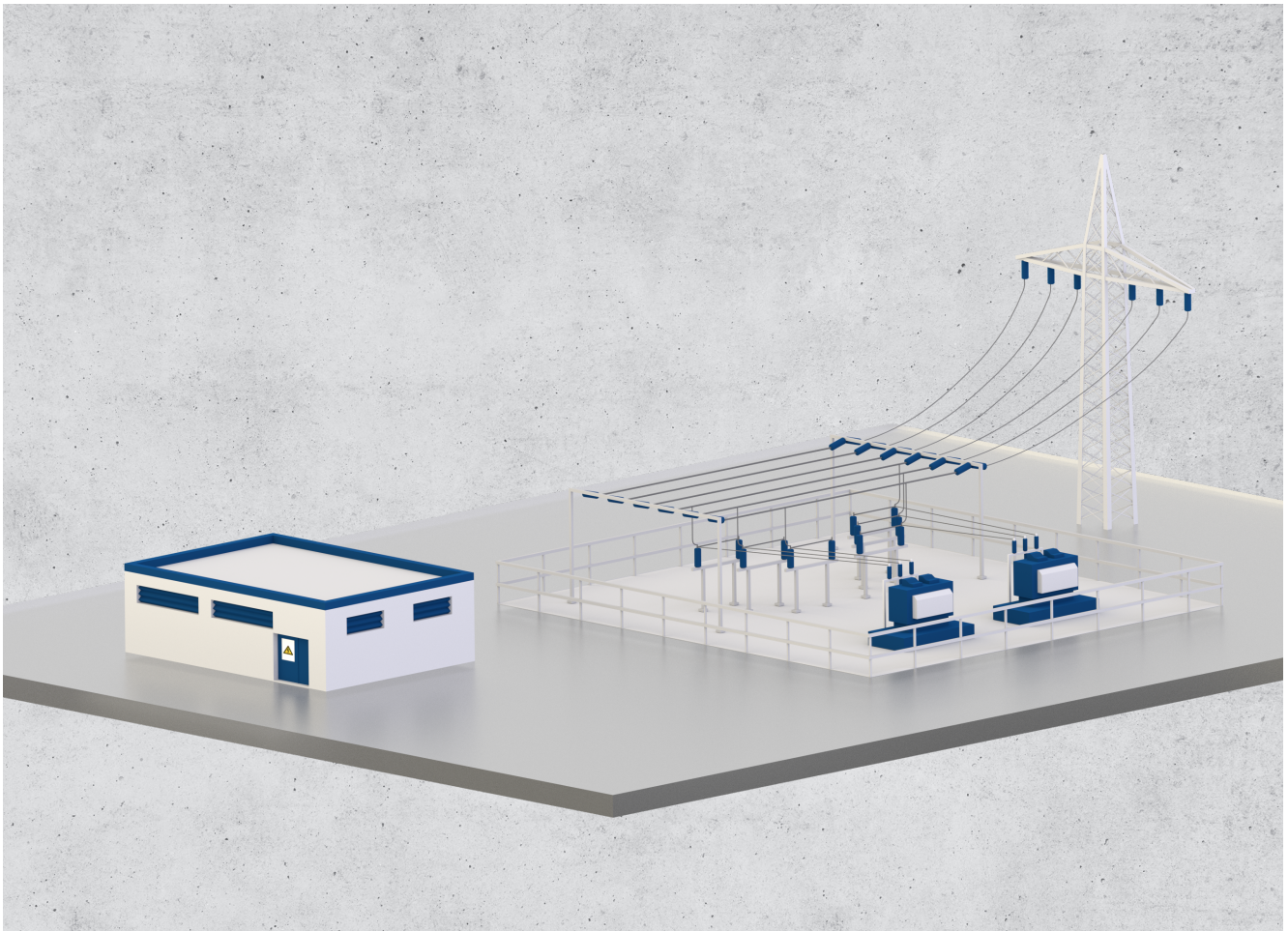


Always. Reliable. Tight.

hauff-  
technik®



FOR SUBSTATIONS, SWITCH GEAR AND ENGINEERING BUILDINGS  
CONSTRUCTED USING CONVENTIONAL METHODS

## CABLE ENTRIES AND PIPE ENTRIES

For substations, switch gear and engineering buildings constructed using conventional methods

## CABLE ENTRIES AND PIPE ENTRIES

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

Hauff-Technik cable entries are often used in the secondary technology area of substations (to protect the supply and regulate voltage, for remote control and ripple control, etc.). We offer solutions for every cable type and diameter. In the primary technology area too, cables in switch gear buildings, for example, are sealed with cable entries. Our press seals are ideal for sealing pipes which are used to connect the transformer trays

Conduit routes, possibly combined with cable shafts, have proved to be a reliable solution enabling cables to be replaced in a substation without subsequent groundwork and the associated risks. We have the ideal connection option for every cable duct. Hauff-Technik cable entry systems can be used to create pressure-tight building connections with an empty conduit system.

Hauff-Technik provides solutions not only for new-build projects – where provision is made right at the planning stage and the corresponding equipment is set in concrete when the building is constructed – but also for existing buildings for retrofit installation in core drill holes.

Detailed information about our products is available on the following pages.

### OVERVIEW OF OUR PRODUCT SOLUTIONS

#### Building-Integrated Substation

- Cable entry for connection of a rigid duct
- Cable entry with flexible duct connection
- Fire protection
- Earthing entry

#### Transformer station with switch gear building

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

#### Cable duct

- Cable entry for connection of a rigid duct
- Cable entry without connection for cable duct

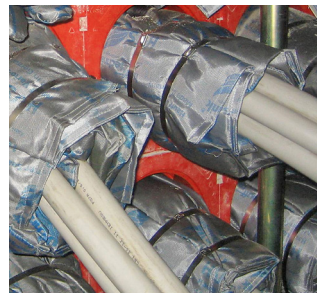
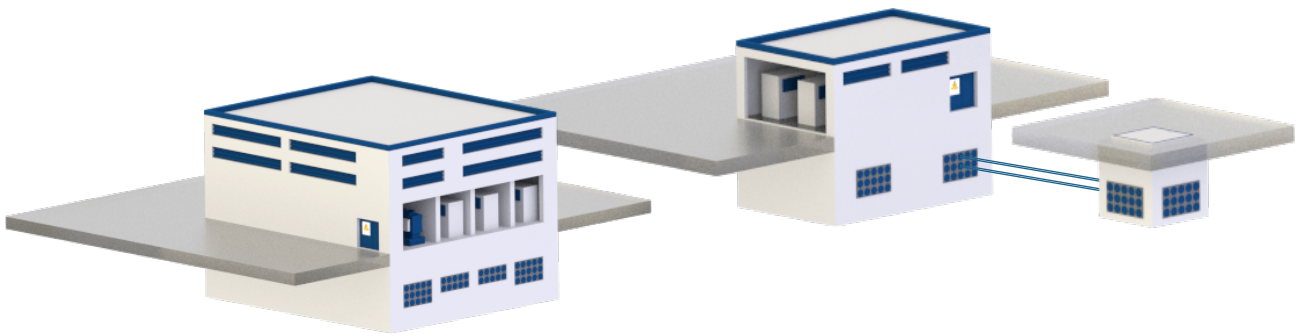
### OUR PLANNING SUPPORT FOR ARCHITECTS AND SPECIALISED PLANNERS

With Hauff-Technik, your project is in good hands. You can count on us for direct and instant support in technical questions related to professional insertion and sealing of cables and pipes. We are glad to discuss and advise individually and personally.

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

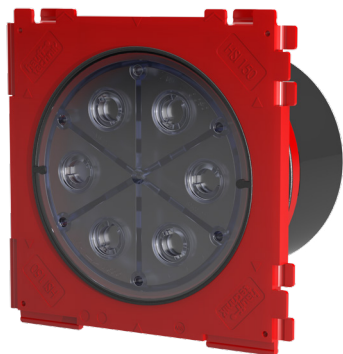
Robert-Bosch-Straße 9  
89568 Hermaringen, GERMANY

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planungssupport@hauff-technik.de



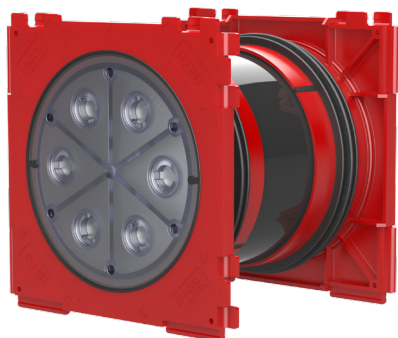
# Cable sealing system 150

## WALL INSERTS AND FLANGE



### HSI 150-K/X single wall insert with one-sided connection on the outside of the building

Single wall inserts are available for wall thickness from 70 mm onwards. Along with a closing cover, single wall inserts are equipped with a safety cover, which is only removed immediately before laying the cable. Customers benefit from double reliability, as wall thicknesses from 70 to 150 mm are protected not only against water getting into the building but also against oil leaking out of the building into the surrounding area should the closing cover be opened accidentally or prematurely. A variety of system seals are available for sealing cables and ducts.



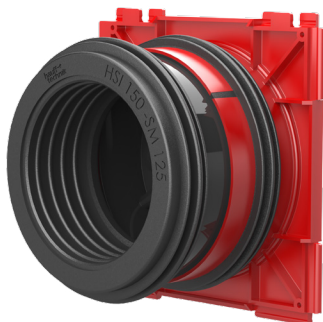
### HSI 150-K2/X double wall insert with connection on both sides

Double wall inserts are available for wall thickness from 100 mm onwards. They are equipped with pressure-tight closing covers on both sides. They can be used to connect cable ducts and also to seal the cables on the inside of the building. Packages can be created using the square installation frame. The double wall insert offers maximum flexibility for sealing and many advantages over core drills and wall sleeves.



# Cable sealing system 150

## WALL INSERTS AND FLANGE



### HSI 150-GSM single wall insert with plug-in socket

The single wall insert with plug-in socket is the ideal and particularly cost-effective solution for connecting smooth cable ducts to buildings and cable shafts. The pressure-tight blind cover that is pre-mounted on the HSI 150-GSM also prevents water ingress into the building if cable ducts have already been connected. After the cable has been laid, it is preferably sealed with split system seals on the inside of the building.

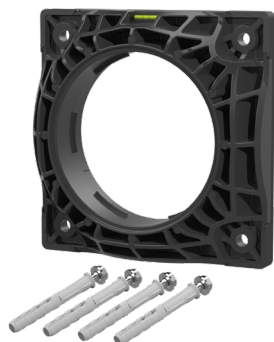


### HSI 150-K2-S30°/45°/60°/X slanted wall insert

The HSI 150 slanted wall insert is the ideal solution for routing cables or cable ducts through walls at an angle. Thanks to the slanted installation, cables can be laid in compliance with minimum bending radii. Designs in 30°, 45° or 60° are available as single or double wall inserts. Packages are available in single rows. Slanted wall inserts are delivered with polystyrene wedges, ready for installation flush with formwork.

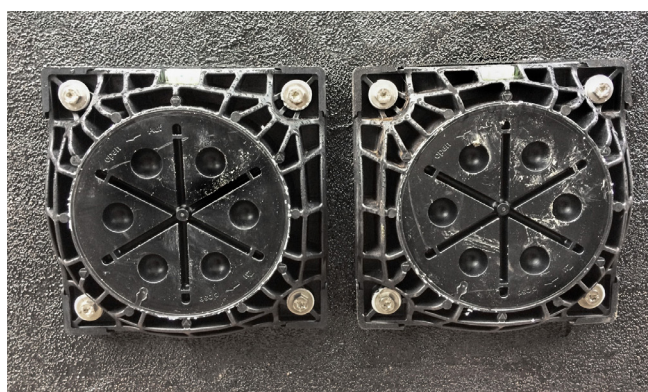


## Cable sealing system 150 WALL INSERTS AND FLANGE

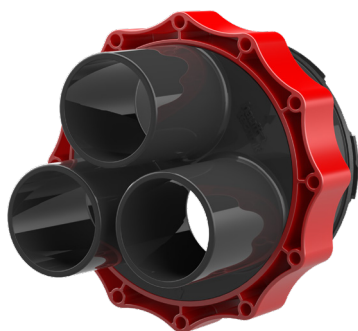


### HSI 150-DFK flange

The HSI-150 DFK polymer flange is installed on the outside of the building covering a core drill hole (ID max. 150 mm). The pressure-tight connection to the wall is achieved using a 6-mm-thick surface seal made of EPDM. The fasteners including the washer are made of high quality stainless steel. The integrated spirit level simplifies the horizontal alignment. All HSI 150 system covers and system seals can be installed. The HSI 150-DFK is the ideal and flexible solution when no single or double wall inserts are available on site.

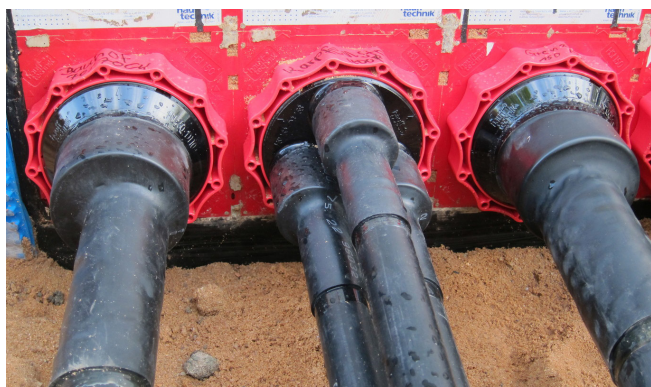


## Cable sealing system 150 SYSTEM COVER AND SYSTEM SEALS FOR CABLES



### HSI 150-D1/80, 3/58 or 7/33 system cover with shrink sleeves

The system covers with bayonet system are installed in the wall inserts before the cables are laid. Variants with different socket diameters are available according to requirements for sealing the cables. Hot or, alternatively, cold shrink sleeves are included in the scope of delivery. System covers with larger sockets are supplied with an additional centring strap. Empty sockets are sealed with VS blind plugs.



Cable sealing system 150

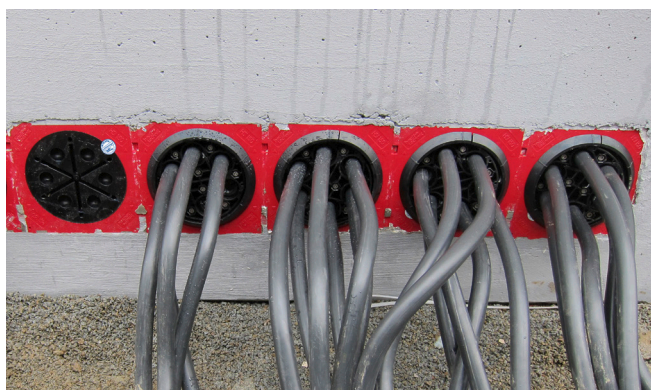
## SYSTEM COVER AND SYSTEM SEALS FOR CABLES



### HSI 150-DG-1/36-70, 1/70-112, 3/24-54 or 6/10-36 split system cover

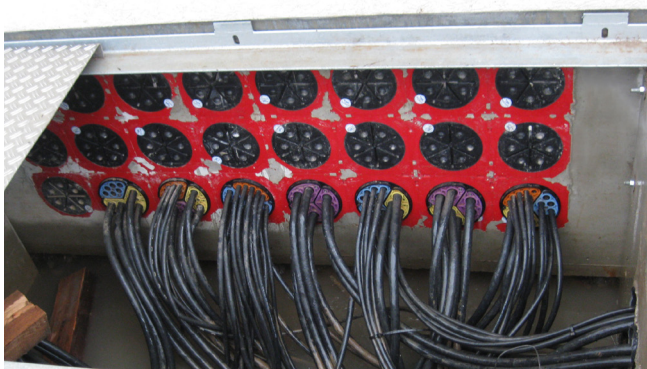
The HSI 150-DG system cover is installed after the cables have been laid. This means that the entire cross-section of the cable entry is available when laying the cables. An adapter ring, which is also split, ensures an optimum position of the seal. Thanks to the patented super segmented ring technology with precisely marked application ranges, the seal insert can be adjusted on site to correspond to the cables that have been laid.

The split HSI 150-DG and the system cover with sleeves, cover the application ranges of standard power cables and are the preferred solution for these applications.



### SEGMENTO

With Technogel, the seal material used for SEGMENTO, cables can be sealed in a particularly gentle manner. Four segments, which can be installed in any combination in the HSI 150-S3 system cover, are available in an application range from 5 – 31 mm. Retrofitting is very simple. All segments are supplied with blind plugs. Sealing signal, data and control cables is their typical area of application.



## GASTIGHT AND WATERTIGHT FIRE BARRIER S 90



### **HSS 150/SEG/D/DG - fire protection for installation in HSI 150-K2/X cable entry**

The HSS 150/SEG/D/DG fire barrier for walls is a gas- and watertight fire barrier meeting the requirements of fire resistance class S90 in accordance with DIN 4102-9 for installation in the HSI 150-K2 system. The seal is created with system covers. The barrier is approved for use with all types of cable in walls and for HSI 150 packages up to 2x6.

Approval number: Z-19.15-1906



### **HVS-KK 100 or HVS-KK 150 - fire protection kit for installation in core drills/wall sleeves**

The fire-stop pads of the HVS-KK... fire barrier for core drills/wall sleeves up to ID 100 or 150 mm are installed after the cables have been laid (the pads can be installed from one side). The barrier is approved for installation with all types of cables in the wall. The HVS-KK meets the requirements of fire resistance class S90 to DIN 4102-9.

Approval number: Z-19.15-1792



Cable sealing system 150

## SYSTEM COVERS FOR CONNECTING CABLE DUCTS



### HSI 150-M system cover with sleeve method

Smooth and corrugated cable ducts with an outer diameter of 110, 125 or 160 mm can be connected with the HSI 150-M system cover. The cable duct is connected using a flexible and stable rubber sleeve, which is pressed against the system cover and the cable duct by the stainless steel clamping straps. To connect corrugated cable ducts, clip rings are needed for mechanical stabilisation. These are placed underneath the stainless steel clamping straps (corrugated cable duct type and manufacturer to be provided when placing an order). We recommend sealing the cable on the inside of the building for conduit connections.



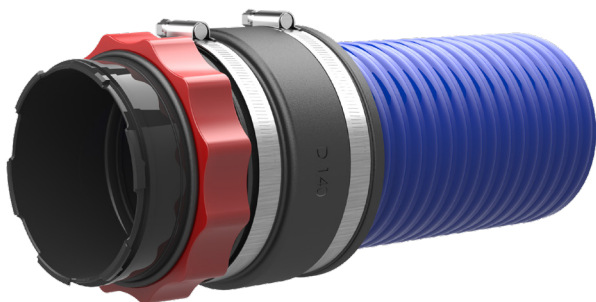
### HSI 150-D...-KS system cover with shrink sleeves

Quick and easy connection of corrugated cable ducts (Ø 110 and 125 mm) with a cold shrink sleeve. Including empty conduit routes enables problematic groundwork having to be carried out on the substation site at a later date.



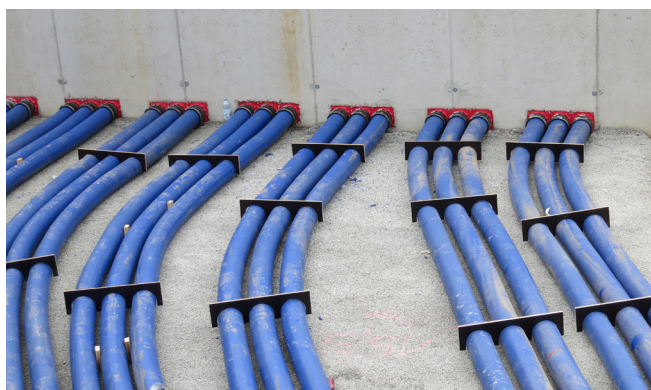
## Cable sealing system 150

# CABLE ENTRY SYSTEM



### **KES-M 150-D wall connection**

The KES-M 150 cable entry system is the ideal solution for a pressure-tight, flexible and robust empty conduit system. The 14150 Hateflex spiral hose is connected to the HSI 150 wall insert in a gas- and watertight (2.5 bar) manner using the KES-M 150-D system cover with the sleeve method. Various seal variants are available to seal the cables at the end of the spiral hose.



### **KES-M150-ZVR 150/500 floor entry**

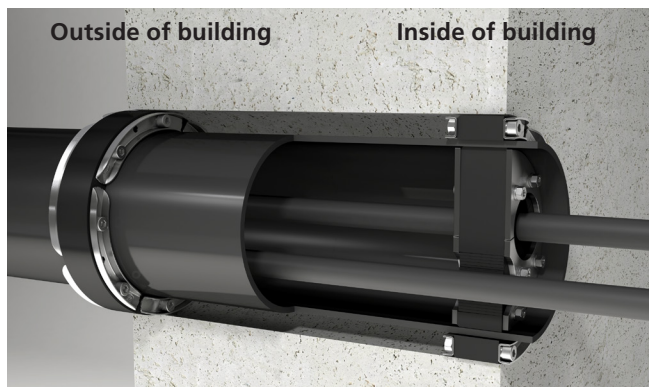
The KES-M150-ZVR 150/500 is used to create a gas- and watertight floor entry for the Hateflex spiral hose, while offering an optimum fit for the press seal at the same time. Precise height adjustment to the level of the finished floor is achieved by cutting the ZVR to length after concreting.

HRD 150-SG... press seals, for example, are available for sealing cables in the ZVR.



# Cable sealing system 150

## CABLE ENTRY SYSTEM



### Connection set for core drills/wall sleeves

#### KES-M 150-KB-Set

Sealing of a cable duct in waterproof concrete with two HSD 200/159 press seals on the outside and inside of the wall. The cable seal in the cable duct is made with an HRD 150-SG standard press seal on the inside of the building. With this solution, water can be present inside the cable duct but it cannot penetrate or damage the structure of the building. The spreading forces of the cable seal to which the cable duct is exposed are absorbed by the pipe seal.

Other variants on request



### KES-M 150-M cable entry system

KES-M 150-M sleeves can be used to connect smooth ducts to the Hateflex spiral hose. This allows, in combination with the cable entry system, a flexible installation of rigid ducts up to the connection to the building. This is for example helpful if you have to overcome a height difference.



### Cable entry system KES-M 150-WE 160-SG-z/d

Already laid cables can be sealed at the end of the cable duct with a sleeve and a split interchangeable insert with segment ring technology. The sleeve is mounted before the cables are laid. The entire cross-section of the cable entry system is available for laying the cables. Apart from the sealing set comprising sleeve and standard interchangeable insert, individual interchangeable inserts are also available.

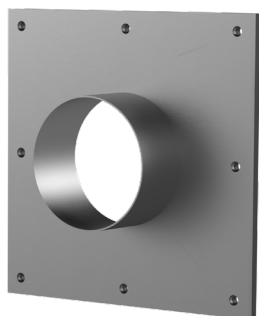


## STANDARD WALL SLEEVES AND FLANGES



### Cement-coated wall sleeve ZVR

The ZVR is available in diameters from 80 – 300 mm. It is installed flush with the formwork. It can also be installed in wall cut-outs. The break-resistant and inherently stable plastic wall sleeve with cement-bound special coating provides the basis for an optimum connection to the concrete. All press seals can be used for sealing cables or pipes.



### HRD-F dowel flange for retrofit installation on sheet steel, sheet metal casings or concreted walls

The leak-tight connection to the wall/casing is achieved using a 10-mm-thick surface seal made of EPDM. Made of stainless steel, the flange and fastening elements provide optimum protection against corrosion. All press seals can be installed for sealing cables or pipes. Dowel flanges are also custom-made to meet your specifications and can be installed over larger recesses/break-throughs, for example. Flanges with multiple pipe sockets and split flanges are also available.



Press seals

## STANDARD PRESS SEALS AND SEALING SET



### Standard press seal HSD

The HSD press seal is the ideal and cost-effective solution for sealing smooth cable ducts in core drills and wall sleeves. The incredibly stable stainless steel u-profile press segments with integrated torque control can be relied upon for an optimum press connection and offer outstanding protection against corrosion.



### Sealing set for corrugated pipes ADS

The sealing set ADS is the ideal sealing solution for corrugated cable ducts. The patented clip rings can be relied upon to distribute the closing pressure evenly, thus ensuring a gentle seal without piercing through the seal rubber and into the grooves of the pipes. This effectively excludes the risk of deformations and damage to the corrugated pipe. The insulation ring included in the scope of supply centres the corrugated pipe and neatly finishes and insulates the wall connection. For cable sealing in the corrugated pipe, the HRD press seal must be positioned directly underneath the press seal of the sealing set in order to avoid deformations.



## STANDARD PRESS SEALS

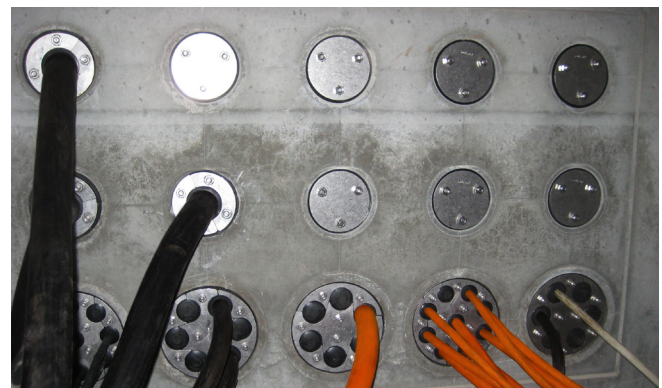
### Standard press seal HRK-SSG

Already laid cables can be sealed in core drilled holes/ducts with the split HRK-SSG press seal. This ensures that the whole surface of the core drilled hole/ducts can be used during installation of the cables. Thanks to the super segmented ring technology the sealing can be adapted on site to the diameter of the cables. The inscription on the segments ensure a very high application security. Unoccupied openings are sealed with the blind plugs included in the scope of delivery. You can choose between the OD 100, 150 and 200 mm. The pressure plates are made of high quality glass fiber reinforced plastic and ensure thanks to the integrated form closure maximum of stability and anti-twist. Bolts and nuts are made of stainless steel V2A (AISI 304L)



### Standard press seal HRD-SG

The split press seal HRD-SG is used to seal cables that have already been laid through core drills/wall sleeves. This means that the entire cross-section of the wall sleeve/core drill is available when laying the cables. Thanks to the super segmented ring technology, the seal insert can be adjusted on site to correspond to the cables that have been laid. Unoccupied openings are sealed with the blind 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 V2A (AISI 304L) stainless steel.



## Press seals

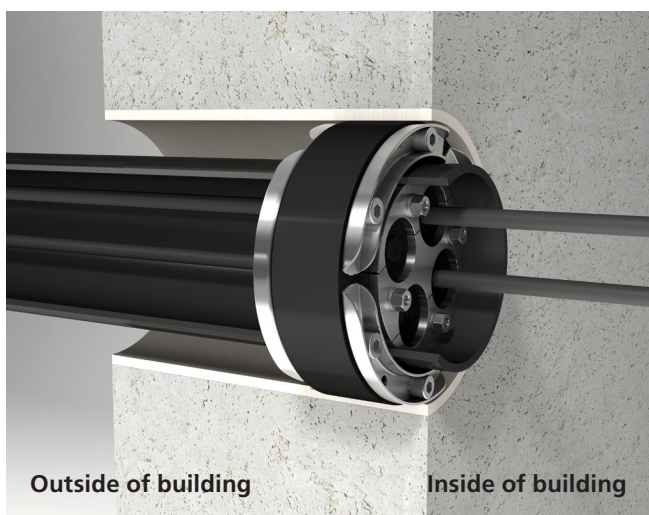
# STANDARD PRESS SEALS



### With duct connection - very thick walls

Sealing of a cable duct in waterproof concrete with two HSD 200/159 press seals on the outside and inside of the wall. The cable seal in the cable duct is made with an HRD 150-SG standard press seal on the inside of the building. With this solution, water can be present inside the cable duct but it cannot penetrate or damage the structure of the building. The spreading forces of the cable seal to which the cable duct is exposed are absorbed by the pipe seal.

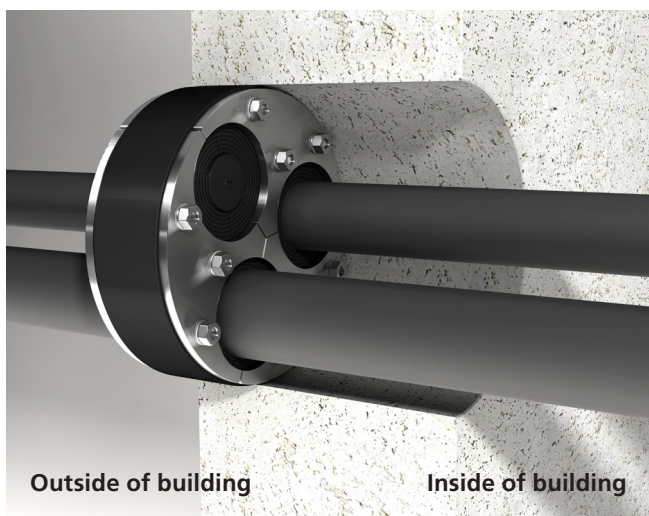
Other variants on request



### With duct connection - thin walls

Sealing of a cable duct with an HSD 150/110 press seal in the wall sleeve on the inside of the building. The cable seal in the cable duct is also made on the inside of the building. The cable inserted is sealed with an HRD 100-SG press seal. This solution provides the best possible seal for cable duct and cable. The spreading forces of the cable seal to which the cable duct is exposed are absorbed by the pipe seal. When using the sealing system for core drills in waterproof concrete, the seals must be positioned flush with the outside wall in order to prevent water ingress into the core drill.

Other variants on request




### Without duct connection

Cable seal with a press seal in a core drill in waterproof concrete. To prevent water ingress into the core drill, the seal must be positioned on the outside wall.

The position of the cable seal can be selected at will when using wall sleeves.

## WALL INSERTS AND FLANGE



HSI 150 – WALL INSERTS			
Item	Article code	Article number	Figure
Single wall insert minimum wall thickness 70 mm	<b>HSI 150-K/X</b>	2140100XXX *1	
Double wall insert minimum wall thickness 100 mm	<b>HSI 150-K2/X</b>	2140300XXX *1	
Double wall insert for element walls	<b>HSI 150-K2-EW/X</b>	2140304XXX *1	
Slanted wall insert minimum wall thickness 240 mm	<b>HSI 150-1xZ-K2 S30/X</b>	2140303431	
Slanted wall insert minimum wall thickness 250 mm	<b>HSI 150-1xZ-K2 S45/X</b>	2140303500	
Slanted wall insert minimum wall thickness 300 mm	<b>HSI 150-1xZ-K2 S60/X</b>	2140303561	
Single wall insert with integrated plug-in sleeve Ø 110 mm minimum wall thickness 120 mm	<b>HSI 150-GSM 110/X *2</b>	_ *1	
Single wall insert with integrated plug-in sleeve Ø 125 mm minimum wall thickness 120 mm	<b>HSI 150-GSM 125/X *2</b>	_ *1	
Single wall insert with integrated plug-in sleeve Ø 160 mm minimum wall thickness 180 mm packages can only be created in conjunction with spacer	<b>HSI 150-GSM 160/X</b>	_ *1	
Spacer - set of 2 to increase the centre distance by 40 mm, enables HSI 150 to be packaged with HSI 90	<b>HSI-AH 40</b>	2101090010	

\*1 Please find the article number for the exact wall thickness on [www.hauff-technik.de](http://www.hauff-technik.de)  
standard length: 70 up to 500 mm (gradation in 10 mm)

X = wall thickness in mm, S = installation angle in °  
Z = number of entries next to one other

\*2 Possible restrictions for cable configurations

Slanted wall inserts (30°, 45° and 60°); special solutions to DIN 18195 Part 6 are also available on request.


HSI 150 – POLYMER FLANGE			
Item	Article code	Article number	Figure
Polymer flange incl. fastenings made of stainless steel V4A (AISI 316L) for concrete walls	<b>HSI 150-DFK</b>	2118010020	
Cartridge of 290 ml colour: grey elastic sealant to optimise wall surface when used with sealing flange	<b>EGO MS-805</b>	0505071621	



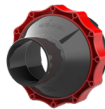
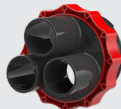
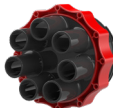
## Cable sealing system 150

# WALL INSERTS AND FLANGE

### HSI 150 – CLOSING COVER


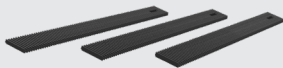

Item	Area of application cable/pipe Ø	Article code	Article number	Figure
Transparent closing cover	Blind cover	<b>HSI 150-DT</b>	2126010172	

### HSI 150 – SYSTEM COVERS WITH HEAT SHRINK SLEEVES





Item	Area of application cable/pipe Ø	Article code	Article number	Figure
System cover with 1 socket incl. 1 x heat-shrink sleeve 1 x centering tape	25 – 78 mm	<b>HSI 150-D1/80</b>	2101100010	
System cover with 3 x sockets incl. 3 x heat-shrink sleeves 1 x centering tape	22 – 56 mm	<b>HSI 150-D3/58</b>	2101100049	
System cover with 7 x sockets incl. 7 x heat-shrink sleeves	12 – 31 mm	<b>HSI 150-D7/33</b>	2101100059	

Designs with cold shrink sleeves are available on request.




### ACCESSORIES SYSTEM COVERS GENERALLY WITH SHRINK SLEEVES

Item	Article code	Article number	Figure
To seal unused sockets			
Sealing plug for system cover HSI 150-D7/33 (available as single unit or packing unit = 10 pcs)	<b>VS 32/34</b>	2140403234	
Sealing plug for system cover HSI 150-D3/58 (available as single unit or packing unit = 10 pcs)	<b>VS 58/60</b>	2140405860	
For centering and fixing the cables into the system cover sockets for optimal shrinking	<b>HSI-ZB</b>	2102200700	
Centering tape – set of 3 pieces elastomer strips 30 x 430 mm			
Flexible pin spanner	<b>SLS 6G</b>	0352010000	
Flexible pin spanner For installing and removing system covers in walls up to 100 mm with heat insulation	<b>SLS 6GD</b>	0352010100	

## SYSTEM COVERS AND SYSTEM SEALS FOR CABLES

<b>HSI 150-DG – SYSTEM COVERS FOR RETROFIT INSTALLATION</b>				
<b>Item</b>	<b>Area of application cable/pipe Ø</b>	<b>Article code</b>	<b>Article number</b>	<b>Figure</b>
Split system cover with 1 opening incl. split adapter ring	36 – 70 mm	<b>HSI 150-DG-1/36-70</b>	2102200020	
Split system cover with 1 opening incl. split adapter ring	70 – 112 mm	<b>HSI 150-DG-1/70-112</b>	2102200030	
Split system cover with 3 openings incl. split adapter ring and 3 x blind plugs	24 – 54 mm	<b>HSI 150-DG-3/24-54</b>	2102200000	
Split system cover with 6 openings incl. split adapter ring and 6 x blind plugs	10 – 36 mm	<b>HSI 150-DG-6/10-36</b>	2102200010	


Included in the scope of delivery of each HSI 150-DG system cover: GM lubricating stick, cutter, cleaning cloth.




<b>ACCESSORIES SPLIT SYSTEM COVER</b>			
<b>Item</b>	<b>Article code</b>	<b>Article number</b>	<b>Figure</b>
Tool for installation of system cover  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, AF 5, ¼ inch 1 wrench socket, M6, 100 mm with ball head, ¼ inch	<b>HSI 150-DG-W</b>	2102200600	
Press plate cover for HSI 150-DG-3/24-54 for protecting the threads against dirt	<b>HSI 150-PA- 3/24-54</b>	2102200400	
Press plate cover for HSI 150-DG-6/10-36 for protecting the threads against dirt	<b>HSI 150-PA- 6/10-36</b>	2102200410	

## Cable sealing system 150


# SYSTEM COVERS AND SYSTEM SEALS FOR CABLES

<b>HSI 150 – SEGMENTO</b>			
Item	Article code	Article number	Figure
System cover as segment receptacle	<b>HSI 150-S3</b>	2300100000	
The violet segment application area for 2 cables, diameter 20 – 31 mm including 2 blind plugs	<b>SEG 2/31</b>	2300130000	
The yellow segment application area for 3 cables, diameter 20 – 26 mm including 3 blind plugs	<b>SEG 3/26</b>	2300140000	
The blue segment application area for 6 cables, diameter 15 – 21 mm including 6 blind plugs	<b>SEG 6/21</b>	2300150000	
The orange segment application area for 8 cables, diameter 5 – 15 mm including 8 blind plugs	<b>SEG 8/15</b>	2300160000	


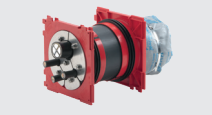
<b>COMBINATION KIT SEGMENTO</b>			
Item	Article code	Article number	Figure
SEGMENTO combination kit for pressure-tight external sealing of core drill, diameter 150 mm comprising: 1x plastic flange HSI 150-DFK with attachment elements, 1 x system cover HSI 150-S3, 3 x segments according to choice SEG x / xx, 1 x lubricant GMS, 1 x installation instructions	<b>KKS</b>  ordering example: KKS 338 comprise: 1x HSI 150-DFK, 1x HSI 150-S3, 2x SEG 3/26, 1x SEG 8/15, 1x GMS	–	

<b>ACCESSORIES SEGMENTO</b>			
Item	Article code	Article number	Figure
Torque screwdriver (1,2 Nm) SEGMENTO with acoustic signal	<b>DMS</b>	2300300000	
Special lubricant SEGMENTO 10 g	<b>GMS</b>	2300310000	
Assignment template SEGMENTO to determine the suitable segments according to the cable diameter	<b>BSS</b>	2300320000	


## GASTIGHT AND WATERTIGHT FIRE BARRIER S 90

<b>HSS – FIRE PROTECTION SET AND TOOLS</b>				
Artikel	Core drill hole/wall sleeve ID (mm)	Article code	Article number	Figure
Approval no: Z-19.15-1906 – fire protection S90				
Gastight fire protection set in conjunction with HRD comprising: fire-stop pads 2 x HVS-K250, 3 x HVS-KB-60, 1 x label, stainless steel belt	up to 100	<b>HSS-100-KB/FR-HRD</b>	2600030002	
Gastight fire protection set in conjunction with HRD comprising: fire-stop pads 2 x HVS-K400, 3 x HVS -K250, 3 x HVS-KB-60, 1 x label, stainless steel belt	up to 150	<b>HSS-150-KB/FR-HRD</b>	2600030003	

HRD rubber press seal not included.

<b>HSS UNIVERSAL FIRE-RESISTANT SEALING FOR CABLE ENTRY HSI 150</b>				
Item	Sealing	Article code	Article number	Figure
Approval no: Z-19.15-1906 – fire protection S90				
Gastight fire protection set in conjunction with system sealing HSI 150 comprising: fire-stop pads 1 x HVS-K720, 1 x HVS-K400, 4 x HVS -K250/2, 4 x HVS-KB-60, label, stainless steel belt	SEGMENTO/ system cover	<b>HSS-150/SEG/D/DG</b>	2600030000	
Gastight fire protection set in conjunction with system sealing HSI 150 comprising: fire-stop pads 2 x HVS-K400, 3 x HVS-K250, 3 x HVS-KB-60, label, stainless steel belt	HRD press seal	<b>HSS-150/HRD</b>	2600030001	

Delivery without HRD rubber press seal, SEGMENTO respectively system cover.


<b>HVS FIRE PROTECTION S90 PAD FIREWALL SYSTEM FOR CORE DRILL HOLE AND WALL SLEEVES</b>				
Item	Core drill hole/wall sleeve ID (mm)	Article code	Article number	Figure
Approval no: Z-19.15-1792				
Fire protection set comprising: 3 x HVS-K250, 3 x HVS-KB-60, label, stainless steel belt	up to 100	<b>HVS-KK 100</b>	2600010005	
Fire protection set consisting of: fire-stop pads 2 x HVS-K400, 5 x HVS -K250/2, 6 x HVS-KB-60, 1 x label, 2 x stainless steel belt	up to 150	<b>HVS-KK 150</b>	2600010006	
Fire protection set comprising: fire-stop pads 2 x HVS-K720, 2 x HVS-K400, 5 x HVS-K250/2, 8 x HVS-KB-60, 1 x label, 4 x stainless steel belt	up to 200	<b>HVS-KK 200</b>	2600010007	

HRD rubber press seal not included.


<b>ACCESSORIES</b>			
Item	Article code	Article number	Figure
Fitting panel for close-fitting installation of HVS/HSS fire-stop pads	<b>HVS/HSS-MB</b>	2600024100	

## Cable sealing system 150

# SYSTEM COVERS FOR CONNECTING CABLE DUCTS

HSI 150 – SLEEVE METHOD FOR SMOOTH AND CORRUGATED PIPES				
Item	Pipe OD	Article code	Article number	Figure
System cover for smooth ducts	110 mm	<b>HSI 150-M 110</b>	2126010110	 e.g HSI 150-M 140
System cover for corrugated ducts including clip rings		<b>HSI 150-M 110-WR*</b>	for Kabuflex: 2126010113	
System cover for smooth ducts	125 mm	<b>HSI 150-M 125</b>	2126010125	
System cover for corrugated ducts including clip rings		<b>HSI 150-M 125-WR*</b>	for Kabuflex: 2126010007	
System cover for smooth ducts	140 mm	<b>HSI 150-M 140</b>	2126010140	
System cover for smooth ducts	160 mm	<b>HSI 150-M 168</b>	2126010000	
System cover for corrugated ducts including clip rings		<b>HSI 150-M 168-WR*</b>	for Kabuflex: 2126010001	




\* For corrugated duct connections, clip rings CR are additionally required (please specify duct type and manufacturer in your order). For each pipe connection 2 profile sealing rings are necessary (available from the pipe manufacturer, to be provided on-site).

HSI 150 – COLD SHRINK SLEEVES FOR CORRUGATED PIPES				
Item	Pipe OD	Article code	Article number	Figure
System cover for corrugated pipes	110 mm	<b>HSI 150-D 110-KS</b>	2102100060	 e.g HSI 150D 125-KS
System cover for corrugated pipes	125 mm	<b>HSI 150-D 125-KS</b>	2102100070	

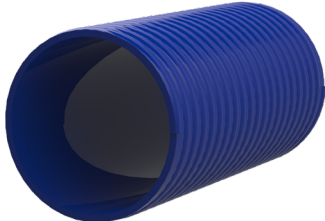
ACCESSORIES REPLACEMENT COLD SHRINK SLEEVES				
Item	Article code	Article number	Figure	
Replacement shrink-fit sleeves for HSI 150-D 110-KS	<b>KS 223.119.56</b>	0311031201	 e.g KS 240.154.76	
Cement shrink-fit sleeves for HSI 150-D 125-KS	<b>KS 240.154.76</b>	0311031000		



## Cable sealing system 150

# CABLE ENTRY SYSTEM

<b>KES-M 150 – CABLE ENTRY SYSTEMS</b>			
<b>Item</b>	<b>Article code</b>	<b>Article number</b>	<b>Figure</b>
System cover for the pressure-tight connection of Hateflex 14150 spiral hose to HSI 150 wall insert	<b>KES-M 150-D</b>	2125810000	
Floor entry, cement-coated wall sleeve ID = 150 mm with sleeve for the pressure-tight connection of Hateflex 14150 for floor entries	<b>KES-M150-ZVR 150/500</b>	2125502000	
Connection set for core drill/wall sleeves inclusive 2 press seals for connecting the Hateflex spiral hose 14150 to core drills Ø 200 mm. max. wallthickness 500 mm *	<b>KES-M 150-KB-Set</b>	2125818500	





\*For corrugated duct connections, clip rings CR are additionally required (please specify duct type and manufacturer in your order). For each pipe connection 2 profile sealing rings are necessary (available from the pipe manufacturer, to be provided on-site).

<b>SPIRAL HOSE WITH SMOOTH INNER SURFACE, FOR GENTLE CABLE FEEDING ID = 150 MM MINIMUM LENGTH 1000 MM, AVAILABLE IN 500 MM INCREMENTS</b>			
<b>Length (m)</b>	<b>Article code</b>	<b>Article number</b>	<b>Figure</b>
2	<b>Hateflex 14150/2000</b>	2130000200	
3	<b>Hateflex 14150/3000</b>	2130000300	
4	<b>Hateflex 14150/4000</b>	2130000400	
5	<b>Hateflex 14150/5000</b>	2130000500	
6	<b>Hateflex 14150/6000</b>	2130000600	
8	<b>Hateflex 14150/8000</b>	2130000800	
10	<b>Hateflex 14150/10000</b>	2130001000	
12	<b>Hateflex 14150/12000</b>	2130001200	
15	<b>Hateflex 14150/15000</b>	2130001500	
18	<b>Hateflex 14150/18000</b>	2130001800	
20	<b>Hateflex 14150/20000</b>	2130002000	
25	<b>Hateflex 14150/25000</b>	2130002500	

<b>ACCESSORIES CABLE SEALING SYSTEM – FLOOR ENTRY</b>			
<b>Item</b>	<b>Article code</b>	<b>Article number</b>	<b>Figure</b>
Installation fixture KES-M ZVR-FUBO-FIX C-rack (length 1100 mm) with 4 adjustable earth spikes	<b>KES-M ZVR-FUBO-FIX</b>	1900500165	
Fastening bow for Ø 160 mm suitable for fixing the KES-M 150-ZVR150/500 to the installation fixture, including fixing elements (max. 4 pieces in a row possible)	<b>Befestigungsbogen für KES-M ZVR-FUBO-FIX</b>	1900500167	

# Cable sealing system 150

## CABLE ENTRY SYSTEM

<b>KES-M 150 – CABLE ENTRY SYSTEM</b>			
<b>Item</b>	<b>Article code</b>	<b>Article number</b>	<b>Figure</b>
Sealing set sleeve KES-M 150-WE including interchangeable insert with segmented ring technology for sealing cables at the end of the spiral hose Hateflex 14150: of 1 cable, Ø 48 – 83 mm or 3 cables, Ø 22 – 58 mm or 6 cables, Ø 8 – 36 mm (installation before cables are pulled through) inclusive blind plug	<b>KES-M 150 WE160-SG-1/48-83</b>	2125817103	 e.g. KES-M 150 WE160-SG-6/8-36
	<b>KES-M 150 WE160-SG-3/22-58</b>	2125817102	
	<b>KES-M 150 WE160-SG-6/8-36</b>	2125817101	
Sleeve to be used with interchangeable insert WE 160-z/d to seal cables on end of spiral hose Hateflex 14150 (installation before cables are pulled through)	<b>KES-M 150-WE</b>	2125817100	
Split interchangeable insert with segmented ring technology for installation in sleeve KES-M 150-WE for sealing: of 1 cable, Ø 48 – 83 mm or 3 cables, Ø 22 – 58 mm or 6 cables, Ø 8 – 36 mm inclusive blind plug	<b>WE 160-SG-1/48-83</b>	0825817116	 e.g. WE 160-SG-3/22-58
	<b>WE 160-SG-3/22-58</b>	0825817115	
	<b>WE 160-SG-6/8-36</b>	0825817114	
Interchangeable insert to be used with sleeve KES-M 150-WE customized according to cables to be installed z = number of cables d = cable diameter	<b>WE 160-z/d</b>	2125817110	

## Cable sealing system 150

# CABLE ENTRY SYSTEM

CABLE ENTRY SYSTEMS			
Item	Article code	Article number	Figure
Connection sleeve for connecting rigid cable ducts OD = 110 mm* to spiral hose Hateflex 14150	<b>KES-M 150-M 110</b>	2125814000	–
Connection sleeve for connecting rigid cable ducts OD = 125 mm* to spiral hose Hateflex 14150	<b>KES-M 150-M 125</b>	2125813000	–
Connection sleeve for hose extension / connection of Hateflex 14150	<b>KES-M 150 HTV</b>	2128020000	
Connection sleeve for connecting rigid cable ducts OD = 160 mm* to spiral hose Hateflex 14150	<b>KES-M 150-M 160</b>	2125812000	
1 set of clip rings to stabilize the corrugated pipe within the sleeve (kindly indicate pipe manufacturer and pipe type in your order)	<b>CR 110</b>	for Kabuflex: 1630001730	
1 set of clip rings to stabilize the corrugated pipe within the sleeve (kindly indicate pipe manufacturer and pipe type in your order)	<b>CR 125</b>	for Kabuflex: 1630001750	
1 set of clip rings to stabilize the corrugated pipe within the sleeve (kindly indicate pipe manufacturer and pipe type in your order)	<b>CR 160</b>	for Kabuflex: 1630001770	
Rigid pipe section OD = 160 mm with sleeve for connection to spiral hose Hateflex 14150 (tight wall sealing in core drillings when used together with HRD press seals).	<b>KES-M 150-R 160</b>	2125818000	
Spacer 2x3 for positioning of hose packages with Hateflex 14150	<b>KES 150-2x3 KA</b>	2101090200	
Tool set for pressure-tight strap assembly, consisting of 1 torque 4-20 Nm, ¼ inch, 1 extension 150 mm, ¼ inch, 1 socket for hexagon spanner SW 13, ¼ inch 1 socket for hexagon spanner SW 8, ¼ inch	<b>KES-M-W</b>	2128030000	

\* additional clip rings CR are necessary to connect corrugated pipes  
For each pipe connection 2 profile sealing rings are necessary (available from the pipe manufacturer, to be provided on-site).



## Wall sleeves

# WALL SLEEVES AND FLANGES

### ZVR – STANDARD WALL SLEEVE

Item	Article code	Article number	Figure
Cement-coated wall sleeve ID 80 mm	<b>ZVR 80/X</b>	1200080XXX *	
Cement-coated wall sleeve ID 100 mm	<b>ZVR 100/X</b>	1200100XXX *	
Cement-coated wall sleeve ID 125 mm	<b>ZVR 125/X</b>	1200125XXX *	
Cement-coated wall sleeve ID 150 mm	<b>ZVR 150/X</b>	1200150XXX *	
Cement-coated wall sleeve ID 200 mm	<b>ZVR 200/X</b>	1200200XXX *	

\* Please complete article number as appropriate:  
 XXX = wall thickness in mm  
 Standard lengths: 200, 240, 250, 300, 365, 400, 500 mm


X = wall thickness in mm

The cement-coated wall sleeve is coated at each end with 250 mm at lengths > 600 mm.

### HRD FLANGE CLOSED FOR RETROFIT DOWELLING

Item	Wall sleeve wall thickness (mm)	Standard flange dimensions □ or Ø (mm)	Article code	Article number	Figure
Stainless steel flange closed ID 80 mm	2	170 (□)	<b>HRD 80-F</b>	0910820000	
Stainless steel flange closed ID 100 mm	2	180 (□)	<b>HRD 100-F</b>	0910830000	
Stainless steel flange closed ID 125 mm	2	205 (□)	<b>HRD 125-F</b>	0910840000	
Stainless steel flange closed ID 150 mm	2	225 (□)	<b>HRD 150-F</b>	0910850000	
Stainless steel flange closed ID 200 mm	3	270 (□)	<b>HRD 200-F</b>	0910870000	

## STANDARD PRESS SEALS

HRK-SSG – STANDARD PRESS SEAL WITH SUPER SEGMENTED RING TECHNOLOGY					
Core drill hole/wall sleeve ID (mm)	Number of cables	Cable diameter OD (mm)	Article code	Article number	Figure
100 (available as single unit or packaging unit = 9 x)	1	18 – 65	<b>HRK 100-SSG-1/18-65</b>	1600101610	 <p>e.g. HRK 150-SSG-3/24-54</p>
	4	8 – 30	<b>HRK 100-SSG-4/8-30</b>	1600101600	
150 (available as single unit or packaging unit = 8 x)	1	36 – 70	<b>HRK 150-SSG-1/36-70 *</b>	1600101650	
	1	70 – 112	<b>HRK 150-SSG-1/70-112 *</b>	1600101660	
	3	24 – 54	<b>HRK 150-SSG-3/24-54</b>	1600101630	
	6	10 – 36	<b>HRK 150-SSG-6/10-36</b>	1600101640	
200 (available as single unit or packaging unit = 8 x)	1	110 – 162	<b>HRK 200-SSG-1/110-162 *</b>	1600101670	
	3	40 – 72	<b>HRK 200-SSG-3/40-72</b>	1600101665	

\* Without blind plugs

HRD-SG – STANDARD PRESS SEAL WITH SEGMENTED RING TECHNOLOGY						
Core drill hole/wall sleeve ID (mm)	Number of cables overall	Number of cables	Cable diameter OD (mm)	Article code	Article number	Figure
80	1	1	6 – 41	<b>HRD 80-SG-1/6-41</b>	2700100108	 <p>e.g. HRD 200-SG-3/6-54-4/6-26</p>
100	1	1	24 – 52	<b>HRD 100-SG-1/24-52*</b>	2700101000	
	4	4	8 – 30	<b>HRD 100-SG-4/8-30*</b>	2700102000	
	8	8	4 – 16,5	<b>HRD 100-SG-8/4-16,5</b>	2700103000	
	5	2	8 – 30	<b>HRD 100-SG-2/8-30-3/4-16,5</b>	2700103500	
3			4 – 16,5			
104	1	1	24 – 52	<b>HRD 104-SG-1/24-52</b>	2700103615	
	4	4	8 – 30	<b>HRD 104-SG-4/8-30</b>	2700103610	
	8	8	4 – 16,5	<b>HRD 104-SG-8/4-16,5</b>	2700103620	
125	3	3	10 – 40	<b>HRD 125-SG-3/10-40</b>	2700103750	
	6	6	6 – 31	<b>HRD 125-SG-6/6-31</b>	2700103800	
	10	10	4 – 16,5	<b>HRD 125-SG-10/4-16,5</b>	2700103850	
150	1	1	12 – 75	<b>HRD 150-SG-1/12-75*</b>	2700103996	
	1	1	75 – 110	<b>HRD 150-SG-1/75-110*</b>	2700103998	
	3	3	22 – 54	<b>HRD 150-SG-3/22-54*</b>	2700104000	
	6	6	8 – 35	<b>HRD 150-SG-9/6-25</b>	2700105000	
	9	9	6 – 25	<b>HRD 150-SG-9/6-25</b>	2700106000	
	10	4	8 – 30	<b>HRD 150-SG-4/8-30-6/4-16,5</b>	2700106500	
6			4 – 16,5			
200	7	3	6 – 54	<b>HRD 200-SG-3/6-54-4/6-26</b>	2700107000	
		4	6 – 26			
	15	7	10 – 32	<b>HRD 200-SG-7/10-32-8/3,5-16,5</b>	2700108000	
		8	3,5 – 16,5			

Press seals for cable duct connection

## STANDARD PRESS SEALS AND SEALING SET

<b>HSD – STANDARD PRESS SEAL</b>					
Core drill hole/ wall sleeve ID (mm)	Suitable for carrier pipe OD from to (mm)		Seal width 40 mm Article code	Article number	Figure
100	32	34	<b>HSD 100/32-V2A/EPDM</b>	1650010032	
	40	43	<b>HSD 100/40-V2A/EPDM</b>	1650010040	
	48	51	<b>HSD 100/48-V2A/EPDM</b>	1650010048	
	60	63.5	<b>HSD 100/60-V2A/EPDM</b>	1650010060	
125	60	63.5	<b>HSD 125/60-V2A/EPDM</b>	1650012060	
	75	77	<b>HSD 125/75-V2A/EPDM</b>	1650012075	
	78	81	<b>HSD 125/78-V2A/EPDM</b>	1650012085	
150	78	81	<b>HSD 150/78-V2A/EPDM</b>	1650015078	
	88	92	<b>HSD 150/88-V2A/EPDM</b>	1650015088	
	110	113	<b>HSD 150/110-V2A/EPDM</b>	1650015110	
200	110	113	<b>HSD 200/110-V2A/EPDM</b>	1650020100	
	114	119	<b>HSD 200/114-V2A/EPDM</b>	1650020110	
	125	128	<b>HSD 200/125-V2A/EPDM</b>	1650020120	
	133	136	<b>HSD 200/133-V2A/EPDM</b>	1650020130	
	139	141	<b>HSD 200/139-V2A/EPDM</b>	1650020140	
	159	163	<b>HSD 200/159-V2A/EPDM</b>	1650020150	

<b>ADS – SEALING SET FOR CORRUGATED PIPES</b>				
Core drill hole/ wall sleeve ID (mm)	Nominal width (mm)	Article code	Article number	Figure
100	63	<b>ADS 100/63 – Pipe type/pipe manufacturer</b>	–	
125	63	<b>ADS 125/63 – Pipe type/pipe manufacturer</b>	–	
	75	<b>ADS 125/75 – Pipe type/pipe manufacturer</b>	–	
150	75	<b>ADS 150/75 – Pipe type/pipe manufacturer</b>	–	
	90	<b>ADS 150/90 – Pipe type/pipe manufacturer</b>	–	
	110	<b>ADS 150/110 – Pipe type/pipe manufacturer</b>	–	
200	110	<b>ADS 200/110 – Pipe type/pipe manufacturer</b>	–	
	125	<b>ADS 200/125 – Pipe type/pipe manufacturer</b>	–	
	160	<b>ADS 200/160 – Pipe type/pipe manufacturer</b>	–	
250	160	<b>ADS 250/160 – Pipe type/pipe manufacturer</b>	–	
	175	<b>ADS 250/175 – Pipe type/pipe manufacturer</b>	–	
	200	<b>ADS 250/200 – Pipe type/pipe manufacturer</b>	–	

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