

SCI Series 9191L Lead-free Brass Swing-Check Valve

Installation, Operation and Maintenance Instructions

Series 9191L Lead-free Brass Swing Check Valve - Threaded Ends



Figure 1 – SCI Series 9191L Threaded, Lead-free Brass Swing Check Valves

Series 9191L Lead-free Brass Check Valve with Threaded Ends

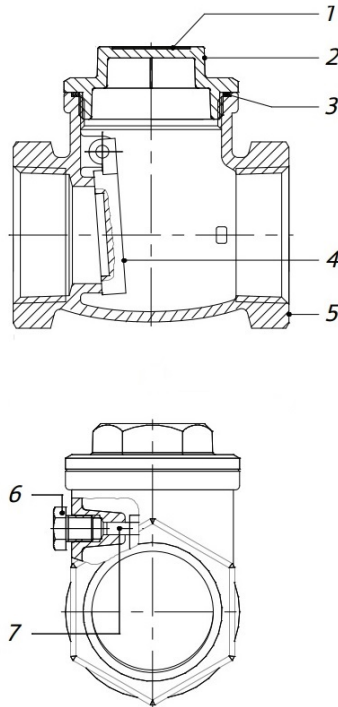


Table 1 – SCI Series 9191L List of Materials (See Figure 1 for items illustrated)

Item No.	Part Description	Material – Series 9191L (Lead-Free, Note 1)
1	Name Plate	Aluminum
2	Cap	Brass ASTM B584, C89550
3	Packing	Fibre “H”
4	Disc	Cast Brass ASTM B584, C89550
5	Body	Cast Brass ASTM B584, C89550
6	Bolt	Brass ASTM B16 – C36000
7	Pin	Brass ASTM B16 – C36000

Notes: (1) Materials certified lead-free approved to California AB1953 and federal Safe Water Drinking Water Act (SWDA).

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 cap (2) above the flow axis (in horizontal pipe) for optimum access and operation of the valve.

These valves should be installed in a horizontal pipeline with the body vertical (with cap (2) above flow axis) using good pipe installation practice. These valves can also be installed in a vertical run of pipe, as long as the flow arrow on the body points upward.

These valves are equipped with internally threaded pipe (FNPT) connections to be screwed into the piping system. It is recommended that a suitable joint compound or TFE tape be used on the pipe threads for ease of fit-up and sealing of the threads.

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


The operation of a swing check valve is automatic – no operator action is required.

The swing check valves are designed to permit flow in only one direction and stop flow in the reverse direction.

A flow arrow on the side of the valve body indicates the desired direction of fluid flow (free flow).

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

Safety Precautions Prior to Performing Maintenance:

 **WARNING** – Do not attempt to perform maintenance on these valves in pressurized lines. Doing so may result in severe injury or burns due to hot fluids 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 to ensure that no pressure exists on either the upstream or downstream sides of the valve before performing any maintenance.

Valve Maintenance – continued:

In normal service, no preventive maintenance is required to be performed on these valves.

These valves do not require lubrication or adjustment while in service.

Should the valve disc (4) or its seat become worn over time – such that its performance (leakage) is unacceptable – the valve should be replaced.

However, should only minor work need to be performed on the valve internals (e.g., removal of an internal obstruction or debris) the following steps should be performed:

Disassembly of the valve to access internals:

D1. Loosen the valve cap (2) using a pipe wrench by turning it counterclockwise. Note: depending on manufacturer – it may be necessary to apply heat in addition to torque to loosen the cap if thread sealants have been used. Remove the cap gasket (3) and set it aside if not damaged excessively – otherwise discard it.

D2. If it is necessary to remove the disc (4) to inspect the seating surfaces or get to an internal obstruction, remove the retaining screw (6) and back out the pin (7) and remove the disc (4) thru the top of the valve.

D3. Remove any internal obstructions inside the valve that may be blocking the disc (4) and inspect the seating surfaces on the inside of the body (5) or the disc (4) for any obvious damage or material that adheres to either surface. Note: extensive damage to the seating surfaces will warrant replacement of the entire valve as refurbishment or replacement of the disc and seating areas may be too costly.

Reassembly of the valve after disc (4) and/or seat repairs:

R1. Re-insert the disc (4) back into the adjacent support grooves in the valve body (5) and put the pin (7) through the body (5) and arms of the disc (4) to secure it. Ensure the disc (4) lifts easily without excessive resistance.

R2. Replace the cap gasket (3) – preferably with a new one – and install the cap (2) by screwing it onto the body (5) and tighten it clockwise (snug plus ¼ turn) using a pipe wrench or similar. Note: if it is evident that thread sealants had been used when the valve was disassembled, use the same or similar sealant (compatible with system fluid) prior to reassembly of the cap (4).

R3. If the valve has been removed from the pipeline, it is recommended to re-test the valve to a minimum of 225psig (110% of rating) with water, or 80 to 100psig air pressure to ensure the body-to-cap connection is tight. If the valve is installed in the pipeline, it is recommended to perform this test to maximum system pressure possible and to ensure the valve shuts off in the reverse flow direction.