faifiltri
A Quality Filtration Company

12 bar
170 psi

Series CSG

OIL FILTER FAI FILTRI

DESCRIPTION

Many years of in-field experience have shown the necessity of more and more efficient controls on the contamination level of hydraulic fluids and fuels.

With this goal uppermost in its mind, and thanks to sophisticated design patterns and the use of cutting-edge materials and technologies, FAI FILTRI has engineered a complete series of spin-on filters , in different models and sizes, designed to meet a wide array of filtration and operating requirements, in order to allow a more effective control of contamination levels in hydraulic, lubricating, engine circuits, etc.

The CSG series filtering cartridges, featuring standard American design and flanging (interchangeable with the main manufacturers of American filters), give their best performances when fitted into hydraulic systems, earthworks machineries, agricultural machines and generally speaking into any movable/ mobile machines with pressure peaks up to **12 bar**.

The fundamental characteristic of these elements is the possibility, for any clogged filter, to be easily replaced, by a quick and clean procedure, condition that has to be considered of great importance in working contexts where highly deteriorated environmental conditions usually occur.

They can support flow rates up to 250 l/min.; each element can be equipped with a by-pass valve.

Specifically, FAI FILTRI spin-on cartridges, equipped with new-generation “A” filtering media, can grant very high standards of performance even in the hardest conditions.

“A” type elements with absolute filtration power of 3, 6, 10, 25 micron ($\beta x \geq 200$), are formed by inorganic impregnated and resin bonded inert micro-fibers, supported upstream and downstream. The result is a very compact filtering core which ensures the resistance of the media itself to deformation, distortion and strain ,preventing any contaminants to get released, thus improving filtering performances and allowing contaminants to accumulate efficiently, also in the event of phenomena such as high differential pressure and water hammering derived from cold starts and discharge flow rates.

The above mentioned features make the FAI FILTRI spin-on filters consistent with the use of hydraulic, lubricating oils, fuels, glycol water, emulsions and most synthetic fluids

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TECHNICAL DATA

MATERIALS

- Tropicalized, galvanized stamped plate flange
- Sinned and painted sheet steel vessel
- Perforated/drilled supporting pipes and galvanized steel end-caps

CARTRIDGES PRESSURE VALUES

Max. operating pressure:	**12 bar**
Impulse test in compliance with ISO 3724:	**from 0-12-0 bar 1Hz 50.000 min. cycles**

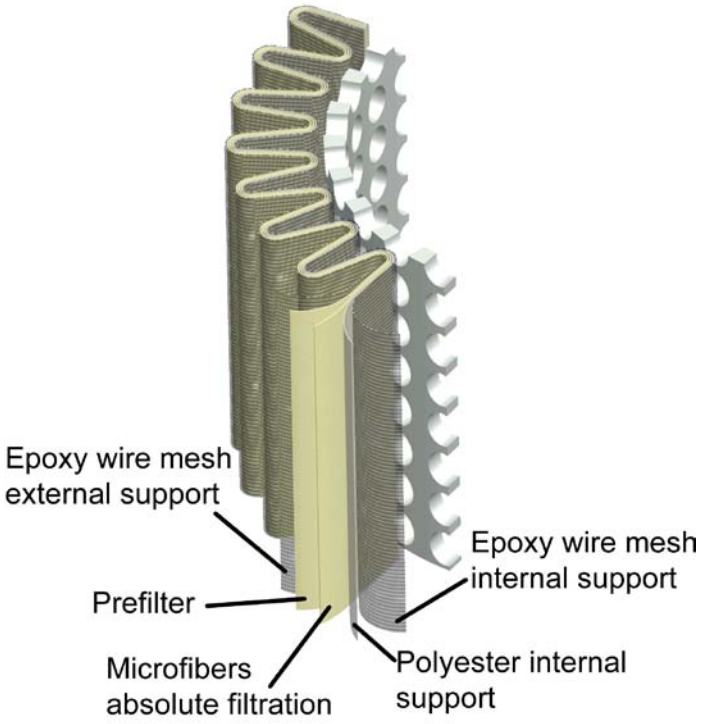
FILTERING ELEMENTS

"P" 10 and 25 nominal micron made of βx > 2 impregnated cellulose fibers

"A" 3, 6, 10, 16 and 25 absolute micron made of βx ≥ 200 reinforced, inorganic fibers with polyester protections

"M" 60 90 nominal micron made of wire net

New generation "A" filtering elements structure



RETENTION POWER

In compliance with ISO 4572 Multi-pass test method

Filter element	Dimension for β (μm) Value				Filtering rapport			Final ΔP (bar)
	β ≥ 2 50%	β ≥ 20 95%	β ≥ 75 98,7%	β ≥ 200 99,5%	β_2	β_{10}	β_{20}	
A03	-	2	2.4	3	20	>10000	>10000	7
A06	-	3	4.6	6	8	>2000	>10000	7
A10	3	6	7.8	10	1.5	≥200	>1000	7
A16	7	9	12	16	-	>25	>5000	7
A25	13	19	22	25	-	>1.5	>35	7
P10	10	>30	>30	-	1	2	4.5	4
P25	25	>30	>30	-	1	1	1.3	4

INTERNATIONAL STANDARDS FOR FLUIDS CONTAMINATION CONTROL

ISO 4406 CONTAMINATION CODES		NAS 1638 CORRESPONDING CLASS	SUGGESTED FILTRATION	APPLICATION FIELDS
5 μm	**15 μm**		**βx ≥ 200**	
12	9	3	1-2	High accuracy servo-plants – laboratory
15	11	6	3-6	Servo-plants – robotics – aeronautics
16	13	7	10-12	High sensitivity plants – where high standards of operating reliability are required
18	14	9	12-15	
19	16	10	15-25	General plant engineering with limited reliability
21	18	12	25-40	Low pressure plants – desultory services

TESTS CARRIED OUT ON FILTERING ELEMENTS

Filtering elements differential collapsing pressure tested in compliance with ISO 2941:

"P" Type **5 bar**

"A" and "M" Types **10 bar**

Resistance to axial deformation tested in compliance with ISO 3723

Manufacturing conformity and determination/assessment of the first bubble point in compliance with ISO 2942

FILTERING SURFACES

Type	P10/P25	A06/A10/A25	M60/M90
CSG – 50	2390 cm^2	1670 cm^2	685 cm^2
CSG – 70	3740 cm^2	2600 cm^2	1070 cm^2
CSG – 100	4960 cm^2	4460 cm^2	1480 cm^2
CSG – 150	8760 cm^2	7885 cm^2	2610 cm^2

BY-PASS VALVE

Type -1- setting 0,5 bar

Type -2- setting 1 bar

Type -3- setting 1,75 bar

Type -4- setting 2,5 bar

GASKETS

Buna-N "A" type gaskets

Viton "V" type gaskets

COUPLINGS

For the different couplings see order forms

Specifically on request (custom-made)

OPERATING TEMPERATURES

From –25°C up to +110°C

For different temperatures please contact our technical department

FLOW RATES

From 35 up to 150 l/min

N.B.: Choose the cartridge according to the filtration and to the recommended pressure drop

PRESSURE DROP

Curves are applicable to mineral oil with a dynamic viscosity of 30 mm^2/sec. (cSt). ΔP changes along with the values of dynamic viscosity according to the following formulas:

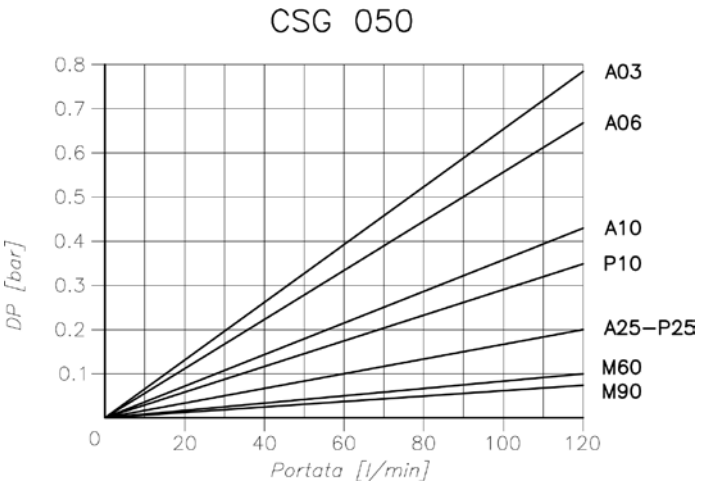
① **Dynamic viscosity variations ≤5**

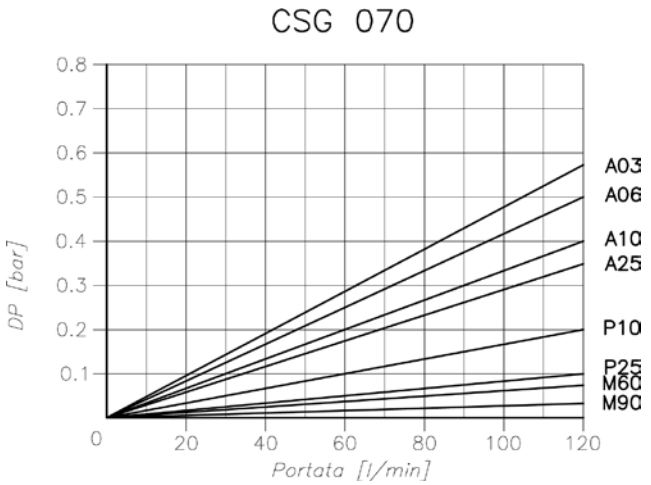
$$\Delta P = \frac{v1}{v} \Delta P$$

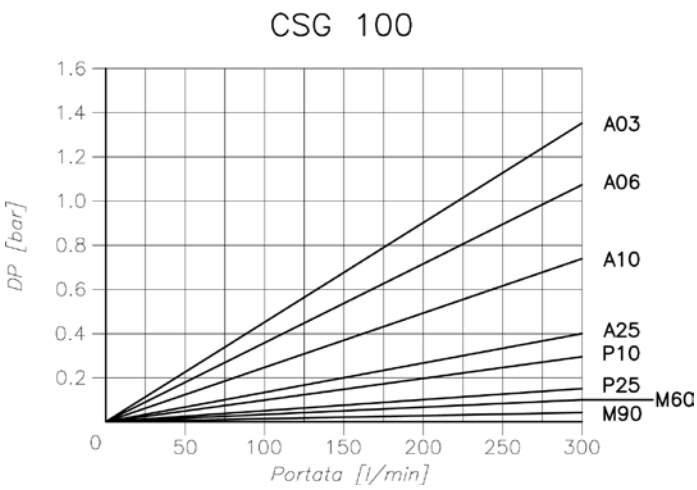
② **Dynamic viscosity variations >5**

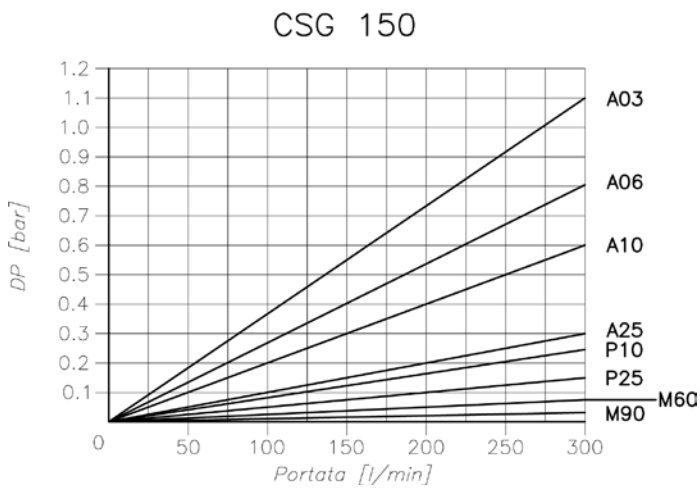
$$\Delta P1 = \frac{\frac{v1}{v} + \sqrt{\frac{v1}{v}}}{2} \Delta P$$

In both formulas **ΔP** stands for the pressure loss calculated on the curves, **v** stands for the reference dynamic viscosity (30 mm^2/sec); **ΔP1** is the pressure loss to be calculated and **v1** stands for the actual dynamic viscosity of the tested fluid.

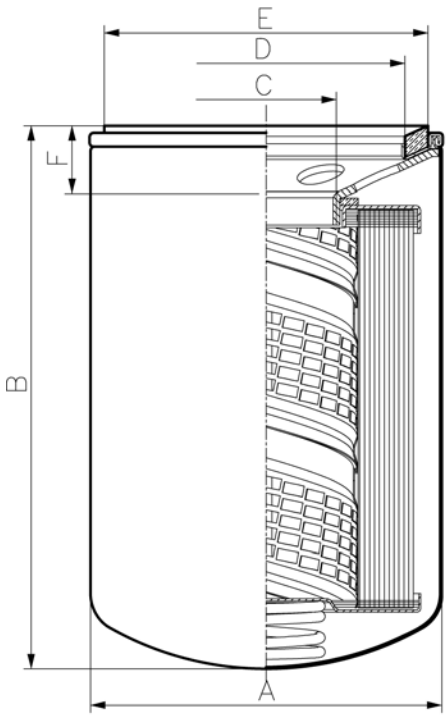




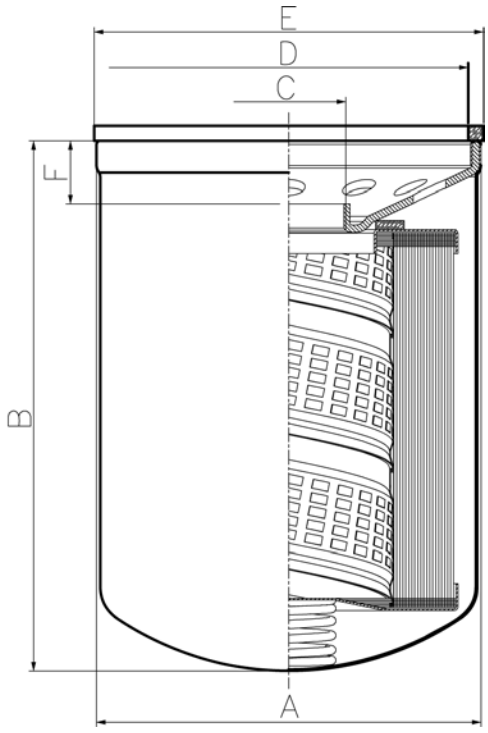




DIMENSIONAL INFORMATION



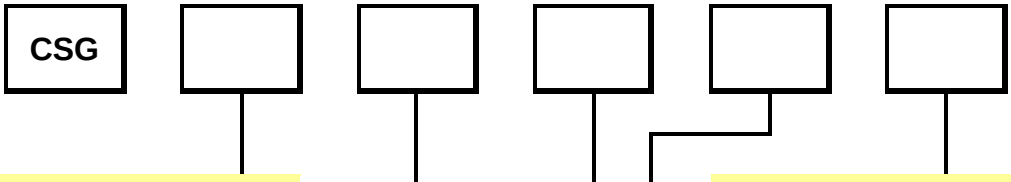
CSG 050-070



CSG 100-150

Type	Flow rate [l/min]	A	B	C	D	E	F
CSG 050	35	96	149	1 1/2" – 16 UNF	75	88	18
CSG 070	55		212				
CSG 100	75	126	177		130	120	20
CSG 150	150		277				

ORDER CODE



Type	
50 70 100 150	See dimensional table

Couplings	
6	1 1/2” – 16 UNF

Seals	
A	Nitril (buna-n)
V	Viton

Filter element	
P10 P25	Impregnated cellulose fibers 10 e 25 μ
A03 A06 A10 A16 A25	3. 6. 10, 16 e 25 μ Inorganic fibers
M60 M90	60. 90 μ wire mesh net

By-pass valve	
0	Without by-pass
1	0.3 bar
2	1 bar
3	1.75 bar
4	2.5 bar