

THE MAHLE INDUSTRIAL FILTER RANGE

Progress in Filter Technology



MAHLE
Industriefilter

THE COMPANY

MAHLE Industrial Filters is part of MAHLE Filtersysteme GmbH, Stuttgart, and is situated in Öhringen.

Industrial filters have been developed, manufactured and marketed here since Purolator Products Inc. USA was originally founded in 1962.

In 1974 the then Purolator Filter GmbH was taken over in its entirety by The MAHLE Group, Stuttgart and merged with KNECHT Filterwerke GmbH in Stuttgart in 1977. The hitherto existing name licensing agreement expired in mid-1990. Today all the products and services are offered under the new trade name of MAHLE Industrial Filters.

Fluid Technology

The fluid technology product range, which includes a very extensive range of hydraulic filters, is the division of MAHLE Industrial Filters with the greatest proportion of turnover. More than ever before effective filtration is the key to the operation of highly-sensitive hydrau-

lic systems. The lower and lower tolerances of the various hydraulic equipment demand strict observance of the specified degree of purity of the fluid medium. The filter manufacturer is therefore obliged to improve the efficiency of hydraulic filters continually, and to improve their efficiency by developing new filter materials.



Dust removal

The use of dust filters is constantly increasing in importance because of stricter regulations on emissions (TA Luft¹ maximum concentration levels) and increased substance yields. Both users and manufacturers feel bound to take steps to continually increase the efficiency of dust removal while simultaneously improving efficiency. MAHLE Industrial Filters offers a wide range of dust collectors, cleaning systems and dust filter cartridges.

Depending upon the user's requirements, dust filter cartridges are available in lengths up to 1,000 mm and diameters up to 500 mm, in many different versions, e.g. with cellulose, polyester or polypropylene as filter materials. An optimally large filter surface can be used in

compact collectors by virtue of the pleating of filter material. The range is completed by cleaning systems specially designed for these filters and small, compact equipment, so that many dust removal problems can be



solved efficiently, cost-effectively and reliably.



Process technology

Two filtration methods are distinguished in respect of process technology. MAHLE metal-edge filters, which can be cleaned without interrupting operation, are suitable for highly economic filtration of fluids and pastes and

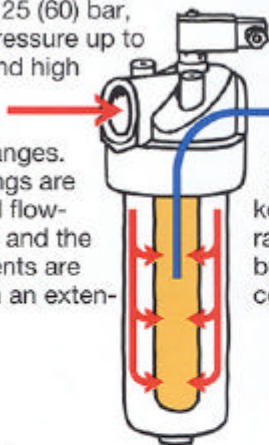
have been well tried and tested in many process filter applications for years.

¹ German industrial inspectorate for air quality.



Pressure filters

Pressure filters are available for full or partial volume flow in the low pressure up to 25 (60) bar, medium pressure up to 210 bar, and high pressure up to 450 bar, ranges. The housings are robust and flow-favourable and the filter elements are taken from an extensive range of components which are exactly matched to the requirements of every individual case. New hydraulic filters in accordance with DIN 24550 fulfil contemporary market demands. The range is completed by an extensive accessory programme.



DIN 24550 fulfil contemporary market demands. The range is completed by an extensive accessory programme.



Pi 1941 Rated flow 10 - 63
Connection G 1/4 - G 3/4
Nominal pressure (bar) 10/25



Pi 270 Rated flow 250 - 320
Connection G 1 1/2
Nominal pressure (bar) 10



Pi 200 Rated flow 50 - 1000
Connection G 1 1/2 - DN 64
Nominal pressure (bar) 25/60



Spin-on cartridges

for Pi 220, Pi 270 and Pi 1941



Pi 220 Rated flow 10 - 160
Connection G 1/2 - G 1 1/4
Nominal pressure (bar) 10/25



Pi 150 Rated flow 400 - 630
Connection G 1 1/2 - SAE 2"
Nominal pressure (bar) 10/25



Pi 1907 Rated flow 350 - 5800
Connection DN 50 - DN 250
Nominal pressure (bar) 16



Pi 360 Rated flow 50 - 300
Connection G 1/2 - G 1 1/4
Nominal pressure (bar) 210



Pi 1931 Rated flow up to 800
Connection G 1 1/4 - DN 80
Nominal pressure (bar) 16/25



Pi 410 Rated flow 20 - 63
Connection Hole pattern A6 DIN 24340 NG 6 + NG 10
Nominal pressure (bar) 315



Pi 1975 Rated flow up to 50
Connection G 3/4 - G 1
Nominal pressure (bar) 6



Pi 420 Rated flow 50 - 450
Connection G 1/2 - DN 38
Nominal pressure (bar) 450



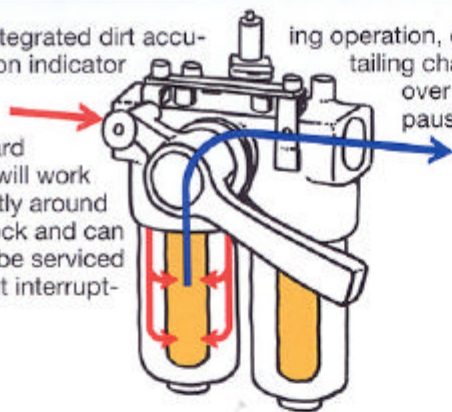
Pi 340 Rated flow 50 - 450
Connection 2 x Ø 15 - Ø 38
Nominal pressure (bar) 250



Pi 1123 Rated flow 5 - 40
Connection G 1/4 - G 1/2
Nominal pressure (bar) 350

Switched double filters

with integrated dirt accumulation indicator fitted as standard these will work perfectly around the clock and can easily be serviced without interrupting operation, or entailing change-over pauses.



Pi 210 Rated flow 50 - 1000
Connection G 1 - DN 64
Nominal pressure (bar) 25/60



Pi 370 Rated flow 50 - 450
Connection G 1 - SAE 1 1/2"
Nominal pressure (bar) 200/250

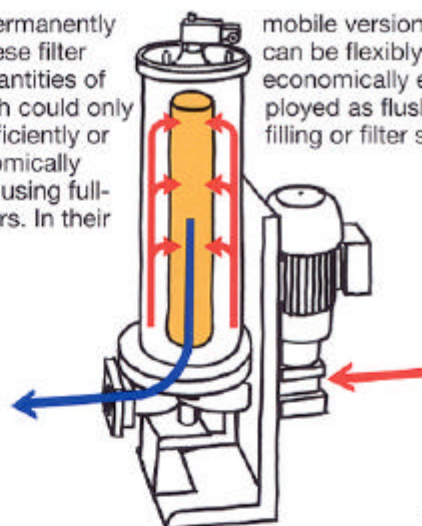


Pi 5075 Rated flow up to 5800
Connection DN 50 - DN 250
Nominal pressure (bar) 16/40

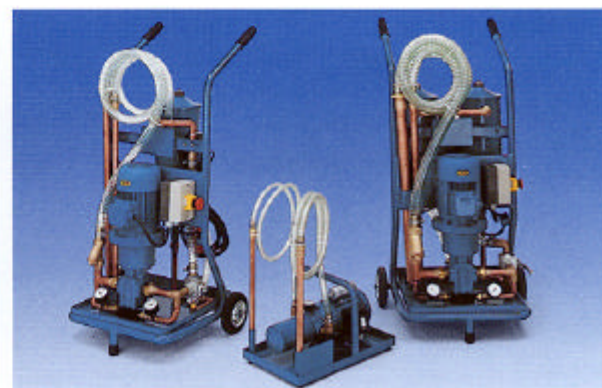
Partial flow filters

When permanently fitted these filter large quantities of oil, which could only be insufficiently or uneconomically cleaned using full-flow filters. In their

mobile version they can be flexibly and economically employed as flushing, filling or filter sets.



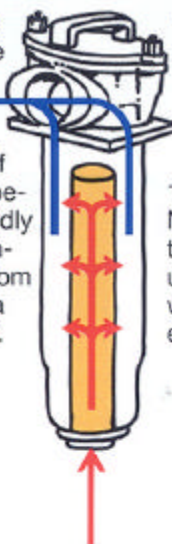
Filter set Rated flow 400 - 630
Connection G 1 1/2 - SAE 2"
Nominal pressure (bar) 10/25



**Mobile Filter Equipment
Pi 8000**

Suction filters

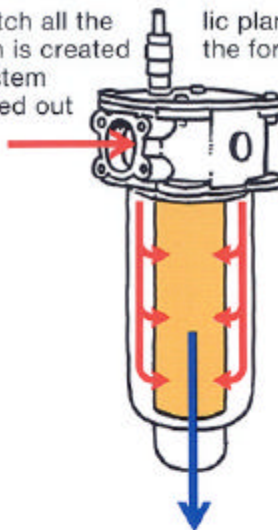
These protect the pump from coarse dirt particles. They are either installed in front of the pump or – especially service-friendly – inserted in the intake, accessible from the outside, with a dirt level indicator.



The wide range of system-orientated elements allows plant and pump protection in the fine range of 10–25 μm using MIC-qualities or in the coarse range, using wire fabric, which can be cleaned.

Return filters

These catch all the dirt which is created in the system and flushed out of the hydraulic



plant. This prevents the formation of a disastrous dirt circuit between the tank and the pump.



Pi 160

Rated flow
Connection

80 - 315
G 1 1/2 - SAE 3"



**Pi 500/
Pi 500 HF**

Rated flow 40 - 1000
Connection G 1 - G 2, DN 38 - DN 76
Nominal pressure (bar) 7/10



Pi 1710

Rated flow
Connection

10 - 480
G 1/4 - G 2 1/2



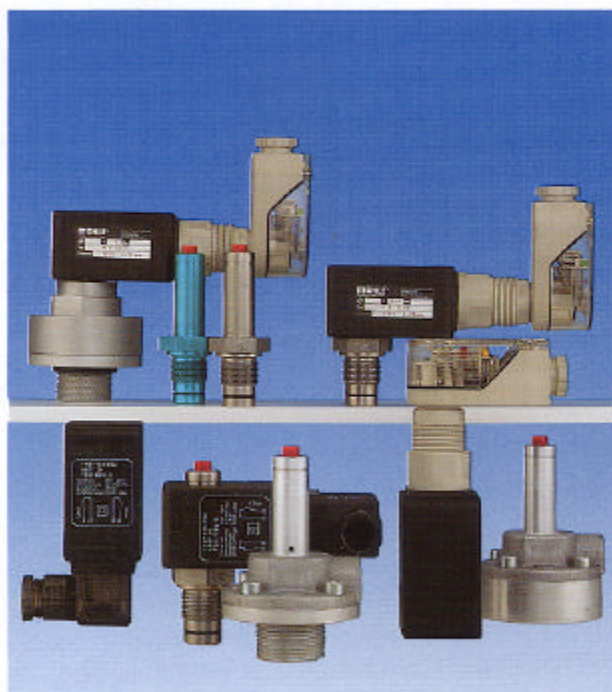
**Pi 510/
Pi 510 HF**

Rated flow 40 - 1000
Connection G 1 - G 1 1/2, DN 50 - DN 76
Nominal pressure (bar) 7/10

Accessories

Filter elements are only being used economically if their capacity to absorb dirt is fully exploited. Filter housings with dirt

level indicators meet this requirement and also simplify maintenance.



Servicing equipment

for measuring the pollution of mineral oil based hydraulic fluids.



Filter elements

These form the heart of all hydraulic filters. They are β -stable. Their multi-layered structure guarantees reliable maintenance of the requisite degree of

purity. Depending upon the user's requirements special purpose-built versions can be manufactured.



Air filters

These provide a pure air supply to vessels. They offer a wide range of system-orientated filter elements, are corrosion- and shockproof and can

be supplied with a wide variety of connections.

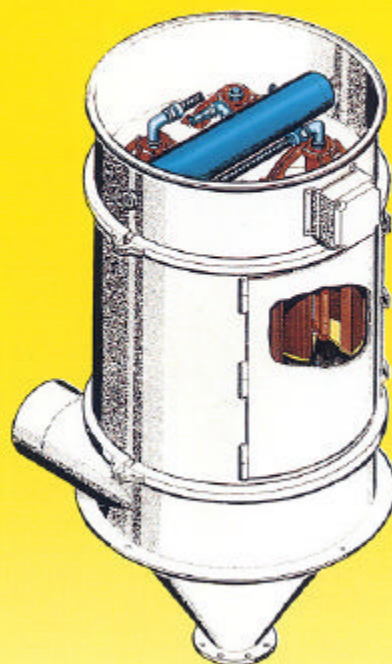
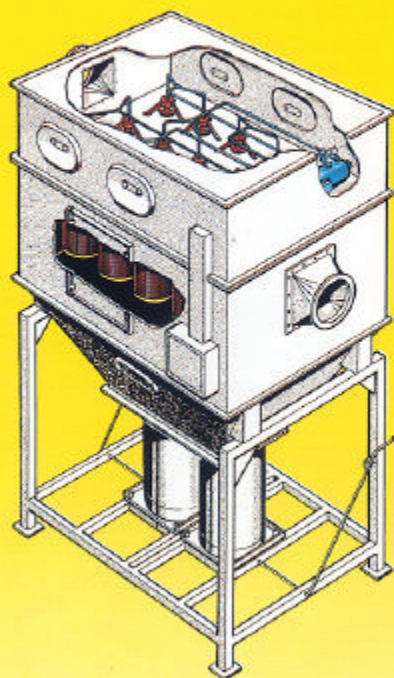


Dust collectors and Cleaning systems

for environmental protection, safety at work and product reclamation.

High-quality materials and manufacturing quality, optimally adapted to the

respective utilisation, ensure long life and high performance.

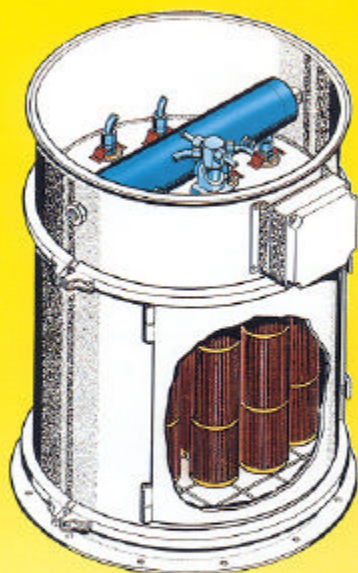


Dust collectors

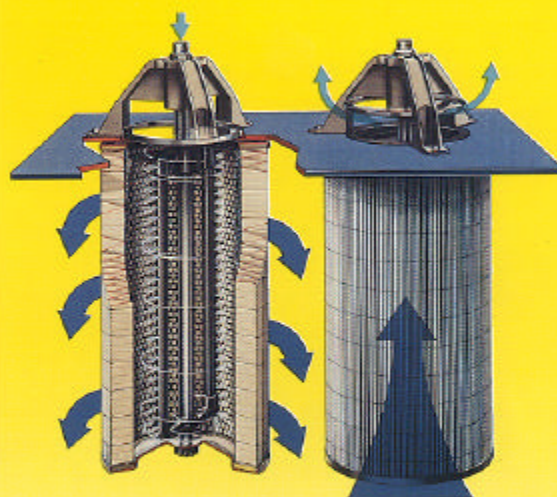
complete with control, insulation and ventilator

Rectangular version
up to 1,000 m² filter surface area

Round version
up to 90 m² filter surface area



Top filters



Rotating wings

for efficient cleaning of large cartridges

Dust filter cartridges

for industrial use, with filter surface areas up to 20 m², diameters up to 500 mm and lengths up to 1,000 mm. The current filter material range with mixed fibre-cellulose, polyester, poly-

propylene, PTFE membranes and glass fibre suits a wide range of applications. Special versions are available to order.



Air filters

guarantee that oil vessels, compressors, vacuum pumps and internal combustion engines are constantly provided with clean air. The noise level is also reduced in intake silencers. All the filter

elements are characterised by good precipitation and high dirt holding capacity.



Fine oil precipitators

for screw compressors retain lubricating oil in the compressed air and return it to the lubrication circuit. They thus guaran-

tee especially economic operation. The standard version is in the tried and tested wound form, with star-crimped versions

available for reduced volume.



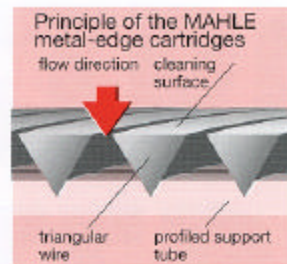
Metal-edge filter systems

are designed to filter different fluids and paste in an automatic operation. Economical solutions will

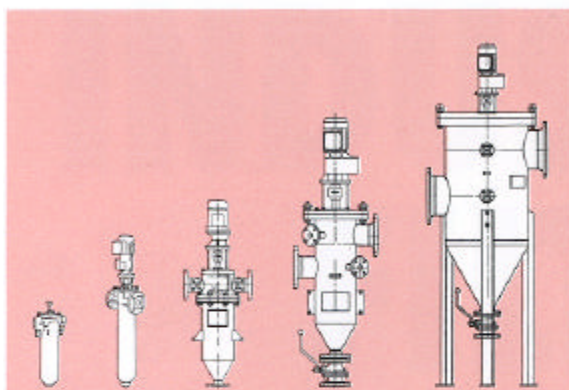
be achieved due to the maintenance-free and waste disposal-free MAHLE metal-edge filter

systems. The universal MAHLE metal-edge filter programm consists of a flexible assembly system

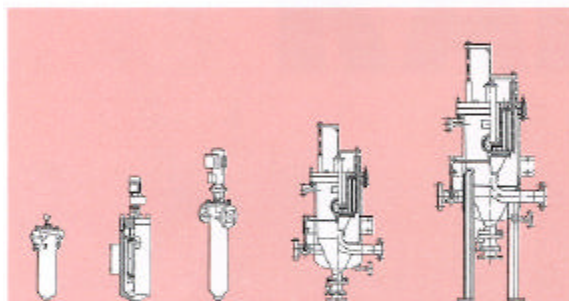
an optimal selection. The range of application can be extended due to different design- and material executions. Additional solutions are possible owing the new patented axial-force free bearing system and various cleaning devices. The essential features are the different executions of the MAHLE-cartridges enabling the proper selection for any particular application.



and a solid filter construction. Well suited sizes from G 3/4 up to DN 400, amongst executions with several driven cartridges, are providing the proper requirement for

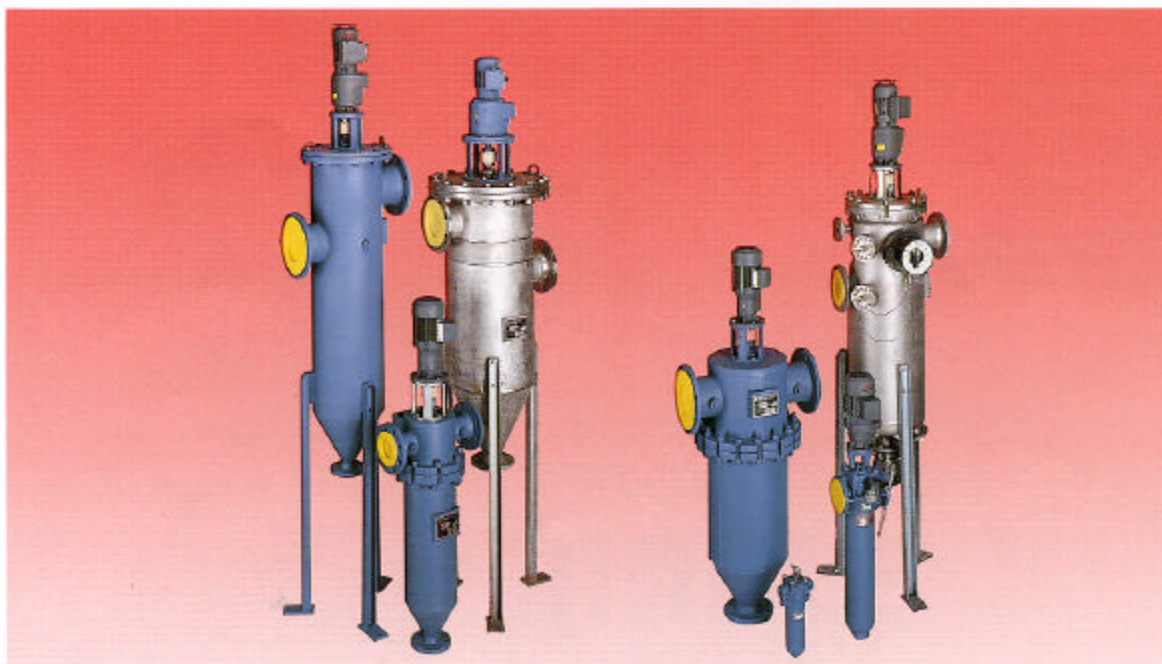


Series PI 61/71, PI 62/72, PI 73, PI 74, PI 75 and PI 76 with radial cleaning device and patented axial-force free bearing system.



High-pressure series 100–450 bar with patented axial-force free bearing system PI 61/71, PI 62/72, PI 73.

Series PI 82 and PI 83 with axial cleaning device (patent pending)





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