

The Reverse Osmosis Process

Developed & proven by the U.S Government:

Following World War II, the US Government began investing hundreds of millions of dollars to determine the best methods of treating drinking water. Still today, the most viable method of fully treating our drinking water in an economical way is through Reverse Osmosis.

How Reverse Osmosis (RO) works:

The RO process utilizes a semipermeable membrane that has the ability to remove and reject a wide spectrum of impurities from water using only water pressure. These impurities affect the taste and or the quality of your drinking water.

How safe is water direct from my tap?

Water doesn't have to taste or smell bad to contain harmful toxic chemicals. Water treatment facilities are geared for the prevention of water borne diseases. In addition, the chlorine added to water by these treatment plants can react with organic matter to form toxic, carcinogenic organic compounds known as Trihalomethanes (THM's). A recent Environmental Protection Agency Survey identified over 700 potentially hazardous chemicals in the US water supplies. The contaminants or other substances removed or reduced by this water treatment device are not necessarily in your water.

Features of the Premier Five – Stage Reverse Osmosis System:

- ◆ 5 – Stage filtration / purification process for water with improved quality & taste.
 1. 5 – micron, high density polypropylene pre – filter removes dirt, rust & sand particles.
 2. The secondary filter contains a cartridge of granular activated carbon. It reduces chlorine, objectionable taste and odours.
 3. The third stage contains an activated carbon block cartridge for greater reduction of chlorine, objectionable taste / odours and organic contaminants.
 4. Thin film composites (TFM) semipermeable membrane separates the purified water from the rejected impurities, up to 98% of arsenic, lead, fluoride and dissolved solids, which are flushed from the membrane and disposed down the drain.
 5. 6 – inch GAC one – micron final stage filter to enhance taste.
- ◆ Automatic shut-off valve. When the storage tank has reached capacity, the automatic shut-off valve stops the flow of water entering the system, thereby conserving water. As water is drained from the storage tank, the flow is allowed to resume through the system. This cycling procedure works automatically by the water pressure.
- ◆ Operates on 3 Bar to 6 Bar water line pressure.
- ◆ Stores up to 12 litres of purified water.
- ◆ Produces enough purified water for an average family's daily use. (Up to 190 litres/day)

Biological Contaminants - Rejection

RECOMMENDED FILTER CHANGE SCHEDULE

	FILTER	FREQUENCY*
Bacteria..... 99%		
Protozoa 99%	1 st Stage Sediment Pre-Filter	6 Months
Giardia 99%	2 nd Stage Carbon Pre-Filter	6 Months
Cryptosporidium 99%	3 rd Stage Carbon Pre-Filter	6 Months
Protozoan Cysts..... 99%	TFM Membrane	2 – 5 Years
	5th Stage Final Carbon	1 year

* Depends on incoming water quality

CONTAMINANT - REJECTION

Sodium 99%	Cadmium 99%	Chromate.....99%
Calcium 99 %	Silver 98%	Cyanide..... 95%
Magnesium 99%	Mercury 98%	Sulphite 99%
Potassium 98%	Barium 99%	Thiosulfate..... 99%
Iron 99%	Chromium 99%	Ferrocyanide 97%
Manganese 99%	Lead 99%	Bromide 98%
Aluminium 99%	Chloride 99%	Borate 50%
Ammonium 97%	Bicarbonate 98%	Sulphate 99%
Copper..... 99%	Nitrate 97%	Arsenic 99%
Nickel 99%	Fluoride 98%	Selenium 99%
Zinc 99%	Silicate 98%	Asbestos 99%
Strontium 99%	Phosphate 99%	Radioactivity 98%

LARGER SYSTEMS AVAILABLE ON REQUEST