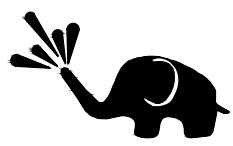


# UNDERGROUND FIRE HYDRANT type PH1

<Two in one = hydrant + isolating pre-valve>

<Dual reliability = possibility of use (closing from below)  
even when the regular closing (from above) is malfunctioning>  
<high flow rate ( $K_v = 110 \text{ m}^3/\text{h}$ ) = less fire damage>



## PROCUREMENT DATA: \*1

- \* Name: Underground fire hydrant
- \* Made in accordance with the standard EN14339\*2 **CE**
- \* Nominal sizes (DN80; DN100), PN16.
- \* Closing with the main valve "from above".
- \* With isolation "pre-valve", closing "from below".
- \* Possibility of use even when the main valve seal is defective.
- \* Flow;  $K_v = \text{min. } 105 \text{ m}^3/\text{h}$ .
- \* Activation moment: MOT:<40Nm.
- \* Repair of the main valve; the other hydrants remain in operation, without digging up the ground and without dismantling the hydrant.
- \* Drainage system "all outside"; repair without dismantling the hydrant.

\* Inlet connection : → Flange EN1092-2 (Du80, PN16) (Du100, PN16) → Particular request, "describe"

\* Nominal height  $Hi$ : → (700) (850) (1000) mm → Particular request, "specify"

\* Outlet  $Di$ : → 65 mm

\* Outlet couplings: → Specify label and standard

\* Drainage system: → (D1) (D2) → Without

\* Medium: Water → Drinking → Technical

\* Colors of external surfaces: → Black

\* **Warranty period: 5 years.**

\* Submit documents:

- "Brochure",
- "Test report", issued by the hydrant "authorized body"
- "Certificate of Conformity" hydrant, issued by an "authorized body",

\*1 → If necessary, "omit/add"

\*2 → The standard determines the min. performance = "the least good allowed" hydrant.

## Appearance:

1. Inlet flange
2. Isolation "pre-valve" (closing from below)
3. Obturator "main valve" (closing from above)

3.1 The threaded part of the obturator

4. Body

5. Adapter

6. Outlet couplings

7. Identification plate ("CE", " $K_v$ ", ...)

## 8. Drainage system:

### type D1:

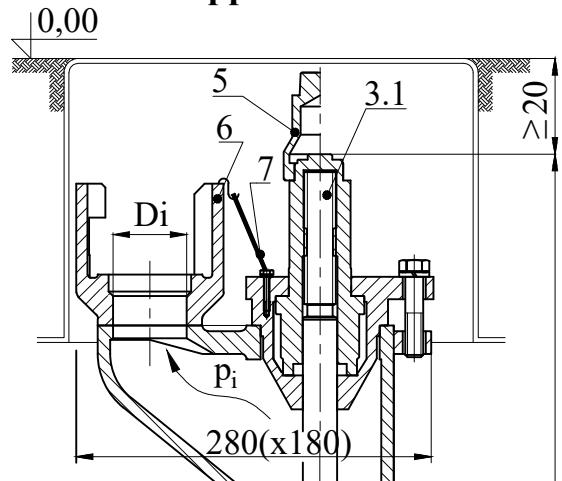
- 8.1 Drainage valve
- 8.2 Drain pipe
- 8.3 Stone → (16÷31) mm\*3

### type D2:

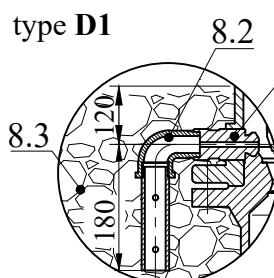
- 8.1 Drainage valve
- 8.2 Drain pipe → (L=?) mm
- 8.3 Distribution pipe
- 8.4 Wire basket\*3
- 8.5 Stones → (16÷31) mm\*3
- 8.6 Cover
- 8.7 Plastic foil\*3
9. Arch with foot EN545\*3

\*3 → Provided by the buyer

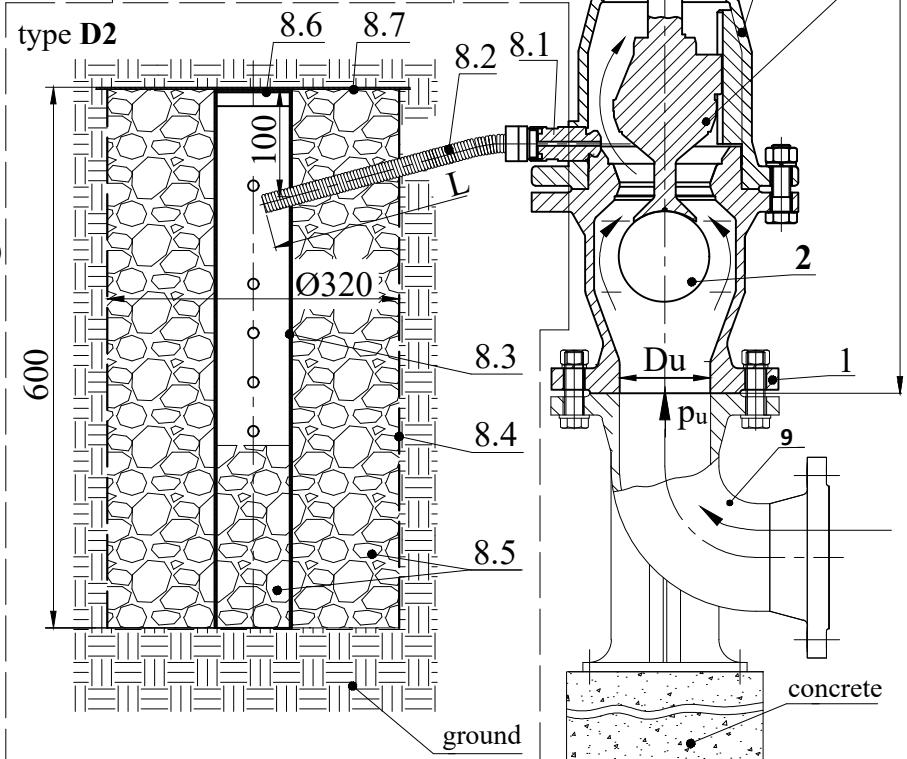
## Appearance



## Drainage system:



### type D2



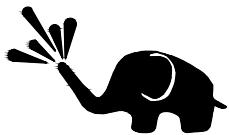
# UNDERGROUND FIRE HYDRANT type PH1

<Two in one = hydrant + isolating pre-valve>

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even when the regular closing (from above) is malfunctioning>  
<high flow rate (Kv= 110 m<sup>3</sup>/h) = less fire damage>

## Basic technical characteristics:

- \* Safe = compliant with the requirements of the EN 14339 standard = CE
- \* Purpose: Taking water from underground pipelines for fire fighting and communal needs
- \* See "Procurement data" P1/2
- \* Flow: Kv= 110 m<sup>3</sup>/h
- \* Moment of activation MOT: max. 30 Nm (Class 1)
- \* Weight..... ~ (42÷48) daN for Hi (700÷1000) mm
- \* Materials:
  - hydrant body castings ..... nodular cast
  - sealants ..... polypropylene/elastomers
  - pipe of body, spindle, and obturator seat ..... stainless steel

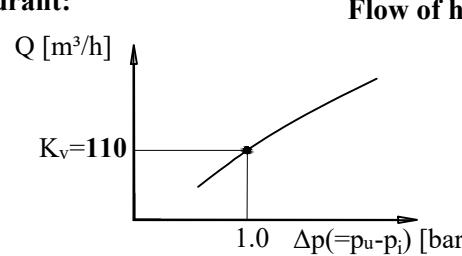


## Advantages:

- \* Two ways of use = double reliability:
  - closing with the main valve (3), from above (regular work),
  - closing with a pre-valve (2), from below (extraordinary work),
- \* Isolation pre-valve (2) inside the hydrant, automatic, self-blocking, which enables:
  - to omit a separate isolation valve in front of the hydrant,
  - that the other hydrants remain in operation even when the main valve (3) malfunction,
  - use of the hydrant and when the main valve (3) is malfunction,
  - lower cost of procurement and maintenance of the hydrant network,
- \* Large flow: (Kv= 110 m<sup>3</sup>/h), less fire damage.
- \* Control valve (7) = great safety of the executor, prevention of hydrant freezing.
- \* Easy activation: (class 1, MOT < 30 Nm) longer service life.
- \* High reliability of closing: impermeability even after 1000 closings.
- \* The main valve seal is conical, self-flushing = dirt retention prevented = longer service life.
- \* Very easy hydrant maintenance:
  - Replacing the main valve seal (3); without digging up the ground and without dismantling the body (4).
  - The threaded part of the closure (3.1) is outside the flow of water, permanently lubricated, maintenance-free throughout its working life.
  - Repair of the drainage valve (8.1); from the outside, without dismantling the hydrant.
- \* Long warranty period 5 years.
- \* Probably the best, and the most economical hydrant available.

## Documents accompanying the delivery of hydrant:

- \* Declaration of Performance,  
or Certificate of Constancy of Performance
- \* Instruction for safety work (installation,  
handling, inspection, maintenance, warranty)



## Flow of hydrant:

$$Q = K_v \times (1000 \Delta p / \rho)^{1/2}$$

- flow ..... Q [m<sup>3</sup>/h]  
 - flow coefficient ..... Kv [m<sup>3</sup>/h]  
 - pressure difference ..... Δp [bar]  
 - water density ..... ρ [kg/m<sup>3</sup>]