

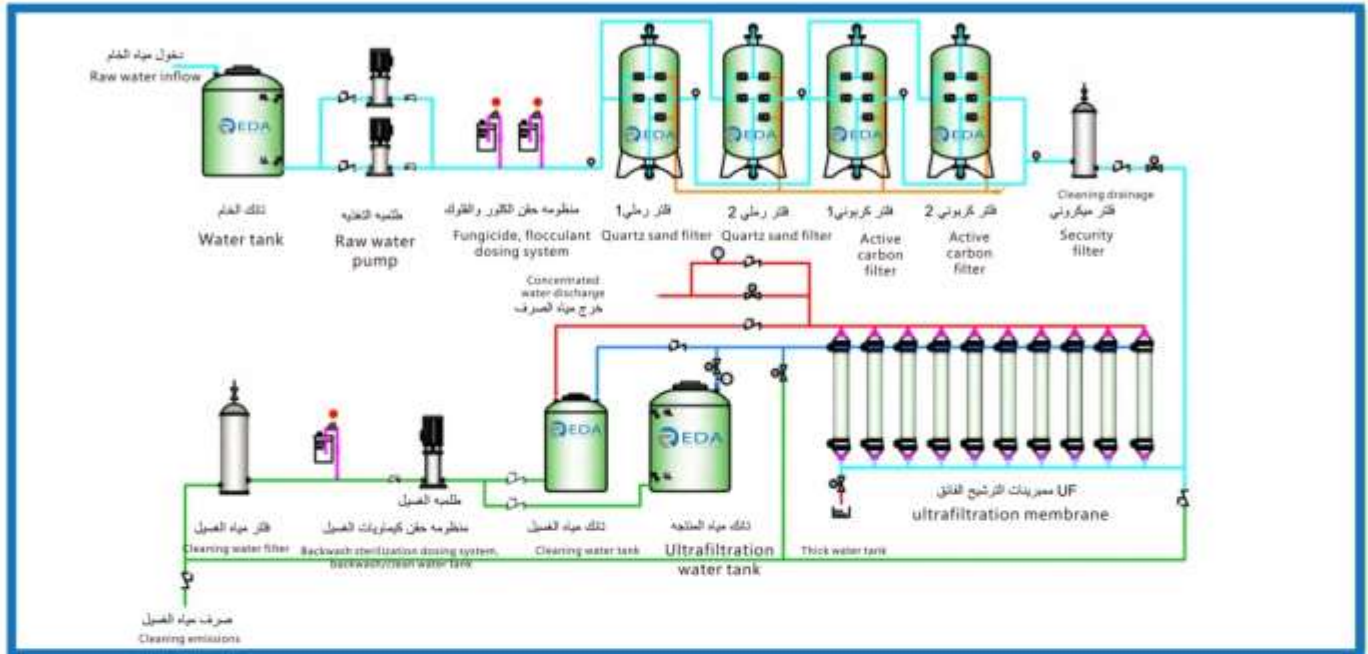
مواصفات المنتج**PRODUCT INTRODUCTION**

محطات الترشيح الفائق تعتمد على التأثير بضغط على غشاء مسامي يقوم بترشيح العوالق والجزيئات الأكبر من 0.002-0.2 ميكرون وبالتالي فهو يقوم بإزالة الرواسب والسيليكا والبروتين والميكروبات وجميع المواد العضوية
لذلك فإن تكنولوجيا الترشيح الفائق يتم استخدامها في كثير من التطبيقات مثل معالجة المياه السطحية - إعادة تدوير المياه - المعالجة الابتدائية لمحطات التحلية

Ultrafiltration water treatment equipment is a process driven by pressure. Through the micropore screening on the membrane surface, particles and impurities with a diameter of 0.002-0.1 μm can be intercepted, which can effectively remove colloids, silicon, proteins, and microorganisms in the water. And organic matter. When the liquid mixture flows through the surface of the membrane under a certain pressure, the solvent and small molecular substances penetrate the membrane and are trapped, thereby achieving size and intermolecular separation and purification. It can be widely used in the separation, concentration and purification of substances. The process has no phase transformation, no heating, normal temperature operation, energy saving, and particularly suitable for the separation of heat-sensitive substances. The ultrafiltration process is simple, with few supporting devices, simple operation and low maintenance cost. Resistant to chemical erosion, wide range of PH adaptability, largest membrane area per unit volume, lowest investment cost, simple cleaning.







مخطط سريان محطة ترشيح فائق UF
Process Flow Of Ultrafiltration Equipment



ULTRAFILTRATION (UF) WATER PURIFICATION SYSTEMS

Ultrafiltration membrane system or ultrafiltration water purification plant is pressure driven process, it removes particles, suspended or particulate matter from water. Ultrafiltration membrane system can be used most effectively instead of pretreatment unit like sand, activated carbon mechanical filtration.

UF membrane permeability is more than reverse osmosis membranes. The most important things about Ultrafiltration water purification plant, if you use just Ultrafiltration membrane system, your raw water TDS can not be removed using MF and UF due to lower size.

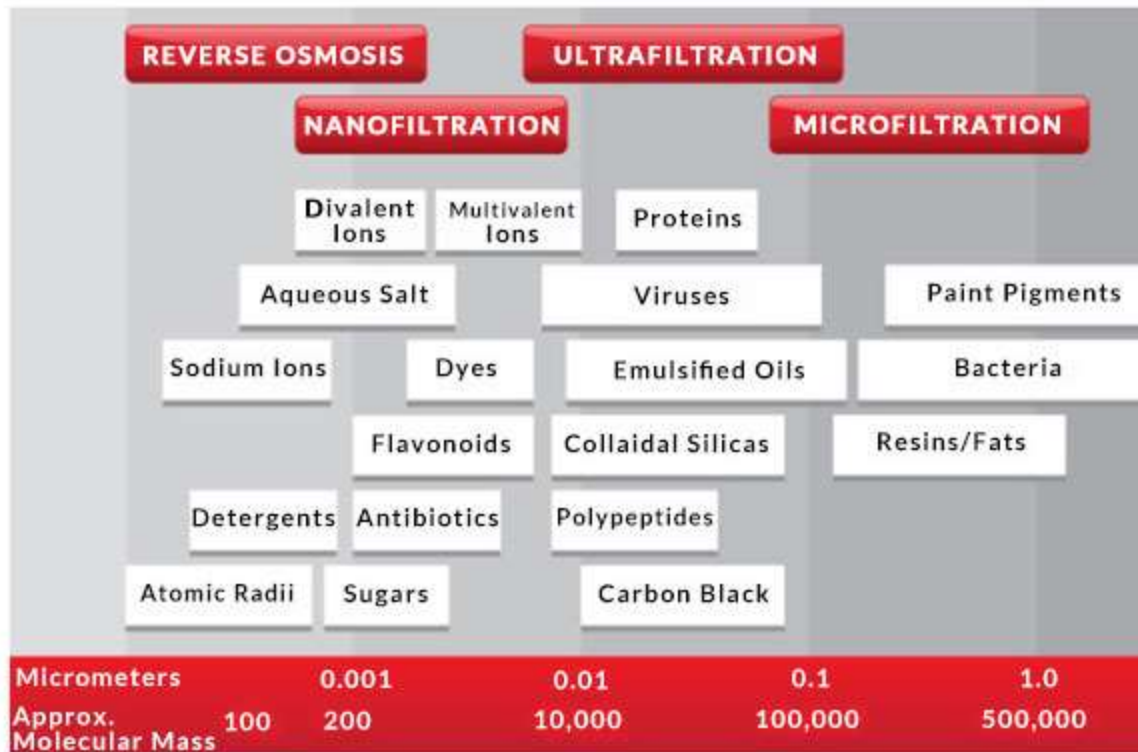


UF with a nominal pore size of around $0.02\ \mu\text{m}$ is found to be the most effective in eliminating potential elements such as microorganism, silt, algae, and large molecular weight from the feed water source that are responsible for RO membrane fouling. Most of application ultrafiltration water purification plants are used as pretreatment for RO system.



Ultrafiltration membrane system fall between that of nanofiltration and micro filtration with a pore size range between 10 to 100 nm, or about 500 to 500,000 Dalton in molecular weight. UF membranes typically operate between 3 – 5 bar, of course, in some special cases to 8 bar and are dependent on trans membrane pressure to drive the separation process. You can see separation size and molecular for Ultrafiltration Water Purification Plant from below table.

Degrees Of Membrane Separation



Futures and Options Ultrafiltration Water Purification Plant

Standard Features:	Available Options:
UF modules (PVC)	Chemically Enhanced Backwash (CEB)
Stainless steel backwash pump	Feed/backwash oxidizer (dosing system) Membrane cleaning skid (CIP)
150 um flushable screen	380-415V/3Ph/50-60Hz power supply
Schedule 80 PVC piping	Online turbidity monitor
Microprocessor control panel	Stainless steel multi-stage feed pump
Motor starters	Feed pump VFD
Enclosure	PLC + HMI
Differential pressure switch	Filtrate (backwash) tank (HDPE)
Liquid filled pressure gauges (panel mount)	Pressure Transducers
Electrically actuated valves	Blower (for backwash)
Flow meter	Duplex 2205 screen (versus SS 316)

Operation Specifications:

Power supply: 380/460V/3Ph/50Hz/60Hz

Temperature 25°C (max. 40°C)

TOC < 10 max. < 40 mg/L

pH 6-9 (2-11 cleaning)

TSS < 50 max. < 100 mg/L

Backwash frequency 20-60 minutes

Turbidity < 50 max. 300 NTU

Cl₂ 0.5 ppm

COD max. < 60 mg/LM

If your water TDS is very low and clean, and you want to keep important minerals for drinking water UF mineral water filtration suitable for you.

UF processes are currently preferred over traditional treatment methods for the following reasons:

1. No chemicals required (aside from cleaning)
2. Constant product quality regardless of feed quality
3. Compact plant size
4. Capable of exceeding regulatory standards of water quality, achieving 90–100% pathogen removal

Application of Ultrafiltration Membrane System

1. RO pretreatment
2. Drinking water treatment
3. Water Recycling and Reuse
4. Grey water treatment
5. Process separation or recovery
6. Reclaimed Water Treatment

UF Mineral water filtration is becoming popular in drinking water industry. Because UF mineral water filtration systems keep water's valuable minerals but remove big particles, bacteria and microorganism. Especially some famous drinking water companies to keep water taste and nature, they are using mountain water as raw water source and use uf mineral water filtration equipment.

To kill bacteria, virus and other microorganism we can add UV Sterilizer, ozone generator to your uf mineral water filtration machine.