

# PRODUCT CATALOGUE

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## PRODUCT PAGES

- Preface – How Kleenoil works
- Filter Cartridges
- Micron Filtration Systems
  - The Compact Filtration System
  - The Static Filtration System
  - The Single Filter
  - The Double Filter
  - The Four Filter
  - The Six Filter
  - The Eight Filter
- Fluid Condition Monitoring
- Trouble Shooting

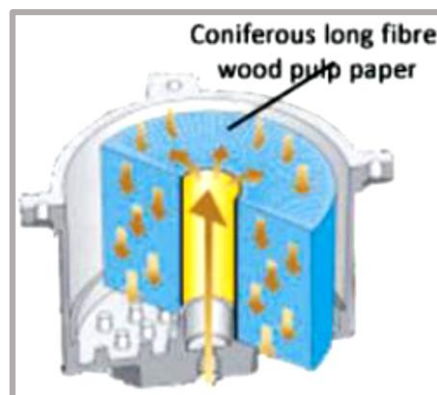
# How Kleenoil Works...

The **Kleenoil Micron Filtration System**® is based on the principle of **In-Depth media filters** which allows fluid to flow through the layers of the Coniferous wood pulp paper. The long fibres of the paper attract the water, which arrives either through the combustion process or by condensation, and absorb it like a sponge, at the same time rejecting the larger oil molecules, which are forced to pass between the tight windings of the cartridge.

The Coniferous Media filters & filter cartridge operate upon a principle of **Absorption and Adsorption**. As the oil passes through the cartridge minute carbon, wear metals and dust are extracted from the oil by adhering to the many surfaces of the filter- a process known as adsorption

Fluid cleanliness, particularly in hydraulic systems, is extremely important. It is widely recognized that silt particles (<5 micron in size) are a primary cause of premature machine failure through abrasive wear of component surfaces. In addition, water is a major cause of system damage through accelerated oxidation, corrosion, and fluid breakdown.

**Kleenoil** absorbs all free and emulsified water and gradually removes contaminant particles down to less than **ISO 4406 16/14/11** or **NAS 1638 class 5** equivalent. Therefore, extends oil life through the removal of the oxidation catalysts and at the same time extends component life. The system can also be clean and transfer unused oil (ISO 16/11) prior to use.



# Filter Cartridges

## Replacement Cartridges

### CARTRIDGE DESIGN

**Cartridge** is made of densely wound pure coniferous long fibre wood pulp paper, held together in a material casing offered in specified sizes for use in the appropriate filtration units.

**Action of the cartridge:** The filtration cartridge acts both by absorption and by adsorption in a continuous recycling process. Long fibres of the paper attract the water formed either through the combustion process or by condensation and absorb it like a sponge, at the same time rejecting the large oil molecules which are forced to pass between the tight windings of the cartridge. As the oil passes through the cartridge, minute carbon, wear metals, and silicon particles are extracted from the oil by adhering to the many surfaces of the filter - a process known as adsorption.

### UNIT APPLICATION



The Kleenoil Bypass Filter Cartridge will remove particles down to 0.5 micron (relative) and totally remove water. The principle for filtering particulate matter is 'liquid chromatography' which is in effect allowing a fluid to drain down a surface which will progressively arrest particles.

Water retention is approximately 1.2 litres per kilo of tissue.

### UNIT DESIGN

CODE: SDFC 1888 / HDFC 1878 / KF65

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure.

Guide – For SAE 15w/40 oil @ 70 c/ 60 psi/ 4.2Kcm-0.44gcm/ 2.01mp to 0.65gpm/ 3.01mp

**Operating Temperatures:** Within operating specifications of engine, gear, and hydraulic oils. Filtration Level: Particulate contamination in accordance with BS 5540 part 4: 1981 and ISO/DIS 4406. ISO equivalent to NAS 1638 class 5. (Hydraulic oil specification)

# Polypropylene Filter Cartridges

Used for WATER GLYCOL purposes

Water Glycol is used to transmit power, lubricate, seal, and to transfer heat. As it is used and reused, it begins to absorb contaminants such as chips, fines, tramp oil, and bacteria. Valves and seals will start to leak, ports will become blocked, and components will fail. All of which will result in costly downtime and loss of productivity.

All our models can be used on **Water Glycol**. These systems have many critical functions and keep a check on the water content in the system.

Our special Polypropylene cartridges are used specially for Water Glycol

## CARTRIDGE DESIGN

**Cartridge** is made of densely wound pure coniferous long fibre wood pulp paper, held together in a material casing offered in specified sizes for use in the appropriate filtration units.

## UNIT APPLICATION



## UNIT DESIGN

CODE: SDPC 2088

Polypropylene cartridge suitable for water-based fluids / emulsified oils / water glycol –

**Filter efficiency to less than 10 microns**

# Micron Filtration System<sup>®</sup>

The Off-Line Micron Filtration Unit is a multi-purpose fluid cleaning. It is ideal for cleaning most types of hydraulic, gear, and transmission fluid reservoirs and, because of its portable design, the unit can be used for many situations including construction equipment, as well as for oil and fuel transfer and rotational cleaning of factory and industrial equipment.

The specially designed cartridge filter achieves an **ISO 4406 16/14/11** equivalent to **NAS 1638 class 5** well below the original standards of the equipment's original manufacturers and distributors. By filtering particles down to one micron, the Off-Line Micron Filtration Unit minimizes the amount of dirt and debris within a machine and, as a result, will dramatically cut down on repair and maintenance costs.

Hence the Kleenoil Micron Filtration System<sup>®</sup>:

- ✓ ***Kleenoil provide In-Depth oil Filtration which is an advanced and better form of filtration***
- ✓ ***The Kleenoil machine is a 3-in-1 filtration system which can attract moisture, ferrous as well as carbon contamination.***
- ✓ ***Removes contaminant particles down to less than 0.5 microns***
- ✓ ***Removes water up to capacity of cartridge through "Absorption process".***
- ✓ ***No machine downtime as oil is cleaned continuously while machine is in operation***
- ✓ ***There is no storage tank and oils are cleaned instantly***
- ✓ ***The only consumables are the filter cartridges which can be changed within minutes.***
- ✓ ***Can be used with virtually any petroleum/synthetic based oil***
- ✓ ***All properties of oil being cleaned are maintained***



Filtration System attached to a Wheel Loader



Filtration System attached to a Power Pack for critical Servo Valve



Filtration System attached to a Turbine in a Steel Plant



Filtration System attached to a Tunnel Boring Machine

# Micron Filtration System<sup>®</sup>

Compact Micron Filtration System - Model Compact MFS 1XKU 65

## UNIT SYSTEM

We designed our **Compact Oil Filtration System** for use as dedicated filtration equipment on smaller sumps and reservoirs.

- Continuous and quick oil filtration
- Ultra-fine contamination control to finer than one micron
- Dedicated filtration
- Fully automatic operation
- Core-magnet fitted to existing filter units

Warranty 12 months on all parts.

## UNIT APPLICATION



Earth moving, Construction & Mining Equipment, Hydraulic Press & Hot/Cold Steel Mills, Hydraulic & Synthetic fluid, Lubricating-Cutting-Gear box & Engine oils, Servo Valves

## UNIT DESIGN

CODE:  
Compact MFS 1XKU65

Electric Motor: 0.37kw/0.5HP/415kv  
3 Phase 1450rpm  
Flow rate: 300lph  
Suitable for tanks: Up to 1,000ltrs  
Dimensions (L\*W\*H):  
625X500X500 (mm)  
Weight: Approx. 30 kg

Additional Options:

- Eclipse magnetic filter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

To Order, Call: +91 124 4904545 or email [info@kleenoilindia.com](mailto:info@kleenoilindia.com)

ALL UNITS ARE DELIVERED AND COMMISSIONED BY KLEENOIL ENGINEERS UN-LESS OTHERWISE ARRANGED

# Micron Filtration System<sup>®</sup>

Model Static MFS 1XSDU

## UNIT SYSTEM

We designed our **Static Oil Filtration System** for use on smaller sumps and reservoirs.

These systems can accommodate a wide range of flow rates, always leaving the possibility of higher flow rates with custom orders.

- Continuous and quick oil filtration
- Ultra-fine contamination control to finer than one micron
- Fully automatic operation
- Core-magnet fitted to existing filter units

Warranty 12 months on all parts.

## UNIT APPLICATION



Earth moving, Construction & Mining Equipment, Hydraulic Press & Hot/Cold Steel Mills, Hydraulic & Synthetic fluid, Cutting-Gear box & Engine oils, Water-glycol fluid, Servo Valves

## UNIT DESIGN

CODE:  
STATC MFS 1XSDU 9788

Electric Motor: 0.37kw/0.5HP/415kv  
3 Phase 1450rpm

Flow rate: 300lph

Suitable for tanks: Up to 1,500ltrs

Dimensions (L\*W\*H):  
790X405X635 (mm)

Weight: Approx. 50 kg

Additional Options:

- Eclipse magnetic filter
- Particle counter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

# Micron Filtration System<sup>®</sup>

Model Static MFS 2XSDU

## UNIT SYSTEM

We designed our **Static Oil Filtration System** for use on smaller sumps and reservoirs.

These systems can accommodate a wide range of flow rates, always leaving the possibility of higher flow rates with custom orders.

- Continuous and quick oil filtration
- Ultra-fine contamination control to finer than one micron
- Fully automatic operation
- Core-magnet fitted to existing filter units

Warranty 12 months on all parts.

## UNIT APPLICATION



Earth moving, Construction & Mining Equipment, Hydraulic Press & Hot/Cold Steel Mills, Hydraulic & Synthetic fluid, Lubricating-Cutting-Gear box & Engine oils, Water-glycol fluid, Servo Valves

## UNIT DESIGN

CODE:  
STATIC MFS 2XSDU 9788

Electric Motor: 0.37kw/0.5HP/415kv  
3 Phase 1450rpm

Flow rate: 600lph

Suitable for tanks: Up to 2,000ltrs

Dimensions (L\*W\*H):  
990X460X635 (mm)

Weight: Approx. 60 kg

Additional Options:

- Eclipse magnetic filter
- Particle counter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

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# Micron Filtration System<sup>®</sup>

Free-standing, offline, fluid cleaning rig, used as a multipurpose cleaner or transfer unit – Model MFS 1XSDU+MM5

## UNIT SYSTEM

The **Hydraulic Oil Filtration System** is a multi-purpose fluid cleaning rig, which can be used to clean most mineral oils such as hydraulic, transmission oils, diesel type fuels and many soluble oils and fluids.

As a mobile trolley, it has a wide variety of applications, such as oil and fuel transfer and rotational cleaning of factory machinery.

- Core-magnet fitted to existing filter units
- Additional Magnetic Filter – Micromag – for super fine finishing

Warranty 12 months on all parts.

## UNIT APPLICATION



Injection Moulding; Cooling; Heating Systems; Diesel Storage Tanks; Plant and Machinery, Flushing Fluid, Testing Oils, Water Glycols, Ceramics Industries

## UNIT DESIGN

CODE: MFS 1XSDU

Electric Motor: 0.37kw/0.5HP/415kv  
3 Phase 1450rpm

Flow rate: 300lph

Suitable for tanks: Up to 2,000ltrs

Dimensions (L\*W\*H):  
700X600X1100(mm)

Weight: Approx. 65 kg

Additional Options:

- Particle counter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

# Micron Filtration System<sup>®</sup>

Free-standing, offline, fluid cleaning rig, used as a multipurpose cleaner or transfer unit – Model MFS 2XSDU+MM5

## UNIT SYSTEM

The **Lube Oil Filtration System** is a multi-purpose fluid cleaning rig, which can be used to clean most mineral oils such as hydraulic, transmission oils, diesel type fuels and many soluble oils and fluids.

As a mobile trolley, it has a wide variety of applications, such as oil and fuel transfer and rotational cleaning of factory machinery.

- Core-magnet fitted to existing filter units

## UNIT APPLICATION



Hot Press in plywood Industries, Aluminium Extrusion & Die Casting Machines, CNC Machine Tools, Manual & CNC Machinery; Fine Finishing Operations; Cooling & Heating Systems; Engines; Post Drill Head Operations; Plant and Machinery

## UNIT DESIGN

CODE: MFS 2XSDU

Electric Motor: 0.37kw/0.5HP/415kv  
3 Phase 1450rpm

Flow rate: 600lph

Suitable for tanks: Up to 4,000ltrs

Dimensions(L\*W\*H):

700X600X1100(mm)

Weight: Approx. 80 kg

Additional Options:

- Particle counter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

Warranty 12 months on all parts.



# Micron Filtration System<sup>®</sup>

Free-standing, offline, fluid cleaning rig, used as a multipurpose cleaner or transfer unit – Model MFS 4XSDU+MM10

## UNIT SYSTEM

The **Gear Oil Filtration System** is a multi-purpose fluid cleaning rig, which can be used to clean most mineral oils such as hydraulic, gear and transmission oils, diesel type fuels and many soluble oils and fluids.

As a mobile trolley, it has a wide variety of applications, such as oil and fuel transfer and rotational cleaning of factory machinery.

- Core-magnet fitted to existing filter units
- **Fitted with 20lpm/6 bar external Gear pump for Gear oil**
- Additional Magnetic Filter – Micromag – for contaminant-laden lubricants

Warranty 12 months on all parts

## UNIT APPLICATION



Cement Plants, Steel Mills, Metal, Chemical industry, Conveyors, Cranes, Environmental protection, Mining, Marine & Offshore, Commercial Vehicles, Earth Moving Equipment, Construction, Outdoor Power Equipment

## UNIT DESIGN

CODE: MFS4XSDU

Electric Motor: 0.75kw/1.0HP/415kv  
3 Phase 1450rpm

Flow rate: 900lph

Suitable for tanks: Up to 6,000ltrs

Dimensions (L\*W\*H):  
950X700X1100(mm)

Weight: Approx. 100 kg

Additional Options:

- Eclipse magnetic filter
- Particle counter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

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# Micron Filtration System®



Free-standing, offline, fluid cleaning rig, used as a multipurpose cleaner or transfer unit – Model MFS 6XSDU

## UNIT SYSTEM

Contamination in the form of water, particulate, metal shavings, or tramp oil builds up over time and will compromise the finishing quality of the cutting oil. Problems of unacceptable processed parts, excess chips in the "cutting zone", increased process friction & elevation in process temperature.

- Removes all water from the oil in the lubricating system from the oil before it causes permanent damage.
- Magnetic filter attached to machine, prevent ferrous particles from flowing into reservoir and back to the work piece
- This system filters, de-aerates and purifies the turbine oil
- Core-magnet fitted to existing filter units

## UNIT APPLICATION



- Stops leaking seals, sticking valves & blocked orifices and ports
- Removes contamination of "new" water glycol hydraulic oil
- Core-magnet fitted to existing filter units

## UNIT DESIGN

CODE: MFS 6XSDU

Electric Motor: 0.75kw/1.0HP/415kv  
3 Phase 1450rpm  
Flow rate: 1200lph  
Suitable for tanks: Up to 8,000ltrs  
Dimensions (L\*W\*H):  
1200X700X1100(mm)  
Weight: Approx. 120 kg

Additional Options:

- Eclipse magnetic filter
- Particle counter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

Warranty 12 months on all parts

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# Micron Filtration System<sup>®</sup>

Free-standing, offline, fluid cleaning rig, used as a multipurpose cleaner or transfer unit – Model MFS 8XSDU

## UNIT SYSTEM

The **Turbine Oil Filtration System** continuously remove particles, water, acidity, and oil degradation products from all kinds of oils and fluids, such as hydraulic oils, lube oils, gear oils, engine lube oils, marine diesel oil, marine gas oils, heat transfer oils, honing oils, quenching oils, rolling oils, washing oils, synthetic gear oils, turbine lubrication oils

One of the major problems of continuous water presence in the oil is formation of varnish, which is a thin insoluble film deposit that is usually found on bearings and servo-valves. The System is designed to remove contamination continuously, while in operation and it ensures that even the smallest contaminants, varnish and sludge are removed.

## UNIT APPLICATION



Industrial turbines, Utility Power generation, Oil & Gas, Mechanical drives, Waste regeneration, Steel plants, Cements Plants, Sugar etc.

## UNIT DESIGN

CODE: MFS 8XSDU

Electric Motor: 0.9kw/1.0HP/415kv  
3 Phase 960rpm

Flow rate: 1800lph

Suitable for tanks: Up to 10,000ltrs

Dimensions (L\*W\*H):  
1450X700X1100(mm)

Weight: Approx. 150 kg

Additional Options:

- Eclipse magnetic filter
- Particle counter

**Oil Flow Rate:** Output levels are dependent on viscosity, temperature, degree of contamination, and oil pressure

# Fluid Condition Monitoring

## Oil Testing Kit

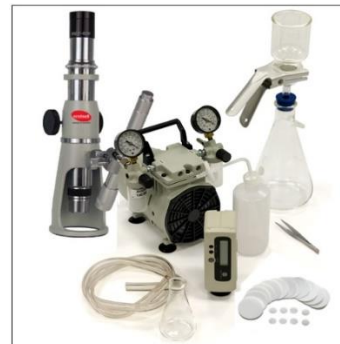
### UNIT SYSTEM

Oil analysis has become an important part of machine maintenance, and we can offer a programme of analysis in conjunction with Kleenoil cartridge changes to monitor the oils improvement, and alert to potential problems before they become serious.

Oil analysis is a proactive method that can save these industries considerable costs year on year. It measures the contamination from surface degradation caused by mechanical wear and corrosion from integrated components such as hydraulic motors, piston, housing, etc.

You can minimize your downtime and maximize your uptime with oil contamination control.

### UNIT APPLICATION



It comprises of:

- Vacuum pump with flexible pipe.
- Conical flask; Funnel.
- Sintered Glass Membrane holder.
- Pincette; Metallic Clamp.
- 500 ml plastic Benzene bottle.
- 0.8-micron membrane filter paper (1 Box - 100Nos.).
- 100 X Microscope (Optional)



KLENOIL offers a complete set maintenance programme, to change and dispose cartridges, take samples, and compile a monthly report for each machine

(Valid for AMC customers)

# Trouble Shooting

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## RIG WILL NOT RUN:

- Check Power Supply is correct voltage.
- If fitted check for faulty fuse (415v Models)
- Check power cable for any damage
- Check that the power supply is connected, and the Isolator Switch is ON.
- Check to see if the **RED** light is illuminated or if there is no light, then there is no supply.  
Check power supply.
- **RED** light on press Start Switch
- No **GREEN** light - Disconnect from Power Supply and request for a qualified Electrician to investigate the control box.
- Check trip switch inside the control box.
- If the unit is bunded and is fitted with a float switch, check for any fluid spillage in the bund. Drain the excess fluid and re-start the unit. Check for any leaks.

## POOR FLOW RATE:

- Cartridges are clogging with dirt and/or water.
- Cartridge inserted upside down. Remove lid and check brass ring is at the top.
- Partial blockage in the pipe work or manifold.
- Bypass valve is opening due to partial blockage, cartridge clogging or too high viscosity of oil.
- High viscosity rate of fluid will also reduce flow rate e.g. very heavy gear oil. Warmer oil flows more freely than cold oil, as the unit operates the oil will get warmer and flow will increase.

## RIG KEEPS STOPPING:

- Start the rig and watch the pressure gauge. If this goes above 70 psi and the rig stops there is either a blockage between the pump and manifolds or the cartridges are clogged.

## LEAK AROUND FILTER LID:

- Seals are worn or damaged - remove and replace with new seals.
- Check for any damage around the filter housing top - if someone has used a screwdriver or similar, to remove cartridges they may have damaged the aluminum lip.
- Check tightness of bolts.

## NO FLOW:

- Check all fittings are tight on the suction side of the pump.
- Prime the pump and if still no flow, check to see if the motor and pump are running.
- Disconnect the feed line to the manifold and if still no flow, then check and replace pump stator.



# Some of our Customers

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**BOSCH**



**TAFE**



**Supreme**



**JTEKT**



**adani**



**Parle Agro**

