

Manual

Floor installation systems

Installation units



CE

:hager

EN

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Important note

This manual does not replace any operating and assembly instructions that are also supplied with the products described.

No generally applicable legal obligation shall be derived from the contents of this document.

The contents of this document are based on the currently applicable rules and regulations as well as our own test findings. No generally applicable legal obligation shall be derived from the contents of this document.

This document explains the relevant principles for assembling supply units and installation units and for routing and connecting cables and wires in these systems.






2 Introduction

2.1 Document content

This document explains the relevant principles for assembling, designing and using supply units and installation units and their accessories. The contents of this document are based on the currently applicable rules and regulations as well as our own test findings.

2.2 Symbols used

- Single-step instruction or any sequence
- ① Multi-step instruction Sequence must be maintained.
- List
- ▶ Reference to additional documents/information

	Installation only by a qualified electrician		Installation only by a person with electrical training		For further information, refer to the installation and commissioning instructions
	Suitable for use throughout Europe and Switzerland		Manufacturer's information is in accordance with § 18 Para. 4 of the German Electrical and Electronic Equipment Act.		

2.3 Target group

This manual is intended for designers, architects and installers of systems in which supply units, installation units and their accessories are fitted.



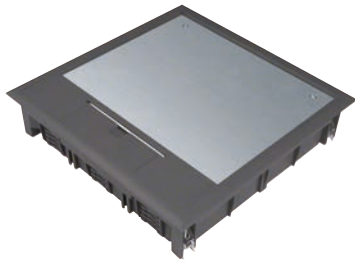
Attention

Electronic devices may only be assembled, installed and configured by a specialist with electrical training and certification in accordance with the relevant installation standards of the country. The accident prevention regulations valid in the appropriate countries must be complied with.

2.4 System overview for installation units

Installation units provide the installation space for power, data and multimedia connections in the floor installation systems. Different solutions should be used depending on the specific requirements and location.

Supply unit



Cassette



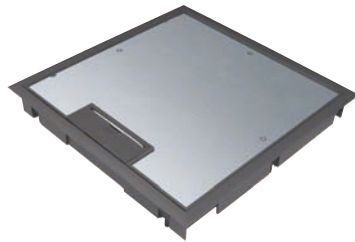
Supply unit wet-cleaned



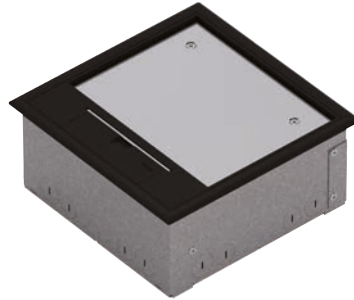
	Dry-cleaned	Dry-cleaned Wet-cleaned	Wet-cleaned
Floor maintenance	Dry-cleaned	Dry-cleaned Wet-cleaned	Wet-cleaned
Depth of covering	0 ... 12?mm	15 ... 25?mm	0 ... 3?mm
Floor covering	Carpet PVC Vinyl	Tiles Parquet Laminate Stone Terrazzo	Tiles Stone
Min. installation depth	77?mm (5?mm floor covering) 84?mm (12?mm floor covering)	95?mm (15?mm floor covering) 105?mm (25?mm floor covering)	90?mm
Max. load	Small area: 3?kN Large area: 5?kN	Small area: 5?kN Large area: 20?kN	Small area: 3?kN Large area: 7.5?kN/10?kN
Suitable for	Screed-covered trunking system (UK.electraplan) Cavity floor system Raised floor system Screed-flush trunking system (BK.electraplan) On-floor trunking system (AK.electraplan)	Screed-covered trunking system (UK.electraplan) Cavity floor system Raised floor system Screed-flush trunking system (BK.electraplan)	Screed-covered trunking system (UK.electraplan) Cavity floor system Raised floor system Screed-flush trunking system (BK.electraplan) → dry-cleaned

Table 1: System overview - 1

**Plastic hinged cover
(55/664mm)**



UD-ZuHause floor box set



Floor socket outlet



Floor maintenance	Dry-cleaned	Dry-cleaned	Dry-cleaned Wet-cleaned
Depth of covering	5?...8/12?mm	5 ... 15?mm	
Floor covering	Carpet PVC Vinyl	Carpet PVC Vinyl Tiles Parquet Laminate Stone Terrazzo	Carpet PVC Vinyl Tiles Parquet Laminate Stone Terrazzo
Min. installation depth	50?mm (5?mm) 57?mm (12?mm)	90?mm	86?mm
Max. load	Small area: 1.5?kN	Small area: 3?kN Large area: 5?kN	Small area: 3?kN Large area: 7.5?kN/15?kN
Suitable for	Screed-covered trunking system (UK.electraplan) Cavity floor system Raised floor system Screed-flush trunking system (BK.electraplan) On-floor trunking system (AK.electraplan)	Screed floors with pipe installation	Screed floors with pipe installation and casing element (SER02) Cavity floor system with casing element (SER02) Raised floor system

Table 2: System overview - 2



Supply units

The supply units made from polyamide are ideal for use in offices. They can withstand a load of up to 3?kN (DIN specification). The supply units are available in different shapes and colours.



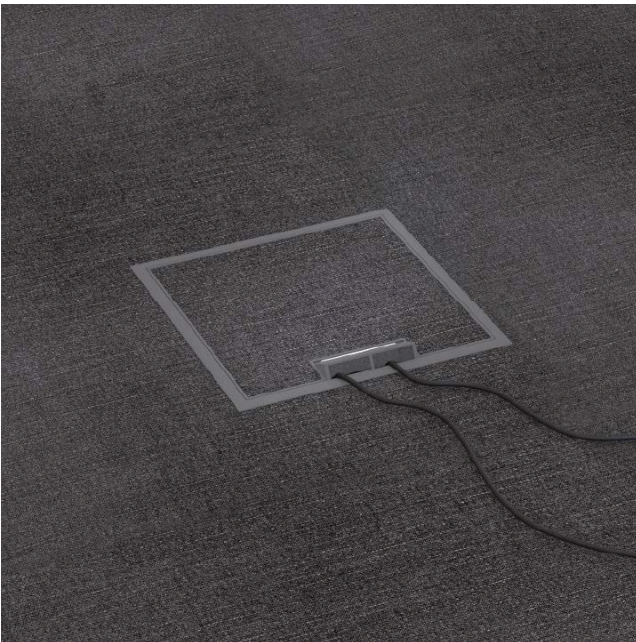
Cassettes

The Hager cassettes are levelled to the final floor height using additional levelling sets. Whether a floor is dry-cleaned, damp-cleaned or wet-cleaned, there is the right cassette available for any situation. With its virtually invisible design, the stainless-steel or brass cassette blends perfectly into the floor covering.

**Supply units wet-cleaned**

The VANR supply units are particularly suitable in combination with high-quality floor coverings, such as stone tiles.

The supply units are made from aluminium in accordance with DIN EN 50085-1 and DIN EN 50085-2-2 and are intended for dry rooms with dry-cleaned or wet-cleaned floors and with a carpet protection frame. They can be walked on and are designed for fairly high loads.

**Hinged cover**

Special solutions are required for low assembling heights. The KDQ/KDE series contains hinged covers designed specifically for very flat floor structures. Using a special socket outlet GBESxx, this series makes it possible to provide a power supply even with a floor structure as low as 50?mm.



UD-ZuHause floor box set (floor tanks in the set)

Square floor tanks with a cable outlet for 2-12 installed devices in a practical set with a levelling cassette or as a plastic supply unit.

The UD-ZuHause floor box set series is supplied as a complete installation unit. The installation unit includes a floor box as screed lining and either a stainless-steel cassette or supply unit for device installation. All the elements required to set up a device are supplied. The floor box is installed directly on the raw concrete and connected with flexible installation tubes. In addition, if necessary, the floor tank can be configured from the individual parts first and then be assembled on the construction site.



Floor socket outlets

The floor socket outlets have a modular structure: They consist of an installation box, a device receptacle and a cover variant. All components are perfectly matched. The practical installation accessories ensure quick and easy installation on any flooring.

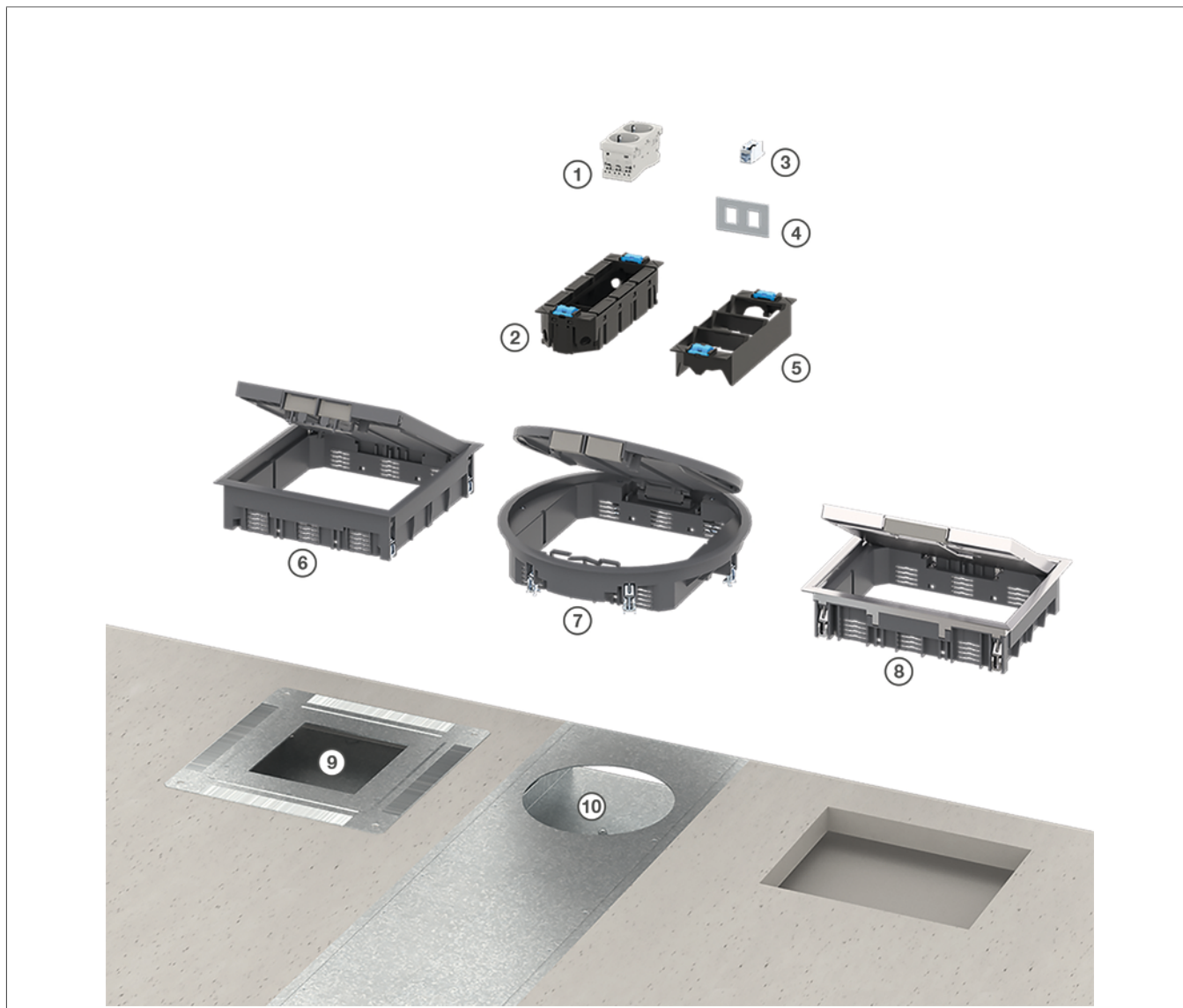
3 Supply units

3.1 System description

Our supply units bundle together the different connections such as power, data and multimedia to provide the best supply to workstations or other areas in a room. This means that all connections are available centrally at defined points in the floor. These supply units are suitable for dry floors and available in round and angular versions. Different sizes are also available, depending on the packing density that is required. They can be fitted in our screed-flush, screed-covered or on-floor trunking system, and in system floors (raised floor and cavity floor) with the appropriate recess.



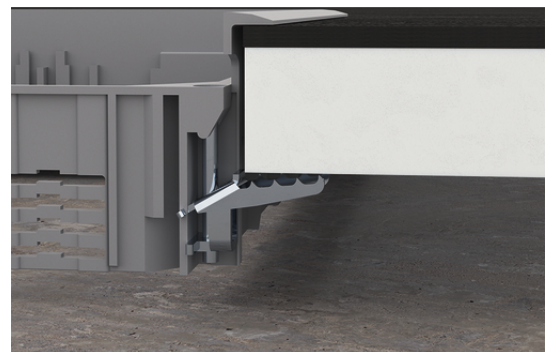
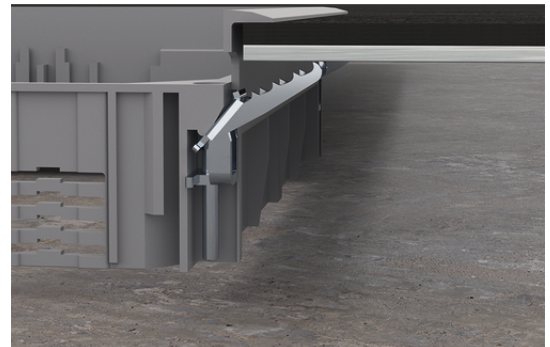
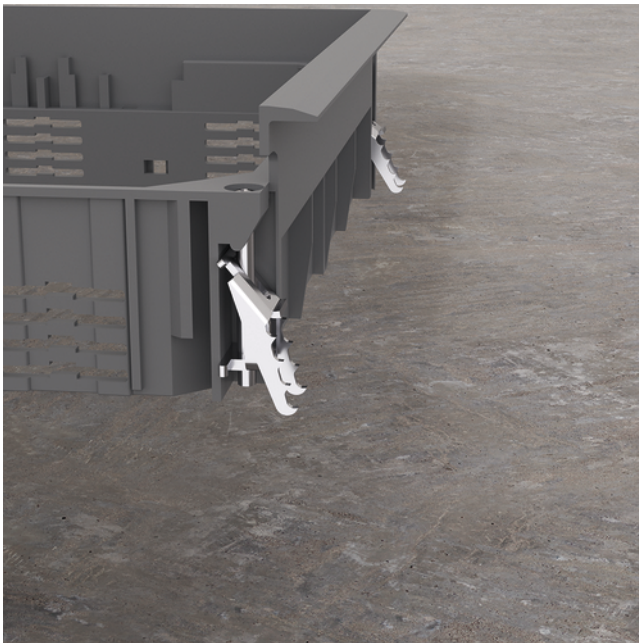
3.2 Installation principle



- ① Socket outlet 2-gang
- ② Device carrier for 4 Rastec devices
- ③ Keystone module
- ④ Mounting plate for keystone module
- ⑤ Device carrier for mounting plate – data technology
- ⑥ Supply unit, plastic, square
- ⑦ Supply unit, plastic, round
- ⑧ Supply unit, stainless steel, rectangular
- ⑨ Universal floor box for UK system
- ⑩ Die-cut cover for BK system

The supply units can be installed in floor boxes, raised floors or in cavity floors. Thanks to the universal claw, the supply units can be fitted in any type of floor installation.

You can always use the same fastening kit, whichever floor system the supply units are used in. You no longer need to select different fastening kits when placing an order.



3.3 Options

Q06



6x socket outlet Rastec 45
2x GTVR300
Installation dimensions 200 x 200?mm



Q12



12x socket outlet Rastec 45
3x GTVR400
Installation dimensions 244 x 244?mm



E09



9x socket outlet Rastec 45
3x GTVR300
Installation dimensions 200 x 253?mm



R06



6x socket outlet Rastec 45
2x GTVR300
Installation dimension \varnothing 200 mm



R10



10x socket outlet Rastec 45
2x GTVR300
1x GTVR400
Installation dimension \varnothing 275 mm



R12



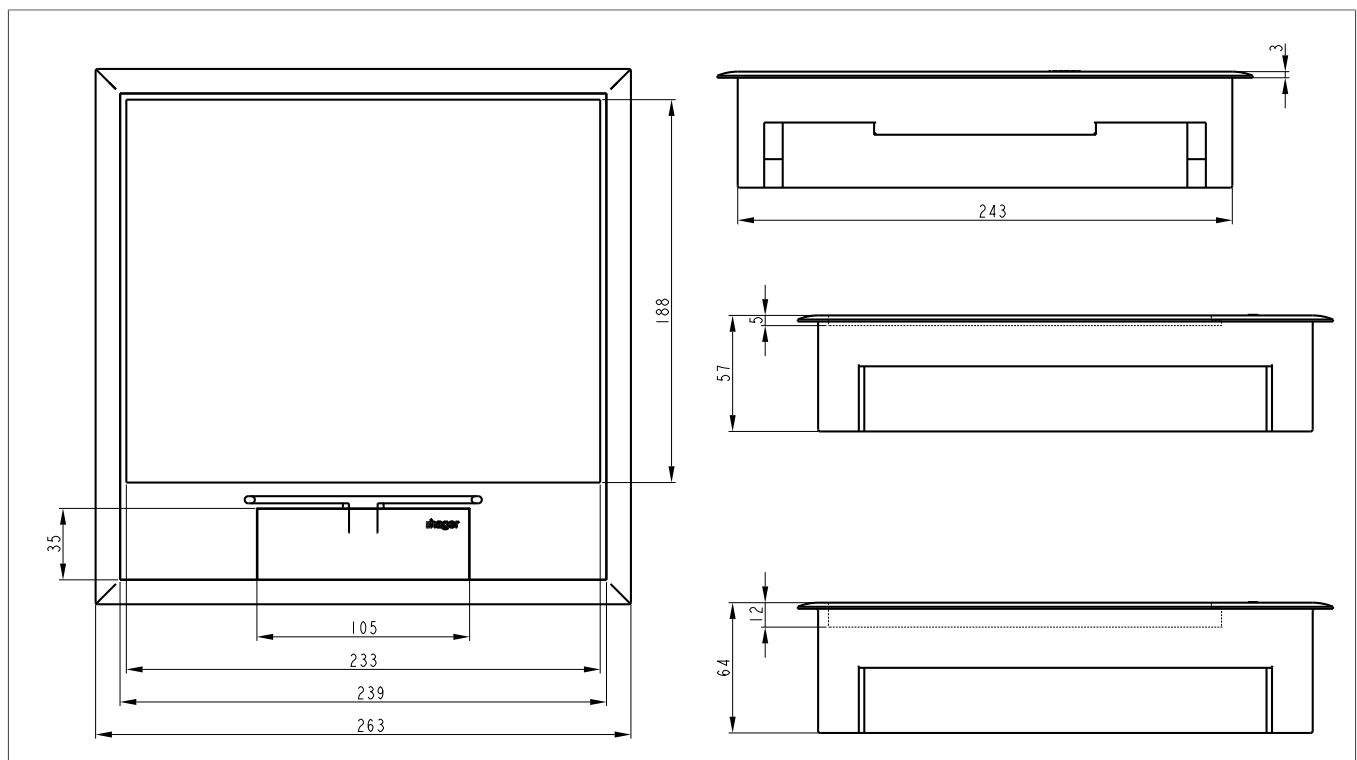
12x socket outlet Rastec 45
3x GTVR400
Installation dimension \varnothing 305 mm



3.4 Installation and system dimensions

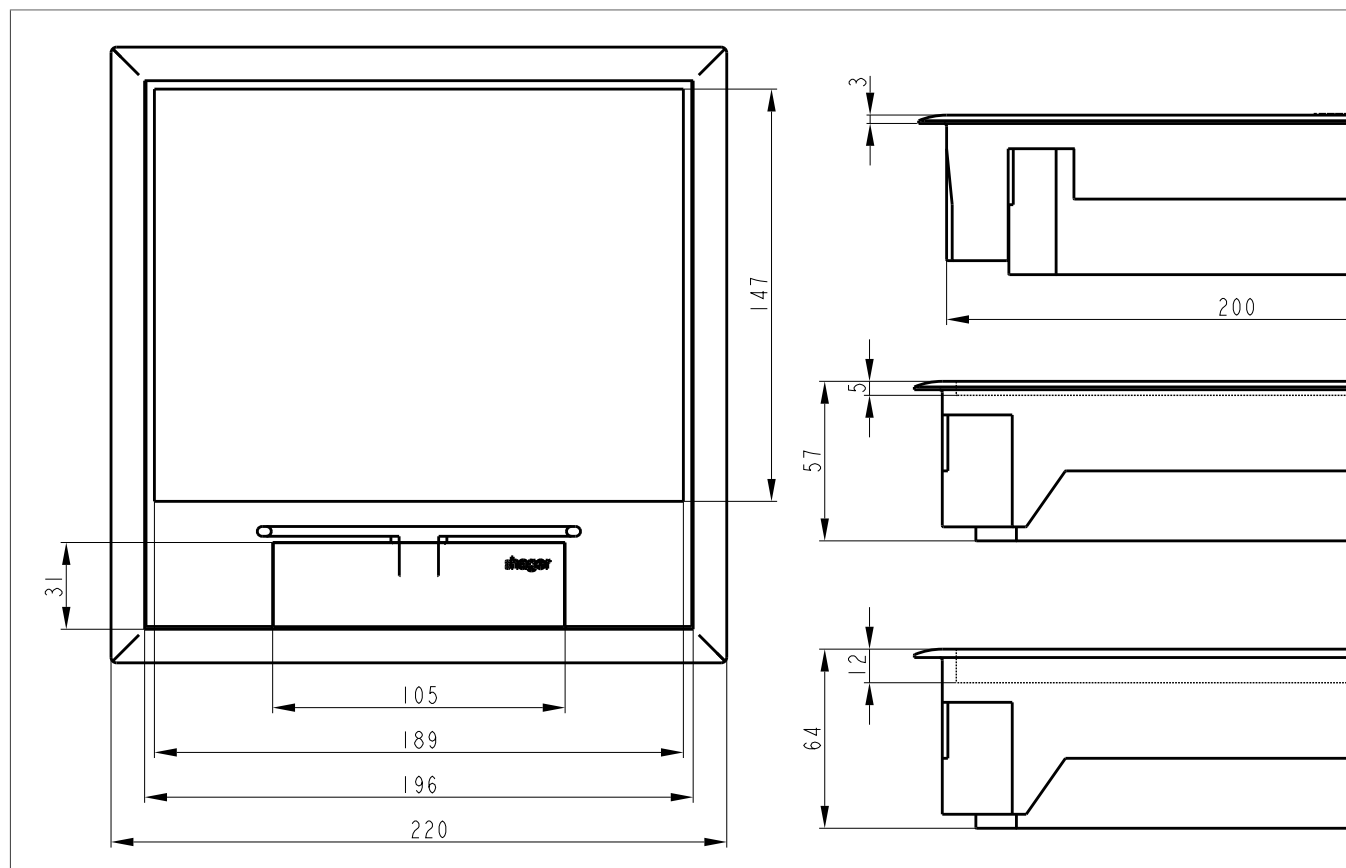
The installation and floor cutout dimensions are only required for raised/cavity floor systems. As soon as the supply units are installed in the universal floor boxes (UDHxx, UDBxx, UDSxx) of the screed-covered system UK, in the casing system (SEBD500GT, SEGT350), in the junction box (BKSAxx), or in the mounting covers (BKAXx) of the screed-flush system BK and the mounting covers (AKMxx) of the on-floor trunking system AK, the matching installation openings are in place. Simply pay attention to the nominal sizes (Q12, R12, Q06, R06, etc.).

Dimensions of supply units, square, VQ12xx



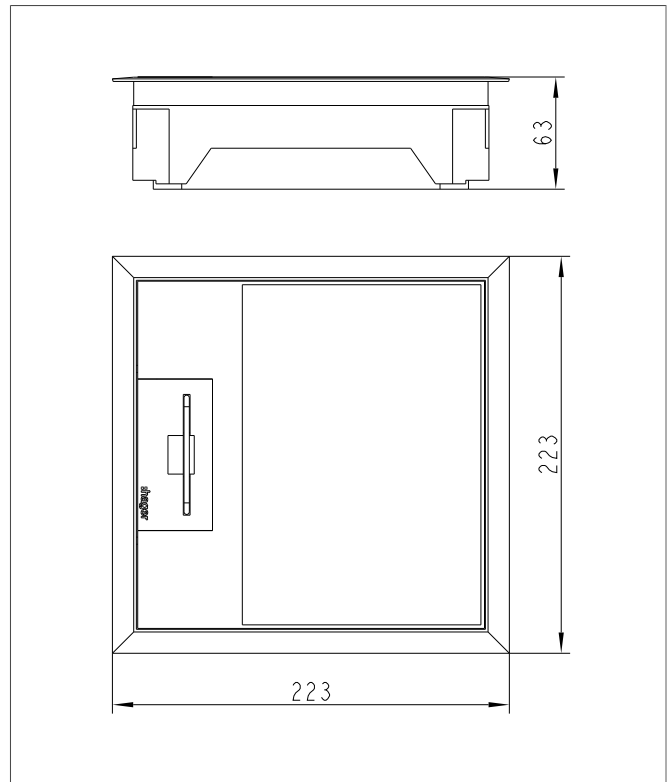
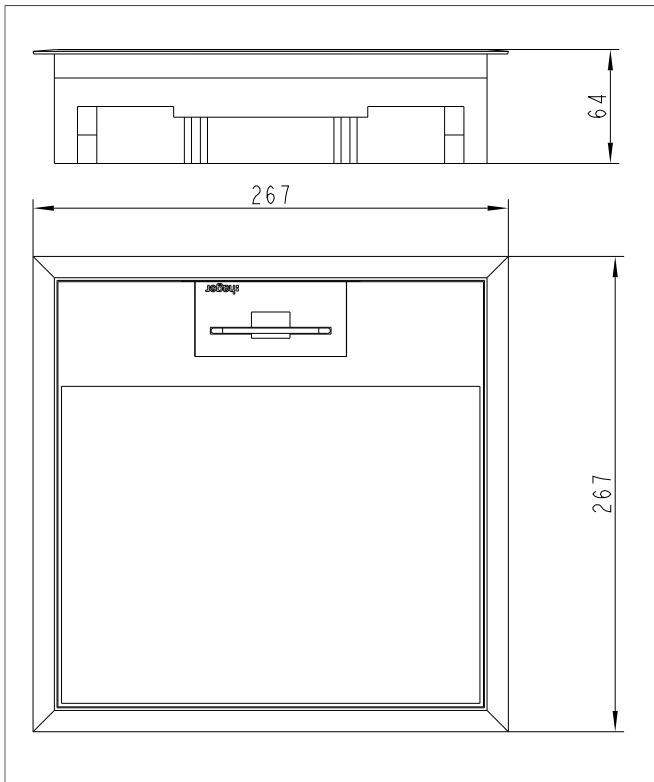
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Polyamide	Q12	5?mm	Iron grey	1	1.9 kg	VQ12057011
Supply unit	Polyamide	Q12	5?mm	Black	1	1.9 kg	VQ12059005
Supply unit	Polyamide	Q12	12?mm	Iron grey	1	1.9 kg	VQ12127011
Supply unit	Polyamide	Q12	12?mm	Black	1	1.9 kg	VQ12129005

Dimension of supply unit, square, VQ06xx



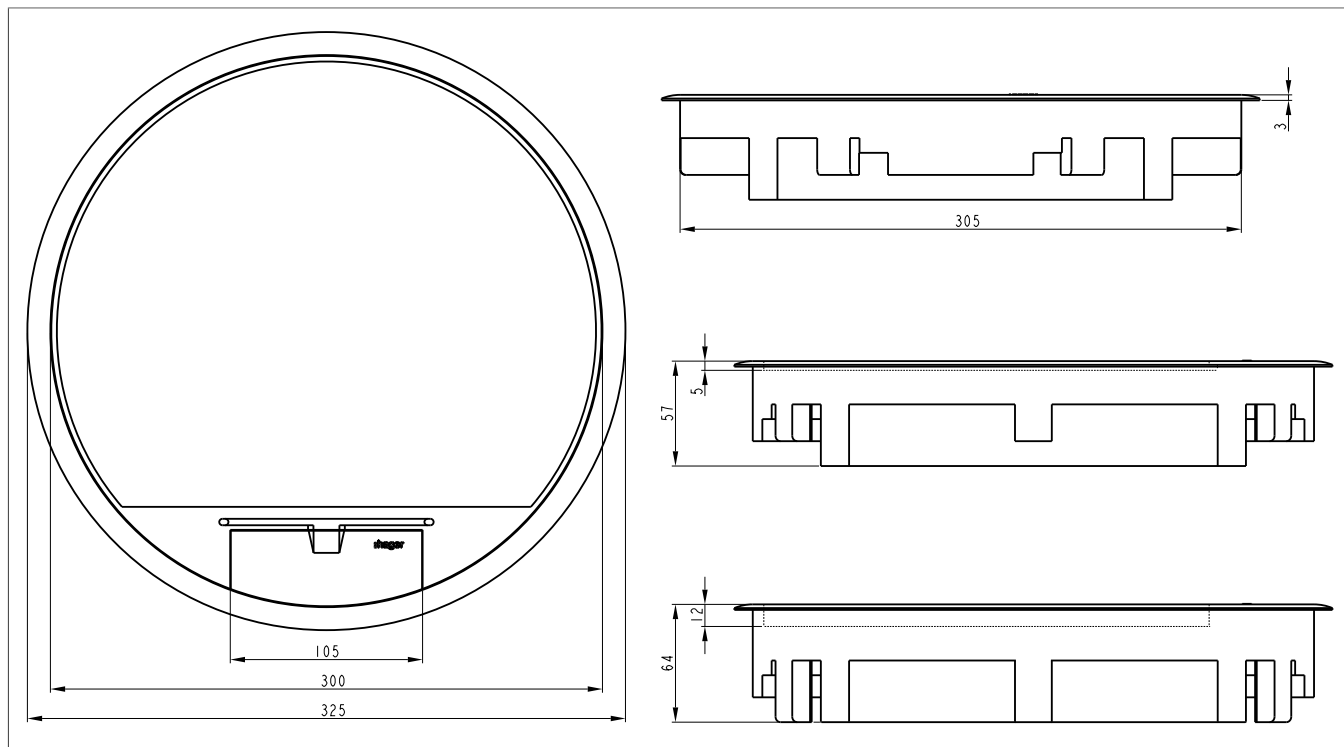
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Polyamide	Q06	5?mm	Iron grey	1	1.1 kg	VQ06057011
Supply unit	Polyamide	Q06	5?mm	Black	1	1.1 kg	VQ06059005
Supply unit	Polyamide	Q06	12?mm	Iron grey	1	1.1 kg	VQ06127011
Supply unit	Polyamide	Q06	12?mm	Black	1	1.1 kg	VQ06129005

Dimension of supply unit, stainless steel, angular, VEQxxxx



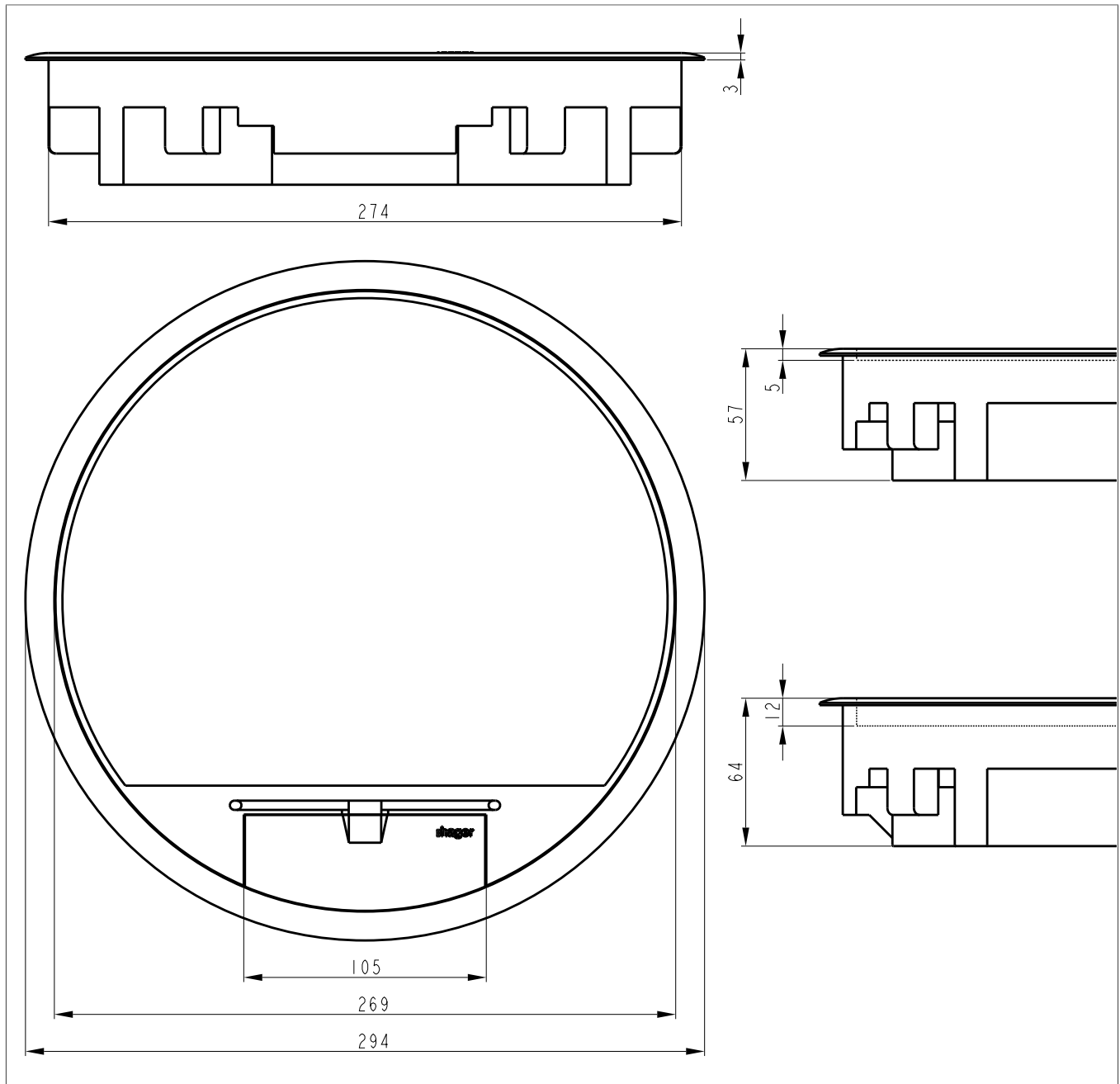
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Stainless steel	Q12	127mm	Stainless steel		2.3 kg	VEQ1212E
Supply unit	Stainless steel	Q06	127mm	Stainless steel		2.0 kg	VEQ0612E

Dimension of supply unit, round, VR12xx



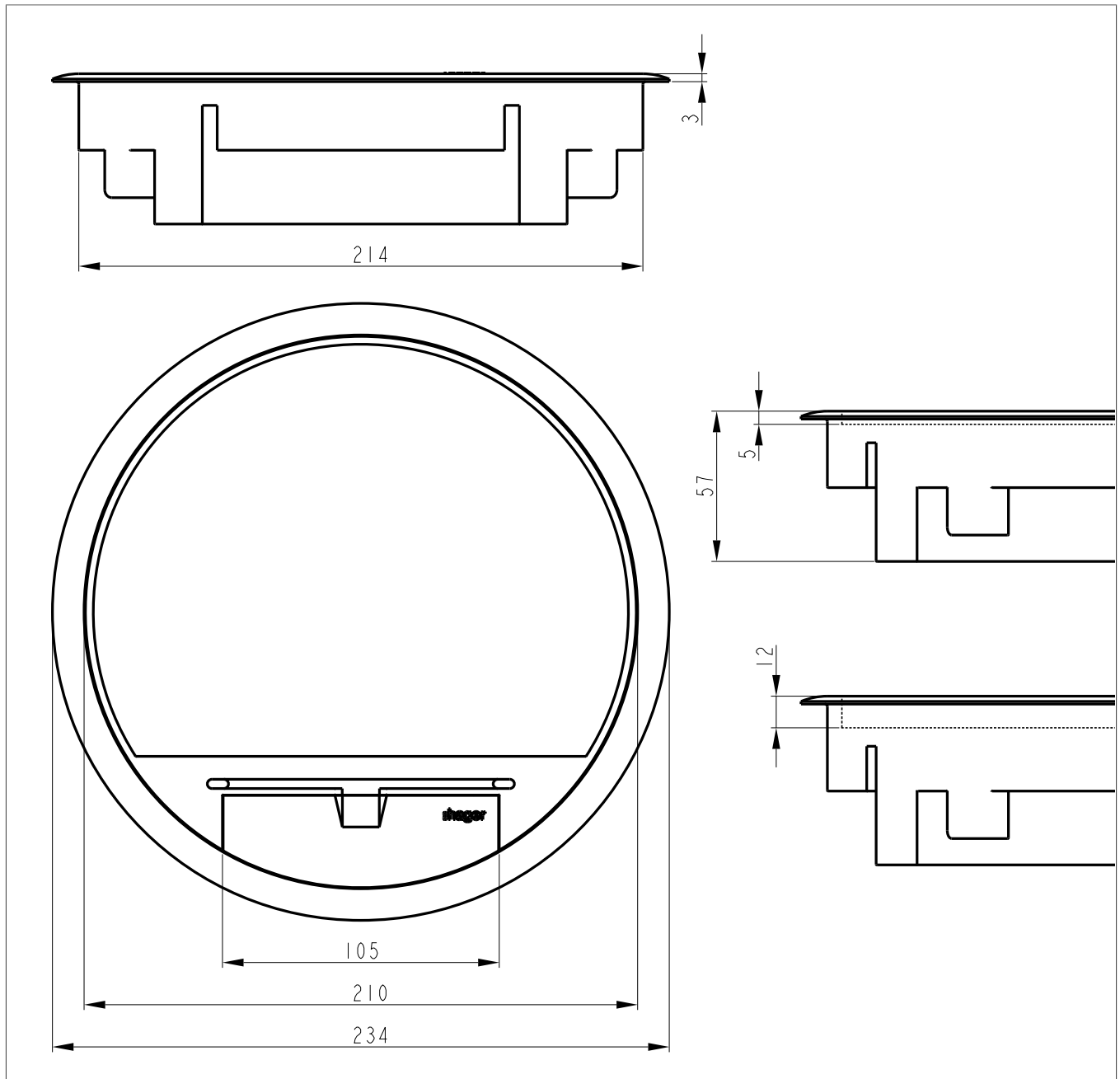
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Polyamide	R12	57mm	Iron grey	1	2.4 kg	VR12057011
Supply unit	Polyamide	R12	57mm	Black	1	2.4 kg	VR12059005
Supply unit	Polyamide	R12	127mm	Iron grey	1	2.4 kg	VR12127011
Supply unit	Polyamide	R12	127mm	Black	1	2.4 kg	VR12129005

Dimension of supply unit, round, VR10xx



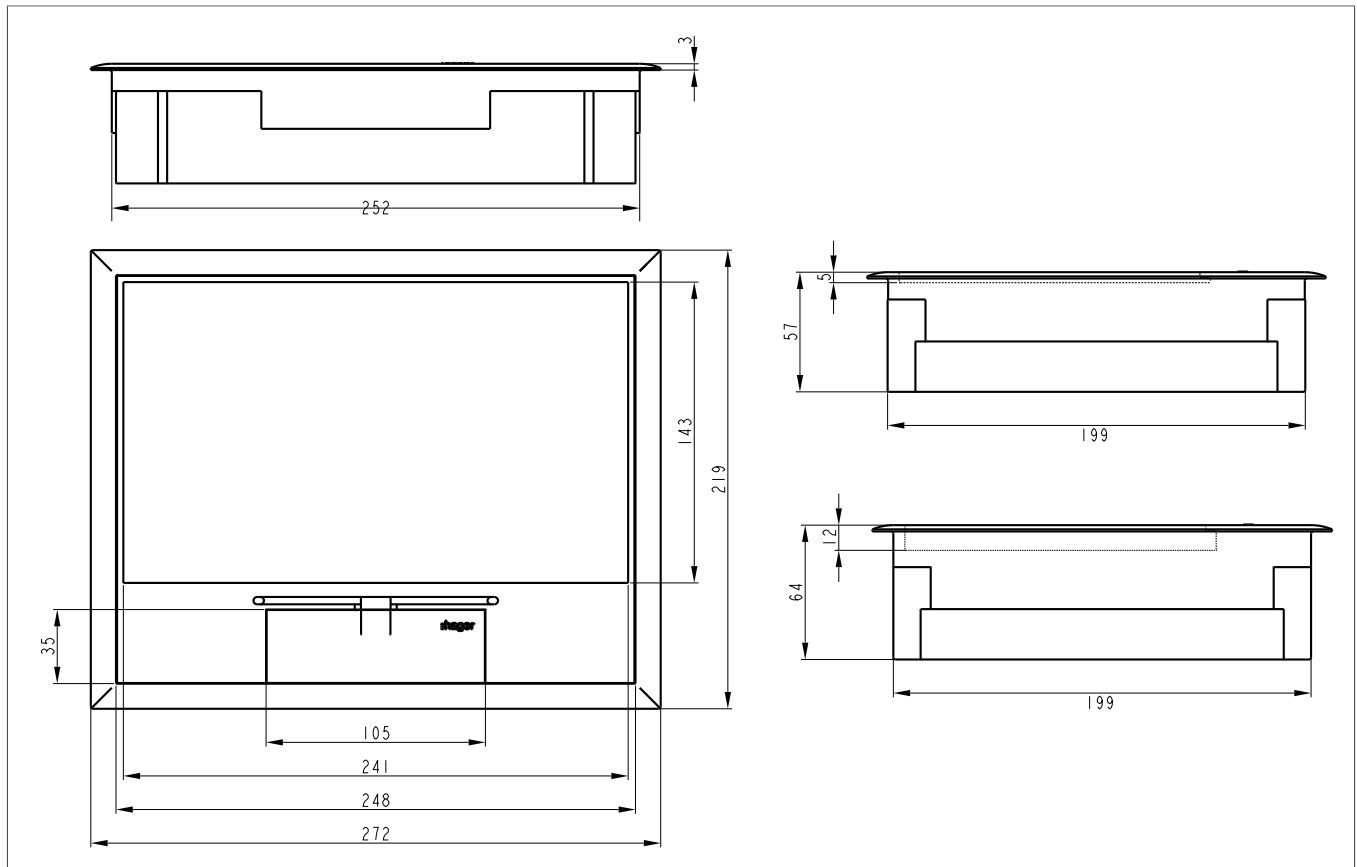
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Polyamide	R10	5?mm	Iron grey	1	1.7 kg	VR10057011
Supply unit	Polyamide	R10	5?mm	Black	1	1.7 kg	VR10059005
Supply unit	Polyamide	R10	12?mm	Iron grey	1	1.7 kg	VR10127011
Supply unit	Polyamide	R10	12?mm	Black	1	1.7 kg	VR10129005

Dimensions of supply unit, round, VR06



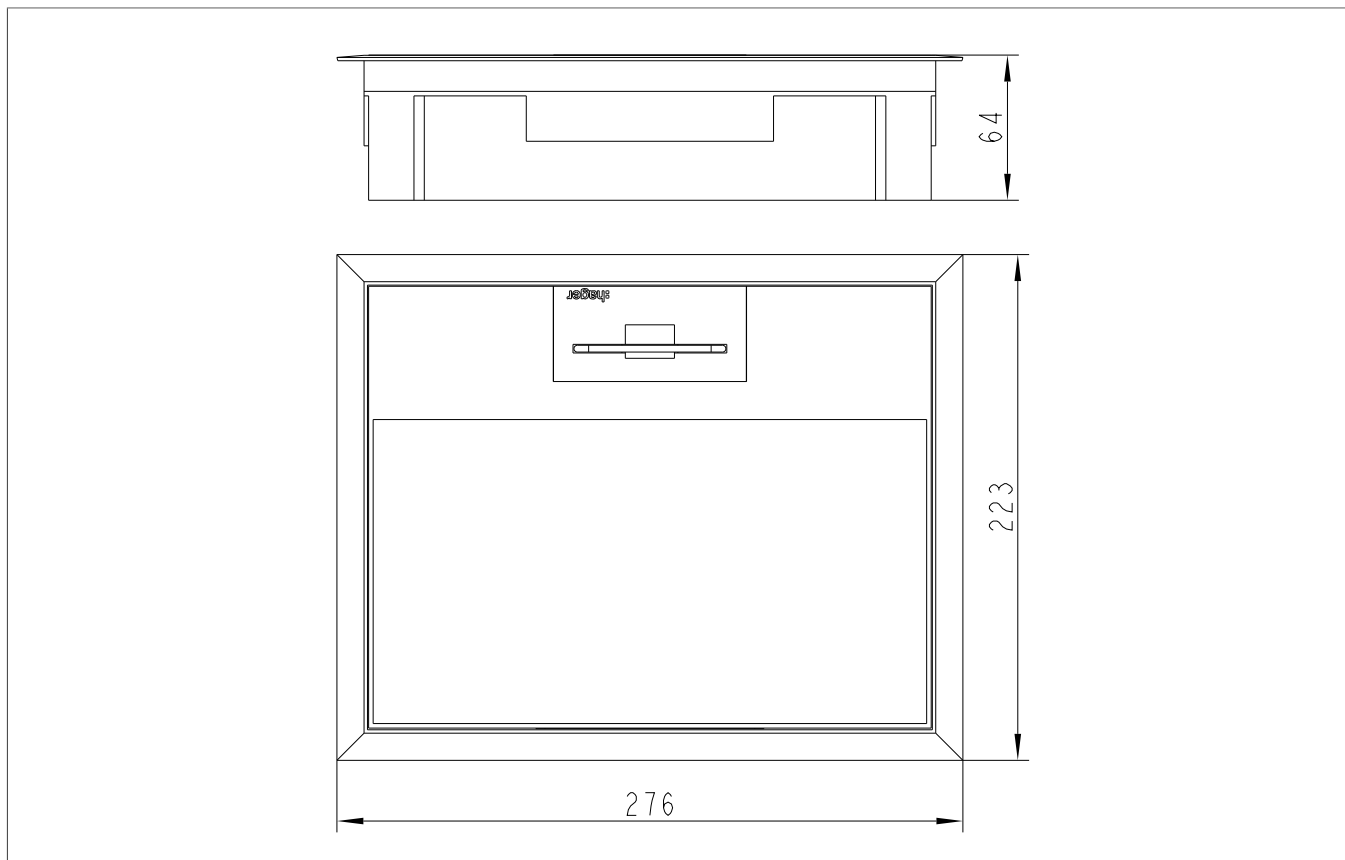
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Polyamide	R06	5?mm	Iron grey	1	1.0 kg	VR06057011
Supply unit	Polyamide	R06	5?mm	Black	1	1.0 kg	VR06059005
Supply unit	Polyamide	R06	12?mm	Iron grey	1	1.0 kg	VR06127011
Supply unit	Polyamide	R06	12?mm	Black	1	1.0 kg	VR06129005

Dimensions of supply unit, angular, VE09



Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Polyamide	E09	5?mm	Iron grey	1	1.5 kg	VE09057011
Supply unit	Polyamide	E09	5?mm	Black	1	1.5 kg	VE09059005
Supply unit	Polyamide	E09	12?mm	Iron grey	1	1.5 kg	VE09127011
Supply unit	Polyamide	E09	12?mm	Black	1	1.5 kg	VE09129005

Dimension of supply unit, stainless steel, angular, VEE09xx



Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Supply unit	Polyamide	E09	12?mm	Stainless steel	1	2.3 kg	VEE0912E

Installation depth with snap-in floor box extension



**With GTVRx device carrier
(top snap-in position)**

**With GTVRx device carrier
(bottom snap-in position)**

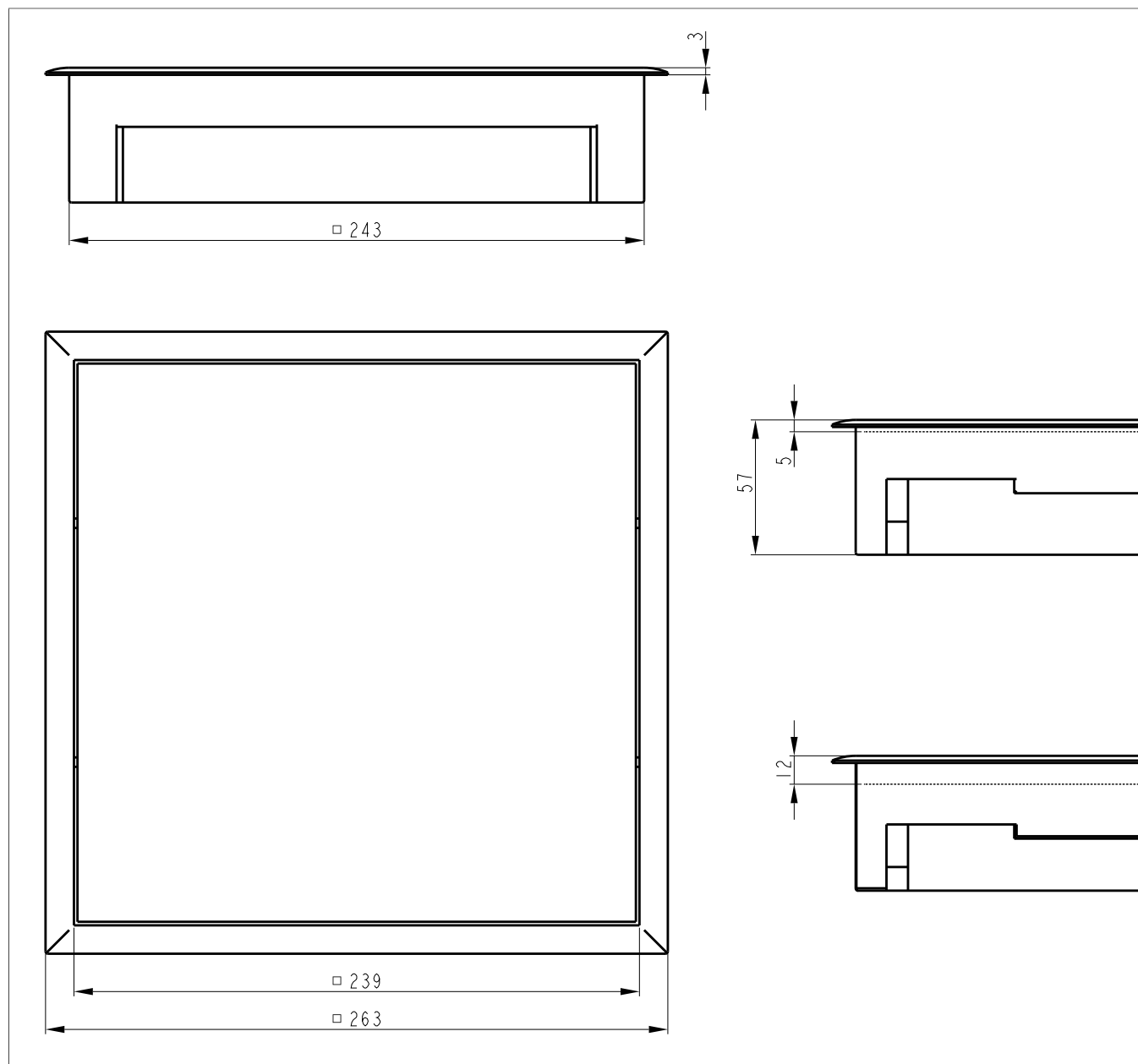
**With GTVRx device carrier and
snap-in floor box extension
(bottom snap-in position)**

Order No.	a [mm]	b [mm]	c [mm]
VE0905x	80	98	128
VE0912x	87	104	135
VEE0912E	85	103	135
VQ0605x	80	98	128
VEQ0612E	87	104	135
VQ1205x	80	98	128
VQ1212x	87	105	135
VEQ1212E	85	103	135
VR0605x	80	98	128
VR0612x	87	105	135
VR1005x	80	98	128
VR1012x	87	105	135
VR1205x	81	99	128
VR1212x	88	106	135

Table 3: Minimum installation depth with snap-in floor box extension

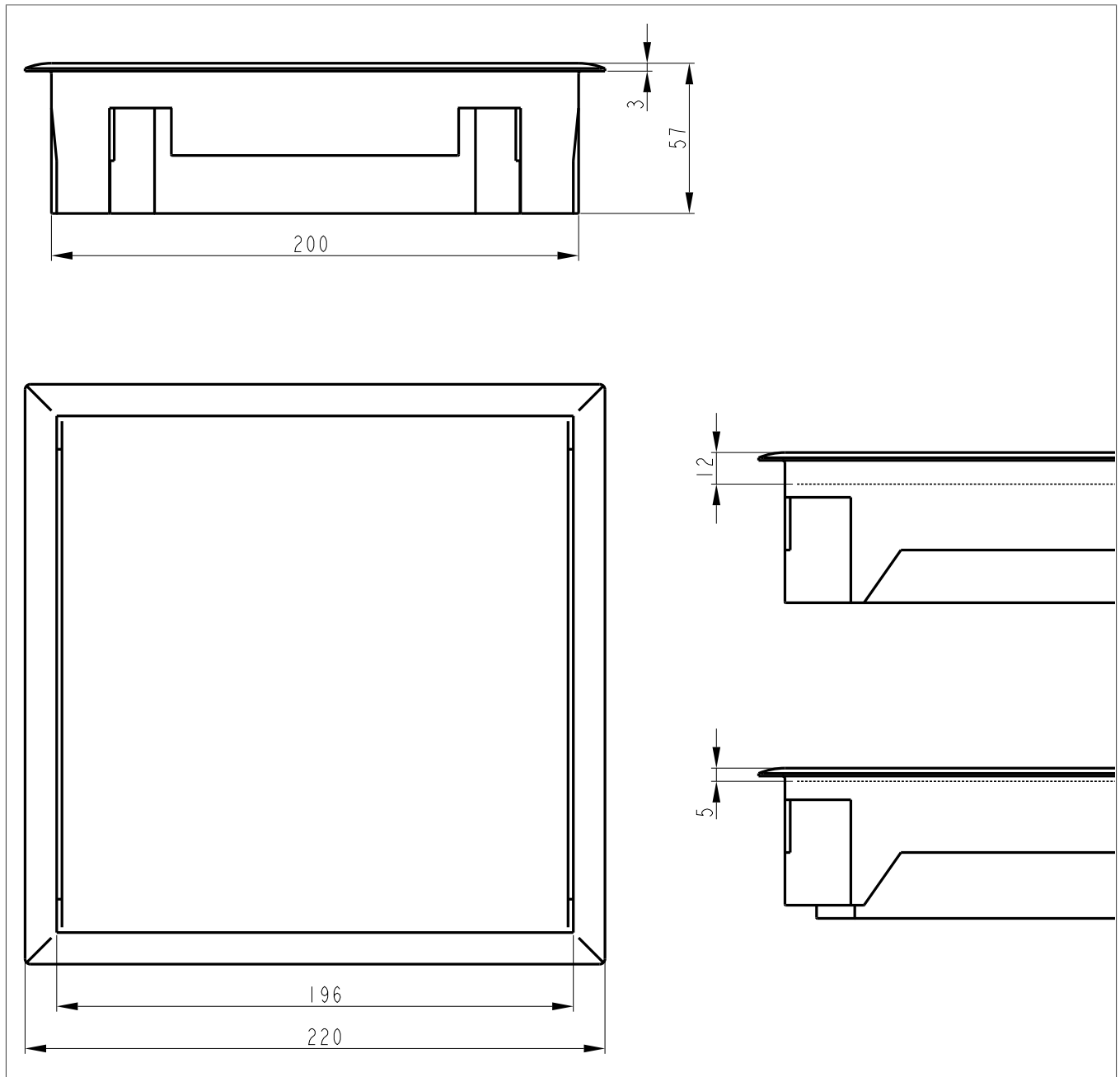
All values are rounded.

Dimension of sealing cover, square, VDQ12xx



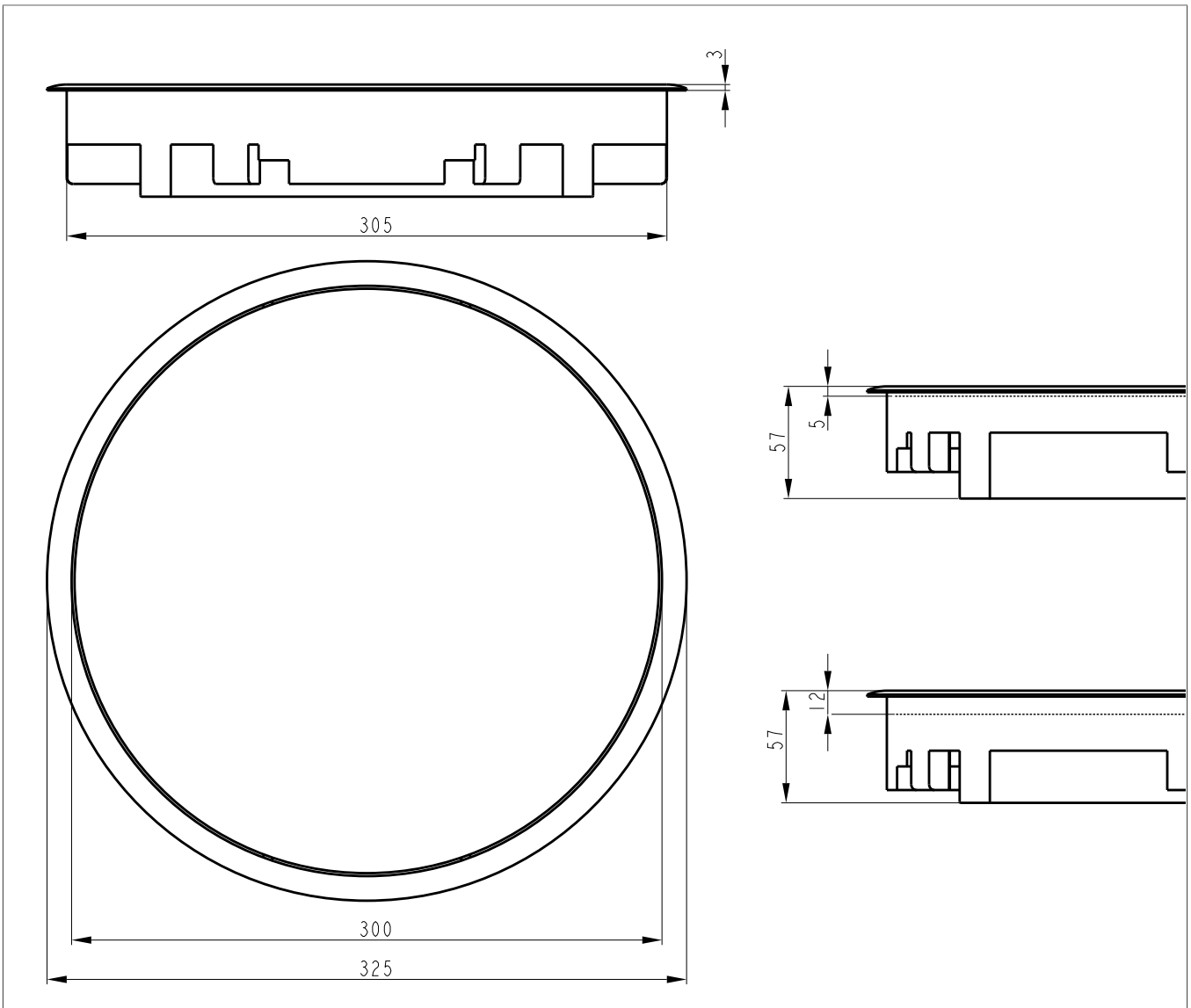
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Sealing cover	Polyamide	Q12	5?mm	Iron grey	1	1.7 kg	VDQ12057011
Sealing cover	Polyamide	Q12	5?mm	Black	1	1.7 kg	VDQ12059005
Sealing cover	Polyamide	Q12	12?mm	Iron grey	1	1.7 kg	VDQ12127011
Sealing cover	Polyamide	Q12	12?mm	Black	1	1.7 kg	VDQ12129005

Dimension of sealing cover, square, VDQ06xx



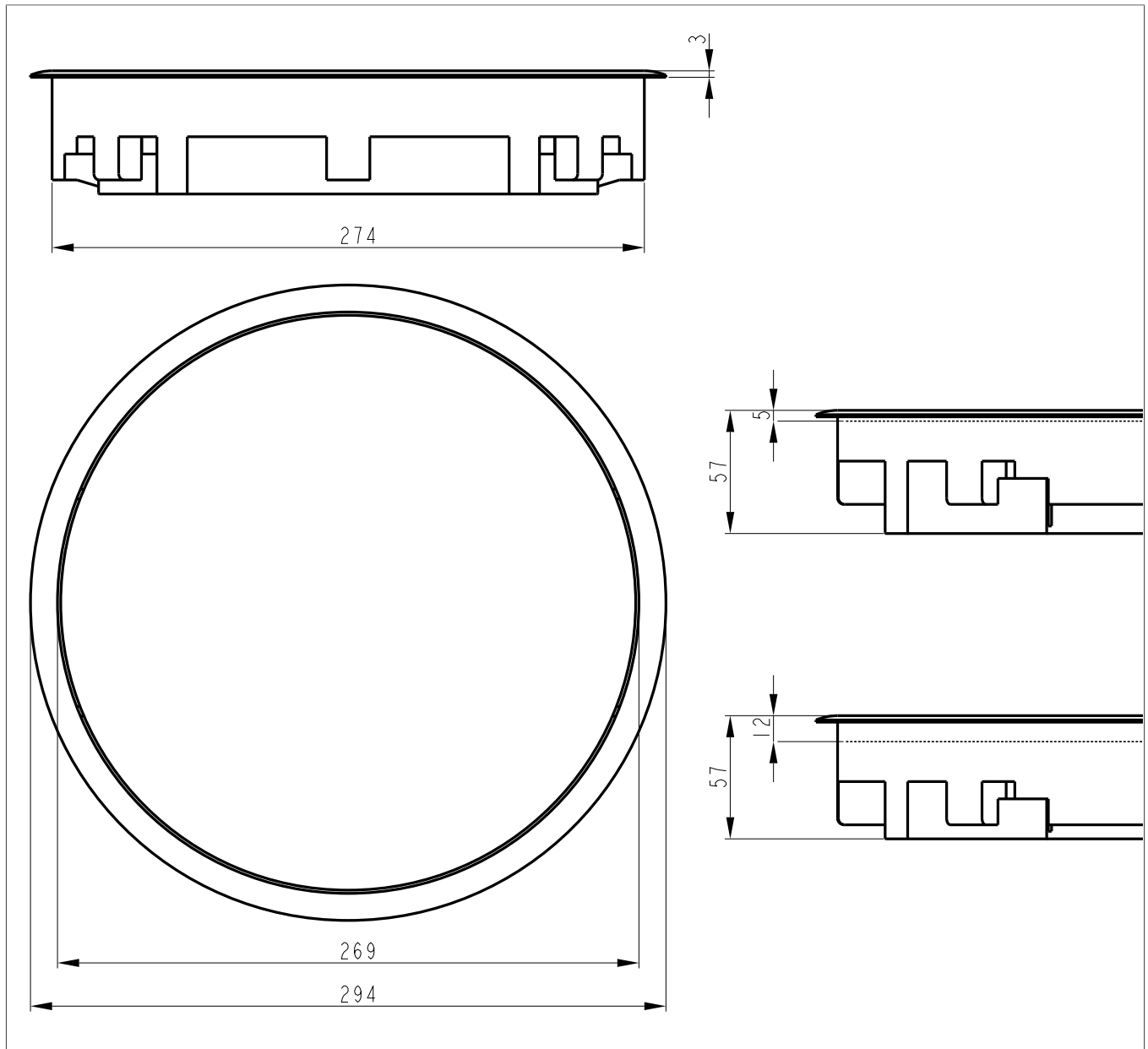
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Sealing cover	Polyamide	Q06	5?mm	Iron grey	1	1.2 kg	VDQ06057011
Sealing cover	Polyamide	Q06	5?mm	Black	1	1.2 kg	VDQ06059005
Sealing cover	Polyamide	Q06	12?mm	Iron grey	1	1.2 kg	VDQ06127011
Sealing cover	Polyamide	Q06	12?mm	Black	1	1.2 kg	VDQ06129005

Dimension of sealing cover, round, VDR12xx



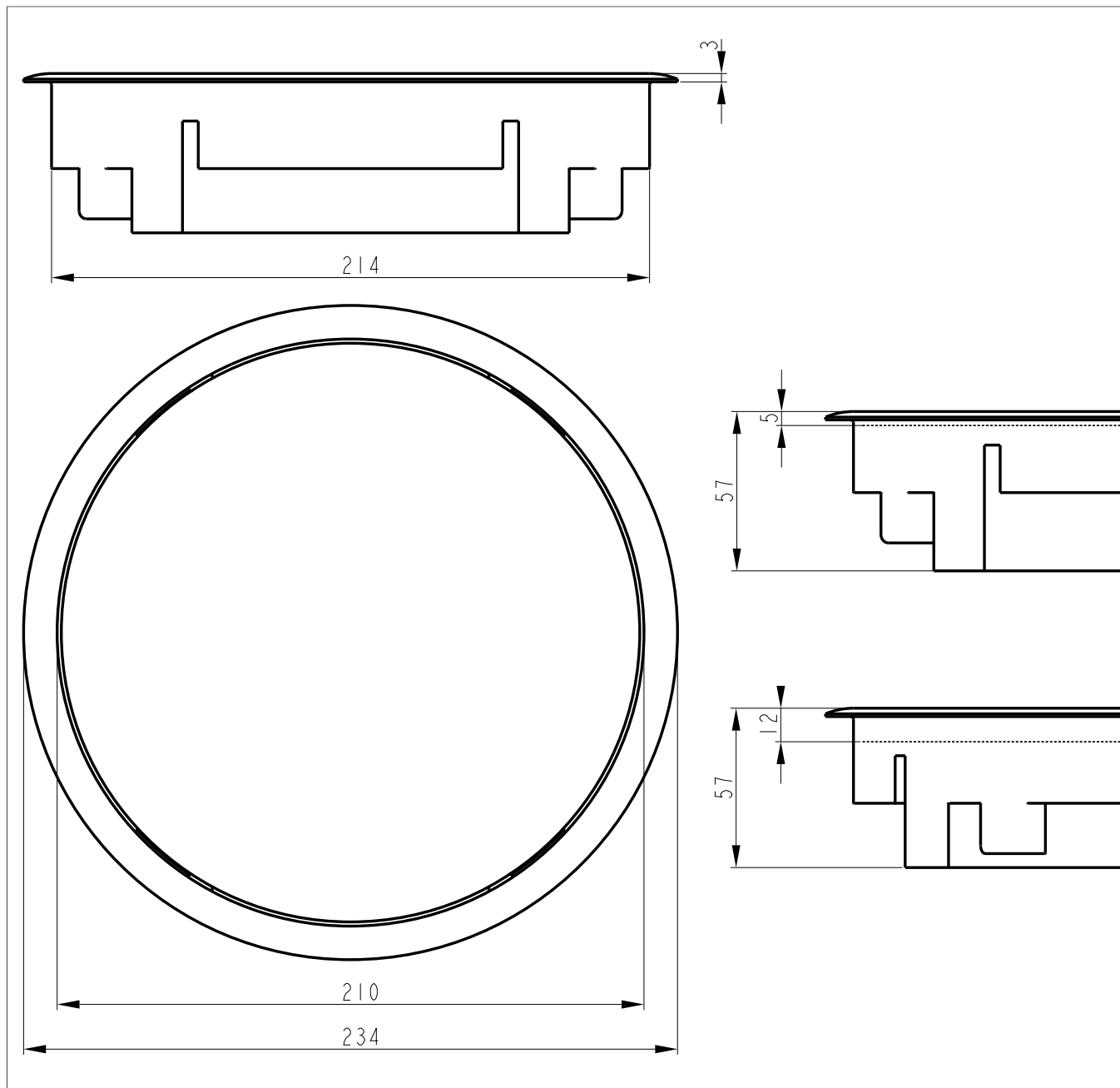
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Sealing cover	Polyamide	R12	57mm	Iron grey	1	2.1 kg	VDR12057011
Sealing cover	Polyamide	R12	57mm	Black	1	2.1 kg	VDR12059005
Sealing cover	Polyamide	R12	127mm	Iron grey	1	2.1 kg	VDR12127011
Sealing cover	Polyamide	R12	127mm	Black	1	2.1 kg	VDR12129005

Dimension of sealing cover, round, VDR10xx



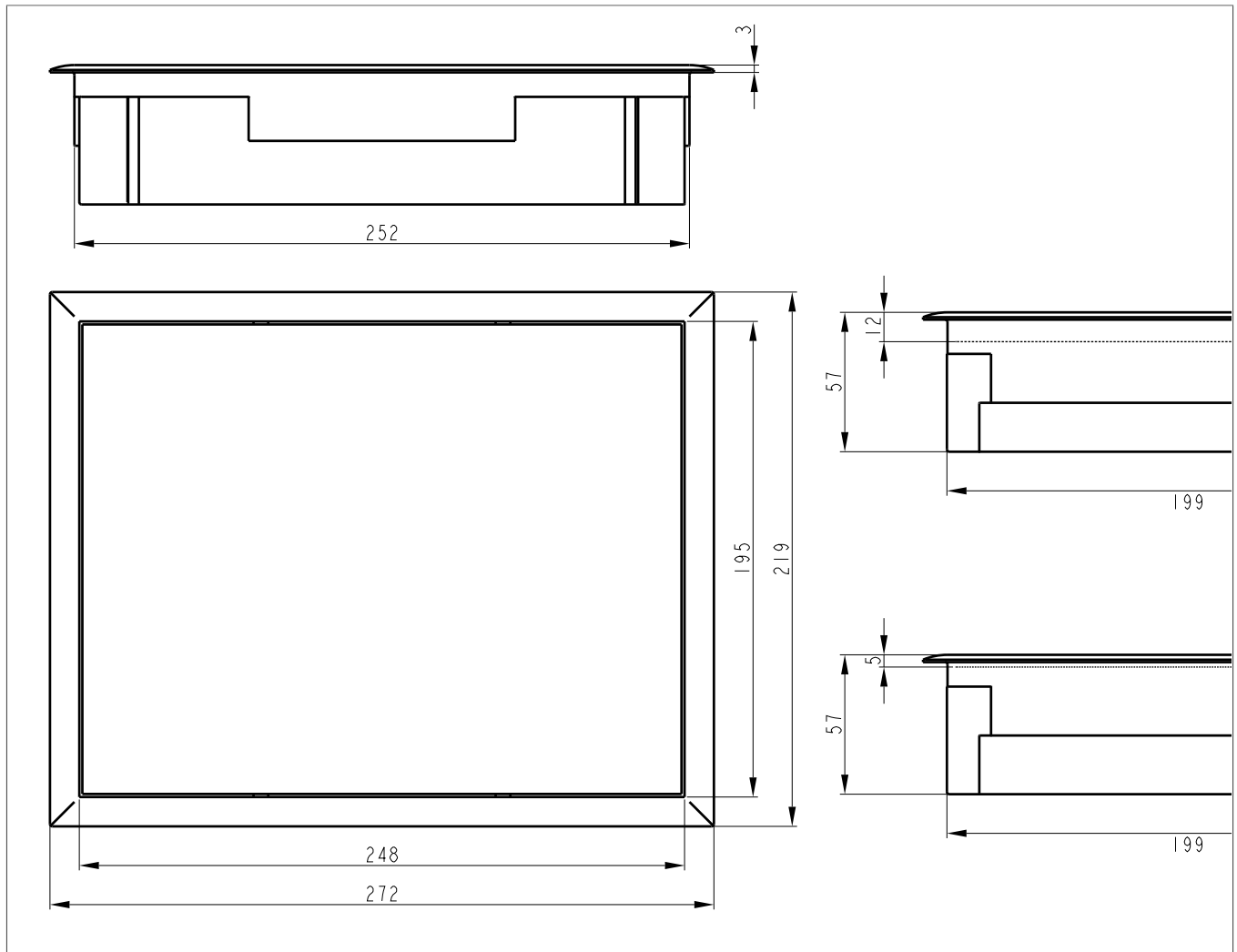
Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Sealing cover	Polyamide	R10	5?mm	Iron grey	1	1.7 kg	VDR10057011
Sealing cover	Polyamide	R10	5?mm	Black	1	1.7 kg	VDR10059005
Sealing cover	Polyamide	R10	12?mm	Iron grey	1	1.7 kg	VDR10127011
Sealing cover	Polyamide	R10	12?mm	Black	1	1.7 kg	VDR10129005

Dimension of sealing cover, round, VDR06xx



Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Sealing cover	Polyamide	R06	5?mm	Iron grey	1	1.0 kg	VDR06057011
Sealing cover	Polyamide	R06	5?mm	Black	1	1.0 kg	VDR06059005
Sealing cover	Polyamide	R06	12?mm	Iron grey	1	1.0 kg	VDR06127011
Sealing cover	Polyamide	R06	12?mm	Black	1	1.0 kg	VDR06129005

Dimensions of sealing cover, angular, VDE09xx



Designation	Material	Nominal size	Depth of covering for	Colour	PU	Weight	Order No.
Sealing cover	Polyamide	E09	5?mm	Iron grey	1	1.4 kg	VDE09057011
Sealing cover	Polyamide	E09	5?mm	Black	1	1.4 kg	VDE09059005
Sealing cover	Polyamide	E09	12?mm	Iron grey	1	1.4 kg	VDE09059005
Sealing cover	Polyamide	E09	12?mm	Black	1	1.4 kg	VDE09129005

3.5 Installation

3.5.1 Installation in screed-covered trunking systems UK

A number of requirements must be met in order to install the supply units in screed-covered trunking systems.

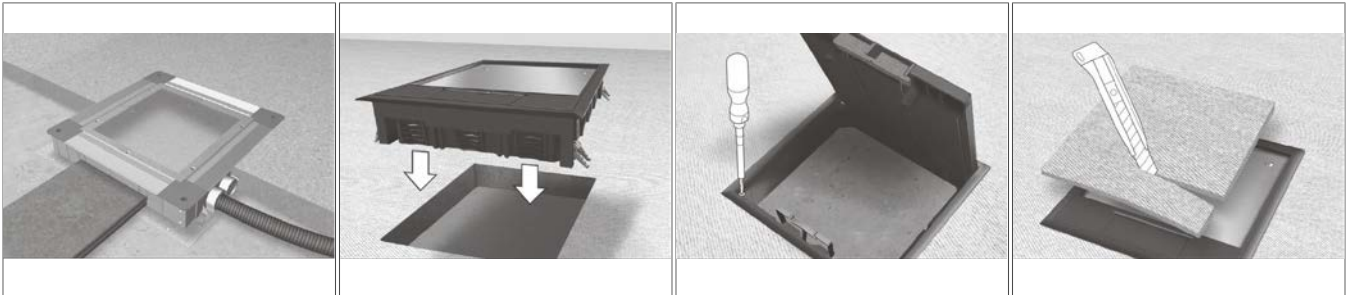
- ☑ The screed-covered trunking system UK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The screed protective cover has been removed.
- ☑ The mounting cover has been installed.
- ☑ The floor covering has been laid and cut out.

● Install the universal floor box and pour the screed. Lay the floor covering and cut out the installation opening. The cut-out floor covering can be glued in- to the cover of the supply unit.

● Insert the supply unit into the installation opening. Orientate the supply unit according to the room conditions. Note the position of the hinged opening.

● Fasten the supply unit in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the cover of the supply unit.



3.5.2 Installation in screed-flush trunking systems BK

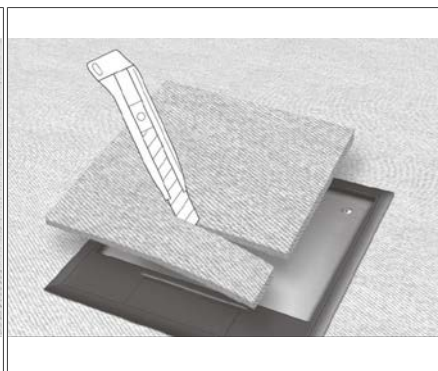
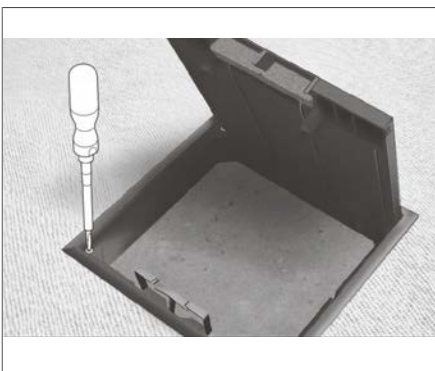
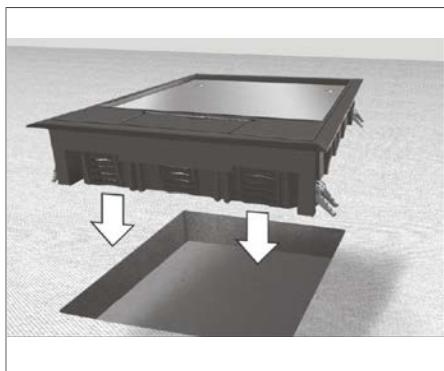
A number of requirements must be met to install the supply units in screed-flush trunking systems.

- ☑ The screed-flush trunking system BK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The mounting cover has been installed in the trunking or junction box.
- ☑ The floor covering has been laid and cut out.

● Install the BK system with the matching mounting cover. Lay the floor covering and cut out the installation opening. The cut-out floor covering can be glued into the cover of the supply unit.

● Insert the supply unit into the installation opening. Orientate the supply unit according to the room conditions. Note the position of the hinged opening.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the cover of the supply unit.



3.5.3 Installation in raised floor systems DB

A number of requirements must be met in order to install the supply units in raised floor systems.

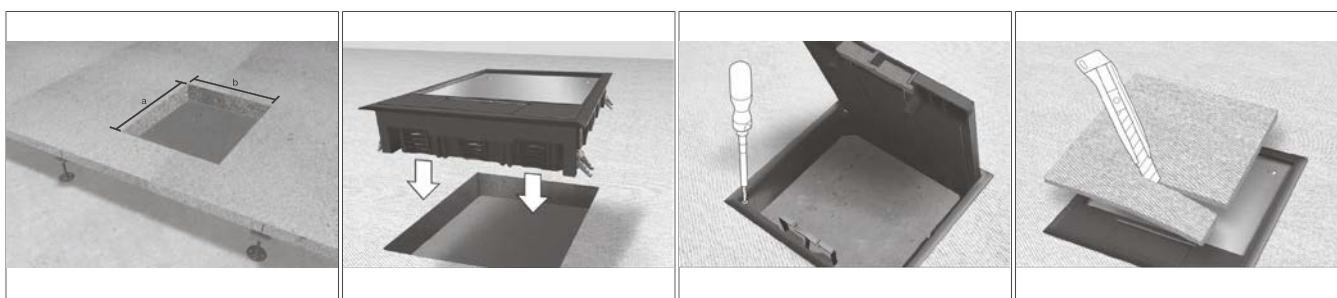
- ☑ The installation opening in the raised floor panel has been cut out.
- ☑ The floor covering has been laid and cut to size.

● Check the dimension of the installation opening. The dimension of the installation opening must have a tolerance of **+1 mm**.

● Insert the supply unit into the installation opening. Orientate the supply unit according to the room conditions. The direction of the hinged opening should be noted here.

● Fasten the supply unit in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the cover of the supply unit.



3.5.4 Installation in cavity floor systems HB

A number of requirements must be met in order to install the supply units in a cavity floor.

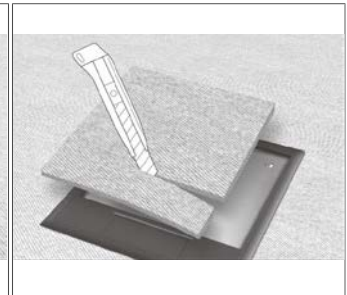
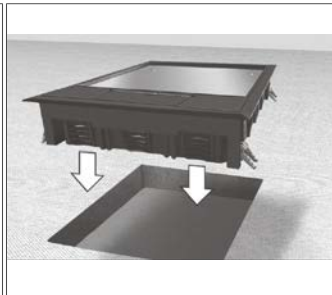
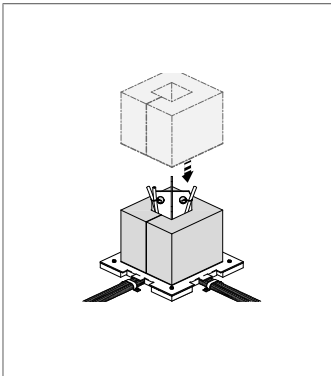
- ☑ The cavity floor elements have been installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The casing element has been removed.
- ☑ The floor covering has been laid and cut out.

● Orientate the casing element before you pour the screed on the cavity floor. Once the screed has set, remove the casing element and lay the floor covering.

● Insert the supply unit into the installation opening. Orientate the supply unit according to the room conditions. Note the position of the hinged opening.

● Fasten the supply unit in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the cover of the supply unit.



3.5.5 Installation in on-floor trunking systems AK

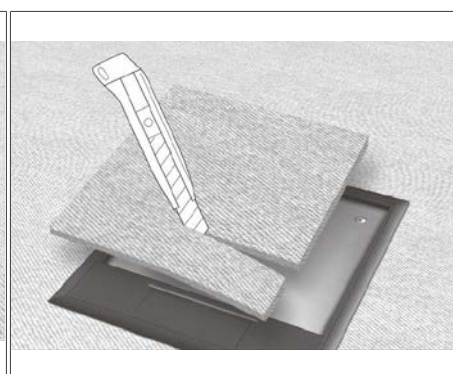
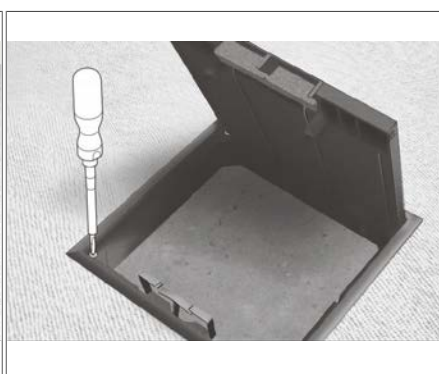
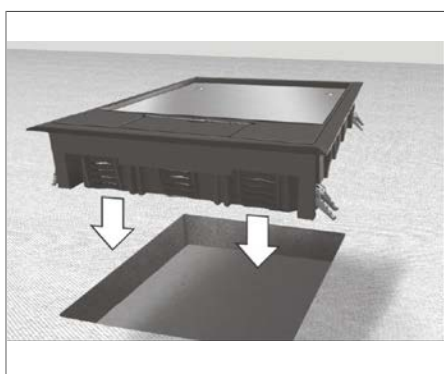
A number of requirements must be met in order to install the supply units in on-floor trunking systems.

- ☑ The on-floor trunking system AK has been fully installed.
- ☑ The mounting cover has been installed.
- ☑ The floor covering has been laid and cut out.



● Insert the supply unit into the installation opening. Orientate the supply unit according to the room conditions. Note the position of the hinged opening.

● Fasten the supply unit in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the hinged cover.



3.6 Accessories

	Designation	Material thickness	Order No.
	Cardboard cover inlay for VQ12	1?mm	VEDEQ12P1
	Cardboard cover inlay for VQ12	2?mm	VEDEQ12P2
	Cardboard cover inlay for VR12	1?mm	VEDER12P1
	Cardboard cover inlay for VR12	2?mm	VEDER12P2
	Cardboard cover inlay for VR10	1?mm	VEDER10P1
	Cardboard cover inlay for VR10	2?mm	VEDER10P2
	Cardboard cover inlay for VE09	1?mm	VEDEE09P1
	Cardboard cover inlay for VE09	2?mm	VEDEE09P2
	Cardboard cover inlay for VQ06	1?mm	VEDEQ06P1
	Cardboard cover inlay for VQ06	2?mm	VEDEQ06P2
	Cardboard cover inlay for VR06	1?mm	VEDER06P1
	Cardboard cover inlay for VR06	2?mm	VEDER06P2
	Cardboard cover inlay for VDQ12	1?mm	VDDEQ12P1
	Cardboard cover inlay for VDQ12	2?mm	VDDEQ12P2
	Cardboard cover inlay for VDR12	1?mm	VDDER12P1
	Cardboard cover inlay for VDR12	2?mm	VDDER12P2
	Cardboard cover inlay for VDR10	1?mm	VDDER10P1
	Cardboard cover inlay for VDR10	2?mm	VDDER10P2
	Cardboard cover inlay for VDE09	1?mm	VDDEE09P1
	Cardboard cover inlay for VDE09	2?mm	VDDEE09P2
	Cardboard cover inlay for VDQ06	1?mm	VDDEQ06P1
	Cardboard cover inlay for VDQ06	2?mm	VDDEQ06P2
	Cardboard cover inlay for VDR06	1?mm	VDDER06P2
	Cardboard cover inlay for VDR06	2?mm	VDDER06P2
	Snap-in floor box extension for VQ12 / VR12		RLV1230
	Snap-in floor box extension for VR10		RLV1030
	Snap-in floor box extension for VE09		RLV0930
	Snap-in floor box extension for VQ06 / VR06		RLV0630

3.7 Normative information

Classification according to EN 50085-1		VQ	VR	VE	VDQ	VDR	VDE
6.2	Based on impact resistance for installation and application						
6.2.4	Cable trunking and ducting systems for impact energy of 5?J	X	X	X	X	X	X
6.3	Based on temperature						
Tab. 1	Minimum storage and transport temperatures +/-2°C -15°C	X	X	X	X	X	X
Tab. 2	Minimum installation and application temperatures +/-2°C -5°C	X	X	X	X	X	X
Tab. 3	Maximum application temperatures +/-2°C +60°C	X	X	X	X	X	X
6.4	Based on resistance to flame propagation						
6.4.2	Non-flame propagating cable trunking and ducting systems	X	X	X	X	X	X
6.5	Based on electrical conductivity						
6.5.2	Cable trunking and ducting system without electrical conductivity	X	X	X	X	X	X
6.6	Based on electrical insulating properties						
6.6.2	Cable trunking and ducting system with electrical insulating properties	X	X	X	X	X	X
6.7	Based on degrees of protection afforded by housing/casing in accordance with EN460529:1991						
	IP20 connection units in use	X	X	X	X	X	X
	IP30 connection units not in use	X	X	X	X	X	X
	IP30 access units	X	X	X	X	X	X
6.9	Based on fastening type for system trunking cover						
6.9.2	The trunking cover of the cable trunking and ducting system should only be opened with a tool.	X	X	X	X	X	X
6.10	Based on electrical protection separation						
6.10.1	Cable trunking and ducting systems without an internal protective separation element	X	X	X	X	X	X

Classification according to EN 50085-2-2		VQ	VR	VE	VDQ	VDR	VDE
6.101	Based on type of floor maintenance						
6.101.1	Electrical installation system for dry floor maintenance	X	X	X	X	X	X
6.102	Based on resistance to vertical loads applied to a small area (approx. Ø 13.34mm ± 0.1)						
6.102.7	Electrical installation system for 3000?N	X	X	X	X	X	X
6.103	Based on resistance to vertical loads applied to a large area (approx. 4041304mm)						
6.103.3	Electrical installation system for 5000?N	X	X	X	X	X	X

4 Supply units wet-cleaned

4.1 System description

The supply units in the VANRx series are designed specifically for wet-cleaned floors. The supply units are made entirely from aluminium and are designed for high loads of up to 10 kN. There are three versions available:

- Aluminium, grooved structure
- Aluminium, grooved structure, jet black
- Aluminium with 3 mm floor covering recess

Type of fastening

- Cavity floor (HB)
- Floor boxes (BD)



4.2 Installation principle



- ① Socket outlet 2-gang
- ② Device carrier for 4 Rastec devices
- ③ Keystone module
- ④ Mounting plate for keystone module
- ⑤ Device carrier for mounting plate – data technology
- ⑥ Supply unit for wet-cleaned floors
- ⑦ Heavy-duty mounting cover for universal floor box
- ⑧ Heavy-duty support for universal floor box
- ⑨ Universal floor box for UK system

4.3 Options

R2



6x socket outlet Rastec 45
2x GTVR300
Installation dimension Ø 215 mm
Aluminium tube outlet
IP66
10?kN



R12



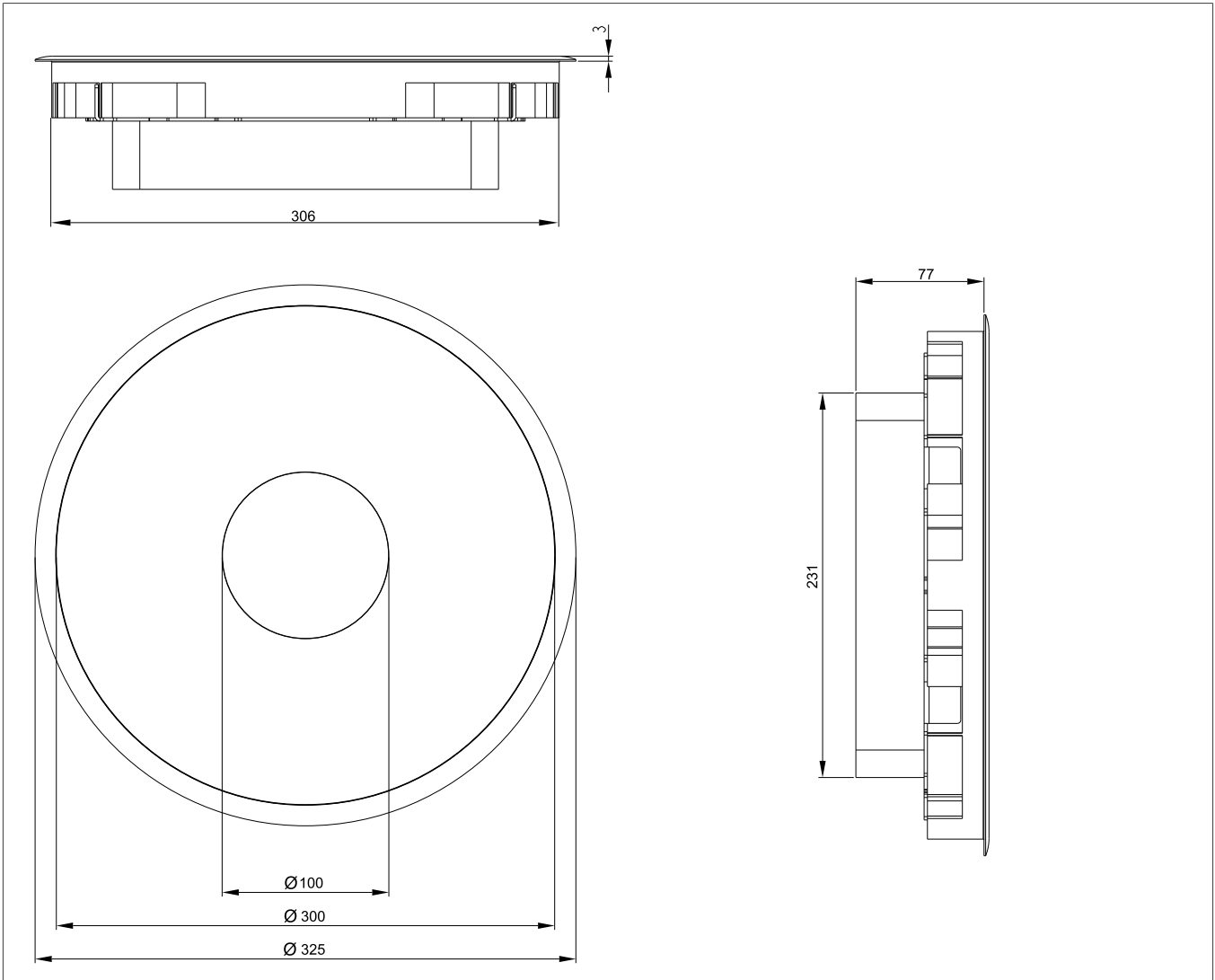
12x socket outlet Rastec 45
3x GTVR400
Installation dimension Ø 305 mm
Aluminium tube outlet
IP66
10?kN



4.4 Installation and system dimensions

The installation and floor cutout dimensions are only required for raised/cavity floor systems. As soon as the supply units are installed in the universal floor boxes (UDHxx, UDBxx, UDSxx) of the screed-covered system UK, in the casing system (SEBD500GT, SEGT350), the matching installation openings are in place. Simply pay attention to the nominal sizes (R12, R2).

Dimensions of VANR12xx supply units with grooves

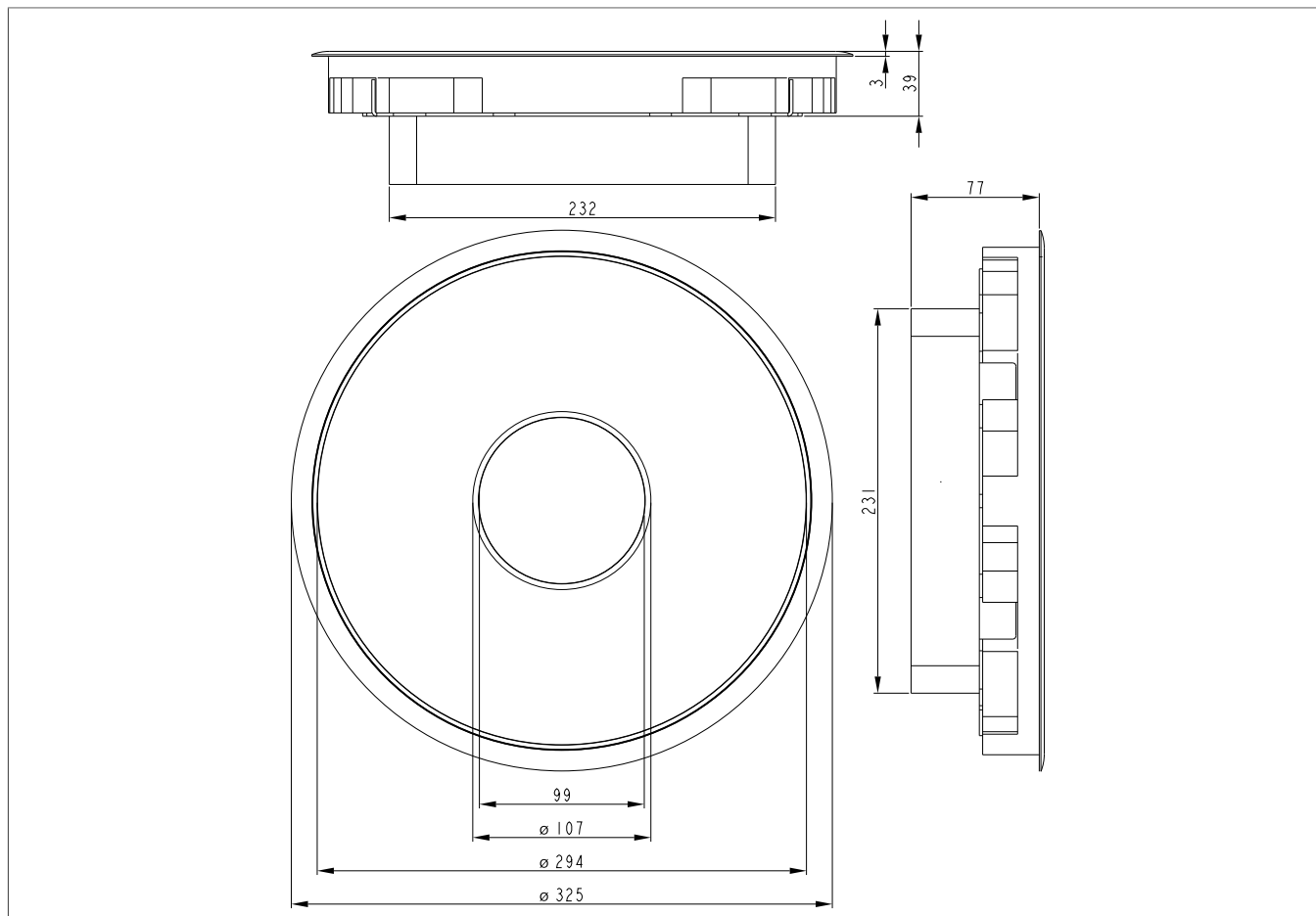


Designation	Material	Nominal size	Depth of covering	Colour	Installation mode	PU	Weight	Order No.
Supply unit wet-cleaned	Aluminium	R12	Grooves	Aluminium	HB	1	3.5 kg	VANR1200
Supply unit wet-cleaned	Aluminium	R12	Grooves	Aluminium	DB	1	3.4 kg	VANR1201
Supply unit wet-cleaned	Aluminium	R12	Grooves	Black	HB	1	3.3 kg	VANR12009005

Designation	Material	Nominal size	Depth of covering	Colour	Installation mode	PU	Weight	Order No.
Supply unit wet-cleaned	Aluminium	R12	Grooves	Black	DB	1	3.2 kg	VANR12019005

All VANR12xx supply units are designed with a closed tube cable outlet for protection type IP66 and a load of 3 kN/10 kN.

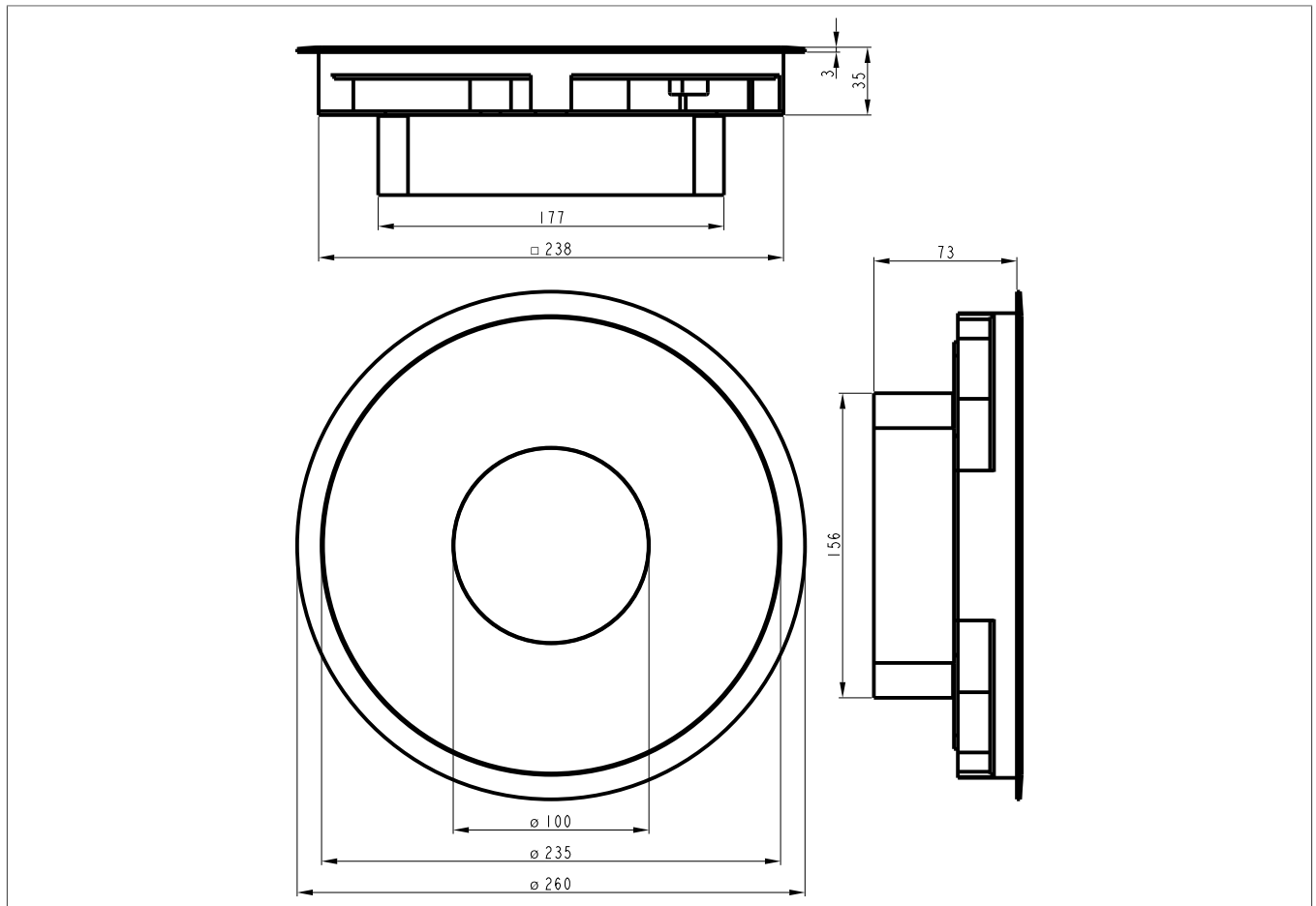
Dimensions of VANR12xx supply units with a floor covering recess



Designation	Material	Nominal size	Depth of covering	Colour	Installation mode	PU	Weight	Order No.
Supply unit wet-cleaned	Aluminium	R12	Grooves	Aluminium	HB	1	2.8 kg	VANR12003
Supply unit wet-cleaned	Aluminium	R12	Grooves	Aluminium	DB	1	2.5 kg	VANR12013

All VANR12xx supply units are designed with a closed tube cable outlet for IP66 protection type and a load of 3 kN/10 kN.

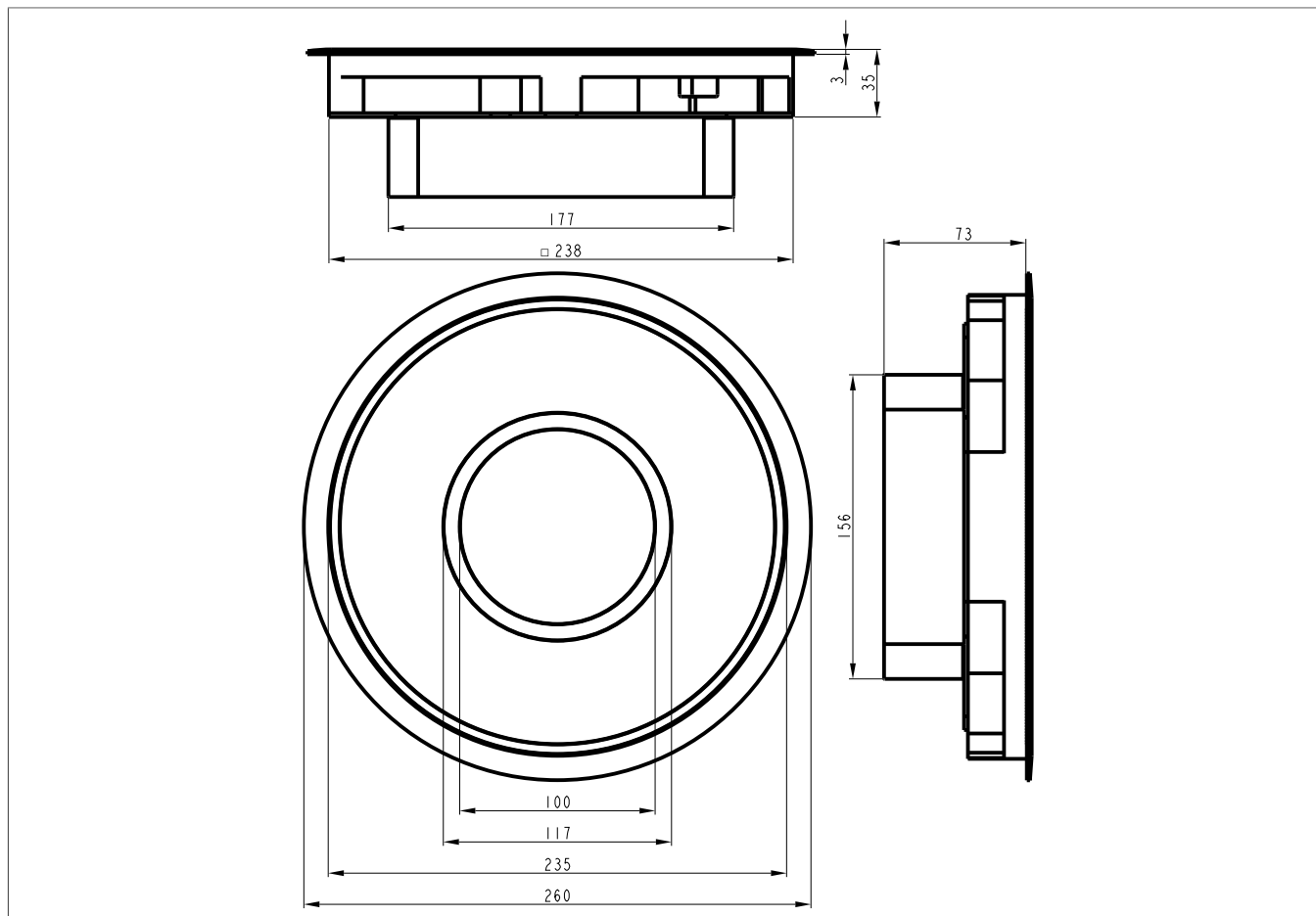
Dimensions of VANR2xx supply units with grooves



Designation	Material	Nominal size	Depth of covering	Colour	Installation mode	PU	Weight	Order No.
Supply unit wet-cleaned	Aluminium	R2	Grooves	Black	HB	1	2.0 kg	VANR2009005
Supply unit wet-cleaned	Aluminium	R2	Grooves	Black	DB	1	2.1 kg	VANR2019005

All VANR12xx supply units are designed with a closed tube cable outlet for IP66 protection type and a load of 3 kN/10 kN.

Dimensions of VANR2xx supply units with a floor covering recess



Designation	Material	Nominal size	Depth of covering	Colour	Installation mode	PU	Weight	Order No.
Supply unit wet-cleaned	Aluminium	R2	37mm	Aluminium	HB	1	2.0 kg	VANR2003
Supply unit wet-cleaned	Aluminium	R2	37mm	Aluminium	DB	1	1.8 kg	VANR2013

All VANR12xx supply units are designed with a closed tube cable outlet for IP66 protection type and a load of 3 kN/10 kN.

Installation depth with snap-in floor box extension



**With GTVRx device carrier
(top snap-in position)**

**With GTVRx device carrier
(bottom snap-in position)**

**With GTVRx device carrier and
snap-in floor box extension
(bottom snap-in position)**

Order No.	a [mm]	b [mm]	c [mm]
VANR2009005	93	117	148
VANR2019005	93	117	148
VANR2003	93	117	148
VANR2013	93	117	148
VANR1200	96	120	151
VANR1201	96	120	151
VANR12009005	96	120	151
VANR12019005	96	120	151
VANR1203	96	120	151
VANR1213	96	120	151

Table 4: Minimum installation depth with snap-in floor box extension

All values are rounded.

4.5 Installation

4.5.1 Installation in screed-covered trunking systems UK

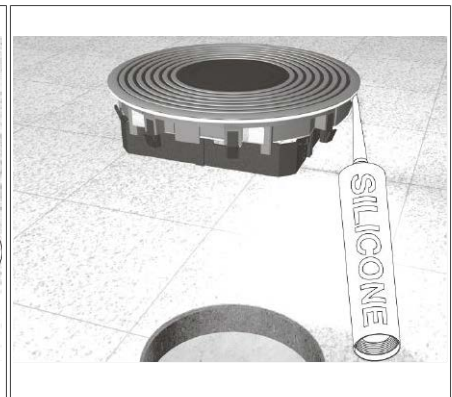
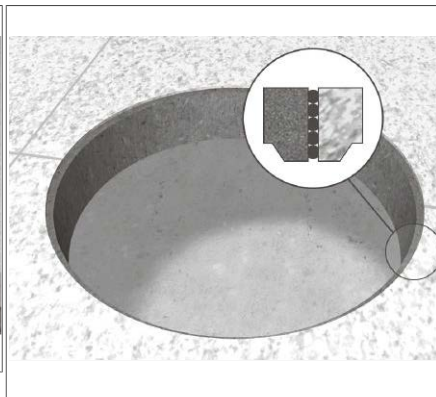
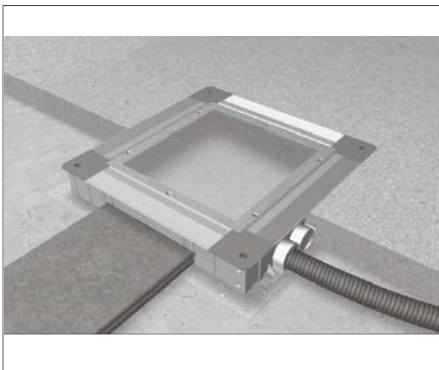
A number of requirements must be met in order to install the supply units in screed-covered trunking systems.

- ☑ The screed-covered trunking system UK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The screed protective cover has been removed.
- ☑ The mounting cover has been installed.
- ☑ The floor covering has been laid and cut out.

● Install the universal floor box and pour the screed. Lay the floor covering.

● Check the existing expansion joint. In the case of hard coverings such as wood or tiles, an appropriate expansion joint must be left between the floor covering and the supply unit.

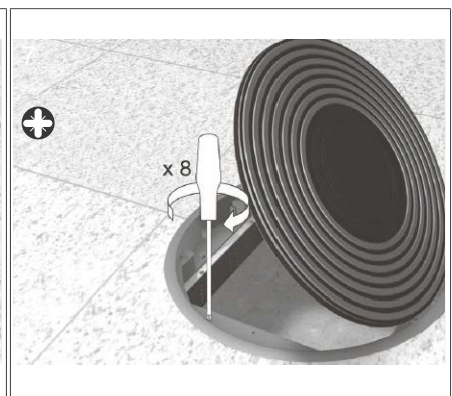
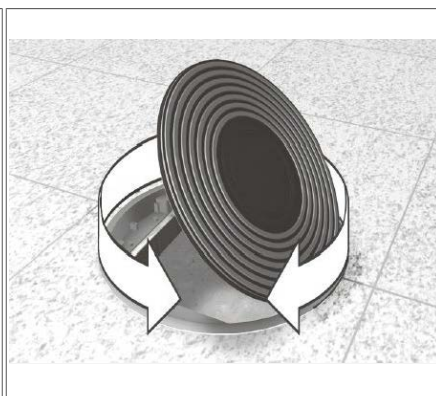
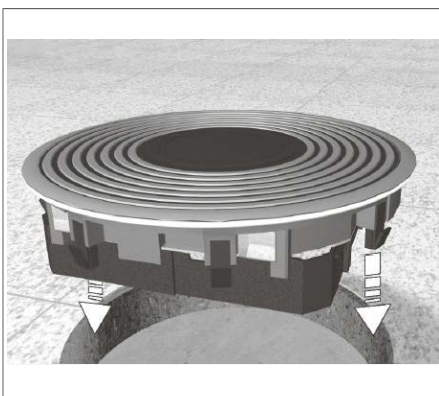
● Apply a suitable sealant to the bottom surface of the cover.



● Press the supply unit into the installation opening. During this step, check the spacing of the fastening kit in relation to the respective height of the floor structure.

● Orientate the supply unit. Orientate the supply unit according to the room conditions. The direction of the hinged opening should be noted here.

● Fasten the supply unit in place. Screw in the inside screws of the eight fastening kits.



4.5.2 Installation in screed-flush trunking systems BK

A number of requirements must be met to install the supply units in screed-flush trunking systems.

- ☑ The screed-flush trunking system BK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The mounting cover has been installed in the trunking or junction box.
- ☑ The floor covering has been laid and cut out.

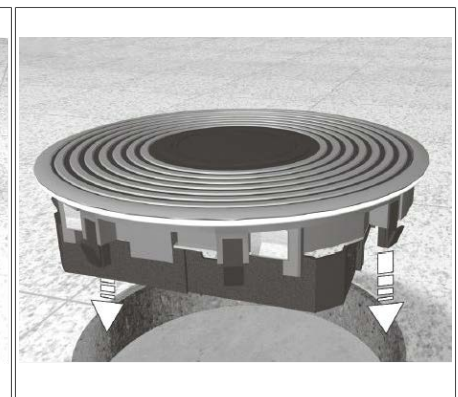
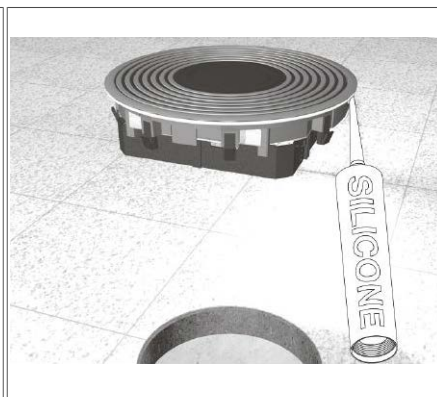
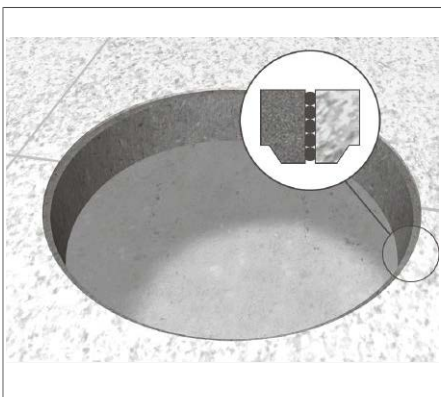


Warning

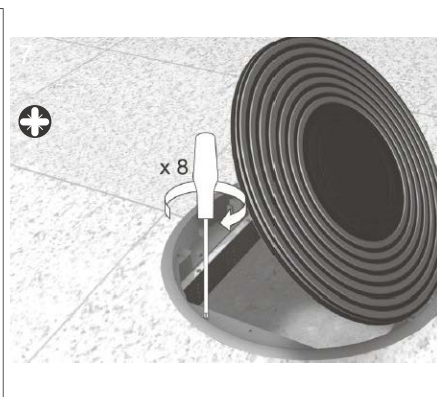
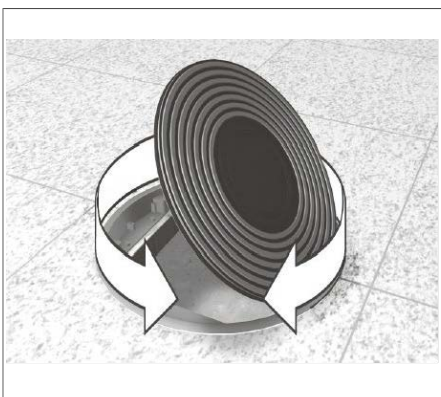
The BK trunking system is not suitable for wet cleaning. Wet-cleaning will cause damage to the installed device units.

- Only perform dry or damp cleaning.

- Check the existing expansion joint. In the case of hard coverings such as wood or tiles, an appropriate expansion joint must be left between the floor covering and the supply unit.
- Apply a suitable sealant to the bottom surface of the cover.
- Press the supply unit into the installation opening. When you do this, check the spacing of the fastening kit in relation to the respective height of the floor structure.



- Orientate the supply unit. Orientate the supply unit according to the room conditions. The direction of the hinged opening should be noted here.
- Fasten the supply unit in place. Screw in the inside screws of the eight fastening kits.

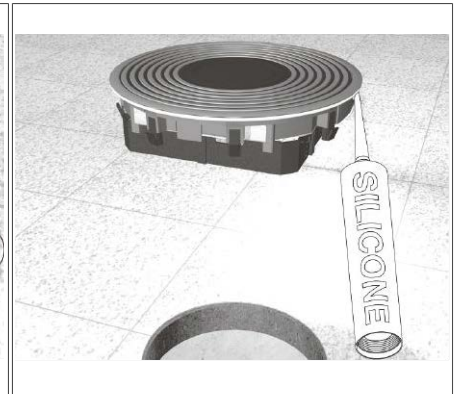
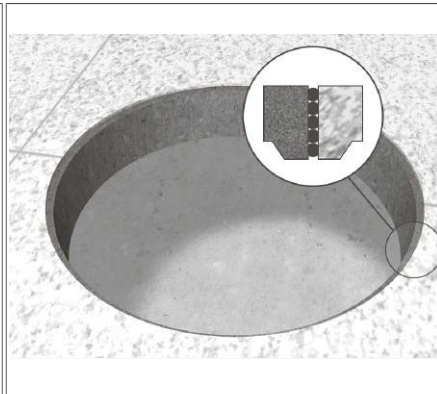
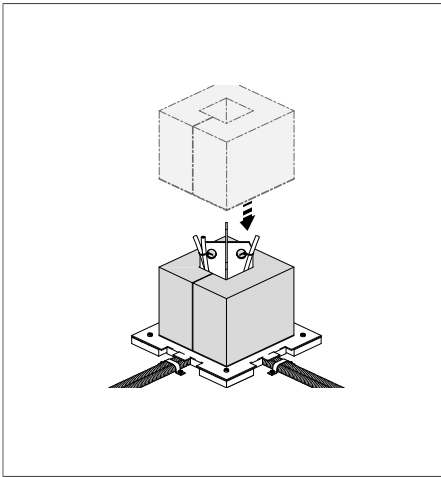


4.5.3 Installation in cavity floor systems HB

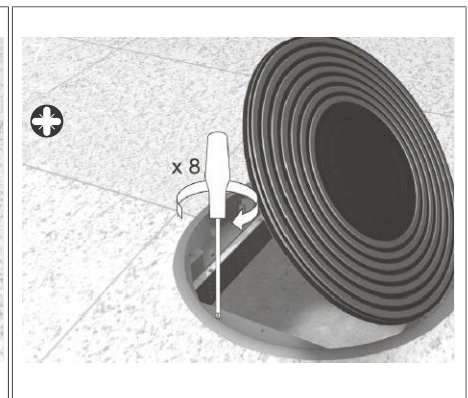
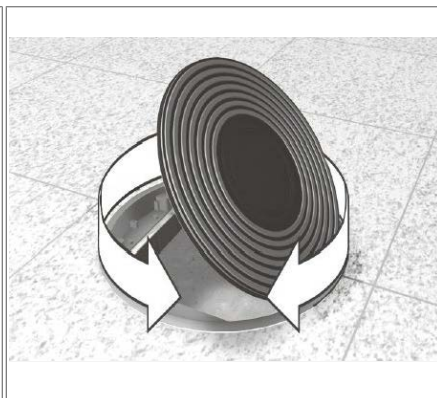
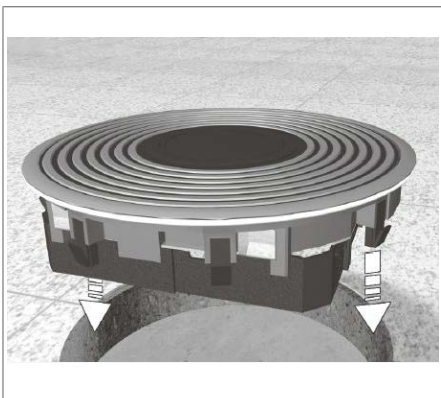
A number of requirements must be met to install the supply units in a cavity floor.

- ☑ The cavity floor elements have been installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The casing element has been removed.
- ☑ The floor covering has been laid and cut out.


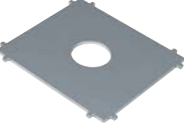

- Orientate the casing element before you pour the screed on the cavity floor. Remove the casing element once the screed has set. Lay the floor covering.
- Check the existing expansion joint. In the case of hard coverings such as wood or tiles, an appropriate expansion joint must be left between the floor covering and the supply unit.
- Apply a suitable sealant to the bottom surface of the cover.



- Press the supply unit into the installation opening. During this step, check the spacing of the fastening kit in relation to the respective height of the floor structure.
- Orientate the supply unit. Orientate the supply unit according to the room conditions. The direction of the hinged opening should be noted here.
- Fasten the supply unit in place. Screw in the inside screws of the eight fastening kits.



4.6 Accessories

	Designation	Order No.
	Tube cable outlet	TULAA105
	Face spanner	TUSS000
	Snap-in floor box extension	RLV1230 RLV0630

4.7 Normative information

Classification according to EN 50085-1		VANR
6.2	Based on impact resistance for installation and application	
6.2.5	Cable trunking and ducting systems for impact energy of 20?J	X
6.3	Based on temperature	
Tab. 1	Minimum storage and transport temperatures +/-2°C -15°C	X
Tab. 2	Minimum installation and application temperatures +/-2°C -5°C	X
Tab. 3	Maximum application temperatures +/-2°C +60°C	X
6.4	Based on resistance to flame propagation	
6.4.2	Non-flame propagating cable trunking and ducting systems	X
6.5	Based on electrical conductivity	
6.5.1	Cable trunking and ducting system with electrical conductivity	X
6.6	Based on electrical insulating properties	
6.6.1	Cable trunking and ducting system without electrical insulating properties	X
6.7	Based on degrees of protection afforded by housing/casing in accordance with EN460529:1991	
6.7.3	Based on protection against contact with hazardous parts	
	IP20 connection units in use	X
	IP66 connection units not in use	X
6.8	Protection against corrosive or contaminating substances	
6.8.3	Cable trunking and ducting systems with moderate external and internal protection	X
6.9	Based on fastening type for system trunking cover	
6.9.2	The trunking cover of the cable trunking and ducting system should only be opened with a tool.	X
6.10	Based on electrical protection separation	
6.10.1	Cable trunking and ducting systems without an internal protective separation element	X

Classification according to EN 50085-2-2		VANR
6.101	Based on type of floor maintenance	
6.101.1	Electrical installation system for dry floor maintenance	X
6.101.2	Electrical installation system for wet-cleaning of floors when the connection unit is not in use	X
6.101.3	Electrical installation system for wet-cleaning of floors when the connection unit is in use	X
6.102	Based on resistance to vertical loads applied to a small area (approx. Ø 13.34mm ± 0.1)	
6.102.7	Electrical installation system for 3000?N	X
6.103	Based on resistance to vertical loads applied to a large area (approx.Ø41304mm)	
6.103.3	Electrical installation system for 5000?N	X

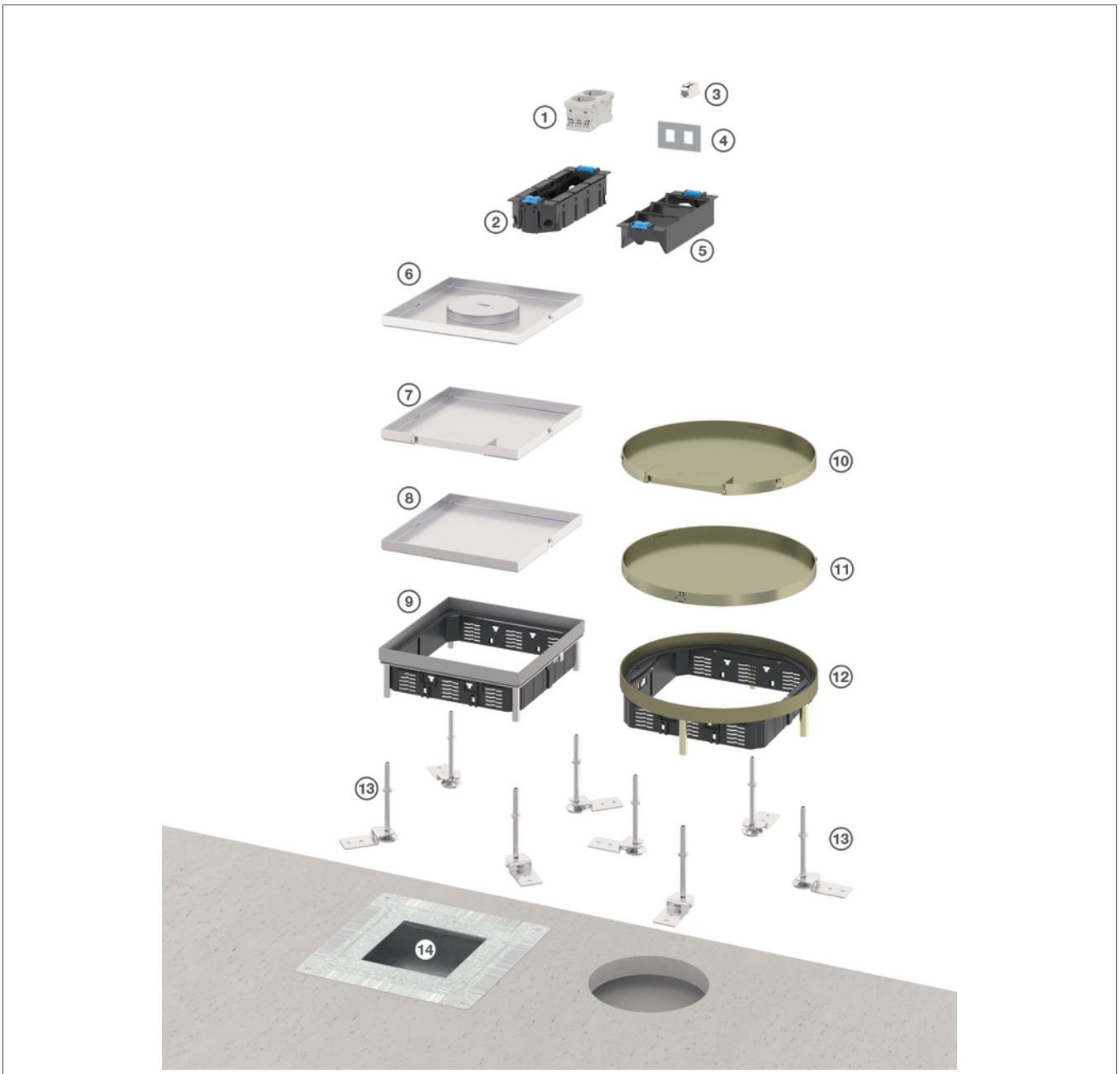
5 Cassettes

5.1 System description

The levelling cassettes blend perfectly into the appearance of a tile and stone floor covering and into the surface of wooden floors. Their narrow edge makes them almost invisible in the floor. Available in round and angular versions, you can choose the perfect version for your floor covering or even create a feature. Their high IP protection level indicates they are also suitable for wet-cleaned floors.



5.2 Installation principle



- | | | | |
|-----|---|-----|--|
| ① | Socket outlet 2-gang | ⑦+⑨ | Stainless-steel cassette with cable outlet, square |
| ② | Device carrier for 4 Rastec devices | ⑧+⑨ | Stainless-steel cassette, blank, square |
| ③ | Keystone module | ⑩+⑫ | Brass cassette with cable outlet, round |
| ④ | Mounting plate for keystone module | ⑪+⑫ | Brass cassette, blank, round |
| ⑤ | Device carrier for mounting plate – data technology | ⑬ | Levelling set for cassettes |
| ⑥+⑨ | Stainless-steel cassette with tube outlet, square | ⑭ | Universal floor box for UK system |

5.3 Options

R06



6x socket outlet Rastec 45
2x GTVR300
Installation dimension Ø 200 mm
Blank, cable outlet, tube
IP54
5?kN



R12



12x socket outlet Rastec 45
3x GTVR400
Installation dimension Ø 305 mm
Blank, cable outlet, tube
IP54
5?kN



Q06



6x socket outlet Rastec 45
2x GTVR300
Installation dimensions 200 x 200?mm
Blank, cable outlet, tube
IP54
5?kN



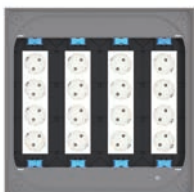
Q12



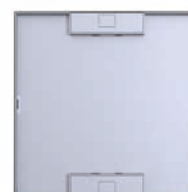
12x socket outlet Rastec 45
3x GTVR400
Installation dimensions 244 x 244?mm
Blank, cable outlet, tube
IP54
5?kN



Q16



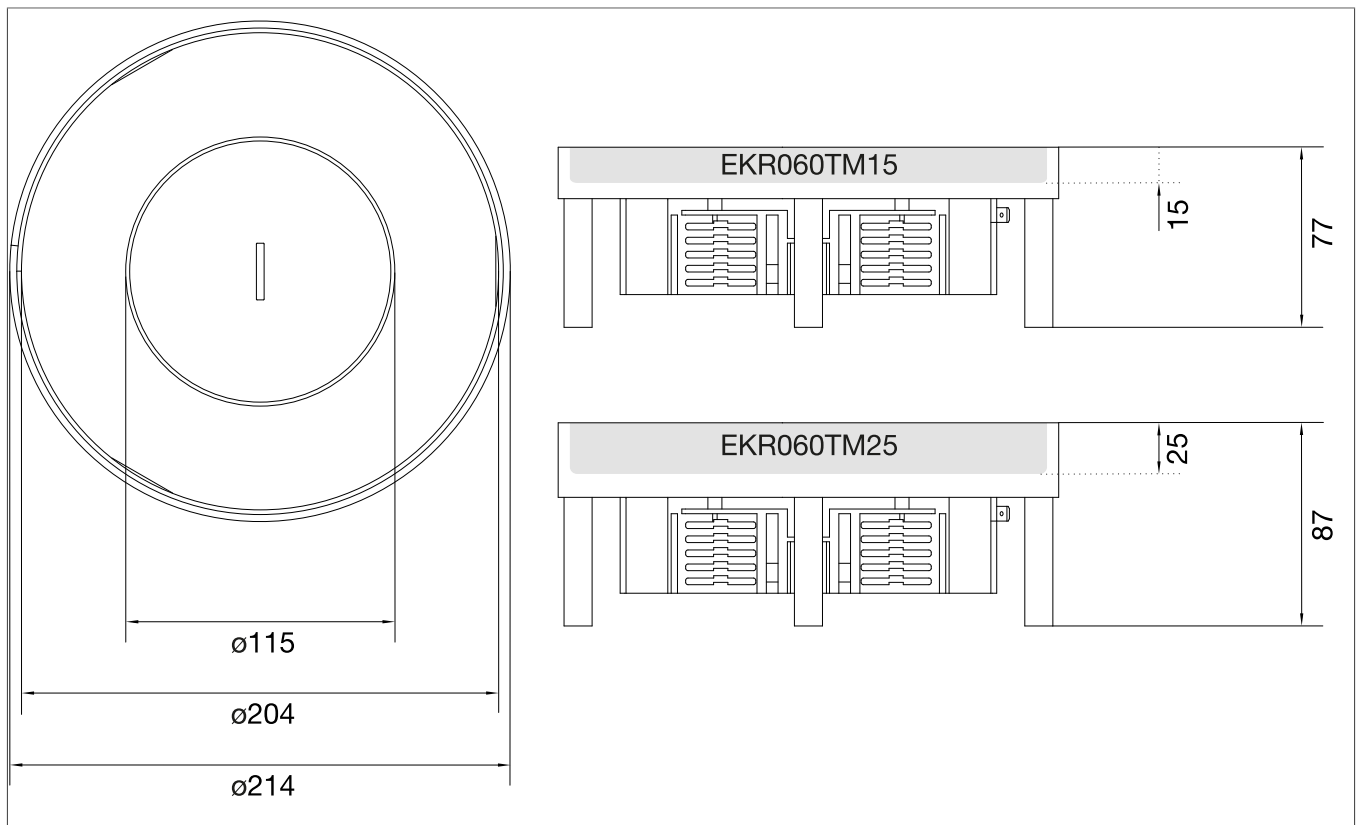
16x socket outlet Rastec 45
4x GTVR400
Installation dimension 320 x 320?mm
Blank, cable outlet, tube
IP54
5?kN



5.4 Installation and system dimensions

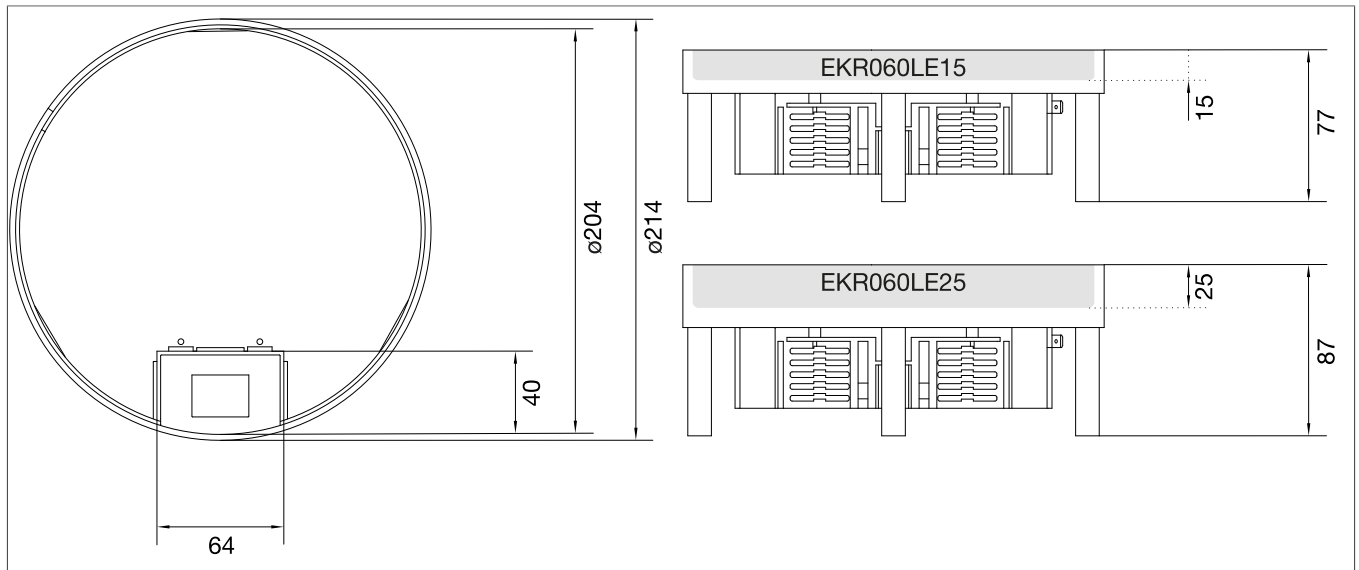
The installation and floor cutout dimensions are only required for raised/cavity floor systems. As soon as the cassettes are installed in the universal floor boxes (UDHxx, UDBxx, UDSxx) of the screed-covered system UK, in the casing system (SEBD500GT, SEGT350), in the junction box (BKSAxx) or in the mounting covers (BKAXx) of the screed-flush system BK and the mounting covers (AKMxx) of the on-floor trunking system AK, the matching installation openings are in place. Simply pay attention to the nominal sizes (Q12, R12, Q06, R06, etc.).

Dimensions of levelling cassettes, R06 with tube outlet



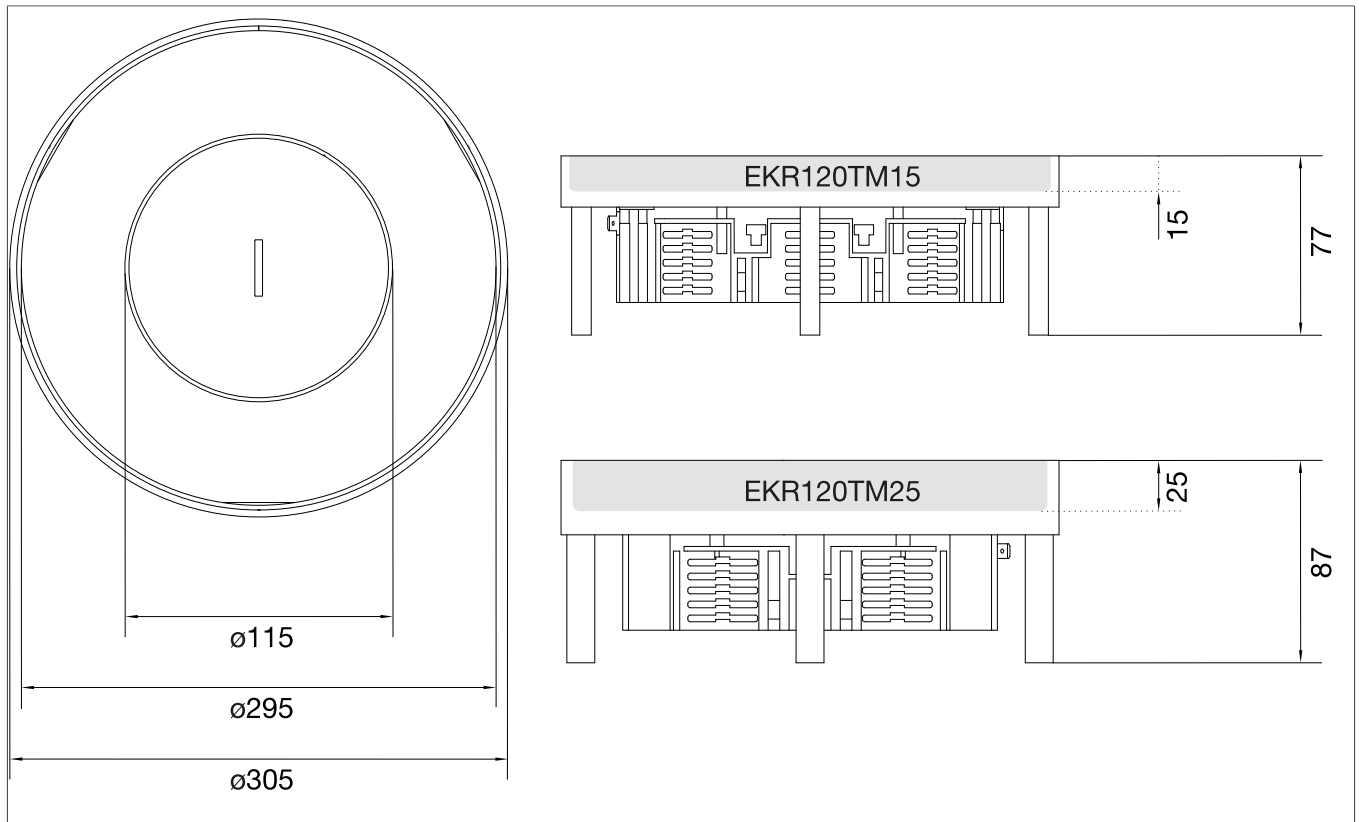
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Stainless-steel cassette	Stainless steel	R06	25?mm	Tube outlet	1	1.9 kg	EKR060TM25
Stainless-steel cassette	Stainless steel	R06	15?mm	Tube outlet	1	1.6 kg	EKR060TM15

Dimensions of levelling cassettes, R06 with cable outlet



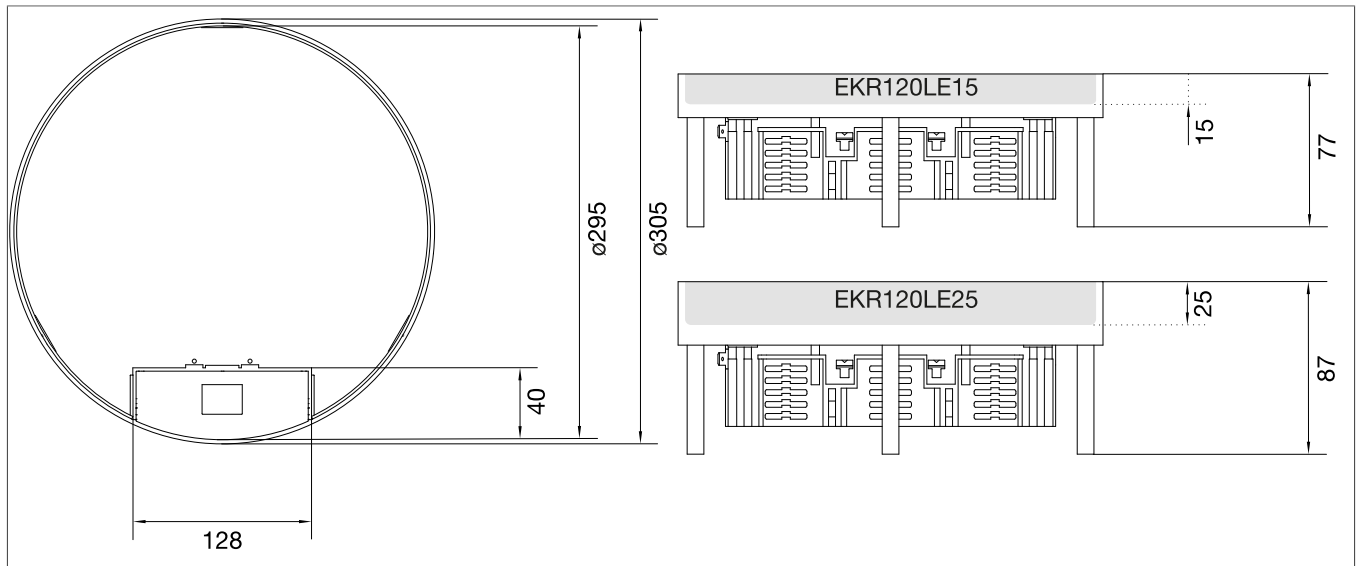
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Stainless-steel cassette	Stainless steel	R06	25?mm	Cable outlet	1	1.5 kg	EKR060LE25
Stainless-steel cassette	Stainless steel	R06	15?mm	Cable outlet	1	1.3 kg	EKR060LE15

Dimensions of levelling cassettes, R12 with tube outlet



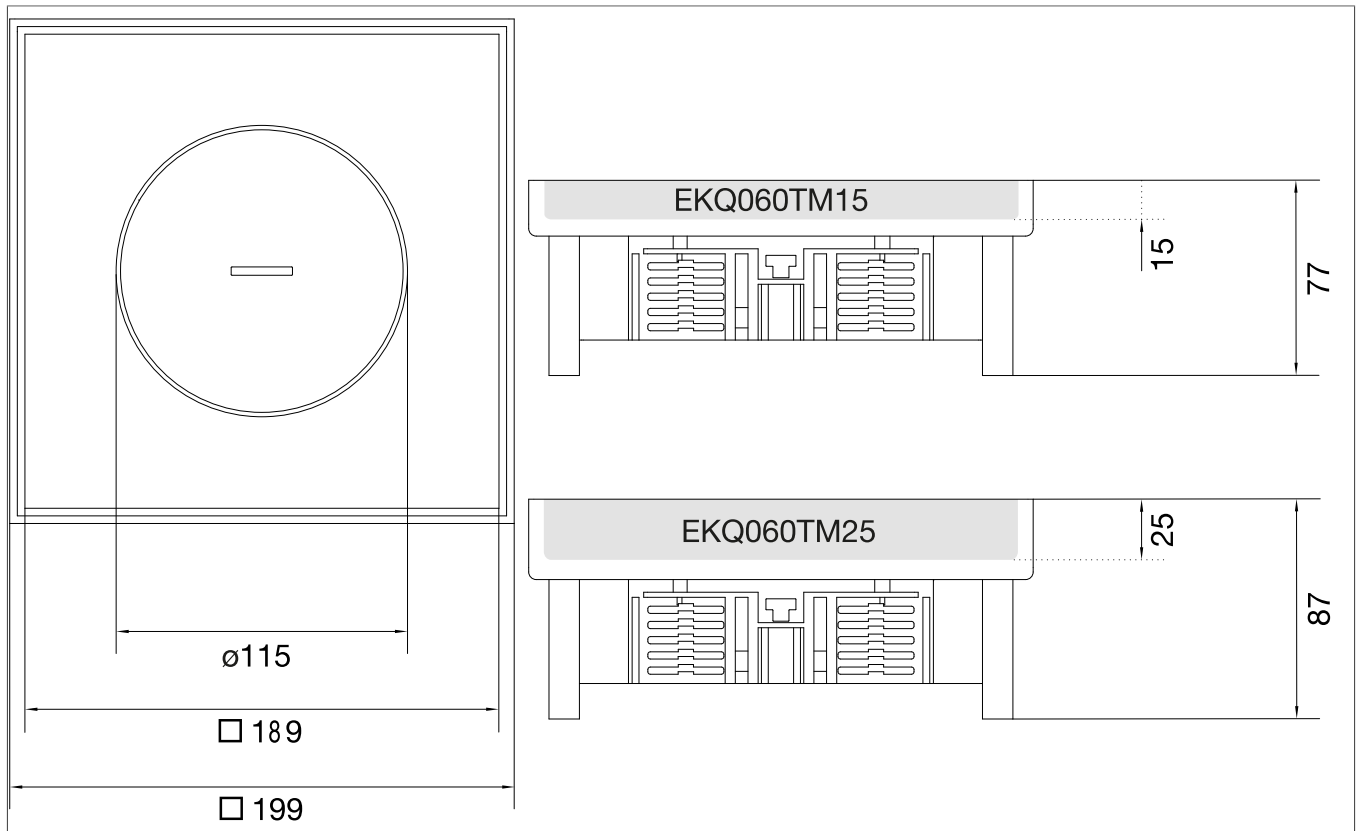
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	R12	25?mm	Tube outlet	1	3.0 kg	EKR120TM25
Levelling stainless-steel cassette	Stainless steel	R12	15?mm	Tube outlet	1	2.6 kg	EKR120TM15

Dimensions of levelling cassettes, R12 with cable outlet



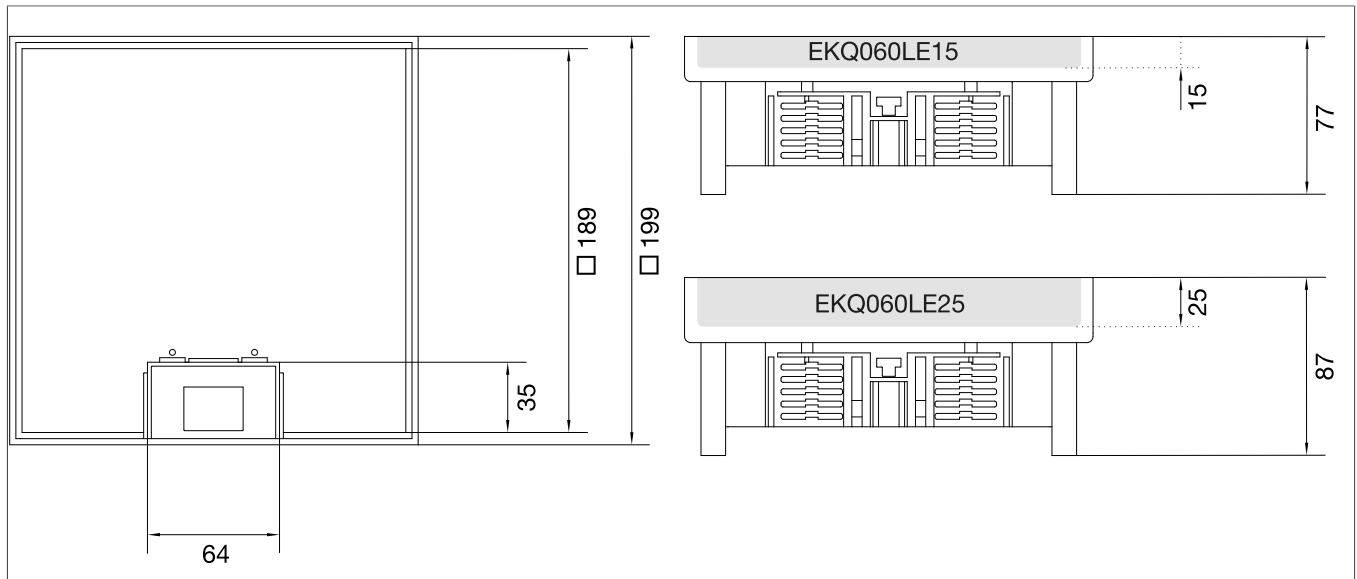
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	R12	25?mm	Cable outlet	1	2.8 kg	EKR120LE25
Levelling stainless-steel cassette	Stainless steel	R12	15?mm	Cable outlet	1	2.5 kg	EKR120LE15
Levelling brass cassette	Brass	R12	25?mm	Cable outlet	1	2.7 kg	MKR120LE25

Dimensions of levelling cassettes, Q06 with tube outlet



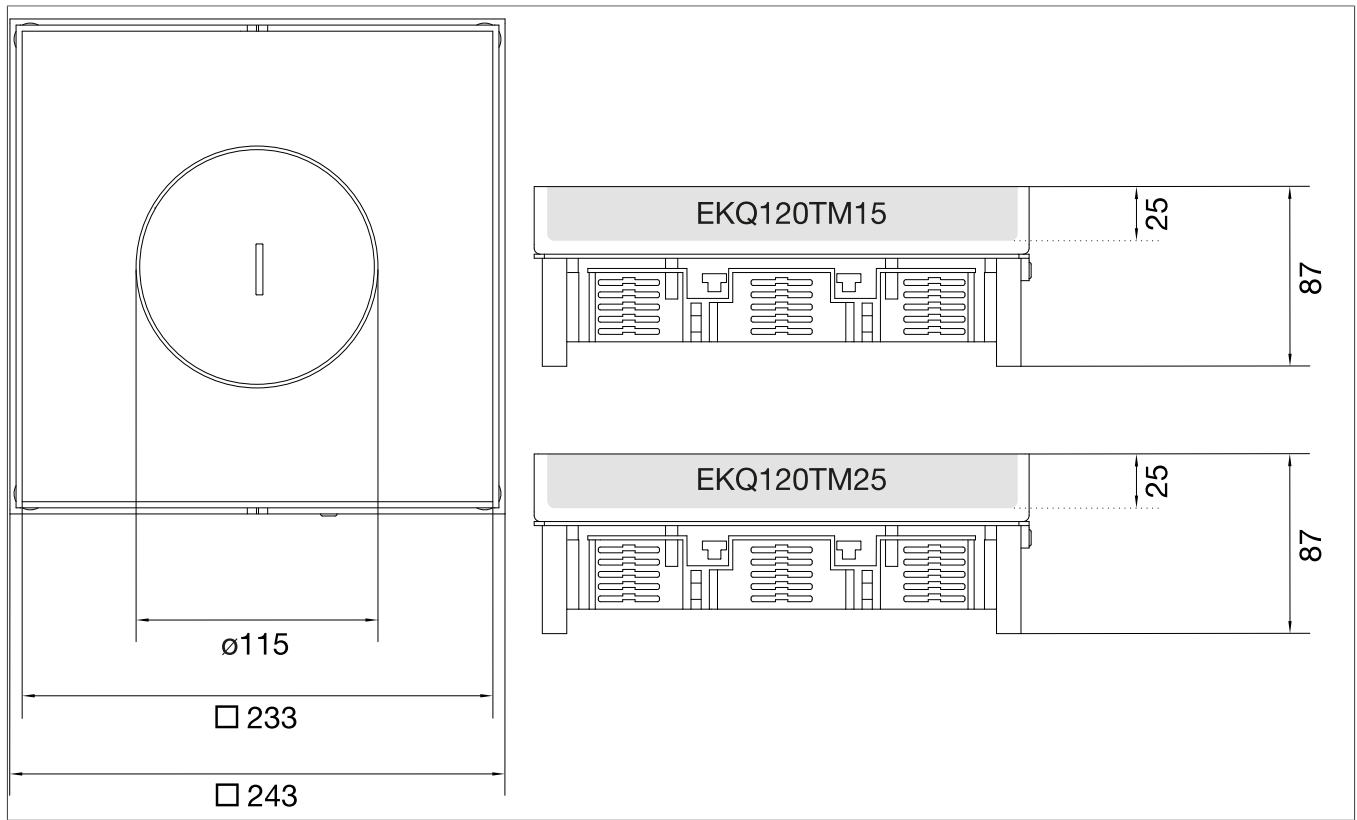
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q06	25?mm	Tube outlet	1	1.9 kg	EKQ060TM25
Levelling stainless-steel cassette	Stainless steel	Q06	15?mm	Tube outlet	1	1.6 kg	EKQ060TM15

Dimensions of levelling cassettes, Q06 with cable outlet



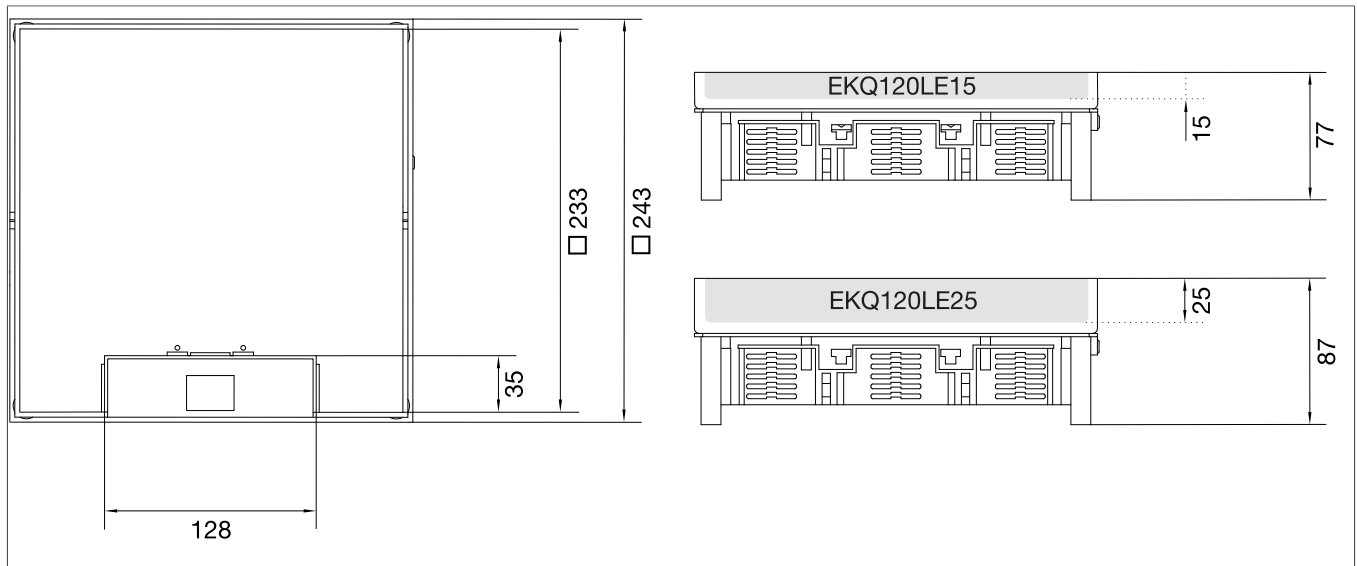
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q06	25?mm	Cable outlet	1	1.7 kg	EKQ060LE25
Levelling stainless-steel cassette	Stainless steel	Q06	15?mm	Cable outlet	1	1.4 kg	EKQ060LE15

Dimensions of levelling cassettes, Q12 with tube outlet



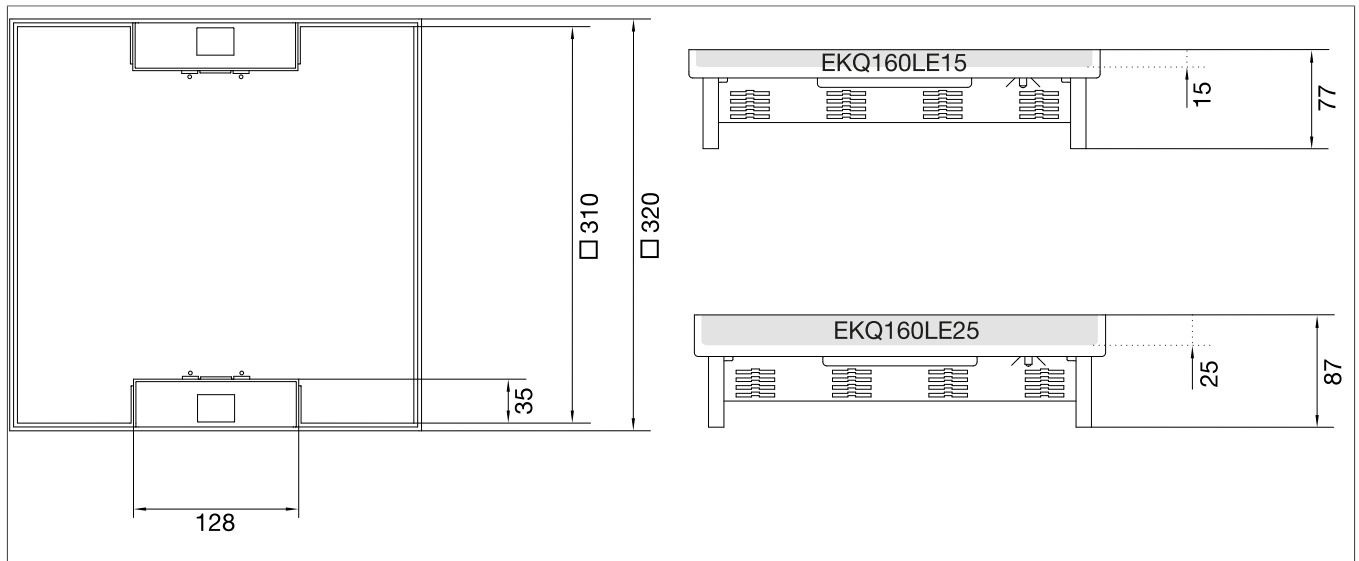
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q12	25?mm	Tube outlet	1	2.6 kg	EKQ120TM25
Levelling stainless-steel cassette	Stainless steel	Q12	15?mm	Tube outlet	1	2.2 kg	EKQ120TM15

Dimensions of levelling cassettes, Q12 with cable outlet



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q12	25?mm	Cable outlet	1	1.7 kg	EKQ120LE25
Levelling stainless-steel cassette	Stainless steel	Q12	15?mm	Cable outlet	1	1.4 kg	EKQ120LE15
Levelling brass cassette	Brass	Q12	25?mm	Cable outlet	1	2.3 kg	MKQ120LE15

Dimensions of levelling cassettes, Q16 with cable outlet



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q16	25?mm	Cable outlet	1	3.6 kg	EKQ160LE25
Levelling stainless-steel cassette	Stainless steel	Q16	15?mm	Cable outlet	1	3.1 kg	EKQ160LE15

Installation depth with snap-in floor box extension



**With device carrier GTVRx
(top snap-in position)**

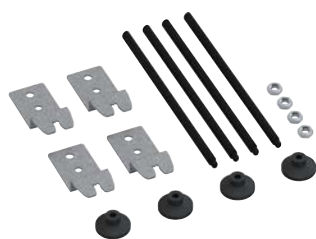
**With device carrier GTVRx
(bottom snap-in position)**

**With device carrier GTVRx and
snap-in floor box extension
(bottom snap-in position)**

Order No.	a [mm]	b [mm]	c [mm]
EKR060xx15	82	106	137
EKR060xx25	92	116	147
EKR120xx15	82	106	137
EKR120xx25	92	116	147
MKR120LE25	92	116	147
EKQ060xx15	82	106	137
EKQ060xx25	92	116	147
EKQ120xx15	84	108	139
EKQ120xx25	94	118	149
MKQ120LE25	94	118	149
EKQ160LE15	82	100	-
EKQ160LE25	92	110	-

Table 5: Snap-in floor box extension

Levelling set



Depth of covering

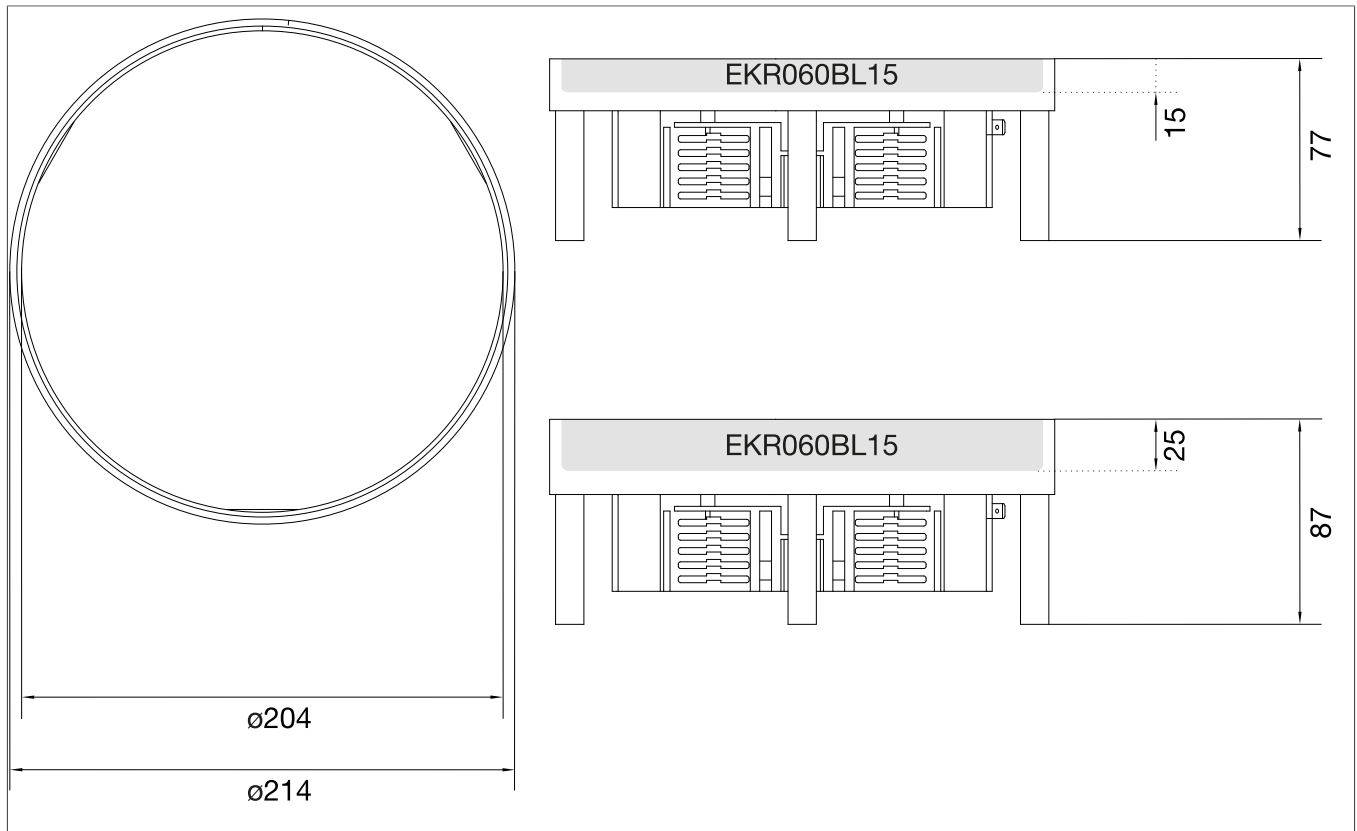


154mm

254mm

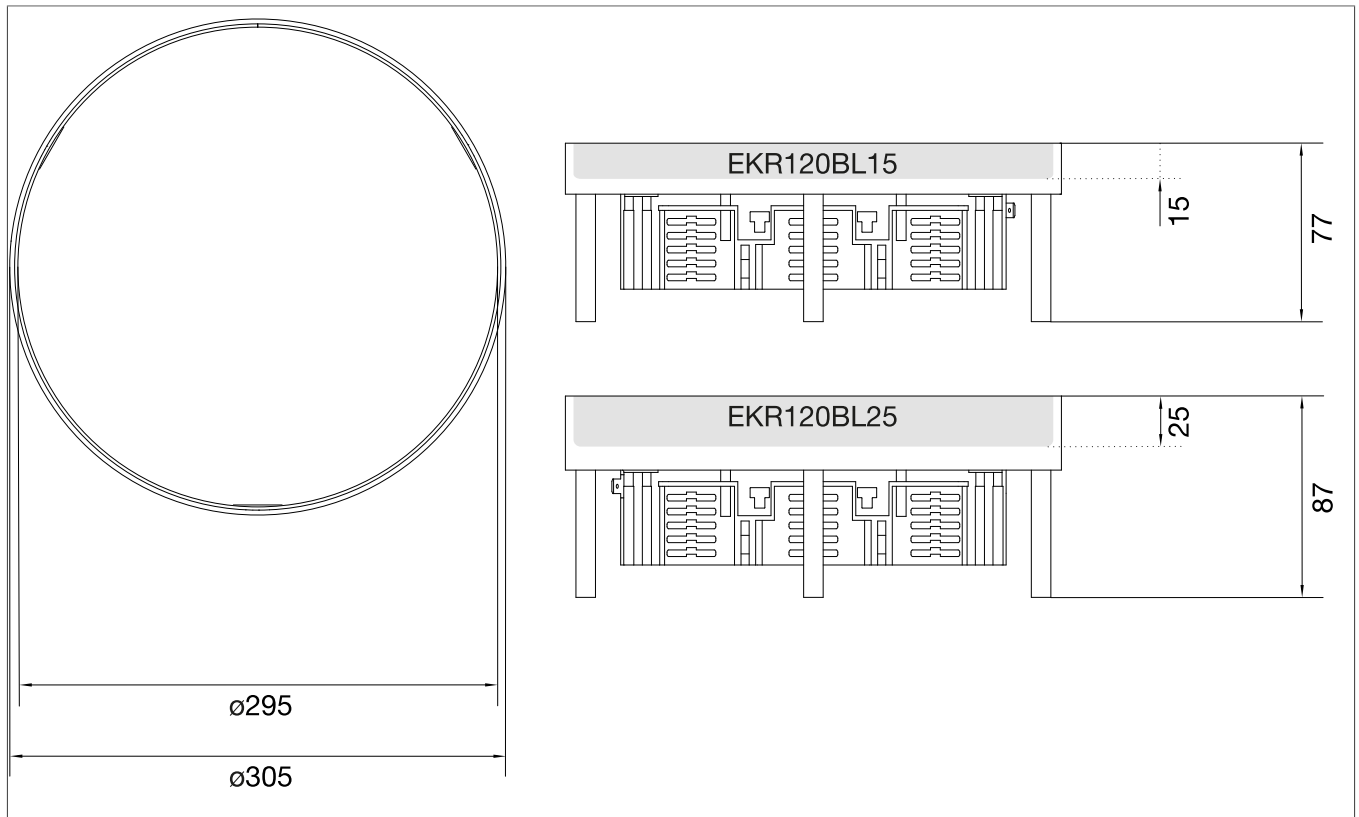
EKNS060	95?...?146	105?...?156
EKNS105	140?...?191	150?...?201
EKNS150	185?...?236	195?...?246
EKNS190	231?...?282	241?...?292
EKSNS065	110?...?161	120?...?171
EKSNS110	155?...?206	165?...?216

Dimensions of R06 levelling cassettes, blank



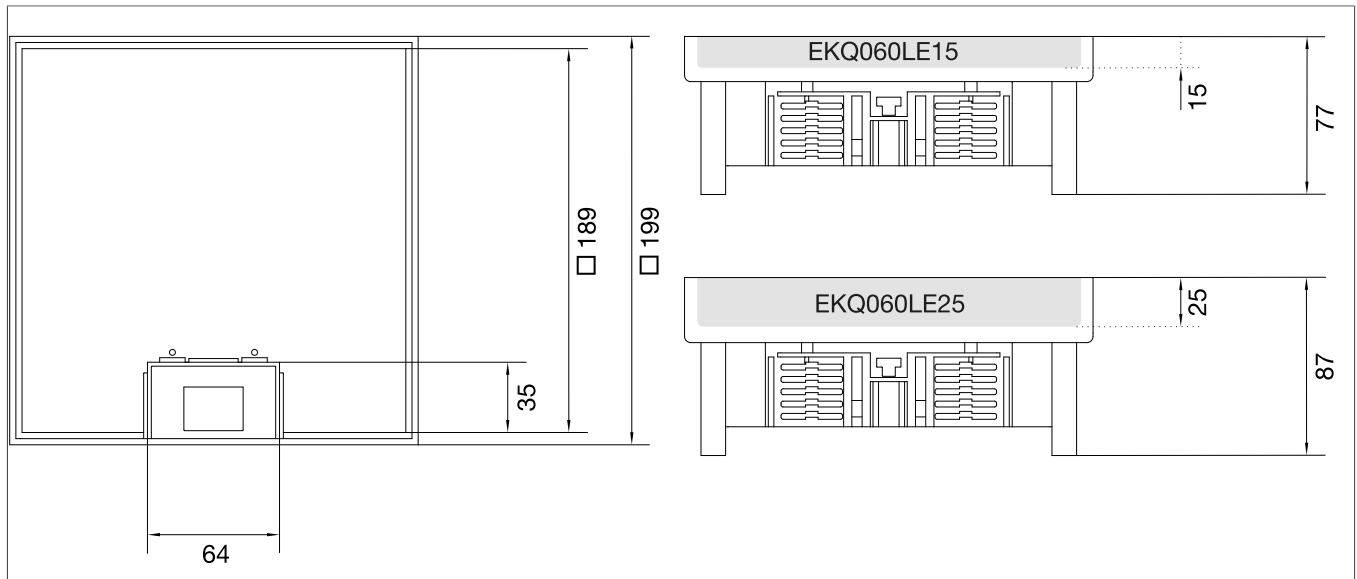
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	R06	25?mm	Blank	1	1.4 kg	EKR060BL25
Levelling stainless-steel cassette	Stainless steel	R06	15?mm	Blank	1	1.4 kg	EKR060BL15

Dimensions of R12 levelling cassettes, blank



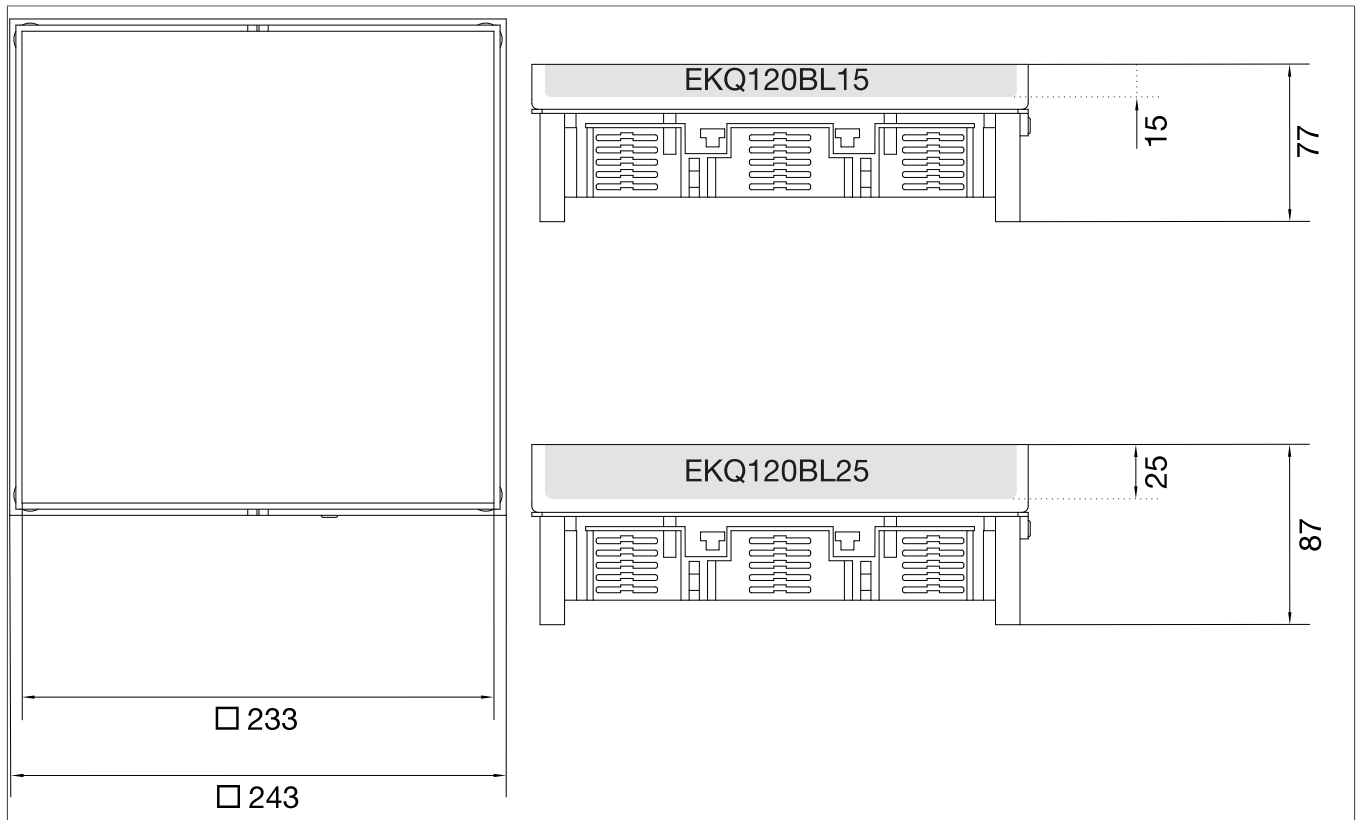
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	R12	25?mm	Blank	1	2.5 kg	EKR120BL25
Levelling stainless-steel cassette	Stainless steel	R12	15?mm	Blank	1	2.2 kg	EKR120BL15
Levelling brass cassette	Brass	R12	25?mm	Blank	1	2.6 kg	MKR120BL25

Dimensions of Q06 levelling cassettes, blank



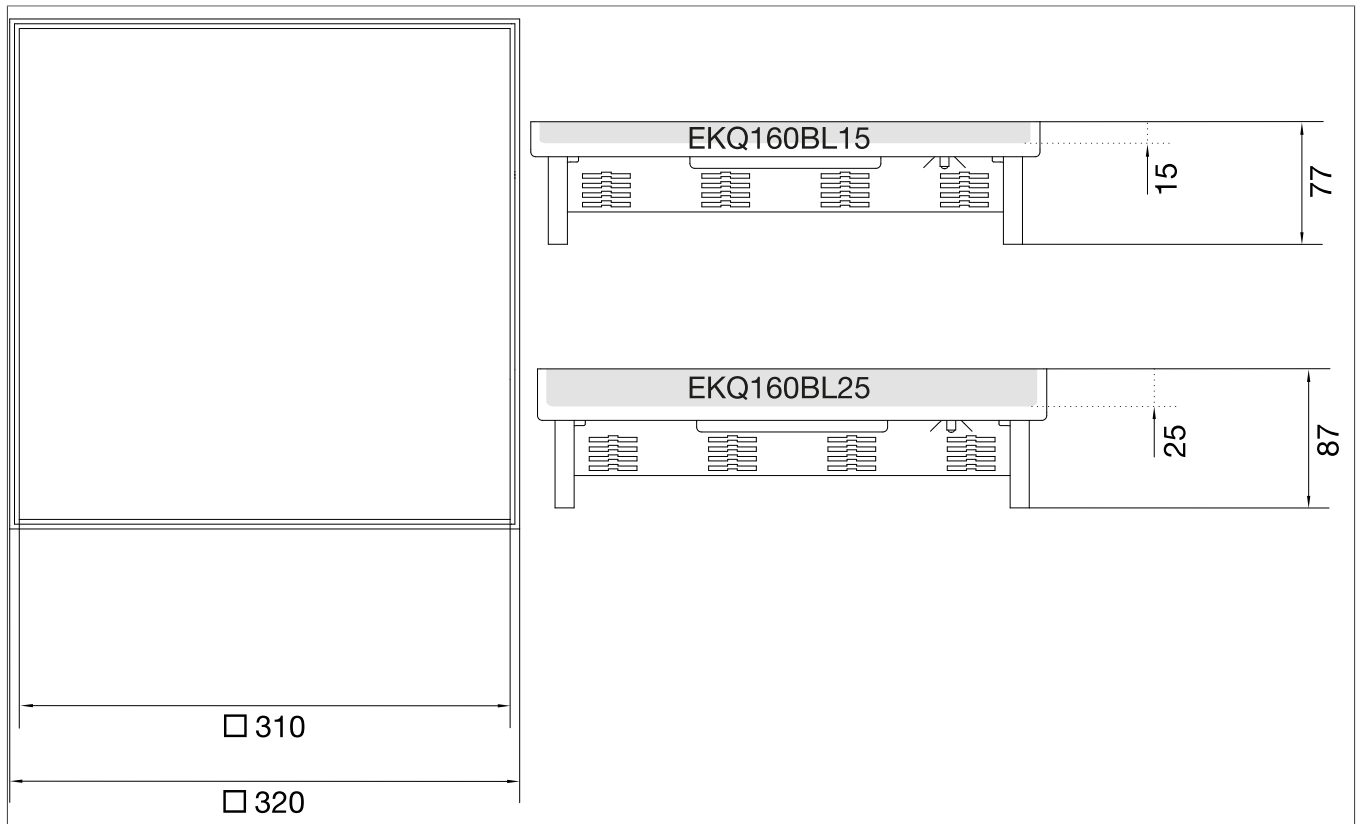
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q06	25?mm	Blank	1	1.7 kg	EKQ060BL25
Levelling stainless-steel cassette	Stainless steel	Q06	15?mm	Blank	1	1.4 kg	EKQ060BL15

Dimensions of Q12 levelling cassettes, blank



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q12	25?mm	Blank	1	2.1 kg	EKQ120BL25
Levelling stainless-steel cassette	Stainless steel	Q12	15?mm	Blank	1	1.8 kg	EKQ120BL15
Levelling brass cassette	Brass	Q12	25?mm	Blank	1	2.3 kg	MKQ120BL25

Dimensions of Q16 levelling cassettes, blank



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling stainless-steel cassette	Stainless steel	Q16	25?mm	Blank	1	3.4 kg	EKQ160BL25
Levelling stainless-steel cassette	Stainless steel	Q16	15?mm	Blank	1	3.0 kg	EKQ160BL15

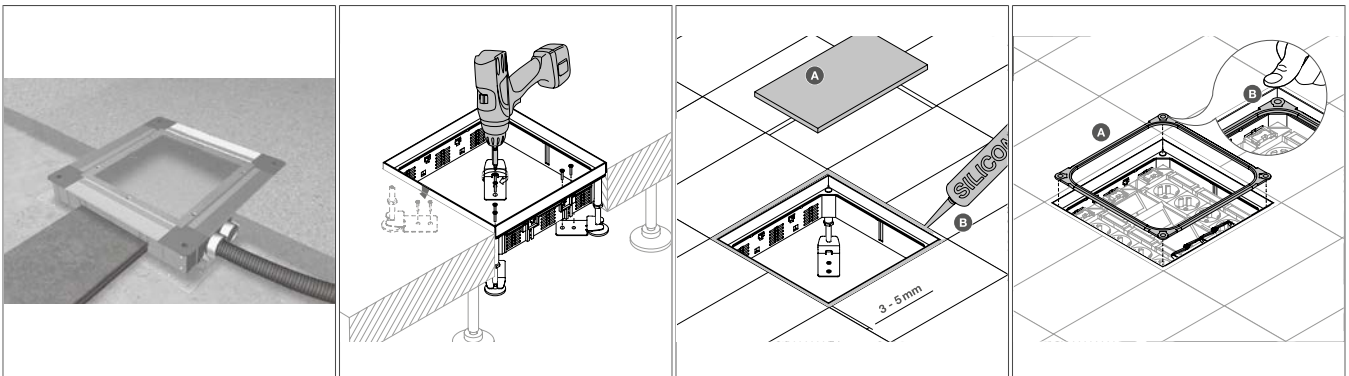
5.5 Installation

5.5.1 Installation in screed-covered trunking systems UK

A number of requirements must be met to install the cassettes in screed-covered trunking systems.

- ☑ The screed-covered trunking system UK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The screed protective cover has been removed.
- ☑ The mounting cover has been installed.
- ☑ The floor covering has been laid and cut out.

- Install the universal floor box and pour the screed. Lay the floor covering.
- Place the cassette in the installation opening with the appropriate leveling feet and screw to the floor. Level the cassette on the floor and fix it in place with the lock nut.
- Once the floor covering has been laid, seal up the cassette frame and cassette cover with silicone.
- Insert the seal and press it down. Fit the cassette cover in the frame.



5.5.2 Installation in screed-flush trunking systems BK

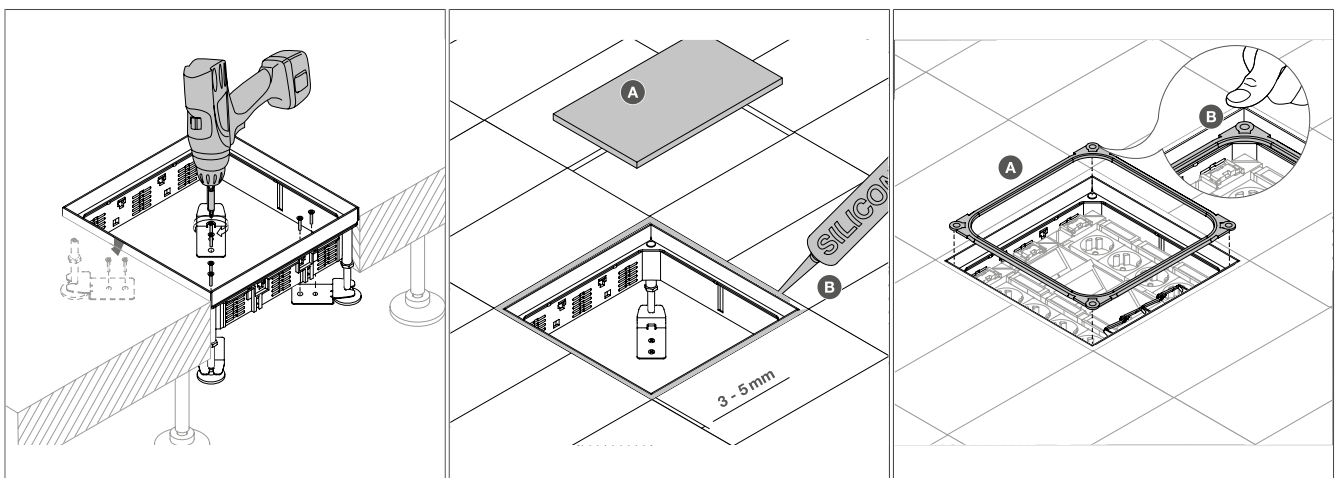
A number of requirements must be met to install the cassettes in screed-flush trunking systems.

- ☑ The screed-flush trunking system BK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The mounting cover has been installed in the trunking or junction box.
- ☑ The floor covering has been laid and cut out.

● Place the cassette in the installation opening with the appropriate leveling feet and screw to the floor. Level the cassette on the floor and fix it in place with the lock nut.

● Once the floor covering has been laid, seal up the cassette frame and cassette cover with silicone.

● Insert the seal and press it down. Fit the cassette cover in the frame.

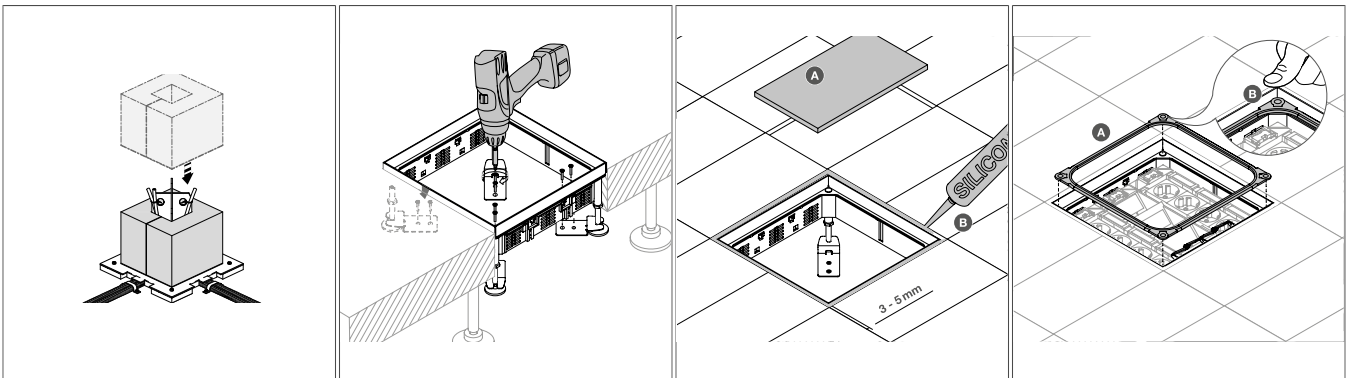


5.5.3 Installation in cavity floor systems HB




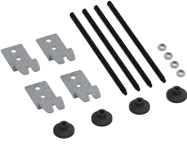
A number of requirements must be met to install the cassettes in a cavity floor.

- ☑ The screed has been fully poured and can be walked on.
- ☑ The casing element has been removed.
- ☑ The floor covering has been laid and cut out.

- Orientate the casing element before you pour the screed on the cavity floor. Remove the casing element once the screed has set. Lay the floor covering.
- Place the cassette in the installation opening with the appropriate leveling feet and screw to the floor. Level the cassette on the floor and fix it in place with the lock nut.
- Once the floor covering has been laid, seal up the cassette frame and cassette cover with silicone.
- Insert the seal and press it down. Fit the cassette cover in the frame.



5.6 Accessories

	Designation	Order No.
	Terrazzo set for EKR12 and MKR12 cassettes	EKTSETR12
	Terrazzo set for EKR12 and MKR12 cassettes	EKTSETQ12
	Replacement seal for EKR/EKSR levelling cassettes size R12	EKR12D
	Replacement seal for EKR/EKSR size R06 levelling cassettes	EKR06D
	Replacement seal for EKQ levelling cassettes size Q16	EKQ16D
	Replacement seal for levelling cassettes EKQ/MKQ and UD-ZuHause, UDKQ size Q12	EKQ12D
	Replacement seal for levelling cassettes EKQ and UD-ZuHause, UDKQ size Q06	EKQ06D
	Levelling set L = 195?mm for levelling cassettes and height expansion	EKNS195
	Levelling set L = 150?mm for levelling cassettes and height expansion	EKNS150
	Levelling set L = 105?mm for levelling cassettes and height expansion	EKNS105
	Levelling set L = 60?mm for levelling cassettes and height expansion	EKNS060

5.7 Normative information

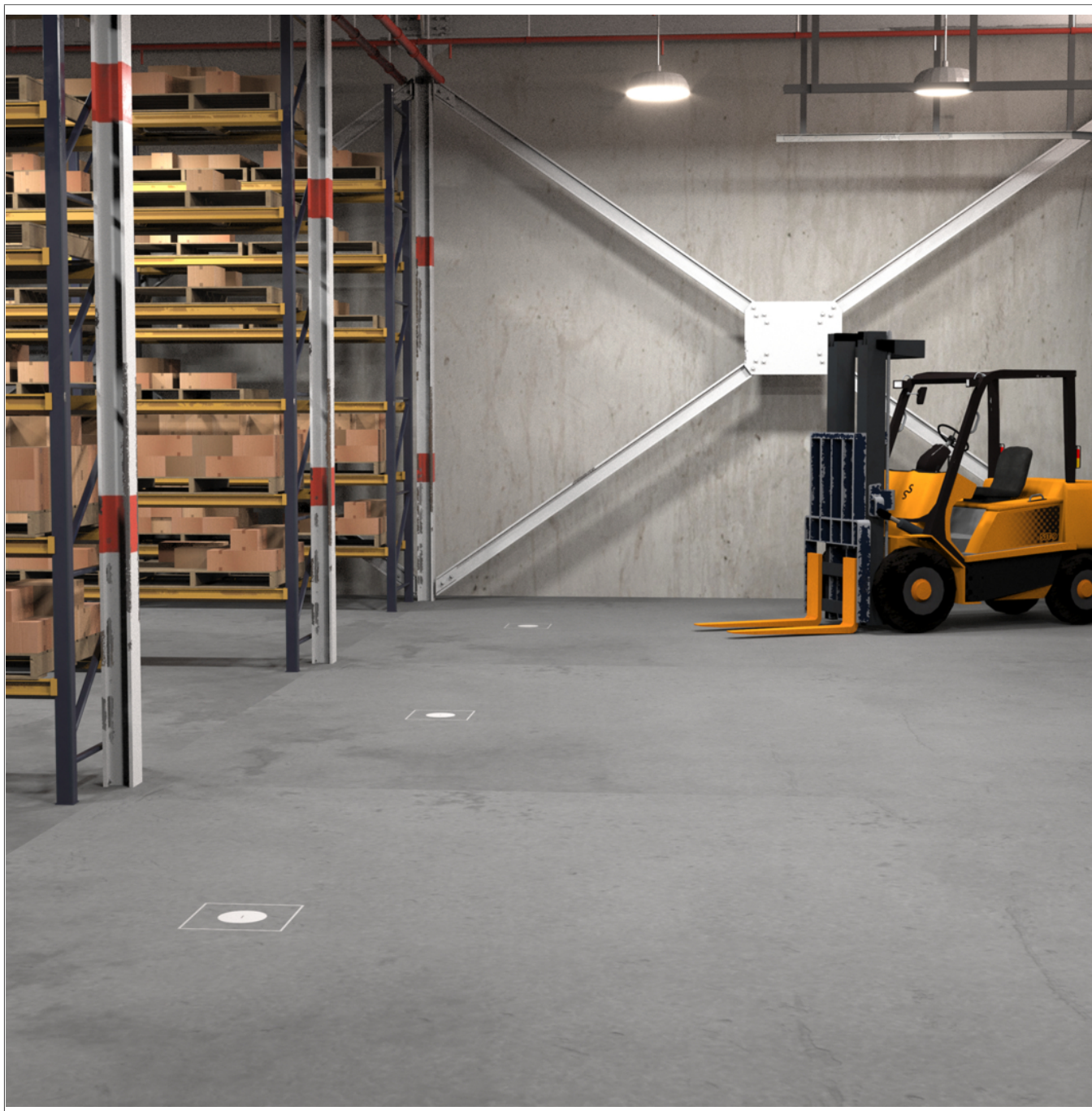
Classification according to EN 50085-1		EKQ/MKQ	EKR/MKR
6.2	Based on impact resistance for installation and application		
6.2.4	Cable trunking and ducting systems for impact energy of 5?J	X	X
6.3	Based on temperature		
Tab. 1	Minimum storage and transport temperatures +/-2°C -15°C	X	X
Tab. 2	Minimum installation and application temperatures +/-2°C -5°C	X	X
Tab. 3	Maximum application temperatures +/-2°C +60°C	X	X
6.4	Based on resistance to flame propagation		
6.4.2	Non-flame propagating cable trunking and ducting systems	X	X
6.5	Based on electrical conductivity		
6.5.1	Cable trunking and ducting system with electrical conductivity	X	X
6.6	Based on electrical insulating properties		
6.6.1	Cable trunking and ducting system without electrical insulating properties	X	X
6.7	Based on degrees of protection afforded by housing/casing in accordance with EN460529:1991		
6.7.3	Based on protection against contact with hazardous parts		
	IP20 connection units in use	X	X
	IP30 connection units not in use	X	X
6.8	Protection against corrosive or contaminating substances		
6.8.1	Cable trunking and ducting system with low external and internal protection	X	X
6.8.3	Cable trunking and ducting systems with moderate external and internal protection	X	X
6.9	Based on fastening type for system trunking cover		
6.9.2	The trunking cover of the cable trunking and ducting system should only be opened with a tool.	X	X
6.10	Based on electrical protection separation		
6.10.1	Cable trunking and ducting systems without an internal protective separation element	X	X

Classification according to EN 50085-2-2		EKQ/MKQ	EKR/MKR
6.101	Based on type of floor maintenance		
6.101.1	Electrical installation system for dry floor maintenance	X	X
6.102	Based on resistance to vertical loads applied to a small area (approx. Ø 13.34mm ± 0.1)		
6.102.7	Electrical installation system for 3000?N	X	X
6.103	Based on resistance to vertical loads applied to a large area (approx.Ø41304mm)		
6.103.3	Electrical installation system for 5000?N	X	X

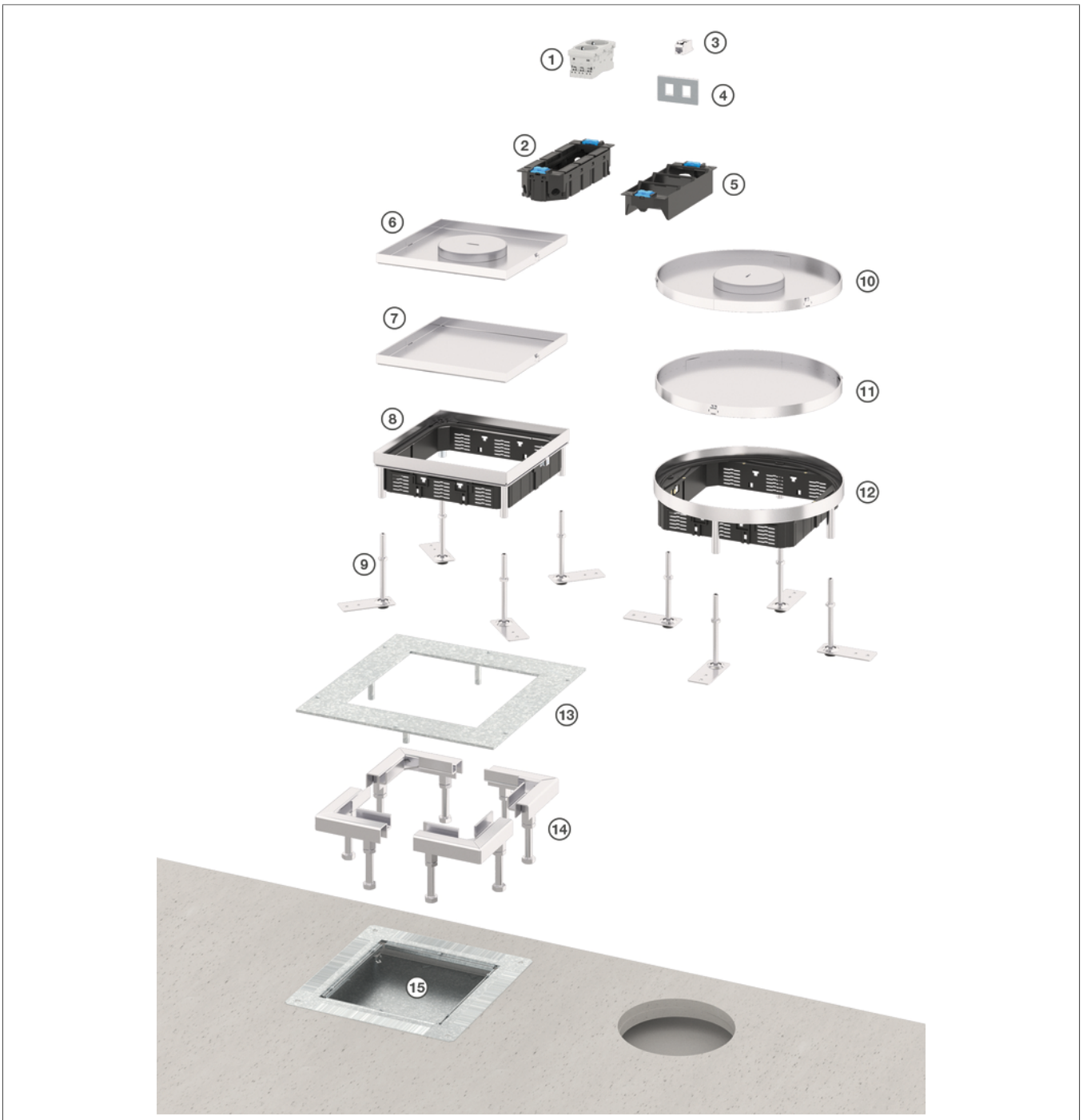
6 Heavy-duty cassettes

6.1 System description

The heavy-duty cassettes from Hager are used in places that are subject to high loads, such as railway stations, airports, museums or car dealerships. The cassettes provide these areas with a reliable power supply, data and multimedia technology. The heavy-duty systems from Hager are specifically adapted to cater for these high loads.



6.2 Installation principle



- | | | | |
|-----|---|-----|---|
| ① | Socket outlet 2-gang | ⑨ | Levelling set for heavy-duty cassette |
| ② | Device carrier for 4 Rastec devices | ⑩+⑫ | Heavy-duty cassette with tube outlet, round |
| ③ | Keystone module | ⑪+⑫ | Heavy-duty cassette, blank, round |
| ④ | Mounting plate for keystone module | ⑬ | Heavy-duty mounting cover for universal floor box |
| ⑤ | Device carrier for mounting plate – data technology | ⑭ | Heavy-duty support for universal floor box |
| ⑥+⑧ | Heavy-duty cassette with tube outlet, square | ⑮ | Universal floor box |
| ⑦+⑧ | Heavy-duty cassette, blank | | |

6.3 Options

R06



6x socket outlet Rastec 45
2x GTVR300
Installation dimension Ø 200 mm
Blank, tube outlet
20?kN



R12



12x socket outlet Rastec 45
3x GTVR400
Installation dimension Ø 305 mm
Blank, tube outlet
20?kN



Q06



6x socket outlet Rastec 45
2x GTVR300
Installation dimensions 200 x 200?mm
Blank, tube outlet
20?kN



Q12



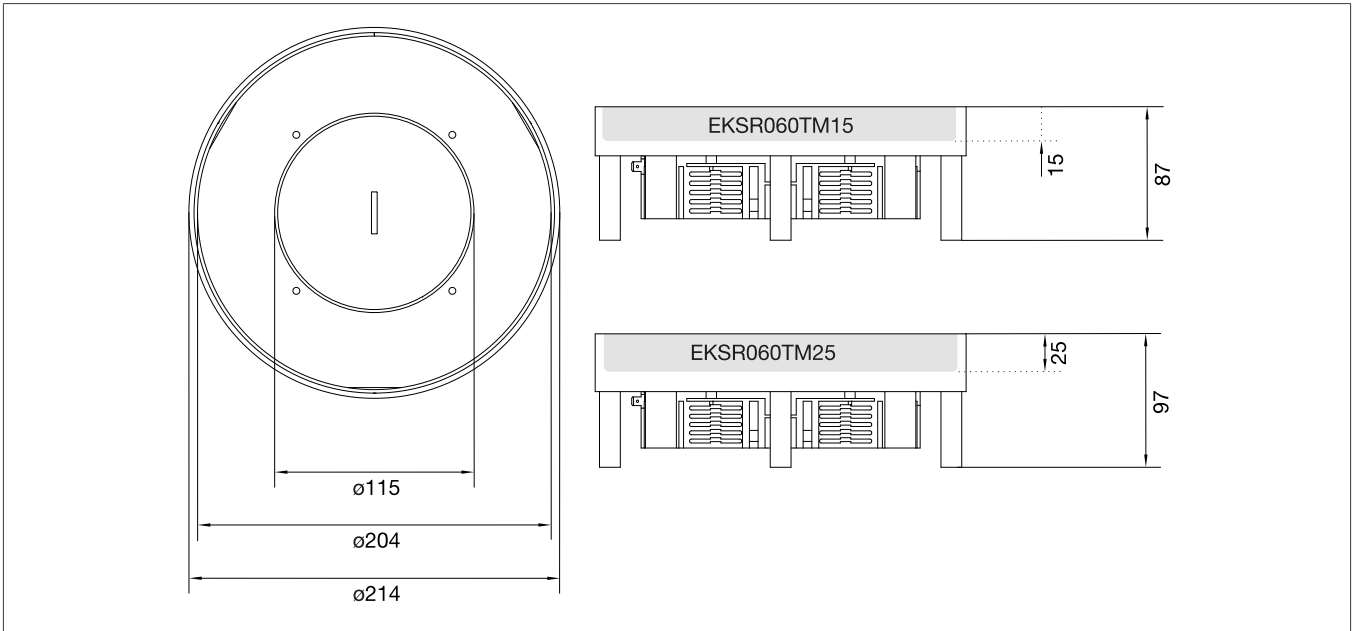
12x socket outlet Rastec 45
3x GTVR400
Installation dimensions 244 x 244?mm
Blank, tube outlet
20?kN



6.4 Installation and system dimensions

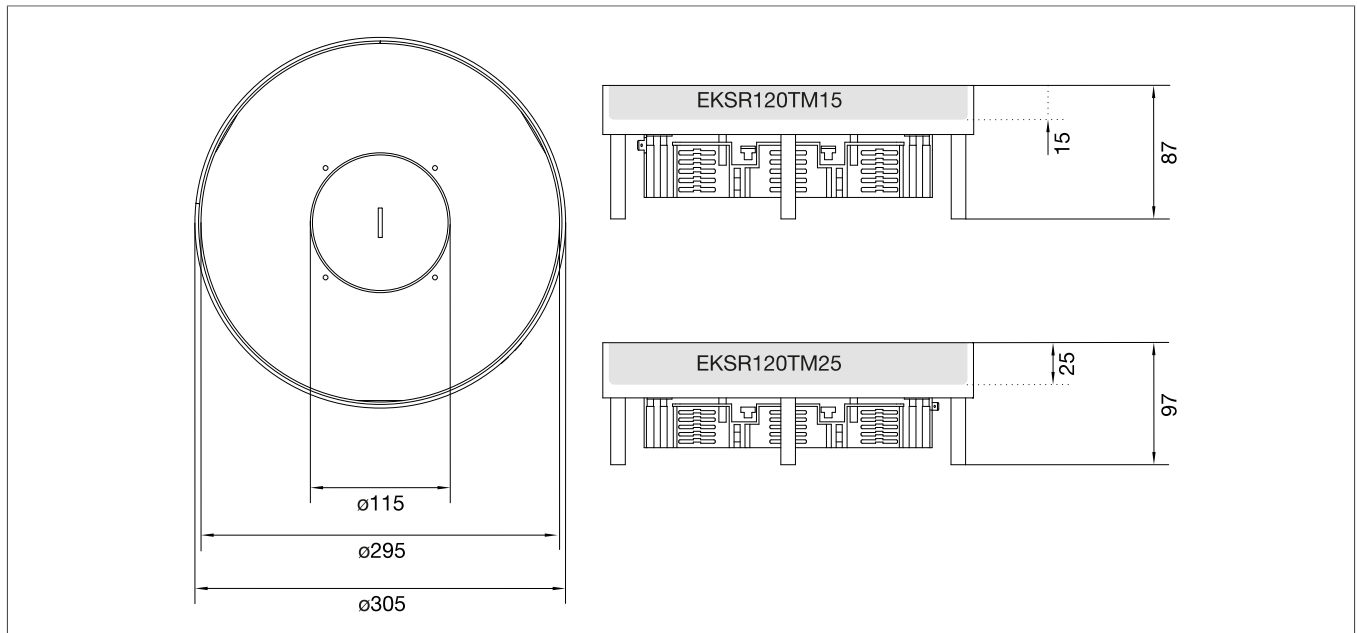
The installation and floor cutout dimensions are only required for raised/cavity floor systems. As soon as the heavy-duty cassettes are fitted in the universal floor boxes (UDHxx, UDBxx, UDSxx) of the screed-covered system UK and in the casing system (SEBD500GT, SEGT350), the matching installation openings are in place. Simply pay attention to the nominal sizes (Q12, R12, Q06, R06).

Dimensions of R06 levelling heavy-duty cassettes, with tube outlet



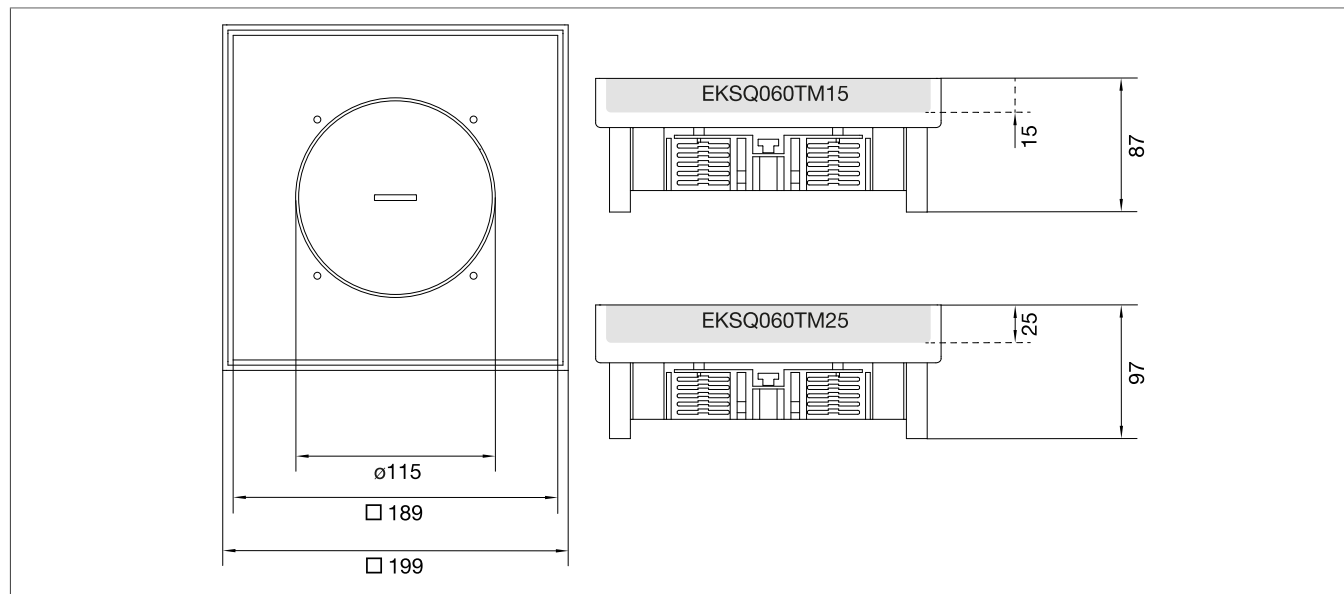
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	R06	25?mm	Tube outlet	1	3.8 kg	EKSR060TM25
Levelling heavy-duty cassette	Stainless steel	R06	15?mm	Tube outlet	1	3.5 kg	EKSR060TM15

Dimensions of R12 levelling heavy-duty cassettes, with tube outlet



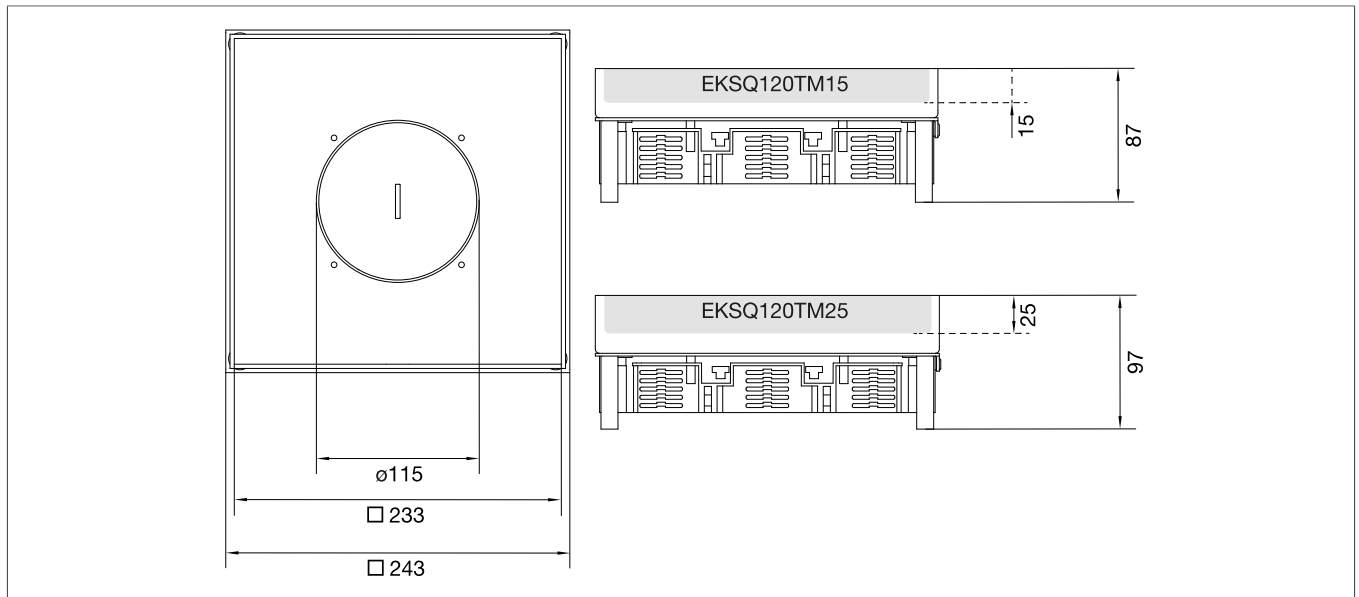
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	R12	25?mm	Tube outlet	1	8.0 kg	EKSR120TM25
Levelling heavy-duty cassette	Stainless steel	R12	15?mm	Tube outlet	1	7.2 kg	EKSR120TM15

Dimensions of Q06 levelling heavy-duty cassettes, with tube outlet



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	Q06	25?mm	Tube outlet	1	4.2 kg	EKSQ060TM25
Levelling heavy-duty cassette	Stainless steel	Q06	15?mm	Tube outlet	1	3.9 kg	EKSQ060TM15

Dimensions of Q12 levelling heavy-duty cassettes, with tube outlet



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	Q12	25?mm	Tube outlet	1	6.2 kg	EKSQ120TM25
Levelling heavy-duty cassette	Stainless steel	Q12	15?mm	Tube outlet	1	5.8 kg	EKSQ120TM15

Installation depth with snap-in floor box extension



**With device carrier GTVRx
(top snap-in position)**

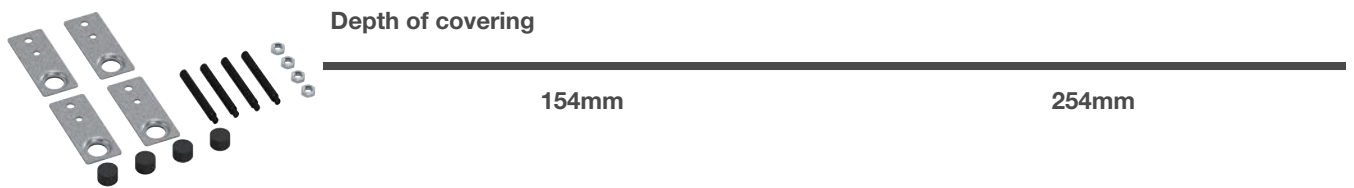
**With device carrier GTVRx
(bottom snap-in position)**

**With device carrier GTVRx and
snap-in floor box extension
(bottom snap-in position)**

Order No.	a [mm]	b [mm]	c [mm]
EKSQ060xx15	92	116	147
EKSQ060xx25	102	126	157
EKSQ120xx15	94	118	149
EKSQ120xx25	104	128	159
EKSR060xx15	92	116	147
EKSR060xx25	102	126	157
EKSR120xx15	92	116	147
EKSR120xx25	102	126	157

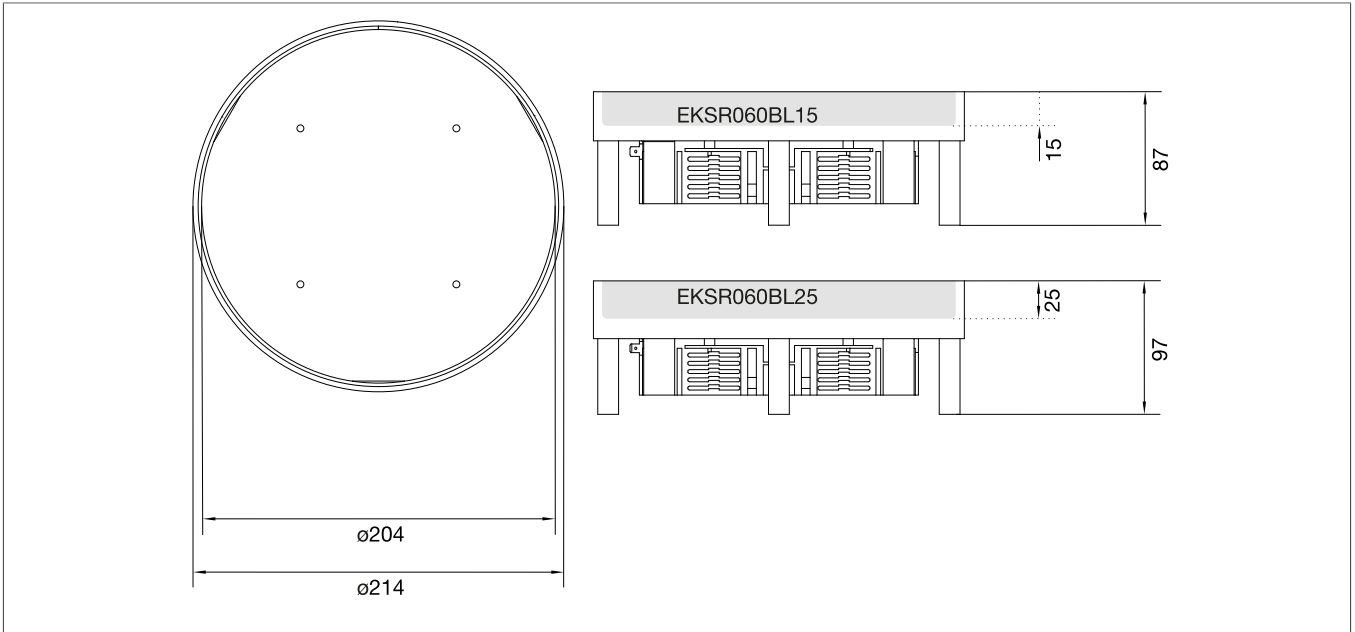
Table 6: Installation and floor cutout dimensions

Levelling set



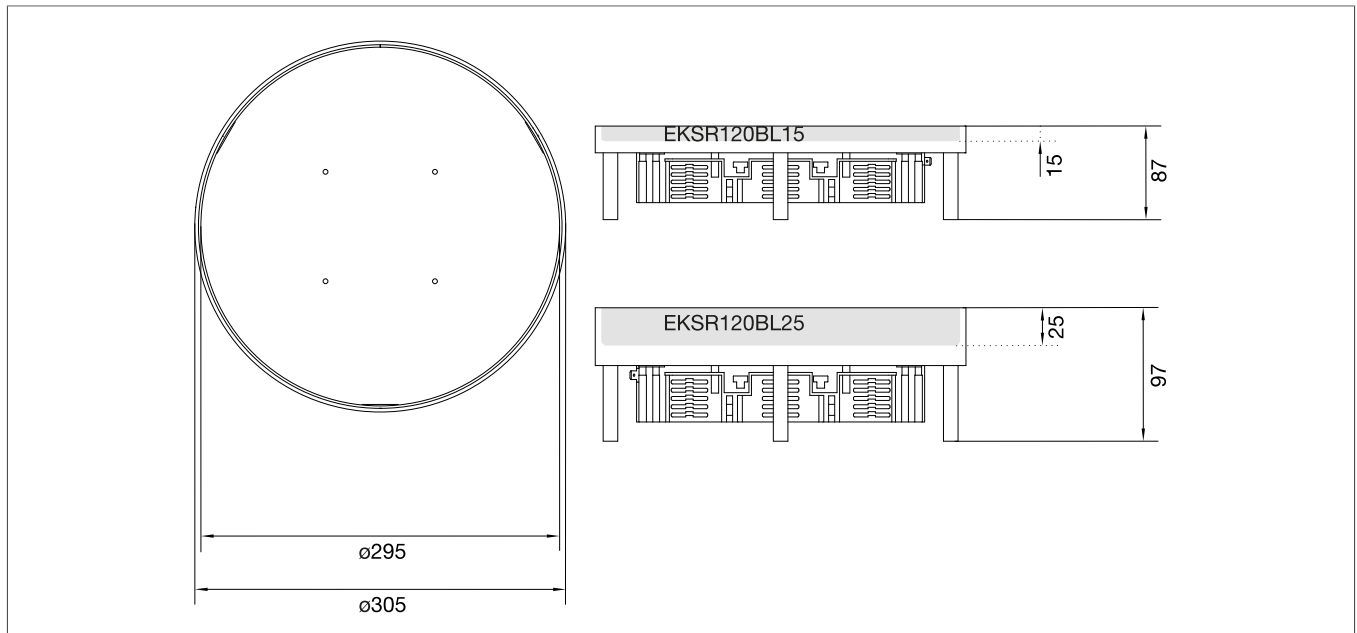
	154mm	254mm
EKSNS065	110?...?161	120?...?171
EKSNS110	155?...?206	165?...?216

Dimensions of R06 levelling heavy-duty cassettes, blank



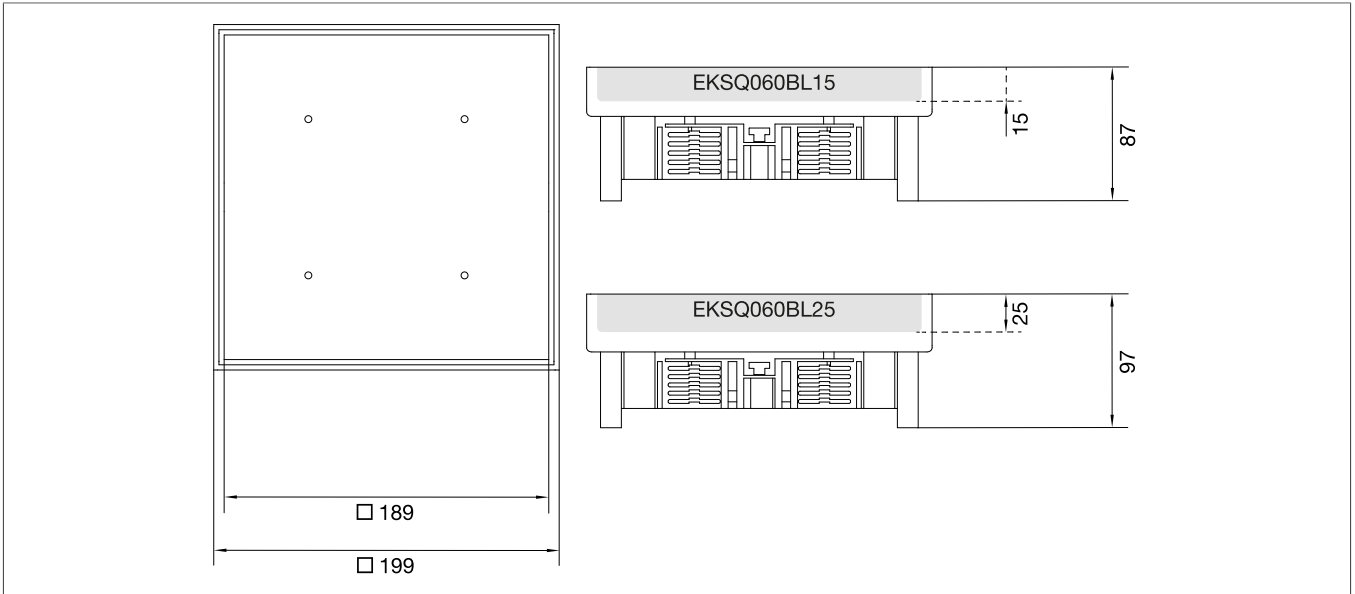
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	R06	25?mm	Blank	1	3.3 kg	EKS060BL25
Levelling heavy-duty cassette	Stainless steel	R06	15?mm	Blank	1	3.1 kg	EKS060BL15

Dimensions of R12 levelling heavy-duty cassettes, blank



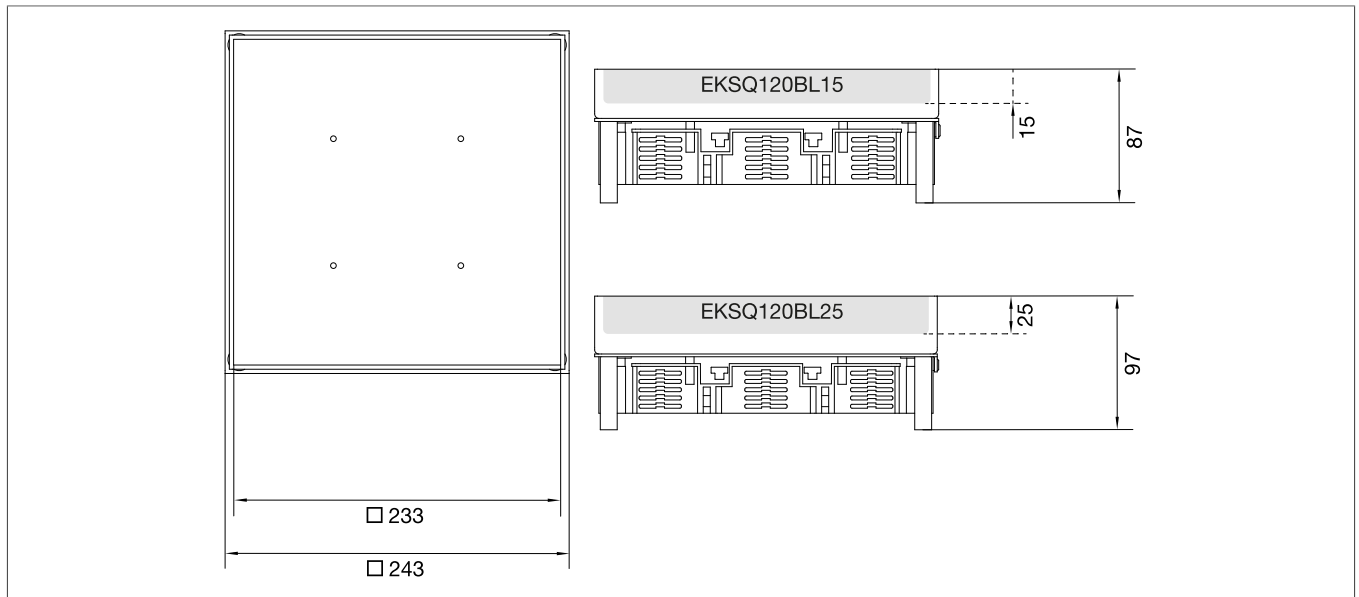
Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	R12	25?mm	Blank	1	7.2 kg	EKSR120BL25
Levelling heavy-duty cassette	Stainless steel	R12	15?mm	Blank	1	6.8 kg	EKSR120BL15

Dimensions of Q06 levelling heavy-duty cassettes, blank



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	Q06	25?mm	Blank	1	3.7 kg	EKSQ060BL25
Levelling heavy-duty cassette	Stainless steel	Q06	15?mm	Blank	1	3.6 kg	EKSQ060BL15

Dimensions of Q12 levelling heavy-duty cassettes, blank



Designation	Material	Nominal size	Depth of covering	Version	PU	Weight	Order No.
Levelling heavy-duty cassette	Stainless steel	Q12	25?mm	Blank	1	5.9 kg	EKSQ120BL25
Levelling heavy-duty cassette	Stainless steel	Q12	15?mm	Blank	1	5.4 kg	EKSQ120BL15

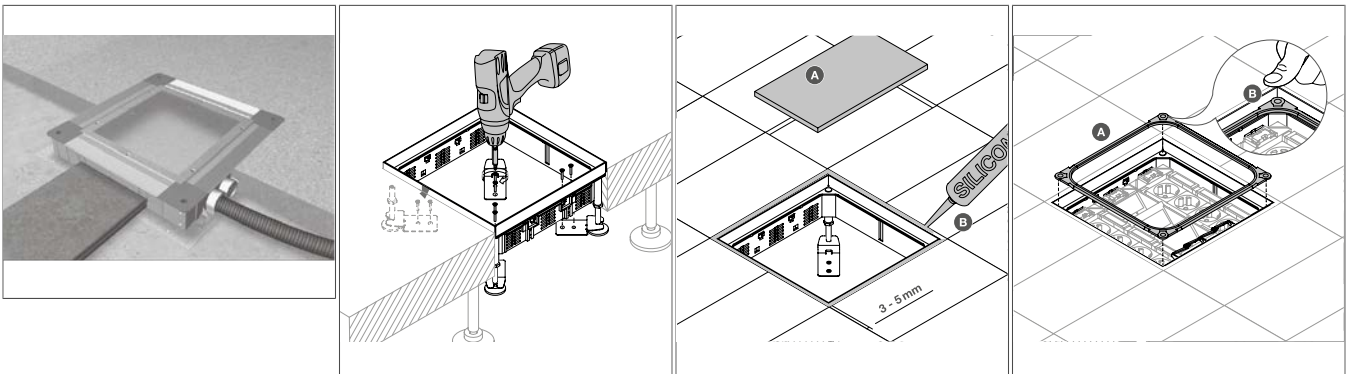
6.5 Installation

6.5.1 Installation in screed-covered trunking systems UK

A number of requirements must be met to install the heavy-duty cassettes in screed-covered trunking systems.

- ☑ The screed-covered trunking system UK has been fully installed.
- ☑ Heavy-duty supports have been installed on the universal floor box.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The protective cover has been removed.
- ☑ The heavy-duty mounting cover has been installed.
- ☑ The floor covering has been laid and cut out.

- Install the universal floor box and pour the screed.
- Lay the floor covering.
- Place the cassette in the installation opening with the appropriate leveling feet and screw to the floor. Level the cassette on the floor and fix it in place with the lock nut.
- Once the floor covering has been laid, seal up the cassette frame and cassette cover with silicone.
- Insert the seal and press it down. Fit the cassette cover in the frame.

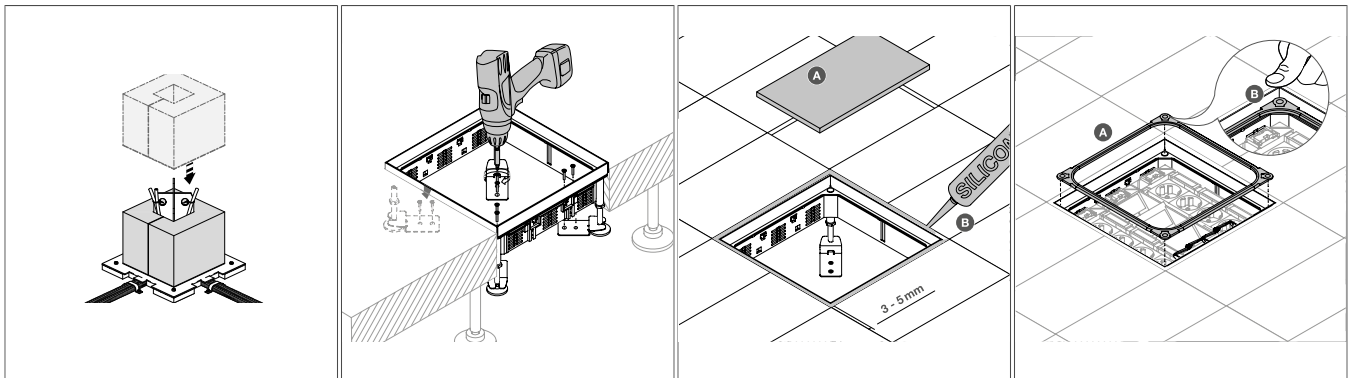


6.5.2 Installation in cavity floor systems HB

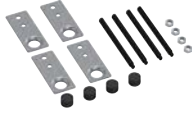
A number of requirements must be met to install the heavy-duty cassettes in a cavity floor.

- ☑ The screed has been fully poured and can be walked on.
- ☑ The casing element has been removed.
- ☑ The floor covering has been laid and cut out.

- Once the screed has set, remove the casing unit and lay the floor covering.
- Place the cassette in the installation opening with the appropriate leveling feet and screw to the floor. Level the cassette on the floor and fix it in place with the lock nut.
- Once the floor covering has been laid, seal up the cassette frame and cassette cover with silicone.
- Insert the seal and press it down. Fit the cassette cover in the frame.



6.6 Accessories

	Designation	Order No.
	Levelling set with length of 110?mm for levelling heavy-duty cassette	EKSNS110
	Levelling set with length of 110?mm for levelling heavy-duty cassette	EKSNS110
	Levelling set with length of 65?mm for levelling heavy-duty cassette	EKSNS065

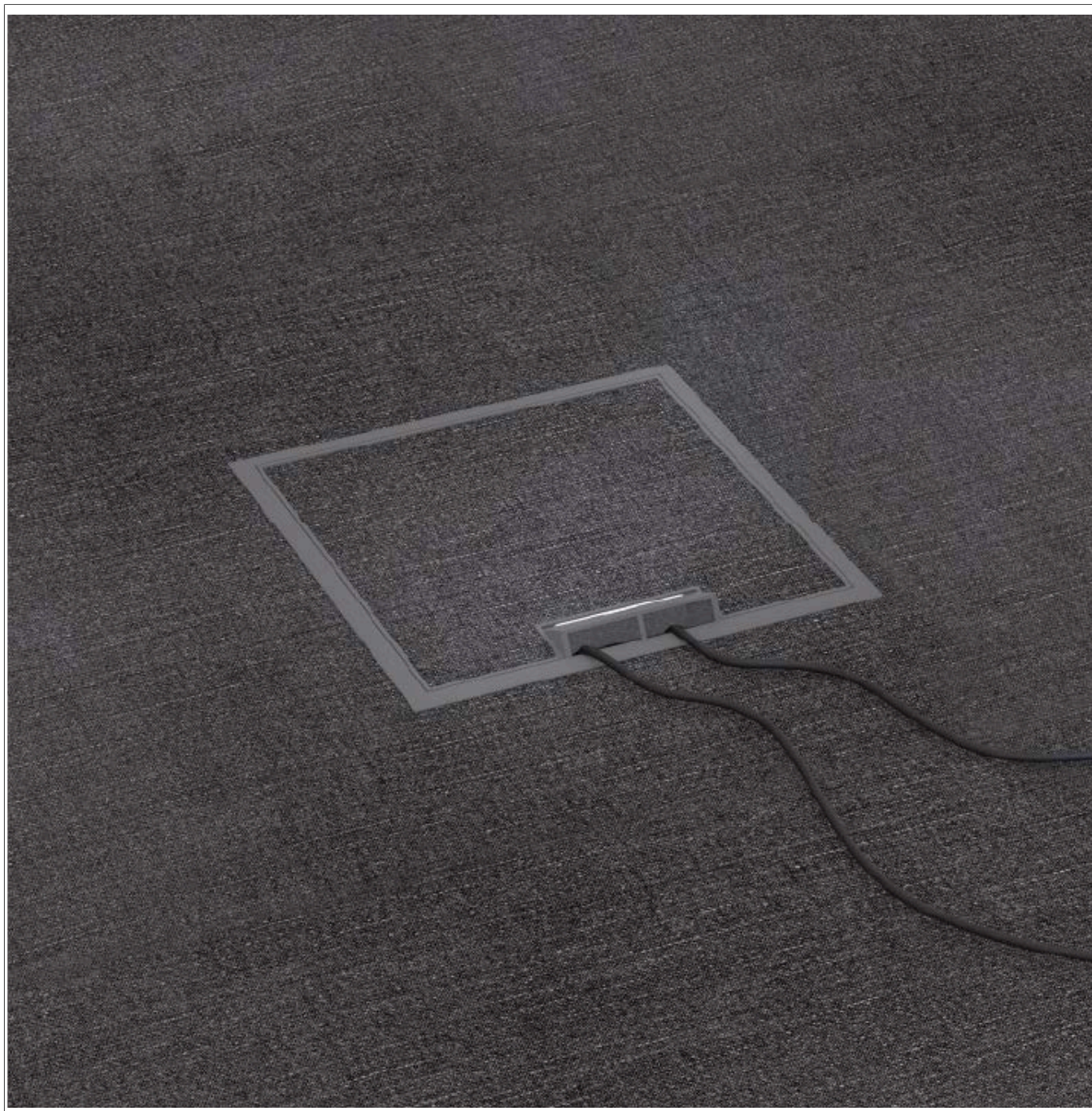
6.7 Normative information

Classification according to EN 50085-1		EKSQ	EKSR
6.2	Based on impact resistance for installation and application		
6.2.5	Cable trunking and ducting systems for impact energy of 20?J	X	X
6.3	Based on temperature		
Tab. 1	Minimum storage and transport temperatures +/-2°C -15°C	X	X
Tab. 2	Minimum installation and application temperatures +/-2°C -5°C	X	X
Tab. 3	Maximum application temperatures +/-2°C +60°C	X	X
6.4	Based on resistance to flame propagation		
6.4.2	Non-flame propagating cable trunking and ducting systems	X	X
6.5	Based on electrical conductivity		
6.5.1	Cable trunking and ducting system with electrical conductivity	X	X
6.6	Based on electrical insulating properties		
6.6.1	Cable trunking and ducting system without electrical insulating properties	X	X
6.7	Based on degrees of protection afforded by housing/casing in accordance with EN460529:1991		
6.7.3	Based on protection against contact with hazardous parts		
	IP20 connection units in use	X	X
	IP30 connection units not in use	X	X
6.8	Protection against corrosive or contaminating substances		
6.8.3	Cable trunking and ducting systems with moderate external and internal protection	X	X
6.9	Based on fastening type for system trunking cover		
6.9.2	The trunking cover of the cable trunking and ducting system should only be opened with a tool.	X	X
6.10	Based on electrical protection separation		
6.10.1	Cable trunking and ducting systems without an internal protective separation element	X	X
Classification according to EN 50085-2-2		EKSQ	EKSR
6.101	Based on type of floor maintenance		
6.101.1	Electrical installation system for dry floor maintenance	X	X
6.102	Based on resistance to vertical loads applied to a small area (approx. Ø 13.34mm ± 0.1)		
6.102.7	Electrical installation system for 3000?N	X	X
6.103	Based on resistance to vertical loads applied to a large area (approx. Ø41304mm)		
6.103.6	Electrical installation system for 20000?N	X	X

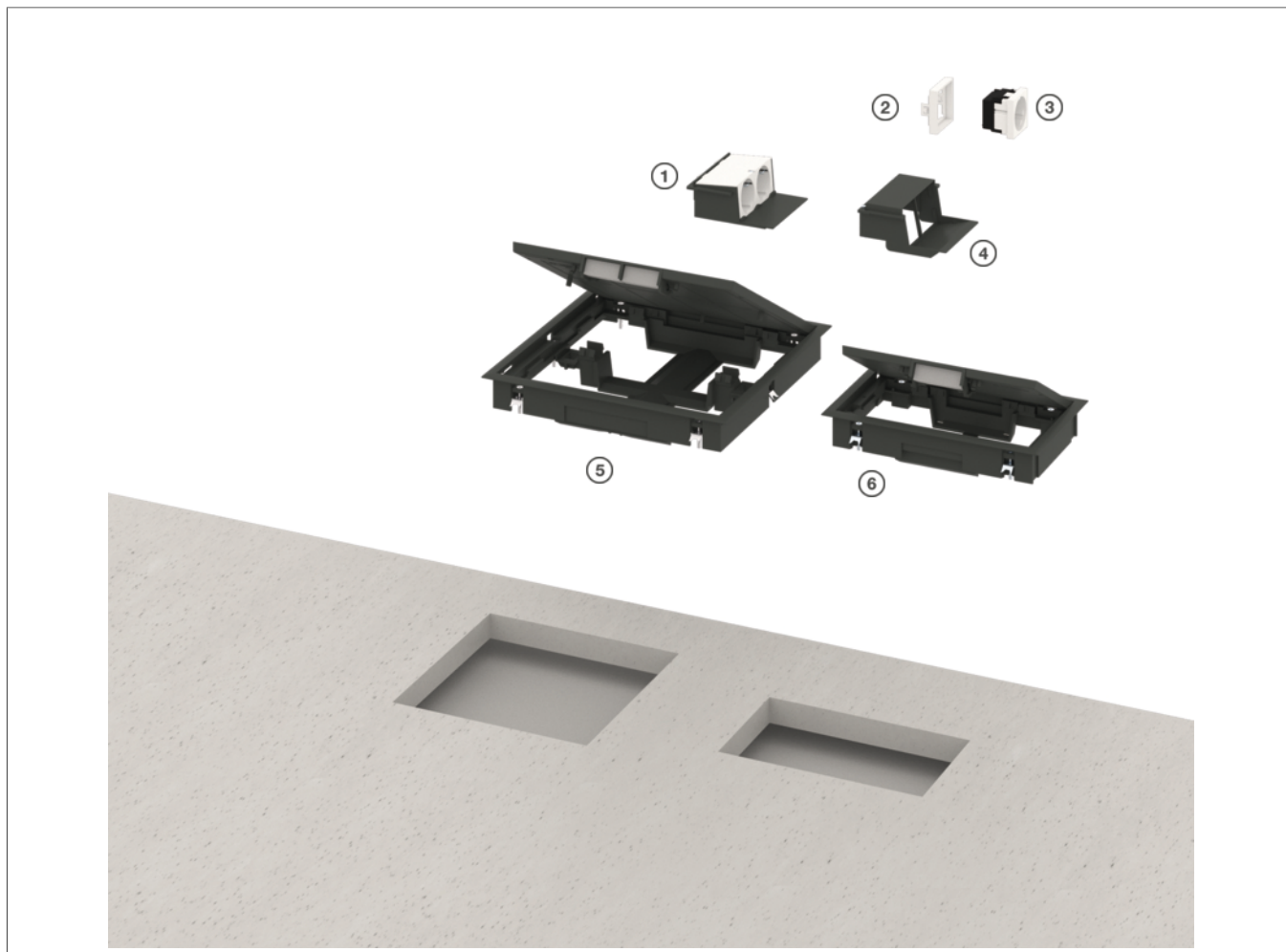
7 Hinged cover

7.1 System description

The hinged cover from Hager is suitable for very shallow floor structures. A power supply can be installed if the floor structure has a thickness of 50 mm or more.



7.2 Installation principle



- ① Device casing with 2-gang socket outlet
- ② Adapter frame, Rastec 50 to 45
- ③ 1-gang socket outlet, Rastec 45
- ④ Device casing for Rastec 45
- ⑤ Q08 hinged cover, square
- ⑥ E04 hinged cover, rectangular

7.3 Options

E04



4x socket outlet Rastec 45
2x GBM5050 + GBMAR5045 or 2x
GBES2xx
Installation dimensions 147 mm x 247?mm



Q08



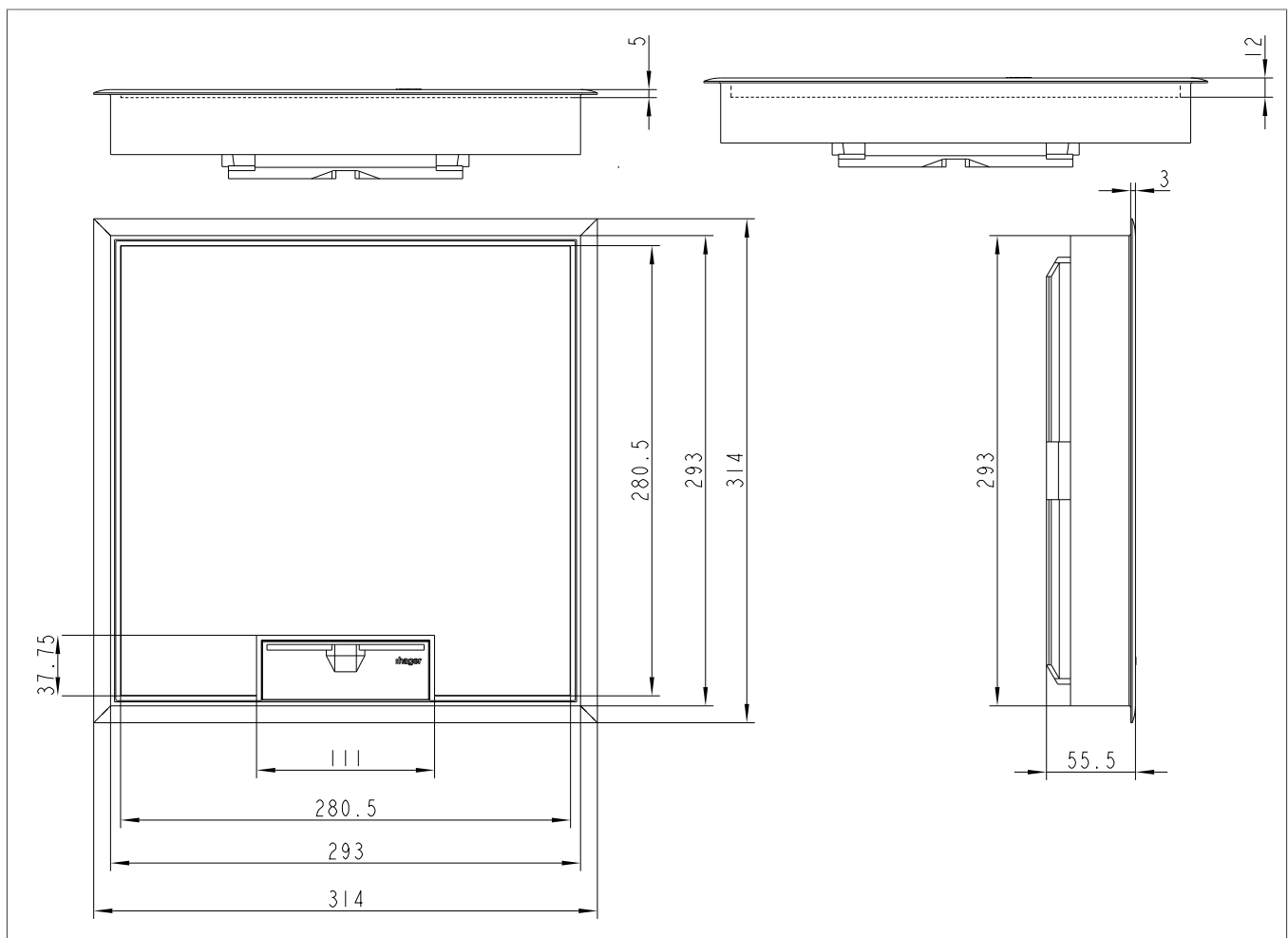
8x socket outlet Rastec 45
4x GBM5050+ GBMAR5045 or 4x
GBES2xx
Installation dimension 294 mm x 294?mm



7.4 Installation and system dimensions

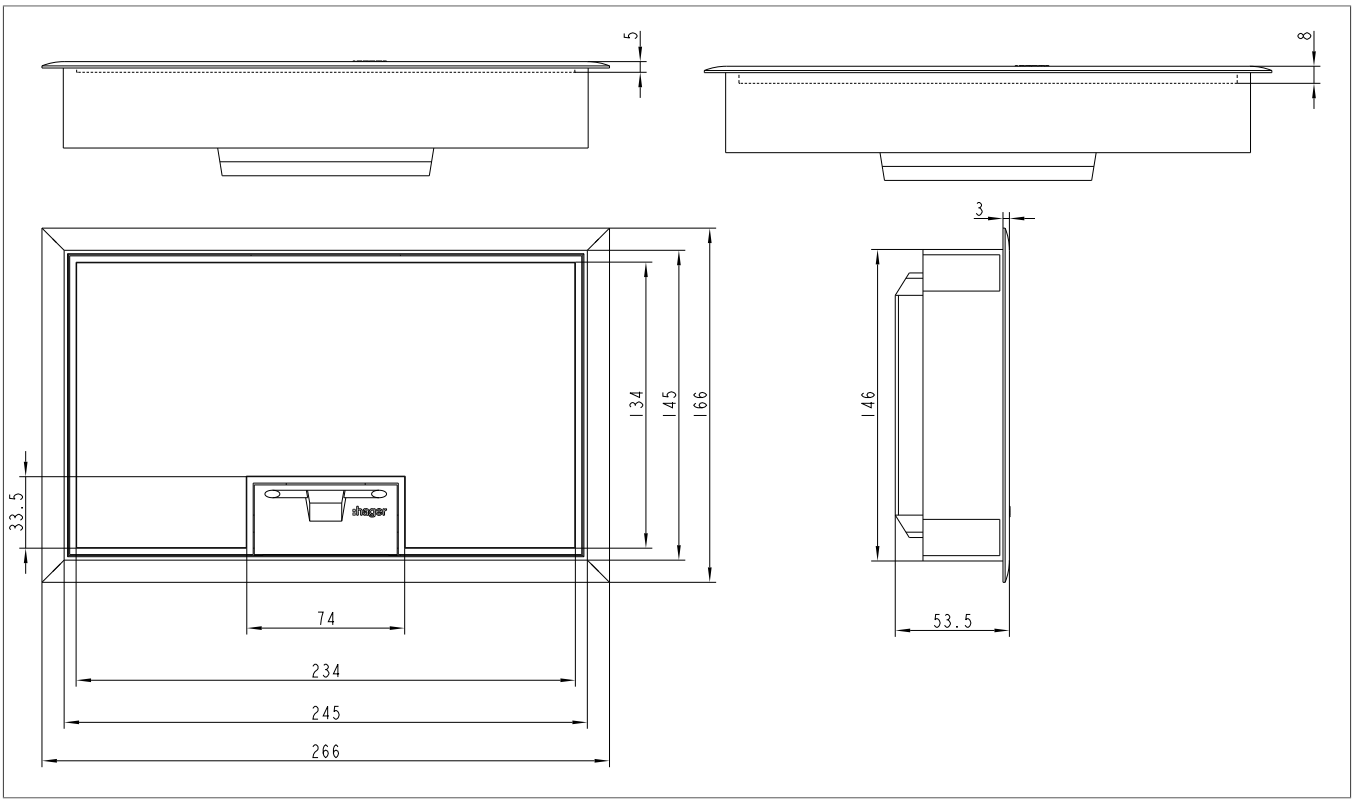
The installation and floor cutout dimensions are only required for raised/cavity floor systems. As soon as the hinged covers are installed in the universal floor boxes (UDHxx, UDBxx, UDSxx) of the screed-covered system UK, in the casing system (SEBD500GT, SEGT350), in the junction box (BKSAxx) or in the mounting covers (BKAx) of the screed-flush system BK and the mounting covers (AKMxx) of the on-floor trunking system AK, the matching installation openings are in place. Simply pay attention to the nominal sizes Q08 and E04.

Dimensions of hinged covers, Q08 with cable outlet



Designation	Material	Nominal size	Depth of covering	Colour	PU	Weight	Order No.
Hinged cover	Polyamide	Q08	5?mm	Iron grey	1	3.0 kg	KDQ08057011
Hinged cover	Polyamide	Q08	5?mm	Black	1	3.0 kg	KDQ08059005
Hinged cover	Polyamide	Q08	12?mm	Iron grey	1	3.1 kg	KDQ08127011
Hinged cover	Polyamide	Q08	12?mm	Black	1	3.1 kg	KDQ08129005

Dimensions of hinged covers, E04 with cable outlet



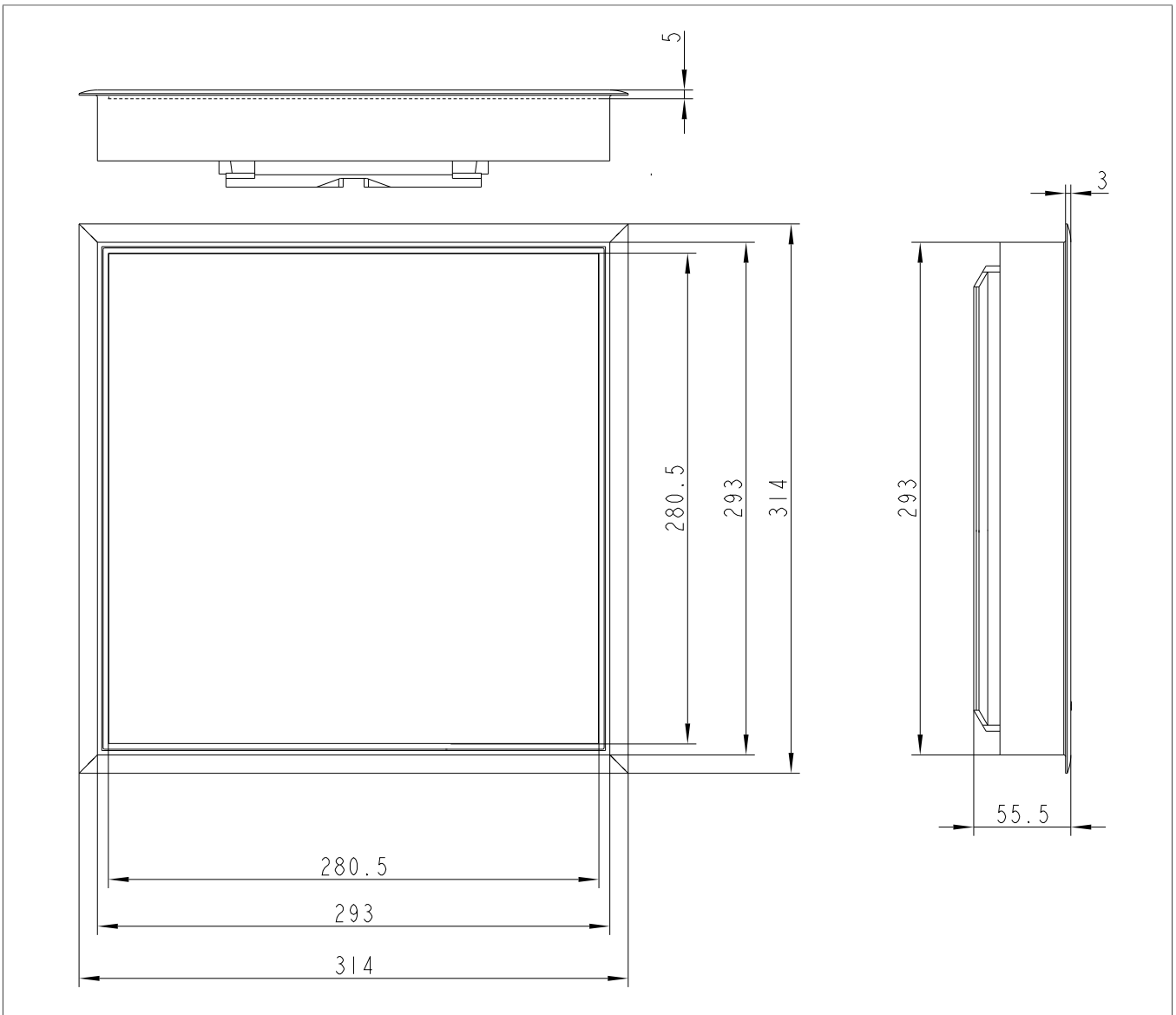
Designation	Material	Nominal size	Depth of covering	Colour	PU	Weight	Order No.
Hinged cover	Polyamide	E04	5?mm	Iron grey	1	3.0 kg	KDE04057011
Hinged cover	Polyamide	E04	5?mm	Black	1	3.0 kg	KDE04059005
Hinged cover	Polyamide	E04	8?mm	Iron grey	1	3.1 kg	KDE04087011
Hinged cover	Polyamide	E04	8?mm	Black	1	3.1 kg	KDE04089005

Installation depth of hinged cover



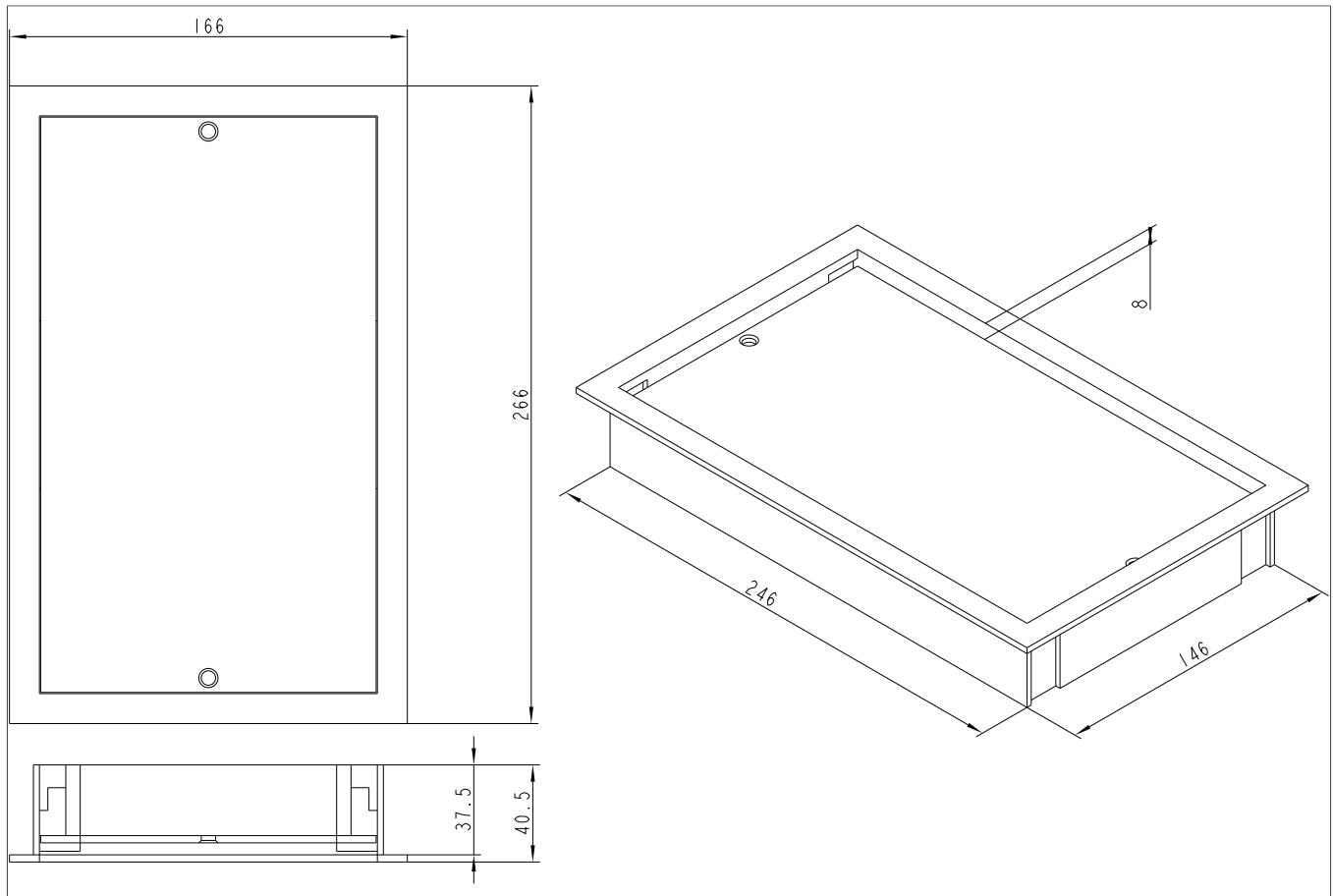
Item number	Min. installation depth with GBES2x [mm]	Min. installation depth with GBM5050 [mm]
KDE0405x	50.8	57.5
KDE0408x	53.8	60.5
KDQ0812x	52.8	59.5
KDQ0812x	59.8	66.5

Dimensions of Q08 hinged cover, blank



Designation	Material	Nominal size	Depth of covering	Colour	PU	Weight	Order No.
Blank cover	Polyamide	Q08	5?mm	Iron grey	1	3.0 kg	BDQ08057011
Blank cover	Polyamide	Q08	5?mm	Black	1	3.0 kg	BDQ08059005
Blank cover	Polyamide	Q08	12?mm	Iron grey	1	3.1 kg	BDQ08127011
Blank cover	Polyamide	Q08	12?mm	Black	1	3.1 kg	BDQ08129005

Dimensions of E04 hinged cover, blank



Designation	Material	Nominal size	Depth of covering	Colour	PU	Weight	Order No.
Blank cover	Polyamide	E04	5?mm	Iron grey	1	3.0 kg	BDE04057011
Blank cover	Polyamide	E04	5?mm	Black	1	3.0 kg	BDE04059005
Blank cover	Polyamide	E04	8?mm	Iron grey	1	3.1 kg	BDE04087011
Blank cover	Polyamide	E04	8?mm	Black	1	3.1 kg	BDE04089005

7.5 Installation

7.5.1 Installation in screed-covered trunking systems UK

A number of requirements must be met to install the hinged cover in screed-covered trunking systems.

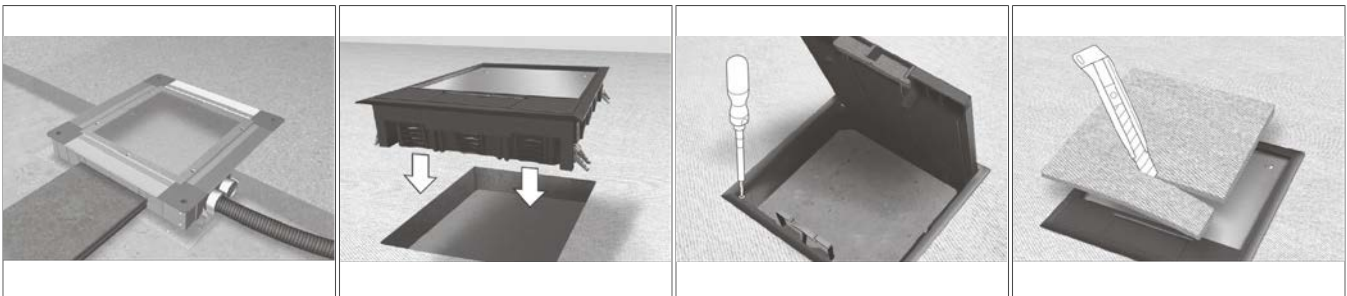
- ☑ The screed-covered trunking system UK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The screed protective cover has been removed.
- ☑ The mounting cover has been installed.
- ☑ The floor covering has been laid and cut out.

● Install the universal floor box and pour the screed. Lay the floor covering and cut out the installation opening. The cut-out floor covering can be glued into the hinged cover.

● Insert the hinged cover into the installation opening. Orientate the hinged cover according to the room conditions. Note the position of the hinged opening.

● Fix the hinged cover in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the hinged cover.

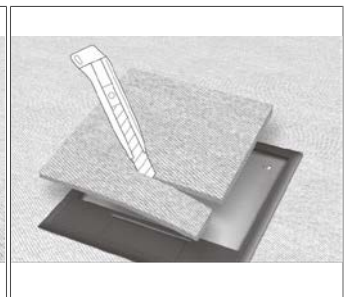
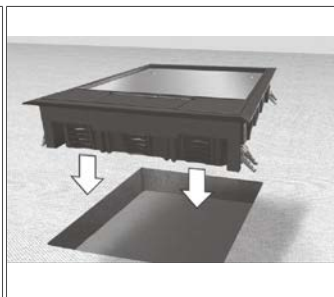
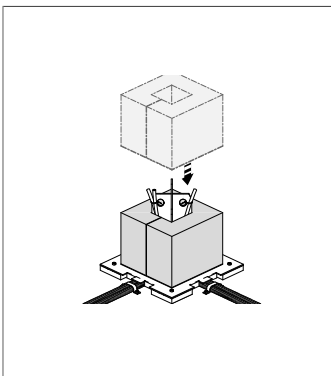


7.5.2 Installation in cavity floor systems HB

A number of requirements must be met to install the hinged cover in a cavity floor.

☑ The cavity floor elements have been installed.

- Orientate the casing element before you pour the screed on the cavity floor. Remove the casing element once the screed has set. Lay the floor covering.
- Insert the hinged cover into the installation opening. Orientate the hinged cover according to the room conditions. Note the position of the hinged opening.
- Fix the hinged cover in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.
- Glue in the floor covering. Cut the floor covering to fit and glue it into the hinged cover.



7.5.3 Installation in screed-flush trunking systems BK

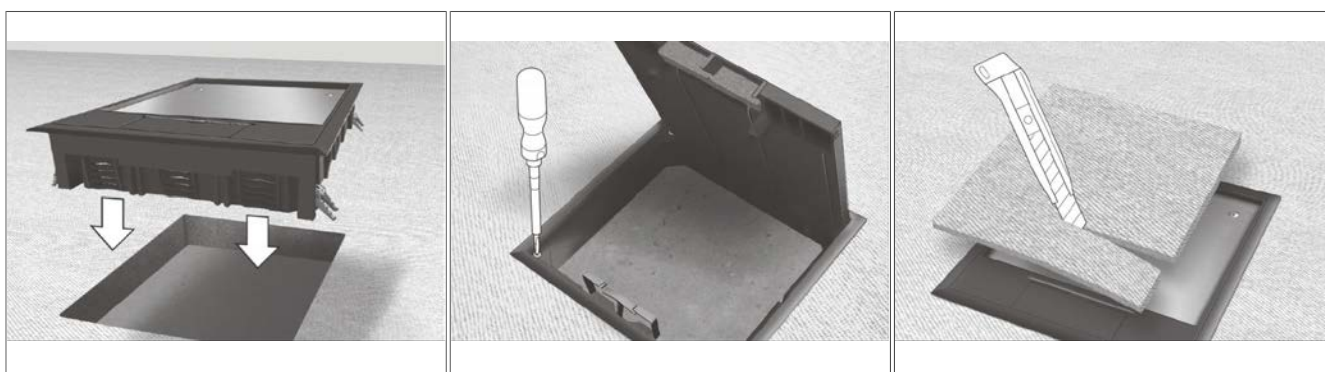
A number of requirements must be met to install the hinged covers in screed-flush trunking systems.

- ☑ The screed-flush trunking system BK has been fully installed.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The mounting cover has been installed in the trunking or junction box.
- ☑ The floor covering has been laid and cut out.

● Insert the hinged cover into the installation opening and orientate it according to the conditions in the room. Note the position of the hinged opening.

● Fix the hinged cover in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the cover.



7.5.4 Installation in on-floor trunking systems AK

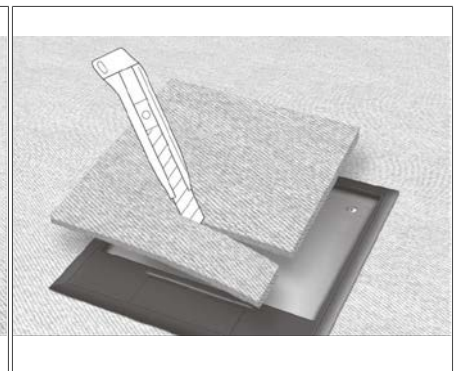
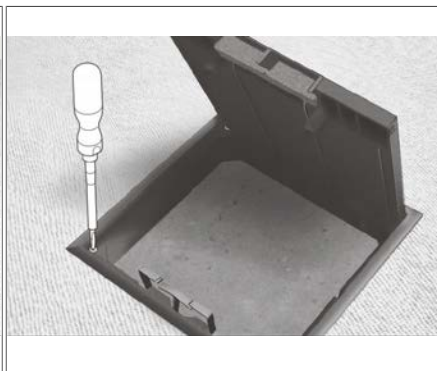
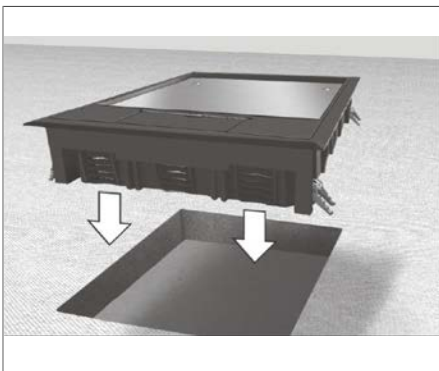
A number of requirements must be met to install the hinged covers in on-floor trunking systems.

- ☑ The on-floor trunking system AK has been fully installed.
- ☑ The mounting cover has been installed.
- ☑ The floor covering has been laid and cut out.







● Insert the hinged cover into the installation opening. Orientate the hinged cover according to the room conditions. Note the position of the hinged opening.

● Fix the hinged cover in place. Tighten the inside screws of the fastening kit in a cross-wise fashion.

● Glue in the floor covering. Cut the floor covering to fit and glue it into the hinged cover.



7.6 Accessories

	Designation	Order No.
	Device casing with two socket outlets	GBES29010 GBES22004
	Device casing for data technology	GBM5050
	Adapter frame	GBMAR5045
	Mounting plate 45 x 45mm	GBVDR45
	Adapter frame for data technology in Rastec 45	GBVDMR45
	Mounting plate for data technology	GBVDM012 GBVDM032 GBVDM052

7.7 Normative information

Classification according to EN 50085-1		KDE/BDE	KDQ/BDQ
6.2	Based on impact resistance for installation and application		
6.2.4	Cable trunking and ducting systems for impact energy of 5?J	X	X
6.3	Based on temperature		
Tab. 1	Minimum storage and transport temperatures +/-2°C -15°C	X	X
Tab. 2	Minimum installation and application temperatures +/-2°C -5°C	X	X
Tab. 3	Maximum application temperatures +/-2°C +60°C	X	X
6.4	Based on resistance to flame propagation		
6.4.2	Non-flame propagating cable trunking and ducting systems	X	X
6.5	Based on electrical conductivity		
6.5.2	Cable trunking and ducting system without electrical conductivity	X	X
6.6	Based on electrical insulating properties		
6.6.2	Cable trunking and ducting system with electrical insulating properties	X	X
6.7	Based on degrees of protection afforded by housing/casing in accordance with EN460529:1991		
	IP20 connection units in use	X	X
	IP30 connection units not in use	X	X
	IP30 access units	X	X
6.9	Based on fastening type for system trunking cover		
6.9.2	The trunking cover of the cable trunking and ducting system should only be opened with a tool.	X	X
6.10	Based on electrical protection separation		
6.10.1	Cable trunking and ducting systems without an internal protective separation element	X	X
Classification according to EN 50085-2-2		KDE/KDQ	BDE/BDQ
6.101	Based on type of floor maintenance		
6.101.1	Electrical installation system for dry floor maintenance	X	X
6.102	Based on resistance to vertical loads applied to a small area (approx. Ø 13.34mm ± 0.1)		
6.102.7	Electrical installation system for 3000?N	X	X
6.103	Based on resistance to vertical loads applied to a large area (approx. 4041304mm)		
6.103.3	Electrical installation system for 5000?N	X	X

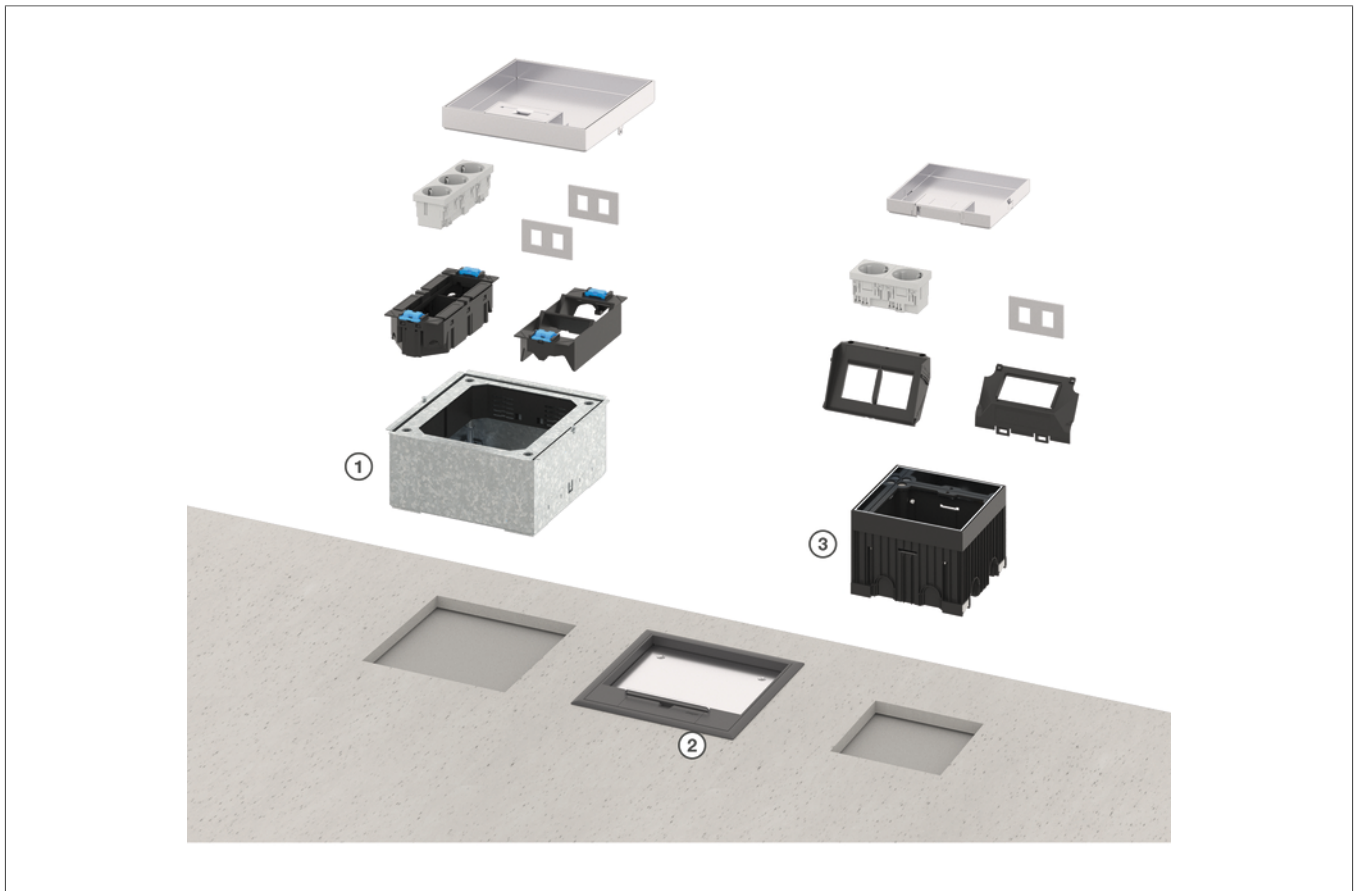
8 UD-ZuHause floor box set

8.1 System description

The family of UD-ZuHause floor box set complete units delivers power, data and multimedia technology to where they are needed. Floor socket outlets and floor tanks in the UD-ZuHause floor box set product family are installed directly on the unfinished floor and connected flexibly with installation tubes.



8.2 Installation principle



- ① UD-ZuHause Q06 floor box set in stainless steel with cable outlet
- ② UD-ZuHause Q06 floor box set in plastic with cable outlet
- ③ UD-ZuHause Q02 floor box set in stainless steel with cable outlet

8.3 Options

Options for UD-ZuHause floor box set, angular

Q02



2x socket outlet Rastec 45 + 2x data module
Installation dimension 145 x 145?mm



Q06



2x socket outlet Rastec 45 + data technology
1x GTVR300 + 1x GTVD200
Installation dimensions 200 x 200?mm



Q12

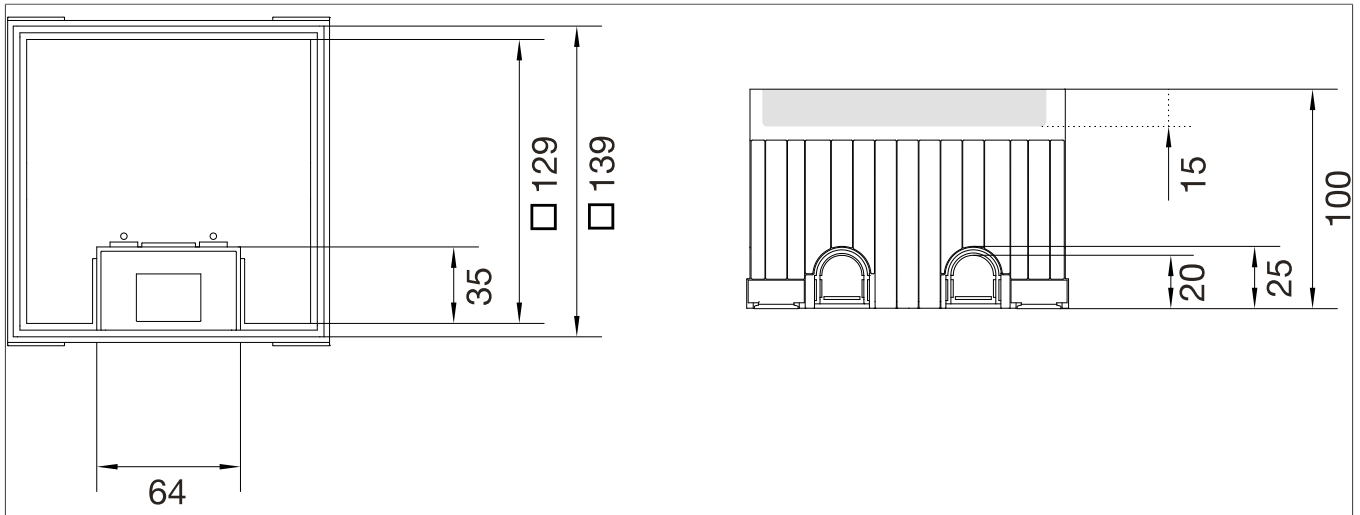


8x socket outlet Rastec 45 + data technology
2x GTVR300 + 1x GTVD200
Installation dimensions 244 x 244?mm



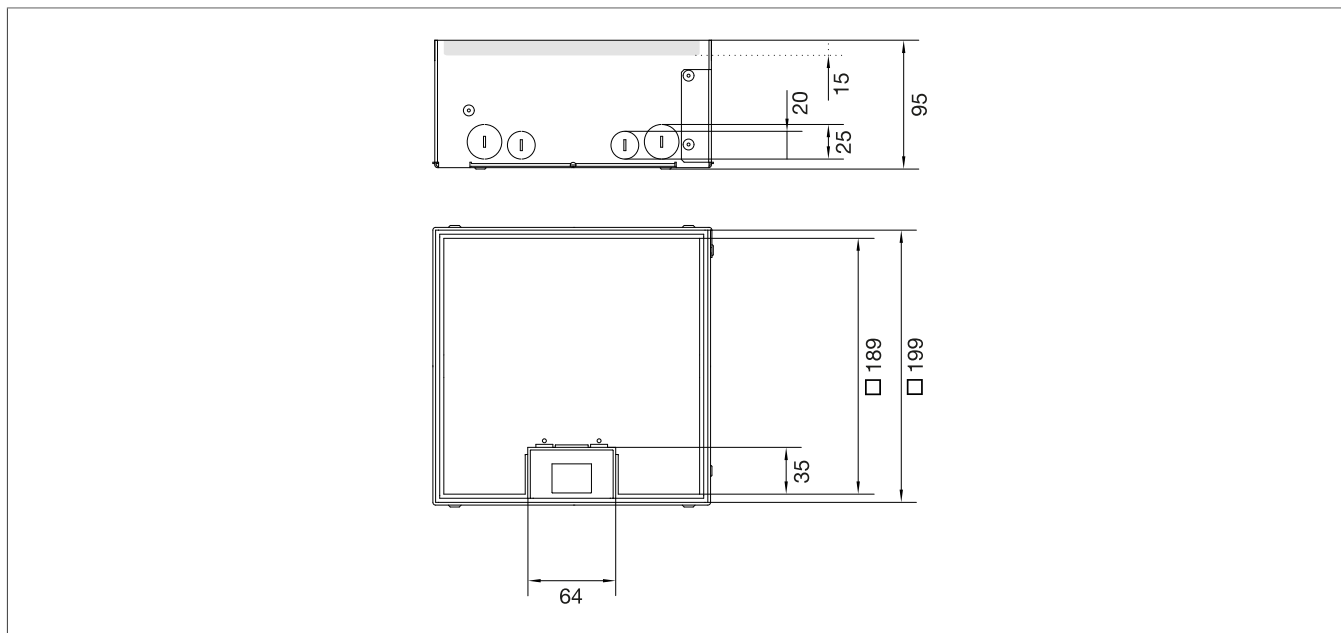
8.4 Installation and system dimensions

Dimension of UD-ZuHause floor box set UDKQ02xx



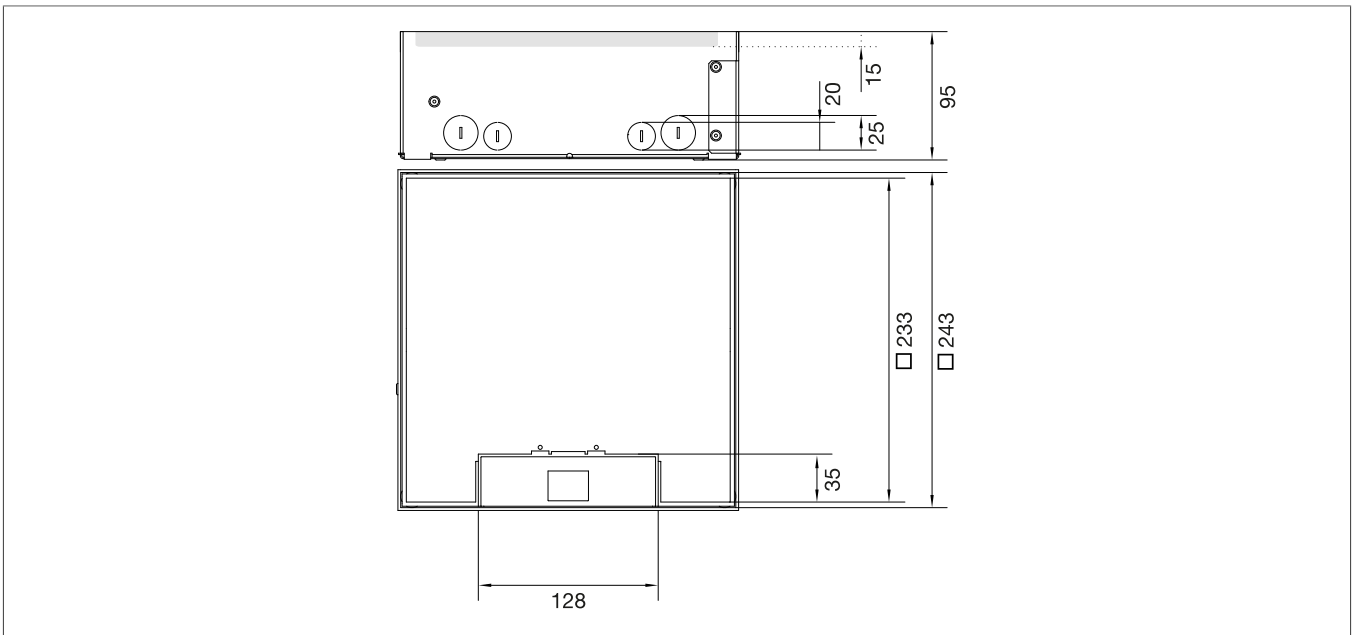
Designation	Nominal size	Depth of covering for	Version	Colour	PU	Weight	Order No.
UD-ZuHause floor box set	Q02	15?mm	Unequipped	Stainless steel	1	1.3 kg	UDKQ02E15U
UD-ZuHause floor box set	Q02	15?mm	Equipped	Stainless steel	1	1.4 kg	UDKQ02E15

Dimension of UD-ZuHause floor box set UDKQ06xx



Designation	Nominal size	Depth of covering for	Version	Colour	PU	Weight	Order No.
UD-ZuHause floor box set	Q06	57mm	Equipped	RAL?9005	1	2.9 kg	UDKQ069005
UD-ZuHause floor box set	Q06	57mm	Equipped	RAL?7011	1	2.7 kg	UDKQ067011
UD-ZuHause floor box set	Q06	157mm	Equipped	Stainless steel	1	3.3 kg	UDKQ06E15

Dimension of UD-ZuHause floor box set UDKQ12xx



Designation	Nominal size	Depth of covering for	Version	Colour	PU	Weight	Order No.
UD-ZuHause floor box set	Q12	128mm	Equipped	Stainless steel	1	4.6 kg	UDKQ12E15

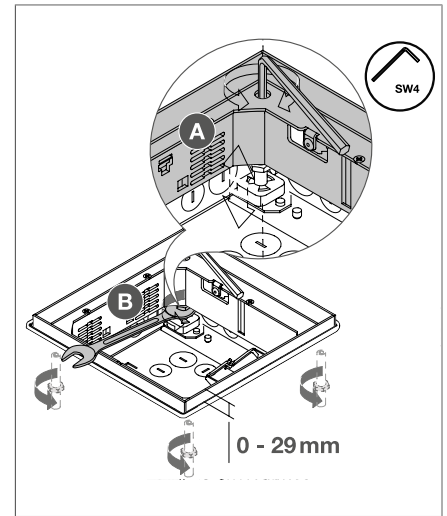
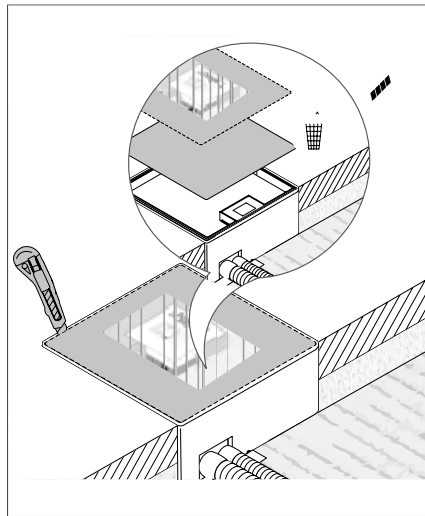
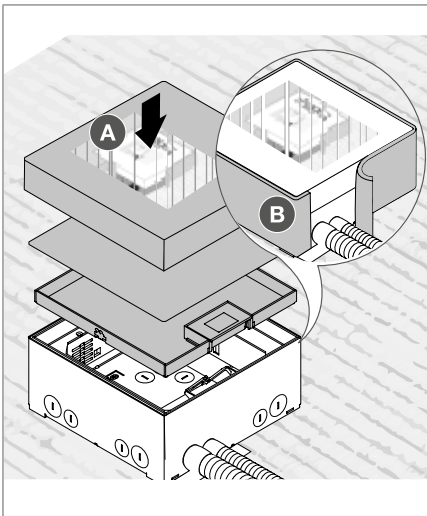
Levelling heights with height expansion

Order No.	Min. levelling height cassette	Max. levelling height cassette	Max. levelling height device socket with height expansion (UDQXH + EKNS*)	Min. levelling height device socket with height expansion
UDKQ02E15	100	121	115	305
UDKQ02E15U	100	121	115	305
UDKQ067011	95	-	110	300
UDKQ069005	95	-	110	300
UDKQ06E15	95	124	110	300
UDKQ12E15	95	124	110	300

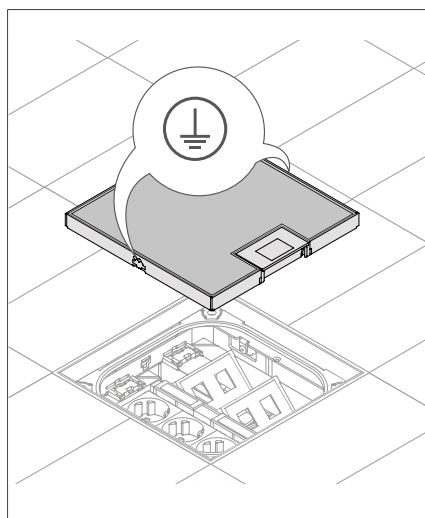
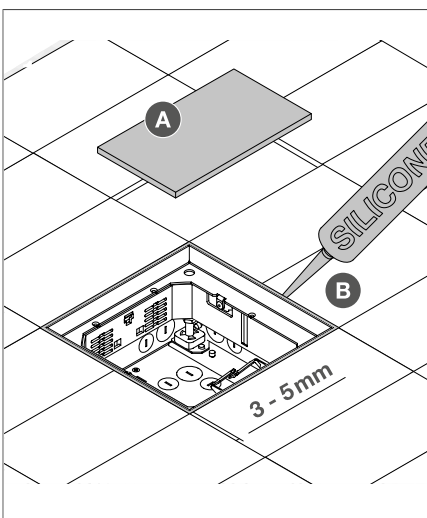
8.5 Installation

The UD-ZuHause floor box set is installed directly on the unfinished floor.

- Orientate the floor box on the unfinished floor, fix it in place and insert installation tubes for power and data cables into the floor box and seal shut to prevent screed from getting inside.
- Lay the insulation, apply the screed layer and remove the screed protective cover.
- Remove the cover and orientate the floor box on the floor covering.



- Once the floor covering has been laid, seal up the floor box and cassette cover with silicone.
- Install the cover.



8.6 Accessories

	Designation	Order No.
	Height extension for UD-ZuHause floor box set Q12	UDQ12H
	Height extension for UD-ZuHause floor box set Q06	UDQ06H
	Height extension for UD-ZuHause floor box set Q02	UDQ02H
	Levelling set L = 60 mm	EKNS060
	Levelling set L = 105 mm	EKNS105
	Levelling set L = 150 mm	EKNS150
	Levelling set L = 1950 mm	EKNS195
	Floor box for casing made of steel for receiving installation units Q12	UDBDQ12
	Floor box for casing made of steel for receiving installation units Q06	UDBDQ061

8.7 Normative information

Classification according to EN 50085-1		UDKPQ06	UDKPQxxE
6.2	Based on impact resistance for installation and application		
6.2.4	Cable trunking and ducting systems for impact energy of 5?J	X	
6.2.5	Cable trunking and ducting systems for impact energy of 20?J		X
6.3	Based on temperature		
Tab.1	Minimum storage and transport temperatures +/-2°C -15°C	X	X
Tab. 2	Minimum installation and application temperatures +/-2°C -5°C	X	X
Tab. 3	Maximum application temperatures +/-2°C +60°C	X	X
6.4	Based on resistance to flame propagation		
6.4.2	Non-flame propagating cable trunking and ducting systems	X	X
6.5	Based on electrical conductivity		
6.5.1	Cable trunking and ducting system with electrical conductivity		X
6.5.2	Cable trunking and ducting system without electrical conductivity	X	
6.6	Based on electrical insulating properties		
6.6.1	Cable trunking and ducting system without electrical insulating properties		X
6.6.2	Cable trunking and ducting system with electrical insulating properties	X	
6.7	Based on degrees of protection afforded by housing/casing in accordance with EN460529:1991		
	IP20 connection units in use	X	X
	IP30 connection units not in use	X	X
	IP30 access units	X	
6.8	Protection against corrosive or contaminating substances		
6.8.3	Cable trunking and ducting systems with moderate external and internal protection		X
6.9	Based on fastening type for system trunking cover		
6.9.2	The trunking cover of the cable trunking and ducting system should only be opened with a tool	X	X
6.10	Based on electrical protection separation		
6.10.1	Cable trunking and ducting systems without an internal protective separation element	X	X
Classification according to EN 50085-2-2		UDKPQ06	UDKPQxxE
6.101	Based on type of floor maintenance		
6.101.1	Electrical installation system for dry floor maintenance	X	X
6.102	Based on resistance to vertical loads applied to a small area (approx. Ø 13.34mm ± 0.1)		
6.102.7	Electrical installation system for 3000?N	X	X
6.103	Based on resistance to vertical loads applied to a large area (approx. Ø41304mm)		
6.103.3	Electrical installation system for 5000?N	X	X

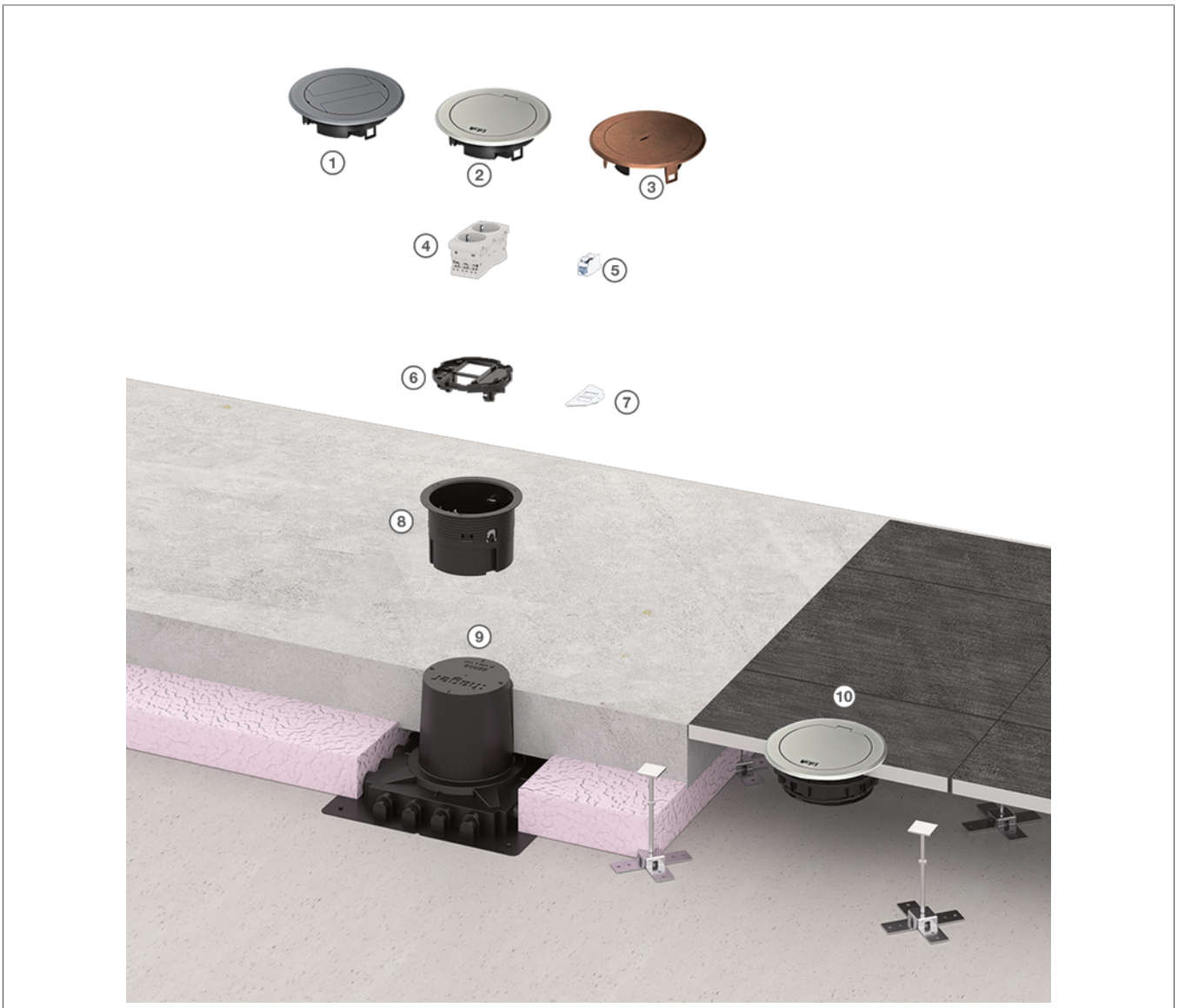
9 Floor socket outlets

9.1 System description

Providing a flexible power and data supply in large rooms is a real challenge. The new floor socket outlets meet this challenge with a robust design, discreet appearance, and flexible connection options. Their high load capacity and degree of protection also make these sockets ideal for floors in high-traffic zones or places that are subject to heavy loads requiring dry or wet cleaning. Their attractive options of covers and colours offer a maximum range of applications. One mounting system for all floor types simplifies installation efforts. You will find the right connection for any flooring with our new floor socket outlets.



9.2 Installation principle



- ① Plastic hinged cover for BSR02 with dual cable outlet
- ② Metal hinged cover for BSR02 silver
- ③ Metal tube outlet cover for BSR02 aged copper
- ④ 2-gang socket outlet
- ⑤ Keystone modules
- ⑥ Device carrier for power and data technology
- ⑦ Mounting plate for keystone modules
- ⑧ Installation box for BSR02
- ⑨ Casing element
- ⑩ Cable outlet LAR02

9.3 Options

R02

2x socket outlet Rastec
45
2x data module
Installation dimension Ø
122 mm



Cable outlet

Plastic
IP30
0.5 / 5 kN



Cable outlet

Metal
IP54
3 / 15 kN



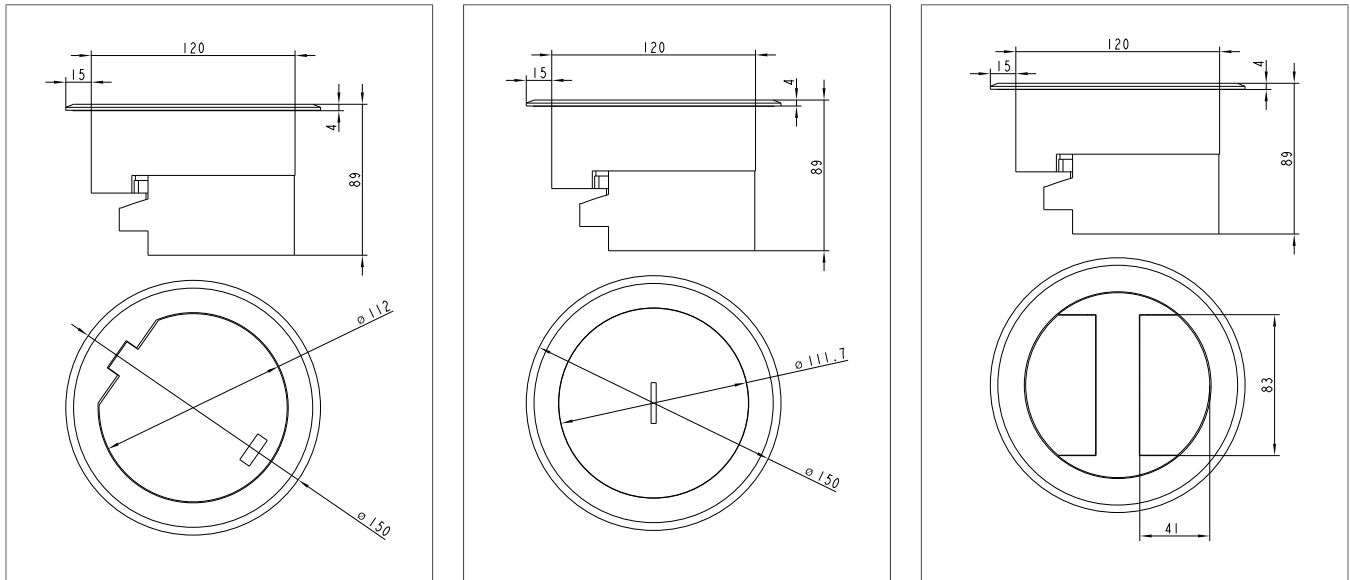
Tube outlet

Metal
IP54
3 / 15 kN



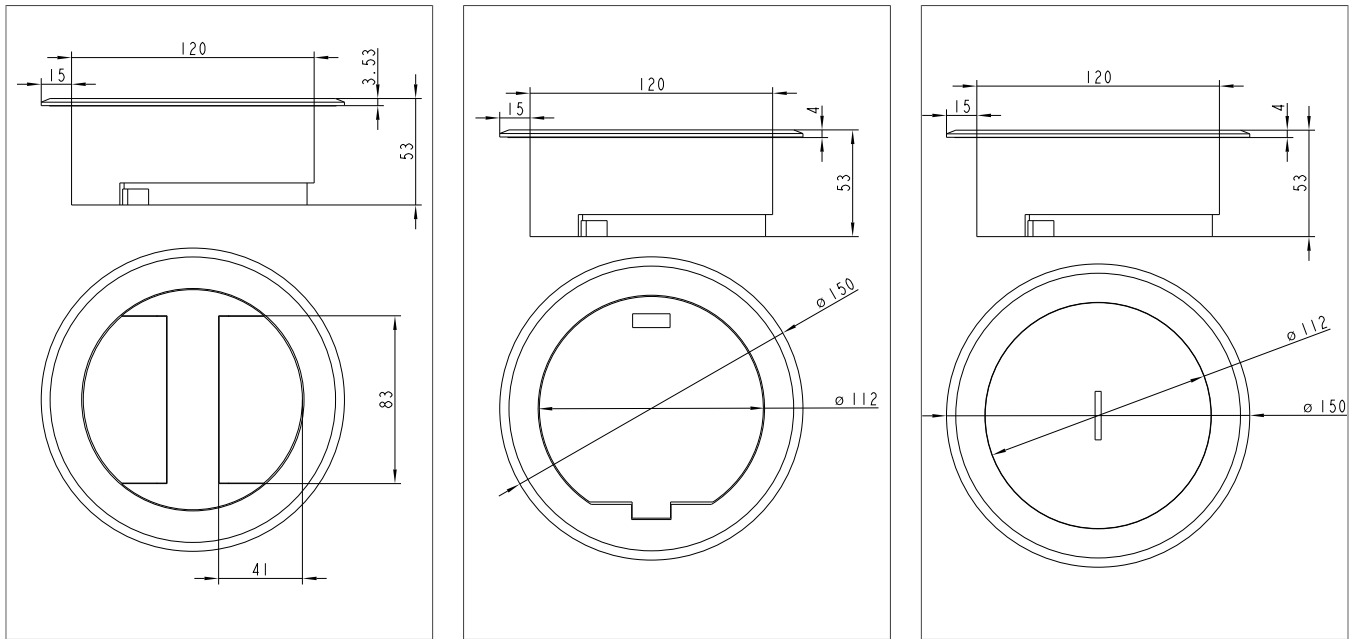
9.4 Installation and system dimensions

Dimensions of BSR02 floor socket outlets



Designation	Material	Nominal size	Version	Colour	PU	Weight	Order No.
Floor socket outlet set	Metal	R02	Hinged cover	Silver	1	0.9 kg	BSR02D01
Floor socket outlet set	Metal	R02	Tube outlet	Silver	1	0.9 kg	BSR02D02
Floor socket outlet set	Plastic	R02	Hinged cover	RAL?9005	1	0.5 kg	BSR02D03

Dimensions of LAR02 cable outlet



Designation	Material	Nominal size	Version	Colour	PU	Weight	Order No.
Cable outlet with blank cover for floor covering, clamping range > 32?mm	Plastic	R02	Blank cover	Iron grey	1	0.3 kg	LAR02K-B7011
Cable outlet with blank cover for floor covering, clamping range > 32 mm	Plastic	R02	Blank cover	Jet black	1	0.3 kg	LAR02K-B9005
Cable outlet with plastic hinged cover, clamping range > 32?mm	Plastic	R02	Hinged cover	Iron grey	1	0.2 kg	LAR02KK7011
Cable outlet with plastic hinged cover, clamping range > 32 mm	Plastic	R02	Hinged cover	Jet black	1	0.2 kg	LAR02KK9005
Cable outlet with round-chain connection, clamping range > 32?mm	Plastic	R02	Round-chain connection	Iron grey	1	0.1 kg	LAR02KR7011
Cable outlet with round-chain connection, clamping range > 32 mm	Plastic	R02	Round-chain connection	Jet black	1	0.1 kg	LAR02KR9005

Designation	Material	Nominal size	Version	Colour	PU	Weight	Order No.
Cable outlet with metal hinged cover, clamping range > 32?mm	Metal	R02	Hinged cover	Silver	1	0.7 kg	LAR02MKS
Cable outlet with metal hinged cover, clamping range > 32 mm	Metal	R02	Tube outlet	Silver	1	0.7 kg	LAR02MTS

9.5 Installation

The floor socket outlets can be installed in two different ways.

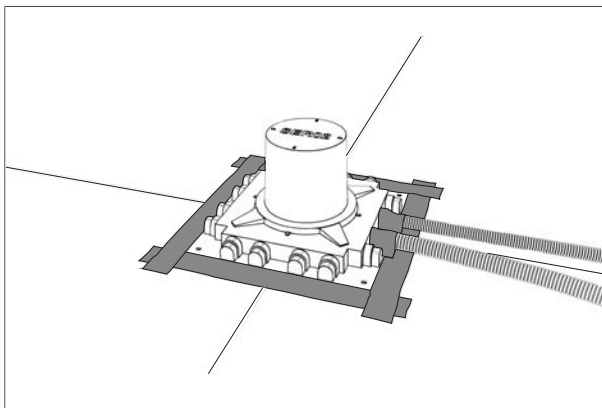
- Installation in screed
- Installation in system floors

9.5.1 Installation in screed

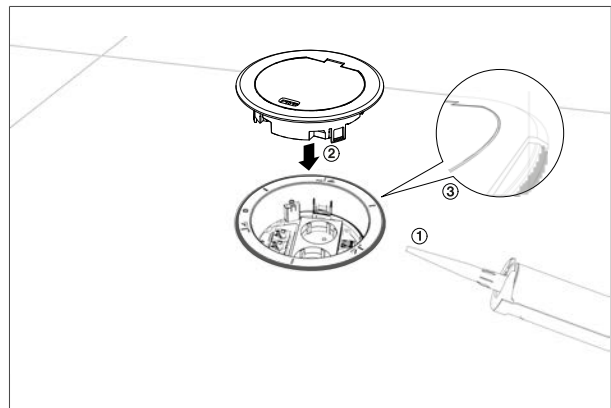
A number of requirements must be met to install the floor socket outlet in screed. Floor socket outlets may only be installed in screed-covered trunking systems directly by special request.

- ☑ The SER02 casing element has already been installed.
- ☑ The screed-covered trunking system UK or the installation tubes have been connected to the casing element.
- ☑ The insulation has been laid properly.
- ☑ The screed has been fully poured and can be walked on.
- ☑ The casing element has been cut open.
- ☑ The floor covering has been laid and cut out.

- Orientate the casing element on the unfinished floor and connect it to the UK trunking or installation tubes and pour the screed. Lay the floor covering and make a cut.

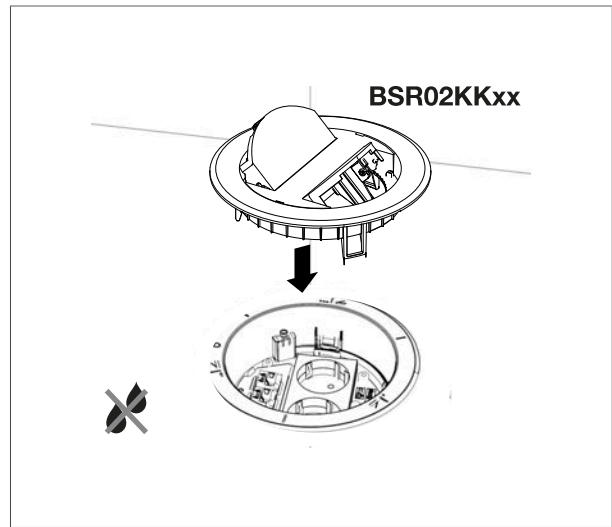
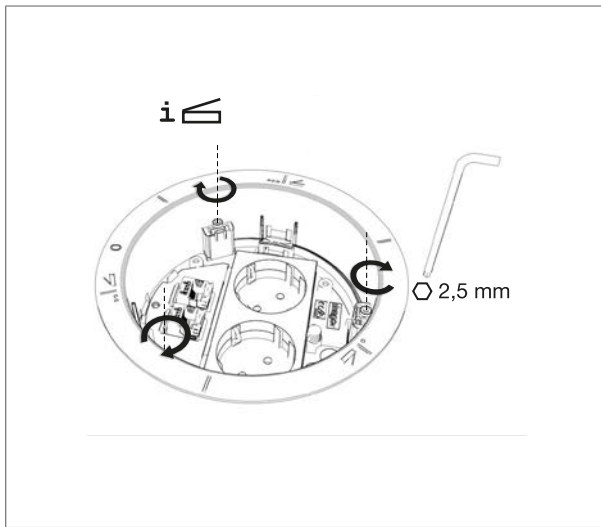


- If necessary, seal up the installation box with silicone and fit it in the installation opening. Orientate the installation box according to the room conditions.



- Fix the installation box in place. Tighten the inside screws of the fastening kit.

- Attach the cover to the installation box, noting the position of the hinged opening of the cover.



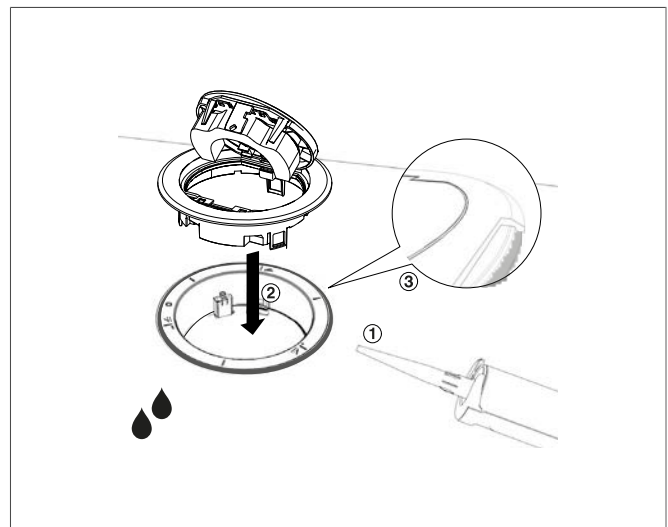
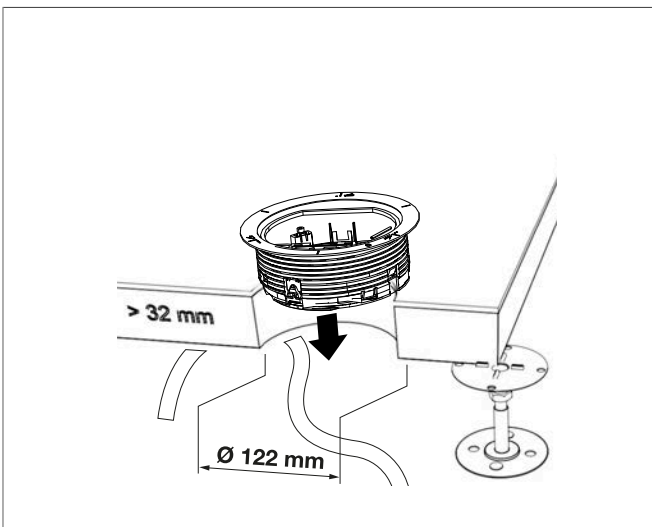
9.5.2 Installation in system floors

A number of requirements must be met to install the floor socket outlets in raised floor systems.

- ☑ The installation opening in the raised floor panel has been cut out.
- ☑ The floor covering has been laid and cut to size.

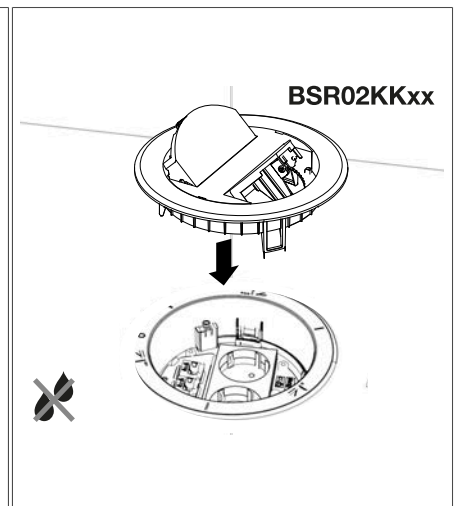
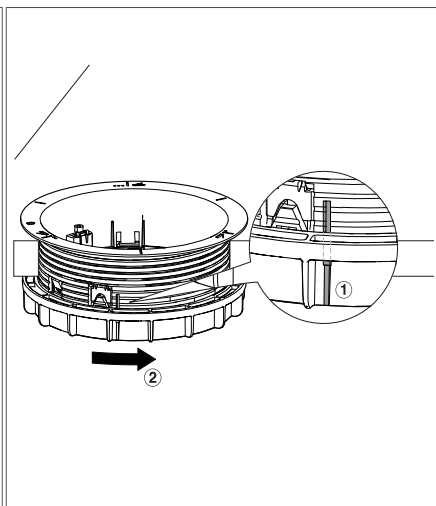
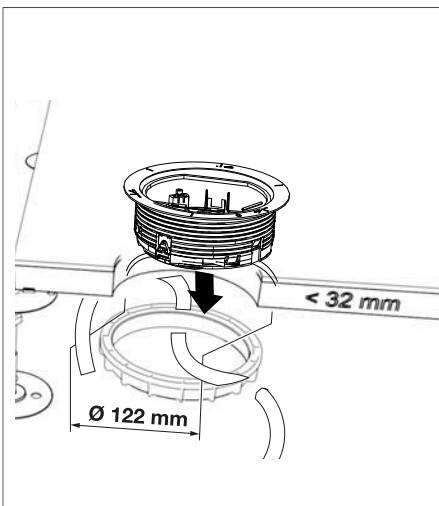
Install the floor box in the floor panel with a thickness > 324mm.

- Check the dimension of the installation opening. The dimension of the installation opening may have a tolerance of + 1mm. Place the installation box in the installation opening.
- If necessary, seal up the installation box with silicone and fit it in the installation opening. Orientate the installation box according to the room conditions. Note the position of the hinged opening of the cover. Install the cover.










Install the floor box in the floor panel with a thickness < 324mm.

- Check the dimension of the installation opening. The dimension of the installation opening may have a tolerance of + 1 mm. Place the installation box in the installation opening.
- If necessary, seal up the installation box with silicone and fit it in the installation opening and fix it on the floor panel with the clamping ring.
- Install the cover and orientate the hinged opening of the cover according to the room conditions.



9.6 Accessories

	Designation	Order No.
	Installation box 2 x 45 for BS R02	BSR02D
	Metal hinged cover for BSR02 aged copper	BSR02MKK
	Metal hinged cover for BSR02 aged brass	BSR02MKM
	Metal hinged cover for BSR02 silver	BSR02MKS
	Plastic hinged cover for BSR02 iron grey	BSR02KK7011
	Plastic hinged cover for BSR02 jet black	BSR02KK9005
	Metal tube outlet for BSR02 aged copper	BSR02MTK
	Metal tube outlet for BSR02 aged brass	BSR02MTM
	Metal tube outlet for BSR02 silver	BSR02MTS
	Mounting plate type 01, 19.3x14.8 2-gang	BSM012
	Mounting plate type 03, 19.5x14.85 2-gang	BSM032
	Mounting plate type 05, 20.1x14.8 2-gang	BSM052
	Mounting plate type 030, 12.8x21 1-gang	BSM301
	Installation box ring for < 32mm	BSR02R
	2-gang socket outlet, 33° 16A/250V Rastec 45 pw	ESR2339010
	2-gang socket outlet, 33° 16A/250V Rastec 45 ro	ESR2332004
	2-gang socket outlet, 33° 16A/250V Rastec 45 mgr	ESR2336029
	Casing element R02 H = 155mm	SER02

9.7 Normative information

Classification according to EN 50085-1		BSR02D01 BSR02MKxx LAR02MKxx	BSR02D02 BSR02MTxx LAR02MTxx	BSR02D03 BSR02KKxx LAR02KKxx	LAR02KBxx
6.2	Based on impact resistance for installation and application				
6.2.3	Cable trunking and ducting systems for impact energy of 2?J			X	
6.2.4	Cable trunking and ducting systems for impact energy of 5?J				X
6.2.5	Cable trunking and ducting systems for impact energy of 20?J	X	X		
6.3	Based on temperature				
Tab. 1	Minimum storage and transport temperatures +/-2°C				
	-15°C	X	X	X	X
Tab. 2	Minimum installation and application temperatures +/-2°C				
	-5°C	X	X	X	X
Tab. 3	Maximum application temperatures +/-2°C				
	+60°C	X	X		
6.4	Based on resistance to flame propagation				
6.4.2	Non-flame propagating cable trunking and ducting systems	X	X	X	X
6.5	Based on electrical conductivity				
6.5.1	Cable trunking and ducting system with electrical conductivity	X	X		
6.5.2	Cable trunking and ducting system without electrical conductivity	X		X	
6.6					
6.6.1	Cable trunking and ducting system without electrical insulating properties	X	X		X
6.6.2	Cable trunking and ducting system with electrical insulating properties			X	
6.7	Based on degrees of protection afforded by housing/casing in accordance with EN?60529:1991				
	IP20 connection units in use	X	X	X	
	IP30 connection units not in use			X	
	IP67 connection units not in use		X		X
6.8	Protection against corrosive or contaminating substances				
6.8.3	Cable trunking and ducting systems with moderate external and internal protection	X	X	X	X
6.9	Based on fastening type for system trunking cover				
6.9.2	The trunking cover of the cable trunking and ducting system should only be opened with a tool.	X	X	X	X
6.10	Based on electrical protection separation				
6.10.1	Cable trunking and ducting systems without an internal protective separation element	X	X	X	X

Classification according to EN 50085-2-2		BSR02D01 BSR02MKxx LAR02MKxx	BSR02D02 BSR02MTxx LAR02MTxx	BSR02D03 BSR02KKxx LAR02KKxx	LAR02KBxx
6.101	Based on type of floor maintenance				
6.101.1	Electrical installation system for dry floor maintenance	X	X	X	X
6.101.2	Electrical installation system for wet-cleaning of floors when the connection unit is not in use		X		
6.101.3	Electrical installation system for wet-cleaning of floors when the connection unit is not in use		X		
6.102	Based on resistance to vertical loads applied to a small area (approx. 13.34mm ± 0.1)				
6.102.1	Electrical installation system for 500?N			X	
6.102.5	Electrical installation system for 2000?N				X
6.102.7	Electrical installation system for 3000?N	X	X		
6.103	Based on resistance to vertical loads applied to a large area (approx. 1304mm)				
6.103.3	Electrical installation system for 5000?N			X	X
6.103.5	Electrical installation system for 15000?N	X	X		



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