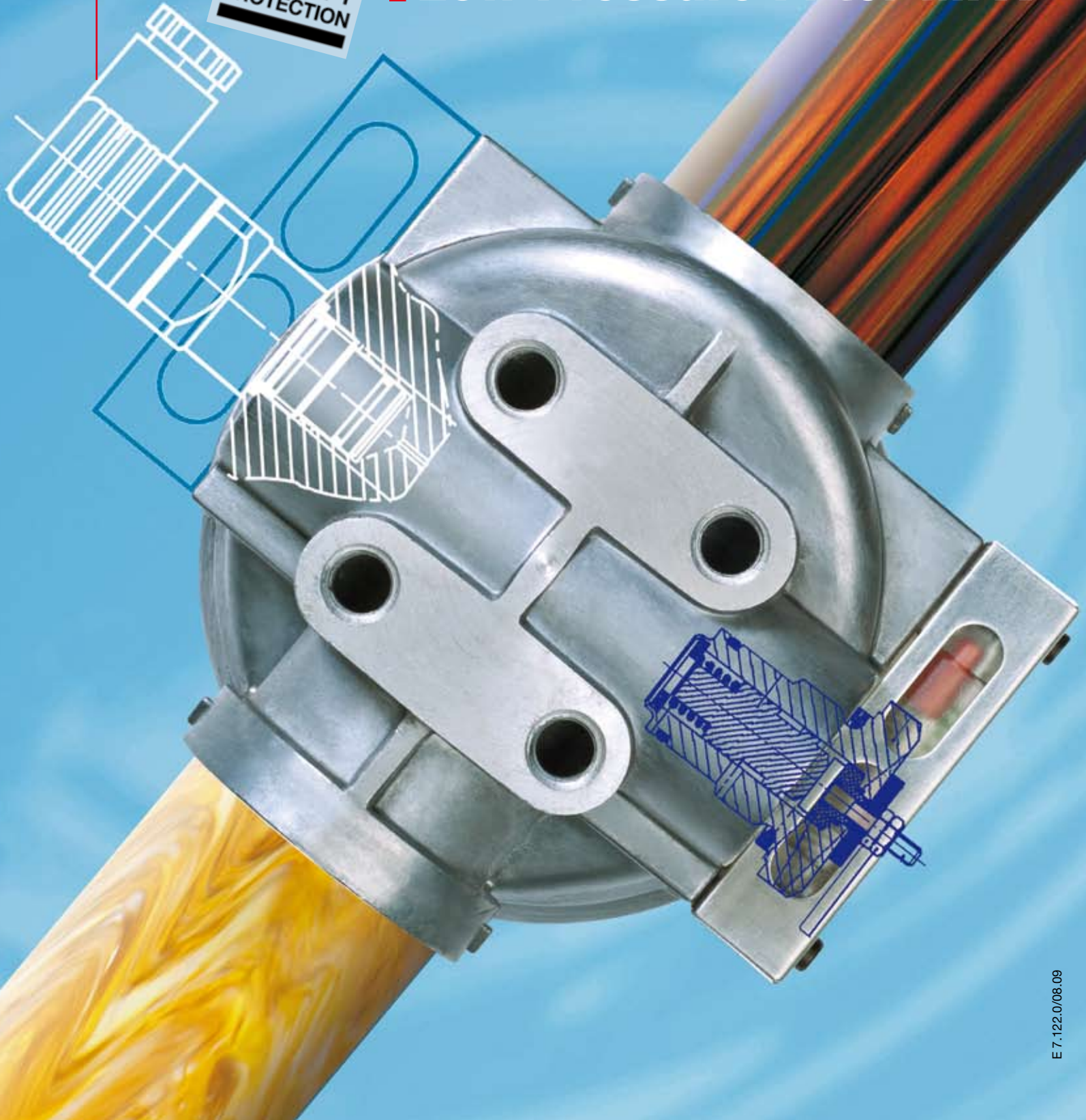


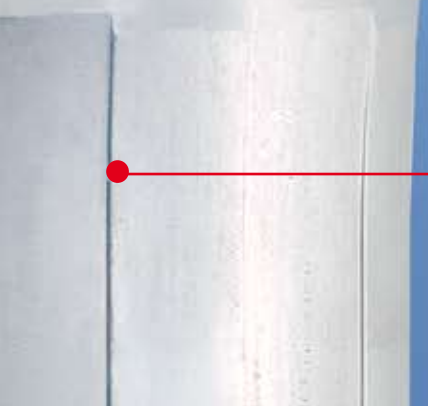
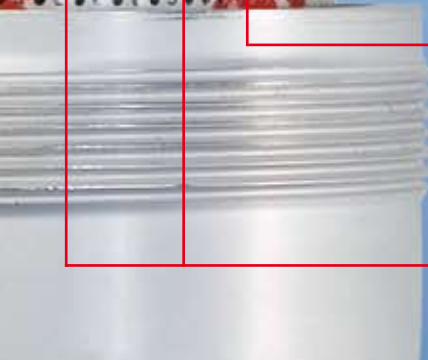
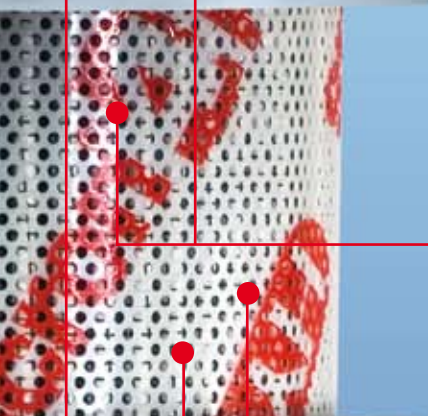
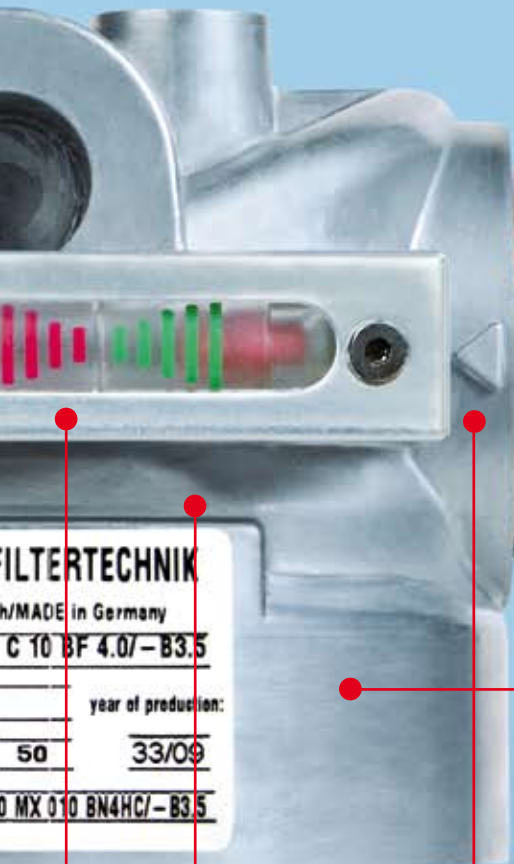
HYDAC INTERNATIONAL



**Quality Assurance for
Supply Circuit Filtration:
Low Pressure Filter MFX.**



the outside. Innovative on the inside. Efficient all round.



Guaranteed original HYDAC quality
thanks to HYDAC Quality Protection.

Custom-fit alternatives
to established systems of different brands.

Element change = Complete overhaul
because elements have built-in
bypass valves and seals.

Warranty security
thanks to individual branding.

Versatile in application
thanks to the variety of choice
of elements and clogging indicators.

As convenient as spin-on filters.
As high performance and environmentally friendly
as high-tech filters.





A wealth of **ingenious features**
for superb innovation.

Half the number of seals,
double the protection against leakage.

Top marks in all areas.
(Beta x, contamination retention,
Delta p, burst pressure ...)

Maximum profitability
from initial installation and operation
through to maintenance and disposal.

High level of operating reliability
as a result of high performance,
long filter lifetimes,
high contamination retention capacity,
high filtration performance,
high burst pressure.

Leadership in technology - a firm foundation.

With over 5,500 employees worldwide, 40 overseas companies and over 500 sales and service partners, we at HYDAC are close to our customers for engineering advice, production, installation and service.

The knowledge and skill we have gained in over 45 years of the most demanding projects in almost all sectors of industry means that, not only do we understand the demands of the international market, but we are also on the same wavelength as our customers.

Our internationally acknowledged leadership in technology, our experience and sector-specific knowledge together with our above average investment in and commitment to research and development at the highest level, using our own laboratories for simulation and practical tests, result in innovative and user-orientated solutions.

Against this background, we work alongside our customers on their projects starting with initial equipment and the application of professional fluid engineering right through to fluid service.

From market to market.

By keeping our finger on the pulse when working alongside international OEMs and users, we recognise the trends well before outdated forecasts stealthily become inexorable problems. In this way it is possible to plan what today's market requires for tomorrow.

The cry for ever greater capacity, ever more accurately controllable work processes and even longer service life is unmistakable. Today's rapid development in the field of electronics which already dominates all sectors, is evidence of this trend, in the same way that valve technology - e.g. that of mobile and machine tool technology - has become extremely fast but also compact and highly accurate.

Since each more innovative high-tech hydraulic system is only as strong as the weakest element in the system, operating fluids too must meet the high standards. For effective and economical supply circuit filtration, the new HYDAC low pressure filter MFX brings the greatest possible reliability for future strategy and operation. For the market of today. And for that of tomorrow.



Product idea: MFX instead of Spin-On.

Is the Spin-On still on-trend at all?
Is the Spin-On even still capable of meeting the rigorous market requirements?
Forget the wasteful spin-on and change to the high capacity compact group of high quality MFX from HYDAC.
It has everything the future demands:
Compact design, high level performance, maximum reliability, greatest possible cost-saving, simple and reliable element-change and servicing, fulfils the most stringent environmental regulations.

Innovation in facts and figures.

Applications: Examples: small wheel loaders, compact loaders, mini excavators, municipal vehicles (road sweepers), telehandlers, agricultural machines (tractors), manlifts

Locations: Examples: closed hydraulic circuits, cooling circuits, lubrication systems, supply circuits, in the return line

Technical specifications:

p_{max} : 50 bar (at $>10^6$ cycles)

Q_{max} : 130 l/min

Connections: G³/₄, G1, M26x1.5, M33x2, 1 1/16-12 UN, 1 5/16-12 UN

Sizes (and weight): 100 (1.46 kg) or 200 (1.74 kg)

Bypass valve opening pressure: 1.7 or 3.5 bar

Standard is with G³/₄ or G1 ports in conjunction with the port configurations for clogging indicators in flow direction to the left (position 2.x and 4.x)

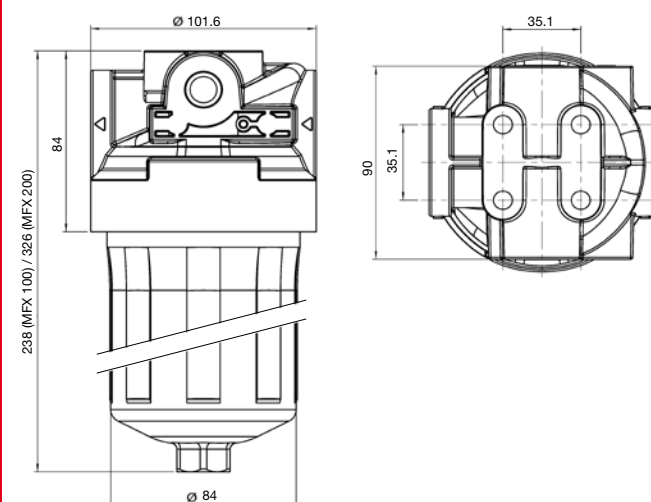
Materials of housing:

Head: Aluminium, **Housing:** Aluminium

Core tube: Plastic, **Seal:** NBR

Bypass valve: Polyamide / Aluminium

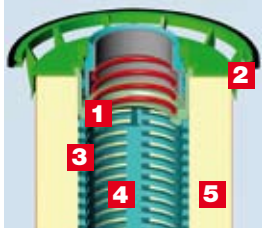
Dimensions:



Inlet thread	Outlet thread	Mounting holes
G ³ / ₄	G ³ / ₄	M10
G1	G1	M10
1 1/16-12 UN	1 1/16-12 UN	3/8-16 UNC
1 5/16-12 UN	1 5/16-12 UN	3/8-16 UNC
M26x1.5	M26x1.5	M10
M33x2	M33x2	M10

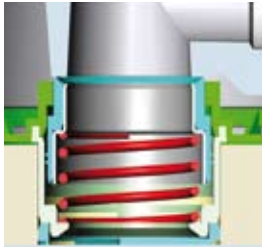
Low Pressure Filter MFX: the Maximum in Performance

Many ingenious features for brilliant innovation.



Many quality-related and future-orientated ideas have gone into the low pressure filter MFX from HYDAC. With this filter, each new development is interdependent on the next, each one meriting an individual patent.

1 Bypass valve



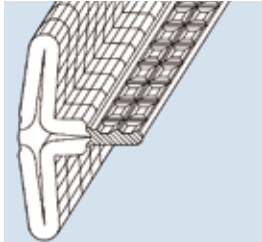
The pressure drop curve of the patented sliding bypass valve is particularly low. Particular advantages: The bypass valve is not located in the filter sump, but at the top in the head of the element.

2 Element seal



The element/bowl seal is located on the element cap. If a different brand of element is used, there will be no seal between the head and element.

3 Ultrasonically welded long seam



The raw edges of the element material are firmly sealed using a patented welding process. This produces a completely sealed and impermeable smooth seam.

4 Plastic core tube



The patented core tube with star support gives the element optimum purchase even at high pressures.

5 Protective outer wrap



The unique HYDAC outer wrap ensures that the fluid is distributed evenly and protects the delicate filter material from mechanical damage.

Quality Protection: Highest level of reliability.

With the HYDAC low pressure filter MFX a special design of seal and bypass ensures that only HYDAC replacement elements can be used, in other words:

Highest level of system protection achieved through guaranteed spare part quality.

Advantages for the OEM:

- Original spare part quality
- Protection of the spare part business
- Guaranteed oil cleanliness due to spare part quality
- Protection of warranty

Advantages for the end user:

- Original spare part quality
- Simple element change
- High level of operational reliability since bypass valve and housing seal are replaced at each element change
- Minimal risk of leakage since the number of seals is reduced to just one

Individual branding.

Quality / operational reliability through the use of individual branding / type coding for the spare part market.



Performance and Innovation and Quality and Reliability



Variety of possible applications.

With 3 different interchangeable filter elements which can be selected from the high performance HYDAC element range.

Betamicon®



Filtration rating: 5, 10, 20 µm

Differential pressure stability: 20 bar

Special features:

- High $\beta_{x(c)}$ values
- High $\beta_{x(c)}$ value stability
- **Particularly high contamination retention**
- Low differential pressure

Mobilemicon



Filtration rating: 8 (High Efficiency), 10, 15 µm

Differential pressure stability: 10 bar

Special features:

- High $\beta_{x(c)}$ values
- High contamination retention
- **Particularly low differential pressure**

ECOMicon®



Filtration rating: 5, 10, 20 µm

Differential pressure stability: 10 bar

Special features:

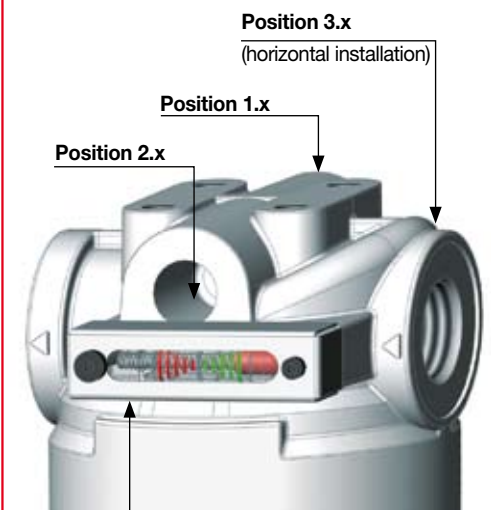
- High $\beta_{x(c)}$ values
- High contamination retention
- Low differential pressure
- **High flow fatigue stability**
- Incinerable

Contamination always firmly in view.

The new HYDAC low pressure filter MFX can be fitted with a wide variety of clogging indicators in visual, visual/electrical and electrical versions in 4 possible positions.

These different possibilities mean that the visual indicators in particular can be positioned in such a way that they can always be monitored easily and accurately.

Possible mounting positions for a clogging indicator.



Position 3.x
(horizontal installation)

Position 1.x

Position 2.x

Position 4.x

(horizontal installation)
Shown here as an example:
The new, cost-effective, visual mobile indicator with protective cover.

(standard 4.x)

Reliability and Economy and ...

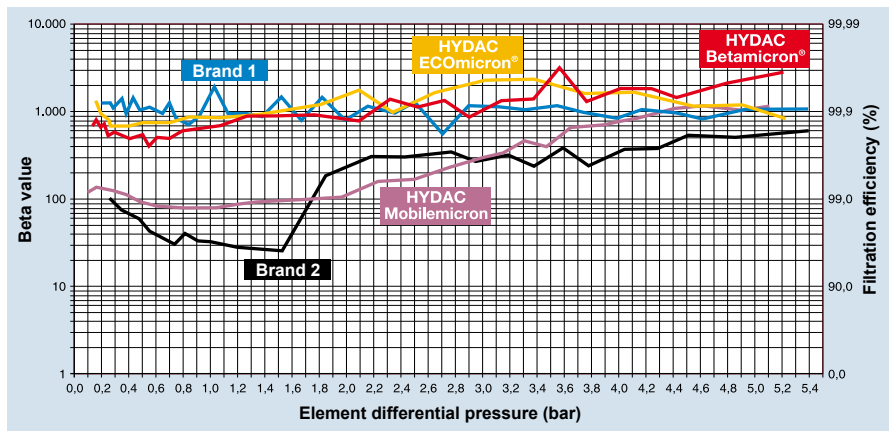
Excellent, verifiable operating efficiency demonstrated in all areas of filtration.

- Cost-optimised filter housing
- New alternative and cost-effective mobile indicator available
- Low operating costs in system operation
- Significantly extended lifetimes
- Lower energy costs
- Low element pressure drop
- Reduced element disposal costs

The performance data shows:

Consistently high filtration performance

Result: reliable component protection and long service life
(Shown here, the filtration performance of the MFX 200 and comparable brands.)



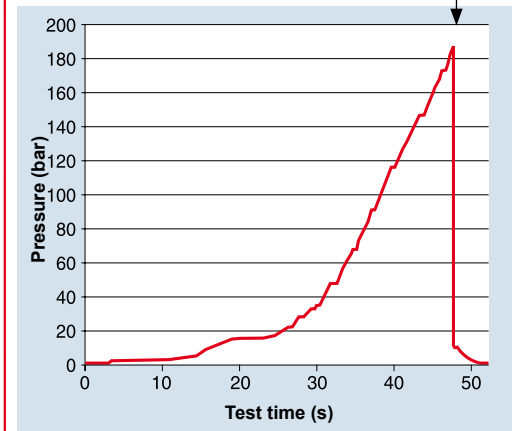
Excellent operating reliability. At all times.

- Due to the best component protection
- Due to guaranteed spare part quality (Quality Protection)
- Because seal and bypass valve are replaced at every element change
- Due to extremely high pressure stability of the housing

Housing stable up to 187 bar!

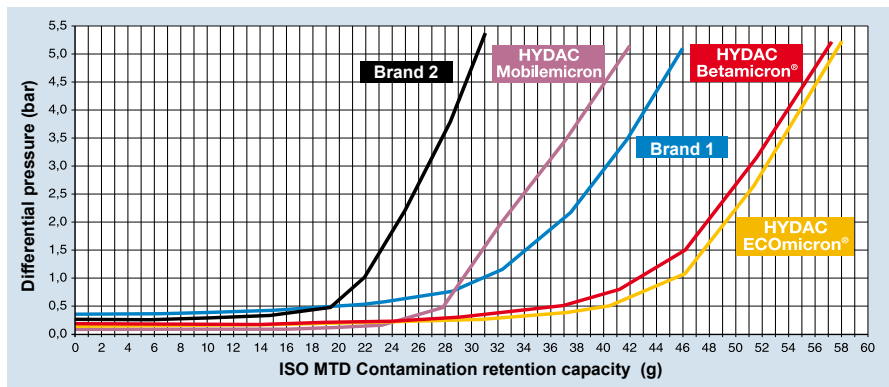
3 x better than Brand 1

2 x better than Brand 2



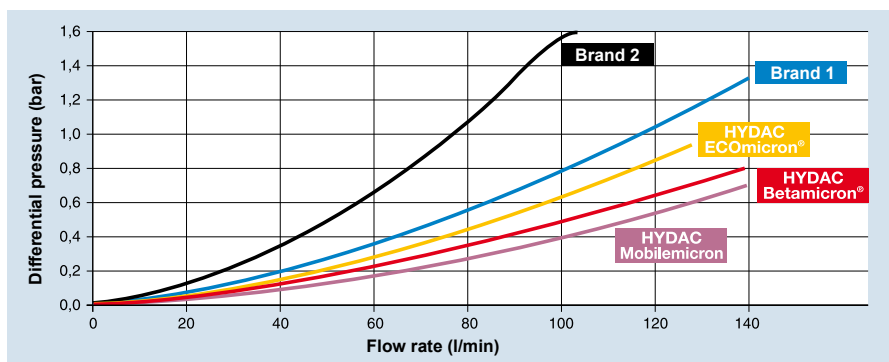
Excellent contamination retention capacity

Result: long element lifetimes and long intervals between changes
(Shown here, the contamination retention capacity of the MFX 200 and comparable brands.)



Low pressure drop across the filter element

Result: low energy costs
(Shown here, the flow rate characteristics of the MFX 200 and comparable brands.)



User-friendly from design to service.

- Alternative typical applications to other brands already on the market
- Engineering advice always available
- Little space required for changing element
- Low disposal requirement compared with material intensive spin-on cartridges



For further information please see the brochure: Low Pressure Filter MFX.



Br.: Accumulators DEF 3.000



Brochure: Filter Range DEF 7.000



Broch.: Filters for Ind. Processing DEF 7.700



Broch.: Fluid Systems DEF 7.929



Broch.: Compact Hydraulics DEF 5.300



Brochure: Accessories DEF 6.100






Brochure: Electronics DEF 18.000



Broch.: Cooling Systems DEF 5.700

Global presence. Local expertise. www.hydac.com



-  HYDAC Headquarters
-  HYDAC Companies
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