

## 1. Intended use / Product description



ZAK® PE fusion end straight  
 Water ZAK34 D32, D40  
 ZAK46 D32 - D63  
 ZAK69 D63  
 Gas ZAK34 D32, D40  
 ZAK46 D32 - D63



Elbow 90° with ZAK® spigot end  
 and PE fusion end  
 Water ZAK34 D32, D40  
 ZAK46 D32 - D63  
 Gas ZAK34 D32, D40  
 ZAK46 D32 - D50



Elbow 90° with ZAK® spigot end  
 and PE fusion end  
 Gas ZAK46 D63

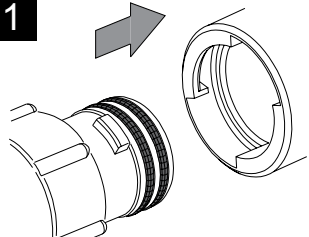
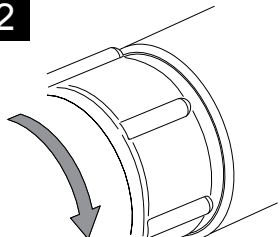
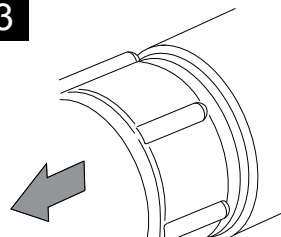
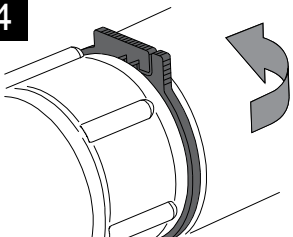
**Medium:** Potable Water / Municipal Sewage / Gas  
**Max. operating temperature:** Potable Water / Municipal Sewage: 0° to 40° / Gas: -10° to 50°  
**Max. operating pressure:** Potable Water / Municipal Sewage: 16 bar / Gas: 10 bar  
**Material:** Housing: GJS-400, Hawle epoxy powder coated  
 Outlet: PE100  
 Gasket: EPDM (Potable Water), NBR (Gas and Municipal Sewage)

ZAK-PE end straight and elbow 90° as transition from Hawle ZAK® system to PE pipelines. For underground pipeline construction and in distribution systems both in drinking water and gas supply and in wastewater disposal. No application in installation. Can be used for PE pipes (DIN 8074/EN 12201). On the one hand with ZAK® spigot end for positive connection of fittings and fittings with ZAK® socket, on the other hand with PE end (SDR 11) made of PE 100 according to DIN 8074/EN 12201.

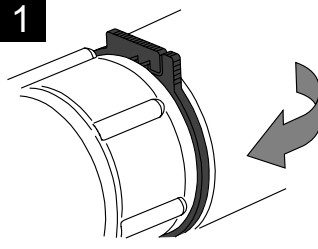
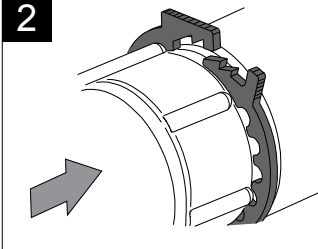
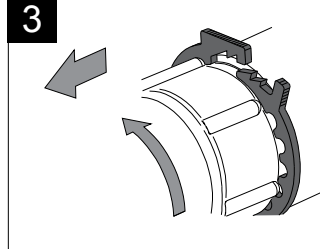
During installation and maintenance operations, the applicable standards and guidelines, accident prevention regulations and the regulations of professional associations are to be observed and complied with. Installation and maintenance operations must be performed by qualified personnel only

## 2. Assembly

### 2.1 Assembly ZAK®-System

			
<p>Apply approved lubricant to the O-rings of the spigot end and slide the ZAK® spigot end into the ZAK® socket as far as it will go.</p>	<p>Turn the ZAK® connection fitting 90° clockwise as far as it will go.</p>	<p>Pull back ZAK® connection fitting approx. 4 mm as far as it will go.</p>	<p>Slide the fixing ring into the gap and engage the interlocking by pressing it together. (The fixing ring can be pulled on so far that it can also be inserted later)</p>

## 2.2 Dismantling ZAK®-System

<b>1</b> 	<b>2</b> 	<b>3</b> 
Open the interlocking of the fixing ring. Expand the fixing ring and pull it back.	Insert ZAK® connection fitting as far as it will go.	Turn the ZAK® connection fitting 90° counter-clockwise as far as it will go and pull it out of the ZAK® connection sleeve. After dismantling, check O-rings and replace if necessary.

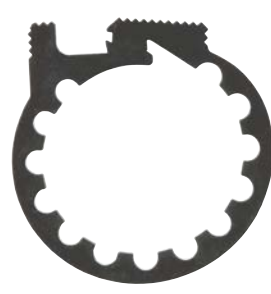



## 3. Commissioning/Pressure test

After successful installation, a pressure test must be carried out in an open pipe trench in accordance with DVGW regulations.

## 4. Maintenance and servicing

Hawle Fittings are maintenance-free.

### 4.1 Spare parts

	
 Locking ring für ZAK®-fittings Ord.No. 616-03	 O-Ring ZAK-outflow ZAK®34: Ord.No. 008 700 6085 ZAK®46: Ord.No. 006 160 0055 ZAK®69: Ord.No. 618 000 0065

**If you have any other questions or if you need more information please contact:**

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