faifiltri®
A Quality Filtration Company

35 bar
500 psi

Series **CSD**

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.

CSD filtering cartridges, engineered to support medium pressure values up to max. **50 bar**, provide a valid solution for filtration problems, granting their best performances when fitted into hydraulic drives, in presence of supercharged hydrostatic drives, earthworks machines, compressors, converters, hydraulic systems return or exhaust lines.

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 140 l/min.

FAI FILTRI spin-on cartridges, equipped with new-generation “A” filtering media, can specifically grant 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.

TECHNICAL DATA

MATERIALS

- Cast aluminum flange
- Sinned and painted sheet steel vessel
- Perforated/drilled supporting pipes and galvanized steel end-caps

CARTRIDGES PRESSURES VALUES

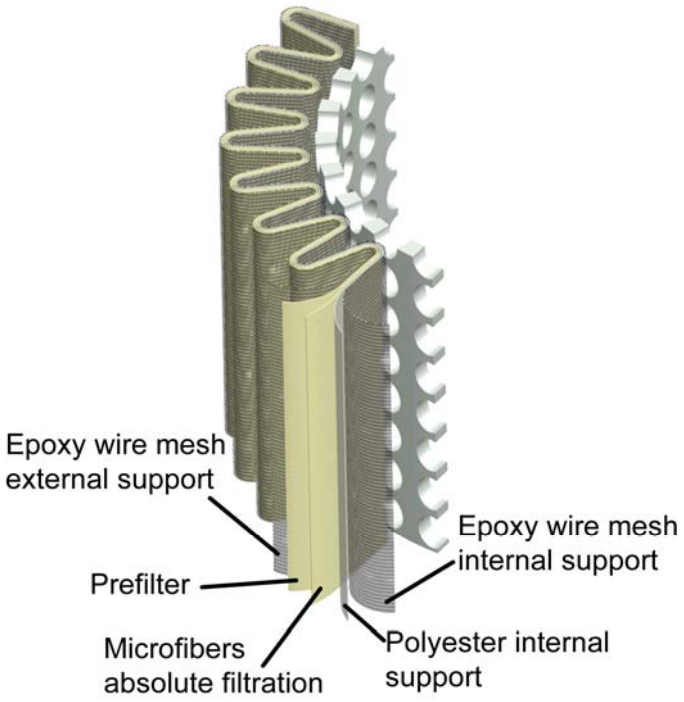
Max operating pressure:	**35 bar (25 bar for model CSD 400)**
Impulse test in compliance with ISO 3724:	**from 0-35-0 bar 1Hz 50.000 min. cycles** **from 0-25-0 bar 1Hz 50.000 min. cycles (CSD 400)**

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

New generation "A" filtering elements structure



RETENTION POWER

In compliance with ISO 4572 Multi-pass test method

Filter element	Dimensions for β (μm) Value				Filtering rapports			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

FILTERING ELEMENTS

Differential collapsing pressure of the filtering elements tested in compliance with ISO 2941: **20 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	A03/A06/A10/A16/A25
CSD – 020	1090 cm^2	940 cm^2
CSD – 050	2180 cm^2	1680 cm^2
CSD – 060	2720 cm^2	2090 cm^2
CSD – 070	3700 cm^2	2830 cm^2
CSD – 400	8600 cm^2	5010 cm^2

BY-PASS VALVES

No by-pass valve – in case a valve is present it is fitted directly on the head or cartridge casing.

GASKETS

Buna-N “A” type gaskets/seals

Viton “V” type gaskets/seals

COUPLINGS

For the different coupling 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

Up to 180 l/min

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**

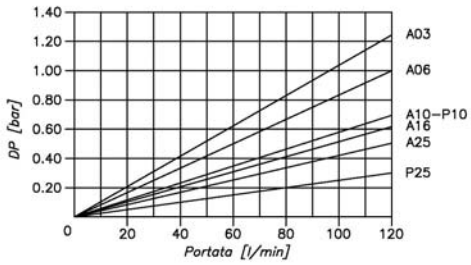
$$\Delta P = \frac{v1}{v}\,\Delta P$$

② **Dynamic viscosity variations >5**

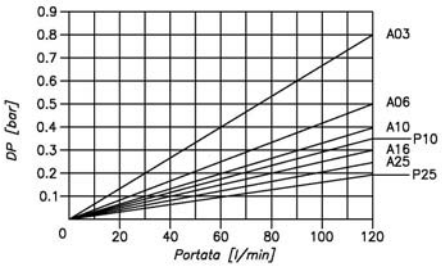
$$\Delta P1 = \frac{\frac{v1}{v} + \sqrt{\frac{v1}{v}}}{2}\,\Delta P$$

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.

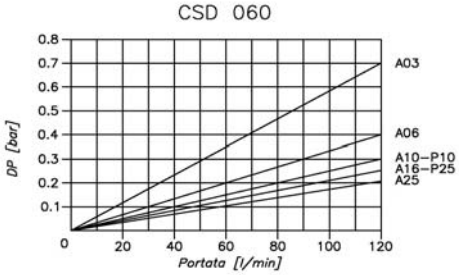
CSD 020



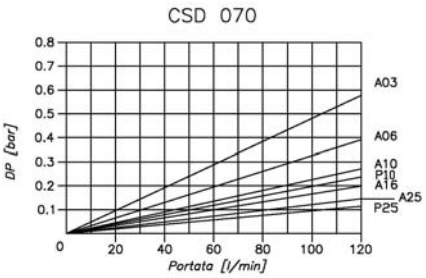
CSD 050



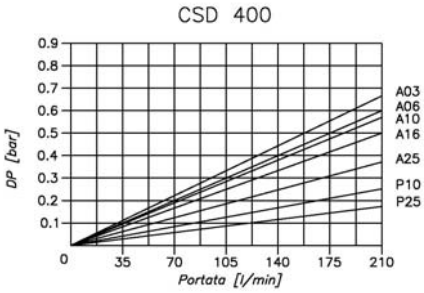
CSD 060



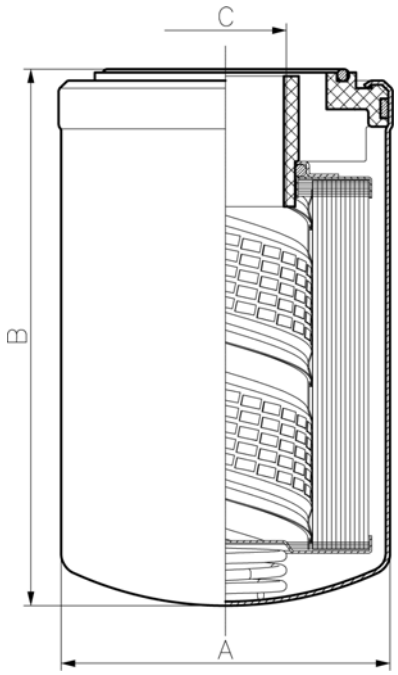
CSD 070



CSD 400

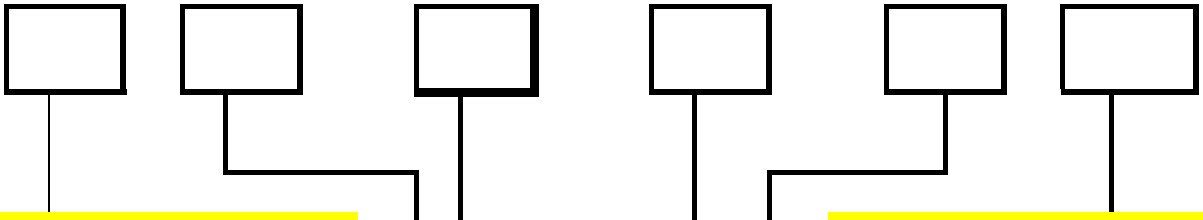


DIMENSIONAL INFORMATION



Type	Flow rate [l/min]	A	B	C
CSD 020	50	95,6	100	SEE ORDER CODE
CSD 050	100		152	
CSD 060	120		180	
CSD 070	140		228	
CSD 400	180	117	295	

ORDER CODE



Type
CSD

Type	Couplings
020	0 – 1 – 3 - C
050	
060	
070	
400	0

Couplings	
	Type 20 ÷ 70
0	1”3/8-12 UN
1	3/4”-16 UN
3	1”-12 UNF
C	M32x2
	Type 400
0	1”3/4-12 UNF

Seals	
A	Nitrile (Buna - n)
V	Viton

Filter element	
P10	Impregnated resin paper $\beta x \geq 2$
P25	
A03	Inorganic fiber $\beta x \geq 200$
A06	
A10	
A16	
A25	

By-pass valve	
0	Without by-pass
3	1,75 bar
4	2,5 bar
5	3,5 bar