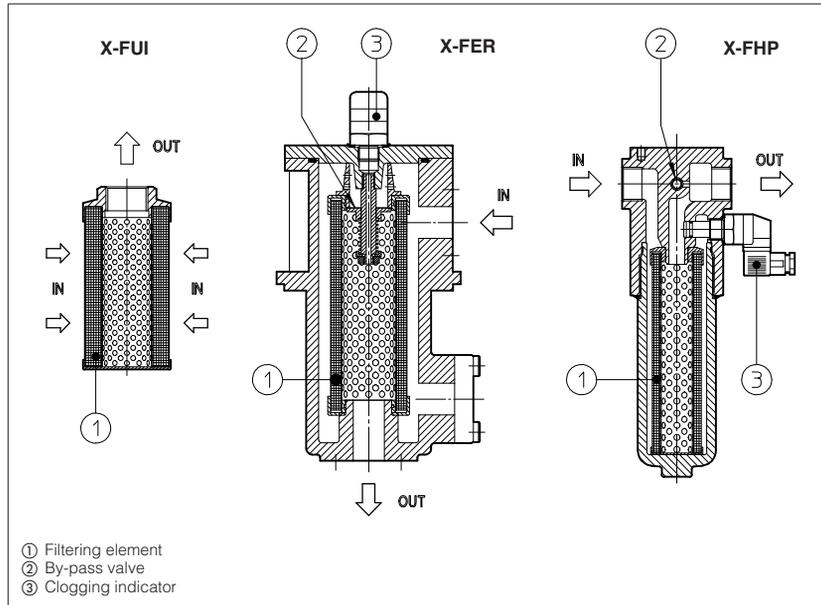


Hydraulic filters type X-FUI, X-FER, X-FHP

suction, return and pressure filters



X-FUI, X-FHP and X-FER filters are designed to be installed respectively on the pump inlet line, on the pressure line and on the return line; they are suitable for hydraulic mineral oil or synthetic fluids.

The filtering element of X-FUI filters is made by a metallic net with square mesh. The filtering element of X-FER and X-FHP filters is made by inorganic microfibre with an acrylic support and it can be easily replaced.

They are available in different dimensions:

- type X-FUI; to be installed immersed on the pump inlet line: G 1/2" to G 2 1/2".
- type X-FER; to be installed on the return line: G 1/2" and G 3/4" and SAE 3000 1" to 2 1/2".
- type X-FHP; to be installed on the pressure line: G 1/2" to G 1 1/2".

X-FER and X-FHP filters may be delivered with visual or electrical clogging indicators.

1 MODEL CODE

X-FER			-	100	/	25	/	V	**	/	*
type: X-FUI = immersed on the pump inlet line X-FER = on the return line X-FHP = on the pressure line											
nominal size:											
X-FUI	X-FER	X-FHP									
25 = G 1/2"	25 = G 1/2"	65 = G 1/2"									
40 = G 3/4"	40 = G 3/4"	75 = G 3/4"									
100 = G 1"	100 = flange SAE 3000 1"	135 = G 1"									
250 = G 1 1/2"	250 = flange SAE 3000 1 1/2"	320 = G 1 1/2"									
630 = G 2 1/2"	630 = flange SAE 3000 2 1/2"										
Absolute filtration rating (βx = 75) for microfibre cartridges: 03 = 3 μm (X-FHP) 10 = 10 μm (X-FER e X-FHP) 25 = 25 μm (X-FER e X-FHP)											
Filtration rating for metallic net cartridges (3) 125 = 90 μm (X-FUI)											
			Clogging indicator for X-FER (it must be always indicated): V = visual E = electric; see section. 4 e 6 VE = visual/electric: see section. 4 e 6								
			for X-FHP (mass-production): VE = visual/electric: see section. 4 e 6								
			Synthetic fluids WG = for water glycol (1) PE = for phosphate ester fluids (2)								
			Design number								

2 MODEL CODE FOR SPARE CARTRIDGES (4)

SP - CU			-	100	/	A 25	**	/	*
Type: SP-CU = for filters type X-FER (5) SP-HP = for filters type X-FHP									
Nominal size (see filter code):									
25 (X-FER)									
40 (X-FER)									
65 (X-FHP)									
75 (X-FHP)									
100 (X-FER)									
135 (X-FHP)									
250 (X-FER)									
320 (X-FHP)									
630 (X-FER)									
			Absolute filtration rating: (βx = 75): 03 = 3 μm (X-FHP) 10 = 10 μm (X-FER e X-FHP) 25 = 25 μm (X-FER e X-FHP)						
			Synthetic fluids WG = for water glycol (1) PE = for phosphate ester fluids (2)						
			Design number						

- 1) For water glycol it is better to use filters with a filtration rating which is not lower than 25 μm.
- 2) For phosphate ester fluids, consult our technical office and specify the kind of fluid.
- 3) For metallic cartridges, the filtration rating is fixed in micron by the maximum diameter of the sphere which is inserted in the net-mesh.
- 4) The cartridge of new filters type X-FER and type X-FHP is made by microfibre and when it is clogged it cannot be cleaned and it must be replaced. It may be useful to have a spare cartridge with every single installed filter.
- 5) The microfibre cartridges of the new X-FER filters have a filtering power which is about 2,5 times higher than the filtering power of the metallic cartridges type SP-CFE and they have a size which allows them to be easily changed with this type of cartridge.

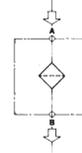
3 NOTES

3.1 X-FUI

They have to be installed immersed in the fluid in order to protect the pump.
 They can be installed in any position: we recommend to avoid localized obstructions and to limit the fluid speed to $1 \div 1,5$ m/s.
 The filtering element is in square mesh net. Δp of filtering elements collapse is 1 bar.
 They are not equipped neither with a by-pass valve nor with a clogging indicator; therefore regular controls of the filter conditions are necessary.
 The filter must be entirely replaced when it is clogged.
 Fluid temperature: $-25 \text{ }^\circ\text{C} \div +110 \text{ }^\circ\text{C}$

Model	X-FUI-25	X-FUI-40	X-FUI-100	X-FUI-250	X-FUI-630
Max recommended flow [l/min] ($\Delta p = 0,08$ bar)	35	70	130	250	850
Δp max [bar]	1				

Hydraulic symbol

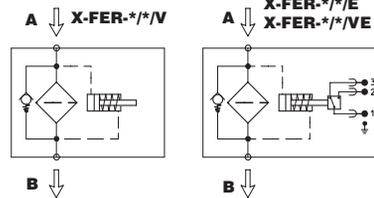


3.2 X-FER

They have to be installed on the return line to tank.
 The cartridge is made of inorganic microfibre with acrylic support. When it is clogged, it cannot be cleaned and it must be replaced.
 The cartridge will be easily replaced after the cover has been removed.
 The collapsed pressure of filtering elements is 10 bar.
 They are equipped with a by-pass valve with opening pressure of $2,5 \text{ bar} \pm 10\%$. The by-pass valve is integral with cover.
 They are delivered with visual or electrical indicator.
 The visual indicator shows the progressive building-up of contaminant in the cartridge, by means of a red sector.
 The electrical indicator (see sections 4 and 4) opens or closes an electric contact when filter has reached a preset value of contamination ($2 \text{ bar} \pm 10\%$).
 Fluid temperature: $-20 \text{ }^\circ\text{C} \div +70 \text{ }^\circ\text{C}$

Model	X-FER-25/10	X-FER-25/25	X-FER-40/10	X-FER-40/25	X-FER-100/10	X-FER-100/25	X-FER-250/10	X-FER-250/25	X-FER-630/10	X-FER-630/25
Max recommended flow [l/min] ($\Delta p = 0,25$ bar)	35	23	20	55	30	100	120	290	220	430
Max inlet pressure [bar]	20									
Δp max [bar]	10									

Hydraulic symbol

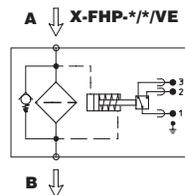


3.3 X-FHP

They have to be installed on the pressure line in order to protect the circuit components.
 The cartridge is made by inorganic microfibre with acrylic support. When it is clogged, it cannot be cleaned and it must be replaced.
 The cartridge will be easily replaced after the filter housing has been unscrewed.
 The collapsed pressure of filtering elements is 20 bar.
 They are equipped with a by-pass valve with opening pressure of about $6 \text{ bar} \pm 10\%$.
 They are delivered with visual/electrical indicator (see sections 4 and 4) which opens or closes an electric contact when filter has reached a preset value of contamination ($5 \text{ bar} \pm 10\%$).
 Fluid temperature: $-20 \text{ }^\circ\text{C} \div +70 \text{ }^\circ\text{C}$

Modello	65/03	65/10	65/25	75/03	75/10	75/25	135/03	135/10	135/25	320/03	320/10	320/25
Max recommended flow [l/min] ($\Delta p = 1$ bar)	16	38	55	38	120	150	95	155	200	230	400	600
Max inlet pressure [bar]	420											
Δp max [bar]	20											

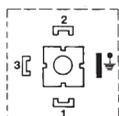
Hydraulic symbol



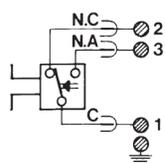
4 ELECTRICAL CLOGGING INDICATORS FOR X-FER AND X-FHP

for dimensions, see section. 4

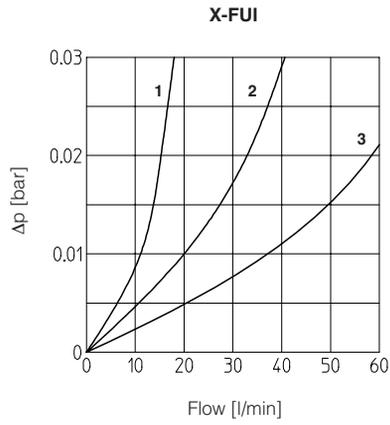
CONNECTOR DIN 43650
 Protection rating to DIN 40050 IP-65



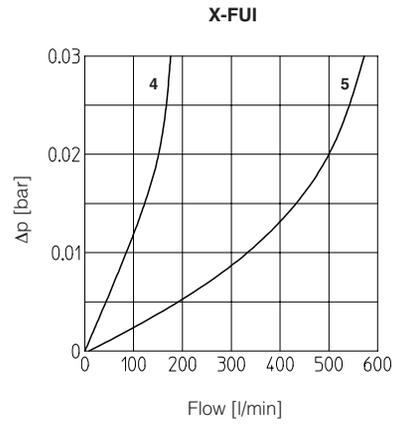
ELECTRIC DIAGRAM
 (changeover contacts)



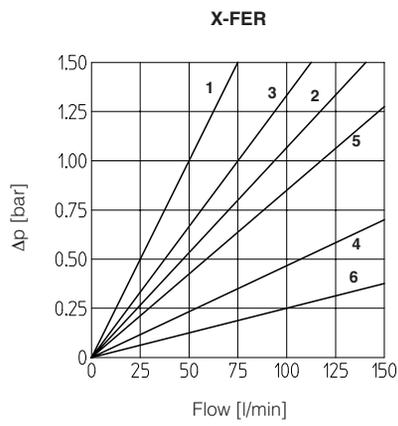
Feeding voltage (V)	MAX FLOW - CONTACTS -	
	Resistive load (A)	Inductive load (A)
AC 125	5	2
AC 250	5	2
DC 30	5	3
DC 125	0,5	0,03
DC 250	0,25	0,03



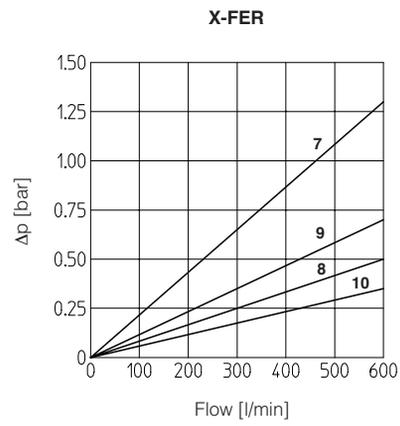
- 1 X-FUI-25/125
- 2 X-FUI-40/125
- 3 X-FUI-100/125



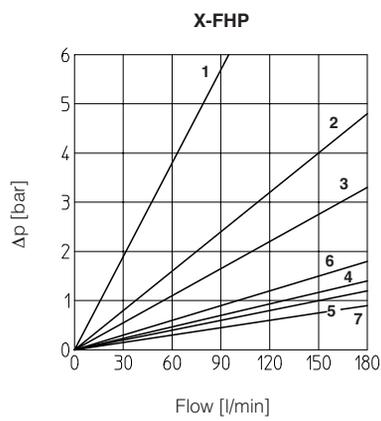
- 4 X-FUI-250/125
- 5 X-FUI-630/125



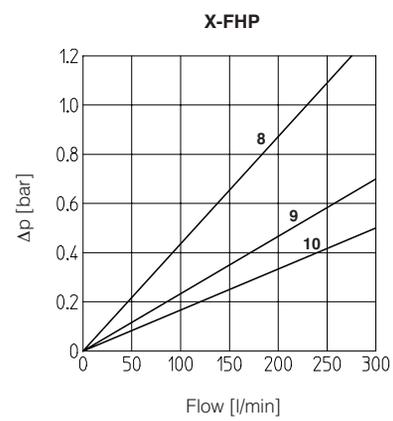
- 1 X-FER-25/10
- 2 X-FER-25/25
- 3 X-FER-40/10
- 4 X-FER-40/25
- 5 X-FER-100/10
- 6 X-FER-100/25



- 7 X-FER-250/10
- 8 X-FER-250/25
- 9 X-FER-630/10
- 10 X-FER-630/25



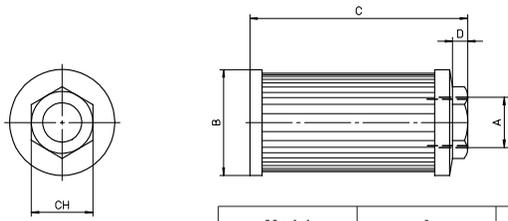
- 1 X-FHP-65/03
- 2 X-FHP-65/10 e X-FHP-75/03
- 3 X-FHP-65/25
- 4 X-FHP-75/10
- 5 X-FHP-75/25 e X-FHP-135/10
- 6 X-FHP-135/03
- 7 X-FHP-135/25



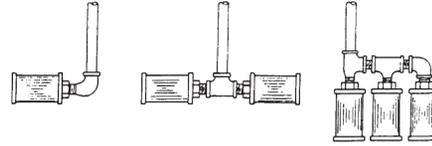
- 8 X-FHP-320/03
- 9 X-FHP-320/10
- 10 X-FHP-320/25

6 DIMENSIONS [mm]

X-FUI

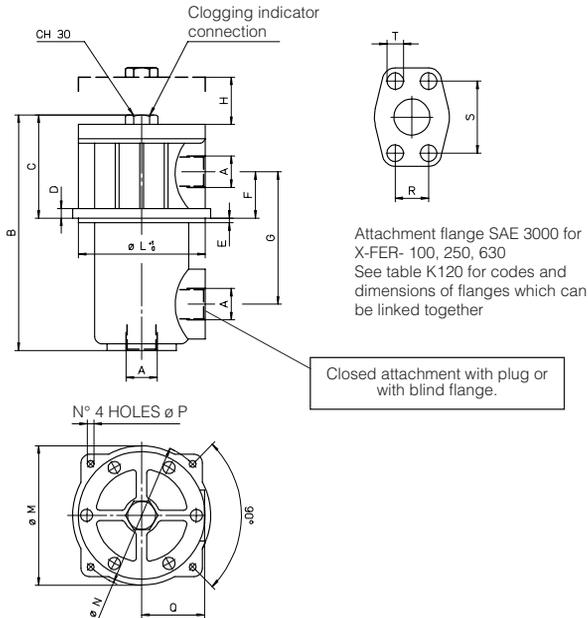


Installation examples

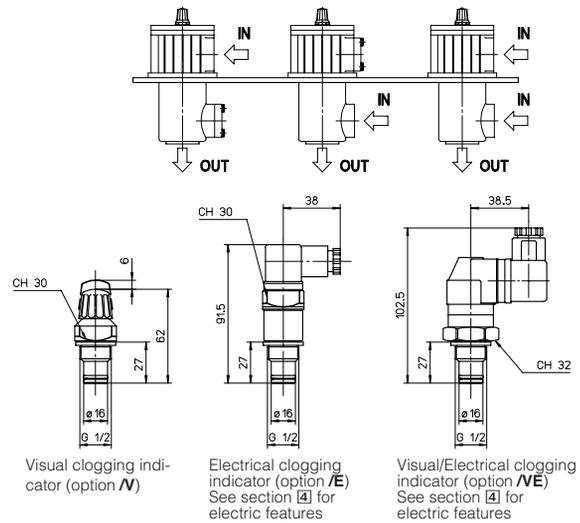


Model	A	B	C	D	CH	Mass [Kg]
X-FUI-25	G 1/2"	52	78	10	30	0,16
X-FUI-40	G 3/4"	70	95	10	42	0,22
X-FUI-100	G 1"	70	140	10	42	0,30
X-FUI-250	G 1 1/2"	99	225	15	69	0,68
X-FUI-630	G 2 1/2"	130	270	20	101	1,25

X-FER

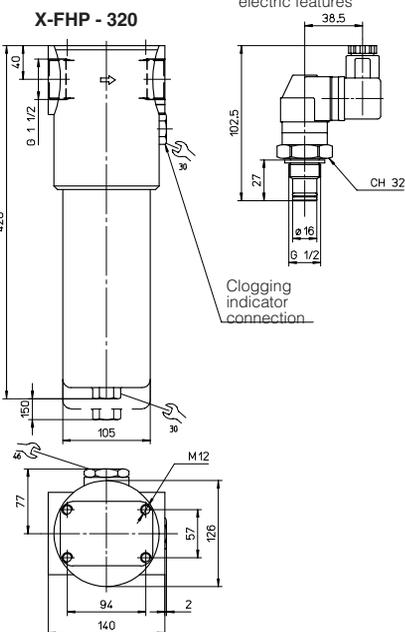
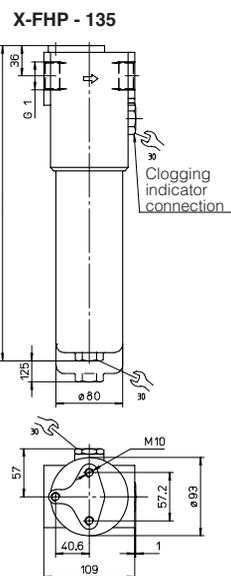
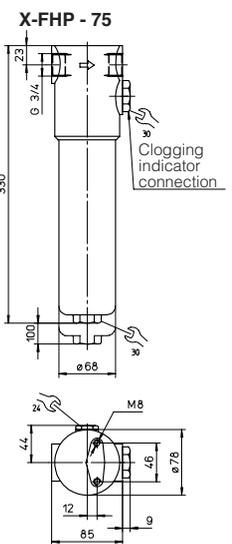
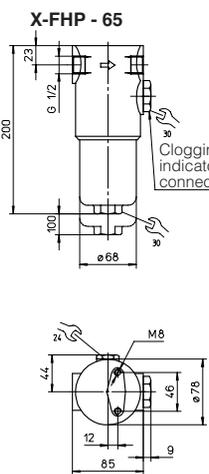


Installation examples



Model	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	Mass [Kg]
X-FER-25	G 1/2"	150	85	5	3	19	62,5	105	83,5	89	95	5,5	44	-	-	-	1
X-FER-40	G 3/4"	190	98	8	3,5	36	105	110	121	132	138	6,5	57	-	-	-	2,5
X-FER-100	flangia SAE 3000 1"	260	120	10	5	49	140	155	135	146	154	6,5	67	26,19	52,37	M10	3,8
X-FER-250	flangia SAE 3000 1 1/2"	345	145	10	5	58	177	240	162	174	180	8,5	82	35,71	69,85	M12	6,3
X-FER-630	flangia SAE 3000 2 1/2"	400	190	13	10	79	218	275	237	253	275	10,5	117,5	50,80	88,90	M12	13,8

X-FHP



Visual/Electrical clogging indicator (option **/VE**)
See section [4] for electric features

Model	X-FHP-65	X-FHP-75	X-FHP-135	X-FHP-320
Net weight [Kg]	3,9	5,7	9,4	16,5