

INTERNORMEN

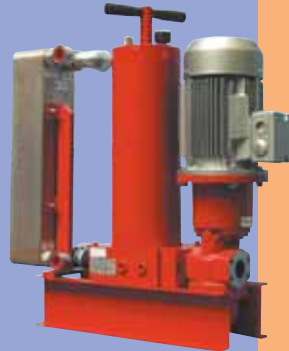
Oil-Service Equipment for Hydraulics and Lubrication

Filter Units for finest filtration in off-line
as well as for oil change and filling

- **BUY!**
- **USE!**
- **PROFIT!**



UM 40



USP 81



UST 80



US 80



UMCC 40



US 20



US 161



US 320

We guarantee you optimal cleanliness

- Variety in capability and individuality of the series
- High quality filter elements
- Specific solution of problems
- Competent consultation

internormen 
fluid management



Oil-Service for Hydraulics and Lubrication

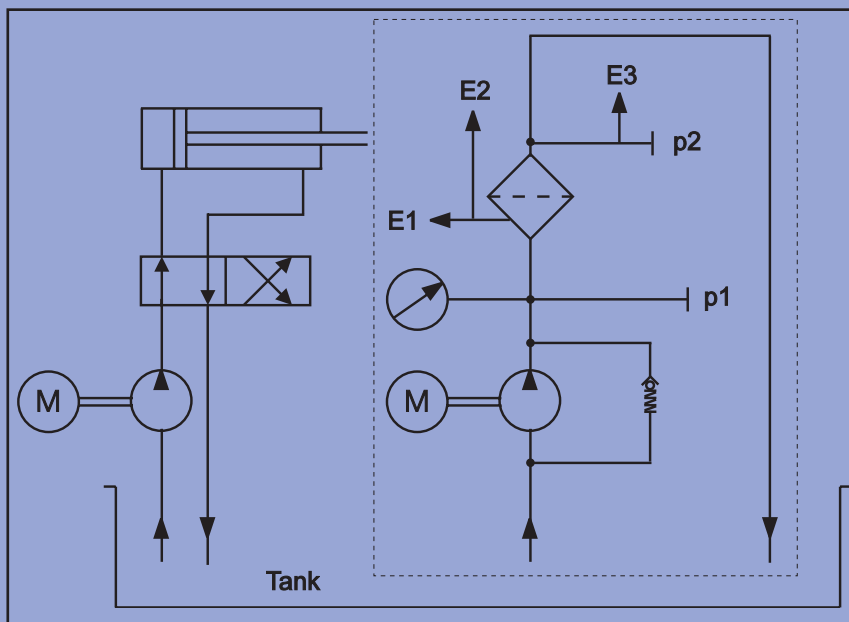
The oil-service for systems of hydraulic and lubrication techniques demands, apart from the operating filter, the application of a filter unit for off-line filtration and for oil change or rather for filling. The reasons for this can be found in different application matters. So initiation rinsing does not often take place, for example in production and lubrication systems as well as in mobile and stationary hydraulic. Oil is poured in unfiltered and an accumulation of mud of the tanks takes place because of finest dirt particles.

The equipment of a hydraulic system with an electromotive unit to the off-line filtration allows to improve the cleanness of the operating fluid by system filters who achieve a higher quality. Especially reduced is the finest dirt level and though the early wear and tear of the system components is prevented. Beyond this, the durability of the operating fluid is prolonged distinctly.

To avoid negative and uncontrolled influences of polluted decanting systems as well as the pollution of the system upon adding unclean fresh oils, the fluid should in any case be filled in via a fine filter of an off-line filter unit.

Off-Line Filtration

At the off-line filtration the filter is arranged in a circulation separated from the main stream. Because of the separation of both streams the filter can be determined exactly. The off-line filtration can now be operated as long as the operating fluid reaches the wanted cleanliness classes, regardless of the running time of the system.



Off-line filtration

Characteristics of the Off-Line-Filter Units

- Off-line filtration
- Off-line filtration in addition to an operating system filter
- Filtration when filling the oil tank
- Improvement of the cleanliness classes
- Extension of the service life of the system components and the fluid
- Change of the elements without downtime of the system
- High dirt holding capacity of the filter elements
- Element change without tools
- Safety valves allow an unattended operation of the units
- Standard visual clogging indicator
- Low overall volume



Off-line filtration on duty



IFPM-unit on duty



Filter testing and quality control according to ISO standards.

Description

The stationary and mobile off-line-filter units (US, UM) were particularly developed for oil maintenance on hydraulic systems. They are equipped with a gear pump driven by an electric motor. The flow is fed over a filter element to DIN 24550, part 4. Depending on the customers' wishes, the filter fineness is either 4, 5, 7 or 10 $\mu\text{m}_{(c)}$. In addition, we have developed the stationary series USP and UST with plate exchanger and tubular heat exchanger which provide the additional advantage of oil cooling. As third series we offer the UMW as mobile filter unit with water separator. The off-line-filter units must not be used to pump contaminated hydraulic fluids and are therefore designed without a switchover fitting to bypass the filter. The compact structural design on a base plate without pipe satisfies the prerequisites for small dimensions and high reliability.

Off-line-filter unit with cooler (USP, UST)

At first, the flow is fed over a filter element to DIN 24550, part 4 and afterwards over a plate exchanger or a tubular heat exchanger.

Mobile Oil Service UMCC - the new standard for modern fluid management

The mobile filter unit UMCC 40, always equipped with Particle Counter System CCS 2 is intended for oil maintenance on hydraulic systems.

The area of applications comprises:

- secondary flow filtration in addition to the existing operating filter
- secondary flow filtration without the action of the operating filter
- filtration when filling the oil reservoir.

Fluid Purifier Systems: IFPM/IFPS

are user friendly and safe in the operation.

They are in itself closed systems and:

- remove free, emulsified and dissolved water
- remove free and dissolved gases
- remove particulate contamination down to 1 μm

The resulting advantages are:

- reduced down-times of individual components and complete systems
- reduced wear of all components
- extend the oil service life and prevent premature oil aging
- increased reliability and productivity of the plants

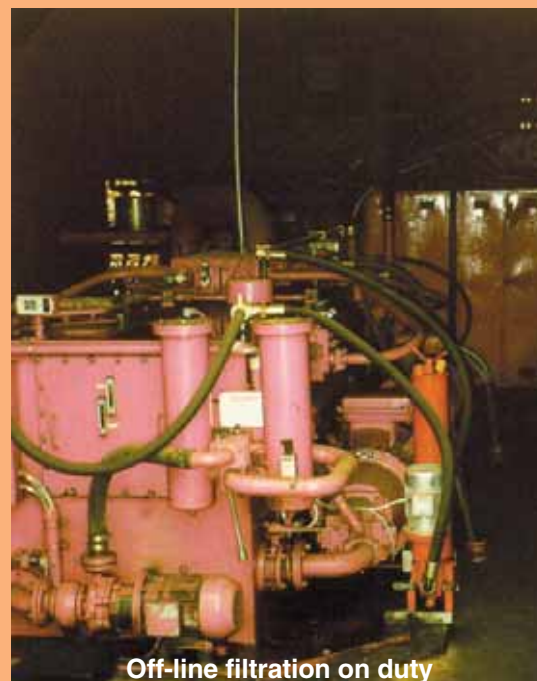
Type	data sheet no.
Filter unit, stationary, series US 20/21/22	4008.1/4008.2/4008.3
Filter unit, stationary, series US 40	4011.1
Filter unit, stationary, series US 80	4009.1
Filter unit, stationary, series US 161	4010.1
Filter unit, stationary, series US 320/321	4012.1/4012.2
Filter unit, mobile, series UM 20	4013
Filter unit, mobile, series UM 40	4014
Filter unit, mobile, series UM 80	4015
Filter unit, mobile, series UMCC 40 with CCS 2	4033
Filter unit, mobile, series UMFC 41 with fluid control	4052
Filter unit, mobile, series UMFC 81 with fluid control	4053
Filter unit, mobile with water separator, series UMW 80	4016
Filter unit, stationary with plate exchanger, series USP 20	4020
Filter unit, stationary with plate exchanger, series USP 41	4021
Filter unit, stationary with plate exchanger, series USP 81	4022
Filter unit, stationary with plate exchanger, series USP 161	4023
Filter unit, stationary with plate exchanger, series USP 320	4024
Filter unit, stationary with tubular heat exchanger, UST 20	4027
Filter unit, stationary with tubular heat exchanger, UST 40	4028
Filter unit, stationary with tubular heat exchanger, UST 80	4029
Filter unit, stationary with tubular heat exchanger, UST 160	4030
Filter unit, stationary with tubular heat exchanger, UST 320	4031
Fluid purifier system, mobile IFPM 21	4035
Fluid purifier system, mobile IFPM 31	4036
Fluid purifier system, stationary IFPM 71 / IFPS 71	4046/4045
Fluid purifier system, stationary IFPS 101	4043

Please ask for data sheets.



Simulation programs

We determine the most efficient and very reasonable off-line filtration for you by using our tools!



Off-line filtration on duty



IFPM-unit on duty

Confidence is good, control is better!
Contamination determination with our CCS 2.

