

NEWater Technology

Stage 1 – First Stage

The first stage of the NEWater production process is known as Microfiltration (MF). In this process, the treated used water is passed through membranes to filter out and retained on the membrane surface suspended solids, colloidal particles, disease-causing bacteria, some viruses and protozoan cysts. The filtered water that goes through the membrane contains only dissolved salts and organic molecules.

Stage 2 – Reverse Osmosis

The second stage of the NEWater production process is known as Reverse Osmosis (RO). In RO, a semi-permeable membrane is used. The semi-permeable membrane has very small pores which only allow very small molecules like water molecules to pass through. Consequently, undesirable contaminants such as bacteria, viruses, heavy metals, nitrate, chloride, sulphate, disinfection by-products, aromatic hydrocarbons, pesticides etc, cannot pass through the membrane. Hence, NEWater is RO water and is free from viruses, bacteria and contains negligible amount of salts and organic matters.

Stage 3 – UV Disinfection

At this stage, the water is already of a high grade water quality. The third stage of the NEWater production process really acts as a further safety back-up to the RO. In this stage, ultraviolet or UV disinfection is used to ensure that all organisms are inactivated and the purity of the product water guaranteed.

Before Storing NEWater in Water Tanks – Balance the pH in NEWater

With the addition of some alkaline chemicals to restore the acid-alkali or pH balance, the NEWater is now ready to be piped off to its wide range of applications.

