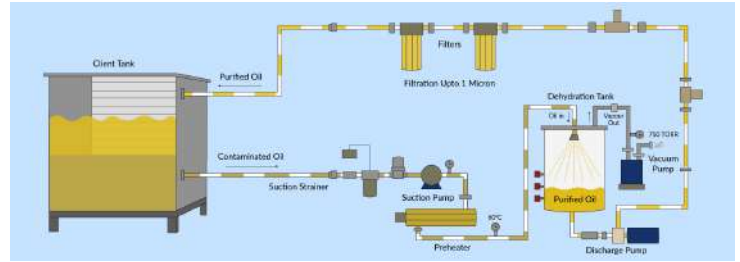
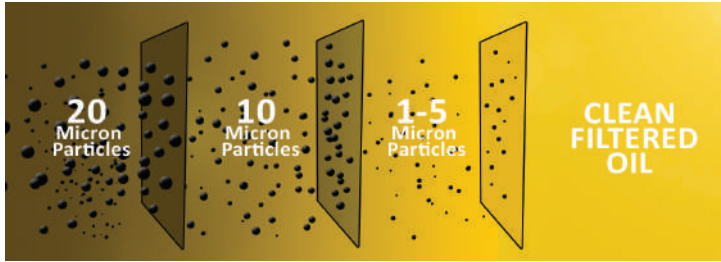


Oil Dehydration System

Minimac MLC-LVDH oil purification systems are high-end technology machines popularly used for filtration (fine solid particle removal) and dehydration (moisture removal) of lubricating and hydraulic oils. MLC-LVDH series machines are externally attached, independently operating by-pass oil purifying machines.

Technology: Stagewise Mechanical Filtration and low vacuum dehydration



MLC-LVDH-ELC



MLC-LVDH-100



MLC-LVDH-10



MLC-LVDH-10-FP



MLC-LVDH-40-FRF

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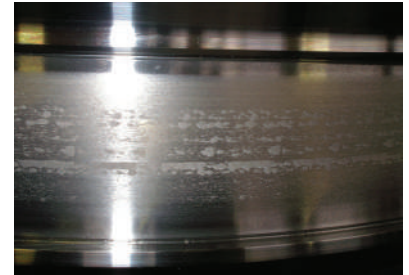
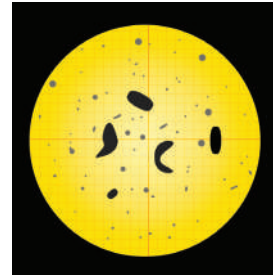


Why Oil Purification Important

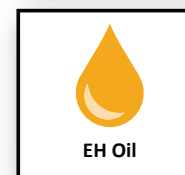
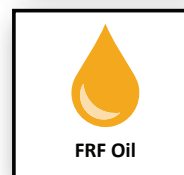
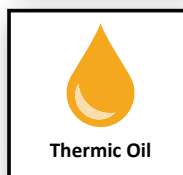
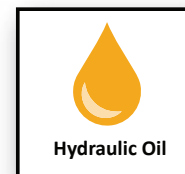
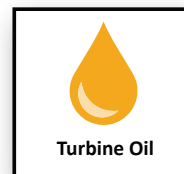
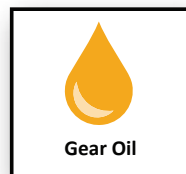
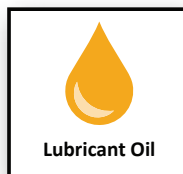
A lubrication system generates metallic wear particles (of < 5-micron size) during its operations.

Metallic wear particles are highly abrasive in nature. Increase of wear particles is highly damaging to machine components. Wear particles typically cause 50% of all failures. These multiply due to wear and tear on the surfaces of machine components. The most harmful particles are trapped in the dynamic tolerance, like bearings.

Another critical issue is the presence of free, emulsified, and dissolved water in lube oils which is detrimental to the overall performance of the lubricating system. This causes Oil oxidation and breakdown, Sludge formation, Seal Deterioration and leakages, Metal etching through Corrosion, etc.



Types of fluid which can be cleaned



Nomenclature - Model No. MLC LVDH

T1

T2

T3

T4

T1	Pump Flow Rate (LPM)	Filtration Capacity (LPM)
10 LPM	10 LPM	10 LPM
20 LPM	20 LPM	20 LPM
40 LPM	40 LPM	40 LPM
60 LPM	60 LPM	60 LPM
80 LPM	80 LPM	80 LPM
100 LPM	100 LPM	100 LPM
150 LPM	150 LPM	150 LPM
200 LPM	200 LPM	200 LPM

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

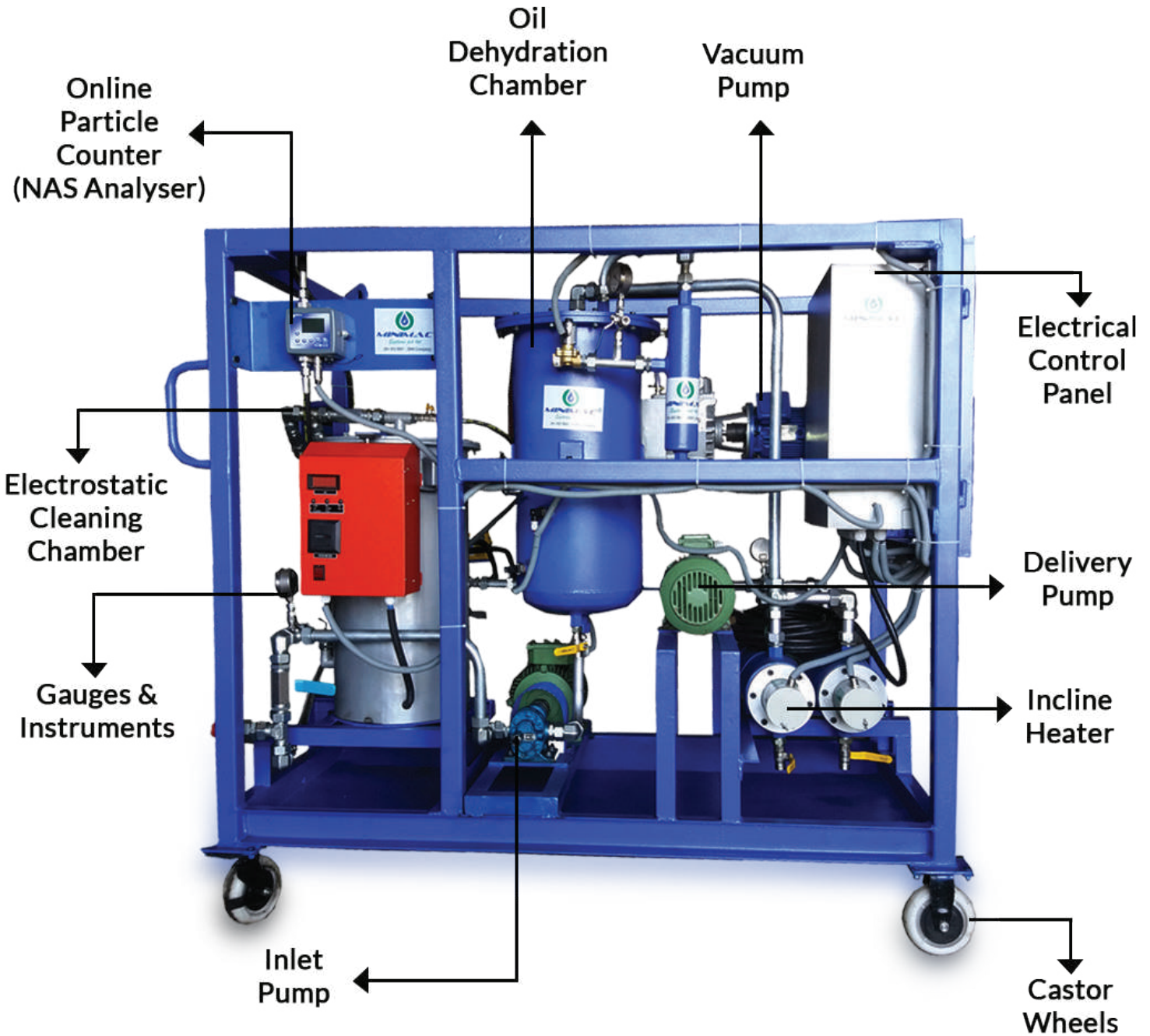
T3	Fluid Type
H	Hydraulic Oil & Lube Oil (upto 220 cSt)
G	Gear Oil (320 cSt & above)
FRF	Synthetic Fluid - FRF (Phosphate Ester)

T4	Filter Clogging Indications
V	1 stage filtration
E	Electrical Indication

For customizations please contact Minimac® Sales Representative.

All specifications and configurations are indicative and should be verified with Minimac® Sales Office prior to ordering

Features



Specifications

Installation Scheme	Trolley Mounted, Portable Machine
Working	Online / Offline. Fitted externally to oil reservoir as a by-pass oil purification system
Operational Principle Filtration Principle Moisture Removal Principle	<p>Stage Filtration of reducing microns Depth Type filters : The complete volume of the filter serves as a filtration media and provides efficient filtration of dust, metallic particles, sludge, soot etc. Thin Film Evaporation : Removes dissolved, emulsified and free moisture in oil. A very thin film of oil is allowed to spread evenly on fountain like evaporation plate, under a warm and un-saturated air chamber. Moisture in oil exposed to the vacuumized chamber gets converted to vapour form and escapes from the oil film. Low vacuum Dehydration : By creation vacuum pressure in air-tight chamber, the vapour conversion process is boosted in the in stage.</p>
Benefits Filtration Capacity Moisture Removal Capacity Moisture Separated Oil Viscosity handled Oil Types handled Prevents oil oxidation Ensures Higher Oil Life Prevents Valve Failures Prevent Pump Failures Increases bearing life	<p>NAS 5-6 Cleanliness Class < 100 PPM moisture level 100% Moisture removal from oil in Dissolved, Emulsified or Free form 0-460 CST; for higher viscosities customized model is to be ordered. Hydraulic, Turbine, Gear, Lube, FRF, EH-Oil By removal of solid particles and moisture in oil By retaining Viscosity, TBN, Flash Point, Additive level etc. Due to removal of sticky sludge Due to removal of micronic particles Due to moisture & sludge free oil</p>
Oil Flow Systems Oil in-take system Oil delivery System Moisture discharge system	<p>Gear Type Monobloc Pump Pressurized Diaphragm Type / Vane Type - Vacuum Pump</p>
Filters Suction line Strainer 1st Stage Filter 2nd Stage Filter	<p>149-micron mesh (Washable) It can be provided in 3 Stages of filtration in the range of 0 - 100 microns. Customized filtration can be provided as per oil and conditions within range. 10 micron (99.98% efficiency, Beta - 1000) 03 micron (99.98% efficiency, Beta - 1000)</p>
Vacuum Chamber Capacity	Customised Vacuum Chamber as per flow rate.
Oil & Air Drive Systems Inlet Pump Details Type Nominal Flow Rate Operating Pressure Motor Power Discharge Pump Details Type Nominal Flow Rate Operating Pressure Motor Power	<p>Mechanical Gear Pump Same as desired LPM model 0-10 Bar, Max – 10 Bar As per required capacity. Mechanical Gear Pump Same as desired LPM model 0-10 Bar, Max – 10 Bar As per required capacity.</p>

Specifications

Pre-heating of oil	Up to 50 LPM - 6 KW, Above 50 LPM - 12 KW, customized heating can also be provided.
Vacuum Pump	a. 20 to 60 LPM -215 LPM b. 60 and above 300LPM c. Drive: Direct Driven
Operating Vacuum	Up To 760 Mm Of Hg
Electrical Controls Dry Run Protection Pre-heater temp control Overload pump protection Supply Protections Anti Flood Protection	Yes Temperature Controller / Thermostat Yes RCCB / ELCB based Double safety, based on level float switch
Indications Oil Pressure Suction & Stage Filter Clog Oil Temperature Hour Meter Lamp Indications	0 - 10 bar Compound Gauge & Differential Pressure Gauge (optional) Thermometer / Digital Display Analogue Phase, Pumps Operation, Heaters Operation, Over-flooding, Low Press.
Hose Pipes Suction Pipe Fine Filtration Delivery Pipe	3 m rubber hose pipe 3 m rubber hose pipe
Electrical Cable	10 M (4 core)
Fabrication Structure	MS (powder coated) structure frame Castor Wheels with swivel, bearing and pad brakes
Accessories	Online particle counters can be integrated with the machine for continuous condition monitoring of the oil.

Credentials

Clients	City	Country	Capacity
Abdulla Fouad Energy Company (AFESCO)	Dammam	Saudi Arabia	20 LPM
Acron Plast Pvt Ltd : Unit 3	Nashik	India	20 LPM
Aditya Birla Nuvo Ltd - Unit Indian Rayon	Junagadh	India	40 LPM
Amrit Cement Ltd	East Jaintia Hill	India	20 LPM
Arpan Electricals & Enterprises	Nagpur	India	150 LPM
Aryan Pumps & Enviro Solutions Pvt Ltd	Pune	India	20 LPM
Bharat Petroleum Corporation Ltd - Mumbai Refinery	Mumbai	India	15 LPM
Brahmaputra Cracker And Polymer Ltd	Dibrugarh	India	40 LPM
Coastal Energen Pvt Ltd	Tuticotin	India	20 LPM
Cona Industries	Haridwar	India	20 LPM
Dana India	Pune	India	100 LPM
Darlipali Super Thermal Power Station (NTPC)	Sundargarh	India	20 LPM
DB Power Ltd	Champa	India	40 LPM
Electro Clear Systems	Chennai	India	50 LPM
Emami Paper Mills Ltd	1)Balasore 2) Kolkata	India	40 LPM
Essar Power Gujarat Ltd	Devbhoomi Dwarka	India	20 LPM
Essar Power MP Ltd	Singrauli	India	20 LPM
Galwaliya Ispat Udyog Pvt Ltd	Udham Singh Nagar	India	40 LPM
GBC Packaging	Mumbai	India	20 LPM
Gimatex Industries Pvt Ltd - Unit Wani	Wardha	India	20 LPM
GKN Sinter Metals Pvt Ltd	Pune	India	75 LPH
GSPC Pipavav Power Company Ltd	Gandhinagar	India	40 LPM
Gujarat Sidhee Cement Ltd (GSCL)	Siddhigram	India	10 LPM
GVK Alaknanda Hydro Power Company Ltd	Shrinagar	India	40 LPM
GVK Power (Goindwal Sahib) Ltd	Tarn Taran	India	40 LPM
Hindalco Industries Ltd - Hirakud FRP Plant	Sambalpur	India	20 LPM
Hitech Plast Ltd - Unit Rohtak	Rohtak	India	20 LPM
Hydratech ME FZCO	Dubai	United Arab Emirates	100 LPM
IL&FS Tamil Nadu Power Company Ltd - Cuddalore Plant	Cuddalore	India	40 LPM
Impulse Promotions Ltd	Nairobi	Kenya	40 LPM
Industrial Energy Ltd	Jajpur	India	20 LPM
International Oil Technologies Ltd	Ho Chi Minh City	Vietnam	80 LPM
Jhabua Power Ltd	Seoni	India	20 LPM
Jhajjar Power Ltd	Jhajjar	India	20 LPM
Karnataka Power Corporation Ltd	Shivamoga	India	40 LPM
Kawai Thermal Power Project	Baran	India	100 LPM
KEPCO Plants Service and Engineering Co Ltd	1)Mansa 2) Chittorgarh	India	1)20 LPM 2) 100 LPM
KR Pulp & Papers Ltd	Shahjahanpur	India	40 LPM
M/S New Maakali Enterprises	Kolkata	India	100 LPM
Mahan Aluminium (Hindalco)	Singrauli	India	40 LPM

Credentials

Clients	City	Country	Capacity
Mahan Energen Ltd	Singurali	India	50 LPM
Malana Power Company Ltd (MPCL)	Kullu	India	20 LPM
Megha Engineering And Infrastructure Ltd	Anantapur	India	10 LPM
Melwire Rolling Pvt Ltd	Colombo	Srilanka	100 LPM
MSP Steel & Power Ltd	Raigarh	India	20 LPM
Mundra Thermal Power Station	Mundra	India	40 LPM
National Mineral Development Corporation Ltd (NMDC)	Bellary	India	20 LPM
Nhava Sheva (India) Gateway Terminal Pvt Ltd	Mumbai	India	40 LPM
Nuclear Power Corporation of India Ltd	Chittorgarh	India	40 LPM
Odisha Power Generation Corporation Ltd (OPGC)	Bhubaneshwar	India	20 LPM
Paradeep Phosphates Ltd	Paradeep	India	100 LPM
Prayagraj Power Generation Company Ltd	Prayagraj	India	30 LPM
Raigarh Energy Generation Ltd	Raigarh	India	10 LPM
Raipur Energen Ltd	Raipur	India	20 LPM
Chhabra Supercritical Thermal Power Project	Baran	India	40 LPM
Sasan Power Ltd	Singrauli	India	20 LPM
Sawalka Tools and Machines Pvt Ltd	Pune	India	20 LPM
Shell India Markets Pvt Ltd - Chennai	Chennai	India	100 LPM
Shree Trading Corporation	Jaipur	India	20 LPM
Sipat Super Thermal Power Station (NTPC)	Bilaspur	India	25 LPM
SKS Power Generation Chhattisgarh Ltd (SPGCL)	Raigarh	India	1) 30 LPM 2) 20 LPM
Solapur Super Thermal Power Station (NTPC)	Solapur	India	40 LPM
The West Bengal Power Development Corporation Ltd	Hooghly	India	10 LPM
Tiroda Thermal Power Project	Gondia	India	10 LPM
Tuffchem Environmental Services Pte Ltd	Loyang	Singapore	20 LPM
Udupi Power Corporation Ltd	Udupi	India	10 LPM
Vadinar Power Company Ltd	Jamnagar	India	40 LPM
Venlon Enterprises Ltd	Mysore	India	20 LPM
Vidarbha Industries Power Ltd	Nagpur	India	10 LPM
Visa Steel Ltd	Jajpur	India	100 LPM
Xicon International Ltd	Mumbai	India	40 LPM