



# BV700 Series Actuated Ball Valve ORFS Instruction Manual

#### **A 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

Setting The Standard



### **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:



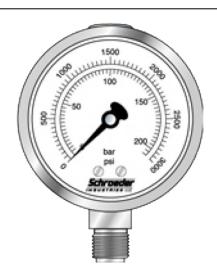






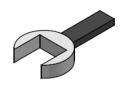


Foot Protection Hearing Protection Safety Helmets Hand Protection Safety Glasses



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

### **Tools Required**



**Spanner** (Wrenches)



Spray bottle (Snoop or soapy water)

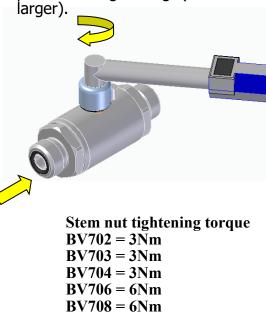
# Installation Instructions

If valve not supplied with actuator or bracket follow these instruction

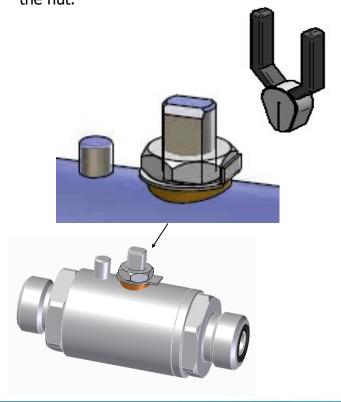
Setting The Standard

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

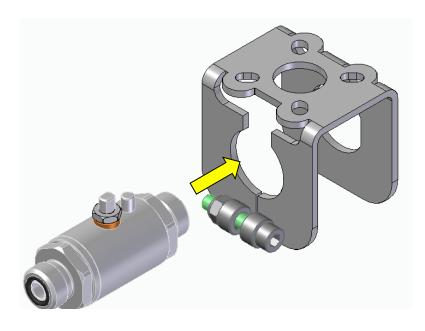
2. Tighten the half nut to the required torque. Insert TOOL-BVASSY to hold ball in place while tightening. (For BV703 and larger)



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.

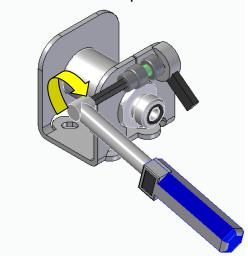


3

If valve not supplied with actuator or bracket follow these instructions

Setting The Standard

5. Tighten the lock bolt to the recommended torque.



Actuator mount bolt tightening

torque

BV702 = 4Nm

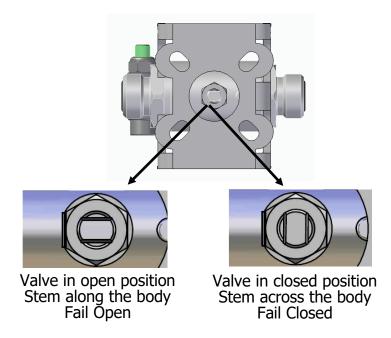
BV703 = 2Nm

BV704 = 1Nm

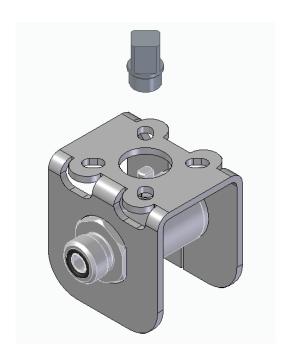
BV706 = 5Nm

BV708 = 12Nm

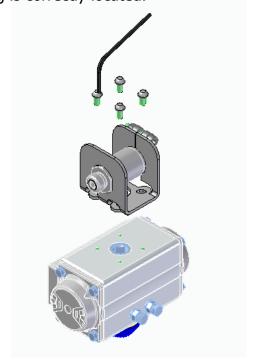
6. Set the valve to the required fail open/fail close position as required.



7. Install the drive dog over the stem.



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





### Installation **Instructions**

Setting The Standard

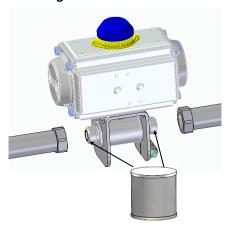
#### For use in Canada:

This design has been confirmed and tested to standards not recognized by Canadian authorities. For the purposes of installation of this design in ASME B31.3 piping systems, the piping system designer should confirm suitability and consider the following design conditions:

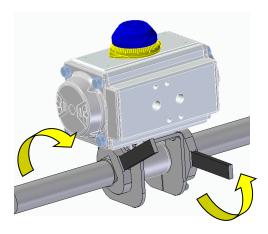
DESIGN PRESSURE: 410 BAR (6000 PSIG)
DESIGN TEMPERATURE: -40 TO +85°C (-40 TO +185°F)
CORROSION ALLOWANCE: 0 mm (0 in)

For installation in ASME B31.3 piping systems, the designer of the piping system should ensure that required leak testing is performed on the piping system prior to operation.

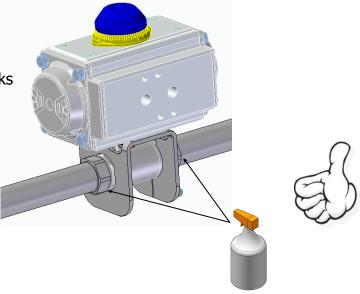
1. Ensure face seal O-rings are in position and sealing faces are free of damage. Apply anti-seize grease to threads.



2. Torque to the tube or hose fitting supplier's recommendations.



3. . Installation complete, check for leaks with snoop or similar on first use.



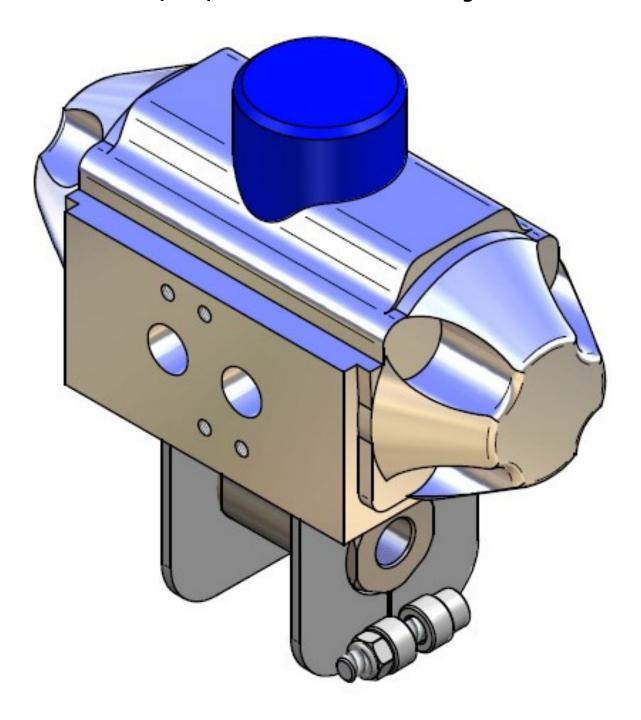
**Note:** Oasis recommends routine back pressure leakage testing as part of a good preventative maintenance schedule and servicing the valves as required. This will ensure safe and reliable operation over their life time.

# Installation Instructions

Setting The Standard

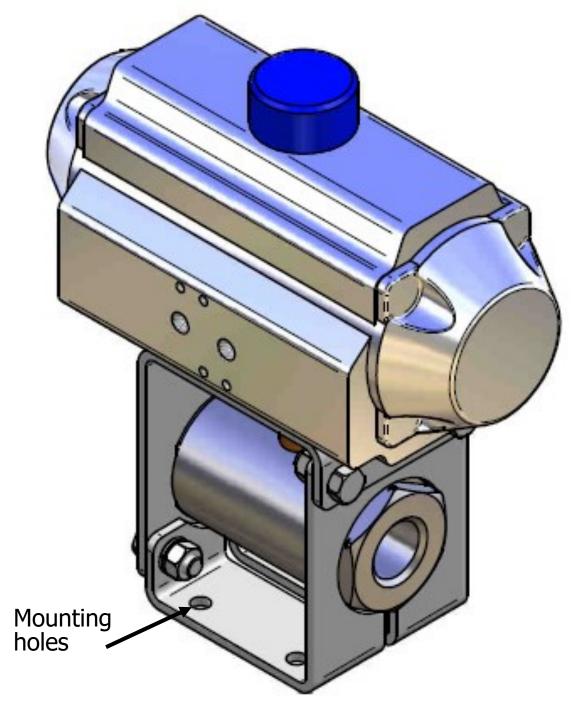
Oasis recommends that for BV706/708 valves the actuator bracket is mounted separately using the mounting holes in the supplied actuator bracket.

#### BV702/703/704 Actuator Bracket Design





#### **BV706/708 Actuator Bracket Design**

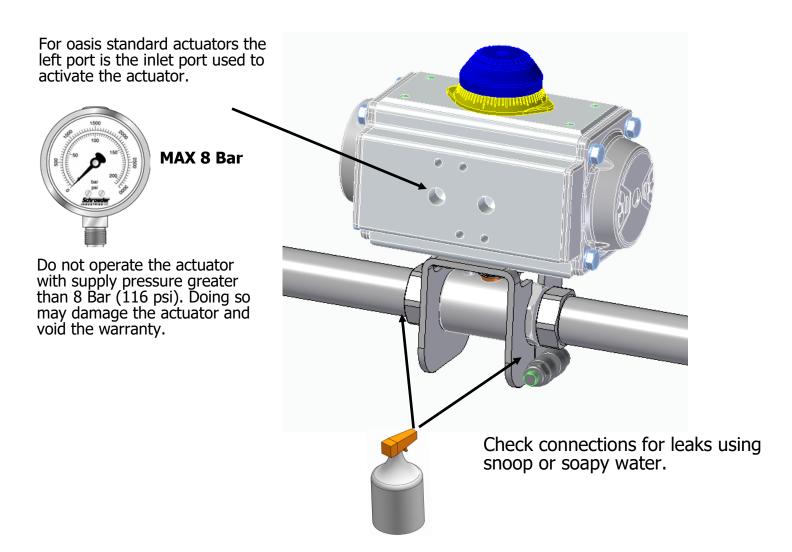


For mounting holes pattern please refer to Actuated Ball Valves Specification sheet.

# **Operation Instructions**

Setting The Standard

1. Connect air line and check connections for leaks.



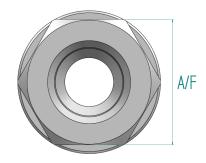
### Recommended Spanners for End Caps:

BV702 = 25mmBV703 = 28mm

BV704 = 34mm

BV706 = 50mm

BV708 = 60 mm





### Servicing

Setting The Standard

#### **Service Kit Parts**

#### BV702 — BV703 — BV704\*\*

2 x Seats<sup>^</sup> 1 x Stem 1 x Ball







1 x Gland

1 x Silicone

1 x Cap O-ring







1 x Locking Tab\*

2 x Face O-ring





(BV702 - 012 FKM 90) (BV703 - 014 FKM 90) (BV704 - 018 FKM 90)

#### BV706\*\* — BV708\*\*

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 Backup O-ring

2 x Face O-ring







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

#### **Tools Required**



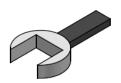
Cleaner (Warm Soapy Water or Similar)



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



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



Spanner (Wrenches)



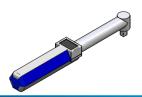
**Pliers** 



Small flat screw driver



**Sockets** 



**Torque Wrench** 



Snoop or **Soapy Water** 

<sup>\*</sup>only used when servicing actuated ball valves.

<sup>\*\*</sup>It is normal for the service kit to include a ball with a small hole in the bottom

<sup>^</sup>For low pressure service kits, the seats will be supplied with an O-ring installed



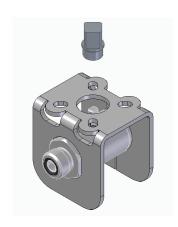
# Servicing Disassembly

#### Setting The Standard

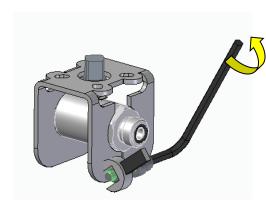
1.Remove actuator from valve.



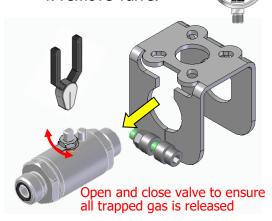
2. Remove drive dog.



3. Undo clamp.



4. remove valve.



5. Fold down metal tab.



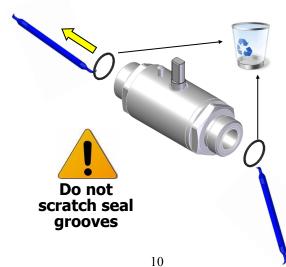
6. Remove nut and tab.



7. Discard gland.



4. Remove face O—rings from valve cap and body. Discard O—rings.



8. Remove end cap.

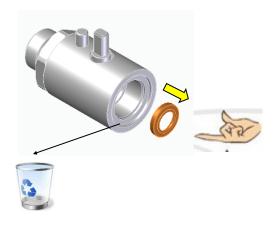




# Servicing Disassembly

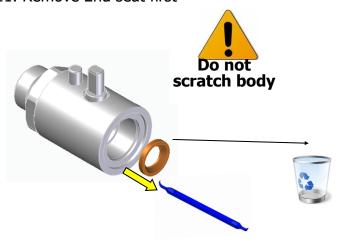
#### Setting The Standard

9.Discard seat.

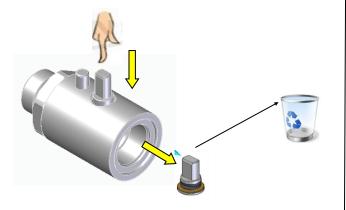


#### **BV702 — BV703**

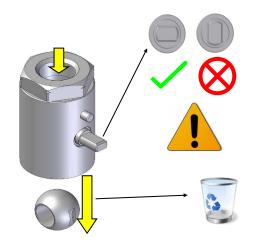
11. Remove 2nd seat first



12. Remove and discard stem.

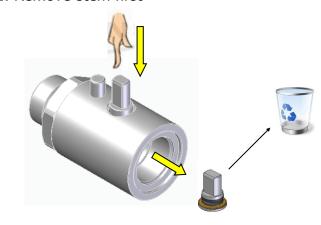


10. Remove ball.



BV704 - BV706 - BV708

11. Remove stem first



12. Remove and discard 2nd seat

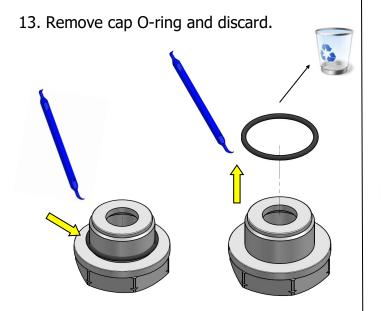




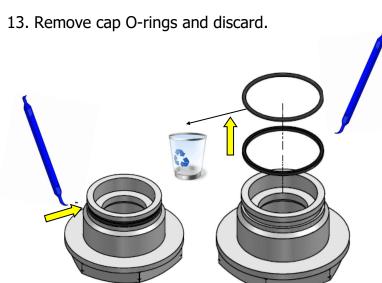
# Servicing Disassembly

Setting The Standard

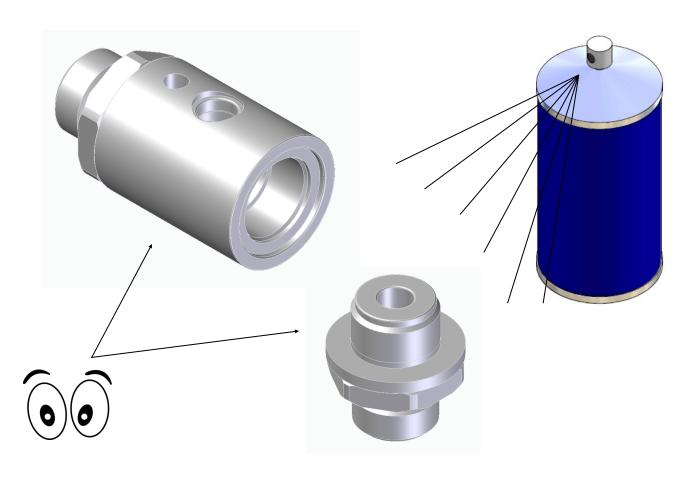
#### BV702 - BV703 - BV704



#### **BV706 - BV708**



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

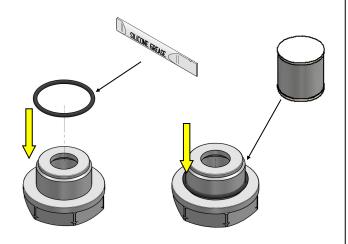


### Servicing Assembly

Setting The Standard

#### BV702 — BV703 — BV704

1. Fit O-ring.



#### BV702 — BV703

2. Insert stem assembly first.

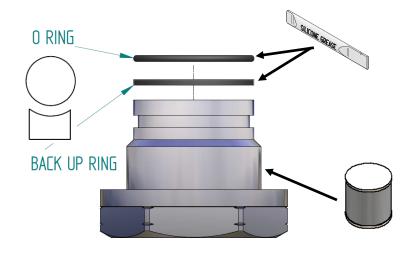


3. Insert first seat.



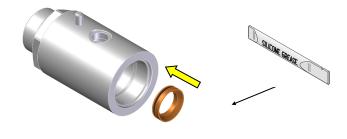
#### **BV706 — BV708**

1. Fit end cap O-rings.



#### BV704 - BV706 - BV708

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



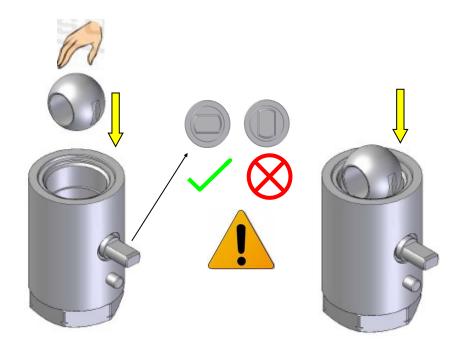
3. Insert stem assembly.





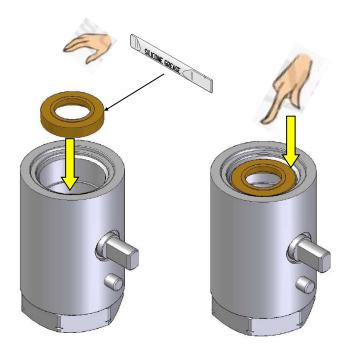
#### BV702 - BV703 - BV704 - BV706 - BV708

#### 4. Insert ball.



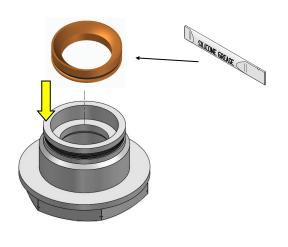
#### BV702 — BV703 — BV704

5. Apply silicone grease to new seat. Take care not to pinch an O-ring if present on seat when installing.



#### **BV706 — BV708**

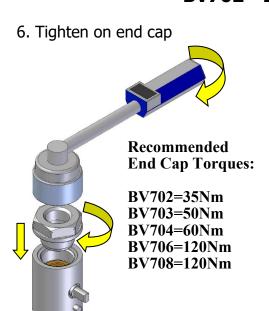
5. Apply silicone grease to new seat and install in cap. Take care not to pinch O-ring when installing low pressure seat.



14



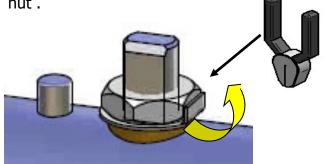
#### BV702 - BV703 - BV704 - BV706 - BV708



8. Install the lock tab and the nut.



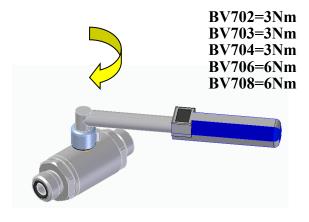
10. Using pliers bend the lock tab upwards so that it is tight against the nut.



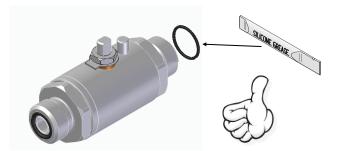


9. Tighten stem nut.

Recommended Handle Nut Torques:



11. Re install face O-ring and lubricate with silicon grease. Servicing complete, follow installation instructions from step 4 on page 3



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