General information

Above-ground hydrants

Hawle above-ground hydrants are made exclusively of high-grade and non-corroding materials and are therefore perfectly suitable for use in coastal regions and road areas (salt spreading), as the materials chosen for them ensure high functionality.

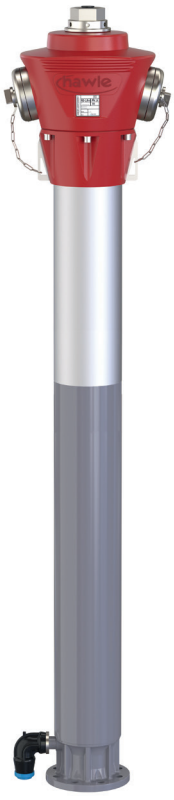
In addition the materials used have a comparatively substantially lower weight than conventional above-ground hydrants made of cast iron. The column, a thick-walled pipe made of stainless steel, is in addition protected in the below-ground area and up to the breakaway area with Hawle epoxy powder coating.

Apart from the technical advantages, Hawle above-ground hydrants of stainless steel are suitable for installation in city centres and pedestrian zones, where great store is set by a neat appearance.
Another advantage is afforded by the hydrant head. Even when the hydrant is already installed, the hydrant head can be turned from 0° to 360° to align the outlets to each intermediate position.

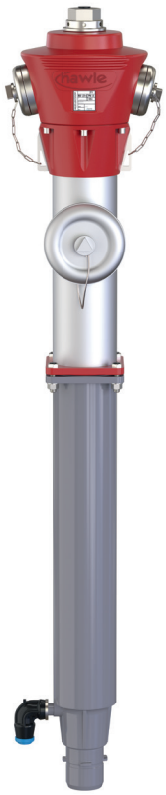
The hydrant head can furthermore be supplied in individual coloration, any desired RAL color being possible.

All Hawle above-ground hydrants with predetermined breaking point are delivered with a set of spare bolts (located in the hydrant head).

Versions



514-00 / 515-00 (Above-ground hydrant DN 80 or DN 100 “rigid” version)



519-00 (Above-ground hydrant DN 80 or DN 100, break-away type)

517-00 (Above-ground hydrant with drop jacket, break-away type DN 100

516-00 / 516-01 (R1 above-ground hydrant DN 100 or DN 150, break-away type) Illustration DN 100

Typ 518-00 / 518-01 (R1 above-ground hydrant with drop jacket, DN 100 or DN 150, break-away type) Illustration DN 100

Above-ground hydrant made of stainless steel

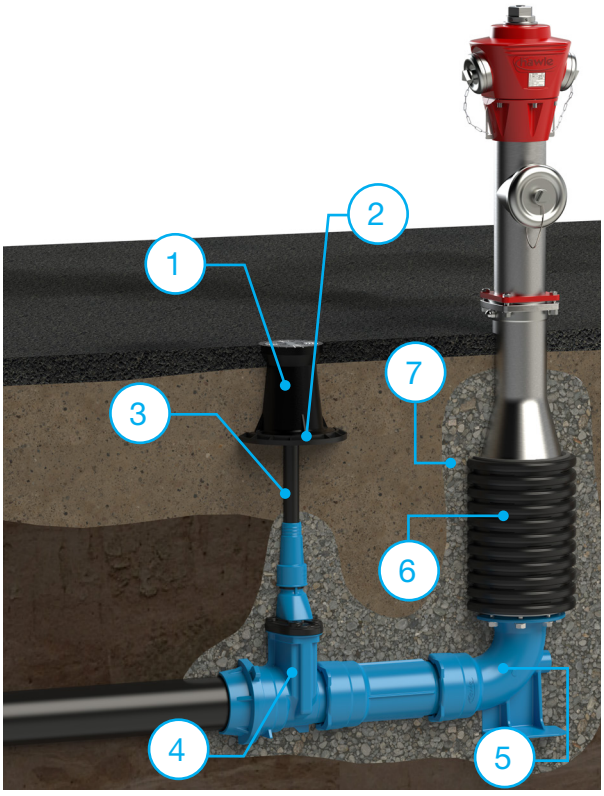
In compliance with DVGW W 386 the hydrant must be so installed that the break away area is approx 120 mm (+ - 80) above terrain level in order for it to be effective.

Technical features

- Low weight (ca. 50 - 100 kg, depending on version)
- Hydrant head can be turned by 360°
- Fixed coupling compliant with DIN 14317, DIN 14318, DIN 14319
- Drain-off system with pressure control and replaceability of the valve set
- Pipe cover depths from 1.0 m to 1.5 m (special lengths on request)
- Design variants
  - Hydrant without predetermined breaking point (514-00, 515-00)
  - Hydrant with predetermined breaking point, model AU (516-00, 516-01, 519-00)
  - Hydrant with drop jacket with predetermined breaking point, model AFU (517-00, 518-00, 518-01)
- CE marking compliant with EN 14384

Technical data

Hydrant head:	514-00, 515-00, 516-00, 516-01, 519-00: saltwaterproof aluminium alloy; UV resistant 517-00, 518-00, 518-01: shock resistant plastic with reflective foil for better visibility
Column/stand pipe:	stainless steel, with Hawle epoxy powder coating in the below-ground area and up to breakaway area
Valve rod:	stainless steel
Gaskets:	EPDM acc. to KTW-BWGL for water
Medium:	potable water
max. operating pressure	16 bar
Lower outlet:	BAIO® spigot end DN 80, flange DN 80, flange DN 100, flange DN 150



Installation example above-ground hydrant R1 (DN 150)

1. Surface box
2. Base plate
3. Extension spindle
4. Gate valve
5. Duckfoot bend
6. Drainge element
7. Permeable material (grain size min. 5 mm)

Underground hydrants

In case of conventional underground hydrants, water tapping and shutting off is effected in a cast iron body, with the shut-off function realized vertically via a spindle rod assembly and valve plug. In the Hawle freeflow underground hydrant, shutting off is effected by means of a shut-off blade of stainless steel.
Via an eccentric mechanism and gear the shut-off blade is moved horizontally against fixed metal stops in a body, ensuring low wear. By separating the operating pipe and the medium pipe, the hydraulic conditions in opened position in the hydrant are clearly more favourable than those in hydrants with a shut-off mechanism via valve plug.

To ensure both a high operating reliability and a long service life, the materials are chosen with particular regard to the aspect of corrosion protection. The medium pipe and the closing element are made of stainless steel. The cast iron components are protected against corrosion through Hawle epoxy powder coating. Additionally, the medium pipe of stainless steel is also powder coated.

Versions

490-00
Freeflow underground hydrant

492-00
Tele-Hydrant®

494-00
Freeflow underground hydrant
„height adjustable“

Freeflow underground hydrant, 490-00

Its special design provides the freeflow underground hydrant with features not present in underground hydrants of conventional make.

As the rod is guided outside the medium pipe, lower pressure losses result than in conventional below-ground hydrants with conical shut-off.

Apart from the conventional integration via pipe fittings, the hydrant can also be installed on pipelines under operating pressure at a later date.

With this process the hydrant can be installed on the pipeline using shut-off saddles and the pipe drilled via the free bore of the hydrant. This avoids expensive integrations.

Technical features:

- Minimum flow rate at 1 bar differential pressure: 153 m^3/h
- Min. cross section: 70 mm
- Shut-off blade with fixed stops in opened/closed position
- Spindle/claw coupling compliant with DVGW W 386, for standpipes compliant with DIN 14375
- Drainage compliant with DIN EN 1074-6
- CE marking compliant with EN 14339
- Opening/closing: 15 revolutions acc. to EN 14339
- Pipe cover depths: standard 0,77 m bis 2,40 m (special lengths on request)
- Later drilling under operating pressure possible
- DIN-DVGW certificate

Technical data

Cast components:	GJS-400, Hawle epoxy powder coated
Medium pipe:	stainless steel, Hawle epoxy powder coated
Spindle/shut-off blade:	stainless steel
Protection jacket:	PP (Polypropylen)
Gaskets:	EPDM acc. KTW-BWGL for water
Medium:	potable water
Max. operating pressure:	16 bar
Lower outlet:	BAIO® spigot end DN 80, Flange DN 80, PE fusion tail d 90 / d 110

Ausführungsvarianten

BAIO® spigot end

Flange connection

Duckfoot bend (flange)

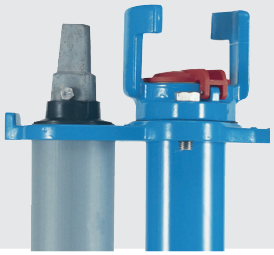
Duckfoot bend (spigot end)

PE fusion tail

Cover versions

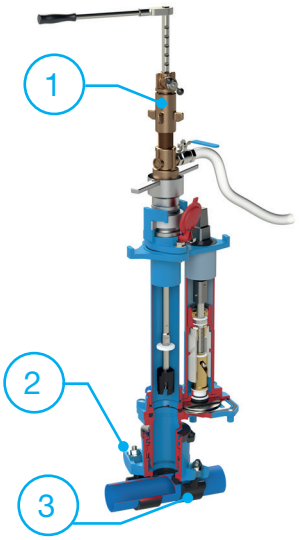
Pushed-on cast iron cover

Plastic claw cover (Standard)



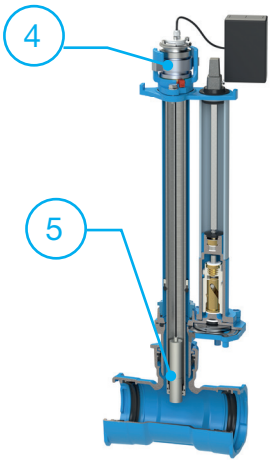
Freeflow underground hydrant - Examples of application

Drilling under pressure



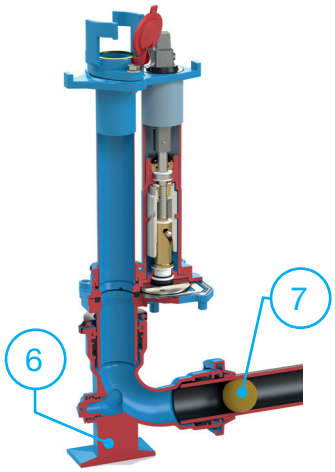
1. Drilling machine (830-00)
2. Double strap pipe drilling saddle (359-00)
3. Hawle strap (310-00)

Pipeline network monitoring



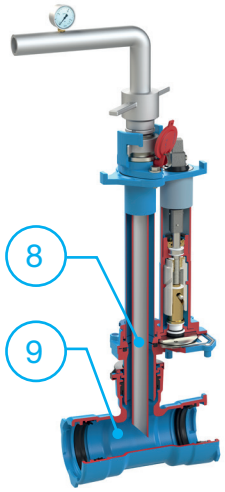
4. Measurement lock
5. Endoscope, measuring probe or microphone

Pipe cleaning with sponge ball



6. MMN piece (548-00)
7. Sponge ball

Line drainage by means of suction lance



8. Suction lance
9. MMB piece (542-00)

Freeflow underground hydrant “height adjustable”, 494-00

The height-adjustable freeflow underground hydrant features a telescopic medium pipe of stainless steel and a telescopic operating unit.

Thus the underground hydrant can be adapted to the level of the road and/or of the surrounding terrain even when installed.

The adjusting range is between 0 - 300 mm and/or 0 - 550 mm, depending on the version. The medium pipe is engaged via a clamping flange with a grip ring of stainless steel, with the telescopic operating pipe being safely held via the coupling plate.

The shut-off mechanism, connection types and other possible uses of the height-adjustable underground hydrant are the same as for the standard freeflow underground hydrant.

Hawle Tele-Hydrant® (Underground hydrant with integrated standpipe), 492-00

Ponding water and deposits inside surface boxes have always been problems encountered with the use of underground hydrants. In many cases, putting the standpipe onto the claw coupling will be possible only after cleaning the inside of the surface box. Moreover, there are areas where the installation of above-ground hydrants seems sensible but is impossible because of local conditions (road area, etc.)

To use the Tele-Hydrant® you only have to remove the surface box and pull the telescopic standpipe upward and above road or ground level. As the standpipe is enclosed, no previous cleaning of the inside of the surface box will be required. Therefore, access time is accordingly short.

After tapping the water, the telescopic standpipe can be lowered back into the box. Thus the Tele-Hydrant® is protected in areas with increased traffic volume as well as from unauthorized use. Just like the standard freeflow underground hydrant, the Tele-Hydrant® can be integrated into the supply network via the customary ways of connection (BAIO® spigot end, flange, and PE fusion tail) and the respective pipe fittings.

Measurement lock for Hawle underground hydrants

The Hawle underground hydrant measurement lock has been developed for the later introduction of a sensor into an already existing water pipeline system. In the process, the sensor is placed in the pipeline system through an existing Hawle freeflow underground hydrant by means of the measurement lock. If no underground hydrant is available for installing a measurement lock, the Hawle freeflow underground hydrant can be integrated later into the pipeline under pressure.
The measurement lock can be mounted and maintained easily and quickly from the road surface. Thus, quick access is possible to the measurement lock and the sensor, e.g. for maintenance and cleaning work. The Hawle measurement lock has been designed such that it can be easily integrated into already existing Hawle freeflow underground hydrants. The measurement lock can be installed either as a permanent or as a temporary shortterm measuring point.

The system is frost-proof and protected against external environmental infl uences. The supply line need not be shut off for the installation of the measurement lock, since an integration into the pipeline system under pressure (max. 16 bar) is possible any time. The sensors provided by the customer are pushed/inserted into the Hawle freeflow underground hydrant through a specially developed sensor tube using a setting tool.

Sensors up to a diameter of 60 mm can be introduced via the Hawle freeflow underground hydrants. The sensors must be provided by the customer. By means of the appropriate sensors, parameters such as turbidity, flow direction, pressure, conductivity, temperature, noise, leakage, etc., can be measured.
In the sensor tube, the entire electronic system as well as the required battery can be installed as needed.

Moreover, it is possible to integrate the data logger and the transmission unit below the surface box (e.g. surface box 211-00). In this case, a large surface box should be chosen.

Technical features

- Sensor diameter: 60 mm
- Can be used for Hawle freeflow underground hydrants
- Can also be used on underground hydrants drilled later (minimum tapping diameter 65 mm): 490-00, 494-00
- Measuring access possible without manhole
- Max. operating pressure 16 bar (depending on the pressure stage of the sensor)
- Sensor sealing just above the shut-off unit of the underground hydrant to ensure frost protection and a minimum of eddy water

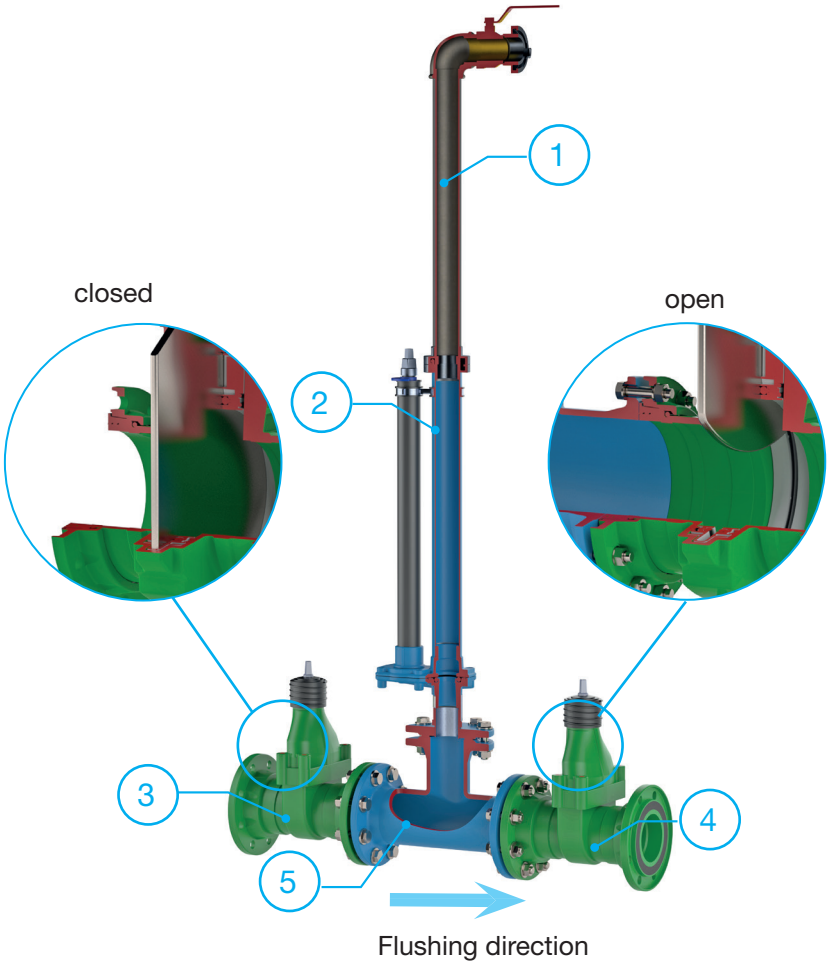
Flushing valves

Free-flow flushing valve for flushing pressure lines, 985-04

Via the free outlet area Hawle flushing valves permit a flushing of pressure lines, culverts or transmission lines in the field of water and sewage water.

The compact design of the flushing valve makes complex and high-maintenance manhole constructions unnecessary. Therefore, all the dangers possibly associated with the entry of manholes can be avoided.

Application example: Flushing a sewage pressure pipe (DN 80)



1: Standpipe for flushing valve (985-06)

2: Flushing valve for sewage water and potable water (985-04)

3: Sewage water knife gate valve closed (481-00)

4: Sewage water knife gate valve open (481-00)

5: T-piece (851-00)

The direction of flush is determined by the variable shutting-off of the gate valves.

Garden hydrants

Free-flow irrigation hydrant, Best-Nr. 984-00

Technical features

- Ideal for use in gardens and parks, as well as on camping sites
- Protected from damage by frost via drain-off function
- Upper outlet: GEKA Plus coupling or Franke coupling
- bottom connection: tapered male thread 1 1/4”
- Spindle and shut-off blade driving mechanism made of stainless steel
- Pipe cover depths: standard 0.80 m -1.50 m (special lengths on request)

Irrigation hydrant, 984-01

Technical features

- Ideal for use in green areas/gardens
- Protected from damage by frost via drain-off function
- Upper connection: female thread 2 ½“
- Lower connection: flange DN 80
- Spindle and shut-off blade driving mechanism made of stainless steel
- Individual adaptation of the length, pipe cover depths 1.3 - 1.8 m (special lengths on request)

Freeflow garden hydrant, shortenable, 984-04

Technical features

- Ideal for use in green areas/gardens
- Protected from damage by frost via drain-off function
- Upper outlet: GEKA Plus coupling (alternative Franke coupling on request)
- Lower connection: ZAK 46 socket on both ends
- Spindle and shut-off blade driving mechanism made of stainless steel
- Individual adaptation of the length, pipe cover depths 1,3 - 1,8 m (special lengths on request)