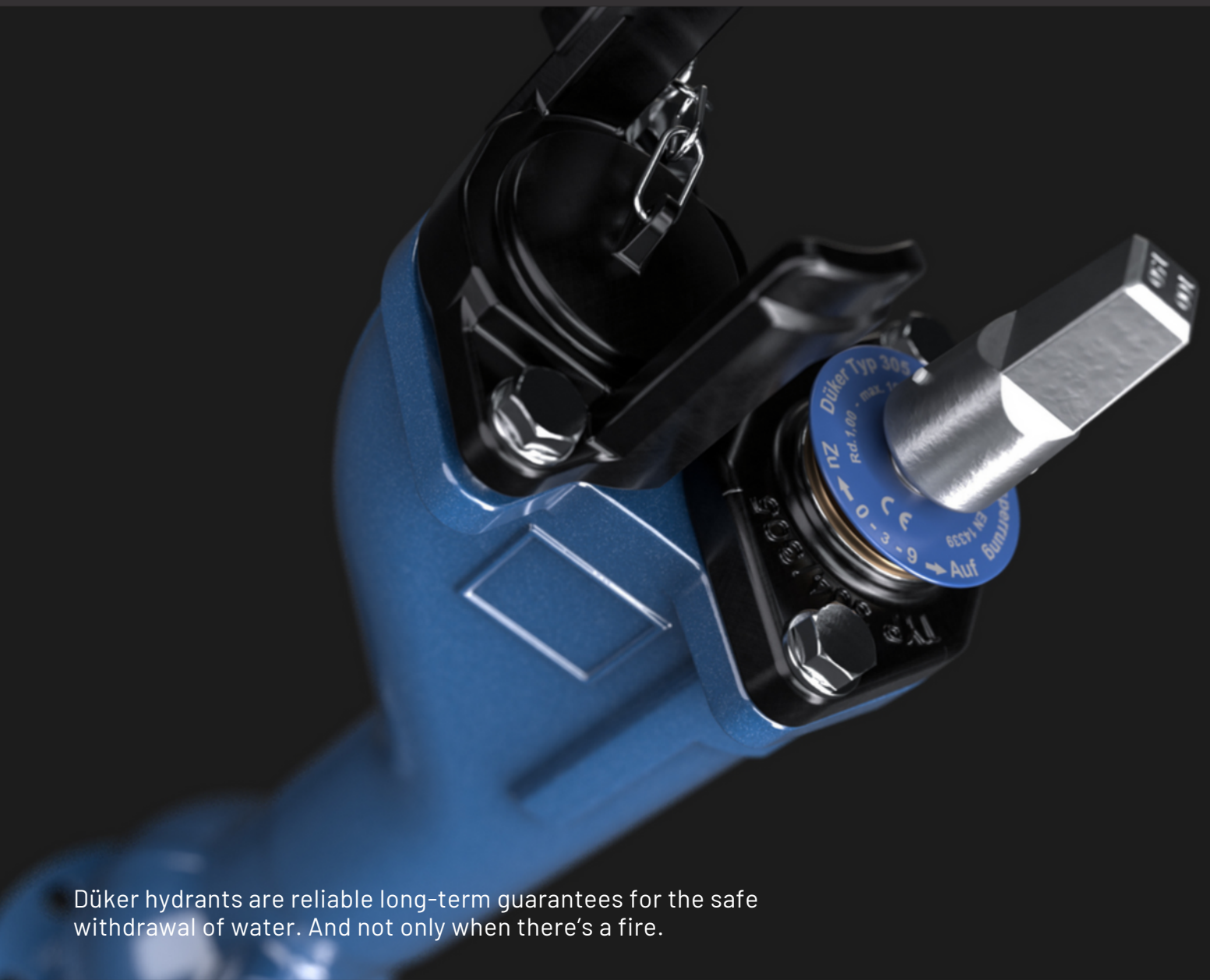


UNDERGROUND HYDRANTS.

TIGHT, CORROSION-
RESISTANT
AND ECONOMICAL.



Düker hydrants are reliable long-term guarantees for the safe withdrawal of water. And not only when there's a fire.

Düker Hydrants – Important Elements of a Modern Public Water Supply

Ductile cast iron hydrants

Hydrants are an important part of the public water supply system, with a wide area of application, such as:

- drawing water for fire fighting and emergency conditions
- setting up of temporary network connections in case of an emergency
- aeration and venting of pipe sections
- temporary water supply during events or on construction sites

The right material is what counts

Material quality is at the core of continued and reliable operations. This is why Düker hydrants are made of ductile cast iron.

Another name for ductile cast iron is spherulitic graphite iron. The material has outstanding properties such as a long service life, density, good corrosion resistance, cost effectiveness and on top of it, is fully recyclable. It is therefore reliable and ideally suited to meet the requirements of our hydrants.

Ductile iron is only corrosion-resistant in combination with good corrosion protection. It is important that the stem is made of forged material. This gives you the certainty of not having any stagnant water in

the stem. The screw connection and additional pin, as well as the solid, forged stem guide, guarantee mass and stability where they are needed.

Permanent all-round protection

In order to ensure even better and permanent protection against corrosion and encrustation, our hydrants are fully enamelled, according to the requirements of the DEV guidelines and DIN 51178.

No chance is given to bacteria on the flawlessly smooth enamel surface. Biofilm adhesion is actively prevented, thus ensuring hygienically and physiologically safe drinking water supply – even during temperature fluctuations.

Maximum protection

All Düker hydrants are equipped with an secured obturator linkage that prevents the obturator linkage to be catapulted out as a result of the existing operating pressure in case of mechanical damage of the upper part or during maintenance work.

DIN outlet coupling, head piece and linkage may be easily replaced by the user.



Düker underground hydrants

- **Type 304 / 305**
DN 80, PN 16, pipe covering 0.80 m to 1.50 m
- **Type 304/305 Epoxy Line**
DN 80, PN 16, pipe covering 0.80 m to 1.50 m
- **Type 304 S**
DN 80, PN 16, pipe covering 0.75 m to 1.50 m
- **Type 306 (for chamber installation)**
DN 65, PN 16, pipe covering 0.80 m

etec-Enamel – the special all-round surface protection for Düker hydrants

Etec enamel is a composite which melds a permanent chemical bond with the cast iron pipe section. Its main strengths are:

- inside and outside corrosion protection including class III soil
- high degree of resistance to mechanical stress (friction, impact, pressure, push)
- ageing resistance
- prevention of blistering between the base material and the coating, by the diffusion of water through the coating
- no sub-surface migration, even in the case of local damage
- climate and media resistance (UV-radiation, humidity, temperature, organic solvents)



Underground Hydrant 304 and 305 – with Flange Connection

DN 80 / PN 16 – pipe covering 0.80 m to 1.50 m, inside and outside enamelled

Range of application

- for drinking and raw water
- up to 16 bar
- up to 60 °C

Underground hydrants of the 304 and 305 series correspond to the requirements and tests of DIN 3221, DIN 3321 and EN 14339, as well as the DVGW testing standard VP 325 and possess a DVGW type approval test.

All materials used correspond to the KTW recommendations of the Federal Environmental Agency and the DVGW worksheet W270.

Furthermore, the requirements of the standard are even exceeded in many areas, such as the amount of residual water of 10 cm³ for example (standard requirements: ≤ 80 cm³) or the flow rate at 132 m³/h (standard requirement: ≥ 110 m³/h).

Upon request, the hydrants may be serially equipped with a self-locking, epoxy coated stainless steel outlet cover.



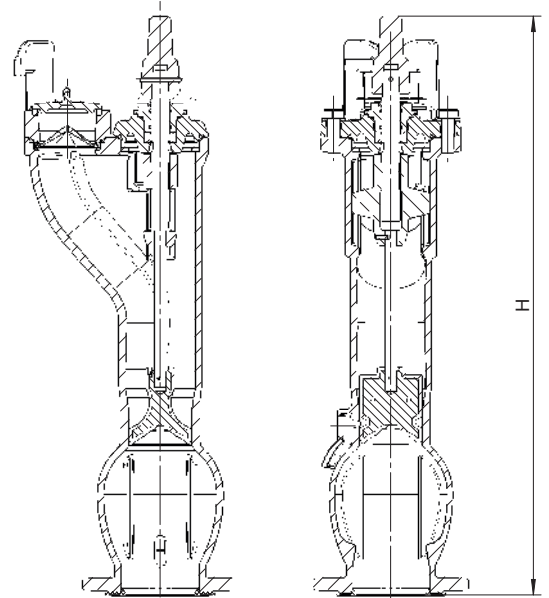
The most important elements

- 1 Inside and outside enamelled one-piece body
- 2 Cast-on and fully enamelled drainage outlet
- 3 Factory-mounted EPDM flange gasket with a steel core
- 4 Dual shut-off with an EPDM coated steel ball (305)
- 5 Obturator with full polyurethane elastomer coating
- 6 Solid stainless steel obturator linkage
- 7 brass guide piece
- 8 Well-established and proven stem bearing
- 9 Self-acting EPDM stone protector
- 10 DIN outlet coupling with brass ring and cast protective cover with stainless steel chain



Dimensions and weights

Type	DN	PN	Pipe covering mm	Height of construction H mm	Weight kg
304	80	16	800	575	24,5
	80	16	1000	750	27,5
	80	16	1250	1000	31,5
	80	16	1500	1250	36,5
305	80	16	800	575	25,0
	80	16	1000	750	28,0
	80	16	1250	1000	32,0
	80	16	1500	1250	37,0



Materials and technical properties

The one-piece body of the underground hydrant type 304 or 305 is made of ductile cast iron and is fully enamelled.

The sturdy obturator is also made of cast iron. Its shape allows ideal flow-through conditions and it is further fully coated with premium hydrolysis resistant polyurethane.

The design of this underground hydrant supports water pressure protection according to DIN 3321. Once the hydrant is opened, the pressurized water will not enter the pillar from the main pipe before the drainage outlet of the pillar is locked.

Following that same pattern, the drainage outlet will not open during the shut-off procedure until the main valve is securely locked. This prevents the leaking of pressurized water and allows the remaining residual water to discharge.

Type 304 comes with a single shut-off and type 305 comes with a dual shut-off device. An additional sealing ball ensures sealing when the linkage is replaced under pressure. There is no need for the pipe to be without pressure due to the dual shut-off device and no additional gate valve is required.

Maintenance-free stem bearing as a result of using two O-rings. The rolled stem thread ensures high wear resistance.

If repair is needed, the marking on the top of hydrant indicates information about the pipe covering in order to find the appropriate linkage length. The standard linkage safeguarding arrangement ensures additional safety during linkage exchange.

Installation and operation to be carried out in accordance with the guidelines of the DVGW worksheet W 263.



Underground hydrant type 304 S for TYTON® / Novo sockets

DN 80 / PN 16 – Pipe coverings 0.75 m to 1.50 m, enamelled inside and outside

Range of application

- for drinking and raw water
- up to 16 bar
- up to 60 °C

The underground hydrant 304 S has a spigot end that fits into any TYTON®/Novo socket DN 80. It is available for pipe coverings from 0.75 m to 1.50 m.

The underground hydrant type 304 S complies in every detail with the requirements and tests of the standards DIN EN 14339 and DIN EN 1074-6 as well as the DVGW test specification W 386 (P). It has proven itself over many years in the supply of drinking water for firefighting and as an emergency tapping point.

Two-piece drainage cylinder made from shock-resistant plastic with drainage fleece separately available for all Düker underground hydrants



The most important elements

- 1 One-piece, completely enamelled body
- 2 Three-winged sealing piston with EPDM coating
- 3 Cast-on drain opening, fully enamelled
- 4 Stainless steel piston rod
- 5 Brass guide piece
- 6 Stem / lock nut
- 7 Protective cover with link chain
- 8 Bayonet hook with brass ring and cast iron protective cover with stainless steel chain
- 9 Cast iron protector



Dimensions and weights

DN	PN	Pipe covering mm	Height of construction H mm	Weight kg
80	16	750	670	29
80	16	1000	890	33
80	16	1250	1140	38
80	16	1500	1390	43

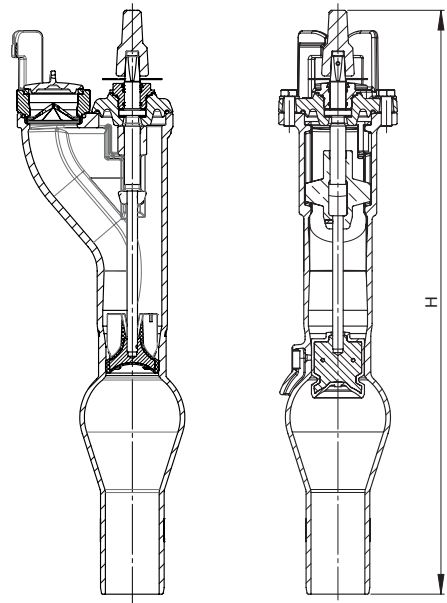
Technical properties

The body of the 304 S is a one-piece body made of all-round enamelled ductile cast iron.

The robust three-winged sealing piston is optimally shaped in terms of flow and is also made of ductile cast iron with a high-quality EPDM coating on all sides.

The pressurised water protection is ensured by the body design. When the hydrant is opened, the pressurised water only emerges from the main pipe into the column when the drainage opening of the column is closed.

Similarly, when the hydrant is closed, the drainage opening is only opened again when the main valve is securely closed. This prevents pressurised water from emerging from the drainage opening and the remaining residual water can drain away.



The underground hydrant 304 S has a single shut-off. With this variant, the pipe must be depressurised before any installation work is carried out.

The stem (6) is maintenance-free thanks to the use of two O-rings. The threaded stem ensures high wear resistance.

A marking on the hydrant head (one to four notches) provides information about the pipe covering so that the pipe covering can be determined at any time, even after installation in the ground.

The built-in rodding safety device ensures safe installation and removal. Installation and operation are carried out in accordance with the guidelines of DVGW worksheet W 263.

Underground Hydrant 304 and 305 Epoxy Line – with Flange Connection

DN 80 / PN 16 – pipe covering 0.80 m to 1.50 m, internally and externally epoxy coated

Range of application

- for drinking and raw water
- up to 16 bar
- up to 60 °C

Underground hydrants of the 304 and 305 series in the Epoxy Line version comply with the requirements and tests of DIN EN 14339, DIN EN 1074-6 and the DVGW test specification W 386 (P) and have a DVGW type approval test. They bear the CE marking in accordance with the Construction Products Directive.

All materials in contact with drinking water comply with the current state of the Federal Environment Agency assessment guidelines and directives. All elastomers and plastic parts comply with the DVGW worksheet W 270.

The flow rates of the underground hydrants 304 and 305 significantly exceed the standard requirements: Type 304 with single shut-off achieves approx. 131 m³/h, while the dual shut-off Type 305 achieves a flow rate of approximately 134 m³/h. The residual water volume is minimal, and the drainage time at a pipe covering of 1.00 m is only approximately 1:40 min.

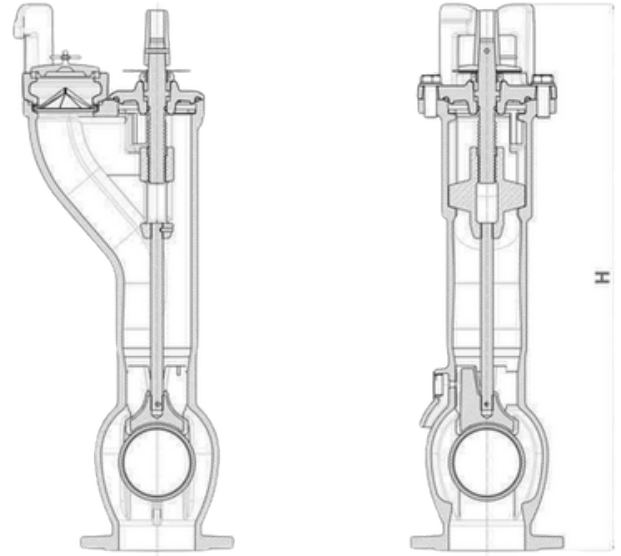
Die wichtigsten Elemente

- 1 One-piece housing, coated inside and outside with epoxy
- 2 Cast-on and epoxy coated drainage outlet
- 3 Three-winged sealing piston, fully EPDM coated
- 4 Dual shut-off with EPDM coated steel ball (type 305)
- 5 Solid stainless steel piston rod
- 6 Brass guide piece
- 7 Well-established and proven stem bearing
- 8 Self-acting EPDM outlet cover
- 9 Bayonet hook with brass ring and cast protective cover with stainless steel chain



Dimensions and weights

Type	DN	PN	Pipe covering mm	Height of construction H mm	Weight kg
304	80	16	800	540	22,5
	80	16	1000	715	25,5
	80	16	1250	965	29,5
	80	16	1500	1215	34,5
305	80	16	800	540	23,0
	80	16	1000	715	26,0
	80	16	1250	965	30,0
	80	16	1500	1215	35,0



Materials and technical properties

The one-piece body of the underground hydrants type 304 and 305 is made of ductile cast iron and is coated inside and outside with a high-quality, seamless epoxy coating. The continuous all-round coating without an interface in the seat area ensures optimum protection and a long service life. The cast-on, epoxy coated drainage outlet is fully integrated into the design – without additional parts – and reliably prevents the ingress of roots.

The robust, three-winged sealing piston is fully coated with EPDM and ensures high stability and optimum flow-through conditions.

Type 304 features a single shut-off. Type 305 is additionally equipped with a dual shut-off EPDM coated steel ball, which allows linkage replacement even under pressure – without draining the pipeline or requiring additional gate valves.

The solid piston rod is made of stainless steel. The stem is maintenance-free thanks to the use of two O-rings. The rolled stem thread contributes to the long service life. The guide piece is made of brass.

In the event of repair, the marking on the hydrant head enables clear identification of the pipe covering in order to determine the appropriate linkage length. The standard linkage safeguarding arrangement ensures additional safety during linkage replacement.

A self-acting EPDM outlet cover as well as a protective cover with link chain and bayonet hook with brass ring complete the high-quality fitting.

Installation and operation are to be carried out in accordance with the guidelines of DVGW worksheet W 263.





Quality at the highest possible level

We are the first ones to set the highest requirements into the quality of our products. It is for that reason that we introduced a modern quality management system according to DIN EN ISO 9001 already in 1993, which has also been TÜV CERT certified.

In addition, Düker products have undergone other tests and approval procedures in line with product or market specific standards or rule sets.

It is not unusual that quality criteria are met within the context of quality assurance associations that are way beyond the standard requirements.



Düker Group

Laufach:

Tel. +49 6093 87-555

Karlstadt:

Tel. +49 9353 791-550

sales@dueker.de

www.dueker.de