



# AQUA B70-526

## Combination “Surge Arrestor” and Air Release Valve

### GENERAL SAFETY INFORMATION

1. The unit should only be installed/operated by technically competent personnel who are familiar with safety practices and the hazards involved.
2. Store in a dry place to avoid damp conditions deteriorating the equipment. Refer to Cla-Val model B70-526 Instruction Manual.
3. Protect against dirt, damage and frost. It is absolutely essential that no foreign matter such as pipe thread swarf, welding slag, grit or stones are allowed to enter the equipment. Debris of this type can cause severe damage. Frost/freezing will damage the equipment.
4. The equipment is only suitable for installation in a clean, dust free indoor environment, with adequate protection from heat and frost. Ambient air temperature should be between 2 and 80 degrees centigrade, non-condensating. Operation outside of these conditions could seriously damage the equipment.
5. If the equipment were to be stored or taken out of service for a period of time (e.g. 1 week or more), then we would recommend draining the equipment of all water/liquid (with due regard to any local regulations) to prevent frost damage to components.
6. Isolate the equipment before pressure testing system. Excess pressure could cause irreparable damage.
7. When chlorination of the system is carried out, ensure that any residual chlorine is removed by thorough flushing as detailed in the HSE approved code of practice L8, to avoid damaging the equipment. The normal level of chlorination is up to 2 parts per million (ppm), but shock dosing for sterilization purposes, at 25-50 ppm for 24-48 hours is acceptable as long as all chlorine is removed once the process is complete. Chlorination beyond these limits could seriously damage components and WILL NOT be covered by the warranty.
8. The installer/user is responsible for the installation of the correct earthing and protection according to valid national and local standards. All operations must be carried out by a suitably qualified person.
9. The isolating valve must be left open to ensure normal operation.



## INSTALLATION INSTRUCTIONS

This equipment is an Automatic, combined Air Release, Anti-Vacuum & Surge Protection valve for use on pressure boosted (potable) cold water systems to help prevent pressure shocks/water hammer damage to pipework systems and components. These instructions are intended for the installer of this equipment. Please follow them carefully. The unit should only be installed by a competent person who is technically competent and familiar with safety practices and the hazards involved. Failure to install the equipment as recommended below could invalidate the warranty provided by Cla-Val UK to the buyer.

### LIMITS OF OPERATION

1. Typical operating temperature range is 0°C to 80°C
2. Typical maximum operating pressure is 10 Bar (g). The valve will vent air up to this pressure (see label on equipment for more product specific data)
3. Typical maximum allowable pressure is 10 Bar (g).
4. Maximum air inlet rate is 49 Normal Litres per Second at -0.1 bar(g) during drain down of system pipework.
5. Air discharge rate of 0.50 Normal l/s at 3.0 Bar(g) (during refilling of system pipework)

### LOCATION

If the equipment is to be installed in an unheated area, ensure that there is adequate frost protection. This equipment contains a fluid which may under certain circumstances leak/drip/spray fluid (e.g. servicing, repair or malfunction). Ensure any fluid discharge will not cause damage to the surroundings by taking appropriate action. E.g. install in a place that will not be damaged by leakage or install in a bunded area with adequate drainage.

Ensure the location is vented to atmosphere as the valve is required to draw in and release large quantities of air. Ensure that location for equipment provides adequate clear space to accommodate it with reasonable access to all parts; Cla-Val UK recommends a minimum distance of 300mm all around. There must be sufficient room to:-

- a) Isolate the valve;
- b) Remove the top of the valve to enable servicing;
- c) Clean the strainer
- d) remove the entire valve assembly.

Should any of these location conditions not be satisfied, Cla-Val UK reserve the right to charge labour on any warranty work required on the equipment.

### FIXING TO SYSTEM RISER PIPEWORK

1. Exhaust connection with suitable air gap and removable pipework to allow for servicing.
2. Refer to Fig. 1.3 as an example of multi-riser use. Install the AQUA B70-526 at the top of the riser (see Fig 1.1) noting location conditions above.
3. Keep inlet pipe as short as possible to avoid the risk of stagnation.
4. Where more than one riser is used, install an AQUA B70-526 at the top of each riser (see Fig 1.3)
5. Connection to the riser is via a 1" BSP female connection with Strainer, which is provided for servicing.
6. A 1" BSP male outlet allows any released water to be discharged externally to the building or to drain with a suitable air gap via a tundish. Free flow of air must be allowed **IN and OUT** of this exhaust for the valve to operate correctly.
7. AQUA B70-526 must be installed vertically as shown in Fig 1.1
8. Ensure pipework connected to exhaust is removable to enable servicing of the valve.
9. Isolating valve must be left OPEN to ensure proper operation.

## **USER INSTRUCTIONS**

### **CUSTOMER ASSURANCE**

CLA-VAL UK ASSURE YOU THAT IF ANY PART OF THIS EQUIPMENT BECOMES DEFECTIVE DUE TO FAULTY MANUFACTURE OR MATERIALS WITHIN 60 MONTHS FROM THE DATE OF INVOICE OR 60 MONTHS FROM DATE OF COMMISSIONING THE PART WILL BE REPAIRED OR REPLACED. THIS IS A RETURN TO BASE WARRANTY AND AS SUCH DOES NOT INCLUDE SITE LABOUR COST.

For full details please see the Cla-Val UK "CONDITIONS OF SALE"

### **COMMISSIONING**

Whilst this equipment has been tested in the factory to the required settings it is impossible to simulate the actual on-site conditions, especially if they are unusual. Also, the equipment may have been disturbed since leaving the factory. Prior to requesting an engineer to attend the site for commissioning, the client must ensure that:

- a) The equipment has been correctly installed.
- b) Any necessary chlorination or other treatment has been completed.
- c) An adequate water supply is available with a minimum pressure of 0.3 bar (g) at the valve inlet
- d) The pipework etc in the building is capable of accepting the generated pressures.

Failure to comply with the installation, commissioning and maintenance procedures will invalidate the warranty.

## **OPERATING INSTRUCTIONS**

This equipment is an Automatic, combined Air Release, Anti-Vacuum & Surge Protection valve for use on pressure boosted (potable) cold water systems to help prevent pressure shocks/water hammer damage to pipework systems and components.

**Please Note:** As the specific conditions prevailing at the time of riser drain down cannot be defined due to variations of use within any given building, it is impossible to guarantee that the AQUA B70-526 valve will eliminate all instances of failure.

### **NORMAL OPERATION**

The Cla-Val AQUA B70-526 valve is designed to help assist with the draining down and refilling of pressure boosted (potable) water supply pipework by helping to prevent damaging Water hammer from occurring. Whether a system pipework is drained down intentionally for maintenance or unintentionally as a result of the pressure booster set stopping, either by power interruption or a low water condition there is the potential of pressure shocks when the pressure booster restarts. The AQUA B70-526 works to help prevent these shock conditions developing, by allowing the system to be properly vented at all times and without wasting water.

During filling, the vent will provide controlled discharge air release from the empty pipework, resulting in an effective deceleration of the water column as it rises to the top of the system. When all air is evacuated the valve will close and seal the system with very little or no loss of water. Should the system require draining ensure that a vacuum break can occur eliminating the possibility of a negative pressure within the draining riser.

# INSTALLATION

- Ensure a rigid fix to connecting pipework
- If exhausting outside building, ensure water can discharge fully from pipe via a suitable slope below the valve outlet

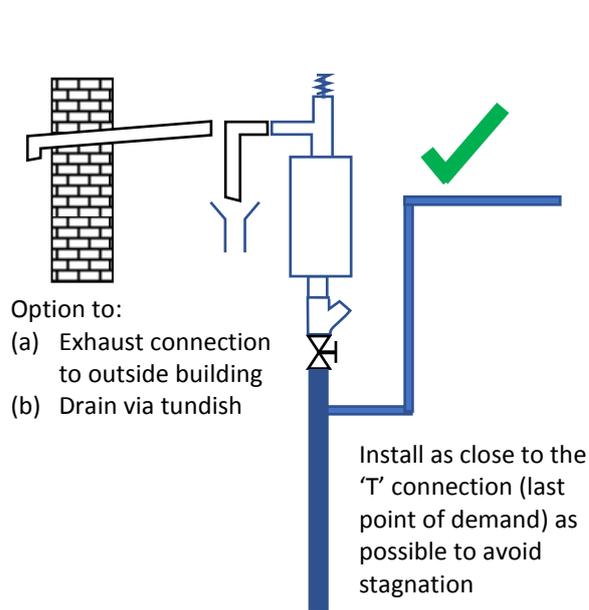


FIG 1.1

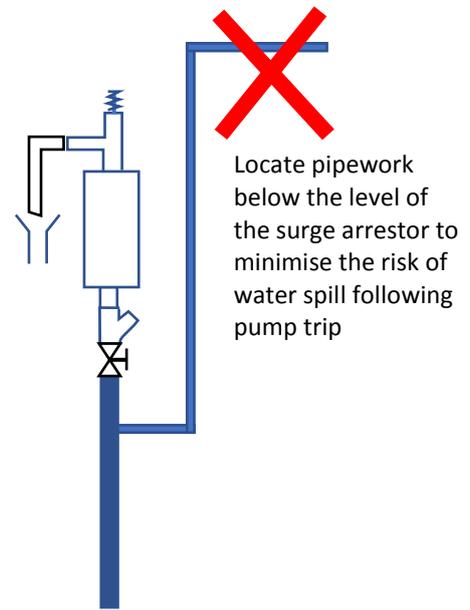


FIG 1.2

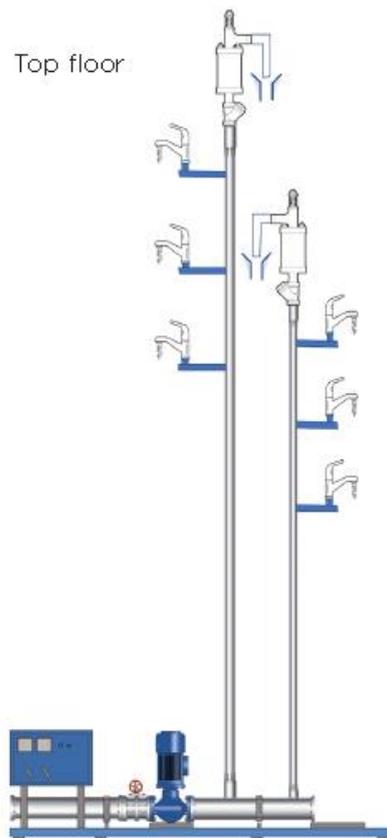


FIG 1.3