



1. Intended use / product description:

Types:



Pushed-on CI cover



Plastic claw cover



BAIO® spigot end DN 80



Flange connection DN 80



PE-tail d 90/d110

Medium:

Potable water

Max. operating pressure:

16 bar

Material:

Cast iron components: GJS-400, Hawle epoxy powder-coated

Medium pipe: stainless steel, Hawle epoxy powder-coated

Spindle/shut-off blade/shut-off blade driving mechanism: stainless steel

Protection jacket: PP (polypropylene)

PE shaft: PE 80

Gaskets: EPDM acc. to DVGW W 270

Metal materials in contact with potable water according to positive list of German Federal Environment Agency (UBA)*

Accessories (see respective separate operating instructions)

- Surface box with cover, round, with locking pin, Ord. No. 211-00
- Base plate of concrete, Ord. No. 204-04
- Dirt cover and locking ring for underground hydrant assembly, Ord. No. 490-05 (**mandatory for hydrants with spigot ends**)
- Duckfoot bend - BAIO® system Ord.No. 548-00
- EN-fitting - BAIO® system Ord.No. 549-00
- End fitting, Ord. No. 620-01
- Seepage hose for Freeflow underground hydrant set Ord.No. 490-10

Hawle freeflow underground hydrants acc. to EN 14339, DIN EN 1074 and DVGW W386

Claw coupling for standpipes acc. to DIN 14375-1

The underground hydrant assembly consists of a PE shaft and a freeflow underground hydrant DN 80 fixed in the shaft via two retaining rods.

The underground hydrant assembly replaces complex and expensive manholes. In case of maintenance or repair work the hydrant can be accessed without any digging work.

The underground hydrant assembly offers a drain-off function via push-fit fitting for PE pipe d32. A suitable PE line or a seeping water drain packing of filling material capable of drainage has to be established by the customer.

The drain hole can be closed (e.g. in case of a high groundwater level) via a piece of PE pipe d32 in combination

with end fitting Ord. No. 620-01.


Because of the separation of operating and medium pipe the Hawle freeflow underground hydrant features considerably better hydraulic conditions than hydrants with conventional shut-off via valve plug.

Shut-off is effected via a shut-off blade of stainless steel. The shut-off blade is moved horizontally at low wear against fixed metal stops in a housing via eccentric mechanism and gear. The minimum cross section is 70 mm.

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.

CE-marking

- Cast iron parts: GJS-400 (GGG-40), high-quality corrosion protection by Hawle epoxy powder coating inside and outside acc. to DIN 3476-1 colour similar to RAL 5012 (coating thickness >250 µm, zero-porosity at 3000V, adhesion inside and outside >16 N/mm² after exposure to hot water).
- Drainage acc. to EN 1074-6
- Corrosion-resistant to disinfectants permitted in the field of potable water.

 1085	
Hawle Armaturen GmbH, 83395 Freilassing 07 1085 - CPR -0025	
EN 14339 Freeflow underground hydrant Spindle square acc. to W386	
PN	16
Number of turns for opening (total and ineffective)	15 and 4
Closing direction	Clockwise
MOT and mST	105 and 210 Nm
Kv (m ³ /h)	153
Inlet	Flange EN 1092 - 2, BAIO® spigot end, PE tail
Outlets	Claw coupling acc. to W386

2. Installation:

Put the underground hydrant assembly onto the pipeline using the respective connection (B-fitting, all socket tee) or, in case of lateral installation, on the duckfoot bend (EN-fitting, MMN-fitting).

By means of a pipe drilling saddle (pipelines DN 150 to DN 500), underground hydrants can be installed later and drilled while under pressure (see separate operating instructions).

Moreover, for installing and operating underground hydrants, the DVGW sheets W331 and W405, as well as DIN EN 1717 shall be observed.

In a Hawle freeflow underground hydrant with a BAIO® spigot end outlet a dirt cover and locking ring has to be used between the hydrant spigot end and the BAIO® socket. In addition to preventing unintentional turning, the dirt cover and locking ring is also a protection against dirt. **IMPORTANT:** For the freeflow underground hydrant assembly the dirt cover and locking ring for the underground hydrant assembly shall be used!

The PE shaft can be shortened by 50 mm if required.

2.1 Dismantling the hydrant from the assembly

1. Before removing the hydrant from the assembly, the supply line to the assembly has to be shut off.



Important: Dismantling the hydrant under operating pressure involves a serious danger of injury!

2. Take the protective rubber cover upward and out of the assembly.
3. Open the hydrant to relieve the residual pressure from the line.
4. Remove the protective caps from the hexagon nuts (A/F 30). Loosen the upper hexagon nuts from the retaining rods. Make sure not to loosen the nuts of the claw coupling (A/F 24) by mistake.



5. Remove the hydrant upwards (canting may be necessary)



2.2 Re-installing the hydrant

1. Clean the O-rings and the spigot end of the hydrant as required, and slightly grease the O-rings with KTW-approved grease.
2. Insert the spigot end of the hydrant into the socket of the assembly base plate from above.
3. Tighten the hexagon nuts (A/F 30) above the retaining rods finger-tight, thus firmly fixing the hydrant in the assembly.
4. Put the protective caps with grease packing onto the hexagon nuts (A/F 30).
5. Insert the rubber cover into the assembly.

For further testing of the hydrant see item 5 Commissioning and pressure testing.

2.3 Seeping water drain packing

If the drainage opening is not closed (see product description), a seeping water drain packing made of permeable backfilling (grain size > 5 mm) must be installed in the area of the drainage, which absorbs the residual water produced during the closing process and at the same time prevents the Freeflow Underground Hydrant Assembly from being flushed out. The installation of a seepage hose, order no. 490-10, in connection with permeable backfilling is recommended.

2.4 Seepage hose Ord.No. 490-10

The seepage hose for the Freeflow Underground Hydrant Assembly, Ord. No. 490-02, is used to collect and slowly drain off the residual water that accumulates during the closing process. In addition, possible root ingrowth is prevented. The seepage hose consists of a flexible drainage pipe d 50 mm covered with filter fleece. The residual water is discharged evenly over the large surface area. Penetration of fine-grained soil material via the seepage hose into the interior of the Freeflow underground hydrant or the set is largely prevented by the filter fleece.

Use in:

- „Fine-textured“ soils
- Installation situations where mud is expected to be washed into the housing (groundwater)

Assembly:

See operating instructions Seepage Hose Freeflow underground hydrant and Freeflow underground hydrant set Ord. No. 490-04/490-10.

3. Commissioning and pressure testing:

After the successful installation, the hydrant assembly has to be subjected to pressure testing in the open trench considering the maximum operating pressures as specified in the DVGW regulations. After the leakage test, a function check has to be performed.

4. Servicing and maintenance:

Hawle underground hydrants do not require any maintenance. Inspection acc. to DVGW sheet W400-3.

At regular intervals, visual and functional checks as well as the resultant maintenance work shall be carried out and documented.

To avoid any soiling of the hydrant's interior, the claw cover must be closed properly. Dirt accumulating inside the surface box, at the claw, and at the hydrant head shall be removed.

When the drain hole is closed, the assembly shall be checked at regular intervals for water transfer from above and drained, if required, via a suction lance, hand pump, or similar equipment.

4.1 Spare parts

		
<p>  Claw coupling DN80 with brass-ring Ord.No. 491 080 0279 </p>	<p> Plastic claw cover Ord.No. 491 080 0243 </p>	<p>  Pushed-on cast iron cover Ord.No. 490-09 / 490 080 0510 </p>
		
<p>  Flat gasket for claw coupling Best.Nr. 491 080 0282 </p>	<p>  Tin spring for Plastic claw cover Best.Nr. 491 080 0258 </p>	

* Brass/red brass components > 0.1% lead acc. 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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