ABOVE-GROUND FIRE HYDRANT type LNH2

<Two in one = hydrant + isolating pre-valve>
<Dual reliability = prossibility of use (closing from below) even when the regular closing (from above) is malfunctioning>
<high flow rate (Kv = 278 m³/h) = less fire damage>

PROCUREMENT DATA: *1

*Name: Above-ground fire hydrant **with break system**
*Made in accordance with the SRPS EN14384 standard, type "C" *2 CE
*Nominal sizes DN100, PN16. * Closing with the main valve "from above".
*With isolation "pre-valve", closing "from below". * With control valve.
*Activation without or with an additional tool.
*The possibility of blocking unauthorized use.
*Flow (for Di=2x65; Kv=min.270m³/h
*Activation moment: MOT=max.65Nm.
*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.
*Outlets tiled toward the ground by 25°.
*Breakage due to force F; no damage to the lower part of hydrant. *3
* Breaking moment M=max.1500daN.*3

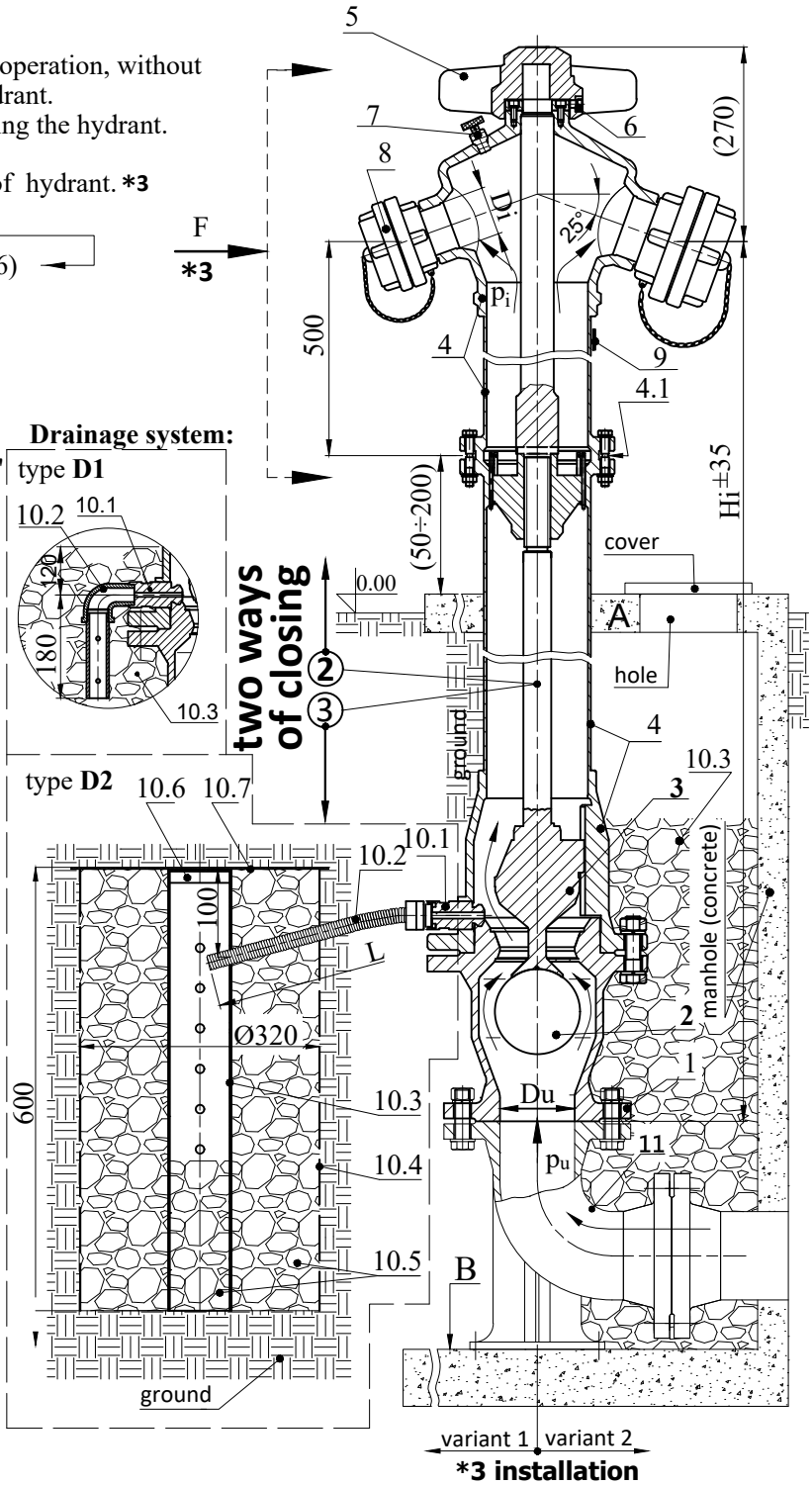
*Inlet connection: Flange EN1092-2 (Du100, PN16) (Du150, PN16) / Particular request, "describe"
*Normal height Hi: (1350) (1550) (1850)mm / Particular request, "specify"
*Outlets Di: (2x65+1x100)mm
*Outlet couplings: (2xB+1xA) DIN, system "storz" / Specify label and standard
*Drainage system: (D1) (D2) / 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)**
4. Body
4.1 Place of breaking, 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. Ident plate ("CE", "Kv",...)
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 Drain 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

*4 → **Provided by the buyer**

Appearance



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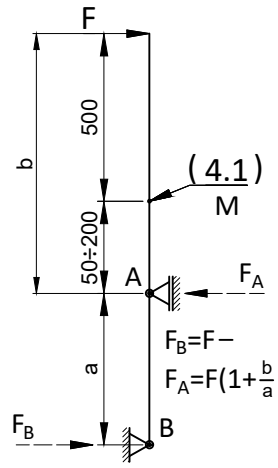
Basic technical characteristics:

* **Safe = compliant with** the requirements of the **EN 14384 standard** = CE
* **Purpose:** Taking water from underground pipelines **for fire fighting and communal needs**
* **See "Procurement data" P1/2**
* **Flow: Kv=278m³/h**, for Di=2x65
* **Activation moment MOT: max. 55Nm, (Class 1)**
* **Breaking force** ..... F=1350 daN
* **Foundation**
* **Weight** ..... ~ (57÷94) 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,

*3

Load scheme
(obligation under the standard)



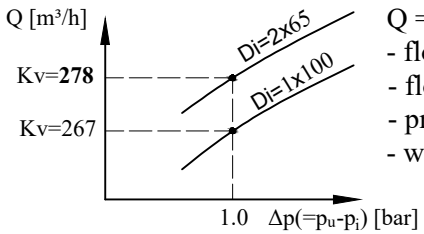
Advantages:

* **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,**
  - **to omit** a separate isolation **valve in front of the hydrant,**
  - **lower cost** of procurement and maintenance of the **hydrant network,**
  - **the use of a hydrant even when the main valve (3) is malfunction,**
* **Large flow: (Kv=278 m3//h**; for Di=2x65); **minor fire damage.**
* **Control valve (7) = great safety of the executor, prevenstion of hydrant freezing.**
* **Activation without additional tools**, by turning the cap (5).
* **Easy activation: (class 1, MOT < 55 Nm) longer service life**.
* **Possibility of blocking (6) unauthorized use.**
* **High reliability of closing reliability**; impermeability even after 1000 closures.
* **Outlet 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).**
  - **Possibility (7) of checking the correctness of the drain and main valve.**
  - **Repair of the drainage valve (10.1)**; **from the outside**, partial excavation, and **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 [m³/h]
- flow coefficient..... K_v [m³/h]
- pressure difference..... Δp [bar]
- water density..... ρ [kg/m³]

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