

Lubrigard Oil Purifier Systems

Moisture & Particulate Removal to Ultra-low Levels

Oil Purification Systems

LUBRIGARD OIL PURIFICATION SYSTEMS PROVIDE YOUR MAINTENANCE DEPARTMENT WITH EFFICIENT TOOLS TO REMOVE HIGH CONCENTRATIONS OF WATER AND PARTICULATE FROM LARGE RESERVOIRS WHILE EQUIPMENT IS IN OPERATION.



BENEFITS

Existing Oil Filtering Systems

Most oil filtration systems used in Plants & Mills, including filter cartridges, centrifuges and filter presses, cannot adequately remove water and solid contamination within the oil to continuously provide dry/clean oil.

The VPL Oil Purification System is the Solution

Lubrigard Vacuum Oil Purifiers (Model VPL) utilize a vacuum dehydration process to remove free, emulsified and dissolved water from oils as well as fine particulate and gasses. These systems are self-contained, skid mounted and offer a P.L.C. controlled full status control panel for a fully automatic operation. Standard Lubrigard Oil Purifiers are offered as stationary and portable system for continuous or periodic attachment to an Oil System.

Guaranteed Performance in a wide variety of Applications

The Lubrigard Vacuum Dehydrator has successfully been performing services for over the last 20 years in many applications involving both mineral and synthetic oils in Turbine, Hydraulic, Gear, and Quenching applications as well as Insulating Oils, Compressor Seal Oils, and Cutting & Cooling Mineral Based Oils.

FEATURES

- The VPL Systems are offered in a variety of processing rates to suit each customer's needs and reservoir sizes with flow rates of 200, 400, 600, 900, 1200 & 1600 USGPH. Continuous process provides for fast reservoir turnover
- The VPL Systems are designed and guaranteed to remove water contamination from 10,000 ppm to 100ppm or less in total water in a single pass.
- 99.5% particulate removal of particles 3 microns or larger. This is accomplished with the use of 3 micron absolute($\beta(3)=200$) rated micro glass filter elements. ISO Particle Counts of 16/13 or less are achievable with the use of Lubrigard's High Performance Filter Elements.
- VPL Systems do not remove additives.
- VPL Systems provide for low maintenance requirements and minimal installation requirements.
- Fully automatic operation; Simple start-up, easy to operate and simple to shutdown.

OVERVIEW

- Purify used and in-use lubricant instead of dumping good oil.
- Reduce 10,000ppm of water to 100ppm of water in a single pass.
- Remove free, emulsified and dissolved water.
- Achieve an ISO Cleanliness Code of 16/13.

RENTAL OPTIONS

Lubrigard units are available for weekly and monthly rental.



PROACTIVE LUBRICATION MANAGEMENT

Lubrigard Oil Purifier Systems

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PRODUCTS

200 Gallons/Hour (760 Liters/Hour)
[VPL-200]



600 Gallons/Hour (2,270 Liters/Hour)
[VPL-600]



1,600 Gallons/Hour (6,000 Liters/Hour)
[VPL-1600]



GENERAL PRINCIPLE OF VPL SYSTEM OPERATION

Dehydration

The Vacuum Dehydrator's purpose is the removal of water from the oil. This is achieved by drawing oil into the system via the use of the system's vacuum or an option inlet pump (Option O). The oil is then directed through an electric heater whereby it is heated to a suitable temperature of 140-160°F.

The oil is directed to an optional Pre-Filter Vessel prior to entering the system's Vacuum Chamber where the oil level is safely controlled by a float control valve. Within the vacuum chamber, the oil is distributed through a series of fiberglass constructed dispersion coalescers and is exposed to high vacuum (26-28"Hg) and the water (free, emulsified and dissolved), dissolved air and gases and other low range volatiles are boiled off, i.e., vaporized out of the oil, thereby purifying and conditioning it to a standard that is generally regarded as better than new oil. The Lubrigard dispersion coalescer filters provide for maximum exposure of the oil to the effect of vacuum and thereby accelerate the water removal process.

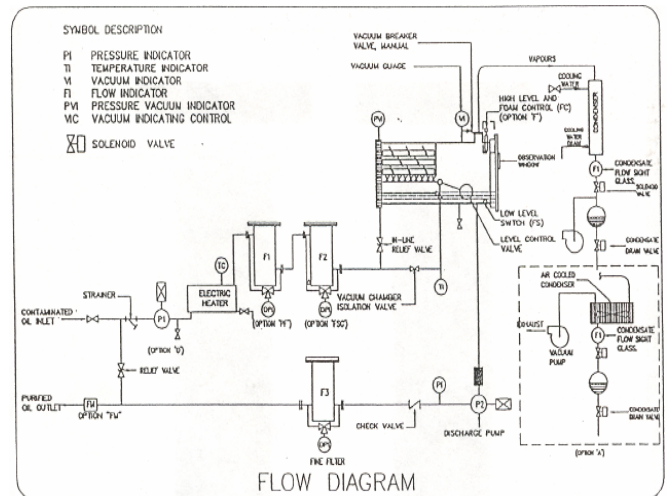
A cooling device of ample capacity, either an air or water condenser, efficiently condenses the steam and vaporized contaminants and automatically discharges them from the system's waste water drain. Purified oil falls to the bottom of the vacuum chamber whereby it is removed by a discharge pump. Additives and detergents are retained and continue to serve their original purpose in the processed oil. No oil is lost in the process.

The degree of water removal is accomplished to virtually the zero point (100ppm or less). Varying water content within reasonable limits presents no problems as the unit automatically re-circulates until all the water is removed.

Particulate Removal

Lubrigard provides as a standard a Polishing Filter Vessel that is located on the discharge side of the vacuum chamber. If an optional inlet pump is chosen, the customer is able to relocate the standard polishing filter vessel to the inlet side of the vacuum chamber or can simply select an optional Pre-Filter Vessel to provide for pre-filtration of the oil prior to entering the vacuum chamber. The vessel contains a 3 Micron Absolute pleated filter with a micro-glass media that is rated to remove 99.5% of particles greater or equal to 3 microns. These elements are impervious to water in the oil and provide for long service life due to a high level of filtering surface area. Each Filter is monitored by a differential pressure gauge/switch to provide for both visual and electrical indication of a filter change out requirement.

Upon delivery to the customer, the Vacuum Oil Purifier is a fully assembled system that is self-contained and skid mounted and ready for connection to utilities. More detailed information on the VPL Stationary and Portable Systems is available on enquiry.



PROACTIVE LUBRICATION MANAGEMENT

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