SERIES 30 HYDRANT
INSTALLATION, OPERATION & MAINTENANCE MANUAL

Instruction for use

Thank you for selecting an AVK product. With correct use, the product is guaranteed to deliver a long and reliable service. This manual has been prepared to assist you with the installation, operation and maintenance of the hydrant to the maximum efficiency. For ease of reference, it has been divided into sections covering all aspects of use, in the users best interests please read it and ensure that it is fully understood.

Health and Safety

It is always recommended that wherever work is being conducted on a valve, the valve is fully depressurised prior to carrying it out, and for convenience, draining of the line may be beneficial.

It is essential that the user of the valve is aware of the weight of the components and/or assemblies that must be handled and manipulated during installation and maintenance. It is the users responsibility to ensure that safe working practices are followed at all times.

Whenever AVK products are installed, operated, or maintained, it is essential that the staff that undertake these operations be adequately trained. The hazards of pressurised liquids and gases can be severe, and it is the responsibility of the users to ensure that trained, competent staff undertake these duties. This manual has been designed to assist, but it can never fully replace quality training in the workplace. AVK technical staff will always be available to answer any questions relating to specific problems that may not be covered by this manual.

AVK products are designed and manufactured to be fit for purpose, and to a high and reliable standard. This provides a safe product with minimum risk to health when used correctly for the purpose for which it was designed. However, this assumes that the equipment is used and maintained in accordance with the manual, and the user is advised to study this manual, and to make it available to all staff that may need to refer to it.

AVK cannot be held responsible for any incidents arising from incorrect installation, operation or maintenance. The responsibility for this must rest wholly with the user.

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1. Introduction

AVK series 30 hydrants are designed to meet local specifications and include:

Standards Mark Compliance - According to AS3952-2020

QLD, NSW, VIC, TAS

Series 30/00 Spring Hydrant

Series 30/10 Spring Hydrant (Swab Type)

Both series available with blue yoke for potable water or purple yoke for recycled water

The valves are 100% factory tested hydrostatically.

IT IS IMPORTANT TO STATE OPERATING TEMPERATURE, PRESSURE, MEDIUM AND OPERATING CONDITIONS WITH ENQUIRIES/ORDERS, SO THE MOST SUITABLE VALVE WILL BE SUPPLIED FOR YOUR SPECIFIC PURPOSE.

Series 30/00

Refer to individual datasheets for specific information

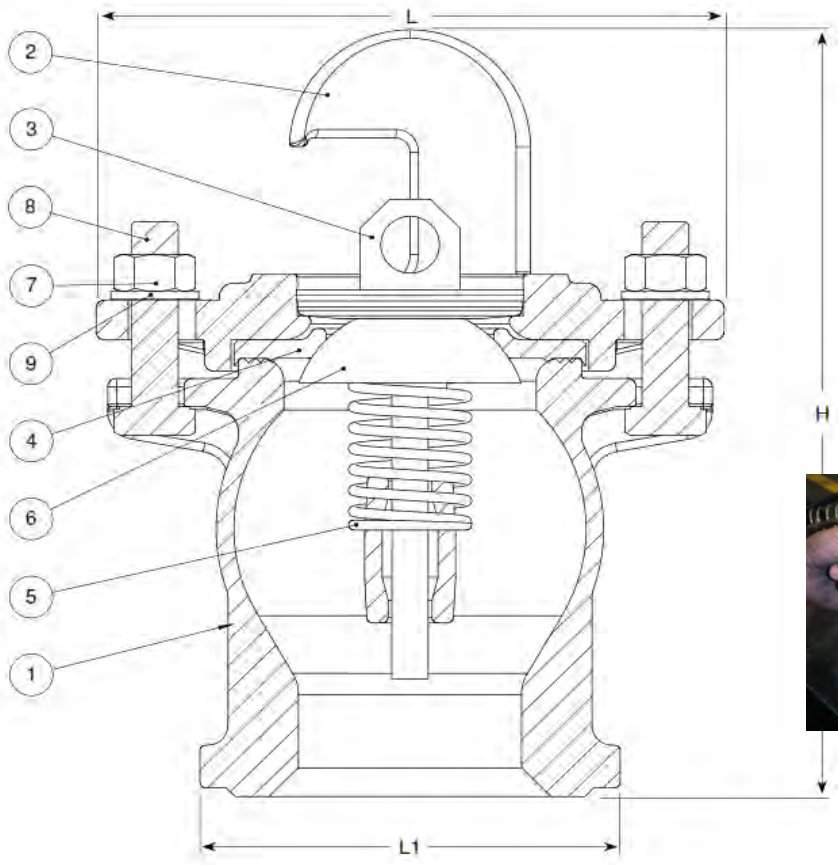
Component list 30/00 series

1. Body	Ductile Iron to AS 1831 Grade 450-10	6. Dome	Brass to AS 1568
2. Yoke	Ductile Iron to AS 1831 Grade 450-10	7. Nut	Stainless Steel ASTM 276 Gr. 316
3. Protective plug	Polyethylene - PE - HD	8. Bolt	Stainless Steel ASTM 276 Gr. 316
4. Seat	EPDM to AS 1646	9. Washer	Stainless Steel ASTM 276 Gr. 316
5. Spring	Stainless Steel ASTM 276 Gr. 304		

Components can be substituted with equivalent or higher class materials.

Spare parts component list 30/00 series

Component	Code
2. Yoke	300801512
3. Protective plug	3008017
4. Seat	3008013
5. Spring	3008016
6. Dome	300801400



series 30/10 swab has a removable guide

Reference nos. and dimensions

AVK ref. nos.	Inlet Flange DN	H	L	L1	Weight kg
Blue Yoke					
30-080-0015112	80	268	214	154	9.2
30-080-0025112	100	268	214	166	10.3
Purple Yoke					
30-080-0015145	80	268	214	154	9.2
30-080-0025145	100	268	214	166	10.3

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2. Installation

- When installing the valve, ensure the flange faces are clean.
- To ensure adequate sealing it is important to select the correct type of gasket for the medium concerned, a gasket with the correct flange size must be used.
- Place valve onto the pipe flange, and insert the bolts.
- Tighten bolts loosely.
- Tighten bolts in a diagonal sequence to ensure flanges are pulled parallel.
- Finally tighten bolts to correct torque levels as recommended in WSA 109.

2.1. Bolts

2.1.1 Bolt size

The following table shows the bolt size you should use for each valve size

DN mm	Bolts	Quantity
80	M 16	4
100	M 16	4

3. Operation

This series of Spring fire hydrants are suitable for use with clean water and neutral liquids, to a maximum temperature of 70°C. Minimum liquid temperature must be above freezing. Insulation is essential for external temperatures on 0°C and below to a limit of -10°C. They are rated for a maximum working pressure of 16 bar.

4. Method of Operation

The AVK 30 series Hydrant is spring loaded and opened and closed by an approved standpipe arrangement. The standpipe locks into position under the yoke and the tap at the top controls a rod that compresses the dome.

SWABBING
it is not possible to use the 30/00 series spring type for this purpose.
Only the 30/10 Swab type is suitable for the introduction and retrieval of swabs.

Typical standpipe

Series 30/10 Swab Type

4. Maintenance

SAFETY PRECAUTIONS:

When changing the Seat seal, Maintenance Procedures **MUST NOT** be carried out whilst the hydrant is installed in a live water main under pressure.

4.1. PROCEDURE for Removal of the Seat, Dome and Spring Assembly

SAFETY PRECAUTION:

This procedure **MUST NOT** be carried out with the hydrant under pressure.

Check to ensure there is no pressure in the main prior to commencing work.

Ensure the main WILL NOT be recharged before all work on the hydrant is completed

1) First insert a stand pipe to ensure the pipeline is not under pressure.
2) Ensure area around the hydrant is clear of soil and debris so contaminants don't enter the pipeline when the top yoke is removed.

Caution at this point is required **as the spring behind the dome will have tension upwards forcing the yoke up once nuts are removed**

3) Remove nut (7) from bolt (8), removing both equally as the spring dome (6) will have tension upwards on the seat (4) and yoke (2).
4) Keep pressure down on the yoke (2) during the final removal of the bolts as the dome is forcing upwards
5) Remove the yoke (2) carefully, the seat (4) the dome (6) and spring (5) will be accessible to remove from the body (1).

SWAB 30/10 VERSION

6) The insert that supports the spring and dome can be removed at this point

4.2. PROCEDURE for Replacement of Seat□□ ome and Sprin□ □ ssem□l□

1a) **Swab version 30/10 has a removable insert to support the spring and dome. Ensure this is inserted first and centrally located in recess. (See diagram (a) below)**

1) Insert the dome pin inside the spring with the dome head going over the spring.

2) Insert the spring and dome into the body of the hydrant with the spring going over the spindle guide and the stem through the guide.

3) Depress the dome manually to check for freedom of movement

4) Position the resilient seat in the yoke groove, with the dome seat downwards.

5) Carefully place the resilient seat and yoke over the dome, ensuring alignment of the bolt holes, checking the seat is sitting central.

6) If the hydrant is in the work shop and you have provisions of a press, compress the the dome down without damaging the spring, enough to fit the nuts.

Otherwise insert the bolts and place the washer and nut on with two threads each side, pushing down on the dome.

□ ote The nut shall be installed upside down.
This is an Australian Standard requirement

7) Tighten the nuts ensuring the yoke is compressing evenly

8) Tighten the bolts evenly to 60nm using a torque wrench maintaining an even space between the matting flanges on both sides

9) Check to make sure that the resilient seat is sitting centrally. If the seat is not sitting centrally depress plunger again loosen off bolts, reposition seat and re-tighten.

10) When satisfied the seat and dome are correctly installed, depress the dome twice and check for freedom of movement and alignment.

11) Check final bolt torques

12) The valve is ready to be pressure tested

Diagram (a) 30/10 series swab insert

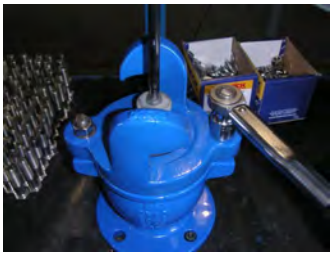
1)

2)

4)

6)

8)



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