



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

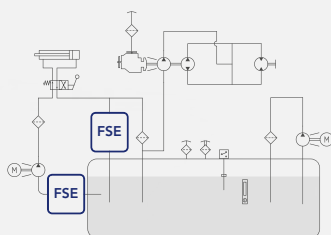
COMPATIBILITY (ISO 2943)

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

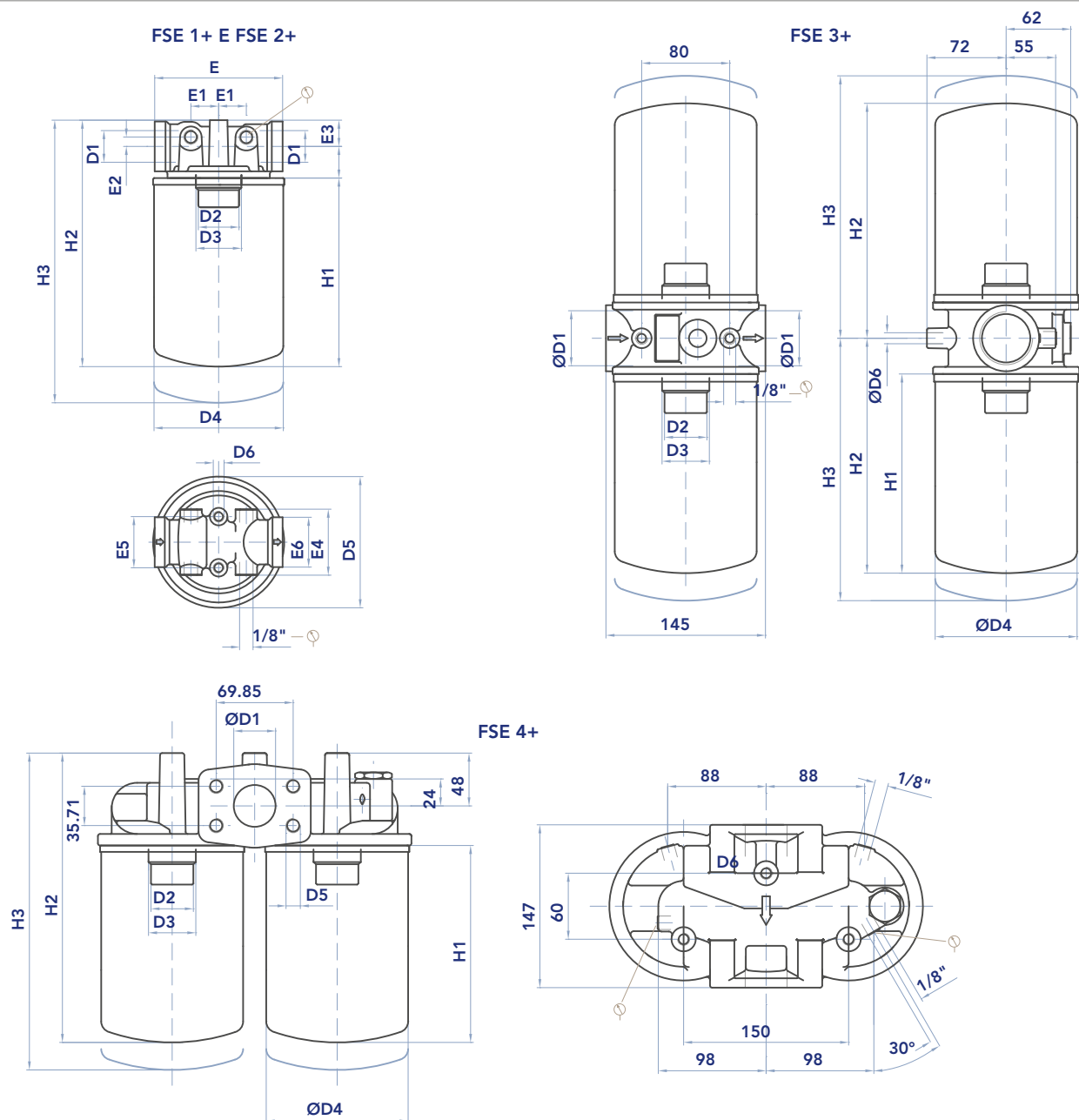
ONE LIMITED TIME OF THE YEAR

* When ordering the filter elements, please consider the following information:

ESE31 = 2 x ESE21
ESE32 = 2 x ESE22
ESE41 = 2 x ESE21
ESE42 = 2 x ESE22

[illegible]

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

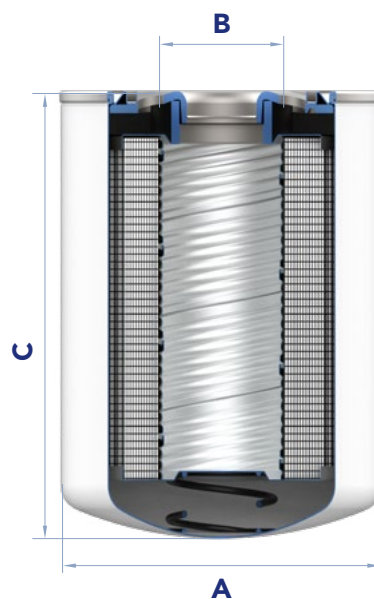
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FILTER ELEMENT

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





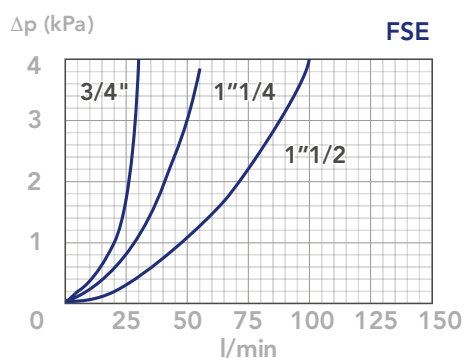
PRESSURE DROP CURVES (Δp)

The “Assembly Pressure Drop (Δp)” 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).

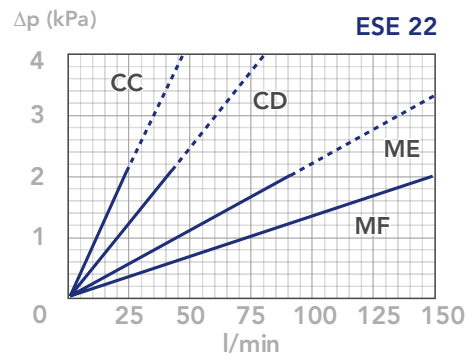
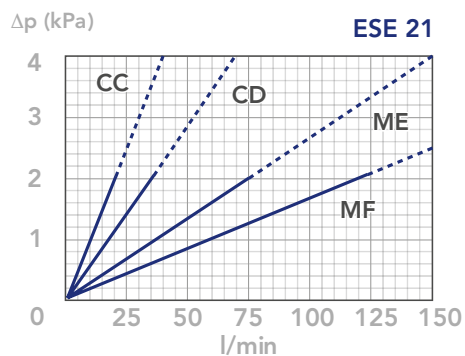
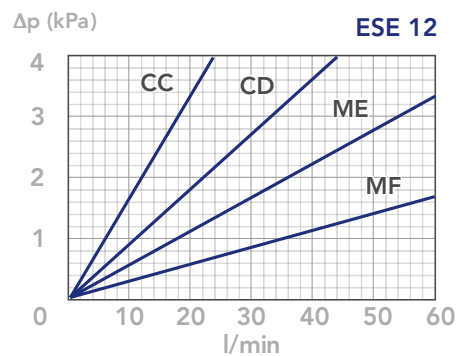
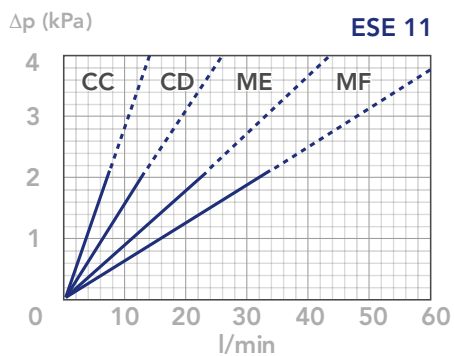
FILTER HOUSING PRESSURE DROP

(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

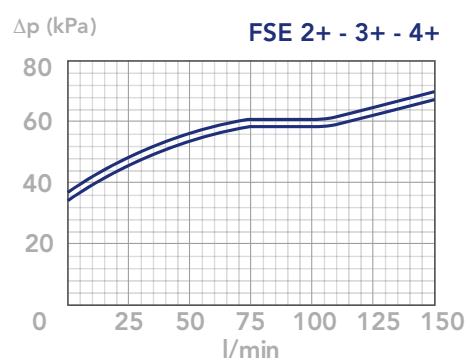
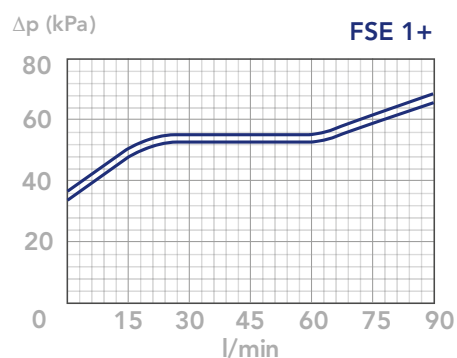
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BYPASS VALVE PRESSURE DROP

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/dm³; 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.