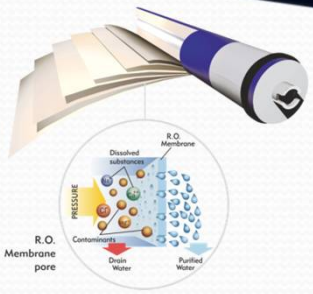
Reverse Osmosis System



Reverse osmosis (RO) is a water purification technology that uses a semipermeable membrane. This membrane technology is not properly a filtration method. In reverse osmosis, an applied pressure is used to overcome osmotic pressure, a colligative property, that is driven by chemical potential, a thermodynamic parameter. Reverse osmosis can remove many types of molecules and ions from solutions, and is used in both industrial processes and the production of potable water. The result is that the solute is retained on the pressurized side of the membrane and the pure solvent is allowed to pass to the other side. To be "selective", this membrane should not allow large molecules or ions through the pores (holes), but should allow smaller components of the solution (such as the solvent) to pass freely. In the normal osmosis process, the solvent naturally moves from an area of low solute concentration (high water potential), through a membrane, to an area of high solute concentration (low water potential

Rayned- Grey Water System

Treatment of grey water must address all of the contaminants and it must be treated to a quality whereby it is of use in daily life. Grey water treatment is often dismissed as a simple process requiring only a few filters and chlorination, however, this is far from the truth and these process are often abandoned due to process problems and smell. The reality is that grey water contains, solids, hair, organic contaminants, oils, bacteria and measurable levels BOD. Without addressing these pollutants in a proper manner, the water for re-use will not be of an acceptable quality.