SMART WATER PURIFICATION
SAVING ELECTRICITY AND WATER

WATER SCARCITY IN EGYPT

GROWING CONCERNS, AND PARTNERSHIPS

Water Is The Next Oil

EGYPT FACES A SEVERE WATER SECURITY CRISIS

As it is one of the most water-scarce countries globally, relying heavily on the Nile River, which is under strain from rapid population growth, climate change, and upstream dams. The country has a significant annual water deficit, with increasing demands from a growing population and agriculture outpacing its limited renewable resources. **This crisis threatens the economy, food security, and overall stability, necessitating urgent, integrated water management and the development of alternative water sources to bridge the gap and build resilience.**

Security Implications of Growing Water Scarcity in Egypt

Egypt is currently using more water than its internal renewable resources, mainly based on Nile fresh water inflows. Water stress in Egypt is expected to further increase in the future as a result of rapid population growth, rising temperatures and increasing water consumption in Egypt and other Nile basin countries. If not properly dealt with, growing water scarcity will put severe strains on Egypt’s economy and make the country more vulnerable to renewed internal strife In Egypt, the issue of water scarcity is taken very seriously as a major challenge now and for the years to come. Egypt is facing an annual water deficit of around seven billion cubic meters.

All Egyptian Must React fast

Citizens and civil society organizations should be engaged as key stakeholders in shaping water policies and raising awareness about them. This issue cannot be limited to elite discourse. Engaging the public and civil organizations as stakeholders will enhance awareness of the increasing risks of water poverty in Egypt. Finally, there is a need to process what is known as "de-securitization". Instead of only focusing on securitizing the water issue, Egyptian decision-makers must also incorporate the "dimension of water deficit" across institutional, economic, security, social, and environmental sectors to adopt more pragmatic measures to address this existential threat to the lives of Egyptian people.

EGYPT WATER NEED

Annual water needs
88.4 Bcm

Annual waterSUPPLY
58.4 Bcm

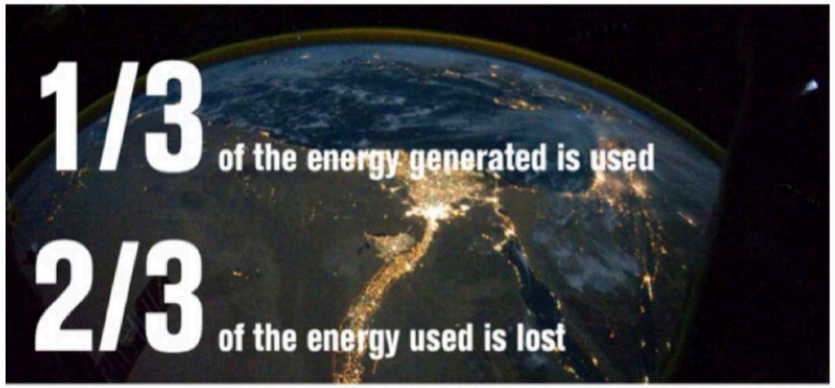
IMARI WILL MAKE MAJOR WATER SAVING IN TWO AREAS

1- STOP USING THE EXISTING RO PURIFICATION SYSTEM

2- RO PRODUCES MORE QUANTITY OF WASTEWATER THAN PURIFIED WATER.

3- SAVING WATER USED BY POWER PLANTS BY SAVING ENERY UP TO 40%

With Imari Energy efficient Solutions We Generate Virtual power plants By Eliminating The Existing RO Water Purification system



SAVING ENERGY = BUILDING POWER GENERATION PLANTS FREE

"Virtual" power plant

- Every KWH saved equates to 3 or more KWH worth of energy that does not need to be produced.
- What would be the equivalent-sized power plant capacity worth of energy saved?
- How much money does it cost to build a new power station? How much debt does a country need take on?
- How much does it cost to change a light bulb or encourage other end use energy efficiency practices and technologies?

1-STOP USING THE EXISTING RO PURIFICATION SYSTEM

How much water is used during the Reverse Osmosis process?

1 Gallon : 5 Gallons

For every gallon of RO water produced, the system will drain five gallons of water on average. Treat With Efficiency

While RO systems can improve water quality, these systems can also generate a significant amount of water waste to operate. For example, a typical point-of-use RO system will loose five gallons or more of reject water for every gallon of treated water produced.

Water Sense Savings

The existing reverse osmosis system RO system must be replaced with Imari **ULTRAFILTRATION** smart water purification system which

1- Do not use electricity

2- Do not loose any water like existing RO system

3- No electricity needed

4- No tank is needed

Our water purification system will reduce water use on average by more than 3,100 gallons of water per year compared to the water usage of a typical point-of-use RO system. This translates to a savings of 47,000 gallons over the lifetime of the system.

While RO systems can improve water quality, these systems can also generate a significant amount of water waste to operate, For example, a typical point-of-use RO system will generate five gallons or more of reject water for every gallon of treated water produced

How Reverse Osmosis is Bad for Human Consumption

Reverse osmosis, although widely used, has several drawbacks that raise concerns about its impact on human health. Let's explore some of the key reasons why reverse osmosis may not be the best choice for water purification.

1. Removal of Essential Minerals

One of the main issues with reverse osmosis is its ability to remove essential minerals from water. While it effectively eliminates contaminants, **this process also strips the water of vital minerals like calcium, magnesium, and potassium that are beneficial for our bodies.** These minerals play a crucial role in maintaining healthy bones, teeth, and overall cellular function.

2. Acidic pH Levels

Reverse osmosis can result in water with acidic pH levels, which can have negative implications for our health. Acidic water can disrupt the body's natural pH balance, leading to various health issues such as digestive problems, mineral deficiencies, and even organ dysfunction. Maintaining a balanced pH is vital for our overall well-being.

3. Wastage of Water

Another significant concern with reverse osmosis is the excessive wastage of water during the purification process. It takes a substantial amount of water to produce a smaller quantity of purified water, for every one gallon of water purified we lose 5 gallons to clean the filter making it an inefficient method. This wastage not only strains our water resources but also impacts the environment, especially in regions prone to water scarcity.

4. Lack of Beneficial Microorganisms

Reverse osmosis not only removes harmful contaminants but also eliminates beneficial microorganisms present in water. These microorganisms, such as probiotics and enzymes, contribute to a healthy gut microbiome and aid in digestion and overall immune function. The absence of these beneficial microorganisms in reverse osmosis water can have a negative impact on our digestive system and immune health.

5. Increased Acidity in the Body

Drinking reverse osmosis water regularly can result in increased acidity in the body. This can lead to a condition called acidosis, which may cause symptoms like fatigue, headache, muscle weakness, and an overall feeling of malaise. Maintaining a balanced pH level is essential for optimal bodily functions.

Drinking reverse osmosis water is scientifically confirmed to cause more harm to the body than most contaminants found in tap water.

Scientists Issue Reverse Osmosis Water Warning

Everyone knows that Reverse Osmosis (RO) filters or systems excel at removing water impurities, but few are aware that they also remove beneficial minerals. **The reverse osmosis process removes 92-99% of beneficial calcium and magnesium. In addition, it removes an even greater amount of trace elements.** So what's the big deal?

After analyzing hundreds of scientific studies concerning demineralized or reverse osmosis water, scientists released a report stating that such water "has a definite adverse influence on human organism.

It gets worse.

Because reverse osmosis water lacks sufficient minerals, it also leaches minerals from the body. As a result, the mineral content of food and vitamins are urinated away. Fewer minerals consumed, plus more minerals excreted, lead to serious side effects and significant health problems. low-mineral water was responsible for an increased elimination of minerals from the body.

"It has been adequately demonstrated that consuming water of low mineral content has a negative effect on homeostasis mechanisms, Consumption of reverse osmosis water leads to the dilution of the electrolytes dissolved in the body water. Inadequate body water redistribution between compartments may compromise the function of vital organs. Side effects at the very beginning of this condition include tiredness, weakness and headache; more severe symptoms are muscular cramps and impaired heart rate.

Recent epidemiological studies suggest that reverse osmosis water may be a risk factor for hypertension and coronary heart disease, gastric and duodenal ulcers, chronic gastritis, goiter, pregnancy complications, and several complications in newborns and infants, including jaundice, anemia, fractures, and growth disorders.

Study Finds Hundreds of Thousands of Plastic Particles in Bottled Water

January 10, 2024

As microplastics break down, the particles become small enough to pass through areas where it had been thought they could not reach, such as the blood-brain barrier, a network of tissues that protects the brain from toxins and pathogens. While there is still much to learn about the health effects of microplastics, their widespread infiltration of the world and our bodies is extremely concerning.

When plastic breaks down in the environment into microplastic particles, these particles can absorb chemical pollutants or microorganisms that could pose health risks for humans. As a result of the manufacturing process, they may also contain chemical additives, some of which can be toxic – like phthalates

A study published shows just how much plastic we drink with bottled water: Researchers from Columbia University and Rutgers have found at least 240,000 plastic particles in the average liter of bottled water, a major health concern.

High blood pressure associated with drinking from plastic bottles

Drinking from plastic bottles may pose a health risk to children's developing brains due to exposure to microplastics and chemicals like BPA, which can cross the blood-brain barrier. While the exact long-term effects are still under investigation, studies suggest potential links to neurodevelopment issues, behavioral changes, cognitive decline, and disruptions in brain function. To minimize exposure, parents can choose alternatives like glass or stainless steel for food and liquids.

Plastic Water Bottles Harmful to Your Kids?

As a parent, are you constantly worried about the health of your child? If yes, then why do you let your child drink from a plastic water bottle every day? We all know very well that plastic is not only deteriorating our environment but is also hazardous to our health. Plastic can undeniably the worst side effect of our modern lifestyle and technology. Plastic water bottles are one of the major sources of pollutants responsible for land and water pollution. And not only this, the water stored in these plastic water bottles is toxic in nature as harmful chemicals from the bottle leach into the water over the span of time.

Toxic chemicals: Plastics can contain chemicals like BPA and phthalates, which are known to be harmful to children's developing nervous systems and can affect brain growth and behavior.



Water in Egypt: A reason for panic

Egyptians often joke about the quality of their tap water, foreigners are strongly advised not to try their luck by drinking it, and the media often speculates on the amount of bacteria lurking in it for the unaware consumers.

High chlorine levels in Egyptian drinking water lead to stomach upset and can form carcinogenic disinfection by-products like trihalomethane (THMs), a risk to human health. While chlorination is a necessary, low-cost method to kill microbes, the quality of the raw water often necessitates high dosages, creating more harmful by-products. some of the harmful effects that you could encounter include

Asthma symptoms

Chlorine has been found to aggravate asthma symptoms and create an increase in respiratory problems.

Rectal and bladder cancer

chlorination can increase the risk of suffering from rectal and bladder cancer.

Various congenital abnormalities

The trihalomethane that are found in chlorinated water can adversely affect women who are pregnant. Children may be born with such birth abnormalities as ventricular septal defects, poor brain development, or cleft palates.

Poor smell and taste

water that contains too much chlorine can have a poor smell and taste, which would make the water unpleasant to drink.

HOW MUCH TDS ALLOWED IN EGYPT

The countryThe maximum allowed TDS (total resolved solids) in Egypt driving water is 1000 mg/liter, in USA the maximum allowable TDS in the drinking water is 500 mg/liter with PH value between 6.5 to 8.5 , Low TDS (0-300 mg/L): Considered pure but may lack essential minerals and taste flat. Moderate TDS (300-600 mg/L): Generally ideal, balancing minerals and purity, and providing a pleasant taste. High TDS over (500mg/liter) may cause salty taste. Very high TDS above (1000mg/liter) is not recommended

What is Hard Water?

Hard water contains high levels of dissolved hard minerals like calcium and magnesium. While hard water doesn’t cause serious health issues, it can wreak havoc on skin, hair, and nails.

These minerals reduce the effectiveness of soaps and shampoos, making it harder to get a thorough lather and rinse. Hard water can contribute to dull, dry hair, skin irritation, brittle and discolored nails.

WHY YOU NEED TO REMOVE CHLORINE AND HARD WATER

Chlorine strips out the natural oils in our hair & skin, leaving them damaged, dry, and irritated Dissolves hair lipids, leaving hair looking less shiny, less strong, and causing split ends Breaks down the amino acids in our hair, depleting the hair's natural strength Reacts with the natural melanin in our hair, changing the color of your hair, chlorine also Can irritate our skin and potentially lead to eczema, itchiness, hives & rashes Speeds up the loss of collagen as heavy metals cause free radicals to form

The American Chemical Society estimates that "we could receive from 6 to 100 times more chlorine by breathing the air around showers and baths than we could by drinking water."
The skin is our body's largest organ and is entirely chlorine absorbent. Chlorine chemically bonds with the protein in our skin and hair, making hair brittle and dry, and making skin itch, dry, and flake. One half of our daily chlorine exposure is from showering. Not only is chlorine absorbed through the skin, but it also vaporizes in the shower, is inhaled into the lungs, and is transferred directly into the blood system. In fact, chlorine exposure from one shower is equal to an entire day's amount of drinking the same water. Therefore, drinking filtered good water addresses only half the problem. Our ultra shower filter offers the answer for the complete solution.
This shower filter is a product of extensive research and development to provide a maximum degree of filtering performance from a minimum sized filter.

USING IMARI SHOWER AND SINK FILTER

Protect Your Sensitive Skin

If you have sensitive skin, you understand the challenges that come with finding products and routines that don't lead to redness, itching, or irritation. While you may be meticulously selecting skincare products designed for sensitive skin, **your shower water could still be causing unnecessary distress.** Tap water often contains minerals, metals, and impurities that can trigger sensitive skin reactions. These contaminants can disrupt the natural balance of your skin's pH levels, leaving it prone to dryness, itching, and inflammation. For individuals with conditions like eczema, psoriasis, or rosacea, this can be especially problematic, as these skin conditions are often made worse by harsh water. By installing Imari water filtration system into your shower, you're taking a significant step toward safeguarding your sensitive skin. **An Imari high-quality filter effectively removes these irritants, leaving you with water that is gentle and soothing.** The absence of impurities means your skin's natural protective barrier can thrive, leading to a reduction in redness, itching, and overall discomfort.

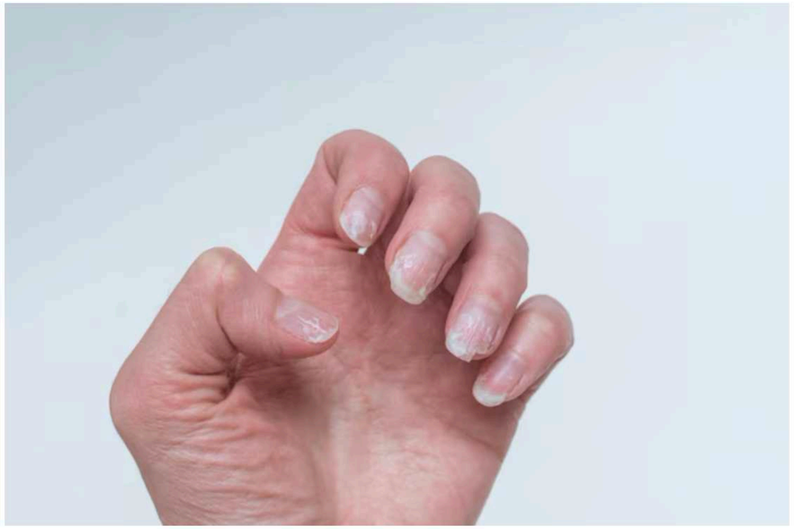
Extend the Lifespan of Your Beauty Products

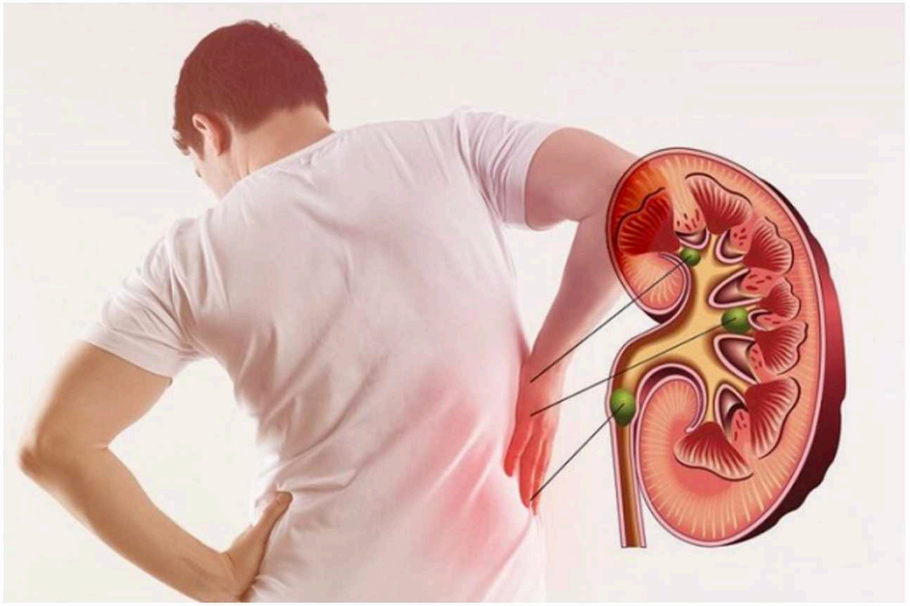
If you're a skincare and haircare enthusiast, you likely invest time and money in choosing the best products to achieve your desired results. However, have you ever considered that the water you use in your daily routine might be affecting the effectiveness of these products?The minerals and impurities present in tap water can interact with the active ingredients in your skincare and haircare products. This interaction can lead to a decrease in the products' effectiveness, rendering them less powerful than intended. For example, antioxidants might become oxidized, rendering them useless, while certain cleansing agents might become less efficient at removing dirt and oil. Well, do not let your products go to waste by installing Imari water filtration system.

Effects of Hard Water on Nails

When your hands and nails are exposed to hard water regularly, mineral accumulation becomes an issue. Our nails are made of numerous keratin layers that form the nail bed. Mineral deposits might break down your nails over time, making them brittle and prone to snapping.

Hard water minerals can also dry out your nails, stunting their growth and causing unsightly nail discoloration over regular exposure. In addition to washing your hands with softer water, staying adequately hydrated will help keep your nail moisture levels up.



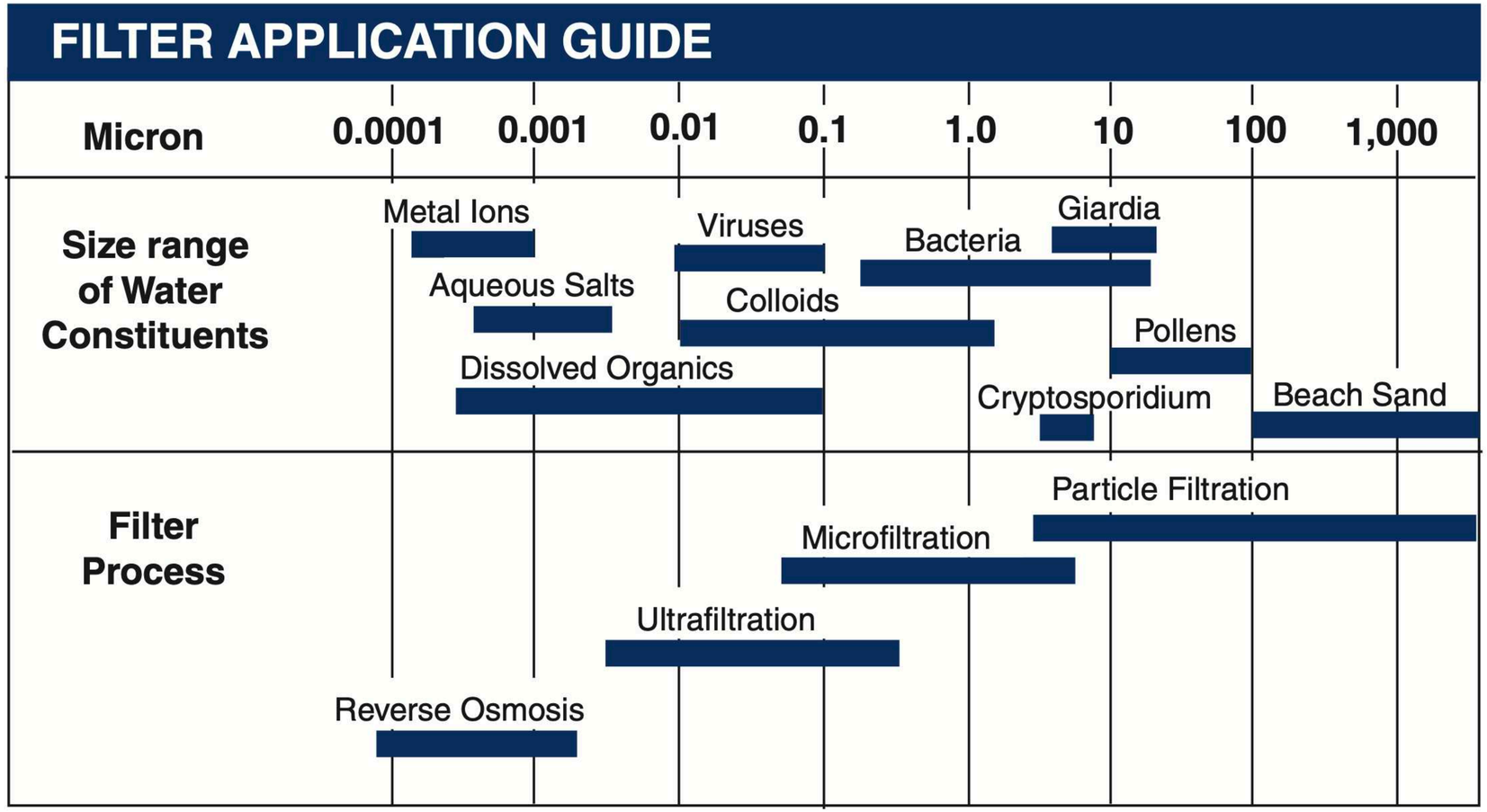


Hard Water and Kidney Stones

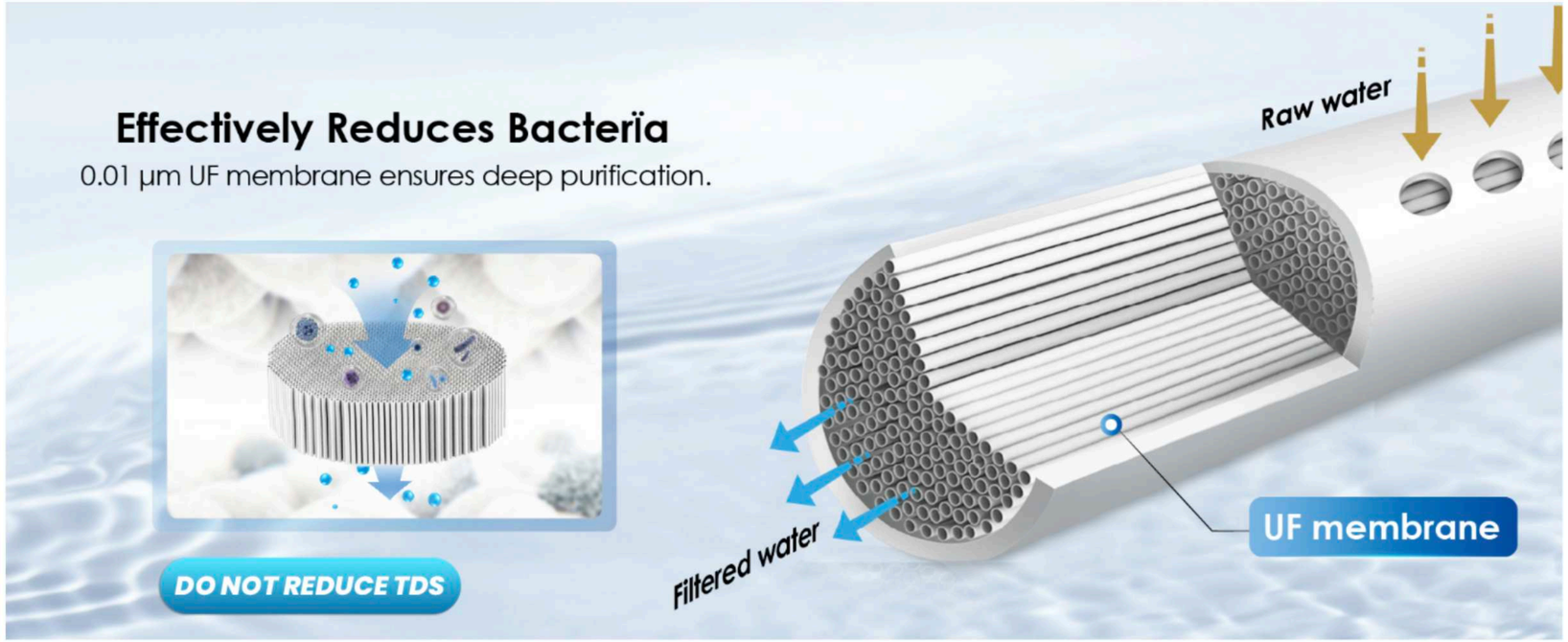
Long-term consumption of hard water can cause kidney dysfunction, which may lead to the other diseases such as cerebrovascular disease, diabetes and others.

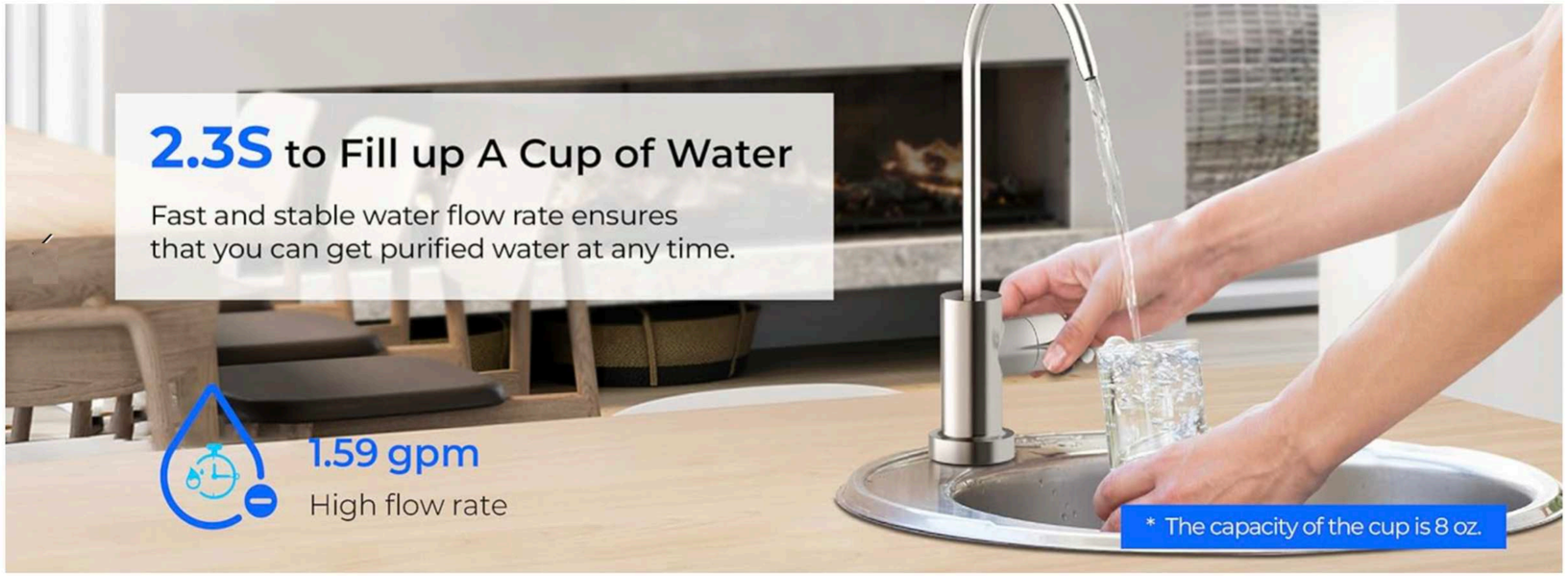
Kidney stones have been described by patients as more painful than giving birth! Surprisingly, hard water and kidney stones have been linked since the early ’90s, and research is continually confirming that if you drink hard water, your risk goes up significantly. As much as 300%! Whether you’ve been touched by the pain of kidney stones or not, your water quality could be increasing your risk of kidney stones.

THE SOLUTION
ULTRAFILTERATION W ATER PURIFICATION



ULTRAFILTRATION MEMBRANE WATER FILTER





The disadvantages and danger of using plastic in water purification

include the leaching of harmful chemicals and the release of micro- and nanoplastics, which pose potential health risks. The long-term durability of plastic filter components can also be compromised by heat and repeated use.

Carcinogens and pollutants: Additives used in plastic manufacturing, such as phthalates and flame retardants, are known carcinogens that can also leach into the water. The leaching process is accelerated by heat, UV light, damage to the plastic, and repeated use.

Microplastic and nanoplastic contamination

Plastic does not biodegrade but breaks down into smaller and smaller pieces, which can contaminate drinking water.

- **Physical degradation:** Over time, plastic components in water purification systems, such as filter housings, pipes, and aging reverse osmosis membranes, can degrade and shed plastic particles into the water.
- **Potential health risks:** The full health impact of ingesting micro- and nanoplastics is still being researched, but some studies have found these particles in human organs and bloodstreams. The health risks may include inflammation, cellular damage, and hormonal imbalances.

Biofilm formation

Plastics can create a favorable surface for microbial growth, potentially introducing pathogens into purified water.

- **Pathogen growth:** Biofilms are complex communities of microorganisms that can grow on surfaces, including the plastic components of water purification systems and pipes.
- **Contamination risk:** Though most microorganisms in biofilms are non-pathogenic, some can include harmful bacteria and pathogens, which can contaminate drinking water and pose a health risk.

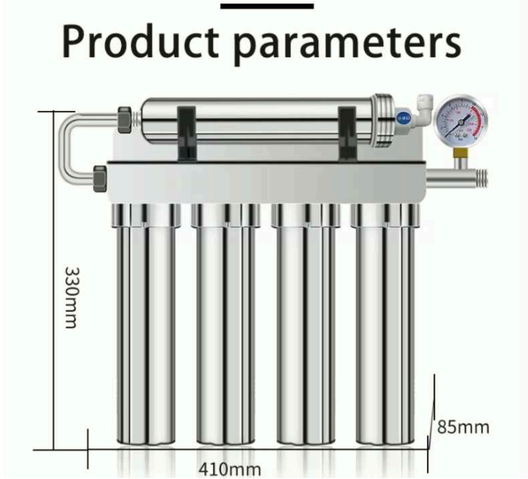
SOLUTION

USE IMARI STAINLESS STEEL ULTRAFILTRATION SYSTEM

IMARI 5 STAGE
STAINLESS STEEL ULTRA - FILTRATION SYSTEM


304 stainless steel body
Lead-free and corrosion-proof
Stainless steel body, corrosion/pressure
/weather-resistant, durable.
国标304
不锈钢

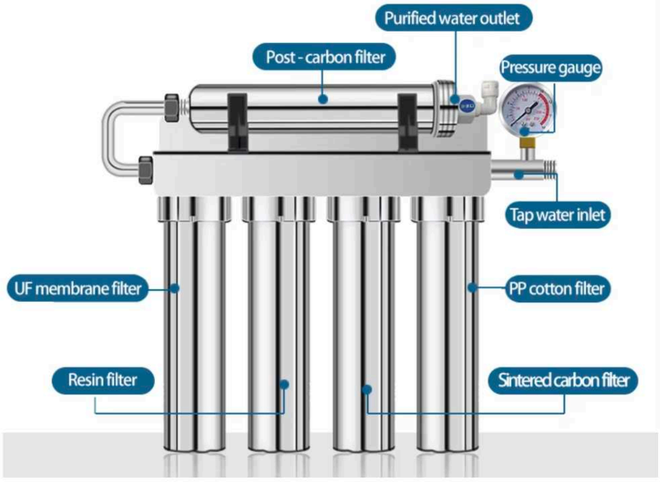

Stylish & finely-crafted design
Filtration with 0.01 μm precision
Healthy direct drinking
Save power and water
Simple installation
Multi-stage purify
Physical filtration
CA2+
Retain minerals
304
不锈钢
Inox steel
Water pressure detection

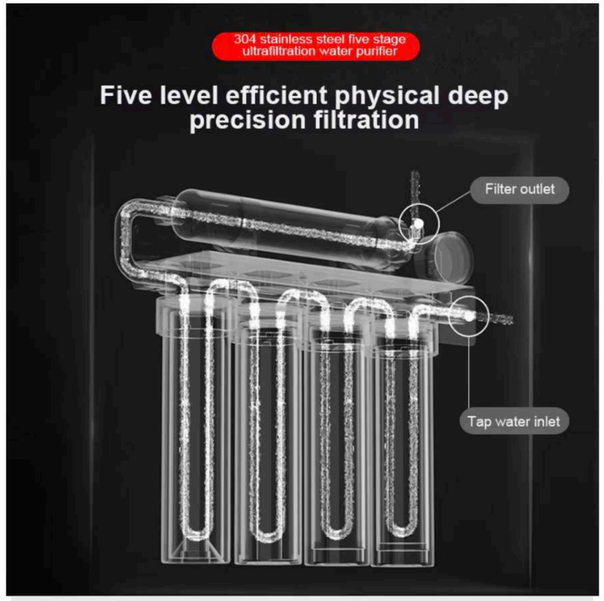

Product parameters
330mm
85mm
410mm


Small installation space required
It occupies little space
Convenient and hassle-free
5-stage display fine-filter water purifier

Product key components

5 - stage filter, pressure gauge, inlets & outlets





Real-time water pressure monitor

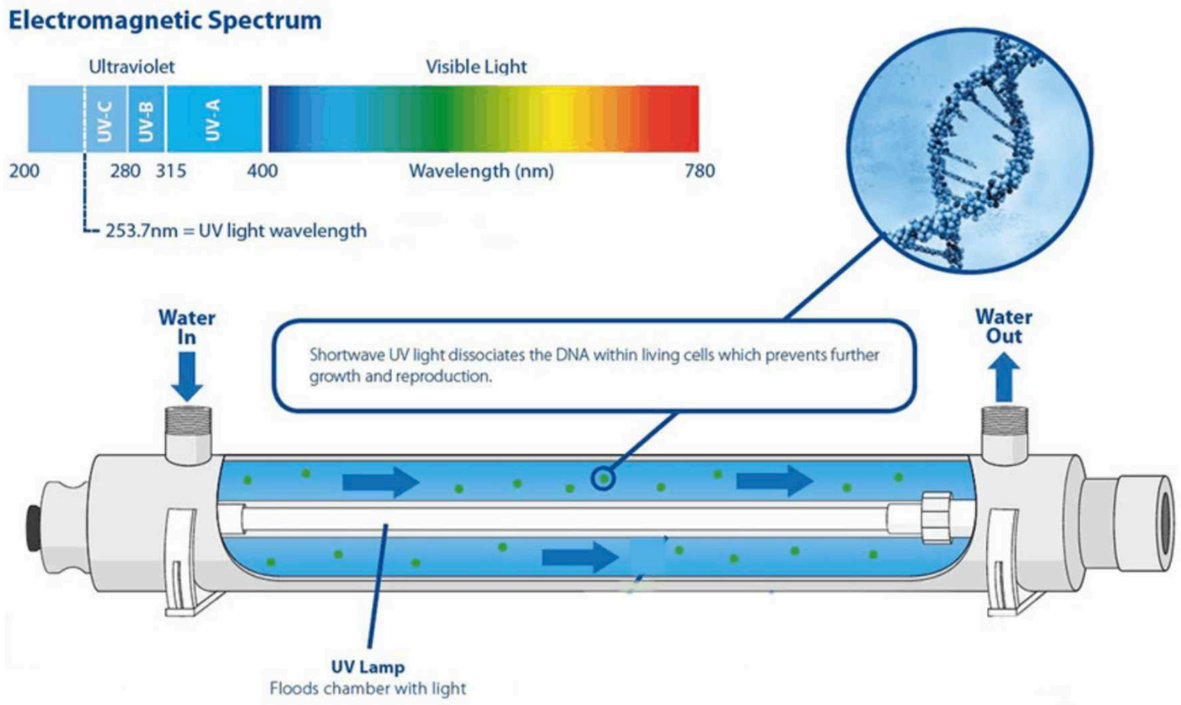
Monitor water pressure in real time to prevent water pipes from bursting due to excessively high water pressure

Food-grade 304 stainless steel

The body is crafted from 304 stainless steel—sturdy, durable, hygienic, rust - proof, and anti - aging. It has a long lifespan, making it perfect for water purifiers.

UV-C Disinfection Water Purification Systems

Ultraviolet Disinfection destroy 99.99 harmful microorganisms. UV disinfection water treatment is highly effective against myriad waterborne pathogens that may lead to outbreaks of disease. These include mycobacteria, cryptosporidium, and giardia. This method is used by numerous entities and properties that need to protect the public from infection, including homes hospitals, processing facilities, and hotels.



IMARI6 STAGE

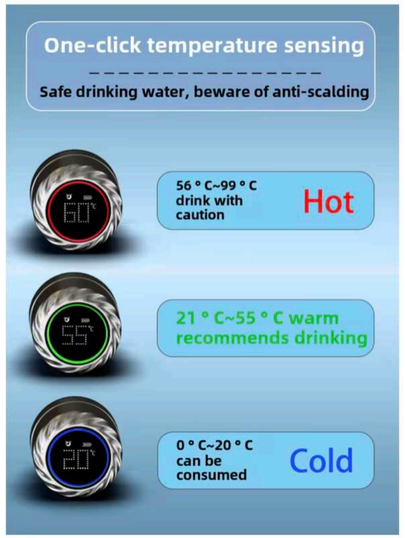
STAINLESS STEEL ULTRA - FILTRATION SYSTEM WITH UV-C

IMARI STAINLESS STEEL ULTRAFILTRATION WATER PURIFICATION SYSTEM

THE NEX GENERATION OF TECHNOLOGY
UV-C WATER DISINFECTION THERMOS

ZERO BACTERIA OR VIRUSES FOR HE ENTIRE FAMILY
WITH SMART DRINK REMINDER

DRINK PURE WATER WITH ZERO VIRUSES OR BACTERIA WITH OUR THERMOS



There are pathogens in the water

Diarrhea

Catch a cold

Decrease in immunity

UV SELF CLEANING THERMOS

YOUR BODY AND YOUR BABY NEED MINERALS IN YOUR DRINKING WATER
USE IMARI ULTRAFILTRATION TECHNOLOGY