

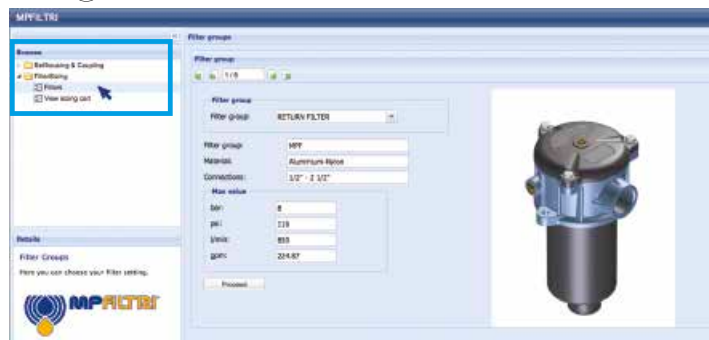
FZD series

Maximum working pressure up to 35 Mpa (350 bar) - Flow rate up to 60 l/min



TYPICAL FILTER SIZING Selection Software

Step 1 Select "FILTERS"



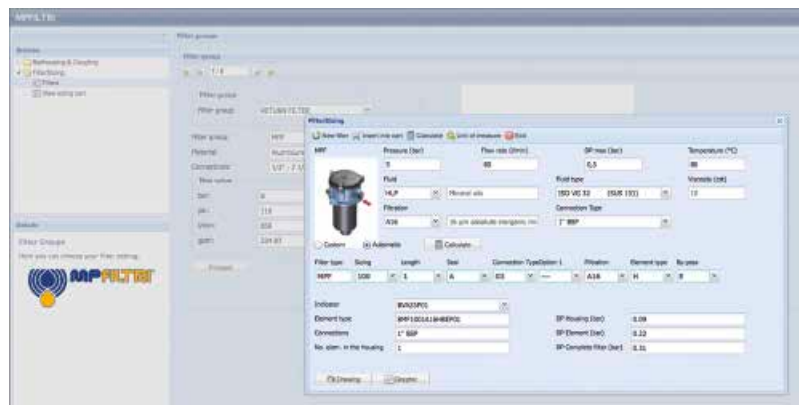
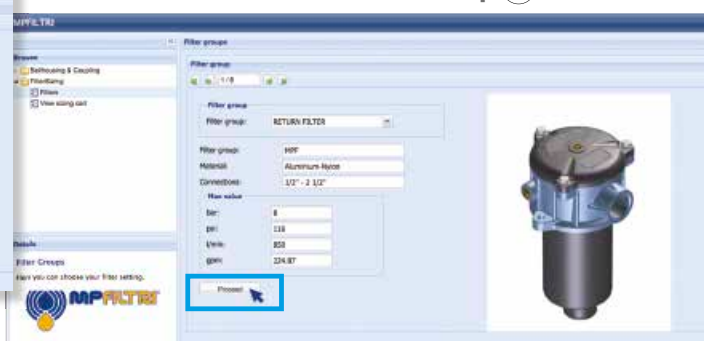
Step 2 Choose filter group (Return Filter, Pressure Filter, etc.)



Step 3 Choose filter type (MPF, MPT, etc.) in function of the max working pressure and the max flow rate



Step 4 Push "PROCEED"



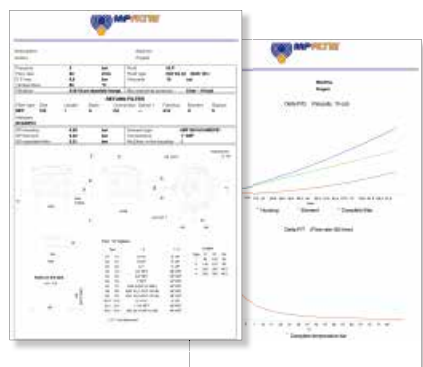
Step 5

Insert all application data to calculate the filter size following the sequence:

- working pressure
- working flow rate
- working pressure drop
- working temperature
- fluid material and fluid type
- filtration media
- connection type

Step 6

Push "CALCULATE" to have result; in case of any mistake, the system will advice which parameter is out of range to allow to modify/adjust the selection



Step 7

Download PDF Datasheet "Report.aspx" pushing the button "Drawing"



Description

Technical data

Stainless steel high pressure filters

Duplex

Maximum working pressure up to 35 Mpa (350 bar)
Flow rate up to 60 l/min

FZD is a range of stainless steel high pressure duplex filter with integrated changeover function to allow the filter element replacement without the system shut-down. They are directly connected to the lines of the system through the hydraulic fittings.

Available features:

- Female threaded connections up to 3/4", for a maximum flow rate of 90 l/min
- Fine filtration rating, to get a good cleanliness level into the system
- Balancing valve, available for FZD051, to equalize the housing pressure before the switch.
- Bypass valve, to relieve excessive pressure drop across the filter media
- Vent ports, to avoid air trapped into the filter going into the system
- Drain ports, to remove the fluid from the housing prior the maintenance work
- High collapse filter element "H", for use with filters not provided with bypass valve
- 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:

- System where shut-down causes high costs
- System where shut-down causes safety issues

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 \pm 10%

Temperature

From -50 °C to +120 °C

Note

FZD 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 H-S: 210 bar.

Element series "H - 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 [dm³]

Filter series	Weights [kg]					Volumes [dm ³]						
	Length	1	2	3	4	5	Length	1	2	3	4	4
FZD 010	-	-	7.9	-	-	-	-	-	0.10	-	-	-
FZD 021	-	-	9.6	9.8	10.3	-	-	-	0.06	0.12	0.22	-
FZD 051	-	-	17.4	18.0	19.0	20.3	-	-	0.31	0.41	0.53	0.83

Filter series	Length	Filter element design - H Series					Filter element design - U Series				
		A03	A06	A10	A16	A25	A03	A06	A10	A16	A25
FZD 010	2	4	5	7	8	11	4	5	7	8	11
	3	5	6	11	12	16	5	6	11	12	16
FZD 021	3	9	11	16	18	20	9	11	16	18	20
	4	10	12	17	19	21	10	12	17	19	21

Filter series	Length	Filter element design - R Series					Filter element design - S Series					Filter element design - U Series				
		A03	A06	A10	A16	A25	A03	A06	A10	A16	A25	A03	A06	A10	A16	A25
FZD 051	2	39	41	51	54	59	35	37	48	51	58	35	37	48	51	58
	3	45	46	54	56	61	41	43	52	54	60	41	43	52	54	60
	4	50	52	58	58	62	47	49	56	56	61	47	49	56	56	61
	5	56	57	61	62	63	53	53	57	59	63	53	53	57	59	63

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.

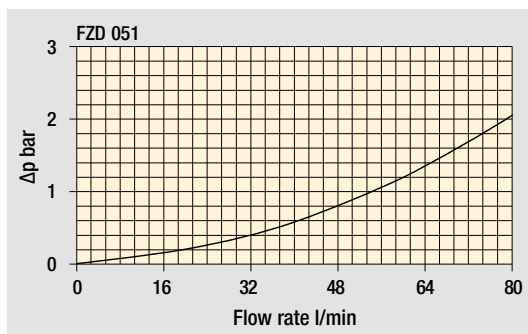
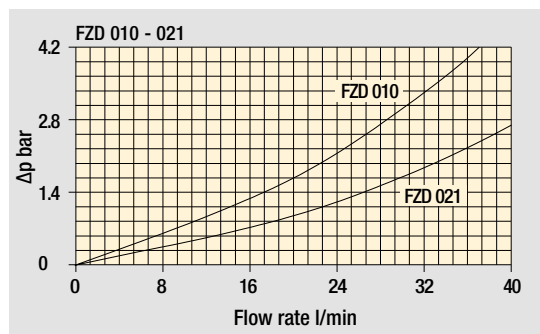
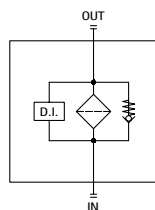
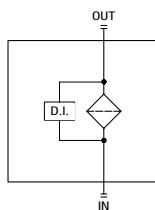
For different pressure drop or fluid viscosity we recommend to use our selection software available on www.mpfiltri.com.

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
FZD 010	•	
FZD 021	•	
FZD 051	•	•



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

Series and size		Configuration example: FZD021 4 S A G1 A06 H P01											
FZD010	FZD021												
Length		FZD010	FZD021										
2		•	•										
3			•										
4			•										
Valves													
S	Without bypass												
Seals													
A	NBR												
V	FPM												
Connections		FZD010	FZD021										
G1		G 3/8"	G 1/2"										
G2		3/8" NPT	1/2" NPT										
G3		-	SAE 8 - 3/4" - 16 UNF										
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		Execution				
							H 210 bar		P01 MP Filtri standard				
							U 210 bar, stainless steel filter element		Pxx Customized				

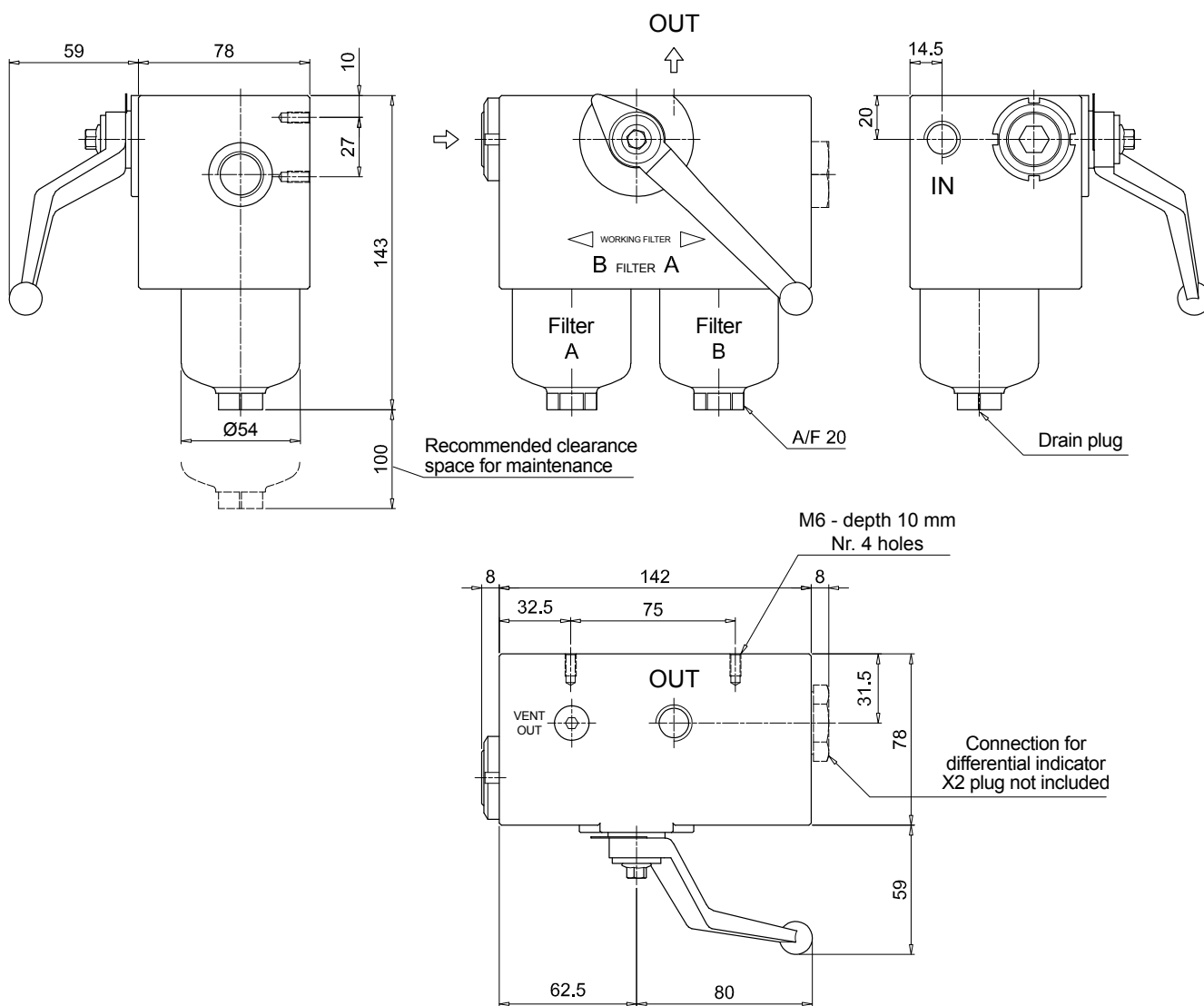
FILTER ELEMENT

Element series and size		Configuration example: HP011 4 A06 A H P01											
HP010	HP011												
Element length		HP010	HP011										
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		Element Δp			Execution				
				A NBR		H 210 bar			P01 MP Filtri standard				
				V FPM		U 210 bar, stainless steel filter element			Pxx Customized				

ACCESSORIES

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

FZD010

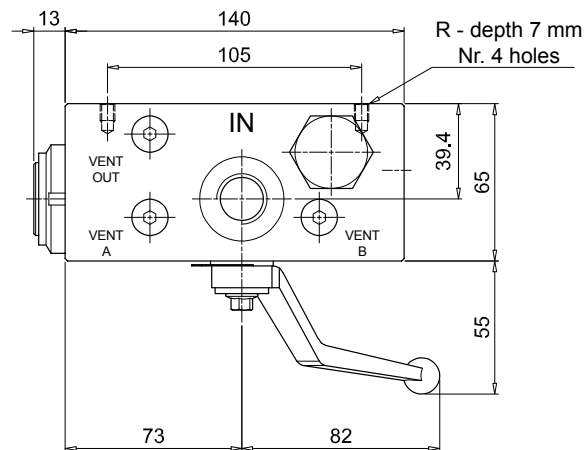
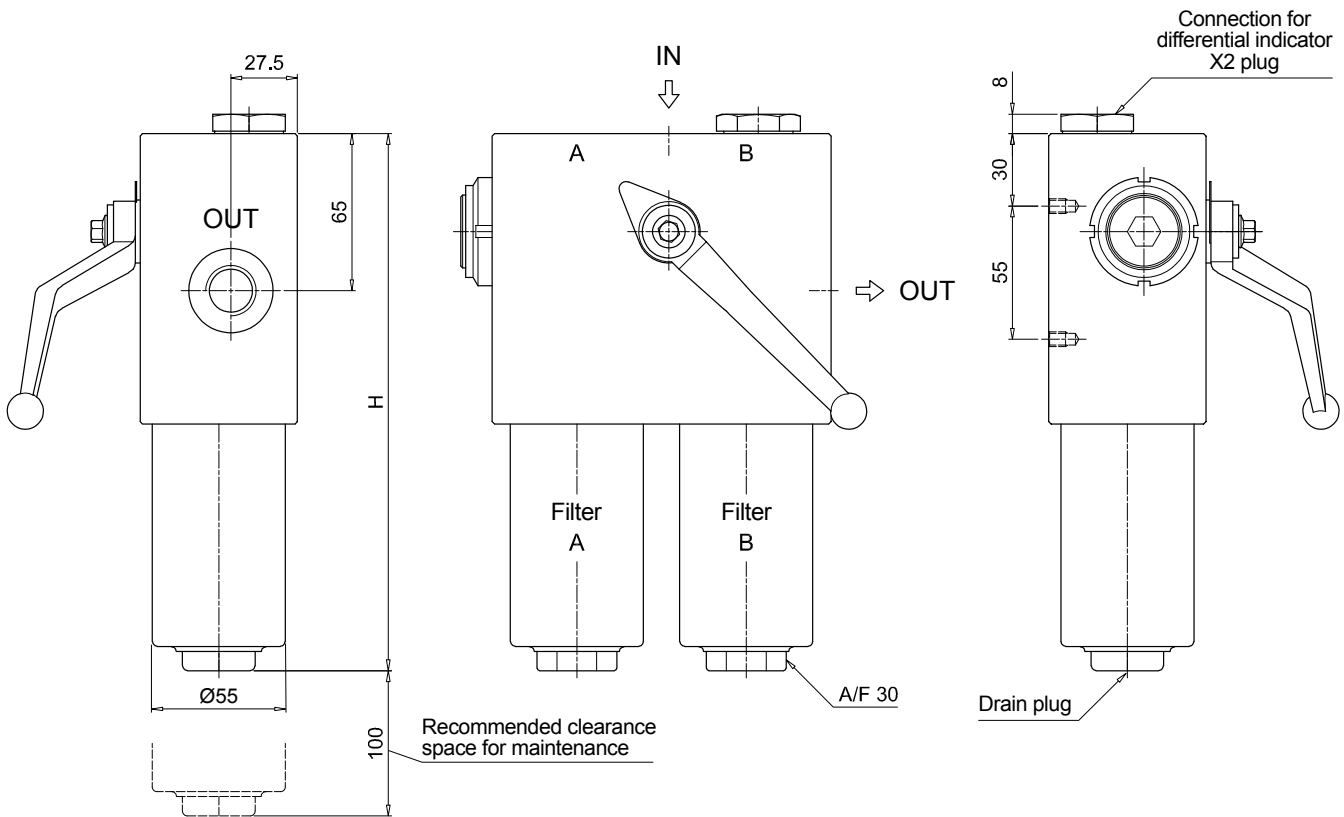


Dimensions

FZD021

Filter length	H [mm]
2	172
3	222
4	272

Connections	R
G1	M6
G2 - G3	1/4" UNC



Designation & Ordering code

COMPLETE FILTER

Series and size FZD051	Configuration example: FZD051 3 B A G3 A03 U P01							
Length 2 3 4 5								
Valves S Without bypass B With bypass 6 bar								
Seals A NBR V FPM								
Connections G1 G 3/4" G2 3/4" NPT G3 G 1/2" G4 1/2" NPT G5 SAE 8 - 3/4" - 16 UNF G6 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								
	Element Δp		Valves		Execution			
	R 20 bar	S	B	P01 MP Filtri standard				
	S 210 bar			Pxx Customized				
	U 210 bar, stainless steel filter element							

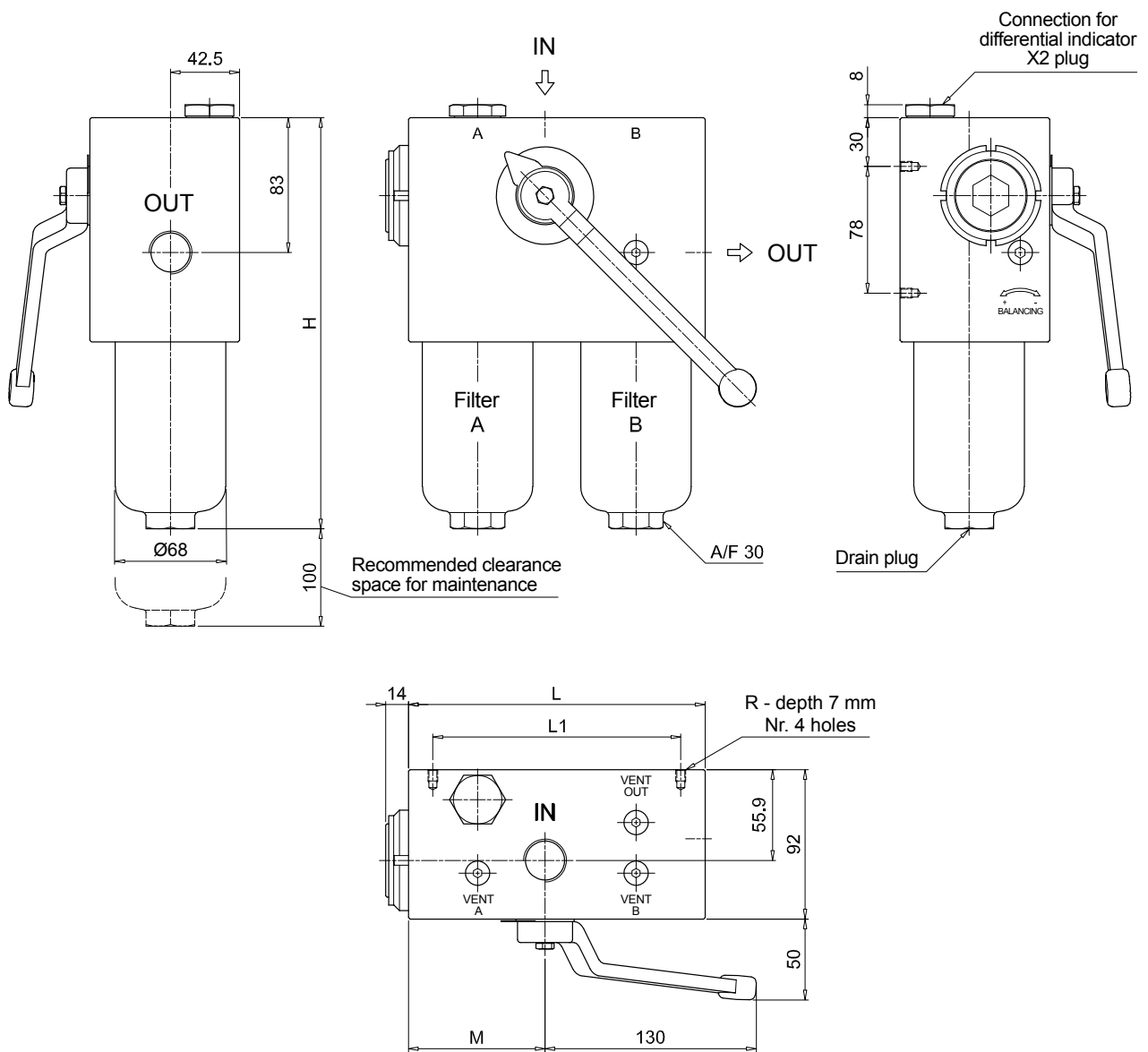
FILTER ELEMENT

Element series and size HP050	Configuration example: HP050 3 A03 A U P01					
Element length 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						
	Seals		Element Δp		Execution	
	A NBR	R 20 bar	P01 MP Filtri standard			
	V FPM	S 210 bar	Pxx Customized			
		U 210 bar, stainless steel filter element				

ACCESSORIES

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

FZD051			
Filter length	H [mm]		
2	253		
3	295		
4	343		
5	465		
Connections	R		
G1	M6		
G2	1/4" UNC		
G3	M6		
G4-G5-G6	1/4" UNC		
Valves	L [mm]	L1 [mm]	M [mm]
S	168	138	84
B	182.5	152.5	98.5

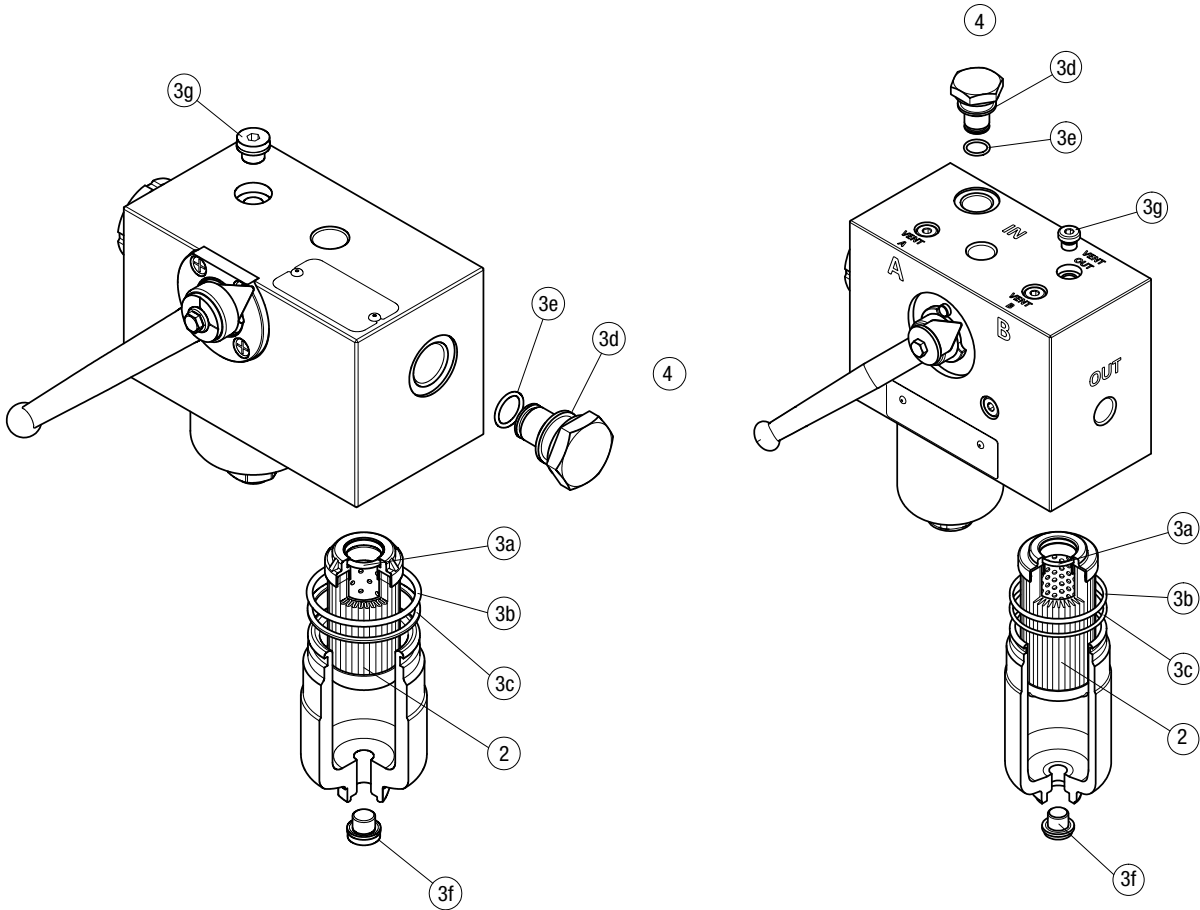


FZD SPARE PARTS

Order number for spare parts

FZD 010

FZD 021 - FZD 051



Item:	Q.ty: 1 pc.	Q.ty: 1 pc.		Q.ty: 1 pc.	
Filter series	Filter element	Seal Kit code number		Indicator connection plug	
FZD 010	See order table	NBR	FPM	NBR	FPM
		02050613	02050655		
FZD 021		02050796	02050797	X2H	X2V
FZD 051		02050800	02050801		