

Stainless steel high pressure
filters Manifold top mounting FZM
series



 HYDRAULIC
COMPONENTS
& FLUID CONTAMINATION
CONTROL



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HYDRAULIC FILTRATION PRODUCTS

STAINLESS STEEL HIGH PRESSURE FILTERS



PASSION TO PERFORM





A WORLDWIDE LEADER IN THE FIELD OF HYDRAULIC FILTRATION EQUIPMENT.

Our company started life in 1964, when Bruno Pasotto decided to attempt to cater for the requests of a market still to be fully explored, with the study, design, development, production and marketing of a vast range of filters for hydraulic equipment, capable of satisfying the needs of manufacturers in all sectors. The quality of our products, our extreme competitiveness compared with major international producers and our constant activities of research, design and development has made us a worldwide leader in the field of hydraulic circuit filtering. Present for over 50 years in the market, we have played a truly decisive role in defining our sector, and by now we are a group capable of controlling our entire chain of production, monitoring all manufacturing processes to guarantee superior quality standards and to provide concrete solutions for the rapidly evolving needs of customers and the market.

MARKET LEADER



Our work is based on a skillful interaction between advanced technology and fine workmanship, **customizing products according to specific market requests**, focusing strongly on innovation and quality, and following every step in the manufacturing of both standard and special products, fully respecting customer expectations.



Our customer-oriented philosophy, which enables us to satisfy all customer requests **rapidly and with personalized products**, makes us a **dynamic and flexible enterprise**. The possibility of constantly controlling and monitoring the entire production process is essential to allow us to guarantee the quality of our products.

WORLDWIDE PRESENCE

Our foreign Branches enable us to offer a diversified range of products that allow us to successfully face the aggressive challenge of international competition, and also to maintain a stable presence at a local level.

The Group boasts **9** business branches



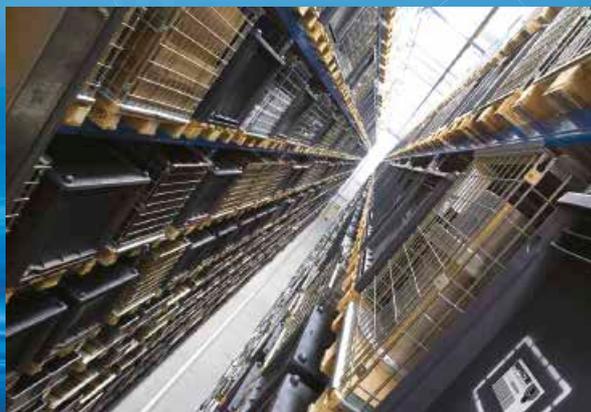
TECHNOLOGY

Our constant **quest for excellence in quality and technological innovation** allows us to offer only the best solutions and services for applications in many fields, including general industry, test rigs, lubrication, heavy engineering, renewable energies, naval engineering, offshore engineering, aviation systems, emerging technologies and mobile plant (i.e. tractors, excavators, concrete pumps, platforms).



AND PRODUCTION

Our high level of technological expertise means **we can rely entirely on our own resources, without resorting to external providers.** This in turn enables us to satisfy a growing number of customer requests, also exploiting our constantly updated range of machines and equipment, featuring **fully-automated workstations** capable of **24-hour production.**





SUCTION FILTERS

Flow rates
up to 875 l/min

Mounting:
- Tank immersed
- In-Line
- In tank with
shut off valve
- In tank
with flooded suction

RETURN FILTERS

Flow rates
up to 3000 l/min

Pressure
up to 20 bar

Mounting:
- In-Line
- Tank top
- In single
and duplex designs

RETURN / SUCTION FILTERS

Flow rates
up to 300 l/min

Pressure
up to 80 bar

Mounting:
- In-Line
- Tank top

SPIN-ON FILTERS

Flow rates
up to 365 l/min

Pressure
up to 35 bar

Mounting:
- In-Line
- Tank top

LOW & MEDIUM PRESSURE FILTERS

Flow rates
up to 3000 l/min

Pressure
up to 80 bar

Mounting:
- In-Line
- Parallel manifold version
- In single
and duplex designs

HIGH PRESSURE FILTERS

Flow rates
up to 750 l/min

Pressure from 110 bar
up to 560 bar

Mounting:
- In-Line
- Manifold
- In single
and duplex designs

PRODUCT RANGE

MP Filtri can offer a vast and articulated range of products for the global market, suitable for all industrial sectors using hydraulic equipment.

This includes filters (suction, return, return/suction, spin-on, pressure, stainless steel pressure) and structural components (motor/pump bell-housings, transmission couplings, damping rings, foot brackets, aluminium tanks, cleaning covers).

We can provide all the skills and solutions required by the modern hydraulics industry to monitor contamination levels and other fluid conditions.

Mobile filtration units and a full range of accessories allow us to supply everything necessary for a complete service in the hydraulic circuits.



STAINLESS STEEL HIGH PRESSURE FILTERS

Flow rates up to 125 l/min

Pressure from 320 bar up to 1000 bar

Mounting:

- In-Line
- Manifold
- In single and duplex designs

CONTAMINATION MONITORING PRODUCTS

- Online, in-line particle counters
- Off-line bottle sampling products
- Fully calibrated using relevant ISO standards
- A wide range of variants to support fluid types and communication protocols

MOBILE FILTRATION UNITS

Flow rates from 15 l/min up to 200 l/min

POWER TRANSMISSION PRODUCTS

- Aluminium bell-housings for motors from 0.12 kW to 400 kW
- Couplings in Aluminium Cast Iron - Steel
- Damping rings
- Foot bracket
- Aluminium tanks
- Cleaning covers

TANK ACCESSORIES

- Oil filler and air breather plugs
- Optical and electrical level gauges
- Pressure gauge valve selectors
- Pipe fixing brackets
- Pressure gauges

FZM series

Maximum working pressure up to 32 Mpa (320 bar) - Flow rate up to 70 l/min



Description

Technical data

Stainless steel high pressure filters

Manifold

Maximum working pressure up to 32 Mpa (320 bar)
Flow rate up to 70 l/min

FZM is a range of stainless steel high pressure filter for protection of sensitive components in high pressure hydraulic systems placed in difficult environmental conditions.

They are directly connected to the top of the manifold, through the proper flanged interface.

Available features:

- Manifold connections up to Ø15 mm, for a maximum flow rate of 70 l/min
- ISO 4401 CETOP 3 and CETOP 5 interface, for direct mounting on the CETOP valves.
- Fine filtration rating, to get a good cleanliness level into the system
- Bypass valve, to relieve excessive pressure drop across the filter media
- Low collapse filter element with external support "R", for filter element protection against the back pressure caused by the check valve or the reverse flow in filters provided with the bypass valve
- High collapse filter element with external support "S", for filter element protection against the back pressure caused by the check valve or the reverse flow in filters not provided with the bypass valve
- High collapse filter element "U", for use with aggressive fluids
- Visual, electrical and electronic differential clogging indicators

Common applications:

- Off-shore equipment
- Water filtration systems
- Systems with strong or corrosive environmental conditions
- Systems with corrosive fluids

Filter housing materials

- Head: AISI 316L
- Housing: AISI 316L
- Bypass valve: AISI 316L

Seals

- Standard NBR series A (-25 °C to +110 °C)
- Optional FPM series V (-20 °C to +120 °C)
- Optional MFQ series F (-50 °C to +120 °C)

Bypass valve

Opening pressure 6 bar ±10%

Temperature

From -50 °C to +120 °C

Note

FZM filters are provided for vertical mounting

Δp element type

Fluid flow through the filter element from OUT to IN

Microfibre filter elements - series R: 20 bar.

Element series "R":

- End cap: Nylon
- Core tube: Tinned Steel
- External/Internal support: Wire mesh Epox painted
- Media/Support/Pre-filter: Microfibre/Syntetic

Microfibre filter elements - series S: 210 bar.

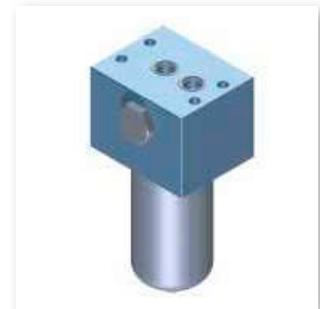
Element series "S":

- End cap: Tinned Steel
- Core tube: Tinned Steel
- External support: Wire mesh Epox painted
- Internal support: Wire mesh Stainless Steel
- Media/Support/Pre-filter: Microfibre/Syntetic

Stainless Steel Microfibre filter elements series U: 210 bar.

Element series "U":

- End cap: Stainless Steel
- Core tube: Stainless Steel
- External support: Stainless Steel
- Internal support: Stainless Steel
- Media/Support/Pre-filter: Microfibre/Syntetic



Weights [kg] and volumes [dm³]

Filter series	Weights [kg]					Volumes [dm ³]				
	Length	1	2	3	4	Length	1	2	3	4
FZM 039	-	5.0	5.6	6.1		-	0.19	0.26	0.34	

Filter series	Length	Filter element design - R Series					Filter element design - S-U Series				
		A03	A06	A10	A16	A25	A03	A06	A10	A16	A25
FZM 039	2	19	25	41	47	54	19	23	39	43	51
	3	33	36	50	56	65	30	33	45	49	60
	4	41	44	58	64	70	37	39	51	63	68

Maximum flow rate for a complete stainless steel high pressure filter with a return drop $\Delta p = 1.5$ bar.

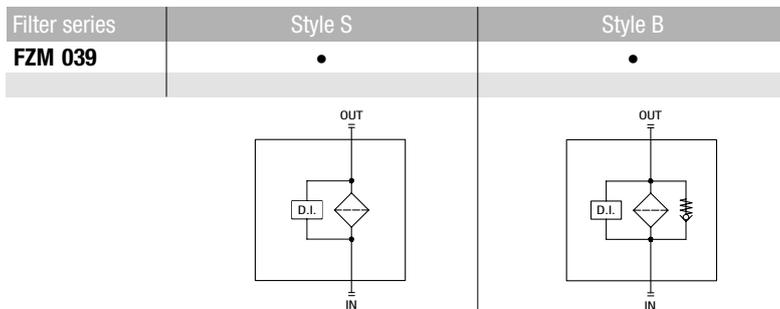
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

You can also calculate the right size using the formulas present on the FILTER SIZING paragraph at the beginning of the full catalogue or at the beginning of the filter family brochure.

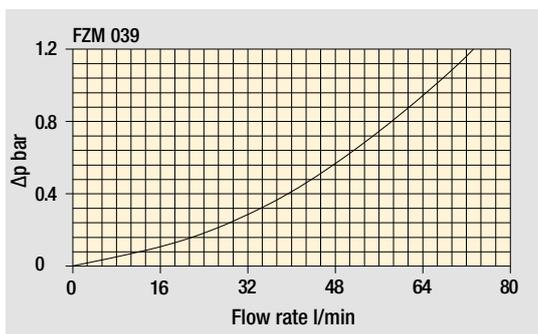
Please, contact our Sales Department for further additional information.

Hydraulic symbols



Pressure drop

Filter housings Δp pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm³ in compliance with ISO 3968. Δp varies proportionally with density.

Designation & Ordering code

COMPLETE FILTER

Series and size FZM039	Configuration example: FZM039	2	S	A	M	1	A10	H	P01
Length 2 3 4									
Valves S Without bypass B With bypass 6 bar									
Seals A NBR V FPM F MFQ									
Connections M Manifold									
Connection for differential indicator 1 Without 2 With connection									
Filtration rating (filter media) A03 Inorganic microfiber 3 µm A06 Inorganic microfiber 6 µm A10 Inorganic microfiber 10 µm A16 Inorganic microfiber 16 µm A25 Inorganic microfiber 25 µm									

Element Δp	Valves		Execution
	S	B	
R 20 bar		•	P01 MP Filtri standard
S 210 bar	•		Pxx Customized
U 210 bar, stainless steel filter element	•	•	

FILTER ELEMENT

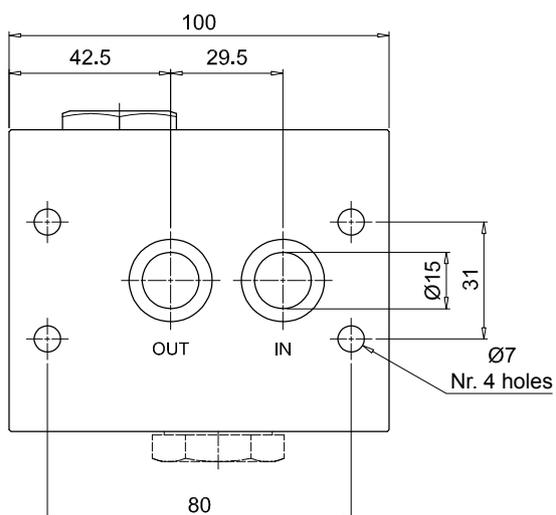
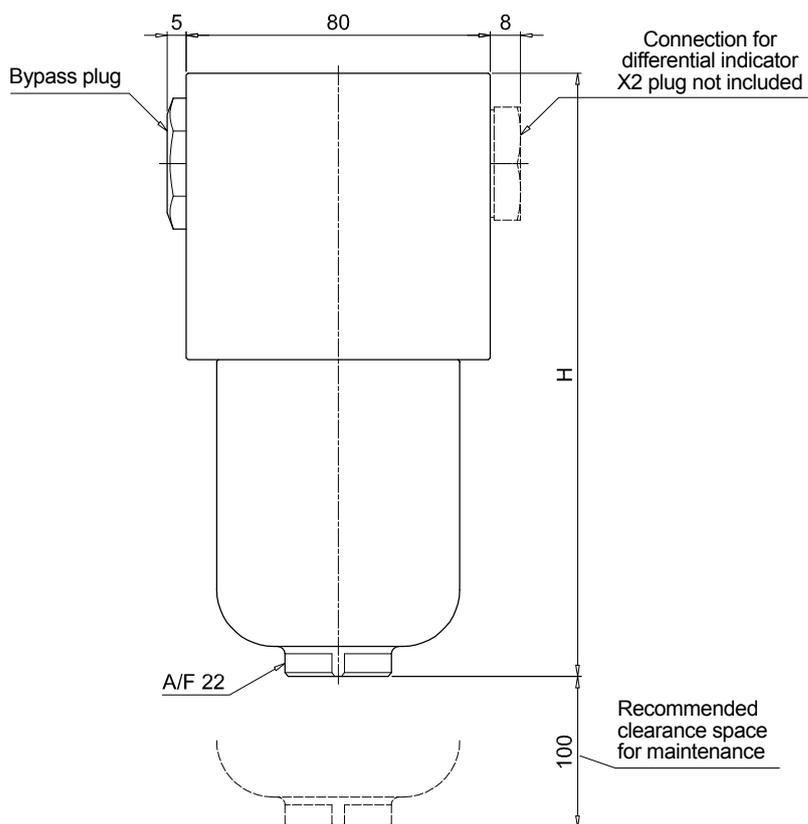
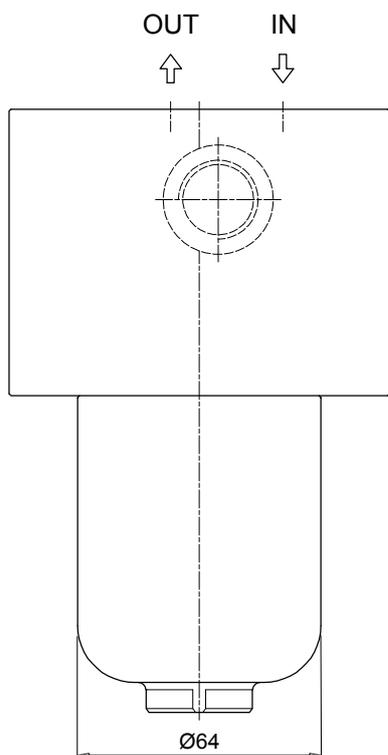
Element series and size HP039	Configuration example: HP039	3	A10	A	S	P01
Element length 2 3 4						
Filtration rating (filter media) A03 Inorganic microfiber 3 µm A06 Inorganic microfiber 6 µm A10 Inorganic microfiber 10 µm A16 Inorganic microfiber 16 µm A25 Inorganic microfiber 25 µm						

Seals	Element Δp	Execution
A NBR	R 20 bar	P01 MP Filtri standard
V FPM	S 210 bar	Pxx Customized
F MFQ	U 210 bar, stainless steel filter element	

ACCESSORIES

Differential indicators	page		page
DEH Hazardous area electronic differential indicator	642	DVX Visual differential indicator	643
DEX Electrical differential indicator	643	DVY Visual differential indicator	644
DLX Electrical / visual differential indicator	643		
Additional features	page		
X2 Plug	644		

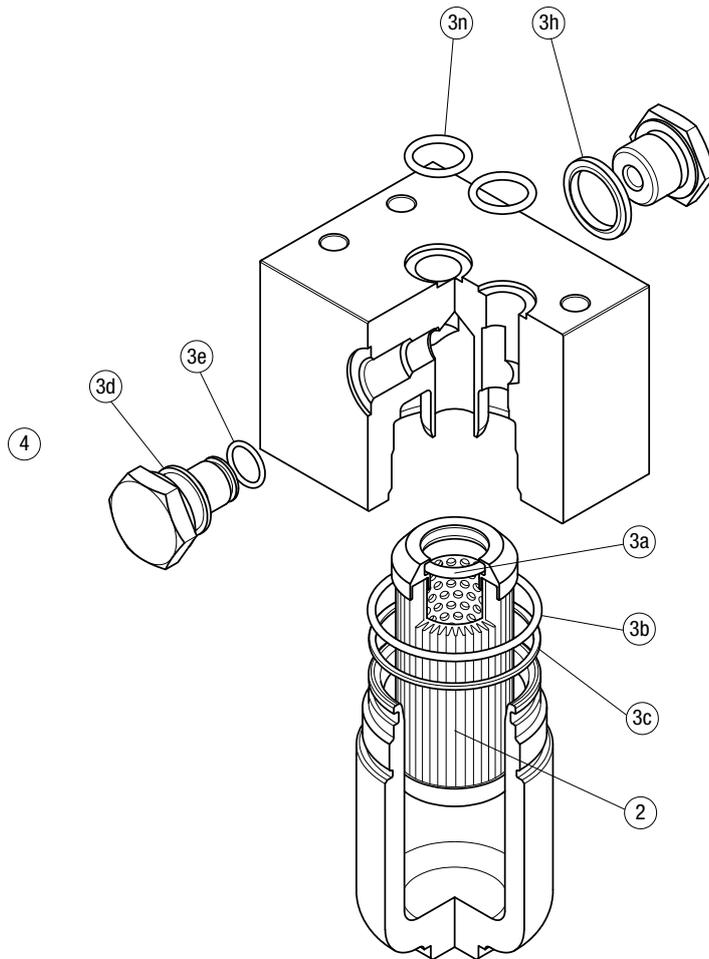
FZM039	
Filter length	H [mm]
2	160
3	203
4	247



FZM SPARE PARTS

Order number for spare parts

FZM 039



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
FZM 039	See order table	NBR	FPM	NBR	FPM
	2	3 (3a ÷ 3n)		4	
		02050651	02050652	X2H	X2V

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