



SKYHYDRANT™ FACT SHEET

Low Pressure Ultra-Filtration Filtration Unit

Low Pressure Ultra-Filtration technology meeting and exceeding World Health Organisation requirements for safe drinking water.

Low pressure ultra-filtration membrane technology is highly effective in removing all non dissolved species in feed waters. The filtration unit will meet and exceed requirements for key criteria to produce “safe” drinking water. In most cases it will exceed WHO standards, however it is important to test the water and validate the composition of the feed water. Please refer to the technical bulletins and Specifications to obtain specific information on performance.

Ultra -Filtration (to 0.1 um) will remove Pathogens (disease causing organisms) and Turbidity (dirt) from water:

- Pathogens removed (to log reduction value >4) by ultra-filtration include:
 - Bacteria
 - Protozoa
 - Cysts
 - Helminths
 - Total Coliform TC
 - Faecal Coliform FC
 - Ecoli
 - Virus (significantly reduces virus levels)
- Turbidity - NTU (Nephelometric Turbidity Units) is removed by ultra-filtration to <0.1 NTU.
Turbid water contains suspended matter such as clay, silt, fine fragments of organic matter, and similar material.
- Total Suspended Solids (TSS) will be removed. TSS is similar to turbidity.
- Iron and Manganese if first oxidised or if colloidal can be removed by ultra-filtration.
- Arsenic Manganese if first oxidised can be removed by ultra-filtration.

Ultra -Filtration (to 0.1 um) will not remove Chemicals or Minerals or Salinity (salt) from water:

Note: mg/L (milligrams per litre) also equals ppm (parts per million).
WHO (World Health Organisation)

- Chemicals not removed by ultra-filtration include:
 - Arsenic (unless first oxidised) (WHO safe drinking standard- Max 0.01 mg/L)
 - Cadmium (WHO safe drinking standard- Max 0.003 mg/L)
 - Chromium (WHO safe drinking standard- Max 0.05 mg/L)
 - Copper (WHO safe drinking standard- Max 2.0 mg/L)
 - Cyanide (WHO safe drinking standard- Max 0.07 mg/L)



- Fluoride (WHO safe drinking standard- 1.5 mg/L)
 - Lead (WHO safe drinking standard- Max 0.01 mg/L)
 - Mercury (WHO safe drinking standard- Max 0.006 mg/L)
 - Nickel (WHO safe drinking standard- Max 0.07 mg/L)
 - Nitrate (WHO safe drinking standard- Max 50 mg/L as NO₃)
 - Nitrite (WHO safe drinking standard- 3 mg/L as NO₂)
 - Sulphate (safe drinking levels: 250 mg/L but up to 500 mg/L can be tolerated)
- Minerals (Hardness) is not removed by ultra-filtration, this includes:
 - Total Hardness, Hard water is mainly calcium and magnesium and is not considered a health risk but can be unpleasant to taste and cause a build up of scale in pipes. (WHO safe drinking standard- Max 500 mg/L).
 - Calcium, Carbonate (WHO safe drinking standard- Max 250 mg/L)
 - Iron and Manganese (unless first oxidised) (WHO safe drinking standard- 0.4 mg/L
Note: exceeding this level is not unsafe but is unpleasant to taste - max 1.0 mg/L).
 - Magnesium (WHO safe drinking standard- Max 150 mg/L)
 - Salinity and Salts are not removed by ultra-filtration include:
 - Salinity (WHO safe drinking standard- Max 250 mg/L)
 - Chloride and Sodium (WHO safe drinking standard- Max 600 mg/L)
 - Conductivity – (WHO safe drinking standard- Max 2000 uS/cm).
 - Total Dissolved Solids (TDS) cannot be successfully removed by ultra-filtration:
 - TDS (WHO safe drinking standard- Max 1000 mg/L)
 - TDS contain a wide range of substances including organic and inorganic (chemicals).
 - Unpleasant Tastes are not successfully removed in most cases using ultra-filtration

Ultra-Filtration will have no effect on PH levels:

- PH Scale (WHO safe drinking standard 6.5 – 9.0)
- Total Alkalinity (WHO safe drinking standard max 500)
- PH levels are not considered a health issue but may cause corrosion or encrustation of plumbing fittings and pipes.



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