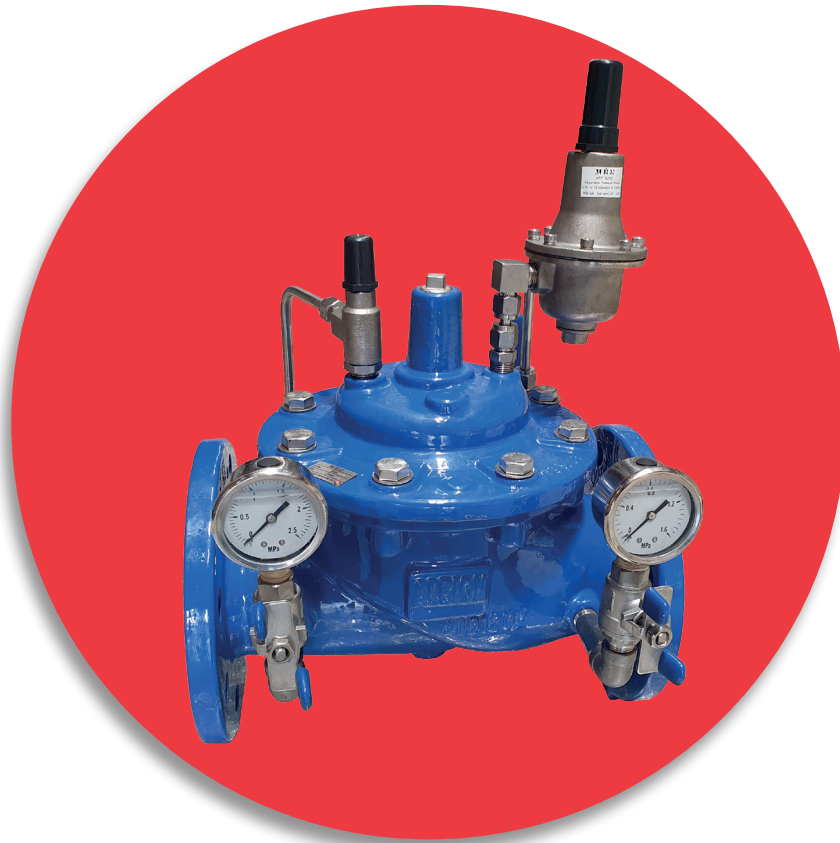




Installation & Operating Manual



ART 6200 Adjustable Pressure Reducing Valve

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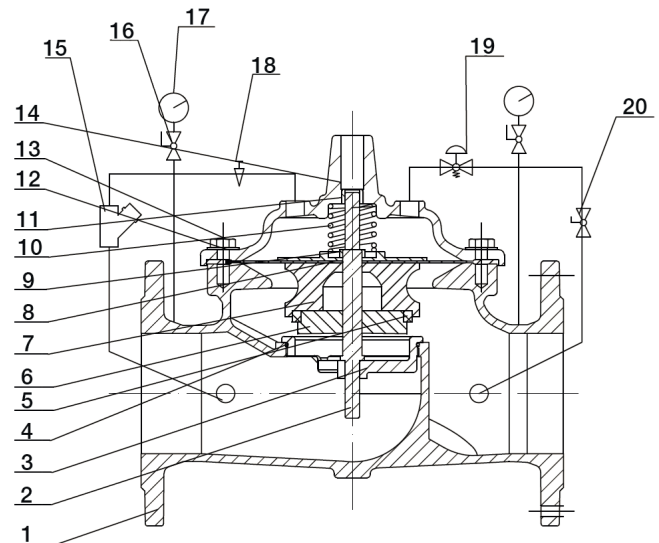
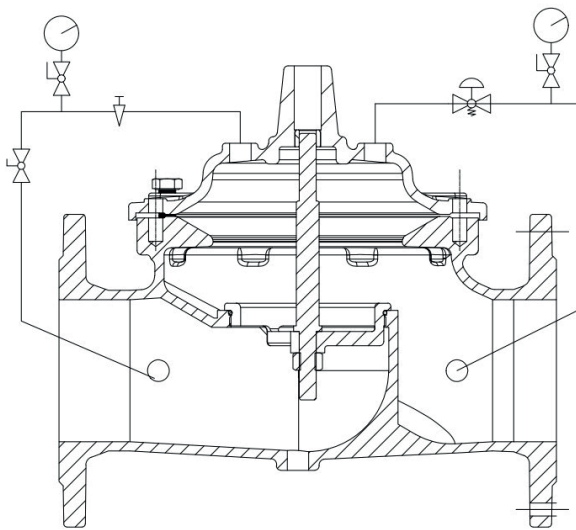
ART 6200 Function

Albion Valves (UK) Ltd ART 6200 Adjustable Pressure Reducing Valve is designed to automatically reduce a higher upstream pressure to a relatively constant downstream pressure. It will perform this regardless of the variance in the upstream pressure.

- Ball Valve
 - o The main function is to shut off the water between the pipe system and pilot control pipe system.
- Pilot Valve
 - o The main function is to adjust the outlet pressure.
- Needle Valve
 - o The main function is to adjust the valve opening speed.

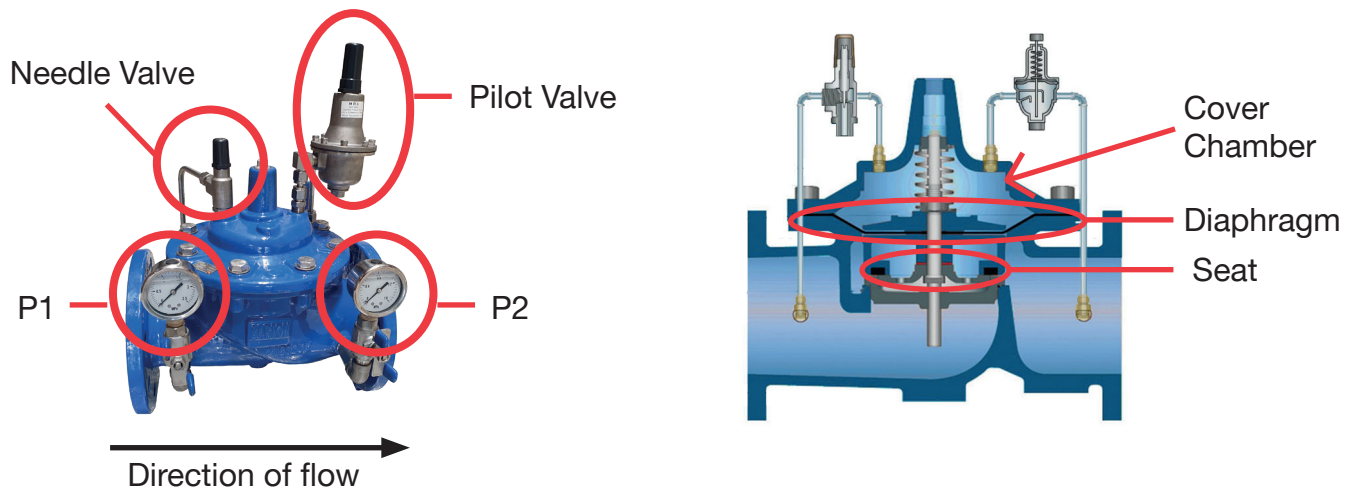
Pressure Reducing Valve Installation Layout

Main Valve Part List



N.	Part Name	Materials
1	Body	Ductile Iron
2	Stem	Stainless Steel 304
3	Seat	Stainless Steel 304
4	O-Ring	NBR
5	Disc Ring	NBR
6	Disc Retainer	Ductile Iron
7	Disc Guide	Ductile Iron
8	Diaphragm	EPDM
9	Diaphragm Washer	Ductile Iron
10	Spring	Stainless Steel 304

N.	Part Name	Materials
11	Cover Bearing	Stainless Steel 304
12	Screw	Stainless Steel 304
13	Washer	Stainless Steel 304
14	Cover	Ductile Iron
15	Strainer	Stainless Steel 304
16	Ball Valve	Stainless Steel 304
17	Gauge	Stainless Steel 304
18	Needle Valve	Stainless Steel 304
19	Pilot Valve	Stainless Steel 304
20	Ball Valve	Stainless Steel 304



Features

Y-Strainer

A Y-Pattern Strainer is installed in the needle valve supply line to protect the needle valve from any foreign particles. The strainer screen may require cleaning periodically.

Pilot Valve

The pilot valve is a PRV in its own right, and is adjusted to achieve the downstream set pressure.

Needle Valve

The needle valve is used as a pressure restriction/bleed of the pressure in the cover chamber. This needs to be set under site conditions as this valve controls the 'speed of response' of the main valve to upstream pressure fluctuations thus reducing such fluctuations in the downstream line. Turning of the adjusting screw clockwise will make the main valve open/close slower.

Isolation Valves

There is an isolation valve used to isolate the pilot valve from the main line pressure. This valve must be open during normal operation. There are also isolation valves fitted to the pressure gauges to enable maintenance/replacement of these items.

Pressure Gauge

Pressure gauges (P1) upstream pressure, and (P2) downstream pressure.



ART 6200 Installation

- Any adjustments to ART 6200 should be made slowly thus allowing the valve to respond and the installation to become stable;
- Installation of Albion ART 6200 should only be undertaken by competent professionals;
- Confirm that the product size and pressure meet the design requirement before installation commences;
- Ensure that the flow direction matches the flow direction arrow on the valve;
- Due to the inherent pressure drop across the valve, the inlet pressure is required to be a minimum of 1.5 bar above the desired outlet pressure.
- Ensure that the pipework system has been flushed to remove any debris prior to installation;
- Sizes up to and including DN 100 can be installed either horizontally or vertically. Sizes DN 125 and above to be installed horizontally only;
- Ensure that sufficient space is available both upstream and downstream of the valve to allow suitable maintenance;
- Isolation valves should be installed both upstream and downstream of the ART 6200;
- Ensure the valve is in an open position prior to commissioning the valve;
- For the main valve to open there should be a minimum inlet pressure of 0.80 bar;
- Caution must be taken to the installation of this valve to ensure any risk as to any 'galvanic' and/or 'electrolytic' corrosion is minimised.
- After the valve is installed and the system is first pressurised, a process of venting any air from the cover chamber needs to take place. This can be achieved by loosening fittings at any of the pipework high-points.

ART 6200 Start Up Procedure

- Close upstream and downstream valves to isolate the valve from line pressure. Release spring tension on Pressure Reducing Control Valve by turning adjustment screw anti-clockwise.
- Open all Isolation Ball Valves, if so equipped. If valve is fitted with adjustable speed controls, turn needle(s) in (clockwise) until seated, and return out (anti-clockwise) 1.1/2 to 2.1/2 turns.
- Slowly open upstream isolation valve to allow controlled filling of the valve. Vent air by loosening control tubing or pipe plug at the highest point possible. If valve is equipped with a Position Indicator, open the air bleed to vent air. Carefully loosen enough cover screws on control pilot(s) to vent entrapped air. Retighten when water vents clearly.



Remove the cap to reveal the adjustment screw



Turn clockwise until fully closed, return anticlockwise circa 1.1/2 to 2.1/2 turns.

- These are approximate settings, and should be further adjusted to suit system requirements after pressure adjustments have been made.



Remove cap from Pilot valve to access adjustment screw



Turn the adjustment screw anticlockwise to fully open the pilot valve.

Turn clockwise to set desired outlet pressure.

- Setting Reducing Control - slowly open downstream isolation valve. Gradually turn adjustment screw on the Pressure Reducing Control Valve to raise/set the downstream pressure. Allow valve and system to stabilise. Observe inlet and outlet pressure gauges and continue to adjust as needed, pausing approximately every 1 1/2 turns, allowing valve and system to stabilise.



Turning the adjustment screw clockwise raises outlet pressure.
 Turning the adjustment screw anti - clockwise lowers outlet pressure.

When desired downstream pressure is reached, tighten locknut on adjustment screw.

- Fine tune the needle valve (speed controls) to suit system requirements. Adjust Closing Speed Control (if equipped) clockwise for slower closure, and counterclockwise for faster closure. Adjust Opening Speed Control (if equipped) clockwise for slower opening, and counterclockwise for faster opening.

Maintenance

- Albion Valves (UK) Limited recommend that an inspection of these types of valves is performed annually.
- The inspection should include both a functional and visual test of the main valve, and the pilot system.
- The inspection is to ensure that no damage or premature wear has occurred due to any system debris or the velocity/pressure that may have exceeded the design/sizing of the valve.
- Accurate record keeping of the actual vs set pressure is 'best practice' of a maintenance function for such a valve.

ART 6200 Repair Instruction

Main valve will not close

Failure Mode	Repair Method
Pilot valve setting too high	Slowly adjust the pilot valve anticlockwise
Sealing position leakage	Tighten the nut or change the sealing parts
Needle valve doesn't work	Open the needle valve(anticlockwise) and flush the valve
Main valve diaphragm broken	Change the diaphragm
Excess debris accumulation	Disassemble, clean the valve. Replace any damaged parts
Seat leakage	Replace the seal
Joint leakage between SS connection components	Tighten the nut or change SS part

Main Valve will not open

Failure Mode	Repair Method
Oversize valve	Use the bypass valve to achieve pressure reducing control
Needle doesn't work	Slowly adjust the needle valve clockwise till to the setting pressure
Pilot valve damage	Replace the pilot valve



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.