



# **BV900 Series**

## **Actuated Ball Valve BSP**

### **Instruction Manual**

#### **⚠ WARNING**

Failure to follow these instructions or to properly install and maintain this equipment could result in gas leakage, fire or explosion causing property damage and personal injury or death.

Oasis products must be installed, operated and maintained by trained and competent personnel in accordance with all applicable local codes, rules and regulations in addition to the Oasis Instructions.

Oasis Engineering Ltd. will not be held liable in such circumstances where installation, operation and maintenance procedures were performed by incompetent personnel resulting in improper assembly, unsafe operation, equipment damage or personal injury.

Oasis recommends that all service technicians should watch the Product Servicing Video before attempting to service this part.

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Instruction Manual

## Warning!

**High pressure gas and gas equipment can cause serious harm to both infrastructure and personnel if safety precautions are not followed.**

**Oasis recommends considering the use of the following PPE when working with high pressure along with any other site specific health and safety requirements:**



**Foot Protection**



**Hearing Protection**



**Safety Helmets**



**Hand Protection**



**Safety Glasses**

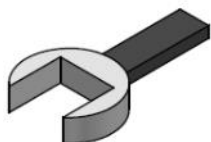


**Ensure the system is clean of debris, vented and isolated before any installation or servicing work is carried out.**

## Attention!

**Oasis 900 series ball valves are intended for use with gaseous Hydrogen, CNG, Helium, Biogas or Nitrogen.**

## Tools Required



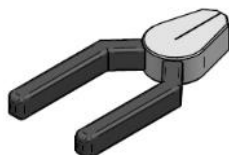
**Spanner  
(Wrenches)**



**Spray bottle  
(Snoop or suitable  
equivalent)**



**Anti Seize Grease**  
- Swagelok Silver Goop  
- Omega 99  
- or similar

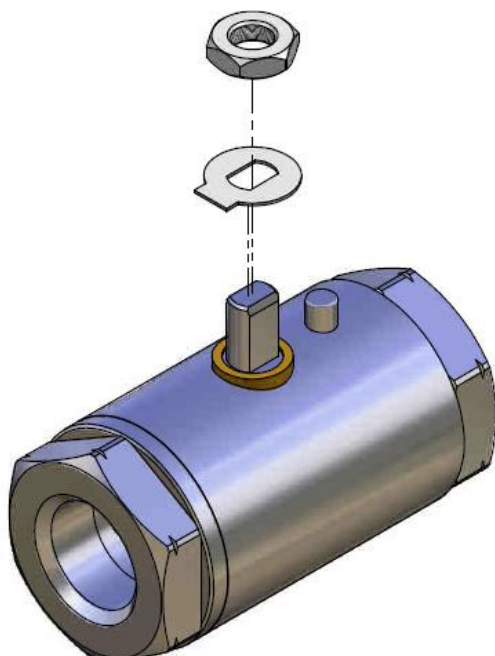


**Pliers**

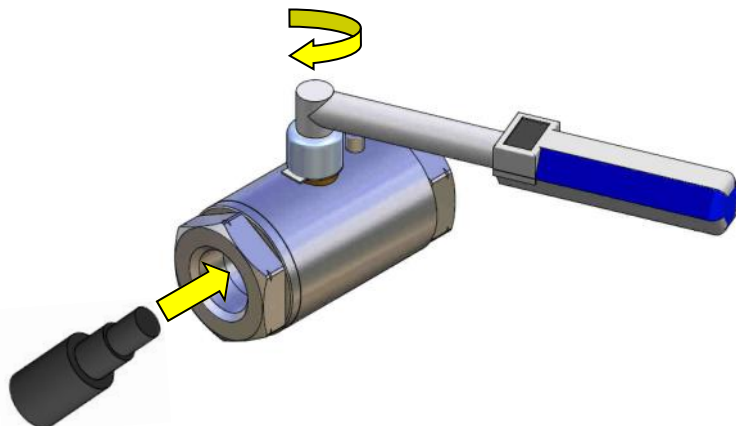


**Oasis Plastic Tool**  
Part Number:  
**TOOL-BVASSY**  
(Sold separately )  
or Similar

1. If fitting an existing valve with an actuator remove existing handle and install the lock tab and half nut.



2. Tighten the half nut to the required torque.



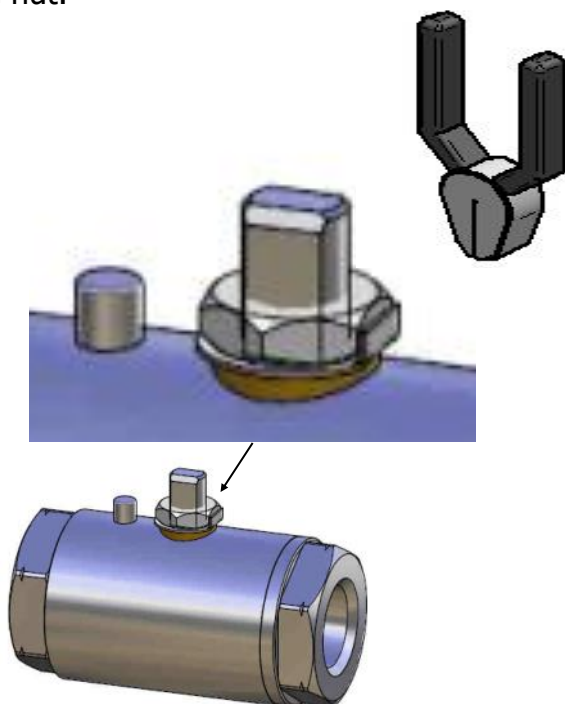
**Recommended Spanners  
for Stem Nuts:**

BV902 = 13mm  
BV903 = 13mm  
BV904 = 13mm  
BV906 = 19mm  
BV908 = 19mm

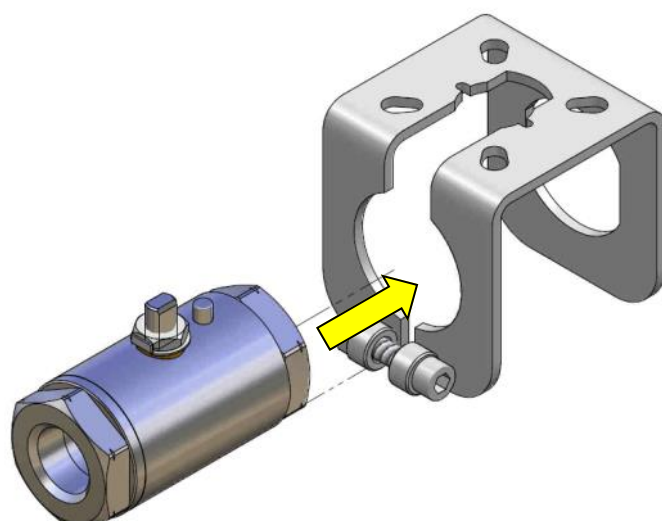
**Stem nut tightening  
torque**

BV902=3Nm  
BV903=3Nm  
BV904=3Nm  
BV906=6Nm  
BV908=6Nm

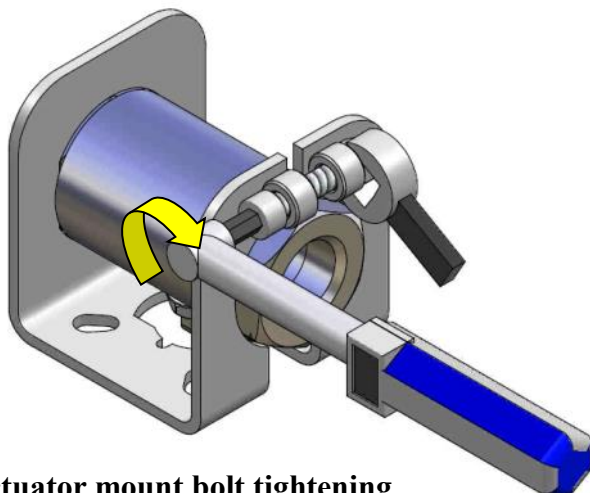
3. Use pliers and crush the lock tab onto the nut.



4. Insert the ball valve into the actuator mount so that the stop pin goes in first.



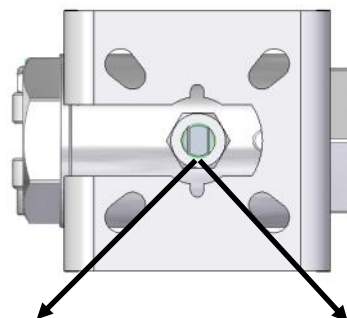
5. Tighten the lock bolt to the recommended torque.



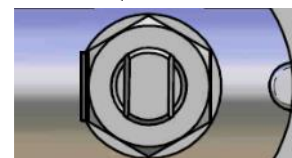
**Actuator mount bolt tightening torque**

BV902 = 1 Nm  
BV903 = 1 Nm  
BV904 = 1 Nm  
BV906 = 5 Nm  
BV908 = 5 Nm

6. Set the valve to the required fail open/fail close position as required.

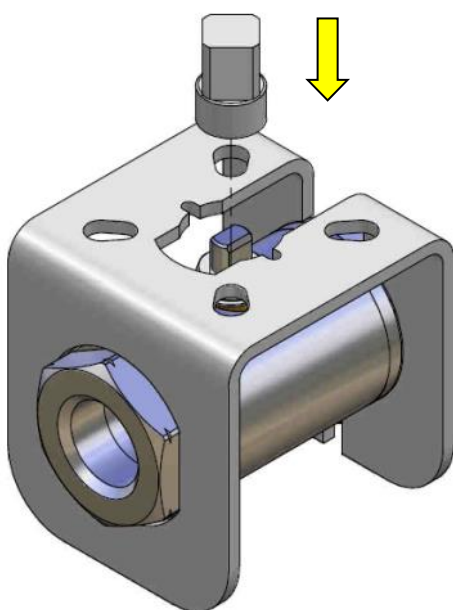


Valve in open position  
Stem along the body  
Fail Open

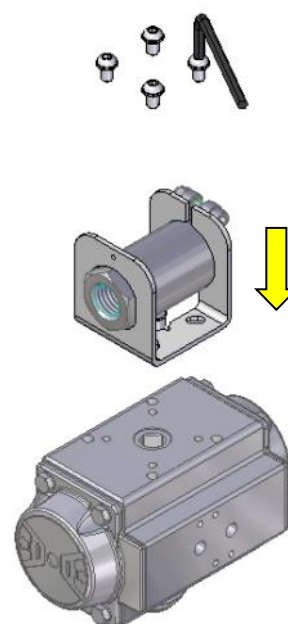


Valve in closed position  
Stem across the body  
Fail Closed

7. Install the drive dog over the stem.



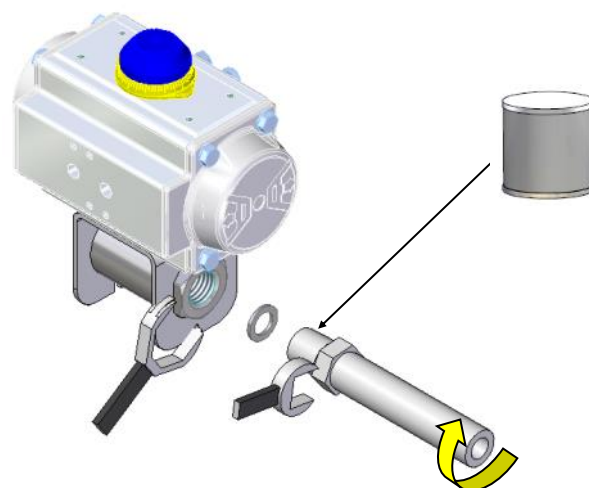
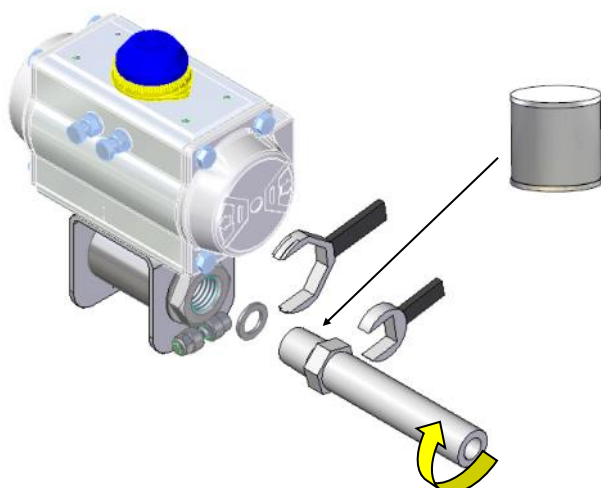
8. Tighten on the actuator ensuring the drive dog is correctly located.



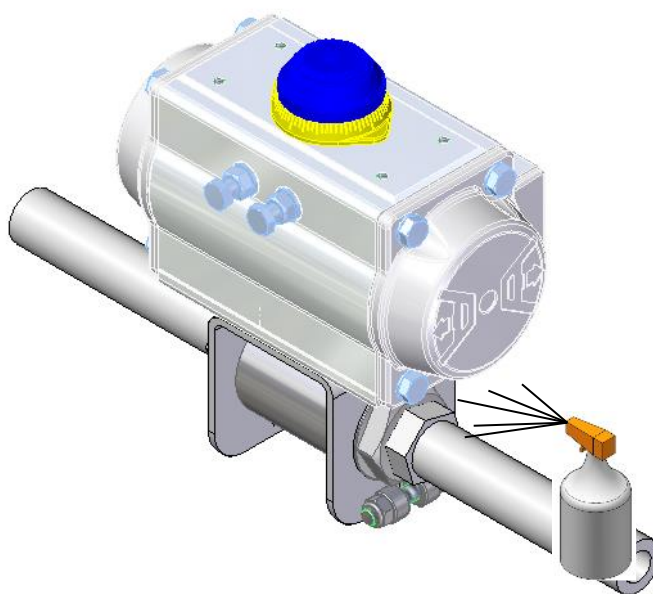


1. Fit Dowty washer to fitting before applying anti-seize to thread. Torque to the fitting suppliers recommended tightening torque.

2. On the other side fit Dowty washer to fitting before applying anti-seize to thread. Torque to the fitting suppliers recommended tightening torque.

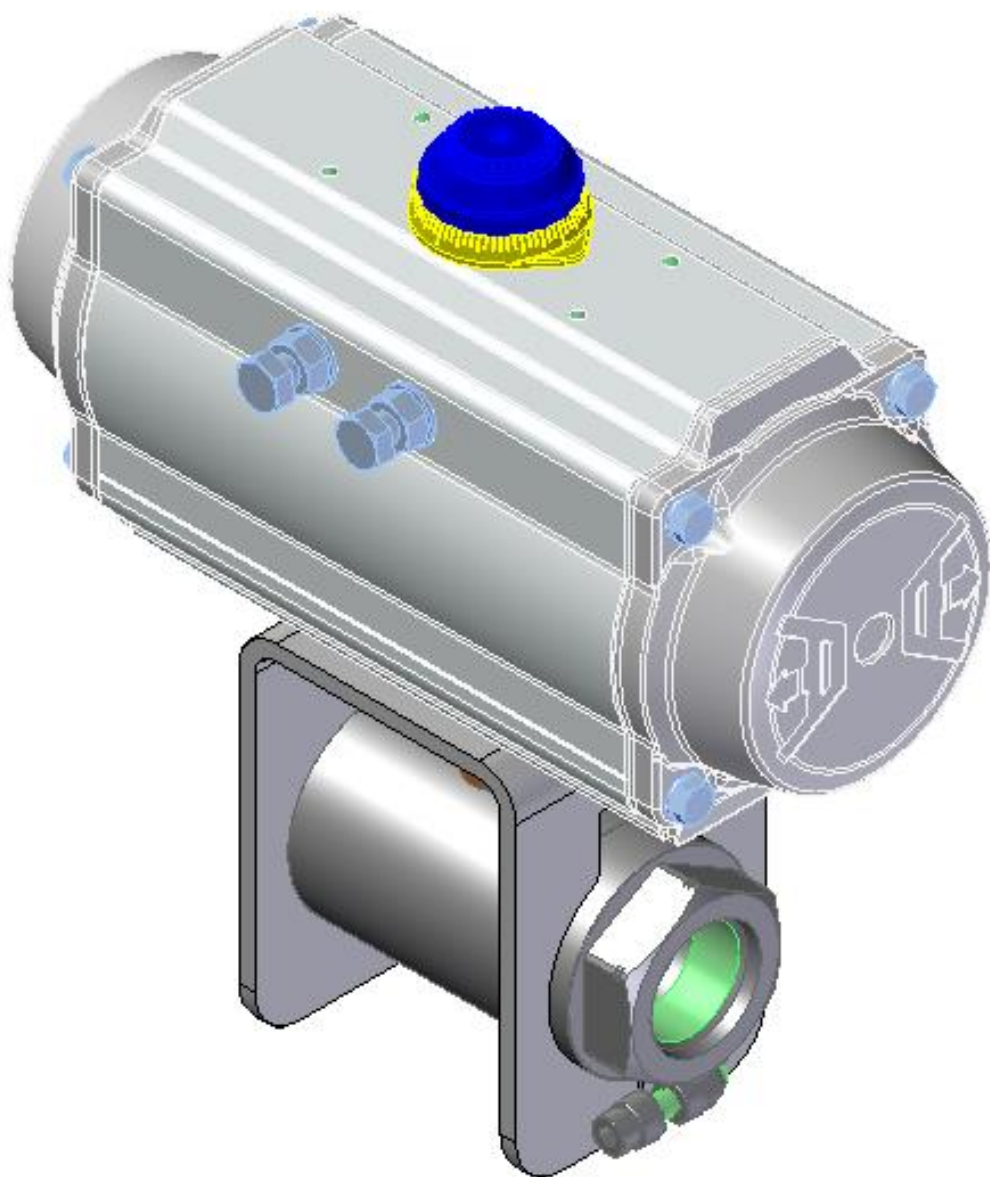


3. Leakage test connections and assembly is complete.



Oasis recommends that for valves bigger than 3/4" the actuator bracket is mounted separately using the mounting holes in the supplied actuator bracket.

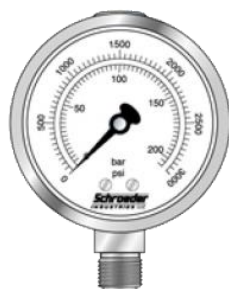
### **BV900 Series Actuator Bracket Design**



1. Connect air line and check connections for leaks.

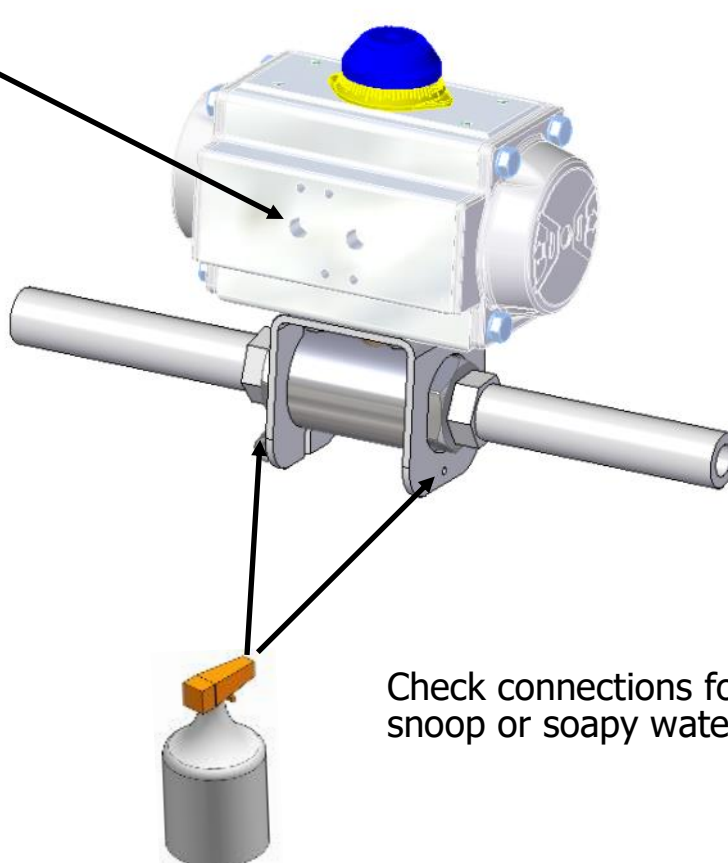
**Important:** Actuate valve 4 times before use to ensure initial sealing.

For oasis standard actuators the left port is the inlet port used to activate the actuator.



**MAX 8 Bar**

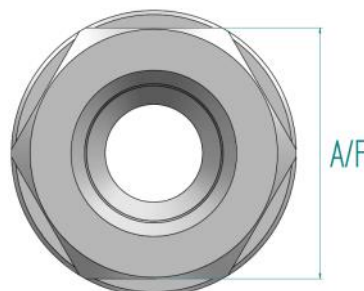
Do not operate the actuator with supply pressure greater than 8 Bar (116 psi). Doing so may damage the actuator and void the warranty.



Check connections for leaks using snoop or soapy water.

## Recommended Spanners for End Caps:

BV902 = 34mm  
BV903 = 34mm  
BV904 = 34mm  
BV906 = 50mm  
BV908 = 50mm



## Service Kit Parts

**BV902—BV903—BV904—BV906 — BV908**

2 x Seats



1 x Stem



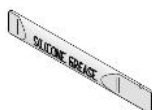
1 x Ball



1 x Gland



1 x Silicone



1 x Cap O-ring



1 x Locking Tab\*



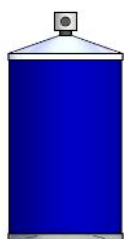
1 x Cap Back-up O-ring



\* Only used when servicing actuated ball valves.

**The Complete Oasis Seal Kit must be used**

## Tools Required



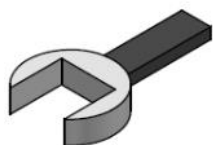
Cleaner (Warm Soapy  
Water or Similar)



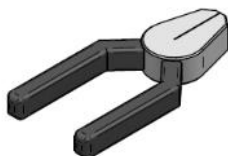
Pick Tool  
Part Number:  
TOOL-PICK  
(Sold separately )



Anti Seize Grease  
(Loctite 771 or Similar)  
For All Threads



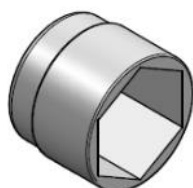
Spanner  
(Wrenches)



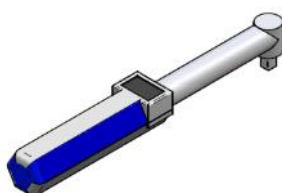
Pliers



Oasis Plastic Tool  
Part Number:  
TOOL-BVASSY  
(Sold separately )  
or Similar



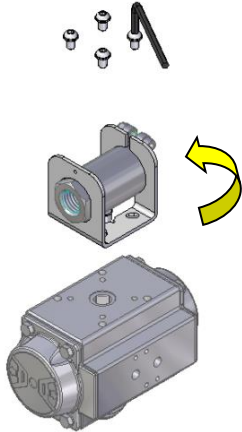
Sockets



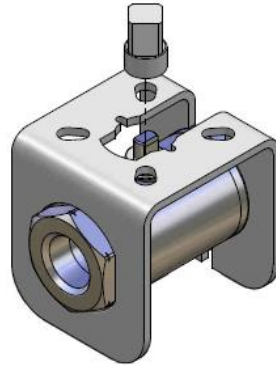
Torque Wrench



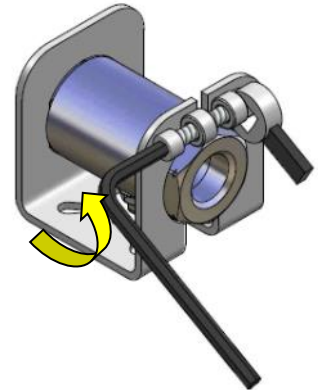
1. Remove actuator from valve.



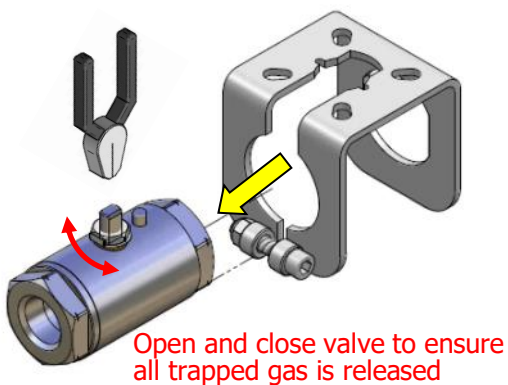
2. Remove drive dog.



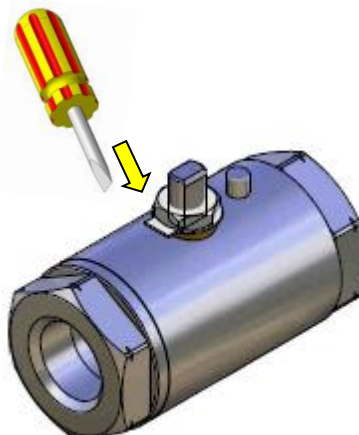
3. Undo clamp.



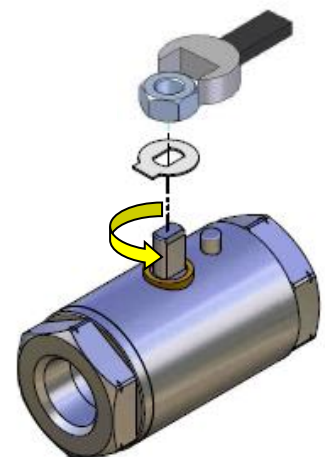
4. Remove valve.



5. Fold down metal tab.



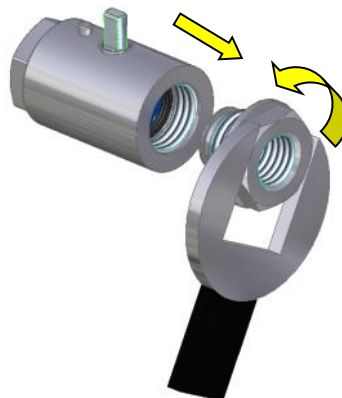
6. Remove nut and tab.



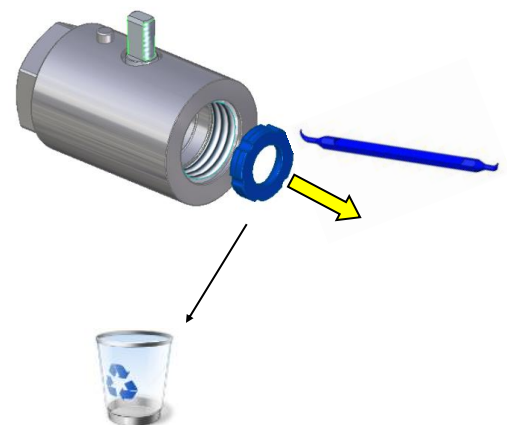
7. Discard gland.



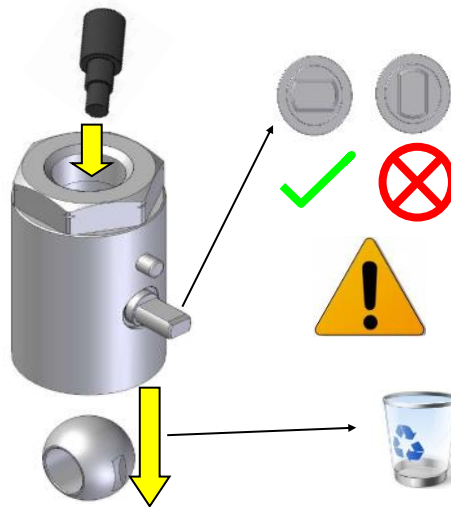
8. Remove end cap.



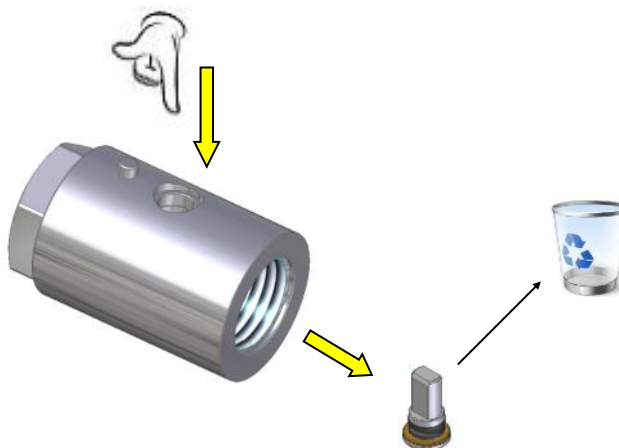
9. Discard seat.



10. Remove ball.



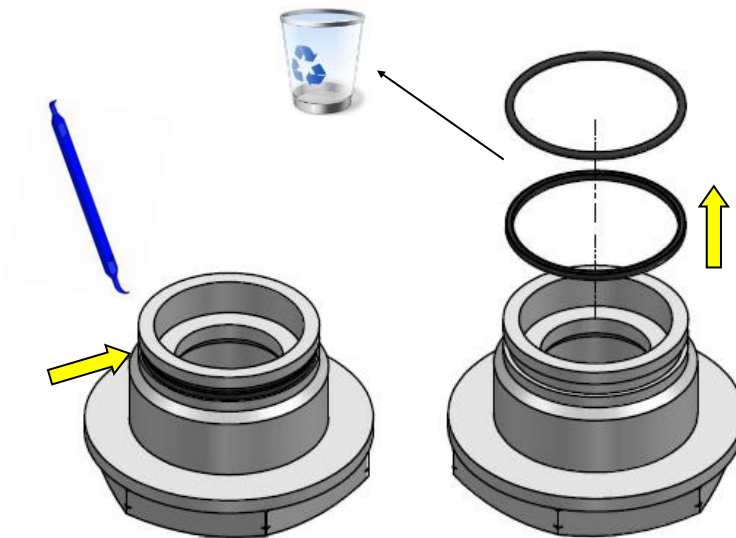
11. Remove stem first



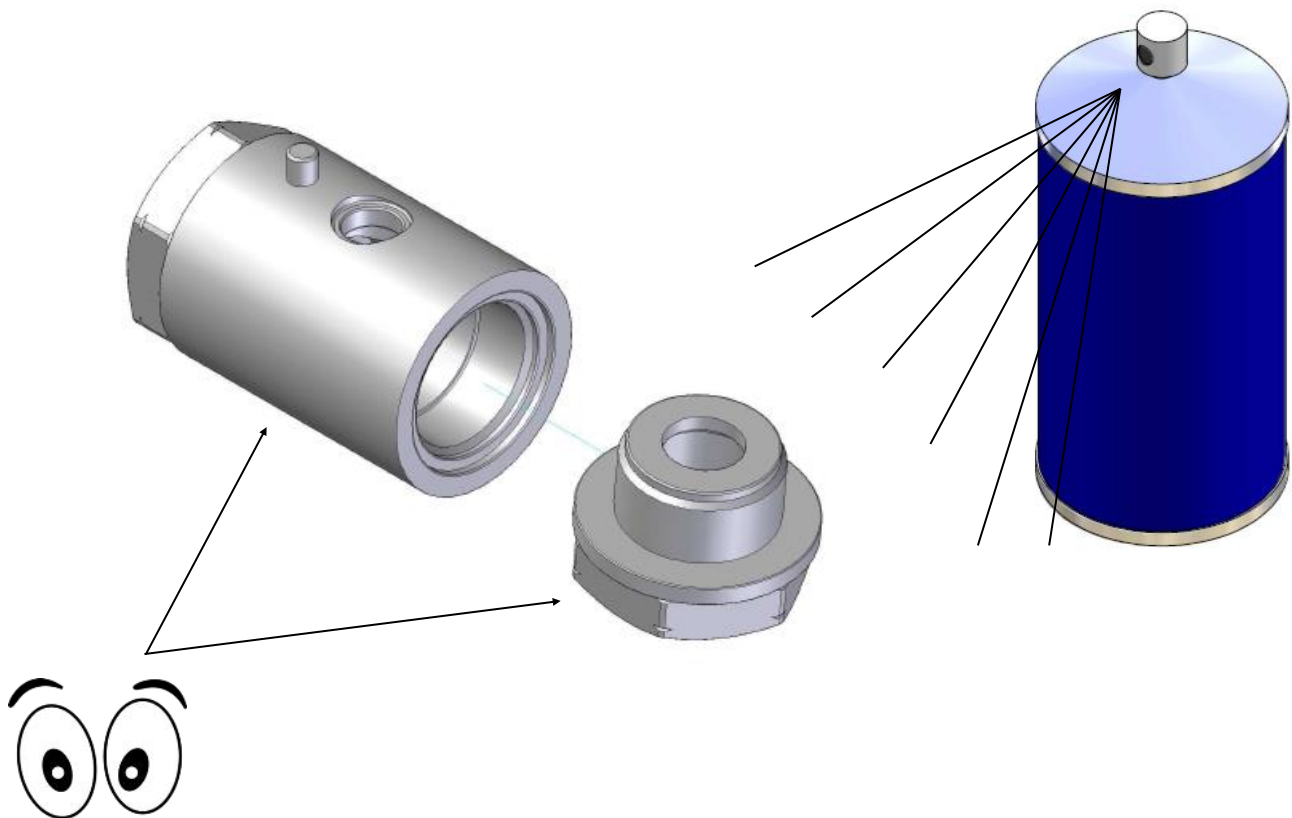
12. Remove and discard 2nd seat



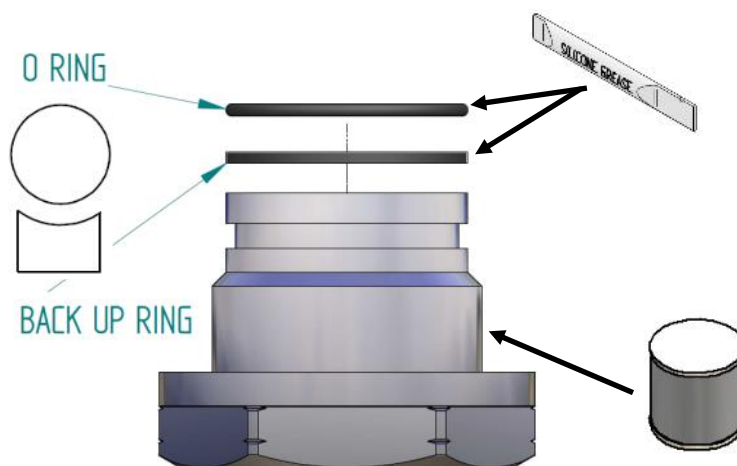
13. Remove cap O-rings and discard.



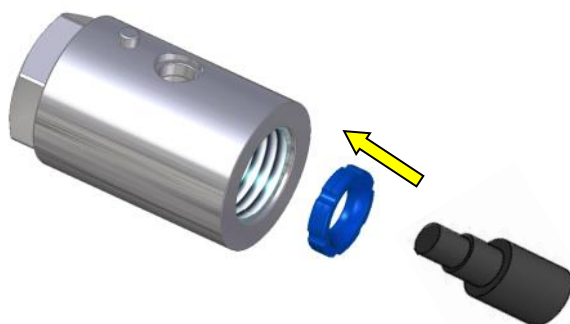
14. Clean body and end cap, visually check parts for damage



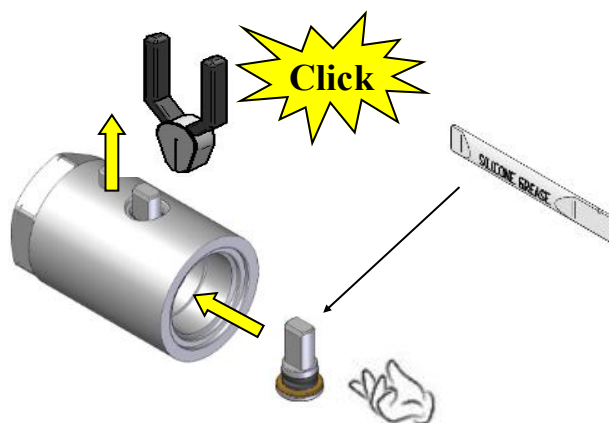
## 1. Fit end cap O-rings.



## 2. Apply silicone grease to new seat and install. Take care not to pinch O-ring when installing low pressure seat.

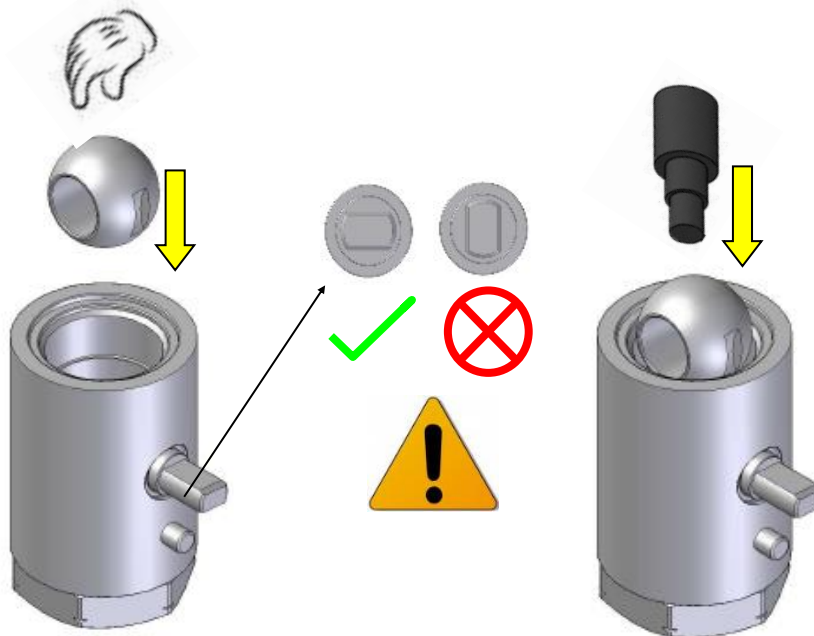


## 3. Insert stem assembly.

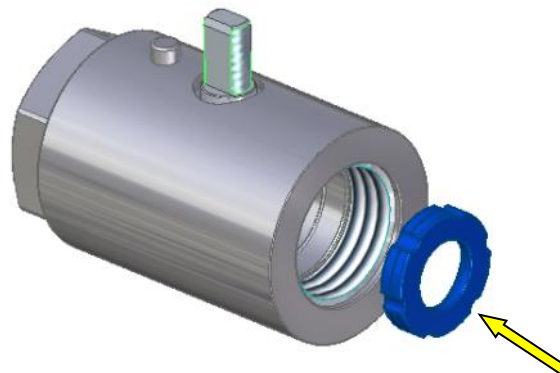




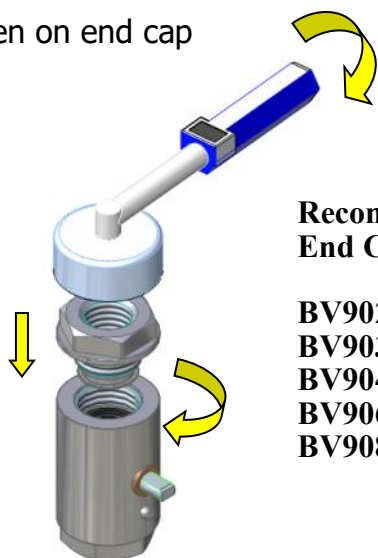
## 4. Insert Ball.



## 5. Install second new seat.



6. Tighten on end cap



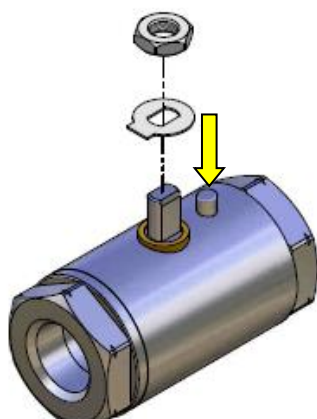
**Recommended  
End Cap Torques:**

BV902=60Nm  
BV903=60Nm  
BV904=60Nm  
BV906=160Nm  
BV908=160Nm

7. Install gland.



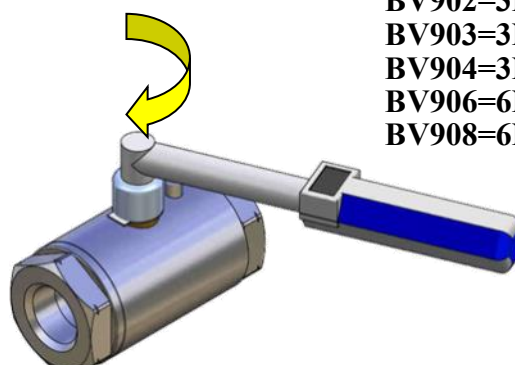
8. Install the lock tab and the nut.



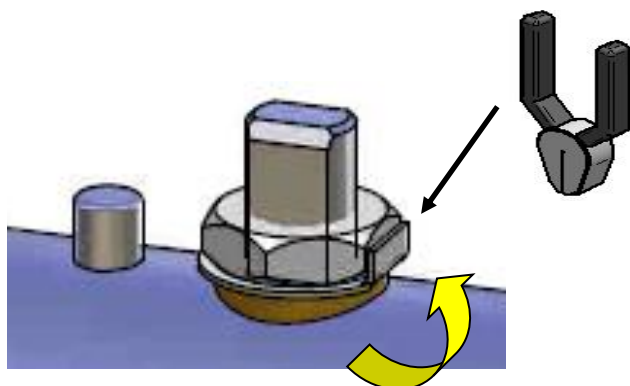
9. Tighten stem nut.

**Recommended  
Handle Nut Torques:**

BV902=3Nm  
BV903=3Nm  
BV904=3Nm  
BV906=6Nm  
BV908=6Nm



10. Using pliers bend the lock tab upwards so that it is tight against the nut .



11. Servicing complete, follow installation instructions from step 4 on page 3 for re-installation of product.



**Important:** Actuate valve 4 times before use to ensure initial sealing.