

# FZX series

Maximum working pressure up to 100 Mpa (1000 bar) - Flow rate up to 10 l/min



◀ **INSTALLATION, SERVICE AND MAINTENANCE MANUAL  
AND SAFETY INSTRUCTIONS**



Please scan the QR codes  
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of the related document.



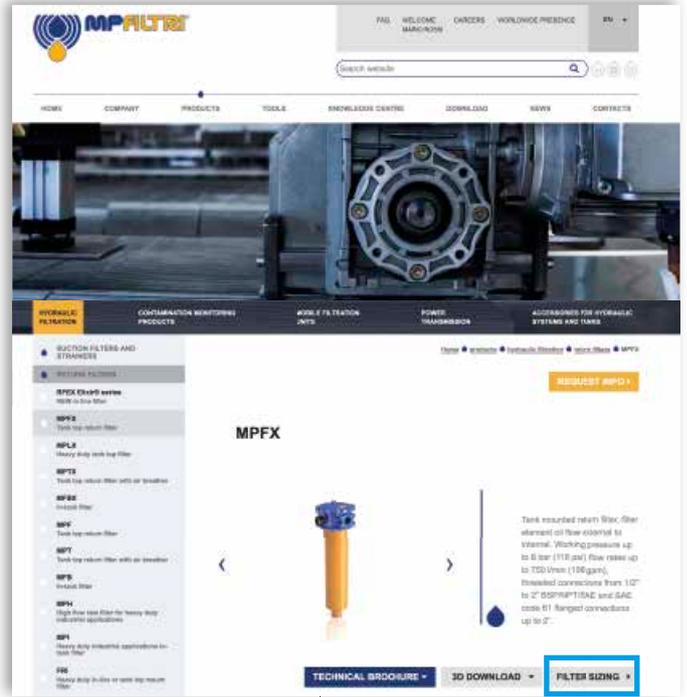
# TYPICAL FILTER SIZING Selection Software

## Step ①

Select "FILTER SIZING SOFTWARE" after login

OR

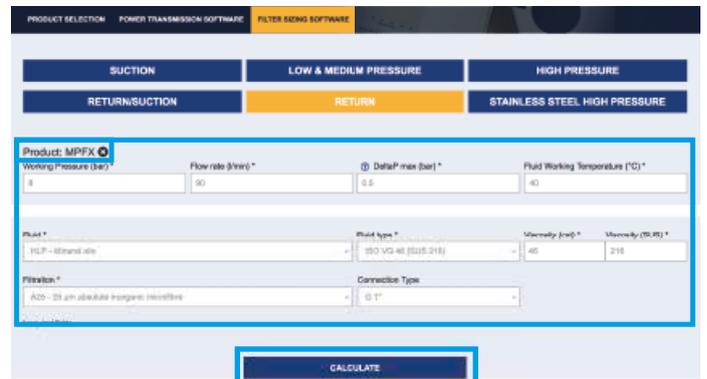
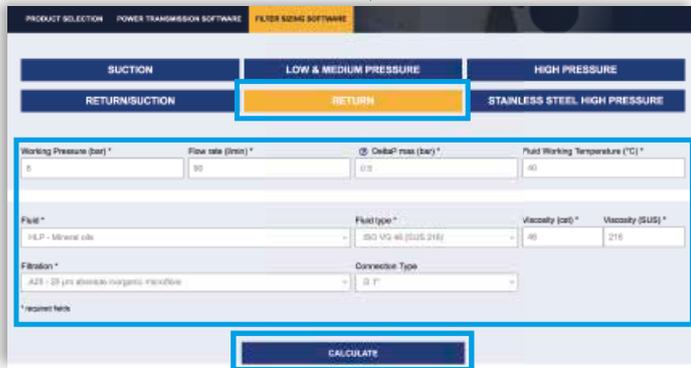
Select "FILTER SIZING" after login from a product page



Choose the type of filter family.  
Enter the main data for sizing the filter  
then push CALCULATE.

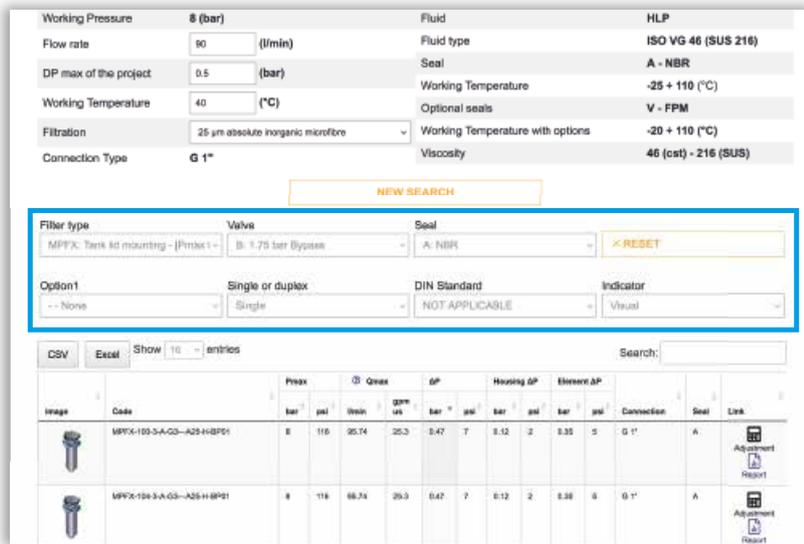
## Step ②

Enter the main data for sizing the filter  
then push CALCULATE.



## Step ③

Select the desired options to choose the appropriate filter type for the application.



## Step 4

Choose the most suitable filter from the proposed list.

Image	Code	Peak bar	Qmax gal/min	ΔP bar	Housing ΔP bar	Element ΔP bar	Connection	Seal	Link			
	MPFX-103-3-A-Q3-A25-H-BPFI	8	116	25.74	25.3	0.47	T	0.12 2	0.33 5	G 1"	A	Adjustment Report
	MPFX-104-3-A-Q3-A25-H-BPFI	8	116	25.74	25.3	0.47	T	0.12 2	0.33 5	G 1"	A	Adjustment Report

## Step 5

It is possible to change the filter modifying every parameter.



### A SAVE YOUR FILTER'S REPORT



### B MANUAL EDIT



SAVE IN YOUR ARCHIVE  
typing your reference data and then SAVE AS PDF



A new browser window displays the pdf

see **A**

Close the report window



By clicking your WELCOME button, the SHOW REPORTS is displayed: select it to see your filters list.

## Description

## Technical data

### Filters for potentially explosive atmosphere

#### In-line

**Maximum working pressure up to 100 Mpa (1000 bar)**  
**Flow rate up to 10 l/min**

FZX 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 lines of the system through the hydraulic fittings.

#### Available features:

- 1/2" female threaded connections, for a maximum flow rate of 10 l/min
- Fine filtration rating, to get a good cleanliness level into the system
- High collapse filter element "H", for use with filters not provided with 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

FZX filters are provided for vertical mounting

### Ap element type

Fluid flow through the filter element from OUT to IN

Microfibre filter elements - series H: 210 bar.

Element series "H":

- 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

### Filter with:

NBR seal in configuration **zerospark<sup>+</sup>**



**II 3G Ex h IIC T6 Gc X**  
**II 3D Ex h IIIC T85°C Dc X**  
**T<sub>amb</sub> : -15°C ÷ +80°C, T<sub>max fluid</sub> +80°C**

FPM / MFQ seal in configuration **zerospark<sup>+</sup>**



**II 3G Ex h IIC T6... T4 Gc X**  
**II 3D Ex h IIIC T85°C...T115°C Dc X**  
**T<sub>amb</sub> : -15°C ÷ +110°C, T<sub>max fluid</sub> +110°C**

## Weights [kg] and volumes [dm<sup>3</sup>]

Filter series	Weights [kg]				Volumes [dm <sup>3</sup> ]					
	Length	1	2	3	4	Length	1	2	3	4
<b>FZX 011</b>	-	-	6.5	-	-	-	-	0.15	-	-

Filter series	Length	Filter element design - H-U Series				
		A03	A06	A10	A16	A25
<b>FZX 011</b>	<b>3</b>	1.57	1.63	1.73	1.74	1.77

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

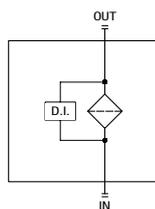
The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

For different pressure drop or fluid viscosity we recommend to use our selection software available on [www.mpfiltri.com](http://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.

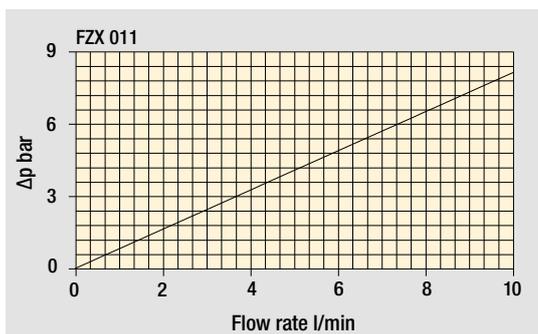
## Hydraulic symbols

Filter series	Style S
<b>FZX 011</b>	•



## Pressure drop

Filter housings  $\Delta p$  pressure drop



The curves are plotted using mineral oil with density of 0.86 kg/dm<sup>3</sup> in compliance with ISO 3968.  $\Delta p$  varies proportionally with density.

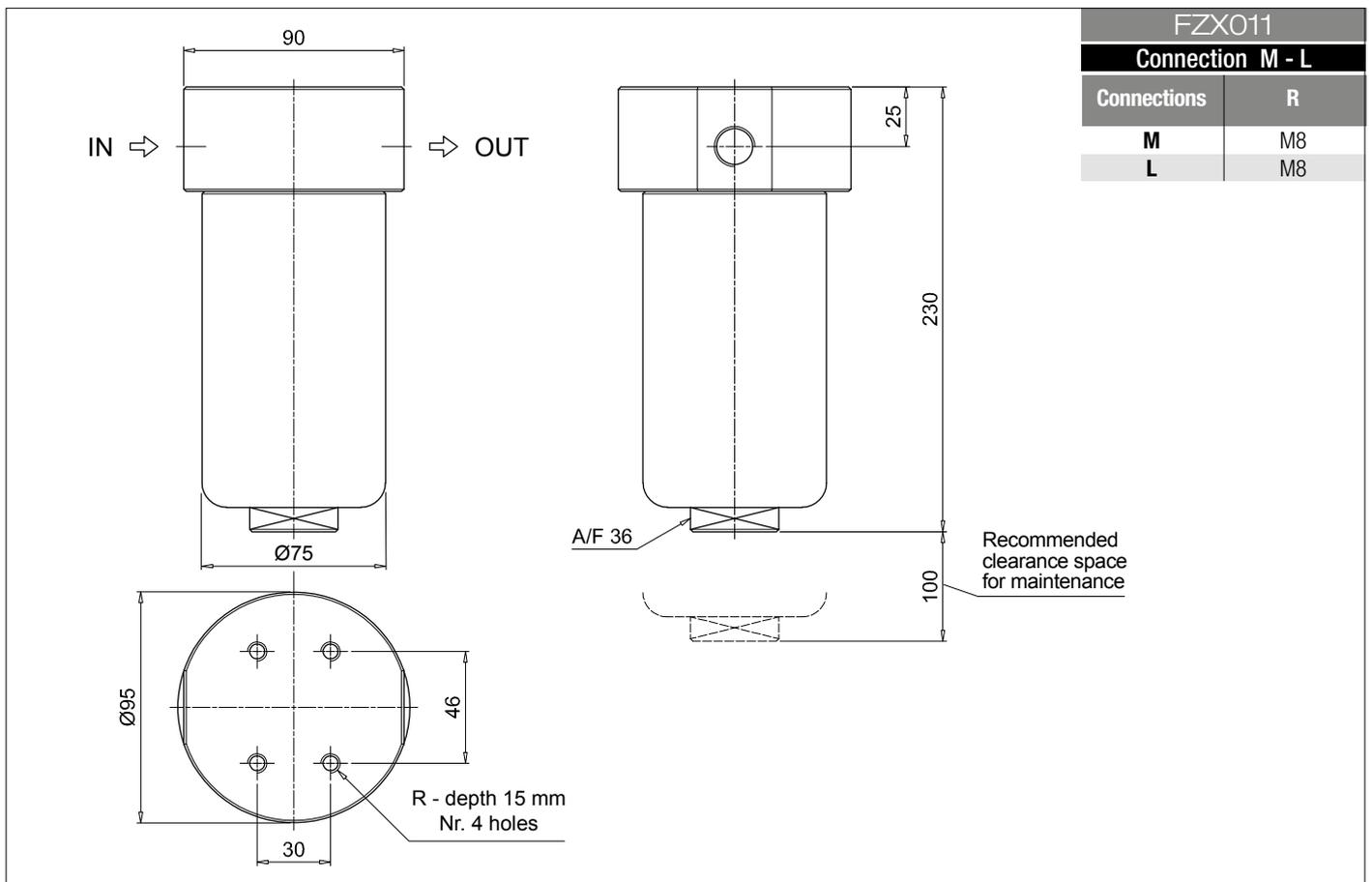
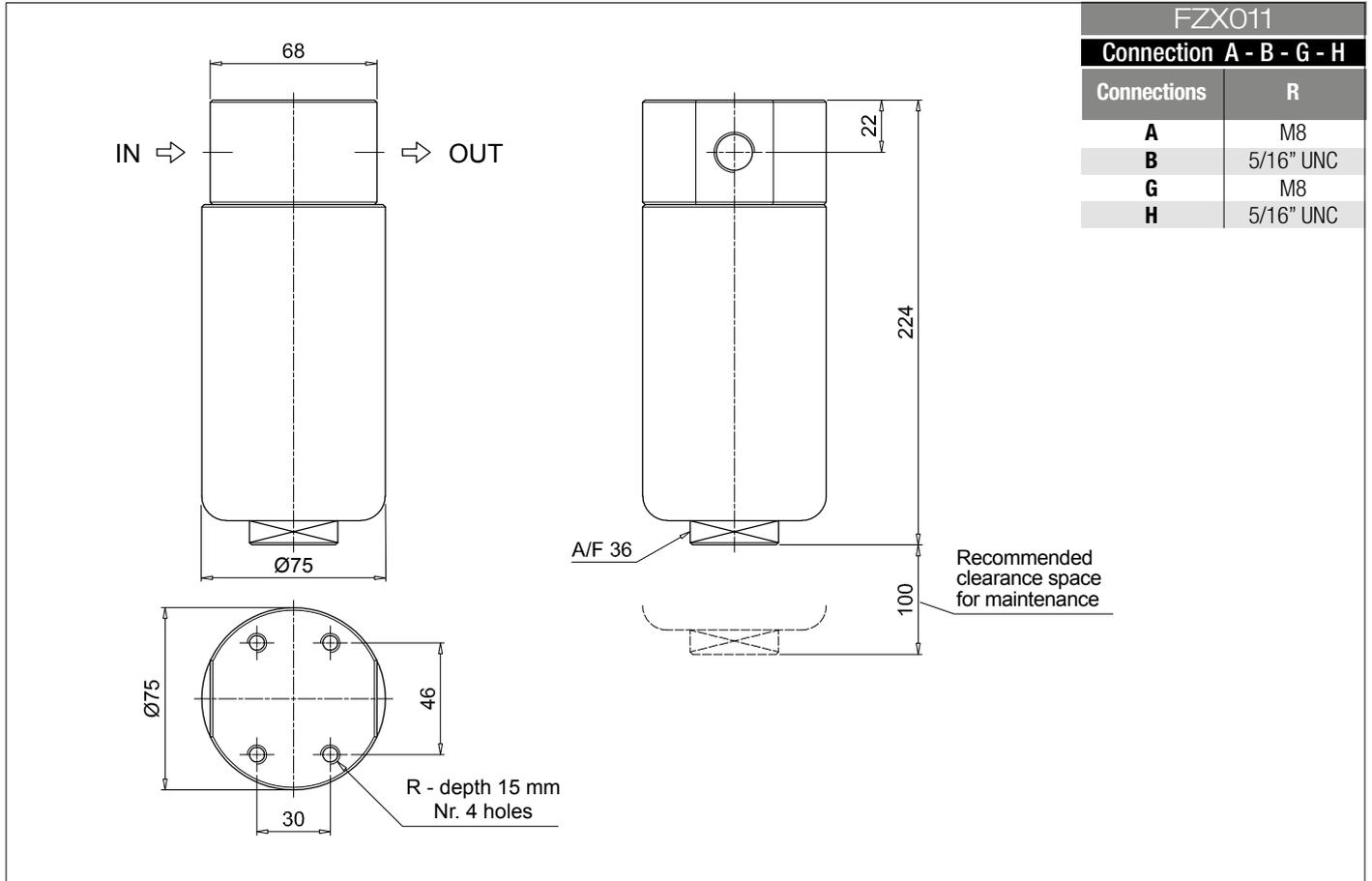
## Designation & Ordering code

### COMPLETE FILTER

<b>Filter series and size</b>	Configuration example: <b>FZX011</b>	<b>3</b>	<b>S</b>	<b>V</b>	<b>B</b>	<b>1</b>	<b>A03</b>	<b>U</b>	<b>Z01</b>	<b>EX</b>
<b>FZX011</b>										
<b>Filter length</b>										
<b>3</b>										
<b>Bypass valve</b>										
<b>S Without bypass</b>										
<b>Seals</b>										
<b>A NBR</b>										
<b>V FPM</b>										
<b>F MFQ</b>										
<b>Connections</b>										
<b>700 bar</b>										
<b>A G 1/4"</b>										
<b>B 1/4" NPT</b>										
<b>G G 1/2"</b>										
<b>H 1/2" NPT"</b>										
<b>Autoclave 1000 bar</b>										
<b>M 9/16" - 18 UNF</b>										
<b>L 3/4" - 14 NPS</b>										
<b>Connection for differential indicators</b>										
<b>1 Without connection</b>										
<b>Filtration rating (filter media)</b>										
<b>A03 Inorganic microfiber 3 µm</b>										
<b>A06 Inorganic microfiber 6 µm</b>										
<b>A10 Inorganic microfiber 10 µm</b>										
<b>A16 Inorganic microfiber 16 µm</b>										
<b>A25 Inorganic microfiber 25 µm</b>										
<b>Element Δp</b>										
<b>H 210 bar</b>										
<b>U 210 bar, stainless steel filter element</b>										
<b>Execution</b>										
<b>zerospark®</b>										
<b>Z01 MP Filtri standard</b>										
<b>Zxx Customized</b>										
<b>Certifications</b>										
<b>EX ATEX certifications</b>										

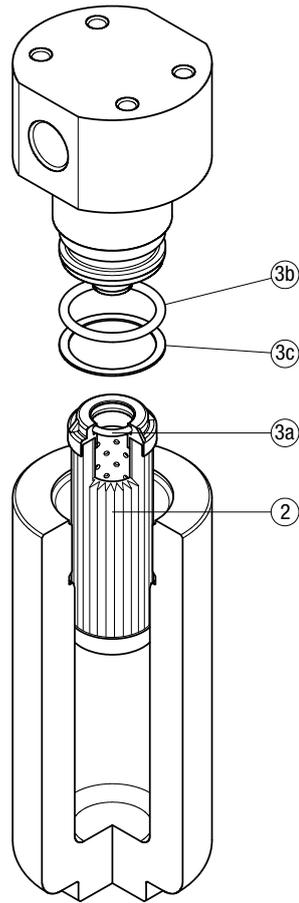
### FILTER ELEMENT

<b>Element series and size</b>	Example: <b>HP011</b>	<b>3</b>	<b>A03</b>	<b>V</b>	<b>U</b>	<b>Z01</b>
<b>HP011</b>						
<b>Element length</b>						
<b>3</b>						
<b>Filtration rating (filter media)</b>						
<b>A03 Inorganic microfiber 3 µm</b>						
<b>A06 Inorganic microfiber 6 µm</b>						
<b>A10 Inorganic microfiber 10 µm</b>						
<b>A16 Inorganic microfiber 16 µm</b>						
<b>A25 Inorganic microfiber 25 µm</b>						
<b>Seals</b>						
<b>A NBR</b>						
<b>V FPM</b>						
<b>F MFQ</b>						
<b>Element Δp</b>						
<b>H 210 bar</b>						
<b>U 210 bar, stainless steel filter element</b>						
<b>Execution</b>						
<b>zerospark®</b>						
<b>Z01 MP Filtri standard</b>						
<b>Zxx Customized</b>						



Order number for spare parts

**FZX 011**



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number	
FZX 011	See order table	NBR	FPM
	<b>2</b>	02050643	02050644
		<b>3</b> (3a ÷ 3c)	