

Total Oil Purification System

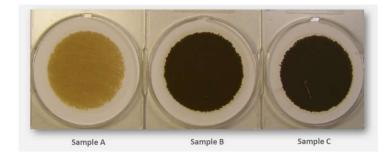
The Solution for Removal & Monitoring of Particle, Sludge, Varnish, Acid and Water by ONE Purifier.

Particle and water contaminations in the lubricating and hydraulic oils cause serious operating problems by shortening life of the equipment. Also, organic oxide such as varnish and sludge has an impact on machine failure and abnormal wear.

SOLGE developed a total purifier for the first in the world that can monitor and remove all kinds of degradation by-products and external contaminants effectively as well as lower down acid number.



MPC Membrane Patch Colorimetry



Performance Test Result

- Test Oil : Turbine Oil (32cSt)/200 Liter,
 EHC Oil (46cSt) /200 Liter
- Particle removal
- Below ISO17/14/12
- Acid removal
 - EHC Oil : 2.0 → ~0.08
- Water removal
 - Turbine mineral oil : 2,000ppm → ~ 50ppm
 - EHC phosphate ester oil : 2,000ppm \rightarrow ~ 80ppm



Function

Particle Removal

- Remove particle with high performance particle filter (Beta ratio 1,000)

· Varnish & Sludge Removal

 Remove sludge and varnish (degradation byproducts in solution by ion-exchange type filter (Patent technology)

Acid Removal

Remove acid with ion-exchange type filter
 (Patent technology)

Water Removal

- Remove 100% of free water & 90% of dissolved water by membrane and dry nitrogen.
- Effectively remove water from EHC oil

Condition Monitoring (Optional)

- Cleanliness/Water/Viscosity/Color/Temperature

Benefits

- Guarantee no failure and long life of the equipment
- · Tool for Proactive Maintenance
- Reduce Maintenance & Operating Cost
- · Increase Asset efficiency
- · Reduce wastes

General Specification

Flow rate: 46 L/min

Operating temp : 40°C ~ 65°C

Power: 480VAC-3HP-3P (optional)

Viscosity : max. 220cSt at 40°C

• Fluid : Mineral oil, Synthetic oil (EHC)

Others : Portable type

Components Specification

Particle removal filter

- Beta ratio 1,000, Absolute Filter

- Ratings : 1μm, 3μm, 6μm, 12μm (Optional)

Varnish & Sludge removal filter

Ion-Exchange type filter (Patent technology)

Acid removal filter

- Ion-Exchange type filter (Patent technology)

• Water removal filter

- Portable Membrane type (Turbine oil)

- Dry Nitrogen purging (EHC Control Oil)

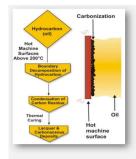
Real-time condition monitoring (optional)

- Cleanliness : Laser type, ISO/SAE/Count

- Particle: Saturation % or ppm(calculated)

- Temp. : °C

- Color: ASTM D1500, Values are 0.5~8







Oil Flow Schematics

■TOMs-F-T (Turbine oil)

Purifier for Turbine oil

• Flow rate : 46 L/min

• Operating temp : 40°C ~ 65°C

• Power: 480ACV-3HP-3P (optional)

• Viscosity : max. 220cSt at 40°C

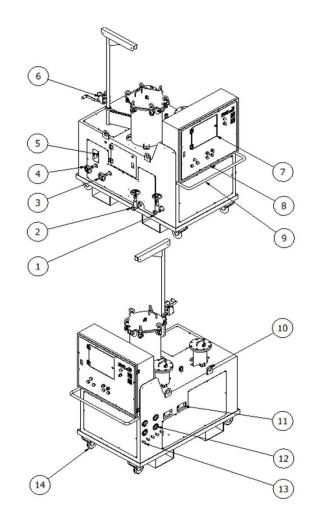
• Fluid : Mineral oil, Synthetic oil (EHC)

• Others : Portable type

■TOMs-F-PE (EHC oil)

Purifier for EHC oil

- Reservoir → Pump → (Sensor) → Electrostatic
 Module → Ion- Exchange Filter → Particle Filter
 - \rightarrow Reservoir
- Integrated with GooD-N which removes water by dry nitrogen purging to the reservoir.



Product Specification

Part No.	TOMs-F-T	TOMs-F-PE
Flow Rate	46 lpm	46 lpm
Working Pressure	8 kgf/cm2	8 kgf/cm2
Power Voltage	380V / 440V / 480V, 3phase, 60Hz (Other specifications are available upon request)	380V / 440V / 480V, 3 phase, 60Hz (Other specifications are available upon request)
Power Consumption(Max)	12Kw	12Kw
Operating Temperature	40°C ~ 60°C	40°C ~ 60°C
Viscosity (Max)	220cSt at 40°C	220cSt at 40°C
Inlet port	1 1/2"	1 1/2"
Outlet port	1"	1"
Monitoring (Optional)	Display with touch screen of Cleanliness / Water / Viscosity / Color / Temperature	
Dimension	L 1490 X W 1000 X H 1687 mm	L 1330 x W 900 x H 1457 mm
Weight (Max)	613 kg	560 kg