SCI Series 6122 CPVC Ball Valve

Installation, Operation and Maintenance Instructions

Figure 1 – SCI Series 6122 CPVC Ball Valve

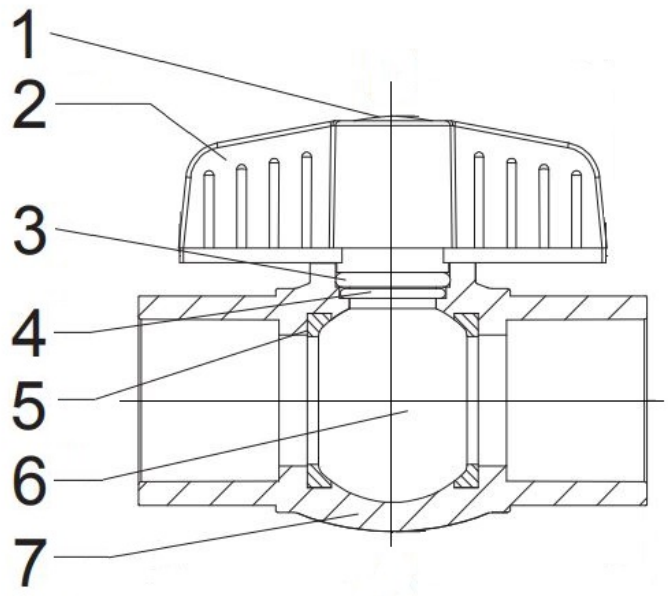

Table 1 – SCI Series 6122 List of Materials (See Figure 1 for items illustrated)

Item No.	Part Description	Material
1	Cap	ABS Plastic
2	Handle	ABS Plastic
3	O-Ring	EPDM Rubber
4	O-Ring	EPDM Rubber
5	Seat Ring	PTFE
6	Ball	CPVC Thermoplastic
7	Body	CPVC Thermoplastic

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

These valves are equipped with socket connections for adhesive bonding to adjacent CPVC piping.

⚠ **CAUTION** – Caution should be taken to properly prepare the same composition CPVC thermoplastic piping for installation into the valve body (7). The ends of piping to be inserted and adhesive-bonded into the valve should be accurately cut square (90-deg) to the outside diameter of the pipe, and the ends de-burred by placing a 10 to 15-degree chamfer on each pipe end, preferably with a file and not just a deburring tool. The outside of the CPVC pipe and inside valve socket connections must also be treated with the correct adhesive primer to help soften the surfaces to be bonded. Solvent cement must be applied immediately to the primed surfaces before they dry – using a 1/4 turn twisting motion of the pipe and socket to distribute the adhesive during installation.

⚠ **WARNING** – These valves constructed of CPVC Thermoplastic should not be used for pressurized gases such as air or nitrogen. Nor should compressed air or gases be used to pressure-test, flush or clear the systems in which these valves are installed. Use of pressurized gases in the valve may result in explosion or fragmentation of the valve body or parts which could cause serious injury or death to adjacent personnel.

⚠ **WARNING** – Some lubricants – including vegetable oils – are known to cause stress cracking in thermoplastic materials like CPVC. Lubricants are not normally required for use in this valve during installation. And any fluids containing lubricants should be checked for compatibility with CPVC before valve installation.

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

These are quarter-turn (90° rotation) ball valves which are typically fitted with a plastic tee-handle (2) for manual operation. The valve body (7) also contains travel stops at fully open and closed positions.

To open the valve, turn the handle (2) counterclockwise. The handle (2) should be in-line or parallel to the axis of the pipe.

To close the valve, turn the handle (2) clockwise. The handle (2) should be perpendicular to the axis of the pipe.

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.

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 any maintenance – including removal of the entire valve from the system.

Valve Maintenance:

This type of molded-in-place thermoplastic valve is not designed to be dismantled to allow maintenance of its internal parts. So, the following conditions may warrant replacement of the entire valve with a new one:

1. There is excessive leakage out of the o-ring seals (3,4) beneath the handle (2).
2. Excessive leakage through the seats (5) when the valve is closed.
3. Excessive torque when attempting to open or close the valve with the handle (2).

Removal of the valve from the system will typically involve cutting the valve from the pipe due to the nature of the adhesives used to secure it to the piping. See the valve installation section of this instruction for installation of a new valve – which may also require installation of an adapter(s) to make up the cut-off pipe.