MANN-FILTER
Unbeatable in service

High-tech made in Germany

» Matching OE quality

Modern heavy-duty engines require mature filter technology in matching OE quality. For MANN-FILTER, OE quality is not just a buzz word, but tried and tested filter know-how.

Leading manufacturers of construction machinery put their trust in the top-quality products of MANN+HUMMEL.

» Innovation leader

MANN+HUMMEL have been active in the development and manufacturing of filters for construction machinery for more than 60 years. Every year, around 4 percent of the total revenue flows back into research and development.

700 employees worldwide work in this sector, designing innovative, economic and individual product concepts.

» Comprehensive product range

Nowadays, fast delivery and a wide market coverage count more than ever before. This is why MANN-FILTER offers its partners a comprehensive product range and high availability.

Our customers value the excellent support on everything that has to do with filters and also the well designed MANN-FILTER product catalogues. See for yourself.

Air filters

Spin-on oil
and fuel filters

Oil filters

PreLine®
prefilter systems

Crankcase ventilation systems

Hydraulic filters

Filtration in construction machines: Quality filters are a must for reliable and cost-effective filtration

MANN-FILTERs in matching OE quality are designed for the recommended service intervals of your machine manufacturer.

Air filters:	Prevent dirt from being sucked in with the intake air, thus minimising wear on the engine.
Oil filters:	Well filtered oil and a well functioning filter guarantee long engine life.
Fuel prefilter systems:	Perfect water separation enhances and extends the durability of the fuel-injection system.
Main fuel filters:	Precise particle separation prevents wear on the high-pressure pump and the injection nozzles.
Hydraulic filters:	Protect your hydraulic system against unnecessary wear.
Cabin air filters:	Protect the driver against pollen, unwanted particles and harmful gases.
Crankcase ventilation systems:	Oil separation for the crankcase ventilation and regulation of crankcase pressure.

Cheap filters are more expensive and add no value:

Filters which do not match OE quality rarely attain the specified service intervals of the machine manufacturers. Their performance with regard to dust capacity, filter fineness or filter surface generally does not match that of original filters. Due to their inferior performance, cheap filters need to be serviced more often. In addition, with cheap filters there is the risk of greater wear which could culminate in the total failure of the engine and hydraulic system.

MANN+HUMMEL

MANN+HUMMEL GMBH, Business Unit Industrial Filters
67346 Speyer, Germany, Telephone +49 (62 32) 53-80, Fax +49 (62 32) 53-88 99
E-Mail: if.info@mann-hummel.com, Internet: www.mann-hummel.com

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Green and Yellow is Tough

Filters for construction machinery

MANN FILTER

MANN-FILTER – Perfect parts. Perfect service.

Guaranteed matching OE quality:
The MANN-FILTER product range for construction machinery:

- Air filters
- Oil filters
- Fuel filters
- Cabin air filters
- Crankcase ventilation systems
- Hydraulic filters

Always play it safe with filter service.

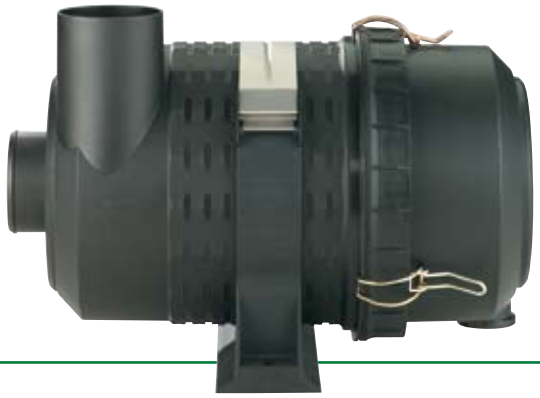
MANN-FILTERs remain robust.

Construction machinery requires extremely robust filters to be able to operate effectively and efficiently on a day to day basis. That is why all leading construction machinery manufacturers attach great importance to filter robustness right through the development of their filter systems.

MANN-FILTER provides this matching OE quality as a standard. With all filters from MANN-FILTER, engines and assemblies will always operate reliably and wear-free in difficult conditions – just like they did on day one.

The added value for maintenance: Matching OE quality from MANN-FI

The durability and functional reliability of construction machinery primarily depends on the quality and reliability of the filters. With MANN-FILTER, you opt for matching quality with original spare parts, dependability, for active protection of your investment and stress-free maintenance on the spot.



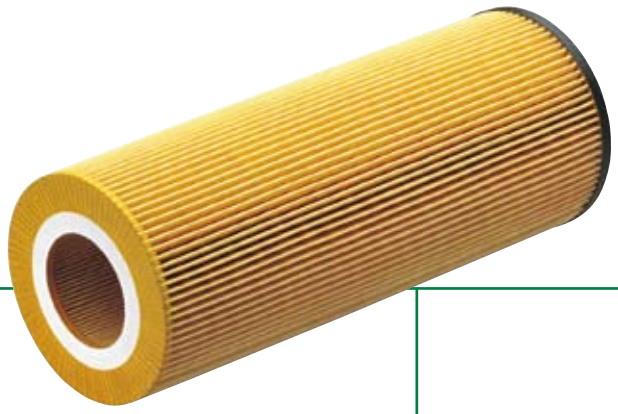
Air filters – wide range

- **Effective**
  For average to heavy dust conditions.
- **Simple maintenance**
  No tools needed.
- **Economic**
  Top performance off the shelf.

PreLine® fuel prefilters – ideal

- **Protection**
  For all injection system components.
- **Reliable**
  Virtually 100% water extraction prevents corrosion in the susceptible injection system.
- **Economic**
  Long operating times even with biodiesel fuels.

LTER – high-performance without co



Oil filters – convincing

- **Environmentally friendly**
  Metal-free filter element is easy to exchange.
- **Resilient**
  Continuous working temperature from -40° C to +90° C with peaks of up to 120° C.
- **Robust**
  Stable in the presence of aggressive oils; hence long service intervals.

Spin-on oil and fuel filters – tried and tested

- **Versatile**
  Available with a variety of filter media.
- **Efficient**
  High dust capacity.
- **Robust**
  Robust housing with corrosion protection.

Hydraulic filters – powerful

- **Robust**
  Can be used with operating pressures of up to 210 bar.
- **Protects**
  The hydraulic system is safeguarded against dust particles, corrosion and abrasion.
- **Service life**
  The high dust capacity of the medium guarantees long filter service life.

mpromise

Crankcase ventilation systems – reliable

- **Protects**
  Prevents oil deposits in the intake tract and on the turbocharger.
- **Environmentally friendly**
  Reduces oleaginous emissions from the crankcase.
- **Economic**
  Reduces the engine's oil consumption.

Perfect maintenance is what counts.

Good, regular maintenance can be planned:

In accordance with the machine manufacturer's instructions, OE quality filters should be used every time the machinery is serviced. Not only does this save time, it also ensures optimum performance of the machinery up until the next service.

Typical consequences of delayed maintenance:

Air filters
- Engine power loss
- Increased fuel consumption
- Higher emissions

Oil filters
- The filter clogs and a safety valve opens in order to ensure the continued lubrication of the engine. The result: the oil is not adequately filtered, causing wear on the valves, bearings and engine components.

Hydraulic filters
- Inadequately filtered oil causes wear in the hydraulic system.

Main fuel filters and prefilters
- Increased wear in the injection system – such as in pump, nozzles, pressure valves – due to inadequate particle and water separation.

Cabin air filters
- The air in the cabin is not adequately filtered; this allows e.g. odorous substances, particles and pollen to enter the driver's cabin.

Crankcase ventilation systems
- Potential damage to the turbocharger and charge air cooler due to oil on the clean side of the filter.
- Reduced engine performance and higher fuel consumption due to reduced turbocharger/charge air cooler performance.