

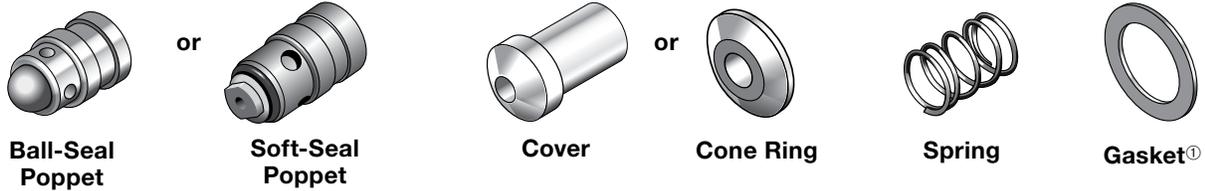
IPT Series Ball-Seal and Soft-Seal Poppet Check Valve



Service Instructions

Kit Contents

This kit contains the parts shown below.



① A gasket is only used in assemblies with an FK end fitting.

Tools Required

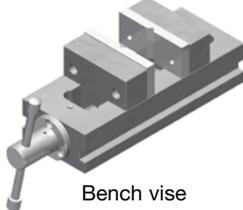
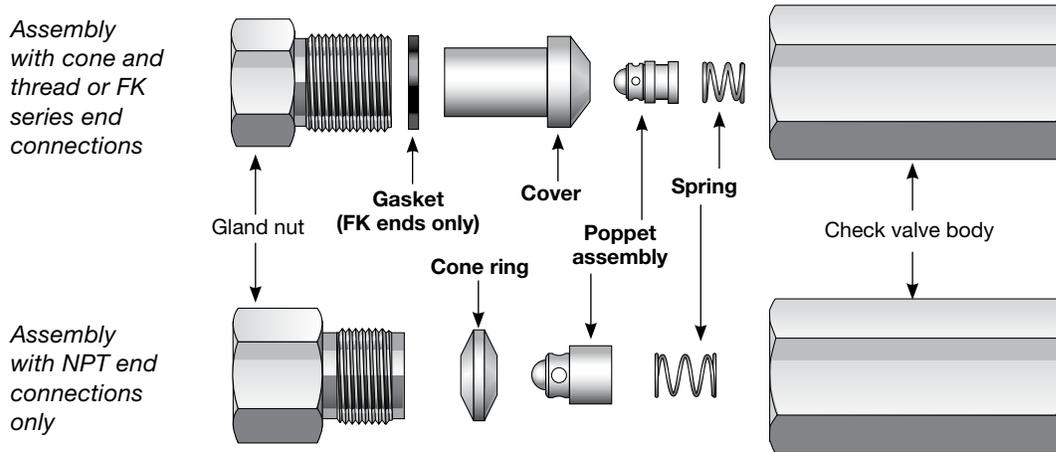
Part	Size/Type	Tool
Valve body	—	 Bench vise
Gland nut	See Table 1	 Open-end wrench (removal only)
	Capable of 320 ft·lb (434 N·m)	 Torque wrench
	See Table 1	 Crow's foot adapter
Poppet	—	 Dowel rod
Poppet Cover/cone ring and gland nut threads	Christo-Lube® MCG 111 Moly-Lit™ anti-seize	 Lubricants/fluids

Table 1

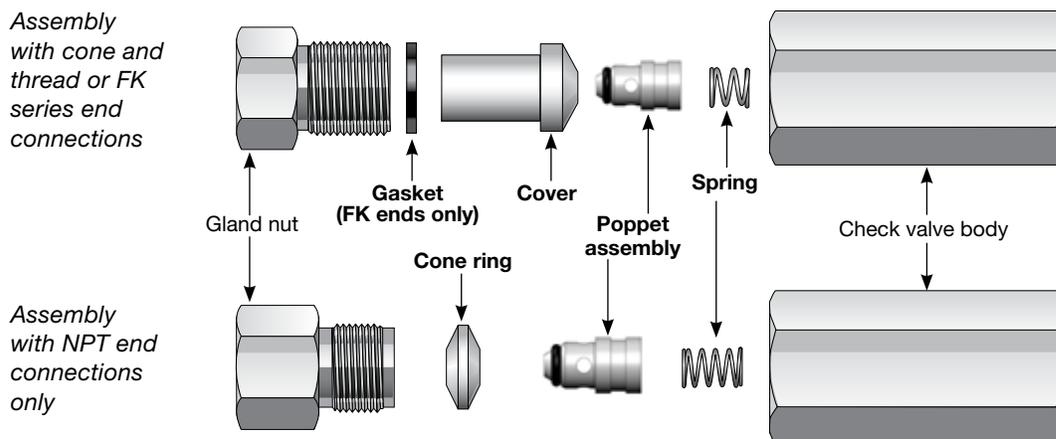
End Connection	End Connection Size (in.)	Gland Nut Hex Size (in.)
Female Cone and Thread Medium-Pressure	1/4	7/8
	3/8	7/8
	9/16	1 3/8
	3/4	1 3/8
	1	1 3/4
Female Cone and Thread High-Pressure	1/4	7/8
	3/8	1 1/8
	9/16	1 3/8
Female NPT	1/8	5/8
	1/4	3/4
	3/8	1
	1/2	1 3/8
	3/4	1 1/2
	1	1 3/4
FK Series Medium-Pressure	1/4	3/4
	3/8	1 3/8
	1/2	1 3/8
	9/16	1 3/8
	3/4	1 7/8

Exploded View

Ball-Seal Poppet Check Valve Components



Soft-Seal Poppet Check Valve Components



***Bold indicates kit component.**

⚠ WARNING

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

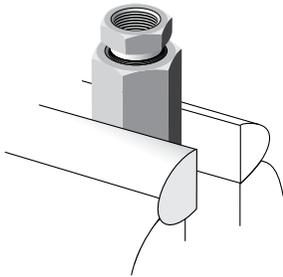
- Depressurize the system
- Cycle the valve
- Purge the system to remove any residual system media left in the valve

NOTICE

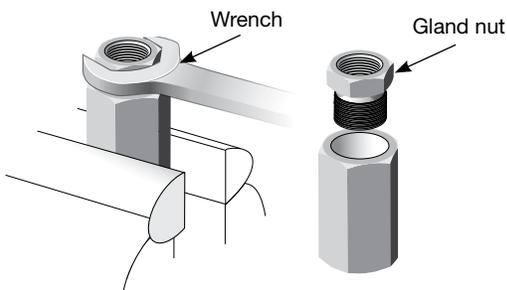
Do not scratch any sealing surfaces while following these instructions. Scratches on sealing surfaces may affect valve performance.

Disassembly

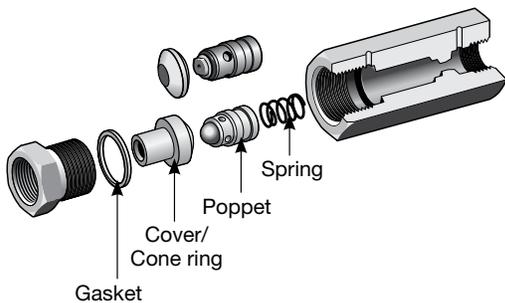
1. Remove the valve from the system, by removing both of the end connections, with a backup wrench on the gland nut.
2. Place the valve body in a vise.



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



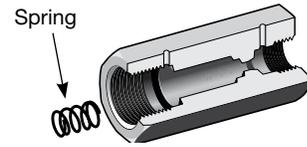
4. Remove and discard the following components: **gasket** (if applicable), **cover/cone ring**, **poppet**, and **spring**.



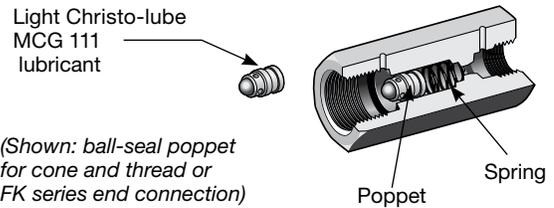
5. Clean the **valve body** and **gland nut**. Ensure that the threads are not damaged or galled.

Reassembly

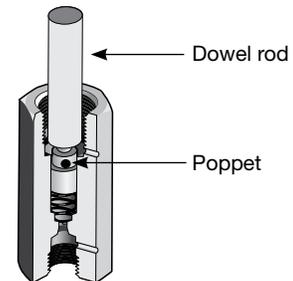
1. Insert the **spring** into the larger hole of the body.



2. Lube the **O-ring** and the **poppet** assembly lightly with Christo-Lube® MCG 111 lubricant applied to the entire largest outer diameter (OD) surface of the poppet. Assemble into the body on top of the **spring**. For a **ball seal**, make sure the round ball part is facing upward. For a **soft seal**, make sure that the end with the O-ring faces away from the spring.

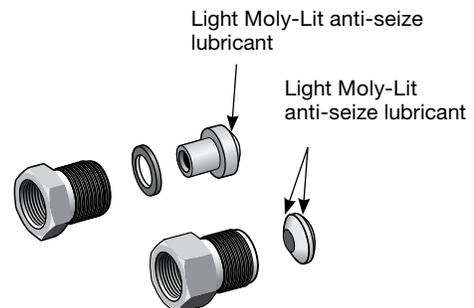


3. Ensure the **poppet** moves freely inside the body by pushing down on the **poppet** with the **dowel rod**.



4. For assemblies with cone and thread or FK series end connections, lube the external angles of the **cover** by applying Moly-Lit™ anti-seize lubricant lightly.

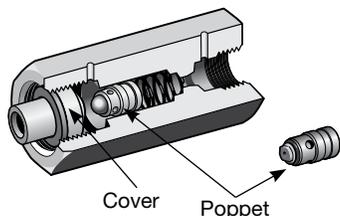
For assemblies with NPT end connections, lube the external angles of the **cone ring** by applying Moly-Lit anti-seize lubricant lightly.



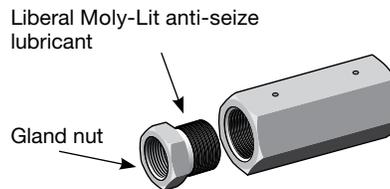
5. For assemblies with FK series end connection only:
Assemble the **gasket** onto OD of the **cover**.



6. Assemble the **cover** or **cone ring** into the body.
Ensure that the edge of the hole in the **cover** or **cone ring** sits against the **poppet ball** (for **ball-seal design**) or against the **O-ring** (for **soft-seal design**).



7. Lube the **gland nut threads** by applying Moly-Lit anti-seize lubricant liberally. Assemble it finger-tight into the body.



8. Torque the **gland nut** according to Table 2.

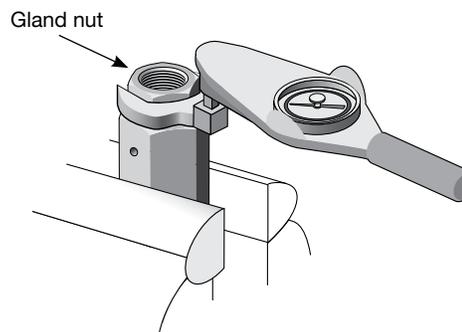


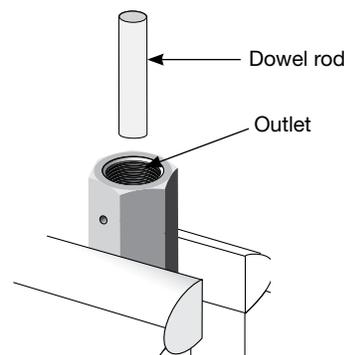
Table 2

End Connection	End Connection Size (in.)	Gland Nut Torque Values
		316 ^② and Alloy 2507
		Required Torque ft·lb (N·m)
Female Cone and Thread Medium-Pressure	1/4	55 to 60 (74.5 to 81.3)
	3/8	55 to 60 (74.5 to 81.3)
	9/16	220 to 240 (298 to 325) ^①
	3/4	220 to 240 (298 to 325)
	1	280 to 320 (380 to 434)
Female Cone and Thread High-Pressure	1/4	55 to 60 (74.5 to 81.3)
	3/8	65 to 70 (88.1 to 94.9)
	9/16	220 to 240 (298 to 325)
Female NPT	1/8	35 to 40 (47.5 to 54.2)
	1/4	40 to 45 (54.2 to 61.0)
	3/8	55 to 60 (74.5 to 81.3)
	1/2	220 to 240 (298 to 325)
	3/4	220 to 240 (298 to 325)
	1	280 to 320 (380 to 434)
FK Series	1/4	40 to 45 (54.2 to 61.0)
	3/8	190 to 210 (258 to 285)
	1/2	190 to 210 (258 to 285)
	9/16	190 to 210 (258 to 285)
	3/4	280 to 320 (380 to 434)

^① For information on NACE material, contact your authorized Swagelok sales and service center.

^② Torque values do not apply to 316 stainless steel NACE material.

9. Using the dowel rod, tap the back of the poppet assembly through the **outlet** in the body to properly set the **poppet**.



10. Wipe off any excess lubricant.

For additional information, see swagelok.com.