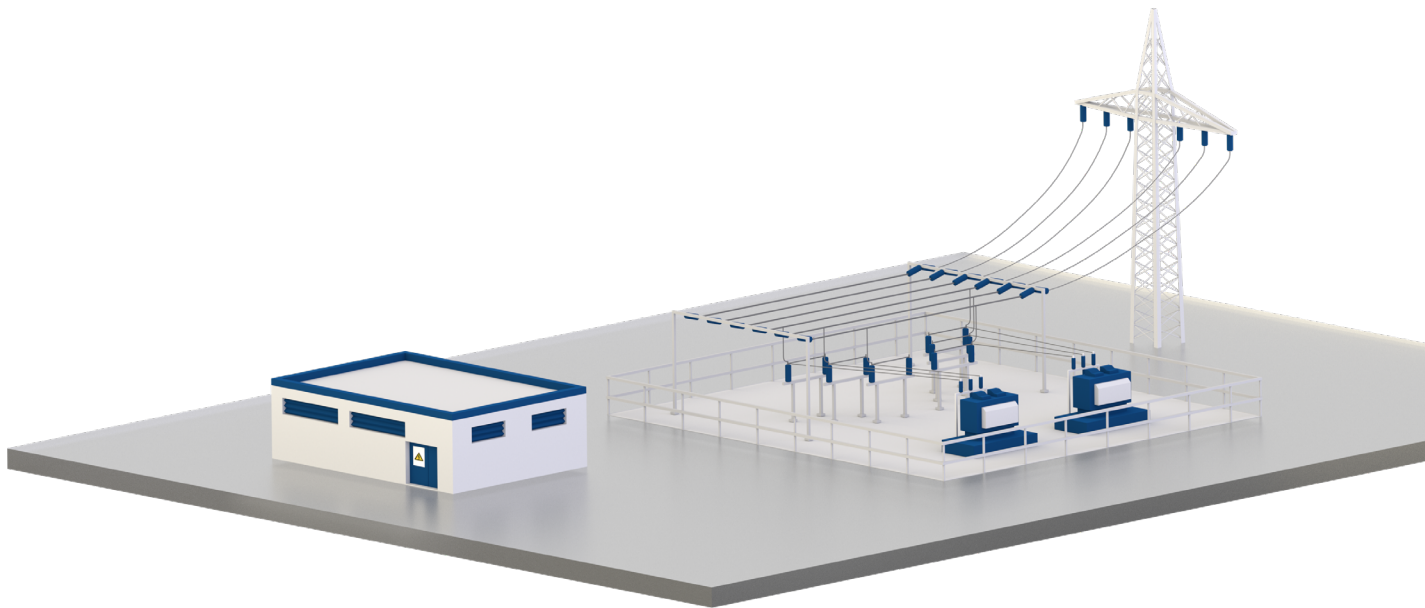


Always. Reliable. Tight.



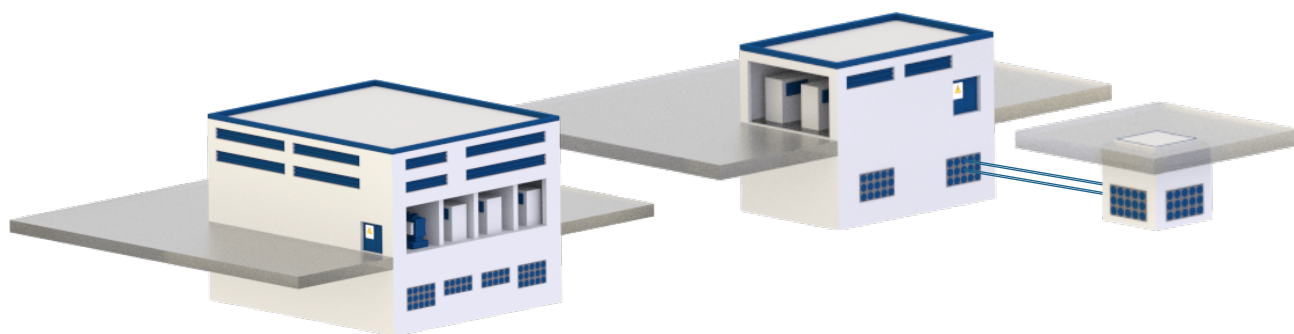
CABLE AND PIPE ENTRIES

# SUBSTATIONS, SWITCH GEARS AND CONVENTIONALLY CONSTRUCTED TECHNICAL BUILDINGS

# For substations, switch gears and conventionally constructed technical buildings

## CABLE AND PIPE ENTRIES

**A substation is an essential part of the electrical supply network. To ensure trouble-free operation and high security of supply in the long term, buildings – some of which house sensitive components of primary and secondary equipment – must be protected against water ingress as well as damage caused by rodents and reptiles.**



Hauff-Technik cable entries are frequently found in substations in connection with secondary equipment (network protection, voltage regulation, remote control, ripple control, etc.). We offer solutions for every cable type and cable cross section here. Cable entries are also used in connection with primary equipment, e.g. to seal cables in switch gear buildings. Our press seals are ideally suited to sealing the pipes used to connect transformer trays.

Continuous empty conduit routes, possibly in combination with cable drawing shafts, have proven an effective way of replacing cables in substations without subsequent groundwork and the risks associated with it. We have the optimum connection option for every cable duct.

Hauff-Technik cable entry systems provide a pressure-tight connection between a building and an empty conduit system.

Hauff-Technik offers both solutions for new buildings – these are already taken into consideration during planning and then set in concrete during construction of the building – and for existing buildings for subsequent installation in core drill holes.

Detailed information about our products can be found on the following pages.

## OUR PRODUCT SOLUTIONS AT A GLANCE

### Substation integrated in a building

- Cable entries for connecting a rigid cable duct
- Cable entry with flexible duct connection
- Fire protection
- Earthing entry

### Substation with switch gear building

- Cable entry for connecting a rigid cable duct
- Cable entry without cable duct connection
- Earthing entry

### Cable shaft

- Cable entry for connecting a rigid cable duct
- Cable entry without cable duct connection
- Earthing entry

## For substations, switch gears and conventionally constructed technical buildings CABLE AND PIPE ENTRIES

### OUR PLANNING SUPPORT FOR ARCHITECTS AND SPECIALISED PLANNERS

Your project is in good hands with us. We provide direct and fast support on technical questions and are happy to advise you on the correct way to install and seal cables and pipes. Whatever you're planning, with Hauff-Technik you can make it perfect. We will be happy to advise you individually and personally.

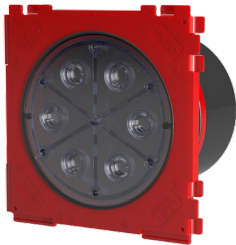
#### Planning support team for architects and specialised planners

Robert-Bosch-Straße 9  
89568 Hermaringen, GERMANY  
Tel. +49 7322 1333-660  
[planungssupport@hauff-technik.de](mailto:planungssupport@hauff-technik.de)



## WALL INSERTS AND POLYMER FLANGE

### SINGLE WALL INSERT HSI150 K/X WITH ONE-SIDED CONNECTION OPTION ON THE OUTSIDE OF THE BUILDING



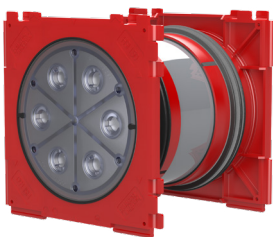
Single wall inserts are available above a wall thickness of 70 mm.

In addition to a closing cover, they are also equipped with a safety cover that is not removed until just before the cable is laid.

This double security ensures protection from water ingress and also from oil escaping into the surrounding area if the closing cover is opened unintentionally or prematurely for wall thicknesses of 70 – 150 mm. A variety of system seals is available for cable and duct sealing.



### DOUBLE WALL INSERT HSI150 K2/X WITH CONNECTION OPTIONS ON BOTH SIDES



Double wall inserts are available above a wall thickness of 100 mm and are equipped with pressure-tight closing covers on both sides.

They provide a way of connecting cable ducts and additionally creating seals with cables on the inside of the building.

Packages can be formed with the square assembly frame. The double wall insert provides maximum sealing flexibility and considerable advantages compared with core drill holes and wall sleeves.



Cable entries 150

## WALL INSERTS AND POLYMER FLANGE

### SINGLE WALL INSERT WITH INTEGRATED PATCH FLANGE HSI150 1X(Z) K AF/X FOR SETTING IN

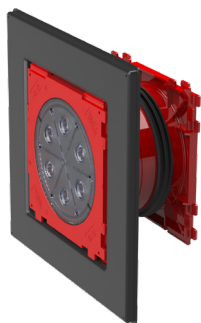


Integrated patch flange for practical application of plastic-modified bitumen thick coatings for the gastight and watertight connection on one side of system seals for cables or cable ducts and a high level of flexibility during subsequent use.

A 1x1 or 1x4 package configuration is possible.

Quality mark: sealed ex works. Facility to check for unintentional or unauthorised opening of the closing cover.

### DOUBLE WALL INSERT WITH INTEGRATED PATCH FLANGE HSI150 1X(Z) K2 AF/X FOR SETTING IN CONCRETE



Integrated patch flange for practical application of plastic-modified bitumen thick coatings for the gastight and watertight connection on both sides of system seals for cables or cable ducts and a high level of flexibility during subsequent use.

A 1x1 or 1x4 package configuration is possible.

Quality mark: sealed ex works. Facility to check for unintentional or unauthorised opening of the closing cover.



## WALL INSERTS AND POLYMER FLANGE

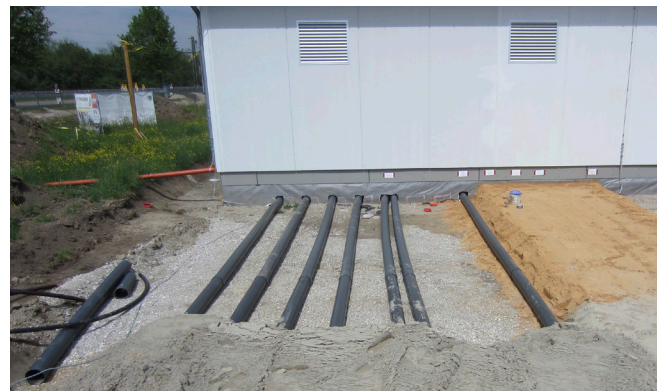
### SINGLE WALL INSERT WITH PLUG-IN SOCKET HSI150 GSM



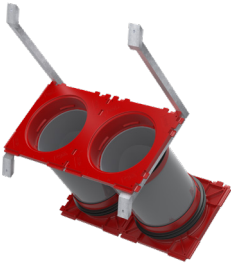
The single wall insert with plug-in socket is both the optimum and an extremely economical solution for connecting smooth cable ducts to buildings and cable drawing shafts.

The factory pre-assembled, pressure-tight closing cover of the HSI150 GSM also prevents water ingress into the building for cable ducts already connected.

On the inside of the building, the cable should preferably be sealed with split system seals after laying.



### INCLINED WALL INSERT HSI150 K2 S30°/45°/60°/X



The inclined wall insert HSI150 is the ideal solution if cables or cable ducts need to be run through the wall at an angle.

Installing the cables at an angle enables the minimum bending radii to be observed. 30°, 45° or 60° versions are available as a single or double wall insert. Packages are available in a single row. Slanted wall inserts are supplied ready for installation flush with the formwork using polystyrene wedges.



Cable entries 150

## POLYMER FLANGE AND SYSTEM COVER

### FLANGE HSI150 DFK



The polymer flange HSI150 DFK is installed on the outside of the building over a core drill hole (Ø max. 150 mm).

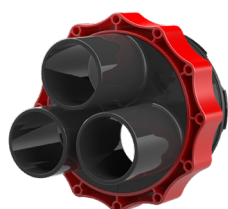
Tightness to the wall is achieved by a 6 mm thick overlapping surface seal made of EPDM. The fastening elements including sealing washer are made of high-quality stainless steel.

An integrated spirit level simplifies horizontal alignment.

All HSI150 system covers and seals can be installed. The HSI150 DFK is both the ideal and a flexible solution if there is no single or double wall insert available on site.



### SHRINK-FIT SYSTEM COVER HSI150 D1X80, D3X58 OR D7X33



The system covers with bayonet system are installed in the wall inserts before the cables are laid. For sealing the cables, variants with different socket diameters are available depending on the requirements.

Hot or cold shrink sleeves are included.

System covers with larger sockets are additionally supplied with centring tape.

Unused sockets are sealed using VS blind plugs.



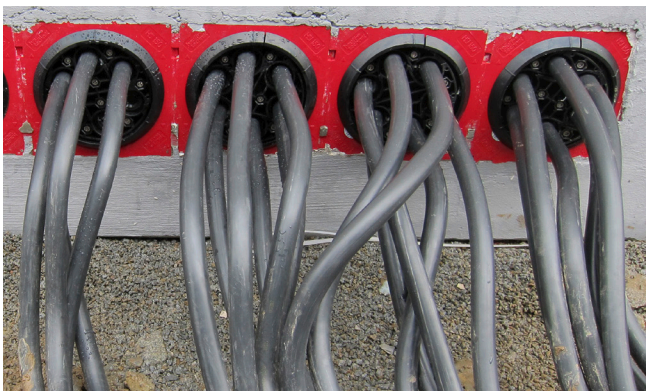
## SYSTEM COVERS AND SYSTEM SEALS FOR CABLES

### SPLIT SYSTEM COVER HSI150 DG 1X36-70, 1X70X112, 3X24-54 OR 6X10-36



The system cover HSI150 DG is installed after the cable has been laid. This means that the full cross section of the cable entry is available for laying cables. An adapter ring, which is also split, ensures an optimum sealing fit.

The patented super segmented ring technology with precisely labelled application areas enables the seal insert to be adapted on site according to the cables being laid. The split HSI150 DG and the shrink-fit system covers are suitable for standard power cables and are the preferred solution here.

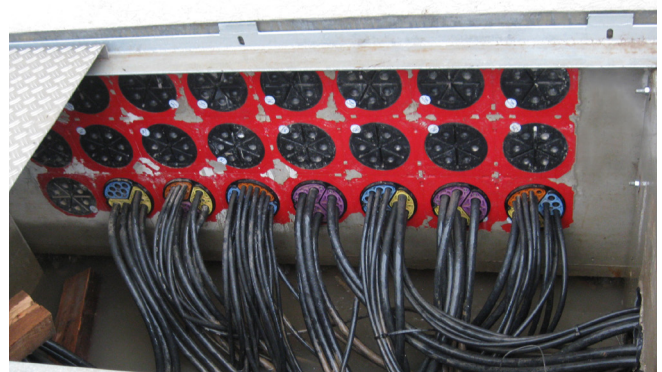


### SEGMENTO



The Technogel used in SEGMENTO is a particularly gentle way of sealing cables. Four segments with an application range of 5 – 31 mm are available, which can be mounted in any combination in the system cover HSI150 S3.

Retrofitting is very straightforward.  
All segments are supplied with plugs.  
A typical use is sealing signal, data and control cables.





Fire protection

## GASTIGHT AND WATERTIGHT FIREWALL S90

### HSS150 HSI150 – FIRE PROTECTION KIT FOR INSTALLATION IN THE CABLE ENTRY HSI150 K2/X



The firewall HSS150 HSI150 for walls is a gastight and watertight firewall with the fire resistance class S90 to DIN 4102-9 for installation in the system HSI150 K2. The seal is created using system covers. The barrier is approved for use with all types of cable in walls and for multi-installation with HSI150 up to 2x6.

Approval no.: Z-19.15-1906



### HSS100 KB FR HRD – HSS150 KB FR HRD FIRE PROTECTION KIT FOR INSTALLATION IN CORE DRILL HOLES/WALL SLEEVES



The fire-stop pads HSS(D) KB FR HRD for core drill holes/wall sleeves up to Ø 100 or 150 mm are installed after the cable has been laid, with installation of the pads possible from one side. The barrier is approved for use with all types of cable in walls. The HSS(D) KB FR HRD has the fire resistance class S90 to DIN 4102-9.

Approval no.: Z-19.15-1792



## SYSTEM COVERS FOR CONNECTING CABLE DUCTS

### HSI150 MA SYSTEM COVER WITH SLEEVE METHOD



The system cover HSI150 MA allows smooth and corrugated cable ducts with an outer diameter of 110, 125 or 160 mm to be connected. The pipe connection is made via a flexible and sturdy rubber sleeve, which is fitted with stainless steel straps against the system cover and the cable duct.

For connecting corrugated pipes, ring clips for mechanical stabilisation are additionally required. These are positioned under the stainless steel straps. The type and manufacturer of the corrugated pipe must be specified when ordering. For empty duct connections, we recommend placing the cable seal on the inside of the building.



### HSI150 D...KS SHRINK-FIT SYSTEM COVER



Quick and easy connection of corrugated cable ducts ( $\varnothing$  110 and 125 mm) with a cold shrink sleeve.

Installing empty conduit ducts may enable problematic groundwork on the substation site to be avoided at a later date.



Cable entries 150

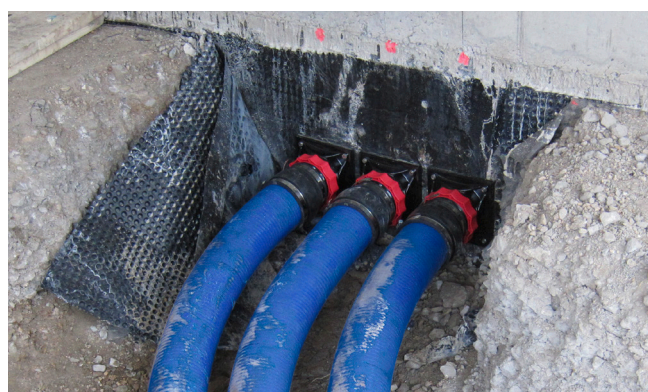
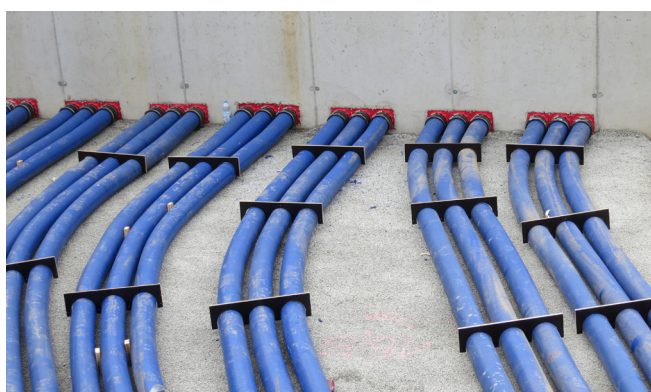
## CABLE ENTRY SYSTEM

### CONNECTION TO THE WALL INSERT KES MA150 D



The cable entry system KES MA150 D is the perfect solution for a pressure-tight, flexible and rugged empty conduit system. The system cover KES MA150 D with sleeve method provides a gastight and watertight (2.5 bar) connection between the spiral hose Hateflex 14150 and the wall insert HSI150.

Various sealing variants are available for sealing cables at the end of the spiral hose.



### FLOOR ENTRY KES150 MA ZVR150/500



KES150 MA ZVR150/500 provides a gastight and watertight floor entry for the spiral hose Hateflex and simultaneously offers an optimum sealing fit for press seals. The height is exactly adjusted to the finished floor level by cutting the ZVR after concreting.

The press seals HRD150 SG... can be used for cable sealing in the ZVR.



## CABLE ENTRY SYSTEM

### CONNECTION SET FOR CORE DRILL HOLES/WALL SLEEVES KES150 MA KB SET



Cable duct sealing in waterproof concrete with two press seals HSD 200 1x159 on the inside and outside of the wall. The cable seal in the cable duct is created with a standard press seal HRD150 SG on the inside of the wall. With this solution, water can be present in the cable duct without this resulting in leaks or damage to the building. The expanding forces exerted on the cable duct by the cable seal are absorbed by the pipe seal.

Additional variants on request

### CABLE ENTRY SYSTEM KES150 MA160-172/140-163 WE



The sleeves KES150 MA160-172/140-163 WE are designed to connect smooth ducts to the Hateflex spiral hose. This enables rigid cable ducts to be flexibly extended as far as the connection on the building with the cable entry system, for example to compensate for a height offset.



### CABLE DUCT END STOP KES150 MA WE160 SG SET



Using a sleeve and a split standard interchangeable insert with segmented ring technology, a seal can be created at the empty conduit end on cables that have already been laid. The sleeve is installed before the cables are laid.

The entire cross section of the cable entry system is available when laying cables. In addition to the existing sealing set comprising sleeve and split standard interchangeable insert with segmented ring technology, individual interchangeable inserts are also available.



## Wall sleeves

# STANDARD WALL SLEEVES AND FLANGES

### CEMENT-COATED WALL SLEEVE ZVR

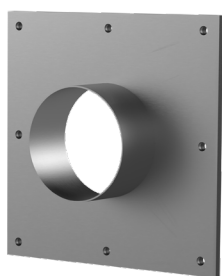


The ZVR is available in diameters of 50 – 300 mm and is installed flush with the formwork. Alternatively it is also suitable for installation in wall recesses and break-throughs.

The break-resistant, inherently stable plastic liner with cement-bound special coating provides an optimum connection with the concrete. All press seals can be used for sealing cables or pipes.



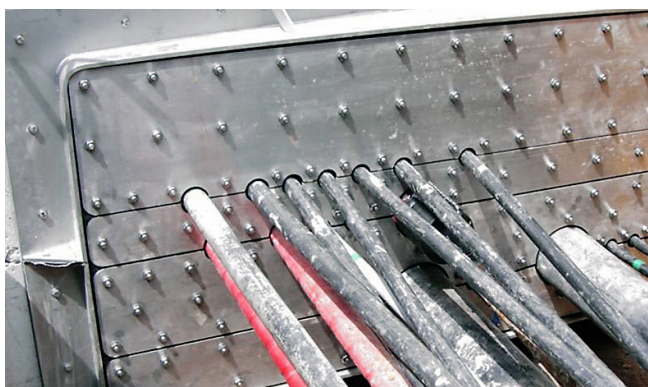
### FLANGE FA/FAG FOR RETROFIT DOWELLING IN CLOSED AND SPLIT DESIGN FOR SUBSEQUENT MOUNTING ON SHEET STEEL, SHEET METAL HOUSINGS OR CONCRETED WALLS



Tightness to the wall/housing is achieved by a 10 mm thick surface seal made of EPDM. The flange and the fastenings for concrete including sealing rings are made of stainless steel and therefore provide optimum corrosion protection.

All press seals can be used for sealing cables or pipes. Flanges for retrofit dowelling can also be fabricated individually in accordance with your requirements and can, for example, be mounted over larger recesses/break-throughs.

Flanges with several pipe sockets are also available.



## Press seals

# STANDARD PRESS SEALS AND SEALING SET

### STANDARD PRESS SEAL HSD



The press seal HSD is an effective and low-cost solution for sealing smooth cable ducts in core drill holes and wall sleeves.

The extremely rugged stainless steel U-profile press segments with integrated torque control provide optimum pressing action and offer outstanding corrosion protection.



### CORRUGATED PIPE SEAL



The corrugated pipe seal WRD is the optimum sealing solution for corrugated cable ducts. The patented ring clips ensure a uniform distribution of the contact pressure and gentle sealing without any penetration of the sealing rubber into the pipe corrugation. This prevents deformation of and damage to the corrugated pipe in the first place.

The supplied insulation ring centres the corrugated pipe and neatly finishes and insulates the wall connection.

With a cable seal in the corrugated pipe, the press seal HRD must be positioned directly underneath the press seal of the WRD to prevent deformation.



Press seals

## STANDARD PRESS SEALS

### STANDARD PRESS SEAL HRK SSG



The split press seal HRK SSG is used to seal cables already installed in core drill holes/wall sleeves. This means that the entire wall sleeve/core drill hole space is available for laying cables.

The super segmented ring technology means that the seal insert can be adapted right on site according to the cables being laid. The labelled segments provide an extremely high level of application security here.

Unused openings are sealed with the plugs included in the scope of delivery.

Variants with outer diameters of 100, 150 and 200 mm are available.

The press plates are made of high-quality glass fibre reinforced polyamide and feature integrated form-fitting connections for maximum stability and twist resistance.

The bolts and nuts are made of A2 stainless steel (AISI 304L).



### STANDARD PRESS SEAL HRD SG



The split press seal HRD SG is designed to seal cables already laid through core drill holes/wall sleeves. This means that the entire wall sleeve/core drill hole space is available for laying cables.

The segmented ring technology means that the seal insert can be adapted on site according to the cables being laid.

Unused openings are sealed with the plugs included in the scope of delivery. Variants with outer diameters of 80, 100, 125, 150 and 200 mm are available. The press plates are made of high-quality A2 stainless steel (AISI 304L).



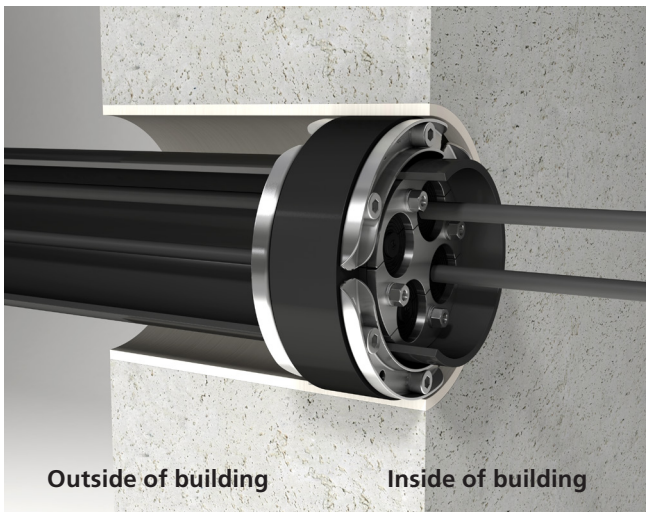
## STANDARD PRESS SEALS



### With duct connection – thicker wall

Cable duct sealing in waterproof concrete with two press seals HSD200 1x159 on the inside and outside of the wall. The cable seal in the cable duct is created with a standard press seal HRD 150 SG on the inside of the wall. With this solution, water can be present in the cable duct without this resulting in leaks or damage to the building. The expanding forces exerted on the cable duct by the cable seal are absorbed by the pipe seal.

Additional variants on request.



### With duct connection – thinner wall

Cable duct sealing with a press seal HSD150 1x110 in the wall sleeve on the inside of the building. The cable seal in the cable duct is likewise created on the inside of the wall. The cables are sealed with a standard press seal HRD100 SG. This solution provides an optimum seal for the cable duct and cables. The expanding forces exerted on the cable duct by the cable seal are absorbed by the pipe seal. When using the sealing system for core drill holes in waterproof concrete, the seals must be positioned flush with the outside wall to prevent water ingress into the core drill hole.

Additional variants on request.



### Without duct connection

Cable sealing with a press seal in a core drill hole in waterproof concrete. The seal must be positioned flush with the outside wall to prevent water ingress into the core drill hole. When using wall sleeves, the cable seal position can be freely selected.



Press seals

## INDIVIDUAL PRESS SEALS

### INDIVIDUAL PRESS SEAL HRD LAU (ABZ Z-74.91-195)



The individual press seal HRD LAU with building inspection approval certificate for use in facilities for storage, filling and handling is designed to seal cables and pipes in core drill holes/wall sleeves.

The press seal made of A4 stainless steel (AISI 316L) and silicone is tested and certified for resistance to transformer oils and can be used in oil collection pans. Variants with an outer diameter of 100 to 500 mm with a configuration of 1 to 3 cables/pipes are available.

Article numbers, GTIN and price on request Other variants available at [www.hauff-technik.de](http://www.hauff-technik.de).

# Earthings HEA EARTHINGS

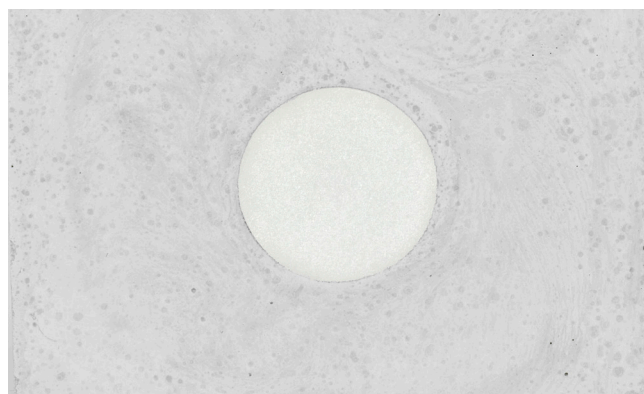
## EARTHING ENTRY HEA M12/X OR M16/X



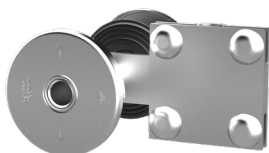
The earthing entry HEA M12 has a specially contoured contact washer for patented twist resistance and is suitable for installation flush with the formwork in waterproof concrete.

Earthing connections can be made with the thread on both sides in the conductor core.

Also available for element walls.



## EARTHING ENTRY WITH TERMINAL LUG AND CROSS-CLAMP HEA PK M12/X OR HEA PK M16/X



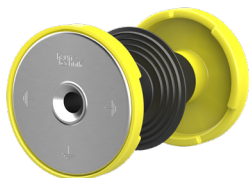
The earthing entry HEA PK has a specially contoured contact washer for patented twist resistance and is suitable for installation flush with the formwork in waterproof concrete.

Earthing connections can be made on the inside and outside with the thread on both sides in the conductor core. There is a tab with cross-clamp for making an earthing connection in the wall.



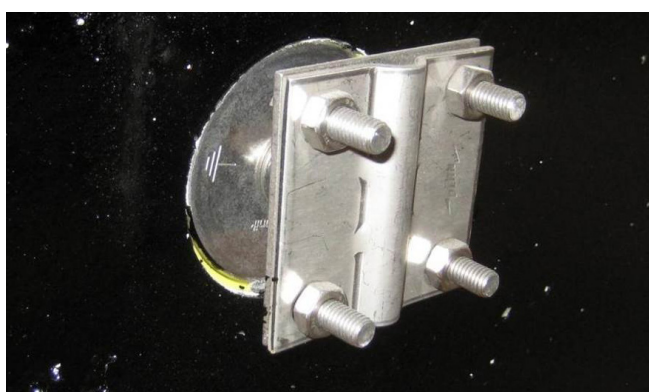
# Earthings HEA EARTHINGS

## INSULATED EARTHING ENTRY HEA IS M12/X



The insulated earthing entry from Hauff-Technik is particularly suitable for station construction and also serves as an optional measuring isolation point for the earthing system.

The function of the ring earth electrode outside the station can be checked separately via the insulated earthing entries. Round or flat steels or cable shoes can be connected via cross-clamps or connection bolts. Successful short-circuit test according to DIN EN 50522 (VDE 0101-2):2011-11.



## EARTHING FIXED POINT HEA A M12/X FOR WELDING TO CORE IRON ON THE STATION BUILDING



The earthing fixed point for station construction can be used for equipotential bonding and earthing the transformer station. With the conductor core made of corrosion-resistant A2 stainless steel, the connection point of the station earthing can be installed inside or outside. Due to the black-and-white transition and the practical connection groove, the core iron can be welded on without changing the material. Suitable for distances between formwork and core iron of 50 or 70 mm.

Successful short-circuit test according to DIN EN 50522 (VDE 0101-2):2011-11.



## WALL INSERTS AND POLYMER FLANGE



HSI150 – WALL INSERT	
Illustration	Article code
<b>Single wall insert above wall thickness 70 mm</b>	
	HSI150 1x1 K/X*1
<b>Double wall insert above wall thickness 100 mm</b>	
	HSI150 1x1 K2/X*1
<b>Single wall insert with integrated patch flange, HSI150 1x1 K/X 1= rows on top of each other, 1= rows alongside each other, X = wall thickness (mm)</b>	
	HSI150 1x1 K AF/X
<b>Double wall insert with integrated patch flange, HSI150 1x1 K2 AF/X 1= rows on top of each other, 1= rows alongside each other, X = wall thickness (mm)</b>	
	HSI150 1x1 K2 AF/X
<b>Single wall insert with integrated plug-in socket ID 110 mm above wall thickness 120 mm</b>	
	HSI150 1x1 GSM110/X*1*2
<b>Single wall insert with integrated plug-in socket ID 125 mm above wall thickness 120 mm</b>	
	HSI150 1x1 GSM125/X*1*2
<b>Single wall insert with integrated plug-in socket ID 160 mm above wall thickness 180 mm multi-installation only in conjunction with spacer</b>	
	HSI150 1x1 GSM160/X*1

\*1 The article numbers for the exact wall thicknesses can be found at [www.hauff-technik.de](http://www.hauff-technik.de)  
Standard lengths 70 to 500 mm (gradation in 10 mm)

\*2 Possible restrictions for cable configurations

Cable entries 150


## WALL INSERTS AND POLYMER FLANGE



HSI150 1xz K2 S <sub>°</sub> /X			
Illustration	Installation angle	Minimum wall thickness (mm)	Article code
<b>Slanted double wall insert S30°, z = rows alongside each other</b>			
	30°	240	HSI150 1xz K2 S30°/X
<b>Slanted double wall insert S45°, z = rows alongside each other</b>			
	45°	250	HSI150 1xz K2 S45°/X
<b>Slanted double wall insert S60°, z = rows alongside each other</b>			

Article numbers and GTIN on request.

z = number of openings alongside each other  
S = installation angle in °. X = wall thickness in

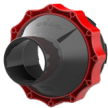
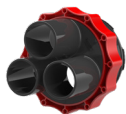

The minimum concrete covering of 200 mm according to the waterproof concrete directive (information sheet H10) is only reached above a wall thickness of 342 mm (S45° – 385 mm; S60° – 420 mm) with the slanted wall insert HSI150 K2 S30°.

HSI150 – POLYMER FLANGE			
Illustration	Article code	Article number	GTIN
<b>Polymer flange including attachment elements made of A4 and sealing rings for concrete walls</b>			
	HSI150 DFK	2118010020	4052487156264

OPTIONAL ACCESSORIES			
Article	Article code	Article number	GTIN
<b>290 ml cartridge, colour grey, elastic sealant to optimise wall surface in combination with sealing flanges</b>			
	EGO MS805 DMA	3030300027	4052487168359
<b>Spacer set (2x) to enlarge the axle spacing of the wall inserts to 250 mm. Enables block assembly of HSI150 and HSI90</b>			
	HSI AH40	3030300093	4052487220156

## SYSTEM COVERS AND SYSTEM SEALING FOR CABLES

<b>HSI150 – CLOSING COVER</b>				
Illustration	Application	Article code	Article number	GTIN
<b>Transparent closing cover</b>				
	Blind cover	<b>HSI150 DT</b>	2126010172	4052487193566




<b>HSI150 – HEAT-SHRINK SYSTEM COVER</b>				
Illustration	Application range cable/pipe Ø (mm)	Article code	Article number	GTIN
<b>System cover with 1 socket including 1x thermal plug, 1x centring tape</b>				
	25 – 78	<b>HSI150 D1x80 WS</b>	2101100010	4052487054966
<b>System cover with 3 sockets including 3x thermal plugs, 1x centring tape</b>				
	22 – 56	<b>HSI150 D3x58 WS</b>	3030300082	4052487054997
<b>System cover with 7 sockets including 7x thermal plugs</b>				
	12 – 31	<b>HSI150 D7x33 WS</b>	3030300083	4052487197632

Design with cold shrink sleeves available on request.




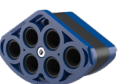

Cable entries 150


## SYSTEM COVERS AND SYSTEM SEALS FOR CABLES




<b>HSI150 DG – SYSTEM COVER FOR RETROFIT INSTALLATION</b>				
<b>Illustration</b>	<b>Application range cable/pipe OD (mm)</b>	<b>Article code</b>	<b>Article number</b>	<b>GTIN</b>
<b>Split system cover with 1 opening including split adapter ring</b>				
	36 – 70	<b>HSI150 DG 1x36-70</b>	2102200020	4052487121064
<b>Split system cover with 1 opening including split adapter ring</b>				
	70 – 112	<b>HSI150 DG 1x70-112</b>	2102200030	4052487121071
<b>Split system cover with 3 openings including split adapter ring and 3x plugs</b>				
	24 – 54	<b>HSI150 DG 3x24-54</b>	2102200000	4052487055444
<b>Split system cover with 6 openings including split adapter ring and 6x plugs</b>				
	10 – 36	<b>HSI150 DG 6x10-36</b>	2102200010	4052487055451

<b>ACCESSORIES FOR SPLIT SYSTEM COVER</b>				
<b>Illustration</b>	<b>Article code</b>	<b>Article number</b>	<b>GTIN</b>	
<b>Tool kit for installation, comprising: 1 torque wrench 4-20 Nm, ¼ inch; 1 adapter for cordless screwdriver square end, ¼ inch; 2 extensions, 150 mm, ¼ inch; 1 extension, 100 mm, ¼ inch; 1 wrench socket M6, A/F 5, ¼ inch; 1 wrench socket M6, 100 mm with ball head, ¼ inch; 1 hexagon spanner M8, 50 mm with ball head, ¼ inch</b>				
	<b>HSI150 DG/HRK SSG WKZ</b>	2102200600	4052487055505	
<b>Press plate cover for HSI150 DG 3x24-54 for protecting the thread against dirt</b>				
	<b>HSI150 DG PA 3x24-54</b>	2102200400	4052487055468	
<b>Press plate cover for HSI150 DG 6x10-36 for protecting the thread against dirt</b>				
	<b>HSI150 DG PA 6x10-36</b>	2102200410	4052487055475	

## SYSTEM COVERS AND SYSTEM SEALS FOR CABLES

<b>HSI150-SEGMENTO</b>			
Illustration	Article code	Article number	GTIN
<b>System cover as segment receptacle</b>			
	<b>HSI150 S3</b>	3030300088	4052487062046
<b>The violet segment is designed for 2 cables, Ø 20 – 31 mm including 2 blind plugs</b>			
	<b>SEG 2x31</b>	3030300180	4052487215442
<b>The yellow segment is designed for 3 cables, Ø 20 – 26 mm including 3 blind plugs</b>			
	<b>SEG 3x26</b>	3030300181	4052487215459
<b>The blue segment is designed for 6 cables, Ø 15 – 21 mm including 6 blind plugs</b>			
	<b>SEG 6x21</b>	3030300182	4052487215466
<b>The orange segment is designed for 8 cables, Ø 5 – 15 mm including 8 blind plugs</b>			
	<b>SEG 8x15</b>	3030300183	4052487215473

<b>COMBINATION KIT SEGMENTO</b>			
Illustration	Article code	Article number	GTIN
<b>Combination kit SEGMENTO for pressure-tight outside sealing of core drill holes Ø 150 mm</b> Consisting of: 1x polymer flange HSI150 DFK with attachment elements, 1x system cover HSI150 S3, 3x segments according to choice SEG zxD, 1x lubricant GMS, 1x installation instructions			
	<b>KKS</b> Order example: KKS 3x26+3x26+8x15 includes: 1x HSI150 DFK, 1x HSI150 S3, 2x SEG 3x26, 1x SEG 8x15, 1x GMS	*	* Article numbers, GTIN on request

<b>ACCESSORIES FOR SEGMENTO SYSTEM COVER</b>			
Illustration	Article code	Article number	GTIN
<b>SEGMENTO torque screwdriver (1.2 Nm) with acoustic signal generator</b>			
	<b>DSD</b>	2300300000	4052487062220
<b>SEGMENTO special lubricant 10 g</b>			
	<b>GMS</b>	2300310000	4052487062237
<b>SEGMENTO assignment template to determine the suitable segments according to the cable diameter</b>			
	<b>BSS</b>	2300320000	4052487062244



Fire protection

# GASTIGHT AND WATERTIGHT FIREWALL S90

## HSS – FIRE PROTECTION SET S90 AND TOOLS

Illustration	Core drill hole/ wall sleeve ID (mm)	Article code	Article number	GTIN
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Approval no.: Z-19.15-1906 – Fire protection S90

**Gastight fire protection set in conjunction with HRD consisting of:  
Fire-stop pads 2x HVS K250, 3x HVS KB60, 1x label, stainless steel band**

	Up to Ø 100	<b>HSS100 KB FR HRD</b>	2600030002	4052487063722
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**Gastight fire protection set in conjunction with HRD consisting of:  
Fire-stop pads 2x HV K400, 3x HVS K250, 3x HVS KB 60, 1x label, stainless steel band**

	Up to Ø 150	<b>HSS150 KB FR HRD</b>	2600030003	4052487063739
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HRD seal insert not included

## HSS UNIVERSAL FIRE RETARDING SEALING FOR CABLE ENTRY HSI150

Illustration	Sealing variant	Article code	Article number	GTIN
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Approval no.: Z-19.15-1906 – Fire protection S90

**Gastight fire protection set in conjunction with system seal HSI150 consisting of:  
Fire-stop pads 1x HVS K720, 1x HVS K400, 4x HVS K250/2, 4x HVS KB 60, label, stainless steel band**

	SEGMENTO/system cover	<b>HSS150 HSI150</b>	2600030000	4052487063708
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e.g. HSS150/DG

**Gastight fire protection set in conjunction with system seal HSI150 consisting of:  
Fire-stop pads 2x HVS K400, 3x HVS K250, 3x HVS KB-60, label, stainless steel band**

	HRD press seal	<b>HSS150 HSI150 HRD</b>	2600030001	4052487063715
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# GASTIGHT AND WATERTIGHT FIREWALL S90

## HVS FIRE PROTECTION S90 PAD FIREWALL SYSTEM FOR CORE DRILL HOLES AND WALL SLEEVES

Illustration	Core drill hole/ wall sleeve ID (mm)	Article code	Article number	GTIN
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Approval no.: Z-19.15-1792

**Fire protection set consisting of:  
Fire-stop pads 3x HVS K250/2, 5x HVS KB 60, 1x label, 2x stainless steel band**



Up to Ø 100	<b>HVS KK100</b>	2600010005	4052487063371
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**Fire protection set consisting of:  
Fire-stop pads 2x HVS K400, 5x HVS K250/2, 6x HVS-KB 60, 1x label, 2x stainless steel band**



Up to Ø 150	<b>HVS KK150</b>	2600010006	4052487063388
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**Fire protection set consisting of:  
Fire-stop pads 2x HVS K720, 2x HVS K400, 5x HVS K250/2, 8x HVS KB 60, 1x label, 4x stainless steel band**



Up to Ø 150	<b>HVS KK200</b>	2600010007	4052487063395
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HRD seal insert not included

## ACCESSORIES

Illustration	Article code	Article number	GTIN
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**Assembly plate, for close-fitting installation of HVS/HSS fire-stop pads**




<b>HVS/HSS MBL</b>	2600024100	4052487132145
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Cable entries 150




## SYSTEM COVERS FOR CONNECTING CABLE DUCTS

<b>HSI150 – SLEEVE METHOD FOR SMOOTH AND CORRUGATED PIPES</b>				
Illustration	Pipe OD (mm)	Article code	Article number	GTIN
<b>System cover for smooth pipes</b>				
	110	<b>HSI150 MA110 GR</b>	2126010110	4052487058346
	125	<b>HSI150 MA125 GR</b>	2126010125	4052487058360
	140	<b>HSI150 MA145 GR</b>	2126010140	4052487058377
	160	<b>HSI150 MA168 GR</b>	2126010000	4052487058292
<b>System cover for corrugated pipes including ring clips for Kabuflex</b>				
	110	<b>HSI150 MA110 WR*</b>	2126010113	4052487124980
	125	<b>HSI150 MA125 WR*</b>	2126010007	4052487124973
	160	<b>HSI150 MA168 WR*</b>	2126010001	4052487058308

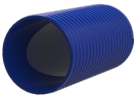
<b>HSI150 – COLD SHRINK-FIT METHOD FOR CORRUGATED PIPES</b>				
Article	Pipe OD (mm)	Article code	Article number	GTIN
<b>System cover for corrugated pipes</b>				
	110	<b>HSI150 D1x110 KS WR</b>	2102100060	4052487055338
	125	<b>HSI150 D1x125 KS WR</b>	2102100070	4052487055352

<b>ACCESSORIES FOR COLD-SHRINK SYSTEM COVER</b>				
Illustration	Article code	Article number	GTIN	
<b>Replacement shrink-fit sleeves for HSI150 D1x110 KS WR</b>				
	<b>KSM I223 2x119-56</b>	0311031201	4052487005814	
<b>Replacement shrink-fit sleeves for HSI150 D1x1125 KS WR</b>				
	<b>KSM I240 2x154-76</b>	0311031000	4052487005777	

## CABLE ENTRY SYSTEM

<b>KES150 MA – CABLE ENTRY SYSTEM</b>			
Illustration	Article code	Article number	GTIN
<b>System cover for pressure-tight connection of spiral hose Hateflex14150 to wall insert HSI150</b>			
	<b>KES MA150 D</b>	2125810000	4052487058070
<b>Cement-coated wall sleeve (length 500 mm) with sleeve for floor entry of spiral hose Hateflex14150</b>			
	<b>KES150 MA ZVR150/500</b>	2125502000	4052487139991
<b>Connection set for core drill holes/wall sleeves including two press seals to connect the spiral hose Hateflex14150 to core drill holes Ø 200 mm for max. wall thickness 500 mm*</b>			
	<b>KES150 MA KB SET</b>	2125818500	4052487140409



\* Other variants available at [www.hauff-technik.de](http://www.hauff-technik.de).

<b>SPIRAL HOSE WITH SMOOTH INNER SURFACE FOR GENTLE CABLE FEEDING, ID 150 MM (STANDARD LENGTHS)</b>				
Illustration	Length (m)	Article code	Article number	GTIN
	2	<b>Hateflex14150/2000</b>	2130000200	4052487058490
	3	<b>Hateflex14150/3000</b>	2130000300	4052487058513
	4	<b>Hateflex14150/4000</b>	2130000400	4052487058537
	5	<b>Hateflex14150/5000</b>	2130000500	4052487058551
	6	<b>Hateflex14150/6000</b>	2130000600	4052487058575
	8	<b>Hateflex14150/8000</b>	2130000800	4052487058612
	10	<b>Hateflex14150/10000</b>	2130001000	4052487058650
	12	<b>Hateflex14150/12000</b>	2130001200	4052487058698
	15	<b>Hateflex14150/15000</b>	2130001500	4052487058759
	18	<b>Hateflex14150/18000</b>	2130001800	4052487058810
	20	<b>Hateflex14150/20000</b>	2130002000	4052487058858
	25	<b>Hateflex14150/25000</b>	2130002500	4052487058957




Custom lengths on request.

## CABLE ENTRY SYSTEM

### ACCESSORIES FOR CABLE ENTRY SYSTEMS – FLOOR ENTRY









Illustration	Article code	Article number	GTIN
<b>Installation fixture KES FUBO-FIX AV</b>			
<b>C-rack (length 1100 mm) with adjustable earth spikes</b>			
	<b>KES FUBO-FIX AV</b>	1900500165	4052487165693
<b>Fastening bracket for Ø 160 mm, suitable for fastening the KES150 MA ZVR150/500 to the installation fixture, including fastening elements (side-by-side arrangement possible)</b>			
	<b>KES150 FUBO-FIX BB160</b>	1900500167	4052487165716

### KES150 MA – CABLE DUCT END STOP

Illustration	Article code	Article number	GTIN
<b>Sealing set sleeve KES150 MA WE including split interchangeable insert with segmented ring technology for the cable seal at the end of the spiral hose Hateflex14150: for 1 cable, Ø 48 – 83 mm or 3 cables, Ø 22 – 58 mm or 6 cables, Ø 8-36 mm (installation of sleeve prior to cable laying) including plug</b>			
	<b>KES150 MA WE160 SG 1x48-83 SET</b>	2125817103	4052487164764
	<b>KES150 MA WE160 SG 3x22-58 SET</b>	2125817102	4052487164757
	<b>KES150 MA WE160 SG 6x8-36 SET</b>	2125817101	4052487164740
<b>Sleeve to be used with interchangeable insert WE 160-z/d to seal cables at end of spiral hose Hateflex14150 (installation before cables are laid)</b>			
	<b>KES150 MA 160-172/140-163 WE</b>	2125817100	4052487120937
<b>Split interchangeable insert with segmented ring technology for installation in sleeve KES150 MA WE for sealing:</b>			
<b>1 cable, Ø 48 – 83 mm or 3 cables, Ø 22 – 58 mm or 6 cables, Ø 8-36 mm including plug</b>			
	<b>WE160 SG 1x48-83</b>	0825817116	4052487164719
	<b>WE160 SG 3x22-58</b>	0825817115	4052487164702
	<b>WE160 SG 6x8-36</b>	0825817114	4052487164696
<b>Split interchangeable insert for installation in sleeve KES150 MA WE customised according to cable use</b>			
<b>z= number of cables, d= cable diameter</b>			

\* Article numbers, GTIN and price on request\*  
Other variants available at [www.hauff-technik.de](http://www.hauff-technik.de).

## CABLE ENTRY SYSTEM

CABLE ENTRY SYSTEMS			
Illustration	Article code	Article number	GTIN
<b>Pipe connection sleeve for connecting smooth cable ducts</b>			
	KES150 MA160-172/140-163 AR111	2125814000	4052487058131
<b>Pipe connection sleeve for connecting smooth cable ducts</b>			
	KES150 MA160-172/140-163 AR126	2125813000	4052487058124
<b>Connection sleeve for hose extension/connection for Hateflex14150</b>			
	KES150 MA150-172/150-172	2128020000	4052487058407
<b>Connection sleeve for connecting rigid cable ducts OD = 160 mm* to spiral hose Hateflex14150</b>			
	KES150 MA140-163/160-175	2125812000	4052487058100
<b>1 set of ring clips to stabilise the corrugated pipe within the sleeve for Kabuflex: (please specify pipe type and manufacturer when ordering)</b>			
	CR110	1630500110	4052487134491
	CR125	1630500125	4052487134514
	CR160	1630500160	4052487134538
<b>Rigid pipe section 440 mm projecting and OD = 160 mm with sleeve for connection to spiral hose Hateflex14150 (tight wall sealing in core drill holes in combination with an HRD press seal).</b>			
	KES150 MA160-172/140-163 SET	2125818000	4052487058278
<b>Spacer 1x2 for attaching and positioning hose packages with Hateflex 14150 (can be combined using a simple push-fit system)</b>			
	KES150 1x2 AH PP	3030359940	4052487227797
<b>Tool set for pressure-tight strap assembly, comprising: 1 torque 4-20 Nm, ¼ inch; 1 extension 150 mm, ¼ inch; 1 socket for hexagon spanner A/F 13, ¼ inch; 1 socket for hexagon spanner A/F 8, ¼ inch</b>			
	KES MA WKZ SET	2128030000	4052487058469


\* Additional clip rings CR are necessary to connect corrugated pipes.

Two profile sealing rings are additionally necessary for each pipe connection (available from the pipe manufacturer, to be provided on-site).

## Wall sleeves

# WALL SLEEVES AND FLANGE WALL SLEEVES

### ZVR – CEMENT-COATED WALL SLEEVE


Illustration	Wall sleeve ID (mm)	Wall sleeve OD (mm)	Article code	Article number
	50	59	<b>ZVR50/X</b>	1200050XXX*
	80	95	<b>ZVR80/X</b>	1200080XXX*
	100	115	<b>ZVR100/X</b>	1200100XXX*
	125	142	<b>ZVR125/X</b>	1200125XXX*
	150	167	<b>ZVR150/X</b>	1200150XXX*
	200	219	<b>ZVR200/X</b>	1200200XXX*
	250	269	<b>ZVR250/X</b>	1200250XXX*
	300	321	<b>ZVR300/X</b>	1200300XXX*

\* The article numbers and GTINs for the exact wall thicknesses can be found at: [www.hauff-technik.de](http://www.hauff-technik.de)  
 Standard lengths: 200, 240, 250, 300, 365, 400, 500 mm Other wall sleeve diameters on request.

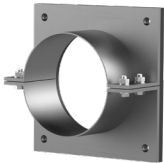
X = wall thickness in mm

Above a length of > 600 mm, the cement-coated pipe has a 250 mm coating on each side.

### FA

Illustration	Wall sleeve ID (mm)	Wall sleeve wall thickness (mm) S	Flange standard dimensions (mm)	Article code	Article number
	80	2	□170	<b>FA1x80/80/0 A2</b>	0910820000
	100	2	□185	<b>FA1x100/80/0 A2</b>	0910830000
	125	2	□205	<b>FA1x125/80/0 A2</b>	0910840000
	150	2	□225	<b>FA1x150/80/0 A2</b>	0910850000
	200	3	Ø 350	<b>FA1x200/80/0 A2</b>	0910870000

### FAG

Illustration	Wall sleeve ID (mm)	Wall sleeve wall thickness (mm) S	Flange standard dimensions (mm)	Article code	Article number
	80	1,5	□170	<b>FAG1x80/80/0 A2</b>	0910910000
	100	2	□185	<b>FAG1x100/80/0 A2</b>	0910920000
	125	2	□205	<b>FAG1x125/80/0 A2</b>	0910930000
	150	2	□225	<b>FAG1x150/80/0 A2</b>	0910950000
	200	2,5	□280	<b>FAG1x200/80/0 A2</b>	0910960000
	250	2	Ø 400	<b>FAG1x250/80/0 A2</b>	0910970000
	300	3	Ø 450	<b>FAG1x300/80/0 A2</b>	0910980000
	350	3	Ø 500	<b>FAG1x350/80/0 A2</b>	0910983500
	400	3	Ø 550	<b>FAG1x400/80/0 A2</b>	0910990000
	450	4	Ø 600	<b>FAG1x450/80/0 A2</b>	0910990002
	500	4	Ø 650	<b>FAG1x500/80/0 A2</b>	0910990003

## STANDARD PRESS SEALS

<b>STANDARD PRESS SEAL HSD, A2/EPDM55, sealing width 40 mm</b>					
Core drill hole/ wall sleeve ID (mm)	Suitable for media pipe OD (mm)		Article code	Article number	GTIN
	from	to			
100	32	34	<b>HSD100 1x32 b40 A2/EPDM55</b>	1650010032	4052487121347
	40	43	<b>HSD100 1x40 b40 A2/EPDM55</b>	1650010040	4052487121408
	48	51	<b>HSD100 1x48 b40 A2/EPDM55</b>	1650010048	4052487121460
	60	63.5	<b>HSD100 1x60 b40 A2/EPDM55</b>	1650010060	4052487121521
125	60	63.5	<b>HSD125 1x60 b40 A2/EPDM55</b>	1650012060	4052487121583
	75	77	<b>HSD125 1x75 b40 A2/EPDM55</b>	1650012075	4052487121644
	78	81	<b>HSD125 1x78 b40 A2/EPDM55</b>	1650012085	4052487121705
150	78	81	<b>HSD150 1x78 b40 A2/EPDM55</b>	1650015078	4052487121828
	88	92	<b>HSD150 1x88 b40 A2/EPDM55</b>	1650015088	4052487121880
	110	113	<b>HSD150 1x110 b40 A2/EPDM55</b>	1650015110	4052487121941
200	110	113	<b>HSD200 1x110 b40 A2/EPDM55</b>	1650020100	4052487122047
	114	119	<b>HSD200 1x114 b40 A2/EPDM55</b>	1650020110	4052487122108
	125	128	<b>HSD200 1x125 b40 A2/EPDM55</b>	1650020120	4052487122160
	133	136	<b>HSD200 1x133 b40 A2/EPDM55</b>	1650020130	4052487122221
	139	141	<b>HSD200 1x139 b40 A2/EPDM55</b>	1650020140	4052487122283
	159	163	<b>HSD200 1x159 b40 A2/EPDM55</b>	1650020150	4052487122344



Press seals for cables

## CORRUGATED PIPE SEAL


<b>WRD</b>				
<b>Illustration</b>	<b>Nominal diameter (mm)</b>	<b>Article code</b>	<b>Article number</b>	<b>GTIN</b>
<b>Core drill hole/wall sleeve ID 100 mm</b>				
	63	<b>WRD100 1x63 b40 A2/EPDM55 – Kabuflex</b>	1610100063*	4052487042116*
	<b>Core drill hole/wall sleeve ID 125 mm</b>			
	63	<b>WRD125 1x63 b40 A2/EPDM55 – Kabuflex</b>	1610125063*	4052487132534*
	75	<b>WRD125 1x75 b40 A2/EPDM55 – Kabuflex</b>	1610125075*	4052487042192*
<b>Core drill hole/wall sleeve ID 150 mm</b>				
	75	<b>WRD150 1x75 b40 A2/EPDM55 – Kabuflex</b>	1610150075*	4052487042208*
	90	<b>WRD150 1x90 b40 A2/EPDM55 – Kabuflex</b>	1610150090*	4052487042215*
	110	<b>WRD150 1x110 b40 A2/EPDM55 – Kabuflex</b>	1610150110*	4052487042222*
<b>Core drill hole/wall sleeve ID 200 mm</b>				
	110	<b>WRD200 1x110 b40 A2/EPDM55 – Kabuflex</b>	1610200110*	4052487042239*
	125	<b>WRD200 1x125 b40 A2/EPDM55 – Kabuflex</b>	1610200125*	4052487042253*
	160	<b>WRD200 1x160 b40 A2/EPDM55 – Kabuflex</b>	1610200160*	4052487042277*
<b>Core drill hole/wall sleeve ID 250 mm</b>				
	160	<b>WRD250 1x160 b40 A2/EPDM55 – Kabuflex</b>	1610250160*	4052487042314*
	200	<b>WRD250 1x200 b40 A2/EPDM55 – Kabuflex</b>	1610250300*	4052487181907*

\*The article numbers and GTINs are dependent on the pipe type and manufacturer.

Additional sizes on request.

Press seals for cables

## STANDARD PRESS SEALS

<b>HRK SSG – STANDARD PRESS SEAL WITH SUPER SEGMENTED TECHNOLOGY</b>						
<b>Illustration</b>	<b>Number of cables</b>	<b>Cable OD (mm)</b>	<b>Article code</b>		<b>Article number</b>	<b>GTIN</b>
<b>Core drill hole/wall sleeve ID (mm) 100</b>						
	1	18 – 65	<b>HRK100 SSG 1x18-65 b40 PAGF/A2/EPDM55</b>	1	3030300044	4052487129268
	4	8 – 30	<b>HRK100 SSG 4x8-30 b40 PAGF/A2/EPDM55</b>	1	3030300045	4052487129251
<b>Core drill hole/wall sleeve ID (mm) 150</b>						
	1	36 – 70	<b>HRK150 SSG 1x36-70 b40 PAGF/A2/EPDM55*</b>	1	3030300046	4052487223614
	1	70 – 112	<b>HRK150 SSG 1x70-112 b40 PAGF/A2/EPDM55*</b>	1	3030300047	4052487129305
	3	24 – 54	<b>HRK150 SSG 3x24-54 b40 PAGF/A2/EPDM55</b>	1	1600101630	4052487129275
	6	10 – 36	<b>HRK150 SSG 6x10-36 b40 PAGF/A2/EPDM55</b>	1	3030300048	4052487126373
<b>Core drill hole/wall sleeve ID (mm) 200</b>						
	1	110 – 162	<b>HRK200 SSG 1x110-162 b40 PAGF/A2/EPDM55*</b>	1	3030300049	4052487223652
	3	40 – 72	<b>HRK200 SSG 3x40-72 b40 PAGF/A2/EPDM55</b>	1	3030300050	4052487134576

Press seals for cables

## STANDARD PRESS SEALS

<b>HRD SG – STANDARD PRESS SEAL WITH SEGMENTED RING TECHNOLOGY</b>					
<b>Number of cables overall</b>	<b>Number of cables</b>	<b>Cable OD (mm)</b>	<b>Article code</b>	<b>Article number</b>	<b>GTIN</b>
<b>Core drill hole/wall sleeve ID (mm) 80</b>					
1	1	6 – 41	<b>HRD80 SG 1x6-41 b40 A2/EPDM55</b>	2700100108	4052487000109
<b>Core drill hole/wall sleeve ID (mm) 100</b>					
1	1	24 – 52	<b>HRD100 SG 1x24-52 b40 A2/EPDM55</b>	2700101000	4052487168038
4	4	8 – 30	<b>HRD100 SG 4x8-30 b40 A2/EPDM55</b>	2700102000	4052487000130
8	8	4 – 16.5	<b>HRD100 SG 8x4-16.5 b40 A2/EPDM55</b>	2700103000	4052487000147
5	2	8 – 30	<b>HRD100 SG 2x8-30 3x4-16.5 b40 A2/EPDM55</b>	2700103500	4052487000154
	3	4 – 16.5			
<b>Core drill hole/wall sleeve ID (mm) 104</b>					
1	1	24 – 52	<b>HRD104 SG 1x24-52 b40 A2/EPDM55</b>	2700103615	4052487129695
4	4	8 – 30	<b>HRD104 SG 4x8-30 b40 A2/EPDM55</b>	2700103610	4052487127370
8	8	4 – 16.5	<b>HRD104 SG 8x4-16.5 b40 A2/EPDM55</b>	2700103620	4052487129213
<b>Core drill hole/wall sleeve ID (mm) 125</b>					
3	3	10 – 40	<b>HRD125 SG 3x10-40 b40 A2/EPDM55</b>	2700103750	4052487063913
6	6	6 – 31	<b>HRD125 SG 6x6-31 b40 A2/EPDM55</b>	2700103800	4052487000161
10	10	4 – 16.5	<b>HRD125 SG 10x4-16.5 b40 A2/EPDM55</b>	2700103850	4052487000178
<b>Core drill hole/wall sleeve ID (mm) 150</b>					
1	1	12 – 75	<b>HRD150 SG 1x12-75 b40 A2/EPDM55</b>	2700103996	4052487063951
1	1	75 – 110	<b>HRD150 SG 1x75-110 b40 A2/EPDM55</b>	2700103998	4052487063968
3	3	22 – 54	<b>HRD150 SG 3x22-54 b40 A2/EPDM55</b>	2700104000	4052487000185
6	6	8 – 35	<b>HRD150 SG 6x8-35 b40 A2/EPDM55</b>	2700105000	4052487000192
9	9	6 – 25	<b>HRD150 SG 9x6-25 b40 A2/EPDM55</b>	2700106000	4052487000208
10	4	8 – 30	<b>HRD150 SG 4x8-30+6x4-16.5 b40 A2/EPDM55</b>	2700106500	4052487000215
	6	4 – 16.5			
<b>Core drill hole/wall sleeve ID (mm) 200</b>					
7	3	6 – 54	<b>HRD200 SG 3x6-54+4x6-26 b40 A2/EPDM55</b>	2700107000	4052487000222
	4	6 – 26			
15	7	10 – 32	<b>HRD200 SG 7x10-32+8x3.5-16.5 b40 A2/EPDM55</b>	2700108000	4052487000239
	8	3.5 – 16.5			

## EARTHING ENTRIES

<b>HEA M – ENTRY FOR EARTHING IN CONCRETE</b>			
<b>Article</b>	<b>Article code</b>	<b>Article number</b>	<b>GTIN</b>
Entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective foils, for wall thickness 70 mm	<b>HEA M12/70</b>	1700010070	4052487044479
Entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective covers, for wall thickness 100 mm	<b>HEA M12/100</b>	1700010100	4052487044493
Entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective covers, for wall thickness 150 mm	<b>HEA M12/150</b>	1700010150	4052487044509
Entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective covers, for wall thickness 200 mm	<b>HEA M12/200</b>	1700010200	4052487044516
Entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective covers, wall thicknesses 210 – 500 mm	<b>HEA M12/X</b>	On request	On request
Entry for earthing connections made of A4, M16 connection on both sides, with water barrier and protective covers, wall thicknesses 210 – 500 mm	<b>HEA M16/200</b>	1700020020	4052487044530

<b>HEA PK – EARTHING CONNECTION AND ENTRY</b>			
<b>Article</b>	<b>Article code</b>	<b>Article number</b>	<b>GTIN</b>
Entry for earthing connections made of A4, M12 connection on both sides, with terminal lug and cross-clamp, available for wall thicknesses 150 – 500 mm, with water barrier and protective covers	<b>HEA PK M12/X</b>	On request	On request
Entry for earthing connections made of A4, M16 connection on both sides, with terminal lug and cross-clamp, available for wall thicknesses 150 – 500 mm, with water barrier and protective covers	<b>HEA PK M16/X</b>	On request	On request

X = wall thickness (mm)

Increments of 10 mm possible

Short circuit-proof up to 10 KA/1s (VDE 0101/E DIN EN 50522)

Extra

## EARTHING ENTRIES

### HEA IS M12 – INSULATED FEEDTHROUGH FOR STATION EARTHING

Article	Article code	Article number	GTIN
Insulated entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective cover (HEA-IS-M12) for wall thickness 100 mm	<b>HEA IS M12/100</b>	1710020100	4052487045308
Insulated entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective cover (HEA-IS-M12) for wall thickness 150 mm	<b>HEA IS M12/150</b>	1710020150	4052487045360
Insulated entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective cover (HEA-IS-M12) for wall thickness 200 mm	<b>HEA IS M12/200</b>	1710020156	4052487045384
Insulated entry for earthing connections made of A4, M12 connection on both sides, with water barrier and protective cover (HEA-IS-M12) for wall thickness 250 mm	<b>HEA IS M12/250</b>	1710020157	4052487045391

### HEA A M12 – CONNECTION PART WITH WELD GROOVE

Article	Article code	Article number	GTIN
Connection piece in A4 with weld groove in St, conductor core Ø 25 mm, M12 connection, for distances between formwork and core iron of 50 mm	<b>HEA A M12/50</b>	1700300500	4052487124140





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