



## UFI FILTERS

Filtri Oleodinamici

Filtri in aspirazione



 HYDRAULIC  
COMPONENTS  
& FLUID CONTAMINATION  
CONTROL



# CAL

## SUCTION FILTERS



### DESCRIPTION

In-line suction element

### MATERIALS

Housing: Zinc plated steel

### FLOW RATE

Qmax 100 l/min

### WORKING TEMPERATURE

From -25° to +110° C

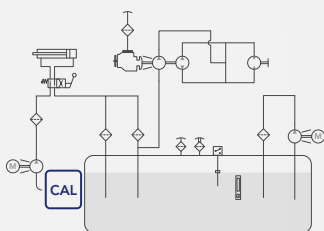
### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HV-HTG  
(according to ISO 6743/4)

For fluids different than the above mentioned,  
please contact our Customer Service.



### HYDRAULIC DIAGRAM

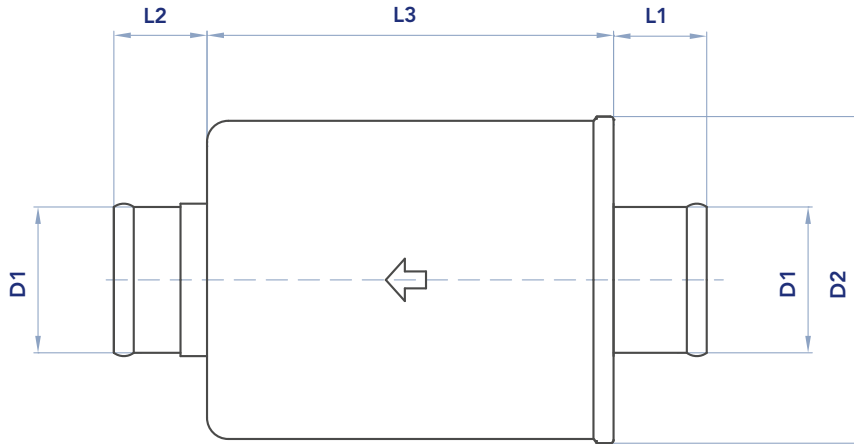


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# CAL

## SUCTION FILTERS

### INSTALLATION DRAWING



### FILTER HOUSING

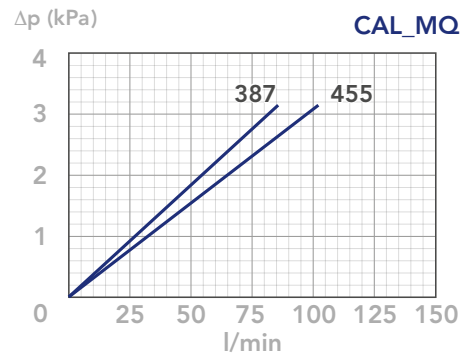
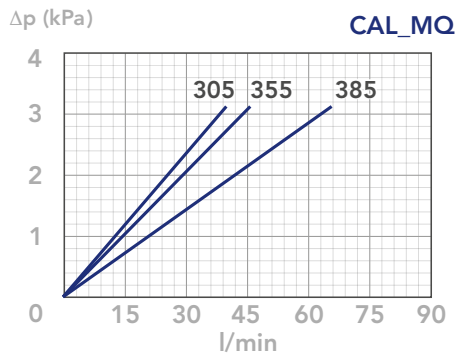
	Nominal Flow Rate l/min	Filter Media	D1	D2	L1	L2	L3	kg
CAL305MQ	40	FormulaUFI.WEB 160 µm	30	72	23	23	100	0,35
CAL355MQ	45	FormulaUFI.WEB 160 µm	35	80	22	22	96	0,35
CAL385MQ	65	FormulaUFI.WEB 160 µm	38	72	22	22	102	0,35
CAL387MQ	85	FormulaUFI.WEB 160 µm	38	72	23	23	160	0,40
CAL455MQ	100	FormulaUFI.WEB 160 µm	45	100	32	42	139	0,65

### MAINTENANCE

The best time to change your filter element is just before it reaches its maximum dirt-holding capacity. When it is time to change the filter element, switch off the system before removing the element. Remove the dirty filter element and replace it with an original UFI Hydraulics element, verifying the part number on the filter can or in the ordering and option chart.

N.B. The exhausted filter elements and the oil dirty filter parts are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorized Companies. We recommend the stocking of a spare UFI Hydraulics filter element for timely replacement when required.

### PRESSURE DROP CURVES (ΔP)



### N.B.

The references fluid has a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>.

For different oil viscosity please contact our Customer Service for further information.



# ESA-ESB

## SUCTION FILTERS



### DESCRIPTION

Suction strainer

### MATERIALS

Connector: Polyamide (Aluminum for ESA & ESB 51 - 52)  
End cap: Polyamide (Zinc plated steel for ESA & ESB 51 - 52)  
Bypass valve: (ESA) Polyamide  
Magnetic core: (ESB) Syntherized magnetic material

### PRESSURE

Collapse, differential: 100 kPa (1 bar)

### BYPASS VALVE

Setting: 30 kPa (0,3 bar)  $\pm$  10%

### FLOW RATE

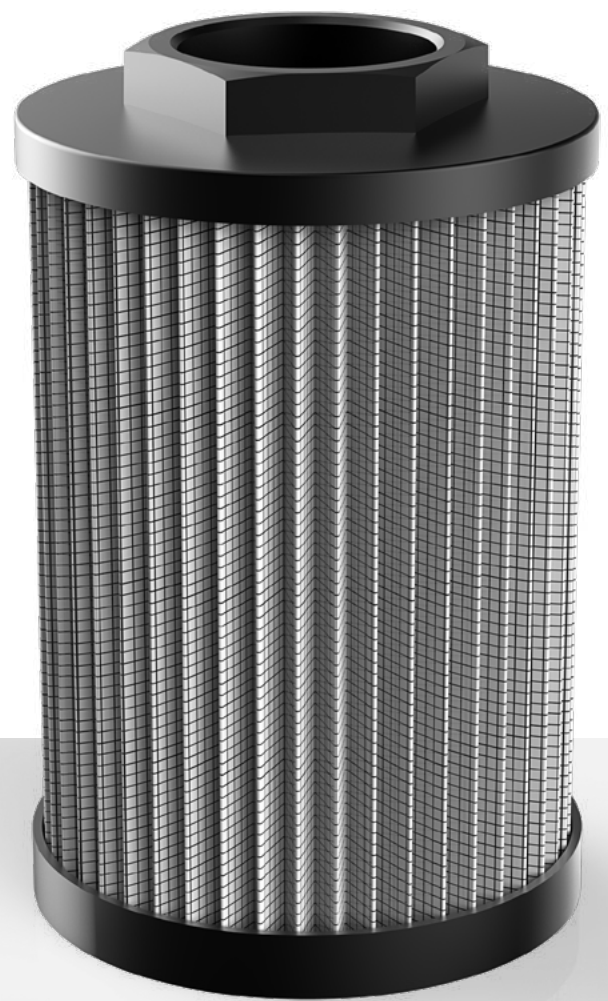
Qmax 600 l/min

### WORKING TEMPERATURE

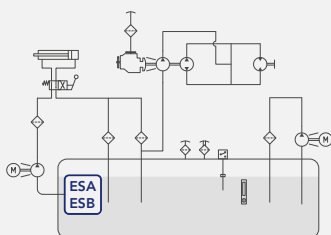
From -25° to +110° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HR-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above mentioned,  
please contact our Customer Service.



### HYDRAULIC DIAGRAM



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### ORDERING AND OPTION CHART

E	S	A	FILTER ELEMENT FAMILY													
			<b>SIZE &amp; LENGTH</b>	<b>11</b>	<b>21</b>	<b>2A</b>	<b>22</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>51</b>	<b>52</b>
			<b>PORT TYPE</b>													
			B = BSP thread	B	B	B	B	B	B	B	B	B	B	B	B	B
			N = NPT thread	N	N	N	N	N	N	N	N	N	N	N	-	-
			<b>PORT SIZE</b>													
			03 = 3/8"	03	-	-	-	-	-	-	-	-	-	-	-	-
			04 = 1/2"	04	04	04	-	-	-	-	-	-	-	-	-	-
			06 = 3/4"	-	06	06	-	-	-	-	-	-	-	-	-	-
			08 = 1"	-	-	-	08	-	-	-	-	-	-	-	-	-
			10 = 1" 1/4	-	-	-	-	10	10	10	-	-	-	-	-	-
			12 = 1" 1/2	-	-	-	-	12	12	12	12	12	-	-	-	-
			16 = 2"	-	-	-	-	-	-	16	16	16	16	-	-	-
			20 = 2" 1/2	-	-	-	-	-	-	-	-	-	20	-	-	-
			24 = 3"	-	-	-	-	-	-	-	-	-	24	24	-	-
			28 = 3" 1/2	-	-	-	-	-	-	-	-	-	-	-	28	-
			32 = 4"	-	-	-	-	-	-	-	-	-	-	-	-	32
			<b>BYPASS VALVE</b>													
			W = without	W	W	W	W	W	W	W	W	W	W	W	W	W
			A = 30 kPa (0,3 bar)	D	D	D	D	D	D	D	D	D	D	D	D	D
			<b>FormulaUFI MEDIA</b>													
			ME = FormulaUFI.WEB 60 µm	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME
			MF = FormulaUFI.WEB 90 µm	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
			MG = FormulaUFI.WEB 250 µm	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG



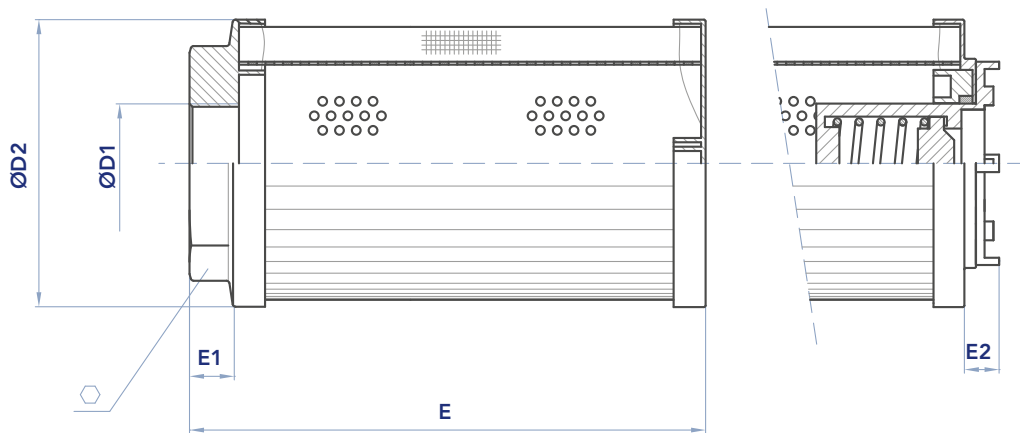
### ORDERING AND OPTION CHART

E	S	B	FILTER ELEMENT FAMILY													
			<b>SIZE &amp; LENGTH</b>	<b>11</b>	<b>21</b>	<b>2A</b>	<b>22</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>51</b>	<b>52</b>
			<b>PORT TYPE</b>													
			B = BSP thread	B	B	B	B	B	B	B	B	B	B	B	B	B
			N = NPT thread	N	N	N	N	N	N	N	N	N	N	N	-	-
			<b>PORT SIZE</b>													
			03 = 3/8"	03	-	-	-	-	-	-	-	-	-	-	-	-
			04 = 1/2"	04	04	04	-	-	-	-	-	-	-	-	-	-
			06 = 3/4"	-	06	06	-	-	-	-	-	-	-	-	-	-
			08 = 1"	-	-	-	08	-	-	-	-	-	-	-	-	-
			10 = 1" 1/4	-	-	-	-	10	10	10	-	-	-	-	-	-
			12 = 1" 1/2	-	-	-	-	12	12	12	12	12	-	-	-	-
			16 = 2"	-	-	-	-	-	-	16	16	16	16	-	-	-
			20 = 2" 1/2	-	-	-	-	-	-	-	-	-	20	-	-	-
			24 = 3"	-	-	-	-	-	-	-	-	-	24	24	-	-
			28 = 3" 1/2	-	-	-	-	-	-	-	-	-	-	-	28	-
			32 = 4"	-	-	-	-	-	-	-	-	-	-	-	-	32
			<b>BYPASS VALVE</b>													
			X = not available	X	X	X	X	X	X	X	X	X	X	X	X	X
			<b>FormulaUFI MEDIA</b>													
			ME = FormulaUFI.WEB 60 µm	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME	ME
			MF = FormulaUFI.WEB 90 µm	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF	MF
			MG = FormulaUFI.WEB 250 µm	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG	MG

# ESA

## SUCTION FILTERS

### INSTALLATION DRAWING



### FILTER HOUSING

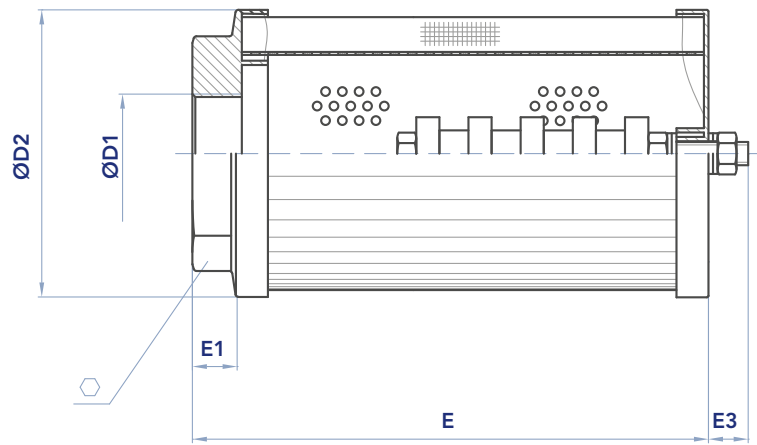
	D1	D2	E	E1	E2	⬡	Kg
ESA11	3/8" - 1/2"	52	73	12	8	30	0,05
ESA21	1/2" - 3/4"	70	92	13	11	42	0,25
ESA2A	1/2" - 3/4"	70	141	13	11	42	0,25
ESA22	1"	70	137	13	11	42	0,25
ESA30	1"1/4 - 1"1/2"	99	135	15	8	70	0,30
ESA31	1"1/4 - 1"1/2"	99	178	15	8	70	0,40
ESA32	1"1/4 - 1"1/2 - 2"	99	218	15	8	70	0,50
ESA40	1"1/2 - 2"	130	160	15	15	101	0,50
ESA41	1"1/2 - 2"	130	201	15	15	101	0,70
ESA42	2" - 2"1/2 - 3"	130	253	15	15	101	1,00
ESA43	3"	130	330	15	15	101	1,30
ESA51	3"1/2"	180	390	35	-	140	2,80
ESA52	4"	180	440	35	-	140	3,00

# ESB

## SUCTION FILTERS



### INSTALLATION DRAWING



### FILTER HOUSING

	D1	D2	E	E1	E3	⬡	Kg
ESB11	3/8" - 1/2"	52	73	12	9	30	0,10
ESB21	1/2" - 3/4"	70	92	13	12	42	0,30
ESB2A	1/2" - 3/4"	70	141	13	12	42	0,30
ESB22	1"	70	137	13	12	42	0,30
ESB30	1"1/4 - 1"1/2	99	135	15	12	70	0,35
ESB31	1"1/4 - 1"1/2	99	178	15	12	70	0,45
ESB32	1"1/4 - 1"1/2 - 2"	99	218	15	14	70	0,60
ESB40	1"1/2 - 2"	130	160	15	14	70	0,60
ESB41	1"1/2 - 2"	130	201	15	14	70	0,80
ESB42	2" - 2"1/2 - 3"	130	253	15	14	101	1,20
ESB43	3"	130	330	15	14	101	1,50
ESB51	3"1/2	180	390	35	14	140	3,00
ESB52	4"	180	440	35	14	140	3,20



# ESA-ESB

## SUCTION FILTERS

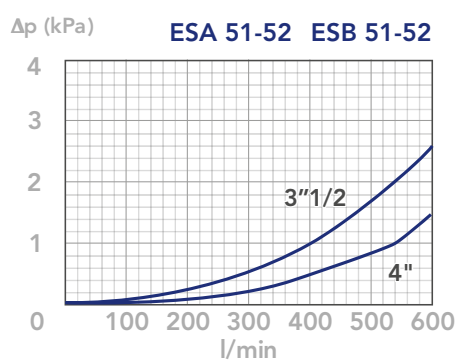
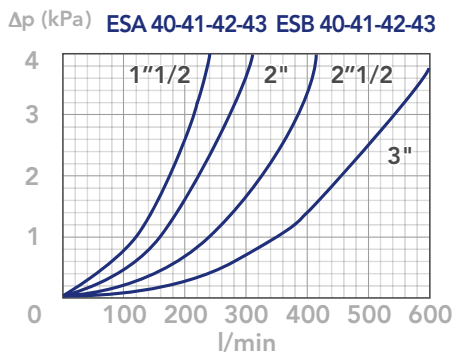
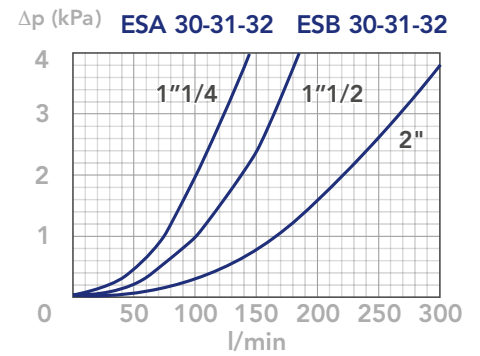
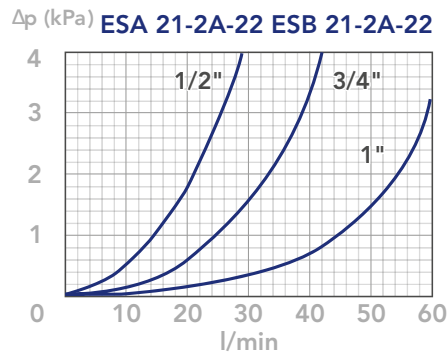
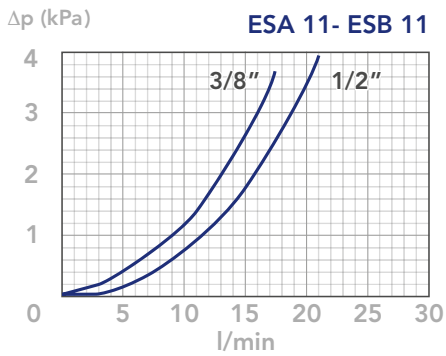
### MAINTENANCE

The best time to change your filter element is just before it reaches its maximum dirt-holding capacity. When it is time to change the filter element, switch off the system before opening the tank. Remove the dirty filter element and replace it with an original UFI Hydraulics element, verifying the part number on the filter cap or in the ordering and option chart. Close the tank.

N.B. The exhausted filter elements and the oil dirty filter parts are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorized Companies. We recommend the stocking of a spare UFI Hydraulics filter element for timely replacement when required.

### PRESSURE DROP CURVES ( $\Delta P$ )

The Pressure Drop ( $\Delta p$ ) must be lower than 3 kPa (0,03 bar).



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.



# FAM

## SUCTION FILTERS

### DESCRIPTION

Suction strainer

### MATERIALS

Connector: Aluminum  
Internal core: Zinc plated steel  
End cap: Zinc plated steel

### PRESSURE

Collapse, differential: 100 kPa (1 bar)

### BYPASS VALVE

Setting: 30 kPa (0,3 bar)  
(not available for FAM130-150)

### FLOW RATE

Qmax 600 l/min

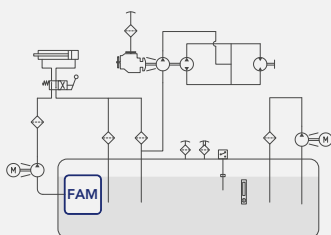
### WORKING TEMPERATURE

From -25° to +110° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HR-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above mentioned,  
please contact our Customer Service.

### HYDRAULIC DIAGRAM



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# FAM

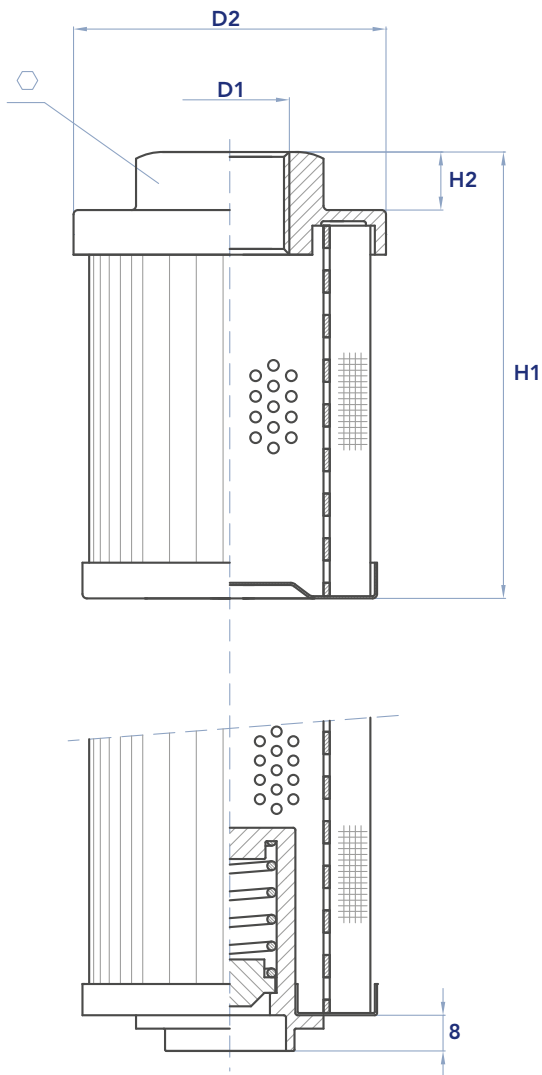
## SUCTION FILTERS

### ORDERING AND OPTION CHART (SOFIMA CODIFICATION)

F	A	M	FILTER ELEMENT FAMILY																				
SIZE & LENGTH			003	004	006	008	011	013	015	020	025	030	040	043	045	050	060	065	075	080	115	130	150
			<b>FormulaUFI MEDIA</b>																				
			MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS	MS
			MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN	MN
			DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC
		<b>X</b>	<b>SEALS</b>																				
			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
			<b>BYPASS VALVE</b>																				
			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	-
		<b>B</b>	<b>PORTS</b>																				
			B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B
			<b>PORT SIZE</b>																				
			2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	5	5	5	-	-	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	6	6	-	6	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	7	-	7	7	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	8	8	8	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	B	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	C
			<b>ACCESSORIES</b>																				
			S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
			<b>QUANTITY PER BOX</b>																				
			24	24	15	15	15	15	12	6	12	6	6	6	12	6	6	6	6	6	1	1	1



## INSTALLATION DRAWING



## SUCTION STRAINER

	D1	D2	H1	H2	⬡	Kg	Area (cm <sup>2</sup> ) Media M+
FAM003	3/8"	52	80	10	30	0,14	240
FAM004	1/2"	52	80	10	30	0,20	285
FAM006	1/2"	71	100	13	42	0,60	495
FAM008	3/4"	71	100	13	42	0,26	495
FAM011	3/4"	71	145	13	42	0,29	770
FAM013	1"	71	145	13	42	0,23	770
FAM015	1"	96	100	13	60	0,37	590
FAM020	1"	96	135	13	60	0,54	840
FAM025	1" 1/4	96	100	13	60	0,42	590
FAM030	1" 1/4	96	220	13	60	0,65	1450
FAM040	1" 1/2	96	220	13	60	0,60	1450
FAM043	1" 1/4	96	135	13	75	0,50	840
FAM045	1" 1/2	140	115	13	75	1,44	1160
FAM050	1" 1/2	140	155	13	75	1,50	1640
FAM060	2"	140	155	13	75	1,42	1640
FAM065	2"	140	215	13	75	1,37	2360
FAM075	2"	140	265	13	75	1,33	2960
FAM080	2" 1/2	140	277	25	101	1,35	2960
FAM115	3"	140	325	25	101	1,28	3255
FAM130	3" 1/2	180	390	35	140	2,87	6600
FAM150	4"	180	440	35	140	2,79	7545

# FAM

## SUCTION FILTERS



### MAINTENANCE

The best time to change your filter element is just before it reaches its maximum dirt-holding capacity. When it is time to change the filter element, switch off the system before opening the tank.

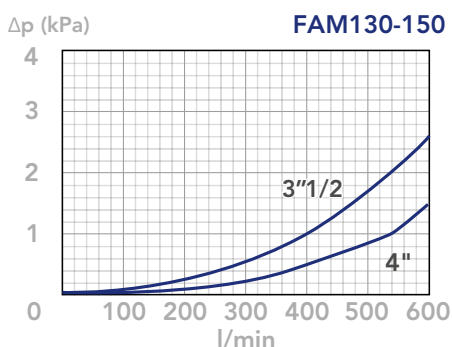
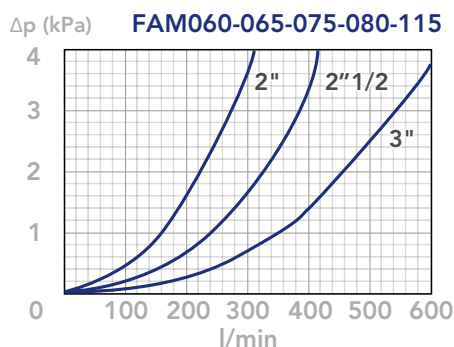
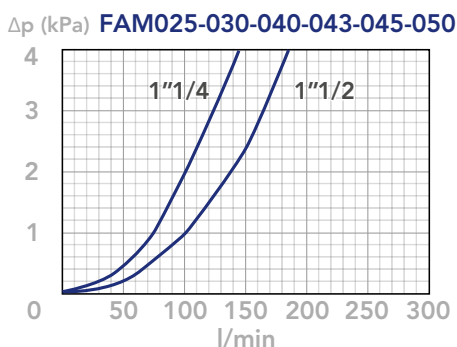
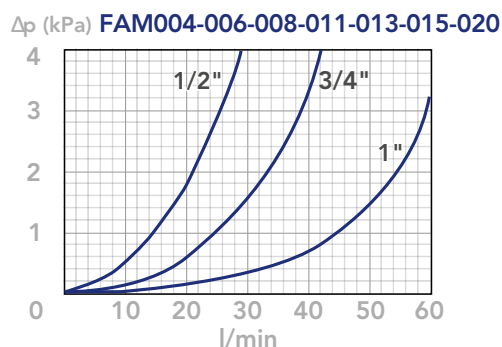
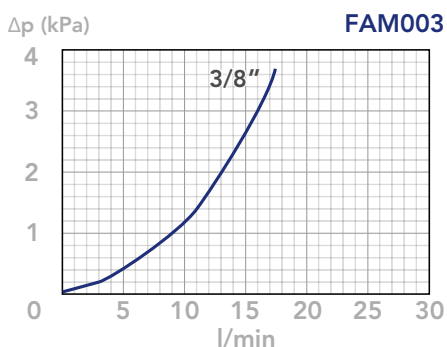
Remove the dirty filter element and replace it with an original UFI Hydraulics element, verifying the part number on the filter cap or in the ordering and option chart. Close the tank.

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We recommend the stocking of a spare UFI Hydraulics filter element for timely replacement when required.

### PRESSURE DROP CURVES ( $\Delta p$ )

The Pressure Drop ( $\Delta p$ ) must be lower than 3 kPa (0,03 bar).



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.



# FMA

## SUCTION FILTERS

### DESCRIPTION

Multipurpose filter

### MATERIALS

Housing: Aluminum alloy  
Bowl: Cold formed steel  
Seals: NBR Nitrile (FKM Fluoroelastomer on request)  
Indicator housing: Brass

### PRESSURE

Max working: 0,7 MPa (7 bar)  
Collapse, differential for the filter element (ISO 2941): 300 kPa (3 bar)

### FLOW RATE

Qmax 600 l/min

### WORKING TEMPERATURE

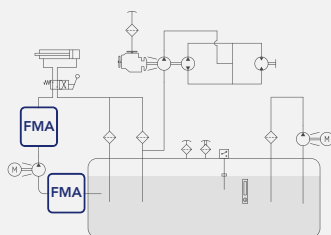
From -25° to +110° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above mentioned,  
please contact our Customer Service.



### HYDRAULIC DIAGRAM



Is this datasheet the latest release? Please check on our website

# FMA

## SUCTION FILTERS



### ORDERING AND OPTION CHART

F	M	A	COMPLETE FILTER FAMILY						FILTER ELEMENT FAMILY	E	M	A
			<b>SIZE &amp; LENGTH</b>	11	21	22	31	32	<b>SIZE &amp; LENGTH</b>			
		<b>B</b>	<b>PORT TYPE</b>									
			B = BSP thread	B	B	B	B	B				
			<b>PORT SIZE</b>									
			04 = 1/2"	04	-	-	-	-				
			06 = 3/4"	-	06	-	-	-				
			08 = 1"	-	-	08	-	-				
			10 = 1" 1/4	-	-	-	10	-				
			12 = 1" 1/2	-	-	-	-	12				
		<b>X</b>	<b>BYPASS VALVE</b>									
			X = not available	B	B	B	B	B				
			<b>SEALS</b>						<b>SEALS</b>			
			N = NBR Nitrile	N	N	N	N	N				
			F = FKM Fluoroelastomer	F	F	F	F	F				
			G = Treatment for water-glycol	G	G	G	G	G				
			<b>FormulaUFI MEDIA</b>						<b>FormulaUFI MEDIA</b>			
			CC = FormulaUFI.CELL 10 µm β>2	CC	CC	CC	CC	CC				
			CD = FormulaUFI.CELL 25 µm β>2	CD	CD	CD	CD	CD				
			MD = FormulaUFI.WEB 30 µm	MD	ME	ME	ME	ME				
			ME = FormulaUFI.WEB 60 µm	ME	ME	ME	ME	ME				
			MF = FormulaUFI.WEB 90 µm	MF	MF	MF	MF	MF				
			MG = FormulaUFI.WEB 250 µm	MG	MG	MG	MG	MG				
			WR = FormulaUFI.H2O*	WR	WR	WR	WR	WR				
			<b>CLOGGING INDICATOR</b>									
			0E = nr. 2x1/8" ports, plugged	0E	0E	0E	0E	0E				
			11 = vacuum gauge**	11	11	11	11	11				
			91 = vacuum switch**	91	91	91	91	91				
			33 = pressure gauge, rear connection***	33	33	33	33	33				
			P1 = SPDT, pressure switch***	P1	P1	P1	P1	P1				
			<b>ACCESSORI / ACCESSORIES</b>									
			W = without accessory	W	W	W	W	W				
			B = mounting brackets	B	B	B	B	B				
		<b>X</b>	<b>ACCESSORI / ACCESSORIES</b>									
			X = no accessory available	X	X	X	X	X				

\* Water removal media - see "Hydro Dry" or FormulaUFI chapters  
 \*\* For Suction line  
 \*\*\* For Return and Low Pressure line

### SPARE PARTS

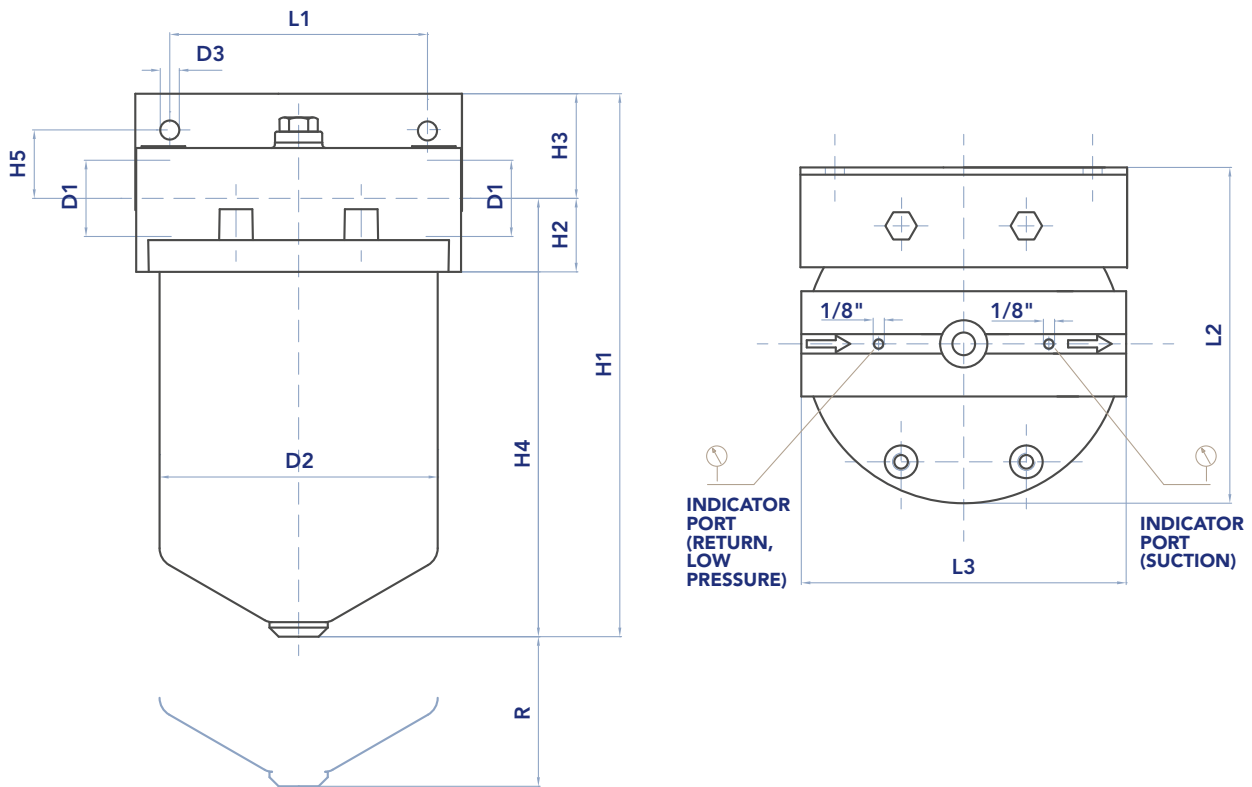
FILTER HOUSING										FILTER ELEMENT					CLOGGING INDICATOR		
B	M	A								E	M	A					



## SPARE SEAL KIT

	NBR	FKM
FMA11	521.0111.2	521.0090.2
FMA21-22	521.0023.2	521.0091.2
FMA31-32	521.0089.2	521.0092.2

## INSTALLATION DRAWING



## FILTER HOUSING

	D1	H1	H2	H3	L1	D2	H4	L2	D3	L3	H5	R	kg
FMA11	1/2"	170	22	38	50	81	132	95	6,5	105	26	20	1,0
FMA21	3/4"	245	37	40	100	114	205	135	8,5	140	24	25	2,0
FMA22	1"	285	37	40	100	114	245	135	8,5	140	24	25	2,5
FMA31	1"1/4	290	40	50	150	155	240	185	10,5	178	28	25	6,0
FMA32	1"1/2	350	40	50	150	155	300	185	10,5	178	28	25	6,5



# FMA

## SUCTION FILTERS



### FILTER ELEMENT

	AREA (cm <sup>2</sup> )					
	A	B	C	Media M+	Media C+	Media WR
EMA11	70	29,5	88	480	1.180	669
EMA21	70	29,5	134	750	1.800	1.036
EMA22	95	41	175	1.650	2.400	2.112
EMA31	140	65,5	145	1.740	4.440	3.181
EMA32	140	65,5	205	2.490	6.390	4.574



### MAINTENANCE

- 1) Stop the system and verify there is no pressure in the filter.
- 2) Collect the oil inside the filter with a suitable container.
- 3) Unscrew the screw (1) to remove the bowl (2). The filter element is assembled on the bottom.
- 4) Empty the bowl (2)
- 5) Remove the dirty filter element (3).  
N.B. The exhausted filter elements and the oil dirty filter parts are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorised Companies.
- 6) Check the filter element part number on the filter label or in the ordering and option chart.  
Use only original spare parts.
- 7) Check the correct position of the gasket (4) and the spring (5) on the central pin (6) in the bowl. Insert the clean element onto the pin, in contact with the gasket  
Lubricate the element o-ring gasket (3) with oil.
- 8) Keep the housing (2) and its gasket (7) against the head (8). Tighten the screw (1) with the washer (9) until the seal between bowl and head is guaranteed.

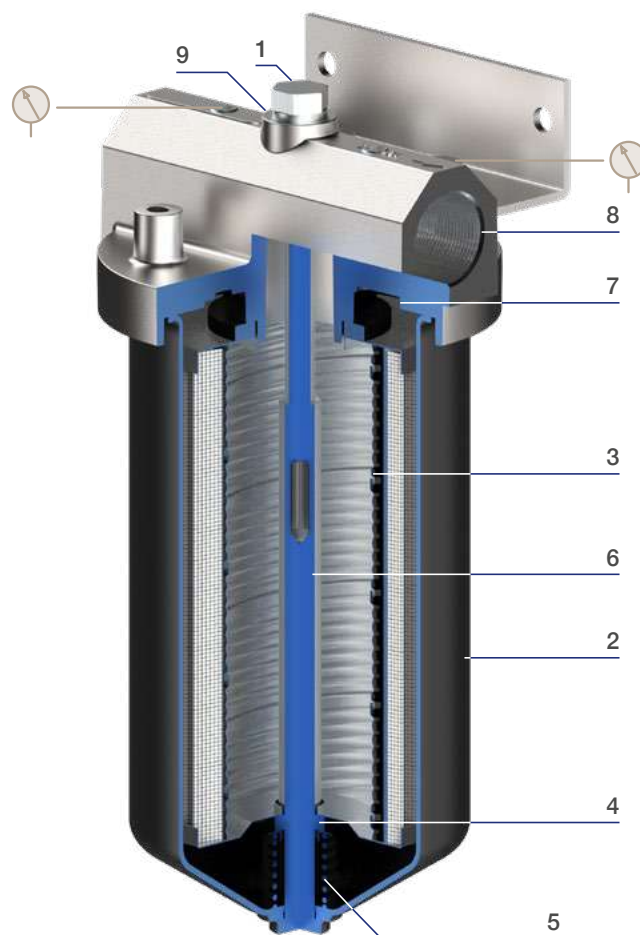
#### Accessories:

Clogging indicator (6).

If damaged, unscrew and replace it (check the part number in the ordering and option chart).

Apply a thread-sealing and screw until tight.

N.B. an over-tightening can damage the thread.

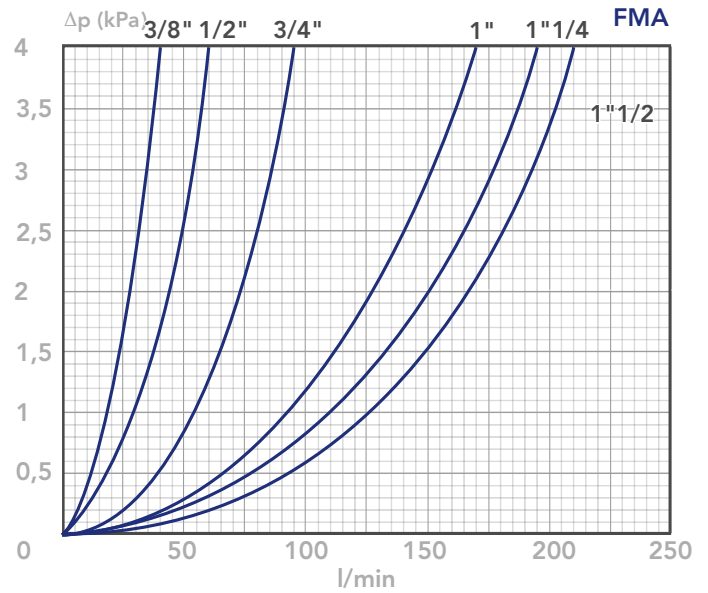




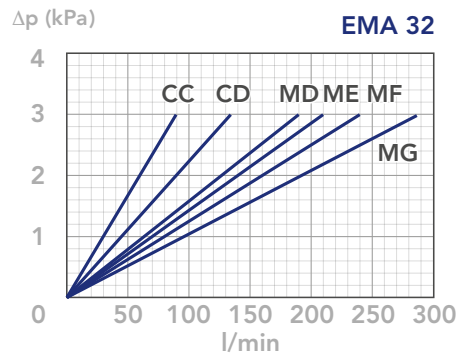
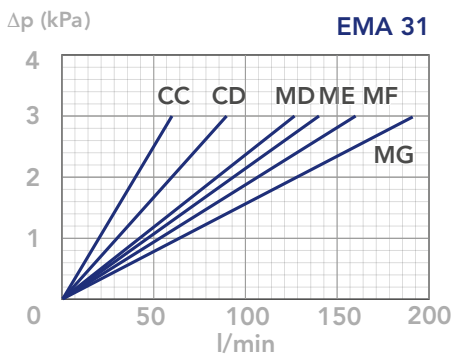
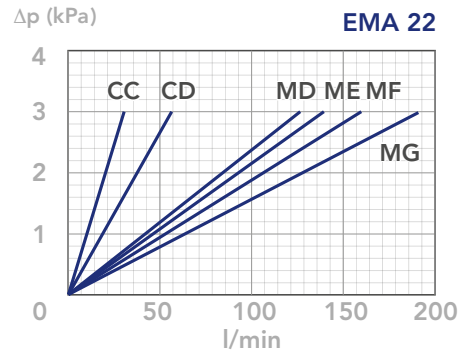
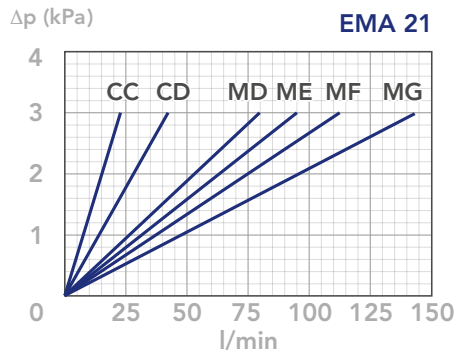
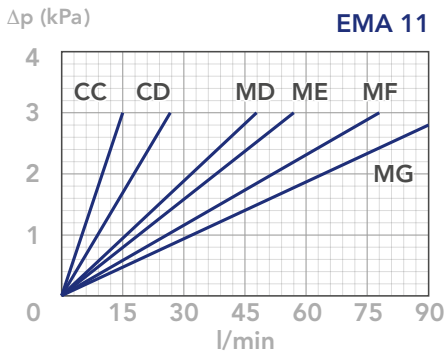
## PRESSURE DROP CURVES ( $\Delta P$ )

The Pressure Drop ( $\Delta p$ ) must be lower than 3 kPa (0,03 bar).

FILTER HOUSING PRESSURE DROP  
(mainly depending on the port size)



CLEAN FILTER ELEMENT PRESSURE DROP  
(depending both on the internal diameter of the element and on the filter media)



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.



# FSC

## SUCTION FILTERS

### DESCRIPTION

Suction filter

### MATERIALS

#### FSC31 & FSC41

Cover & head: Aluminum alloy

Bowl: Polyamide

#### FSC71 & FSC81

Cover & housing: Aluminum

#### FSC51 & FSC61

Housing: Steel

Cover: Aluminum

Shut-off valve: Polyamide

Seals: NBR Nitrile

(FKM fluoroelastomer on request)

Indicator housing: Brass

### PRESSURE

Collapse, differential for the filter element: 100 kPa (1 bar)

### FLOW RATE

Q<sub>max</sub> 500 l/min

### WORKING TEMPERATURE

From -25° to +110° C

### COMPATIBILITY (ISO 2943)

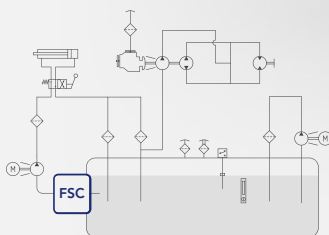
Full with fluids: HH-HL-HM-HV-HTG

(according to ISO 6743/4)

For fluids different than the above mentioned, please contact our Customer Service.



### HYDRAULIC DIAGRAM



Is this datasheet the latest release? Please check on our website



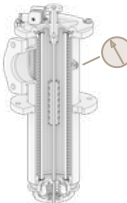

# FSC

## SUCTION FILTERS

### ORDERING AND OPTION CHART

F	S	C	COMPLETE FILTER FAMILY							FILTER ELEMENT FAMILY	E	S	C
			<b>SIZE &amp; LENGTH</b>	31	41	51	61	71	81	<b>SIZE &amp; LENGTH</b>			
			<b>PORT TYPE</b>										
			B = BSP thread	B	B	-	-	-	-				
			F = SAE flange 3000 psi	-	F	F	F	F	F				
			<b>PORT SIZE</b>										
			10 = 1" 1/4	10	-	-	-	-	-				
			12 = 1" 1/2 (B12 only)	-	12	-	-	-	-				
			16 = 2" (F16 only)	-	16	-	-	-	-				
			20 = 2" 1/2 (F20 only)	-	20	-	-	-	-				
			24 = 3"	-	-	24	-	24	-				
			32 = 4"	-	-	-	32	-	32				
		<b>W</b>	<b>BYPASS VALVE</b>										
			W = no bypass	W	W	W	W	W	W				
			<b>SEALS</b>							<b>SEALS</b>			
			N = NBR Nitrile (only for complete filter)	N	N	N	N	N	N				
			F = FKM Fluoroelastomer (only for complete filter)	F	F	F	F	F	F				
			X = not applicable (only for filter element)	X	X	X	X	X	X				
			G = treatment for water-glycol (for filter and element)	G	G	G	G	G	G				
			<b>FormulaUFI MEDIA</b>							<b>FormulaUFI MEDIA</b>			
			ME = FormulaUFI.WEB 60 µm	ME	ME	ME	ME	ME	ME				
			MF = FormulaUFI.WEB 90 µm	MF	MF	MF	MF	MF	MF				
			MG = FormulaUFI.WEB 250 µm	MG	MG	MG	MG	MG	MG				
			<b>CLOGGING INDICATOR</b>										
			01 = 1/8" port, plugged	-	-	-	-	-	01				
			04 = nr.2 x 1/8" seats, plugged	04	04	04	04	04	-				
			10 = vacuum gauge, rear connection	10	10	10	10	10	10				
			91 = SPDT, vacuum switch	91	91	91	91	91	91				
			<b>ACCESSORI / ACCESSORIES</b>										
			W = without	W	W	W	W	W	W				
			M = magnetic core	-	M	M	M	M	M				
			<b>ACCESSORI / ACCESSORIES</b>										
			W = without	W	W	W	W	W	W				
			S = safety switch	-	S	S	S	S	S				

### SPARE PARTS

FILTER HOUSING				FILTER ELEMENT				CLOGGING INDICATOR				ACCESSORIES						
																		
B	S	C		F	W			E	S	C		X						



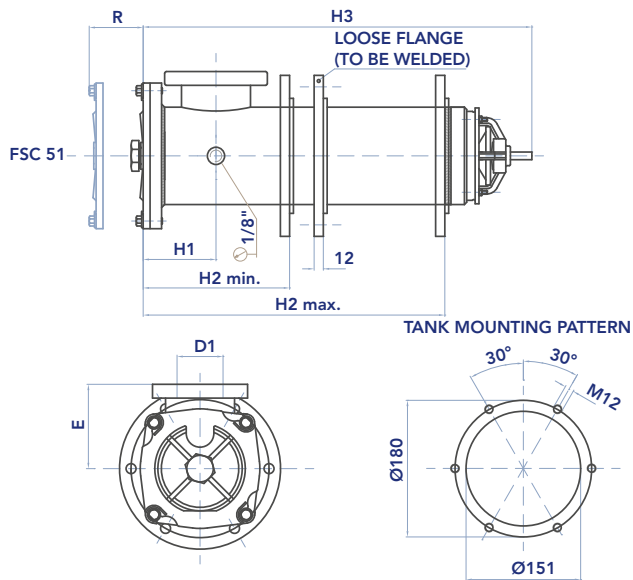
## SPARE SEAL KIT

	NBR	FKM
	NBR	FKM
<b>FSC31</b>	521.0088.2	521.0090.2
<b>FSC41</b>	521.0023.2	521.0091.2
<b>FSC51</b>	521.0089.2	521.0092.2

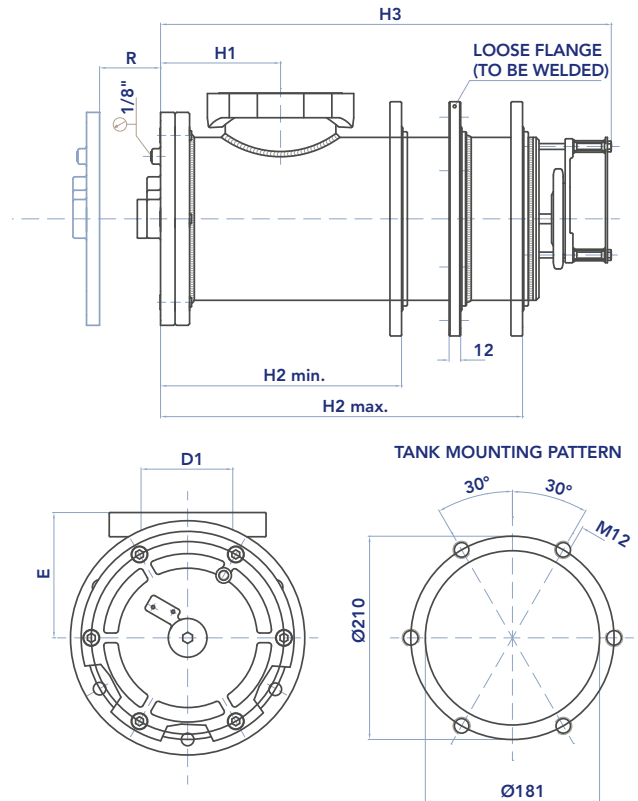
	NBR	FKM
	NBR	FKM
<b>FSC61</b>	521.0024.2	521.0093.2
<b>FSC71</b>	521.0097.2	521.0098.2
<b>FSC81</b>	521.0099.2	521.0100.2

## INSTALLATION DRAWING

### FSC51



### FSC61



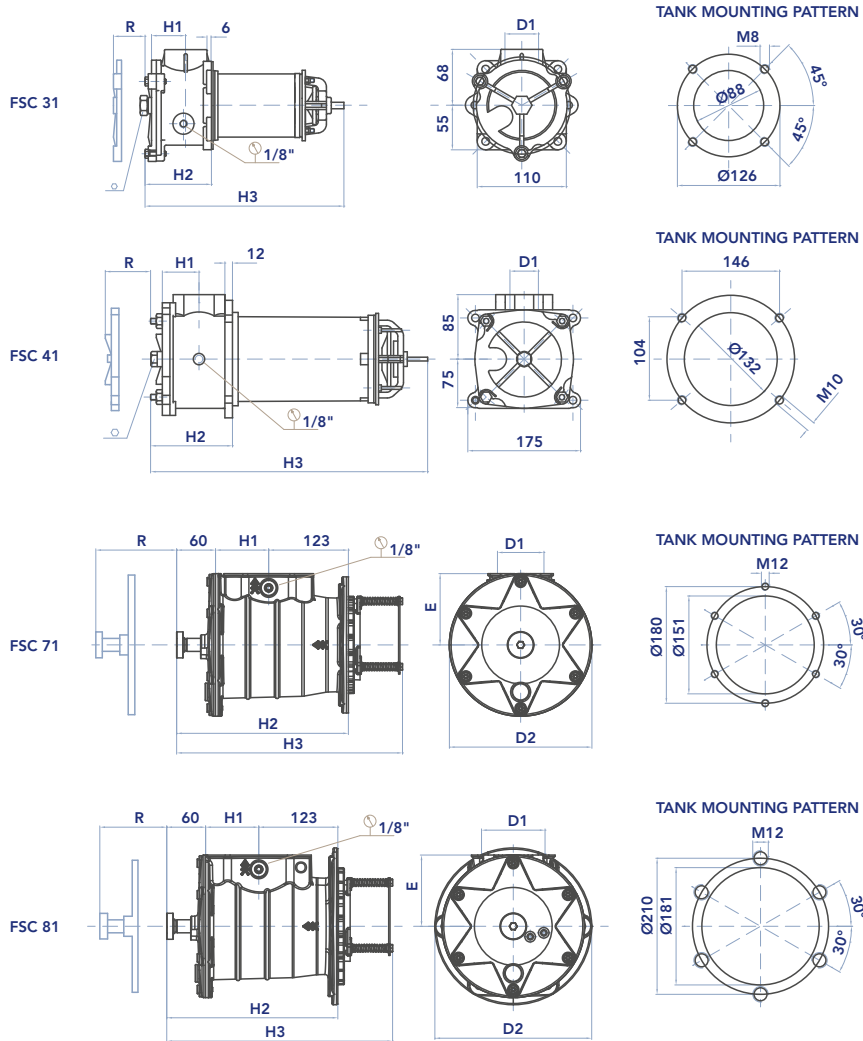
## FILTER HOUSING

	D1	D2	E	H1	H2	H3	R	⬡	kg
<b>FSC31</b>	1"1/4	-	-	42	80	275	250	22	1,6
<b>FSC41</b>	1"1/2 - 2" - 1"1/2	-	-	66	120	322	300	32	3,0
<b>FSC51</b>	3"	210	110	95	174 ÷ 355	480	500	32	13,0
<b>FSC61</b>	4"	242	130	122	250 ÷ 405	470	500	32	16,0
<b>FSC71</b>	3"	220	110	80	265	348,5	250	10	5,5
<b>FSC81</b>	4"	242	110	80	264	348,5	250	10	6,0

# FSC

## SUCTION FILTERS

### INSTALLATION DRAWING

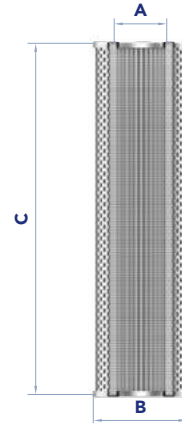


### FILTER HOUSING

	D1	D2	E	H1	H2	H3	R	⬡	kg
FSC31	1"1/4	-	-	42	80	275	250	22	1,6
FSC41	1"1/2 - 2" - 1/2	-	-	66	120	322	300	32	3,0
FSC51	3"	210	110	95	174 ÷ 355	480	500	32	13,0
FSC61	4"	242	130	122	250 ÷ 405	470	500	32	16,0
FSC71	3"	220	110	80	265	348,5	250	10	5,5
FSC81	4"	242	110	80	264	348,5	250	10	6,0

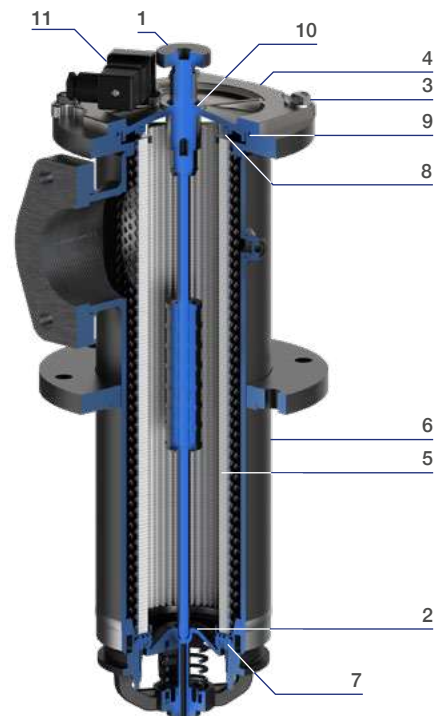
## FILTER ELEMENT

	A	B	C	Kg	AREA (cm <sup>2</sup> ) Media M+
<b>ESC31</b>	29,5	70	163	0,25	1.600
<b>ESC41</b>	65	99	198	0,50	1.845
<b>ESC51</b>	65	99	375	0,90	3.545
<b>ESC61</b>	93	136	375	1,50	5.065
<b>ESC71</b>	77	120	196	0,80	2.400
<b>ESC81</b>	93	136	196	0,90	2.600



## MAINTENANCE

- 1) Stop the system and verify there is no pressure in the filter.
- 2) Unscrew the threaded pin (1) to close the bulkhead (2) on the bottom of filter housing and to prevent oil leakage from the system.
- 3) Collect the oil inside the filter with a suitable container.
- 4) FSC31-FSC41-FSC51 Loosen the nuts/screws (3) on the cover (4). N.B. it is not necessary to disassemble the nuts, use the slots on the cover. FSC61-71-81: Unscrew the screws (3).
- 5) FSC31-FSC41-FSC51 Turn the cover (4) clockwise and remove it. FSC61-71-81: remove the cover (4).
- 6) Remove the dirty filter element (2).  
N.B. The used filter elements and oil dirty filter parts are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorised Companies.
- 7) Check the filter element part number on the filter label or in the ordering and option chart.  
Use only original spare parts.
- 8) Insert the clean element (5) in the housing (6) resting on the bottom gasket (7).  
Lubricate the new element o-ring gasket (3) with oil.
- 9) Check the correct positioning and condition of the gasket (8) and o-ring (9) respectively assembled on the cover (4) and housing (6). Lubricate with oil if necessary. If damaged, check the catalogue or call the customer care service.  
Insert the clean element into its seat with care.
- 10) Position the cover (4) and tighten the screws/nuts (3) until it stops.
- 11) Screw the threaded pin (1) up to the stop on the cover (4). This opens the bulkhead (2) on the bottom and allows the oil inlet from the tank. N.B. The o-Ring (10) ensures the seal between the pin and the cover.



### Accessories:

**Safety switch.** The threaded pin (1) must be completely screwed to close the contact of microswitch (11). If the pin is unscrewed, the microswitch opens. If damaged, check the catalogue or call the customer care service.

**Clogging indicator.** If damaged, unscrew and replace it (check the part number in the ordering and option chart). Apply a thread-sealing and screw until tight.

N.B. an over-tightening can damage the thread.

# FSC

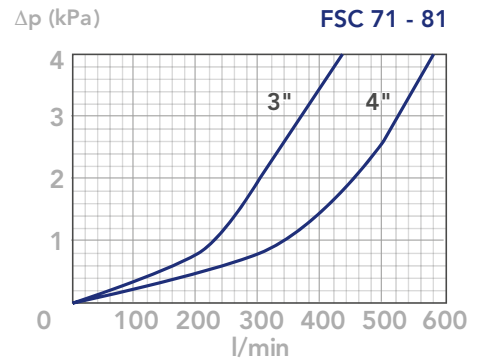
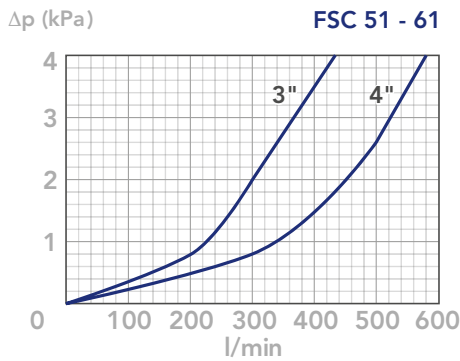
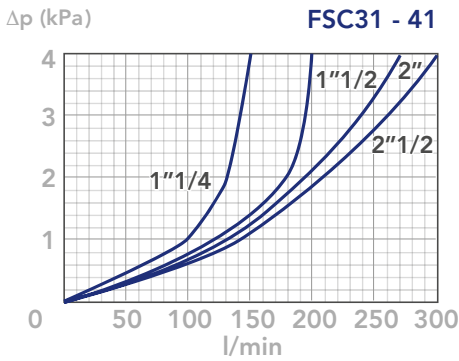
## SUCTION FILTERS



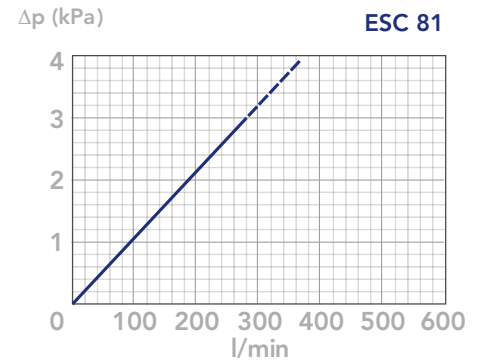
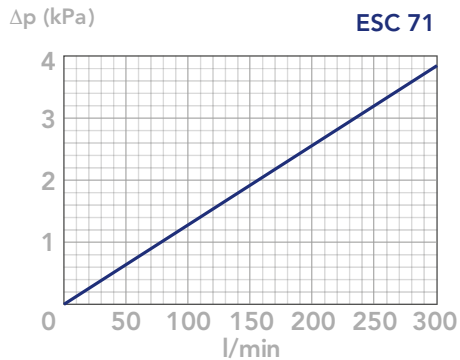
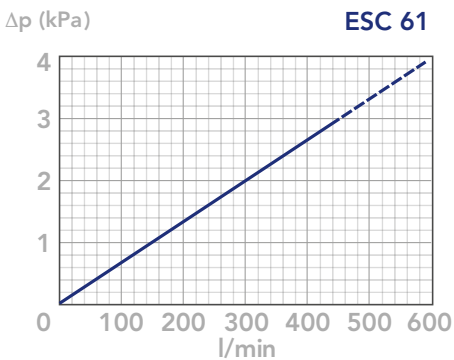
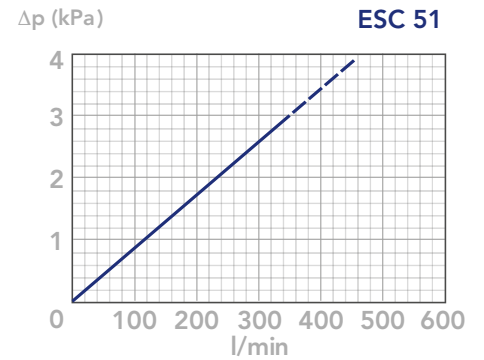
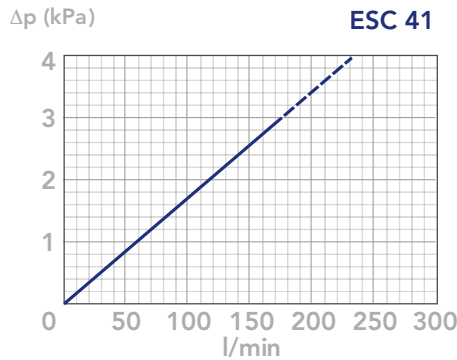
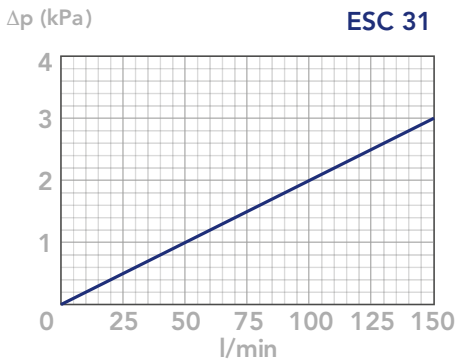
### PRESSURE DROP CURVES ( $\Delta p$ )

The Pressure Drop ( $\Delta p$ ) must be lower than 3 kPa (0,03 bar).

FILTER HOUSING PRESSURE DROP  
(mainly depending on the port size)



CLEAN FILTER ELEMENT PRESSURE DROP  
(pressure drop values of the elements by ME - MF - MG media are very similar)



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.





# FSD

## SUCTION FILTERS



### DESCRIPTION

Suction filter

### MATERIALS

Cover & housing: Anodized aluminum alloy  
For 61&62 only: Cover: anodized aluminum alloy  
Housing: steel  
Bypass valve: Polyamide  
Seals: NBR Nitrile (FKM fluoroelastomer on request)  
Indicator housing: Brass

### PRESSURE

Collapse, differential for filter element: 1 MPa (10 bar)

### BYPASS VALVE

Setting: 35 kPa (0,35 bar)  $\pm$  10%

### FLOW RATE

Qmax 700 l/min

### WORKING TEMPERATURE

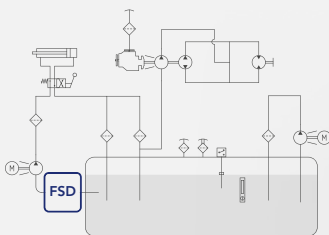
From -25° to +110° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above mentioned,  
please contact our Customer Service.



### HYDRAULIC DIAGRAM



Is this datasheet the latest release? Please check on our website

# FSD

## SUCTION FILTERS



### ORDERING AND OPTION CHART

F	S	D	COMPLETE FILTER FAMILY						FILTER ELEMENT FAMILY	E	R	D	
			<b>SIZE &amp; LENGTH</b>	11	21	31	41	51	61	62	<b>SIZE &amp; LENGTH</b>		
			<b>PORT TYPE</b>										
			B = BSP thread	B	B	B	B	B	-	-			
			N = NPT thread	N	N	N	N	N	-	-			
			S = SAE thread	S	S	S	S	S	-	-			
			F = SAE flange 3000 psi	-	-	F	F	F	F	F			
			<b>PORT SIZE</b>										
			04 = 1/2"	04	-	-	-	-	-	-			
			06 = 3/4"	-	06	-	-	-	-	-			
			08 = 1"	-	-	08	-	-	-	-			
			12 = 1" 1/2 (B12 only)	-	-	-	12	-	-	-			
			20 = 2" 1/2 (F20 only)	-	-	-	-	20	-	-			
			28 = 3" 1/2	-	-	-	-	-	28	-			
			32 = 4"	-	-	-	-	-	-	32			
			<b>BYPASS VALVE</b>										
			W = without bypass	W	W	W	W	W	W	W			
			A = 35 kPa (0,35 bar)	A	A	A	A	A	A	A			
			<b>SEALS</b>										
			N = NBR Nitrile	N	N	N	N	N	N	N	<b>SEALS</b>		
			<b>FormulaUFI MEDIA</b>										
			ME = FormulaUFI.WEB 60 µm	ME	ME	ME	ME	ME	ME	ME	<b>FormulaUFI MEDIA</b>		
			MF = FormulaUFI.WEB 90 µm	MF	MF	MF	MF	MF	MF	MF			
			MG = FormulaUFI.WEB 250 µm	MG	MG	MG	MG	MG	MG	MG			
			<b>CLOGGING INDICATOR</b>										
			08 = 1/8" seat , plugged	08	08	08	08	08	08	08			
			11 = vacuum gauge, bottom connection	11	11	11	11	11	11	11			
			91 = SPDT, vacuum switch	91	91	91	91	91	91	91			
X	X		<b>ACCESSORI / ACCESSORIES</b>										
			XX = no accessory available	XX	XX	XX	XX	XX	XX	XX	XX	XX	

### SPARE PARTS

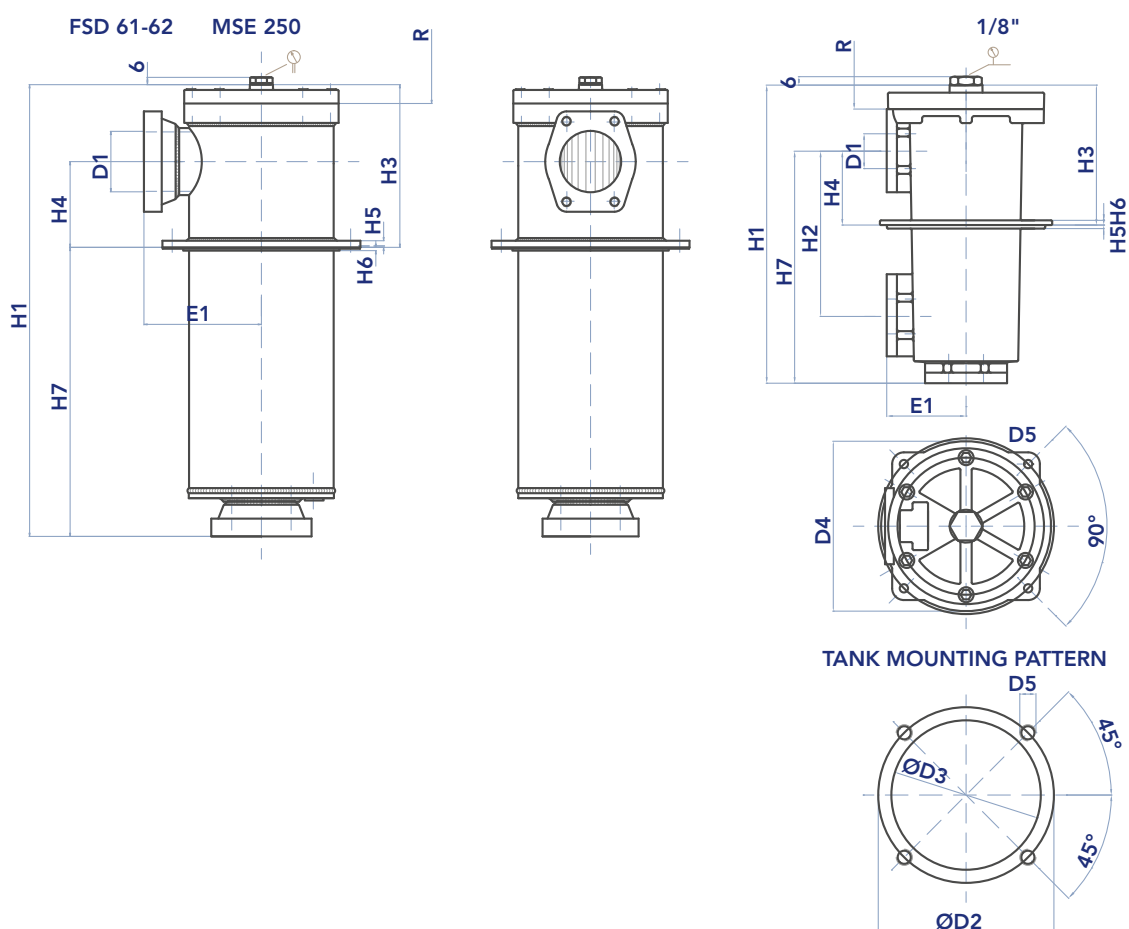
FILTER HOUSING				FILTER ELEMENT				CLOGGING INDICATOR			
B	S	D		E	R	D					



## SPARE SEAL KIT

NBR		NBR		NBR		NBR	
FSD11	521.0045.2	FSD31	521.0047.2	FSD51	521.0048.2	FSD62	521.0049.2
FSD21	521.0046.2	FSD41	521.0031.2	FSD61	521.0049.2		

## INSTALLATION DRAWING

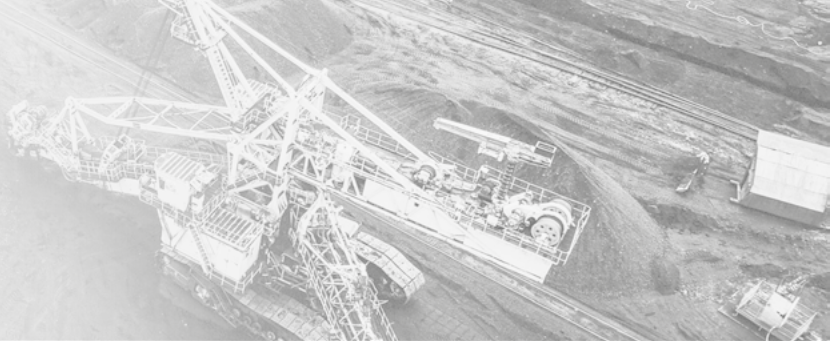


## FILTER HOUSING

	D1	D2	D3	D4	D5	E1	H1	H2	H3	H4	H5	H6	R	Kg
FSD11	1/2"	95	85	90	M5	43	160	62,5	96	31,5	4	3	105	1,3
FSD21	3/4"	138	123	128	M6	57	191	105	100	52	6	3	110	2,6
FSD31	1"	154	137	147	M6	67	250	140	117	63	8	4	155	3,7
FSD41	1"1/2	180	164	174	M8	82	323	177	155	82	8	4	240	6,5
FSD51	2"1/2	275	239	254	M10	117,5	420	218	192	91	10	8	275	14,2
FSD61	3"1/2	-	-	-	-	178	1.130	200	673	457	-	-	525	49,0
FSD62	4"	-	-	-	-	178	1.590	200	1.110	480	-	-	1.020	75,0

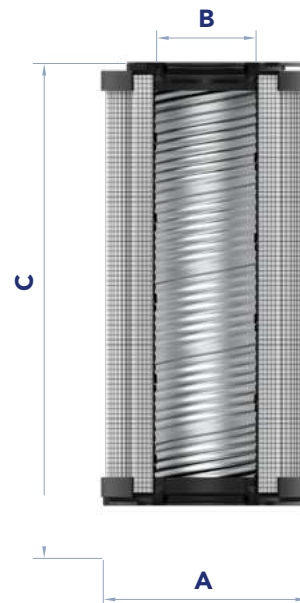
# FSD

## SUCTION FILTERS



### FILTER ELEMENT

	A	B	C	Kg	AREA (cm <sup>2</sup> )
					Media M+
<b>ERD11</b>	52	28/24	70	0,10	245
<b>ERD21</b>	70	34	85	0,20	460
<b>ERD31</b>	70	34	130	0,25	740
<b>ERD41</b>	99	51	211	0,70	2.330
<b>ERD51</b>	130	74	251	1,50	3.340
<b>ERD61</b>	130	74/85	500	2,00	9.860
<b>ERD62</b>	43	96,3	896	3,80	22.000



### MAINTENANCE

- 1) Stop the system and verify there is no pressure in the filter.
- 2) Unscrew the screws (1)
- 3) Remove the cover (2).  
N.B. Don't touch the by-pass valve as its setting must not be changed.  
Collect the oil inside the filter with a suitable container.
- 4) Remove the dirty filter element (3) using the handle.  
N.B. The exhausted filter elements and the oil dirty filter parts are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorised Companies.
- 5) Check the filter element part number on the filter label or in the ordering and option chart.  
Use only original spare parts.
- 6) Lubricate the element o-ring gasket (4) with oil.
- 7) Insert the clean element into its seat (5) with care.
- 8) Check the cover o-ring condition (6) and lubricate with oil.  
If damaged, check the seal kit part number in the spare seal kit table
- 9) Re-assembly the cover (2) and tighten the screws (1).

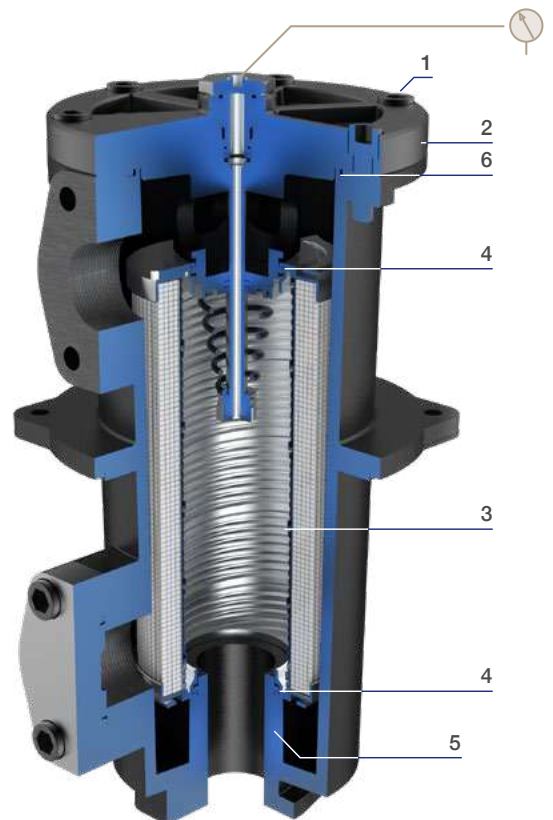
#### Accessories:

Clogging indicator.

If damaged, unscrew and replace it (check the part number in the ordering and option chart).

Apply a thread-sealing and screw until tight.

N.B. an over tightening can damage the thread.

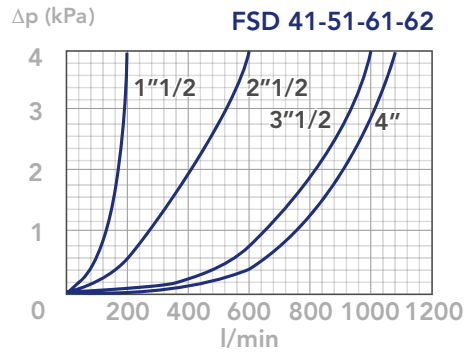
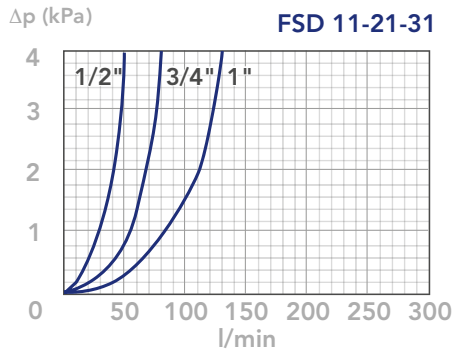




## PRESSURE DROP CURVES ( $\Delta P$ )

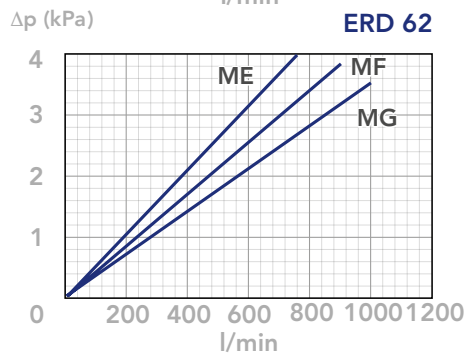
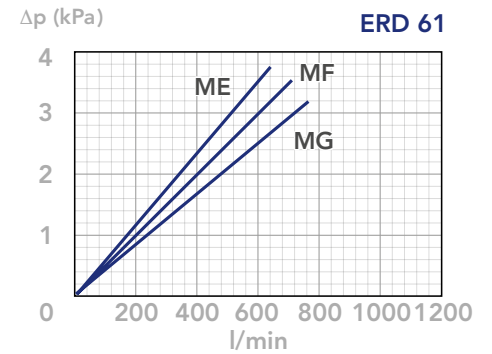
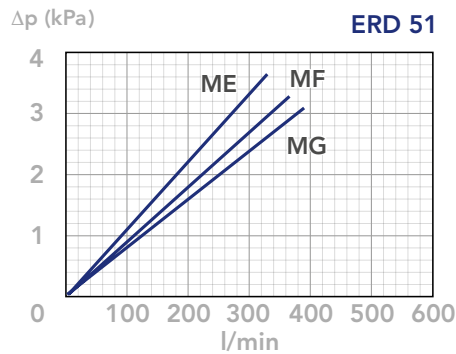
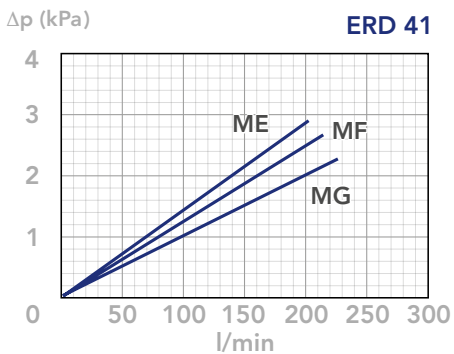
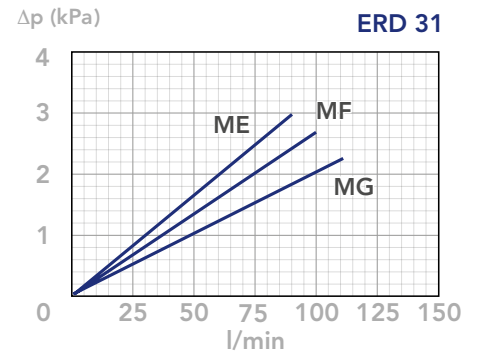
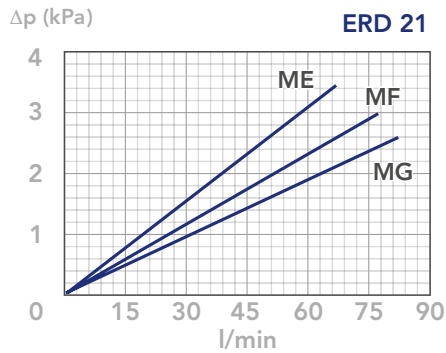
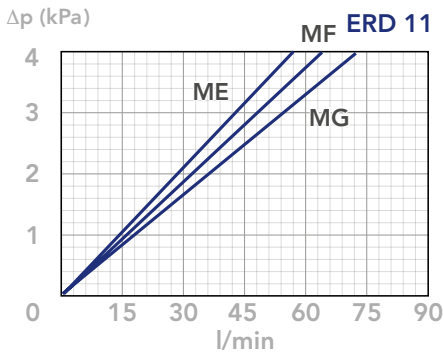
The Pressure Drop ( $\Delta p$ ) must be lower than 3 kPa (0,03 bar).

FILTER HOUSING PRESSURE DROP  
(mainly depending on the port size)



CLEAN FILTER ELEMENT PRESSURE DROP

(depending both on the internal diameter of the element and on the filter media)

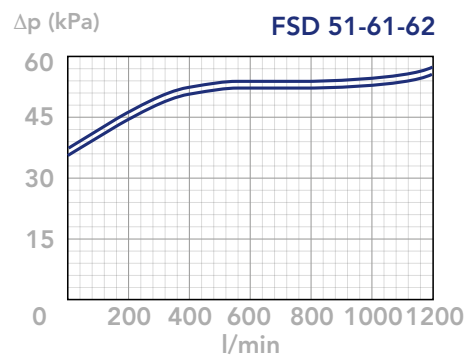
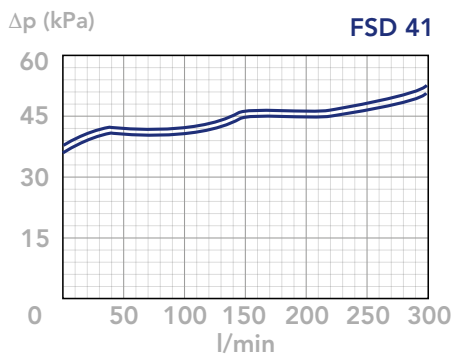
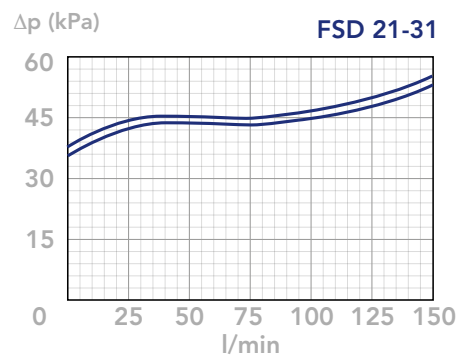
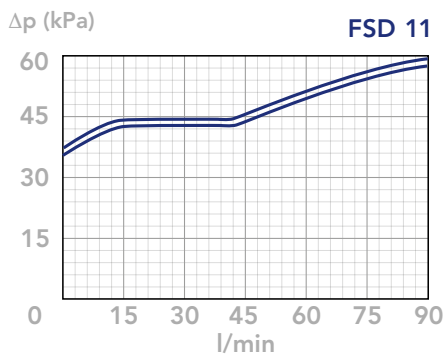


# FSD

## SUCTION FILTERS

### BYPASS VALVE PRESSURE DROP

When selecting the filter size, these curves must be taken into account if it is foreseen that any flow peak is to be absorbed by the bypass valve, it also must be of proper configuration to avoid pressure peaks. The valve pressure drop is directly proportional to fluid specific gravity.



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.



# FSE

## SUCTION FILTERS

### DESCRIPTION

Suction spin-on filter

### MATERIALS

Head: Aluminum alloy  
Spin-on cartridge: Steel  
Bypass valve: Polyamide  
Seals: NBR Nitrile (FKM Fluoroelastomer on request)  
Indicator housing: Brass

### PRESSURE

Collapse, differential for filter element: 400 kPa (4 bar)

### BYPASS VALVE

Setting: 30 kPa (0,30 bar)  $\pm$  10%

### FLOW RATE

Qmax 75 l/min

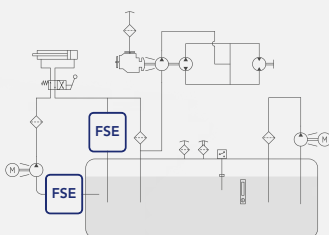
### WORKING TEMPERATURE

From -25° to +110° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HV-HTG (according to ISO 6743/4)  
For fluids different than the above mentioned,  
please contact our Customer Service.

### HYDRAULIC DIAGRAM



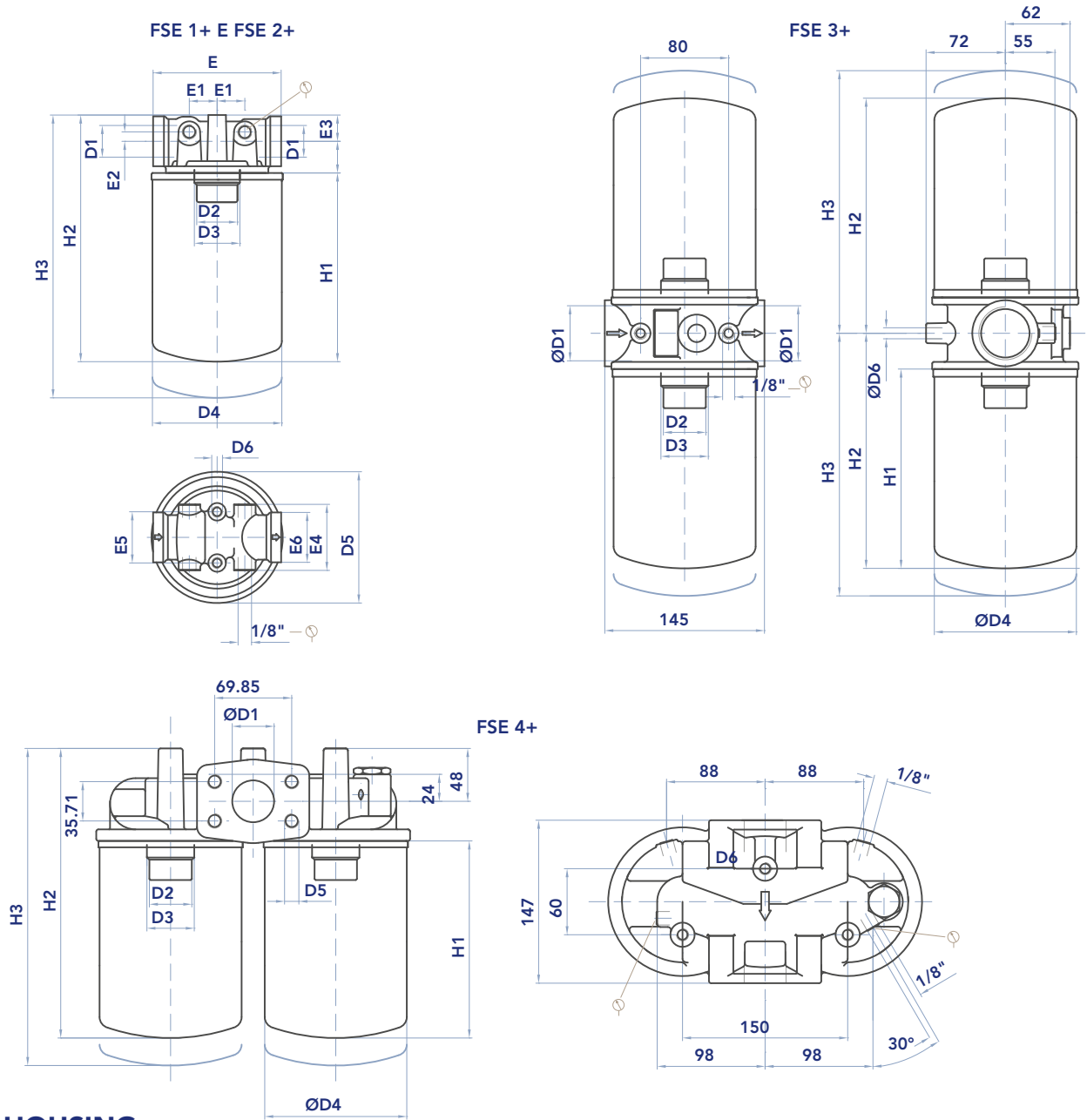
Is this datasheet the latest release? Please check on our website







# INSTALLATION DRAWING



## FILTER HOUSING

	D1	D2	D3	D4	D5	D6	E	E1	E2	E3	E4	E5	E6	H1	H2	H3	Kg
FSE11	3/4"	3/4"BSP	-	96	96	M8	95	20,5	7	20	49	38	37	145	188	208	1,2
FSE12	3/4"	3/4"BSP	-	96	96	M8	95	20,5	7	20	49	38	37	191	234	254	1,5
FSE21	1"1/4	1"1/2 16-UN	1"1/4 BSP	129	134	M8	133	35	10	30	64	50	57	181	248	278	1,9
FSE22	1"1/4	1"1/2 16-UN	1"1/4 BSP	129	134	M8	133	35	10	30	64	50	57	226	293	323	2,0
FSE31	1"1/2	1"1/2 16-UN	1"1/4 BSP	129	-	M10	-	-	-	-	-	-	-	181	216	246	3,6
FSE32	1"1/2	1"1/2 16-UN	1"1/4 BSP	129	-	M10	-	-	-	-	-	-	-	226	261	291	3,8
FSE41	1"1/2	1"1/2 16-UN	1"1/4 BSP	129	M12	M10	-	-	-	-	-	-	-	181	269	299	4,8
FSE42	1"1/2	1"1/2 16-UN	1"1/4 BSP	129	M12	M10	-	-	-	-	-	-	-	226	314	344	5,0

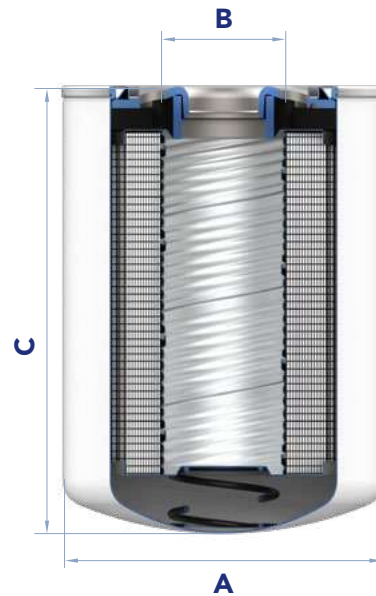
# FSE

## SUCTION FILTERS



### FILTER ELEMENT

	A	B	C	KG	AREA (cm <sup>2</sup> )	
					Media M+	Media C+
<b>ESE11</b>	96,5	3/4" BSP	146	0,70	980	3.305
<b>ESE12</b>	96,5	3/4" BSP	191	0,80	1.390	4.745
<b>ESE21</b>	129	1"1/4 BSP	181	1,20	1.940	5.560
<b>ESE22</b>	129	1"1/4 BSP	226	1,40	2.570	7.360



### MAINTENANCE

- 1) Stop the system and verify there is no pressure in the filter.
- 2) Collect the oil inside the filter with a suitable container.
- 3) Unscrew the dirty filter element (1).  
N.B. The exhausted filter elements and the oil dirty filter parts are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorized Companies.
- 4) Check the filter element part number on the silk-screen printing or in the ordering and option chart.  
Use only original spare parts.
- 5) Lubricate the element o-ring gasket with oil.
- 6) Screw the clean filter element until the first contact of the gasket with the flange.
- 7) Tighten strongly for  $\frac{3}{4}$  of a turn (indicative tightening torque of 18 Nm).

Accessories:

Clogging indicator.

If damaged, unscrew and replace it (check the part number in the ordering and option chart).

Apply a thread-sealing and screw until tight.

N.B. An over-tightening can damage the thread.



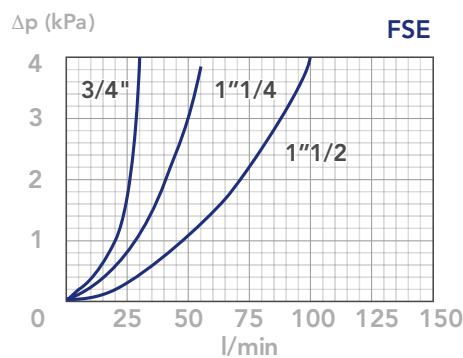


## PRESSURE DROP CURVES ( $\Delta P$ )

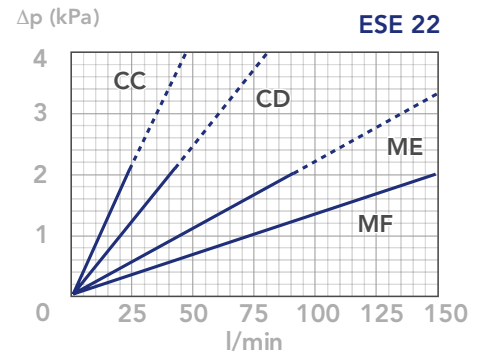
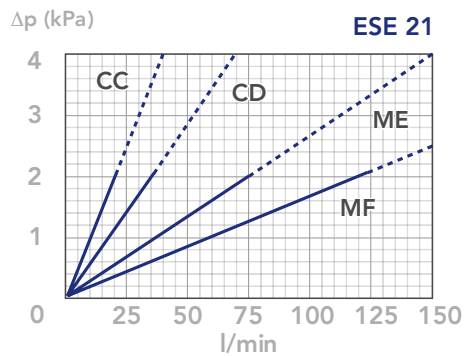
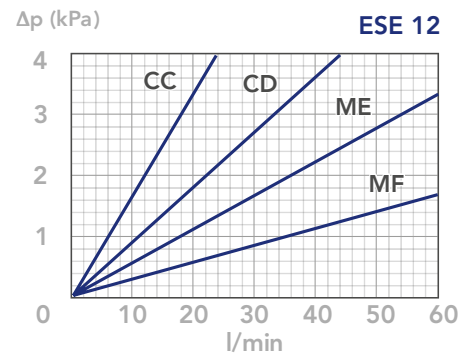
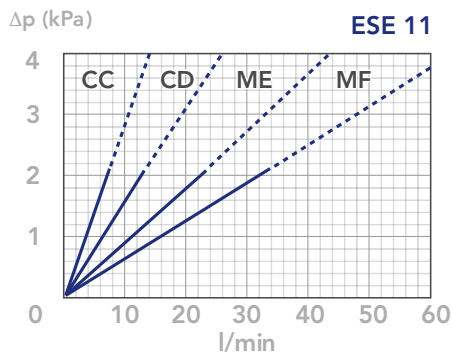
The “Assembly Pressure Drop ( $\Delta p$ )” is obtained by adding the pressure drop values of the Filter Housing and of the Clean Filter

Element corresponding to the considered Flow Rate and it must be lower than 3 kPa (0,03 bar).

FILTER HOUSING PRESSURE DROP  
(mainly depending on the port size)



CLEAN FILTER ELEMENT PRESSURE DROP  
(depending both on the internal diameter of the element and on the filter media)



### N.B.

FSE3+ and FSE4+ filters use double element canisters. The Assembly Pressure Drop is therefore calculated by adding the Housing Pressure Drop at the real flow rate and half the pressure drop of the ESE2+ element. E.g.

The pressure drop of a complete FSE31-----FC--- filter at a 60 l/min flow rate is obtained by adding the Housing Pressure Drop and half the ESE21NFC element pressure drop at 60 l/min

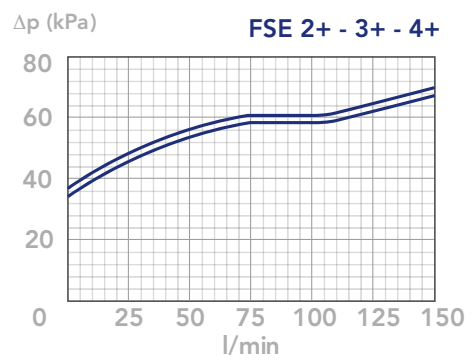
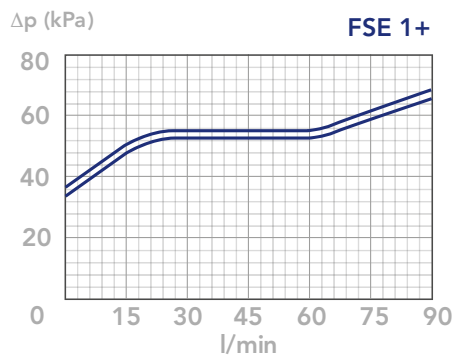
# FSE

## SUCTION FILTERS



### BYPASS VALVE PRESSURE DROP

When selecting the filter size, these curves must be taken into account if it is foreseen that any flow peak is to be absorbed by the bypass valve, it also must be of proper configuration to avoid pressure peaks. The valve pressure drop is directly proportional to fluid specific gravity.



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.



# FSG

## SUCTION FILTERS

### DESCRIPTION

Tank side wall suction filter

### MATERIALS

Lid: Polyamide  
Housing: Aluminum alloy  
Seals: NBR Nitrile

### PRESSURE

Collapse, differential for filter element: 1 MPa (10 bar)

### FLOW RATE

Qmax 70 l/min

### WORKING TEMPERATURE

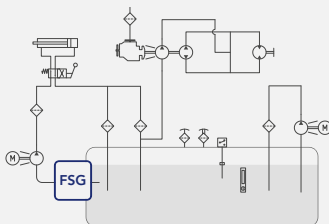
From -25° to +110° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above mentioned,  
please contact our Customer Service



### HYDRAULIC DIAGRAM



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# FSG

## SUCTION FILTERS



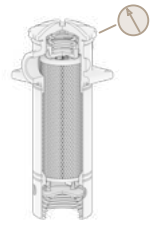


### ORDERING AND OPTION CHART

F	S	G	COMPLETE FILTER FAMILY			FILTER ELEMENT FAMILY	E	S	G
			<b>SIZE &amp; LENGTH</b>	11	13	<b>SIZE &amp; LENGTH</b>			
			<b>PORT TYPE</b>						
			B = BSP thread	B	B				
			<b>PORT SIZE*</b>						
			10 = 1" 1/4	10	10				
		<b>W</b>	<b>BYPASS VALVE</b>						
			W = without bypass	W	W				
			<b>SEALS</b>			<b>SEALS</b>			
			N = NBR Nitrile	N	N				
			<b>FormulaUFI MEDIA</b>			<b>FormulaUFI MEDIA</b>			
			CC = FormulaUFI.CELL 10 µm	CC	CC				
			<b>CLOGGING INDICATOR</b>						
			01 = 1/8" port, plugged	01	01				
			10 = vacuum gauge, rear connection	10	10				
			91 = SPDT, vacuum switch	91	91				
			<b>ACCESSORI / ACCESSORIES</b>						
			W = without	W	W				
			<b>ACCESSORI / ACCESSORIES</b>						
			X = without	X	X				

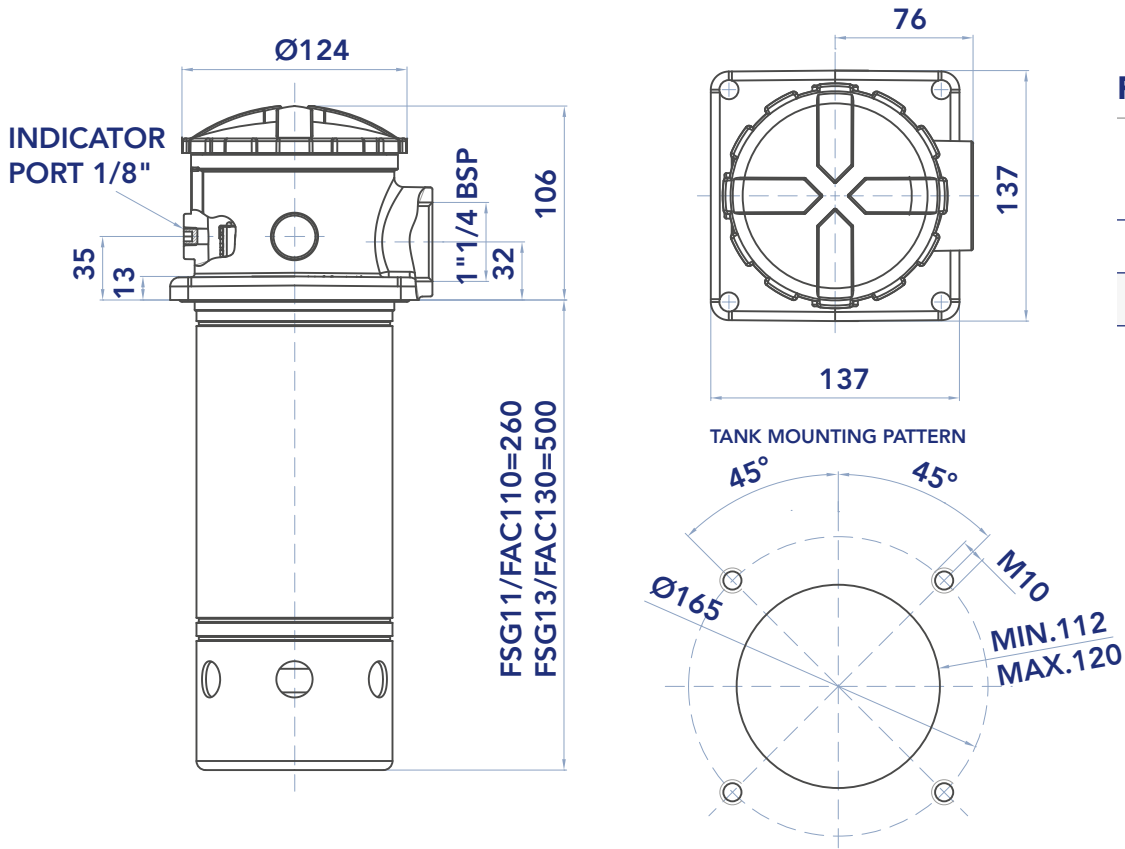
\* Port size B08 (1") on request, please check availability with our Customer Service

### SPARE PARTS

FILTER HOUSING				FILTER ELEMENT				CLOGGING INDICATOR					
													
B	S	G		B	1	0						X	X
				E	S	G							



## INSTALLATION DRAWING

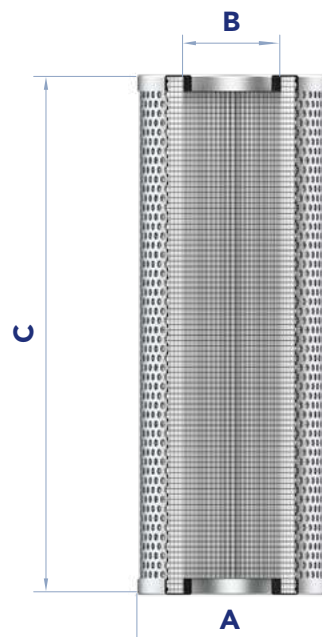


## FILTER WEIGHT

	Kg
FSG11	2,8
FSG13	3,2

## FILTER ELEMENT

	A	B	C	Kg	AREA (cm <sup>2</sup> ) Media C
ESG11	83	50	230	0,4	5.000
ESG13	83	50	472	0,5	9.300



# FSG

## SUCTION FILTERS

### MAINTENANCE

- 1) Stop the system and verify there is no pressure in the filter.
- 2) Loosen the cover (1).
- 3) Remove the dirty filter element (2).  
N.B. The used filter elements and oil dirty filter parts are classified "Dangerous waste material" and must be disposed of according to the local laws, by authorized Companies.
- 4) Check the filter element part number on the filter label or in the ordering and option chart.  
Use only original spare parts.
- 5) Lubricate the new element O-ring gasket (3) with oil.
- 6) Insert the clean element into the filter housing, resting on the lower gasket (3).
- 8) Check the cover O-ring condition (4) and lubricate with oil.  
If damaged, check the seal kit part number in the spare seal kit table.
- 9) Screw the cover (1) up to the stop to ensure the correct locking of the filter element.

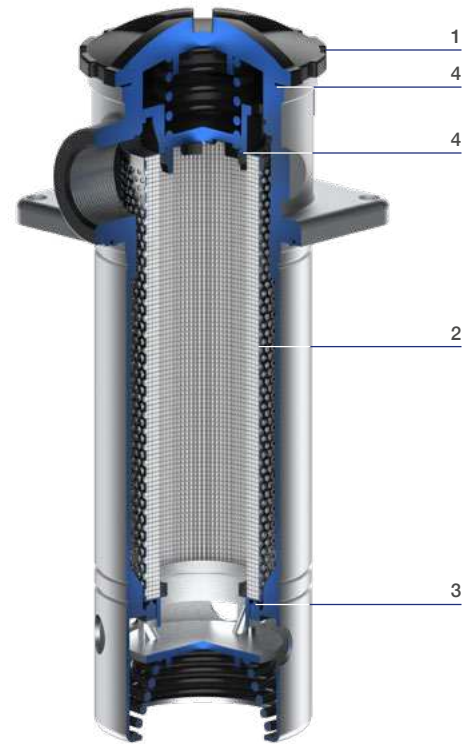
Accessories:

Clogging indicator

If damaged, unscrew and replace it (check the part number in the ordering and option chart).

Apply a thread-sealing and screw until tight.

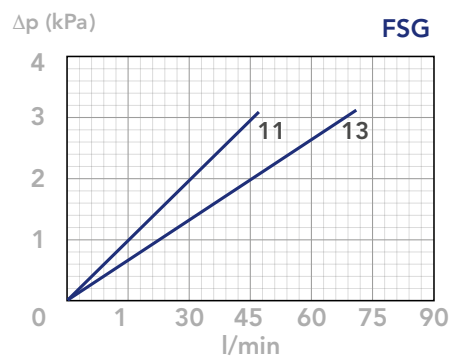
N.B. an overtightening can damage the thread.



### PRESSURE DROP CURVES ( $\Delta P$ )

The Pressure Drop ( $\Delta p$ ) must be lower than 3 kPa (0,03 bar).

COMPLETE FILTER PRESSURE DROP  
(mainly depending on the port size)



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves are

obtained from test done at the UFI FILTERS HYDRAULICS DIVISION Laboratory, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.





# MSZ

## SUCTION FILTERS



### DESCRIPTION

Suction strainer

### MATERIALS

Connector: Polyamide  
Internal core: Zinc plated steel  
End cap: Zinc plated steel

### PRESSURE

Collapse, differential: 100 kPa (1 bar)

### BYPASS VALVE

Setting: 30 kPa (0,3 bar)  $\pm$  10% on request

### FLOW RATE

Qmax 600 l/min

### WORKING TEMPERATURE

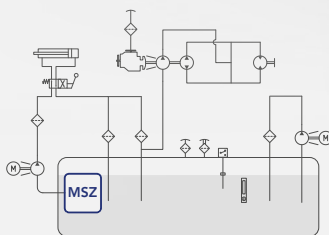
From -25° to + 90° C

### COMPATIBILITY (ISO 2943)

Full with fluids: HH-HL-HM-HR-HV-HTG  
(according to ISO 6743/4)  
For fluids different than the above mentioned,  
please contact our Customer Service.



### HYDRAULIC DIAGRAM



Is this datasheet the latest release? Please check on our website

# MSZ

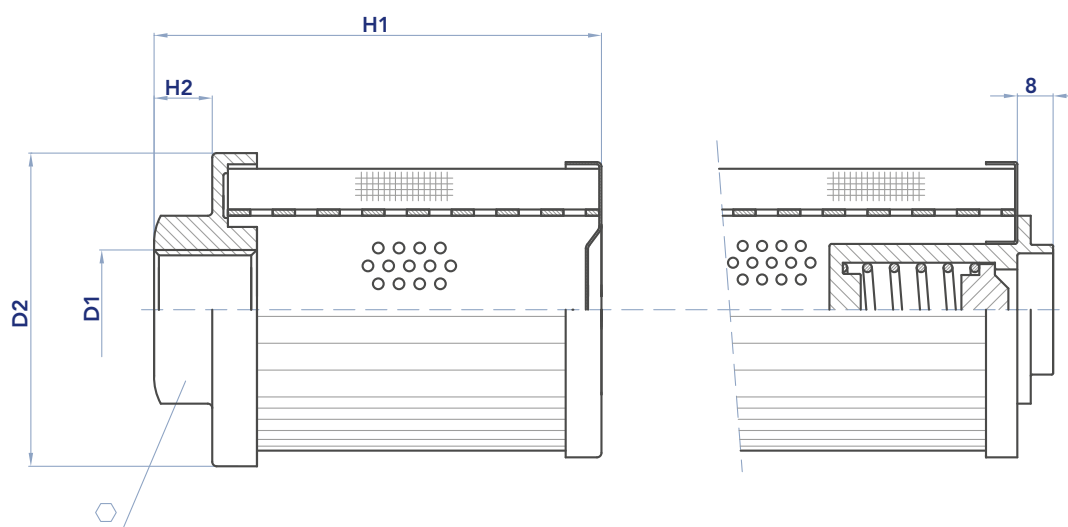
## SUCTION FILTERS

### ORDERING AND OPTION CHART (SOFIMA CODIFICATION)

M	S	Z	FILTER ELEMENT FAMILY									
			<b>SIZE &amp; LENGTH</b>	<b>101</b>	<b>201</b>	<b>202</b>	<b>301</b>	<b>302</b>	<b>303</b>	<b>401</b>	<b>402</b>	<b>403</b>
			<b>FormulaUFI MEDIA</b>									
			MN = FormulaUFI.WEB 90 µm	MN	MN	MN	MN	MN	MN	MN	MN	MN
			DC = FormulaUFI.WEB 250 µm	DC	DC	DC	DC	DC	DC	DC	DC	DC
		<b>X</b>	<b>SEALS</b>									
			X = not available	X	X	X	X	X	X	X	X	X
			<b>BYPASS VALVE</b>									
			S = without	S	S	S	S	S	S	S	S	S
			A = bypass valve 300 kPa ( 0,3 bar)	A	A	A	A	A	A	A	A	A
		<b>B</b>	<b>PORTS</b>									
			B = BSP	B	B	B	B	B	B	B	B	B
			N = NPT	N	N	N	N	N	N	N	N	N
			<b>PORT SIZE</b>									
			3 = 1/2"	3	-	-	-	-	-	-	-	-
			4 = 3/4"	-	4	-	-	-	-	-	-	-
			5 = 1"	-	-	5	-	-	-	-	-	-
			7 = 1" 1/2	-	-	-	7	7	-	-	-	-
			8 = 2"	-	-	-	-	-	8	8	-	-
			9 = 2" 1/2	-	-	-	-	-	-	-	9	-
			A = 3"	-	-	-	-	-	-	-	-	A



## INSTALLATION DRAWING



## SUCTION STRAINER

	D1	D2	H1	H2	⬡	Kg	AREA (cm <sup>2</sup> ) Media M+
<b>MSZ 101</b>	1/2"	46	105,5	14	30	0,12	155
<b>MSZ 201</b>	3/4"	64	109,5	14	36	0,22	335
<b>MSZ 202</b>	1"	64	139,5	15	46	0,27	450
<b>MSZ 301</b>	1" 1/2	86	140	18	60	0,45	610
<b>MSZ 302</b>	1" 1/2	86	200	18	60	0,53	920
<b>MSZ 303</b>	2"	86	260	18	70	0,56	1190
<b>MSZ 401</b>	2"	150	150	18	70	1,20	2030
<b>MSZ 402</b>	2" 1/2	150	212	20	90	1,40	2900
<b>MSZ 403</b>	3"	150	272	20	100	1,60	3900

# MSZ

## SUCTION FILTERS



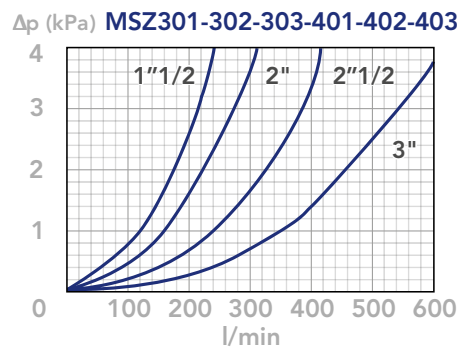
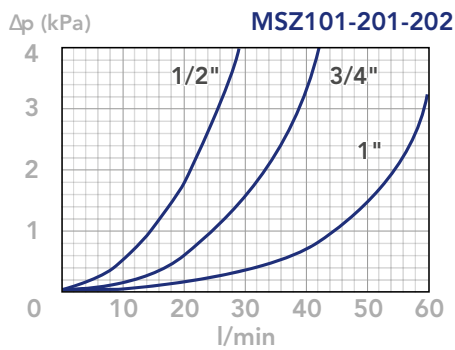
### MAINTENANCE

The best time to change your filter element is just before it reaches its maximum dirt-holding capacity. When it is time to change the filter element, switch off the system before opening the tank. Remove the dirty filter element and replace it with an original UFI Hydraulics element, verifying the part number on the filter cap or in the ordering and option chart. Close the tank.

N.B. The exhausted filter elements and the oil dirty filter parts are classified "Dangerous waste material" and must be disposed according to the local laws, by authorized Companies. We recommend the stocking of a spare UFI Hydraulics filter element for timely replacement when required.

### PRESSURE DROP CURVES ( $\Delta P$ )

The Pressure Drop ( $\Delta p$ ) must be lower than 3 kPa (0,03 bar).



### N.B.

All the curves have been obtained with mineral oil having a kinematic viscosity 30 cSt and specific gravity 0,86 kg/dm<sup>3</sup>; for fluids with different features, please consider the factors described in the first part of this catalogue. All the curves

are obtained from test done at the UFI FILTERS HYDRAULICS, according to the specification ISO 3968. In case of discrepancy, please check the contamination level, viscosity and features of the fluid in use.



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