PILLAR FIRE HYDRANT type NH3

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

<Double reliability = use even when main valve is defective>

PROCUREMENT DATA:*1 **<great flow (Kv= 540 m^3/h)=minor fire damage>**

* Name: Pillar fire hydrant
* Made in accordance with the standard EN14384.*2 CE
* Nominal sizes: DN100, PN16.
* With isolation "pre-valve" * With control valve,
* Possibility of use even when the main valve seal is broken.
* Activation: without additional tools.
* The possibility of blocking unauthorized use.
*Flow (for Di=2x65): Kv=min 520m3/h.
*Activation moment: MOT= max. 70Nm (Class 1).
*Repair of the main valve: the other hydrants remain in operation, without digging up the ground and without dismantling the hydrant body.
*Drainage drain closed already at 20% opening stroke.
*Drainage drain repair: outside, without dismantling the hydrant.
*With a defined place of breakage due to impact, in the underground part of the hydrant.*3
*Fracture; without damage to the pipeline, automatic stop of water discharge.
*Breaking moment M= max 14000 Nm.*3

* Input connection: → Flange EN1092-2 (Du150, PN16) ← / → Particular request, "describe"
* Nominal height Hi: → (1350) (1550) (1850) mm / → Particular request, "describe"
* Outlet opening Di: → (2x100+1x150) mm / → Particular request, "describe"
* Outlet couplings: → Specify label and standard
* Drainage: → With → D1 / D2 (particular request) / Without
* Medium: Water (technical) (drinking)
*Colors of external surfaces:
  - overhead part (not pipe): → red / special request
  - underground part: black
*Submit documents:
-"Prospect";
-"Test Report", issued by"authorized body";
-Valid "Certificate of Conformity",issued by" authorized body";

*1 → "Omit/Add" as needed

*2 → **The standard determines min. performance, and recommends the better**

Appearance:

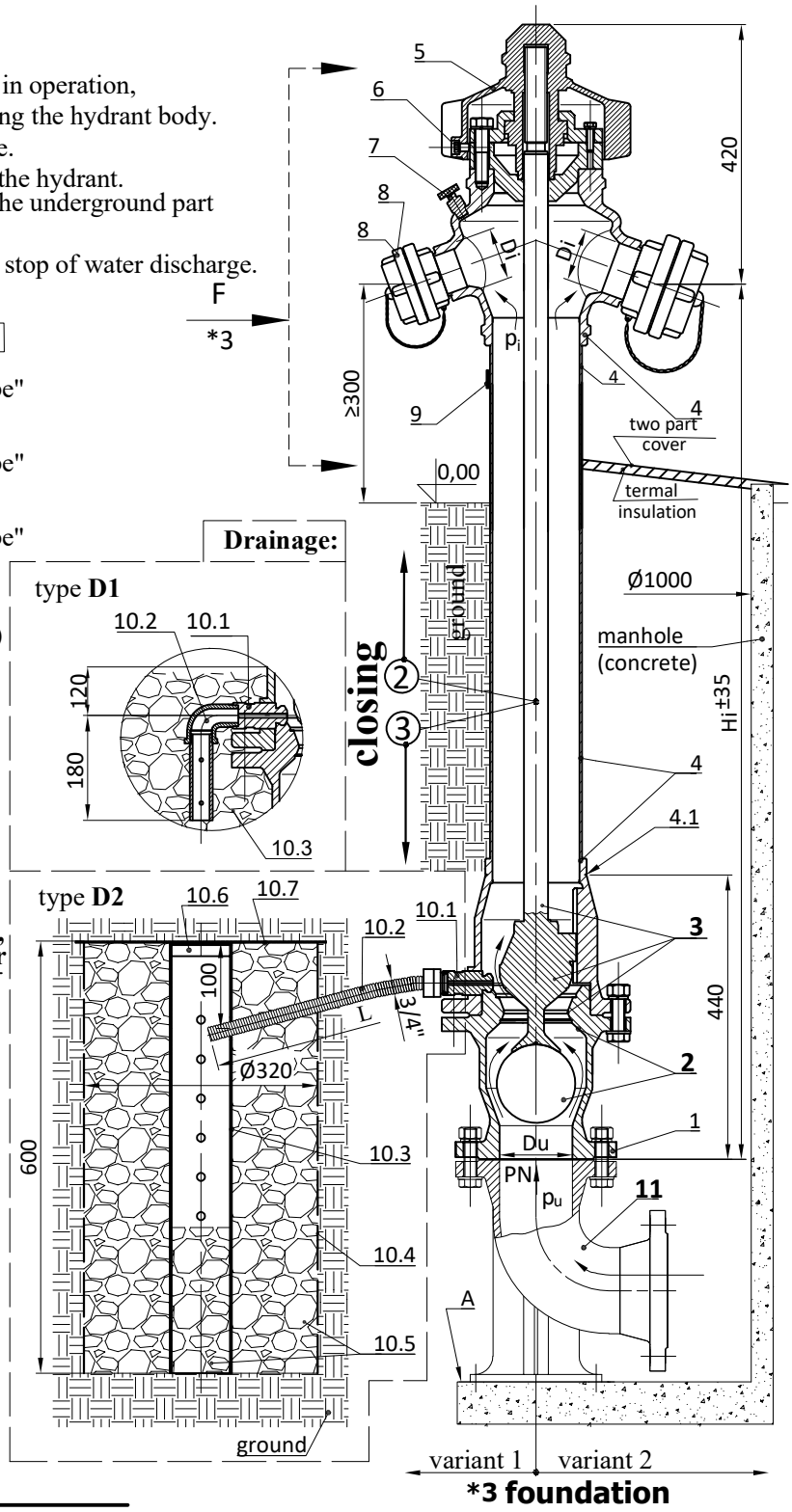
1.Inlet flange 2. Isolation **"pre-valve"**
3. Obturator - **"main valve"**
4. Body **4.1 Place of breakage**,Due to the impact of force F
5. Cap 6.Blocking of unauthorized use
7. Control valve (safety; sealing)
8. Outlet couplings
9. Identification plate ("CE", "K_v", ...)
10. **Drainage drain:** (not 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
10.5 Stone → (16÷31) mm*4
10.6 Cover 10.7 Plastic foil*4
11. Arch with foot EN545*4

*4 → **Provided by the buyer**

Appearance



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PILLAR FIRE HYDRANT type NH3

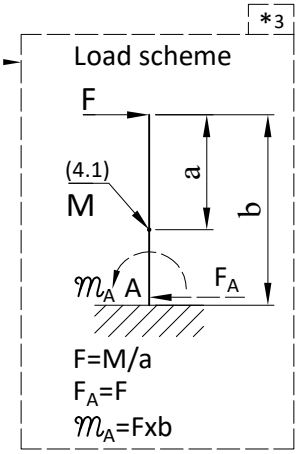
<Two in one = hydrant + isolating pre-valve>
<Double reliability = use even when main valve is defective>
<great flow (Kv= 540 m³/h)=minor fire damage>

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" L1/2**
* **Flow: Kv=540m³/h,** for Di = 2x60

* **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
-sealants.....polypropylene/elastomers
-pipe of body, spindle, and obtutator seat..... stainless steel



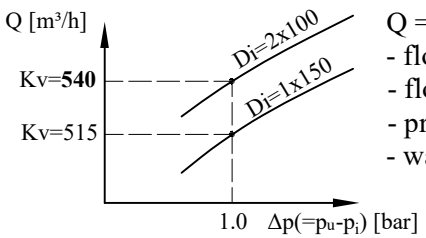
Advantage:

* 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 broken.**
* **Large flow: (Kv = 540 m3//h**, for Di = 2 x 100); **minor fire damage.**
* **The possibility of using** a hydrant (drainage drain closed) **at a flow rate of (20÷100)%.**
* **Prevented damage to the supply pipeline = breakage at point 4.1**, due to force F.
* **Activation without additional tools**, by turning the cap (5).
* **Possibility of blocking (6) unauthorized use.**
* **Possibility to control (7) the correctness of the** drainage and main valve**, greater operator safety.**
* **Easy activation: (class 1, MOT < 60 Nm) longer service life**.
* **High reliability of closing**: tightness even after 1000 closings.
* **High reliability** of the drainage system = two outlet openings, **self-flushing drainage valve**.
* **High strength** of the closure and hydrant body, MsT > 250 Nm.
* **Very easy hydrant maintenance**:
  - **Replacing the main valve seal (3)** ; **without digging up the ground and without disassembling the body (4).**
  - **The threaded part of the closure** is outside the flow of water, **permanently lubricated**, **maintenance-free** throughout its 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**.
  - **Easy replacement of the seat** of the main valve (3) and pre-valve (2).
  - **The main valve seal is conical, self-flushing** = dirt retention prevented = **longer service life.**

Documents with the delivery of hydrant:

* Declaration of Performance,
* Instruction for safety work (installation, handling, inspection, maintenance, guarantee)

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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