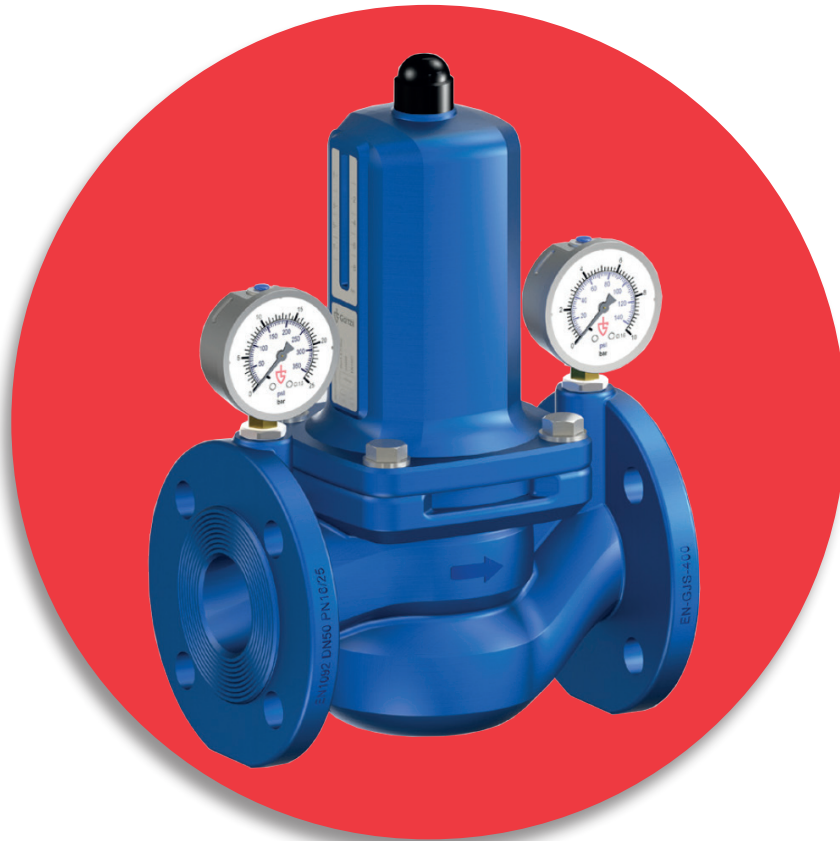




# Installation & Operating Manual



## ART 688 / ART 689 Cast Iron Pressure Reducing Valve

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### 1. Introduction

- Albion Valves (UK) Ltd ART 688 and ART 689 Pressure Reducing Valves automatically reduce a higher inlet pressure to a lower set outlet pressure.
- ART 688 and ART 689 is suitable for drinking water applications.

### 2. Technical Data

| Valve Type | Size Range   | Connection Type                 | Temperature Rating | Pressure Rating (Max)                 |
|------------|--------------|---------------------------------|--------------------|---------------------------------------|
| ART 688 LP | DN50 – DN125 | Flange conforms to BS EN 1092-2 | +5°C – +65°C       | Inlet 8 bar<br>Outlet 0.5-3.0 bar     |
| ART 688 SP | DN50 – DN125 | Flange conforms to BS EN 1092-2 | +5°C – +65°C       | Inlet 16 bar<br>Outlet 1.5 -7.0 bar   |
| ART 688 HP | DN50 – DN125 | Flange conforms to BS EN 1092-2 | +5°C – +65°C       | Inlet 16 bar<br>Outlet 3.0 – 12.0 bar |
| ART 689 SP | DN50 – DN125 | Flange conforms to BS EN 1092-2 | +5°C – +65°C       | Inlet 25 bar<br>Outlet 1.5 -7.0 bar   |
| ART 689 HP | DN50 – DN125 | Flange conforms to BS EN 1092-2 | +5°C – +65°C       | Inlet 25 bar<br>Outlet 3.0 – 12.0 bar |

### 3. Valve Features

- Albion Valves (UK) Ltd ART 688 and ART 689 is designed to reduce a higher inlet pressure, to a lower, constant, safer outlet pressure.
- The flow rate of the pressure reducing valve has also been rated for maximum output.

### 4. Valve Installation

- Albion Valves (UK) Ltd recommend that the installer adheres to the installation requirements as specified by the Water Supply Water Fittings Regulations 1999.
- Consideration should also be given to BS EN 806-2 (Specifications for installations inside

- buildings conveying water for human consumption).
- ART 688 and ART 689 should be sited to ensure ease of access, for both use and maintenance.
- It is the responsibility of the installer to ensure the valve is suitable for service conditions e.g., temperature, pressure, and service media.
- It is the responsibility of the installer to ensure that the valve, and adjoining pipework is suitably supported to avoid any undue stresses being applied to the valve.
- Suitable sealing materials should be used during installation.
- Do not clean any parts of the valve with harsh chemicals that may cause damage.
- ART 688 and ART 689 is factory-set to 3 bar outlet pressure (for SP version).
- ART 688 and ART 689 must be installed in the pipeline without stress. Make sure that the correct seals are fitted, and only suitable tools are used.
- It is advisable to have an uninterrupted length of 5 x nominal pipe diameter after the valve.
- The pipeline must be carefully flushed through before the pressure reducer is installed. This ensures that any impurities being carried along by the medium will not be trapped in the valve as these may have a detrimental affect on the valve.
- The pressure gauges are screwed into the sockets using hempor gasket strip and indicate the inlet and outlet pressure.
- Presetting in the de-pressurised state is possible by means of a setting scale.
- ART 688 and ART 689 can be installed in any given orientation.
- The direction of flow must match the arrow on the housing.
- Albion Valves (UK) Ltd recommend that 'shut-off' valves are installed immediately before and after pressure reducing valves.
- Bolt tightening must be even and diagonal around the valve face to prevent any alignment distortion. Refer to Albion's Bolt Tightening Sequence document for further information.

#### **Attention!**

Before the pressure reducing valve is commissioned, please ensure that the two pressure gauges supplied are correctly installed or alternatively, the connections on the housing are sealed by means of suitable sealing plugs.

## **5. Maintenance**

According to BS EN 806-5, inspection and maintenance must be carried out at least once per year to rectify any malfunctions that can be caused by contamination, corrosion, calcification, and natural wear. This interval may be shorter, depending on the conditions of use.

**Please ensure that the system is not under pressure during maintenance of the pressure reducing valve.**

### Replacing the valve insert

- Turn off the water supply and relieve pressure.
- Remove plastic protective cap; loosen counter-nut (do not unscrew)
- Turn the adjustment knob anticlockwise until the spring is completely relieved. Failure to observe this instruction can cause injury.
- Unscrew spring housing or remove screws.
- Lever out the complete valve insert.
- Replace the valve insert.
- For assembly, proceed in the reverse sequence. Please note, a light lubrication may be required during this process. Please ensure this is WRAS approved should the installation require this.



### Remove The Screen

- Shut off the water supply and relieve the valve of pressure.
- Remove valve insert from the housing (see previous section).
- Remove the bottom O-Ring from the valve insert which will allow the strainer to be removed.
- Clean / replace the screen as required.
- Reassemble in the reverse sequence.
- Make sure that the grooved ring and the O-ring are in the correct position.

## 6. Approvals Classification

- Please contact Albion Valves (UK) Ltd Quality Department for further details of any specific product approvals and accreditations.

## 7. Troubleshooting

ART 688 and ART 689, may from time to time malfunction. The most common causes, and how to rectify are given below: -

| Fault                                    | Possible cause   | Remediation                                |
|--|--|--|
| Outlet pressure increases above setpoint | Internal leakage due to dirt or damage to the valve seat             | Clean or replace the valve insert          |
|  | Pressure increase e.g. due to heating in the downstream installation | No action required on the pressure reducer |



|                  |                                    |   |
|------------------|------------------------------------|---|
| External leakage | Defective diaphragm                | Replace valve insert or use sealing set |
|                  | Spring cap not tightened correctly | Tighten spring cap / screws             |
|                  | Seals defective / dirty            | Replace or clean seal                   |

A full risk assessment should be undertaken prior to any maintenance works taking place.

## 8. Warranty

- For further details of Albion Valves (UK) Ltd warranty period, please refer to Albion Valves (UK) Ltd 'Conditions of Sale' available on our website.



## **About Albion Valves (UK) Ltd**

Albion has been supplying valves and fittings to the building services and industrial markets for the past 40 years.

Albion was created with the sole purpose of providing quality products at an affordable price. With a growing reputation for quality and reliability, Albion is now an established brand providing the industry with a trusted alternative to premium-priced products.

Our commitment to setting the highest standards in all areas of our business means, if you're looking for quality, service, delivery and choice — you'll find it's all at Albion.

### **Quality**

Whatever you need, you can rest assured that if it comes from Albion it has been designed and manufactured to deliver optimum performance and is accredited with the necessary approvals. Our in-house quality department are always on hand too!

### **Service**

We pride ourselves on our customer service – we have even won awards for it! Our cradle to grave approach means you will never be on your own!

### **Delivery**

We know that time is money, and when a priority project depends on a part you can trust Albion to deliver – next day for all orders placed before 4:00PM.

### **Choice**

We may have started out with a single brass ball valve, but our range has grown substantially since and we now consider ourselves to be a 'One Stop Shop' with our comprehensive range. It is becoming more and more apparent to the industry, that it really is all at Albion.