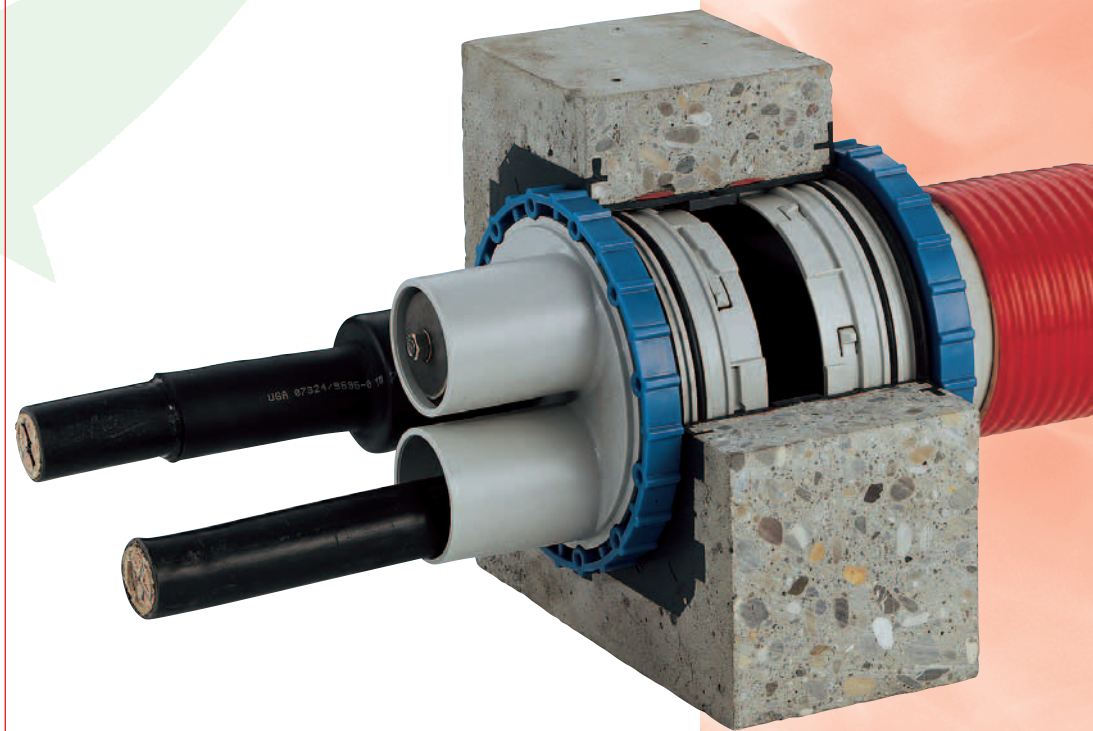




## Bushings to a system



*Universal entrance possibilities  
for cables and pipes.  
Perfect in its system,  
safe down to the last detail.*

**UGA**<sup>®</sup>

SYSTEM-TECHNIK

*Leading  
in ideas*

# Cable Bushings to a Intelligent and Economic!

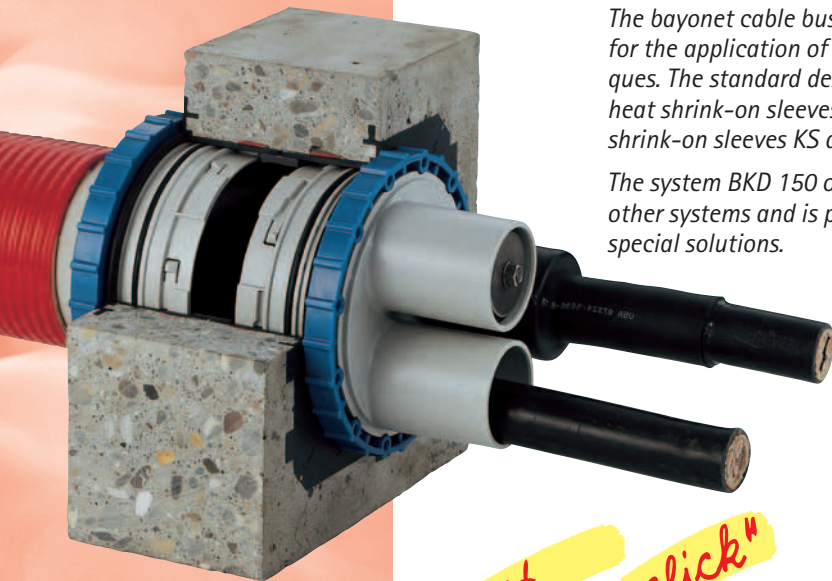
## The UGA cable bushings BKD and KD

### System BKD 150

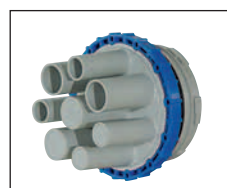
System BKD 150 fulfils highest requirements. Due to its bayonet catch it offers a technology for quick and easy installation which is finished with only 1/12 turn.

The bayonet cable bushing BKD 150 is suitable for the application of various sealing techniques. The standard design is supplied with heat shrink-on sleeves. As an option, cold shrink-on sleeves KS are also available.

The system BKD 150 offers compatibility with other systems and is prepared for numerous special solutions.



*just "click" and go*



Both system KD and system BKD 150 are equipped with suitable system covers with 1, 3, and 8 connection pieces.

Cable bushing systems BKD and KD consist of a sealing collar which is designed as single or double collar and can be assembled into packages by means of the frames around the collar to be imbedded flush into the concrete of the formwork.

Sealing collars will be supplied fitting to the wall thickness of the structural works and are inserted flush into the formwork.

The cable bushings are provided with protective foils and sealing caps. Thus the interior of the sealing collar stays clean during installation and is gas- and watertight immediately after concreting (BKD 150, KD 150, KD 85).

For a detailed description of the systems ask for our corresponding individual prospects.

Please do not hesitate to contact us if you have special applications and requirements. Our technical department will always find the right solution for your problem.

- ▶ Universal entrance possibilities for all cables and pipes
- ▶ Sealing by shrinkage and rubber technology.
- ▶ Immediately gas- and watertight (KD 85, KD 150, and BKD 150).
- ▶ Easy installation and secure connection of cable protection systems (KSS).
- ▶ Complete system of covers, heat and cold shrink-on sleeves with accessory available.
- ▶ Sealing collar safe against tear out due to wall anchor.
- ▶ Edges chamfered to prevent damages to the cable sheath when drawing in the cables
- ▶ Environment-friendly and chemically resistant materials

### Technical Data of Systems BKD and KD

No. of connection pieces	BKD 150		KD 150		KD 110		KD 85	
	inside dia.	order no.	inside dia.	order no.	inside dia.	order no.	inside dia.	order no.
0 (blind)	-	BKD 150-D	-	KD 150-D	-	KD 110-D	-	KD 85-D
1	110	BKD 150-D1/110	110	KD 150-D1/110	100	KD 110-D1/100	75	KD 85-D1/75
1	80	BKD 150-D1/80	80	KD 150-D1/80	80	KD 110-D1/80	-	-
3	58	BKD 150-D3/60	58	KD 150-D3/60	46	KD 110-D3/46	30	KD 85-D3/30
5	-	-	-	-	-	-	20	KD 85-D5/20
7	-	-	-	-	32/25	KD 110-D7/32/25	-	-
8	35/25	BKD 150-D8/35/25	35/25	KD 150-D8/35/25	-	-	-	-
1	110	BKD 150-DSM110	110	KD 150-DSM110	110	KD 110-WA/1x110	-	-
-	-	-	-	-	-	KD 110-WA/ZxD	-	-

A complete program of pipe connection covers is available for systems BKD and KD. Further information on request. DSM = plug-type sleeve, WA = rubber seal, Z = quantity, D = diameter

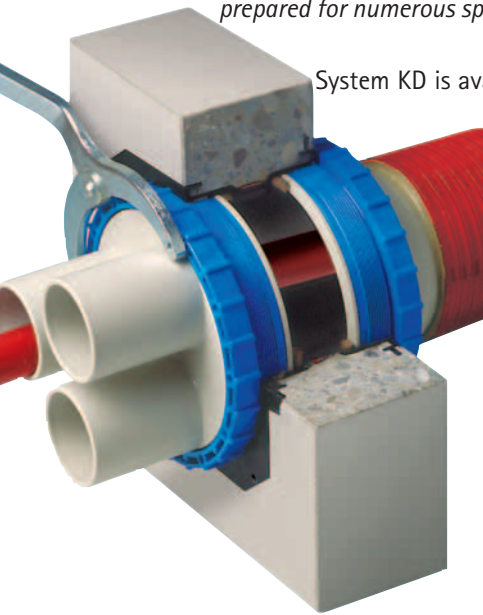


# System

Safe to the Detail – strog in the System

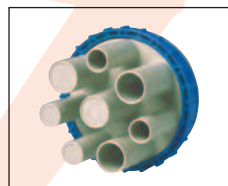
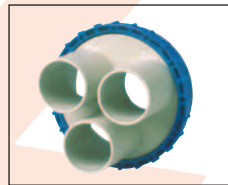
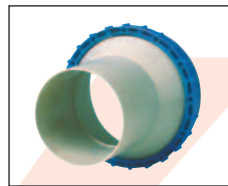
## System KD

System KD is a multiple wall duct proven many thousand times in the application of various sealing techniques. The standard design is supplied with heat shrink-on sleeves. As an option, sleeves are also available with cold shrink-on-technique KS. System KD offers compatibility with other systems and is prepared for numerous special solutions.



System KD is available in three different sizes: KD 85, KD 110, and KD 150.

Each size is equipped with suitable system covers:  
 KD 85 with 1, 3, and 5 connection pieces  
 KD 110 with 1, 3, and 7 connection pieces  
 KD 150 with 1, 3, and 8 connection pieces



## Quick Installation due to Ergonomic Design

The ergonomically designed installation nut makes mounting of the system cover easy. Tightness against pressing water is thus secured within seconds.

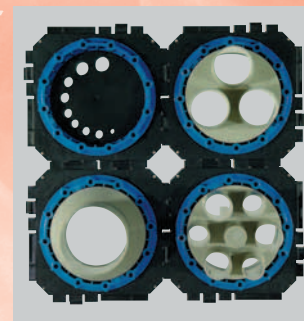
## Product Nomenclature (example for orders: sealing collar)

BKD 150	2	x	2	-	K	2	/	(L)	
KD 150									wall thickness in mm
KD 110									double sealing collar
KD 85									single sealing collar
									2 sealing collars side by side
									2 sealing collars, one on top of the other
									system designation



immediately watertight due to integrated sealing caps

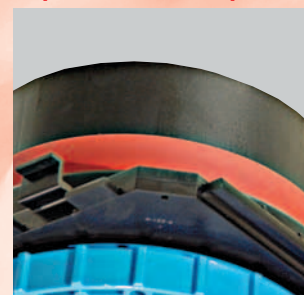
Due to the integration of a gas- and presswater-tight sealing cap systems BKD and KD (KD 85, KD 150) offer a protection against pressing water immediately after installation. The interior of the bushing stays clean during concrete works and there are no additional costs for blind plugs on spare bushings. Accessory tools like system or square wrenches facilitate efficient removal.



## Safety at a glance

In order to lead a great number of cables through walls and ceilings it is possible to assemble the sealing collars into packages. Due to the chamfered edges the compaction of the concrete can be controlled to an optimum in the area of the cable bushing.

## Absolute bonding to the concrete due to sophisticated Expansion Sealing Material



The innovative combination of expansion sealing material and sealing collar guarantees an absolute bonding to the concrete.

Together with the novel UGA check holes the design thus offers long-lasting protection against leakage.

# Flexible Cable Protection: System KSS

The UGA system KSS consists of a flexible, very stress-resistant plastic spiral hose. The system components can be chosen at random and ensure connection to an imbedded sealing collar or core hole on one side.

On the other side, connection to rigid or flexible protective tubes for cables or sealing of the inserted cables is possible.

Even a gas- and watertight connection of two buildings is feasible without any problems.

- ▶ reliable sealing
- ▶ changing of direction possible immediately after emerging from the building
- ▶ project-related special systems
- ▶ compatible with all common protective tubes for cables
- ▶ movements of the building or of the earth won't damage the cables
- ▶ gas- and watertight connection of protective tubes or underground cables
- ▶ no expensive earthworks required when changing the assignment of cables
- ▶ hose systems can be imbedded into concrete without any problems



## Technical Data of the KSS system

Type	First connection side of the hose	Second connection side of the hose	hose Øi (mm)
KSS 150/110/D2/L*	KD 150 connection cover (to sealing collar)	KD 150 connection cover (to sealing collar)	110**
KSS 150/110/D/K/L*	KD 150 connection cover (to sealing collar)	KD 150 sealing collar	110**
KSS 150/110/D/KM 110/L*	KD 150 connection cover (to sealing collar)	glue-on sleeve 110	110**
KSS 150/110/D/SM 110/L*	KD 150 connection cover (to sealing collar)	plug-type sleeve 110	110**
KSS 150/110/K2/L*	KD 150 sealing collar	KD 150 sealing collar	110**
KSS 150/110/D/D3-46/L*	KD 150 connection cover (to sealing collar)	KD 110-D3/46	110**
KSS 85/80/D/D3-30/L	KD 85 connection cover (to sealing collar)	KD 85-D3/30	80
KSS 150/110/D/D7-32-25/L*	KD 150 connection cover (to sealing collar)	KD 110-D7/32/25	110**
KSS 85/80/D/D5-20/L	KD 85 connection cover (to sealing collar)	KD 85-D5/20	80
KSS 110/GPD 150/./L	GPD/150	variable	110
KSS 80/GPD 125/./L	GPD/125	variable	80

\* also available as system KSS B150, KSS 110, and KSS 85 / \*\* hose Øi also available in 125 and 150 mm

# Flexible House Entrances: System FHE

UGA's system FHE consists of a flexible pressure-resistant plastic spiral hose with expansion seal coating as well as a thermal sleeve on one or both sides for gas- and watertight installation.

- ▶ simple and quick installation
- ▶ tightness towards wall and inserted cables up to 1 bar

- ▶ available with thermal sleeve on one or both sides
- ▶ also available in cold shrink-on technique or as roll-on sleeve sealing
- ▶ big range of applications thus only a few sizes required
- ▶ simple replacement of cables
- ▶ sealing also possible with multiple groupings



## Technical Data System FHE

product designation in heat shrink-on technique with thermal sleeve on one side	product designation in heat shrink-on technique with thermal sleeve on both sides	cable-Ø from to mm	FHE inside-Ø mm	FHE outside-Ø mm	product designation in cold shrink-on-technique
FHE 19 / 8	FHE 19 / 8 / 2	8 - 17	19	26	FHE 19 / 13 - KS
FHE 30 / 9	FHE 30 / 9 / 2	9 - 28	30	38	FHE 30 / 16 - KS
FHE 38 / 12	FHE 38 / 12 / 2	12 - 36	38	47	FHE 38 / 20 - KS
FHE 45 / 16	FHE 45 / 16 / 2	16 - 43	45	54	FHE 45 / 21 - KS
FHE 65 / 22	FHE 65 / 22 / 2	22 - 63	65	75	FHE 65 / 32 - KS
FHE 80 / 29	FHE 80 / 29 / 2	29 - 78	80	92	FHE 80 / 33 - KS
FHE 110 / 42	FHE 110 / 42 / 2	42 - 108	110	122	FHE 110 / 49 - KS

standard length 600 mm - also available in special lengths - UGA FHE spiral hose is also available on rolls

# Rubber Press Seals: System GPD

No matter what type of cable is to be led through walls or ceilings - UGA's system GPD always offers a safe solution. UGA Rubber Press Seals can be inserted into the most varied pipe linings, core holes or entrance plates without any problems.

- ▶ universally suitable for cables and / or pipes for the distribution of electricity, gas and water and for sewage systems in structural and civil engineering
- ▶ gas- and watertight
- ▶ soundproof
- ▶ subsequent installation for already laid cables possible
- ▶ project-related special designs and sizes available
- ▶ elastic bedding of the cables
- ▶ high quality due to optimum materials: EPDM rubber with stainless steel press plates and stainless steel screws
- ▶ basement waterproofing according to DIN 18195 possible
- ▶ manifold bushings
- ▶ easy installation



## Technical Data of System GPD

system designation outside diameter	max. cable outside diameter mm	diameter of pipe lining, core hole mm	* pipe linings FU... **A/L
GPD 60	34	60 - 62	FU.. 60/L
GPD 80	45	80 - 82	FU.. 80/L
GPD 100	66	100 - 102	FU.. 100/L
GPD 125	87	125 - 127	FU.. 125/L
GPD 150	112	150 - 152	FU.. 150/L
GPD 200	162	200 - 203	FU.. 200/L
GPD 250	212	250 - 253	FU.. 250/L
GPD 300	260	300 - 304	FU.. 300/L
GPD 350	300	350 - 354	FU.. 350/L
GPD 400	350	400 - 404	FU.. 400/L

\*available pipe linings: K = plastic pipe, FZ = asbestos cement pipe, VA = stainless steel pipe with central flange

\*\* A = inside diameter  
\*\*L = wall thickness in mm



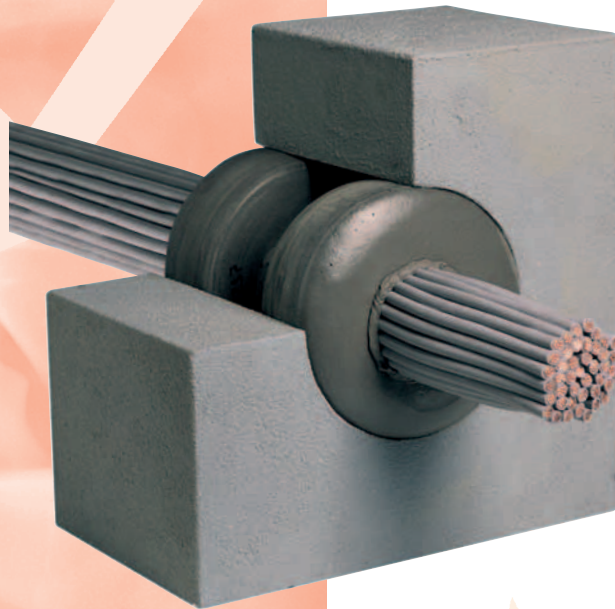
# Earthing of Buildings: System GE

The UGA structural earth GE is available as duct, potential, reinforcement and subsequent earthing in rigid and flexible design for many ranges of application.

- ▶ insulated bushings, thus faultless measurements
- ▶ earthing suitable for equipotential bonding
- ▶ earth connection points available for all applications
- ▶ stainless steel design therefore no corrosion
- ▶ high safety due to connection threads and bolts of size M12
- ▶ gas- and watertight
- ▶ suitable as point of separation for measuring
- ▶ wall and ceiling installation flush with formwork
- ▶ permanent identification of the earthing type
- ▶ earthings available in nearly all laying-out lengths

# Fire Barrier for Cables: System BS 90

With regard to fire protection, openings in fire lobby walls and ceilings give cause for concern and have to be closed according to building regulations. Otherwise fire, smoke gas and decomposition products spread too quickly into the next fire lobby or section of the building. A reliable counter-measure is sealing the opening with our fire protection system BS 90.



## BS 90 Variants

### UGA BS 90 Cable Shields

Cable shield for wall and ceiling openings in concrete, masonry, or light partition walls to DIN 4102, part 9, fire resistance class S 90. The fireproof material allows a dust and fibre-free cable shield which expands by foaming in case of fire and can be easily installed subsequently. (pictures 1, 2, and 3)

### UGA BS 90 Shield Casings

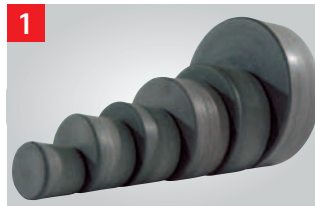
Shield casing systems for wall and ceiling openings in concrete, masonry, or light partition walls to DIN 4102, part 9, fire resistance class S 90. Installation at the structural phase guarantees fire protection already during the whole building phase. The shield casing system allows a dust and fibre-free cable shield which expands by foaming in case of fire and can be easily installed subsequently (picture 4)

The UGA fire protection system BS 90 has been tested and approved according to DIN 4102, part 9 by DIBt in Berlin for cable shields of fire resistance class S 90 for installation into walls and ceilings of fire resistance class F 90.

Approval no.: Z-19.15-1230, Z-19.15-1346, and Z-19.11-1226.

Our approvals are permanently updated due to further developments.

- ▶ admissible for all types of cables, like e.g. PE, VPE, aluminium cables and optical fibres
- ▶ admissible for single lines of steel and plastic
- ▶ admissible for supporting systems
- ▶ for a wall thickness from 100 mm and a ceiling thickness from 150 mm
- ▶ BS 90 plugs for bore holes up to 200 mm
- ▶ BS 90 blocks for openings
- ▶ BS 90 shield cases with frame for light partition walls
- ▶ BS 90 shield cases without frame for brickwork
- ▶ BS 90 shield cases extendable in modular design
- ▶ BS 90 shield cases guarantee fire protection already during the building phase
- ▶ dust- and fibre-free installation in dry construction
- ▶ simple subsequent installation possible
- ▶ short installation times, no special tools required
- ▶ no coating of cables required
- ▶ no limitation of the total conductor cross section for individual cables



### BS 90-ST / D

(BS 90 fire protection plugs, available for core hole diameters of up to 200 mm, D = core hole Ø)

Approval no. Z-19.15-1230



### BS 90-B

(BS 90 fire protection block, standard dimensions 220 x 120 x 70 mm and 600 x 220 x 70 mm)

Approval no. Z-19.15-1230  
Z-19.15-1346



### BS 90-K

(BS 90 fire protection putty / 310 ml)

Approval no. Z-19.11-1226



### BS 90-SK(R)

(BS 90 shield casing for light partition walls or for imbedding in mortar, standard length 200 mm)

Approval no. Z-19.15-1230  
Z-19.15-1346

Sealing systems and fire protection for cables and pipes

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