

FZP series

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



INSTALLATION, SERVICE AND MAINTENANCE MANUAL AND SAFETY INSTRUCTIONS



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Filters for potentially explosive atmosphere

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 160 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
- Optional FPM series V
- Optional MFQ series F

Bypass valve

Opening pressure 6 bar $\pm$ 10%

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: Polyamide
- 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

Temperature

Seals	Ambient Temperature	Max fluid Temperature	Temperature Class	Max surface temperature
NBR	-15 °C ÷ +80 °C	+80 °C	T6	T85 °C
FPM / MFQ	-15 °C ÷ +80 °C	+80 °C	T6	T85 °C
	-15 °C ÷ +95 °C	+95 °C	T5	T100 °C
	-15 °C ÷ +110 °C	+110 °C	T4	T115 °C

Filter with:

NBR seal in configuration **zerospark[®]**



II 3G Ex h IIC T6 Gc X
II 3D Ex h IIIC T85°C Dc X

FPM / MFQ seal in configuration **zerospark[®]**



II 3G Ex h IIC T6... T4 Gc X
II 3D Ex h IIIC T85°C...T115°C Dc X

Weights [kg] and volumes [dm³]

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

Flow rates [l/min]

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

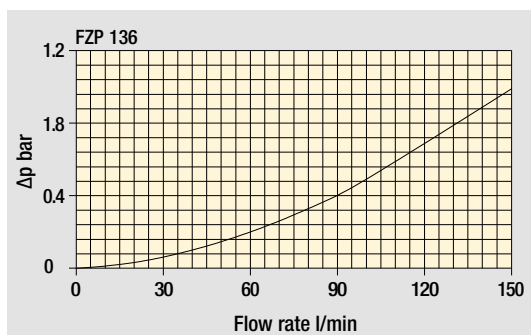
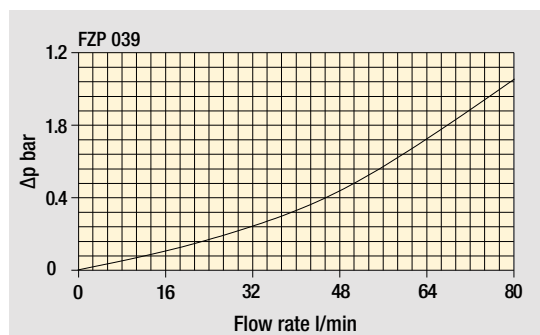
Please, contact our Sales Department for further additional information.

Hydraulic symbols

Filter series	Style S	Style B	Style T	Style D	Style V	Style Z
FZP 039	•	•	•	•	•	•
FZP 136	•	•	-	-	-	-

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

Filter series and size	Configuration example: FZP039										
FZP039	2	B	F	B	2	A03	U	Z01	EX		
Filter length											
2 3 4											
Valves											
S Without bypass	D With reverse flow, with bypass 6 bar										
B With bypass 6 bar	V With reverse flow, without bypass										
T With reverse flow, without bypass	Z With reverse flow, with bypass 6 bar										
Seals											
A NBR											
V FPM											
F MFQ											
Connections											
A G 1/2"											
B 1/2" NPT											
C SAE 8 - 3/4" - 16 UNF											
Connections for differential pressure indicator											
1 Without connection											
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										
R 20 bar	S	B	T	D	V	Z					
S 210 bar	•	-	•	-	•	-					
U 210 bar, stainless steel filter element	•	•	•	•	•	•					
Execution											
zerospark®											
Z01 MP Filtri standard											
Zxx Customized											
Certifications											
EX ATEX certifications											

FILTER ELEMENT

Element series and size	Configuration example: HP039					
HP039	2	A03	F	U	Z01	
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						
A NBR						
V FPM						
F MFQ						
Element Δp						
R 20 bar						
S 210 bar						
U 210 bar, stainless steel filter element						
Execution						
zerospark®						
Z01 MP Filtri standard						
Zxx Customized						

CLOGGING INDICATORS

See page 729

DEH Electrical differential pressure indicator

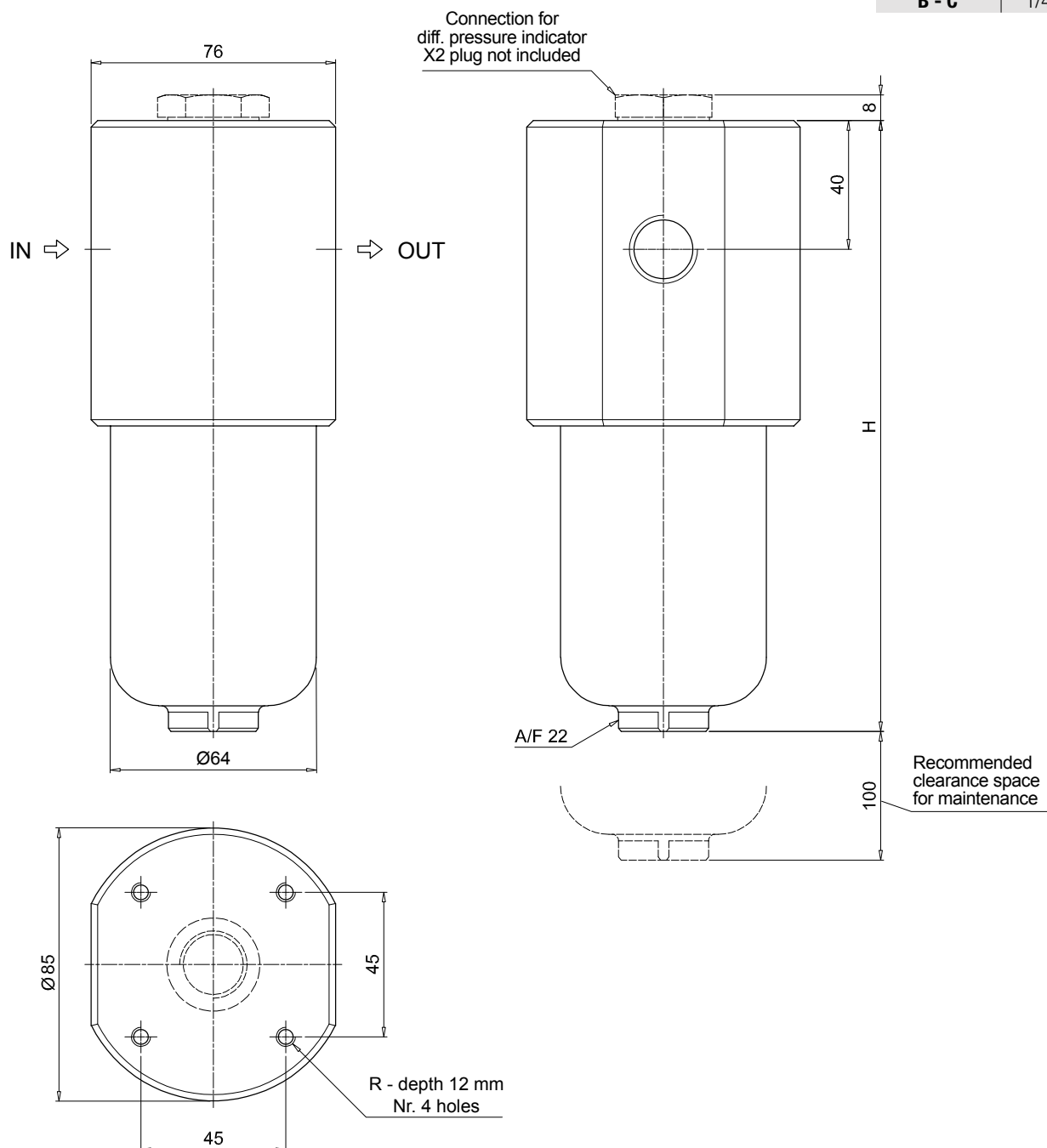
DVX Visual differential pressure indicator

DVY Visual differential pressure indicator

PLUGS

See page 747

X2 Stainless steel plug (not included)



FZP039

Filter length	H [mm]
2	179
3	222
4	266

Connections	R
A	M6
B - C	1/4" UNC

Designation & Ordering code

COMPLETE FILTER

Filter series and size FZP136	Configuration example: FZP136										1	B	A	B	6	A03	R	Z01	EX
Filter length 1 2 3																			
Valves S Without bypass B With bypass 6 bar																			
Seals A NBR V FPM F MFQ																			
Connections A G 3/4" B 3/4" NPT C SAE 12 - 1 1/16" - 12 UN D G 1" E 1" NPT F SAE 16 - 1 5/16" - 12 UN G G 1 1/4" H 1 1/4" NPT I SAE 20 - 1 5/8" - 12 UN																			
Connections for differential pressure indicator 1 Without connection 6 With two connections on both sides																			
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 R 20 bar S 210 bar U 210 bar, stainless steel filter element	Valves S B - • • - • •		Execution zerospark+ Z01 MP Filtri standard Zxx Customized		Certifications EX ATEX certifications														

FILTER ELEMENT

Element series and size HP135	Configuration example: HP135										1	A03	A	R	Z01
Element length 1 2 3															
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 A NBR V FPM F MFQ															
Element Δp R 20 bar S 210 bar U 210 bar, stainless steel filter element											Execution zerospark+ Z01 MP Filtri standard Zxx Customized				

CLOGGING INDICATORS

See page 729

DEH Electrical differential pressure indicator

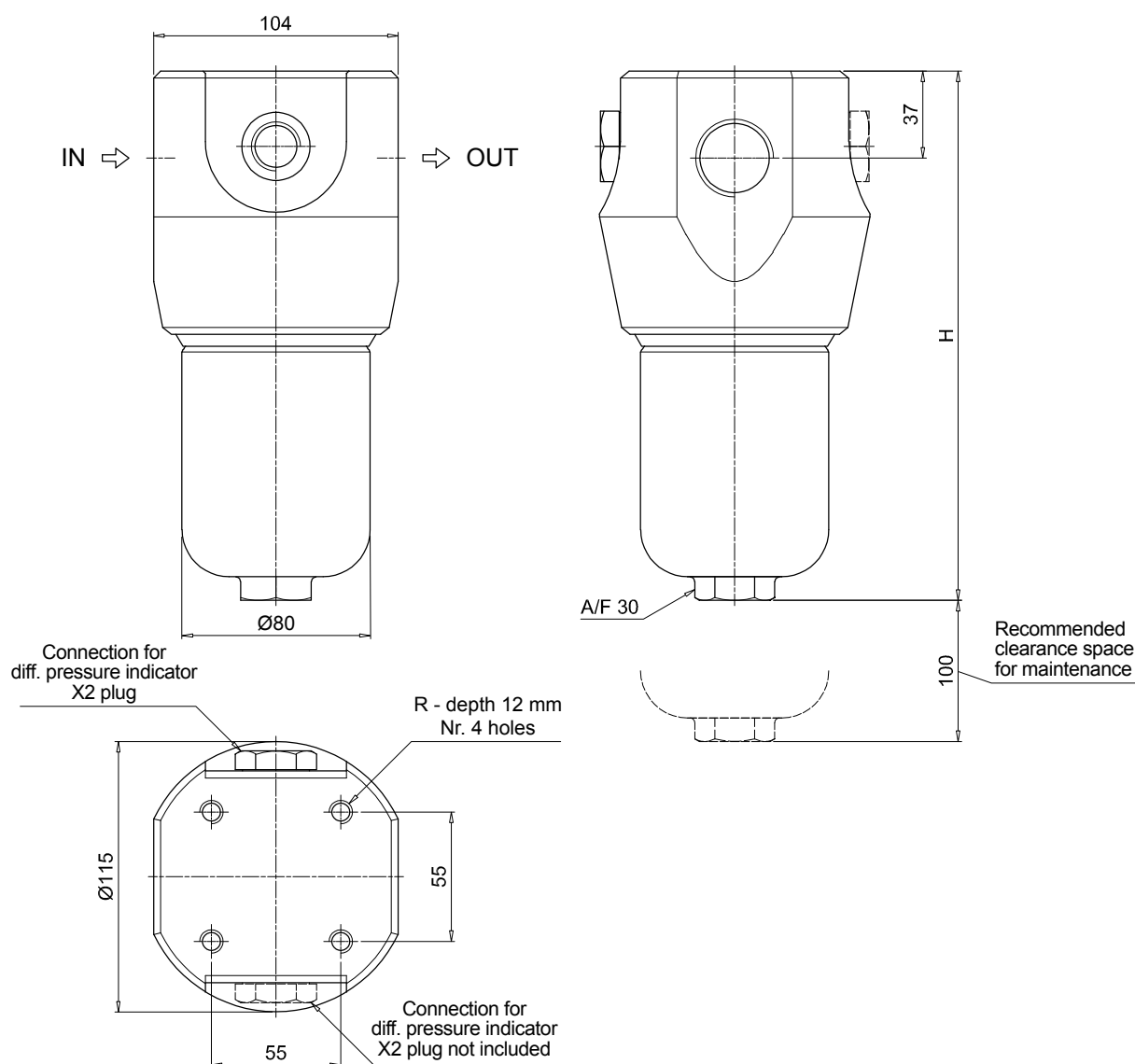
DVX Visual differential pressure indicator

DVY Visual differential pressure indicator

PLUGS

See page 747

X2 Stainless steel plug (not included)



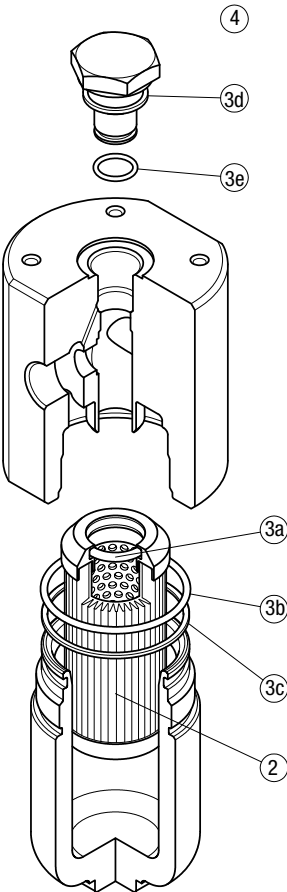
FZP136	
Filter length	H [mm]
1	222
2	335
3	410
Connections	R
A	M10
B - C	3/8" UNC
D	M10
E - F	3/8" UNC
G	M10
H - I	3/8" UNC

The position of the X2 plug is reversible

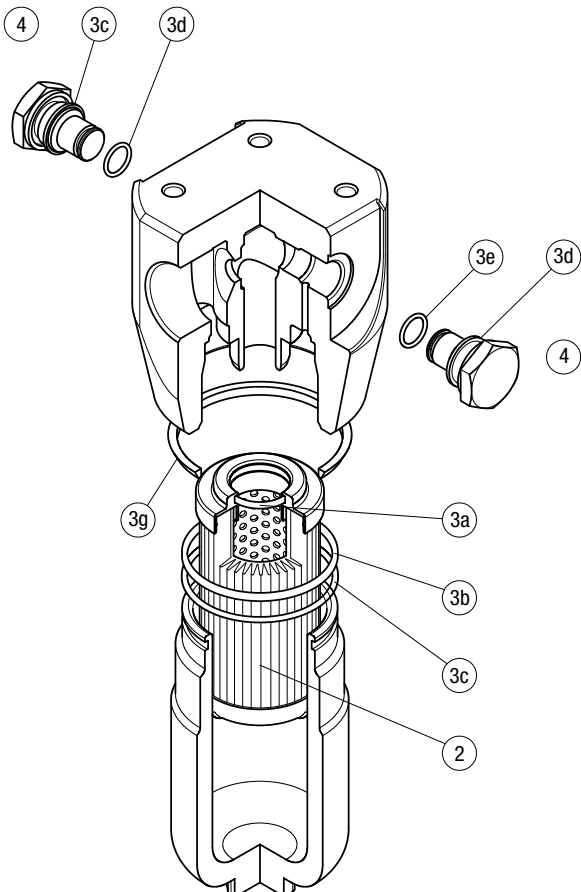
FZP SPARE PARTS

Order number for spare parts

FZP 039



FZP 136



Q.ty: 1 pc.		Q.ty: 1 pc.		Q.ty: 1 pc.	
Item:	2	3 (3a ÷ 3g)		4	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
		NBR	FPM	NBR	FPM
FZP 039	See order table	02050299	02050300	X2H	X2V
FZP 136		02050636	02050637		

FILTERS FOR POTENTIALLY EXPLOSIVE ATMOSPHERE

Designation & Ordering code

DIFFERENTIAL PRESSURE INDICATORS

Series	Configuration example 1:									
DE Electrical differential pressure indicator	DE	H	50	F	A	48	P01			
Series	Configuration example 2:									
DV Visual differential pressure indicator	DV	X	70	V			P01			
Type	DE	DV								
A With automatic reset	-	•								
M With manual reset	-	•								
H Stainless steel hazardous area 420 bar	•	-								
X Stainless steel standard type 420 bar	-	•								
Y Stainless steel optional type 420 bar	-	•								
Pressure setting	DEH	DVA	DVM	DVX	DVY					
50 5.0 bar	•	•	•	•	•					
70 7.0 bar	•	•	•	•	•					
95 9.5 bar	-	•	•	•	•					
Seals	DEH	DVA	DVM	DVX	DVY					
H HNBR	-	•	•	•	•					
V FPM	•	•	•	•	•					
F MFQ	•	-	-	-	-					
Thermostat	DEH									
A Without thermostat	•									
T With thermostat	-									
Electrical connections	DEH									
48 Connection via three-core cable - fitting M20x1.5	•									
49 Connection via four-core cable - fitting 1/2" NPT	•									
70 Connection IEC 61076-2-101 D (M12)	•									
Option										
P01 MP Filtri standard										
Pxx Customized										

PLUGS

Series				Configuration example	X2	H
T2 Plug						
X2 Stainless Steel plug 420 bar						
X3 Stainless Steel plug 700 bar (only for FZH)						
Seals		T2	X2	X3		
H	HNBR	•	•	•		
V	FPM	•	•	•		
F	MFQ	-	•	•		