

# H SERIES DE-WATERING THERMOJET® OIL PURIFIER

One of the most advanced and effective methods of purifying industrial lubricants and hydraulic oils. The ThermoJet® Oil Purifiers from Colfax Fluid Handling's Reliability Services are a key element in our quest to keep your facility Up and Running.

The ThermoJet® Oil Purifier is a state-of-the-art, on-line industrial oil-purification system that removes free, emulsified and dissolved water from industrial lubricants and hydraulic oils. The unique air/gas stripping technology employed by the ThermoJet® Oil Purifier makes it practical and efficient; allowing the ThermoJet® Oil Purifier to outperform centrifuges, coalescers and the more complex vacuum dehydration systems.

## PRINCIPLE OF OPERATION

The ThermoJet® works on the principal of air stripping. The use of air or nitrogen bubbled through contaminated liquids has long been used to remove contaminants. But the use of this technique was restricted because the volume of gas required was large due to limited mixing of the gas with the liquid.

The unique technology embodied by the ThermoJet® makes air/gas stripping practical and efficient because of the mixing and intimate contact of the air/gas with the fluid being cleaned. In addition, the ThermoJet® utilizes the principal that the capacity of a gas to entrain moisture increases exponentially with temperature. For example, with a 55° Celsius increase in temperature, there is a 30-fold increase in the capacity of gas to hold moisture.



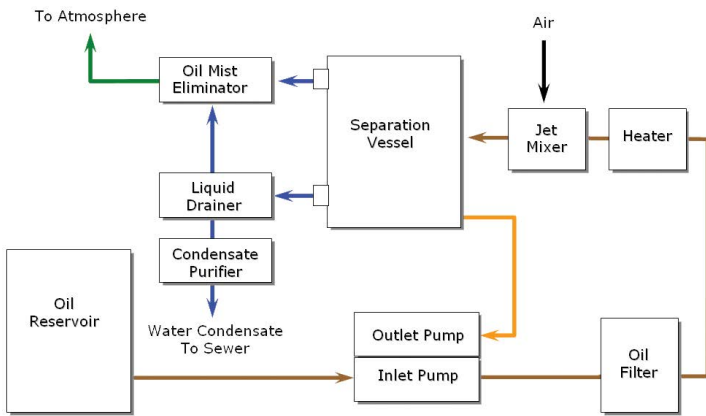
## BENEFITS

- Removes all three forms of water
- No waste or oil disposal
- Oil viscosity is maintained
- Improved machinery reliability
- No machinery failures due to poor quality oil
- No oily discharge
- No emissions penalties from environmental agencies
- Greatly reduces new oil purchases

## DESIGN FEATURES

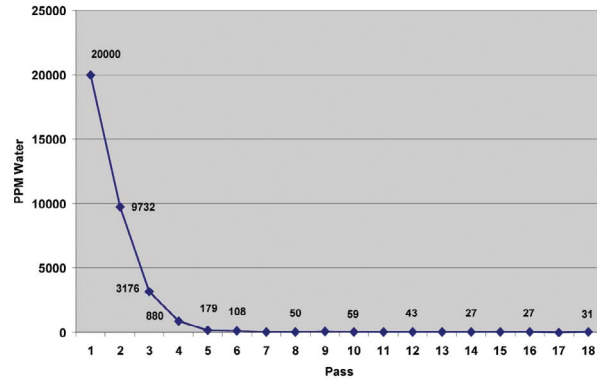
- Electric heater
- Proprietary dual-stage jet mixer
- Corrosion-resistant stainless steel construction
- Particulate filtration to ISO Cleanliness Code 15/13/10
- 2 close-coupled gear pumps driven by single motor
- Available in various international voltages
- Available in 180 GPH and 540 GPH models
- Electrical Classification Available:
  - Class 1, Division 2. Groups B/C/D. CSA Certified
  - Class 1, Division 1. Groups C/D. CSA Certified
  - ATEX CAT3, Ex dn. IIB+H<sub>2</sub> T3

## HOW THE H SERIES THERMOJET® OIL PURIFIER FUNCTIONS



Oil is drawn from a reservoir by a pump through a sight flow indicator and a Y-strainer. A filter removes small quantities of dirt, wear particles and corrosion products. The oil temperature is elevated by a heater. Downstream of the heater, atmospheric air is filtered as it is drawn into the wet oil by a highly efficient, proprietary Jet Mixer. As the air contacts and mixes with the oil, the liquid water changes into a vapor. A supply of compressed air is not required. Dehydrated oil collects in a level-controlled separation tank. In the space above the oil level, the water vapor separates from the oil. The unique design of the THERMOJET® separation tank prevents any condensate from recontaminating the oil. Clean, dry oil is drawn from the tank by

Typical Water Removal



a second gear pump which delivers it back to the machinery reservoir or oil tank. The clean water vapor which passes through an oil mist coalescer exhausts to atmosphere. The water condensate passes from a liquid trap into a Condensate Purifier Assembly which removes 99% of the carry-over oil before it is discharged into an oily water sewer.

### Colfax Fluid Handling Reliability Services

1740 Stebbins Drive  
 Houston, TX 77043  
 Tel: +1.713.464.6266  
 Tol: +1.888.478.6996  
 Fax: +1.713.464.9871  
[www.colfaxfluidhandling.com/reliability-services](http://www.colfaxfluidhandling.com/reliability-services)

#### Reliability Services

CLARUS® COT-PURITECH<sup>SM</sup> LSC® LUBRITECH® SICELUB®



RELIABILITY SERVICES