



- 1 Initially, the deformation of the membrane causes the expulsion of air by the upper valve. When the membrane turns to its original position, the vacuum created causes a depression which aspirates the water (opening the bottom valve) in the cavity (container).
- 2 Secondly, following repetitive motions and deformation of the membrane, the cavity fills with liquid. The balls and « O » rings ensure a proper seal at each valve. The positive pressure allows the upper valve to open. (The upper ball lifts when the air is expelled.) The lower valve then closes (then lower ball is jammed against the « O » ring ensuring water tightness) by pressure and prevents the liquid from escaping out the bottom valve.
- 3
- 4 Thirdly, once the cavity is filled, the incompressible liquid is expelled by the upper valve as soon as the membrane is deformed towards the inside by the piston.