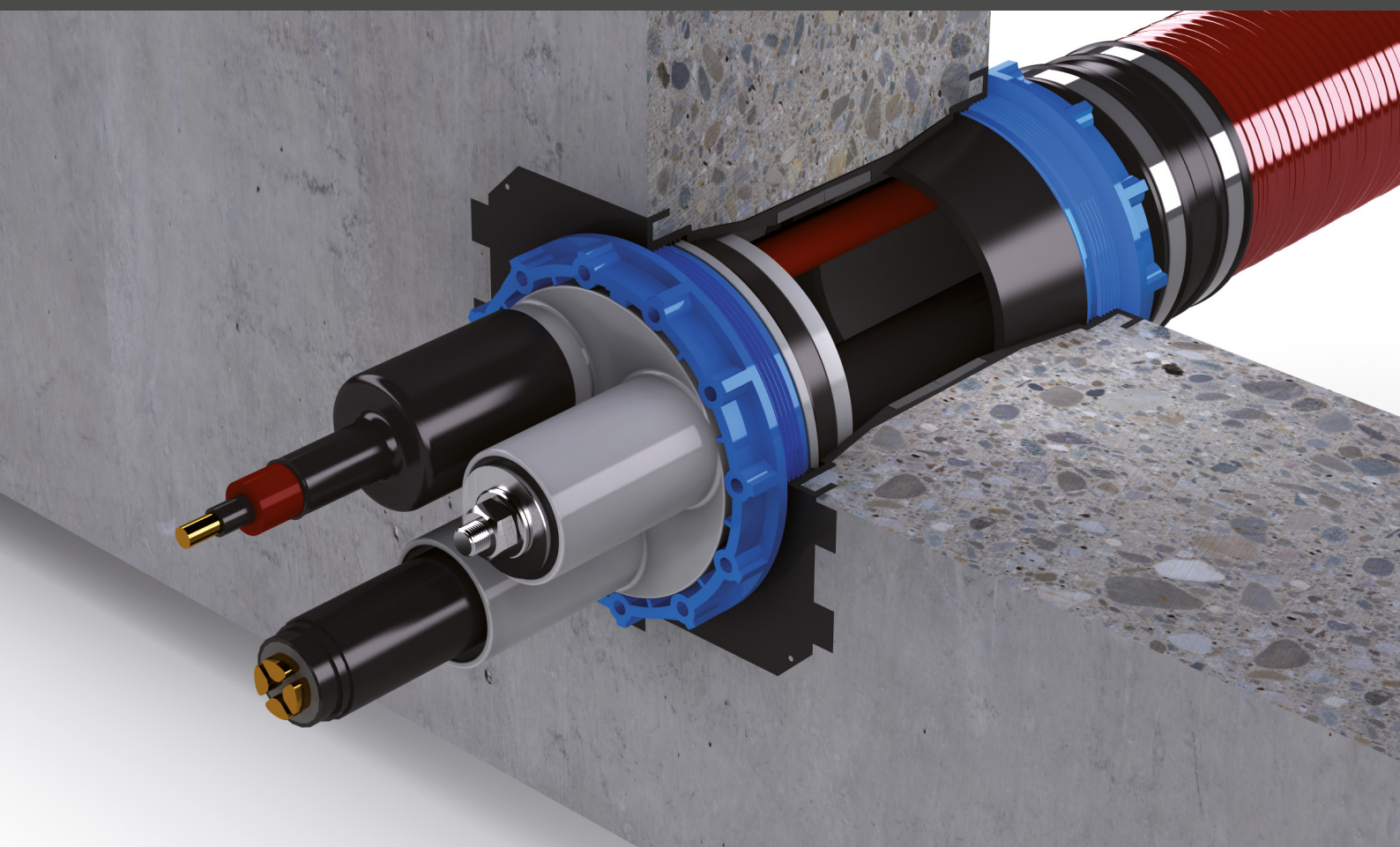


KD 110

Cable entry



24 hour delivery
service

Quality
guarantee



Worldwide sales
network

Service hotline
+49 7324 9696-33

Systematic sealing

The KD 110 system from UGA

Service hotline
+49 7324 9696-33

The KD 110 system is a tried and tested cable entry with an inside diameter of 110 mm. With minimal installation effort, the KD 110 wall insert seals safely against pressurised water. The system offers numerous connection options and is compatible with other entry systems. Thermal shrink sleeves TM are supplied with the system covers as standard.

Optionally, cold shrink sleeves KS are available.

► The benefits of the KD 110 system

- Immediately gas and water pressure-tight
- Perfect, reliable sealing
- Suitable for hot and cold shrink technology
- Lots of variants and connection options
- Variable assembly in batteries

► Processing instructions

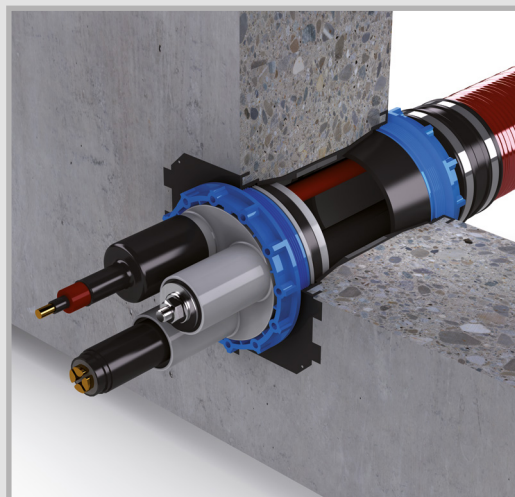
The wall insert is fastened with pin nails and concreted into the formwork. Nail holes are provided in the wall insert for fastening. In order to prevent blowholes, the wall insert must be completely encased in concrete. In the case of single wall inserts, the direction of installation must be determined before concreting.

The wall inserts are suitable for waterproof concrete stress class 1 and 2.

► One system for all cases

The KD 110 system always offers the right variant for the changing requirements on construction sites. Single, double, angular and wall inserts are available as well as various system covers, cable protection systems KSS and connection sleeves.

The UGA collar technology makes it possible to connect all types of pipes and hoses to the KD 110 system.



System cover



Cable protection system KSS

KD 110 system

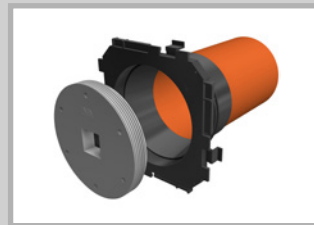
Wall inserts

► Immediately tight and protected

We manufacture our wall inserts in length to match the wall thickness. Each wall insert comes with a gas and water pressure-tight cover. This keeps the interior clean during installation, and the wall insert is immediately gas and water pressure-tight after encasing in concrete.

► Permanent connection to concrete

The wall insert is equipped with a sealing system. It guarantees a permanent connection to the concrete. This ensures excellent water pressure resistance.



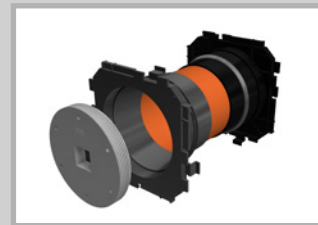
Single wall insert

Suitable for one-sided connection of a system cover or KSS system;
Can be used from 80 mm wall thickness;
The direction of installation must be specified!

Product name:

KD110-K/(L)

(L) = Wall thickness in mm



Double wall insert

Suitable for connecting a system cover or KSS system on both sides;
Can be used from 140 mm wall thickness

Product name:

KD110-K2/(L)

(L) = Wall thickness in mm



Single wall insert with pipe connection sleeve

Suitable for one-sided connection of a system cover or KSS system; opposite side to the direct connection of a smooth-walled cable protection pipe with 110, 125 or 160 mm outside diameter; minimum wall thickness 200 mm

Product name:

KD110-K-SM/(L)

Also available as single wall insert with pipe connection sleeve in collar technology

Product name:

KD110-K-MA115/(L)

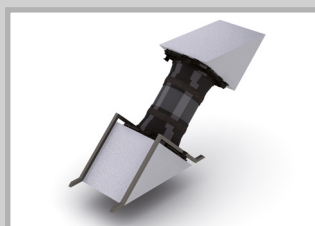
KD110-K-MA125/(L)

(L) = Wall thickness in mm

Clamping ranges:

115 = 100 mm - 115 mm

125 = 110 mm - 125 mm



Angular wall insert

Suitable for cables fitted at angles of 30°, 45° or 60°;
With auxiliary frame and styrofoam wedge; Single or double wall insert also available in batteries;
Minimum wall thickness 250 mm

Angular single wall insert:

Product name:

KD110-K-S30/(L)

KD110-K-S45/(L)

KD110-K-S60/(L)

Angular double wall insert:

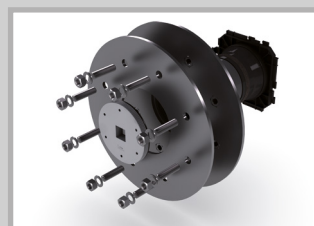
Product name:

KD110-K2-S30/(L)

KD110-K2-S45/(L)

KD110-K2-S60/(L)

(L) = Wall thickness in mm



Stainless steel wall insert

Suitable for sealing in accordance with DIN 18533 (fixed/loose flange design for black trough); Double-sided connection of a system cover or KSS system possible;
Also available in a battery (flange plate);

Minimum wall thickness 140 mm

Product name:

KD110-K2-F+L-W2/(L)/V2A

Pressurised water

Flange diameter fixed flange

450 mm

Product name:

KD110-K2-F+L-W1/(L)/V2A

Non-pressurised water

Flange diameter fixed flange

270 mm

(L) = Wall thickness in mm

Configuration table for conical system insert WE

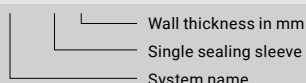
Number of drilled holes	D max. Ø	Order number
1 drilled hole	up to 110 mm	KD 110-E-WE/1x(D)
3 drilled holes	up to 48 mm	KD 110-E-WE/3x(D)
5 drilled holes	up to 36 mm	KD 110-E-WE/5x(D)
7 drilled holes	up to 32 mm	KD 110-E-WE/7x(D)
9 drilled holes	up to 26 mm	KD 110-E-WE/9x(D)
13 drilled holes	up to 21 mm	KD 110-E-WE/13x(D)
19 drilled holes	up to 18 mm	KD 110-E-WE/19x(D)
28 drilled holes	up to 14 mm	KD 110-E-WE/28x(D)

(D) = Measured cable outside diameter in mm

Product index for KD 110 (examples)

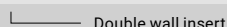
Single wall insert

KD110-K/(L)



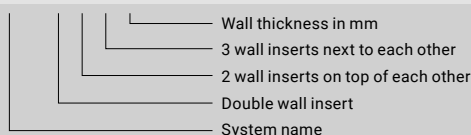
Double wall insert

KD110-K2/(L)



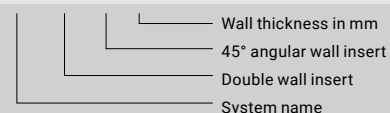
Double wall insert as a 2 x 3 battery set

KD110-K2/2x3/(L)



45° angular wall insert as a double wall insert

KD110-K2-S45/(L)



KD 110 system cover and other connection options

► One connection, lots of possibilities

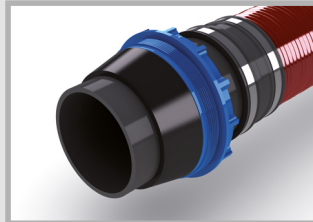
A system cover with connection pieces or sleeves as well as a KSS cable protection system can be connected to the KD 110 wall insert.

► Handling

With the aid of an installation wrench, system cover and cable protection system are inserted before laying the cables. Unoccupied system cover connection pieces can be sealed with sealing plugs VS and are thus available for retrofitting and changing cables.

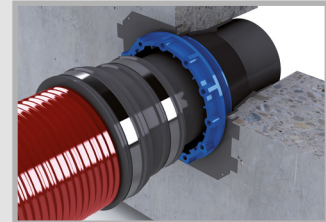
► Cold or hot shrink technology

In the standard version, we supply system covers with thermal shrink sleeves TM. Optionally, cold shrink sleeves KS are available.



Cable protection system KSS

UGA cable protection hoses are available in four diameters with a wide range of connection elements; To connect to the KD 110 wall insert, use the KSS 110 cable protection system; For more information, see the section on KSS systems.



Collar technology

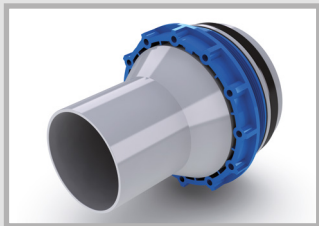
Suitable for flexible connection of pipes or cable protection systems to a wall insert; Compatible with all wiring protection systems; main area of application: Connection of KSS systems

Product name:

KD110-K-MA(D1)-(D2)

(D1) = Lower scope of application

(D2) = Upper scope of application

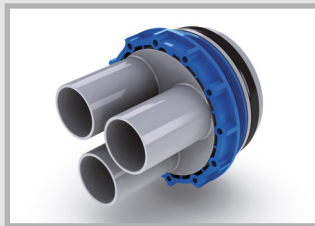


System cover with one connection piece and one thermal shrink sleeve TM

Version for a cable with a diameter of 26 – 78 mm

Product name:

KD110-D-1/80-TM

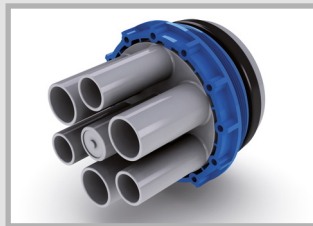


System cover with three connection pieces and three TM thermal shrink sleeves

Suitable for three cables with diameter 16 – 44 mm; Various AK spreader caps or VS 46 sealing plugs are available as accessories

Product name:

KD110-D-3/46(3/3)-TM



System cover with seven connection pieces and six TM thermal shrink sleeves

One connection piece is supplied closed and can be opened if necessary; Suitable for max. four cables with a diameter of 7-23 mm and max. four cables with a diameter of 7-30 mm; Various AK spreader caps or VS25 or VS32 sealing plugs are available as accessories

Product name:

KD110-D-7/32(3/3)/25(4/3)-TM



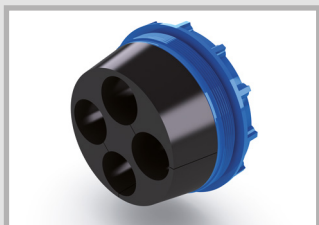
System cover closed

Blind cover for unoccupied wall inserts;

This system cover is included in the scope of delivery of each wall insert.

Product name:

KD110-D

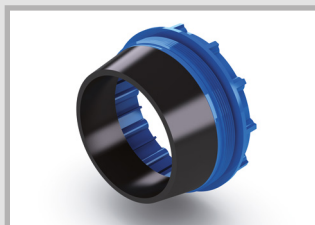


Conical system insert WE

For sealing cables; After laying the cable, fold the rubber insert around the cable and push it into the wall insert; Tighten the split cap nut with the articulated spanner GSS; When ordering, please specify the number of cables and cable diameter. See configuration table (page 3)

Product name:

**KD110-E-WE/EPDM
(Z)x(D)**



Conical system insert DGM

Made from high-quality EPDM rubber; For connection of a cable protection pipe with outside diameter of 110 mm;

Product name:

KD110-D-DGM110



System cover with collar

For connection of a cable protection pipe with outside diameter of 75, 89, 115, 125 mm; Intermediate sizes on request

Product name:

**KD110-D-MA65-75
KD110-D-MA75-89
KD110-D-MA100-115
KD110-D-MA115-125**

Accessories



3-finger AK spreader caps

Hot shrink technology for sealing three cables in one system cover connection piece

Product name:

AK35/3F/2-12

for system cover KD110-D-7/32/25; Suitable for cables with an outside diameter of 2 - 11 mm

Product name:

AK50/3F/5-22

for system cover KD110-D-3/46; Suitable for cables with an outside diameter of 5 - 21 mm



4-finger AK spreader caps

Hot shrink technology for sealing four cables in one system cover connection piece

Product name:

AK35/4F/2-13

for system cover KD110-D-7/32/25; Suitable for cables with an outside diameter of 2 - 12 mm

Product name:

AK50/4F/5-20

for system cover KD110-D-3/46; Suitable for cables with an outside diameter of 5 - 19 mm



Sealing plug VS

For sealing unoccupied system cover connection pieces; Can be quickly removed for retrofitting and changing cables; Versions available for connection pieces with diameters of 25, 32 or 46 mm.

Product name:

VS25 / VS32/34 / VS46



Cold-shrink sleeve KS

For easy and fast assembly without aids, in all weather conditions; 2 bar gas and watertight; Available for all system covers.

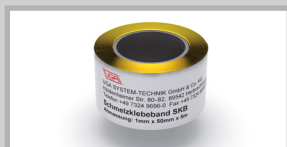


Articulated spanner GSS

For the assembly of all system covers and KSS systems; With adjustable leg

Product name:

GSS



Melt-type adhesive tape SKB

Cold welding tape with very good adhesive properties for sealing and for corrosion protection; Ideal for wrapping around cables and pipes to enlarge the diameter for shrinking; Suitable for all plastics and metals; Thickness: 1 mm, width: 50 mm roll length: 3.00 m

Product name:

SKB



Cable cleaner KR

For environmentally friendly cleaning of cables of all kinds, even in the case of stubborn contamination; Odourless and residue-free evaporation; 500 ml spray bottle and 1,000 ml bottle; Density at 20°C: 0.764 g/cm³ Flash point: > 61°C Evaporation number: 60

Identification: X_n

Product name:

KR/1-litre

Assembling in batteries

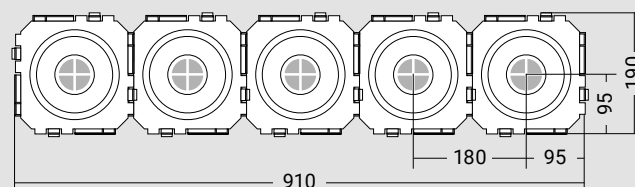
► Variable assembling in batteries

Individual wall inserts can be placed side by side and one above the other.

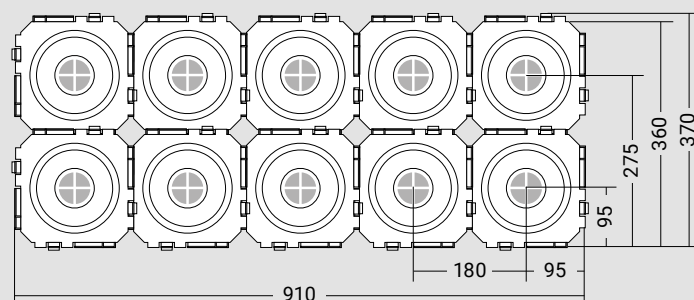
► Safety at a glance

Assembling in batteries creates central inspection windows that allow you to subsequently check concrete compaction.

KD110-K2/1x5/(L)

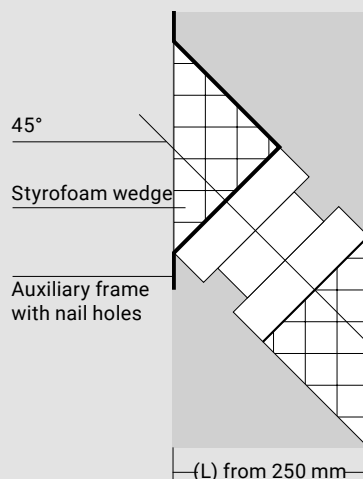


KD110-K2/2x5/(L)



Angular wall insert

Sectional view, 45° angular double wall insert



Tested tightness

The Fraunhofer Gesellschaft Bremen (IFAM) carried out these tests with the KD 110 system:

- Gas tightness with air at an overpressure of 1 bar
- Gas tightness with helium at an overpressure of 5 bar
- Water pressure tightness at an overpressure of 5 bar
- Cold water pressure tightness at an overpressure of 5 bar and -27°C
- Destruction test



The KD 110 wall insert was tested in conjunction with the system cover closed (KD110-D), with the system covers (KD110-D-1/80) and (KD110-D-3/46), as well as with the system insert (KD110-E-WE/3x32). The cold water pressure tightness was tested using the system cover (KD110-D-3/46).

► Results

The KD 110 system achieved excellent test results in terms of gas and water pressure resistance, which far exceeded the required values in practice.

• Gas tightness

The partial pressure immediately after the test setup was 5.4×10^{-6} mbar. This is an excellent value as the partial pressure of helium in the air is approx. 4.8×10^{-6} mbar.

• Water pressure tightness

There was no leakage of liquid.

• Destruction test

KD110-D (system cover closed)	5.00 bar
KD110-D-1/80	20.24 bar
KD110-D-3/46	19.28 bar
KD110-E-WE/3x32	12.37 bar