Pall Corporation

From the historical leader in oil purification comes the most advanced oil purifier in the world...

Pall HLP6 Oil Purifier

Filtration. Separation. Solution.SM

The culmination of 30 years of expertise in water control for lubrication and hydraulic control circuits

With a design based on 30 years of actual field experience, the Pall HLP6 oil purifier combines the excellent efficiency of mass transfer purifiers with an exceptional level of reliability and ease of use.

Water contamination in oil systems is responsible for major maintenance and operational problems of critical components in lubrication and hydraulic circuits. From power generation turbines to paper machines, these problems include:

- Increased corrosion in the system, especially at bearing locations
- Increased oil oxidation and acid build-up
- Sluggish response of control systems

Our experience in the field has shown that it is never enough to remove free water: centrifuges and coalescers alone cannot protect bearings against corrosion and fluid degradation.

Free water and dissolved water

In a typical oil system, temperature swings constantly change the dissolved water content of the oil. At the reservoir location it is critical to remove not only free water, but also a large portion of dissolved water. This is the only way to ensure that free water will not appear when the fluid goes through the cool parts of the system, especially when an oil cooler is used downstream of the reservoir.

Free water removal in typical turbine oil: bright clear aspect shows absence of free water

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Tower
Pall expertise is best illustrated by the newly designed separation tower. Packed with newly designed rings to ensure maximum exchange surface between oil and air, the Pall HLP6 purifier maximizes water removal efficiency thanks to higher mass transfer.

New mist eliminator
Stainless steel packing at the top of the tower eliminates oil carryover and drains the coalesced oil back into the tower.

Oil delivery system eliminates carryover potential. From a dedicated inlet pump, the oil is delivered under pressure through a newly designed manifold. The oil delivery is independent of head pressure condition, for a very flexible installation, better efficiency and easy operation.

Optimized level control
The outlet pump continuously adjusts flow rate to maintain the optimum level inside the tower. Fluid level trips are virtually eliminated.

Unattended operation
The Pall HLP6 purifier is fully PLC controlled and designed to operate totally unattended.

New claw style vacuum pump design
Not susceptible to oil carryover, the pump only needs minor maintenance every 365 days.

The Pall HLP6 oil purifier comes equipped with Pall's Ultipleat® SRT filtration technology for ultimate particle control.

With Pall's integrated water sensor, oil moisture condition can be continuously monitored, easily and precisely.

Floor mount, caster, or complete tow package options make for versatile installation (caster option shown).

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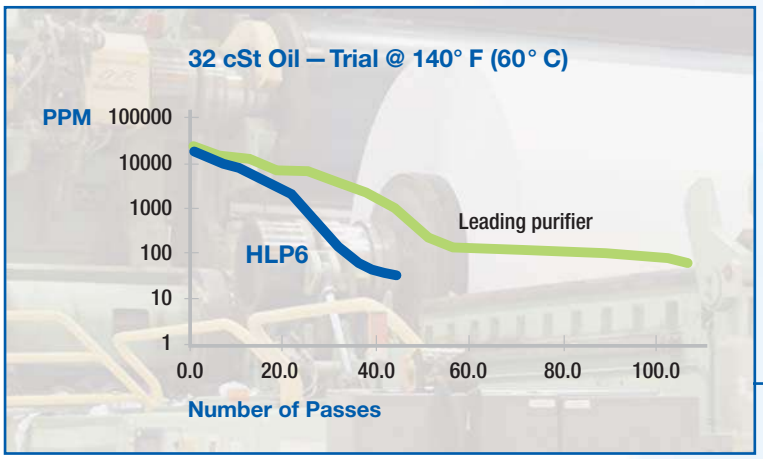
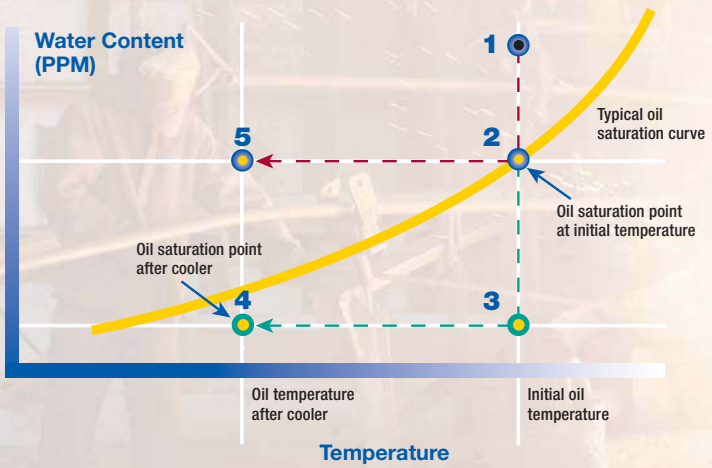
Performance

The Pall HLP6 purifier has a newly redesigned vacuum tower which allows for very efficient water removal. It is designed to remove 100% of free gases and water (under steady state conditions), and up to 80% of dissolved gases and water. It is also designed to remove solid contaminants, with efficiency of 99.9% (down to 3 microns).



The HLP6 oil purifier showed a 40% faster dehydration rate when compared to a leading, similarly sized purifier.

Removing free water is never enough!



1. Initial water content is above saturation (free water).
2. Maximum water removal capability of "free water removal" devices (coalescers, centrifuges, etc.) is to the oil's saturation point.
3. Water content achieved with mass transfer dehydration is significantly below the oil's saturation point.
4. Water content achieved with mass transfer dehydration remains below the oil's saturation point even after oil is cooled. This prevents the formation of harmful free water.
5. If only free water is removed at initial temperature, when oil is cooled the amount of harmful free water in the oil can increase significantly.

Controlling the dissolved as well as the free water in the reservoir is critical in ensuring the absence of free water during operation. With the Pall HLP6 purifier, this is done efficiently, easily, and reliably.

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Ordering Information

HLP6 [Table 1] [Table 2] [Table 3] [Table 4] [Table 5] [Table 6]

Table 1 Voltage | Table 2 Filter | Table 3 Seals | Table 4 Mounting | Table 5 Water Sensor | Table 6 Language

Table 1: Voltage Options

W	480V - 60Hz - 3P (standard)
1	575V - 60Hz - 3P
R	380V - 50Hz - 3P

Table 2: Filter Element Options

Code	ßx(c) ≥ 1000 based on ISO 16889	CST Rating*
AZ	3	08/04/01
AP	5	12/07/02
AN	7	15/11/04
AS	12	16/13/04
AT	22	17/15/08

*CST: Cyclic Stabilization Test to determine filter rating under stress conditions, based on SAE ARP4205

Table 3: Seal Material

Z	Fluorocarbon (standard)

Table 4: Mount Configuration

C	Caster Wheels (standard)
F	Floor Mount (no casters)
P	Tow Package

Table 5: Water Sensor Option

W	WS10 Water Sensor

Table 6: Language

E	English (standard)

Spare Parts	Pall Part Number
Polishing Filter	UE319A*20Z
Exhaust Coalescer	OL4C (cat# 1305787)
Air Breather	HC0293SEE5

Specifications

Flow rate	6 GPM (22.7 l/min) at 60Hz
Viscosity range	3 cSt to 1000 cSt
Seal Material	Fluorocarbon
Fluid compatibility	Petroleum and synthetic based fluids.
Working Temperature Range	
Inlet Fluid Temperature	170°F (76°C) maximum
Ambient Temperature	39°F to 105°F (3.9°C to 40.6°C)
Enclosure	NEMA 4 (IP65)
Piping Codes	Conforms to ANSI B31.1 – Power Piping Code Conforms to ANSI B31.3 – Process Piping Code
Dimensions	72” H x 48” L x 32” W 183 cm H x 122 cm L x 81 cm W (same dimensions with or without casters)
Weight	1150 lbs (521 Kg)
Connections	Inlet – 1.5” FNPT Outlet – 1.0” FNPT
Inlet Pressure Range	-14” Hg to 10 PSI (-0.47 bar to 0.69 bar)
Maximum Outlet Pressure	80 Psig (5.5 barg)
Heater	4KW PLC Controlled
Paint Scheme	Powder-coated (suitable for industrial phosphate ester service)
Filtration	Pall’s SRT filter series 319, 20” cartridge, from 3 to 22 microns available at 99.9% efficiency

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Over 30 years of experience condensed into one of the most reliable machines ever!

APPLICATIONS SERVED

Power Generation
- Main turbine lube oil
- Boiler feed pump reservoir
- Transformer oil
- EHC systems

Pulp and Paper
- Wet end/dryer lube
- Press section lube and hydraulics
- Steam turbine lube and hydraulics

Primary Metals
- Roll mill automatic gauge control hydraulics
- Roll mill gear and pinion lube systems
- Roll grinder lube systems

Light Industrial
- Bulk oil reclamation
- Blow molding
- Injection molding
- Machine tool hydraulic oils
- Automotive transfer line hydraulic oils

Fuels and Chemicals
- Extruder gear boxes
- Compressor and turbine lube oil
- Boiler feed pump reservoir

KEY ADVANTAGES

Improved System Performance
- Fewer costly operational delays
- Increased system reliability
- Less downtime resulting from service interruptions
- Can work on higher viscosity oils (up to 1,000 cSt)
- Lower power consumption

Extended Fluid Life
- Greatly reduced oil change outs due to contamination

Reduced System Wear
- Less frequent component changes needed
- Smaller parts inventory required

Reduced Fluid Disposal Costs
- Sharply reduced need to dispose contaminated fluids
- Reduced waste oil disposal costs