



**Emmie 2**



 HYDRAULIC  
COMPONENTS  
& FLUID CONTAMINATION  
CONTROL



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## New levels of reliability for hydraulic systems

Emmie Mobile Separation System for Hydraulic Oil



**Emmie will pay for itself in one year!** Nearly all hydraulic system failures onboard ships and in power plants are due to contaminants in the hydraulic oil. Emmie, Alfa Laval's mobile cleaning system for hydraulic oil, will increase the reliability of sensitive, vital hydraulic equipment, reduce component wear, and extend the lifetime of the hydraulic oil in the system.



## Recognize these problems?

- **Frequent, costly failure of hydraulic systems due to contaminated oil.**

Leaking seals in systems in contact with seawater (on ships), allow water to enter the system. Water in the hydraulic system:

- > Shortens the oil's lifetime, causing corrosion of internal surfaces, and extra wear due to poor lubrication.
- > Causes additives to decompose rapidly and oxidation, which affects the oil's viscosity.

The full-flow filter only removes particles down to 15–25 µm. Finer particles left by the filter in the hydraulic oil:

- > Shorten the lifetimes of rolling bearings while causing extra internal wear on hydraulic components, and leaking seals.
- > Cause equipment failure due to sticking pilot valves.

- **Filter cartridges quickly become saturated and must be changed. High costs for cartridge disposal and replacement.**

- **Hydraulic oil frequently becomes contaminated and must be replaced, High costs for hydraulic oil disposal and replacement.**



Throughput capacity: 80–120 l/h.

## Invest in an Emmie Mobile Separation System

### Emmie – a small revolution.

Emmie is a mobile separation system that can be wheeled easily between hydraulic tanks. The system includes:

- > A miniature, trolley mounted MIB 303 solid bowl separator designed for cleaning hydraulic oils, with a collecting tank for oil spill and separated water. Weight 55 kg.
- > A separate, compact, mobile oil pre-heater, weighing only 34 kg, that heats the hydraulic oil up to 65°C max.

### Emmie will provide a drastic increase in the reliability and availability of your hydraulic systems.

- > Removes virtually all water from the hydraulic oil.
- > Removes more than 99% of particles in the size range 2 µm – 5 µm.
- > Provides efficient back-up for the full-flow filter, drastically cutting cartridge consumption.

### Emmie cuts operating costs related to hydraulic systems.

- > Impressive reduction in costly equipment failure.
- > The lifetime of the hydraulic oil is extended.

#### Emmie Mobile Separation System

**A highly efficient and reliable solution for cleaning hydraulic oil onboard ships and in power plants.**

- > Used hydraulic oil can be recycled.
- > Reduced filter cartridge consumption.
- > Less contaminated oil and fewer filter cartridges to dispose of.
- > Less component wear and spare parts consumption.

### Plug-and-play installation, simple to clean.

Emmie can be wheeled from tank to tank and hooked up in minutes. The system will then clean the hydraulic oil without supervision. When the separator bowl needs to be cleaned, usually after two to three days, cleaning is child's play and takes about five minutes.

## The bottom line

Upgrading with Emmie will reduce your operating costs. Your local Alfa Laval representative will be pleased to show you how you can save money.

COST BENEFITS	Savings, Euro*
Reduced cost for filter cartridge disposal/replacement	
Less component wear and spare parts consumption	
Increased reliability and availability	
Reduced oil disposal/replacement cost	
Reduced maintenance cost	

\* Fill in the boxes with your local Alfa Laval representative to calculate how much you can win by upgrading with Emmie. Or ask for a demonstration.

#### How to contact Alfa Laval

Contact details for all countries are continually updated on our website. Please visit [www.alfalaval.com](http://www.alfalaval.com) to access the information direct.



## Emmie.2

### Separator system for cost-effective cleaning of oil

Using high-speed centrifugal separation makes it possible to increase the reliability of the oil system and extend the service life of your oil. Alfa Laval's disc-stack separators provide fast, efficient, simultaneous three-phase separation of water and particles.

Emmie.2 removes more than 99 percent of all solid particles between 2 and 5  $\mu\text{m}$  from the oil, and virtually all of the water but none of the additives. It effectively separates airborne dust and undesirable particles from wear on paint, metal, plastic or rubber components from the oil. It also removes water that causes additives to oxidise and decompose, too.

Emmie.2 removes contaminations from many different types of oils whether hydraulic or lubricating oil, compressor or gear oil, cutting or diesel oil. The result is lower costs due to prolonged service life of the oil and less disposal of filters and oil.

Emmie.2 is a complete compact system, including separator, feed pump and control system. The control panel makes it easy to operate. The unit is installed in a bypass system and operates continuously.

#### User-friendly operation

Operator convenience is a key parameter in the design of the Emmie.2. The PLC-based control system is operated by means of a control panel. The symbols and messages in clear text are easy to understand. Quick couplings make it easy to connect the hoses when the cleaning unit is moved from tank to tank.

With its compact and ergonomic design, Emmie.2 is easy to move across the workshop floor. And you can use it to serve several tanks or just one.

- 1 Solid particles accumulate inside the rotating bowl. When the bowl requires cleaning, it can be opened with a few simple operations.
- 2 When the separated water has reached a certain level in the collecting tank, a micro switch is activated, stopping the cleaning process and turning on an indicator light.



- 3 The surface of the rotating bowl is coated with a material that is 12 times harder than steel.
- 4 Large wheels make it easy to move Emmie.2 even when the floor is not entirely smooth.
- 5 The system incorporates a built in electric heater, which heats the oil to reach optimum viscosity prior purifying.

**Meeting your needs**

To meet all your needs, Alfa Laval offers a wide range of stationary or mobile separator systems for all types of fluids. Our offering ranges from systems with capacities suitable for smaller workshops to larger systems designed to clean complex and heavily contaminated fluids.

Our global organization guarantees easy start-up and, if you need a helping hand, an Alfa Laval service engineer is always close by. To support your operations further, Alfa Laval has a network of distributors and service partners who are always available to assist you.

We call this Nonstop Performance.

**Technical data**

**Capacity**

Max flow, 50/60 Hz	200 l/h (0.88 gpm)
Sludge space	0.6 l (0.16 gal)

**Fluids requirements**

Viscosity at separation temperature	Max 40 cSt*
Max. separation temperature	70°C (160°F)
pH value	6–9

**Electrical data**

Voltage	230 V or 100–230 V**
	Single-phase (±5%)
Frequency	50/60 Hz
Amperage (at 230/110 V)	10/16 A

**Weight**

Without heater	60 kg (130 lb)
External heater	34 kg (75 lb)
With heater	100 kg (220 lb)

**Dimensions**

	With heater	Without heater
Length	630 (25")	615 (24 1/2")
Width	680 (27")	520 (20 1/2")
Height	1130 (45")	1130 (45")

\* For higher viscosity oils the oil is heated to reach suitable viscosity.

\*\* Only with optional external heater

Emmie.2 is delivered complete with stand, collection tank for separated water, dive tubes, hoses, service tool kit and instruction book.



The unit is equipped with two dive tubes (left) for suction and return of the oil. Optional is a tank filler device (right) with quick couplings.



The user-friendly control panel. Just choose oil viscosity, press the start button and the system operates without supervision.

**How to contact Alfa Laval**

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)

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