

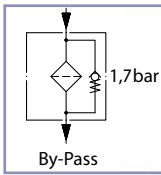
Rücklauffiltergehäuse für Tankeinbau



Baureihe	Bestell-Nr.	Bezeichnung	Anschlussgewinde	Arbeitsdruck in bar	Höhe Filterkopf in mm	Gesamtlänge in mm	Anschluss Verschmutzungsan- zeige	passendes Filterele- ment
HF502-10.060	300-040-1000	HF502-10.060-GD-B-H-Z-XD-DA	1/2"	8	54,5	137,5	1/8"	HEK02-10.060
HF502-20.077	300-040-1050	HF502-20.077-GD-B-H-Z-XD-DA	1/2"	8	73	176	1/8"	HEK02-20.077
	300-040-1100	HF502-20.077-GE-B-H-Z-XD-DA	3/4"	8	73	176	1/8"	
HF502-20.122	300-040-1250	HF502-20.122-GE-B-H-Z-XD-DA	3/4"	8	73	221	1/8"	HEK02-20.122
	300-040-1350	HF502-20.122-GD-B-H-Z-XD-DA	1/2"	8	73	221	1/8"	
	300-040-1400	HF502-20.122-GF-B-H-Z-XD-DA	1"	8	73	221	1/8"	
HF502-20.201	300-040-1450	HF502-20.201-GD-B-H-Z-XD-DA	1/2"	8	73	302	1/8"	HEK02-20.201
	300-040-1500	HF502-20.201-GF-B-H-Z-XD-DA	1"	8	73	302	1/8"	
HF502-30.195	300-040-1550	HF502-30.195-GF-B-H-Z-XD-DA	1"	8	88,5	318,5	1/8"	HEK02-30.195
	300-040-1600	HF502-30.195-GG-B-H-Z-XD-DA	1-1/4"	8	88,5	318,5	1/8"	
HF502-30.239	300-040-1650	HF502-30.239-GG-B-H-Z-XD-DA	1-1/4"	8	88,5	361,5	1/8"	HEK02-30.239
HF502-40.122	300-040-1700	HF502-40.122-GG-B-H-Z-XD-DA	1-1/4"	8	107	280	1/8"	HEK02-40.122
	300-040-1750	HF502-40.122-GH-B-H-Z-XD-DA	1-1/2"	8	107	280	1/8"	
HF502-40.194	300-040-1850	HF502-40.194-GH-B-H-Z-XD-DA	1-1/2"	8	107	346	1/8"	HEK02-40.194
HF502-40.195	300-040-1900	HF502-40.195-GH-B-H-Z-XD-DA	1-1/2"	8	107	346	1/8"	HEK02-40.195
	300-040-2000	HF502-40.195-GL-B-H-Z-XD-DA	2"	8	107	346	1/8"	
HF502-40.239	300-040-2100	HF502-40.239-GL-B-H-Z-XD-DA	2"	8	107	406	1/8"	HEK02-40.239



Rücklauffilterelement



Mikrofaser



Papier



Papier verstärkt



Metallgewebe



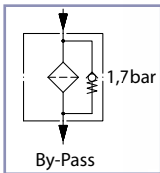
Edelstahl Gewebe

Baureihe	Bestell-Nr.	Bezeichnung	Max. Volumenstrom in l/min *	Arbeitsdruck in bar	Öffnungsdruck By-Pass Ventil in bar	Filterfeinheit in µm	Filtermaterial	Filterfläche in cm ²	Länge in mm	Außendurchmesser in mm	Passendes Filtergehäuse
HEK02-10.060	300-045-1000	HEK02-10.060-AS-FG003-VM-B17-B	15	8	1,7	3	Mikrofaser	346	75	52	HF502-10.060
	300-045-1050	HEK02-10.060-AS-FG006-VM-B17-B	15	8	1,7	6	Mikrofaser	346	75	52	
	300-045-1100	HEK02-10.060-AS-FG010-VM-B17-B	25	8	1,7	10	Mikrofaser	346	75	52	
	300-045-1150	HEK02-10.060-AS-FG025-VM-B17-B	25	8	1,7	25	Mikrofaser	346	75	52	
	300-045-1200	HEK02-10.060-AS-SP010-VM-B17-B	25	8	1,7	10	Papier	400	75	52	
	300-045-1250	HEK02-10.060-AS-SP025-VM-B17-B	45	8	1,7	25	Papier	400	75	52	
	300-045-1300	HEK02-10.060-AS-MI025-VM-B17-B	35	8	1,7	25	Edelstahl Gewebe	227	75	52	
	300-045-1350	HEK02-10.060-AS-MI060-VM-B17-B	45	8	1,7	60	Edelstahl Gewebe	227	75	52	
HEK02-20.077	300-045-1400	HEK02-20.077-AS-FG003-VM-B17-B	35	8	1,7	3	Mikrofaser	702	95	70	HF502-20.077
	300-045-1450	HEK02-20.077-AS-FG006-VM-B17-B	35	8	1,7	6	Mikrofaser	702	95	70	
	300-045-1500	HEK02-20.077-AS-FG010-VM-B17-B	45	8	1,7	10	Mikrofaser	702	95	70	
	300-045-1550	HEK02-20.077-AS-FG025-VM-B17-B	55	8	1,7	25	Mikrofaser	702	95	70	
	300-045-1600	HEK02-20.077-AS-RP010-VM-B17-B	55	8	1,7	10	Papier verstärkt	850	95	70	
	300-045-1650	HEK02-20.077-AS-SP010-VM-B17-B	55	8	1,7	10	Papier	850	95	70	
	300-045-1660	HEK02-20.077-AS-RP025-VM-B17-B	85	8	1,7	25	Papier verstärkt	850	95	70	
	300-045-1700	HEK 02-20.077-AS-MI025-VM-B17-B	65	8	1,7	25	Metallgewebe	444	95	70	
HEK02-20.122	300-045-1800	HEK02-20.122-AS-FG003-VM-B17-B	50	8	1,7	3	Mikrofaser	1113	140	70	HF502-20.122
	300-045-1850	HEK02-20.122-AS-FG006-VM-B17-B	55	8	1,7	6	Mikrofaser	1113	140	70	
	300-045-1900	HEK02-20.122-AS-FG010-VM-B17-B	65	8	1,7	10	Mikrofaser	1113	140	70	
	300-045-1950	HEK02-20.122-AS-FG025-VM-B17-B	80	8	1,7	25	Mikrofaser	1113	140	70	
	300-045-2000	HEK02-20.122-AS-RP010-VM-B17-B	75	8	1,7	10	Papier verstärkt	1347	140	70	
	300-045-2050	HEK02-20.122-AS-RP025-VM-B17-B	105	8	1,7	25	Papier verstärkt	1347	140	70	
	300-045-2100	HEK02-20.122-AS-MI025-VM-B17-B	85	8	1,7	25	Metallgewebe	615	140	70	
	300-045-2150	HEK02-20.122-AS-MI060-VM-B17-B	105	8	1,7	60	Metallgewebe	615	140	70	
HEK02-20.201	300-045-2200	HEK02-20.201-AS-FG003-VM-B17-B	75	8	1,7	3	Mikrofaser	1680	225	70	HF502-20.201
	300-045-2250	HEK02-20.201-AS-FG006-VM-B17-B	85	8	1,7	6	Mikrofaser	1680	225	70	
	300-045-2300	HEK02-20.201-AS-FG010-VM-B17-B	100	8	1,7	10	Mikrofaser	1680	225	70	
	300-045-2350	HEK02-20.201-AS-FG025-VM-B17-B	120	8	1,7	25	Mikrofaser	1680	225	70	
	300-045-2400	HEK02-20.201-AS-RP010-VM-B17-B	115	8	1,7	10	Papier verstärkt	2034	225	70	
	300-045-2450	HEK02-20.201-AS-RP025-VM-B17-B	160	8	1,7	25	Papier verstärkt	2034	225	70	
	300-045-2500	HEK02-20.201-AS-MI025-VM-B17-B	125	8	1,7	25	Metallgewebe	929	225	70	
	300-045-2550	HEK02-20.201-AS-MI060-VM-B17-B	155	8	1,7	60	Metallgewebe	929	225	70	
HEK02-30.195	300-045-2600	HEK02-30.195-AS-FG003-VM-B17-B	160	8	1,7	3	Mikrofaser	3705	212	99	HF502-30.195
	300-045-2650	HEK02-30.195-AS-FG006-VM-B17-B	175	8	1,7	6	Mikrofaser	3705	212	99	
	300-045-2700	HEK02-30.195-AS-FG010-VM-B17-B	210	8	1,7	10	Mikrofaser	3705	212	99	
	300-045-2750	HEK02-30.195-AS-FG025-VM-B17-B	230	8	1,7	25	Mikrofaser	3705	212	99	
	300-045-2800	HEK02-30.195-AS-RP010-VM-B17-B	230	8	1,7	10	Papier verstärkt	4485	212	99	
	300-045-2850	HEK02-30.195-AS-RP025-VM-B17-B	280	8	1,7	25	Papier verstärkt	4485	212	99	
	300-045-2900	HEK02-30.195-AS-MI025-VM-B17-B	240	8	1,7	25	Metallgewebe	2048	212	99	
	300-045-2950	HEK02-30.195-AS-MI060-VM-B17-B	280	8	1,7	60	Metallgewebe	2048	212	99	

* Abhängig von der Anschlussgröße des Filtergehäuses.



Rücklauffilterelement



Mikrofaser



Papier



Papier verstärkt



Metallgewebe



Edelstahl Gewebe

Baureihe	Bestell-Nr.	Bezeichnung	Max. Volumenstrom in l/min *	Arbeitsdruck in bar	Öffnungsdruck By-Pass Ventil in bar	Filterfeinheit in µm	Filtermaterial	Filterfläche in cm ²	Länge in mm	Außendurchmesser in mm	Passendes Filtergehäuse
HEK02-30.239	300-045-3000	HEK02-30.239-AS-FG003-VM-B17-B	190	8	1,7	3	Mikrofaser	4541	255	99	HF502-30.239
	300-045-3050	HEK02-30.239-AS-FG006-VM-B17-B	200	8	1,7	6	Mikrofaser	4541	255	99	
	300-045-3100	HEK02-30.239-AS-FG010-VM-B17-B	230	8	1,7	10	Mikrofaser	4541	255	99	
	300-045-3150	HEK02-30.239-AS-FG025-VM-B17-B	250	8	1,7	25	Mikrofaser	4541	255	99	
	300-045-3200	HEK02-30.239-AS-RP010-VM-B17-B	250	8	1,7	10	Papier verstärkt	5497	255	99	
	300-045-3250	HEK02-30.239-AS-RP025-VM-B17-B	290	8	1,7	25	Papier verstärkt	5497	255	99	
	300-045-3300	HEK02-30.239-AS-MI025-VM-B17-B	260	8	1,7	25	Metallgewebe	2510	255	99	
	300-045-3350	HEK02-30.239-AS-MI060-VM-B17-B	290	8	1,7	60	Metallgewebe	2510	255	99	
HEK02-40.122	300-045-3400	HEK02-40.122-AS-FG003-VM-B17-B	180	8	1,7	3	Mikrofaser	3821	139	130	HF502-40.122
	300-045-3450	HEK02-40.122-AS-FG006-VM-B17-B	205	8	1,7	6	Mikrofaser	3821	139	130	
	300-045-3500	HEK02-40.122-AS-FG010-VM-B17-B	240	8	1,7	10	Mikrofaser	3821	139	130	
	300-045-3550	HEK02-40.122-AS-FG025-VM-B17-B	290	8	1,7	25	Mikrofaser	3821	139	130	
	300-045-3600	HEK02-40.122-AS-RP010-VM-B17-B	260	8	1,7	10	Papier verstärkt	4019	139	130	
	300-045-3650	HEK02-40.122-AS-RP025-VM-B17-B	380	8	1,7	25	Papier verstärkt	4019	139	130	
	300-045-3700	HEK02-40.122-AS-MI025-VM-B17-B	310	8	1,7	25	Metallgewebe	2174	139	130	
	300-045-3750	HEK02-40.122-AS-MI060-VM-B17-B	400	8	1,7	60	Metallgewebe	2174	139	130	
HEK02-40.194	300-045-3850	HEK02-40.194-AS-FG003-VM-B17-B	265	8	1,7	3	Mikrofaser	6107	212	130	HF502-40.194
	300-045-3900	HEK02-40.194-AS-FG006-VM-B17-B	290	8	1,7	6	Mikrofaser	6107	212	130	
	300-045-3950	HEK02-40.194-AS-FG010-VM-B17-B	335	8	1,7	10	Mikrofaser	6107	212	130	
	300-045-4000	HEK02-40.194-AS-FG025-VM-B17-B	380	8	1,7	25	Mikrofaser	6107	212	130	
	300-045-4050	HEK02-40.194-AS-RP010-VM-B17-B	350	8	1,7	10	Papier verstärkt	6423	212	130	
	300-045-4100	HEK02-40.194-AS-RP025-VM-B17-B	450	8	1,7	25	Papier verstärkt	6423	212	130	
	300-045-4150	HEK02-40.194-AS-MI025-VM-B17-B	385	8	1,7	25	Metallgewebe	3159	212	130	
	300-045-4200	HEK02-40.194-AS-MI060-VM-B17-B	450	8	1,7	60	Metallgewebe	3159	212	130	
HEK02-40.195	300-045-4250	HEK02-40.195-AS-FG003-VM-B17-B	275	8	1,7	3	Mikrofaser	6107	212	130	HF502-40.195
	300-045-4300	HEK02-40.195-AS-FG006-VM-B17-B	310	8	1,7	6	Mikrofaser	6107	212	130	
	300-045-4350	HEK02-40.195-AS-FG010-VM-B17-B	360	8	1,7	10	Mikrofaser	6107	212	130	
	300-045-4400	HEK02-40.195-AS-FG025-VM-B17-B	420	8	1,7	25	Mikrofaser	6107	212	130	
	300-045-4450	HEK02-40.195-AS-RP010-VM-B17-B	380	8	1,7	10	Papier verstärkt	6423	212	130	
	300-045-4500	HEK02-40.195-AS-RP025-VM-B17-B	510	8	1,7	25	Papier verstärkt	6423	212	130	
	300-045-4550	HEK02-40.195-AS-MI025-VM-B17-B	420	8	1,7	25	Metallgewebe	3159	212	130	
	300-045-4600	HEK02-40.195-AS-MI060-VM-B17-B	520	8	1,7	60	Metallgewebe	3159	212	130	
HEK02-40.239	300-045-4650	HEK02-40.239-FS-FG003-VM-B17-B	400	8	1,7	3	Mikrofaser	10325	256	130	HF502-40.239
	300-045-4700	HEK02-40.239-FS-FG006-VM-B17-B	432	8	1,7	6	Mikrofaser	10325	256	130	
	300-045-4750	HEK02-40.239-FS-FG010-VM-B17-B	475	8	1,7	10	Mikrofaser	10325	256	130	
	300-045-4800	HEK02-40.239-FS-FG025-VM-B17-B	525	8	1,7	25	Mikrofaser	10325	256	130	
	300-045-4850	HEK02-40.239-FS-RP010-VM-B17-B	480	8	1,7	10	Papier verstärkt	9809	256	130	
	300-045-4900	HEK02-40.239-FS-RP025-VM-B17-B	570	8	1,7	25	Papier verstärkt	9809	256	130	
	300-045-4950	HEK02-40.239-FS-MI025-VM-B17-B	500	8	1,7	25	Metallgewebe	4646	256	130	
	300-045-5000	HEK02-40.239-FS-MI060-VM-B17-B	570	8	1,7	60	Metallgewebe	4646	256	130	
HEK02-40.390	300-045-5050	HEK02-40.390-FS-FG025-VM-B17-B	580	8	1,7	25	Microfaser	16536	407	130	HF502-40.390

* Abhängig von der Anschlussgröße des Filtergehäuses.



THE IMPORTANCE OF AN EFFICIENT FILTRATION



The main cause of anomalies in hydraulic systems has to be attributed to the presence of contaminants in the fluid. The nature of the contaminant may be: gaseous, namely air mixed with the fluid; fluid, it depends on water penetrating the fluid; solid, therefore particles of various origins and dimensions.

Customers who operate equipments are always focused on obtaining the best possible performance, lower energy consumptions and greater respect for the environment.

These characteristics can be attained by using top quality components in the hydraulic system for generating and regulating the fluid power, which are also more sensitive to the presence of contaminants in the fluid.

Starting from these requirements, we understand how important and fundamental it is to prevent the presence of air and water from mixing in the fluid tank by using dedicated solutions.

It is also crucial to limit the presence of solid particles in the hydraulic circuit through a suitable filtering system, which is indispensable to maintain the project requirements of the system over time and to keep running costs low.

The correct choice of a filter and its optimum position in the hydraulic system requires the same care and experience needed to choose all the other components.

The use of filters with larger filtering surfaces reduces, at equal flow rates, the superficial contaminant load and therefore the filter's life is extended proportionally.

To maintain the maximum efficiency of the system, the filters must have a clogging indicator showing the differential pressure on the filtering cartridge and to immediately point out when the cartridge needs replacing in order to prevent the by-pass valve from opening.

The following factors should be analysed when choosing the ideal filter:

- The filtration degree required to protect the most sensitive component from contamination
- The points of the circuit in which the filters have to be installed
- The working pressure of the system
- The maximum flow rate and the type of fluid to be filtered
- The duty cycle
- The retention efficiency of the filtering cartridge
- The contaminant accumulation capacity of the filtering cartridge
- The working ambient temperature

Each filter used generates a pressure drop that increases continuously as time goes by. This pressure drop represents an efficiency index of the filter itself.

When the hydraulic system is about to be assembled, all the components must be perfectly clean and the fluid has to be added through a device complete with a filter.

During the test phase, it is advisable to run some work cycles at low pressure in order to create the best possible conditions for all the components.



TECHNICAL CHARACTERISTICS



The tank mounted filters HF 502 and HF 508 series are specifically designed to be directly connected on the return line of hydraulic circuit to safeguard it from contaminating particles.

HF 508 series is available with double inlet port with SAE 3000 threads.

- Flow up to 264 US gpm (1000 l/min)
- Extension on the oil way out of the pipe union
- Fluid-decelerating diffuser

MATERIALS

Cover	Aluminum
Housing	Aluminum
Bowl (1)	Reinforced nylon Steel
Seals	Buna - Viton
End cap	Zinc plated steel
Inner tube	Zinc plated steel
Filter media	Steel
	Stainless steel
	Cellulose
	Reinforced cellulose Micro-fibre glass

(1) The filters of dimensions 10.060, 10.129, 20.077, 20.122, 20.201, 20.280 and 30.195 are supplied with a nylon-reinforced bowl. Varnished steel bowl is available on request.

The filters of dimensions 30.239, 40.122, 40.194, 40.195, 40.239, 40.390 and 40.512 are only supplied with a varnished steel bowl.

FLUID COMPATIBILITY

Conforming to ISO 2943 (Norm ISO 6743/4)

Oli mineral (2)	HH - HL - HM - HR - HV - HG
Water emulsion (2)	HFAE - HFAS
Syntetic fluid (3)	HS - HFDR - HFDU - HFDS

(2) With Buna seals

(3) With Viton seals

FLOW

Flow max.	264 US gpm (1000 l/min)
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PRESSURE

Working pressure	116 psi (8 bar)
Testing pressure	174 psi (12 bar)
Burst pressure	232 psi (16 bar)
Element collapse pressure rating (conforming to ISO 2941)	145 psi (10 bar)

BY-PASS VALVE

By-pass setting	25 psi (1,7 bar)
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OPERATING TEMPERATURE

With Buna seals	-22 ÷ 195 °F (-30 ÷ 90 °C)
With Viton seals	-4 ÷ 230 °F (-20 ÷ 110 °C)

DEGREE OF FILTRATION

Absolute Filtration

Code	Material	Degree of filtration
FG003	Micro-fibre glass	3 µm
FG006	Micro-fibre glass	6 µm
FG010	Micro-fibre glass	10 µm
FG025	Micro-fibre glass	25 µm

Nominal Filtration

Code	Material	Degree of filtration
SP010	Cellulose	10 µm
RP010	Reinforced cellulose	10 µm
SP025	Cellulose	25 µm
RP025	Reinforced cellulose	25 µm
MI025	Stainless steel	25 µm
MI060	Stainless steel	60 µm
MS090	Steel	90 µm
MI125	Stainless steel	125 µm

INDICATORS (4)

Rear manometer
Radial manometer
Visual indicator
Electrical indicator

(4) Characteristics and dimensions at page 30



SIZING – PRESSURE DROP



The total pressure drop of the filter is calculated by summing the pressure drop value in the housing to the one in the filtering element.

$$\text{Total } \Delta p = \Delta p \text{ in housing} + \Delta p \text{ in element}$$

In filters of HF 502 and HF 508 series in normal working conditions, the total Δp must not be more than 5.8 psi (0,4 bar). To establish the values of pressure drop involved, the following pages provide some diagrams with curves referred to the use of mineral oils SAE 10 with kinematic viscosity of 120 SSU (30 cSt) and density of 7.29 lb/gal (0,856 kg/dm³).

Calculation example

Filter HF502-30.239-AS-RP025-B17-GH-B-H-Z-XN-G-YN-K
 Flow rate= 77 US gpm (290 l/min)
 Kinematic viscosity: 120 SSU (30 cSt)
 Oil density : 7.29 lb/gal (0,856 kg/dm³)
 Filtering degree: 25 μ m

Data obtained from the diagrams:

Δp in housing = 4.93 psi (0,34 bar) (page 5)

Δp in element = 0,87 psi (0,06 bar) (page 14)

Total $\Delta p = 4.93 + 0.87 = 5.8$ psi (0,4 bar) (Δp is lower than maximum value admitted – therefore sizing is correct).

If oil with different kinematic viscosity and different density is used, the values obtained from the diagrams will be re-calculated considering the following indications:

1) The pressure drop of the housing is proportional with the oil density, therefore for oil with density different to 7.29 lb/gal (0,856 kg/dm³) the value of the Δp in the head-bowl will be:

$$\Delta p \text{ in housing} = \frac{\Delta p \text{ of diagram (psi)} \cdot \text{Oil density (lb/gal)}}{7.29 \text{ (lb/gal)}} \quad [\text{psi}]$$

Or

$$\Delta p \text{ in housing} = \frac{\Delta p \text{ of diagram (bar)} \cdot \text{Oil density (kg/dm}^3)}{0,856 \text{ (kg/dm}^3)} \quad [\text{bar}]$$

2) The pressure drop of the element is proportional with the oil density and kinematic viscosity, therefore for oil with density different to 7.29 lb/gal (0,856 kg/dm³) and kinematic viscosity different to 120 SSU (30 cSt) the value of Δp in the element will be:

$$\Delta p \text{ element} = \Delta p \text{ of diagram (psi)} \cdot \frac{\text{Oil density (lb/gal)}}{7.29 \text{ (lb/gal)}} \cdot \frac{\text{Oil viscosity (SSU)}}{120 \text{ (SSU)}} \quad [\text{psi}]$$

Or

$$\Delta p \text{ element} = \Delta p \text{ of diagram (bar)} \cdot \frac{\text{Oil density (kg/dm}^3)}{0,856 \text{ (kg/dm}^3)} \cdot \frac{\text{Oil viscosity (cSt)}}{30 \text{ (cSt)}} \quad [\text{bar}]$$

Now you sum the values of the pressure drop of the housing to the value of the pressure drop of the filtering element, always making sure the total Δp does not exceed the pressure limit of 5.8 psi (0,4 bar).



PRESSURE DROP CURVES THROUGH THE BY-PASS VALVES

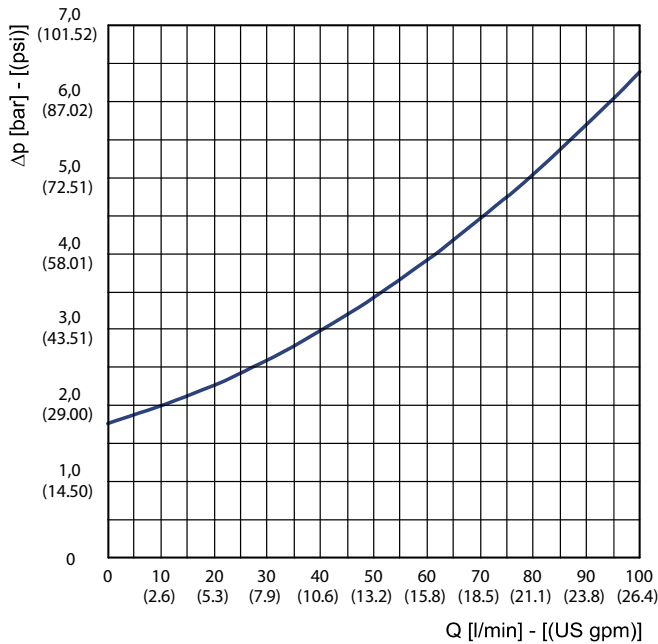


The pressure drop values are directly proportional with the specific weight of the fluid and do not affect the establishment of the total pressure drop of the complete filter.

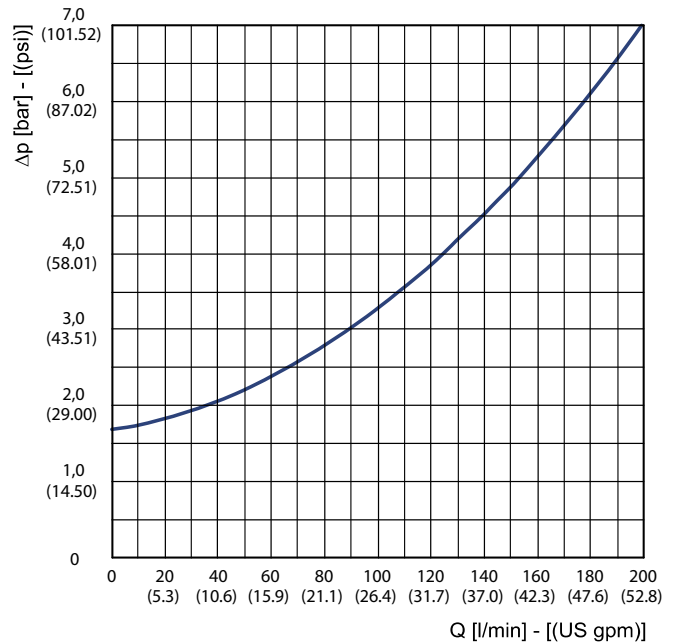
The curves are obtained in the following conditions:

- Mineral oil type SAE 10
- Kinematic viscosity 120 SSU (30 cSt)
- Density 7.29 lb/gal (0,856 kg/dm³).

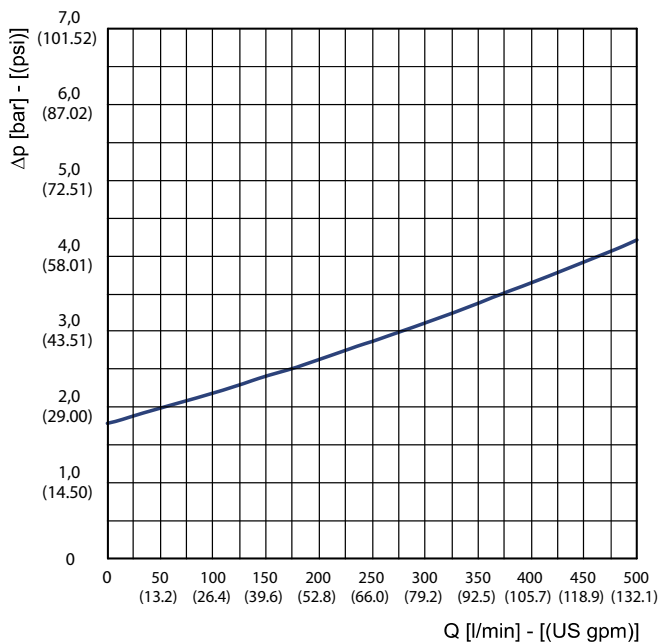
HF 502-10



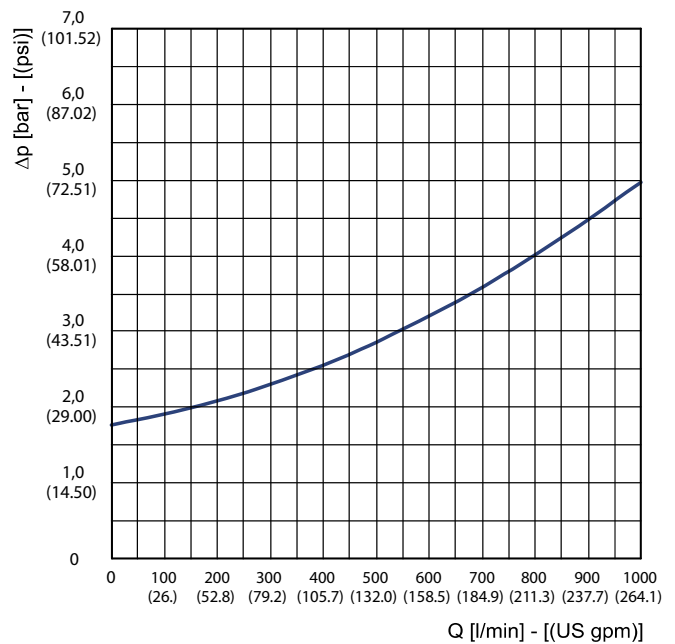
HF 502-20



HF 502 / HF 508-30



HF 502 / HF 508-40



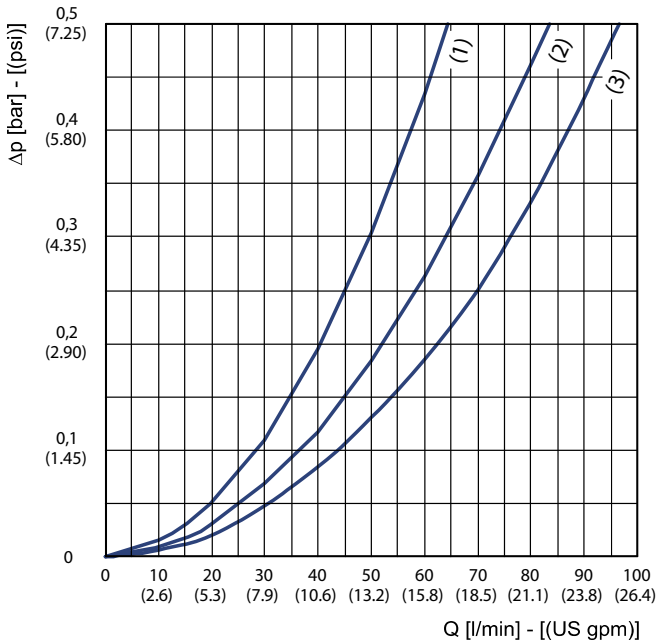
PRESSURE DROP CURVES THROUGH THE HOUSING



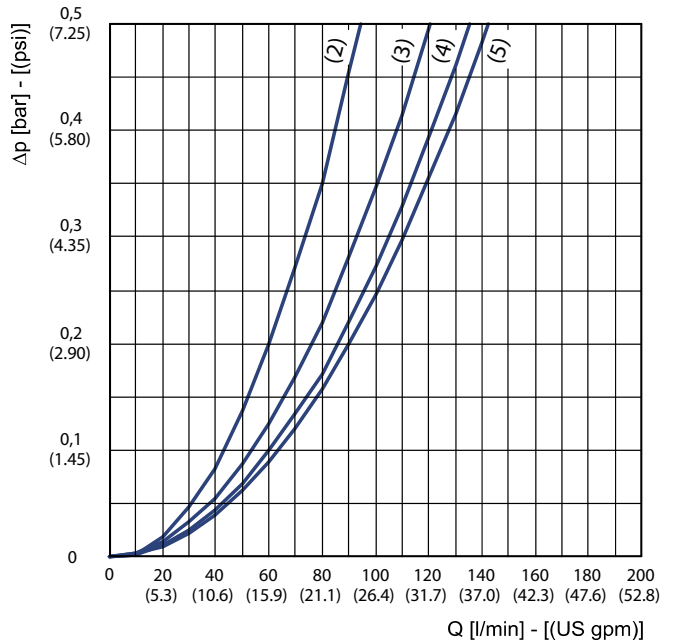
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) G 3/8
- (2) G 1/2
- (3) G 3/4
- (4) G 1
- (5) G 1 1/4

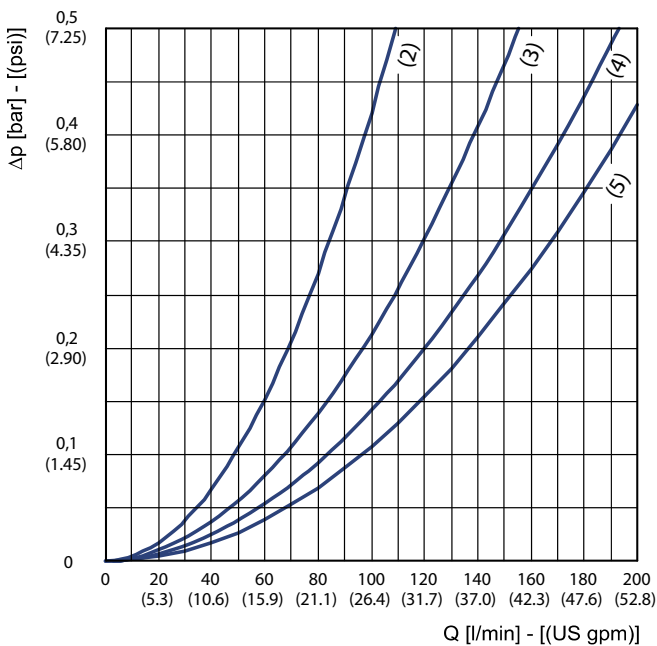
HF 502-10.060 / 10.129



HF 502-20.077 / 20.122



HF 502-20.201 / 20.280



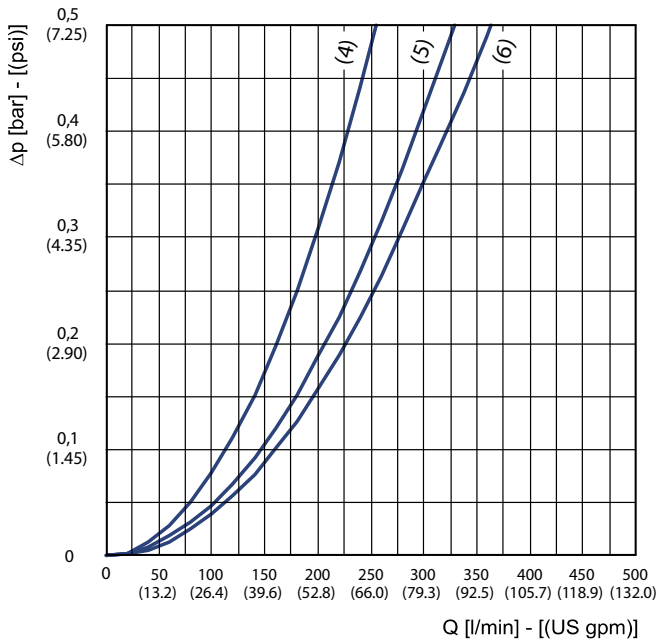
PRESSURE DROP CURVES THROUGH THE HOUSING



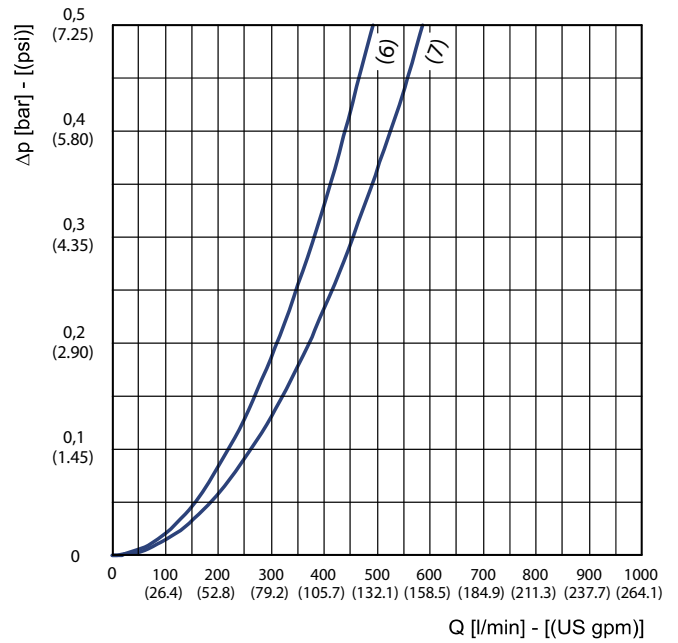
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (4) G 1
- (5) G 1 1/4
- (6) G 1 1/2
- (7) G 2

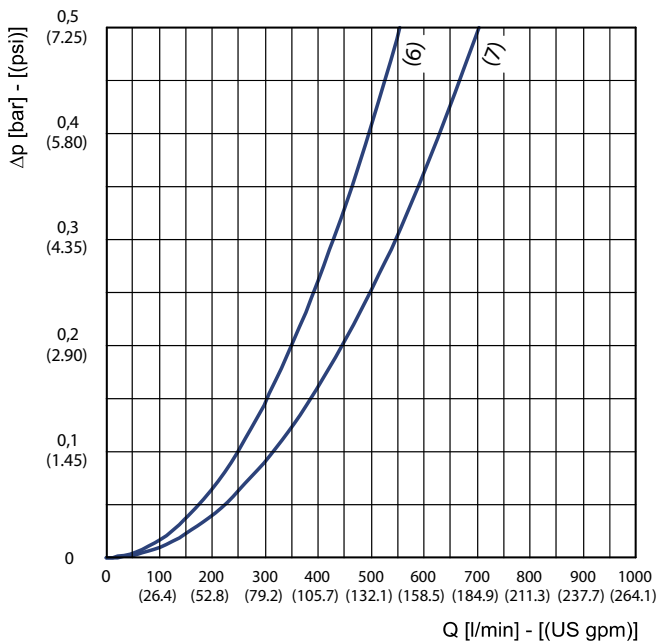
HF 502-30.195 / 30.239



HF 502-40.122 / 40.194



HF 502-40.195 / 40.239 / 40.390 / 40.512



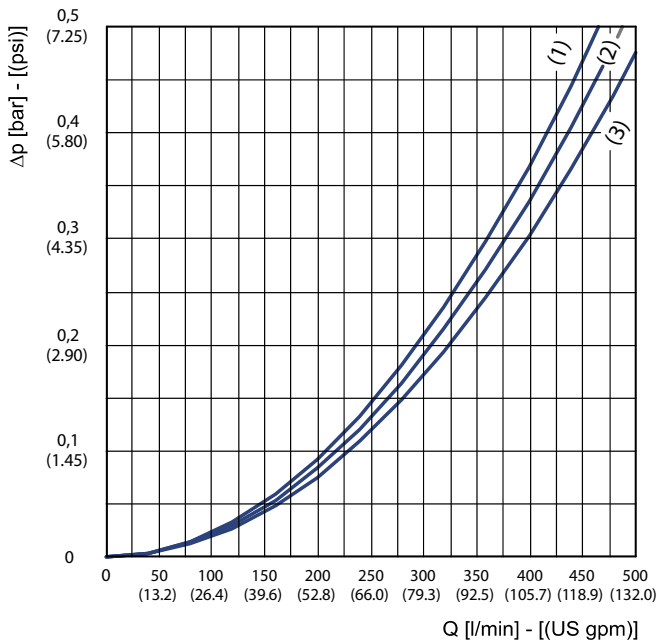
PRESSURE DROP CURVES THROUGH THE HOUSING



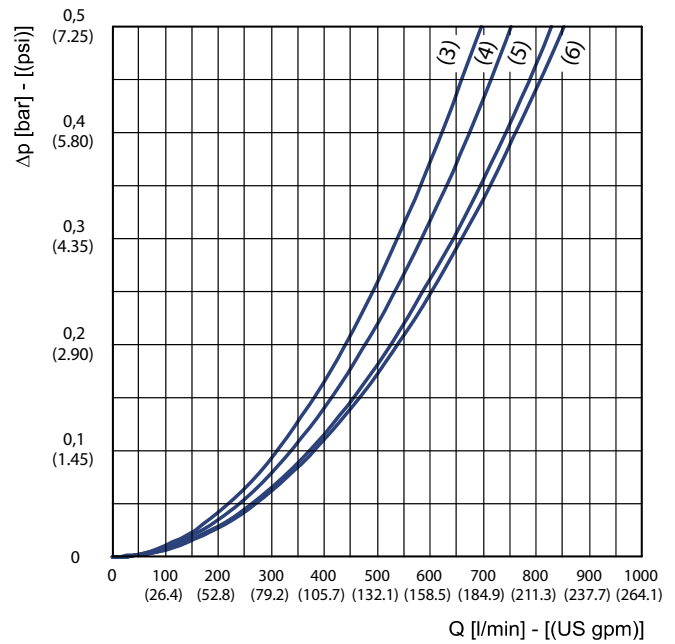
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) 1 1/4 - 1 1/4
- (2) 1 1/4 - 1 1/2
- (3) 1 1/2 - 1 1/2
- (4) 1 1/2 - 2
- (5) 2 - 2
- (6) 2 - 2 1/2

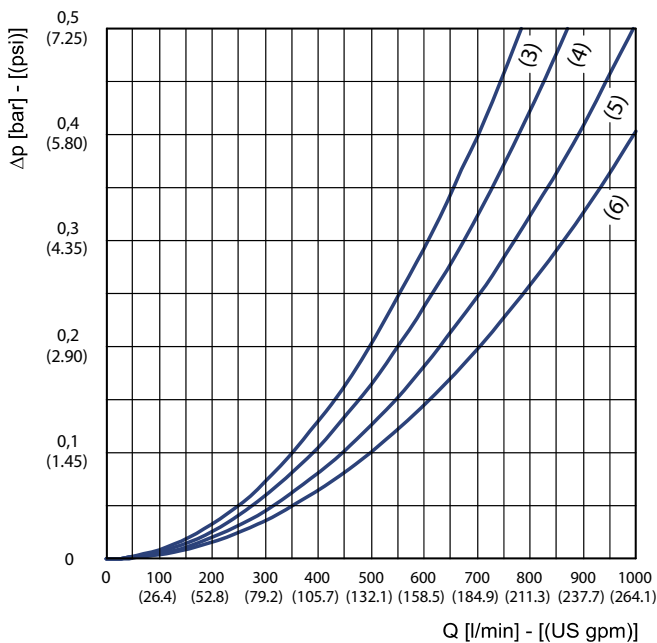
HF 508-30.195 / 30.239



HF 508-40.122 / 40.194



HF 508-40.195 / 40.239 / 40.390 / 40.512



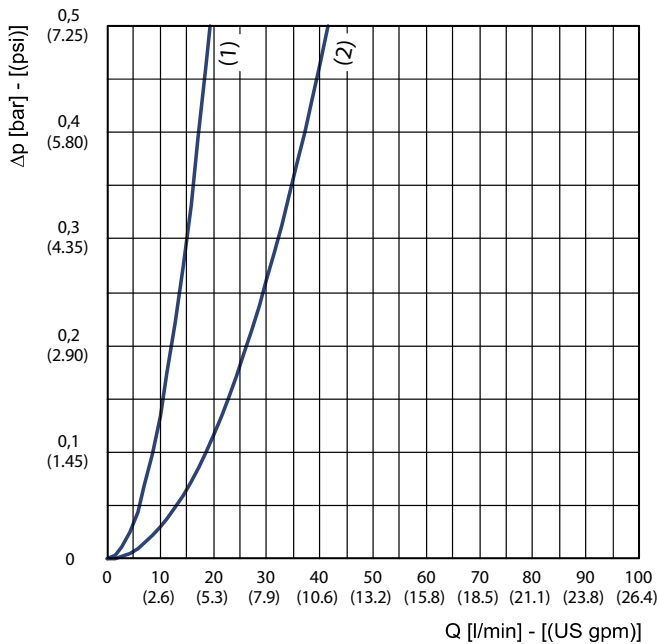
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-10



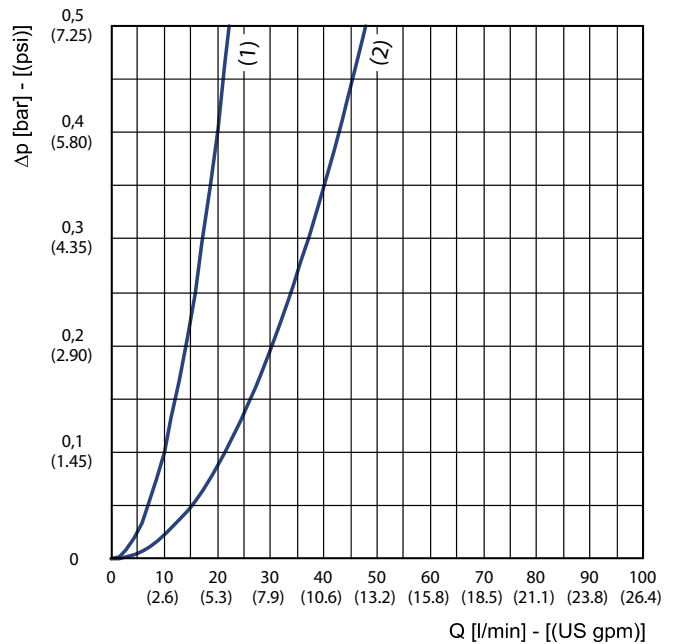
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

(1) HE K02-10.060
 (2) HE K02-10.129

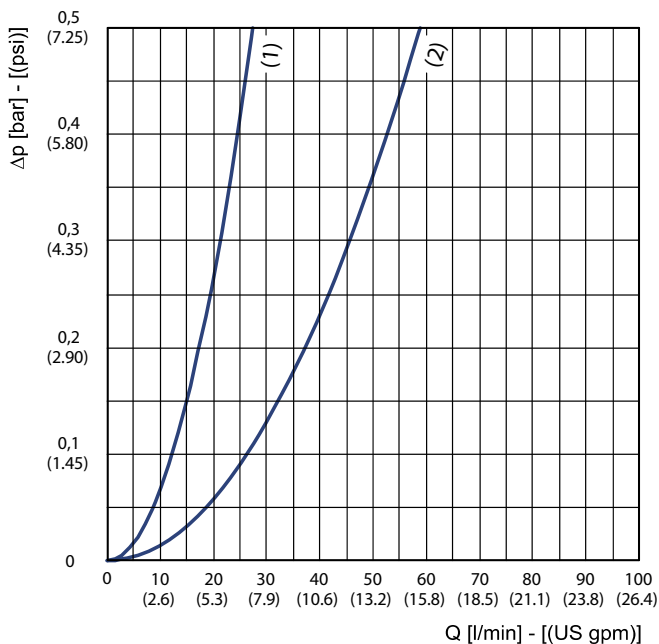
FG003



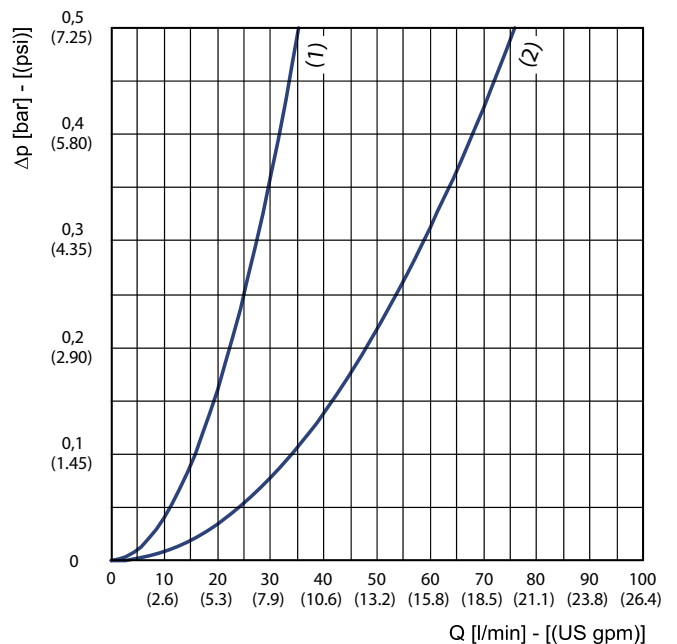
FG006



FG010



FG025



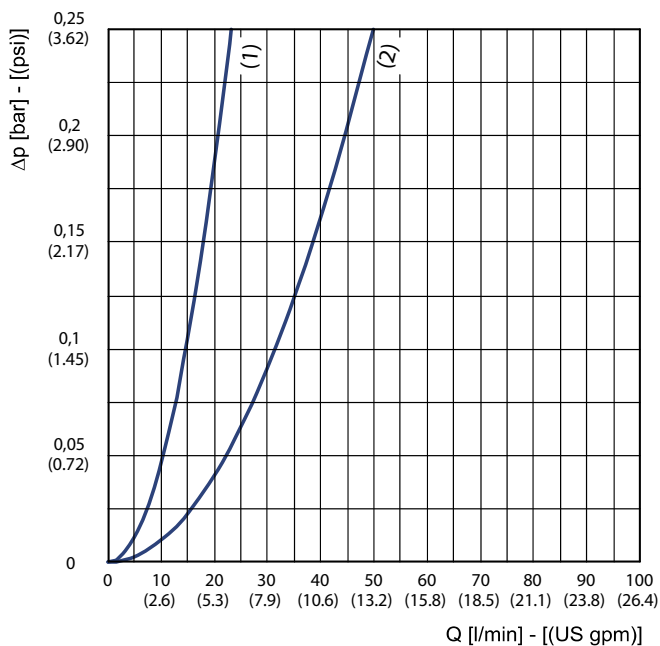
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-10



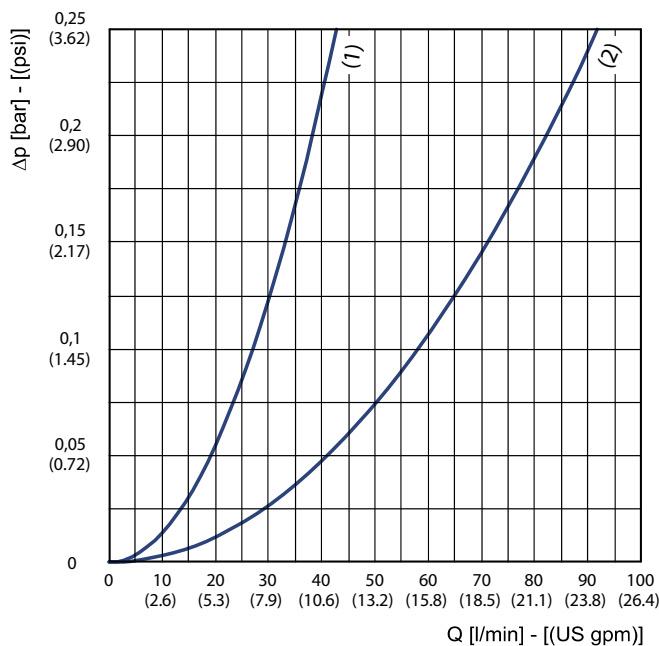
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

(1) HE K02-10.060
 (2) HE K02-10.129

RP010 / SP010



RP025 / SP025



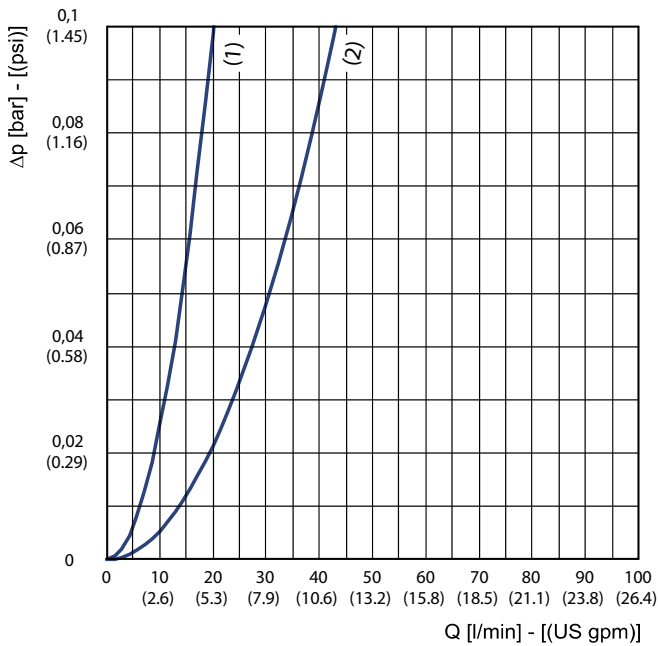
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-10



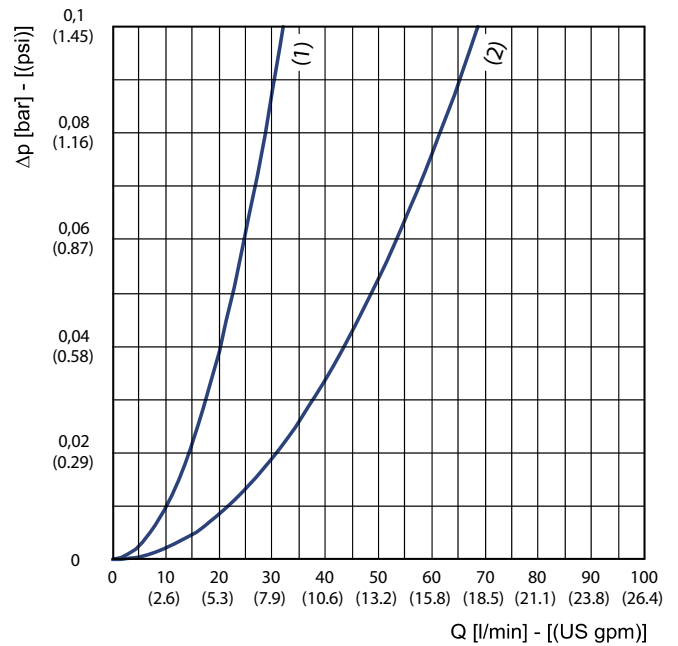
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HE K02-10.060
- (2) HE K02-10.129

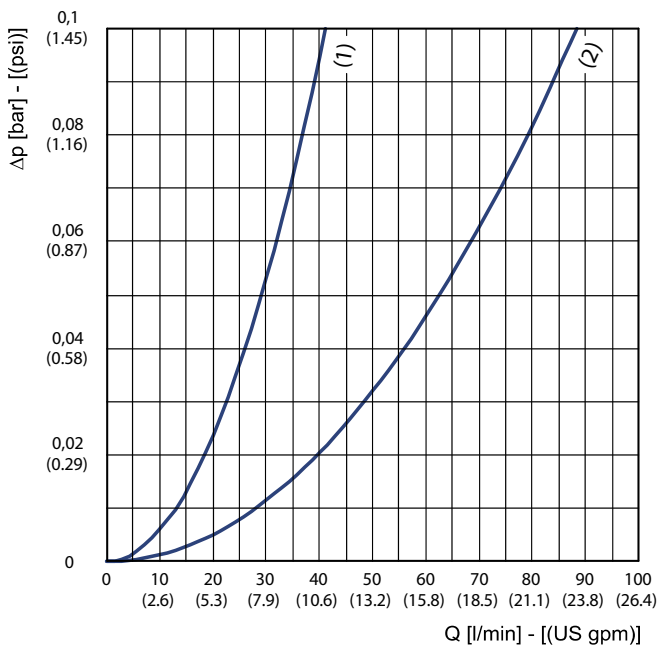
MI025



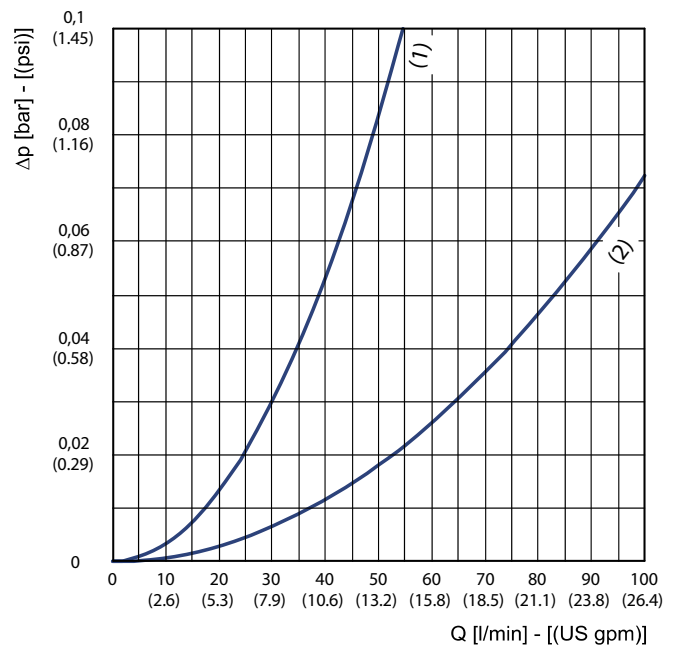
MI060



MS 090



MI125



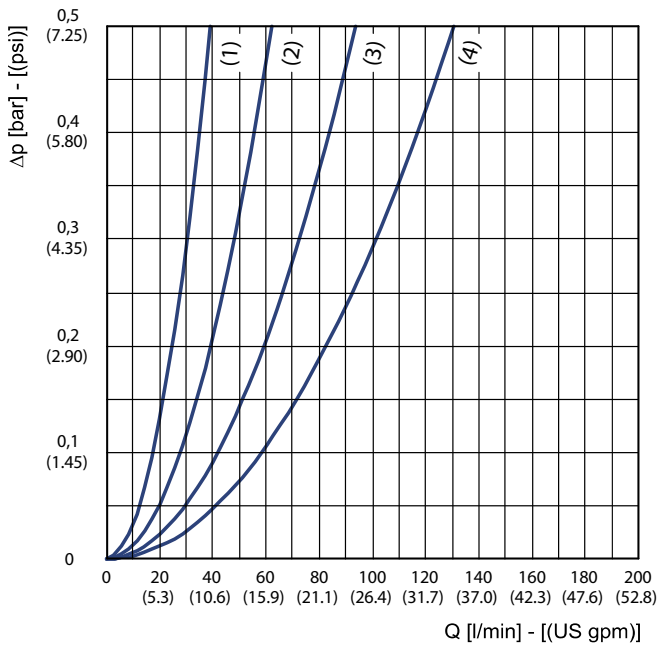
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-20



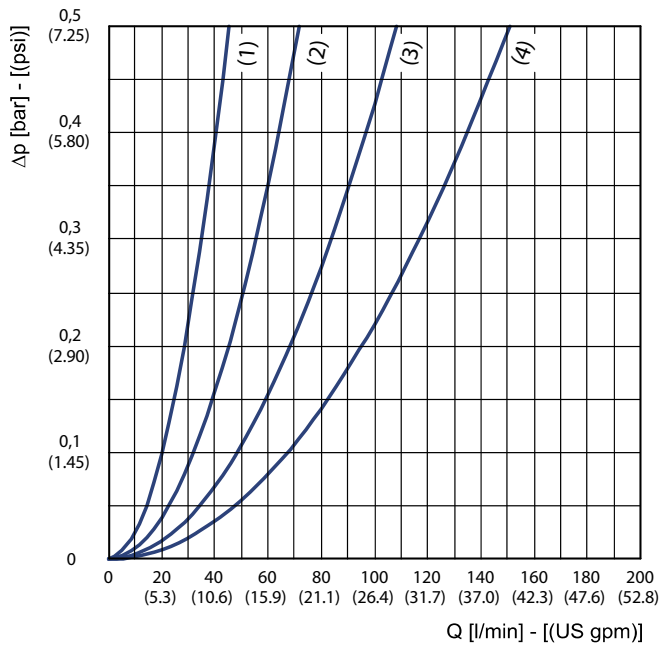
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-20.077
- (2) HEK02-20.122
- (3) HEK02-20.201
- (4) HEK02-20.280

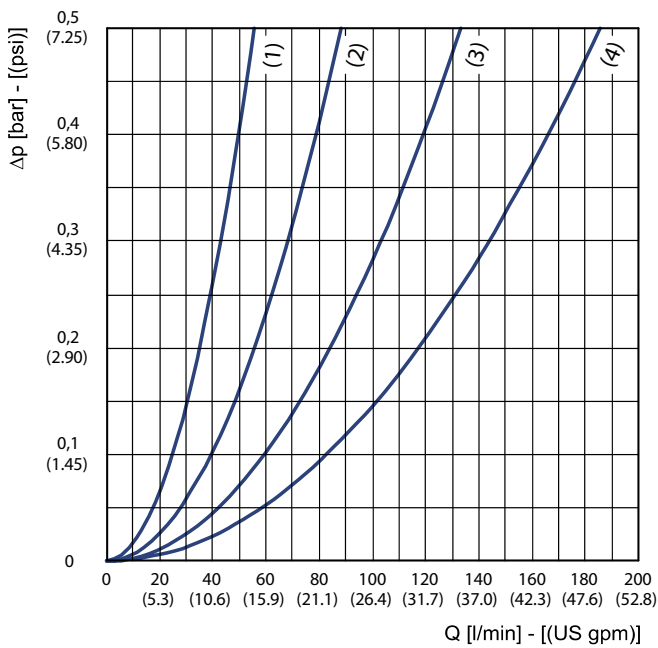
FG003



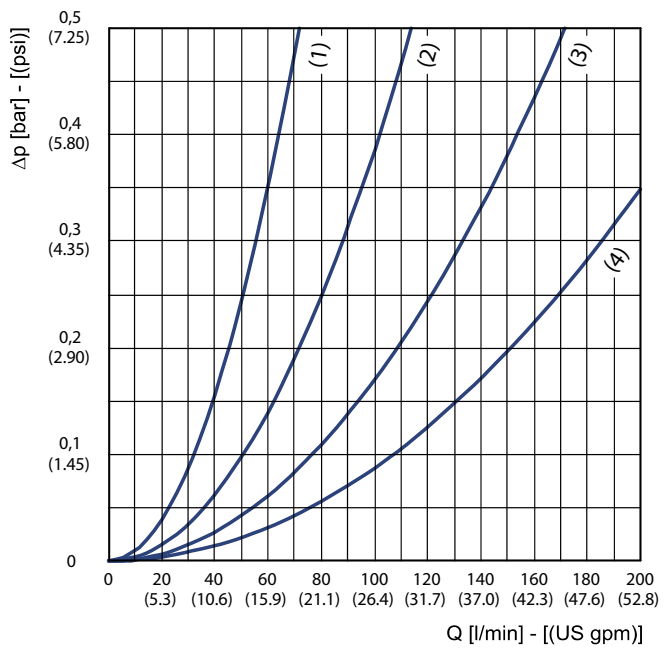
FG006



FG010



FG025



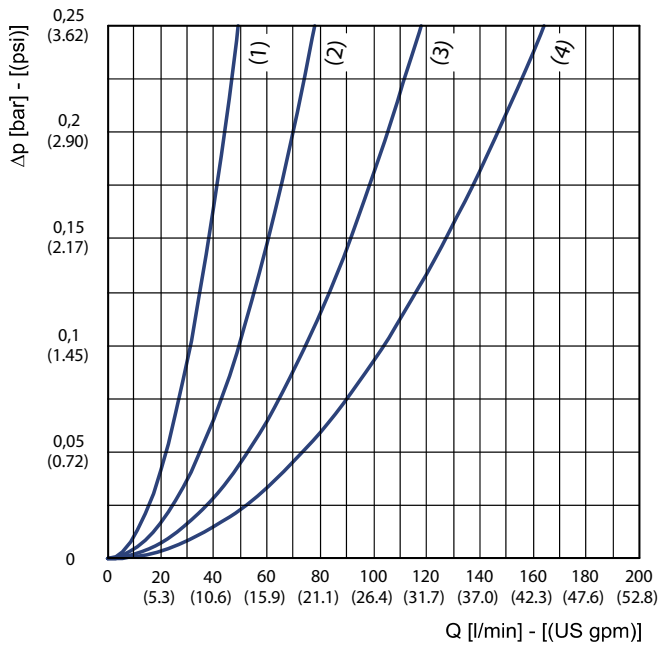
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-20



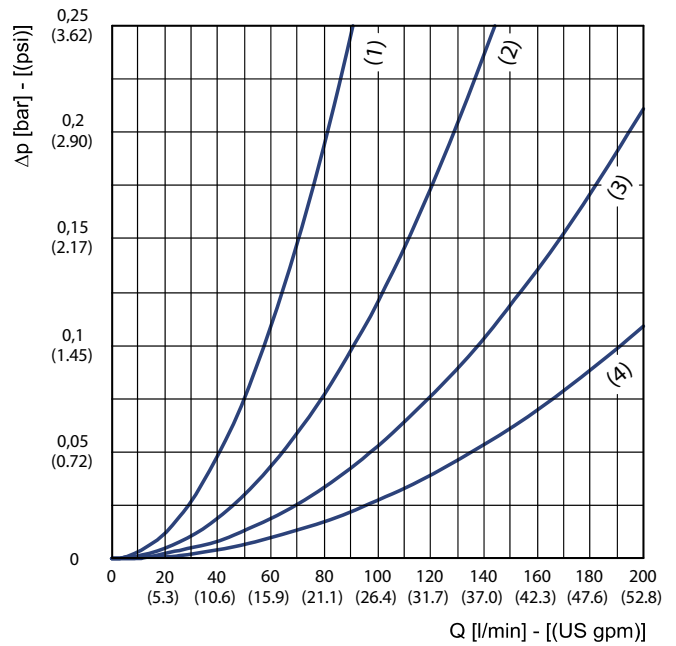
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-20.077
- (2) HEK02-20.122
- (3) HEK02-20.201
- (4) HEK02-20.280

RP010 / SP010



RP025 / SP025



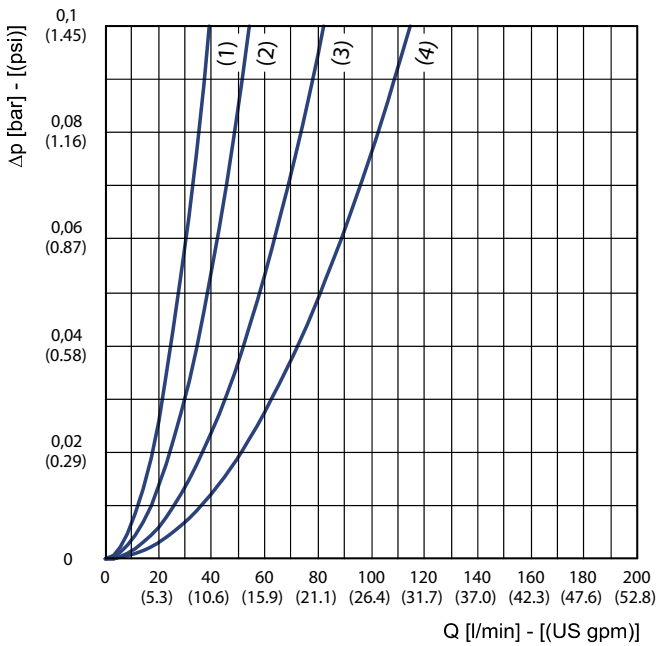
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-20



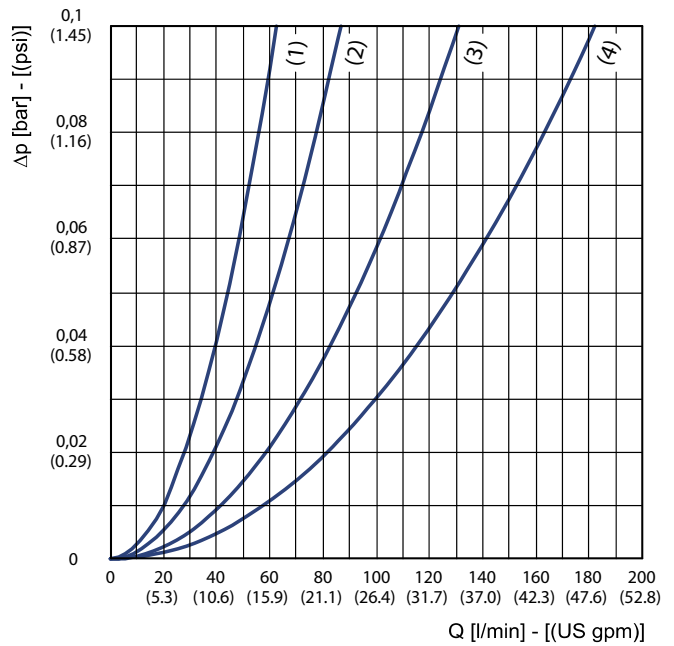
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-20.077
- (2) HEK02-20.122
- (3) HEK02-20.201
- (4) HEK02-20.280

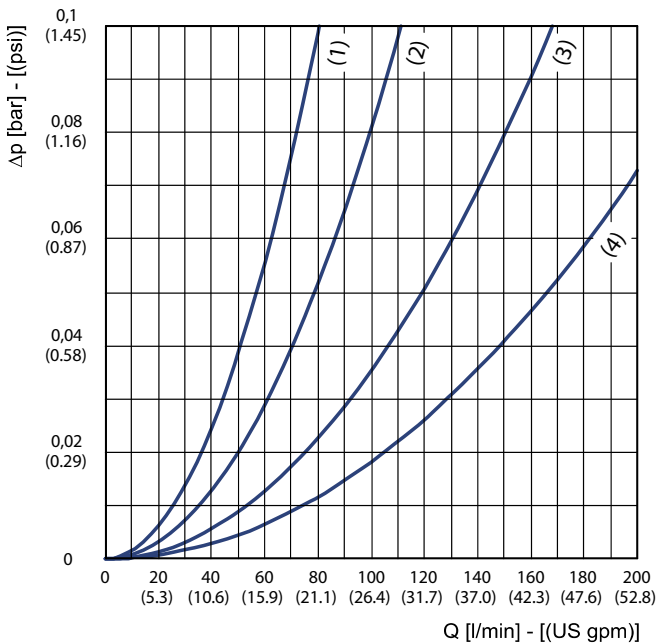
MI025



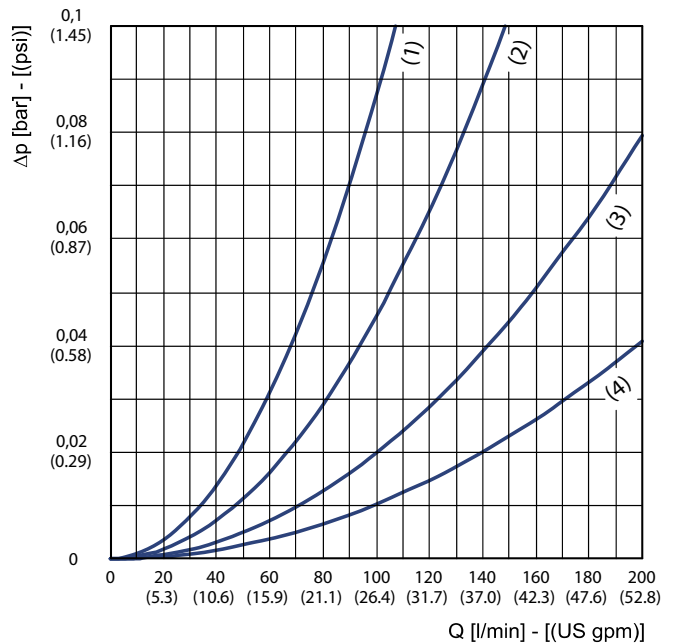
MI060



MS 090



MI125

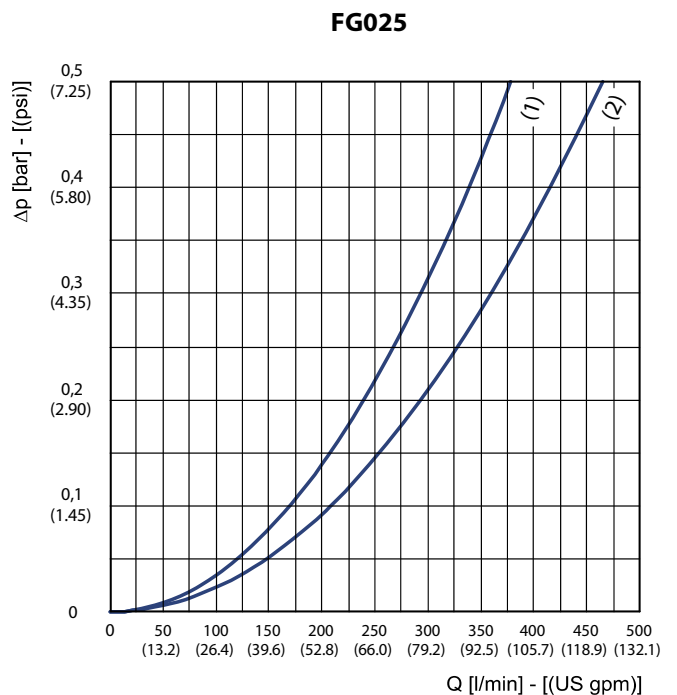
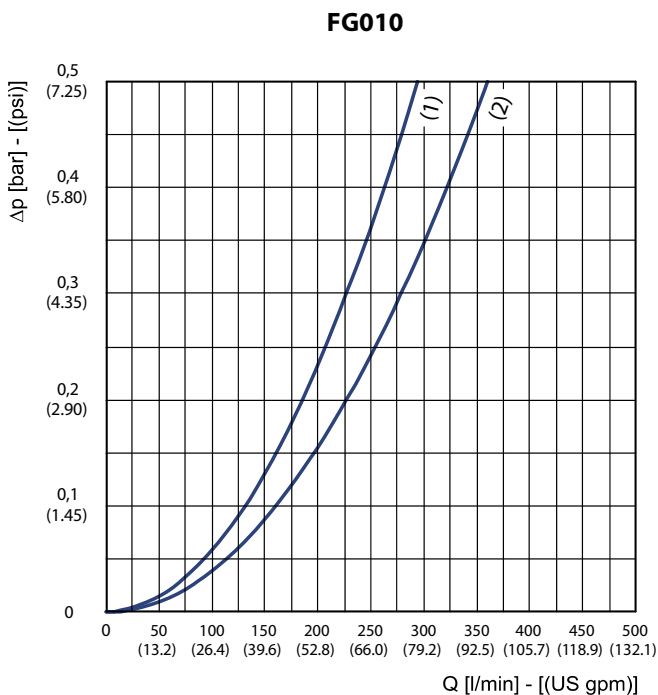
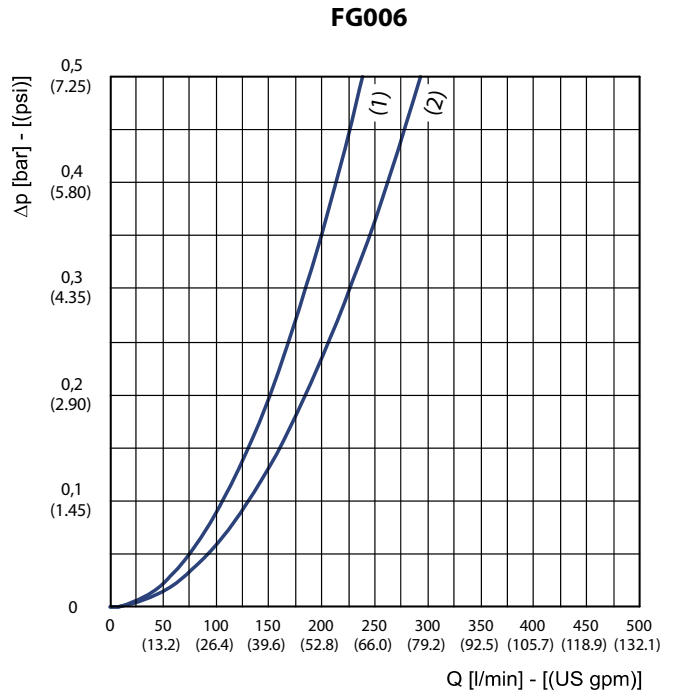
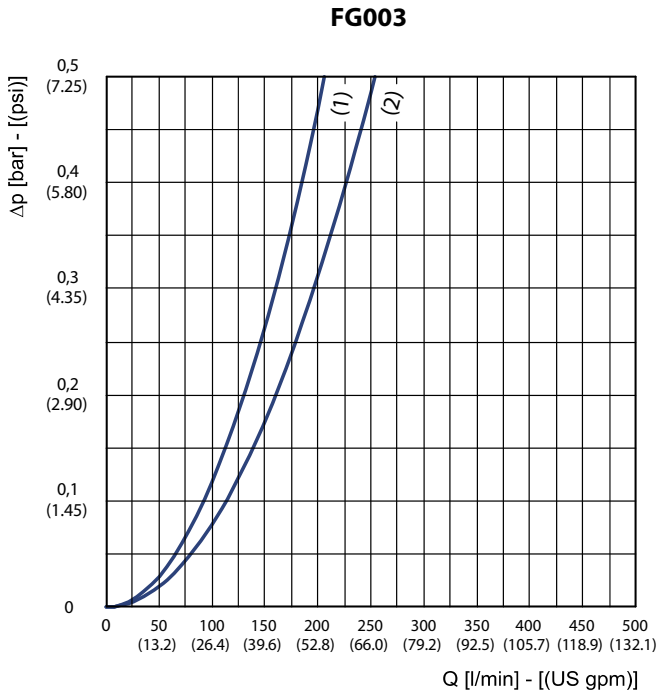


PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-30



The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-30.195
- (2) HEK02-30.239



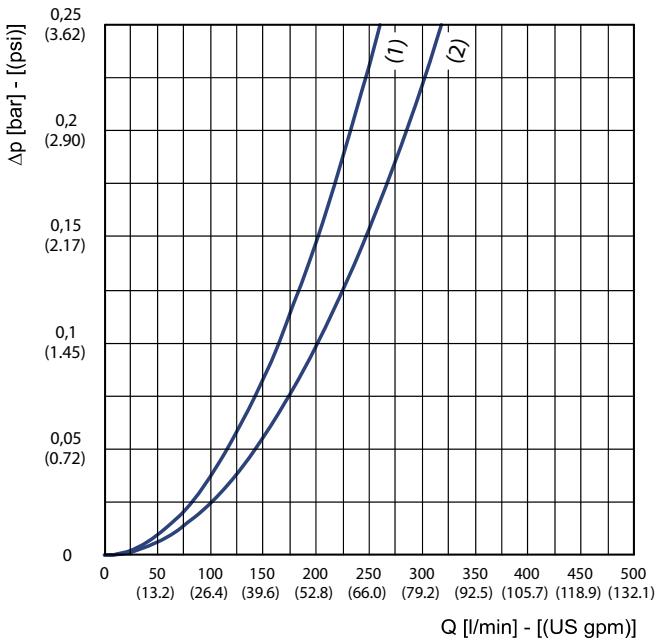
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-30



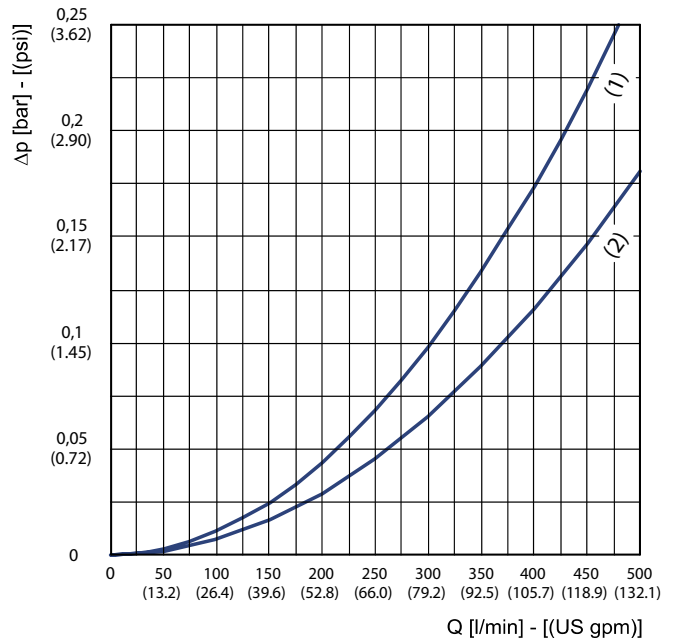
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-30.195
- (2) HEK02-30.239

RP010



RP025



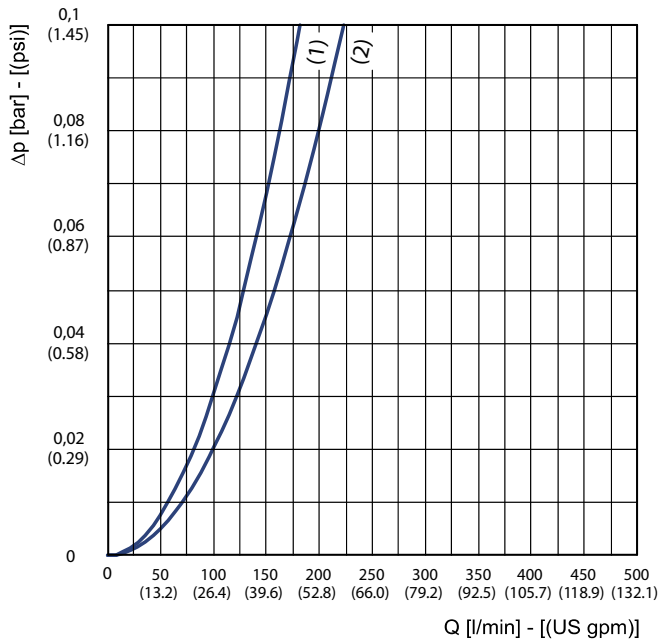
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-30



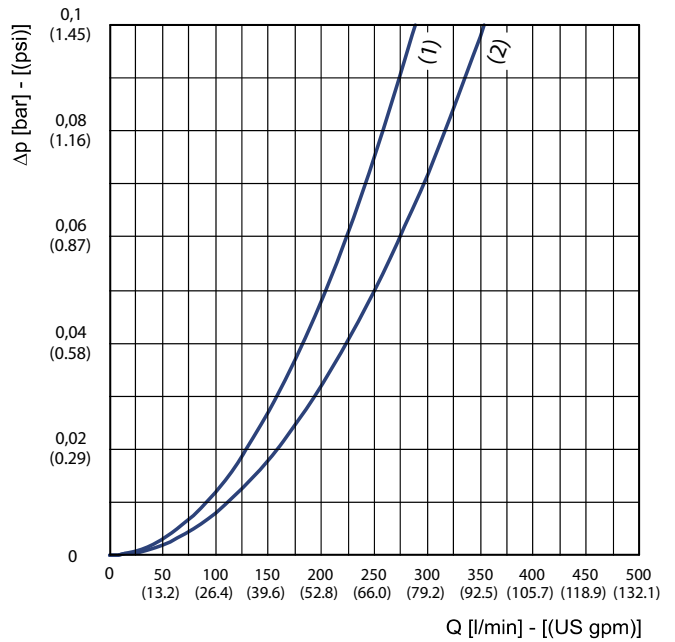
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-30.195
- (2) HEK02-30.239

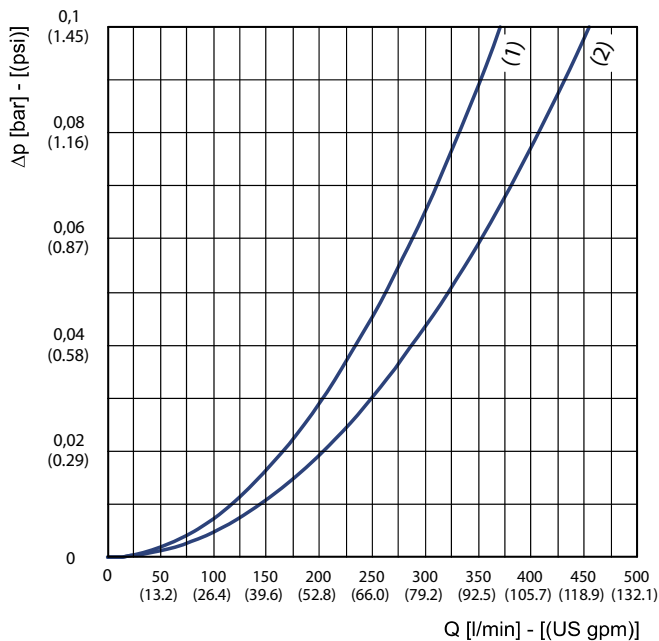
MI025



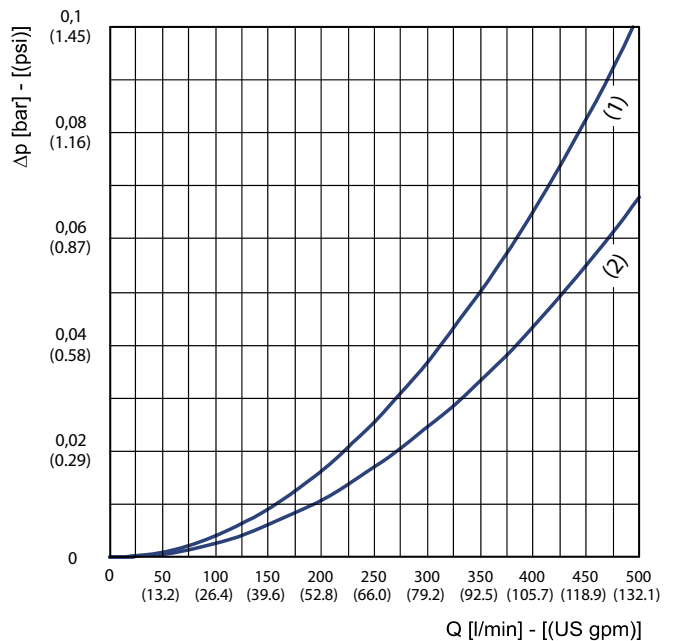
MI060



MS 090



MI125



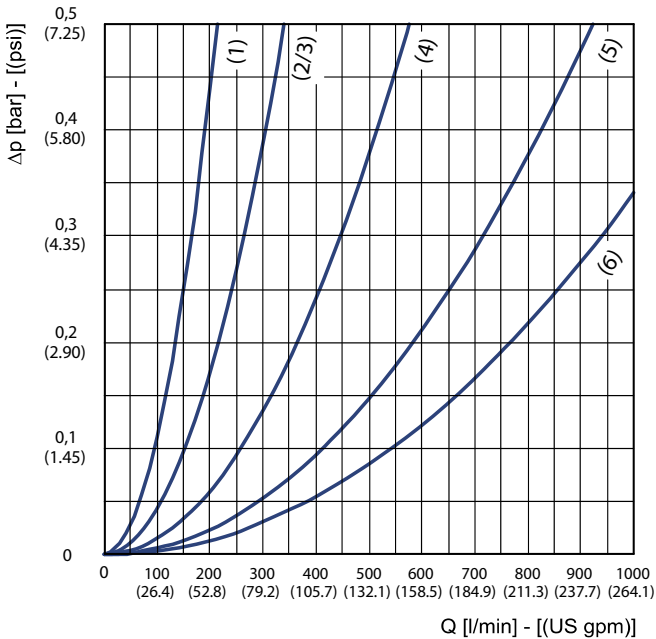
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-40



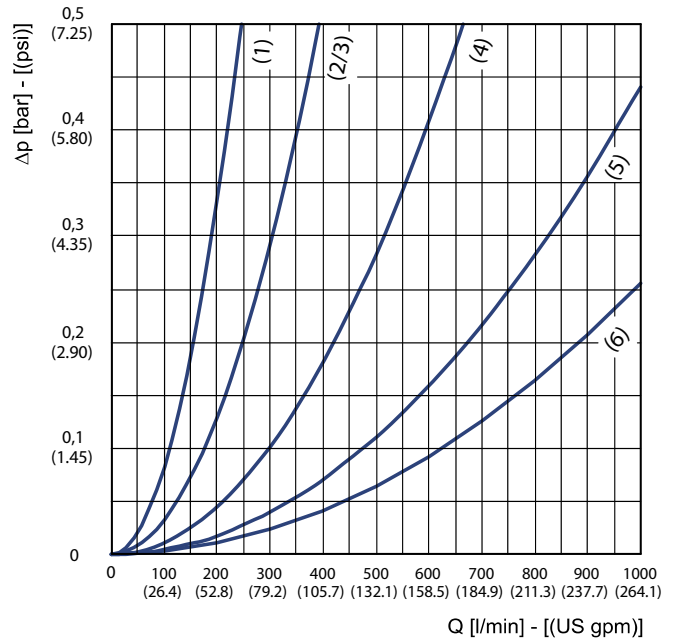
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-40.122
- (2) HEK02-40.194
- (3) HEK02-40.195
- (4) HEK02-40.239
- (5) HEK02-40.390
- (6) HEK02-40.512

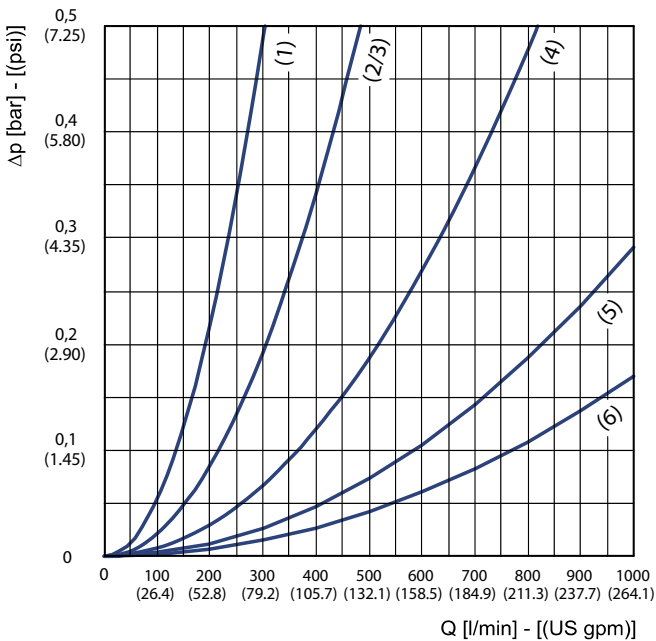
FG003



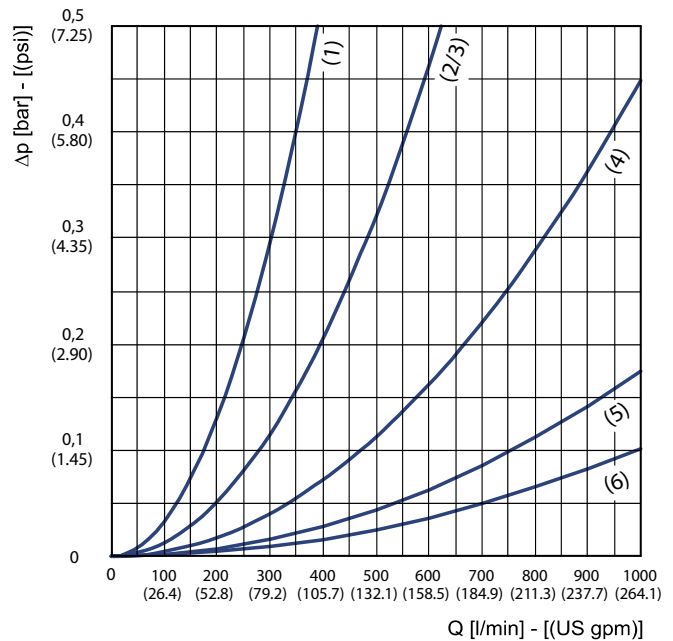
FG006



FG010



FG025



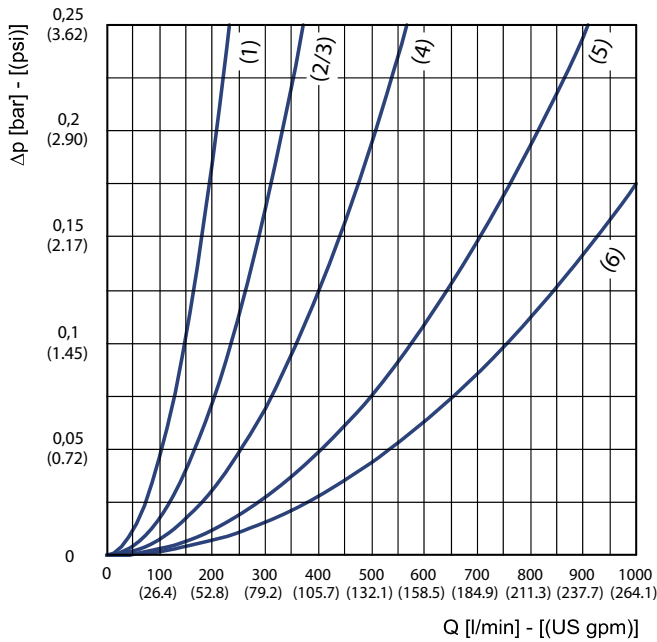
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-40



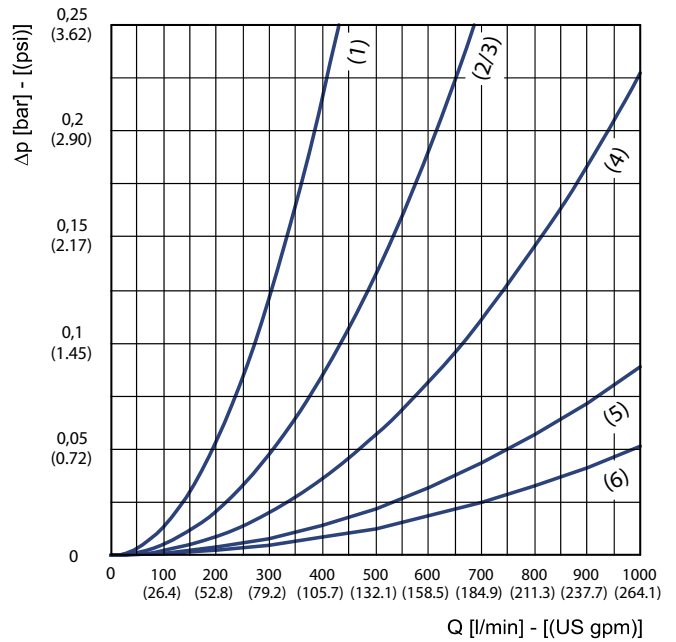
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- | | |
|------------------|------------------|
| (1) HEK02-40.122 | (4) HEK02-40.239 |
| (2) HEK02-40.194 | (5) HEK02-40.390 |
| (3) HEK02-40.195 | (6) HEK02-40.512 |

RP010



RP025



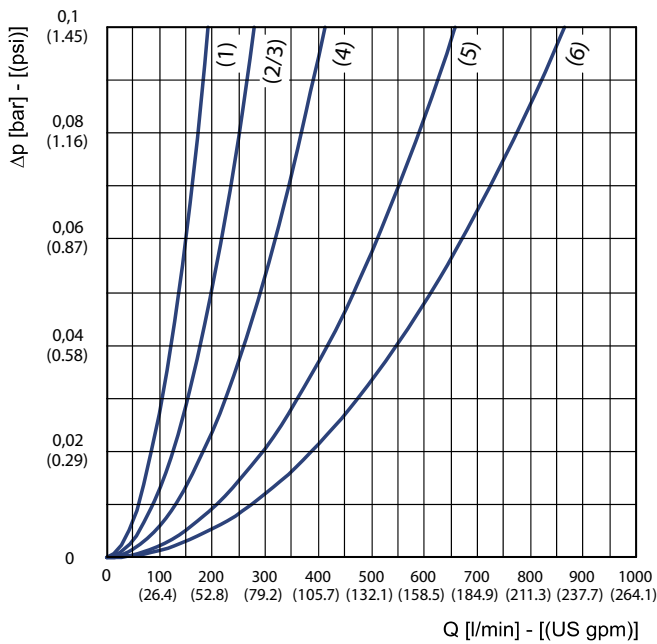
PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-40



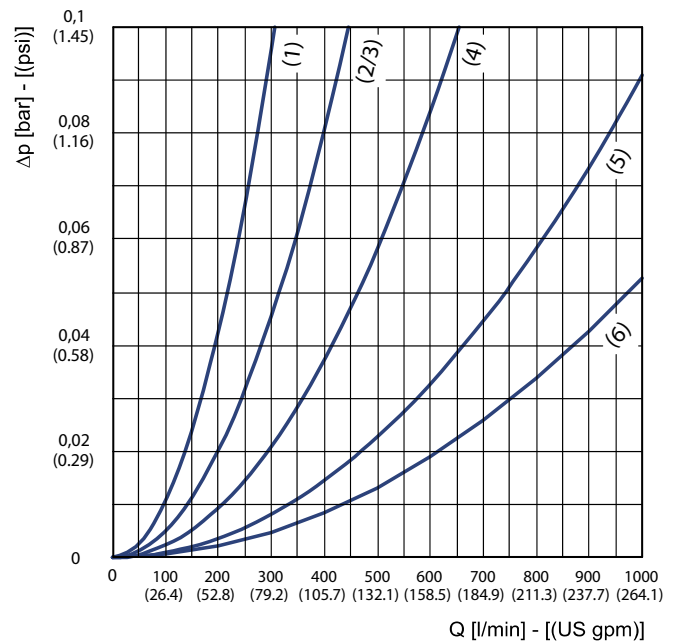
The curves are obtained in the following conditions:
 Mineral oil type SAE 10
 Kinematic viscosity 120 SSU (30 cSt)
 Density 7.29 lb/gal (0,856 kg/dm³).

- (1) HEK02-40.122
- (2) HEK02-40.194
- (3) HEK02-40.195
- (4) HEK02-40.239
- (5) HEK02-40.390
- (6) HEK02-40.512

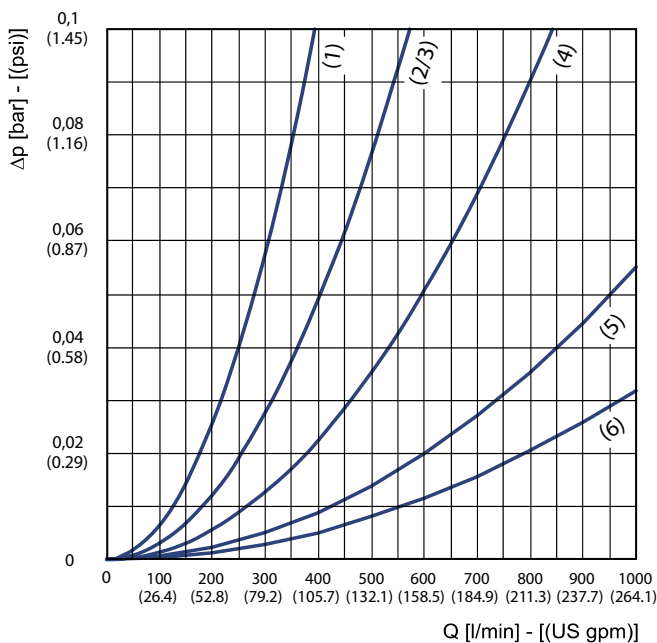
MI025



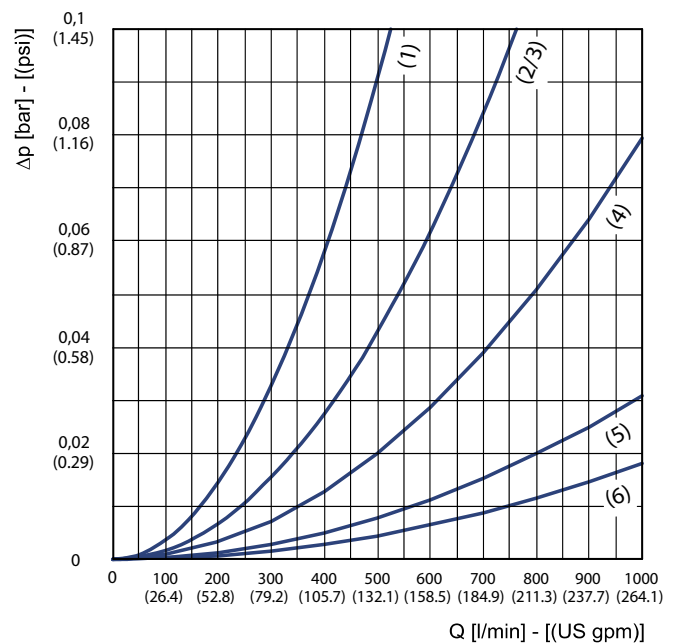
MI060



MS090



MI125



FLOWS - FILTERS WITH SINGLE INLET PORT



Filter type	Inlet port			Degree of filtration					
				FG003	FG006	FG010	FG025	RP/SP010	RP/SP025
	GAS (BSPP)	NPT	SAE J514b	Flow Δp= 5.8 psi (0,4 bar) (values referred to standard filtering surfaces) US gpm (l/min)					
HF 502-10.060	G 3/8	3/8 NPT	9/16-18 UNF-2B	4.0 (15)	4.0 (15)	6.6 (25)	6.6 (25)	6.6 (25)	9.2 (35)
	G 1/2	1/2 NPT	3/4-16 UNF-2B	4.0 (15)	4.0 (15)	6.6 (25)	6.6 (25)	6.6 (25)	11.9 (45)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	4.0 (15)	4.0 (15)	6.6 (25)	7.9 (30)	6.6 (25)	11.9 (45)
HF 502-10.129	G 3/8	3/8 NPT	9/16-18 UNF-2B	7.9 (30)	9.2 (35)	9.2 (35)	11.9 (45)	11.9 (45)	13.2 (50)
	G 1/2	1/2 NPT	3/4-16 UNF-2B	9.2 (35)	9.2 (35)	11.9 (45)	13.2 (50)	11.9 (45)	15.9 (60)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	9.2 (35)	9.2 (35)	11.9 (45)	14.5 (55)	13.2 (50)	18.5 (70)
HF 502-20.077	G 1/2	1/2 NPT	3/4-16 UNF-2B	9.2 (35)	9.2 (35)	11.9 (45)	13.2 (50)	13.2 (50)	17.2 (65)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	9.2 (35)	9.2 (35)	11.9 (45)	14.5 (55)	14.5 (55)	19.8 (75)
	G 1	1 NPT	1 5/16-12 UNF-2B	9.2 (35)	9.2 (35)	11.9 (45)	14.5 (55)	14.5 (55)	22.5 (85)
HF 502-20.122	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	9.2 (35)	9.2 (35)	11.9 (45)	14.5 (55)	14.5 (55)	22.5 (85)
	G 1/2	1/2 NPT	3/4-16 UNF-2B	11.9 (45)	13.2 (50)	14.5 (55)	17.2 (65)	17.2 (65)	19.8 (75)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	11.9 (45)	14.5 (55)	17.2 (65)	19.8 (75)	19.8 (75)	25.1 (95)
HF 502-20.201	G 1	1 NPT	1 5/16-12 UNF-2B	13.2 (50)	14.5 (55)	17.2 (65)	19.8 (75)	19.8 (75)	26.4 (100)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	13.2 (50)	14.5 (55)	17.2 (65)	21.1 (80)	19.8 (75)	27.7 (105)
	G 1/2	1/2 NPT	3/4-16 UNF-2B	17.2 (65)	17.2 (65)	19.8 (75)	22.5 (85)	21.1 (80)	23.8 (90)
HF 502-20.280	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	18.5 (70)	19.8 (75)	23.8 (90)	27.7 (105)	26.4 (100)	33.0 (125)
	G 1	1 NPT	1 5/16-12 UNF-2B	19.8 (75)	22.5 (85)	25.1 (95)	30.4 (115)	30.4 (115)	38.3 (145)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	19.8 (75)	22.5 (85)	26.4 (100)	31.7 (120)	30.4 (115)	42.3 (160)
HF 502-30.195 HF 508-30.195	G 1/2	1/2 NPT	3/4-16 UNF-2B	19.8 (75)	19.8 (75)	22.5 (85)	22.5 (85)	22.5 (85)	25.1 (95)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	22.5 (85)	25.1 (95)	27.7 (105)	30.4 (115)	30.4 (115)	34.3 (130)
	G 1	1 NPT	1 5/16-12 UNF-2B	25.1 (95)	27.7 (105)	31.7 (120)	35.7 (135)	35.7 (135)	40.9 (155)
HF 502-30.239 HF 508-30.239	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	26.4 (100)	29.1 (110)	33.0 (125)	38.3 (145)	38.3 (145)	46.2 (175)
	G 1	1 NPT	1 5/16-12 UNF-2B	39.6 (150)	40.9 (155)	44.9 (170)	50.2 (190)	50.2 (190)	55.5 (210)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	40.9 (155)	44.9 (170)	50.2 (190)	58.1 (220)	58.1 (220)	71.3 (270)
HF 502-40.122 HF 508-40.122	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	42.3 (160)	46.2 (175)	55.5 (210)	60.8 (230)	60.8 (230)	74.0 (280)
	G 1	1 NPT	1 5/16-12 UNF-2B	42.3 (160)	44.9 (170)	50.2 (190)	52.8 (200)	52.8 (200)	58.1 (220)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	47.5 (180)	50.2 (190)	55.5 (210)	63.4 (240)	60.8 (230)	71.3 (270)
HF 502-40.194 HF 508-40.194	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	50.2 (190)	52.8 (200)	60.8 (230)	66.0 (250)	66.0 (250)	76.6 (290)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	46.2 (175)	51.5 (195)	60.8 (230)	72.6 (275)	64.7 (245)	89.8 (340)
	G 2	2 NPT	2 1/2-12 UNF-2B	47.5 (180)	54.1 (205)	63.4 (240)	76.6 (290)	68.7 (260)	100.4 (380)
HF 502-40.195 HF 508-40.195	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	66.0 (250)	72.6 (275)	81.9 (310)	91.1 (345)	84.5 (320)	103.0 (390)
	G 2	2 NPT	2 1/2-12 UNF-2B	70.0 (265)	76.6 (290)	88.5 (335)	100.4 (380)	92.5 (350)	118.9 (450)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	68.7 (260)	76.6 (290)	87.2 (330)	97.7 (370)	89.8 (340)	113.6 (430)
HF 502-40.239 HF 508-40.239	G 2	2 NPT	2 1/2-12 UNF-2B	72.6 (275)	81.9 (310)	95.1 (360)	111.0 (420)	100.4 (380)	134.7 (510)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	95.1 (360)	100.4 (380)	108.3 (410)	116.2 (440)	108.3 (410)	124.2 (470)
	G 2	2 NPT	2 1/2-12 UNF-2B	105.7 (400)	114.9 (435)	125.5 (475)	138.7 (525)	126.8 (480)	150.6 (570)
HF 502-40.390 HF 508-40.390	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	113.6 (430)	116.2 (440)	121.5 (460)	124.2 (470)	121.5 (460)	126.8 (480)
	G 2	2 NPT	2 1/2-12 UNF-2B	132.1 (500)	140.0 (530)	146.6 (555)	153.2 (580)	147.9 (560)	159.8 (605)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	118.9 (450)	121.5 (460)	124.2 (470)	126.8 (480)	124.2 (470)	129.4 (490)
HF 502-40.512 HF 508-40.512	G 2	2 NPT	2 1/2-12 UNF-2B	145.3 (550)	147.9 (560)	153.2 (580)	158.5 (600)	153.2 (580)	163.8 (620)



FLOWS - FILTERS WITH SINGLE INLET PORT



Filter type	Inlet port			Degree of filtration			
				MI025	MI060	MS090	MI125
	GAS (BSPP)	NPT	S A E J 514b	Flow Δp= 5.8 psi (0,4 bar) (values referred to standard filtering surfaces)			
			US gpm (l/min)				
HF 502-10.060	G 3/8	3/8 NPT	9/16-18 UNF-2B	9.2 (35)	11.9 (45)	11.9 (45)	14.5 (55)
	G 1/2	1/2 NPT	3/4-16 UNF-2B	9.2 (35)	11.9 (45)	14.5 (55)	15.9 (60)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	9.2 (35)	13.2 (50)	15.9 (60)	17.2 (65)
HF 502-10.129	G 3/8	3/8 NPT	9/16-18 UNF-2B	11.9 (45)	14.5 (55)	14.5 (55)	14.5 (55)
	G 1/2	1/2 NPT	3/4-16 UNF-2B	14.5 (55)	17.2 (65)	17.2 (65)	18.5 (70)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	17.2 (65)	19.8 (75)	21.1 (80)	22.5 (85)
HF 502-20.077	G 1/2	1/2 NPT	3/4-16 UNF-2B	14.5 (55)	18.5 (70)	19.8 (75)	21.1 (80)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	17.2 (65)	22.5 (85)	23.8 (90)	25.1 (95)
	G 1	1 NPT	1 5/16-12 UNF-2B	17.2 (65)	22.5 (85)	25.1 (95)	27.7 (105)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	17.2 (65)	23.8 (90)	26.4 (100)	29.1 (110)
HF 502-20.122	G 1/2	1/2 NPT	3/4-16 UNF-2B	17.2 (65)	19.8 (75)	21.1 (80)	22.5 (85)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	19.8 (75)	23.8 (90)	25.1 (95)	26.4 (100)
	G 1	1 NPT	1 5/16-12 UNF-2B	22.5 (85)	26.4 (100)	27.7 (105)	30.4 (115)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	22.5 (85)	27.7 (105)	29.1 (110)	31.7 (120)
HF 502-20.201	G 1/2	1/2 NPT	3/4-16 UNF-2B	22.5 (85)	25.1 (95)	25.1 (95)	25.1 (95)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	27.7 (105)	33.0 (125)	33.0 (125)	35.7 (135)
	G 1	1 NPT	1 5/16-12 UNF-2B	30.4 (115)	38.3 (145)	40.9 (155)	42.3 (160)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	33.0 (125)	40.9 (155)	43.6 (165)	46.2 (175)
HF 502-20.280	G 1/2	1/2 NPT	3/4-16 UNF-2B	23.8 (90)	25.1 (95)	25.1 (95)	25.1 (95)
	G 3/4	3/4 NPT	1 1/16-12 UNF-2B	30.4 (115)	33.0 (125)	34.3 (130)	35.7 (135)
	G 1	1 NPT	1 5/16-12 UNF-2B	35.7 (135)	40.9 (155)	42.3 (160)	43.6 (165)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	38.3 (145)	44.9 (170)	47.6 (180)	48.9 (185)
HF 502-30.195 HF 508-30.195	G 1	1 NPT	1 5/16-12 UNF-2B	50.2 (190)	55.5 (210)	58.1 (220)	60.8 (230)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	60.8 (230)	68.7 (260)	71.3 (270)	74.0 (280)
HF 502-30.239 HF 508-30.239	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	63.4 (240)	74.0 (280)	76.6 (290)	81.9 (310)
	G 1	1 NPT	1 5/16-12 UNF-2B	55.5 (210)	56.8 (215)	58.1 (220)	60.8 (230)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	66.0 (250)	71.3 (270)	74.0 (280)	76.6 (290)
HF 502-40.122 HF 508-40.122	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	68.7 (260)	76.6 (290)	79.3 (300)	81.9 (310)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	76.6 (290)	95.1 (360)	101.7 (385)	108.3 (410)
HF 502-40.194 HF 508-40.194	G 2	2 NPT	2 1/2-12 UNF-2B	81.9 (310)	105.7 (400)	116.2 (440)	124.2 (470)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	91.1 (345)	104.3 (395)	108.3 (410)	111.0 (420)
HF 502-40.195 HF 508-40.195	G 2	2 NPT	2 1/2-12 UNF-2B	101.7 (385)	118.9 (450)	126.8 (480)	132.1 (500)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	97.7 (370)	114.9 (435)	121.5 (460)	124.2 (470)
HF 502-40.239 HF 508-40.239	G 2	2 NPT	2 1/2-12 UNF-2B	111.0 (420)	137.4 (520)	145.3 (550)	153.2 (580)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	112.3 (425)	122.8 (465)	125.5 (475)	128.1 (485)
HF 502-40.390 HF 508-40.390	G 2	2 NPT	2 1/2-12 UNF-2B	132.1 (500)	150.6 (570)	155.9 (590)	161.1 (610)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	122.8 (465)	126.8 (480)	129.4 (490)	130.8 (495)
HF 502-40.512 HF 508-40.512	G 2	2 NPT	2 1/2-12 UNF-2B	150.6 (570)	159.8 (605)	162.5 (615)	163.8 (620)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	126.8 (480)	128.1 (485)	129.4 (490)	130.8 (495)
	G 2	2 NPT	2 1/2-12 UNF-2B	155.9 (590)	162.5 (615)	163.8 (620)	166.4 (630)

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FLAWS - FILTERS WITH DOUBLE INLET PORTS



Filter type	Inlet ports				Degree of filtration					
					FG003	FG006	FG010	FG025	RP010	RP025
	GAS (BSPP)	NPT	SAE J514b	SAE 3000 Nom. dim.	Flow Δp= 5.8 psi (0,4 bar) (values referred to standard filtering surfaces)					
					US gpm (l/min)					
HF 508-30.195	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	44.9	50.2	60.8	71.3	68.7	92.5
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	(170)	(190)	(230)	(270)	(260)	(350)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	44.9	50.2	60.8	71.3	71.3	92.5
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(170)	(190)	(230)	(270)	(270)	(350)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	44.9	50.2	60.8	71.3	71.3	97.7
HF 508-30.239	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(170)	(190)	(230)	(270)	(270)	(370)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	52.8	58.1	66.0	76.6	76.6	97.7
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	(200)	(220)	(250)	(290)	(290)	(370)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	52.8	60.8	68.7	79.2	76.6	100.4
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(200)	(230)	(260)	(300)	(290)	(380)
HF 508-40.122	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	55.5	60.8	71.3	81.9	81.9	103.0
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(210)	(230)	(270)	(310)	(310)	(390)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	50.2	55.5	66.0	81.9	71.3	108.3
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(190)	(210)	(250)	(310)	(270)	(410)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	50.2	55.5	66.0	81.9	71.3	113.6
HF 508-40.194	G 2	2 NPT	2 1/2-12 UNF-2B	2	(190)	(210)	(250)	(310)	(270)	(430)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	50.2	55.5	66.0	83.2	71.3	116.2
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(190)	(210)	(250)	(315)	(270)	(440)
	-	-	-	2	50.2	55.5	66.0	84.5	71.3	118.9
	-	-	-	2 1/2	(190)	(210)	(250)	(320)	(270)	(450)
HF 508-40.195	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	71.3	81.9	92.5	111.0	97.7	134.7
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(270)	(310)	(350)	(420)	(370)	(510)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	74.0	81.9	97.7	113.6	103.0	140.0
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(280)	(310)	(370)	(430)	(390)	(530)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	76.6	84.5	97.7	118.9	105.7	150.6
HF 508-40.195	G 2	2 NPT	2 1/2-12 UNF-2B	2	(290)	(320)	(370)	(450)	(400)	(570)
	-	-	-	2	76.6	84.5	100.4	118.9	105.7	151.9
	-	-	-	2 1/2	(290)	(320)	(380)	(450)	(400)	(575)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	74.0	81.9	97.7	116.2	103.0	145.3
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(280)	(310)	(370)	(440)	(390)	(550)
HF 508-40.239	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	76.6	84.5	100.4	118.9	108.3	153.2
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(290)	(320)	(380)	(450)	(410)	(580)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	76.6	87.2	103.0	124.2	111.0	163.8
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(290)	(330)	(390)	(470)	(420)	(620)
	-	-	-	2	76.6	87.2	105.7	129.4	113.6	174.4
HF 508-40.239	-	-	-	2 1/2	(290)	(330)	(400)	(490)	(430)	(660)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	108.3	118.9	134.7	147.9	134.7	163.8
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(410)	(450)	(510)	(560)	(510)	(620)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	113.6	124.2	140.0	158.5	140.0	179.6
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(430)	(470)	(530)	(600)	(530)	(680)
HF 508-40.390	G 2	2 NPT	2 1/2-12 UNF-2B	2	118.9	132.0	146.6	171.7	147.9	195.5
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(450)	(500)	(555)	(650)	(560)	(740)
	-	-	-	2	121.5	134.7	154.5	179.6	155.9	211.3
	-	-	-	2 1/2	(460)	(510)	(585)	(680)	(590)	(800)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	142.7	150.6	158.5	169.1	158.5	178.0
HF 508-40.512	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(540)	(570)	(600)	(640)	(600)	(670)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	150.6	158.5	171.7	184.9	171.7	195.5
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(570)	(600)	(650)	(700)	(650)	(740)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	161.1	171.7	187.6	203.4	187.6	216.6
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(610)	(650)	(710)	(770)	(710)	(820)
HF 508-40.512	-	-	-	2	169.1	177.0	200.8	221.9	200.8	237.7
	-	-	-	2 1/2	(640)	(670)	(760)	(840)	(760)	(900)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	155.9	161.1	166.4	174.4	169.1	179.6
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(590)	(610)	(630)	(660)	(640)	(680)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	166.4	174.4	184.9	190.2	184.9	198.1
HF 508-40.512	G 2	2 NPT	2 1/2-12 UNF-2B	2	(630)	(660)	(700)	(720)	(700)	(750)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	182.3	190.2	203.4	216.6	203.4	224.5
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(690)	(720)	(770)	(820)	(770)	(850)
	-	-	-	2	192.8	206.1	221.9	235.1	221.9	248.3
	-	-	-	2 1/2	(730)	(780)	(840)	(890)	(840)	(940)

01/07.2010



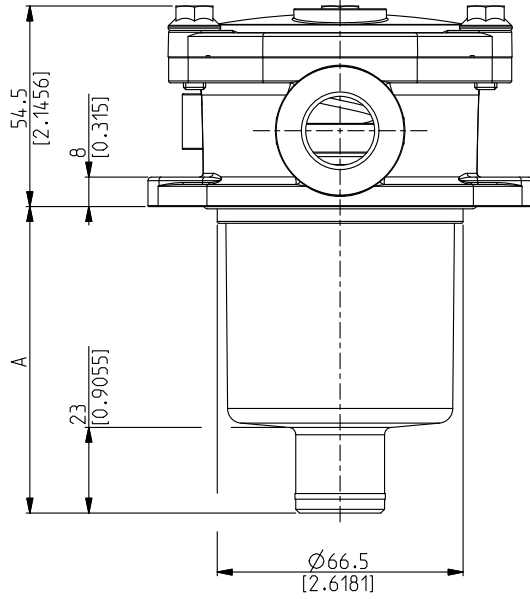
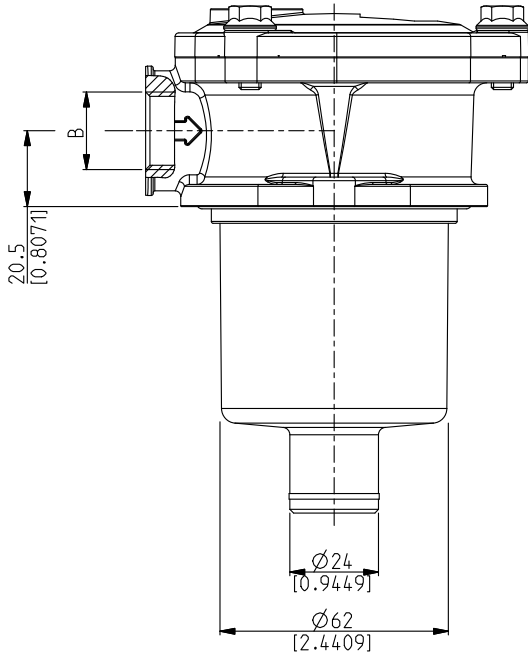
FLOWS - FILTERS WITH DOUBLE INLET PORTS



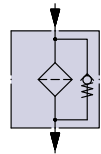
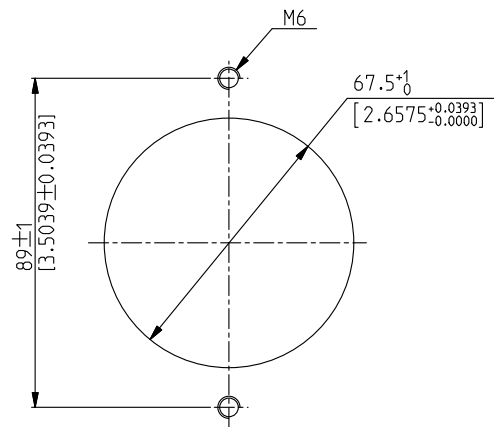
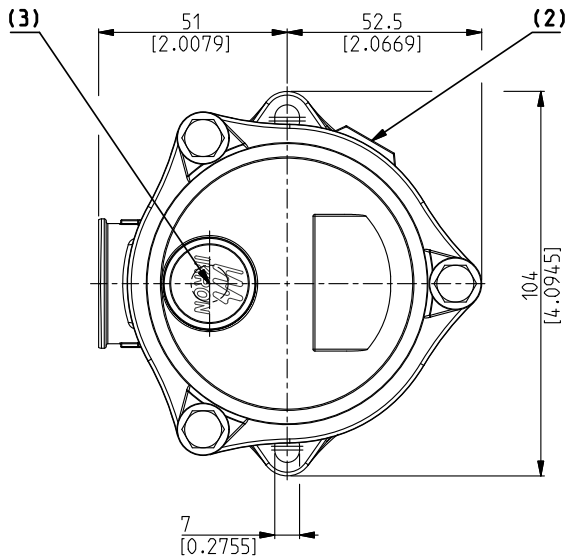
Filter type	Inlet ports				Degree of filtration			
					MI025	MI060	MS090	MI125
	GAS (BSPP)	NPT	SAE J514b	SAE 3000 Nom. dim.	Flow $\Delta p = 5.8 \text{ psi (0,4 bar)}$ (values referred to standard filtering surfaces)			
					US gpm (l/min)			
HF 508-30.195	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	71.3	89.8	97.7	103.0
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	(270)	(340)	(370)	(390)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	74.0	92.5	100.4	105.7
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(280)	(350)	(380)	(400)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	76.6	95.1	103.0	111.0
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(290)	(360)	(390)	(420)
HF 508-30.239	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	81.9	95.1	100.4	104.3
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	(310)	(360)	(380)	(395)
	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	81.9	97.7	103.0	108.3
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(310)	(370)	(390)	(410)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	84.5	103.0	108.3	113.6
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(320)	(390)	(410)	(430)
HF 508-40.122	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	87.1	116.2	129.4	142.7
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(330)	(440)	(490)	(540)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	88.5	118.9	134.7	150.6
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(335)	(450)	(510)	(570)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	89.8	124.2	142.7	161.1
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(340)	(470)	(540)	(610)
	-	-	-	2	92.5	126.8	145.3	163.8
	-	-	-	2 1/2	(350)	(480)	(550)	(620)
HF 508-40.194	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	111.0	134.7	145.3	153.2
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(420)	(510)	(550)	(580)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	113.6	142.7	153.2	163.8
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(430)	(540)	(580)	(620)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	118.9	150.6	163.8	177.0
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(450)	(570)	(620)	(670)
	-	-	-	2	120.2	153.2	169.1	179.6
	-	-	-	2 1/2	(455)	(580)	(640)	(680)
HF 508-40.195	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	116.2	145.3	158.5	169.1
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(440)	(550)	(600)	(640)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	118.9	155.9	171.7	184.9
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(450)	(590)	(650)	(700)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	124.2	166.4	184.9	203.4
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(470)	(630)	(700)	(770)
	-	-	-	2	129.4	177.0	198.1	221.9
	-	-	-	2 1/2	(490)	(670)	(750)	(840)
HF 508-40.239	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	140.0	163.8	171.7	177.0
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(530)	(620)	(650)	(670)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	150.6	177.0	187.6	195.5
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(570)	(670)	(710)	(740)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	161.1	195.5	208.7	219.3
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(610)	(740)	(790)	(830)
	-	-	-	2	169.1	211.3	227.2	243.0
	-	-	-	2 1/2	(640)	(800)	(860)	(920)
HF 508-40.390	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	163.8	177.0	179.6	182.3
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(620)	(670)	(680)	(690)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	177.0	192.8	198.1	200.8
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(670)	(730)	(750)	(760)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	195.5	216.6	224.5	227.2
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(740)	(820)	(850)	(860)
	-	-	-	2	211.3	237.7	248.3	253.6
	-	-	-	2 1/2	(800)	(900)	(940)	(960)
HF 508-40.512	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	171.7	179.6	182.3	184.9
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(650)	(680)	(690)	(700)
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	187.6	198.1	200.1	203.4
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(710)	(750)	(760)	(770)
	G 2	2 NPT	2 1/2-12 UNF-2B	2	208.7	224.5	227.2	232.5
	G 2	2 NPT	2 1/2-12 UNF-2B	2	(790)	(850)	(860)	(880)
	-	-	-	2	227.2	248.3	253.6	264.1
	-	-	-	2 1/2	(860)	(940)	(960)	(1000)



HF502-10 DIMENSIONS



**RESERVOIR MOUNTING
HOLE DIMENSIONS**

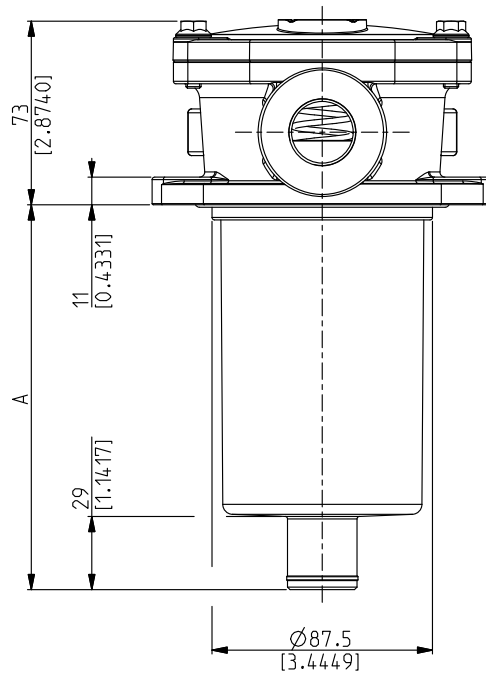
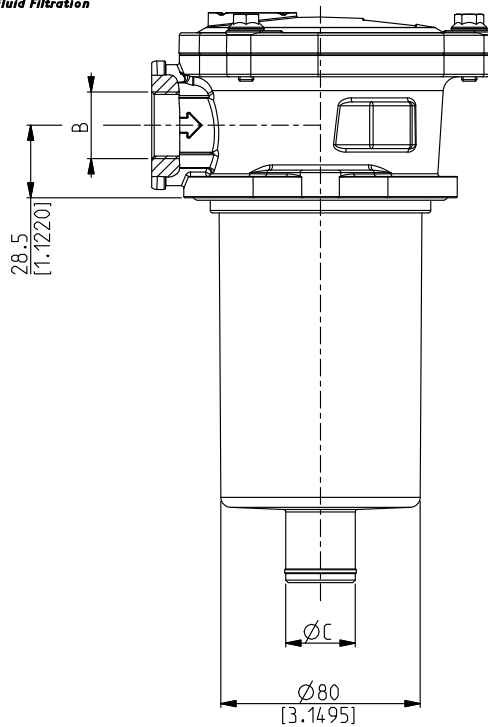


Filter type	Weight kg(lbs)	A mm(in)	B (GAS-BSPP)		(3)(GAS-BSPP)	(2)(3)(GAS-BSPP)
			Standard	On request	Secondary inlet	Indicators
HF 502-10.060	0,43 (0.94)	83 (3.2677)	G 1/2	G 3/8 - G 3/4	G 3/8	G 1/8
HF 502-10.129	0,52 (1.14)	152 (5.9842)	G 3/4	G 3/8 - G 1/2		

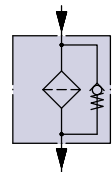
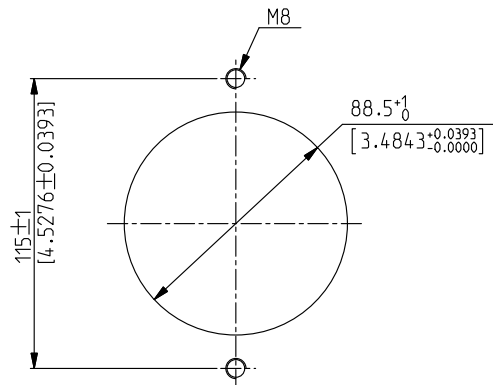
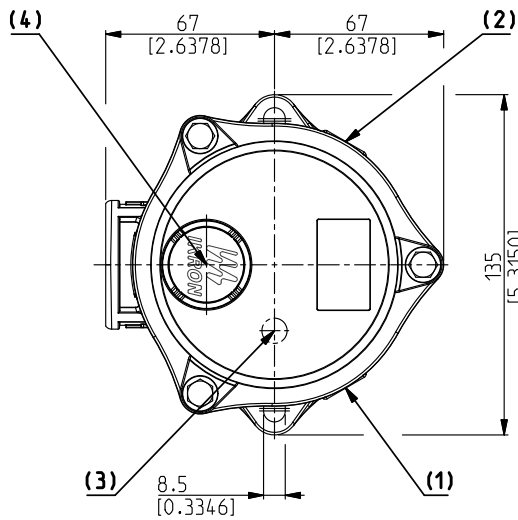
NPT, metric and SAE UN-UNF threads are available (consult our technical department).



HF502-20 DIMENSIONS



RESERVOIR MOUNTING
HOLE DIMENSIONS

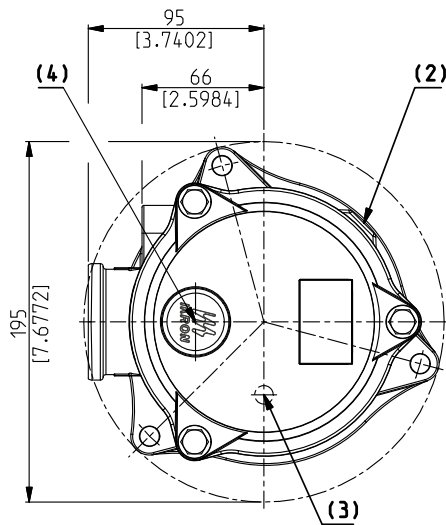
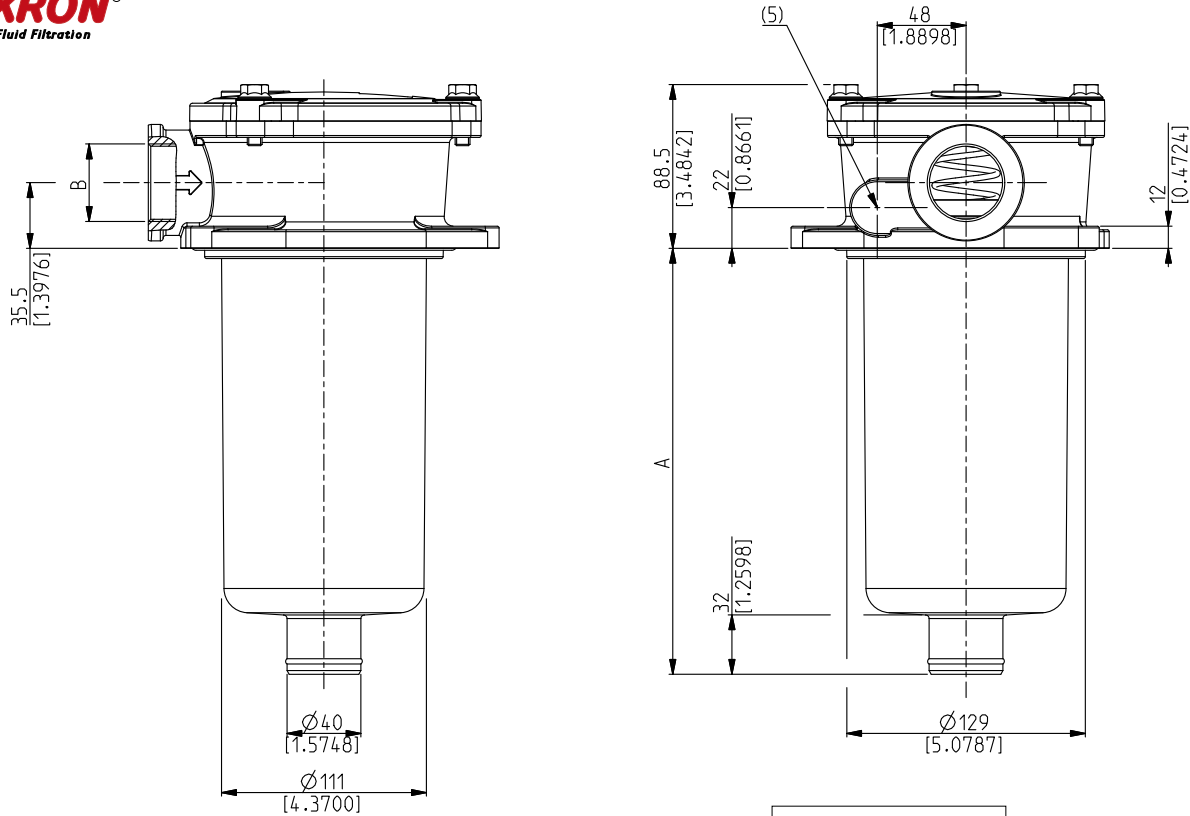


Filter type	Weight kg(lbs)	A mm(in)	B (GAS-BSPP)		ØC mm(in)	(4)(GAS-BSPP) Secondary inlet	(1)(2)(3)(GAS-BSPP) Indicators	(4)(GAS-BSPP) Filler cap
			Standard	On request				
HF 502-20.077	0,96 (2.11)	103 (4.0551)	G 3/4	G 1/2 - G 1 - G 1 1/4	27,5 (1.0826)			
HF 502-20.122	1,07 (2.35)	148 (5.8267)	G 1	G 1/2 - G 3/4 - G 1 1/4		G 3/8 G 1/2		
HF 502-20.201	1,23 (2.71)	229 (9.0157)	G 1 1/4	G 1/2 - G 3/4 - G 1	40 (1.5747)	G 3/4	G 1/8	G 3/4
HF 502-20.280	1,43 (3.15)	312 (12.2834)						

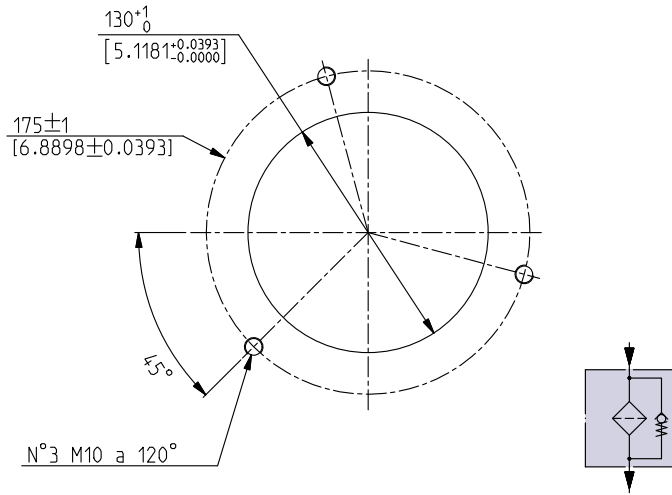
NPT, metric and SAE UN-UNF threads are available (consult our technical department).



HF502-30 DIMENSIONS



RESERVOIR MOUNTING HOLE DIMENSIONS

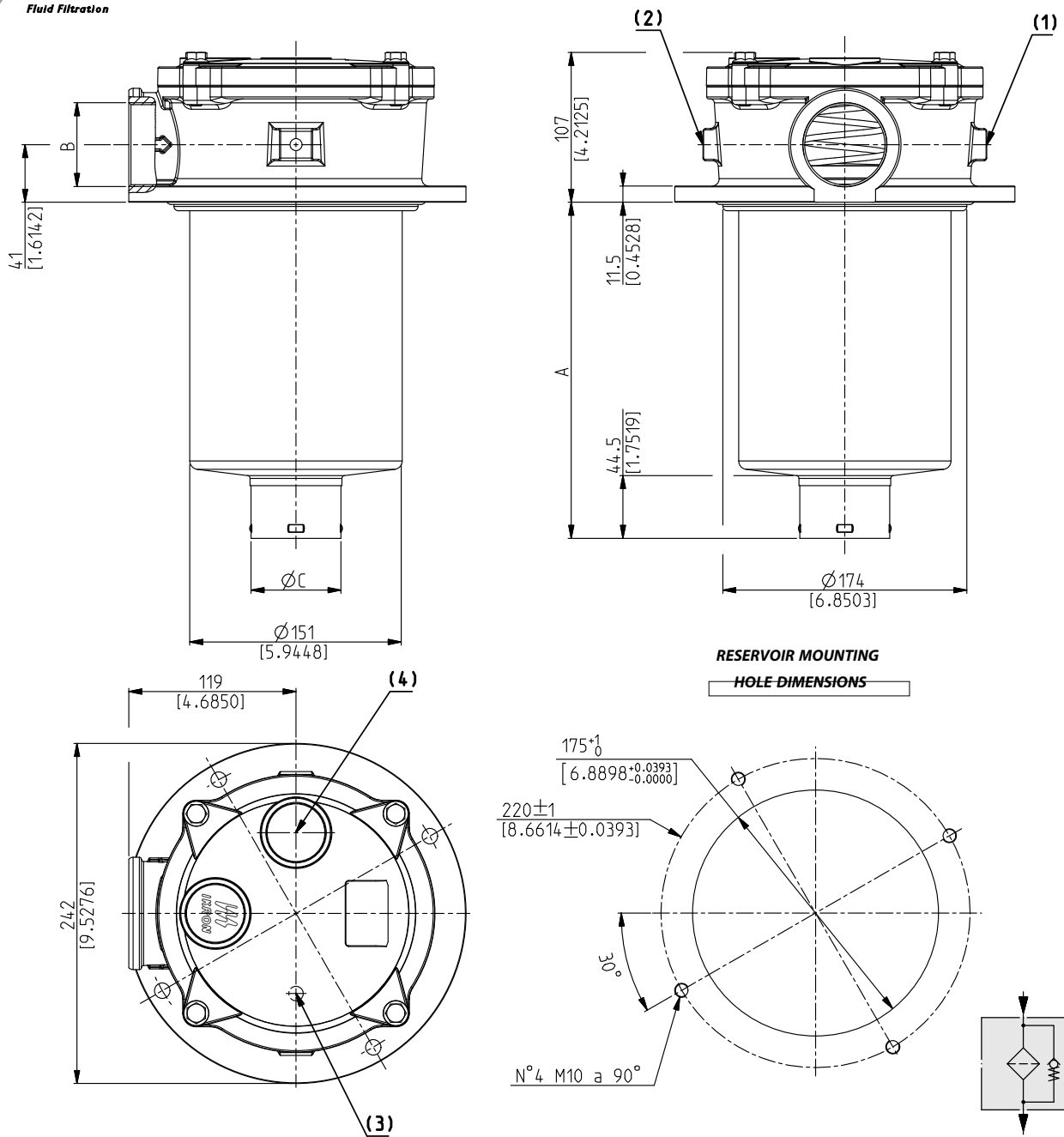


Filter type	Weight kg(lbs)	A mm(in)	B (GAS-BSPP)		(4)(5)(GAS-BSPP)	(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request	Secondary inlet	Indicators	Filler cap
HF 502-30.195	2,24 (4.93)	230 (9.0550)	G 1 1/4	G 1 - G 1 1/2	G 3/8 Pos.(5) G 1/2 Pos.(4)-(5)	G 1/8	G 3/4
HF 502-30.239	2,46 (5.42)	273 (10.7480)	G 1 1/2	G 1 - G 1 1/4	G 3/4 Pos.(4)		

NPT, metric and SAE UN-UNF threads are available (consult our technical department).



HF502-40 DIMENSIONS



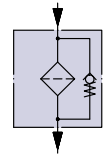
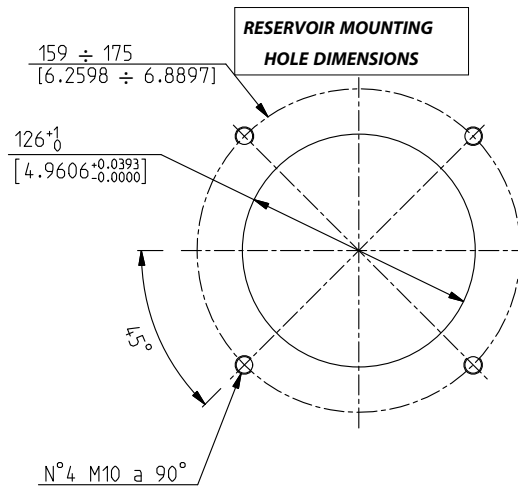
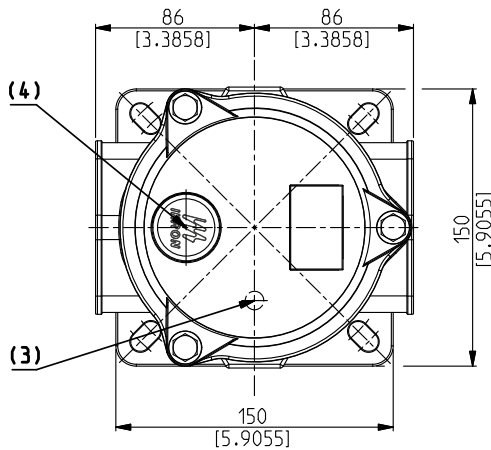
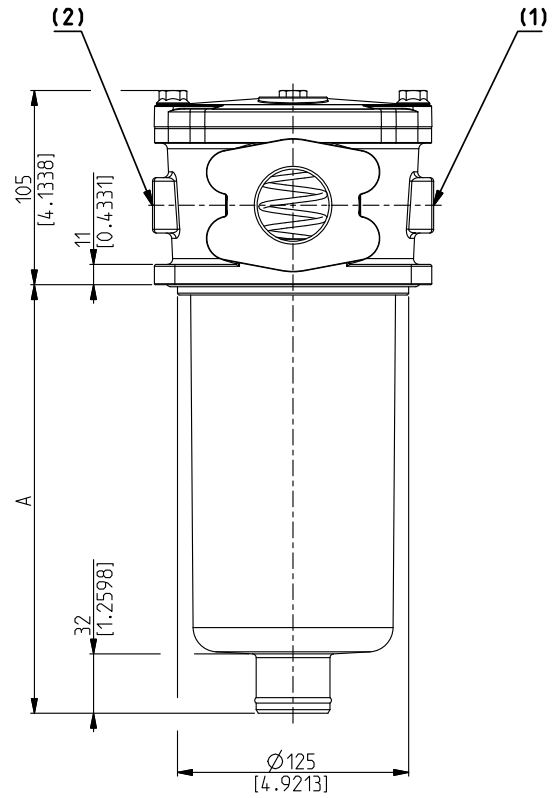
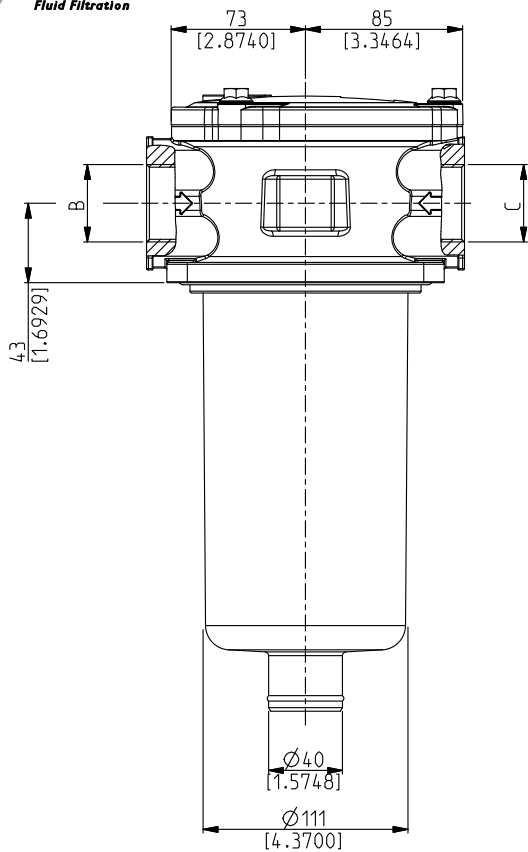
ICAT_014_004_HF502

Filter type	Weight kg(lbs)	A mm(in)	B (GAS-BSPP)		ØC mm(in)	(1)(2)(4)(GAS-BSPP)	(1)(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request		Secondary inlet	Indicators	Filler cap
HF 502-40.122	3.97 (8.75)	173 (6.8110)			50 (1.9684)			
HF 502-40.194	4.34 (9.56)	239 (9.4094)	G 1 1/2	G 2		G 3/8 Pos.(1)-(2)-(4)		
HF 502-40.195	4.42 (9.74)					G 1/2 Pos.(1)-(2)-(4)		
HF 502-40.239	4.58 (10.09)	299 (11.7716)				G 1 Pos.(4)	G 1/8	G 1 1/4
HF 502-40.390	7.85 (17.30)	443 (17.0491)	G 2	G 1 1/2	64 (2.5196)	G 1 1/4 Pos.(4)		
HF 502-40.512	8.29 (18.27)	568 (22.3621)						

NPT, metric and SAE UN-UNF threads are available (consult our technical department).



HF508-30 DIMENSIONS



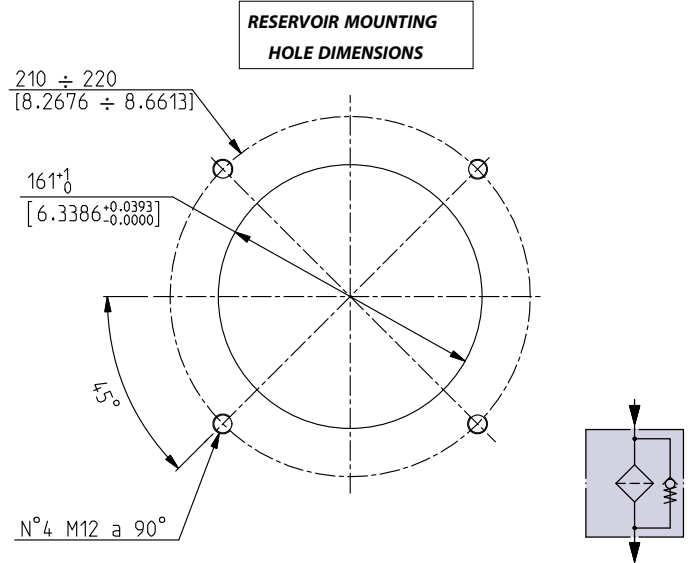
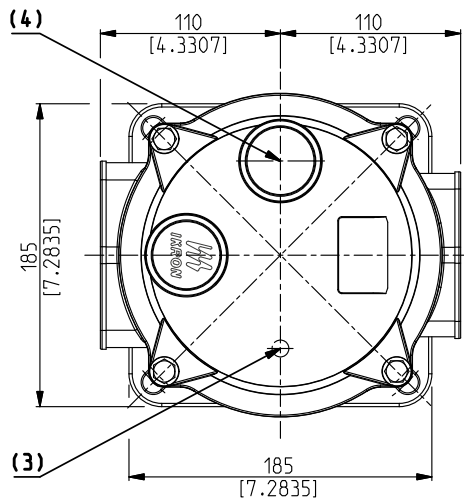
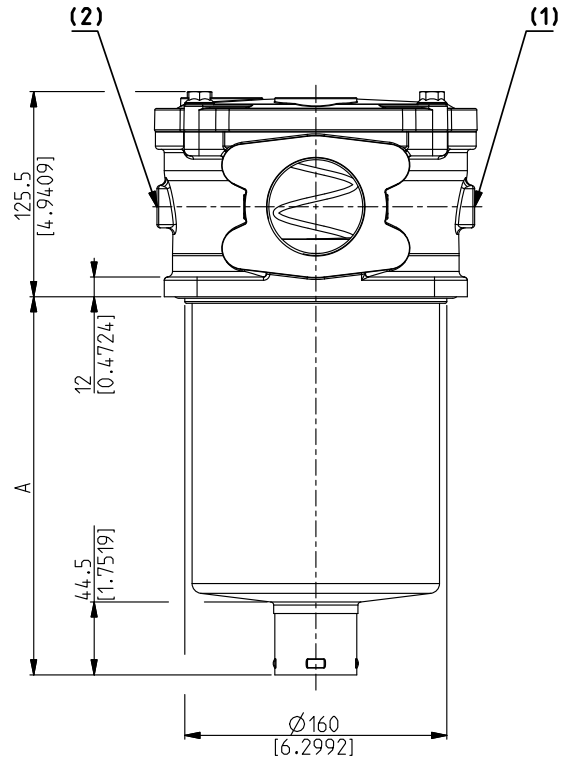
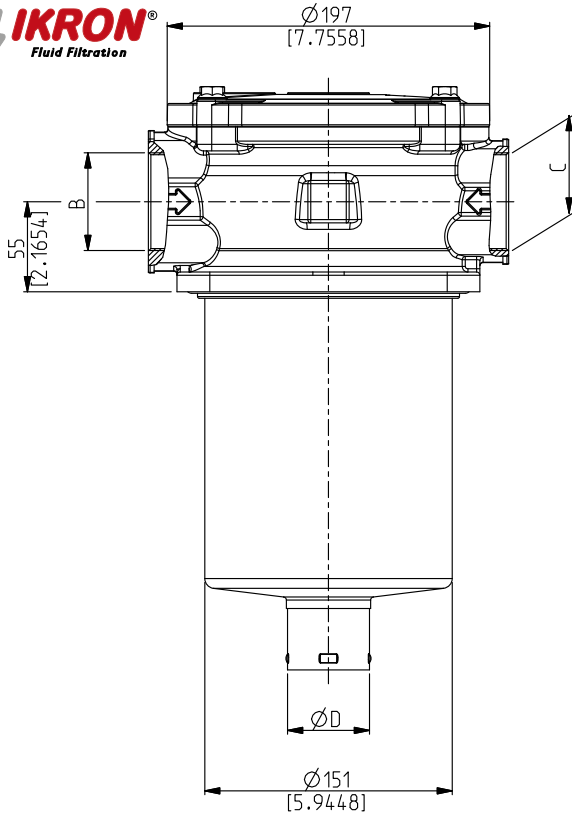
ICAT_014_005_HF502

Filter type	Weight kg(lbs)	A mm(in)	B/C (GAS-BSPP)		(1)(2)(4)(GAS-BSPP)	(1)(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request	Secondary inlet	Indicators	Filler cap
HF 508-30.195	2,85 (6.28)	232 (9.1338)	G 1 1/4	G 1 - G 1 1/2	G 3/8 Pos.(1)-(2) G 1/2 Pos.(1)-(2)-(4)	G 1/8	G 3/4
HF 508-30.239	3,07 (6.76)	275 (10.8267)	G 1 1/2	G 1 - G 1 1/4	G 3/4 Pos.(4)		

NPT, metric, SAE UN-UNF and SAE 3000 threads are available (consult our technical department).



HF508-40 DIMENSIONS

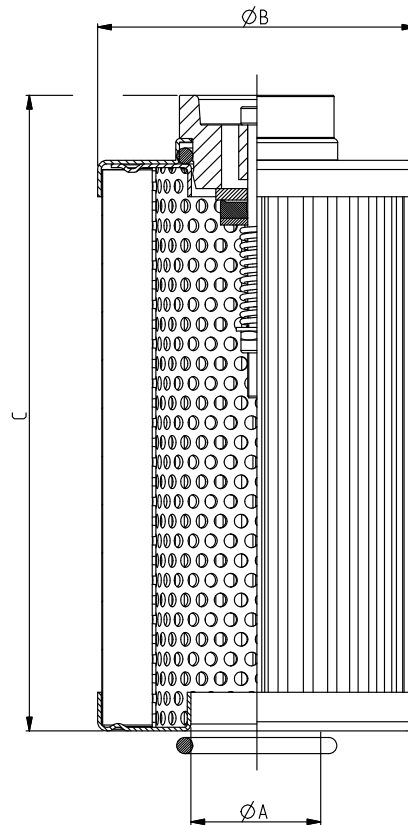


Filter type	Weight kg(lbs)	A mm(in)	B/C (GAS-BSPP)		ØD mm(in)	(1)(2)(4)(GAS-BSPP)	(1)(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request		Secondary inlet	Indicators	Filler cap
HF 508-40.122	4,37 (9.63)	165 (6.4960)			50 (1.9684)			
HF 508-40.194	4,74 (10.44)	231 (9.0944)	G 1 1/2	G 2		G 3/8 Pos.(1)-(2)-(4)		
HF 508-40.195	4,65 (10.25)					G 1/2 Pos.(1)-(2)-(4)		
HF 508-40.239	4,98 (10.97)	291 (11.4566)				G 1 Pos.(4)	G 1/8	G 1 1/4
HF 508-40.390	7,49 (16.51)	435 (17.1259)	G 2	G 1 1/2	64 (2.5196)	G 1 1/4 Pos.(4)		
HF 508-40.512	8,69 (19.15)	560 (22.0471)						

NPT, metric, SAE UN-UNF and SAE 3000 threads are available (consult our technical department).



ELEMENTS DIMENSIONS FOR HF 502 / HF 508



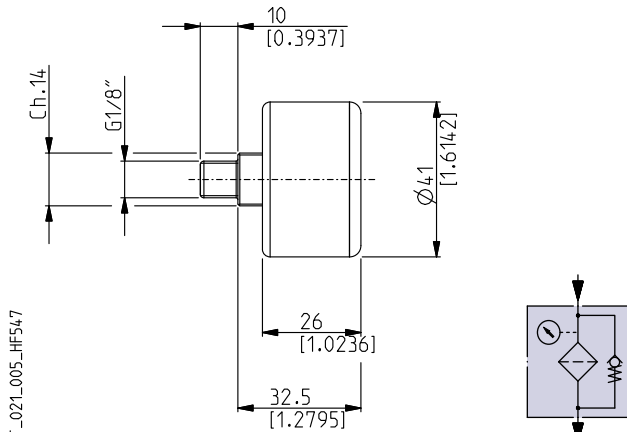
Element series HEK02-40.239, HEK02-40.390, HEK02-40.512 are only available with (FS) version.

Element type	Ø A	Ø B	C	Filtering surface type	Filtering surface		
					FG	MI / MS	RP / SP
	mm(in)	mm(in)	mm(in)		cm ² (in ²)	cm ² (in ²)	cm ² (in ²)
HEK02-10.060	26	52	75 (2.9527)	AS	346 (53.6301)	227 (35.1850)	400 (62.0001)
HEK02-10.129	(1.0226)	(2.0472)	144 (5.6692)	AS	743 (115.1652)	488 (75.6401)	859 (133.1453)
HEK02-20.077	29		95 (3.7401)	AS	702 (108.8102)	444 (68.8201)	850 (131.7503)
HEK02-20.122	(1.1417)	70	140 (5.5117)	AS	1113 (172.5153)	615 (95.3251)	1347 (208.7854)
HEK02-20.201	41	(2.7558)	225 (8.8582)	AS	1680 (260.4005)	929 (143.9953)	2034 (315.2706)
HEK02-20.280	(1.6141)		304 (11.9684)	AS	2341 (362.8557)	1294 (200.5704)	2834 (439.2709)
HEK02-30.195	41	99	212 (8.3664)	AS	3705 (574.2761)	2048 (317.4406)	4485 (695.1764)
HEK02-30.239	(1.6141)	(3.8976)	255 (10.0393)	AS	4541 (703.8564)	2510 (389.0508)	5497 (852.0367)
HEK04-40.122	52		139 (5.4724)	AS	3821 (592.2562)	2174 (336.3707)	4019 (622.9462)
HEK02-40.194	(2.0472)		212 (8.3464)	AS	6107 (946.5869)	3159 (489.6460)	6423 (995.5670)
HEK02-40.195		130			6107 (946.5869)	3159 (489.6460)	6423 (995.5670)
HEK02-40.239	65	(5.1180)	256 (10.0787)	FS	10325 (1600.3780)	4646 (720.1314)	9809 (1520.3980)
HEK02-40.390	(2.5590)		407 (16.0235)	FS	16536 (2563.0850)	7441 (1153.3570)	15709 (2434.9000)
HEK02-40.512			529 (20.8267)	FS	21709 (3364.9020)	9769 (1514.1980)	20623 (3196.5710)



REAR MANOMETER

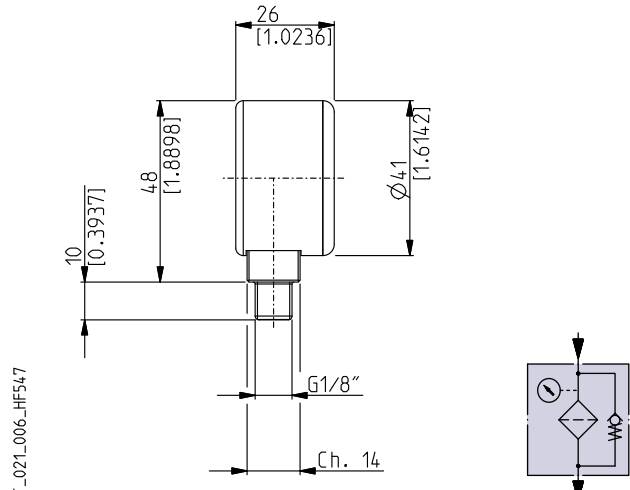
Code: **M**



Scale $0 \div +145 \text{ psi } (0 \div +10 \text{ bar})$

RADIAL MANOMETER

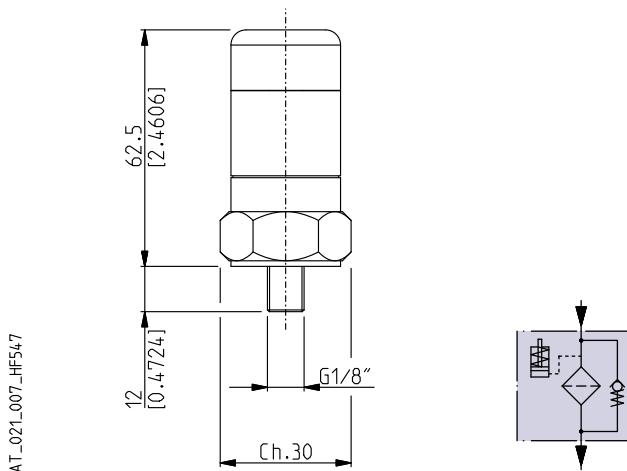
Code: **N**



Scale $0 \div +145 \text{ psi } (0 \div +10 \text{ bar})$

VISUAL INDICATOR

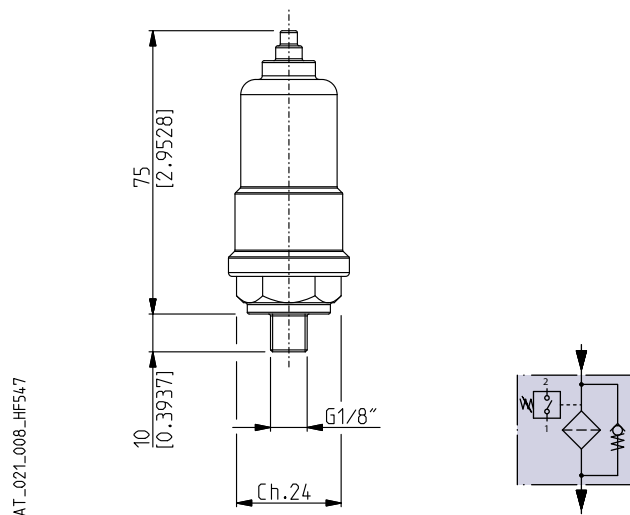
Code: **P**



Pressure setting $21.8 \text{ psi } (1,5 \text{ bar})$

ELECTRICAL INDICATOR

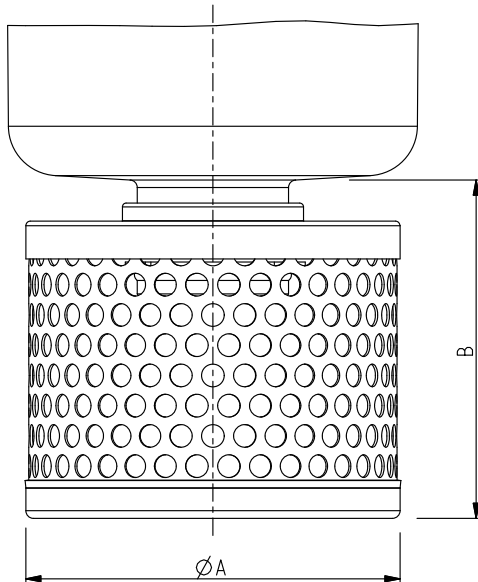
Code: **S**



Pressure setting $21.8 \text{ psi } (1,5 \text{ bar})$

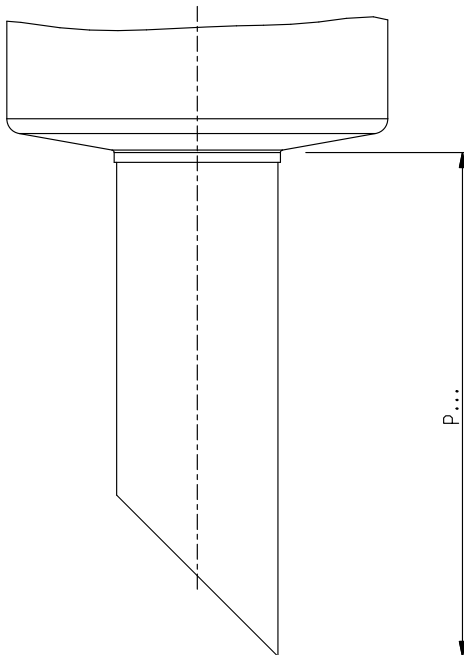
Max. working voltage	220 VCA 30 VCC
Max. working current	0,5 A (resistivity) 0,2 A (inductive)
Protection class	IP65
Contacts	N.O.contact

WITH DIFFUSER

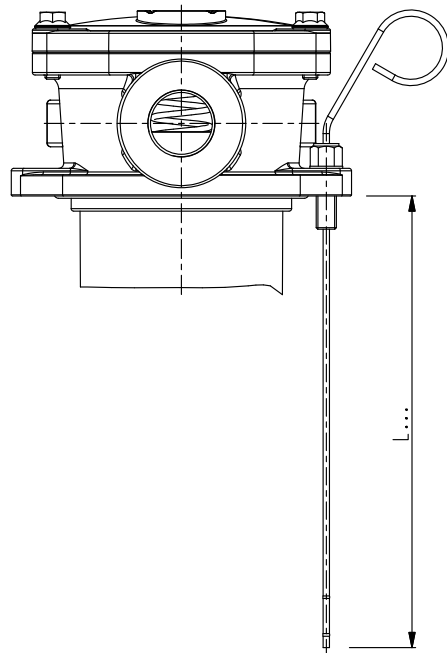


Filter type	A	B
	mm(in)	mm(in)
HF 502-10	52 (2.0472)	50 (1.9684)
HF 502-20	70 (2.7558)	65 (2.5590)
HF 502-30 HF 508-30	99 (3.8976)	90 (3.5432)
HF 502-40 HF 508-40	140 (5.5117)	150 (5.9054)

WITH BOWL EXTENSION



WITH LEVEL DIPSTICK



INLET PORTS

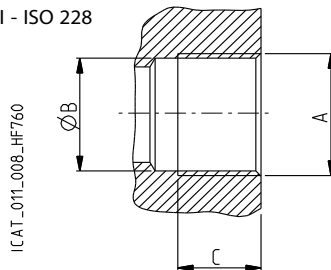


Filter type	PORTS TYPE					
	Nominal size	Gas BSPP	NPT	SAE ODT	Split SSM (3000 PSI)	Split SSS (3000 PSI)
HF 502-10	3/8"	GC	NC	OA	--	--
	1/2"	GD	ND	OB	--	--
	3/4"	GE	NE	OD	--	--
HF 502-20	1/2"	GD	ND	OB	--	--
	3/4"	GE	NE	OD	--	--
	1"	GF	NF	OF	--	--
	1" 1/4	GG	NG	OG	--	--
HF 502-30	1"	GF	NF	OF	--	--
	1" 1/4	GG	NG	OG	--	--
	1" 1/2	GH	NH	OH	--	--
HF 508-30	1"	GF	NF	OF	--	--
	1" 1/4	GG	NG	OG	MD	SD
	1" 1/2	GH	NH	OH	ME	SE
HF 502-40	1" 1/2	GH	NH	OH	--	--
	2"	GL	NL	OI	--	--
HF 508-40	1" 1/2	GH	NH	OH	ME	SE
	2"	GL	NL	OI	MF	SF
	2" 1/2	-	-	-	MG	SG

GAS THREAD

BSPP

Cylindrical GAS thread (55°) in accordance with UNI - ISO 228



CODE	Nominal size	A	Ø B		C	Nm (lbfin)	
			mm	(in)			
GC	3/8"	G 3/8	15	(0.5905)	14	(0.5511)	15 ⁺¹ (133 ÷ 142)
GD	1/2"	G 1/2	19	(0.7480)	17	(0.6692)	20 ⁺¹ (177 ÷ 186)
GE	3/4"	G 3/4	24,5	(0.9645)	20	(0.7873)	30 ^{+2,5} (266 ÷ 288)
GF	1"	G 1	30,5	(1.2007)	22	(0.8661)	50 ^{+2,5} (443 ÷ 465)
GG	1" 1/4	G 1 1/4	39	(1.5354)	24	(0.9448)	60 ⁺⁵ (531 ÷ 575)
GH	1" 1/2	G 1 1/2	45	(1.7716)	26	(1.0236)	70 ⁺⁵ (620 ÷ 664)
GL	2"	G 2	57	(2.2440)	32	(1.2598)	150 ⁺¹⁰ (1328 ÷ 1416)



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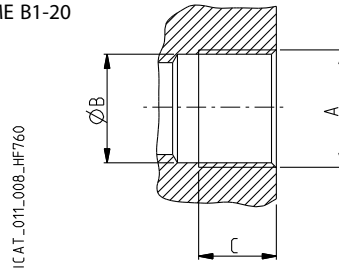
INLET PORTS



NPT THREAD

NPT

NPT thread (60°) in accordance with ANSI - ASME B1-20

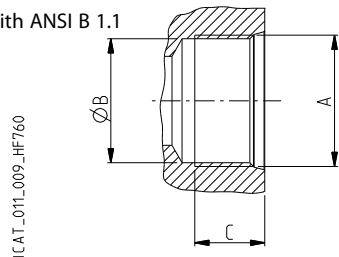


CODE	Nominal size	A	Ø B		C	Nm (lbfin)
			mm (in)	mm (in)		
NC	3/8"	3/8 NPT	14,75 (0.5807)	10 (0.3936)	10	5 ⁺¹ (44 ÷ 53)
ND	1/2"	1/2 NPT	18 (0.7086)	13 (0.5118)	13	10 ⁺¹ (88 ÷ 97)
NE	3/4"	3/4 NPT	23,5 (0.9251)	14 (0.5511)	14	25 ⁺¹ (221 ÷ 230)
NF	1"	1 NPT	29,5 (1.1614)	17 (0.6692)	17	30 ^{+2,5} (265 ÷ 287)
NG	1" 1/4	1 1/4 NPT	38,5 (1.5157)	18 (0.7086)	18	50 ^{+2,5} (442 ÷ 464)
NH	1" 1/2	1 1/2 NPT	44 (1.7322)	18,5 (0.7283)	18,5	70 ⁺⁵ (620 ÷ 664)
NL	2"	2 NPT	57 (2.2440)	19,5 (0.7677)	19,5	130 ⁺⁵ (1150 ÷ 1195)

SAE J514 THREAD

ODT

American thread UNC-UNF 60° in accordance with ANSI B 1.1



CODE	Nominal size	A	Ø B		C	Nm (lbfin)
			mm (in)	mm (in)		
OA	3/8"	9/16" - 18 UNF - 2B	12,75 (0.5019)	12 (0.4724)	12	15 ⁺¹ (133 ÷ 142)
OB	1/2"	3/4" - 16 UNF - 2B	17,3 (0.6811)	15 (0.5905)	15	20 ⁺¹ (177 ÷ 186)
OD	3/4"	1 1/16" - 12 UNF - 2B	24,7 (0.9724)	20 (0.7873)	20	40 ^{+2,5} (354 ÷ 376)
OF	1"	1 5/16" - 12 UNF - 2B	30,5 (1.2007)	20 (0.7873)	20	60 ⁺⁵ (531 ÷ 575)
OG	1" 1/4	1 5/8" - 12 UNF - 2B	39,1 (1.5393)	20 (0.7873)	20	70 ⁺⁵ (620 ÷ 664)
OH	1" 1/2	1 7/8" - 12 UNF - 2B	45,3 (1.7834)	20 (0.7873)	20	100 ⁺⁵ (885 ÷ 929)
OI	2"	2 1/2" - 12 UNF - 2B	61,3 (2.4133)	20 (0.7873)	20	150 ⁺¹⁰ (1328 ÷ 1416)



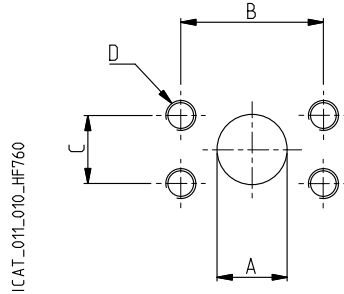
INLET PORTS



SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI

SSM

Metric thread ISO 60° in accordance with ISO/R 262

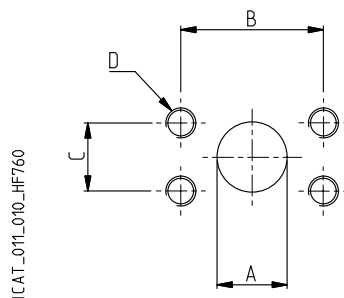


CODE	Nominal size	Ø A	B	C	D	
		mm (in)	mm (in)	mm (in)	Thread Depth mm(in)	
MD	1 1/4	31,8 (1.252)	58,7 (2.311)	30,2 (1.189)	M 10 15,0 (0.591)	20 ⁺¹ (177 ÷ 186)
ME	1 1/2	38,1 (1.252)	69,8 (2.748)	35,7 (1.406)	M 12 18,0 (0.709)	30 ^{+2,5} (265 ÷ 287)
MF	2	50,8 (2.000)	77,8 (3.063)	42,9 (1.689)	M 12 18,0 (0.709)	30 ^{+2,5} (265 ÷ 287)
MG	2 1/2	64 (2.520)	88,9 (3.500)	50,8 (2.000)	M 12 18,0 (0.709)	30 ^{+2,5} (265 ÷ 287)

SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI

SSS

American thread UNC-UNF 60° in accordance with ANSI B 1.1



CODE	Nominal size	Ø A	B	C	D	
		mm (in)	mm (in)	mm (in)	Thread Depth mm(in)	
SD	1 1/4	31,8 (1.252)	58,7 (2.311)	30,2 (1.189)	7/16-14 UNC-2B 16,0 (0.630)	30 ^{+2,5} (265 ÷ 287)
SE	1 1/2	38,1 (1.252)	69,8 (2.748)	35,7 (1.406)	1/2-13 UNC-2B 18,0 (0.709)	30 ^{+2,5} (265 ÷ 287)
SF	2	50,8 (2.000)	77,8 (3.063)	42,9 (1.689)	1/2-13 UNC-2B 18,0 (0.709)	30 ^{+2,5} (265 ÷ 287)
SG	2 1/2	64 (2.520)	88,9 (3.500)	50,8 (2.000)	1/2-13 UNC -2B 18,0 (0.709)	30 ^{+2,5} (265 ÷ 287)



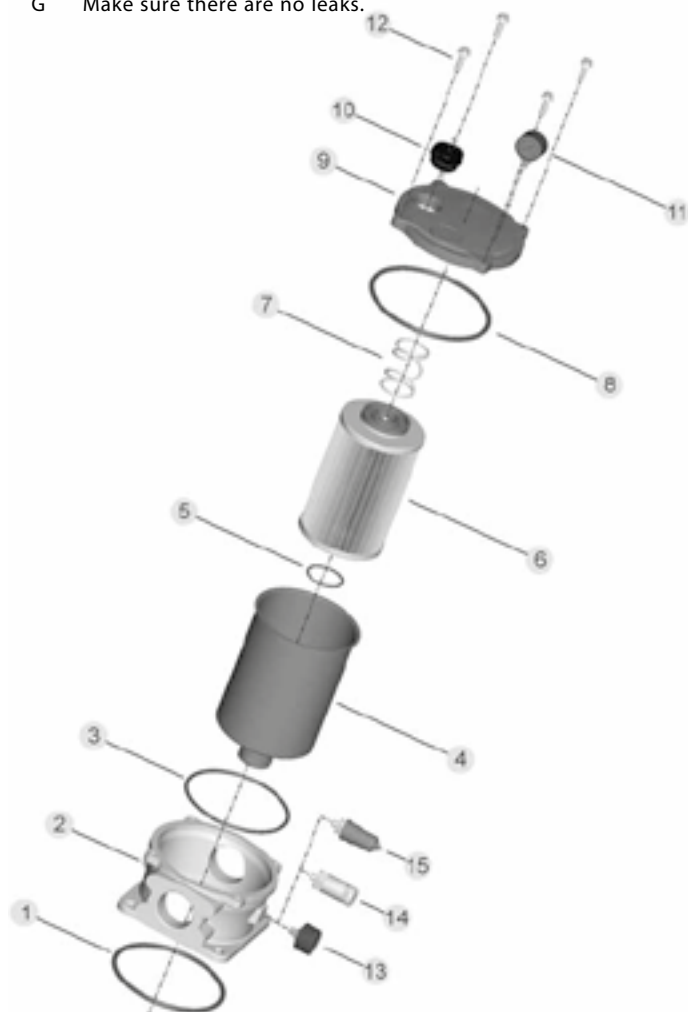
ASSEMBLY AND REPLACING ELEMENT INSTRUCTIONS



MOUNTING

Once you have checked the integrity of the filter inside its package, proceed as follow:

- A Take off the protection cap from the inlet port.
- B Secure the filter in the tank through the holes in the body's flange (pos.2) tightening them as follows:
HF502-10 e HF502-20 = 44 lbfm (5 Nm)
HF502-30 e HF508-30 = 62 lbfm (7 Nm)
HF502-40 e HF508-40 = 88 lbfm (10 Nm)
- C Connect the piping of the return line to the inlet port using the tightening torque indicated on pages 32, 33 and 34.
- D In the presence of secondary inlet ports, prepare the required connections.
- E If the filter has a clogging indicator (pos.11 - 13 - 14 - 15), take the protection cap off and screw the indicator in the dedicated seat, then tighten to a tightening torque of 266 lbfm (30 Nm). If the indicator is electric, complete the required connections.
- F Start the circuit for a few minutes.
- G Make sure there are no leaks.



REPLACING ELEMENT

Once the working hour limit indicated in the maintenance instructions of the system is reached or when the clogging indicators point out the limit pressure drop created inside the filter, the element must be replaced. Pay attention to the drainage of hydraulic oil, therefore prepare suitable containers to collect it.

Proceed as follows:

- A Stop the system in "machine stopped" status.
- B Secure any shut-off valves on the hydraulic circuit.
- C Unscrew the cover's screw (pos.12) and take off the closing cap (pos.9).
- D Remove the clogged filtering element (pos.6) and clean the bowl's bottom (pos.4) from the residual particles left during the functioning.
- E Check out that the O-rings (pos.3, 5, 8) are not damaged, otherwise replace them and consequently position the new ones correctly..
- F In case of leakages between the tank and the filter's body (pos.2) check out the O-ring's condition (pos.1). If it is damaged replace it and consequently position the new one correctly.
- G Insert the new filtering element pre-emptively lubricating the O-Ring (pos. 5).
- H Insert the placement spring (pos.7) in the dedicated seat of the filter's cover (pos.9). Reassemble it using the fixing screws (pos.12) with a tightening torque of 44 lbfm (5 Nm).
- I Re-open the eventual valves closed before.
- L Start the machine for a few minutes.
- M Make sure there are no leaks.

Pos. Description

- | | |
|----|----------------------------|
| 1 | Filter's body O-ring |
| 2 | Filter's body |
| 3 | Bowl O-Ring |
| 4 | Bowl |
| 5 | O-Ring di tenuta cartuccia |
| 6 | Filtering element |
| 7 | Placement spring |
| 8 | Cover's O-ring |
| 9 | Closing cap |
| 10 | Filler cap |
| 11 | Radial manometer |
| 12 | Cover's fixing screws |
| 13 | Rear Manometer |
| 14 | Visual indicator |
| 15 | Electrical indicator |

When ordering spare parts, always specify the reference number, the filter code and quantity.
Example: Spare parts pos . 8 - HHR80000 - Q.ty 3



HOW TO ORDER A COMPLETE FILTER HF 502



1	2	3	4	5	6	7	8		
HF502-	20.122	- AS	- FG010	- B17	- GG	- B	- H	- Z	-
9	10	11	12	13	14				
XA		- GA	- M	- YD	- GE	- K			

1	Filter type	CODE
	See table from pag. 23 to pag. 26	HF502..
2	Filtering surface	CODE
	Standard	
	Oversize	FS
3	Degree of filtration	CODE
	3 [µm] Micro-fibre glass	
	6 [µm] Micro-fibre glass	FG006
	10 [µm] Micro-fibre glass	
	25 [µm] Micro-fibre glass	
	25 [µm] Stainless steel wire mesh	MI025
	60 [µm] Stainless steel wire mesh	
	125 [µm] Stainless steel wire mesh	
	90 [µm] Steel wire mesh	
	10 [µm] Cellulose	
	25 [µm] Cellulose	
	10 [µm] Reinforced cellulose	
	25 [µm] Reinforced cellulose	
4	By-pass setting valve	CODE
	With By-pass setting valve 25 [psi] (1,7 [bar])	
	With By-pass setting valve 51 [psi] (3,5 [bar])	B35
5	Inlet port	CODE
	GAS threads (BSPP)	
	G 3/8	GC
	G 1/2	
	G 3/4	
	G 1	
	G 1 1/4	
	G 1 1/2	
	G 2	
	NPT threads	
	3/8	NC
	1/2	ND
	3/4	NE
	1	NF
	1 1/4	NG
	1 1/2	NH
	2	NL
	SAE threads ODT	
	3/8	OA
	1/2	OB
	3/4	OD
	1	OF
	1 1/4	OG
	1 1/2	OH
	2	OI

6	Seals	CODE
	Buna	
	Viton	V
7	Filler cap	CODE
	Without	
	With filler cap (except HF502-10)	
8	Magnetic set	CODE
	Without	
	With magnetic set	R
9	Indicators arranged	CODE
	Without	
	On the housing - right (1) (except HF502-10 and HF502-30)	XA
	On the housing - left (2)	XB
	On the cover (3)	XD
10	Indicator's ports dimensions	CODE
	GAS Threads (BSPP)	
	G 1/8	GA
	G 1/8 with plug	DA
11	Indicators	CODE
	Without	
	Manometer - rear connection	M
	Manometer - radial connection	N
	Visual indicator	P
	Electrical indicator	S
12	Secondary ports	CODE
	Without	
	On the housing - right (1) (except HF502-10 / 20 / 30)	YA
	On the housing - left (2) (except HF502-10 / 20 / 30)	YB
	On the housing - front-left (5) (only for HF502-30)	YC
	On the cover (4)	YD
13	Secondary ports dimensions	CODE
	G 3/8	GC
	G 1/2 (except HF502-10)	GD
	G 3/4 (except HF502-10)	GE
	G 1 (only for HF502-40)	GF
	G 1 1/4 (only for HF502-40)	GG
14	Accessories	CODE
	Without	
	With diffuser	
	With bowl extension (ex. bowl extension length 150=P150)	P...
	With level dipstick (ex. level dipstick length 175=L175)	L...

Standard On request



HOW TO ORDER A COMPLETE FILTER HF 508



1	2	3	4	5	6	7	8									
HF508-	40.390	-	AS	-	FG010	-	B17	-	MG	/	MF	-	B	-	H	-
9	10	11	12	13	14	15										
Z	-	XA	-	GA	-	M	-	YB	-	GD	-	K				

1	Filter type	CODE
	See table from pag. 27 to pag. 28	HF508..
2	Filtering surface	CODE
	Standard	
	Oversize	FS
3	Degree of filtration	CODE
	3 [µm] Micro-fibre glass	FG003
	6 [µm] Micro-fibre glass	FG006
	10 [µm] Micro-fibre glass	
	25 [µm] Micro-fibre glass	
	25 [µm] Stainless steel wire mesh	MI025
	60 [µm] Stainless steel wire mesh	
	125 [µm] Stainless steel wire mesh	
	90 [µm] Steel wire mesh	
	10 [µm] Cellulose	
	25 [µm] Cellulose	
	10 [µm] Reinforced cellulose	
	25 [µm] Reinforced cellulose	
4	By-pass setting valve	CODE
	With By-pass setting valve 25 [psi] (1,7 [bar])	
	With By-pass setting valve 51 [psi] (3,5 [bar])	B35
5	Main inlet port	CODE
6	Supplementary inlet port	CODE
	GAS threads (BSPP)	
	G 1 1/4	
	G 1 1/2	
	G 2	
	NPT threads	
	1 1/4	NG
	1 1/2	NH
	2	NL
	SAE threads ODT	
	1 1/4	OG
	1 1/2	OH
	2	OI
	Flanged SAE (SSM) - 3000 PSI	
	1 1/4	MD
	1 1/2	ME
	2	MF
	2 1/2 (only for main inlet port HF 508-40)	MG
	Flanged SAE (SSS) - 3000 PSI	
	1 1/4	SD
	1 1/2	SE
	2	SF
	2 1/2 (only for main inlet port HF 508-40)	SG
	Only for supplementary inlet port	
	Blind unmachined port	00

7	Seals	CODE
	Buna	
	Viton	V
8	Filler cap	CODE
	Without	
	With filler cap	
9	Magnetic set	CODE
	Without	
	With magnetic set	R
10	Indicators arranged	CODE
	Without	
	On the housing - right (1)	XA
	On the housing - left (2)	XB
	On the cover (3)	XD
11	Indicator's ports dimensions	CODE
	GAS threads (BSPP)	
	G 1/8	GA
	G 1/8 with plug	DA
12	Indicators	CODE
	Without	
	Manometer - rear connection	M
	Manometer - radial connection	N
	Visual Indicator	P
	Electrical indicator	S
13	Secondary ports	CODE
	Senza	
	On the housing - right (1)	YA
	On the housing - left (2)	YB
	On the cover (4)	YD
14	Secondary ports dimensions	CODE
	G 3/8	GC
	G 1/2	GD
	G 3/4	GE
	G 1 (only for HF 508-40)	GF
	G 1 1/4 (only for HF508-40)	GG
15	Accessories	CODE
	Without	
	With diffuser	
	With bowl extension(ex. bowl extension length 150=P150)	P...
	With level dipstick(ex. level dipstick length 175=L175)	L...

Standard

On request



HOW TO ORDER A REPLACEMENT ELEMENT



1	2	3	4	5	6						
HEK02-	20.201	-	AS	-	FG010	-	VM	-	B17	-	B

1	Element type	CODE
	See table pag. 29	HE K02..

2	Filtering surface	CODE
	Standard	
	Oversize	FS

3	Degree of filtration	CODE
	3 [µm] Micro-fibre glass	
	6 [µm] Micro-fibre glass	
	10 [µm] Micro-fibre glass	
	25 [µm] Micro-fibre glass	
	25 [µm] Stainless steel wire mesh	MI025
	60 [µm] Stainless steel wire mesh	
	125[µm] Stainless steel wire mesh	
	90 [µm] Steel wire mesh	
	10 [µm] Cellulose	
	25 [µm] Cellulose	
	10 [µm] Reinforced cellulose	
	25 [µm] Reinforced cellulose	

4	By-pass valve	CODE
	With valve and spring	
	With valve - without spring	VV

5	By-pass setting valve	CODE
	With By-pass setting valve 25 [psi] (1,7 [bar])	
	With By-pass setting valve 51 [psi] (3,5 [bar])	B35

6	Seals	CODE
	Buna	
	Viton	V

Standard
 On request

