

<two in one = hydrant + isolating pre-valve>
<double reliability = use even when main valve is defective>
<great flow = 136 m³/h>
PROCUREMENT DATA*1

- * Name: Above-ground fire hydrant
- * Made in accordance with the standard EN14384*2
- * Nominal sizes: DN80, PN16
- * With isolation "pre-valve" * With control valve,
- * Possibility of use even when the main valve seal is broken,
- * Activation: without additional tools,
- * With the blocking of unauthorized activation, or not,
- * Flow Kv [m³/h]: (for Di=2x50) → min 130
- * Activation moment Mot: max. 40 Nm (Class 1)
- * Repair of the main valve: the other hydrants remain in operation, without digging up the ground, and without dismantling the hydrant body, or not
- * With a defined point of breaking (4.1) due to the force F, or not
- * Break (4.1): without damage to the pipeline (with the condition "proper foundation"),*3 with automatic stoppage of water
- * Moment of breakage: max 6500 Nm

- * Input connection: Flange EN1092-2 (DN80, PN16) (DN100, PN16) → Particular request, "describe"

- * Nominal height Hi: (1300) (1500) (1800) mm → Particular request, "describe"

- * Outlet openings Di: (2x50+1x65) mm → Particular request, "describe"

- * Outlet couplings: → Specify label and standard

- * Drainage: With → D1 Without → D2 (particular request)

- * Medium: Water (technical) (drinking)

- * Deliver documents:

- "Prospect";
- "Test Report", issued by an "authorized body";
- Valid "Certificate of Conformity", issued by an "authorized body";

- *1 → If necessary, "omit/add"

- *2 → **The standard determines the 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 force F
5. Cap
6. Blocking of unauthorized activation
7. Control valve (safety; sealing)
8. Output couplings
9. Identification label ("CE", "Kv", ...)
10. **Drainage drain:** (not defined by the standard)

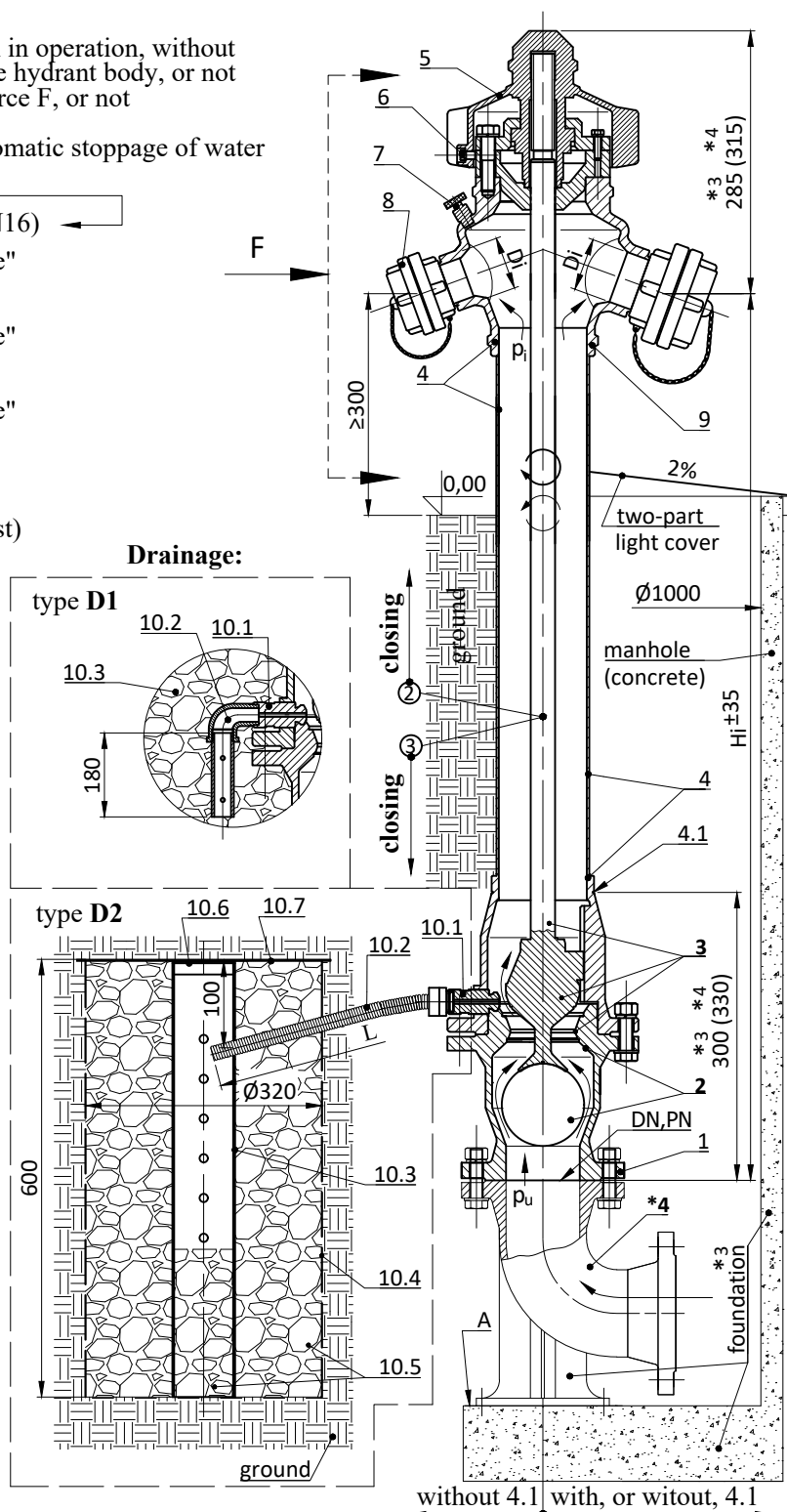
type D1:

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

type D2:

- 10.1 Drainage valve
- 10.2 Drain pipe → (L=?) mm
- 10.3 Distribution pipe
- 10.4 Wire basket
- 10.5 Stone*4 → (16÷31) mm
- 10.6 Cover
- 10.7 Plastic foil*4

- *4 → **Provided by the buyer**


Appearance


without 4.1 with, or without, 4.1

PILLAR FIRE HYDRANT type NH1

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

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

<high flow: $K_v = 136 \text{ m}^3/\text{h}$ >

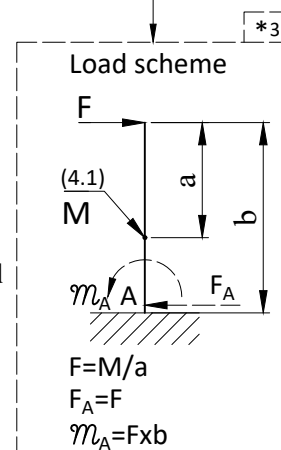
Basic technical characteristics:

- * **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:** $K_v = 136 \text{ m}^3/\text{h}$, for $D_i = 2 \times 50$
- * **moment of activation M_{ot} :** max. 30 Nm (Class 1)
- * **moment of breakage** (at point 4.1) due to force F $M = 6300 \text{ Nm}$
- * **foundation**
- * **weight** ~ (51÷65) daN for H_i (1300÷1800) mm
- * **materials:**
 - hydrant body nodular cast / stainless steel
 - spindle and obturator seat, stainless steel
 - cap, and output couplings aluminium
 - sealants polypropylene/elastomers



Advantages:

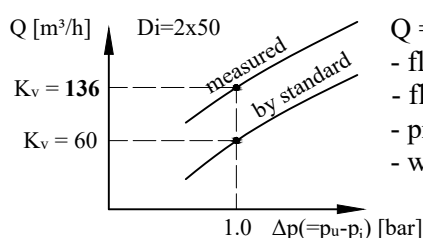
- * Isolation pre-valve (2) inside the hydrant, automatic, self-blocking, which enables:
 - use of the hydrant and in case the main valve (3) is broken,
 - that the other hydrants remain in operation even when the main valve seal is replaced
 - automatic stop of water leakage, in case of breakage (4.1) 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.
- * **High flow, $K_v = 136 \text{ m}^3/\text{h}$** , for $D_i = 2 \times 50$
- * **Replacing the main valve seal: without digging up the ground and without disassembling the body,**
- * **The threaded part of the obturator is:** out of the water flow, permanently lubricated, maintenance-free throughout its working life,
- * **Prevented damage to the supply pipeline = breakage at point 4.1**, due to force F,
- * **Activation without additional tools**, by turning the cap (5) on top of the hydrant,
- * **Possibility of blocking (6) unauthorized activation,**
- * **The main valve seal is conical, self-flushing** = dirt retention prevented = longer service life of the seal,
- * **Easy activation: Class 1, MOT < 30 Nm** (max allowed 125 Nm; Class 3),
- * **Quick activation:** 1 turn until water appears, 8 turns until maximum flow (max. 15 turns allowed),
- * **High closing reliability:** sealing of the closure even after 1000 closures
- * **High reliability of the drainage system = two outlet openings, and self-flushing drainage valve**
- * **Great strength of the obturator and the body of the hydrant, $M_{sT} > 250 \text{ Nm}$,**
- * **The possibility of easy control (7) of the correctness of the hydrant,**
- * **Amount of residual water in the hydrant body, < 80 cm³** (max. allowed 150 cm³),
- * **Fast draining, ≤ 5 min** (permitted max. 10 min/m),
- * **Easy replacement of main valve seat (3) and pre-valve seat (2),**
- * **Drainage valve (10.1) repair; from the outside, partial excavation, and without dismantling the hydrant body.(4)**



Documents with 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 $Q = \text{[m}^3/\text{h]}$
- flow coefficient $K_v = \text{[m}^3/\text{h]}$
- pressure difference $\Delta p = \text{[bar]}$
- water density $\rho = \text{[kg/m}^3]$