

RO+UV+UF
TECHNOLOGY

HERON



SEVEN STAGE RO+UV+UF WATER PURIFICATION SYSTEM

HERON
Grand+

Seven stage RO+UV+UF Water Purification System designed for where feed water has very low water pressure or where the source water contains higher than normal amounts of dissolved solids.



RO & UF Offers safe, good-tasting water at your fingertips

The RO water purifier unit is a five-stage filtration pure-water equipment manufactured with high-tech reverse osmosis technology. After the source water is treated in three pretreatment filters where suspended sediments and other substances bigger than 5 micron are filtrated in the first stage PPF filter and foul smell and by products of chlorine are get rid of in the second granule active carbon and the third stage 1 micron PPF which could remove even tinier sediments. Then the water enters the fourth stage-reverse osmosis membrane. As the diameter of the RO membrane is no longer than 0.0001 micron, there is no possibility for a germ or a virus to pass through the membrane unless the former is shrunk by 1/4000 and the later by 1/200. Therefore, no tiny impurities, harmful dissolved solids, germs or viruses can part the water and the impurities or contaminants to be discharged through the drain pipe. The whole process is completely automatic, and the pure fresh water produced with this RO technology is free from germs and contaminants, rich in oxygen and taste good. In addition, it can activate cells and improve the immunity of the body due to its strong capacity of penetration and dissolution.

Ultra-filtration is one membrane filtration process that serves as a barrier to separate harmful bacteria, viruses, and other contaminants from clean water. An ultra-filtration water system forces water through a .02 micron membrane. Suspended particles that are too large to pass through the membrane stick to the outer membrane surface. Only fresh water and dissolved minerals pass through.



Features:

- Wall Hanging RO UV UF Purifier
- Model: Heron Grand+
- RO Technology: USA
- Capacity: 75 GPD (12 LPH)
- Reserve Capacity: 10 Liter
- Filtration Stage: Seven (Wall Mounted)
- Material of Reserver: Food Grade Material
- Front cover: ABS Grade
- Dimensions: 40 × 50 × 9 cm
- Technology: RO+UV+UF

Filtration Process:



Pre-Stage: Sediment Filter / Clearing Housing

The Sediment filter cartridge is manufactured from pure 100% polypropylene fibers. The fibers have been carefully spun together to form a true gradient density from outer to inner surfaces. It is effective in removing dust, mud, rust and sand particles.



Second Stage: Inline Sediment Filter

Our inline sediment filters are used to eliminate sediment before it reaches to Reverse Osmosis Membrane. We incorporate the most effective sediment removal technologies to address specific problems. The various media are effective in reducing contaminants ranging in size from 50 microns to as low as 1 micron, depending on the need. Filtration down to 1 micron is adequate to reduce cysts such as giardia and cryptosporidium. We design utilizes a multi-layer depth filtration construction that is vastly superior to single layer alternatives. The benefits of this process are threefold. Overall filtration capacity is increased, pressure drop due to sediment buildup is reduced and service life is greatly extended.



Third Stage: Inline Post Carbon Filter

This block carbon filter is composed of high-performance Coconut Shell carbon using a patented process and made entirely from FDA-compliant materials that highly effective at reducing 17 hazardous metals: such as lead, radon, mercury, insecticides, odor and chlorine: taste & odor, from potable drinking water. The unique structure of the carbon block enables it to reduce Giardia, Cryptosporidium, amoeba, and Toxoplasma cysts and fine sediment particles down to 0.5 microns. It is an ideal choice for a wide range of residential, food service, commercial and industrial applications.



Fourth Stage: Ultrafiltration System

The UF membrane is a super fine filter that reduces particles 5,000 times smaller than a human hair. Ultra-filtration gives 90-100% reduction in these contaminants. While UF can't reduce some organics, a .05 micron carbon block prefilter can be added to a system to reduce chlorine taste and odor, lead, cysts, volatile organic compounds (VOCs), and metallic trace elements (MTE). A UF membrane lasts about two years.

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Fifth Stage: Reverse Osmosis (RO) Filter

Reverse Osmosis utilizes the unique properties of a semi-permeable membrane to allow fluid to pass while restricting the flow of dissolved ionic material. With pressure applied to impure water on the side of such membrane materials, pure water will pass through, leaving most of the impurities behind. The rejection of the dissolved ionic material is a function of both molecular weight and ionic charge. For example, we can expect a nominal 90% rejection of sodium chloride, which means that the product water passing through the membrane will have a concentration of salt approximately one-tenth that of the feed water. The rejection of calcium carbonate (hardness) will be near 95%, while most metallic salts will be rejected at a rate of approximately 98% to 99%.

The rejection of non-ionic or organic material is primarily by mechanical filtration. Most substances with a molecular weight of over 100 will be completely rejected by an intact reverse osmosis membrane. Low molecular weight organics, such as formaldehyde or phenol, can pass freely through an R.O. membrane, as can most dissolved gasses. Oil, suspended solids and particulate matter are mechanically filtered, as are viruses, bacteria, pyrogen, and larger organic molecules.

To carry the rejected material away from the membrane surface, the feed side of the R.O. membrane is continually flushed with an excess flow, usually two to five times the product flow. This avoids clogging of the membrane surface and reduces the tendency toward scale formation.

Contaminants	Average Percent Reduction
Arsenic	99.99
Barium	98.90
Cadmium	99.60
Chromium (Hexavalent)	99.99
Chromium (Trivalent)	97.00
Copper	99.0
Cysts	100
Turbidity	98.50
Fluoride	97.9
Lead	99.99
Perchlorate	96.5
Total Hardness	100
Selenium	92
TDS	97

Sixth Stage: Taste and odor Filter

This granular activated carbon filter is composed of high-performance activated carbon that effectively reduces unwanted tastes, odor, organic contaminants, chlorine, pesticides and chemicals that contributed to taste and odor. It is designed to allow maximum contact between the water and carbon, ensuring maximum adsorption. We are using NSF approved post carbon to guarantee the taste of water.

Seventh Stage: Ultraviolet Water Sterilizer

Ultraviolet light (UV), a natural part of the sunlight is widely accepted as a reliable, efficient & environmentally friendly solution for water disinfection. This UV lamp utilize the application of particularly efficient UV radiator with a 254nm wave length to cause immediate death for organisms and wipe out their ability to survive and reproduce. 99.99% DESTRUCTION OF BACTERIA AND VIRUSES



THINK GREEN, SAVE GREEN
FOR GREENER TOMORROW