Operating and Maintenance Instructions for
R1 Standpost Hydrants for Water, break-away type
Order No. 516, 518

1. Intended use / product description

Medium:
Potable water

Max. operating pressure:
Potable water: 16 bar

Material:
Hydrant head: saltwater-proof aluminium alloy, coating as specified by GSK (Quality Association for Heavy-Duty Corrosion Protection) (at least 250µm) RAL3003, and UV-resistant paint.
Pillar: thick-walled tube of stainless steel
Operating rod/spindle: stainless steel
Ring cylinder: stainless steel with cured-on EPDM

Standards applied:
Hydrant DIN EN 14384 and DIN EN 1074
Drainage acc. to DIN EN 1074-6
Fixed couplings: 2 x B acc. to DIN 14318
Pillar: alternatively 1 x A or 2 x fixed coupling A acc. to DIN 14319
Outlet: flange acc. to DIN EN 1092-2

Description:
The shut-off function of the R1 hydrant is performed by a ring cylinder of stainless steel with cured-on sealing. This ensures extremely low operating forces on opening and closing the hydrant even in case of high line pressure. The R1 hydrant head features a defined stop for opening and closing.

When the R1 hydrant is opened, the ring cylinder moves downward, thus closing the drainage bores first and opening the opening area afterwards. Water rises and flows upward through the ring cylinder.

During closing, the ring cylinder is moved to the upper stop position until the opening area is closed completely. After 15 revolutions, the residual water which is still inside the hydrant after closing can run off into the soil via the drain holes and through the drainage element.

The stone trap integrated in the housing of the R1 hydrant prevents damage caused by stones and other foreign matter at the ring cylinder, thus permanently ensuring a reliable shut-off function.

By loosening the screws, the standpipe and hydrant head can be turned by 360° even after installation.

The R1 hydrant is provided with a predetermined breaking point as a standard feature. The predetermined breaking point ensures that the closed hydrant remains tightly closed after being knocked over. In this case, four spare screws in the hydrant head allow a quick and easy repair.
The R1 hydrant is corrosion-resistant to disinfectants permitted in the field of potable water.

During installation and maintenance operations, the applicable standards and guidelines, accident prevention regulations and the regulations of professional associations are to be observed and complied with.
Installation and maintenance operations should only be carried out by qualified personnel.

CE mark

CE 1085	KV values		
	Type	Outlet	Flow [m³/h]
Hawle Armaturen GmbH, 83395 Freilassing 17 1085-CPR-0300	R1	1xB 2xB 1xA 2xA	133 231 269 -
EN 14384 Above ground hydrant , DN 100, PN 16 Closing direction clockwise Number of revolutions 3 /12 Torque (MOT, mST) range 1 (80, 250) Inlet flange DN 100	R1 drop-down cover	1xB 2xB 1xA 2xA	106 188 269 -

CE 1085	KV Values		
	Type	Outlet	Flow [m³/h]
Hawle Armaturen GmbH, 83395 Freilassing 14 1085-CPR-0300	R1	1xB 2xB 1xA 2xA	139 250 290 392
EN 14384 Above ground hydrant , DN 150, PN 16 Closing direction clockwise Number of revolutions 3 /12 Torque (MOT, mST) range 1 (80, 250) Inlet flange DN 150	R1 drop-down coverl	1xB 2xB 1xA 2xA	121 188 290 392

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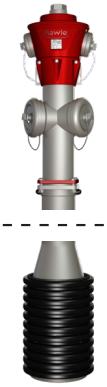
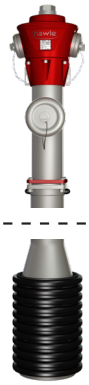
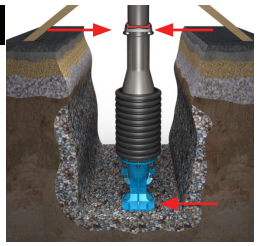
			
R1 breakaway hydrant Outlets: 2 x B + 2 x A	R1 breakaway hydrant with drop-down cover Outlets: 2 x B + 2 x A	R1 breakaway hydrant Outlets: 2 x B + 1 x A	R1 breakaway hydrant with drop-down cover Outlets: 2 x B + 1 x A

2. Installation
2.1 Mounting

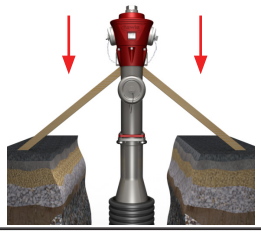
1



Establish a foundation for the hydrant base in the trench.

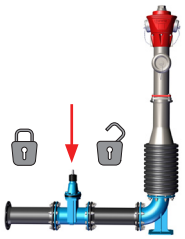
Put the hydrant on the foundation and align it vertically. Acc. to DVGW W386, the predetermined breaking point should be at a height of approx. 120 mm (+/-80 mm) above terrain level.

2



Support the hydrant base sufficiently against the soil.
Important: If the soil is too soft, the breakaway hydrant may be displaced before the predetermined breaking point yields!

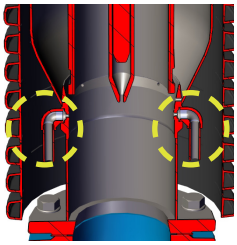
3



For maintenance work we recommend installing a gate valve into the branch line to the hydrant.

Connect the main line.

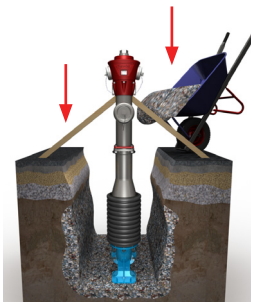
4



The hydrant is surrounded by a seeping water drain packing.

Loose gravel suitable for drainage must be installed around the drainage element. In case of extremely cohesive soils (loam) we recommend additionally wrapping the drainage element in fleece. Drainage is effected via four drain pipes:

5

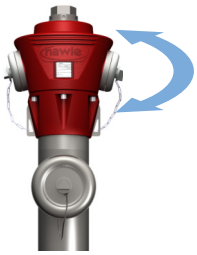


Before starting the filling work, please double-check the correct fit of the drainage element.

Make sure that the material suitable for drainage (grain size at least 5 mm) is filled in evenly. Then compact the soil.

Below the predetermined breaking point, support the hydrant sufficiently against the soil.

6

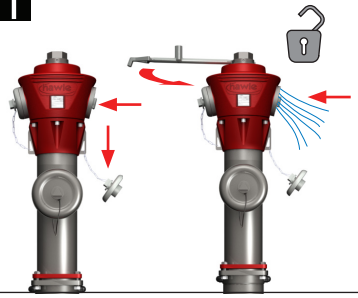


If required, turn the hydrant head to the desired position.
Important: When working at the hydrant head in the supply line, make sure that the hydrant shut-off device or gate valve is closed! For turning the hydrant head, loosen the hexagon socket screws below the head. Turn the head to the desired position.
Retighten the hexagon socket screws (tightening torque: max. 55 Nm)

On commissioning the hydrant, please check the drain-off function as well.
Flush the hydrant and check free movement.

2.2 Annual inspection

1

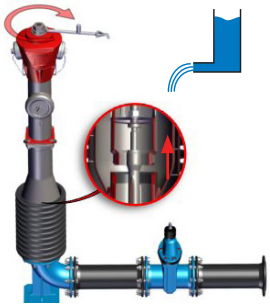


Remove the cap for coupling B and/or A.

Subsequently open and flush the hydrant.

Open the hydrant completely by turning the operating cap counterclockwise. The withdrawal quantity may be regulated only through connected shut-off valves.

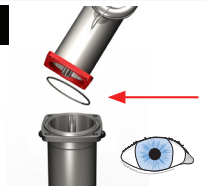
2



Close the hydrant after operation. Check the drain-off function. If the hydrant is not drained after a waiting period of four to five minutes, the clogged drain-off bore has to be flushed free, for example by means of a hand pump. Mount the cap for coupling A and/or B.

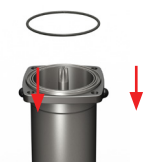
2.3 Breakage of the predetermined breaking point (in case of Order No. 517 and 519)

1



Check visually for damage or dirt on or in the hydrant. Dispose of cracked or broken break bolts.

2

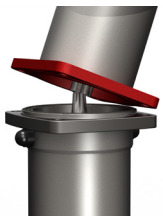


Reinsert the centring seal if required.

3

Take out the spare screws from the screw fixture located below the cap of the hydrant head.
Procure spare screws
Order No. 519 000 0004 from Hawle and store them in the hydrant head.

4



Put on the pillar and take care that the spindle coupling box glides over the spindle square.

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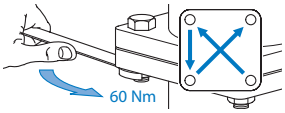

Tighten the break bolts crosswise.

Tightening torque: 60 Nm

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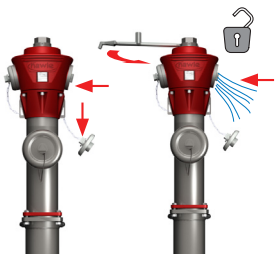
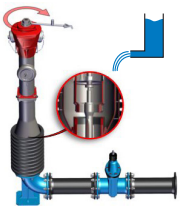


Remove the cap for coupling B and/or A.

Subsequently open and flush the hydrant. The withdrawal quantity may be regulated only through connected shut-off valves.

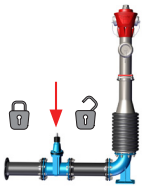
7



Close the hydrant and check the drain-off function. Mount the cap for coupling B and/or A.

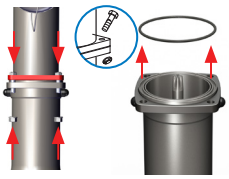
2.4 Exchanging the shut-off ring cylinder

1



Close the supply line to the hydrant. Close the hydrant and turn it back half a turn.

2



Screw the hydrant apart at the predetermined breaking point.
Remove the centring seal.

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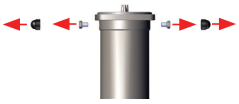


Take off the screw caps, unscrew the holding screws, and remove them.

4

After removing the holding screws, unscrew the internal equipment by approx. 5 turns of the spindle in such a way that the installation holes of the internal equipment are flush with the holes of the external housing.

5

Then the unscrewed internal equipment is screwed again with the external housing through the installation holes (use the holding screws).

6

The shut-off ring cylinder is still in the valve seat. Turn the shut-off body out of the valve seat through approx. 5 clockwise turns.

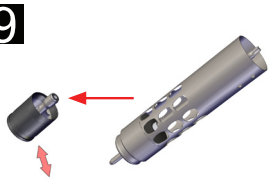
7

Then loosen the holding screws and pull the internal equipment out of the housing.

8

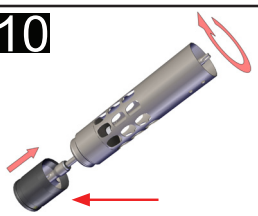
Loosen the internal equipment from the shut-off ring cylinder by turning it counterclockwise and take it off.

9



Exchange the shut-off ring cylinder.

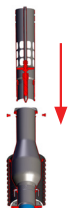
10



Screw the shut-off ring cylinder to the internal equipment by turning it clockwise.

Important:
Apply some fitting grease onto the rubber surface of the shut-off ring cylinder!

11



Subsequently, re-insert the internal equipment with the screwed-on shut-off ring cylinder into the housing. The internal equipment has to be screwed with the external housing through the installation holes.

12

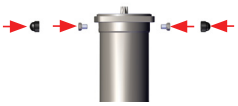
Screw the shut-off ring cylinder into the valve seat by approx. 5 counter-clockwise turns.

13

Then loosen and remove the holding screws.

Screw in the internal equipment by approx. 5 turns so that the fixing holes of the internal equipment are flush with the holes of the external housing.

14

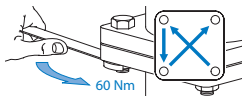


Re-insert the holding screws into the bores provided in the housing and screw them with the internal equipment. Important: Check the gaskets for damage. To protect the screws put the screw caps back onto the screws.

15

Put on the pillar and take care that the spindle coupling box glides over the spindle square.

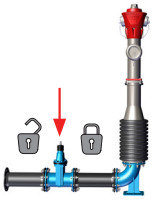
16



Tighten the break bolts crosswise.

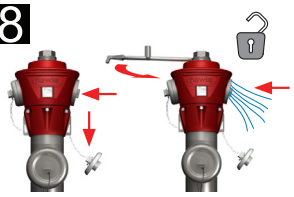
Tightening torque: 60 Nm

17



Close the hydrant. Open the supply line to the hydrant.

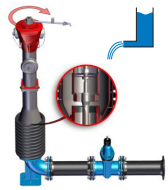
18



Remove the cap for coupling B and/or A.

Subsequently open and flush the hydrant.

19



Check the drain-off function. Mount the cap for coupling B and/or A.

3. Commissioning and pressure-testing

After connecting the hydrant to the water network, a leakage test shall be performed in the open trench as specified in the DVGW regulations. During this process, the hydrant must be fixed in the trench.

After the leakage test, a function check has to be performed.

4. Servicing and maintenance

Hawle above ground hydrants require little maintenance.
Acc. to DVGW sheet W331 (selection, installation, and operation of hydrants), visual and functional checks and the resulting maintenance work at hydrants shall be performed at regular intervals.
For information on inspection and maintenance work please refer also to DVGW sheets W392-2 and W400-3 B1.

If you have any other questions or if you need more information please contact:

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