MONITOR type MNH2

<Three in one = hydrant + water launcher + isolating pre-valve>
<Dual reliability = possibility 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

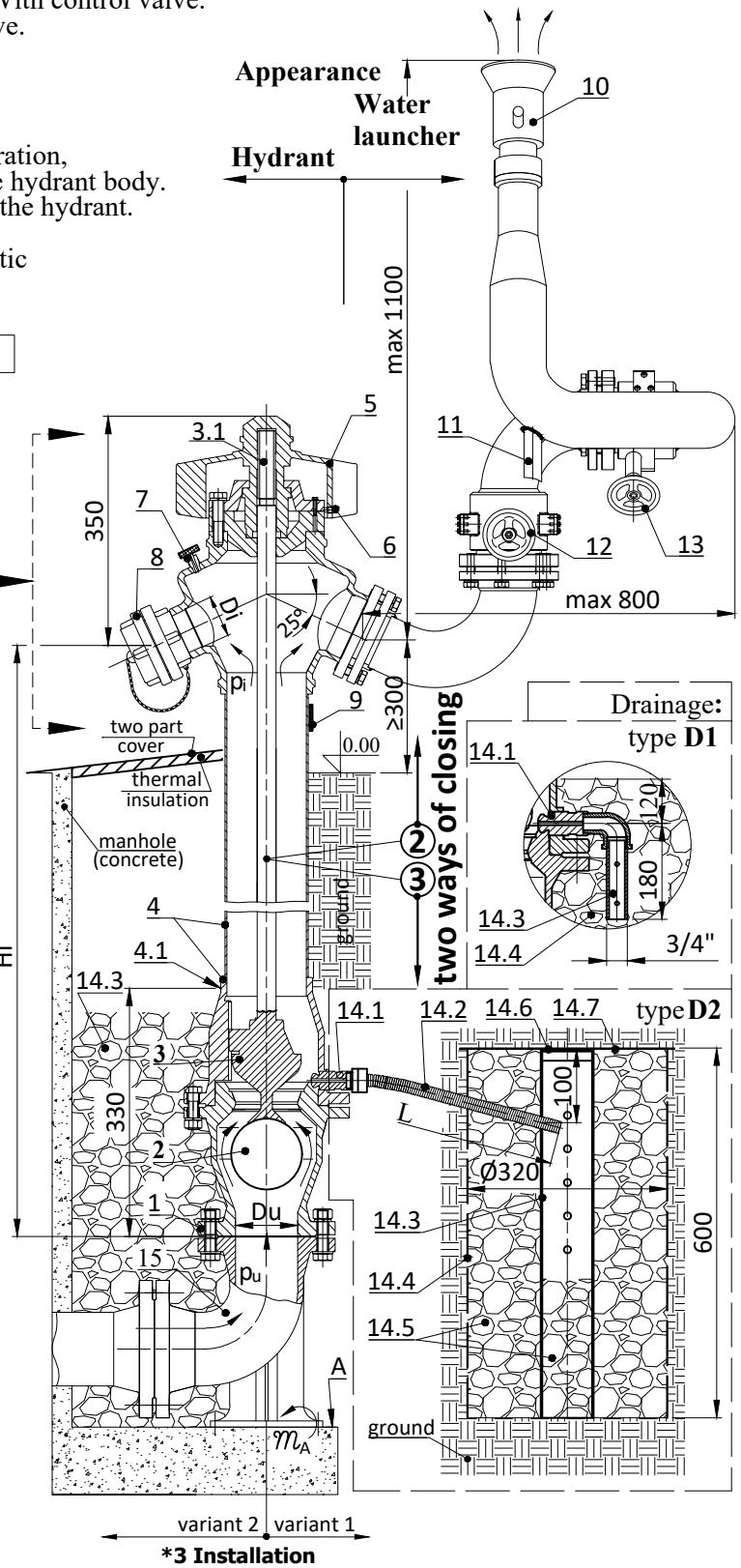
Hydrant:
*Name: Above-ground fire hydrant
*Made in accordance with the EN14384 standard, type "A".*2 CE
*Nominal sizes DN100, PN16. *Closing with the main valve "from above"
*With isolation "pre-valve", closing "from below". *With control valve.
*Possibility of use even when the main valve seal is defective.
*Activation without additional tools.
*The possibility of blocking unauthorized use.
*Flow (for Di=2x65); Kv=min.270m3//h.
*Activation moment: MOT= max.50 Nm.
*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 towards the ground by 25°.
*Breakage due to force F; without damage pipeline, automatic stop of water discharge. *3
*Breaking moment M= max.7800Nm. *3

*Inlet connection: → Flange EN1092-2 (Du100, PN16) (Du150, PN16); → Particular request, "describe"
*Nominal 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 (tehnical) (drinking)

Water launcher:
*Date,on P2/2
***Warranty documents:**
*Deliver documents:
- "Brochure",
- "Test report", issued by the hydrant "authorized body",
- "Certificate of Conformity" hydrant, issued by an "authorized body",

*1→If necessary, "omit/add"
*2→**The standard determines 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 brekaking, Due to the impact of force F
4. Cap (keyless activation) 6. Blocking of unauthorized use
7. Control valve (**safety**; sealing)
8. Output couplings
9. Identity plate ("CE","K/v",...)
10. Nozzle
11. Lever for positioning the jet direction
12. Fixing the horizontal direction
13. Fixing the vertical direction
14. **Drainage system:** (not defined by the standard)
type D1:
14.1 Drainage valve 14.2 Drain pipe
14.3 Stone → (16÷31) mm*4
type D2:
14.1 Drain valve 14.2 Drain pipe →(L=?) mm
14.3 Distribution pipe 14.4 Wire basket*4
14.5 Stone → (16÷31) mm*4
14.6 Cover 14.7 Plastic foil*4
15. Arch with foot EN545*4
***4→ Provided by the buyer**



***3 Installation**

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MONITOR type MNH2

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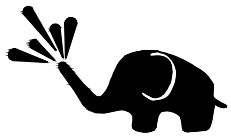


Basic technical characteristics:

Hydrant: type NH2

* **Safe = compliant with the** requirements of the standard **EN 14384** = CE
* **See "Procurement data" P1/2**
* **Flow: Kv=278 m³/h,** for Di=2x65
* **Moment of activation MOT<45Nm, (Class 1)**
* **Moment of breakage** (at point 4.1) due to force F..... M=7500Nm
* **Foundation**
* **Weight** ..... ~ (75÷92)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,

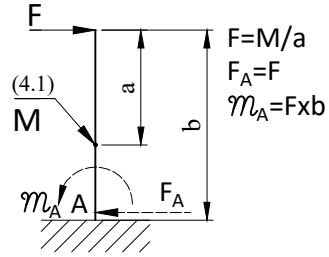
Water launcher:

type BV 1 **type BV 2**

- nominal openings ... Di=65mm ..... Di=100 mm
- nominal pressure ..... PN=16bar
- choice of jet shape
- choice of jet direction .....vertically / horizontally
- fixing the selected jet position
- weight.....40 daN..... 60daN
- materials:
  - body ..... steel,
  - nozzle ..... aluminium,
  - sealants ..... elastomers,

*3

Load scheme



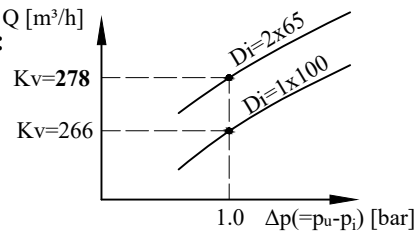
Advantage:

* **Two ways of use = double 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**:
  - **the use of a hydrant even the main valve (3) is malfuction.**
  - **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**,
* **Large flow: (Kv=278 m³//h**, for Di=2x65); **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<45Nm) 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 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, waranty)

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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