

# SCI Series 120L & 125L Chrome Plated Leadfree Brass Washing Machine Globe Valves – 125psi CWP

## Installation, Operation and Maintenance Instructions

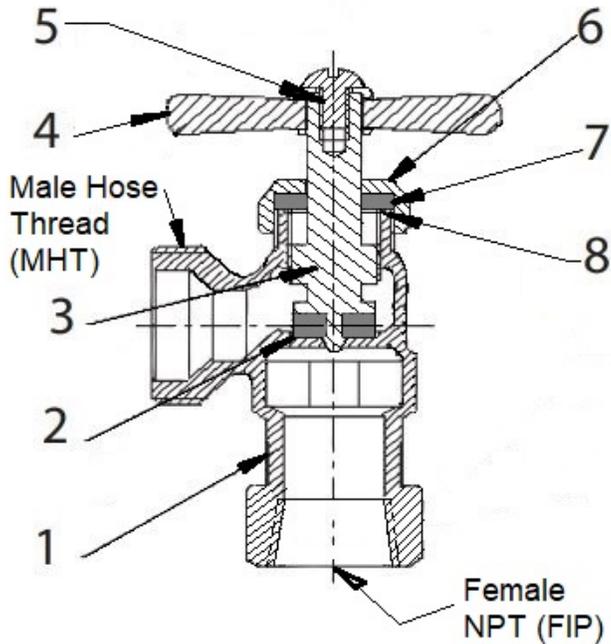


Series 120L FIP x MHT

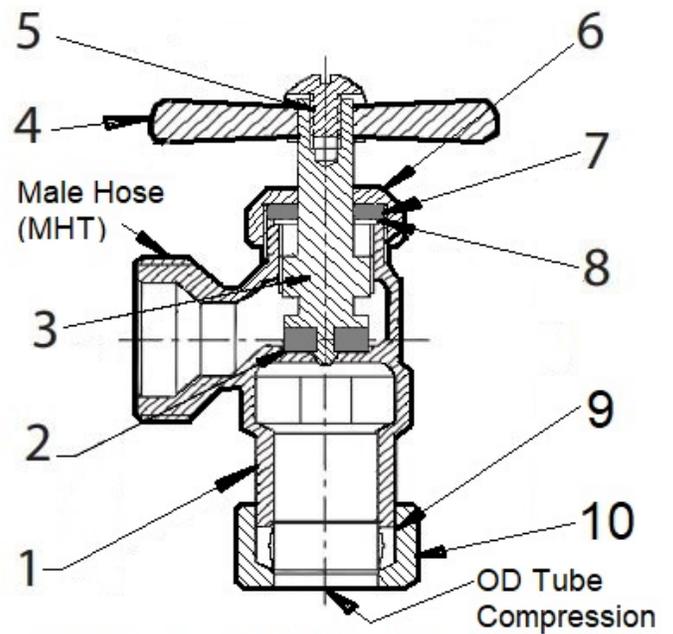


Series 125L  
Compression x MHT

**Figure 1** – SCI Series 120L & 125L Plated LF Brass Washing Machine Valves



SCI Series 120L Plated Leadfree Brass Washing Machine Shutoff Valve - Female NPT (FIP) x Male Hose (MHT)



SCI Series 125L Plated Leadfree Brass Globe Washing Machine Shutoff Valve - Compression x Male Hose (MHT)

**Table 1** – SCI Series 120L & 125L Washing Machine Valves List of Materials (See Figure 1 for items illustrated)

Item No.	Part Description	Material
1	Body	Chrome-Plated LF Cast Brass ASTM B584 Gr. C89550
2	Bibb Washer	NBR Rubber
3	Stem	Chrome-Plated LF Brass ASTM B584 Gr. C89550
4	Handle	Chrome-Plated Zinc
5	Handle Screw	Brass ASTM B134 Gr. C27000
6	Packing Nut	Chrome Plated LF Brass ASTM B124 Gr. C37000
7	Packing Washer	NBR Rubber
8	Stainless Washer	304 Stainless Steel
9	Brass Compression Ring	Brass ASTM B124 Gr. C37700
10	Coupling Nut	Chrome Plated Brass ASTM B124 Gr. C37700

## **Valve Installation** [See Figure 1 and Table 1 for part numbers listed in parentheses ( )]

These valves may be installed in the pipeline in any orientation or position using good piping practice. However, it is recommended to install the valve with the handle (4) above the valve body (1) and piping for optimum access and operation of the valve by the user.

For female NPT pipe (FIP) inlet valves [Series 120L], use a suitable joint compound or PTFE tape on pipe threads of the body (1) for ease of fit-up and to seal the threads. When tightening onto the inlet supply pipe NPT threads, ensure the male hose thread (MHT) connection at the outlet is oriented outward or toward the appliance to allow easy connection of the supply hose(s). After tightening the inlet pipe thread connection, close the valve by turning the handle clockwise and test the connection with system pressure to ensure no leaks. The outlet male hose threads (MHT) do not require thread sealants or tape to be used since connection hoses typically contain rubber gaskets which compress against the end of the connection.

For tube compression inlet valves [Series 125L], use fine sandpaper or equivalent to clean the outside diameter of the inlet tubing and to ensure a proper fit. Slide the inlet connection over the inlet pipe and orient the outlet male hose thread (MHT) connection outward or toward the appliance to allow easy connection to the supply hose(s) before tightening the inlet compression fitting. After tightening the compression fitting (typically hand-tight plus ¼ turn), close the valve by turning the handle clockwise and test the connection with system pressure to ensure no leaks. The outlet male hose threads (MHT) do not require thread sealants or tape to be used since connection hoses typically contain rubber gaskets which compress against the end of the connection.

## **Valve Operation** [See Figure 1 and Table 1 for part numbers listed in parentheses ( )]

These valves are a multi-turn soft-seated globe valve with a rotating & rising stem (3) which is equipped with a metal handle (4) for manual operation. The soft rubber seat or bibb washer (2) allows the valve to be completely sealed or shut off from the supply pressure at the inlet beneath the seat.

To close the valve, turn the handle (4) clockwise until the bibb washer (2) contacts the seat in the body (1) and tighten it hand-tight to shut off the valve.

To open the valve, turn the handle (4) counterclockwise until the stem (3) is sufficiently open to permit the desired amount of flow.

The valve is available in two styles: 1) a female NPT pipe thread inlet (FIP), or 2) a compression connection inlet which can be tightened or swaged directly over the OD of the inlet pipe. These angle-body style valves both have a male hose thread (MHT) outlet positioned 90-degrees from the pipe inlet which allows the operating handle to be directly above the pipe for easier operation.

**Valve Maintenance** [See Figure 1 and Table 1 for part numbers listed in parentheses ( )]

**Safety Precautions Prior to Performing Maintenance:**

**⚠ CAUTION** – Do not attempt to perform maintenance on valves in pressurized lines. Doing so may result in injury if there is an uncontrolled release of system pressure.

Before removing a valve from the pipeline, determine which media may be flowing through the valve. The media may be corrosive, toxic, flammable or contaminated. When there is evidence of hazardous fluids having flowed through the valve, additional precautions should be taken to avoid contact with these fluids and additional precautions should be taken when handling the valves during removal. Review the Safety Data Sheet (SDS) for any hazardous flowing fluids for any additional precautions. As a minimum, the following additional precautions should be taken.

1. Always wear OSHA-approved Safety Eyewear or face shields.
2. Always wear protective gloves and overalls or a chemical-resistant apron.
3. Wear protective footwear (e.g., safety shoes).
4. Wear protective headgear as required for the work area (e.g., hard hat – if required).
5. Ensure that running water is easily accessible (e.g., to rinse fluids from hands or valve / parts).
6. Have a suitable fire extinguisher ready if working with flammable media.

Check pipeline gauges (if so equipped) to ensure that no pressure exists on either the upstream or downstream sides of the valve before performing any maintenance.

Ensure that any trapped media is released from the valve and piping by operating the valve slowly to the half-open position. Then leave the valve in the fully open position during maintenance.

**Valve Maintenance:**

**Stem Packing Washer (7) Adjustment:**

If leakage is evident from the stem packing washer (7) area near the packing nut (6), tighten the packing nut (6) beneath the handle (4) about 1/8 of a turn. If the leakage persists, repeat the tightening sequence again. If the leakage cannot be corrected by tightening the packing nut (6), replacement of the stem packing washer (7) may be necessary.

**Stem Packing Washer (7) Removal and replacement (ONLY):**

*Note: ASC recommends that all soft elastomer parts – including the packing washer (7) and the seat / bibb washer (2) be replaced with new parts if available in a kit (contact sales). If kits are not available, a new replacement valve assembly will be required.*

It may be possible to replace ONLY the packing washer (7) to stop any external leakage out of the stem, but any further disassembly and refurbishment will require the valve to be removed from the piping and moving it to a clean work location.

To replace the packing washer (7), first remove the handle screw (5) and handle (4) from the stem (3).

Remove the packing nut (6) by turning it counterclockwise and pulling it off the stem (3).

Remove the packing washer (7) and the stainless-steel washer (8) from the top of the body (1) and discard the old packing washer. Check the stainless-steel washer (8) for any excessive wear or damage and clean the inside of the packing nut (6) and the surface of the stem (3) before installing any new parts.

Replace the stainless-steel washer (8) and the rubber packing washer (7) and install the packing nut (6) over the stem and tighten it hand tight. Replace the handle (4) onto the stem (3) and secure it with the screw (5) by tightening it snug onto the end of the stem (3). Tighten the packing nut (6) another 1/8 turn to secure the stem connection.

With the hoses connected (if possible) turn the fluid pressure on and open the valve by turning the handle (4) counterclockwise to ensure the stem and packing washer (7) remain tight and there is no fluid leakage.

Full valve refurbishment including replacement of the packing (7) and seat / bibb washer (2):

*Note: ASC recommends that all soft elastomer parts – including the packing washer (7) and the seat / bibb washer (2) be replaced with new parts if available in a kit (contact sales). If kits are not available, a new replacement valve assembly will be required.*

To perform the following more extensive replacement of valve internal components, remove any hoses or connections from the valve outlet and remove the inlet side of the pipeline by unscrewing it from the inlet pipe (FIP threaded connection) or loosening and removing the coupling nut (10) to pull the valve off the pipe (compression fitting).

First remove the handle screw (5) and handle (4) from the stem (3).

Remove the packing nut (6) by turning it counterclockwise and pulling it off the stem (3).

Remove the packing washer (7) and the stainless-steel washer (8) from the top of the body (1) and discard the old packing washer. Check the stainless-steel washer (8) for any excessive wear or damage and clean the inside of the packing nut (6) and the surface of the stem (3) before installing any new parts.

Unthread the stem (3) from the body (1) and completely remove it to get access to the seat or bibb washer (2) on the end of the stem (3).

Remove the old bibb washer (2) and discard it. Clean and inspect the stem (3) seat contact surfaces and the seat surfaces inside the body (1) making sure there are no surface pits or radial scratches that would promote leakage.

Clean the end of the stem (3) and install a new seat or bibb washer (2) over the barbed end of the stem by stretching it slightly and pushing it onto the stem.

Reinstall the stem (3) with new seat/bibb washer by threading it back into the body (1) and ensure the stem thread turns easily in the body all the way up until it seats.

Replace the stainless-steel washer (8) and the rubber packing washer (7) and install the packing nut (6) over the stem and tighten it hand tight.

Replace the handle (4) onto the stem (3) and secure it with the screw (5) by tightening it snug onto the end of the stem (3). Tighten the packing nut (6) another 1/8 turn to secure the stem connection.

The following tests are recommended before reinstalling the valve onto the piping and to ensure tightness of the valve body (1) and packing nut (6) connection and the internal body-seat (2) connection:

- *To test the body (1) and packing (7) connection* - a pressurized shell test at 110% of the valve pressure rating (e.g., 150psi for a 125psi WOG rated valve) with water for 15 seconds – with no leakage allowable. [per API-598 & ASME B16.34].
- *To test the valve seat / bibb washer (2) connection* - a seat test of the valve with the stem (3) and bibb washer (2) in the CLOSED position at  $80 \pm 20$ psig ( $5.5 \pm 1.5$ barg) with air or nitrogen for 60 seconds – with no leakage permitted. [in accordance with MSS SP-61].

See the section on Valve Installation for re-installation of the valve back into the pipeline.