



Stainless steel high pressure filters

FZD series

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



INSTALLATION, SERVICE AND MAINTENANCE MANUAL AND SAFETY INSTRUCTIONS



FZD010

FZD021

FZD051



FZD GENERAL INFORMATION

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 60 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 ±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: Polyamide
- 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

GENERAL INFORMATION FZD

Flow rates [l/min]

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
	6	62	63	67	68	71	59	59	63	65	69	59	59	63	65	69

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

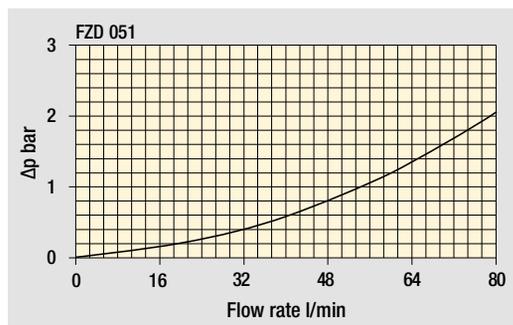
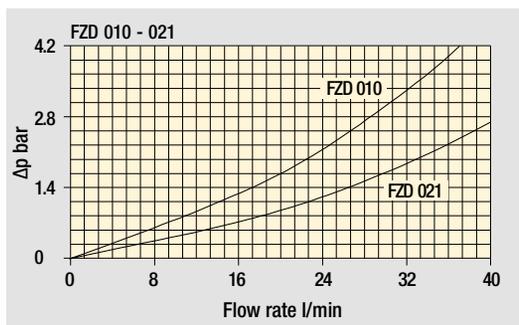
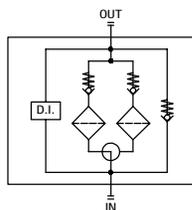
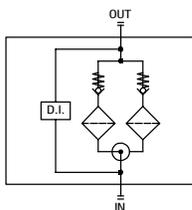
The reference fluid has a kinematic viscosity of 30 mm²/s (cSt) and a density of 0.86 kg/dm³.

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.

FZD FZD010 - FZD021

DUPLEX

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	-	•										
Bypass valve												
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		

CLOGGING INDICATORS

See page 728

DEX Electrical differential pressure indicator

DLX Electrical/visual differential pressure indicator

DVX Visual differential pressure indicator

DVY Visual differential pressure indicator

PLUGS

See page 747

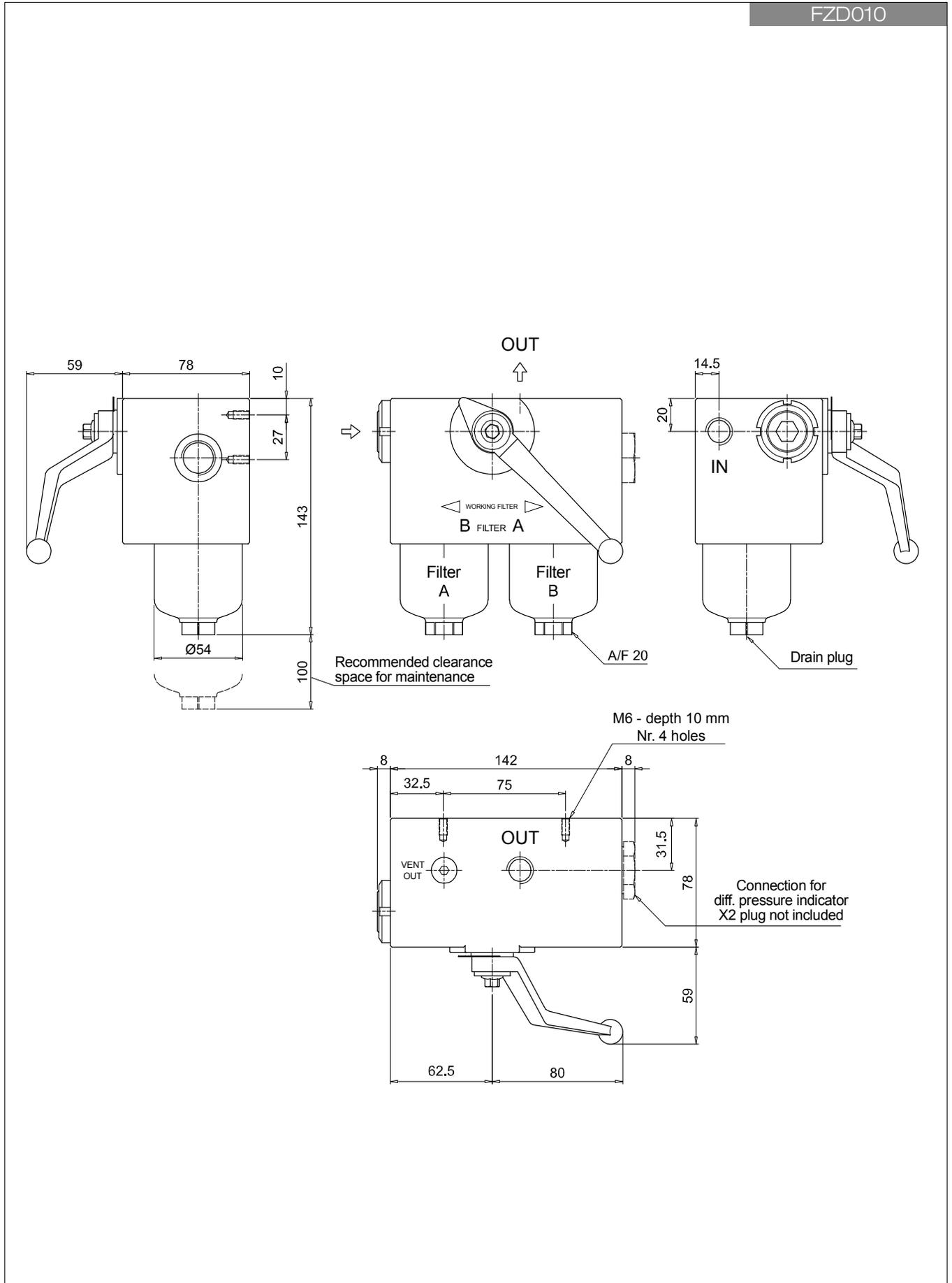
X2 Stainless steel plug (not included)

DUPLEX

FZD010 - FZD021 FZD

Dimensions

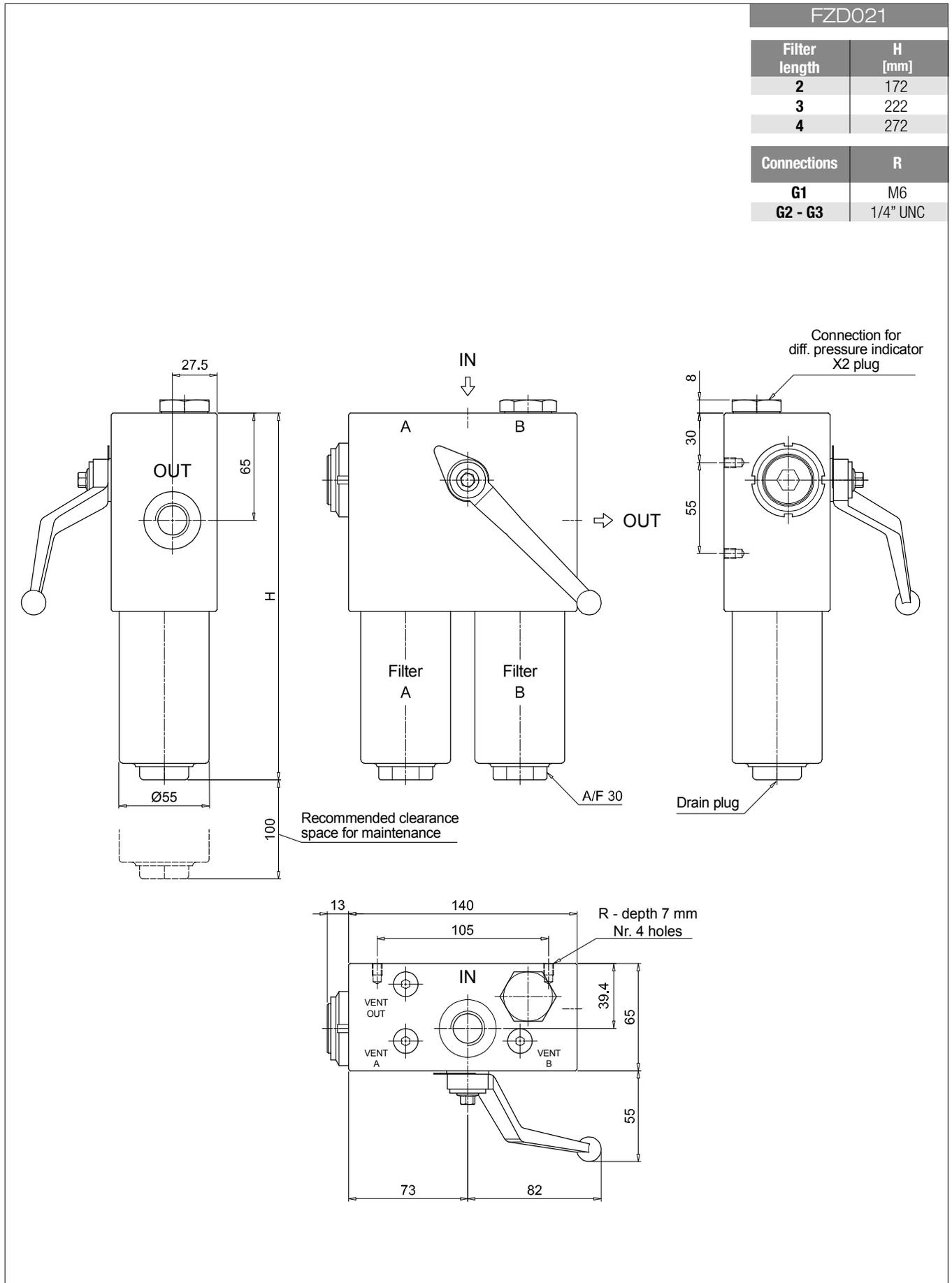
FZD010



FZD FZD010 - FZD021

DUPLEX

Dimensions

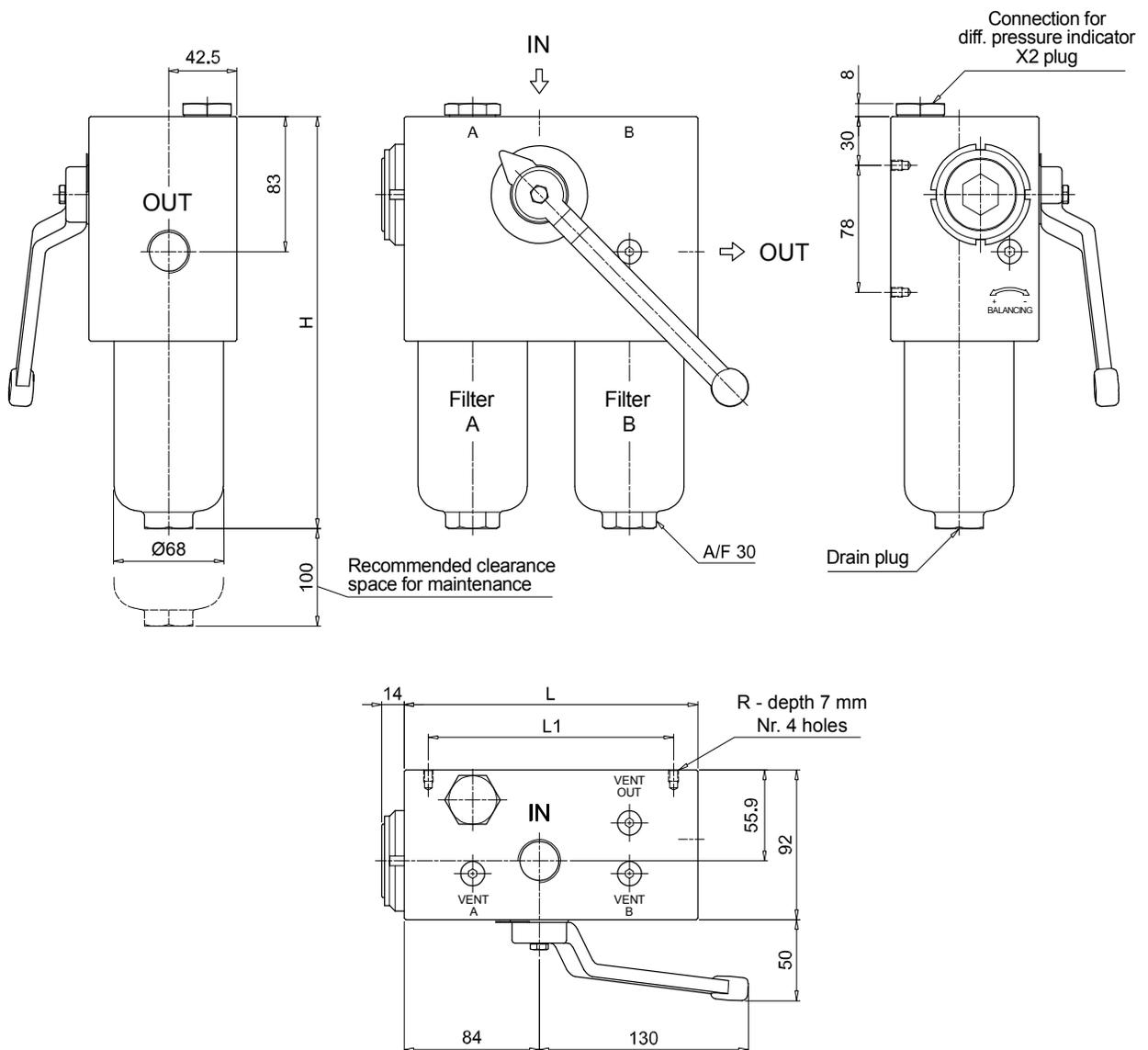


DUPLEX

FZD051 FZD

Dimensions

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]
S	168	138
B	182.5	152.5

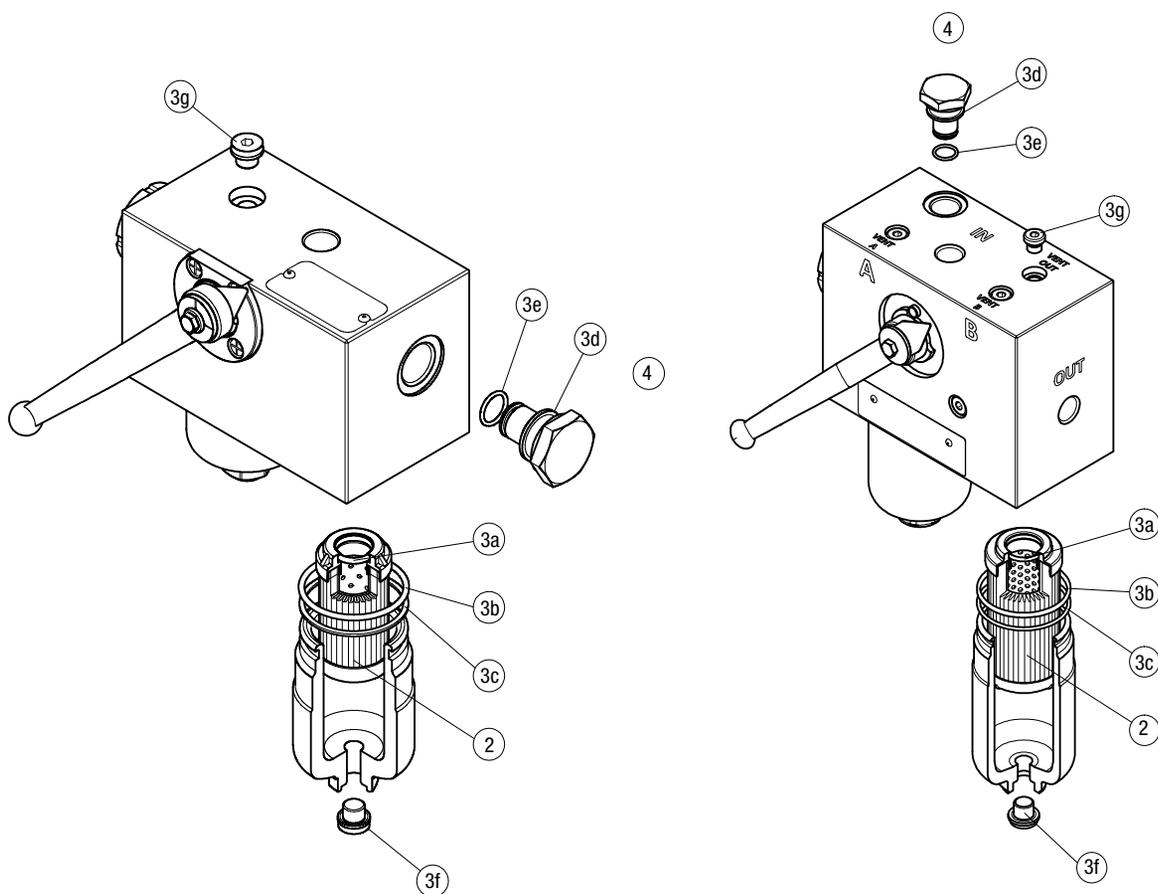


FZD SPARE PARTS

Order number for spare parts

FZD 010

FZD 021 - FZD 051



Item:	Q.ty: 1 pc. 2	Q.ty: 1 pc. 3 (3a ÷ 3g)	Q.ty: 1 pc. 4
Filter series	Filter element	Seal Kit code number	
		NBR	FPM
FZD 010	See order table	02050613	02050655
FZD 021		02050796	02050797
FZD 051		02050800	02050801
			Indicator connection plug
			NBR
			FPM
			X2H
			X2V