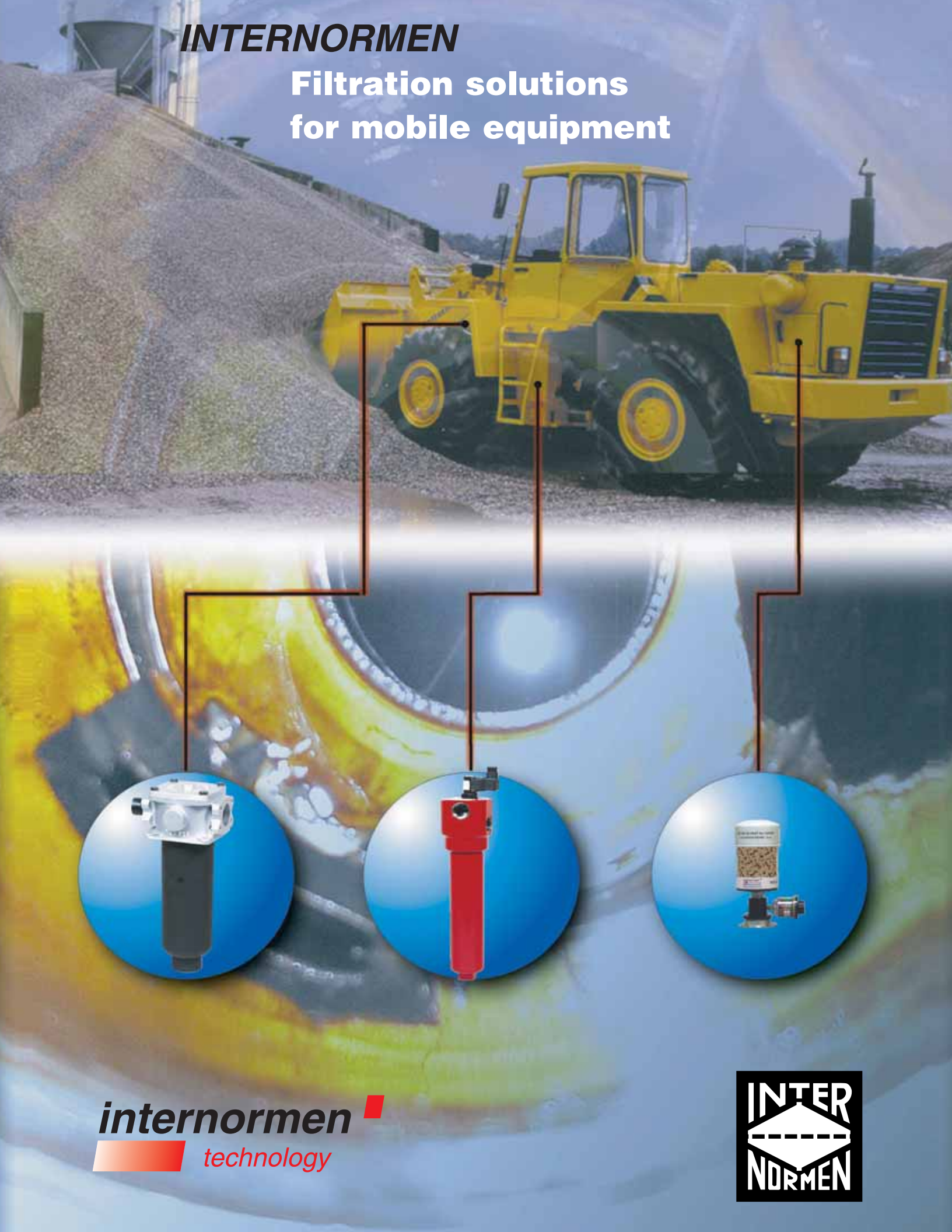


# **INTERNORMEN**

## **Filtration solutions for mobile equipment**



**internormen**   
 *technology*



# Mobile Hydraulics

## **INTERNORMEN Technology**

is a leading global manufacturer of high quality hydraulic and lubrication filters, oil service equipment and analysis products which are separated in different product ranges:



**filter technology**  
**fluid management**  
**electronics**  
**system technology**  
**contamination monitoring**  
**software solutions**

The head office is located in Altlußheim, Germany. Furthermore, production facilities are located in Germany, India and the United States as well as subsidiaries in Poland, Austria, Great Britain, Brazil and China. A global distribution network in more than 65 countries completes the company's structure.

**INTERNORMEN Technology** Group is committed to promptly supplying and servicing our customers with quality products. The target of the company is the manufacturing and distribution of hydraulic and lubrication filters, oil contamination control systems as well as accessories.

**INTERNORMEN Technology** also offers a wide variety of filter-related products:

- Oil analysis sets (PAS 01 / WAS 01)
- Contamination control system CCS 2
- Tank sampling system TSS 1
- Bottle sampling system BSS 2
- Clogging indicators and sensors (visual, electrical, visual-electrical and electronic)
- Off-line filter units (mobile and stationary)
- Expert system DVD (software for selection and performance simulation of filter)

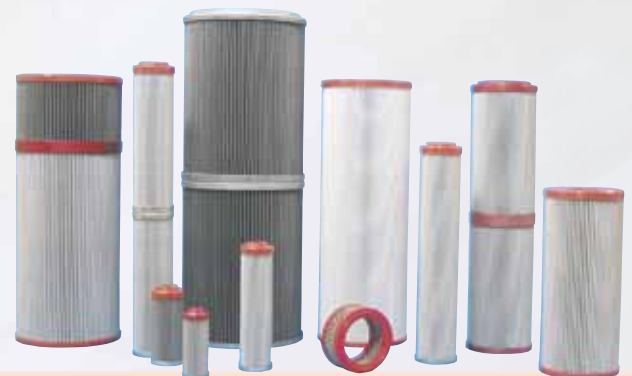


Brands we interchange with:

- Hydac
- EPE
- Mahle
- Pall ...and many others

Our advantages:

- Superior dirt holding capacity
- Highest  $\Delta p$  capability
- Best filtration efficiency



# In-Tank Filters

**TEF**  
Pressures to 145 PSI  
Flow Rates to 2113 GPM

## In-Tank Return Line TEF series

**Applications:**

Tank mounted return-line filters

**Element options:**

Paper, Interpor fleece, stainless steel wire mesh

**User Benefits:** Lightweighted, tank mounted return-line filters, model TEF 41-7201 are easy to change and reduce the possibility of oil spillage during element change (environmental concern). Filters have a removable bowl which prevents contamination from entering reservoir during filter element change. Multiple inlet ports are possible.



**TEFB**  
Pressures to 145 PSI  
Flow Rates to 80 GPM

## In-Tank Return Line with additional airbreather TEFB series

**Applications:**

Tank mounted return-line filters with additional breather filter

**Element options:**

Paper, Interpor fleece, stainless steel wire mesh

**User Benefits:** Lightweighted, tank mounted return-line filters, model TEFB 41-310 are easy to change and reduce the possibility of oil spillage during element change (environmental concern). No additional breather port in the tank needed.



**TRS/TNRS**  
Pressures to 145 PSI  
Flow Rates to 120 GPM

## Return- / Suction Combination Filter TRS/TNRS series

**Applications:**

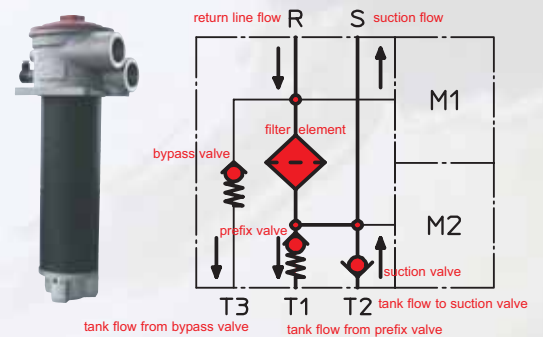
Tank mounted return-line filter with suction connection for mobile hydraulic applications with minimum 2 independent hydraulic circuits

**Element options:**

Paper, Interpor fleece, stainless steel wire mesh

**User Benefits:**

Tank-top mounted in-line filters supply clean suction flow and prevent cavitation. Custom designs possible.



**TRW**  
Pressures to 145 PSI  
Flow Rates to 80 GPM

## Return Filter under the fluid level TRW series

**Applications:**

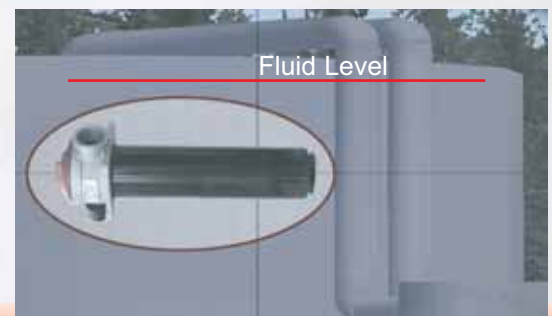
Horizontal tank mounted return-line filters

**Element options:**

Paper, Interpor fleece, stainless steel wire mesh

**User Benefits:**

space-saving mounting under the fluid level (does not need an additional check valve)



# Pressure Filters

MNL/ML -  
Pressures to 2320 PSI  
Flow Rates to 120 GPM

## MNL/ML series Medium Pressure Filters

**Applications:**

In-line mounted pressure filter (partial aluminum construction)

**Element options:**

Interpor fleece, stainless steel wire mesh

**User Benefits:**

Economical, lightweighted filter range for Low to Medium pressure applications. Requires only minimal clearance during element change and therefore saves valuable space.



HP  
Pressures to 6000 PSI  
Flow Rates to 360 GPM

## HP series High Pressure Filters

**Applications:**

In-line or flange mounted high pressure filter

**Element options:**

Interpor fleece, stainless steel wire mesh

**User Benefits:**

In-Line or flange mounting possible with various different port and  $\Delta p$  indicator options. Very high flow rates with a single housing possible.



MDV  
Pressures to 2900 PSI  
Flow Rates to 40 GPM

## MDV/HPV series Pressure Filter with Cold Start Valve

HPV  
Pressures to 6000 PSI  
Flow Rates to 120 GPM

**Applications:**

In-line pressure filter with differential pressure (cold start) valve

**Element options:**

Interpor fleece, stainless steel wire mesh

**User Benefits:**

Permanent supply of clean oil guaranteed.  
If element is clogged, change is forced, this means no damage is possible to the downstream components.  
Forced (third port) return to the reservoir.



# Special Filters

RF  
Pressures to 145 PSI  
Flow Rates to 85 GPM

## Return In-Line Filters *RF series*

**Applications:**

Return-line filters for connection in return lines

**Element options:**

Paper, Interpor fleece, stainless steel wire mesh

**User Benefits:**

Economical line mounted return filters.

Light-weighted aluminum design.

Several and multiple ports available.

Hose connections possible.



AS - Flow Rates to 168 GPM  
TS - Flow Rates to 187 GPM  
TSW - Flow Rates to 32 GPM

## In-Tank Suction Filter *AS/TS/TSW series*

**Applications:**

Suction filter, directly mounted to the reservoir vertically (TS-series) or horizontally (TSW-series)

**Element options:**

Paper, Interpor fleece, stainless steel wire mesh

**User Benefits:**

Suction filters which can be serviced from the outside of the reservoir with no additional check valve needed.



FHP  
Pressures to 3625 PSI  
Flow Rates to 40 GPM

## Manifold Mounted Filter *FHP/HPP/HPF series*

HPP/HPF  
Pressures to 4568 PSI  
Flow Rates to 360 GPM

**Applications:**

FHP/ HPF - Pressure filter, manifold side mounted

HPP - Pressure filter, manifold bottom mounted

**Element options:**

Interpor fleece, stainless steel wire mesh

**User Benefits:**

Simplified mounting, which saves valuable space.

Provides filtration directly at the point needed. Prevents dirty fluid from passing downstream during element change.



# Spin-on Filters

WPL  
Pressures to 145 PSI  
Flow Rates to 120 GPM

## WPL series Spin-on Filters

### Applications:

In-line filter series, mounted into pressure and return lines for all hydraulic systems.

### Element options:

Interpor fleece, Paper

### User Benefits:

Easy maintenance.  
Die-cast aluminum construction saves overall weight.  
Can be used as suction or return filter.



# Accessories

ASF 25 - ASF 275  
Flow Rates to 106 GPM

## SUCTION STRAINERS

### Applications:

Suction Strainers are used in the tank to protect the hydraulic pump from large contaminants.

### Element options:

Stainless steel wire mesh with by-pass options

### User Benefits:

Protect pumps from large particulate  
Ensure long service life  
Reduce maintenance and replacement costs  
Available in BSPP up to 3"



Flow Rates to 933 GPM

## FILLER/AIR BREATHERS

### Applications:

Air breathers assure no contamination reaching the tank through air exchange and condensation of water in reservoirs.

### Element options:

**NBF** Interpor fleece, Paper    **EBF** Paper  
**TBF** Paper    **BF-WP** Interpor fleece, Paper  
**BFD-series** Silicagel, Interpor fleece

### User Benefits:

Protect systems from airborne debris and / or moisture



## CLOGGING INDICATORS

### Applications:

Clogging indicators are warning devices that should be used on all filter applications to ensure in time change of elements, allowing maximum element service life.

### User Benefits:

Wide variety available in differential pressure indicators, electronic indicators and suction indicators  
Prevent system downtimes  
Prevent premature element changeout



**internormen**  
fluid management

Off-line filtration units in stationary and mobile versions, with options like heat exchanger and watersorp elements as well as vacuum dehydration systems.



**internormen**  
electronics

Contamination Control Systems (Laser Particle Counters) with options like Bottle Sampling System and Tank Sampling System as well as mobile and stationary water sensors and electronic sensor systems.



**internormen**  
contamination monitoring

Mobile Sampling- and Oil Analysis Sets as well as in-house laboratory services including oil analysis and element checks performing optical emission spectrum and infrared spectroscopy analysis.



