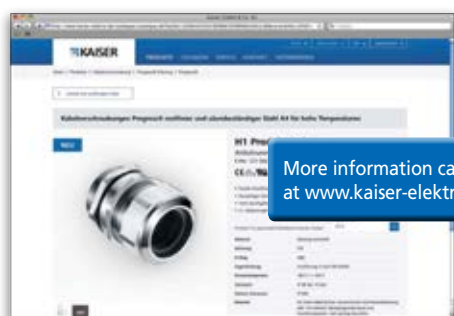
More information can be found at www.kaiser-elektro.de

AGRO Kabelverschraubungen
AGRO Cable Glands

Für professionelle Kabelführungen.
For professional cable entries.

4.0

Catalogue
AGRO Cable Glands

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

Synthetic cable glands Syntec® with lamellar technology

SYNTEC® synthetic cable gland

SYNTEC® synthetic cable gland with innovative lamellar technology including movable jointed lamellae and compression nuts for everyday use (cannot be overtightened).

- Made from high-quality, weather-resistant polyamide
- With short and long metric entry thread
- Standard/reducing sealing rings
- With environmentally resistant TPE sealing ring
- High level of strain relief and simultaneous distortion protection.
- Three colours (light grey, silver grey, black) in stock
- Good chemical resistance
- Protection class IP68, waterproof
- Tested acc. to EN 50262
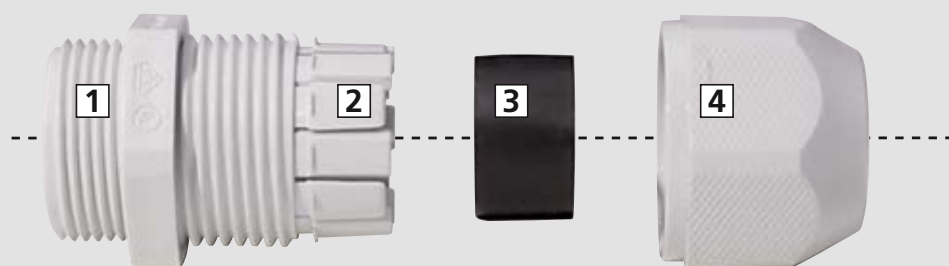
1 Lower part | **2** Lamellae | **3** Sealing ring | **4** Push-down nut

The nut's large-area hexagon always provides a safe and firm grip when turned by hand and tightened with the tool.

Synthetic cable glands Syntec® with lamellar technology

Short entry thread metric

Material:	Polyamide PA 6
Properties:	halogen-free
Sealing ring:	TPE or CR (Neoprene)
Strain relief:	Version A acc. to EN 62444
Temperature range:	-30°C / +100°C
Protection class:	IP 68
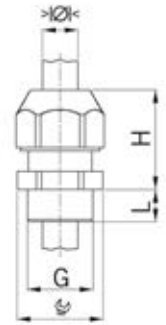
SYNTEC

Light grey RAL 7035
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	21	6	**1555.12.06**	100
M16x1.5	2.0	6.0	19	25	8	**1555.17.06**	50
M16x1.5	5.0	10.0	19	25	8	**1555.17.10**	50
M20x1.5	3.5	8.0	24	29	9	**1555.20.08**	50
M20x1.5	7.0	13.0	24	29	9	**1555.20.13**	50
M25x1.5	5.0	11.0	29	38	10	**1555.25.11**	25
M25x1.5	10.0	17.0	29	38	10	**1555.25.17**	25
M32x1.5	17.0	25.0	42	36	10	**1555.32.25**	20

SYNTEC

Dark grey RAL 7001
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	21	6	**1556.12.06**	100
M16x1.5	2.0	6.0	19	25	8	**1556.17.06**	50
M16x1.5	5.0	10.0	19	25	8	**1556.17.10**	50
M20x1.5	3.5	8.0	24	29	9	**1556.20.08**	50
M20x1.5	7.0	13.0	24	29	9	**1556.20.13**	50
M25x1.5	5.0	11.0	29	38	10	**1556.25.11**	25
M25x1.5	10.0	17.0	29	38	10	**1556.25.17**	25
M32x1.5	17.0	25.0	42	36	10	**1556.32.25**	20

SYNTEC

Black RAL 9005
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	21	6	**1545.12.06**	100
M16x1.5	2.0	6.0	19	25	8	**1545.17.06**	50
M16x1.5	5.0	10.0	19	25	8	**1545.17.10**	50
M20x1.5	3.5	8.0	24	29	9	**1545.20.08**	50
M20x1.5	7.0	13.0	24	29	9	**1545.20.13**	50
M25x1.5	5.0	11.0	29	38	10	**1545.25.11**	25
M25x1.5	10.0	17.0	29	38	10	**1545.25.17**	25
M32x1.5	17.0	25.0	42	36	10	**1545.32.25**	20

Synthetic cable glands Syntec® with lamellar technology

Long entry thread metric

Material:	Polyamide PA 6
Properties:	halogen-free
Sealing ring:	TPE or CR (Neoprene)
Strain relief:	Version A acc. to EN 62444
Temperature range:	-30°C / +100°C
Protection class:	IP 68

SYNTEC

Light grey RAL 7035
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	21	12	1555.12.1.06	100
M16x1.5	2.0	6.0	19	25	15	1555.17.1.06	50
M16x1.5	5.0	10.0	19	25	15	1555.17.1.10	50
M20x1.5	3.5	8.0	24	29	15	1555.20.1.08	50
M20x1.5	7.0	13.0	24	29	15	1555.20.1.13	50
M25x1.5	5.0	11.0	29	38	15	1555.25.1.11	25
M25x1.5	10.0	17.0	29	38	15	1555.25.1.17	25
M32x1.5	17.0	25.0	42	36	15	1555.32.1.25	20
M40x1.5	22.0	33.0	53	48	15	1555.40.1.33	10
M50x1.5	28.0	38.0	60	48	15	1555.50.1.38	5
M63x1.5	32.0	44.0	65	49	16	1555.63.1.44	5

SYNTEC

Dark grey RAL 7001
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	21	12	1556.12.1.06	100
M16x1.5	2.0	6.0	19	25	15	1556.17.1.06	50
M16x1.5	5.0	10.0	19	25	15	1556.17.1.10	50
M20x1.5	3.5	8.0	24	29	15	1556.20.1.08	50
M20x1.5	7.0	13.0	24	29	15	1556.20.1.13	50
M25x1.5	5.0	11.0	29	38	15	1556.25.1.11	25
M25x1.5	10.0	17.0	29	38	15	1556.25.1.17	25
M32x1.5	17.0	25.0	42	36	15	1556.32.1.25	20
M40x1.5	22.0	33.0	53	48	15	1556.40.1.33	10
M50x1.5	28.0	38.0	60	48	15	1556.50.1.38	5
M63x1.5	32.0	44.0	65	49	16	1556.63.1.44	5

SYNTEC

Black RAL 9005
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	21	12	1545.12.1.06	100
M16x1.5	2.0	6.0	19	25	15	1545.17.1.06	50
M16x1.5	5.0	10.0	19	25	15	1545.17.1.10	50
M20x1.5	3.5	8.0	24	29	15	1545.20.1.08	50
M20x1.5	7.0	13.0	24	29	15	1545.20.1.13	50
M25x1.5	5.0	11.0	29	38	15	1545.25.1.11	25
M25x1.5	10.0	17.0	29	38	15	1545.25.1.17	25
M32x1.5	17.0	25.0	42	36	15	1545.32.1.25	20
M40x1.5	22.0	33.0	53	48	15	1545.40.1.33	10
M50x1.5	28.0	38.0	60	48	15	1545.50.1.38	5
M63x1.5	32.0	44.0	65	49	16	1545.63.1.44	5

Subject to modifications

Synthetic cable glands Syntec® with lamellar technology

Synthetic Syntec® cable glands with lamellar technology and anti-kink nozzle

Material:	Polyamide PA 6
Properties:	halogen-free
Sealing ring:	CR (neoprene)
Strain relief:	Version A acc. to EN 62444
Temperature range:	-30°C / +100°C
Protection class:	IP 68
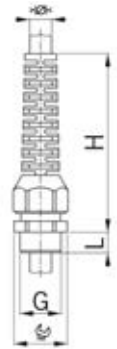
SYNTEC with anti-kink protection

Light grey RAL 7035
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	54	6	**1576.12.06**	50
M16x1.5	4.0	8.0	19	64	6	**1576.17.08**	50
M20x1.5	3.0	7.0	24	88	8	**1576.20.07**	50
M20x1.5	5.5	12.0	24	88	8	**1576.20.12**	50

SYNTEC with anti-kink protection

Dark grey RAL 7001
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	54	6	**1577.12.06**	50
M16x1.5	4.0	8.0	19	64	6	**1577.17.08**	50
M20x1.5	3.0	7.0	24	88	8	**1577.20.07**	50
M20x1.5	5.5	12.0	24	88	8	**1577.20.12**	50

SYNTEC with anti-kink protection

Black RAL 9005
One-piece sealing ring

G	>∅< min mm	>∅< max mm	mm	H mm	L mm	Art. No.	
M12x1.5	2.5	6.5	15	54	6	**1546.12.06**	50
M16x1.5	4.0	8.0	19	64	6	**1546.17.08**	50
M20x1.5	3.0	7.0	24	88	8	**1546.20.07**	50
M20x1.5	5.5	12.0	24	88	8	**1546.20.12**	50

FLUSH-MOUNTING

CAVITY WALL

CONCRETE

HOUSINGS

FIRE PROTECTION

CABLE GLANDS

TOOLS

SERVICE

SYNTEC® brass cable gland

SYNTEC® brass cable gland with innovative lamella technology including movable jointed lamellae and overtightening-protected cap nuts for everyday use.

• Lamellae insert made from high-quality polyamide
• With short and long metric entry thread
• With environmentally resistant TPE sealing ring
• Standard and reducing sealing rings
• High level of strain relief and simultaneous distortion protection.
• Protection class IP68, waterproof
• Tested acc. to EN 50262
• Good chemical resistance
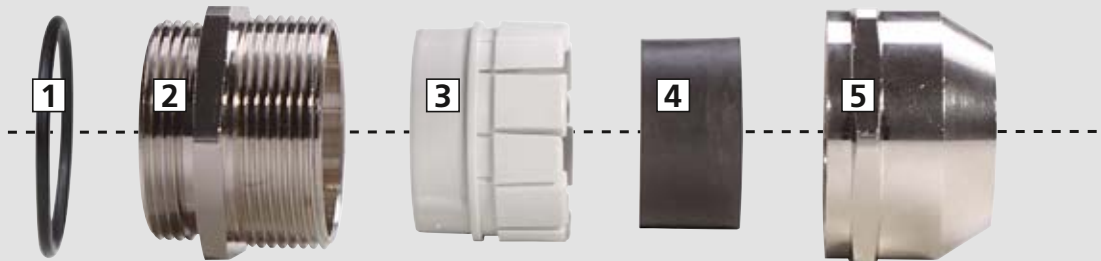
1 O-ring | **2** Lower part | **3** Lamellar insert | **4** Sealing ring | **5** Push-down nut
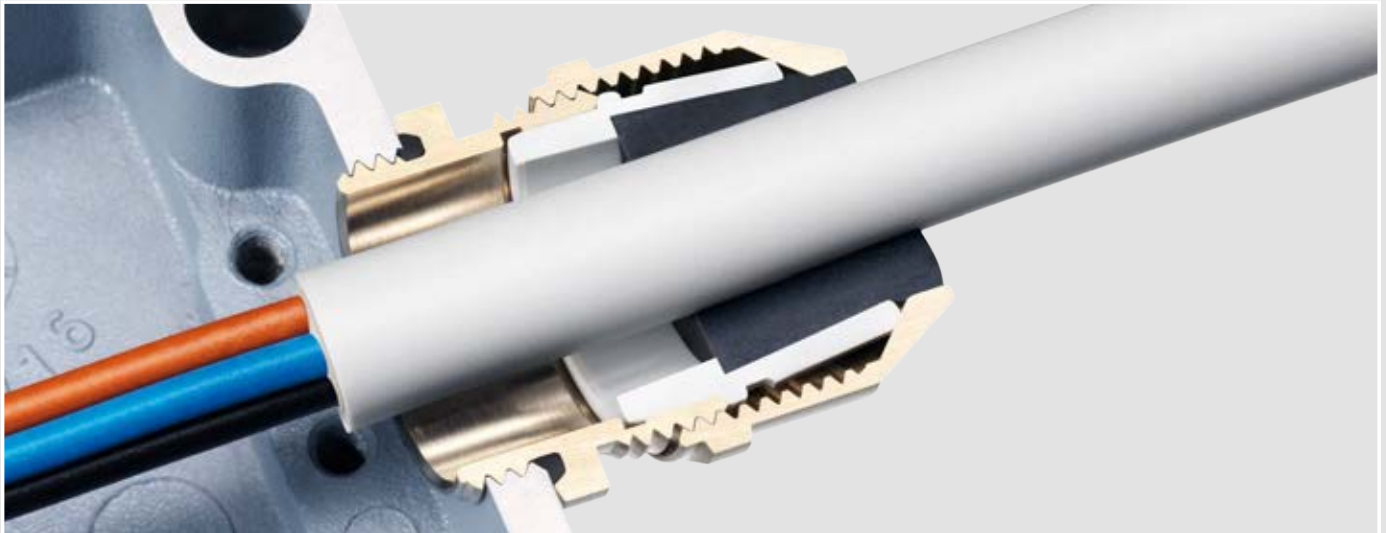
Cable glands Syntec® nickel-plated brass with lamellar technology

Short entry thread metric

Material: Nickel-plated brass
Sealing ring: TPE
O-ring :   NBR
Lamellar insert: Polyamide PA 6
Strain relief: Version A acc. to EN 62444
Temperature range: -40°C / +100°C
Protection class: IP 68

SYNTEC MS

One-piece sealing ring
not overall length insulated

G	>∅< min mm	>∅< max mm	🔧 mm	H mm	L mm	Art. No.	📦
M12x1.5	1.0	5.0	15	17	5	1045.12.050	50
M12x1.5	3.0	7.0	15	17	5	1045.12.070	50
M16x1.5	2.0	6.0	18	20	5	1045.17.060	50
M16x1.5	4.5	10.0	18	20	5	1045.17.100	50
M20x1.5	3.5	8.0	22	25	6	1045.20.080	50
M20x1.5	7.0	13.0	22	25	6	1045.20.130	50
M25x1.5	5.0	11.0	28	31	7	1045.25.110	25
M25x1.5	10.0	17.0	28	31	7	1045.25.170	25
M32x1.5	7.0	15.0	36	33	8	1045.32.150	25
M32x1.5	13.0	21.0	36	33	8	1045.32.210	25
M40x1.5	15.0	23.0	46	40	8	1045.40.230	10
M40x1.5	19.0	28.0	46	40	8	1045.40.280	10
M50x1.5	20.0	29.0	55	40	9	1045.50.290	5
M50x1.5	25.0	35.0	55	40	9	1045.50.350	5
M63x1.5	28.0	39.0	70	43	10	1045.63.390	5
M63x1.5	35.0	48.0	70	43	10	1045.63.480	5

Long entry thread metric

SYNTEC MS

One-piece sealing ring
not overall length insulated

G	>∅< min mm	>∅< max mm	🔧 mm	H mm	L mm	Art. No.	📦
M12x1.5	1.0	5.0	15	17	12	1145.12.050	50
M12x1.5	3.0	7.0	15	17	12	1145.12.070	50
M16x1.5	2.0	6.0	18	20	12	1145.17.060	50
M16x1.5	4.5	10.0	18	20	12	1145.17.100	50
M20x1.5	3.5	8.0	22	25	12	1145.20.080	50
M20x1.5	7.0	13.0	22	25	12	1145.20.130	50
M25x1.5	5.0	11.0	28	31	12	1145.25.110	25
M25x1.5	10.0	17.0	28	31	12	1145.25.170	25
M32x1.5	7.0	15.0	36	33	15	1145.32.150	25
M32x1.5	13.0	21.0	36	33	15	1145.32.210	25
M40x1.5	15.0	23.0	46	40	15	1145.40.230	10
M40x1.5	19.0	28.0	46	40	15	1145.40.280	10
M50x1.5	20.0	29.0	55	40	15	1145.50.290	5
M50x1.5	25.0	35.0	55	40	15	1145.50.350	5
M63x1.5	28.0	39.0	70	43	15	1145.63.390	5
M63x1.5	35.0	48.0	70	43	15	1145.63.480	5
M63x1.5	44.0	55.0	80	43	15	1145.63.550	5

Synthetic with flange and brass lock nut

Entry thread metric
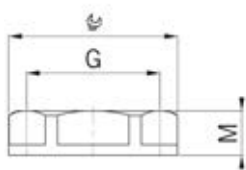
Synthetic lock nuts with flange

Material:	Polyamide PA 6
Properties:	halogen-free
Execution:	Hexagonal design with flange
Temperature range:	-30°C / +100°C

Light grey RAL 7035

G	⌀ mm	M mm	Art. No.	📦
M12x1.5	17	5.0	8255.12	100
M16x1.5	22	5.0	8255.17	100
M20x1.5	27	6.0	8255.20	100
M25x1.5	33	6.7	8255.25	100
M32x1.5	42	7.9	8255.32	50
M40x1.5	48	8.4	8255.40	50
M50x1.5	59	9.9	8255.50	10
M63x1.5	73	11.0	8255.63	10

Black RAL 9005

G	⌀ mm	M mm	Art. No.	📦
M12x1.5	17	5.0	8245.12	100
M16x1.5	22	5.0	8245.17	100
M20x1.5	27	6.0	8245.20	100
M25x1.5	33	6.7	8245.25	100
M32x1.5	42	7.9	8245.32	50
M40x1.5	48	8.4	8245.40	50
M50x1.5	59	9.9	8245.50	10
M63x1.5	73	11.0	8245.63	10

For brass cable glands

Lock nut nickel-plated brass

Entry thread metric

G	⌀ mm	M mm	Art. No.	📦
M12x1.5	15	3.0	8000.12	100
M16x1.5	19	3.0	8000.17	100
M20x1.5	24	3.5	8000.20	100
M25x1.5	30	4.0	8000.25	50
M32x1.5	36	4.0	8000.32	25
M40x1.5	46	5.0	8000.40	25
M50x1.5	55	5.5	8000.50	10
M63x1.5	70	6.0	8000.63	10

Synthetic and brass closing screws
Hexagonal design

Entry thread metric

Synthetic locking plugs

Material:	Polyamide PA 6
Temperature range:	-30°C / +100°C
Protection class:	IP 54
Further protection:	IP 68, if the entry thread is sealed
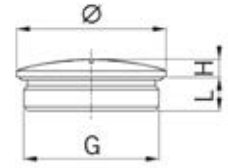
Light grey RAL 7035 without O-Ring

G	Ø mm	H mm	L mm	Art. No.	
M12x1.5	15	4.5	6	8855.12	100
M16x1.5	20	4.5	6	8855.17	100
M20x1.5	24	4.5	6	8855.20	100
M25x1.5	30	5.0	8	8855.25	100
M32x1.5	37	5.5	8	8855.32	50
M40x1.5	46	6.0	8	8855.40	50
M50x1.5	56	6.0	10	8855.50	10
M63x1.5	70	6.0	12	8855.63	10

Black RAL 9005 without O-Ring

G	Ø mm	H mm	L mm	Art. No.	
M12x1.5	15	4.5	6	8845.12	100
M16x1.5	20	4.5	6	8845.17	100
M20x1.5	24	4.5	6	8845.20	100
M25x1.5	30	5.0	8	8845.25	100
M32x1.5	37	5.5	8	8845.32	50
M40x1.5	46	6.0	8	8845.40	50
M50x1.5	56	6.0	10	8845.50	10
M63x1.5	70	6.0	12	8845.63	10

Short entry thread metric

Locking plug nickel-plated brass

Material:	Nickel-plated brass
Temperature range:	-40°C / +200°C
Protection class:	IP 54
Further protection:	IP 68, if the entry thread is sealed
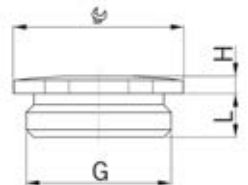
Hexagonal design without O-Ring

G	mm	H mm	L mm	Art. No.	
M12x1.5	14	2.5	5	8745.12	100
M16x1.5	18	2.5	5	8745.17	100
M20x1.5	22	2.5	6	8745.20	100
M25x1.5	27	3.0	7	8745.25	50
M32x1.5	34	3.5	8	8745.32	25
M40x1.5	42	4.0	8	8745.40	25
M50x1.5	52	4.0	9	8745.50	10
M63x1.5	65	4.0	10	8745.63	10
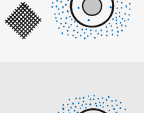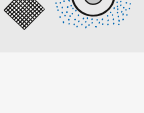
Progress® EMV easyCONNECT EMC cable gland for interference-free installation.
Now new in our AGRO cable glands catalogue.

Products	Nickel-plated brass	PA	TPE	CR
Description	CuZn39Pb3 Copper/zinc alloy Galvanically nickel-plated surface	Polyamide PA 6	Thermoplastic elastomer	Chloroprene rubber
Colour		As per catalogue	Black	Black
Corrosive properties Chem. resistance	Good resistance in dry atmospheres, fresh water, steam, mineral oils, fuels, coolants/lubricants and various organic emulsions	Resistant to diluted organic acids, lyes, aqueous solutions of inorganic salts, mineral oils, fuels, cooling/cutting oils	Resistant to diluted acids and lyes, aqueous solutions of inorganic salts	Resistant to diluted acids and lyes, aqueous solutions of inorganic salts, mineral oils, cooling/cutting oils
Limited or no resistance	Sea water, brackish water, damp atmospheres, acids, lyes, chloride, ammoniac	Mineral acids, concentrated organic acids, formic acid, phenols, halogens	Concentrated acids and lyes, solvents	Concentrated acids and lyes, fuels, solvents, hot water, ozone
Weather-resistance	Very good weather and ageing resistance	Good weather resistance	Good weather, ozone and ageing resistance	Good weather resistance
Constant thermal values	-40°C/+200°C	-30°C/+100°C	-40°C/+100°C	-30°C/+100°C
Combustibility	Not combustible	UL 94 V-2 halogen-free	Comparable to UL 94 HB halogen-free	Comparable to UL 94 V-2 halogen-free

1st digit Degree of protection against contact/foreign body protection		2nd digit Degree of protection against ingress of water	
IP testing		**IP** testing	
	0 No protection		**0** No protection
ø 52,5 mm	**1** Protection against ingress of solid foreign bodies larger than 50 mm (unintentional touching by hand).		**1** Protection against water dripping from above.
ø 12,5 mm	**2** Protection against ingress of solid foreign bodies larger than 12 mm (touching with fingers).		**2** Protection against dripping water falling at an angle of up to 15°.
ø 2,5 mm	**3** Protection against ingress of solid foreign bodies larger than 2.5 mm (touching with tools, wires etc. thicker than 2.5 mm).		**3** Protection against spray falling at any angle up to 60°.
ø 1 mm	**4** Protection against ingress of solid foreign bodies larger than 1 mm (touching with tools, wires etc. thicker than 1 mm).		**4** Protection against splashes from any direction.
	5 Complete protection against contact. Protection against harmful dust deposits — penetration of dust is not completely prevented.		**5** Protection against jets of water from any direction.
	6 Complete protection against contact. Protection against dust penetration.		**6** Protection against temporary flooding e.g. by high seas.
			7 Protection against submersion in water at a specified pressure for an unspecified time.
			8 Protection against submersion in water at increased pressure for an unspecified time.
			9K Protection against the penetration of water during high-pressure (80-100 bars), high-temperature washdown applications (80° C)

IP**: Protection class in accordance with EN 60529 up to 1000 V » and 1500 V = (UTE Standard C 200 10) or acc. to DIN 40059-9
We carry out tests for protection class IPx8 (pressure water) with a test plug, which does not provide any information about the maximum pressure with a cable. Please contact us if you want us to calculate this value in our laboratory using your cable.

FLUSH-MOUNTING

CAVITY WALL

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CABLE GLANDS

TOOLS

SERVICE

MontaX® mounting plate

MontaX® mounting plate for attaching all types of devices and components in building interiors. May be used in plant engineering, machine construction and switchboard plants and for heating, ventilation and air conditioning applications etc.

• More than 200 attachment possibilities

• Secure and fast installation of many devices

Processing instructions

May be arranged to form large mounting surfaces with an infinite number of threaded attachment points or also as a mounting rail for devices on a distribution panel. The mounting magnet is secured beneath the mounting plate. The plates can then be placed wherever devices need to be attached.

Mounting plate

· over 200 fixing methods for accessories

· Injection-moulded connectors allow surfaces to be joined together effortlessly to form larger units

· Mounting plate can be split into two identical halves

· Attachment to cable ducts, round or square conduits, TS 35 standard profiles, etc.

· Magnet attached for adjustable mounting

Height x Width x Length	13 x 90 x 180 mm
Art. No.	2000-00
Inner packaging/shipping	- / 10

MontaX® mounting angle

MontaX® mounting angle for secure attachment in almost all orientations and angles. With only one element, the MontaX® mounting angle gives you 200 attachment possibilities in four different angular positions on standard profiles, square or round conduits, steel beams etc.

- For easy visual inspection of counters, indicator light etc.
- For easy and safe operation of switches etc.
- No voltage transfer as all plastic
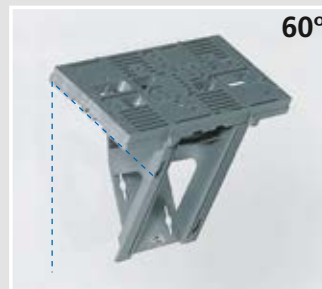
| 30° | 45° | 60° | 90° |

Mounting angle for MontaX®

· for 30°, 45°, 60° & 90° angular attachment of MontaX® to vertical axis

· simple straightening and attaching with 4.5 mm Ø raised head screws through keyholes

· mounting plate can be attached using self-tapping 3.9 mm Ø flat-head screws in mounting grooves

Art. No.	2000-80
Inner packaging/shipping	- / 5

MontaX® - Magnet

· for adjustable mounting

· comes with fixing screw

Art. No.	2000-90
Inner packaging/shipping	- / 5

FLUSH-MOUNTING
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Tools

The most important advantages at a glance:

- High-quality system tools for professional electrical installation
- Perfectly tailored to the processing and installation of our electrical installation systems
- Tried-and-tested quality and technology
- Extremely time-saving and durable
- Wide range of accessories

Product film
www.kaiser-elektro.org/tools

Material	Diamond grinding head for dust extraction (p. 300)	Diamond grinding head (p. 301)	Turbo cutter MULTI 4000 (p. 305)	MULTI 2000 HM (p. 308)	Hardened metal cutter (p. 310)	Hardened metal cutter for sheet metal boarding (p. 310)	Hardened metal cutter for composite thermal insulation systems Ø 20 mm (p. 303)	Hardened metal cutter for composite thermal insulation systems (p. 303)	Standard cutter (p. 309)	Bi-metallic cutter Ø 120 mm (p. 310)	VARIOCUT universal hole cutter 24-68 (p. 312)	VARIOCUT universal hole cutter 65-120 (p. 312)
Recommended RPM												
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
Plywood, coated	-	-	-	450	-	-	700	400	-	450	800 - 1,400	800 - 1,400
OSB Boards	-	-	-	650[1]	-	-	600	400	-	-	300 - 400[1]	200 - 400[1]
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 material (Pertinax etc.)	-	-	-	450	-	-	500	350	-	450	-	-
Mineral fibreboard	-	-	-	600	-	-	800	500	-	500	800 - 1,400	800 - 1,400
MDF boards	-	-	-	-	700	-	-	-	-	450	800 - 1,400	800 - 1,400
Sheet steel	-	-	-	-	-	150[2]	-	-	-	200[2]	300 - 600[3] Ø 20 - 64 mm	200 - 600[3] Ø 65 - 120 mm
Aluminium sheet	-	-	-	-	-	350	-	-	200	-	300 - 600[3] Ø 20 - 64 mm	200 - 600[3] Ø 65 - 120 mm
Multiplex boards	-	-	-	-	700	-	-	-	-	-	-	-
Panels	-	-	-	-	-	-	-	-	-	-	800 - 1,400[4]	700 - 1,400[4]
Ceiling modules	-	-	-	-	-	-	-	-	-	-	800 - 1,400	800 - 1,400
Wall tiles	-	-	-	-	-	-	-	-	-	-	400[4]	250[4]
Hard rubber	-	-	-	-	-	-	-	-	-	-	1,200[5]	1,200[5]
Solid masonry (lime sand brick, Poroton, Ytong and many more)	1,600 - 2,000	1,600 - 2,000	-	-	-	-	-	-	-	-	-	-
Insulated and plastered external facade	-	-	-	-	-	-	1.000	500	-	-	-	-
Technical requirement												
Required drill output	1,000 W	1,000 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
Cut hole Ø												
20 mm	-	-	-	-	-	-	•	-	-	-	-	-
35 mm	-	-	•	-	-	-	-	-	-	-	-	-
68 mm	•	•	•	•	•	•	-	•	•	-	-	-
74 mm	-	-	•	•	-	•	-	-	-	-	-	-
82 mm	•	•	-	-	-	-	-	-	-	-	-	-
120 mm	-	-	-	-	-	-	-	-	-	•	-	-
Variable 24 - 68 mm	-	-	-	-	-	-	-	-	-	-	•	-
Variable 65 - 120 mm	-	-	-	-	-	-	-	-	-	-	-	•
Technical characteristics												
with dust extraction	-	-	-	-	-	-	-	-	-	-	•	•
with direct collet	•	•	-	-	-	-	-	-	-	-	-	-
with drill chuck collet	•	•	•	•	•	•	•	•	•	•	•	•
with drill depth limit	-	-	-	-	-	-	-	•	-	-	-	-

Accessories (optional)	page												
Dust extraction	300	•	-	-	-	-	-	-	-	-	-	-	-
ProfiX distance cutter	307	-	-	•	•	•	•	-	-	•	-	-	-
ProfiX distance cutter with dust extraction	307	-	-	•	•	•	•	-	-	•	-	-	-
Centring aid	304	-	-	-	-	-	-	-	•	-	-	-	-
Centering aid Multi 4000	306	-	-	•	-	-	-	-	-	-	-	-	-

[1] Ventilate frequently; [2] Use cutting oil; [3] up to 1 mm; [4] with restrictions; [5] up to 10 mm

FLUSH-MOUNTING · CAVITY WALL · CONCRETE · HOUSINGS · FIRE PROTECTION · CABLE GLANDS · TOOLS · SERVICE

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 Ø 68 mm or Ø 82 mm holes.	Chisel out drilled core.	Clean and even installation openings for quick further processing with plaster or Klemmfix®.

Diamond grinding head with dust extractor

· Thread to screw on the direct or chuck attachment M18 x 1.5
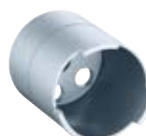
3D animation

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

Dust extraction with direct attachment / Chuck attachment

· for diamond grinding head with Ø 82 or Ø 68 mm
· Fits vacuum cleaner hoses from Ø 31 - 36 mm

Thread for Bosch and Flex	5/8"	-	-
UN thread	-	M18 x 2,5	-
Chuck attachment with hexagonal spanner	-	-	12 mm
Art. No.	1088-21	1088-16	1088-41
Inner packaging/shipping	- / 1	- / 1	- / 1

Subject to modifications

Diamond grinding head without dust extractor

· Thread to screw on the direct or chuck attachment M18 x 1.5

3D animation

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

Direct attachment / Chuck attachment

· for screwing onto the electric drill spindle

Thread for Bosch and Flex	5/8"	-	-
UN thread	-	M18 x 2,5	-
Chuck attachment with hexagonal spanner	-	-	12 mm
Art. No.	1088-20	1088-15	1088-40
Inner packaging/shipping	- / 1	- / 1	- / 1

Centering drill

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

Diameter	6 mm
Art. No.	1088-30
Inner packaging/shipping	- / 1

Drilling template

· for vertical and horizontal pre-drilling of 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

Art. No.	1190-65
Inner packaging/shipping	- / 1

FLUSH-MOUNTING

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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

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

Marking chalk

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

Art. No.	1190-55
Inner packaging/shipping	- / 12

Flush-mounting and masonry tools
for masonry installation

FLUSH-MOUNTING

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TOOLS

SERVICE

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.
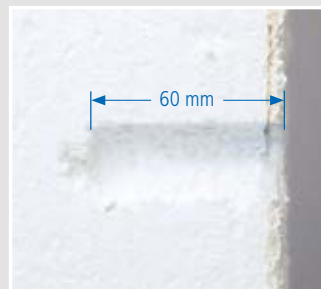
The insulating capacity remains intact despite the installation opening.

Hardened metal cutter 180 for one-gang junction boxes ECON® Styro55

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 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 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 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

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
· 2 centering aids Ø 68 mm (Art. No. 1090-68) for exact cutter guiding

3D animation

Length	**80 mm**	**180 mm**
Drill Ø	20 mm	68 mm
Cutting depth	max. 60 mm	max. 70 mm
Art. No.	**1088-06**	**1088-07**
Inner packaging/shipping	- / 48	- / 1

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.

Use KAISER tool Styro55 for fast, easy fitting of the swivels.

KAISER setting tool Styro55 Art. No. 1090-21.

▓ INNOVATION

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 attachment and exact positioning on the composite thermal insulation system

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

▓ INNOVATION

Styro55 tool

· for fast and secure attaching of the ECON® Styro55 one-gang junction box

Art. No.	1090-21
Inner packaging/shipping	10 / 100

Turbo cutter MULTI 4000

MULTI 4000 turbo cutter for faster cutting speeds, due to new geometry with especially high endurance in three different sizes. Advantages compared to previous model (MULTI 2000):

• 40% faster due to new cutting geometry
• 20% higher endurance than conventional cutters
• With countersink hole cutter and plate ejector
• Cutting diameter 35 mm/68 mm/74 mm
• Specially for plasterboard, softwood/plywood boards

Technical information on MULTI 4000 turbo cutter

Turbo cutter MULTI 4000

· high cutting power
· precise cut for circular drilled holes
· high radial runout accuracy
· Removable countersink hole cutters
· fits all electric drills with 13 mm chuck

3D animation

Cut hole Ø	35 mm	68 mm	74 mm
Depth of cutting hole	36 mm	36 mm	36 mm
with countersink hole cutter and plate ejector	-	•	•
with countersink hole saw, without plate ejector	•	-	-
Art. No.	1082-10	1083-10	1084-10
Inner packaging/shipping	- / 10	- / 10	- / 10

Cutter head MULTI 4000

· high cutting power
· precise cut for circular drilled holes
· high radial runout accuracy

Cut hole Ø	35 mm	68 mm	74 mm
Depth of cutting hole	36 mm	36 mm	36 mm
with plate ejector	-	•	•
without ejector of the drilling core	•	-	-
Art. No.	1082-09	1083-09	1084-09
Inner packaging/shipping	- / 5	- / 5	- / 5

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Countersink hole cutter MULTI 4000

· for flush-mounting box and casing installation
· inductively hardened

Cut hole Ø	35 mm	68 mm	74 mm
Art. No.	1082-05	1083-05	1084-05
Inner packaging/shipping	- / 1	- / 1	- / 1

MULTI 4000 cutter set

· stable plastic case
· Contents: 3 Multi 4000 cutters with countersink hole cutter, Ø 35, 68, 74 mm (1082/83/84-10), 1 set of insulation stripping pliers for NYM cables
· Accessories: folding rule, drilling template, pencil

Art. No.	1083-20
Inner packaging/shipping	- / 1

Centering insert 68/74 mm – operation
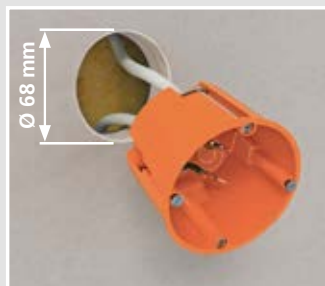
The traditional box is removed from the Ø 68 mm installation opening

Centering insert 68/74 (Art. No. 1083-99) is inserted into the existing opening together with the Ø 74 mm cutter (e.g. MULTI 4000, Art. No. 1084-10).
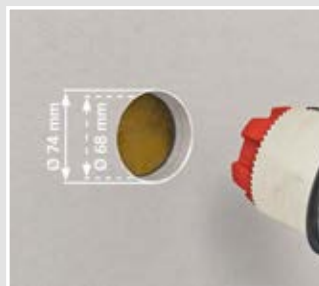
The existing opening can easily be expanded to Ø 74 mm
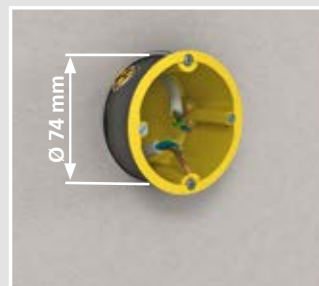
Now the traditional installation box can be replace by a sound insulation, fire protection or radiation protection box.

⠿ INNOVATION

Centering insert 68/74

· for expanding existing installation openings from Ø 68 mm to Ø 74 mm
· Exact guide for cavity wall cutter MULTI 4000
· for single and multi-layer boarded lightweight walls

⠿ INNOVATION

Diameter	68 mm
Art. No.	1083-99
Inner packaging/shipping	10 / 100

Cavity wall tools
for cavity wall installation

FLUSH-MOUNTING

CAVITY WALL

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TOOLS

SERVICE

Spacing cutter, Profix

Profix, the bit for electric drills for quick and precise cutting of Ø 68 mm installation openings at the standard distance. Can be used in cut openings or existing cavity wall boxes. Available with and without dust extractor.

- With three spirit levels for exact insertion of horizontal and vertical combinations
- Standard distance of 71 mm or 91 mm without time-consuming measuring and marking
- For expansion of existing cavity wall box combinations
- For electric drills with Ø 43 mm clamping collar
- centering plate can also be used in existing cavity wall boxes for the expansion of existing equipment

Distance cutter Profix – operation

Distance 71 mm: Cut first opening as usual. Insert centering plate into first opening and cut second opening.

Adjust from 71 to 91 mm: Pull back clip nose with spring and turn centering plate by 180°.

Move centering plate to new position and lock centering plate.

Distance 91 mm: Insert centering plate into existing hole or box, align and cut additional opening.

Spacing cutter, Profix

· for the cutting of cavity wall installation openings with dimensionally accurate combination distances of 71 mm, optionally adaptable to a distance of 91 mm, for horizontal and vertical combinations

3D animation

Up to 13 mm chuck	•	-	•	-
for SDS-plus quick-change chuck	-	•	-	•
with dust extractor	-	-	•	•
Art. No.	1083-25	1083-28	1083-27	1083-29
Inner packaging/shipping	- / 10	- / 1	- / 1	- / 1

Cavity wall box template

· for marking cutting-out distances for combinations
· standard combination distance 71 mm to German DIN 49 075 as well as 91 mm distance for separate covers for low-voltage equipment

Art. No.	1085-99
Inner packaging/shipping	- / 100

MULTI 2000 HM
· Carbide tipped cutter head and countersink
  hole cutter
· extremely powerful
· very long operating life
· Removable countersink hole cutters
· fits all electric drills with 13 mm chuck

Cut hole Ø	68 mm	74 mm
Depth of cutting hole	36 mm	36 mm
with countersink hole cutter and plate ejector	•	•
Art. No.	1083-70	1084-70
Inner packaging/shipping	- / 10	- / 10

MULTI 2000 HM cutting head
· hardened metal tipped
· extremely powerful
· very long operating life

Cut hole Ø	68 mm	74 mm
with plate ejector	•	•
Art. No.	1083-69	1084-69
Inner packaging/shipping	- / 10	- / 10

MULTI 2000 HM countersink hole cutter
· hardened metal tipped
· for flush-mounting box and casing
  installation

Cut hole Ø	68 mm	74 mm
Art. No.	1083-65	1084-65
Inner packaging/shipping	- / 1	- / 1

Collets
· for cutters Art. Nos. 1082-10, 1083-10,
  1084-10, 1083-70, 1082-20, 1084-00,
  1084-70

for 10 mm chuck with twist drill	•	-	-
for 13 mm chuck with twist drill	-	•	-
for SDS-plus quick-change chuck without twist drill	-	-	•
Art. No.	1083-31	1083-32	1083-35
Inner packaging/shipping	- / 1	- / 1	- / 1

Twist drill

· Cylindrical shank with clamping surface
· for clamping spigots Art. Nos. 1083-31, 1083-32, 1083-35

Plate ejector

· Mounting instructions: fit cutter, pull out old ejector using tool. Use tool to press new ejector over collar on base of cutter
· for Art. Nos. 1083-10, 1083-70, 1084-00, 1084-10, 1084-70

Diameter	6 mm	-
Art. No.	1083-30	1083-37
Inner packaging/shipping	- / 5	- / 5

Standard cutter

· without countersink
· with saw blade Art. No. 1086-09
· with twist drill with hexagonal shank

Cut hole Ø	68 mm
Depth of cutting hole	18 mm
Art. No.	1086-00
Inner packaging/shipping	- / 10

Saw blades

· closed version
· hardened cutting teeth
· for Art. No. 1086-00

Cut hole Ø	35 mm	68 mm	74 mm
Depth of cutting hole	18 mm	18 mm	18 mm
Art. No.	1085-09	1086-09	1087-09
Inner packaging/shipping	- / 5	- / 5	- / 5

Saw blades

· closed version
· hardened cutting teeth
· for Art. No. 1086-00

Cut hole Ø	68 mm	74 mm
Depth of cutting hole	40 mm	40 mm
Art. No.	1086-08	1087-08
Inner packaging/shipping	- / 4	- / 4

Countersink hole cutter

· for flush-mounting box and casing installation
· inductively hardened
· for Art. No. 1086-00

Twist drill

· with hexagonal shank
· with clamping faces for 18 and 40 mm cutting depths
· for Art. No. 1086-00

Diameter	-	8 mm
for cut hole Ø	68 mm	-
Art. No.	1086-05	1086-30
Inner packaging/shipping	- / 1	- / 5

FLUSH-MOUNTING

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Hardened metal cutter
· specially for sheet planking made of unalloyed/alloyed steels, non-ferrous metals
· Tapered centering drill for exact drilling

Cut hole Ø	68 mm	74 mm
Depth of cutting hole	15 mm	60 mm
Art. No.	1083-95	1083-74
Inner packaging/shipping	- / 10	- / 1

Hardened metal cutter
· specially for hard wood materials, plywood, MDF and OSB boards
· no clogging due to large chip space
· long service life
· Replacement drill (not shown) Art. No. 1083-53
· Removable countersink hole cutters
· fits all electric drills with 13 mm chuck

Cut hole Ø	68 mm
Depth of cutting hole	55 mm
with countersink hole saw	•
Art. No.	1083-51
Inner packaging/shipping	- / 10

Bi-metallic cutter Ø 120 mm
· fits all electric drills with 13 mm chuck
· for cavity wall junction boxes Art. Nos. 9073-01/-77 and 9273-91/-77

Cut hole Ø	120 mm
Depth of cutting hole	40 mm
for frontal fitting of ThermoX® Arti. No. 9300-01/-02/-03/-22	•
Art. No.	1082-20
Inner packaging/shipping	- / 1

Bi-metal cutter for ThermoX® housings
· fits all electric drills with 13 mm chuck
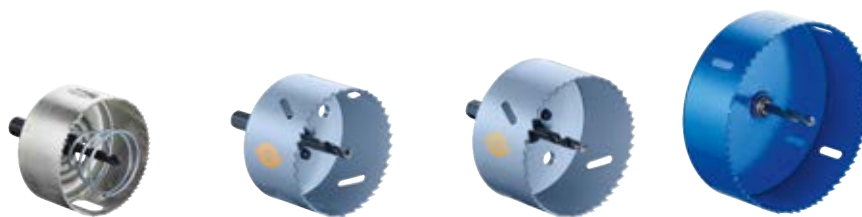
Cut hole Ø	74 mm	79 mm	86 mm	120 mm
Depth of cutting hole	-	-	-	40 mm
for rear fitting of ThermoX® (ceiling exit 68 mm)	●	-	-	-
for rear fitting of ThermoX® (ceiling exit 75 mm)	-	●	-	-
for rear fitting of ThermoX® (ceiling exit 82 mm)	-	-	●	-
for frontal fitting of ThermoX® Arti. No. 9300-01/-02/-03/-22	-	-	-	●
Art. No.	1084-00	1082-79	1082-86	1082-20
Inner packaging/shipping	- / 10	- / 1	- / 1	- / 1

Bi-metallic cutter Ø 86 mm
· Removable countersink hole cutters
· with twist drill with hexagonal shank
· fits all electric drills with 10 mm chuck
· for flush-ceiling installation of ThermoX® LED housing (DA 86), Art. No. 9320-20, 9320-21

Cut hole Ø	86 mm
Depth of cutting hole	38 mm
with countersink hole saw	●
Art. No.	1087-86

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VARIOCUT

VARIOCUT universal hole cutter for clean circular cut-outs in cavity wall materials. The hardened metal cutter inserts can cut variable openings with a cutting depth of 45 mm.

- Making clean circular cut-outs using protective cover with dust extractor
- For light installation openings and circular cut-outs 24-120 mm in diameter
- Continuously adjustable cutter inserts
- centering cutter aid making it easy to guide the centering drill

Operation

Set and lock required diameter and prescribed cutting depth.	Mark the centre point for drilling (use centering cutter if necessary). Set appropriate speed on electric drill. Pre-drill plates to Ø 6 mm before cutting.	Use VARIOCUT centering drill. Start drilling, push the protective cover down flat on the surface and cut opening applying light pressure.	As soon as a hole has been drilled, turn off the electric drill immediately. Wait until the machine has fully stopped before removing the VARIOCUT and removing the cut-out material.

VARIOCUT universal hole cutter for cavity wall building materials

· with hardened metal cutter inserts

3D animation

Cut hole Ø	24 - 68 mm	65 - 120 mm
Depth of cutting hole	45 mm	45 mm
for frontal fitting of ThermoX® Arti. No. 9300-01/-02/-03/-22	-	•
for cavity wall junction box Art. No. 9073-01/-77/-78/-91	-	•
Art. No.	1089-10	1089-00
Inner packaging/shipping	- / 5	- / 5

VARIOCUT box

· robust metal case
· Contents: 1 VARIOCUT 1089-00 (Ø 65-120 mm), 1 cutter unit 1089-01 (Ø 24-68 mm), 1 cutter centering aid 1089-31 (incl. 10 adhesive foils)

Art. No.	1089-25
Inner packaging/shipping	- / 1

Cutter unit for cavity wall building materials
· for VARIOCUT universal hole saw
· for light installation openings and circular cut-outs of any kind

Cut hole Ø	24 - 68 mm	65 - 120 mm
Art. No.	1089-01	1089-02
Inner packaging/shipping	- / 1	- / 1

Cutter unit for metal
· for VARIOCUT universal hole saw
· for thickness up to 1 mm
· for light installation openings and circular cut-outs of any kind

Cut hole Ø	20 - 64 mm	61 - 116 mm
Art. No.	1089-91	1089-92
Inner packaging/shipping	- / 1	- / 1

Hardened metal cutter inserts
· For VARIOCUT cutting unit

For cavity wall building materials	•	-
For metal	-	•
Art. No.	1089-33	1089-34
Inner packaging/shipping	- / 1	- / 1

Twist drill for VARIOCUT
· for VARIOCUT universal hole saw
· with clamping shank

Diameter	6 mm
Art. No.	1089-30
Inner packaging/shipping	- / 5

Cutter centering aid
· centering aid for VARIOCUT
· for hard-to-work materials
· for Ø 6 mm drills
· with 10 pieces of adhesive foil

Adhesive foil
· for locating centering aid Art. No. 1089-31
· double-sided adhesion
· for multiple use

Art. No.	1089-31	1219-10
Inner packaging/shipping	- / 1	- / 1

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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
NYM cable	3 x 1.5 mm²	7.5
	4 x 1.5 mm²	8.5
	5 x 1.5 mm² ; 3 x 2.5 mm²	9.5
	7 x 1.5 mm² ; 5 x 2.5 mm²	10.5
Low-voltage cables	Integrated heavy current and MSR-Bus cable (N)Y(Y(St)Y)M-J 3 x 1.5 mm²	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
Support connector	9060-98	Connector
Flexible conduits (crimped) in acc. with DIN EN 60423	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
NYM cable	3 x 1.5 mm²	8.5
	5 x 1.5 mm²	9.5
	3 x 2.5 mm²	9.5

Assignment table for universal concrete construction opening cutter

Concrete construction		Ø setting*
NYY cable	3 x 1.5 mm^2	10.5
	4 x 1.5 mm^2	10.5
	5 x 1.5 mm^2; 3 x 2.5 mm^2	10.5
	7 x 1.5 mm^2; 5 x 2.5 mm^2	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

For exact openings	4 - 22,5 mm
Art. No.	1085-80
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

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

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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
Art. No.	1284-62	1284-63
Inner packaging/shipping	- / 1	- / 1

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

Length	150 mm	340 mm
Art. No.	1284-69	1284-68
Inner packaging/shipping	- / 1	- / 1

Punch pliers

· for concrete construction installation
· for exact entries for cables and conduits
· with plate ejector
· punch bits exchangeable

3D animation

DIN EN conduit Ø	20 mm	25 mm
Art. No.	1286-33	1286-34
Inner packaging/shipping	- / 1	- / 1

Punch bit inserts for punch pliers

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

DIN EN conduit Ø	20 mm	25 mm
Art. No.	1285-33	1285-34
Inner packaging/shipping	- / 1	- / 1

Reamer

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

DIN EN conduit Ø	25 mm	32 mm	40 mm
Art. No.	1284-34	1284-35	1284-36
Inner packaging/shipping	- / 1	- / 1	- / 1

Step drill

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

3D animation

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

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Service

Energy efficiency. Electrical installation for energy-saving buildings.
• Air-tight installation according to EnEV
• Installation on or in insulated external 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 ship construction

Sound insulation technology – sound insulation boxes for use in walls with increased demands on sound insulation.
• Maintains the wall's sound insulation function
• Also for retrofitting

Radiation protection technology - radiation protection boxes and housings for use in lead-free and lead-containing radiation protection walls.
• Protection against X-rays
• Retrofitting is possible
• Fast installation without additional screening measures

AFS technology. Fire protection for more safety
• AFS - Active Fire Stop – guarantees fire protection
• Fast-acting coating intumesces and safely closes off the installation opening if a fire breaks out

B² system for extra-fast and efficient installation in horizontal prefabrication.
• Saves time
• One-piece design
• Available with or without plaster skin
• Available pre-fitted with special adhesive; no adhesive residue when formwork is struck
• Easy connections for combinations or opposing boxes

Air-tight installation. ECON technology.
• Guaranteed air-tight installation space
• Tool-free cable/conduit entry
• Integrated strain relief

The fastest cavity wall installation of all time. FX⁴ technology.
• 40% faster installation
• Patented thread design
• High level of self-locking

KSK technology. The revolution in concrete building installation.
• Innovative impact coupling
• Combination entries M20/M25
• No internal shortening of the conduits
• Integrated conduit stopper

Lead-free
Use of lead-free materials.

Multimedial contents on the internet
Just one click takes you to www.kaiser-elektro.de.

Multimedial contents for your smartphone.
Scan and look - instantly!

UPPlus. The new generation for flush-mounting installation.
• Variable combination connection piece for M20/M25 conduits
• Flexible for screw and expanding claw fitting of the accessories
• More space for installation
• More torsion-proof, guaranteed 71 mm standardised distance for combinations

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Technical information

Conduits and cables

DIN 60423 contains the dimensions for electrical conduits. DIN EN 61386 regulates the designations and characteristics. This standard contains specific information about the dimensions, designations and qualities of the conduits. Seven different external diameters are available – suitable for any kind of installation from flush-mounting to concrete construction:
outer Ø 16, 20, 25, 32, 40, 50 and 63 mm.
The following conduit types and cables can be used for each individual type of construction:

Flush-mounting (masonry) construction

Manufacturer's designation of conduits, e.g.	
Fränkische Rohrwerke:	FBY-EL (flexible)
	FBY-EL-F (smooth, flexible)
Hegler:	Heglerflex EYL (flexible)
	Heglerplast EL (rigid)
PIPELIFE:	FB-E-L (flexible)
	IPM-E-LF (rigid)

Cavity wall construction
The following are permitted: wires and cables without a protective conduit if their sheaths are made from flame-resistant plastic, e.g. PVC for sheathed NYM wires. Flat-lead cables are not permitted. For lighter design conduits - class 2 (min. pressure resistance 320 N/5cm) or higher, and if additionally fire-protected, cable of type HO7V... (insulated individual leads) and sheathed cables e.g. NYM can be used.
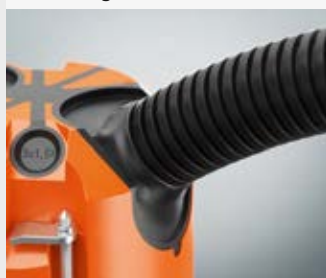
Manufacturer's designation of conduits, e.g.	
Fränkische Rohrwerke:	FBY-EL-F (flexible)
	FFKu-EL-F-HO (flexible)
Hegler:	Heglerflex-EYLF (flexible)
	Heglerflex-EL (flexible)
	Heglerplast-EL (rigid)
PIPELIFE:	FB-E-LF (flexible)
	KuMS-E-MF (flexible)

Concrete construction
The following are permitted: cables without a protective conduit, e.g. NYY or NYZXY. Feed-throughs or connections at joints (e.g. wall-ceiling) can only be made in accordance with DIN EN 60670 in concrete construction installation boxes or casings if the outer sheath of the cables or wires has been removed.
For medium-design conduits - class 3 (min. pressure resistance 750 N/5 cm) or higher, cables of type HO7V... (insulated individual leads) or sheathed cables, e.g. NYM can be used.

Manufacturer's designation of conduits, e.g.	
Fränkische Rohrwerke:	FFKuS-EM-F (flexible)
	FFKuS-EM-F105 (flexible)
Hegler:	Heglerflex-ESPM (flexible)
	Heglerflex-ESPM105 (flexible)
	Heglerplast-EPKM (rigid)
PIPELIFE:	Ku-P-AS-E-MF-105 (flexible)
	RP-E-SF-UV (flexible)
	KuMS-E-MF (flexible)
	PSM-v-E-SF (rigid)

Since there are currently no definitions contained in the standard for minimum pressure resistance that relate to the type of installation, the manufacturer's specifications must be followed, especially for concrete constructions.
Note: The maximum temperature of the pouring process for our concrete building installation boxes with VDE certification is -5 to 90°C.

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KNX building system technology

Special one-gang boxes (electronic boxes) for installation in flush-mounting and cavity walls are shown in the appropriate product sections.

Disposal

KAISER products are not subject to the regulations relating to the disposal of electrical/electronic waste, so currently they do not need to be marked accordingly. KAISER's trade partners in Germany (electrical wholesalers) offer the installer and/or end user a packaging return service (= returning it for recycling).
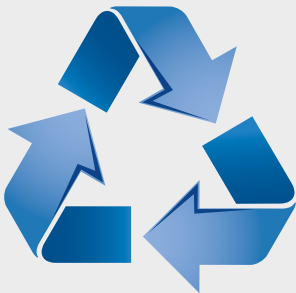
Fire resistance acc. to DIN EN 60670

The test takes place acc. to DIN EN 60695 T. 2-11.
It is carried out as a glow wire test at the following test temperatures.

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

850 °C

Electrical installations in hygienically important areas such as hospitals, medical practices, ambulances, outpatient clinics, etc.

For reasons of cost, the interiors of such buildings are often built using lightweight or plasterboard materials. The resulting cavities can very easily become a refuge for harmful insects. Because of the almost total gas proofness, the air-tight versions of the cavity wall boxes prevent both transfer of bacteria caused by insects and undesirable intake or outflow of filtered air (for example in operating theatres or intensive care units). A corresponding certificate of proof is available on request.

Technical information

Maintaining functionality of cables and wiring systems

Functionality is maintained in an electrical system when, during a fire test, no short circuit and no interruption to current flow take place in the cable/wiring system.

Maintenance of functionality is divided into classes from E30 - E90 in accordance with DIN 4102 T.12. This means that the systems must be able to withstand fire for a period of between 30 and 90 minutes. The materials used for these measures must be made of non-flammable materials (materials class A).

One-gang junction boxes

In addition to space for equipment, one-gang junction boxes have space for at least 3 connection terminals. All KAISER one-gang junction boxes can be used as a junction box if a screw-on cover with fire resistance of 650°/850°C according to DIN EN 60670 is used as a junction box.

Halogen-free materials (preventive fire protection)

In order to prevent injury to persons or property damage, the use of halogen-free materials may be specified. All KAISER flush-mounting and concrete installation boxes, casings, luminaires and loudspeaker housings are halogen-free. Boxes and casings for cavity wall installation as well as several accessory parts are available as halogen-free articles in the product range.

Cavity wall boxes

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

Combinations

Combinations for multiple masking frames of the accessories are created by lining up one-gang boxes and/or one-gang junction boxes.

The combination spacing for this is 71 mm according to DIN 49075.

Combinations of 3-phase and low voltage devices, for example antenna sockets, can be used together only when sockets with electric shock protection are used.

If sockets without electric shock protection are used (these may still be available), then they must have separate covers. The distance between the installation boxes is normally 91 mm (more if necessary) and is created by using distance pieces or suitable tools.

Light hooks

According to **DIN EN 60670 P. 21 / DIN VDE 0100 P. 559,** hanging appliances for luminaires, e.g. light hooks, must be able to carry 50 N or a safety load of five times the specified weight of the light.

Equipotential bonding

Every building must have a main equipotential bonding point. In accordance with DIN VDE 0100 T.701, rooms with baths or showers and covered swimming baths must have additional equipotential bonding.
To ensure easy accessibility for later disconnection and measurement, it is advisable to place the additional equipotential bonding point in an appropriate housing containing an equipotential bonding terminal strip. In accordance with DIN VDE 0100 Part 710, rooms used for medical purposes must have special equipotential bonding installed.

Protection of plasterwork

According to DIN 18382, protection of an installation and any equipment necessary to provide protection of the installation are additional responsibilities of the installation engineer providing this service. Installation boxes are normally closed off with so-called plaster or signal covers.

Areas to be protected

When installation boxes are installed in bathrooms etc., the requirements of DIN VDE 0100 P.701 must be met.
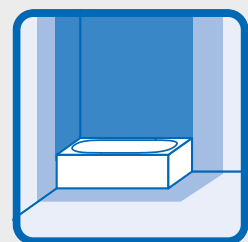
Telephone boxes

In accordance with standard datasheet FTZ 731 TR1 of the German Federal Telecommunications Office in Darmstadt, only one-gang boxes conforming to DIN 49073 may be used for installing telecommunications inserts.

Technical information
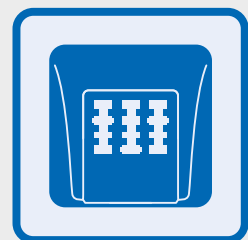
Environmental friendliness - RoHS

Restriction on the use of certain hazardous substances according to EU directive 2002/95/EC (RoHS) and EU directive 76/769/EWG: The materials which we supply comply with the valid "Directives for the use of harmful substances" and satisfy the legal regulations regarding the putting into circulation of substances.
Emissions are not known in normal use.

Flush-mounting product range:
Impact-resistant polystyrene-polyethylene

Cavity wall product range:
Polypropylene

Concrete construction product range:
Polyethylene

Lights and loudspeaker housing product range:
Polyethylene/Polyamide, galvanised steel plate, fire retardant coating

Fire-protection product range:
Galvanised sheet steel, fire-retardant coating

Cable glands:
Polyamide, nickel-plated brass
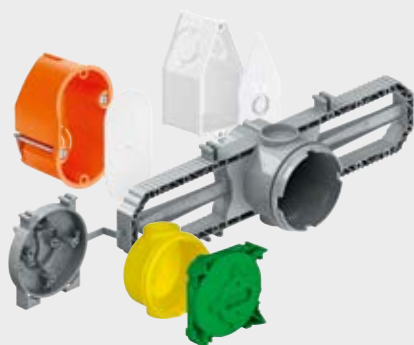
Wall light connection boxes
According to DIN VDE 0100 Part 559, wall light connection boxes must be used wherever feed wiring for wall lights terminates. KAISER wall light connection boxes have space for at least 3 terminal blocks and a reserve cable, with a screw attachment for fitting luminaires**.**

Additional technical information on our solutions and products is available on our website.

The builder of the installation retains responsibility for selection of suitable box types or housings and for their correct installation according to technical safety standards. (See table on page 180 for overview of test markings) Any technical advice given by us is according to the best of our current knowledge and is without responsibility on our part. This also applies to any protective rights of third parties.

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 (prevention of overheating in junction boxes) the DIN EN 60670 standard limits the number of terminals and conductors in a junction box.

A certain cubic volume is required for every terminal pole (terminal volumetric unit). This volume includes the space for the connection terminals, conductors and for movement of wiring in the junction box.

Max. no. of terminals. Values in ( ) are with equipment fitted

Art. No.	Wire cross-section (in mm^2)					
	1.5	2.5	4	6	10	16
10...						
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
11...						
1159-90	6	5				
1172-..	6	5				
12...						
1211-36	7	6				
1211-61	7 (5)	6 (4)				
1227-50	11	9				
1227-55	10	8				
1245-62	7	5				
1245-63	7	5	4			
1248-50	4	3				
1248-55	4	3				
1249-44	5	5				
1249-50	5	5				
1255-40	6 (3)	5				
1255-43	6	5				
1255-45	6	5				
1260-40	8 (6)	6 (5)				
1260-50	8	6				
1262-..	7 (4)	6(5)	5 (4)			
1263-..	8 (7)	6(5)	5 (4)			
1264-50	8	6	5			
1264-60/61	8 (7)	6 (5)	5 (4)			
1265-40	8 (5)	6 (5)				
1265-50	8	6	5			
1268-40	11 (9)	9 (7)	8 (6)			
1269-40	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
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9916.21	18	15	12	8	6	5
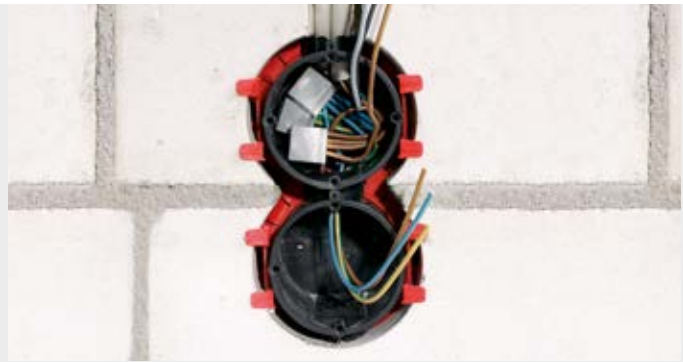
Art. No.	Wire cross-section (in mm^2)					
	1.5	2.5	4	6	10	16
9909.01	12	10	8	5	4	3
9908.01	17	10	11	7	5	4
9911.01	18	15	12	8	6	5
9912.01	18	15	12	8	6	5
15...						
1550-..	6 (5)	5 (4)				
1551-..	6 (5)	5 (4)				
1555-..	6 (5)	5 (4)				
1555-21	7 (5)	5 (4)				
1556-21	7 (5)	5 (4)				
1556-..	6 (5)	5 (4)				
1572-02	8	6	5			
1569-01	6 (3)	4				
16...						
1656-02	9 (6)	7 (5)				
1656-21	9 (7)	7 (5)	6 (4)			
17...						
1756-02						
90...						
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)				
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				
91...						
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
92...						
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)			

FLUSH-MOUNTING

CAVITY WALL

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FIRE PROTECTION

CABLE GLANDS

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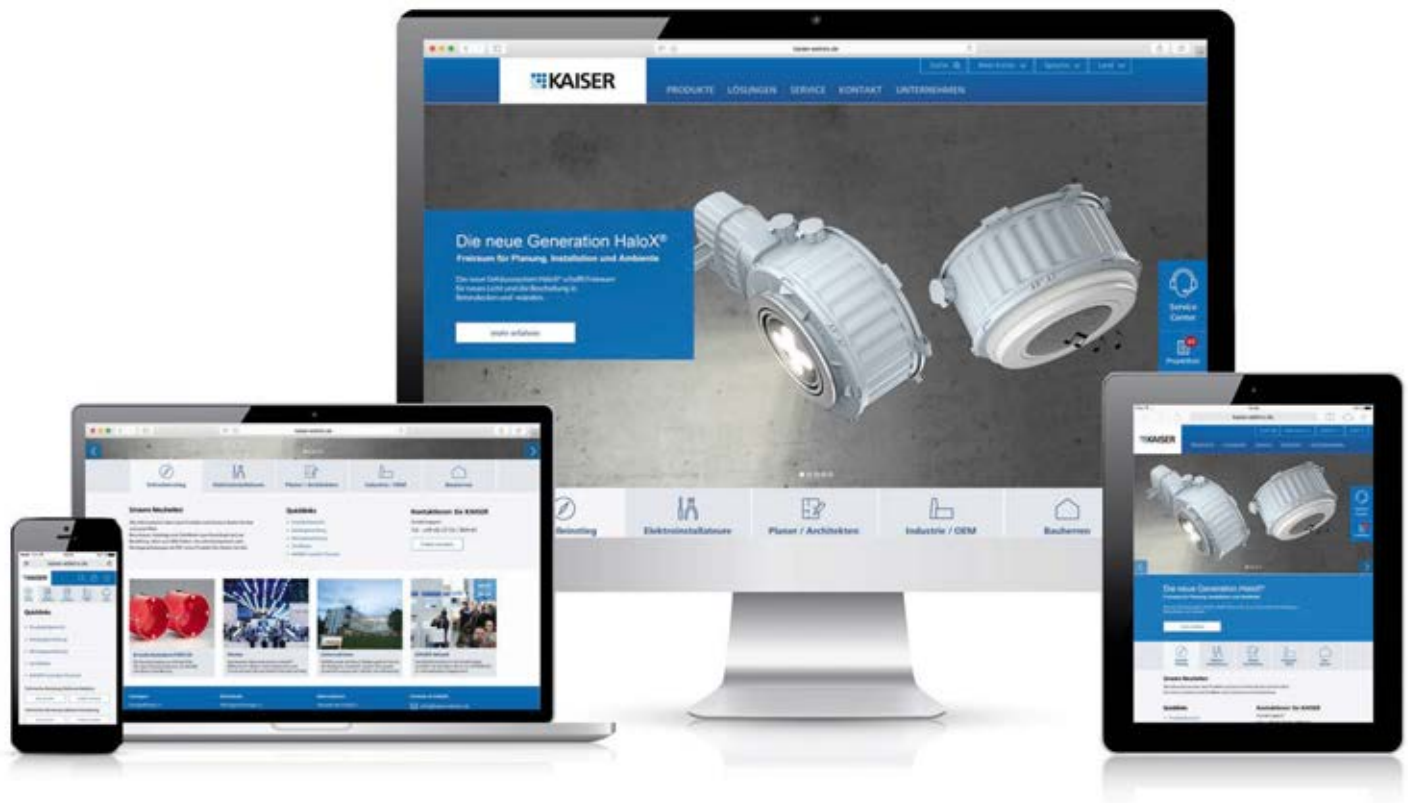
Service. The easy way.

KAISER's innovative, brand-name products stand out thanks to the product-oriented service which accompanies them. This ensures that, right from the start, you can take advantage of all the advantages for yourselves and your customers.

By using clear and intuitive films we explain all the benefits of the products and processes. A clever product filter in the online catalogue on kaiser-elektro.de helps you to select the right products. Tender texts and specifications, CAD data and BIM data make professional planning easy for you.

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• Technical application advice
• Marketing and service numbers
• Sources of supply
• Article master data and prices
• Tenders
• BIM data
• CAD data

One picture is worth more than 1000 words.

For all the products near to which you see the icon, on our **www.kaiser-elektro.de** website and our **www.youtube.de/kaiserelektro** channel, we present informative films which show the installation and function of many products and system solutions. The QR codes give you fast, easy access via your smartphone. Try them out! You can find the QR codes in our catalogues and brochures.

The right data – just a click away!

In order to ensure optimal support for our customers and partners in the planning and execution of projects in the building construction, civil engineering and mechanical engineering sectors, KAISER works closely with leading platforms in the BIM and CAD data sector and tender texts and specifications.

At **www.kaiser-elektro.de**, **kaiser.partcommunity.com** and **www.ausschreiben.de** you can find detailed tender texts and BIM and CAD data about KAISER products in many file formats. You can download them directly and integrate them seamlessly in your work process.

www.kaiser-elektro.de

kaiser.partcommunity.com

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Article master data and prices

The article master data and prices of our products can be found in the download section of our website. Our article master data are available in the following formats: ETIM, Eldanorm, Datanorm and Excel.

The product pictures linked in the master data can be directly downloaded as a zipped folder in JPG and TIF formats.

www.kaiser-elektro.de

Product training

We regularly organise training courses on KAISER product and system solutions. We can also offer such courses at your premises if you wish. Please contact us for further information.

Active partnership and cooperation means that we accompany our "product cycle" from determining requirements up to the next generation. We are at your side in everything to do with building installation. We accompany you in the planning phases, we develop functioning solutions together with you, giving you advice on all matters of installation, including on the building site, and we provide you with the right tools at all times. Our digital and printed media answer many of your questions and provide realistic information and solutions.

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KAISER products are manufactured in accordance with DIN, VDE, EN and IEC regulations. Insofar as required by regulations, approval certificates from the VDE Testing and Certification Centre as well as a number of other European testing centres have been issued for the products contained in this catalogue.

	Country	Organisation	Mark
🇩🇪	Germany	VDE VERBAND DER ELEKTROTECHNIK ELEKTRONIK INFORMATIONSTECHNIK	DIN/VDE
🇦🇹	Austria	ÖSTERREICHISCHER VERBAND FÜR ELEKTROTECHNIK	ÖVE
🇧🇪	Belgium	COMITE ELECTROTECHNIQUE BELGE asbl	CEBEC
🇨🇿	Czech Republic	ELEKTROTECHNICKY´ Republik ZKUSEBNI ÚSTAV	
🇭🇺	Hungary	MAGYAR ELÉKTROTECHNIKAI ELLENőRZő INTÉZET	MEEI
🇸🇮	Slovenia	SLOVENSKI INSTITUT ZA KAKOVOST IN MEROSLOVJE	SIQ
🇨🇭	Switzerland	VERBAND FÜR ELEKTRO-, ENERGIE- UND INFORMATIONSTECHNIK	
🇬🇧	UK	BRITISCH STANDARD	BS

Art. No.	DIN/VDE	⚙	ÖVE	CEBEC	Czech	MEEI	SIQ	Swiss	BS
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1048-00	•					•			
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1056-04	•								
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1068-02	•								
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1076-04					•				
1081-04	•								
1081-05	•								
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1092-90	•				•	•			
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1249-50	•				•	•			
1255-40	•				•	•			
1255-43					•	•			
1255-45					•	•			
1260-40	•				•				
1260-50	•								
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1264-50	•				•	•			
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1296-02	•				•	•			
1297-02	•				•	•			
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9068-03	•				•				
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9148-..	•		•			•			
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9196-..	•		•		•	•			
9197-..	•		•		•	•			
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9248-01					•				
9263-..	•		•						
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9268-94	•		•						
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9273-91	•		•						
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9464-50	•								

The version of the "General Terms and Conditions of Delivery of the ZVEI for Products and Services in the Electrical Industry" which is in force at the time in question in the current version of the ZVEI (www.zvei.org) shall apply as well as the following supplementary regulations of KAISER GmbH & Co.KG.

The place of performance shall be Schalksmühle and the place of jurisdiction Lüdenscheid.

1. Scope of deliveries or services

The written declarations of both parties shall carry equal weight in all matters relating to the scope of deliveries or services. If a contract has been concluded without such mutual declaration, either the written order confirmation from the supplier or service provider (hereinafter: supplier), shall be decisive. If such a document has not been issued, the written order from the purchaser shall be decisive. Supplementary agreements shall only be valid if confirmed in writing.

2. Prices

The gross prices are recommended retail prices in Euro and exclusive of sales tax. The prices for brass products are subject to certain variations that follow the respective DEL quotations. These prices are based on a DEL quotation of 150 Euro for brass MS 58. Changes to this quotation of more than 15 Euro (upwards or downwards) will be invoiced with a 5% surcharge or a 5% reduction. The basis for the calculation will be the DEL-quotation on the date the order is received on our premises. Our product range prices - without taking into account any discounts or surcharges - can be found on www.kaiser-elektro.org/preise

3. Passing of risk

The risk shall pass to the purchaser, even when carriage freight paid delivery has been agreed:

1. When the delivery package has been brought to the shipping department or been collected, if assembly or mounting are not included in the delivery package. The goods shall be packaged with the utmost care. The goods shall be shipped in the manner deemed most appropriate by the supplier. At the request of the purchaser, the supplier shall insure the shipment against breakages and damage caused in transit or by fire.

2. Should the shipping, delivery, start or performance of installation or mounting be delayed at the request of the purchaser or for reasons for which he is responsible, the risk shall pass to the purchaser for the duration of the delay. However, the supplier shall be obliged to take out insurance cover if requested to do so by the purchaser. The costs for such cover shall be borne by the purchaser.

4. Retention of title

The goods shall remain the property of the supplier until the purchaser has satisfied all claims which the supplier can make on him under the terms of the business relationship. Prior to this time, pledging the goods or transfer by way of security shall be forbidden, and the goods may only be resold to the trade in the normal course of business subject to the proviso that the reseller receives payment from his customers. Any intervention costs shall be borne by the purchaser. If the combined value of the security interests of the supplier exceeds the value of all secured claims by more than 20%, the supplier shall release a corresponding portion of the security rights if so requested by the purchaser. Should the purchaser breach the contract (in particular if it defaults on payment), the supplier shall be entitled to take back the goods under his ownership or, if necessary, enforce assignment or claims for return against third parties. All costs arising from the return and recycling of the goods shall be borne by the purchaser. Should the supplier take back goods to which he still retains ownership rights, this shall not be interpreted as terminating the contract. Should external warehousing facilities be used for goods from the supplier to which the supplier still retains ownership rights, the supplier must be informed of this. In such cases, the purchaser must conclude an individual agreement with the warehouse company in order to ensure that no liens will be executed on the goods to which the supplier still retains ownership rights. When such goods are delivered, the warehouse company must be informed in writing that the goods in question are the property of the supplier and are only being stored with the warehouse company on the proviso that it does not acquire a lien on the goods.

5. Terms of payment

1. Payment is to be made in Euros and free of transaction charges to the designated account of the supplier.

2. The purchaser may only offset those claims that are uncontested or have been recognised by declaratory judgement.

3. Unless otherwise agreed, the purchaser shall have 30 days to effect net payment, with a 3% discount if payment is made within 10 days, both counted from the date the invoice is issued.

6. Shipping

The prices shall apply for terms of delivery ex works for the acceptance of sealed shipping cartons for which no packaging costs are levied. If packing units are broken open, a surcharge of 5 EUR shall be levied per packing unit, irrespective of the value of the order. Orders for sealed delivery within the Federal Republic of Germany which have a net value of 800 EUR or more shall be delivered free to the purchaser's address. For small orders with a net order value less than 100 € we charge a processing fee of 25 € net.

7. Returns

Goods may only be returned in exceptional circumstances and must first be approved by us. If we are not notified in advance, returns will not be accepted by our distribution warehouse and shall be returned at the expense of the consignor. Please find our conditions on return at www.kaiser-elektro.org/retouren

8. Acceptance

1. Even if they exhibit minor defects, the delivery items must be accepted by the purchaser.

2. Part-deliveries are permitted.

9. Liability for defects

The supplier shall be liable for defects as follows (if the delivered goods do not exhibit the warranted characteristics, this shall also be deemed a defect):

1. If parts or services become unserviceable or if their serviceability becomes seriously impaired within 12 months (regardless of the operation period) of the day of the passing of the risk, and if such unserviceability is due to factors which date from a time prior to the passing of the risk (in particular faulty construction, poor quality material or faulty workmanship), the supplier must either repair or replace the parts or perform the services again free of charge. Should such defects be discovered, the supplier must be informed in writing without delay.

2. The purchaser must comply with his contractual obligations, in particular the agreed terms of payment. If a complaint in respect of defects is lodged, the purchaser may withhold payments to a value considered appropriate in light of said defects. If, however, the contract concerns the operation of trade, the purchaser may only withhold payment if there is absolutely no doubt as to the legitimacy of the complaint that has been lodged.

General information

1. The issue of this catalogue renders all previous editions null and void.

2. This edition only contains KAISER standard product ranges. Special product ranges and developments on request.

3. KAISER catalogues in other languages are available on request.

4. We make every effort to ensure that technical advice given by us is correct. Such advice is given on a purely non-binding basis. The installer of electrical installation systems shall be responsible for the selection of suitable installation boxes, the materials for such boxes and performing installation in a safe manner.

February 2016

>> Subject to technical changes. No liability for errors.

The current term and conditions of delivery and payment can be found on our website: www.kaiser-elektro.de

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We guarantee quality
References

KAISER installation systems provide you with versatile free space for planning creativity and technical installations of all kinds. KAISER product and system solutions are suitable for all types of buildings. Architects and planners trust in our product know-how which is as innovative, trendsetting and consistent as the properties in which it finds its function.

Decades of experience and the knowledge gained from discussions with users and installers give you the flexibility you need on a daily basis for your planning and installation work. We guarantee that you will work with high-quality products as they are subject to continuous improvement with regard to rising standards in the markets and installation practices.

Tech Gate | Vienna, Austria

UPPER WEST Tower | Berlin
© Jonas Holthaus | Projekt der STRABAG Real Estate

KAISER inside!

Since 1904, KAISER has been developing and manufacturing, in Germany, high-quality electrical installation products for flush-mounting, cavity wall and concrete construction installations. KAISER's innovative ideas and solutions can be found in many important buildings round the world.

For example, also in the UPPER WEST Tower in the capital, in Vienna's "Tech Gate" office building, in Nuremberg's riot police accommodation building and also in Weber-Haus energy-efficient houses.

The Australians also appreciate KAISER quality, and in their new yacht, "Silver Loft", they are incorporating the HWD B15, which is certified for shipbuilding.

Modern energy-efficient house
© WeberHaus

Riot police building | Nuremberg

© Staatliches Bauamt Erlangen-Nürnberg

More about our business sectors:

• **Energy efficiency**
• **Fire protection**
• **Concrete construction**
• **Sound insulation**
• **Radiation protection**
• **Refurbishing**
• **Cable glands**

at www.kaiser-elektro.de

Trust through experience.

Silver Loft

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Headquarters: KAISER
Schalksmühle, Germany

As an innovative manufacturer of products and system solutions, the KAISER Group is one of Europe's leading companies in the field of professional electrical installations. With an international distribution network and subsidiaries AGRO in Switzerland, HELIA in Belgium and ATTEMA in the Netherlands, we are always there for our customers. The close collaboration between the four companies creates substantial synergies to the benefit of our partners in trade, commerce and industry.

Creating **the future together.**

The KAISER, AGRO, HELIA and ATTEMA brands always provide you with installation solutions which satisfy market requirements. In this way, they give you effective support for your daily tasks. Thanks to the on-going and future-oriented product innovations, our four strong brands ensure that you are always up-to-date with the latest technology – today and in future.

AGRO
Hunzenschwil, Switzerland

ATTEMA
Gorinchem, Netherlands

HELIA
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To ensure that, in addition to our promises of delivery, you can always rely on our guaranteed product quality, together with our subsidiaries we are a member of many relevant associations and cooperations.

We are integrated in an international network of partnerships, so we always know what the market wants.

The **"Elektromarken. Starke Partner."** (= Electrical brands. Strong partners) of the 17 leading manufacturers of brand-name products combines the reliable competence with the tried-and-tested quality of the German electrical sector. This is supported not least by an incomparable range of operations centred around high-quality products and services for the electrical trade.
www.elektromarken.de

The **ELEKTRO+** initiative provides builders and specialists with neutral information for the planning and carrying out of electrical installations, for both new installations and modernisation.
www.elektro-plus.com

The **Exportinitiative Energieeffizienz** (= Energy Efficiency Export Initiative) was set up by the Federal Government. In the context of energy efficiency, it supports German suppliers who export products and services.
www.efficiency-from-germany.info

Working closely with well-known companies, **ETIM** develops and distributes a classification model for the electrical industry.
www.etim.de

Der **Gemeinsame Ausschuss Elektronik im Bauwesen** (= German Joint Committee for Electronics in Construction) promotes the use of data processing in the building construction industry, taking into consideration the common language of all those involved in the building sector.
www.gaeb.de

VDE – these three letters stand for one of the big European associations for sectors and professions in the fields of electrical and information technology. It is a forum of international experts on science, standardisation and product testing.
www.vde.com

The **VEG** is the professional association of the electrical wholesalers in Germany. According to the statutes, the association's aims are the protection, awareness and promotion of the general non-material and financial interests of its members.
www.veg.de

The **ZVEH** represents the financial and political interests of around 76,000 electrical and information technology companies, both nationally and internationally.
www.zveh.de

The **ZVEI** is one of Germany's most important industrial associations. It represents the interests of a high-tech sector with a product portfolio which is very wide-ranging and extremely dynamic.
www.zvei.org

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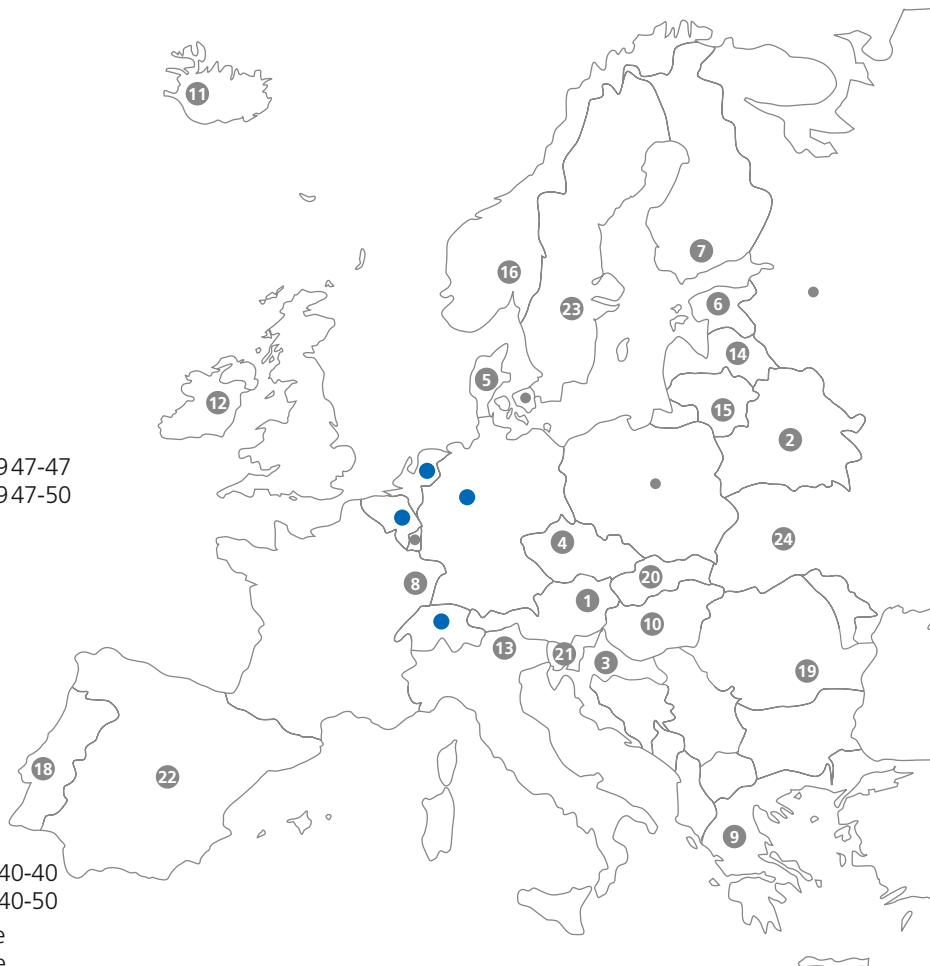
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