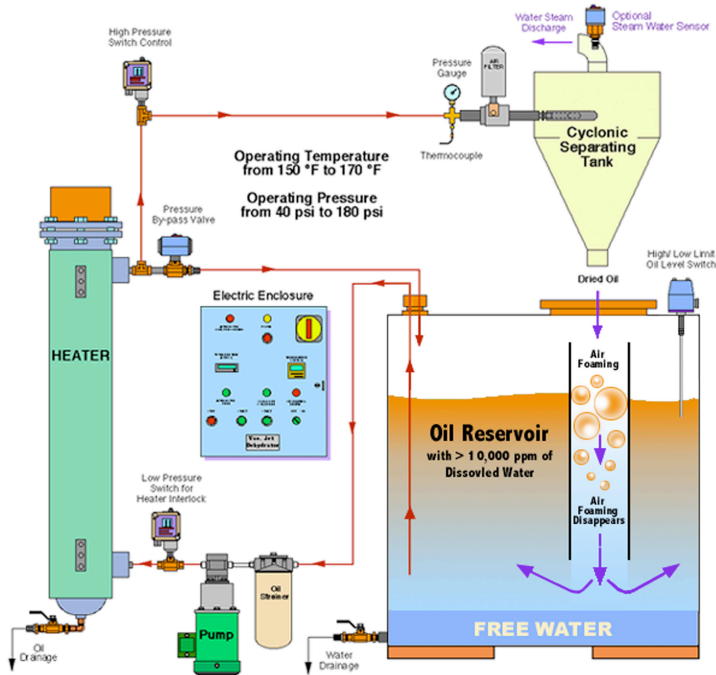


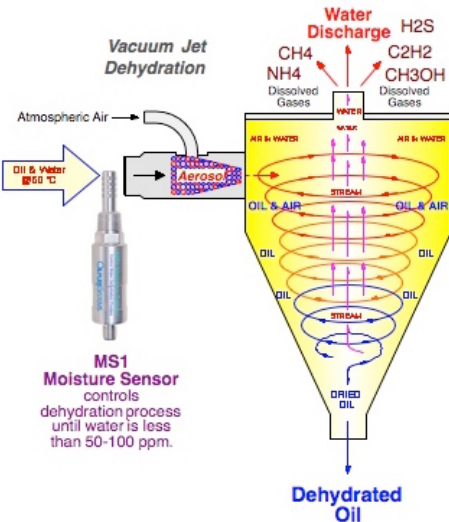
Vacuum Jet Dehydration Fluid Flow Diagram



The Low Cost in Water Dehydration

Dehydration Features

- Removes dissolved and free water from over 10,000 ppm (1%) down to less than 50 ppm (0.005%).
- Removing dissolved gases such as H₂S, CH₄, NH₄, C₂H₂ from oil. These corrosive gases deteriorate lubrication and shorten the life of oil.
- Removes dissolved water about 3 times faster than convention vacuum distillation at the same flow rate.
- Low cost water dehydration (40% to 60%) less cost than conventional vacuum distillation.
- Low heating temperature from 145 °F to 160 °F.
- Dehydrate high viscosity oil up to 5,000 SUS.
- Capable of dehydrating extremely dirty oils such as quenching oil, No. 6 fuel oil etc. heavy duty operation due to its unique design.
- Dehydrator unit has a 50 gal dehydrating tank for more efficient water dehydration process.
- Maintenance free operation. No expensive vacuum pump replacement cost.
- Digital controller with PLC and touch screen interactive display for full automatic control.
- MS1 Moisture Sensor controls dehydration process and read water in ppm.



MS1 Moisture Sensor is also controlled water dehydration operation and allows the Vacuum Jet Dehydration to remove water down to 50 or 100 ppm before discharging and returning the dried oil to oil reservoir.

Vacuum Jet Dehydration is designed to remove dissolved and free water from industrial lubricating oils. This is the latest technology in water dehydration from lubricating oil that can provide a lower cost capacity of removing water down to 40 ppm in extremely dirty oil conditions.

Vacuum Jet Dehydration works by utilizing atmospheric air to absorb dissolved water from oil. Oil & dissolved water mixture is **heated at 140 °F or 60 °C** by an immersion heater and pressurized through OilPure's **proprietary jet eductors**. This causes atmospheric air to mix with oil.

Air and oil mixing action turns fluid into aerosol in a special designed cyclonic separating tank. At the right temperature, **air will absorb moisture from the oil** and causes water to change from liquid state in the oil into a vapor state. The cyclonic forced air will carry dissolved water to the steam above and allow dried oil to fall to the bottom.

How Conventional Vacuum Distillation Works

Conventional vacuum distillation works on the principle that water boils at 170 °F or 77 °C under 29 inch Hg. vacuum, rather than 212 °F at atmospheric sea level. Dissolved water vaporizes from the vacuum chamber and is drawn into the condenser which turns vapor into water droplets. Vacuum distillation uses an expensive, high maintenance vacuum pump to draw moisture from wet oil.

Oil Applications

Hydraulic oil quenching oil, gear oil, lube oil, cutting oil, turbine oil, vacuum oil, compressor oil, transmission oil, honing oil, grinding oil, rolling oil, stamping oil, drawing oil, fire resistant oil, Quintolubric oil, Phosphate Ester oil, synthetic oil, rust preventing oil and etc.

