

ABOVE-GROUND FIRE HYDRANT type NH1

No. 01.23/10.4.2

P 1/2

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

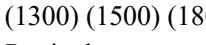
<Dual reliability = possibility of use (closing from below) even when the regular closing (from above) is malfunctioning>

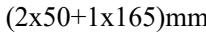
PROCUREMENT DATA:^{*1} <high flow rate (Kv= 145 m³/h) = less damage fire>

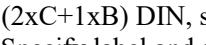
- * Name: Above-ground fire hydrant.
- * Made in accordance with the standard EN14384, type "A" ^{*2} 
- * Nominal sizes DN80, PN16. * Closing with the main valve "from above".
- * With isolation "pre-valve", closing "from below". * With control valve.
- * Possibility of use even when the main valve seal is malfunctioning.
- * Activation without additional tools.
- * Possibility of blocking unauthorized use.
- * Flow (for Di=2x50); Kv=min.140m³/h.
- * Activation moment: MOT=max.40Nm.

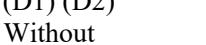
- * Repair of the main valve; other hydrants remain in operation, without digging up the ground and without dismantling the hydrant body.
- * Drainage system "all outside"; repair without dismantling the hydrant.
- * Outlets tilted toward the ground by 25°.
- * Breakage due to force F; without damage pipeline, automatic water stop and draining. ^{*3}
- * Breaking moment M= max.6500Nm. ^{*3}

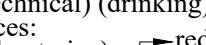
* Inlet connection:  (Du80, PN16) (Du100, PN16)
Particular request, "describe"

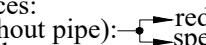
* Nominal height Hi:  (1300) (1500) (1800)mm
Particular request, "specify"

* Outlets Di:  (2x50+1x165)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
- 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", "Kv",,)
10. **Drainage system:** (not defined by the standard)

type D1:

10.1 Drain valve 10.2 Drain pipe

10.3 Stone  *4

type D2:

10.1 Drainage valve 10.2 Drain pipe 

10.3 Distribution pipe 10.4 Wire basket*4

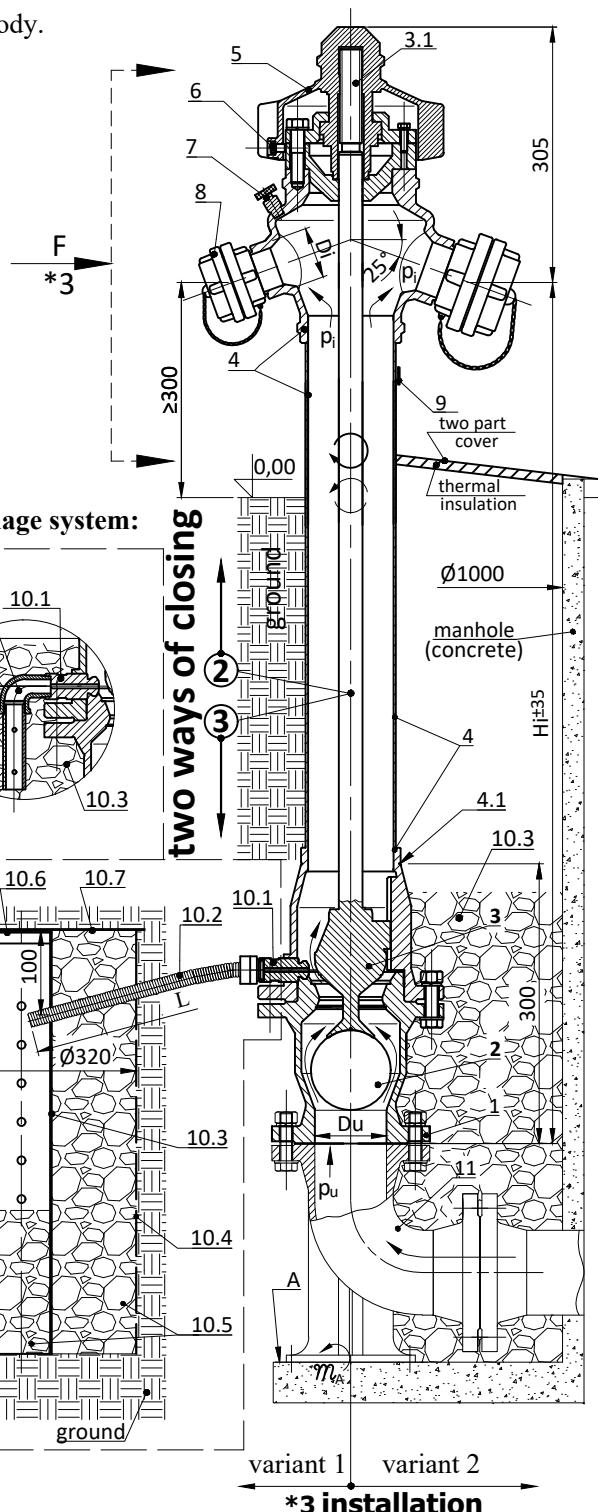
10.5 Stone  *4

10.6 Cover 10.7 Plastic foil*4

11. Arch with foot EN545*4

*4 → Provided by the buyer

Appearance



*3 installation

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P 2/2

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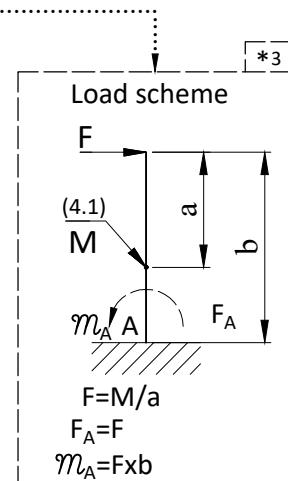
<Dual reliability = possibility of use (closing from below)
even when the regular closing (from above) is malfunctioning>
<high flow rate ($K_v = 145 \text{ m}^3/\text{h}$) = less damage fire>

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: $K_v = 145 \text{ m}^3/\text{h}$, for $D_i = 2 \times 50$ 
- * Moment of activation MOT: max.30Nm (Class 1)
- * Moment of breakage (at point 4.1) due to force F $M = 6300 \text{ Nm}$
- * Foundation
- * Weight $\sim (51 \div 65) \text{ daN}$ for $H_i (1300 \div 1800) \text{ mm}$
- * Materials:
 - hydrant body castings nodular cast
 - cap, and output couplings aluminium
 - pipe of body, spindle, and obturator seat stainless steel
 - sealants polypropylene/elastomers

Advantages:

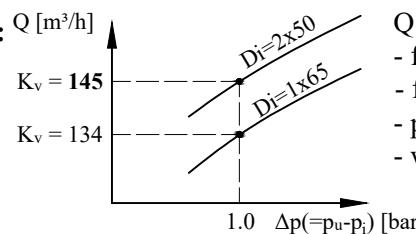
- * Two ways of use = dual reliability.
 - closing with the main valve (3), from above (regular work),
 - closing with a pre-valve (2), from below (extraordinary work),
- * Isolation pre-valve (2) inside the hydrant, automatic, self-blocking, which enables:
 - that the other hydrants remain in operation 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 the main valve (3) is malfunction.
- * Large flow: ($K_v = 145 \text{ m}^3/\text{h}$, for $D_i = 2 \times 50$); 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 < 30Nm) longer service life.
- * Possibility of blocking (6) unauthorized use.
- * High reliability of closing: impermeability even after 1000 closings.
- * Outlets 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 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.
- * Long warranty period (5 years).
- * Probably the best, and the most economical hydrant available.



Flow of hydrant:

Documents accompanying delivery of hydrant:

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



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

- flow Q [m³/h]
- flow coefficient K_v [m³/h]
- pressure difference Δp [bar]
- water density ρ [kg/m³]