



OIL & DIESEL

MAINTENANCE



Continuous maintenance of oil and diesel provides optimal purity and operational efficiency

www.waagene.no



www.waagene.no

History

Our founder, engineer Åge S. Wågene, started his pneumatic engineering business in 1976 and built a service and sales network distributing air compressors and pneumatic tools in Norway. The company represented FF Air AS Denmark and the ABAC Group in Italy.

In 1999, the company started the development of a proprietary oil treatment / maintenance unit designed for hydraulic and lubricating oils. In the early years, the company targeted the domestic maritime industry and then entered the international markets. The global maritime industry embraced the Wågene solution and found it to be highly effective for continuously keeping oil clean by removing particles and water.

In 2011, the company divested its pneumatic operations to focus entirely on cleaning / maintenance of oil and diesel. Since then, company changed its name to Wågene Purifiner Technology AS and focused on broadening its product and service offerings and developing a worldwide network of agents and distributors to supply the maritime industry. By the end of 2013, the company had delivered more than 2,500 oil maintenance units to the most reputable maritime operators globally, including Carnival Cruises, the world's largest cruise line and Bourbon Offshore France, one of the world's largest operator of offshore support vessels.

We are committed to adding value for our customers by maintaining oil cleanliness and quality to

- > reduce operating costs and consumption
- > reduce maintenance costs
- > enhance life of equipment
- > provide considerable environmental benefits



Making your business greener...

The root cause of mechanical failures is contaminated oil and fuel. By maintaining oil and fuel quality by removing water and particulates, there will be less mechanical failures and downtime, reduced operating costs and consumption, and enhanced life of the equipment. Combined, the significant benefits of maintaining oil and fuel quality will make your business greener.



Our unique oil maintenance system

Purifier is a “bypass” oil maintenance system that connects to a hydraulic or lubricating system to remove water and particles continuously.

The Purifier maintains the oil quality by continuous removal of particles, free and emulsified water, sludge and acids in a two stage process; Stage one utilizes natural, 100% long-strand cotton fibers to capture particles > 1 micron and sludge. Stage two in the purification process is a patented flash evaporation process that dehydrates the oil and removes chemical contamination; water content is cut to 100-200 ppm (0.01-0.02%). Our systems are engineered to maintain oils at standard NAS 4 / ISO 13/10, typically better than new oil quality (NAS 6-8 due to contamination in the supply chain).

Research done by “Norske Shell” university and many others, conclude that up to 80% of mechanical breakdowns are due to contaminated oil.

Two measures must be done to achieve optimum oil quality:

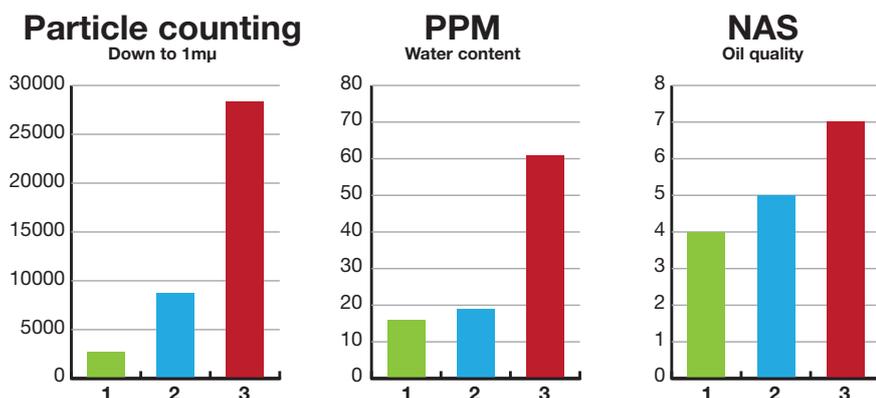
- > Remove particulate contamination, such as iron (Fe), copper (Cu), Silicon (Si) and other metals.
- > Remove chemical contaminants in the oil that is usually water.

Particle contamination is a result of mechanical wear, dust, maintenance operations, defective gaskets, clogged filters, etc. Water contamination typically is a result of condensation, leaks into system, air valves or compressors or other equipment in the system. In addition to being corrosive, water may in high-pressured systems be highly abrasive on the internal surfaces of the equipment.



Our patent filter removes particles down to 1-3 micron and the water evaporates in the specially designed top.

Texaco Regal 68 Hydraulic oil (17,500 hours / 2 years)



Test performed by Norsk Oljelaboratorium AS, May 2013





Controller
TF5060C



Filter WP-15B



TF5060PMH

PRESSURE-FREE SYSTEM

TF5060C Mining and contractor machinery

Filters and cleans oil for better quality than new oil free of particles and water. This prolongs oil life 10 to 15 times. Cleaner unit removes particles down to 1-3 micron. Evaporates all the water, including emulsified water in oil, down to 0.01%. Extends the oil's quality time. For direct installation on machine.

Applications

Mining and contractor machinery such as excavators, mobile cranes and overhead lifts, etc.

Specifications Purifiner Controller unit

Power Supply:	24 V
Nominal Wattage:	360W / 15A
Flow Rate:	600/24H – 25L/H
Back pressure:	Max 3 bar
Inlet pressure:	Max 200 bar
Filter:	1-3 micron (optional)
Water Removal:	Evaporation
Weight:	11 kg
Dimensions:	38 x 35.5 x 14 cm (H x W x D)
Pipework:	INLET=10L OUTPUT =12S

Filters

WP-15B	Up to 500 litres system
WP-25B	Up to 1000 litres system
WP-50B	Up to 1500 litres system
WP-80	For extreme particle pollution



TF5060PMH TF for pressure-free system

The "TF" unit is designed for hydraulic and lubricating oils. Used on pressure free systems or placed higher than the system will purify. The TF has the ability to lift oil into the filter, but must have a gravity based return back to the tank/oil reservoir. Water down to 100 ppm. (0.01%) and particles 1-3 microns.

Applications

Hydraulic systems such as balers, compactors, ro-ro equipment. This is mounted on the IBC tank for cleaning oil, such as freezer compressor oil or other places where it is not possible to permanently install the unit. There are two sets of oil in attendance, one to use and one for purification; just select one of the two as needed.

Specifications Purifiner TF5060PMH

Capacity:	600 litres/24 hour (Single filter) 1,200 litres/24H (Twin filter)
Oil amount:	Up to 3,000 litres (6,000l for Twin and 9,000l for Triple units)
Oil type:	All hydraulic and lubricating oils
Viscosity:	32 - 320
Max. pressure in:	No back-pressure
Power consumption:	2,300 watt, 230 volt, 16 amp circuit
Connection:	3/8" BSP external thread
Warranty:	24 months
Weight:	35 kg
Dimensions:	64 x 45 x 47 cm (H x W x D)

TS5060PMH

TS for pressurized systems

The "TS" unit is designed for pressurized hydraulic and lubricating systems. This unit can be placed lower than the tank or return point. It can also handle back pressure from the hydraulic system up to 8 bar. The Purifier can be connected directly to the system as a "bypass filtration".

Applications

Azipods, Thrusters, Stern tube on board vessels. It can also be used on all other hydraulic systems. The Purifier can purify lubricating systems as well.

Specifications Purifier TS5060PMH

Capacity:	600 litres/24 hour
Oil amount:	Up to 3,000 litres (flow in the system / tank to be cleaned)
Oil type:	All hydraulic- and lubricating oils
Viscosity:	32 - 320
Max pressure in:	200 bar (with reduction valve) 3 bar as standard
Max Back-pressure:	8 bar
Filter use:	Approx. 4 filters a year with continual use and in normal circumstances
Power consumption:	2,400 watt, 230 volt, 16 amp circuit
Connection:	3/8" BSP external thread
Warranty:	24 months
Weight:	45 kg
Dimensions:	64 x 45 x 47 cm (H x W x D)



TS5060PMH-Mobile Purifier TS-Mobile

TS Mobile has the same properties as the TS5060PMH but a higher capacity. The unit is mounted on the trolley, making it easy to move around. Suitable if you have many smaller systems you want to clean.

Applications

Suitable for cleaning many smaller systems such as elevators, presses, overhead lifts, small machinery, cranes, etc. The unit is well suited for rental companies to use on their own and others' fleet. Service and maintenance firms etc.

Specifications Purifier TS5060PMH Mobile

Capacity:	600 litres/24 hour
Oil amount:	Up to 3,000 litres (flow in the system / tank to be cleaned)
Oil type:	All hydraulic- and lubricating oils
Viscosity:	32 - 320
Max pressure in:	200 bar (with reduction valve) 3 bar as standard
Max Back-pressure:	8 bar
Filter use:	Approx. 4 filters a year with continual use and in normal circumstances
Power consumption:	2,400 watt, 230 volt, 16 amp circuit
Connection:	3/8" BSP external thread
Warranty:	24 months
Weight:	60 kg
Dimensions:	115 x 55 x 50 cm (H x W x D)





TS5060PMH-Twin Purifiner TS-Twin

TS Mobile has the same properties as the TS5060PMH but a higher capacity. TS unit is designed for hydraulic oils, but can clean almost any type of oil. It is used for pressurized systems or where the cleaner unit remains lower than the system it will clean. TS-Twin plugs directly into the hydraulic system.

Applications

This unit is widely used for larger systems such as Azipod, Thrusters and Stern Tube on board vessels. Hydraulic central systems. The unit is highly accessible and can be used on any system where you have to collect the oil and return it back into the system.

Specifications Purifiner TS5060PMH-Twin

Capacity:	1,200 litres/24 hour
Oil amount:	Up to 6,000 litres (flow in the system / tank to be cleaned)
Oil type:	All hydraulic and lubricating oils
Viscosity:	32 - 320
Max pressure in:	200 bar (with reduction valve) 3 bar as standard
Max. back-pressure:	8 bar
Filter use:	Approx. 4 filters a year with continual use and in normal circumstances
Power consumption:	2,600 watt, 230 volt, 16 amp circuit
Connection:	3/8" BSP external thread.
Warranty:	24 months
Weight:	60 kg
Dimensions:	64 x 76 x 47 cm (H x W x D)



TS5060PMH-Triple Purifiner TS-Triple

TS Mobile has the same properties as the TS5060PMH but a higher capacity. TS unit is designed for hydraulic oils, but can clean almost any type of oil. It is used for pressurized systems or places where the cleaner unit is lower than the system to be cleaned. TS Triple is connected directly to the hydraulic system.

Applications

This unit is used extensively for large systems such as Azipod, Thrusters and Stern Tube on board vessels and hydraulic central systems. The unit is highly accessible and can be used on any system where you have to collect the oil and return it back into the system.

Specifications Purifiner TS5060PMH-Triple

Capacity:	1,800 litres/24 hour
Oil amount:	Up to 9,000 litres (flow in the system / tank to be cleaned)
Oil type:	All hydraulic and lubricating oils
Viscosity:	32 - 320
Max pressure inn:	200 bar (with reduction valve) 3 bar as standard
Max. Back-pressure:	8 bar
Filter use:	Approx. 4 filters a year with continual use and in normal circumstances
Power consumption:	2,600 watt, 230 volt, 16 amp circuit
Connection:	3/8" BSP external thread
Warranty:	24 months
Weight:	70 kg
Dimensions:	64 x 76 x 47 cm (H x W x D)

Effective cleaning of diesel



WFP-200 Single Fuel Purifier unit

The Fuel Purifier diesel purifier removes 95% of particles and 98% of water. The unit requires simple maintenance and is easy to operate. Fuel Purifier can run continuously and are connected directly to the tank.

Specifications Fuel Purifier WFP-200 Single

Capacity:	200 litres per hour
Type:	Diesel
IBC tank:	600 litre
Filtration:	60 microns
Maximum lift height:	8 feet
Return out:	Freefall
Filter consumption:	Normally by continuous treatment about 4 times a year
Power Consumption:	250 watts, 230 volt, 10 amp. fuse
Warranty:	24 months
Weight:	25 kg
Dimensions:	58 x 31 x 47 cm (H x W x D)

WFP-200 Single



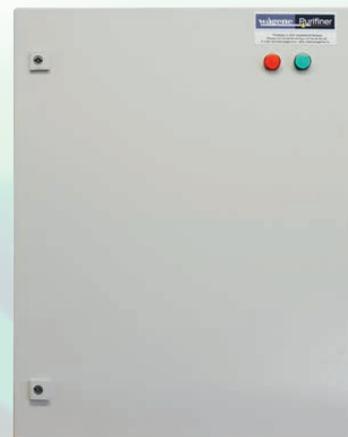
WPD-600 Fuel Purifier unit

The Diesel Purifier WPD-600 is installed in a cabinet. The unit is easy to use and requires simple maintenance and can run continuously. WPD-600 can be connected directly to the tank or stand "in-line" (full flow).

Specifications WPD-600

Capacity:	Up to 600 litres per hour
Filtering:	Particle size 10 micron (standard) (2 and 30 micron = on request)
Max. pressure:	0.5 bar
Lifting height:	1.5 metres
Power Consumption:	250 watts, 230 volts, 50/60 Hz
Connection:	1/2" BSP
Warranty:	24 months
Weight:	50 kg
Dimensions:	76 x 60 x 35 cm (H x W x D)

WPD-600



Applications

For use with diesel having a viscosity between 2 and 5.35' cSA at 37.8 degrees Celsius.



Wågøene Purifiner
TECHNOLOGY



Purifiner is a small investment that gives good economy in the long term

Purifiner is designed for continuous maintenance of oil or diesel. Feedback from our users is that Purifiner is a minimal investment that offers savings over the short term. In the longer term Purifiner provides good economy by prolonging the interval for oil changes and reducing maintenance costs. Minimum consumption of filter cartridges since the water is not absorbed in the filter cartridge but evaporates away.

We have excellent trade references.
Please contact us for a quote:

For more information:
www.waagene.no



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