

# 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



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## Description

## Technical data

### Stainless steel high pressure filters

#### 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:

- Female threaded connections up to 1/2", 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"
- High collapse filter element "U", for use with aggressive fluids

#### 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

#### 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)

#### Temperature

From -50 °C to +120 °C

#### Note

FZX filters are provided for vertical mounting

#### Δp element type

Fluid flow through the filter element from OUT to IN

Microfibre filter elements - series H: 210 bar.

Element series "H":

- End cap: Polyamide
- Core tube: Stainless steel
- External support: Wire mesh Epoxy painted
- Internal support: Wire mesh Stainless steel
- Media/Support/Pre-filter: Microfibre/Synthetic

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/Synthetic

## 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	-	-

Flow rates [l/min]

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.**

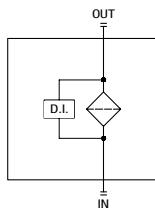
The reference fluid has a kinematic viscosity of 30 mm<sup>2</sup>/s (cSt) and a density of 0.86 kg/dm<sup>3</sup>.

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.

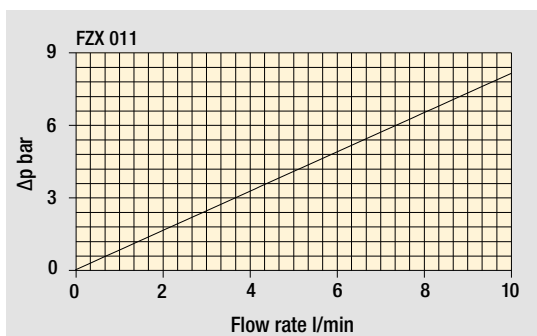
Hydraulic symbols

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.

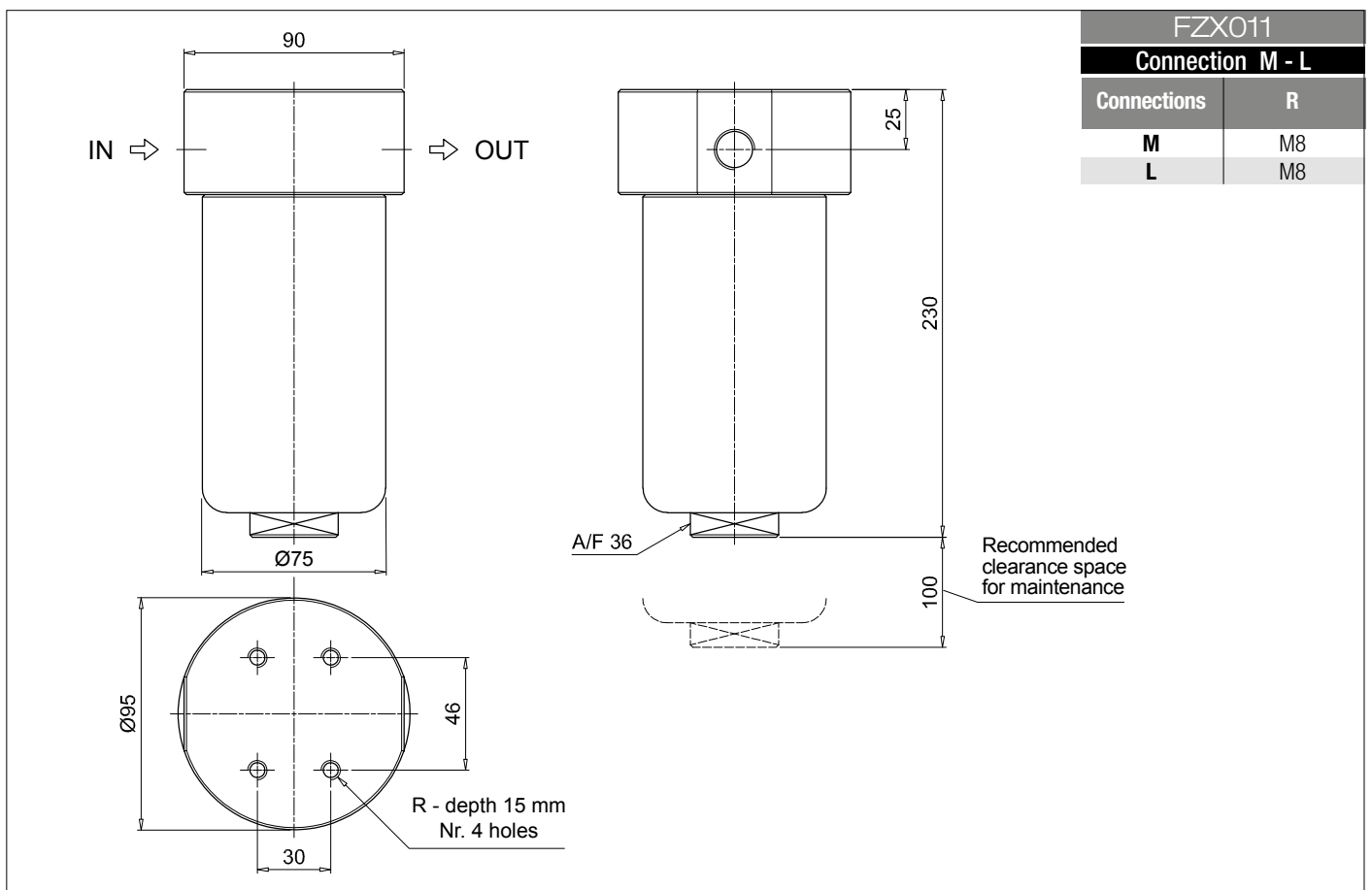
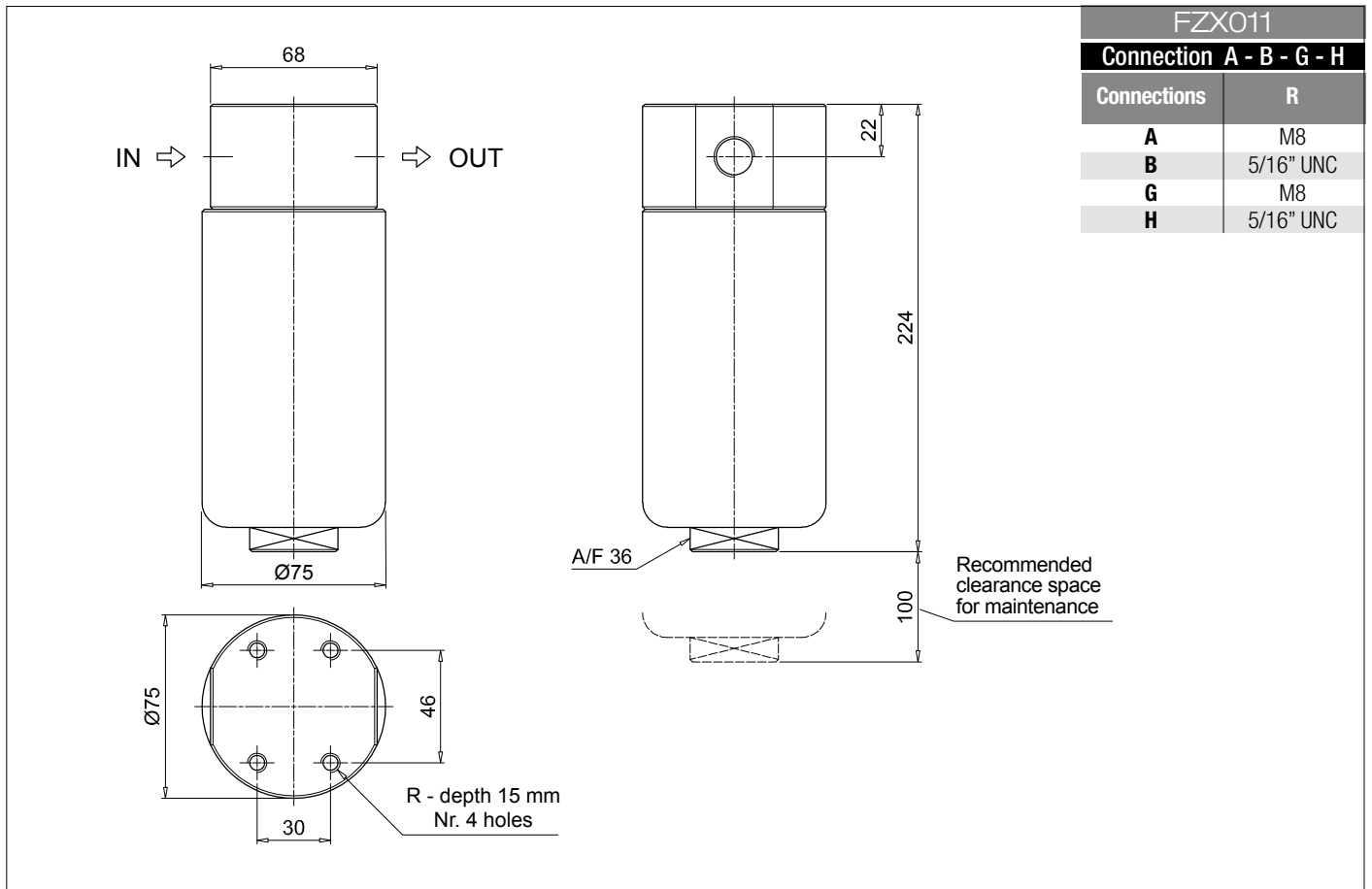
## Designation & Ordering code

### COMPLETE FILTER

Filter series and size	Configuration example: <b>FZX011 3 S V B 1 A03 U P01</b>									
<b>FZX011</b>										
<b>Filter length</b>	<b>3</b>									
<b>Bypass valve</b>	<b>S</b> Without bypass									
<b>Seals</b>	<b>A</b> NBR									
	<b>V</b> FPM									
	<b>F</b> MFQ									
<b>Connections</b>	<b>700 bar</b>									
	<b>A</b> G 1/4"									
	<b>B</b> 1/4" NPT									
	<b>G</b> G 1/2"									
	<b>H</b> 1/2" NPT"									
	<b>Autoclave 1000 bar</b>									
	<b>M</b> 9/16" - 18 UNF									
	<b>L</b> 3/4" - 14 NPS									
<b>Connection for differential pressure indicators</b>	<b>1</b> Without connection									
<b>Filtration rating (filter media)</b>	<b>A03</b> Inorganic microfiber 3 µm									
	<b>A06</b> Inorganic microfiber 6 µm									
	<b>A10</b> Inorganic microfiber 10 µm									
	<b>A16</b> Inorganic microfiber 16 µm									
	<b>A25</b> Inorganic microfiber 25 µm									
<b>Element Δp</b>	<b>H</b> 210 bar									
	<b>U</b> 210 bar, stainless steel filter element									
										<b>Execution</b>
										<b>P01</b> MP Filtri standard
										<b>Pxx</b> Customized

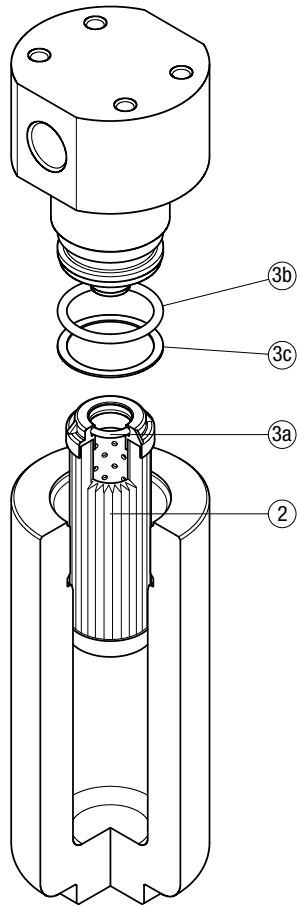
### FILTER ELEMENT

Element series and size	Example: <b>HP011 3 A03 V U P01</b>					
<b>HP011</b>						
<b>Element length</b>	<b>3</b>					
<b>Filtration rating (filter media)</b>	<b>A03</b> Inorganic microfiber 3 µm					
	<b>A06</b> Inorganic microfiber 6 µm					
	<b>A10</b> Inorganic microfiber 10 µm					
	<b>A16</b> Inorganic microfiber 16 µm					
	<b>A25</b> Inorganic microfiber 25 µm					
<b>Seals</b>	<b>A</b> NBR					
	<b>V</b> FPM					
	<b>F</b> MFQ					
<b>Element Δp</b>	<b>H</b> 210 bar					
	<b>U</b> 210 bar, stainless steel filter element					
						<b>Execution</b>
						<b>P01</b> MP Filtri standard
						<b>Pxx</b> Customized



Order number for spare parts

**FZX 011**



Filter series	Filter element	Seal Kit code number		
		NBR	FPM	MFQ
<b>FZX 011</b>	See order table	02050643	02050644	02050646

# CLOGGING INDICATORS

## STAINLESS STEEL HIGH PRESSURE FILTERS

Designation & Ordering code

### DIFFERENTIAL PRESSURE INDICATORS

Series					Configuration example 1:									
<b>DE</b> Electrical differential pressure indicator					DE	Z	50	H	A	50	P01			
<b>DL</b> Electrical / Visual differential pressure indicator					Configuration example 2:									
<b>DV</b> Visual differential pressure indicator					DL	X	70	V	A	52	P01			
Type					DE	DL	DV							
<b>X</b>	Stainless steel standard type 420 bar				•	•	•							
<b>Y</b>	Stainless steel optional type 420 bar				-	-	•							
<b>Z</b>	Stainless steel 700 bar (only for FZH)				•	•	•							
Pressure setting					DEX	DEZ	DL	DV						
<b>50</b>	5.0 bar				•	•	•	•						
<b>70</b>	7.0 bar				•	•	•	•						
<b>95</b>	9.5 bar				•	•	•	•						
Seals					DEX	DEZ	DL	DV						
<b>H</b>	HNBR				•	•	•	•						
<b>V</b>	FPM				-	-	•	•						
<b>F</b>	MFQ				•	•	-	-						
Thermostat					DEX	DEZ	DL	DV						
<b>A</b>	Without thermostat				•	•	•	-						
Electrical connections					DEX	DEZ	DL							
<b>50</b>	Connection EN 175301-803				•	•	-							
<b>51</b>	Connection EN 175301-803, transparent base with lamps 24 Vdc				-	-	•							
<b>52</b>	Connection EN 175301-803, transparent base with lamps 110 Vdc				-	-	•							

Option	
<b>P01</b>	MP Filtri standard
<b>Pxx</b>	Customized

### PLUGS

Series		Configuration example	
<b>X2</b>	Stainless Steel plug 420 bar	X2	H
<b>X3</b>	Stainless Steel plug 700 bar (only for FZH)		
Seals			
<b>H</b>	HNBR		
<b>V</b>	FPM		
<b>F</b>	MFQ		