MYCLEAN

THE X CONCEPT FOR OUR FILTERS

Protect the performance of your system with MYclean.
Quality and efficiency are fundamental for MP Filtri:
this exclusive new filter element possesses polygon shape geometry and specific seal that ensures only original spare parts can be used - ensuring correct operation and higher system reliability.

FMMX 050 series

with MYCLEAN HPX 050 Filter Element

- **Protects the machine from improper use of non-original products.**
- **Safety of constant quality protection & reliability**

With exclusive filter element you are sure that only MP Filtri filter elements can be used, ensuring the best cleaning level of the oil due to the use of originals filter elements.

The products identified as FMMX 050 are protected by:

- Italian Patent n° 102014902261205
- Canadian Patent n° 2,937,258
- European Patent n° 3 124 092 B1
- US Patent n° 20170030384 A1

TOGETHER WITH MYCLEAN , AS OPTION, FMMX 050 SERIES CAN BE PROVIDED WITH

zerospark®

THE ANTI-STATIC FILTERS

THE Z CONCEPT FOR OUR FILTERS

Zerospark® is a specialist solution designed to solve the problem of electrostatic discharge inside hydraulic filters. Caused by the electrical charge build-up due to the passage of oil through the filters, this can result in damage to filter elements, oils and circuit components. It can even cause fire hazards in environments where flammable materials are present.

FMMX 050 series

Maximum working pressure up to 42 MPa (420 bar) - Flow rate up to 154 l/min

FMMX 050 GENERAL INFORMATION

Description

High Pressure filters

In-line
Maximum working pressure up to 42 MPa (420 bar)
Flow rate up to 154 l/min

FMMX is a range of versatile high pressure filter for protection of sensitive components in high pressure hydraulic systems in the mobile machines.
They are directly connected to the lines of the system through the hydraulic fittings.

Available features:
- Female threaded connections up to 1 1/4", for a maximum flow rate of 250 l/min
- 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 "N", for use with filters provided with bypass valve
- Visual, electrical and electronic differential clogging indicators
- MYclean interface connection for the filter element, to protect the product against non-original spare parts.
- External protective wrap, to optimize the flow through the element and to save the element efficiency against non-proper handling

Common applications:
- Agricultural machines
- Mobile machines

Technical data

Filter housing materials
- Head: Painted cast iron, black RAL 9005
- Housing: Phosphatized steel
- Bypass valve: Steel

Pressure
- Test pressure: 63 MPa (630 bar)
- Burst pressure: 126 MPa (1260 bar)
- Pulse pressure fatigue test: 1 000 000 cycles with pressure from 0 to 42 MPa (420 bar)

Bypass valve
- Opening pressure 600 kPa (6 bar) ±10%
- Other opening pressures on request.

Δp element type
- Microfiber filter elements - series N: 20 bar
- Wire mesh filter elements - series N: 20 bar
- Fluid flow through the filter element from OUT to IN

Seals
- Standard NBR series A
- Optional FPM series V

Temperature
From -25 °C to +110 °C

Connections
In-line Inlet/Outlet

Note
FMMX filters are provided for vertical mounting

Weights [kg] and volumes [dm³]

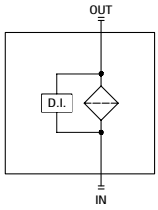
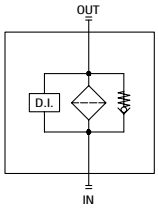
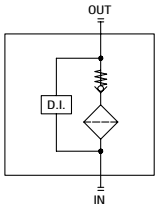
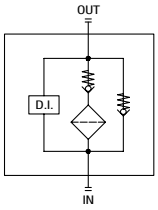
Filter series	Weights [kg]						Volumes [dm³]					
	Length	1	2	3	4	5	Length	1	2	3	4	5
FMMX 050		3.11	3.48	3.90	4.36	5.54		0.34	0.48	0.63	0.81	1.23

FILTER ASSEMBLY SIZING
Flow rates [l/min]

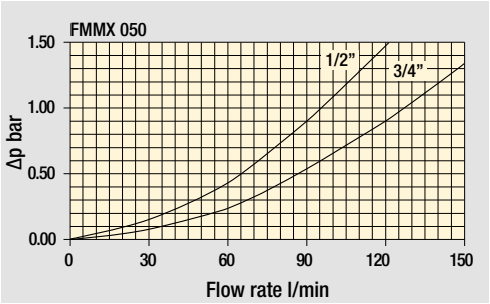
Filter series	Length	Filter element design - N Series					
		A03	A06	A10	A16	A25	M25
FMMX 050	1	42	43	79	82	106	147
	2	52	57	85	96	121	149
	3	66	69	97	106	130	150
	4	83	89	113	115	134	152
	5	107	110	130	134	141	154

Maximum flow rate for a complete pressure filter with a pressure drop Δp = 1.5 bar.
The reference fluid has a kinematic viscosity of 30 mm^2/s (cSt) and a density of 0.86 kg/dm^3.
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.

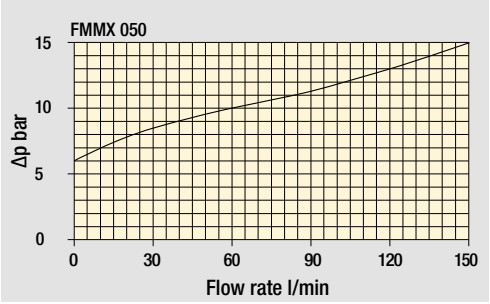
Hydraulic symbols

Filter series	Style S	Style B	Style T	Style D
FMMX 050				

Pressure drop
Filter housings
Δp pressure drop

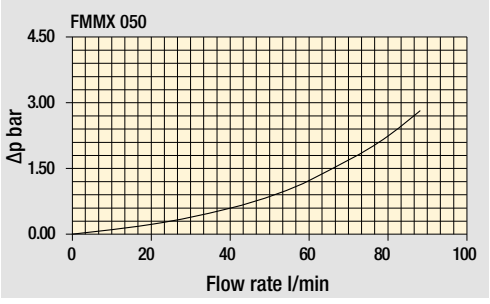


Bypass valve
pressure drop



Valves

Filter housing
with check valve



The curves are plotted using mineral oil with density of 0.86 kg/dm^3 in compliance with ISO 3968. Δp varies proportionally with density.

FMMX 050

Designation & Ordering code

COMPLETE FILTER

Configuration example: FMMX050 | 3 | B | A | G | A10 | N | P01

Series and size

FMMX050 Filter featuring MYCLEAN Filter Element

Length

1 | **2** | **3** | **4** | **5**

Valves

B	With bypass 6 bar
D	With check valve, with bypass 6 bar

Seals

A	NBR
V	FPM

Connections

A	M18x1.5 - ISO 6149	**E**	1/2" NPT
B	M22x1.5 - ISO 6149	**F**	3/4" NPT
C	G 1/2"	**G**	SAE 8 - 3/4" - 16 UNF
D	G 3/4"	**H**	SAE 12 - 1 1/16" - 12 UN

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
M25	Wire mesh	25 µm

Element Δp

N	20 bar

Executions

Base	zerospark	
P01	**Z01**	Upper connection for clogging indicator
P02	**Z02**	Without connection for clogging indicator
P03	**Z03**	Frontal connection for clogging indicator
Pxx	**Zxx**	Customized

FILTER ELEMENT

Configuration example: HPX050 | 3 | A10 | A | N | P01

Element series and size

HPX050 Filter Element with MYCLEAN feature

Element length

1 | **2** | **3** | **4** | **5**

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
M25	Wire mesh	25 µm

Seals

A	NBR
V	FPM

Element Δp

N	20 bar

Executions

Base	zerospark	
P01	**Z01**	MP Filtri standard
Pxx	**Zxx**	Customized

CLOGGING INDICATORS

See page 687

DEA	Electrical differential indicator	**DTA**	Electrical differential indicator
DEM	Electrical differential indicator	**DVA**	Visual differential indicator
DLA	Electrical / visual differential indicator	**DVM**	Visual differential indicator
DLE	Electrical / visual differential indicator		

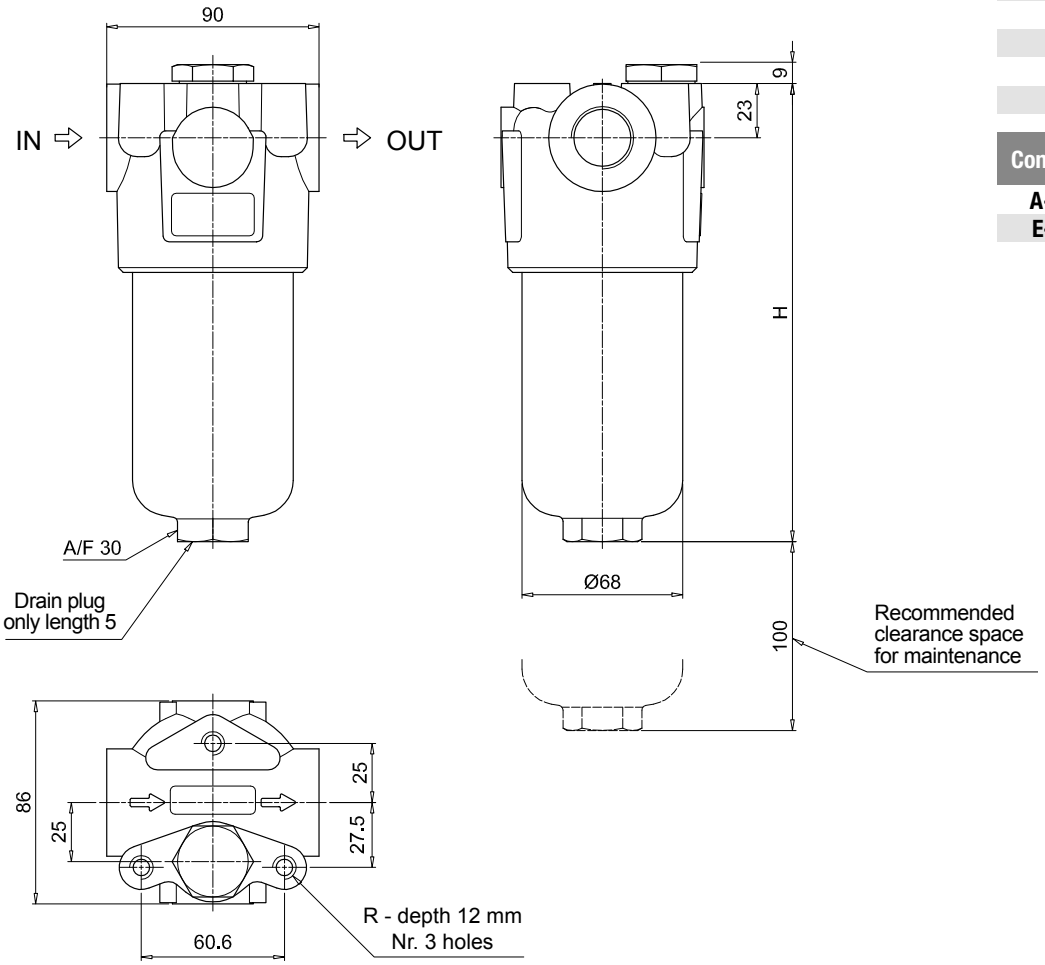
PLUGS

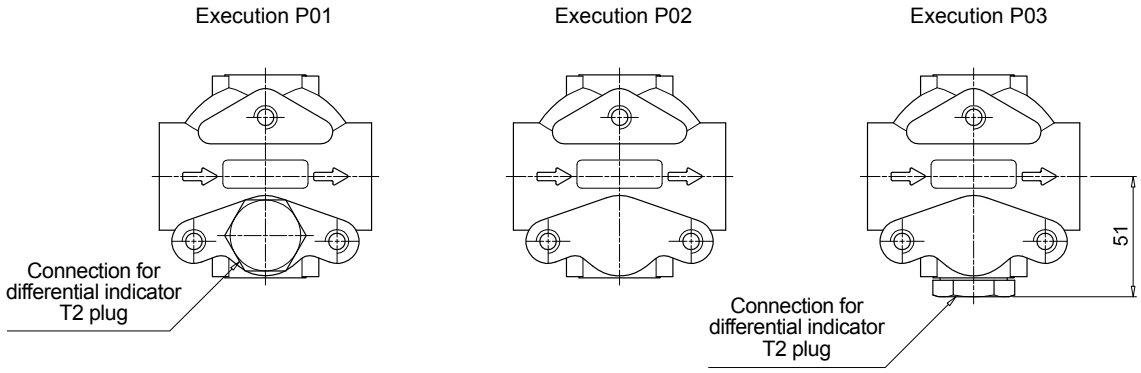
See page 706

T2	Differential indicator plug

FMMX050	
Filter length	**H [mm]**
1	158
2	195
3	237
4	285
5	407

Connections	**R**
A-B-C-D	M10
E-F-G-H	3/8" UNC

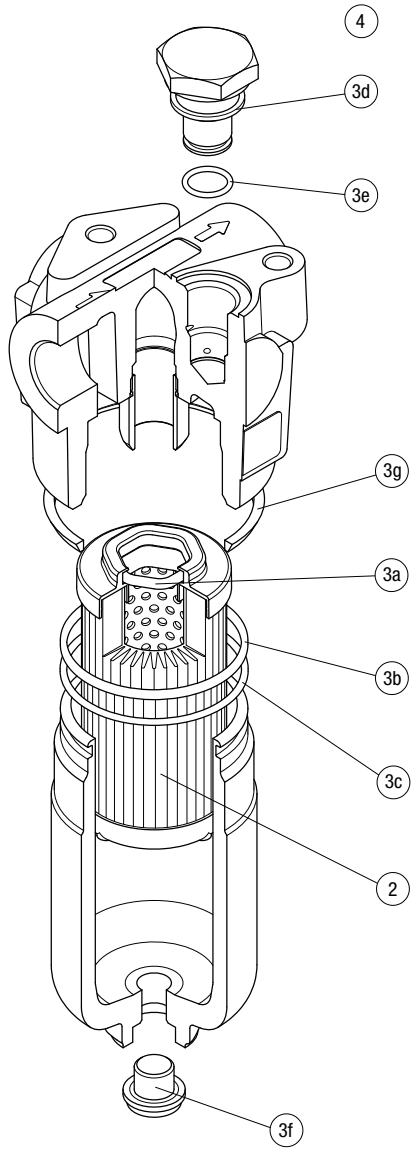




FMMX 050 SPARE PARTS

Order number for spare parts

FMMX 050



Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3g)		Q.ty: 1 pc. 4	
Filter series	**Filter element**	**Seal Kit code number NBR**	**FPM**	**Indicator connection plug NBR**	**FPM**
FMMX 050	See order table	02050864	02050865	T2H	T2V