

Installation Operation and Maintenance Manual

A200 & A201

DOME LOADED PRESSURE REDUCING VALVE

THIS DOCUMENT is only applicable to the service of A200 and A201 valves only. General instructions regarding installation, operation and maintenance for all types of dome loaded pressure reducing valves must be read prior.

TYPE A200 & A201 OPERATING INSTRUCTIONS

A200: INTERNALLY LOADED
A201: EXTERNALLY LOADED

OPERATING INSTRUCTIONS.

To aid setting it is advisable to have a pressure gauge and isolating stop valve available downstream of the reducing valve, this will enable a small downstream volume to be isolated, and will allow accurate indication of downstream control pressure and precise and positive adjustment.

Internal Charging of Dome – A200 Valves only.

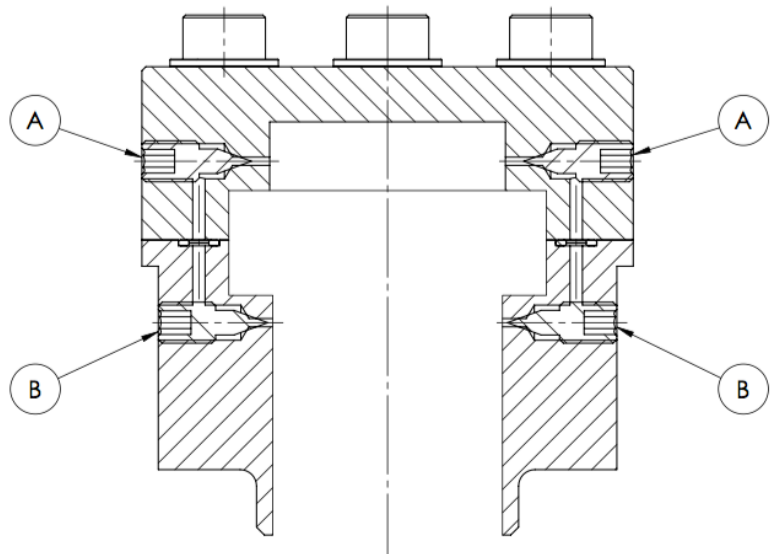
Note: The A200 has common (A) and (B) ports allowing the valve to be set from both sides.

1. Ensure all needle valves are firmly closed.
2. Check the dome is de-pressurised by opening the dome needle valve (A) one full turn and then close firmly when no gas is escaping from the needle valve.
3. Apply pressure to the inlet port. No downstream flow should occur.
4. Open line needle valve (B) one full turn, gas may escape from around the needle valve – this is normal.
5. Observe the downstream pressure gauge and gently crack open the dome needle (A) keeping the socket key in position in the needle valve. Allow the pressure to feed into the dome and outlet pressure to rise to the desired value.
6. Quickly close the dome needle valve (A).
7. Close the line needle valve (B).

ADJUSTMENTS.

The correct outlet pressure should now be set but if the pressure is too high it can be reduced by gently cracking the dome needle valve (A) to release pressure from the dome this will allow the set pressure to fall.

Ensure all needle valves are secure when setting is finalised.

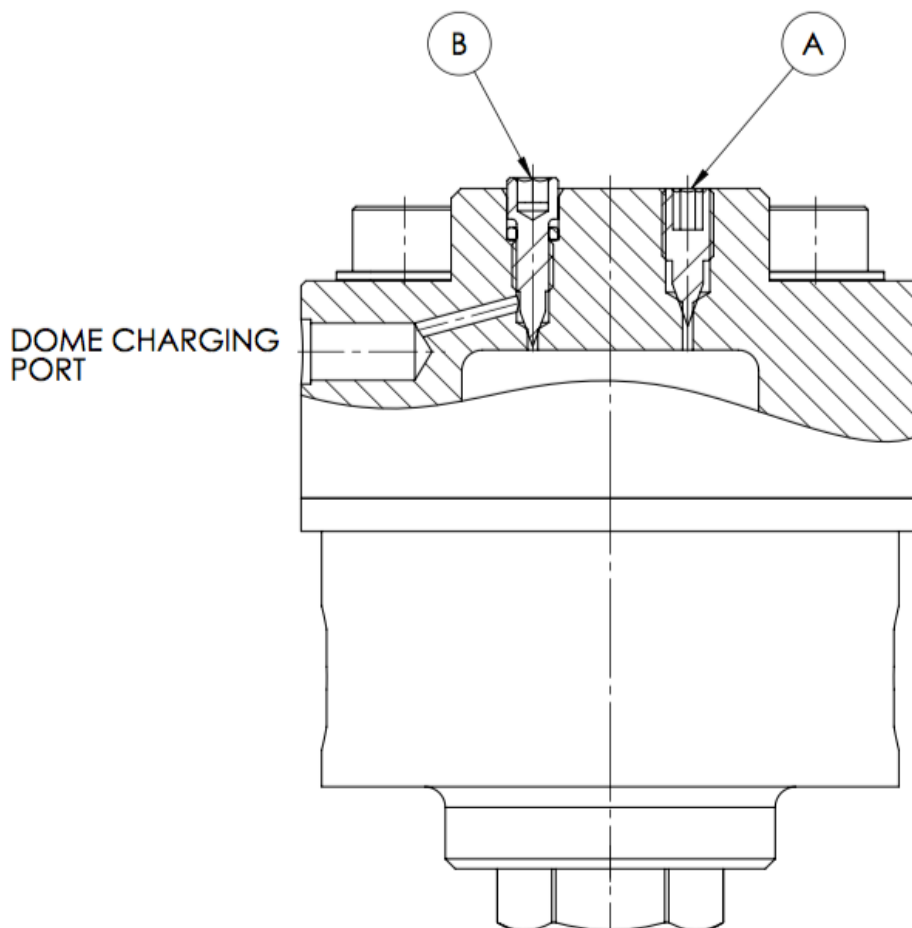


External Charging of Dome – A201 Valves only.

1. Ensure both (A) and (B) needle valves are firmly closed.
2. Check dome is de-pressurised by opening the vent needle valve (A) one full turn and then close firmly when no gas is escaping from the needle valve.
3. Apply pressure to the inlet port. No downstream flow should occur.
4. Connect the pilot pressure supply to the dome charging port and apply suitable pressure.
5. Observe the downstream pressure gauge and gently crack open the dome needle (B) keeping the socket key in position in the needle valve. Allow the pressure to feed into the dome and outlet pressure to rise to the desired value.
6. Quickly close the dome needle valve (B).

ADJUSTMENTS.

The correct outlet pressure should now be set but if the pressure is too high it can be reduced by gently cracking the vent needle valve (A) to release pressure from the dome this will allow the set pressure to fall. Ensure all needle valves are secure when setting is finalised.



DOME LOADED PRESSURE REDUCING VALVE SERVICE INSTRUCTIONS.

These instructions are confined to the replacement of the Diaphragm and O-Ring seal, Valve Seat and Valve Plunger only. Any damage caused to other components would require the units return to the manufacturer.

Before undertaking any servicing of the valve, ensure the valve is completely isolated from the supply and outlet pressures, any pressure in the valve has been removed and the dome has been de-pressurised by unscrewing all needle valves one full turn.

Before commencing the valve refurbishment, it is recommended that the valve is removed from the line and worked on in a clean environment.

Cleanliness during assembly is most important, particularly on all sealing surfaces.

BEFORE SERVICE, REFER TO THE DOME LOADED PRESSURE REDUCING VALVES GENERAL INSTRUCTIONS

Diaphragm and O-Ring replacement. (Top End)

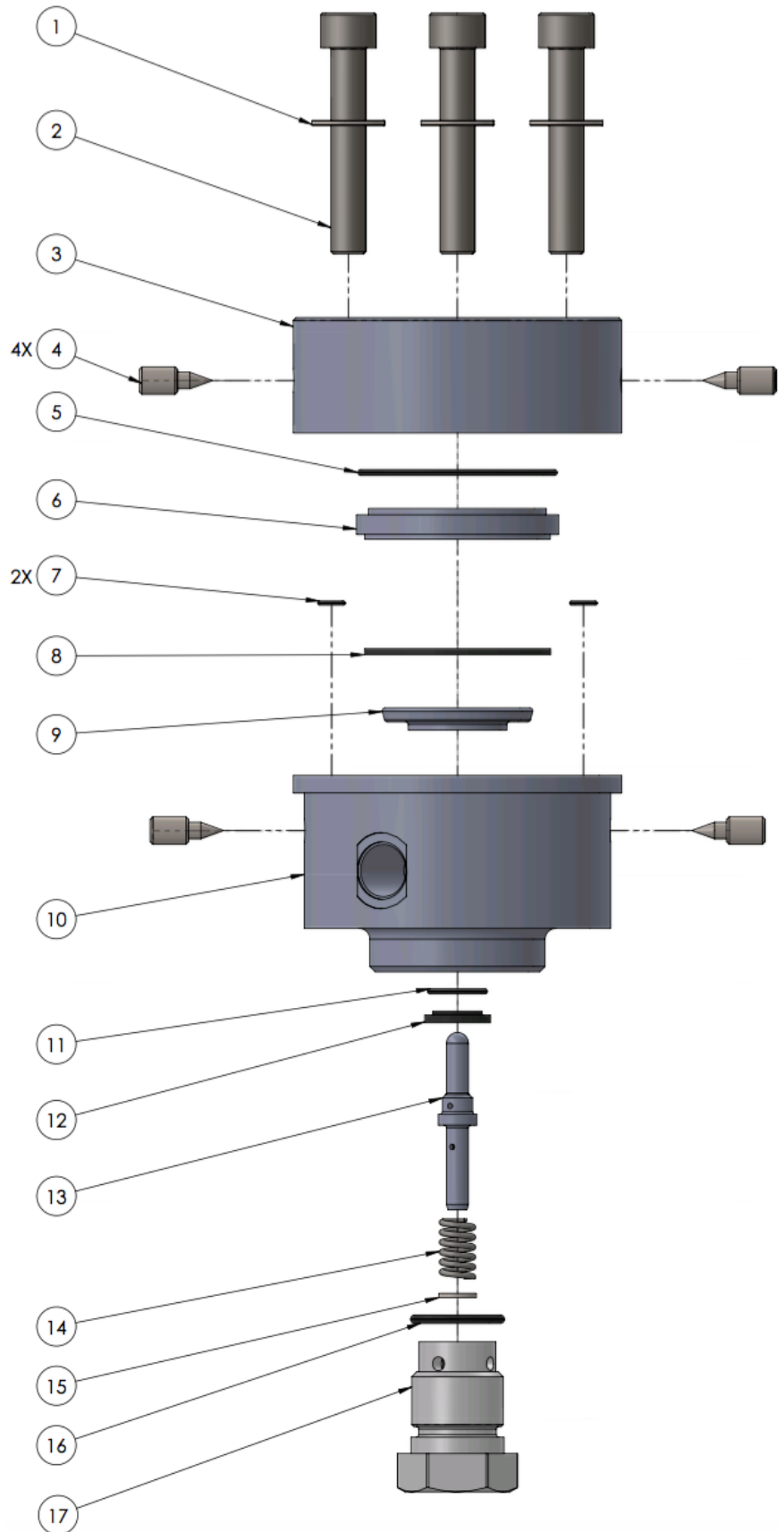
1. Unscrew the socket cap screws (2) complete with washer (1) from the Dome (3). Separate the Dome (3) from the Body (10).
2. Remove the O-Ring (5) and extract the Diaphragm assembly (6,8,9).
3. Remove the Body O-Rings (7).
4. Inspect all parts for any damage and wear before re-assembly. Replace parts as required.
5. Place the lower Diaphragm Plate, new Diaphragm and Upper Diaphragm Plate (6,8,9) in the Valve Body (10).
6. Insert the O-Rings (5,7) into the Body (10) and the Upper Diaphragm Plate (6).
7. Screw the socket cap screws into the Dome and torque to 65 Nm

Valve seat, Valve and O-Ring replacement. (Bottom End)

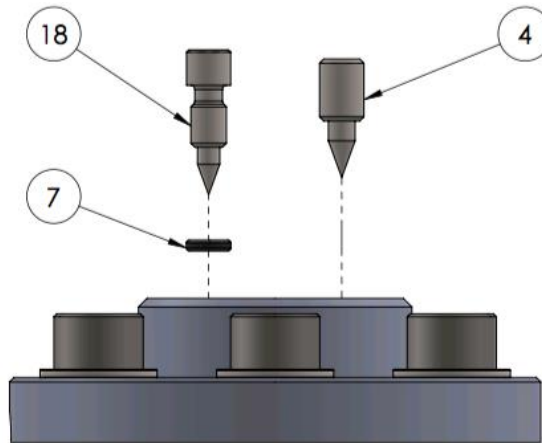
1. Unscrew the Body Plug (17) complete with O-Ring (16) from the Valve Body (10)
2. Remove the valve assembly (11-15).
3. Extract the O-Ring (16) from the Body Plug (17).
4. Inspect all parts for any damages and replace if necessary.
5. Insert the new O-Ring (16) into the Body Plug (17) groove.
6. Insert the Washer (15) and new Spring (14) into the Body Plug (17).
7. Place the Valve Plunger (13) on top of the Washer (15).
8. Insert the new O-Ring (11) into the new Valve Seat (12) and place on top of the Valve Plunger (13).
9. Insert this assembly into the Body Plug (17) and Screw into the Body (10). Torque to 70 Nm

NOTE: Ensure lubricants are compatible with the system medium.

A200 EXPLODED VIEW



A201 EXPLODED VIEW ADDITIONAL DETAIL



RECOMMENDED SPARES KIT

A200 STANDARD VALVE

ITEM	DESCRIPTION	QUANTITY
8	Diaphragm	1
14	Spring	1
5	O-Ring	1
7	O-Ring	2
11	O-Ring	1
16	O-Ring	1
12	Valve seat	1

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8	Diaphragm	1
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7	O-Ring	1
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16	O-Ring	1
12	Valve seat	1