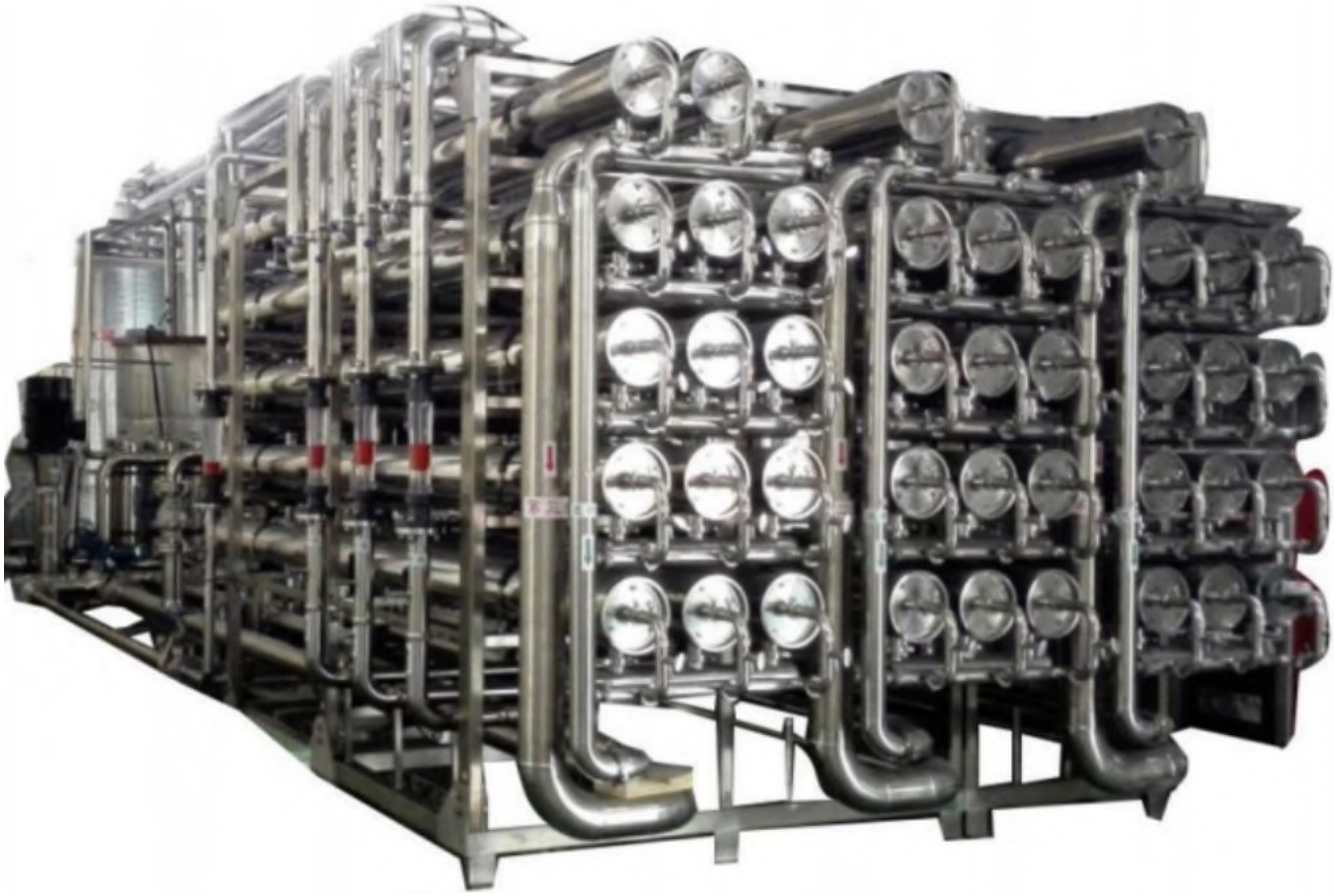
Membrane Filter System



Membrane filtration system under certain pressure, when the original fluid flow through the membrane surface, the water and small molecules go through the membrane surface with many tiny pores allow only, then passed and become the dialysate. The bigger volume substance which is greater than the membrane surface micro aperture is trapped in the liquid side of the membrane and become the concentrate. Thus achieve the purpose of separation and concentrate of the raw material.

According to the membrane pore size, it can be divided into: microfiltration membrane filter (HM-MF-Q), ultrafiltration membrane filter (HM-UF-Q), nanofiltration membrane filter (HM-NF-Q), reverse osmosis membrane filter (HM-RO-Q), etc.. Cross flow filtration method is used for membrane separation.

HM-MF-Q Microfiltration membrane filter: is a kind of static pressure difference as driving force, using the sieving effect of membrane filtration separation membrane technology, one of the characteristics of microfiltration membrane is one of the neat, uniform porous structure design, under the effect of static pressure difference, the particles less than the film hole will pass the filter film. And the larger particles than the film hole is intercepted on the surface of membrane filter, so as to realize effective separation. In addition, the microfiltration membrane is a homogeneous porous membrane with thickness of 90--150um. Filtered particle size is between 0.025 - 10um, and the operating press is 0.01 -- 0.2MPa.

HM-MF-Q microfiltration membrane filter is mainly used in sterilization filtration and clarification in pharmaceutical industry, water for integrated circuit production in electronic industry, etc. In addition, it has been widely used in the pretreatment before municipal sewage treatment and wastewater treatment.

HM-UF-Q Ultrafiltration membrane filter: When the solution containing small molecules passes through the supported membrane surface under certain pressure, the solvent and small solute will pass through the membrane, while the large molecules are intercepted and recycled as concentrate. The diameter of ultrafiltration membrane filter is between 5--10nm, and the operating pressure is between 0.1-0.25MPa.

HM-UF-Q ultrafiltration membrane filter is mainly used in food, beverage processing, pharmaceutical industry, biological preparations, traditional Chinese medicine preparations, clinical medicine, printing and dyeing wastewater, food industrial wastewater treatment, resource recovery, environmental engineering and many other fields.

HM-NF-Q Nanofiltration membrane filter: It is a membrane separation technology developed on the basis of reverse osmosis. The intercepted particle size of nanofiltration membrane is generally between 0.1-1nm. The operating press. is between 0.5-1MPa. And the intercepted molecular weight is 200-1000. It has good separation performance for small organic molecules with molecular weight of hundreds in water.

HM-NF-Q Nanofiltration membrane filter is mainly used in food industry, beverage industry, biological medicine, organic acid preparation, fine chemical industry, environmental protection industry and so on.

HM-RO-Q Reverse osmosis membrane filter: It is also called high filtration which is a reverse process of infiltration. By adding a higher pressure than osmotic pressure to one side of the filter liquid, the solvent in the original solution is compressed to the other side of the semi-permeable membrane. The filtration diameter of reverse osmosis membrane is between 0.2-1.0nm, and the operating pressure is between 1-10MPa.

HM-RO-Q Reverse osmosis membrane filter is mainly used in food and beverage industry to prepare drinking water, pure water, ultrapure water, desalination of sea water, brbrish water, water for power, electronics, semiconductor industry, pharmaceutical industry, preparation, injection, sterile non-heat source pure water, industrial process water, boiler water and cooling water, etc.

Technical parameters

Model	Feed DS, %	Feed capacity, m3/h	Filtering area, m2	Working temp. ℃	F55 output capacity, tpy
HM-NF-Q1.0	28-35	2.4-3.0	16-20	＜80	10000
HM-NF-Q2.0	28-35	4.8-6.0	32-40	＜80	20000
HM-NF-Q3.0	28-35	7.2-9.0	48-60	＜80	30000
HM-NF-Q6.0	28-35	14.5-18.1	96-120	＜80	60000
HM-NF-Q10.0	28-35	24.1-30.2	160-200	＜80	100000
HM-NF-Q15.0	28-35	36.2-45.2	240-300	＜80	150000
HM-NF-Q20.0	28-35	48.3-60.3	320-400	＜80	200000

Hongmao relies on the professional design, the strict production management, the fine processing procedure, provides the high efficiency and energy saving equipment system for the customer. Manufacturing factory has passed the international ISO9001 quality system certification, and with the design and manufacturing capacity of pressure vessels. Customers can choose international ISO, EU CE and other standards for equipment design and production according to their needs.