

# IPT Series Dual-Seal Ball Check Valve

## Service Instructions



### Kit Contents

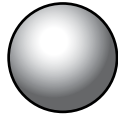
This kit contains the parts shown below.



**Seat**



**Retaining Ring**  
1/4, 3/8, 1/2 in.



**Ball**



**Ball Spring**



**Retaining Spring**



**Snap Ring**<sup>①</sup>



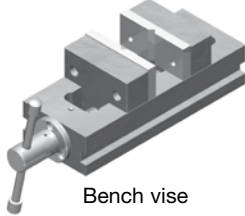




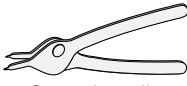

**O-ring**<sup>①</sup>



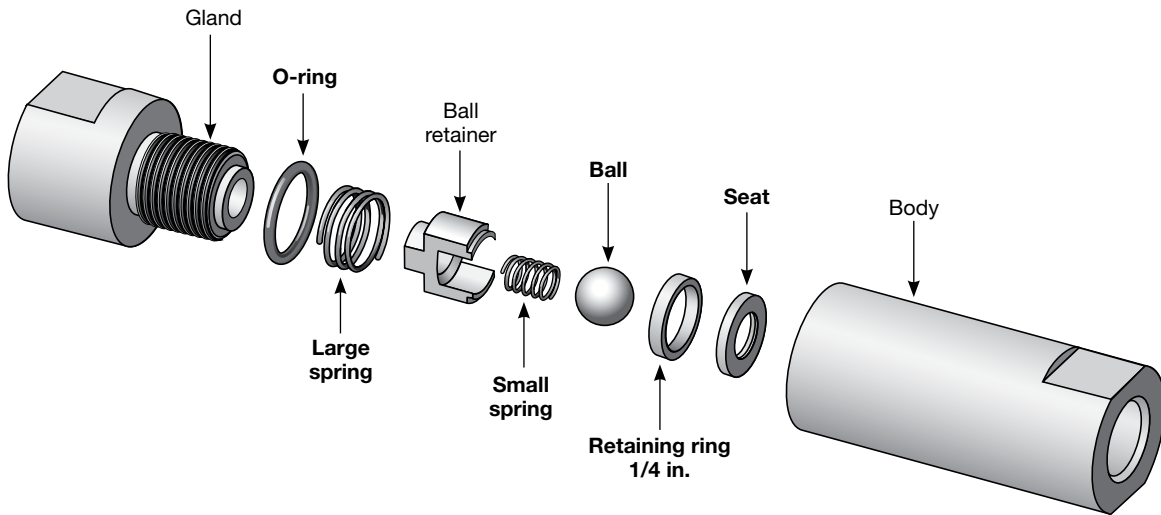
**Retaining Ring**  
3/4 and 1 in.

① 1/4 in. (CV4) check valves include an O-ring and do not include a snap ring. All other valves include a snap ring and do not include an O-ring.

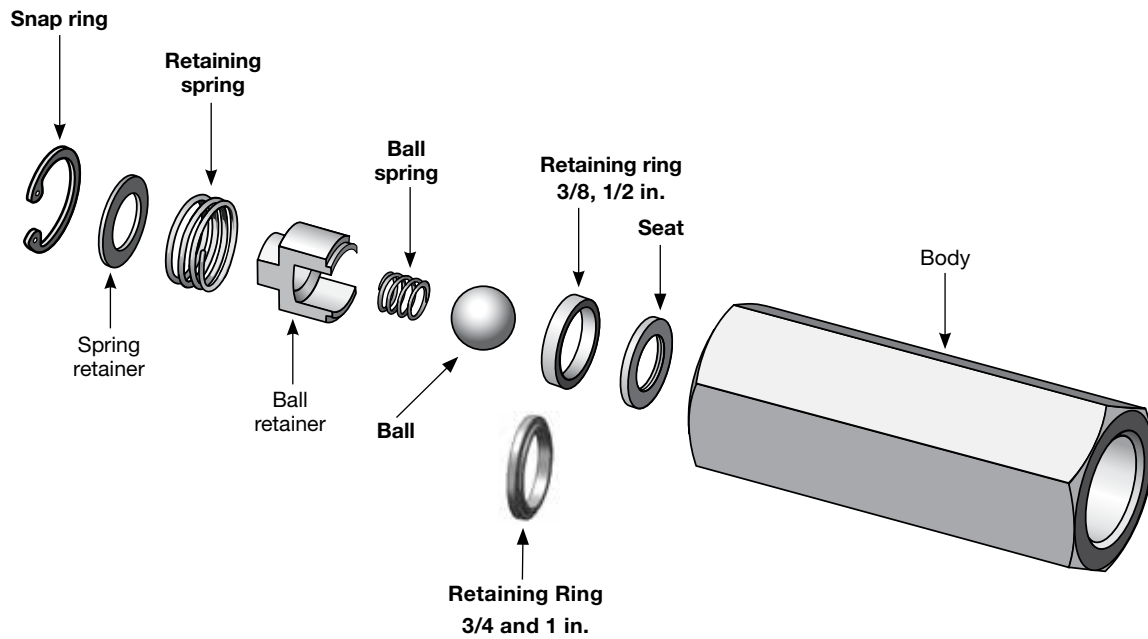
### Tools Required

Part	Size/Type	Tool
Valve body	—	 Bench vise
Gland	7/8 in.	 Open-end wrench (removal only)
	Capable of 45 ft-lb (61.0 N-m)	 Torque wrench
	7/8 in.	 Crow's foot adapter
Seat and ball	—	 Dowel rod
Snap ring	—	 Snap ring pliers
Ball retainer and small spring Gland threads	Christo-Lube <sup>®</sup> MCG 111 Moly-Lit <sup>™</sup> anti-seize	 Lubricants/fluids

**Exploded View – 1/4 in. (CV4) Only**



**Exploded View – All Other Assemblies**



**\*Bold indicates kit component.**

**⚠ WARNING**

Before removing the valve from service, to avoid personal injury, you must:

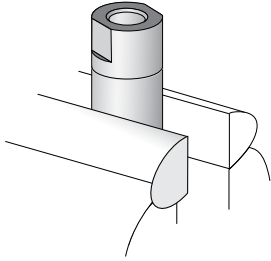
- Depressurize the system
- Cycle the valve
- Purge the system to remove any residual system media left in the valve

**NOTICE**

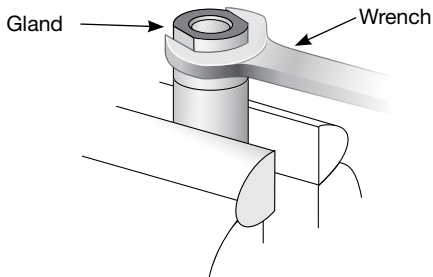
Do not scratch any sealing surfaces while following these instructions. Scratches on sealing surfaces may affect valve performance.

**Disassembly: 1/4 in. (CV4)**

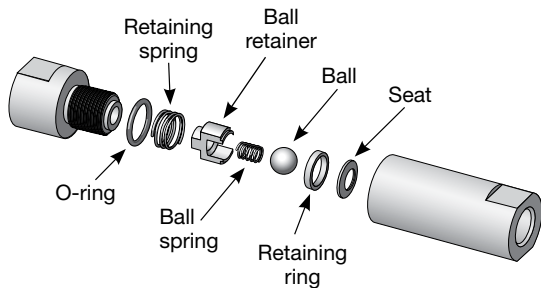
1. Remove the valve from the system.
2. Place the valve body in a vise.



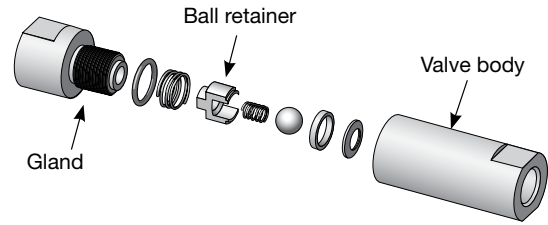
3. Remove the **gland** using an open-end **wrench**.



4. Remove and discard the following components: **O-ring, retaining spring, ball spring, ball, retaining ring, and seat**. Also remove the **ball retainer** and set aside.

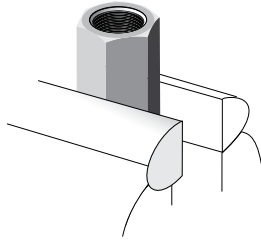


5. Clean the **valve body, ball retainer, and gland**. Ensure that the threads are not damaged or galled.

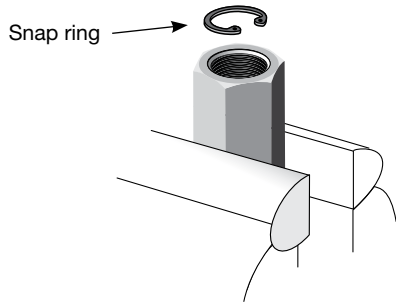


**Disassembly: All Other Assemblies**

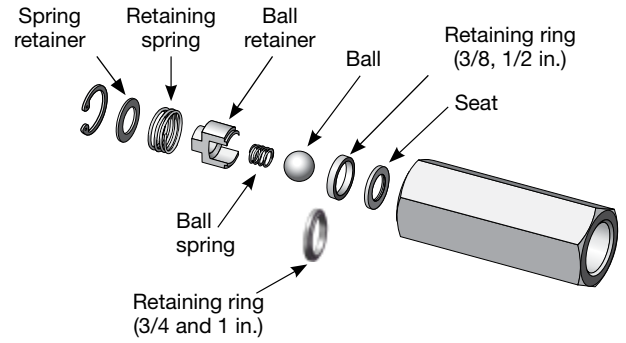
1. Remove the valve from the system.
2. Place the valve body in a vise.



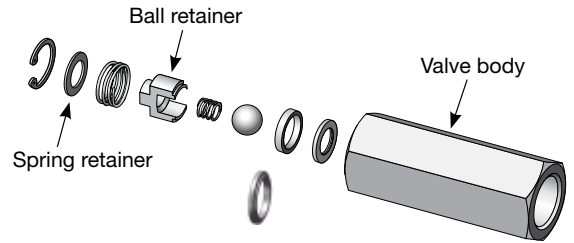
3. Remove and discard the **snap ring**.



4. Remove and discard the following components: **retaining spring, ball spring, ball, retaining ring, and seat**. Also remove the **ball retainer** and **spring retainer** and set aside.

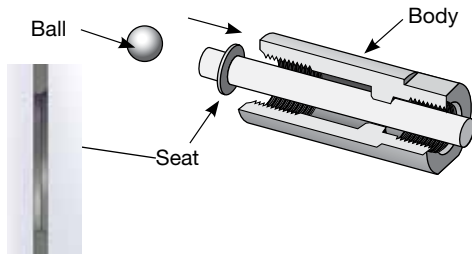


5. Clean the **valve body, ball retainer, and spring retainer**.

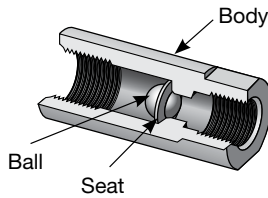


## Valve Reassembly

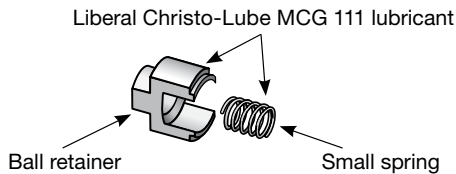
1. Orient the seat chamfer (curved side) towards the **ball**. Assemble the **seat** into the **body** by sliding it on a dowel rod with the chamfer of the seat facing out.



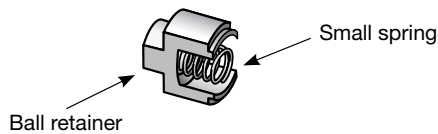
2. Assemble the **ball** into the **body** and onto the **seat**.



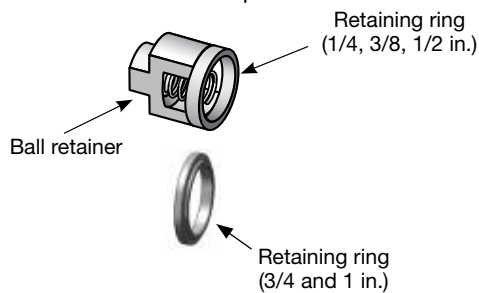
3. Lube the **ball retainer** and **small spring** by applying Christo-Lube® MCG 111 lubricant liberally.



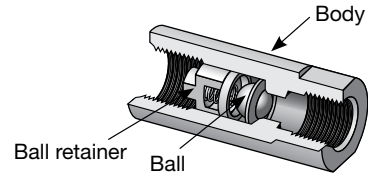
4. Assemble the **small spring** into the bore of the **ball retainer**.



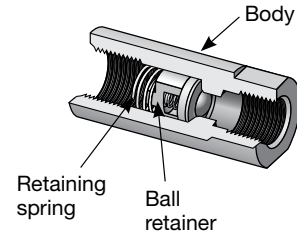
5. Assemble the **retaining ring** onto the outer edge of the **ball retainer** and hold in place.



6. Install the **ball retainer** assembly into the **body** and onto the **ball**.



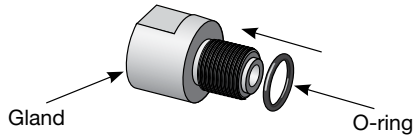
7. Assemble the **retaining spring** into the **body** and onto the **ball retainer**.



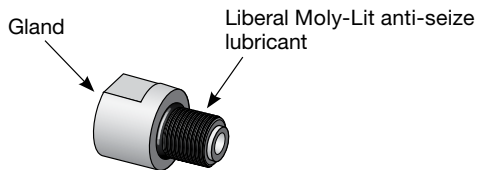
Finish reassembly by following the appropriate instructions:

### 1/4 in. (CV4) Assemblies

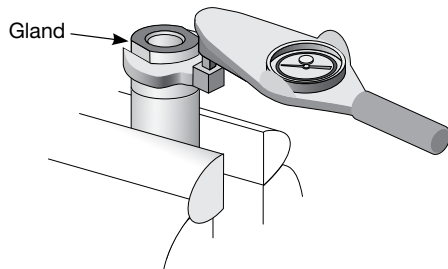
8. Assemble the **O-ring** onto the **gland** neck behind the threads.



9. Lube the **gland threads** by applying Moly-Lit™ anti-seize lubricant liberally.

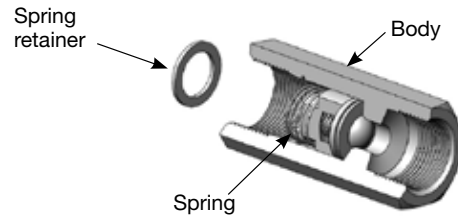


10. Torque the **gland** to 40 to 45 ft-lb (54 to 61.0 N-m).



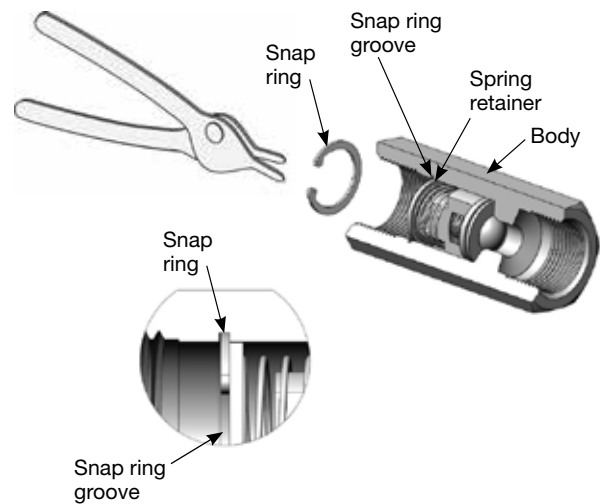
### All Other Assemblies

8. Assemble the **spring retainer** into the **body** on the **spring**.

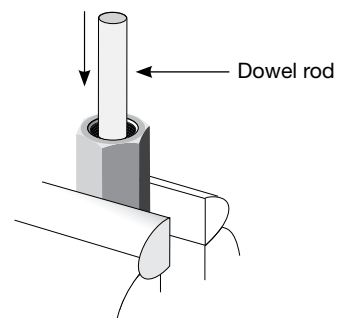


9. Assemble the **snap ring** into the **body** and onto the **spring retainer** using the snap ring pliers.

Note: Ensure the snap ring is fully into the groove.



10. Using the dowel rod, push the back of the **ball** firmly through the **inlet hole** in order to seat the **ball** and verify that the **snap ring** is secured.



For additional information, see [swagelok.com](http://swagelok.com).