

UFO

DN80 Underground Hydrant



ZEROWATERLOSS VISION BECOMES REALITY

Valued customers and business partners

Water is the foundation of life – this goes without saying. Despite this (or even because of this), we are not prepared to pay the right price for good, clean and safe water, or make investments to allow water to be safely transported using sustainable infrastructure, to retain its quality and to prevent theft and waste.

After decades of engagement with the issue of water, VONROLL HYDRO has developed the ZEROWATERLOSS mission statement. In doing so, we have seen how ZEROWATERLOSS has become a global challenge. Summer 2003 was the first time that even countries in Europe with plenty of water were shown how vulnerable the foundation of our life and our quality of life is. 2018 refreshed the (gladly suppressed) memory. In many places, sinking groundwater levels have been registered for years, and a significant portion of worldwide migration movements could be attributed to the increasing lack of water or conflicts connected to the control of water reserves. In addition to climate change, the key causes of water shortages are population growth, demands on the standard of living, overexploitation and ignorance. Where the Aral Sea still stood until recently, there are now dry boatyards in the desert. In many countries, over 50% of the water generated in an energy-intensive manner in desalination plants gets lost on the way to the consumer.

The ZEROWATERLOSS mission statement (www.zerowaterloss.world) presents the counter-thesis: Water is a key part of the intergenerational contract. We must build infrastructure today with first-class, long-lasting components. Water quality and water

use must be monitored and safeguarded with innovative products and services (HYDROPORT and INFRAPORT as the foundations of smart cities and smart villages). The components required here for our infrastructure should ideally be manufactured regionally. This allows our values, which are reflected, for instance, in labour and environmental protection laws, to feed into our infrastructure. Thanks to short transport distances, CO₂ and exhaust gas pollution are minimised at the same time.

Together with you, our customers and business partners, we want to see ZEROWATERLOSS become a reality, with integrated and coordinated products and services worldwide. The new VONROLL HYDRO 2023 full catalogue forms a solid foundation for joint commitment. Our engineering teams are glad to have the chance to support you in planning and implementing large and small infrastructure projects.

ZEROWATERLOSS – so that water also remains a safe foundation of life for our descendants.

On behalf of the companies of the VONROLL HYDRO Group



Jürg Brand
President of the Board of Directors



Marta Lozano
Director ZEROWATERLOSS

1

We recognise

discrimination-free access to clean water as a universal human right.

2

We are committed to

not using more water than can sustainably flow back – Supplying our customers with high-quality water – Feeding used water back into circulation once purified.

3

We favour

recycled and recyclable materials (ideally with no degradation), which are manufactured and transported with as little CO₂ and exhaust gas pollution as possible.

4

We respect

the intergenerational contract by using high-quality and long-lasting products and services, and paying the right price for them.

UFO

So safe, so innovative, so robust

So safe

- ANIWAH: reduces pressure surges on opening and closing (protects the pipe network)
- STOPR: improved pipe network protection with STOPR non-return valve
- CLIP: Claw with cast iron lugs – for mechanical anchoring the standpipe
- TELL: Remote monitoring against water theft

So innovative

- EASY: Innovative inspection system for efficient hydrant maintenance
- ROTO: Improved user-friendliness thanks to rotation end position stops
- Double shut-off for inspection under pressure
- Long-term ease of movement thanks to the use of a needle bearing
- Self-standing claw cover for simple mounting the standpipe and closing the claw opening
- Notches on the base for convenient mounting

So robust

- Enclosed spindle collar bearing and bayonet lock
- Spindle nut protector made of POM: improved guidance and protection of the coating
- High corrosion protection thanks to enamelling in accordance with DIN EN 11177 or epoxy powder coating according to GSK guidelines
- Drainage is fully coated with enamel or epoxy powder coating and thus protected

and...

Operating square cap fastened from above	Inner parts can be easily changed from above with only removing street cover
Spindle bearings are secured via the bayonet catch	Complete corrosion protection with epoxy powder coating in the bearing area
Valve seat	Epoxy version – brass seat for increased durability against possible seat area damage Enamel version shut-off cone seals directly on enamel surface. This ceramic composite material has a high surface hardness and ultra-smooth surface
Claw cover with STOPR option	with integrated non-return valve to protect the pipe system against contamination
Bayonet coupling	for connecting accessories (such as control unit, connecting drainage pipes)
Accessories – Control Unit	For checking the drainage function or the presence of water in the ground. For connection to underground hydrants with bayonet connection to hydrant drainage.
Further features	– Very deep drainage, therefore increased protection against freezing – Integrated flange gasket for easier installation – Flow capacity (Kv-value), far above of DIN requirements

The highlights

Cast lugs on outlet claw

Square top can be replaced in installed position

Bayonet lock

Needle bearings

EASY

Rotation stops

Spindle nut guide protector made from POM

EASY – revision system

- Simple dismounting principle enables simple removal and installation of inner parts of the underground hydrant
- Rod can be pulled out without special tools
- Protection against ejection of the inner parts
- Installing and removing the inner parts of the underground hydrant has never been so quick and easy
- Increased safety thanks to new technology when dismantling the inner parts

ROTO – Rotation stops

- The correct position of the shut-off cone in the open and closed position is clearly indicated by metal rotation stops
- Clear understanding of the end position prevents excessive torque and distortion of the spindle and spindle nut in the respective end positions

Valve seat

ANIWAH

Double shut-off

Bayonet coupling

CLIP

Claw coupling

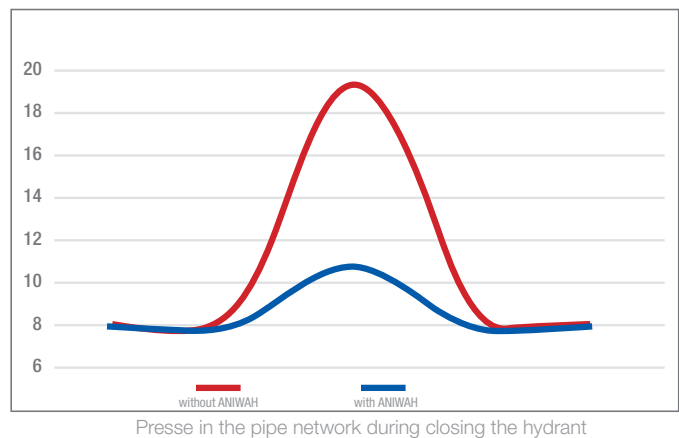
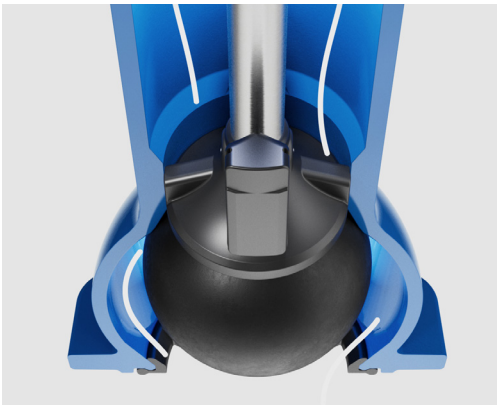
Enameled version

Optional version with STOPR

Optional integrated non-return valve

ANIWAH – patented life extension

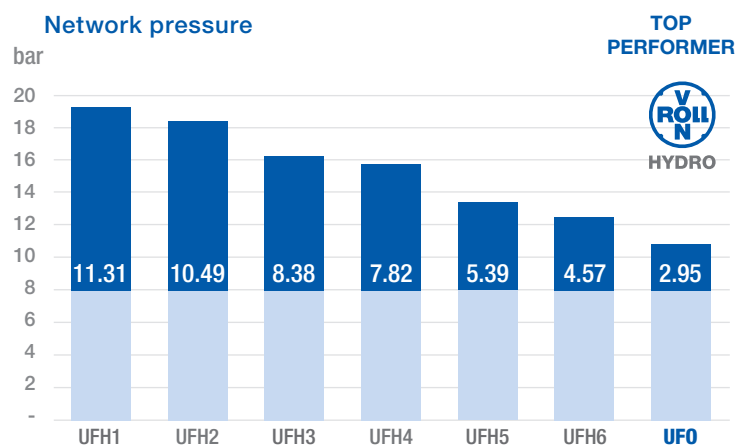
ANIWAH technology ensures that pressure surges are reduced by up to 70 %, thereby minimising the resulting follow-up costs. The service life of the systems is significantly and sustainably increased. VONROLL HYDRO underground and above-ground hydrants are equipped with ANIWAH technology as standard.



ANIWAH - Anti-Water-Hammer on the valve seat, the geometric shape in the cast body achieves a gradual gradually reduces the open cross-section during the closing process.

Initial conditions

Time required for the last revolution	1	sec.
Water supply pipe DN	100	mm
Length of the water supply pipe to the hydrant branch	500	mm
Hydrant branch DN	80	mm
Length of the hydrant branch	5	m
Network pressure without flow through the hydrant	8	bar



Results of testing hydrants of different designs under real conditions. The design of the UFO hydrant with ANIWAH guarantees a minimum pressure surge when the hydrant is closed.

UFO

The technology at a glance

Technical data

- Nominal diameter (DN): DN80
- Pipe cover (in m): RD 0.75, RD 1.00, RD 1.25, RD 1.50.
- Nominal pressure (PN): PN16.
- Flange PN10/16 according to DIN EN1092-2.
- Test according to DIN EN 12266-1, leakage rate A.
- Drainage time < 15 min*RD.
- Residual water: < 100 ml.
- Minimum volume flow KV = 110 m³ / h.
- Shut-off: Form A1 single shut-off, Form AD1 double shut-off.

Approvals

- CE
- DVGW
- W270 / UBA

Variants

- with STOPR claw cover: improved pipe network protection with STOPR non-return valve

Accessoires

- Spindle extension
- Claw extension
- Drainage stone

Corrosion protection

Version with epoxy powder coating

- with epoxy powder coating on all sides according to GSK-version «Heavy-duty corrosion protection» and DIN 3476-1, layer thickness >250 µm, color blue, RAL 5015

Version with enamel coating inside and outside

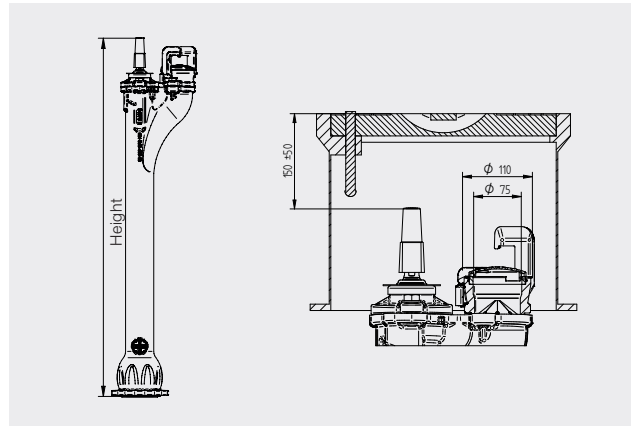
- Body enameled inside and outside according to DIN EN 11177, color blue
- Body cover and claw coupling with epoxy powder coating on all sides in accordance with GSK design «Heavy-duty corrosion protection» and DIN 3476, coating thickness >250 µm, color blue

Materials

- Body, spindle cover and claw coupling made of ductile cast iron 5.3106 (EN-GJS400-15) according to DIN EN1563
- Spindle nut and spindle bearing bushing, brass
- Spindle, rod (solid material), screws, needle bearings, locking pins made of stainless steel with at least 13 % chrome
- Dirt trap, seals and shut-off cone coating – EPDM in accordance with DIN EN 16421 (W270)
- Claw cover made of polyethylene
- Square top made of ductile cast iron and galvanized

UFO

Customised work



Version with epoxy powder coating

A1 and AD1 versions						
DN	Pipe cover depth (m)	Number of castings tips	Height (mm)	Weight (kg)	Art. Nr. single shut-off	Art.-Nr. double shut-off
80	0.75	1	527	23	21008705	21008728
	1.00	2	722	26	21008706	21008721
	1.25	3	972	30	21008789	21008704
	1.50	4	1222	35	21008707	21008714

Version with enamel coating / inside and outside

A1 and AD1 versions						
DN	Pipe cover depth (m)	Number of castings tips	Height (mm)	Weight (kg)	Art. Nr. single shut-off	Art.-Nr. double shut-off
80	0.75	1	527	23	21074748	21074750
	1.00	2	722	26	21074749	21074751
	1.25	3	972	30	21042444	21042445
	1.50	4	1222	35	21074575	21074576

