



Upadhaya Valves Manufacturers Private Limited

OPERATION MANUAL OF C.I & FORGE GATE VALVE

1. Open the gate of sluice valve by operating wheel.
2. Clean the inside seating portion of body and wedge.
3. Ensure gland bolts and nuts are tightened.
4. If it is loosen, tight properly.
5. Partial opening of gate will not be allowed.
6. Valve installed on pipe line, spindle should kept in vertical position.
7. During line testing valve (gate) should be fully open condition.
8. It is to be ensured back seat(for Rising valve) should be engaged spindle chamfered portion to prevent leakage from gland portion (If gland bolt & nut is loosen)
9. It is to be checked that welding slag and welding particle should not reached in front of valve seating.

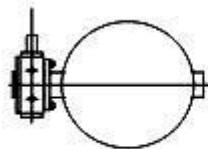
OPERATION MANUAL OF NON-RETURN VALVE

- 1) Clean Seat of check valve. Before installation in between line.
- 2) It should be ensure that there will be no foreign particle inside the valve body.
- 3) Non-Return Valve install in such a way that cover portion shall be kept perfect horizontally.
- 4) Pump started, discharge begins. Flap of NRV will go upward by the flow of water. Flow will continuous until pump stopped.
- 5) When pump stopped, discharge will be stopped at the same time. Flap of NRV goes downward and again sealed with body ring. Pressure will arrest by closing Flap of NRV.

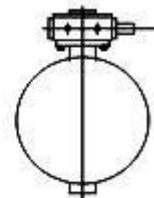
OPERATION INSTRUCTION FOR BUTTERFLY VALVE

1. Clean /Remove dirty particles from Body Ring and valve Follower.
2. Now valve to be opened 10/15° by Rotating driving spindle of gear box.
3. EPDM Seat Ring to be cleaned properly.
4. After cleaning to ensure fully closed of Disc.
 - a. The opening and closing of valve Disc to be done at least 2 times.
 - b. Companion Flange to be fitted to valves Flanges with Bolts & Nuts. (For 800mm)
 - c. Companion Flange Bolt & Nut to be tightened rigidly. (For 2000mm).
5. After Completion of tightening valve to be placed within pipe junction.
6. Before installation it should checked that Flow shall be opposite of valve Follower and S.S. Fasteners.
7. Selected the type of installation. It may install in two types.

- Spindle in Vertical direction
- Spindle in Horizontal direction.



HORIZONTAL DIRECTION



VERTICAL DIRECTION

8. After satisfactory Erection the valve on line, manually opening/closing to be done at least two/three times.



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OPERATION MANNUAL OF BALL VALVE

1. Open cap from thread portion.
2. All BSP thread shall be clean properly (if required). For flange type valve, flange face to be cleaned properly.
3. Valve shall be installed securely between two pipe lines. Teflon tape shall be used for thread sealing, gasket properly insert fro flange end valve.
4. Open /close direction indicated on the lever to conform the rotation of ball through lever.
5. To ensure closing lever shall be rotated clockwise direction and anti-clockwise rotation of lever to ensure the opening of valve.

OPERATION MANNUAL OF Y-STRAINER

1. Basket strainer shall be mounted vertically.
2. Clean the flange surface of strainer.
3. Check the flow direction of strainer.
4. Raw water passes are end of strainer while passes inside perforated sheet with mesh dirty particle of sizes above -40 microns accounted inside the strainer mesh.

OPERATION MANNUAL OF GLOBE VALVE

1. Clean face and bore of globe valve to remove foreign particle on those portion.
2. Open and close 2-3 time before installation in line.
3. Fitted hand wheel on each globe valve.
4. When line is under pressure, valve is kept always full open condition ensure to contact back bush portion to prevent leakage from gland.
5. Valve shall be closed on clockwise direction.
6. During closing of valve a lever is used to ensure proper tighten of seat, causes prevent seat leakage.

OPERATION MANNUAL OF POLYPROPYLENE BALL VALVE

1. Polypropylene valve are made from three parts.
2. Before installation between the line two flanges faces will be cleaned. Rotary movement of valve to be check.
3. Open /close direction indicated on the lever to conform the rotation of ball through lever.
4. To ensure closing lever shall be rotated anti-clockwise direction and clockwise rotation of lever to ensure the opening of valve.

OPERATION MANUAL OF SCOUR VALVE

1. Open the gate of scour valve by operating wheel.
2. Clean the inside seating portion of body and wedge.
3. Ensure gland bolts and nuts are tightened.
4. If it is loosen, tight properly.
5. Partial opening of gate will not be allowed.
6. Valve installed on pipe line, spindle should kept in vertical position.
7. During line testing valve (gate) should be fully open condition.
8. It is to be ensured back seat should be engaged spindle chamfered portion to prevent leakage from gland portion (If gland bolt & nut is loosen)
9. Scouring system is provided to drain the dirty water by opening drain plug.



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10. It is to be checked that welding slag and welding particle should not reached in front of valve seating.

OPERATION MANNUAL OF SLUICE VALVE

1. Before installation of valves check opening and closing by rotating hand wheel.
2. After installation of valve, wedge to be raised fully, to ensure a complete opening hand wheel to be required extra toque by arrange a lever to the attachment with hand wheel.
3. Tee bolt/eye bolt of gland portion to be tightened properly.
4. No dust particle or welding slag should not contain inside the pipe line, it should be ensured properly.
5. To ensure the proper tightening/seating of valve, a lever is required for tightening to get extra toque for seating the valve. A figure lever is enclosed.

OPERATION MANNUAL OF Y-STRAINER

1. Clean the flange surface of strainer.
2. Check the flow direction of strainer.
3. Strainer is mounted on pipe line in such a way that flow mark of strainer in symmetrical according to line flow of water.
4. Strainer cover pant with nipple is kept down word on pipe line. Forging particle may remove by opening cover.

OPERATION MANUAL OF AIR VALVE

- 1) Clean properly large Orifice end before installation on line.
- 2) Cowl/ Dust Cover to be installed on large Orifice top.
- 3) Valve should be installed perfectly vertical direction.
- 4) Slightly slope / Twist of mounting position of valve are not permitted.
- 5) During operation Air will escape from large orifice of the air valve after a few minutes of starting the pump.
- 6) After releasing large quantity of air line will fill up with water and flow inside the line shall be started. Then large orifice with sealed with float and Will arrest the leakage from large orifice.
- 7) Small orifice will seal at the same time. After Discharging the fluid inside the pipe line for few minutes' small quantities of Air will accumulate at small orifice end. At certain position accumulated air will release from small orifice.

OPERATION MANUAL OF BUTTERFLY VALVE

FOR WAFER TYPE BUTTERFLY VALVE

- 1) Before installation of valve between the line, opening and closing of valves should be done at least 3 or 4 times by operating hand wheel/lever.
- 2) Clean dust and other foreign particles on seating surface.
- 3) Valve disc can operate by handle; handle is kept slightly upward for disengaging the handle pin with the teeth portion of top.
- 4) Valve may install on line to keep spindle in vertical portion and valve disc to be kept in opening condition(teeth mark as 'o')

FOR FLANGE TYPE BUTTERFLY VALVE

1. To ensure the opening and closing of valve by operation hand wheel through gear box.
2. Clean properly valve seat and disc seal rings.



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3. The installation of butterfly valve on pipe line can be arranged in two position (i) spindle as in vertical or (ii) spindle may arrange as horizontal direction.
4. Disc of butterfly valve is kept open condition before installation on line. Indication arrow on gear box will remain at 'o' (open) mark

OPERATION MANUAL OF KNIFE EDGE GATE VALVE

1. Clean inside valve seat ring and gate; ensure no foreign elements should kept inside bore/face.
2. Before installation open & close the valves three or four times.
3. Gland of the valve should be tighten properly, the rectangular shape gland is required extra tighten torque to prevent the leakage.
4. To ensure that yoke part (fabricated) nuts & bolts will rigidly fix in with body.

OPERATION MANUAL OF PRESSURE REDUCING VALVE **(REFERENCE DRAWING NO.: U/13PRVAL-4)**

After installing in the pipeline all the inlet and outlet gate valves before and after the pressure reducing valve is closed.

1. Open outlet drain cocks to drain off the pipeline. There must be air release valves in the outlet line to remove air from the pipeline completely.
2. Open the outlet gate valve (if required) just after pressure reducing valve.
3. Open the control cock (7) just one turn open the air release cock (15) of the cylinder to release air valve from the cylinder(8)
4. Open the inlet gate valve slowly (before pressure reducing valve) after starting the pump. Now pressure reducing valve is open and water flows from inlet to outlet pipeline.
5. Keep in this position for few minutes. close air release cock (15) of the cylinder, after being assured that there is no air in the cylinder (control cock should always be open one turn).
6. Now open the inlet gate valve slowly to its full open position. Desired outlet pressure will come with proper adjustments of weights.

OPERATION MANUAL OF SLUICE GATE AS PER IS: 13349/IS:3042

1. Clean inside gate and ensure no foreign elements should kept inside bore.
2. Thimble portion will be grouted on the wall and axis of the shaft should be kept perpendicular.
3. Headstock of gate will be grouted on floor will penetrating extension rod.
4. Extension rod will be pivoted to the center of gate by stud/bolt.
5. After installation the gate on wall, gate shall be operated by hand wheel.
6. Actuator operated gate, limit switch shall be adjusted opening and closing of gate to be done.
7. Buttam (gate compressing wedge) of gate adjusted if there is any passing from gate.

OPERATION MANUAL OF NON-RETURN VALVE

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4. Pump started, discharge begins. Flap of NRV will go upward by the flow of water. Flow will continuous until pump stopped.
5. When pump stopped, discharge will be stopped at the same time. Flap of NRV goes downward and again sealed with body ring. Pressure will arrest by closing Flap of NRV.