



**Industrial Oil Clean**

 **Application Areas**



# In 5 continents Exportation to 36 countries

Group companies in 3 countries

Dealership, distributorship and agency in 12 countries.

## Dealer & Distributor & Agency

- Tunisia
- Jordan (Middle East)
- Algeria
- Belgium
- Slovakia
- Russia
- Ukraine
- Germany
- United Kingdom
- Spain
- Iran
- China



## Group Companies

- Greece
- Morocco
- Italy



## Exported Countries

- |                 |               |                 |                  |               |                    |
|-----------------|---------------|-----------------|------------------|---------------|--------------------|
| 1• U.S.A.       | 7• Belgium    | 13• Romania     | 19• Algeria      | 25• TRNC      | 31• Azerbaijan     |
| 2• Saudi Arabia | 8• Slovakia   | 14• Russia      | 20• Georgia      | 26• Syria     | 32• India          |
| 3• Greece       | 9• Kazakhstan | 15• Nicaragua   | 21• South Africa | 27• Iraq      | 33• Germany        |
| 4• Italy        | 10• Ukraine   | 16• Switzerland | 22• Lebanon      | 28• Iran      | 34• United Kingdom |
| 5• Tunisia      | 11• Albania   | 17• Libya       | 23• Palestine    | 29• Australia | 35• Spain          |
| 6• Morocco      | 12• Sudan     | 18• Qatar       | 24• Egypt        | 30• Jordan    | 36• China          |



# Oil Based Solution

## POLAT SOLUTIONS FOR CLEANING OF INDUSTRIAL OILS

Oils are used in a wide variety of industrial applications: for lubrication and cooling, as fuel, and for the transmission of mechanical energy in hydraulics. In the mineral oil industry, there is an increasing need to comply with environmental legislation and to deal properly with industrial fluids in order to improve plant operating conditions overall and be more competitive. POLAT helps you to develop innovative solutions for the disposal and recovery of industrial fluids by providing a wide range of separators for liquid/solid and liquid/liquid/solid separation. Our purifiers, and clarifiers guarantee efficient cleaning of industrial fluids, reduced operating costs, and a lower environmental impact.

### Oils Management

The particles are the worst problem, especially those smaller than 5 µm. They come from different sources: wear from metal, plastic and rubber components, paint flakes, and airborne dust. Left alone in the oil, they'll cause wear and clog equipment, and change the properties of the oil. It is not economical for a filter to catch particles this small. But it is for a centrifugal separator. It effectively separates particles down to 3 µm from the oil. And separates your operations from downtime and all the other problems associated with dirty oil.

All oils contain water contaminates oils through leakages and condensation, resulting in several negative effects on oil properties and overall system performance:

- Creation of high-viscosity emulsions, which have a damaging effect on valves and pumps
- Oxidation of oils and additives which creates hard particles
- Reduction of oil viscosity and lubricity
- Reduction of bearing lifetime
- Corrosion.

A centrifugal separator is the ideal tool. It can separate water from oils that seemingly does not have any water content at all. The separation process goes on continuously, meaning that production can be maintained even if a substantial amount of water leaks into the oil system. The separator will keep removing the water, and restore the oil properties. Best of all, while a centrifugal separator removes the water from the oil, the additives remain where they belong - in the oil. Our separators can remove such contaminants as water and fine solids efficiently. Contamination takes place during operation, and the fluid is then collected in single tanks or in a centralized collecting tank. Maintaining a low level of contaminants in the oil will result in a longer lifecycle by up to 4 or 6 times compared to the service life achieved with alternative systems (skimmers, paper band filters, lamella separators, etc.).

	Polat Separator	Traditional Filtration System	Vacuum System
Flow Rate	High/ Medium	High	Low
Removal of both water and solids	Yes	No	No
Solids removal -min size	High	Limited	Low
Free water removal	Yes	No	Limited
Emulsified water removal	Limited	No	Yes
Operating Costs	Low	High	High
ROI	Short	Long	Long

### Why change ?

#### OPTION 1

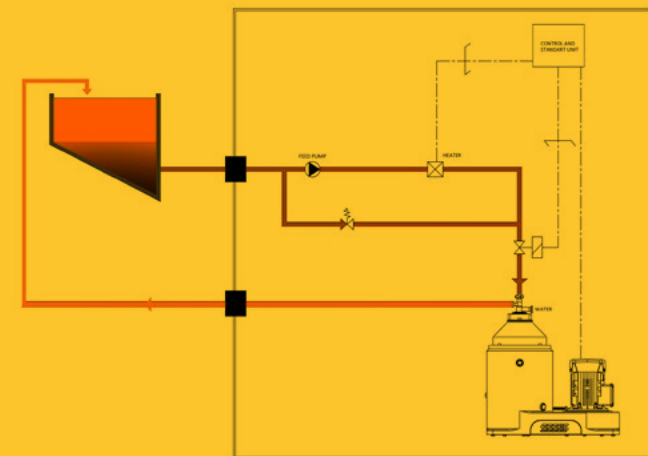
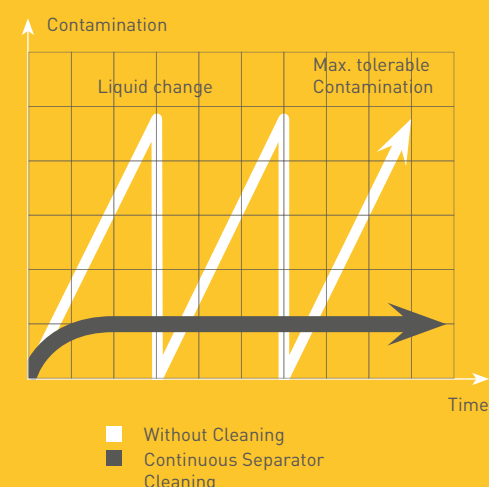
The POLOIL centrifugal separator system (clarifier and purifier series): Continuous removal of both water and particles -Reduces water contaminants to less than 0.5%, faster than any other technology - Reduces solid contaminants to less than 3 µm, without requiring disposal of filter media

#### OPTION 2

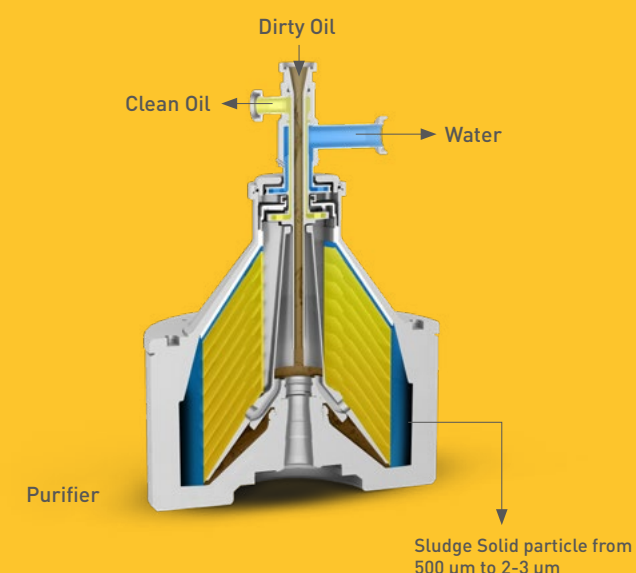
OLLOIL series is a cleaning system "key in hand "for oils able to remove nearly 99% of all particles between 2 mm and 3 microns. It also removes virtually all of the free water, without eliminating additives.

### Customer Benefits

- Reduced maintenance
- Mineral oil fluids are always clean and maintain their characteristics and chemical properties
- No operator supervision is needed thanks to the self-cleaning system
- Reduced downtimes
- Healthier workplace
- Reduced disposal costs
- Continuous processing
- Optimum performance with minimized footprint



Separator Type	Model	Flow Rate (l/h)	Motor (kW)
Manual	XBP 250 M	300-800	1,5
Manual	XBL 250 M	Up to 800	1,5
Manual	XBP 300 M	600-1500	5,5
Manual	XBL 300 M	Up to 1600	5,5



Centrifugal systems operate in by-pass mode with a collecting tank. Experience has shown that good oil quality is obtained if the tank has a capacity equal to 20 times the hourly flow rate of the separator. A purifier separates sludge and water from the oil. Water is continuously discharged from the bowl. The sludge accumulated in the sludge space in both a purifier and a clarifier is intermittently discharged

### Fields of Application

The Polat Purifier and clarifier Unit is specifically designed for purification or clarification of mineral oils Today, Polat offers an extensive range of separators for cleaning industrial fluids, everything from Lubricating oils, Hydraulic oils, Metal working cut oils, Fuels, Quench oils, Drawing oils, Rolling oils, Test bed oils, Heat transfer oils ecc, ecc, The Disc stack centrifuges are ideal for a wide range of separation tasks that involve lower solids concentrations and smaller particle and droplet sizes. They are therefore ideal for a wide range of separation duties for cleaning of industrial oils The Poloil series is a cleaning system "key in hand "for oils able to remove nearly 99% of all particles between 2 mM and 5 microns. It also removes virtually all of the free water, without eliminating additives. Applications: cleaning of hydraulic oil, oil of lubrication, compressor oil, oil Test bay, diesel.

### Standard Scope of Supply

- High-efficiency disc centrifuge, purifier & clarifier version
- All parts in contact with the product made of stainless steel
- All instruments included: feed pump, electric Heater , flow meter, sludge tank, sludge pump, piping, and control valves.
- Welded steel base where all components are pre-assembled and tested for plug and play

## APPLICATION EXAMPLES POLAT MINERAL OIL

### LUBRICANT OIL & HYDRAULIC OIL

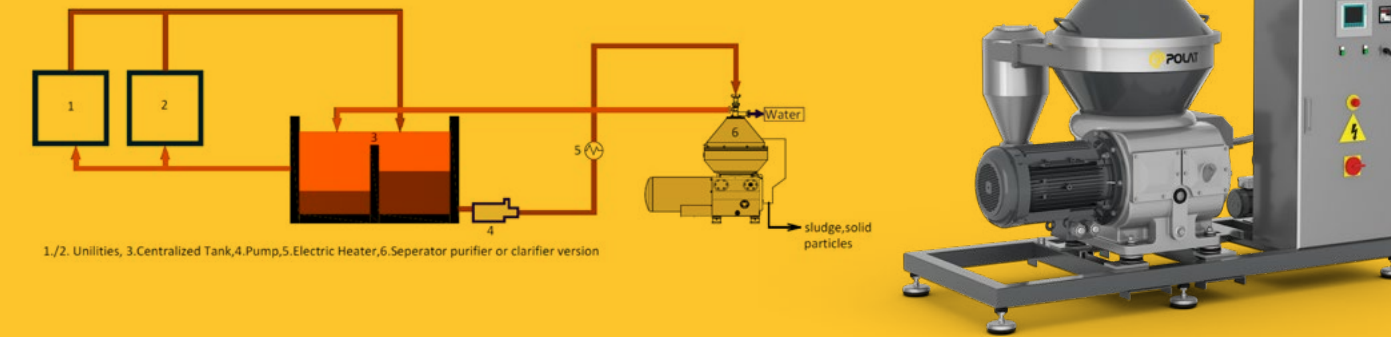
The POLOIL LUBE modules are engineered to remove the contaminant even from the heavier lubricants, and fulfill the quality requirement of more demanding equipment like turbines ones. The lubricant oils often contains particles and watery contaminants that may create serious problem. Whether the lubricant oil serve for engine or a turbine, or as hydraulic oil to move a press or an actuator, the contamination is directly proportional with the loss of the oil

### POLAT POWER

The POLOIL POWER modules are engineered to remove the contaminant even from fuel and heavy fuel, the solution to reach the quality requirement on a more and more demanding sector. Whenever Gasoil and Heavy Oil are used as Fuel, there is the requirement to clean (purify) the same from contaminating water and solid. There is the case of Power Industry (ground power stations, turbine or thermal engines), Petrol Industry (gasoline distribution and storage).

### POLAT CUT

The Poloil cut modules to keep clean the cutting oil after use and recover valuable materials. To remove the contaminants from the fluid during and after the cutting operations, like watery fluids and abrasive solid particles, while giving the possibility to recover the valuable ones. Keeping cleaned the cutting oil after each cycle, means bigger number of cycles and reduced risk of tools wearing and ruptures: less oil consumption, less disposal, for a better economic balance while contributing fro a better environment.



### Customer Benefits

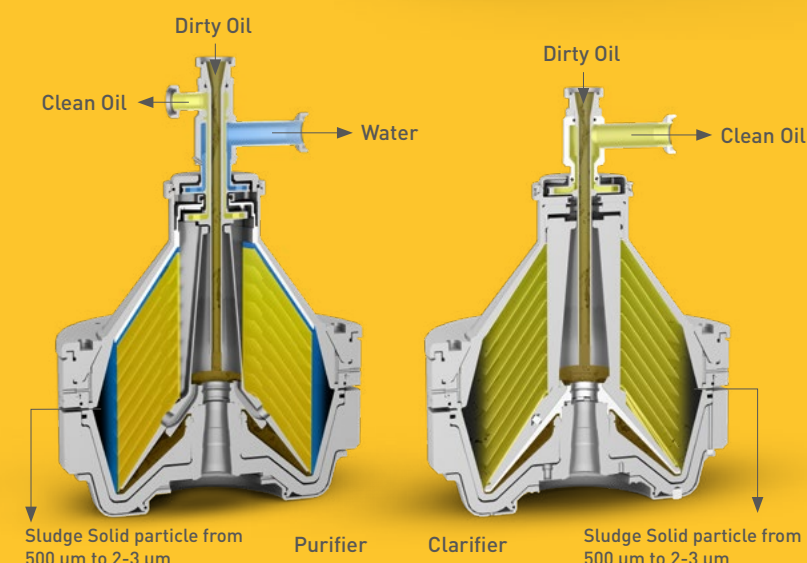
- Increase service life.
- Removes contamination from different types of fluids.
- Does not affect properties of additives.
- Lower machine downtime shutdown.
- It can be used to serve several tanks or just one.
- Plug and play feature as shown in image.
- Constant production conditions.
- Drastic reduction of liquid disposal volumes.
- Reduced disposal costs.
- Eco friendly solution.

### Fields of Application

- Lubricating oils
- Hydraulic oils
- Metall working oils
- Fuels
- Quench oils
- Drawing oils
- Rolling oils
- Test bed oils
- Heat transfer oils

### Scope of Supply

- Skid-mounted Separator, purifier or clarifier
- Control panel
- Feed pump
- Electric heater
- Flow meter
- Sludge tank
- Sludge pump
- Piping
- Control valves
- Steel base where all components are pre-assembled and and tested for plug and play



Separator Type	Model	Flow Rate (l/h)	Motor (kW)
Self-Cleaning	XBP 305 A	600-2000	5,5
Self-Cleaning	XBL 305 A	Up to 2000	5,5
Self-Cleaning	XBP 400 A	2500-4000	11
Self-Cleaning	XBL 400 A	2500-4000	11
Self-Cleaning	XBP 500 A	4000-5500	15
Self-Cleaning	XBL 500 A	4000-5500	15

### Cleaning Mineral Oils Removing Water And Particles

- Lubricating oils
- Hydraulic oils
- Metall working oils
- Fuels
- Quench oils
- Drawing oils
- Rolling oils
- Test bed oils
- Heat transfer oils

### Contaminated Oil Problems Particles

- Wear
- Clogging

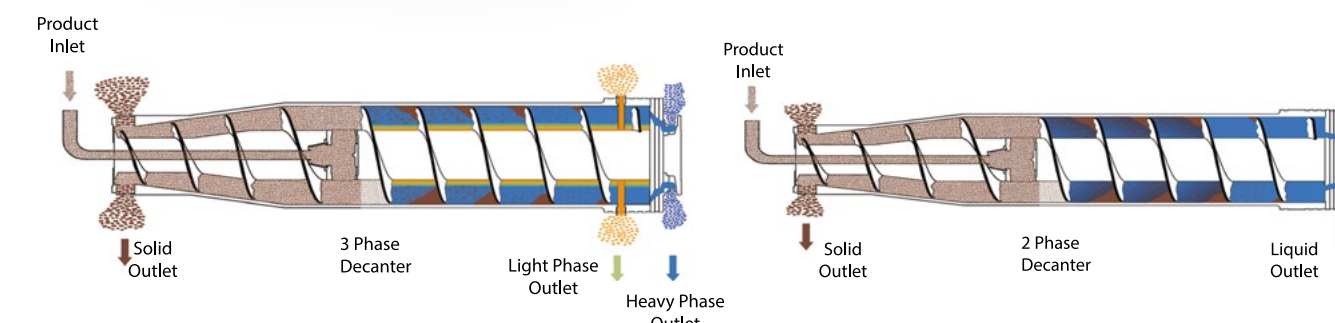
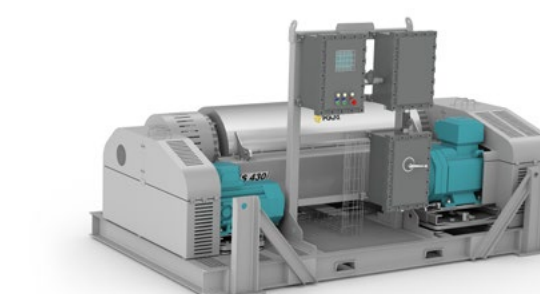
### Deterioration Of The Oil

- Oxidation
- Acid and sludges

### Water

- Costs
- Lubricity
- Viscosity
- Rem. Additives
- Oxidation of oil
- Clogging

**Note:** Performance indicated may vary due to product viscosity, process temperatures, Degree of contaminations, and cleaning effort required.



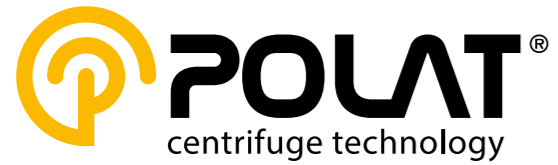
Model	Ø Bowl (mm)	L/ D	Maximum Blow Speed (rpm)	Main Motor (Kw)	Scroll Drive (Kw)	Drive System	Dimensions (mm)	Weight (Kg)
S200	200	4,23	Max. 5500	5,5	2,2	VFD	555*2000*680	500
S300	300	4,18	Max. 4500	15 - 18,5	4	VFD	850*2700*995	1160
S350	350	4,28	Max. 4200	22 - 30	5,5 - 7,5	VFD	1068*3250*1100	1850
S430	430	4,27	Max. 3500	37 - 45	7,5 - 11	VFD	1340*3890*1350	3500
S470	470	4,20	Max. 3300	45 - 55	7,5 - 15	VFD	1340*4070*1450	4700
S530	530	4,20	Max. 3000	55 - 75	11 - 15	VFD	1483*4690*1594	5475
S570	570	4,22	Max. 2800	75 - 90	11 - 22	VFD	1550*4970*1685	6250
S670	692	4,07	Max. 2300	90 - 132	22 - 37	VFD	1880*6190*1965	10980
S770	770	4,23	Max. 2100	132 - 200	37 - 55	VFD	2050*6965*2144	14980

• Measurement may vary depending on configuration.

Our S series centrifuge decanters are used in the environment, mining, food and industrial sectors. They are designed as a double drive system with VFD. The fully adjustable differential speed of the scroll and adjustable pool depth allow for optimum control of the final product quality.

### Advantages of using Polat decanters and separators of Polat machinery in oil industry:

- Special design complying with general fire and explosion protection standards (ATEX Certificate)
- Maximum protection against extremes of temperatures
- Extra protection against corrosive and hazardous materials
- Maximum operator and environmental safety standards compliance
- Ensuring compliance with guaranteed performance specifications
- Fully automated control systems for unmanned automation
- Remotely controllable with PLC and SCADA,
- Cleaner environment, low space requirement, low odour, low aerosol emissions land low life cycle cost



POLAT Machine's separators are designed to offer 24h operation in compliance with CIP system, with a capacity to address the requirements of customers.

POLAT Machine's separators are equipped with an automatically cleaning disc drum. In time ranges adjusted by using control panel, contaminations in the drum are discharged with movable drum. Drum movements are controlled by operation water controlled by solenoid valves.

The drum is manufactured from high-quality stainless steel with high mechanical resistance and high wear protection using the cutting edge technology. The product enters and exits drum via closed tube system. Entrance and exit joints of separator are conformed to DIN 11850 and ISO 2037 standards. All parts contacted to the product are completely produced from stainless steel.

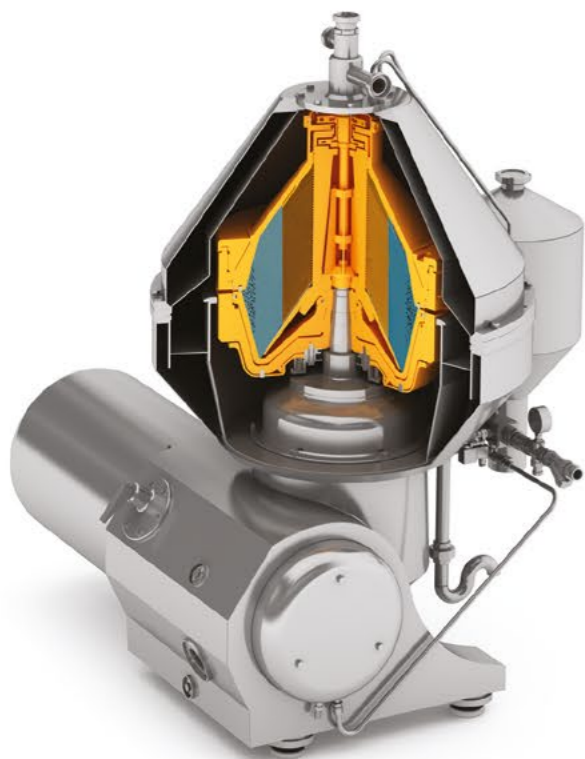


Upper and lower covers of the drum, mud tank and cyclone placed on a cast body are manufactured from stainless steel and their design ensures sound insulation. The engine has a stainless steel shield, and protected with a thermal protection system.

Inverter available in 3-phased engine control panel works with speed control. All controls of the separator are managed by programmable power and PLC control panel.

The PLC control panel is also made of stainless steel. A touch screen in which the drum rotation rate, separator electrical flow, exploitation time range and remaining time for unloading can be observed is available on the control panel.

Furthermore, it is equipped with stainless steel manometers indicating the cream and milk output pressures and allowing to set these pressures.



**365 days 7/24  
excellent service**



**A fast service that reduce downtime to zero?  
according to us it is possible...**

Let's say, the most important preference criteria for you is fast service and spare part solutions.

Don't worry, you are in the right place.

Polat Service Department provides a wide range of service without making distinctions between small and big machines.

Upon demand, periodic controls of process performance and mechanical conditions in customers' operations with service contracts and a flawless service is provided for supplying of original spare part and trouble-free changing fields

**Yes, according to us perfectness is possible.**



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Polat reserves the right to make schematic and technical amendments in order to improve machines.

