

MARK II SERVO TANK FILLING VALVES OPERATION & INSTALLATION INSTRUCTIONS

The Philmac servo tank filling valves operate by opening and closing a piston against a seat through the action of a lever arm attached to a float. The lever arm is interconnected to the secondary piston via a cam.

As the water level drops, the float and lever arm move in a downward direction and the secondary piston lifts allowing water in the top chamber to pass downstream. The secondary piston is interconnected to the main piston and as it lifts so does the main piston which moves it away from the seat and opens the valve.

When the water level rises, the float and lever arm move in an upwards direction and the secondary and main piston moves towards the seat until it sits firmly against the seat. Water then enters the top chamber by passing along the side of the main piston and through a small slot in the piston split ring. By doing this, water pressure is applied to the main piston. This secondary or servo action combined with the action of the float and lever arm ensures the valve shuts off.



1. Apply PTFE tape or approved sealant to the inlet thread ensuring sufficient is applied to ensure a watertight seal.



2. Screw into female thread by hand until firm.



3. Using a pipe wrench or multigrips on the hex of the valve, screw it into the female thread until tight. Where necessary ensure the female thread is held stationary to avoid it from moving.



4. Thread the lever arm through a 10" (255 mm) copper float (ball) and tighten.



5. Fit the split (cotter) pin on the end of the arm to prevent it from coming loose.



6. Remove the pivot pin from the body and fit the lever arm then ensure the pivot pin tabs are flared outward by using a small screwdriver:

Schematic diagram showing a typical installation with either a baffle plate to minimise float bounce or a pipe to direct water away from the float and prevent float bounce.

