ABOVE-GROUND FIRE HYDRANT type NH3

<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 (Kv = 540 m³/h) = less fire damage>

PROCUREMENT DATA: *1

* Name: Above-ground fire hydrant
* Made in accordance with the standard EN14384, type "A".*2 CE
* Nominal sizes DN100, PN16. * Closing with the main valve "form above".
* With isolation "pre-valve", closing "from below". * With control valve.
* Possibility of use even when the main valve seal is malfunctioning.
* Activation without additional tools.
* The possibility of blocking unauthorized use.
* Flow (for Di=2x65); Kv=min.520m3/h.
* Activation moment: MOT=max.70Nm.
* Repair of the main valve; the other hydrants remain in operation, without digging up the ground and without dismantling the hydrant body.
* Drainage system "all outside"; repair without dismantling the hydrant.
* Outlets tilted toward the ground by 25°.
* Breakage due to force F; without damage pipeline, automatic stop of water discharge. *3
* Breaking moment M= max.14000Nm. *3

* Inlet connection: → Flange EN1092-2 (Du150, PN16) / Particular request, "describe"
* Nominal height Hi: → (1350) (1550) (1850)mm / Particular request, "specify"
* Outlets Di: → (2x100+1x150)mm
* Outlet couplings: → Specify label and standard
* Drainage system: → (D1) (D2) / Without
* Medium: → Water (technical) (drinking)
* Colors of external surfaces:
  - aboveground part (without pipe): → red / special request
  - underground part: black
* **Warranty period: 5 years.**
* Deliver documents:
  - "Brochure";
  - "Test Report", issued by an "authorized body";
  - "Certificate of Conformity", issued by an "authorized body";

*1 → If necessary, "omit/add"
*2 → **The standard determines the min.performance =**"the least good allowed" hydrant.

Appearance:

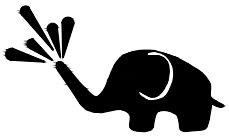
1. Inlet flange.
2. Isolation **"pre-valve" (closing from below**).
3. Obturator - **"main valve" (closing from above).**
3.1 The threaded part of the obturator.
4. Body
4.1 Place of breakage, Due to the impact of force F
5. Cap (keyless activation)
6. Blocking of unauthorized use
7. **Control valve** (**safety**; sealing) 8. Outlet couplings
9. Identification plate ("CE", "K_v", ...)
10. **Drainage system:** (not defined by the standard)

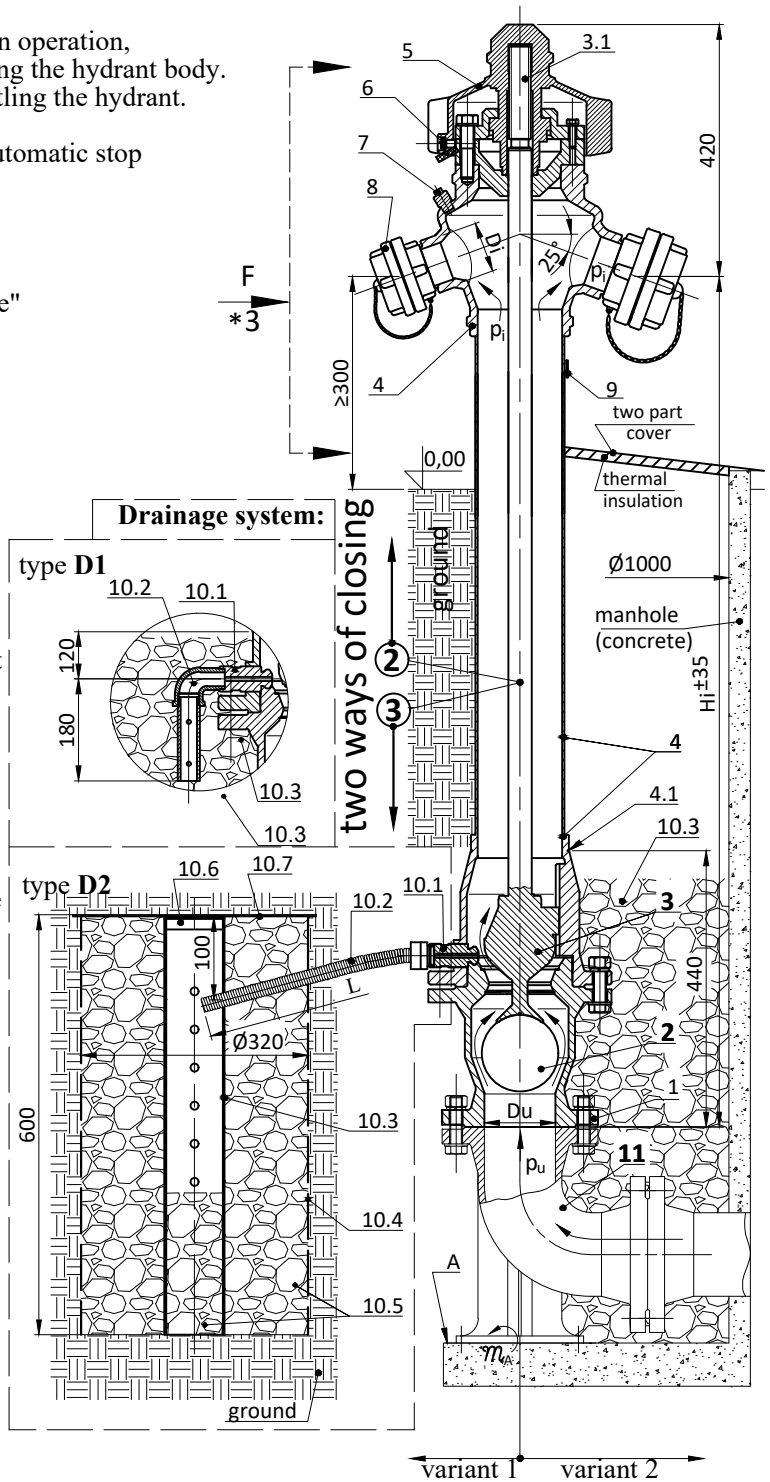
type **D1**:
10.1 Drain valve 10.2 Drain pipe
10.3 Stone → (16÷31)mm*4

type **D2**:
10.1 Drainage valve 10.2 Drain pipe → (L=?)mm
10.3 Distribution pipe 10.4 Wire basket*4
10.5 Stone → (16÷31)mm*4
10.6 Cover 10.7 Plastic foil*4
11. Arch with foot EN545

***4 → Provided by the buyer*4**

Appearance





***3 installation**

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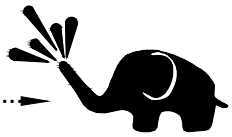
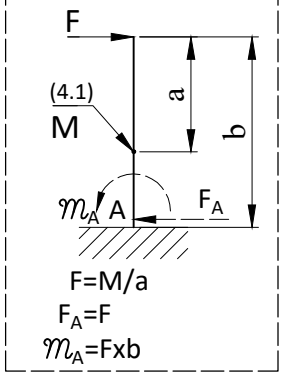
Basic technical characteristics:



* **Safe = compliant with** the requirements of the standard **EN 14384** = CE
* **Purpose:** Taking water from underground pipelines **for fire fighting and communal needs**
* **See "Procurement data" P1/2**
* **Flow: Kv=540m³/h,** for Di = 2x100 .....
* **Moment of activation MOT: max.60Nm, (Class 1)**
* **Moment of breakage** (at place 4.1) due to force F ..... M≈12500 Nm
* **Foundation** .....
* **Weight** ..... ~ (92÷108) daN for Hi (1350÷1850) mm
* **Materials**:

- hydrant body castings ..... nodular cast
- cap, and output couplings ..... aluminium
- pipe of body, spindle, and obtutator seat ..... stainless steel
- sealants ..... polypropylene/elastomers

*3



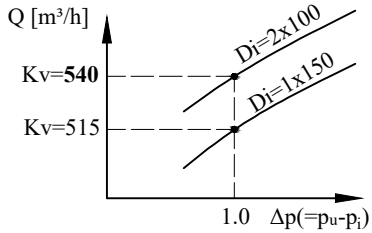
Advantages:

* **Two ways of use = dual 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**:
  - **that the other hydrants remain in operation even when the main valve (3) malfunction,**
  - **automatic stop of water flow**, in case of breakage (4.1) due to force F,
  - **to omit** a separate isolation **valve in front of the hydrant,**
  - **lower cost** of construction and maintenance of the **hydrant network**,
  - **the use of a hydrant even in the case when the main valve (3) is malfunction.**
* **Large flow: (Kv = 540 m³//h**, for Di = 2 x 100); **less fire damage.**
* **Control valve (7) = great safety of the executor, prevention of hydrant freezing.**
* **Prevented damage to the supply pipeline = breakage at point 4.1**, due to force F.
* **Activation without additional tools**, by turning the cap (5).
* **Easy activation: (class 1, MOT < 60 Nm) longer service life**.
* **Possibility of blocking (6) unauthorized use.**
* **High reliability of closing**: impermeability even after 1000 closings.
* **Outles tilted (25°) down, longer service life** of fire hoses.
* **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 it`s working life.
  - **Possibility (7) of checking the correctness of the drain and main valve.**
  - **Repair of the drainage valve (10.1)**; **from the outside**, partial excavation, **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,
* Instruction for safety work (installation, handling, inspection, maintenance, warranty)

Flow of hydrant:



$Q = K_v \times (1000\Delta p / \rho)^{1/2}$
- flow..... Q [m³/h]
- flow coefficient..... K_v [m³/h]
- pressure difference..... Δp [bar]
- water density..... ρ [kg/m³]

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