400 series – Operating and maintenance instructions.

400 series – Inline filter

General information:

The 400 Series Stop Valve is designed to effectively seal off flow in both liquid and gas pressure systems.

The mechanism for closure is of the balanced stem type which reduces the load required to close/open the valve at all pressures.

Installation & Operation:

It is likely that when the new installations are assembled, or when fluids are being conveyed, particles of dirt and debris may become lodged on the valve seating. Although the device is designed to minimise the risk of this occurrence some leakage across the seating may result when the valve is fully closed and for this reason it is therefore recommended that a suitable fitter (30 micron or less) should be fitted up-stream of the valve.

Immediately prior to installing the valve into a pressure system check that operating requirements compare with details marked on the outside of the valve. Remove protective dust caps from the inlet and outlet ports and make sure that no ingress of dirt is allowed into the ports before installation. Any debris finding its way into the valve may affect the working and correct operation of the device.

The flow arrow marked on the side face of the valve should always correspond with the direction of flow within the system.

Install the valve by connecting inlet and outlet ports making sure that the fittings are of the correct type suitable for the maximum working pressure of the system and of the correct thread size.

When the valve is correctly installed shut off by turning the hand wheel in a clockwise direction, using moderate hand torque only. Pressure can now be introduced to the system and the valve is ready for normal operation.

PLEASE NOTE:
ONLY MODERATE HAND TORQUE SHOULD BE APPLIED TO THE HAND WHEEL IN ORDER TO AFFECT THE GAS TIGHT SEAL ACROSS THE SEATING OF THE DEVICE. EXCESSIVE FORCE MAY DAMAGE THE SOFT SEATING PAD AND CAUSE LEAKAGE.

Spares:

A refurbishing facility is offered by PRESREG VALVES and customers are strongly advised to make full use of this service whenever products need attention. However, from time to time it may not be possible or practical for products to be returned and therefore it is suggested that customers keep suitable quantities of recommended spare parts in order to carry out their own maintenance.

Spare kits are available from:

Presreg Valves
a trading division of
JRE Precision Limited
18 Bakewell Road
Loughborough
Leicester
LE11 5QY
UNITED KIINGDOM
Tel: 44(0) 1509 610580
e-mail: info@jreuk.com

In any correspondence, please quote the part number and serial number.

Maintenance:

Only certain maintenance tasks are recommended, and these are listed below. Work must be restricted to these operations only and no alteration should be made to any component part of the device, as this may lead to poor performance and even unsafe operation.

Whenever possible, remove the complete device from the system and carry out servicing at a bench, suitably cleaned to ensure no ingress of dirt or foreign matter.

Anyone wishing to carry out their own maintenance would be well advised to obtain an "O" ring service set of tools as these are specially made to avoid damage to the elastomers during re-assembly.

If, after maintenance has been carried out, the device is not giving satisfactory performance, the complete unit should be returned, together with a brief outline of faults experienced, to the manufacturer for further investigation.

Recommended Maintenance

Before attempting any disassembly of valve, please ensure that a copy of drawing no 200-GA is available for reference, a recommended spares kit is obtained, and a suitable clean area is set aside for working.

****IT IS NOT RECOMMENDED THAT VALVES USED ON MEDICAL/OXYGEN INSTALLATIONS BE SERVICED ON SITE.** Special cleaning procedures and materials are necessary *

*When the valve is to be used for OXYGEN service do not use ordinary grease, ONLY USE FONBLIN RT15. Unsafe conditions may result if this is not observed.

Ensure all pressure is safely vented to zero prior to dismantling. If dangerous medias have been used the system must be purged in accordance with the system service instructions.

1) Spindle assembly replacement:

Unscrew cap head screw retaining the handwheel (item 20). Remove handwheel (item 5) weather sleeve (item 9) and vee ring seal (item 27).
Undo and remove 4 off M6 bolts (item 21) retaining the bonnet (item 2). Remove bonnet.
Holding the shaft (item 8) firmly, pull the spindle upwards out of the body to remove the spindle assembly. A gentle rocking motion will help spindle come free.
Re-fit new spindle assembly by the reverse process, again using a gentle rocking motion to carefully slide the spindle assembly down into the body.
Replace bonnet (Item 2) and the 4 off retaining bolts (item 21). Tighten to 15.9 Nm.
Replace vee ring seal (item 27), weather sleeve (item 9) and handwheel (item 5).
Re-fit cap head screw (item 20) to retain handwheel.
To help the new valve seat, fully open then fully close the valve 10 times.
The operation is now complete.

PRESREG VALVES
Tel: 01509 610580 Email: info@jreuk.com
Web: Presreg.co.uk

Doc number: D11
Doc issue: 02
Mar '24

2) Soft spares kit:

Remove spindle assembly as described in 'Spindle assembly replacement'.
Remove O ring and BU ring (items 14 & 17) from the body (item 1).
Replace O ring and BU ring (item 14 & 17) with new components, lightly greased with a suitable lubricant* (be aware of BU ring orientation).
Remove bearing set (item 25) and bearing spring washer (item 28) and place to one side.
Unscrew shaft (item 8) from spindle (item 6).
Remove the bush (item 3) by pulling away from the spindle.
Using a suitable split bush, hold the spindle (item 6) in a vice and remove the lock nut (item 4)
Unscrew seat retainer (item 7), the seat (item 10) with come away with the seat retainer.
Remove O ring and BU ring (items 12 & 15) from the bottom of the spindle.
Replace O ring and BU ring (item 12 & 15) with new components, lightly greased with a suitable lubricant* (be aware of BU ring orientation).
Place new seat (item 10) over the spindle (item 6) and screw seat retainer on to spindle to secure the seat. Tighten to a torque of 20 lb/in.
Replace lock nut (item 4), applying a small amount of Loctite 648.
Remove O ring and BU ring (items 13 & 16) from the bush (item 3).
Replace O ring and BU ring (item 13 & 16) with new components, lightly greased with a suitable lubricant*. (be aware of BU ring orientation).
Slide bush back over seat retainer.
Screw shaft (item 8) back on to exposed spindle (item 6) thread.
Re-fit new spindle assembly by the reverse process, using a gentle rocking motion to carefully slide the spindle assembly down into the body.
Replace bonnet (Item 2) and the 4 off retaining bolts (item 21). Tighten to 15.9 Nm.
Replace vee ring seal (item 27), weather sleeve (item 9) and handwheel (item 5).
Re-fit cap head screw (item 20) to retain handwheel.
To help the new valve seat, fully open then fully close the valve 10 times.
The operation is now complete.

3) Bearing replacement:

Unscrew cap head screw retaining the handwheel (item 20). Remove handwheel (item 5) weather sleeve (item 9) and vee ring seal (item 27).
Undo and remove 4 off M6 bolts (item 21) retaining the bonnet (item 2). Remove bonnet.
Remove bearing set (item 28) and replace.
Replace bonnet (Item 2) and the 4 off retaining bolts (item 21). Tighten to 15.9 Nm.
Replace vee ring seal (item 27), weather sleeve (item 9) and handwheel (item 5).
Re-fit cap head screw (item 20) to retain handwheel.
Ensure the new bearing set is moving freely by opening and closing the valve a few times.
The operation is now complete.

PRESREG VALVES
Tel: 01509 610580 Email: info@jreuk.com
Web: Presreg.co.uk

Doc number: D11
Doc issue: 02
Mar '24