

# JARECKI VALVES INSTALLATION AND MAINTENANCE MANUAL

## HTV SERIES UNI-BODY METAL SEATED BALL VALVE LEVER OPERATED



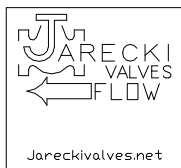
### INSTALLATION

Before Installation, the piping system should be cleaned and flushed, to prevent damage to the seats. Next, ensure that the valve has not been damaged during shipment. All flange protectors and shipping materials must be removed to allow a thorough inspection.

The stops for the lever are factory set. Operate the valve operator to ensure that the operator has not been damaged.

The valve may be installed into the piping system with the valve stem oriented either vertically or horizontally depending on the piping arrangement. For valve sizes 1 1/2" and larger, **never pick up the valve by the Lever.**

**CAUTION:** Pressure orientation is important. The valve must be installed with the flow arrow on the side of the body pointing towards the downstream side.



### WELDING PROCEDURE

1. Apply Anti-Heat, or some other heat-sink compound to the outer boundary of the Heat Affected Zone. The Heat Affected Zone is approximately 2" in length, in either direction of the weld area.
2. Ensure that the area to be welded is free of grease and dirt.
3. Grounding straps should be used and strapped onto the pipe on the body side if you are welding the body to the pipe, and on the tailpiece (5) side if welding the tailpiece.
4. Weld the valve per applicable procedures, taking care to keep the temperature as low as possible past the heat affected zone. At no time should the temperature exceed 700 deg in the area outside the heat affected zone.
5. If PWHT is to be performed, this operation is to be performed on the weld ends only. The ends must be PWHT at separate times to prevent the valve trim and seals from seeing the PWHT temperature.

### OPERATION

Jarecki HTV Series Ball Valves are primarily used as shut-off valves. If the valves are to be used for control, it is strongly recommended that the factory be contacted.

Turn the lever clockwise to close and counterclockwise to open. If the lever is perpendicular to the flow, the valve is closed. There are stops set on the valve for both the open and closed positions.

## MAINTENANCE

This valve does not require lubrication or maintenance.

No scheduled maintenance on the stem packing is required, however, regular inspection on the gland bolts is recommended. During maintenance, the gland bolting must be tightened uniformly to eliminate any extreme rocking of the compression plate. Care must be taken not to over torque the gland bolts. The gland bolting should be tightened to the torque values provided below. This can be accomplished with the valve in line. It is imperative that the compression plate (13) stay level at all times.

### GLAND NUT

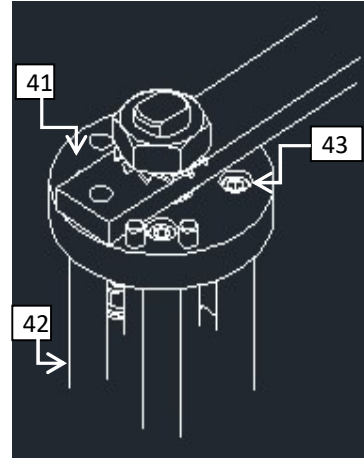
BOLT	TORQUE (FT.LBS)
1/4"	4
5/16"	6
3/8"	10
7/16"	13
1/2"	15

After the gland bolts have been tightened, and leaking persists, the stem packing should be changed. See steps in Repair section to perform this.

## REPAIR

Jarecki Valves recommends returning metal seated valves to our factory concerning major repairs. If seals need replaced, this can be done in the field. A spare parts kit is available for all the seals required in the assembly. If valve disassembly becomes necessary in the field, proceed as follows:

1. Be certain the line pressure in the piping system has been depleted. Review Figure 1.
2. Cycle the valve while it is still in the line to remove any possible trapped pressure within the body cavity. Place the valve in the open position. This will prevent the ball from falling out when the body center section (4) is removed.
3. The lever extension assembly must be removed first before the valve can be disassembled or the stem packing can be replaced. Unscrew (41) mounting screws. Lift up on the lever and remove it and the mounting plate (41) from the valve assembly. Remove the 4 mounting posts (42).



Now that the lever assembly is removed repairs to the valve can be performed.

### Replacing Stem Packing

**There should be no pressure on the valve when the stem packing is changed.**

1. Unfasten the gland nut (16). Take out the compression plate (13), Belleville washers (17), and compression ring (11). Remove old stem packing. Clean stem as best as you can and make sure there are no scratches on the stem which would be a leak path. If there are scratches in the stem then the stem will need replaced.
2. Install one graphite end ring (14B) followed by two sealing graphite rings (14A). Finally, install one graphite end ring (14B).
3. Push the compression ring (11) over the stem and down into the stuffing box. You can use the compression plate to accomplish this (13).
4. Install Belleville Washers (17) in an accordion fashion, followed by the gland nuts (16). Torque the gland nuts (16) evenly. The gland bolting should be tightened to the torque values provided below. This can be accomplished with the valve in line. It is imperative that the compression plate (13) stay level at all times.

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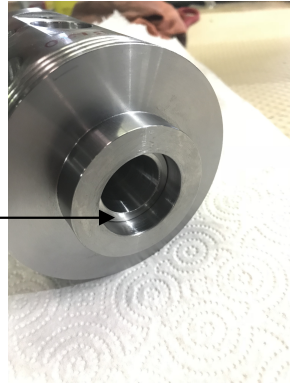
## ASSEMBLY

### Disassemble the Valve

Review Figure 1 on page 5

1. Remove the valve from the line. Then, cut the weld on a Lathe and be careful not to cut away any of the base material in the body or tail.

Retaining Ring



2. Remove the retaining ring (33) on the upstream side of the valve.

3. Remove seat guide (5).

4. Unfasten the gland nut (16). Take out the compression plate (13), and Belleville washers (17).

5. Turn the stem so that the valve now in the closed position. You can now remove the ball (1) from the body (4).

6. Next remove the compression ring (11).

7. Remove the upstream seat (2A) and the downstream seats (2B). You may need to use a pick to get underneath the seat and pull it out. Remove the graphite seat seal (3A) from behind the sealing seat (2B).

8. Dislodge and extract the stem packing (14A). When removing packing, a nonmetallic pick should be used to prevent possible scratching of the packing box sealing surface.

9. Inspect all components for damage or wear. If a component shows these signs, it should be repaired or replaced. Replace all seals during the repair.

1. Thoroughly clean valve body and components with a solvent. Review Figure 1 on page 5.

2. Install seat seal (3A) into the body (4). Next insert downstream sealing seat (2B)

3. Rotate the stem to the closed position and insert the ball (1) into the body cavity. Rotate the stem to the open position (counter clockwise) to prevent the ball from falling out.

4. Insert upstream seat (2A) followed by the seat spring (3C) into the valve body (4).

5. Insert the seat guide (5)

6. Install the retaining ring (33)

7. Install one graphite end ring (14B) followed by two sealing graphite rings (14A).

8. Finally, install one graphite end ring (14B).

9. Push the compression ring (11) over the stem and down into the stuffing box. You can use the compression plate to accomplish this (13).

10. Cycle the valve to ensure it is functioning properly. There should be no sticking or jerking motion.

11. Install Belleville Washers (17) in an accordion fashion, followed by the gland nuts (16). Torque the gland nuts (16) evenly. The gland bolting should be tightened to the torque values provided below. This can be accomplished with the valve in line. It is imperative that the compression plate (13) stay level at all times.

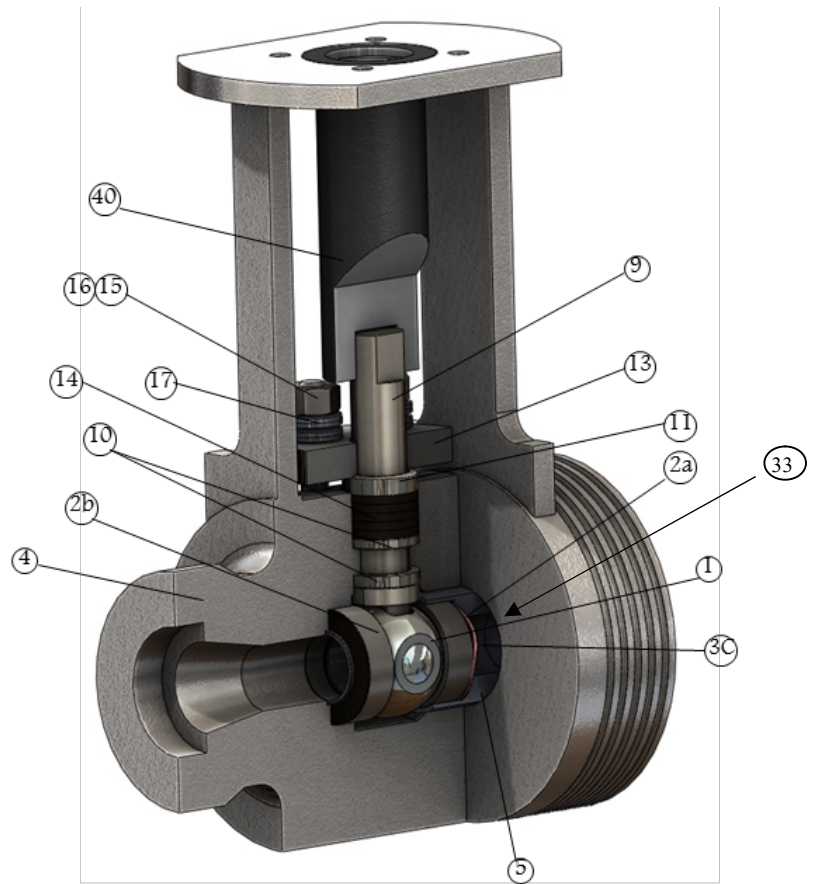
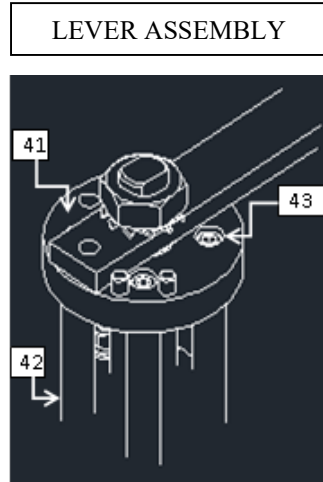
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12. Cycle the valve to ensure it is functioning properly. There should be no sticking or jerking motion.

13. Lever assembly can now be installed.

FIGURE 1



## BILL OF MATERIAL

ITEM NO.	NAME	ITEM NO.	NAME
1	BALL	13	COMPRESSION PLATE
2A	GUIDE SEAT	14	STEM PACKING
2B	SEAL SEAT	15	GLAND STUD
3A	SEAT SEAL	16	GLAND NUT
3C	SEAT SPRING	17	BELLEVILLE WASHER
4	BODY	33	TAILPIECE RETAINING RING
5	SEAT GUIDE	40	COUPLER
9	STEM	41	MOUNTING PLATE
10	THRUST WASHER	42	MOUNTING POST
11	COMPRESSION RING	43	SOCKET HEAD SCREWS