



# HYDRAULIC AND LUBRICATION SYSTEMS



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## FILTRATION AND LUBRICATIONS SYSTEMS



Internormen Twinfil Filter Systems provide reliability and efficiency to the gearbox and its lubrication system by assisting users in maximizing output, minimizing downtime, and minimizing operating costs.

The Twinfil Filter Systems are specially designed gear lubrication systems that reliably supply all gear lubrication points as they filter and deaerate the system.

### Features

Low noise emission

Indicates oil operating condition

Prolongs lubricant service life

Simple to service

Operates in cold weather conditions with an additional pump-assisted heating system

### Products

Twinfil

TWF 1001

TWF 1950

TWF 4000

TWF 6000

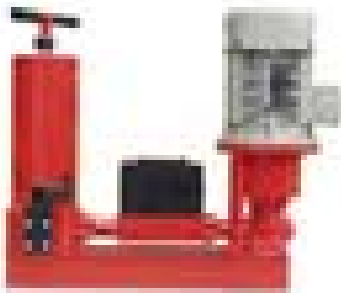
TWF with additional pump-assisted heating system

## OFF-LINE FILTRATION SYSTEMS

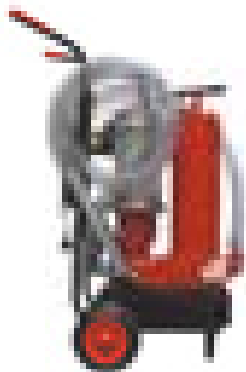
Eaton's oil service equipment makes off-line filtration easy and helps save on the cost of oil, maintenance and component replacement in your operation. Off-line filtration units include both stationary and mobile versions. Options like heat exchangers, Watersorp elements, and vacuum dehydration systems are also available.

During off-line filtration the filter is in a circuit separated from the main operation stream. By separating the streams, off-line filtration can function as long as it takes for the operating fluid to reach the necessary cleanliness, regardless of the system's running time.

### Stationary Off-line filter units.



The Internormen stationary filter units are designed for fine filtration, filling or flushing of hydraulic systems, and oil service for gears with lubricants of high viscosity.



### Mobile Off-line filter units.

Internormen mobile off-line filter units are developed for oil maintenance on hydraulic and lubrication systems.

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## STATIONARY FLUID PURIFIER SYSTEMS



Internormen Stationary Fluid Purifier Systems are oil purification systems that remove water, solid contamination, and gases from hydraulic and lubrication fluids. The use of advanced sensor and control technology enables a fully automated operation of the Fluid Purifier Systems. A compact design allows the IFPS Systems to fit in tight spaces.

Internormen Stationary Fluid Purifier Systems are fully automated, oil purification systems that remove free, emulsified and dissolved water, solid contamination, and free and dissolved gases from oil using the principle of vacuum evaporation with an inert gas. As a result, fluid life is extended, component costs and downtime are reduced. Additionally, the units are equipped with silica gel air filters which increase the efficiency of the whole system, even in high humidity environments.

### Products

IFPS 21

IFPS 31

IFPS 71

IFPS 101

## MOBILE FLUID PURIFIER SYSTEMS



Internormen Mobile Fluid Purifier Systems, are highly versatile and designed to facilitate fluid purification where and when needed. The IFPM systems are fully automated, PLC-controlled units. The water sensor (WSPS 05), in connection with the display unit (WFD 01), allows for a permanent monitoring of the water level in a purified fluid. The electronic xp sensor (VS1) provides the optimal use and maintenance scheduling of the included particle removal filter element. The IFPMs desiccant air breather dries up the inert gas and increases the efficiency of the purifier, even in high humidity.

Some of the most damaging problems water contamination can cause are:  
Fluid breakdown, Additive depletion, Reduction of the lubrication properties of the fluid, Oil oxidation, Internal corrosion, Abrasive wear in system components, Reduced dielectric strength

### Principle of Operation:

Contaminated fluid is drawn into the Internormen Fluid Purifier System by a vacuum of 0,6 to 0,9 bars. The fluid is passing a heater which is raising the temperature in order to increase the filtration speed. The fluid then enters through a vacuum actuated inlet valve into the vacuum chamber, where it is then allowed to cascade over the dispersal elements to break it into droplets in the tower. This increases the exposed surface area of the fluid and converts the water into vapors form, which is drawn out of the tower with a vacuum pump through the condenser to the drainage reservoir for drain off. The water-free fluid is drawn out of the tower by a hydraulic pump and sent through a high efficiency particulate removal filter back to the system. The installed water sensor allows a permanent control of the saturation of the fluid.

### Products

IFPM 21

IFPM 31

IFPM 71

**internormen**   
technology

## COOLANT AND LUBRICANT SERVICE UNIT



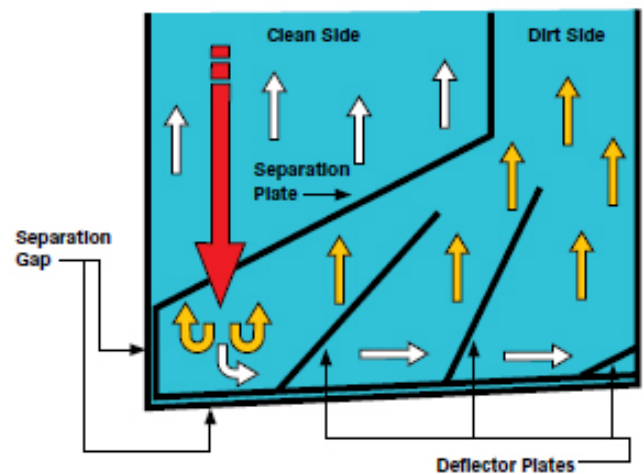
Internormen Mobile Coolant and Lubricant Service Unit, the MKS 601, is a multi-functional system that simplifies the draining of coolant or lubricant from the CNC machine tanks. The system removes contaminants in the emulsion generated by the machining process.

Decreases consumption and improves performance of coolant/lubricant  
Fewer fluid changes and less fluid disposal reduces costs and protects the environment

Decreases user exposure to contaminated fluids

Reduces length of service time per fluid change-out in comparison to conventional machinery system services

Function of Separation Tank



### MKS 601 - Mobile Service Unit

#### Technical Data

Weight (approx.): 595 lbs (270 kg)

Dimensions: 57" x 44" x 47" (1440 x 1116 x 1200 mm)

Operation: Air pressure

Reservoir volume: 160 gal (600 liters)

Extraction of other fluids: Yes

Extraction of particles: 0.24" maximum grain size - (pilot filter suggested)

Separation of other fluids: Separation tank

Separation of solid particles: 1 µm to 25 µm filter fineness

Cleaning of the machine: Hand cleaning gun, up to 87 psi (6 bar)

