



**1. Intended use / Product description**



ZAK® PE fusion end  
 for water d32, d40 ZAK34 / d32 -  
 d63 ZAK46 /d63 ZAK69 / Gas d32,  
 d40 ZAK34 / d32 - d63 ZAK46



Elbow 90° with ZAK® spigot end  
 and PE fusion end for water d32,  
 d40 ZAK34 / d32 - d63 ZAK46 /  
 Gas d32, d40 ZAK34 / d32 - d50  
 ZAK46



Elbow 90° with ZAK® spigot end  
 and PE fusion end for gas d63  
 ZAK46

<b>Medium:</b>	Potable Water / Municipal Sewage / Gas
<b>Max. operating temperature:</b>	Potable Water / Municipal Sewage: 0° to 40° / Gas: -10° to 50°
<b>Max. operating pressure:</b>	Potable Water / Municipal Sewage: 16 bar / Gas: 10 bar
<b>Material:</b>	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**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
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.	Turn the ZAK® connection fitting 90° clockwise as far as it will go.	Pull back ZAK® connection fitting approx. 4 mm as far as it will go.	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)

**2.1 Disassembly**

<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.

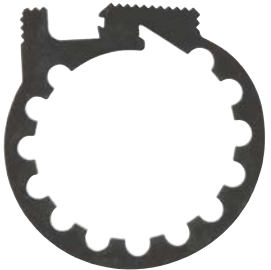
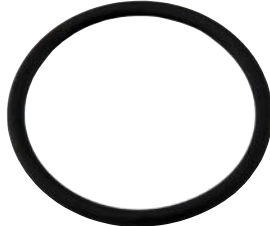


### 3. Commissioning/Pressure test

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

### 4. Maintenance and repair

Hawle Fittings are maintenance-free.

#### 4.1 Spare parts

	
 <p>Locking ring for ZAK®sockets ZAK34 - 69 Article no. 616 000 0033, 616 000 0051, 616 000 0069 Order no. 616-03</p>	 <p>O-ring 28,0 x 3,5 for ZAK®34; 38,0 x 4,0 for ZAK® 46; 52,0x4,0 for ZAK® 69 Article no. 008 700 6085, 006 160 0055, 618 000 0065</p>

\* Brass/red brass components > 0.1% lead according to Regulation (EU) No. 1907/2006 (REACH Regulation)

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

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