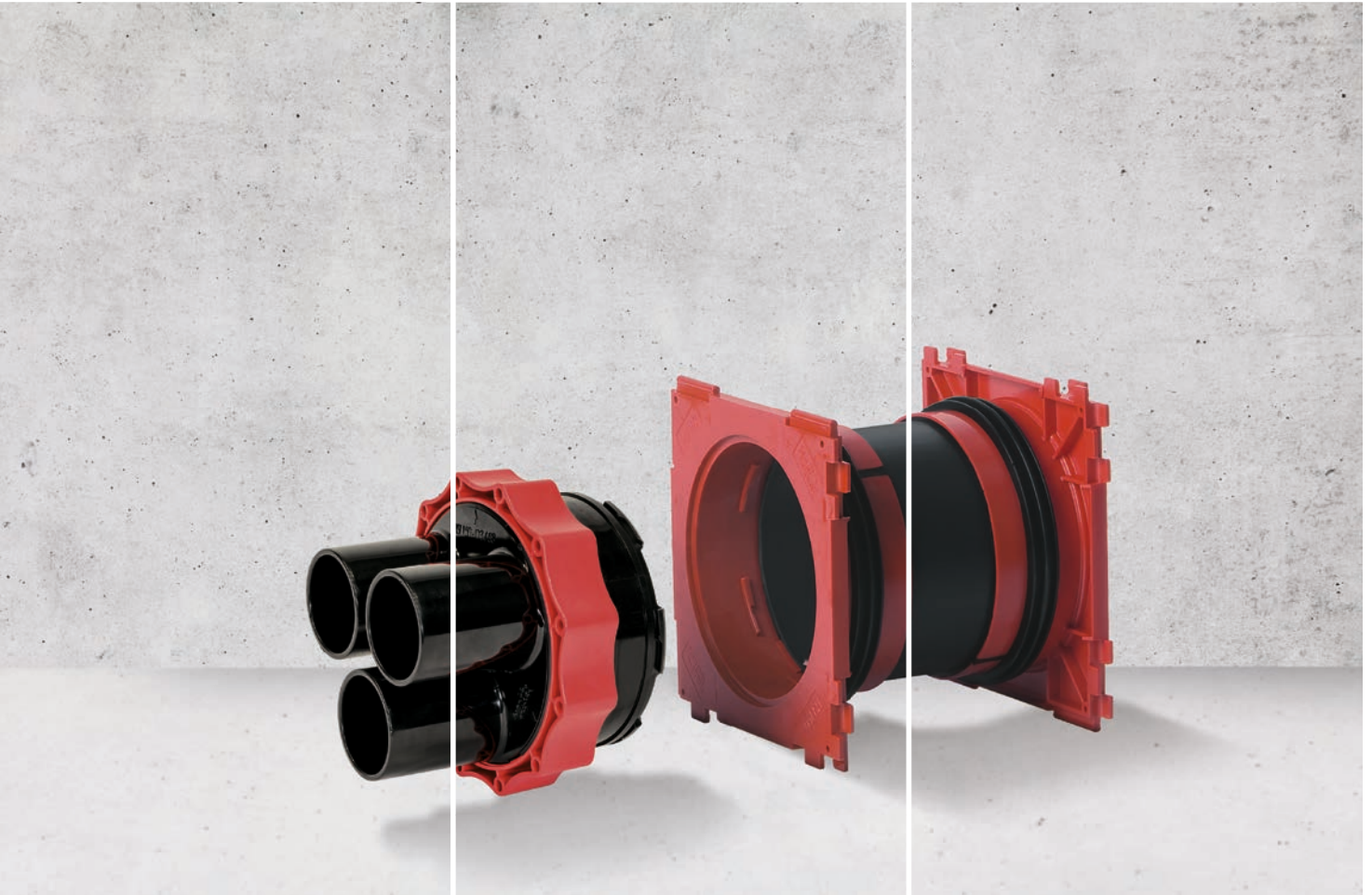


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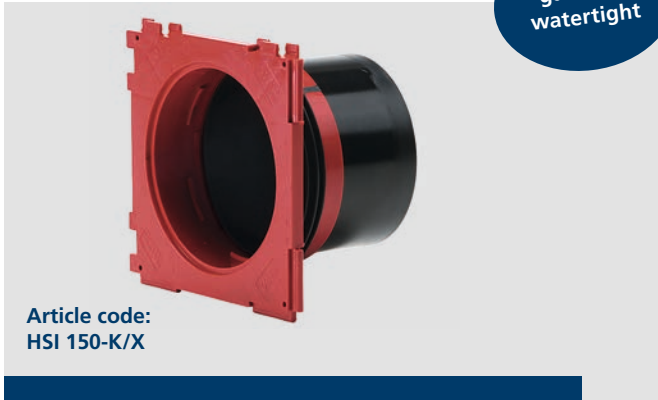


## HSI 150

Cable sealing with system

## Single wall insert

HSI 150-K/X



gas- and watertight

Article code:  
HSI 150-K/X

### Features and technical data:

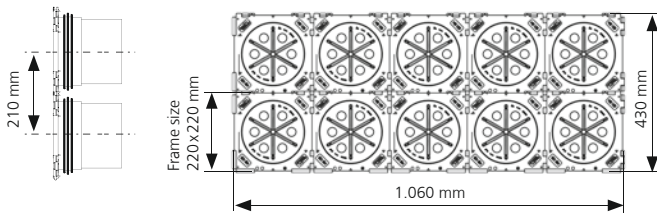
- single-sided connection of system sealing on the outside of the building
- double security by the blind cover and the additional blank plate (to be battered in) – up to wall thickness 150 mm in 10 mm steps
- pressure-tight up to 2.5 bar after concreting
- from 70 mm wall thickness
- for Ø 4 – 112 mm cables
- plug-in frame system for block assembly on-site (we recommend the use of our spacers HSI-AH 40 (accessory) when connecting pipes Ø > 160 mm)
- S 90 fire protection available

### Suitable for sealing system:

- HSI 150 system cover
- HRD press seal

### Suitable for connection system:

- KES cable entry system or ducts or corrugated pipes up to Ø 160 mm



Example application as a 2x5 block (on-site assembly)

### The correct way to quote the article code:

**HSI 150-K/X**

K = single-sided system connection  
X = wall thickness in mm

## Double wall insert

HSI 150-K2/X



gas- and watertight

Article code:  
HSI 150-K2/X

### Features and technical data:

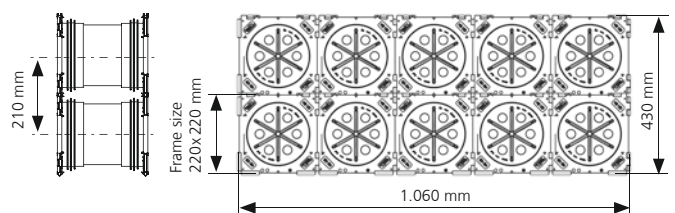
- connection of system sealing possible on both sides
- pressure-tight up to 2.5 bar after concreting
- from 100 mm wall thickness
- for Ø 4 – 112 mm cables
- plug-in frame system for block assembly on-site (we recommend the use of our spacers HSI-AH 40 (accessory) when connecting pipes Ø > 160 mm)
- S 90 fire protection available
- pressure tight-closing covers on both sides
- available for double walls/element walls

### Suitable for sealing system:

- HSI 150 system cover
- HRD press seal

### Suitable for connection system:

- KES cable entry system or ducts or corrugated pipes up to Ø 160 mm



### The correct way to quote the article code:

**HSI 150-YxZ-K2/X**

YxZ = only specify package  
(Y = rows on top of one another, Z = rows next to one another)  
K2 = double-sided system connection  
X = wall thickness in mm

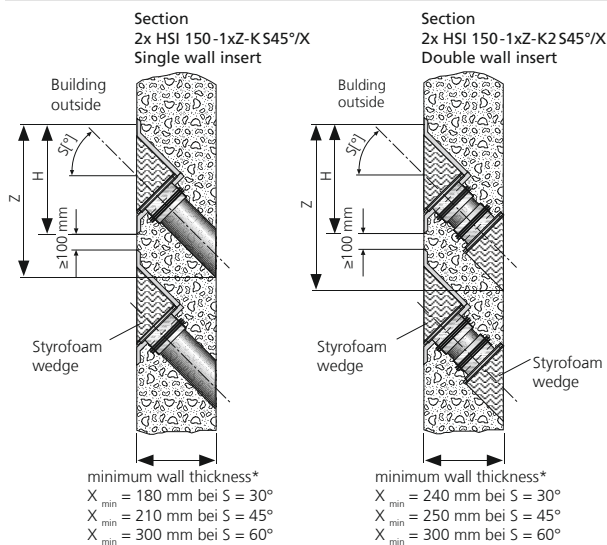
Ordering example as a 2x5 block for wall thickness 200 mm:  
Article code: HSI 150-2x5-K2/200

The HSI 150 cable entry system is an innovative development and sets new standards for formwork-mounted components in concrete. The HSI 150 modular frame is the universal solution in structural work planning for gas and watertight service connection systems. The HSI 150-K single wall insert is suitable for single-sided system sealing. The design allows a neat, securely positioned block assembly to be easily installed on-site. The HSI 150-K2 double wall insert is suitable for bilateral system sealing. The HSI 150 cable entry system is supplied individually or as a package corresponding to the wall thickness. The 3-ribbed seal made from TPE (thermoplastic elastomer) ensures absolute tightness against the concrete.

## Slanted packings HSI 150 – for special requirements



Article code:  
HSI 150-1x3-K2 S45°/X



\* Caution: the special solution used for the slanted packing piece may mean that the specified minimum wall thickness for impermeable concrete walls is undercut.

H = frame height, S = installation angle, X = wall thickness, Z = min. recess height  
Other special solutions on request.

Installation angle S	Single wall insert *	Double wall insert *	Frame height H
30°	$Z = 0.6 \times X + 268$	$Z = 0.6 \times X + 310$	369 mm
45°	$Z = X + 313$	$Z = X + 355$	417 mm
60°	$Z = 1.8 \times X + 420$	$Z = 1.8 \times X + 480$	549 mm

\*Calculation formula for the gap height Z in mm

### The correct way to quote the article code:

**HSI 150-1xZ-K2S\_\_°/X**

Z = number of inserts side by side  
 K = single-sided insert, K2 = double-sided insert  
 S\_\_° = installation slant 30°/45°/60°  
 X = wall thickness in mm

The HSI 150 slanted wall insert is suitable for slanted cable entries from any direction at angles of 30°, 45° or 60°. It allows an optimal bending radius during insertion and sealing of cables respectively connecting of cable ducts. Depending on your requirements, the slanted wall insert is available as a single or double wall insert as well as a single-row block, which is supplied to the site ready for installation flush with the formwork. The 3-ribbed seal made from TPE (thermoplastic elastomer) ensures absolute tightness against the concrete.

## Single wall insert with plug-in socket



Article code:  
HSI 150-GSM 110/X

Article code:  
HSI 150-GSM 160/X

### Features and technical data:

- no additional components required for connecting pipes
- possibility to seal cables with a system cover on the inside of the building
- suitable for wall thickness  $\geq 120 \text{ mm}$  (HSI 150-GSM 110/X or HSI 150-GSM 125/X) respectively  $\geq 180 \text{ mm}$  (HSI 150-GSM 160/X)
- frame connection system for block assembly on-site
- for block assembly of HSI 150 GSM 160/X in concrete spacers HSI-AH 40 (accessory) have to be used\*
- duct connection up to 0.5 bar pressure tight – depending on the used duct pipe
- cost-effective cable duct connection for smooth pipes
- blind cover included in delivery

\* The use of spacers may only be abstained from, if HSI 150 GSM 160/X have been installed in a concrete precasting plant using appropriate mounting aids.

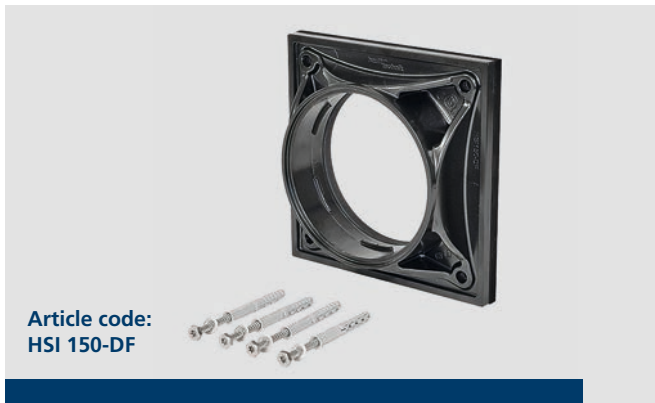
Pipe-Ø	min. wall thickness	Insert depth	Article code
110 mm	120 mm	60 mm	HSI 150-GSM 110/X*
125 mm	120 mm	60 mm	HSI 150-GSM 125/X*
160 mm	180 mm	75 mm	HSI 150-GSM 160/X

X = wall thickness in mm (max. wall thickness 500 mm),  
\* possible restrictions for cable configurations

The integrated push-fit sleeve of the HSI 150 GSM single wall insert allows smooth ducts with outer diameters of 110, 125 and 160 mm to be connected directly. This enables the cost-effective connection of ducts without the need for additional connection components. The cables and pipes laid in the duct can be sealed using the HSI 150 system covers. Due to the diameter reduction we recommend the press seal HRD 150/160-G-WE-z/d for HSI 150-GSM 110 and HSI 150-GSM 125.

## Aluminium flange

HSI 150-DF



Article code:  
HSI 150-DF

### Features and technical data:

- retrofit sealing of core drillings
- suitable for installation on container walls
- wide range of sealing options combined with HSI 150 system covers and KES-M150 cable entry systems
- optimised corrosion protection thanks to cathodic coating

## Fixed/loose flange

HSI 150-K2F/X – for black tank

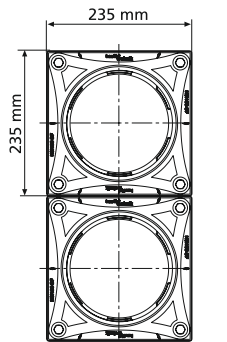


Article code:  
HSI 150-K2F/X

### Features and technical data:

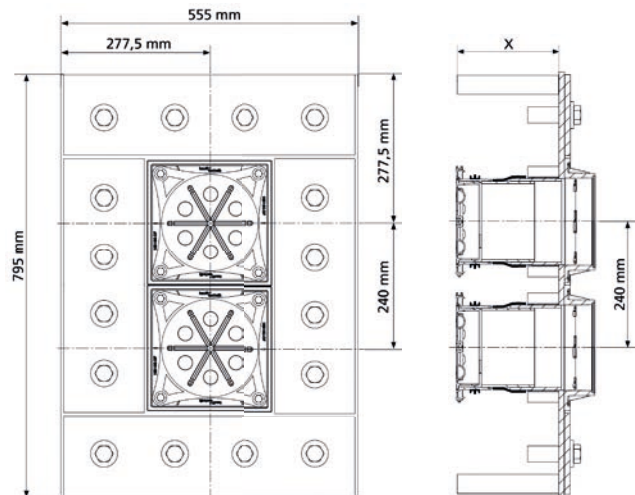
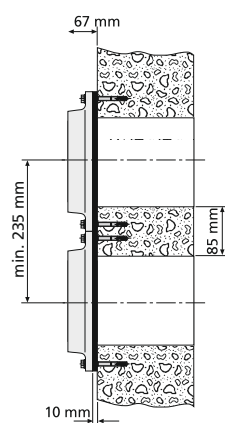
- V2A (AISI 304L) or V4A (AISI 316L) stainless steel
- for pressing water according to DIN 18195, Part 6
- installation flush with formwork
- can also be supplied as a bundle block with several entries adjacent to and on top of one another
- bilateral connection options for HSI 150 system covers and KES-M 150 cable entry systems

Aluminium flange  
HSI 150-DF



Core drilling max. Ø 150 mm

Sectional drawing  
Spacing dimension



### Scope of delivery:

- aluminium flange with cathodic coating
- chloroprene (CR) surface seal, 10 mm thick
- fastenings V4A (AISI 316L) for concrete walls

Optional accessory:

1 component sealing material SIKAFLEX-11FC for a safe sealing especially on rough surfaces.



The HSI 150-DF square aluminium flange provides a retrofit solution for inserting cables, pipes and ducts through core drillings (max. 150 mm) and sealing them. It can also be installed on container walls. The bayonet system enables all HSI 150 system covers and KES-M150 cable entry systems to be connected so that they are pressure-tight. The cathodic coating process provides the aluminium flange with optimum protection against corrosion.

The HSI 150-K2F enables the insertion of cables, pipes and ducts in buildings with waterproof membrane or approved plastic-modified thick coatings (KMB). The fixed/loose flange structure creates a pressure-tight transition from the building seal to the entry. The seal is implemented against pressing water according to DIN 18195, Part 6 (black tank). HSI 150 system covers and KES-M150 cable entry systems can be connected to the HSI 150-K2F on both sides. Special solutions for recesses or core drillings on request.

## System cover

### HSI 150-DG – for retrofit installation



#### Features and technical data:

- pressure-tight up to 2.5/5\* bar (\*tested max. system pressure)
- split seal for retrofit installation
- individual adaptation to the cross-sections of the laid cables on-site
- inscribed segment rings
- blind plugs for HSI 150-DG-3/24-54 and HSI 150-DG-6/10-36 included in the delivery
- transformer oil leak-tightness, tested over 90 days – KIWA Institute
- plastic press plates made of glass fibre reinforced PA
- V2A (AISI 304L) stainless steel screws and nuts

#### Press plate cover

- for protecting the screw heads/threads against dirt
- HSI 150-PA-3/24-54 for HSI 150-DG-3/24-54
- HSI 150-PA-6/10-36 for HSI 150-DG-6/10-36

Number of cables	Area of application cable-Ø	Article code
1	36 – 70 mm	<b>HSI 150-DG-1/36-70</b>
1	70 – 112 mm	<b>HSI 150-DG-1/70-112</b>
3	24 – 54 mm	<b>HSI 150-DG-3/24-54</b>
6	10 – 36 mm	<b>HSI 150-DG-6/10-36</b>

#### Scope of delivery:

- HSI 150-DG press seal
- HSI 150-AR-DG adapter ring
- blind plugs (for HSI-DG-3/24-54 and HSI 150-DG-6/10-36)
- GM lubricating stick
- knife
- cleaning cloth



The HSI 150-DG seal insert is the perfect, split and variable press seal for cables that have already been laid using the HSI 150 systems. Adaptation to the cable diameter is quick and easy using the inscribed and connected segment rings, and therefore ensures reliable installation. With the HSI 150-DG you can seal the following cables: 1 cable with OD 36-70 mm, 1 cable with OD 70-112 mm, 3 cables with OD 24-54 mm or 6 cables with OD 10-36 mm. The positive-fit plastic press plates made of glass-fibre reinforced polyamide are ideally suited for long-term use. The use of the split EPDM adapter ring enables the seal inserts to be integrated precisely in every HSI 150 system.

## System cover for cables



Article code:  
HSI 150-D3/58

Article code:  
HSI 150-D7/33

Article code:  
HSI 150-D

HSI 150 – Hot-shrink			
Sockets	Socket-ID	Cable-OD	Article code
1	80 mm*	25 – 78 mm	HSI 150-D1/80
3	58 mm*	22 – 56 mm	HSI 150-D3/58
7	33 mm	12 – 31 mm	HSI 150-D7/33
closed	blind cover		HSI 150-D

HSI 150 – Cold-shrink			
Sockets	Socket-ID	Cable-OD	Article code
1	80 mm*	38 – 78 mm	HSI 150-D1/80 KS
3	58 mm*	32 – 56 mm	HSI 150-D3/58 KS
7	33 mm	19 – 31 mm	HSI 150-D7/33 KS

\*1 HSI-ZB centering tape is included in scope of delivery.

The system covers for the shrink-method with sockets of varying sizes are made of a stable, high-performance plastic (polycarbonates (PC)). The hot-shrink sleeves offer a large sealing area. For quick and gentle sealing, cold-shrink sleeves (KS) are also available. Any sockets that are not needed can be closed with blind plugs. With its practically shaped red union nut, the bayonet catch allows swift and reliable manual installation. The HSI 150-D sealing cover is suitable for the pressure-tight re-closure of empty openings.

## System cover for the connection of cable ducts



Article code:  
HSI 150-D125 GSM

Article code:  
HSI 150-D110 KS

Article code:  
HSI 150-M168 WR

HSI 150 – Cold-shrink for connection of corrugated cable ducts	
Pipe-OD	Article code
110 mm	HSI 150-D 110-KS
125 mm	HSI 150-D 125-KS

HSI 150 – Sleeve system for smooth and corrugated cable ducts	
Pipe-OD	Article code
110 mm	HSI 150-M 110 (WR)*
125 mm	HSI 150-M 125 (WR)*
140 mm	HSI 150-M 140
160 mm	HSI 150-M 168 (WR)*

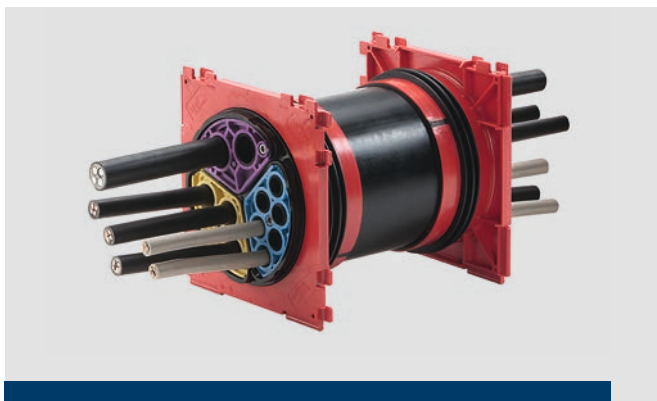
\*WR = corrugated pipe connection incl. clip rings (stabilisation rings)  
When placing your order, please ensure that you specify the pipe manufacturer and type.  
For each pipe connection two additional profile sealings are required (supplied by the building contractor)

HSI 150 – Plug-in socket for smooth cable ducts	
Pipe-OD	Article code
110 mm	HSI 150-D110 GSM
125 mm	HSI 150-D125 GSM
160 mm	HSI 150-D160 GSM

The system covers for cable duct connections with sockets of varying sizes offer connection solutions for all common smooth and corrugated plastic cable ducts made of PVC, PE-HD and PP. Depending on your application you can choose between the versatile rubber sleeve (M), the plug-in socket (GSM) or the cold shrink sleeves for corrugated pipes. Due to the limitations imposed by duct manufacturers, a seal tightness of up to 0.5 bar (e.g. DIN 16961, Part 2) is achieved. With its practically shaped red union nut, the bayonet catch allows swift and reliable manual installation. The HSI 150-D sealing cover is suitable for the pressure-tight re-closure of empty openings.

## SEGMENTO

easy – fast – reliable



### Features and technical data:

- particularly flexible and gentle sealing
- individual clamping of segments
- colour differentiation for areas of application
- simple subsequent installation possible
- all segment openings closed with blind plugs

## Press seal

HRD 150/160-G (-WE)-z/d – the retrofit seal



Article code:  
HRD 150/160-G-3/12-1/44

Article code:  
HRD 150/160-G-WE-3/12-1/44

### Features and technical data:

- externally pressure-tight up to 2.5 bar
- for cables with  $\varnothing$  4 - 110 mm
- produced according to cable configuration
- split seal for retrofit installation
- pressure plates made of V2A (AISI 304L) stainless steel (also V4A (AISI 316L) as an option)

### SEGMENTO

Number of cables	Cable- $\varnothing$	Article code
2	20 – 31 mm	<b>SEG2/31</b>
3	20 – 26 mm	<b>SEG3/26</b>
6	15 – 21 mm	<b>SEG6/21</b>
8	5 – 15 mm	<b>SEG8/15</b>
System cover		<b>HSI 150-S3</b>

### HRD 150/160-G-z/d max. cable occupancy

Numbers of cables	Cable- $\varnothing$
1	110 mm
3	60 mm
7	39 mm
10	30 mm
15	15 mm

### HRD 150/160-G-WE-z/d max. cable occupancy

Numbers of cables	Cable- $\varnothing$
3	44 mm
7	30 mm
12	21 mm
29	12 mm
38	10 mm

Mixed configurations possible. Other configurations on request.

### SEGMENTO as combination kit

#### Article code KKS:

- 1x HSI150-DF flange with fastenings
- 1x HSI 150-S3 system cover
- 3 selected segments, 1x GMS lubricant

Ordering example:  
KKS 338 includes 1x HSI 150-DF, 1x HSI 150-S3, 2x SEG 3/26, 1x SEG 8/15, 1x GMS

### The correct way to quote the article code:

#### HRD 150/160-G(WE)-z/(d1)-z/(d2)...

G = split seal insert  
(WE) = interchangeable insert  
Z = number of cable holes  
d1, d2... = measured cable- $\varnothing$





Accessories and tools	Article code
Cable diameter gauge	<b>BSS</b>
Torque screwdriver	<b>DMS</b>
Lubricant	<b>GMS</b>



The SEGMENTO sealing system is the fastest solution for sealing cables particularly gently at up to 0.5 bar (outside pressure). Subsequent installation can be performed without any problem.



The press seal HRD 150/160-G (-WE)-z/d is the retrofit solution for sealing entries through which power, communications, data and control cables and pipes are fed.

# Accessories

## HSI 150

Blind plug	Socket-ID	Article code	Flexible pin spanner	Article code
For system cover HSI 150-D3/58 	58 mm	<b>VS 58/60</b>	 Universal tool for opening the blind cover	<b>SLS 6 G</b>
For system cover HSI 150-D7/33 	33 mm	<b>VS 32/34</b>		 Universal tool for opening of blind cover installed in walls with thermal insulation

Centering tape, set of 3	Article code	Spacer	Article code
Comprising: 3 piece elastomer strips 30 x 430 mm, approx. 7 mm thick. For fixing and centring the cables to be sealed into the system cover sockets. 	<b>HSI-ZB</b>	 Enlargement of the axis-centre distance to 250 mm in case of block assembly. Adaption for HSI 150 and HSI 90 block assembly. One set consisting of 2 pieces	<b>HSI-AH 40</b>

Cable cleaner	Article code	Cold-melt adhesive tape	Article code
Content: 1000 ml, quick and residue-free evaporation 	<b>KR M.T.X.</b>	 Cold-bonding tape. For reliable sealing and connection of cable sheathing materials, plastics and metals. 3 m roll, 35 mm wide	<b>Hatetherm Scapa 0485</b>

Repair sleeves	Ø	Cable-Ø	Article code
For shrinking to pre-laid cables in system covers.	1 Socket		
	80 mm	29 – 78 mm	<b>TMR 3.250.107.29</b>
	110 mm	36 – 108 mm	<b>TMR 3.250.143.36</b>
	125 mm	36 – 125 mm	<b>TMR 3.250.143.36</b>
	3 Sockets		
	58 mm	20 – 56 mm	<b>TMR 3.250.84.20</b>
	7 Sockets		
	33 mm	13 – 31 mm	<b>TMR 3.250.53.13</b>

Finger sleeves for system cover	Cable-Ø	Article code
3-finger sleeve		
HSI 150-D3/58	9 – 26 mm	<b>AK.3F.71.22.26.9</b>
HSI 150-D7/33	4,2 – 16 mm	<b>AK.3F.44.13.16.4,2</b>
4-finger sleeve		
HSI 150-D3/58	9 – 27 mm	<b>AK.4F.80.25.27.9</b>
HSI 150-D7/33	7 – 20 mm	<b>AK.4F.44.19.20.7</b>

Installation set	Article code
Consisting of: <ul style="list-style-type: none"> <li>• torque wrench 4-20 Nm ¼ inch</li> <li>• 1 adapter for cordless screwdriver, square end, ¼ inch</li> <li>• 2 extensions, 150 mm ¼ inch</li> <li>• 1 extension 100 mm, ¼ inch</li> <li>• 1 wrench socket M6, AF 5, ¼ inch</li> <li>• 1 wrench socket, M6, 100 mm with ball head, ¼ inch</li> </ul> 	<b>HSI 150-DG-W</b>