

Coalescer Separator System

Minimac Coalescer separator system comes with this unique technology capable of removing heavy water contamination & solid contamination by a single system. As the Lube and hydraulic systems are prone to heavy water contamination due to cross-contamination of water from heat exchangers.

Technology: Liquid-Liquid Coalescing

Water Contamination Phases



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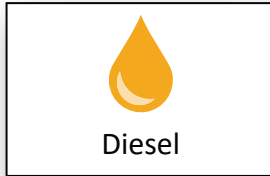


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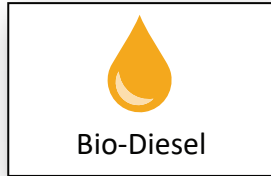
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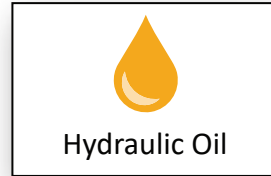
Types of fluid which can be cleaned



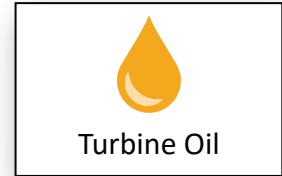
Diesel



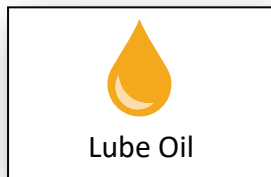
Bio-Diesel



Hydraulic Oil



Turbine Oil



Lube Oil



Low Viscosity Oils

Benefits

- Smooth removal of weighted water contaminants
- Requires least maintenance
- Power consumption is lesser

Nomenclature - Model No. FS -

T1

T2

T3

T4

T1	Pump Flow Rate (LPM)	Filtration Capacity (LPM)	T3	Fluid Type
10 LPM	10 LPM	10 LPM	D	Diesel
20 LPM	20 LPM	20 LPM	BD	Bio-Diesel
40 LPM	40 LPM	40 LPM	H	Hydraulic Oil
60 LPM	60 LPM	60 LPM	T	Turbine Oil
80 LPM	80 LPM	80 LPM	L	Lube Oil
100 LPM	100 LPM	100 LPM		
120 LPM	120 LPM	120 LPM	T4	Filter Clogging Indications
160 LPM	160 LPM	160 LPM	V	1 Stage Filtration
180 LPM	180 LPM	180 LPM	E	Electrical Indicaition

T2	No. of Filtration Stages Present
1S	1 stage filtration
2S	2 stage filtration
3S	3 stage filtration

For customizations please contact Minimac® Sales Representative. All specifications and configurations are indicative and should be verified with Minimac® Sales Office prior to ordering

Comparison of Coalescer-Separator Technology against Centrifuge Technology

Centrifuging	Coalescer-Separator System
Must heat oil to 80°C for efficient removal of impurities & water.	Water is removed from oil without heating or else heater is required temperature will be below 55°C.
Heating oil depletes additives.	No additive depletion.
Required frequent Maintenance for bowl of centrifuge.	No Maintenance needed as if the mechanical filter will chock, you can wash it and reuse it.
Must be used off-line. All related machinery must be stopped to drain oil into barrels / tanks for cleaning.	Can be used on-line, and is therefore user-friendly.
Aerates oil, thus increasing net oxygen supply & depleting anti-oxidation additive.	No aeration. No additive depletion.
Cannot remove emulsified water. Gear pumps used in centrifuging increase emulsification.	Easy & total removal of free & emulsified water/ moisture.
Cannot remove low molecular weight oxidized oil fraction.	Removes low molecular weight oxidized oil fraction.
Cannot remove solid impurities below 10 micron, efficiently.	In conjunction with Mechanical Filtration System, removal efficiency is better than 3 micron.
High energy consumption.	Low energy consumption.
High Operational and maintenance cost.	Very low operational and maintenance cost.
Many high speed moving parts requiring frequent maintenance.	Only one pump. & slow moving parts so no need for frequent maintenance.
Only one mode is available that is water separator mode.	Different mode of working operations: 1. Polishing filter mode 2. Coalescer system mode 3. Primary filter mode 4. Strainer mode
	Additional Premium Features: 1. Automatic water discharge 2. Heater bypass system 3. Polishing filter bypass system 4. No consumables required

Specifications

Brief Description of the Equipment	It incorporates a Portable, Trolley Mounted, Online Type System which can be used in Kidney –Loop circuit for various Lube Oil Systems, Hydraulic Systems, Diesel oil, Gasoline Systems. Super-cleaning, Solid Particle Free Removal up to ISO 16/14/12 (ISO 4406 Standard) and free Moisture/Water removal up to 100 ppm and below.
Performance in Solid Particulate Removal	Super-clean ISO 16/14/12 (ISO 4406 Standard) required under API – 614 (1999) – Chapter 3 Guarantee
Separation Capacity Total Water	<100 PPM free form of moisture
Working Environment Compatibility	Safe Zone. Normal Environment
Technology Used	Solid Particle Filtration: Multi Stage Mechanical Filtration Beta Rated & Coalescer Separator Technology
Maximum Pressure of Filtration System	12 Barg. In order to handle the back pressure of the 3 Filtration Stage.
Fluid Temperature Compatibility	0 – 80 degrees C
Oil Viscosity Handled	Up to 100 CST
Oil Types Handled	Diesel ,Hydraulic Oil,Turbine Oil,Gear Oil
Oil Pumping System	Suction Pump
Pump Type	Mechanical Gear Type
Pump Rated Flow Rate	As per flow rate
Maximum Pump Pressure	As per flow rate
Electric Motor	3 Phase Induction Motor, Power – suitable capacity as per flow rate
Filter Clogging Indicator	Mechanical Type
Equipment Structure	Trolley Mounted on 4 castor wheels for easy movement. Fabricated body (Mild Steel). Suitable hooks provided for hanging Electrical Cables and Hoses with minimum spillage of oil from hanging hoses.
Input Power Supply	415V, 50 Hz, 3 Phase

Specifications

Electrical Cable	4 Core Copper Cable of suitable Current carrying capacity, Minimum Length – 10 meters
Hose	
Suction Hose	Rubber Flexible Hose of suitable size Minimum Length 3 m
Delivery Hose	Rubber Flexible Hose of suitable size Minimum Length 3 m
Electrical Control Panel	Automatic Type Electrical Control Panel with Indication Lamps and Switches for Control of Electrical Motor. Suitable Protections, Inter-locks and Indication Lamps for faults like Filter Clogging, Motor Overload, High Pressure, Pump Dry-run.
Instruments	Pressure Gauge, Pressure Switch, Suction Switch (Vacuum Type), Filter Clogging Indicator.
Valves	Suction Valve & NRV on Discharge, Sampling Valve
Diagnostic Point	Mini-mess Type Coupling Connection for Connection of Particle Counter
Performance Provenness	Particulate Content in Oil post filtration conforms to following : ISO 16/14/12 or better as per ISO 4406. SEPARATION CAPACITY FREE WATER <100 PPM

Credentials

Clients	City	Country	Capacity
Mauda Super Thermal Power Station (NTPC)	Nagpur	India	40 LPM
Solapur Super Thermal Power Station (NTPC)	Solapur	India	500 LPH