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# ABOVE-GROUND HYDRANT TYPE 2018L C (BREAKABLE)
# INSTRUCTIONS FOR SAFE HANDLING

Title: **ABOVE-GROUND HYDRANT TYPE 2018L C (30.03.2023 - rev. 04)**

Highest working – operating pressure
- PN 16 = 16 bar

## 1. INSTALLATION OF THE PRODUCT

- **SELECTION OF HYDRANT**

Correct installation of the hydrant is a condition for its uninterrupted operation.
It is particularly the location of the hydrant and the depth of the pipeline which are important in terms of an optimal selection of the hydrant. The location of the pipeline provides data on possible mechanic damage of the hydrant (break), the depth of the pipeline provides data on the mounting depth of the hydrant.

When installing the hydrant, particular attention should be paid to the safety of the worker, therefore we shall prepare a suitably sized excavation with a levelled area, where the worker can stand. We shall ensure that the valve in front of the hydrant is closed or the pipeline is released from pressure. We fasten a sealing element to a clean connecting flange, set the hydrant and screw together. The position of the hydrant head can be adapted into any direction, regarding to the surroundings. Rotation of the hydrant is enabled by the top rotating flange, located on the head of the hydrant. The procedure is executed by unscrewing all 6 screws pos. 11 mark »A« (two to three rotations) and rotating the hydrant head in the desired direction. After the setting, we equally tighten the screws with T=35–40 Nm.

- **DRAINAGE**

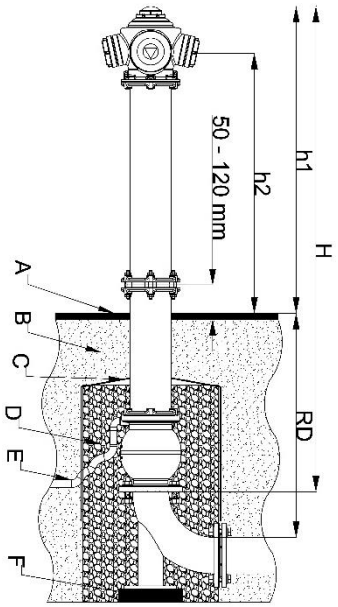
It is also very important to settle the drainage outlet, particularly on heavy clayey areas. Otherwise, the water from the hydrant will not drain which may cause the medium to freeze at low temperatures and consequently cause damages on the hydrant. When backfilling the hydrant, particular attention should be paid not to damage it. After the works are completed, we remove the PVC foil.

- **WARNING**

The hydrant is not designed for flushing or cleaning of the pipeline. Various foreign objects, such as sand in water, may damage the hydrant's sealing element. In case you nevertheless are using the hydrant for this purpose, we advise the following: the hydrant must be fully open. After the flushing close the hydrant with normal force. If the water continues to run, this indicates that a foreign object is caught in the hydrant piston – do not increase the closing force due to this. Repeat the opening and closing procedure. If the hydrant continues to leak, this indicates that a foreign object is trapped in the hydrant piston – the hydrant should be opened and the foreign object has to be removed. See point 2. If the hydrant piston is damaged, it needs to be replaced. It is not necessary to dig out the hydrant!

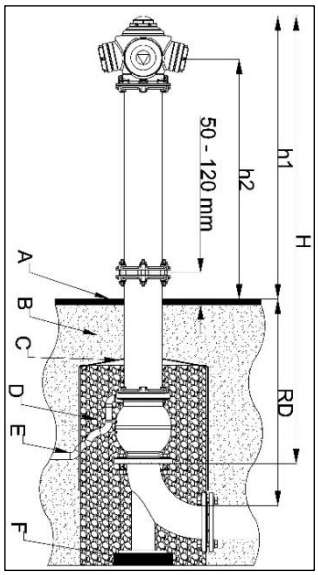
## INSTALLATION OF THE HYDRANT INTO THE PIPELINE

| DIMENSIONS OF THE ABOVE-GROUND HYDRANT | | | | |
|---|---|---|---|---|
| **DN** | **RD (MOUNTING DEPTH)** | **H** | **h1** | **h2** |
| 80 | 750 | 1550 | 995 | 828 |
| | 1000 | 1800 | | |
| | 1250 | 2050 | | |
| | 1500 | 2300 | | |
| 100 | 750 | 1550 | 995 | 828 |
| | 1000 | 1800 | | |
| | 1250 | 2050 | | |
| | 1500 | 2300 | | |




A Ground level
B Ensure good consolidation of the ground
C Felt or PE foil is recommended
D Sand of thickness 4–20 mm
E Option: drainage with PE pipe
F Base-plate (recommended from concrete)

- **ALLOWED POSITIONS OF THE INSTALLED PRODUCT**




This is the only possible correct installation position for the product to function optimally.

## 2. MAINTENANCE AND REPAIRS

The above-ground hydrant is of a simple design and does not require special maintenance. In case of leakage or damage of the main sealing element, it is necessary to replace it.

**Before any maintenance work on or in the hydrant, close the valve in front of the hydrant! Assure pressure release of the hydrant, for example, unscrew the blind coupling and open the hydrant. All service works on the hydrant can only be performed by a qualified and trained person.**

### 2.1 PROCEDURE OF REPLACEMENT OF THE MAIN SEALING ELEMENT FOR ABOVE-GROUND HYDRANT TYPE 2018L C (BREAKABLE)

(SEE APPENDIX – LIST OF COMPONENTS OF THE HYDRANT TYPE 2018L C)

1. Close the inflow of the water into the hydrant.
2. Open the hydrant to open position and check that it is not under pressure – pressure release of the hydrant.
3. Unscrew the nuts – pos. 43 (»B«) and remove the washers – pos. 42 (»C«).
4. Remove the upper part of the hydrant.
5. Remove the clutch – pos. 39 on the break part.
6. Unscrew the nuts – pos. 40 (»D«) on the flange – pos. 36 (»L«) of the break part.
7. Pull out the whole spindle – pos. 5 with break part – pos. 37 and piston - pos. 4 (»G«).
8. Remove the piston – pos. 4 by removing the screws – pos. 9 (»F«).
9. Replace the piston – pos. 4 (»G«) with a new one and fix it with screws – pos. 9 (»F«). The glue against unscrewing should be used for this process (put the glue on the screws – pos. 9 (»F«) before screwing them).
10. Replace the »O« gasket – pos. 13 (»H«) on the break part – pos. 37 if needed.
11. Grease the external diameter of the rubberized piston.
12. Remove the water from the hydrant valve with use of vacuum pump or scoop. This enables the assembly.
13. Insert the whole spindle – pos. 5 with break part – pos. 37 and piston - pos. 4 (»G«) into the pipe - pos. 3. When the spindle with piston stops, it should be pushed to the end in its position.
14. Check both »O« gaskets – pos. 13 (»I« and »H«) on the break part and replace them in case of damage.
15. Check the safety screws – pos. 41 (»J«) and replace them if needed. This should be done in such way: remove the screws by pushing them upwards and then replace them with new ones.
16. Push the bottom flange – pos. 36 (»L«) upwards and fix it with washers – pos. 42 (»E«) and nuts - pos. 40 (»D«) with torque 35-40 Nm.
17. Set the clutch – pos. 39 onto the break part.
18. Put the upper part of the hydrant on the break part. Pay attention that the inner spindle – pos. 38 sets properly onto the clutch – pos. 39. The upper outer pipe – pos. 46 should fit completely onto the break part – pos. 37.
19. Set the washers – pos. 42 (»C«) and screw the nuts – pos. 43 (»B«), with torque 25-30 Nm.
20. Check if the hydrant is in closed position.
21. Open the inflow of water to the hydrant and check the functionality of the hydrant by opening and closing.

## 2.2 PROCEDURE OF FLUSHING THE FOREIGN PARTS FOR ABOVE-GROUND HYDRANT TYPE 2018L C (BREAKABLE)

(SEE APPENDIX – LIST OF COMPONENTS OF THE HYDRANT TYPE 2018L C)

1. Close the inflow of the water into the hydrant.
2. Open the hydrant to open position and check that it is not under pressure – pressure release of the hydrant.
3. Unscrew the nuts – pos. 43 (»B«) and remove the washers – pos. 42 (»C«).
4. Remove the upper part of the hydrant.
5. Remove the clutch – pos. 39 on the break part.
6. Unscrew the nuts – pos. 40 (»D«) on the flange – pos. 36 (»K«) of the break part.
7. Pull out the whole spindle – pos. 5 with break part – pos. 37 and piston – pos. 4 (»G«).
8. Remove the piston – pos. 4 by removing the screws – pos. 9 (»F«).
9. Check both »O« gaskets – pos. 13 (»I« and »H«) on the break part and replace them in case of damage.
10. Insert the whole spindle – pos. 5 with break part – pos. 37 (without piston – pos. 4 (»G«)) into the pipe – pos. 3.
11. Check the safety screws – pos. 41 (»J«) and replace them if needed. This should be done in such way: remove the screws by pushing them upwards and then replace them with new ones.
12. Push the bottom flange – pos. 36 (»L«) upwards and fix it with washers – pos. 42 (»E«) and nuts - pos. 40 (»D«).
13. It is not necessary to set the clutch – pos. 39 onto the break part.
14. Put the upper part of the hydrant onto the break part. Pay attention that the inner spindle – pos. 38 sets properly onto the clutch – pos. 39. The upper outer pipe – pos. 46 should fit completely onto the break part – pos. 37.
15. Set the washers – pos. 42 (»C«) and screw the nuts – pos. 43 (»B«), with max. torque 30 Nm.
16. Fix the fire hose on one of the couplings. The hose should be installed in such way that it will not swing freely around and damage the present persons.
17. Open the valve in front of the hydrant and flush the hydrant as long as no more foreign parts are visible.
18. Close the valve in front of the hydrant and remove the fire hose.
19. Unscrew the nuts – pos. 43 (»B«) and remove the washers – pos. 42 (»C«).
20. Remove the upper part of the hydrant.
21. Remove the clutch – pos. 39 (if we set it in step 13) on break part – pos. 37.
22. Unscrew the nuts – pos. 40 (»D«) and remove the washers – pos. 42 (»E«).
23. Pull out the whole spindle – pos. 5 with break part – pos. 37.
24. Place the piston – pos. 4 (»G«) and fix it with screws – pos. 9 (»F«). The glue against unscrewing should be used for this process (put the glue on the screws – pos. 9 (»F«) before screwing them).
25. Replace the »O« gasket – pos. 13 (»H«) on the break part – pos. 37 if needed.
26. Grease the external diameter of the rubberized piston.
27. Remove the water from the hydrant valve with use of vacuum pump or scoop. This enables the assembly.
28. Insert the whole spindle – pos. 5 with break part – pos. 37 and piston – pos. 4 (»G«) into the pipe - pos. 3. When the spindle with piston stops, it should be pushed to the end in its position.
29. Check both »O« gaskets – pos. 13 (»I« and »H«) on the break part and replace them in case of damage.
30. Check the safety screws – pos. 41 (»J«) and replace them if needed. This should be done in such way: remove the screws by pushing them upwards and then replace them with new ones.
31. Push the bottom flange – pos. 36 (»L«) upwards and fix it with washers – pos. 42 (»E«) and nuts - pos. 40 (»D«).
32. Set the clutch – pos. 39 onto the break part.
33. Put the upper part of the hydrant onto the break part. Pay attention that the inner spindle – pos. 38 sets properly onto the clutch – pos. 39. The upper outer pipe – pos. 46 should fit completely onto the break part – pos. 37.
34. Set the washers – pos. 42 (»C«) and screw the nuts – pos. 43 (»B«), with max. torque 30 Nm.
35. Check if the hydrant is in closed position.
36. Open the inflow of water to the hydrant and check the functionality of the hydrant by opening and closing.

**In case of any complications during the service please contact the service of IMP Armature d.o.o. or replace the whole hydrant.**

## 2.3 APPENDIX – LIST OF COMPONENTS OF THE HYDRANT TYPE 2018L C (BREAKABLE)

| Pos. | Pcs | Title |
|---|---|---|
| 1 | 1 | VALVE |
| 2 | 1 | HEAD |
| 3 | 1 | PIPE |
| 4 | 1 | PISTON |
| 5 | 1 | SPINDLE |
| 6 | 1 | SPINDLE NUT |
| 7 | 1 | LIMITER |
| 8 | 1 | LIMITER |
| 9 | 2 | SCREW M10X25 |
| 10 | 1 | FLANGE "B" |
| 11 | 12 | SCREW M10X20 |
| 12 | 12 | WASHER BN1217 M10 |
| 13 | 4 | GASKET |
| 14 | 1 | FLANGE "R" |
| 15 | 1 | CAP "B" |
| 16 | 1 | COUPLING "B" |
| 17 | 1 | "O" RING Φ80xΦ3,5 |
| 18 | 1 | Al NUT "B" |
| 19 | 1 | OPERATING CAP |
| 20 | 1 | SCREW M8X16 |
| 21 | 1 | Al CAP |
| 22 | 2 | LIMITER |
| 23 | 1 | "O" RING Φ26XΦ3 |
| 24 | 1 | AIR VALVE |
| 25 | 1 | "O" RING Φ9XΦ2,5 |
| 26 | 1 | POM BEARING |
| 27 | 2 | "O" RING Φ18XΦ2,5 |
| 28 | 1 | PLUG |
| 29 | 2 | SCREW M10X35 |
| 30 | 1 | SEALING RING |
| 31 | 1 | "O" RING Φ87XΦ4 |
| 32 | 2 | CAP "C" |
| 33 | 2 | COUPLING "C" |
| 34 | 2 | "O" RING Φ61,9XΦ3,5 |
| 35 | 2 | Al NUT "C" |
| 36 | 2 | FLANGE "L" |
| 37 | 1 | BREAK PART |
| 38 | 1 | SPINDLE "Z" |
| 39 | 1 | CLUTCH |
| 40 | 6 | NUT M10 |
| 41 | 6 | SAFETY SCREW |
| 42 | 12 | WASHER |
| 43 | 6 | NUT M10 |
| 44 | 1 | WASHER |
| 45 | 2 | SCREW M10X16 |
| 46 | 1 | PIPE |