



**1. Intended use / product description:**

	Order No. 313-00	Order No. 313-01	Order No. 313-03	Order No. 313-04
Scope of application:	PE pipes PE80 and PE100 (EN 12201/DIN 8074) PVC pipes (DIN EN ISO 1452-2)	PE pipes PE80 and PE100 (EN 12201/DIN 8074)	PE pipes PE 80 and PE 100 (EN 12201/DIN 8074) and PVC-pipes (DIN EN ISO 1452-2)	PE pipes PE80 and PE100 (EN 12201/DIN 8074)
	PE, SDR 11: d 63 - d 225 PE, SDR 17: d 63 - d 315 PVC, PN 10: d 63 - d 280 PVC, PN 16: d 63 - d 160	PE, SDR 11: d 63 - d 225 PE, SDR 17: d 63 - d 315	PE, SDR 11: d 63 - d 225 PE, SDR 17: d 63 - d 315 PVC, PN 10: d 63 - d 280 PVC, PN 16: d 63 - d 160	PE, SDR 11: d 63 - d 225 PE, SDR 17: d 63 - d 315
Version:	with milling pre-drilled: 35 mm	with punch bore: 25 mm	with milling pre-drilled: 35 mm	with punch bore: 25 mm
Abgang:	ZAK 46 90° to the pipe direction for combination with ZAK® spigot end fittings for connection of service connection pipelines		PE d40 / d50, 90° to pipe direction for combination with plug-in fitting or welding into PE pipelines using electrofusion or mirror welding processes.	

**Medium:** Potable water

**Max. operating pressure:** 16 bar

**Material:** Milling saddle: Red brass, Hawle epoxy powder coated  
 HAKU-Drilling saddle: GJS-400, Hawle epoxy powder coated  
 Puncher/Milling cutter: Brass  
 PE-Outlet: PE100, SDR11  
 UBA-BWGL Metals\*

HAKU milling saddle with HAKU half shells for assembly on PE pipes (EN 12201, DIN 8074) Ord.No. 313-00 and 313-01 and PE pipes (EN12201, DIN8074)/PVC Pipes (DIN EN ISO 1452-2) Ord.No. 313-03 and 313-04. The two half shells are calibrated exactly to the respective outside diameter. An inadmissible deformation of the pipe is prevented by the metallic stops when the half shells are connected.

Hawle milling saddles are equipped with an integrated drilling tool and a shut-off device. This makes it possible to drill pipelines made of PE even under operating pressure. The drilling and commissioning of the service connection pipeline can be carried out immediately if there is a need for water (subsequent drilling). The service shut-off is ensured by a profile seal which is immersed in a cylindrical sealing surface.

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 may be performed by qualified personnel only.

**Accessoires:**

<b>180-00</b> Surface box for valves rigid version	<b>180-02</b> Surface box for valves height adjustable with locking bolt	<b>187-01</b> Surface box for valves with cover, for rolling in

		
 <b>910-00</b> Rigid extension spindle „type S“ for service valve and valve saddle	 <b>960-00</b> Telescopic extension spindle „type S“ for service valve and valve saddle	 <b>962-00</b> Telescopic extension spindle „type S“ of stainless steel for service valves and valve

## 2. Installation

	Wrench, Torque
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1. The surface of the pipe must be clean and free of notches, grooves and lubricants.
2. Place the half shells around the pipe.
3. Fasten the HAKU upper section and HAKU lower section with the four screws supplied.

The following torques apply:

D 63 - D140 ( M10 )	=	max.	50 Nm
D 160 - D225 ( M12 )	=	max.	70 Nm
D 250 - D280 ( M14 )	=	max.	80 Nm
D 315 ( M16 )	=	max.	90 Nm

### Standard assembly:

Tighten the hexagon head screws evenly and crosswise until the two parts make contact or the maximum torque is reached. contact or the maximum torque is reached.

**ATTENTION:** Do not use extensions!

### Installation on aged pipes:

When installing on existing PE pipes (aged pipes), the outer diameter may exceed the standard tolerance tolerance. If necessary, pre-tighten HAKU with two longer screws.

The maximum torque must be checked twice at 15-minute intervals after final assembly of the clamp twice after final assembly of the clamp.

4. Tapping process



Do not change the milling position before the drilling process! Valve is delivered in drilling position.

Perform drilling with uniform closing movement.

In order to ensure perfect drilling, the drilling tool is fed at a high feed rate until shortly before material engagement. During the actual drilling process, a low feed rate is used.

For infeed and drilling process approx. 27 turns are necessary.

## 3. Service and maintenance

Hawle milling saddles are maintenance free.

## 4. Commissioning and pressure testing

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

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

[Should you have questions or need further information, please contact:](#)

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