

Stainless steel high pressure  
filters In-line FZP 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



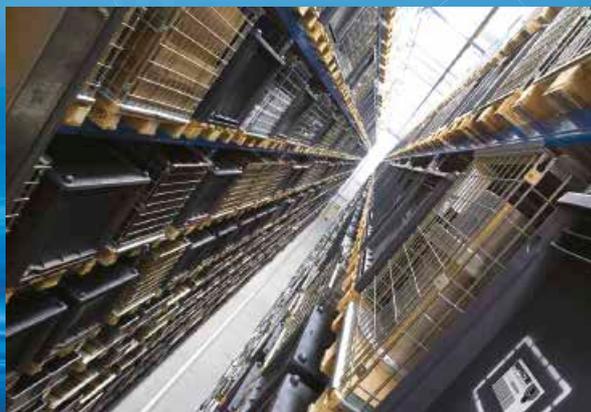
## TECHNOLOGY

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

# FZP series

Maximum working pressure up to 42 Mpa (420 bar) - Flow rate up to 160 l/min



## Description

## Technical data

### Stainless steel high pressure filters

#### In-line

**Maximum working pressure up to 42 Mpa (420 bar)**  
**Flow rate up to 160 l/min**

FZP 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 1/4" female threaded connections, for a maximum flow rate of 150 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 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

FZP 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 [dm<sup>3</sup>]

Filter series	Weights [kg]				Volumes [dm <sup>3</sup> ]					
	Length	1	2	3	4	Length	1	2	3	4
<b>FZP 039</b>	-	-	4.5	5.1	5.6	-	-	0.19	0.26	0.34
<b>FZP 136</b>	8.3	8.3	10.2	11.5	-	0.45	0.78	1.00	-	-

Filter series	Length	Filter element design - R Series					Filter element design - S-U Series				
		A03	A06	A10	A16	A25	A03	A06	A10	A16	A25
<b>FZP 039</b>	<b>2</b>	19	25	43	50	59	19	23	41	45	55
	<b>3</b>	34	37	53	62	74	31	34	48	52	66
	<b>4</b>	42	46	63	72	81	38	41	55	71	78
<b>FZP 136</b>	<b>1</b>	63	67	102	108	136	47	53	87	89	127
	<b>2</b>	95	100	122	123	159	81	95	113	115	138
	<b>3</b>	122	124	148	150	160	106	116	135	141	151

### 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.

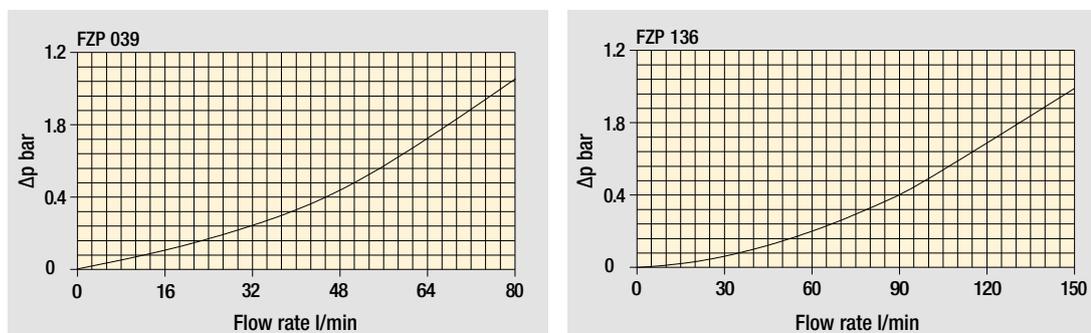
### Hydraulic symbols

Filter series	Style S	Style B	Style T	Style D	Style V	Style Z
<b>FZP 039</b>	•	•	•	•	•	•
<b>FZP 136</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>Series and size</b>	Configuration example: <b>FZP039</b>	<b>2</b>	<b>B</b>	<b>F</b>	<b>B</b>	<b>2</b>	<b>A03</b>	<b>U</b>	<b>P01</b>
<b>FZP039</b>									
<b>Length</b>									
<b>2   3   4</b>									
<b>Valves</b>									
<b>S</b> Without bypass									
<b>B</b> With bypass 6 bar									
<b>T</b> With check valve, without bypass									
<b>D</b> With check valve, with bypass 6 bar									
<b>V</b> With reverse flow, without bypass									
<b>Z</b> With reverse flow, with bypass 6 bar									
<b>Seals</b>									
<b>A</b> NBR									
<b>V</b> FPM									
<b>F</b> MFQ									
<b>Connections</b>									
<b>A</b> G 1/2"									
<b>B</b> 1/2" NPT									
<b>C</b> SAE 8 - 3/4" - 16 UNF									
<b>Connections for differential indicators</b>									
<b>1</b> Without									
<b>2</b> With 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									

Element Δp	Valves						Execution
	S	B	T	D	V	Z	
<b>R</b> 20 bar		•		•		•	<b>P01</b> MP Filtri standard
<b>S</b> 210 bar	•		•		•		<b>Pxx</b> Customized
<b>U</b> 210 bar, stainless steel filter element	•	•	•	•	•	•	

### FILTER ELEMENT

<b>Element series and size</b>	Configuration example: <b>HP039</b>	<b>2</b>	<b>A03</b>	<b>F</b>	<b>U</b>	<b>P01</b>
<b>HP039</b>						
<b>Element length</b>						
<b>2   3   4</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						

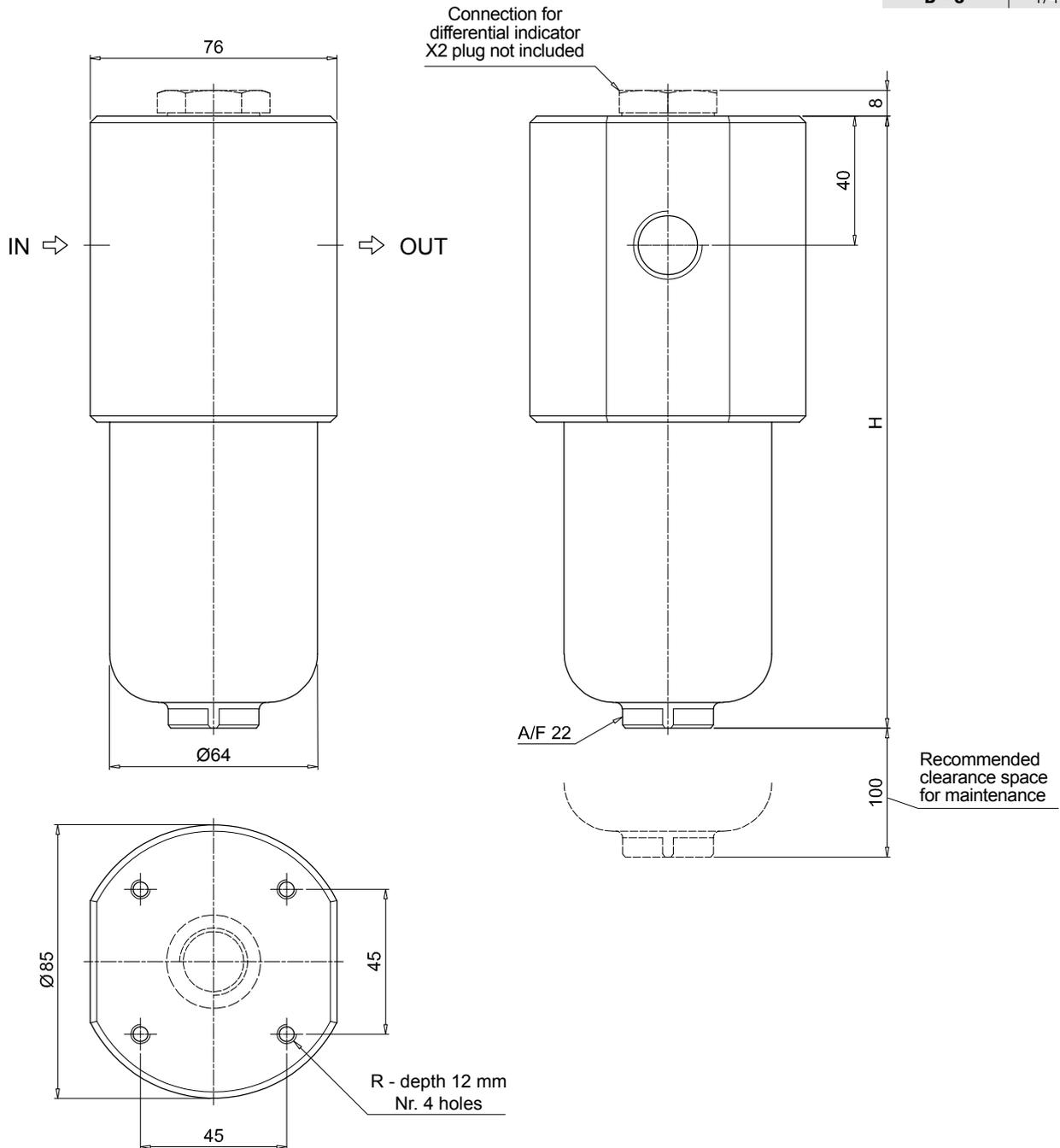
  

Seals	Element Δp	Valves						Execution
		S	B	T	D	V	Z	
<b>A</b> NBR	<b>R</b> 20 bar		•		•		•	<b>P01</b> MP Filtri standard
<b>V</b> FPM	<b>S</b> 210 bar	•		•		•		<b>Pxx</b> Customized
<b>F</b> MFQ	<b>U</b> 210 bar, stainless steel filter element	•	•	•	•	•	•	

### ACCESSORIES

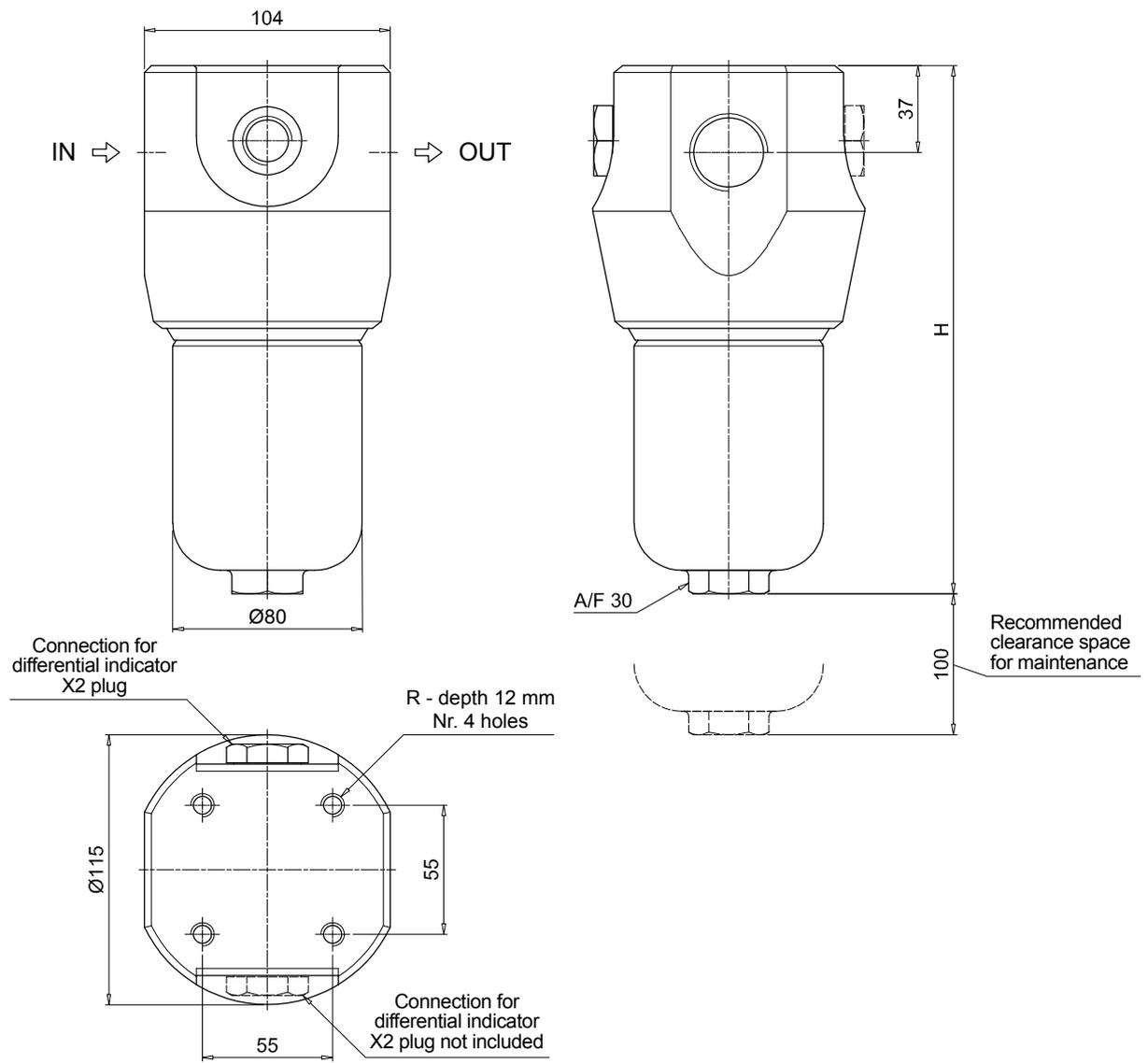
Differential indicators	page		page
<b>DEH</b> Hazardous area electronic differential indicator	642	<b>DVX</b> Visual differential indicator	643
<b>DEX</b> Electrical differential indicator	643	<b>DVY</b> Visual differential indicator	644
<b>DLX</b> Electrical / visual differential indicator	643		
Additional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

FZP039	
Filter length	H [mm]
2	179
3	222
4	266
Connections	R
A	M6
B - C	1/4" UNC





FZP136	
Filter length	H [mm]
<b>1</b>	222
<b>2</b>	335
<b>3</b>	410
Connections	R
<b>A</b>	M10
<b>B - C</b>	3/8" UNC
<b>D</b>	M10
<b>E - F</b>	3/8" UNC
<b>G</b>	M10
<b>H - I</b>	3/8" UNC



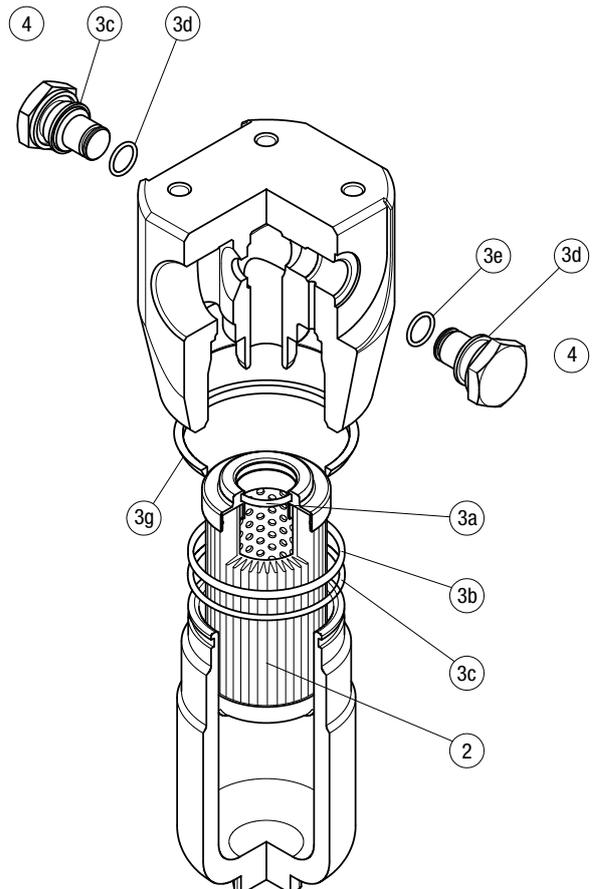
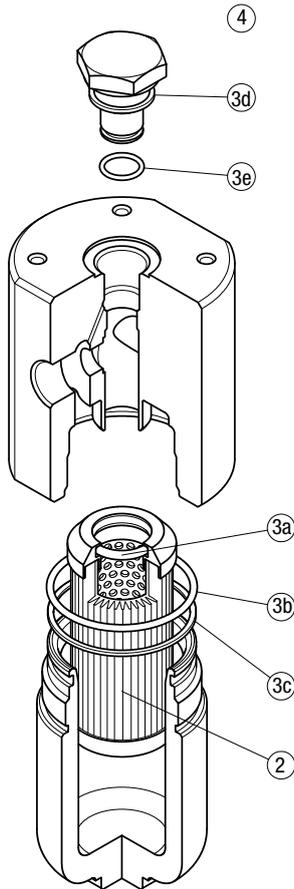
The position of the X2 plug is reversible

# FZP SPARE PARTS

Order number for spare parts

**FZP 039**

**FZP 136**



Item:	Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug		
FZP 039	See order table	NBR	FPM	NBR	FPM	
<b>FZP 136</b>		02050299	02050300	X2H	X2V	
		02050636	02050637			

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