



280 bar
1900 psi



Series **FAP**

Hydraulics 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 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 **FAP** high pressure filters, engineered to support high pressure values with peaks up to **280 bar**, provide a valid solution for filtration problems, granting their best performances when fitted into pressure lines.

Heads and vessels are made in a brass alloy in order to increase their mechanic resistance.

They can support flow rates up to 35 l/min.

with new-generation “A” filtering media, can 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

- Head and vessel in fusion brass alloy
- Perforated/drilled supporting pipes and galvanized steel end-caps

FILTER PRESSURE VALUES

Operating pressure:	280 bar
Test pressure:	420 bar
Bursting pressure:	835 bar

TESTS CARRIED OUT ON FILTER ELEMENTS

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

6 bar “P” Series

20 bar “A” Series

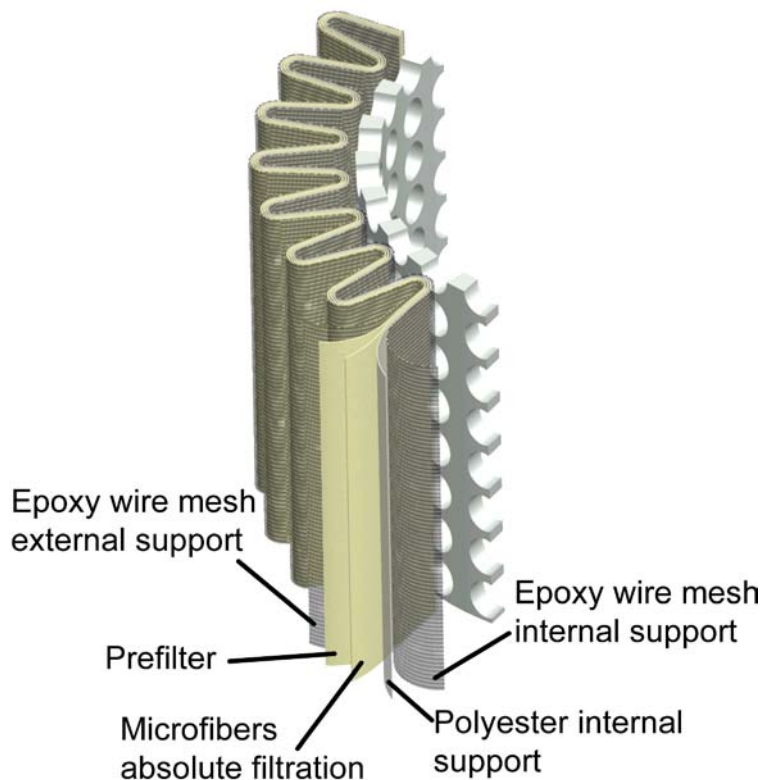
Axial deformation resistance tested in compliance with ISO 3723

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

FILTERING ELEMENTS

- “P” 10 and 25 nominal micron made of $\beta x > 2$ impregnated cellulose fibers
- “A” 3, 6, 10, 16 and 25 absolute micron made of $\beta x \geq 200$ reinforced inorganic microfibers with polyester protections

**New generation “A”
filtering elements
structure**



RETENTION POWER

Secondo ISO 4572 metodo Multi-pass test

Filter element	Dimension for β (μm) Value				Filtering rapport			Final ΔP (bar)
	$\beta \geq 2$ 50%	$\beta \geq 20$ 95%	$\beta \geq 75$ 98,7%	$\beta \geq 200$ 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		$\beta_x \geq 200$	
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

GASKETS

“A” Type Nitrilic (Buna-N)

“V” Type Viton

COUPLINGS

“G” Series GAS thread

OPERATING TEMPERATURES

From -30°C up to $+100^{\circ}\text{C}$

For different temperatures please contact our technical department

FLOW RATE

Up to 35 l/min

Choose the cartridge according to the filtration and to the recommended pressure drop.

FILTERING SURFACES

TYPE	P10/P25	A03/A06/A10/A16/A25	M25/M60/M125
HP 010-1	115 cm ²	145 cm ²	95 cm ²
HP 010-2	195 cm ²	250 cm ²	170 cm ²

PRESSURE DROP

Curves are applicable to mineral oil with a dynamic viscosity of 30 mm²/sec. (cSt). ΔP changes along with the values of dynamic viscosity according to the following formulas:

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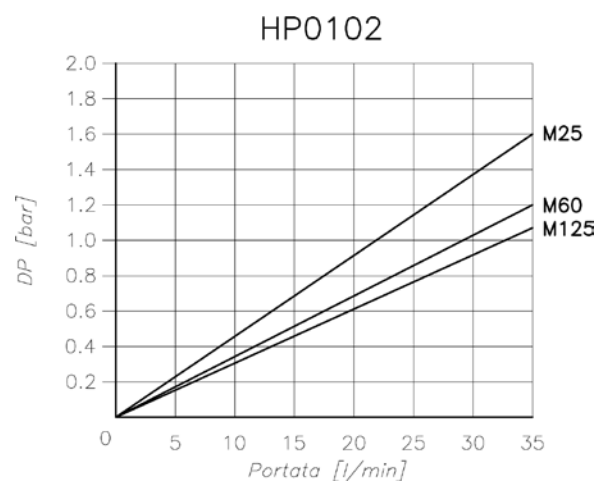
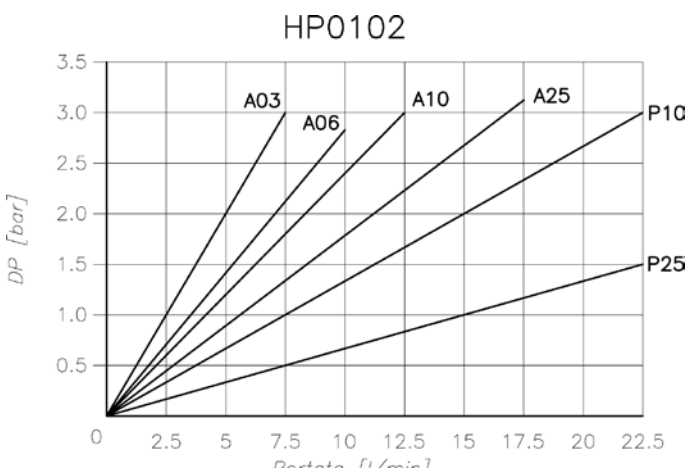
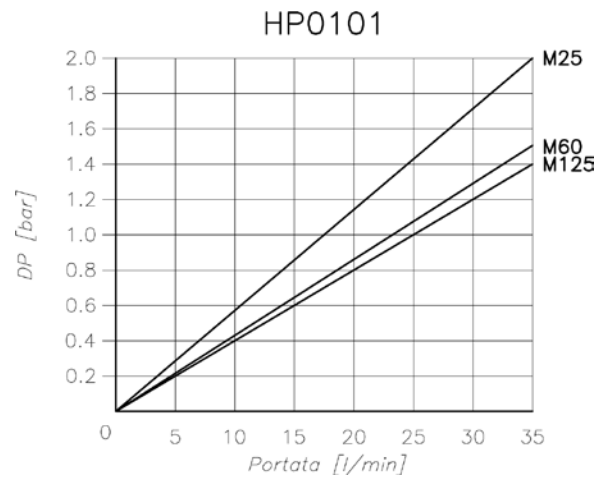
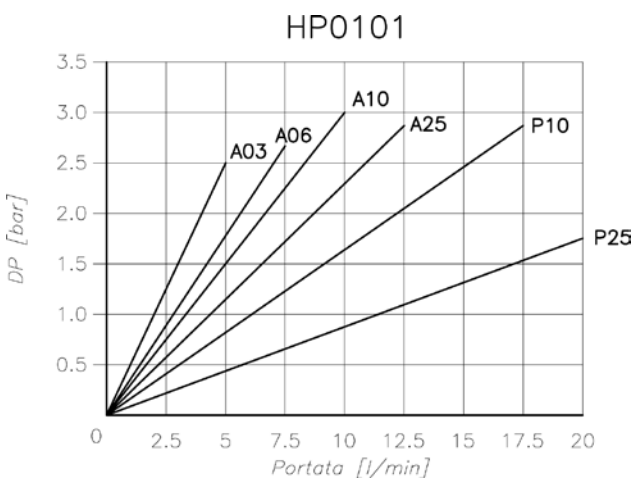
① Dynamic viscosity variations ≤ 5

$$\Delta P = \frac{v_1}{v} \Delta P$$

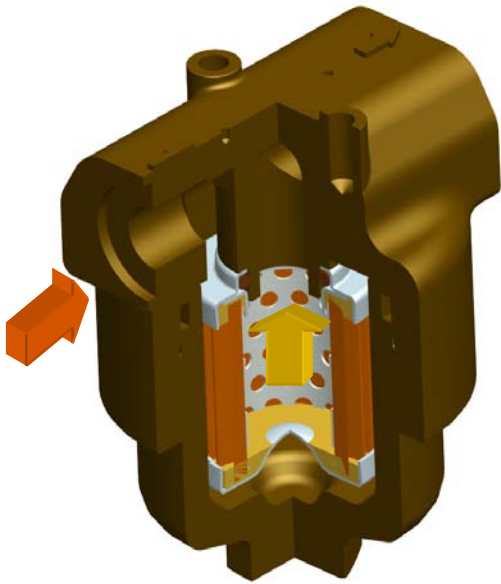
② Dynamic viscosity variations > 5

$$\Delta P_1 = \frac{\frac{v_1}{v} + \sqrt{\frac{v_1}{v}}}{2} \Delta P$$

In both formulas ΔP stands for the pressure loss calculated on the curves, v stands for the reference dynamic viscosity (30 mm²/sec); ΔP_1 is the pressure loss to be calculated and v_1 stands for the actual dynamic viscosity of the tested fluid.



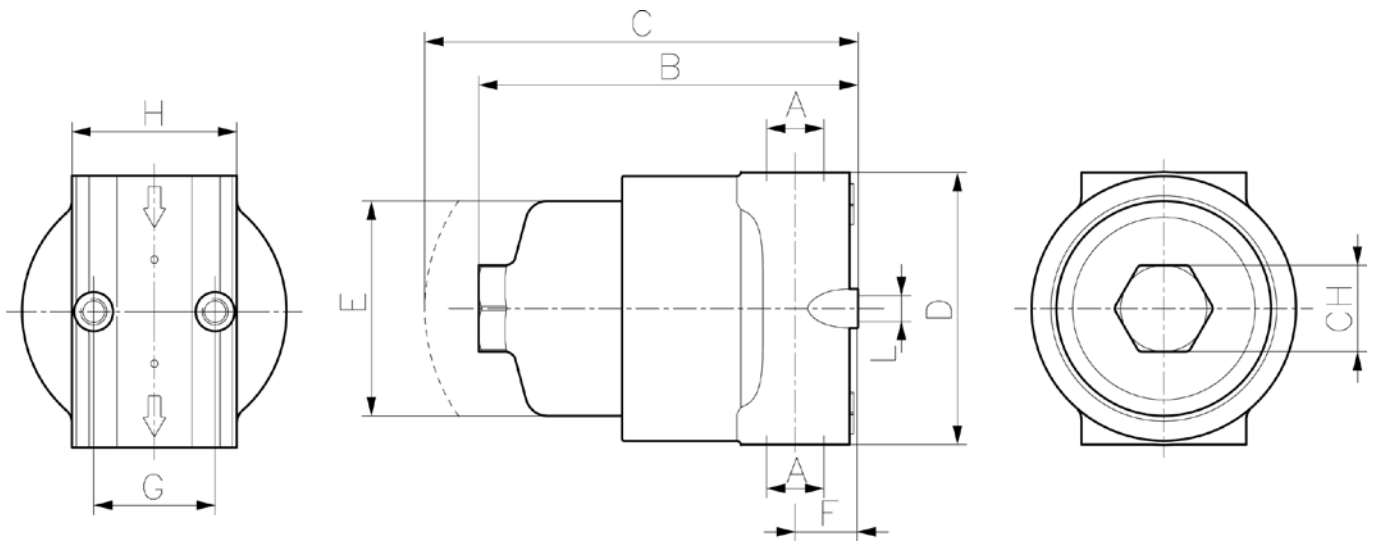
FUNCTIONAL DIAGRAM



FAP 010-1 is equipped with No.1 HP 010-1 cartridge

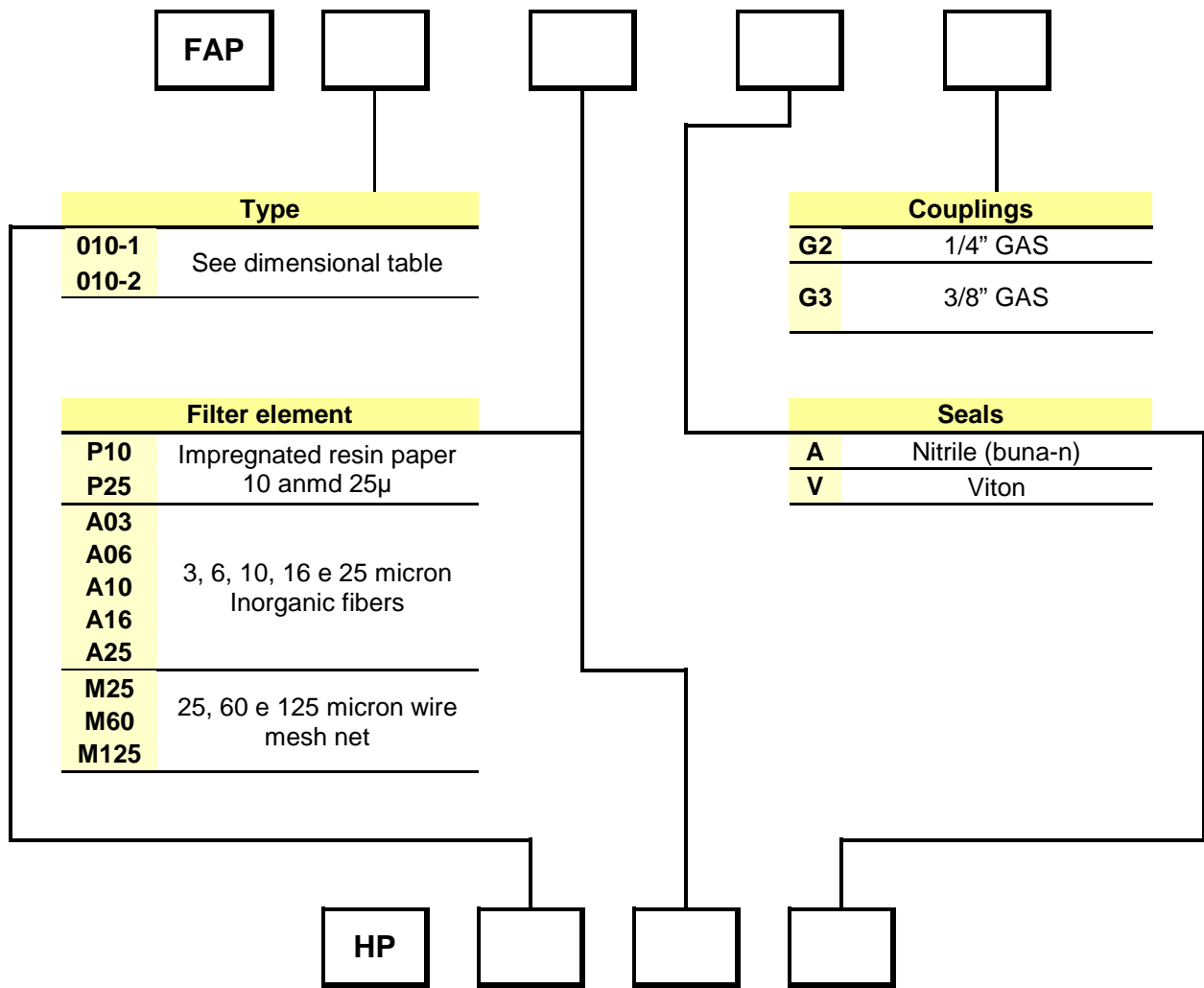
FAP 010-2 is equipped with No.1 HP 010-2 cartridge

DIMENSIONAL INFORMATION



Type	A	B	C	D	E	F	G	H	L	CH
FAP 010-1	1/4" GAS	88	116	62.7	49.5	12	30	38	M6	20
FAP 010-2	3/8" GAS	110	138							

ORDER CODE



SPARE CARTRIDGES ORDER CODES



Il mondo Fai Filtri è diventato più grande per offrirvi di più
Fai Filtri's world has grown bigger to offer you more and more

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