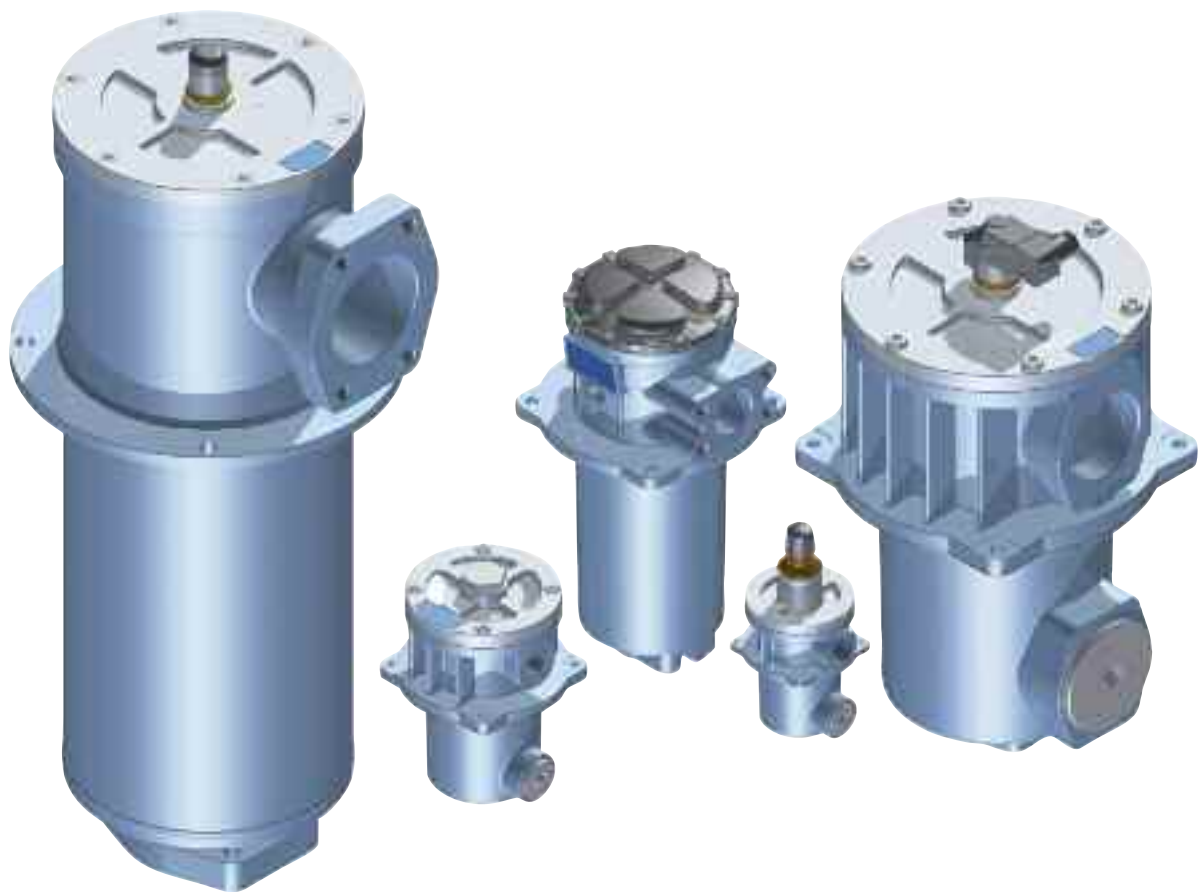


FRI



Maximum pressure 20 bar
Flow rates to 1500 l/min

Filter housing (Materials)

- Filter body: Aluminium - Steel
- Cover: Nylon - Aluminium - Steel
- Valve: Plastic material

Pressure

- Working pressure: 20 bar

Temperature

- From -25 °C to +110 °C

Bypass valve

- Opening pressure 2,4 bar \pm 10%

Δp Elements type

- Series N elements: 10 bar
- Oil flow from outside to inside.

Seals

- Standard NBR series A
- Optional FPM series V

Weights (kg)

- FRI 025 1,0
- FRI 040 2,0
- FRI 100 3,8
- FRI 250 6,3
- FRI 255 4,2
- FRI 630 13,8
- FRI 850 48,0

Volumes (dm³)

- FRI 025 0,28
- FRI 040 0,70
- FRI 100 1,09
- FRI 250 2,60
- FRI 255 3,2
- FRI 630 7,05
- FRI 850 21,5

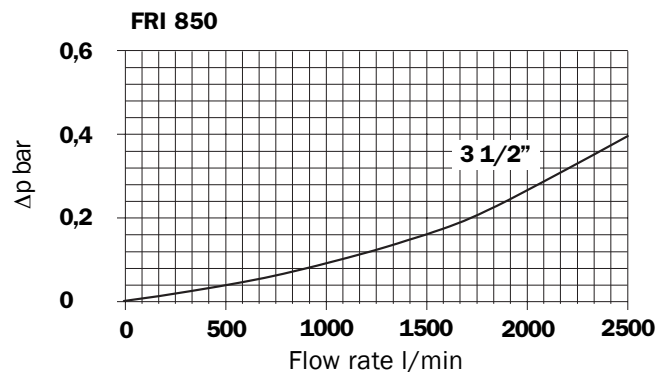
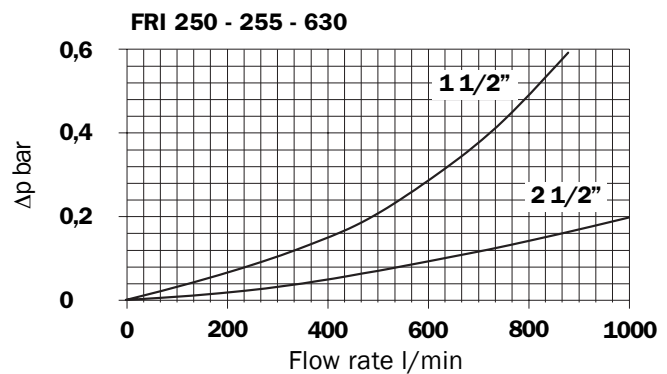
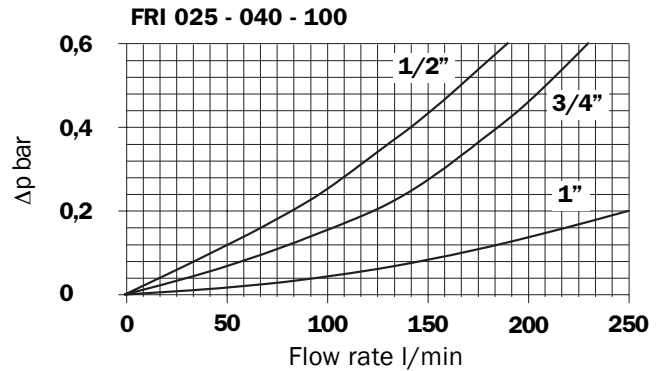
Compatibility (to ISO 2943)

- Housings compatible with:
Mineral oils, synthetic fluids.
Aqueous emulsions, water and glycol.
- The filter elements are compatible with:
Mineral oils, synthetic fluids.
Aqueous emulsions, water and glycol
(series W required).
- NBR seals series A, compatible with:
Mineral oils, synthetic fluids.
Aqueous emulsions, water and glycol.
- FPM seals V series, compatible with:
Synthetic fluids type HS-HFDR-HFDS-HFDU

Filter housings Δp pressure drop

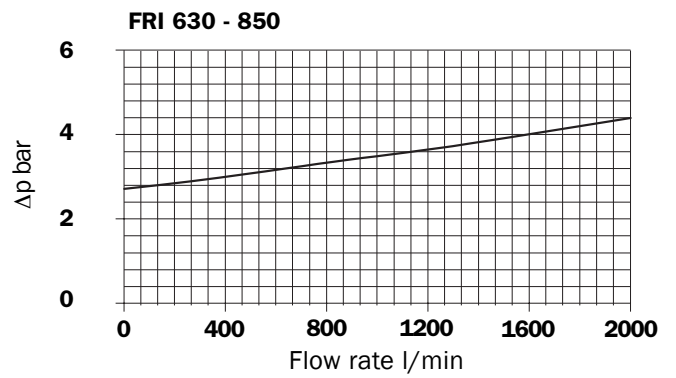
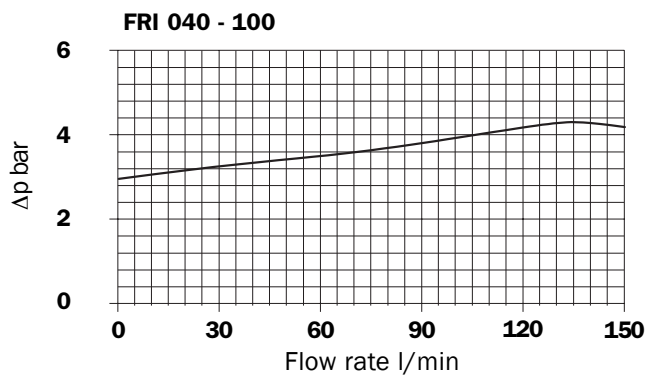
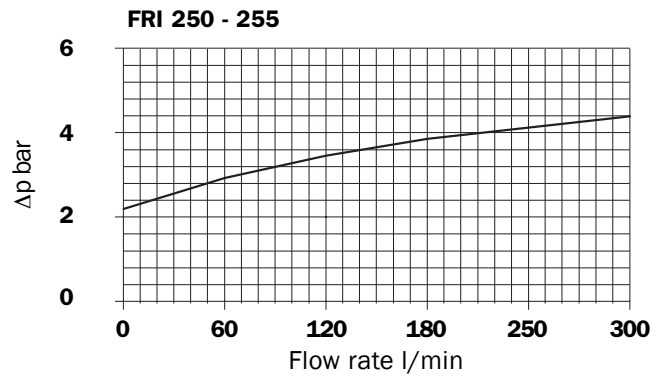
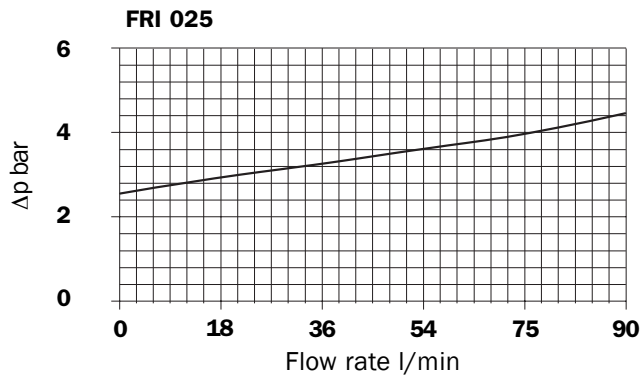
The curves are plotted utilising mineral oil with density of 0.86 kg/dm³ to ISO 3968.

Δp varies proportionally with density.



Valves

Bypass valve pressure drop



Recommended maximum flow rate

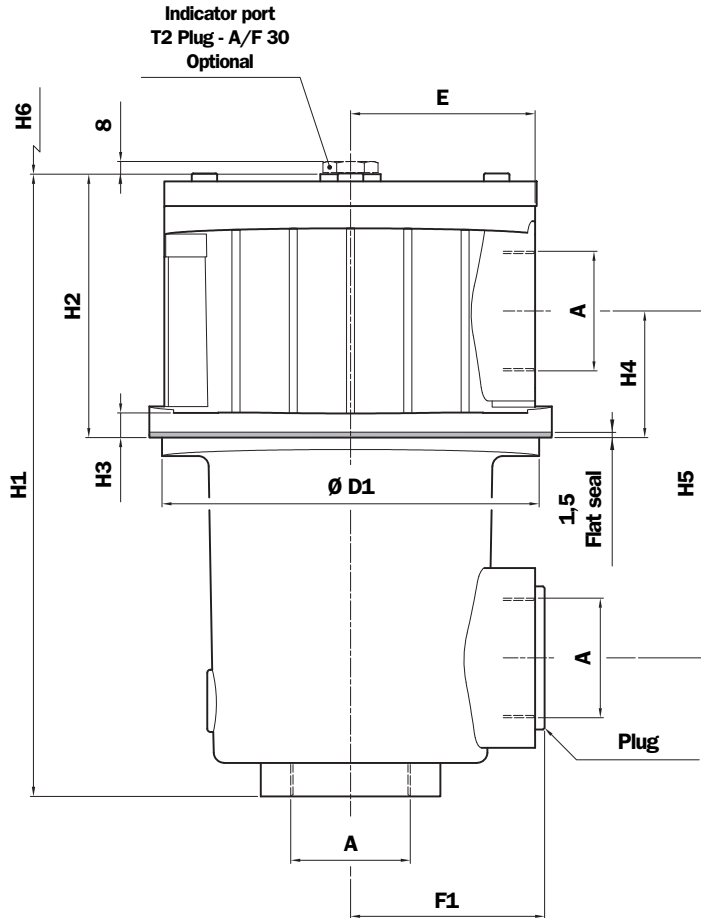
- Pressure drop of filter assembly equal to Δp 0,5 bar.
- Oil kinematic viscosity 30 mm²/s (cSt).
- Density 0,86 kg/dm³.

Filtration

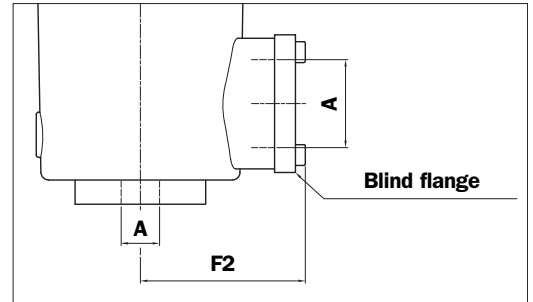
	Length	A03	A06	A10	A16	A25	P10	P25	M25 - M60 - M90
FRI 025	1	6	10	16	19	48	50	50	50*
FRI 040	1	18	23	45	48	80	80	80	80*
FRI 100	1	31	33	90	95	170	170	170	170*
FRI 250 - 255	1	140	170	270	300	400	400	400	400*
FRI 630	1	240	280	500	550	800	800	800	800*
FRI 850	1	440	550	1000	1100	1500	1500	1500	1500*

* Maximum flow recommended

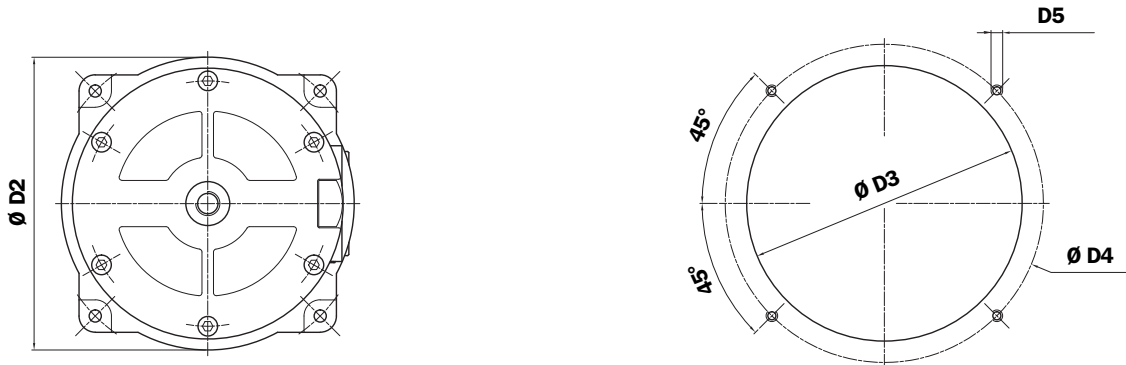
FRI 100 - 250 - 630



Flange connections



Holes on the tank



Thread connections

Type	A		
	FRI 100	FRI 250	FRI 630
G1	G 1"	G 1 1/2"	G 2 1/2"
G2	1" NPT	1 1/2" NPT	2 1/2" NPT
G3	SAE 16 - 1.5/16" - 12 UN	SAE 24 - 1.7/8" - 12 UN	SAE 32 - 2 1/2" - 12 UN

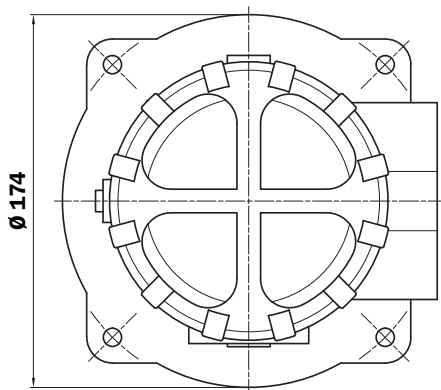
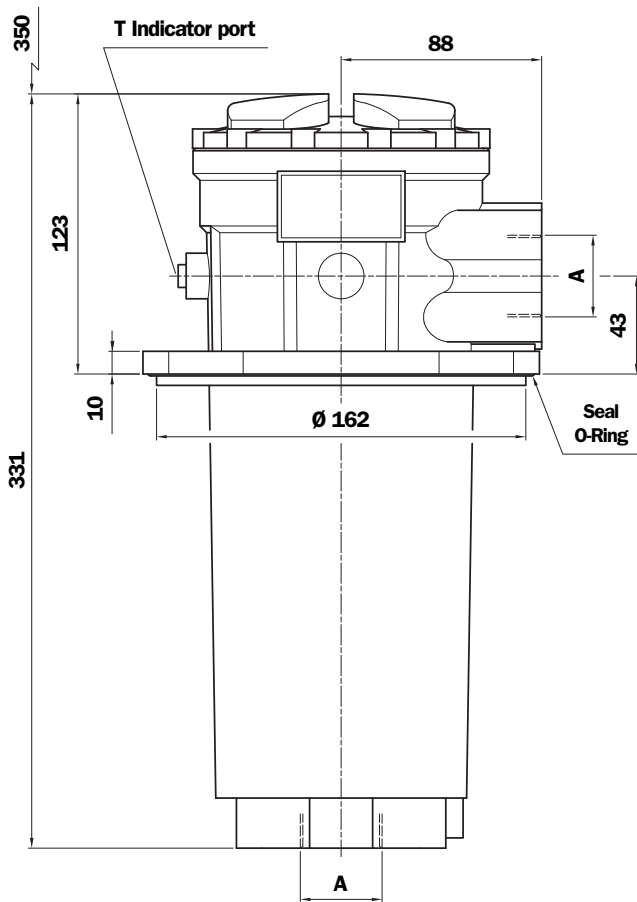
Flange connections*

Type	A		
	FRI 100	FRI 250	FRI 630
F1	1" SAE 3000 psi/M	1 1/2" SAE 3000 psi/M	2 1/2" SAE 3000 psi/M
F2	1" SAE 3000 psi/UNC	1 1/2" SAE 3000 psi/UNC	2 1/2" SAE 3000 psi/UNC

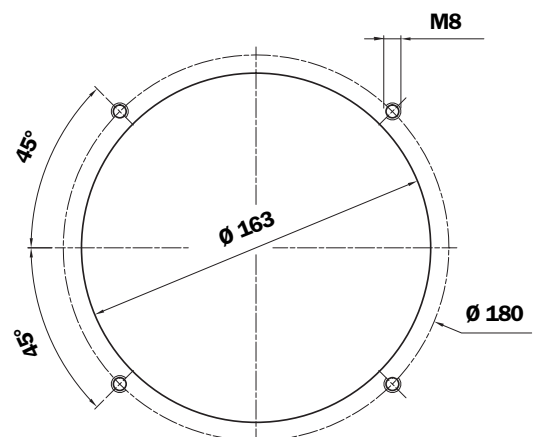
*Connections table "DN/SAE flange" see page 5

Filter Length	H1 mm	H2 mm	H3 mm	H4 mm	H5 mm	H6 mm	D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	E mm	F1 mm	F2 mm
FRI 100	245	106	12	51	140	155	135	146	136	154	M6	67	73	86
FRI 250	333	127	12	59	177	240	162	174	163	180	M8	82	86	100
FRI 630	391	166	16	80	218	275	237	253	238	275	M10	116	122	143

FRI 255



Holes on the tank



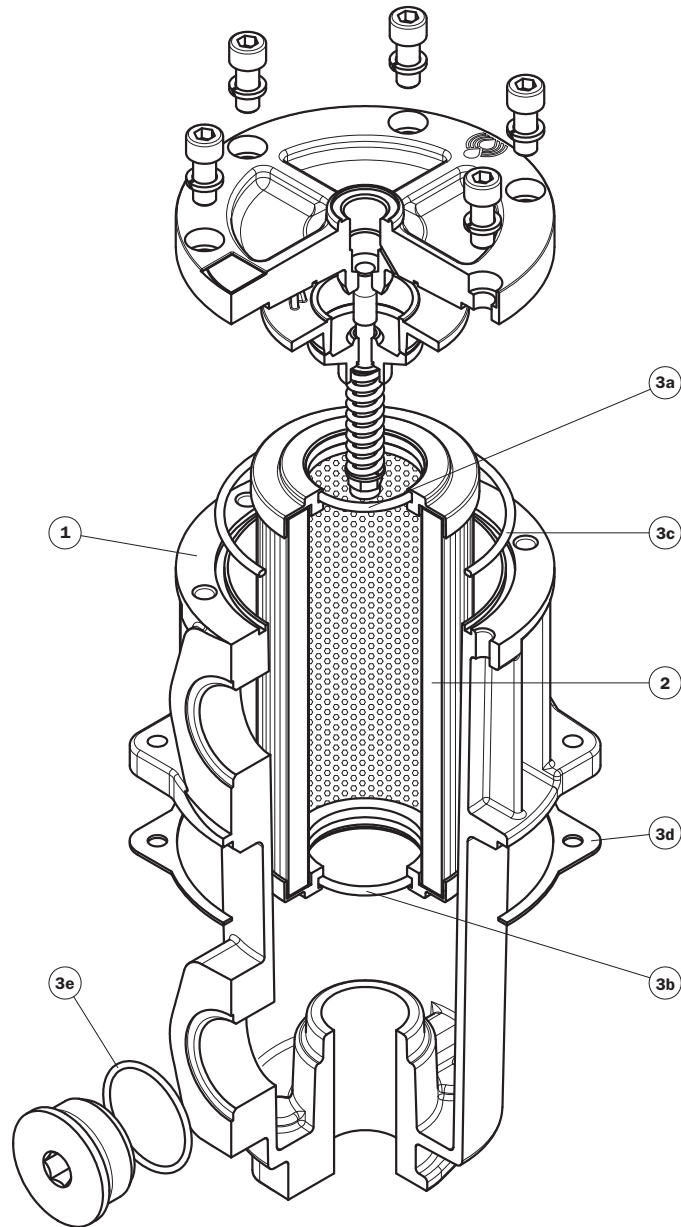
Thread connections

Type	A	T
G1	G 1 1/2"	G 1/8"
G2	1 1/2" NPT	G 1/8"
G3	SAE 24 - 1 7/8" - 12 UN	G 1/8"
G4	G 1 1/4"	G 1/8"
G5	1 1/4" NPT	G 1/8"
G6	SAE 20 - 1 5/8" - 12 UN	G 1/8"

Flange connections*

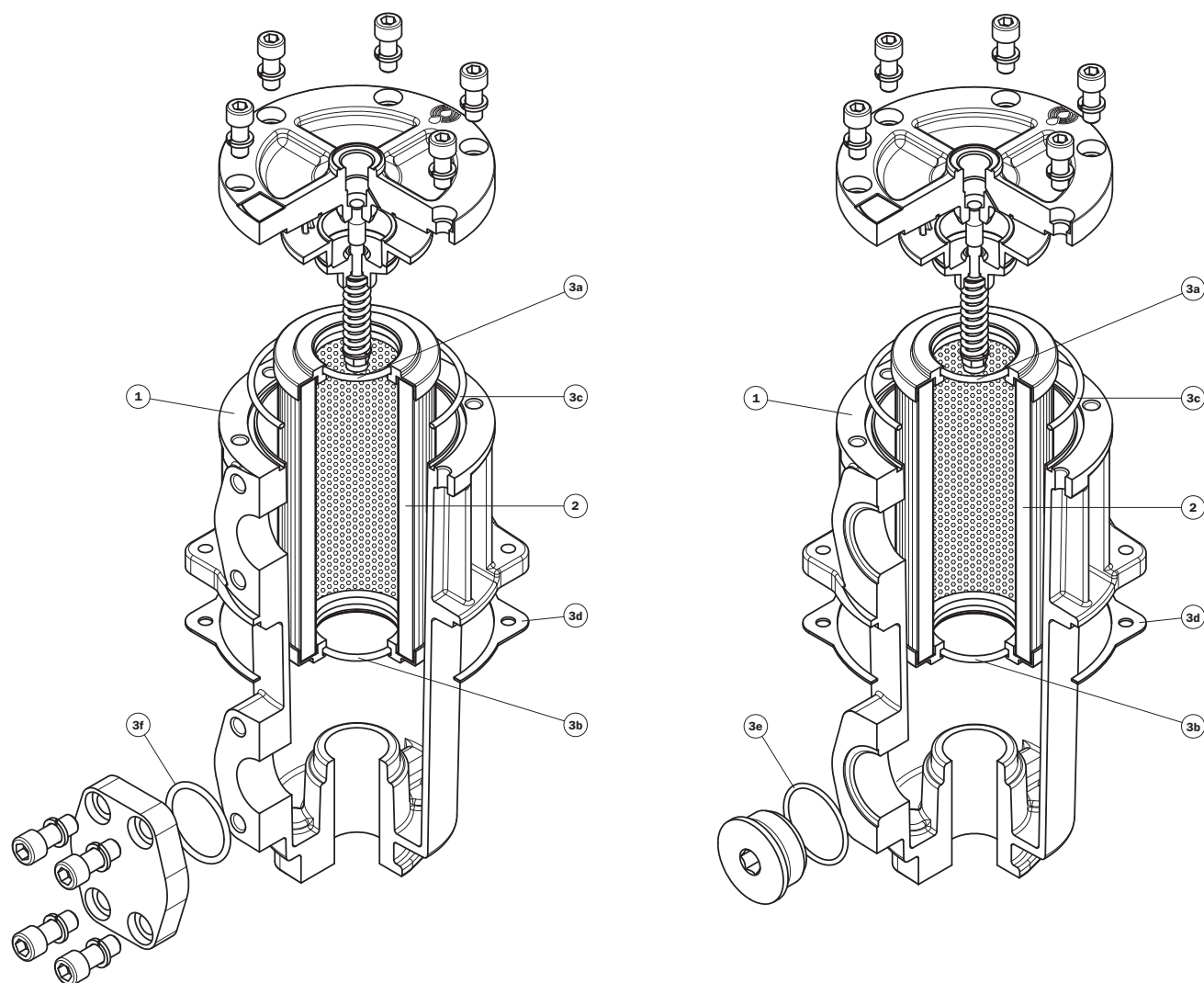
Type	A	T
F1	1 1/2" SAE 3000 psi/M	G 1/8"
F2	1 1/2" SAE 3000 psi/UNC	G 1/8"

*Connections table "DN - SAE flange" see page 5

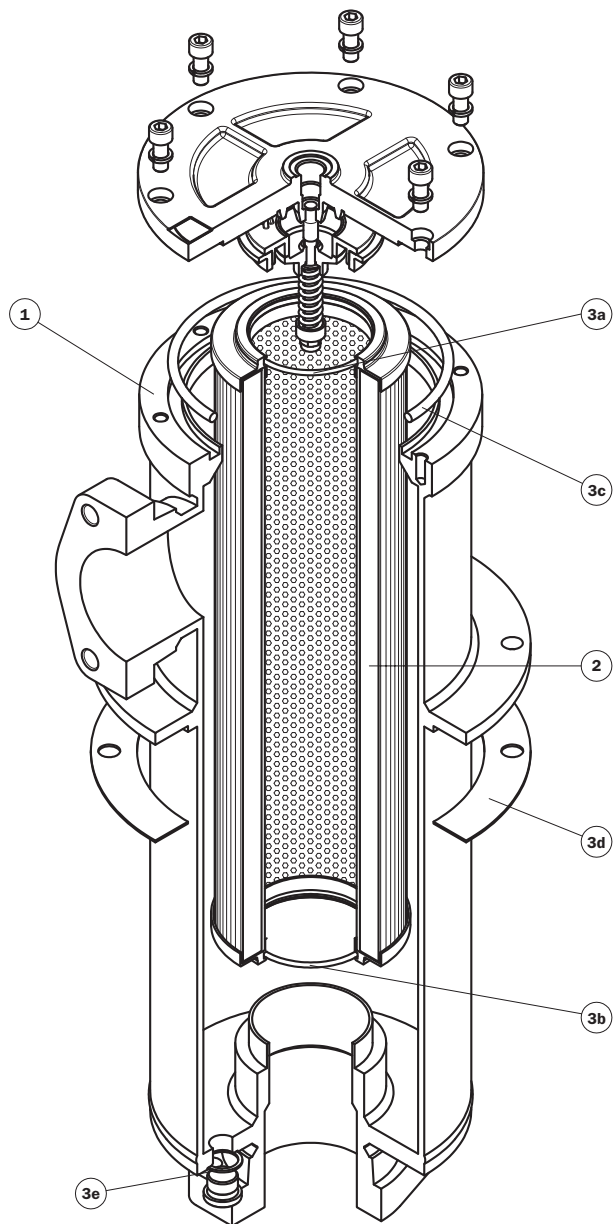


Item	Description	Q.ty	FILTER Series			
			FRI 025		FRI 040	
1	Filter assembly	1	See order table			
2	Filter element	1	See order table			
3	Seal Kit	1	NBR 02050213	FPM 02050220	NBR 02050214	FPM 02050221
3a	Filter element top seal	1	O-R 3106 Ø 25,65 x 2,62		O-R 4137 Ø 34,52 x 3,53	
3b	Filter element bottom seal	1	O-R 3093 Ø 23,47 x 2,62		O-R 4137 Ø 34,52 x 3,54	
3c	Cover seal	1	O-R 3243 Ø 61,60 x 2,62		O-R 4350 Ø 88,50 x 3,53	
3d	Head seal	1	01026404		01026400	
3e	Plug seal GAS thread	1	01017055		01017030	
	Plug seal SAE thread	1	O-R 1064 Ø 16,36 x 2,20		O-R 1092 Ø 23,47 x 2,95	

Spare parts

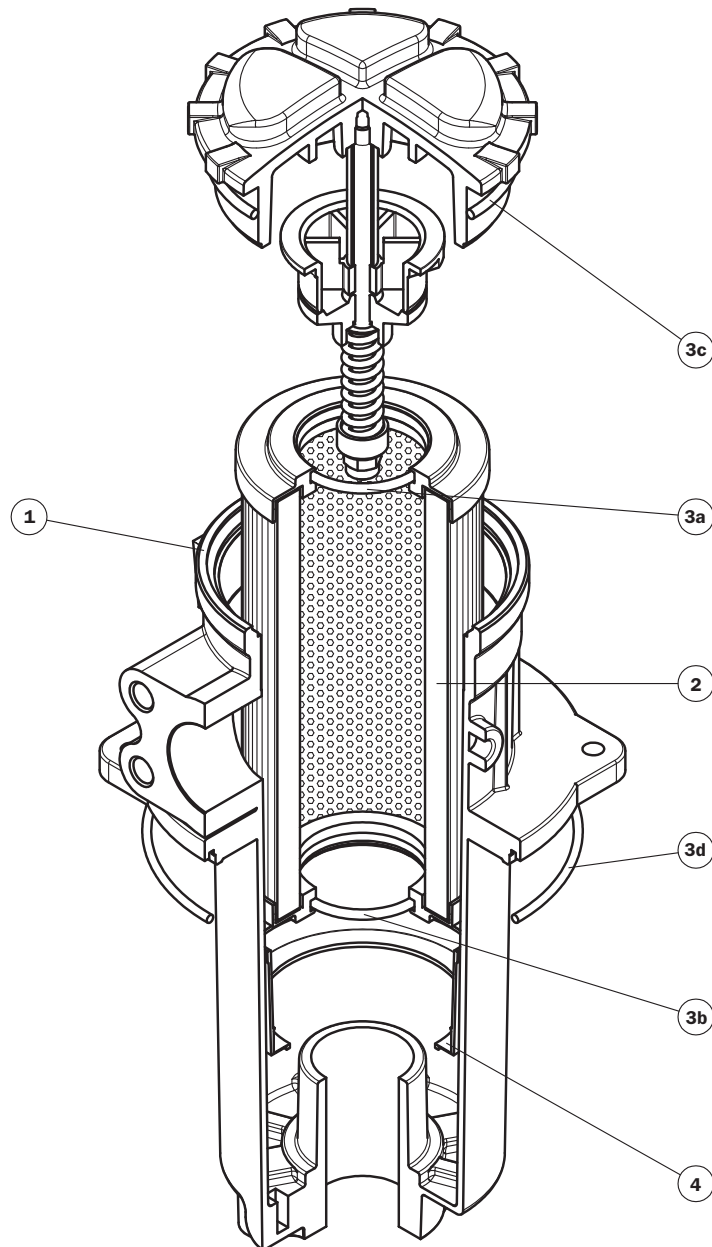


Item	Description	Q.ty	FILTER Series					
			FRI 100		FRI 250		FRI 630	
1	Filter assembly	1	See order table					
2	Filter element	1	See order table					
3	Seal Kit	1	NBR 02050215	FPM 02050222	NBR 02050216	FPM 02050223	NBR 02050217	FPM 02050224
3a	Filter element top seal	1	O-R 4137 Ø 34,52 x 3,53		O-R Metric Ø 50 x 4		O-R 177 Ø 74,61 x 3,53	
3b	Filter element bottom seal	1	O-R 4137 Ø 34,52 x 3,53		O-R Metric Ø 50 x 4		O-R 177 Ø 74,61 x 3,53	
3c	Cover seal	1	O-R 4387 Ø 98,02 x 3,53		O-R 4475 Ø 120,20 x 3,53		O-R 233 Ø 181,00 x 6,99	
3d	Head seal	1	01026401		01026402		01026403	
3e	Plug seal GAS thread	1	O-R 2131 Ø 33,05 x 1,78		O-R 3193 Ø 48,89 x 2,62		O-R 3325 Ø 82,22 x 2,62	
	Plug seal SAE thread	1	O-R 1117 Ø 29,74 x 2,95		O-R 1172 Ø 43,69 x 3		O-R 1234 Ø 59,36 x 3	
3f	Blind flange seal	1	O-R 4131 Ø 32,93 x 3,53		O-R 150 Ø 46,04 x 3,53		O-R 171 Ø 68,26 x 3,53	



Item	Description	Q.ty	FILTER Series FRI 850	
1	Filter assembly	1	See order table	
2	Filter element	1	See order table	
3	Seal Kit	1	NBR 02050218	FPM 02050225
3a	Filter element top seal	1	O-R 4337 Ø 85,32 x 3,53	
3b	Filter element bottom seal	1	O-R 4337 Ø 85,32 x 3,53	
3c	Cover seal	1	O-R 233 Ø 181,00 x 6,99	
3d	Head seal	1	01026320	01026326
3e	Plug seal	1	01017055	

Spare parts



Item	Description	Q.ty	FILTER Series FRI 255	
1	Filter assembly	1	See order table	
2	Filter element	1	See order table	
3	Seal Kit	1	NBR 02050013	FPM 02050014
3a	Filter element top seal	1	O-R Metric Ø 50 x 4	
3b	Filter element bottom seal	1	O-R Metric Ø 50 x 4	
3c	Cover seal	1	O-R Metric Ø 113 x 4	
3d	Head seal	1	O-R 4650 Ø 164,70 x 3,53	
4	Contamination retainer binder	1	01060301	

Ordering information FRI

Filter assembly

FRI

Example: FRI

1	2	3	4	5	6	8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
040	B	A	G1	A10	N	P01

Filter element

CU

Example: CU

1	5	7	8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
040	A10	N	P01

1 - Style

Filter	Filter element
025	025
040	040
100	100
250	250
255	250
630	630
850	850

5 - Filter element

A03	Inorganic microfibre 3 μ	} Absolute filtration $\beta_x(c) \geq 1000$
A06	Inorganic microfibre 6 μ	
A10	Inorganic microfibre 10 μ	
A16	Inorganic microfibre 16 μ	
A25	Inorganic microfibre 25 μ	
M25	Wire mesh	} Nominal Filtration
P10	Resin impregnated paper	} Nominal Filtration
P25	Resin impregnated paper	

2 - By-pass valve

B	With bypass
S	Without bypass

6 - Δp Filter element

N	Δp 10 bar
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3 - Filter seals & Treatment

A	NBR
V	FPM
W	NBR, Filter body anodized. Filter element compatible with fluid HFA, HFB, HFC (only for filter element type Axx and Mxx)
Z	FPM, Filter body anodized. Filter element compatible with fluid HFA, HFB, HFC (only for filter element type Axx and Mxx)

7 - Filter element seals

N	NBR
V	FPM
W*	NBR (only for filter element type Axx and Mxx)
Z*	FPM (only for filter element type Axx and Mxx)

8 - Option

P01	MP Filtri standard
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* Compatible with fluid HFA, HFB, HFC

4 - Connections

FRI 025

Type	A
G1	G 1/2"
G2	1/2" NPT
G3	SAE 8 - 3/4" - 16 UNF

FRI 040

Type	A
G1	G 3/4"
G2	3/4" NPT
G3	SAE 12 - 1 1/16" - 12 UN

FRI 100

Type	A
G1	G 1"
G2	1" NPT
G3	SAE 16 - 1 5/16" - 12 UN
F1	1" SAE 3000 psi/M
F2	1" SAE 3000 psi/UNC

FRI 255

Type	A
G1	G 1 1/2"
G2	1 1/2" NPT
G3	SAE 24 - 1 7/8" - 12 UN
G4	G 1 1/4"
G5	1 1/4" NPT
G6	SAE 20 - 1 5/8" - 12 UN
F1	1 1/2" SAE 3000 psi/M
F2	1 1/2" SAE 3000 psi/UNC

FRI 630

Type	A
G1	G 2 1/2"
G2	2 1/2" NPT
G3	SAE 32 - 2 1/2" - 12 UN
F1	2 1/2" SAE 3000 psi/M
F2	2 1/2" SAE 3000 psi/UNC

FRI 850

Type	A
F1	3 1/2" SAE 3000 psi/M
F2	3 1/2" SAE 3000 psi/UNC

FRI 250

Type	A
G1	G 1 1/2"
G2	1 1/2" NPT
G3	SAE 24 - 1 7/8" - 12 UN
F1	1 1/2" SAE 3000 psi/M
F2	1 1/2" SAE 3000 psi/UNC

Differential indicator FRI (see page 114)
Clogging indicator only for FRI 255 (see page 112)

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