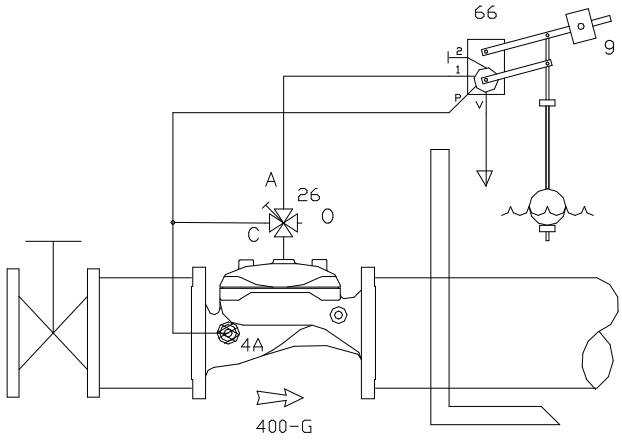
MODEL # 450-66-Z

BI LEVEL RESERVOIR FLOAT VALVE (with manual selector)

■ MAINTENANCE ■OPERATION ■INSTALLATION



CONTROL LIST

400-G	RAM 400-Globe
66	4-Way, Two Levels, Float Pilot Valve
4A	In Line, Self Washing Filter
26	4-Way Cock Valve

DESCRIPTION

Model 750-66 Bi-level Reservoir Control Valve is an automatic control valve designed for two-level control of the water level in reservoirs and tanks. Four-way operation enables full opening even at very low pressure. Full valve opening reduces head loss to a minimum, prevents abrasion and reduces cavitation damage. The valve can be operated via an independent external pressure source when line pressure is very low, or when the water/liquid is very dirty or highly corrosive.

INSTALLATION

1. Allow enough room around the valve assembly for making adjustments and for future maintenance / disassembly work.
2. Thoroughly flush the pipeline to remove dirt, scale, and debris. Failure to perform this operation may render the valve inoperable.
3. Isolation valves A and B should be installed upstream and downstream of the Bermad control valve to allow future maintenance operations.
4. Install the valve in the pipeline with the valve flow arrow on the body casting in the proper direction. Use the lifting eye provided on the main valve cover for raising and lowering the valve. For best performance, install the valve horizontally with the cover up. Ensure that the valve is positioned so that the actuator assembly can be easily removed for future maintenance.
5. After installation carefully inspect /correct any damaged accessories, piping, tubing, or fittings.

ON LINE STATIC TEST PROCEDURES

OPEN VALVE: STATIC TEST

1. Turn cock valve #26 to open position.

Caution: This will allow the valve to open fully. Make sure that this condition does not cause system damage.

2. Check for leaks at the flange connection fittings etc.

CLOSED VALVE: STATIC TEST

1. Turn cock valve #26 to close position, vent any trapped air in the main valve cover by loosening the tube fitting at the highest point on the cover. This will trap the main valve in a closed position while the pipeline is pressurized.
2. Check the valve cover and diaphragm area for leaks, tighten the actuator bolts where necessary.

START-UP OPERATION

1. Close the main valve by closing cock valve #26 and lifting the float to the upper level.

NOTE: Isolating valves A and B should be open.

2. Check valve operation by lifting and dropping the float; the main valve should open and close.
3. If the main valve operating speed increases, fit a needle valve on either port V on the four-way float pilot or on the pressure hydraulic tube supply above filter 4. Adjust the needle valve until the desired flow speed is obtained.
4. Pilot adjustment: Install the pilot valve 66 to the reservoir wall, higher than the upper level (refer to the drawing). Remove the plastic float, loosen the counterweight locking screw (9) and balance the lever system horizontally by moving the counterweight to find the equilibrium. After balancing, replace the float and tighten the counterweight locking screw.
5. Adjust the upper/lower water level by moving the float stops up/down (float while the float is held between the float stops).
6. The float control should be placed where the liquid surface is free from turbulence; where this is not possible, a stilling tank must be placed around the float to prevent it from swinging.
7. There should be adequate space between the reservoir wall and the float.

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TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
Valve fails to open.	1. Insufficient inlet pressure.	1. Check/create inlet pressure.
	2. No downstream demand (reservoir full).	2. Slightly drain the reservoir to check valve operation.
	3. Float pilot valve trapped at upper position.	3. Check if float is operating correctly in balanced position. If necessary rebalance with the counterweight or add extra weight onto the float.
Valve fails to close.	1. Filter 4A blocked.	1. Remove filter and screen to clean.
	2. Cock valve (26) on open position	2. Open cock valve # 26 to auto position.
	3. Float pilot valve trapped in the lower position.	3. Check if float is operating correctly, by lifting the float mechanism to the top.
	4. Debris trapped in main valve.	4. Remove and inspect diaphragm assembly. Check seat area.
	5. Diaphragm in main valve leaking.	5. Test for leakage. Open the main valve by placing the float pilot valve at its lower position. Remove the cover plug on the main valve. If a continuous flow exists, the diaphragm is damaged or loose.
Valve fails to regulate.	1. Float pilot valve is in a turbulent location.	1. Relocate the float pilot to a still surface or install a stilling tank.
	2. Float pilot is blocked.	2. Remove the four-way pilot, clean and replace.
Pilot trapped in position.	1. Float unbalanced.	1. Balance the float.