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## 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 Steel Stainless steel
Filter media	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

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## 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  $\Delta p$  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/dm<sup>3</sup>).

### 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/dm<sup>3</sup>)

Filtering degree: 25  $\mu\text{m}$

Data obtained from the diagrams:

$\Delta p$  in housing = 4.93 psi (0,34 bar) (page 5)

$\Delta p$  in element = 0,87 psi (0,06 bar) (page 14)

Total  $\Delta p = 4.93 + 0.87 = 5.8$  psi (0,4 bar) ( $\Delta p$  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/dm<sup>3</sup>) the value of the  $\Delta p$  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

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

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/dm<sup>3</sup>) and kinematic viscosity different to 120 SSU (30 cSt) the value of  $\Delta p$  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

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

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  $\Delta p$  does not exceed the pressure limit of 5.8 psi (0,4 bar).

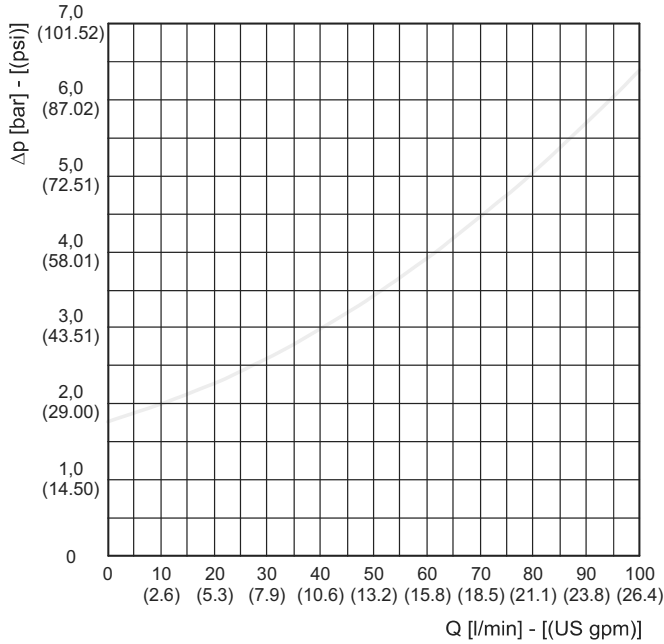
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## PRESSURE DROP CURVES THROUGH THE BY-PASS VALVES

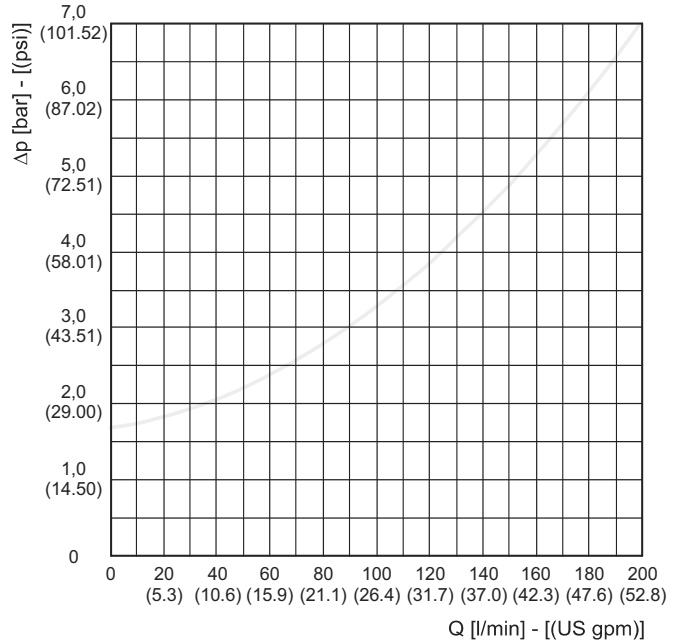
The pressure drop values are directly proportional with the specific weight of the fluid and do not affect the establishment of the total pressure drop of the complete filter.

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/dm<sup>3</sup>).

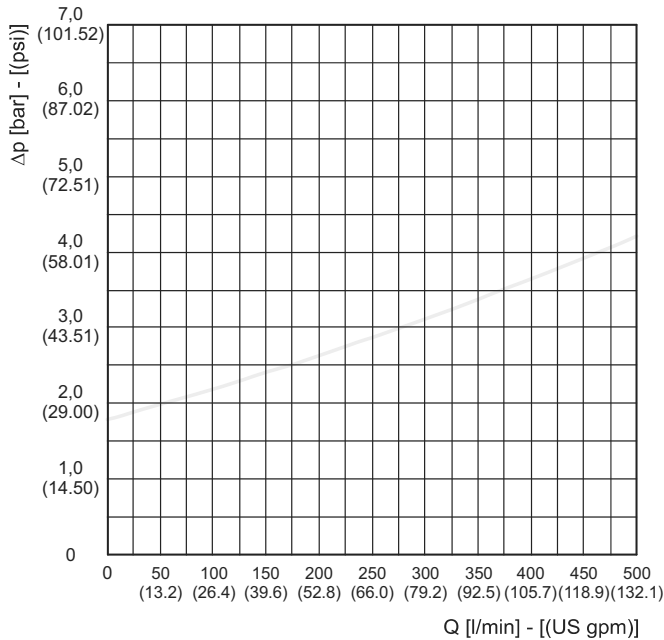
**HF 502-10**



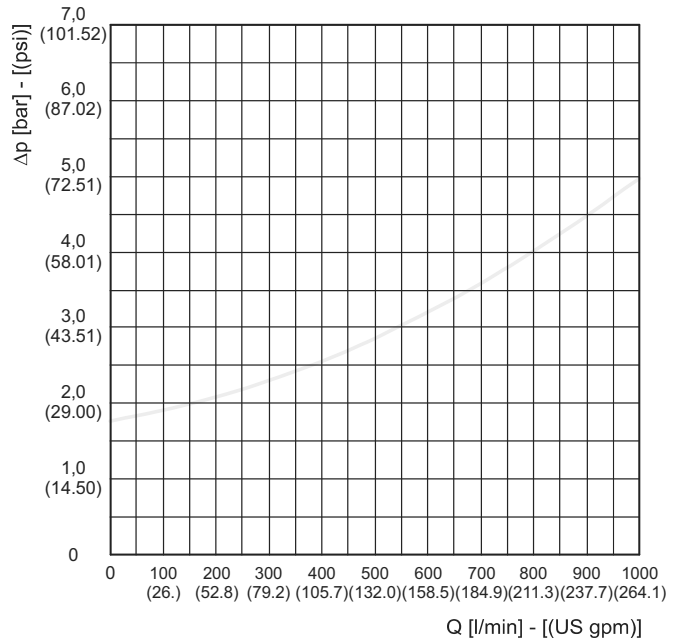
**HF 502-20**



**HF 502 / HF 508-30**



**HF 502 / HF 508-40**



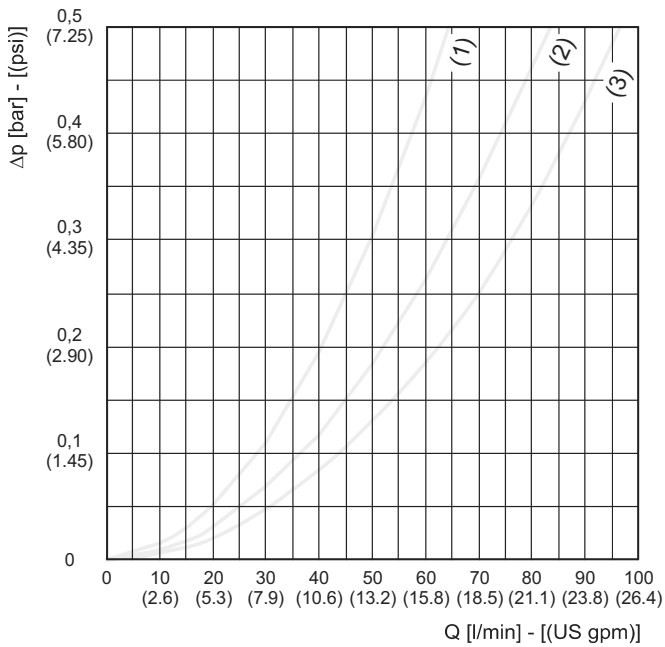
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## PRESSURE DROP CURVES THROUGH THE HOUSING

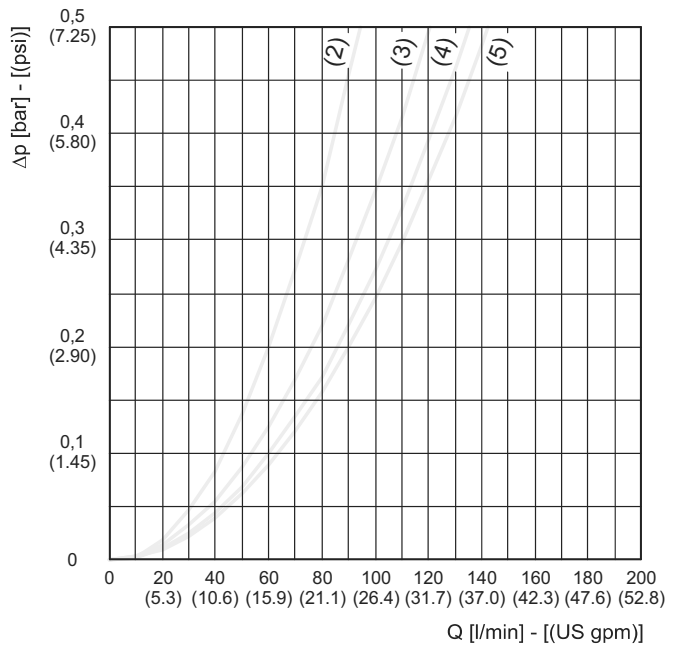
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

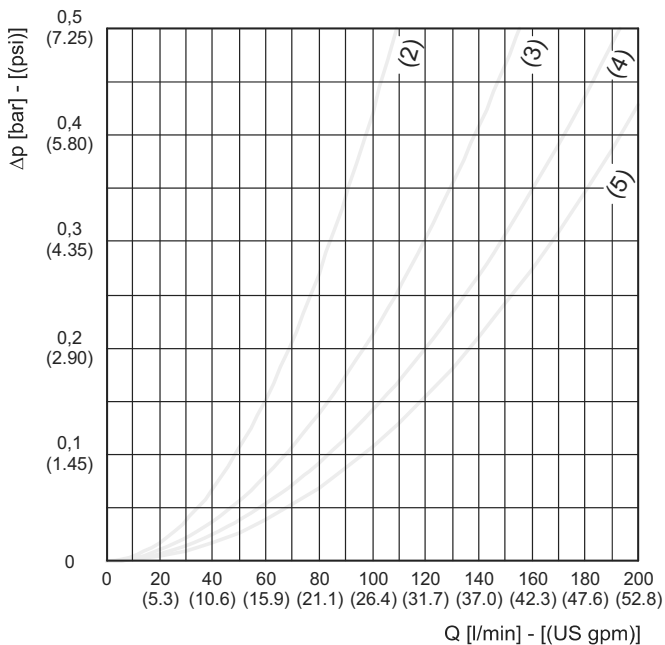
**HF 502-10.060 / 10.129**



**HF 502-20.077 / 20.122**



**HF 502-20.201 / 20.280**



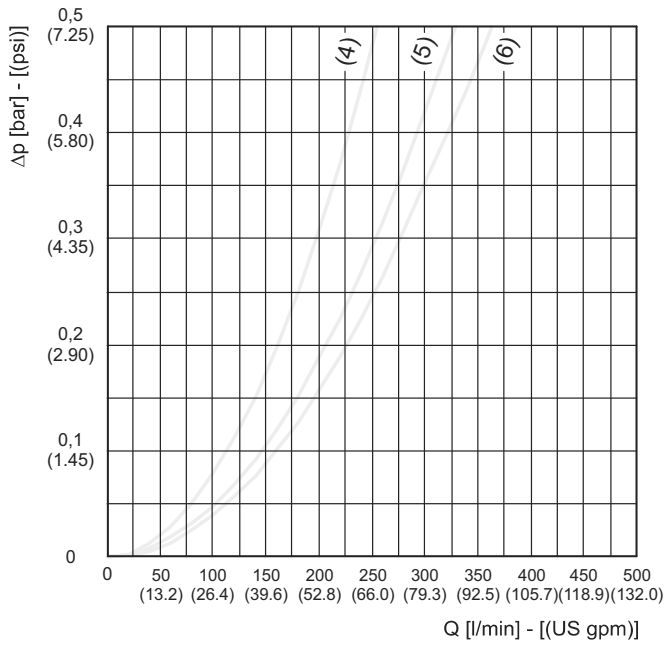
01/07.2010

## PRESSURE DROP CURVES THROUGH THE HOUSING

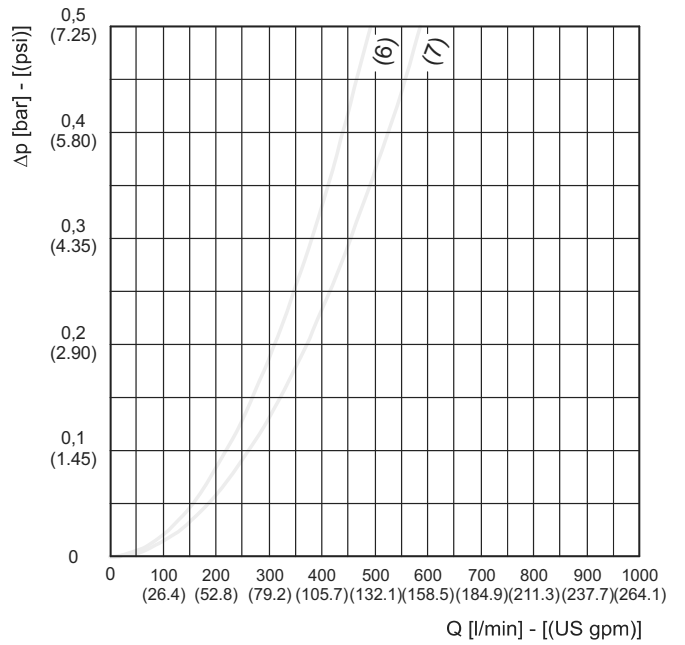
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

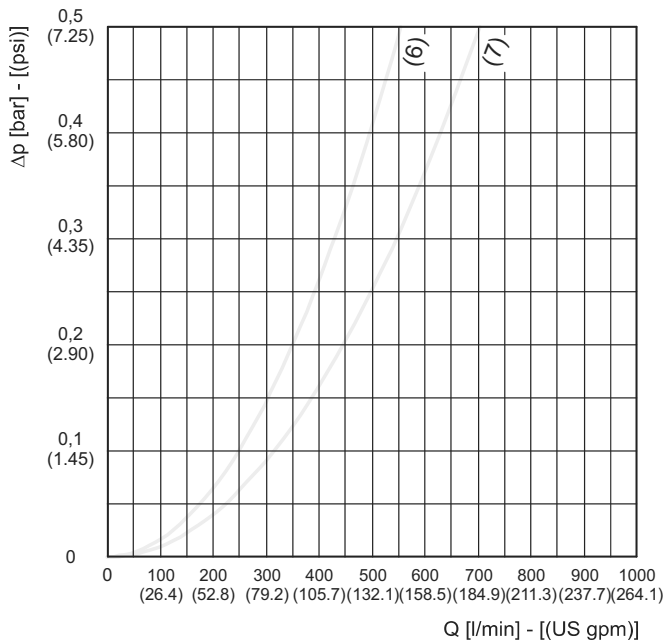
**HF 502-30.195 / 30.239**



**HF 502-40.122 / 40.194**



**HF 502-40.195 / 40.239 / 40.390 / 40.512**



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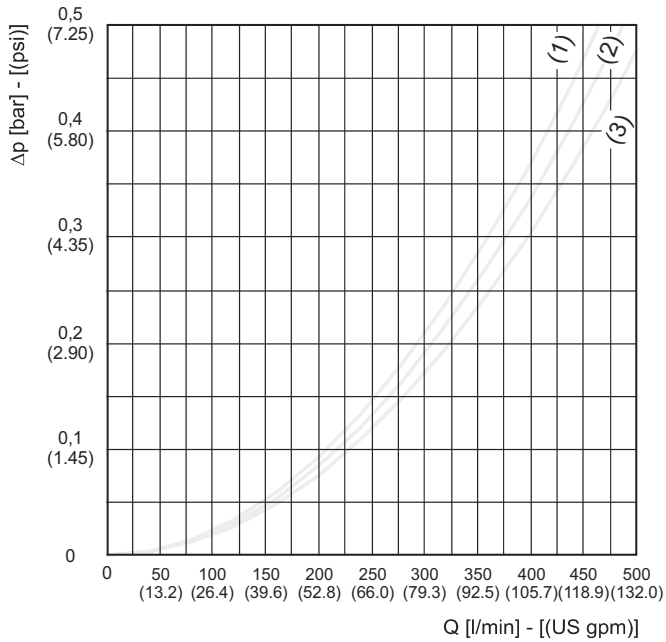


## PRESSURE DROP CURVES THROUGH THE HOUSING

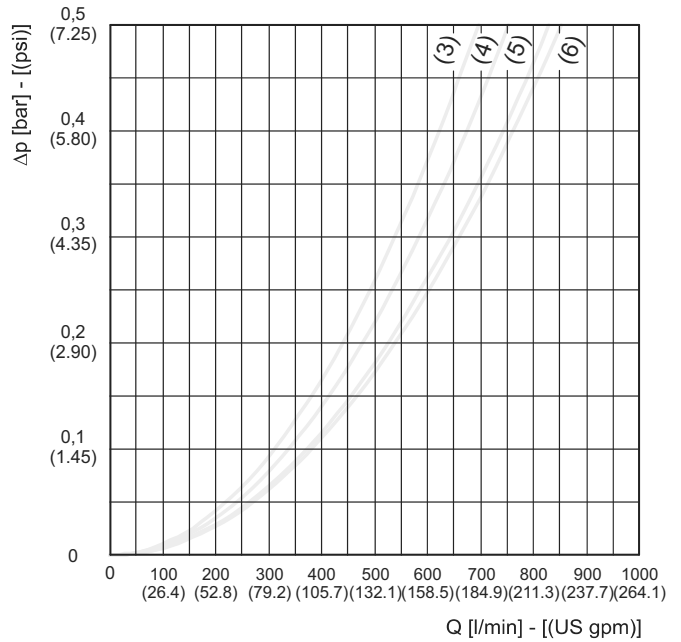
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

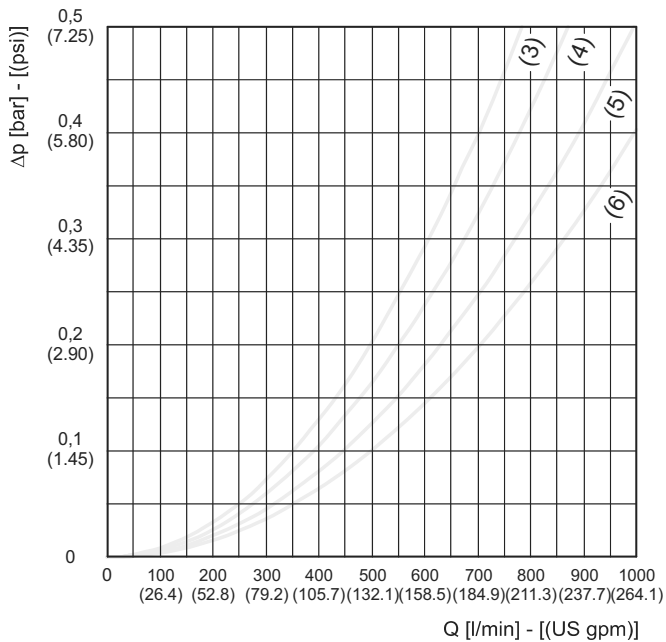
**HF 508-30.195 / 30.239**



**HF 508-40.122 / 40.194**



**HF 508-40.195 / 40.239 / 40.390 / 40.512**



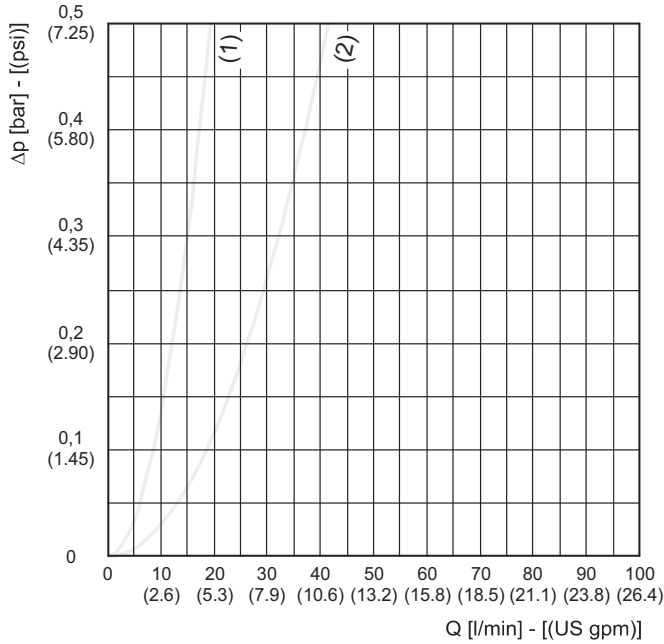
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## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-10

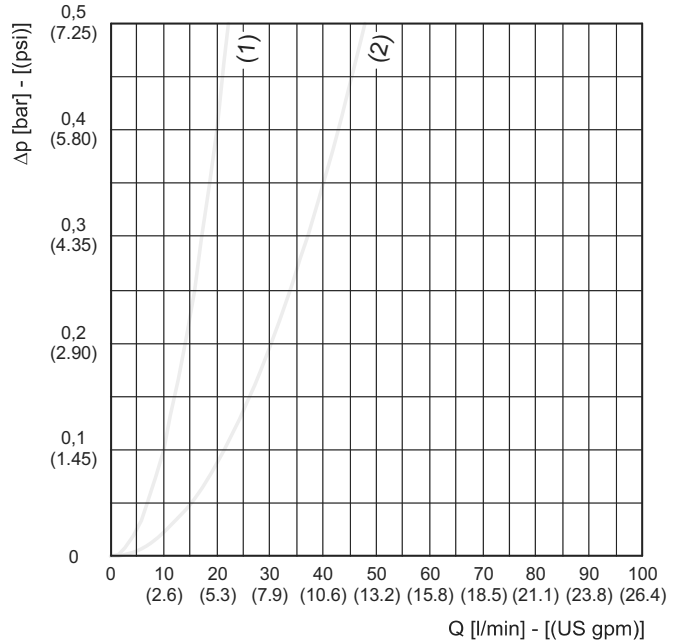
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

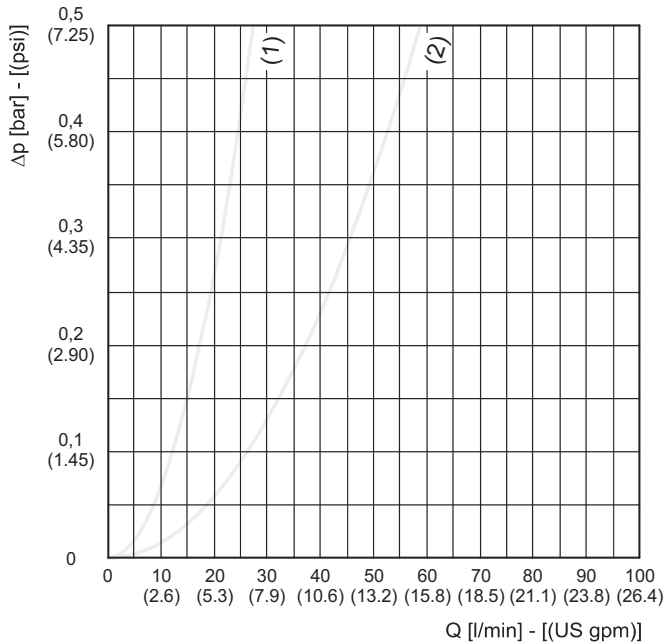
**FG003**



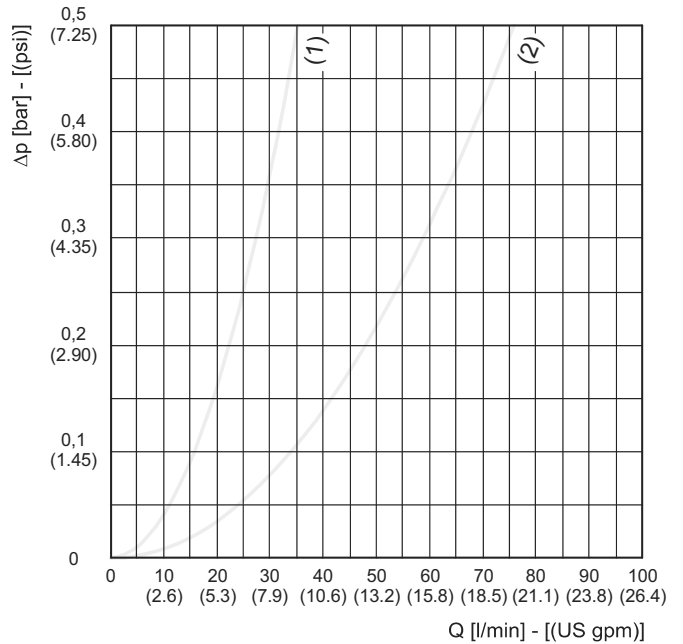
**FG006**



**FG010**



**FG025**



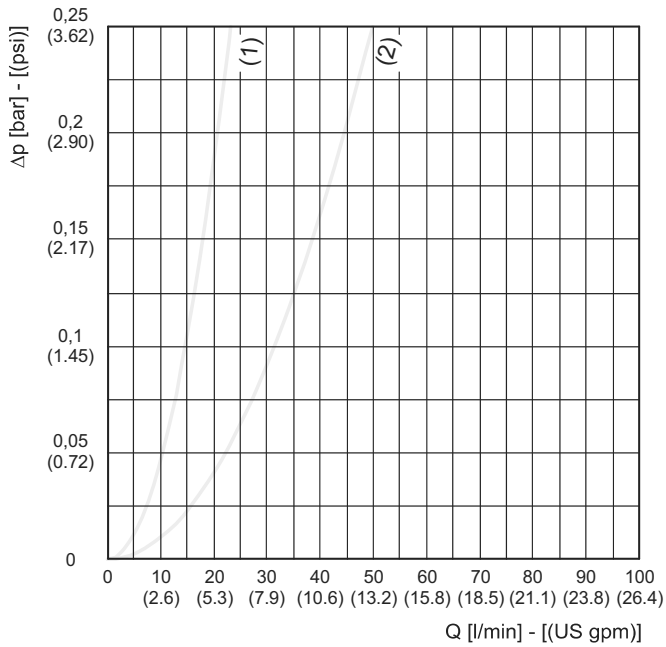
01/07.2010

## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-10

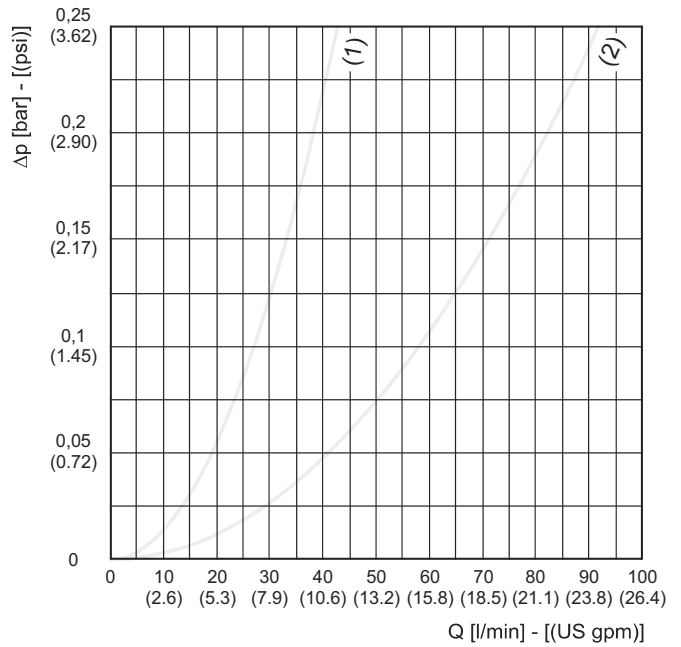
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

**RP010 / SP010**



**RP025 / SP025**



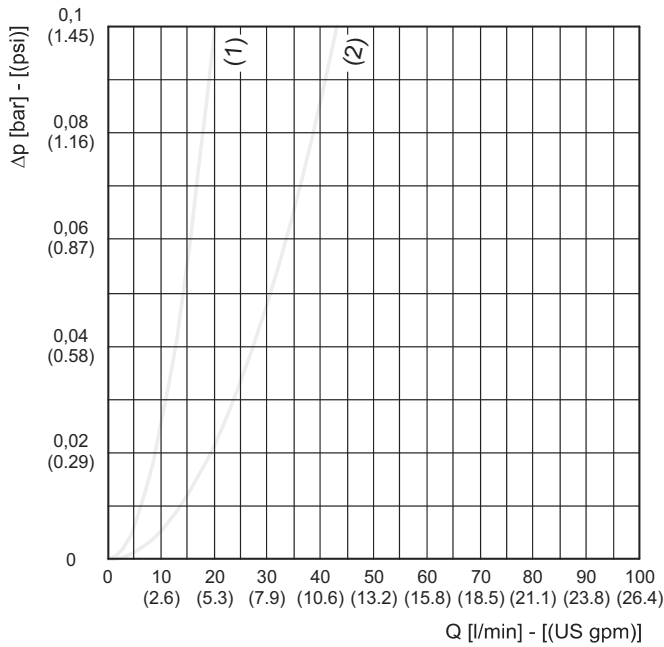
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## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-10

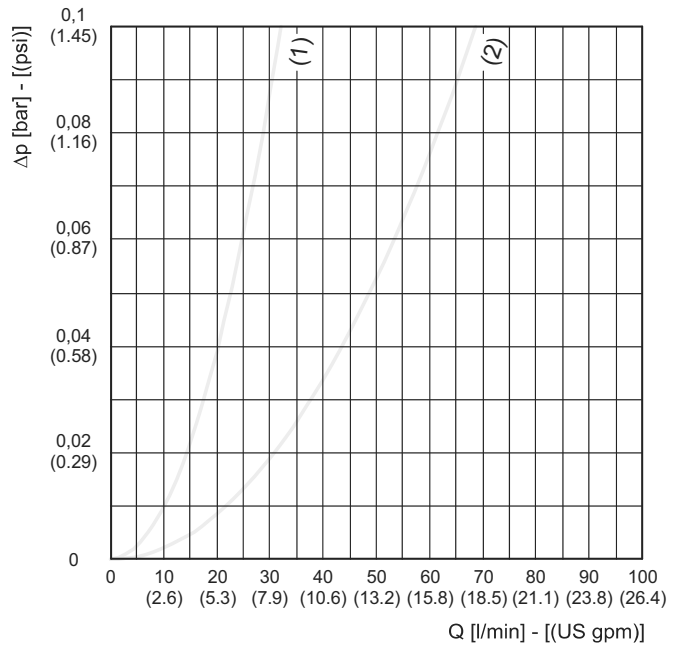
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

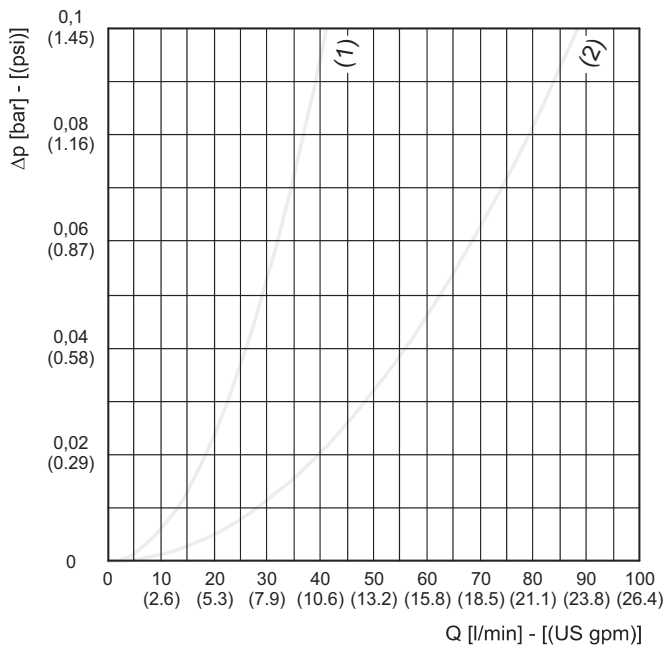
**MI025**



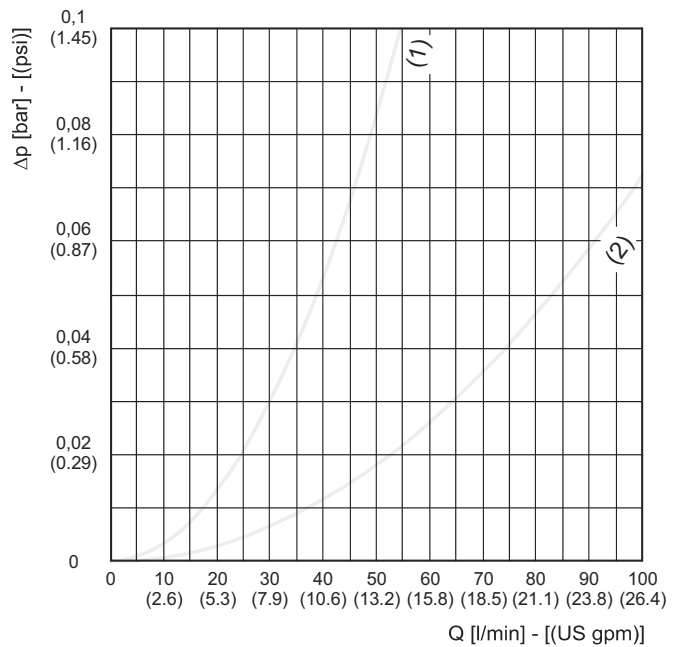
**MI060**



**MS090**



**MI125**



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## 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/dm<sup>3</sup>).

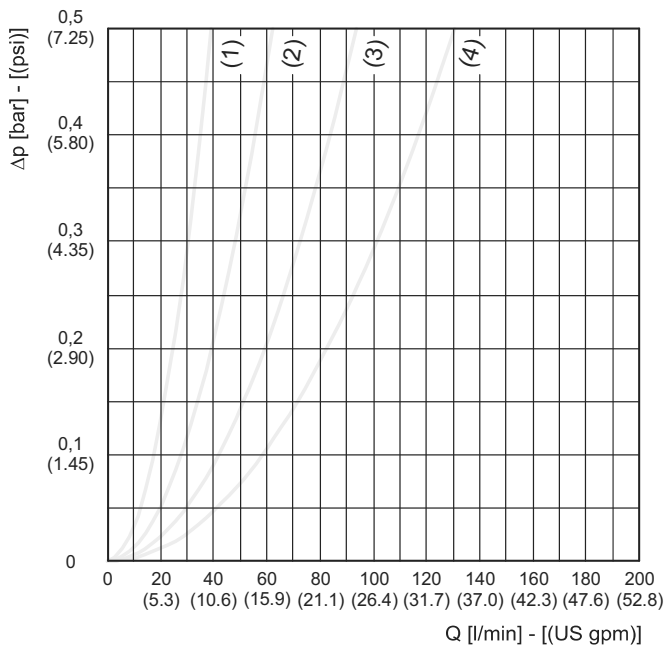
(1) HEK02-20.077

(2) HEK02-20.122

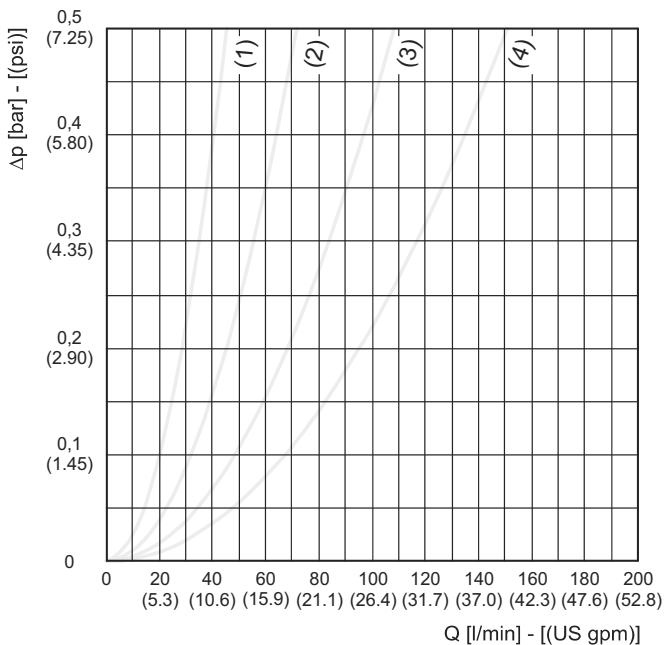
(3) HEK02-20.201

(4) HEK02-20.280

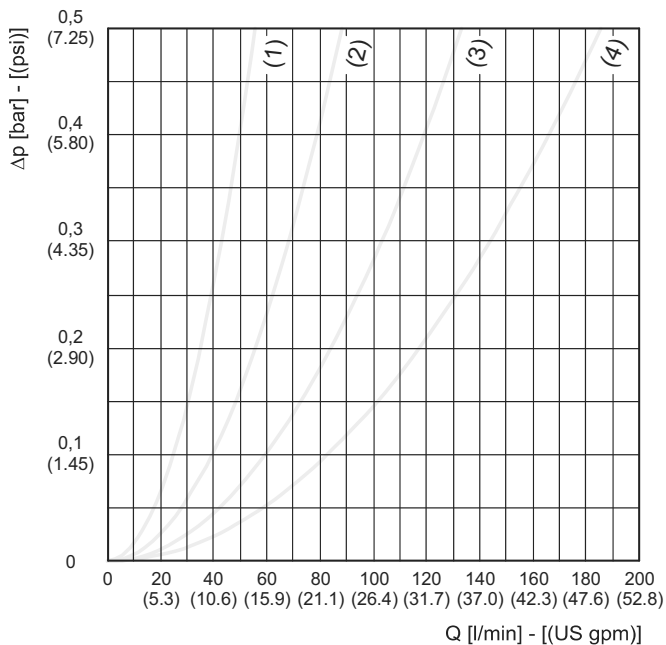
**FG003**



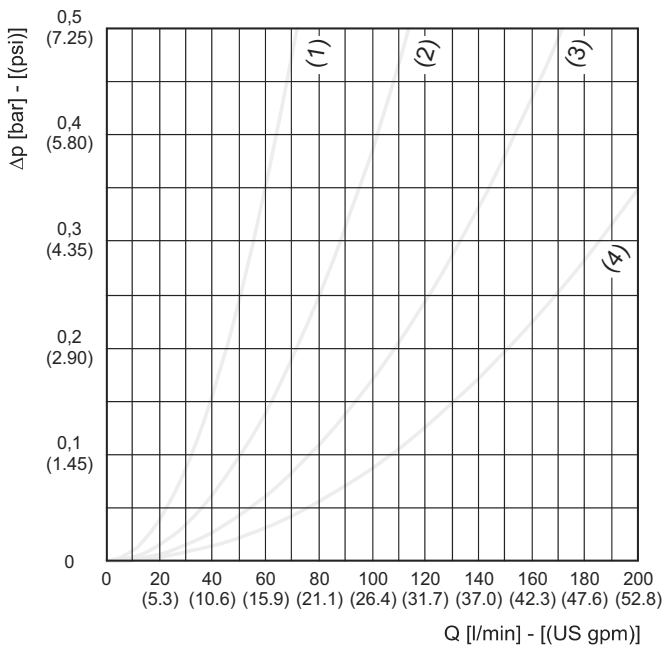
**FG006**



**FG010**



**FG025**



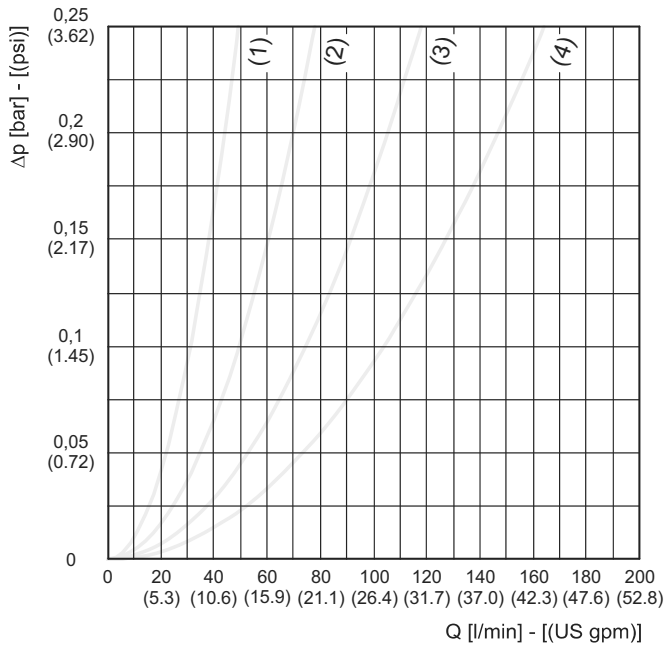
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## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-20

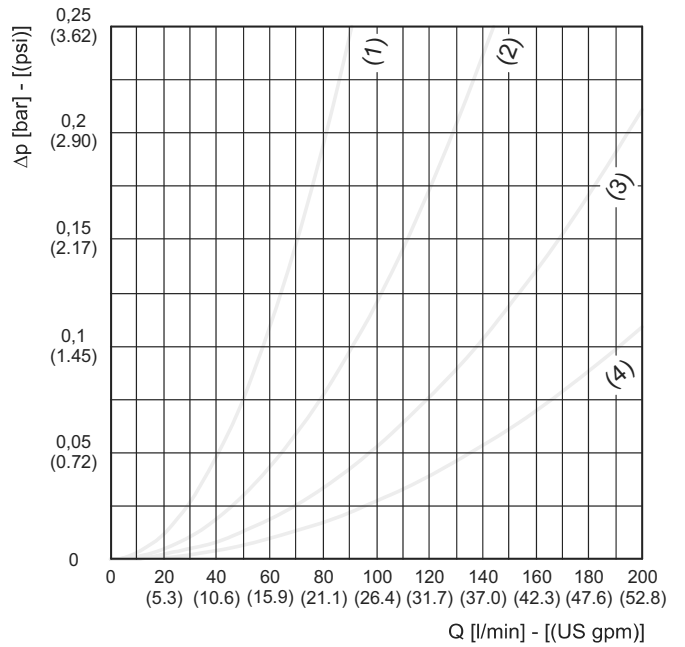
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

**RP010 / SP010**



**RP025 / SP025**



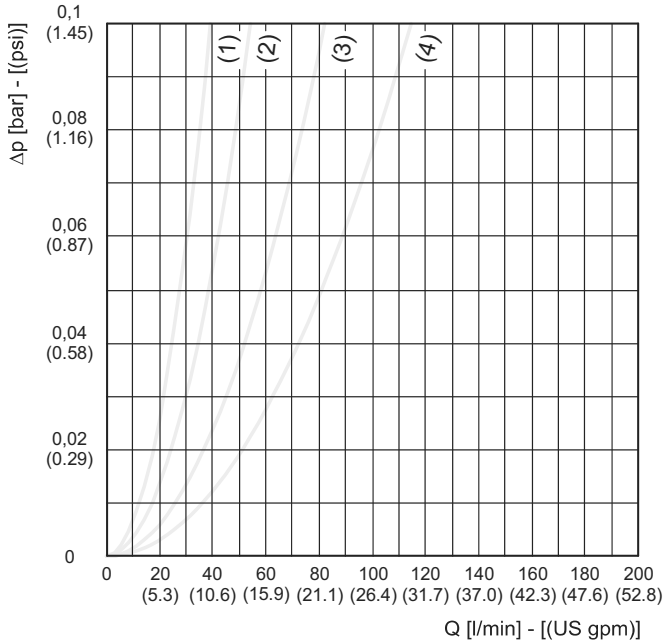
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## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-20

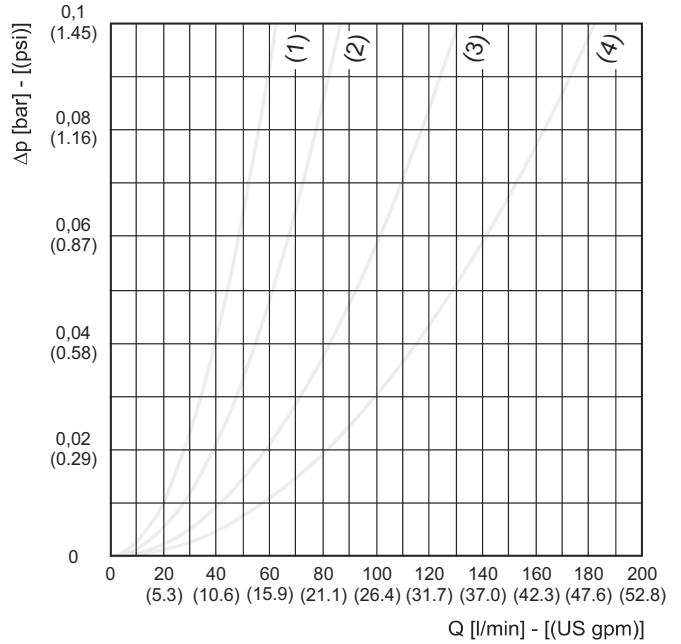
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

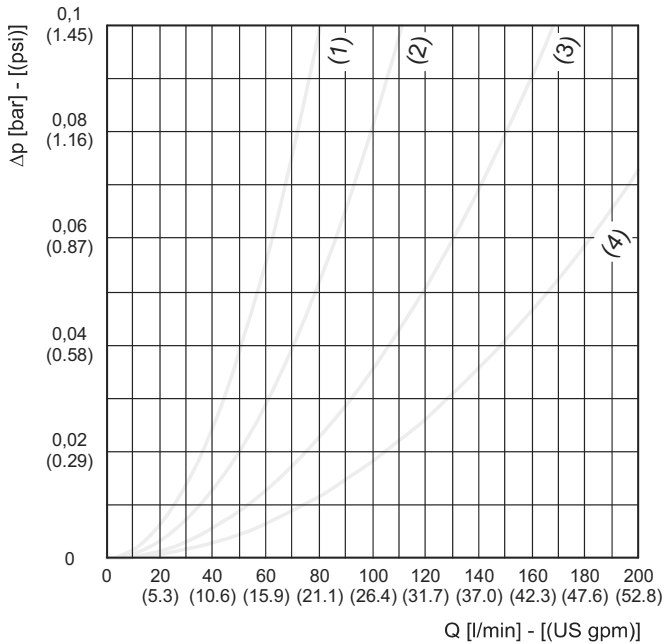
**MI025**



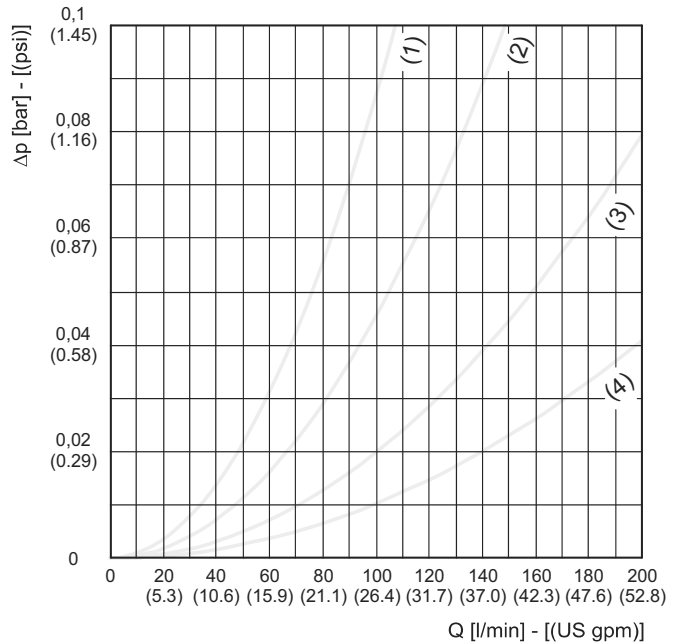
**MI060**



**MS090**



**MI125**



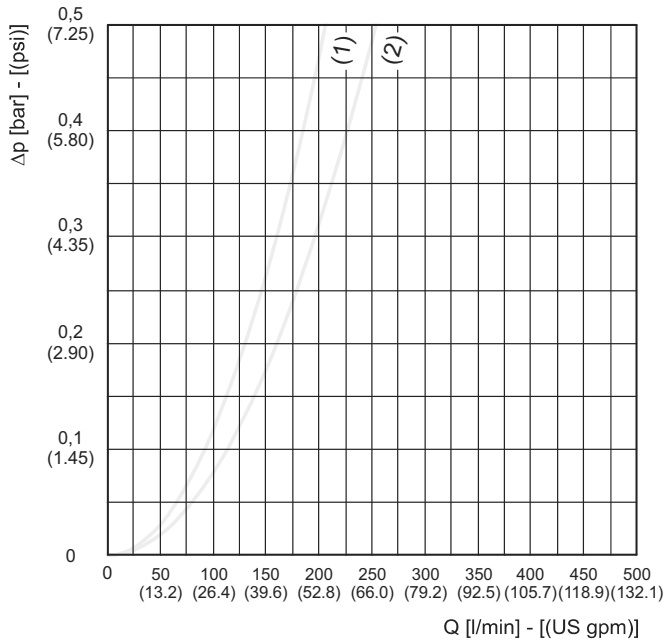
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## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-30

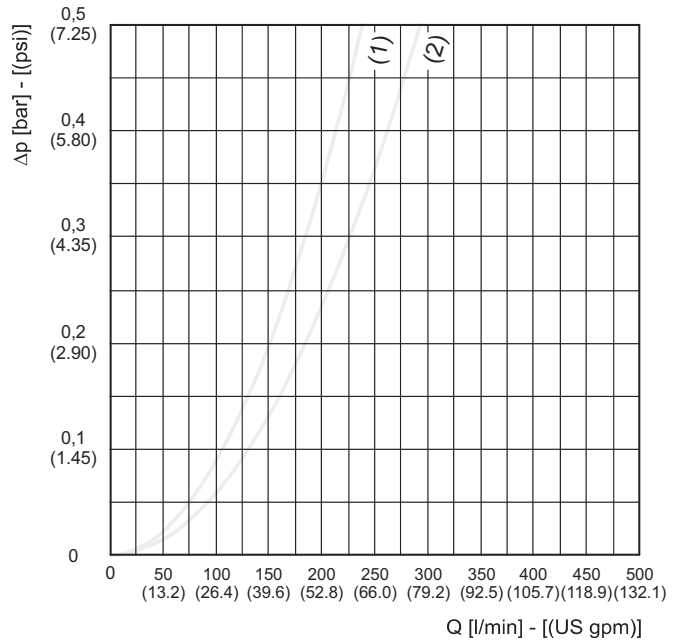
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

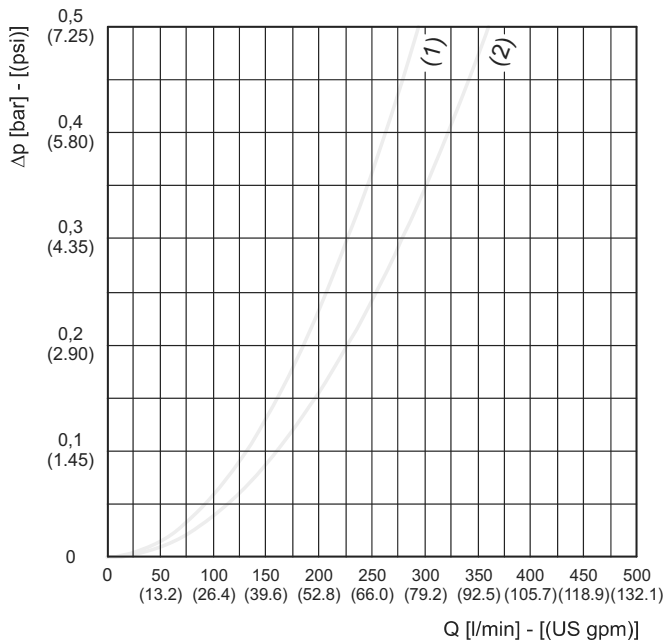
**FG003**



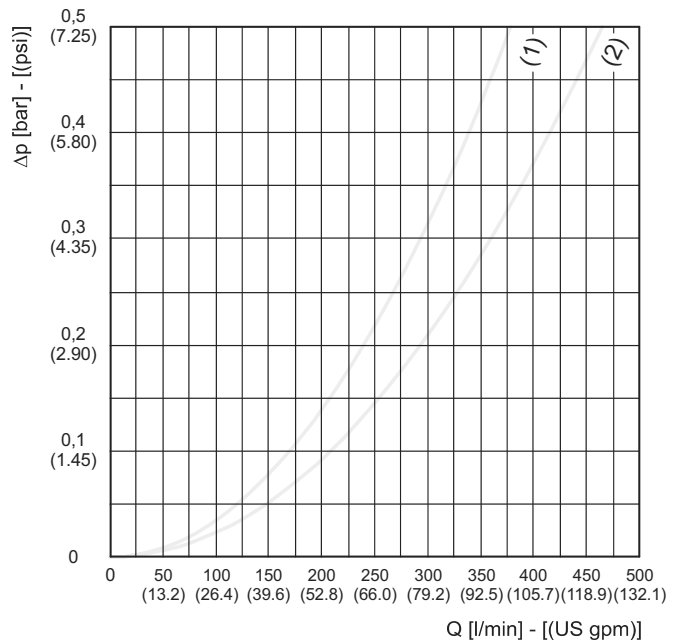
**FG006**



**FG010**



**FG025**



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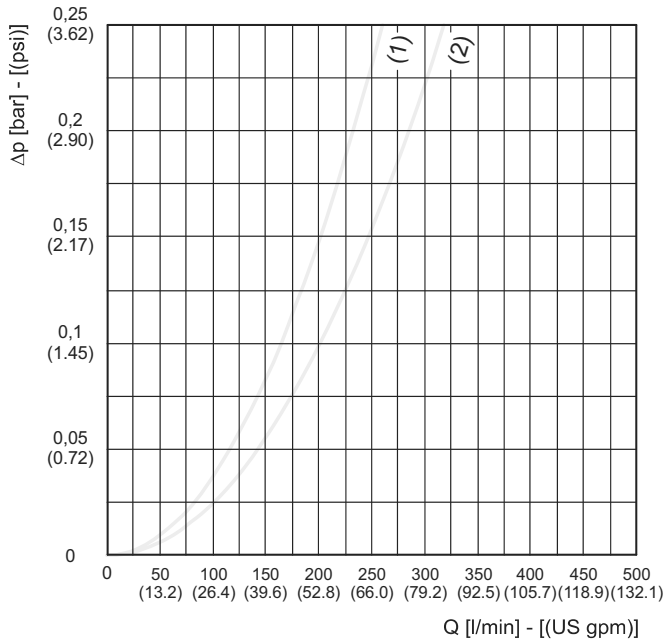


## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-30

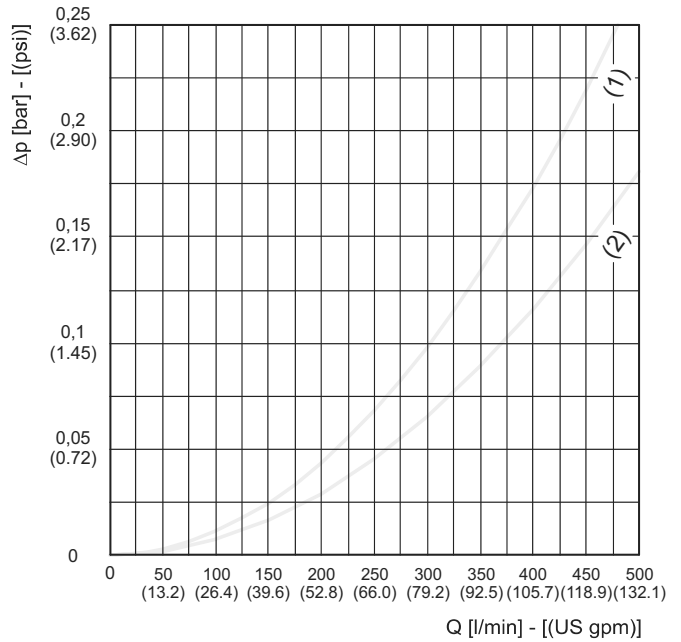
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

**RP010**



**RP025**



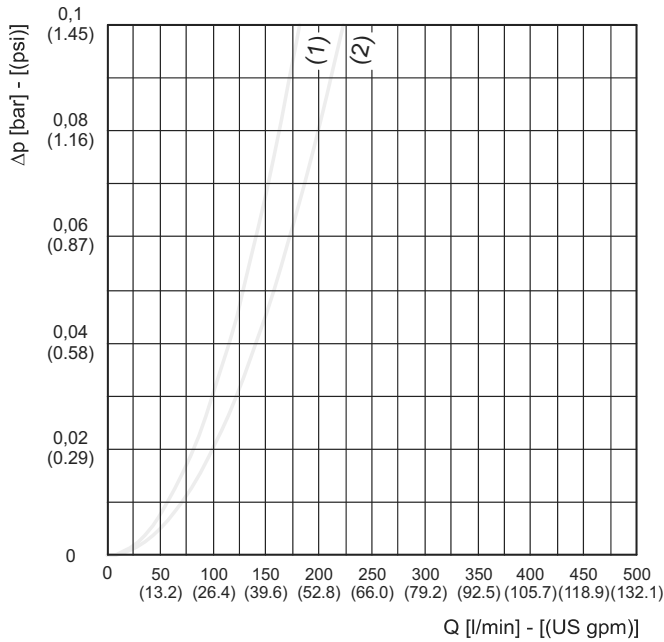
01/07.2010

## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-30

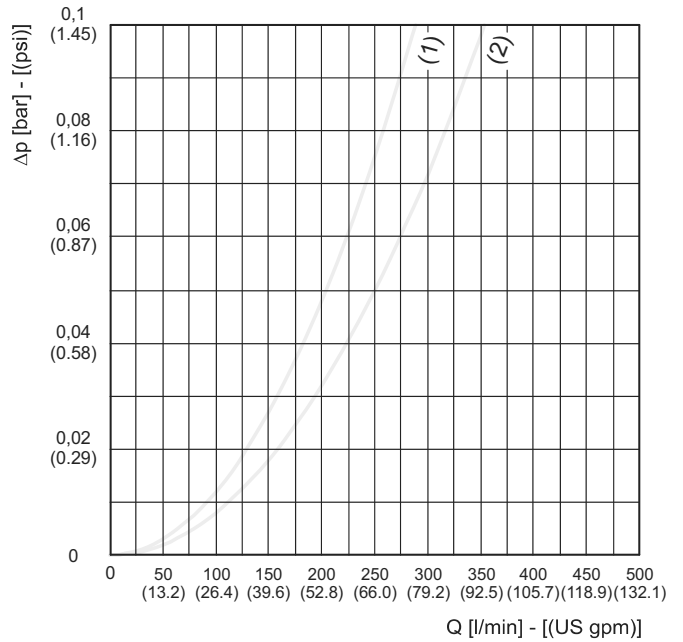
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

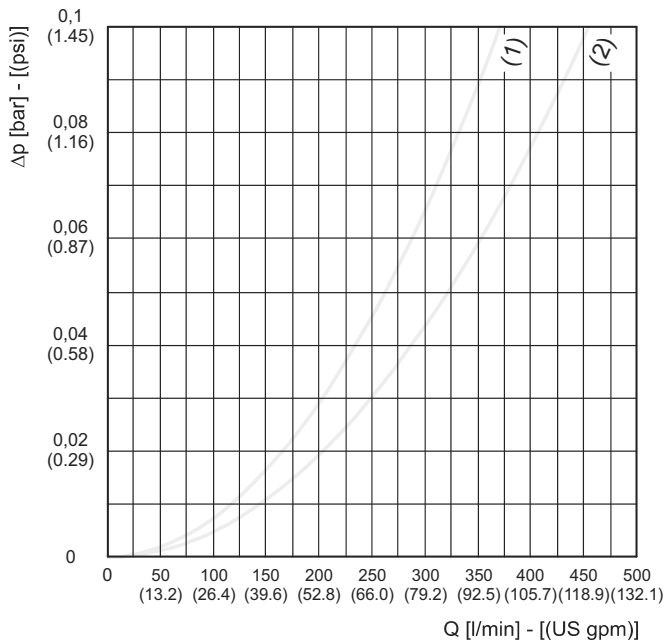
**MI025**



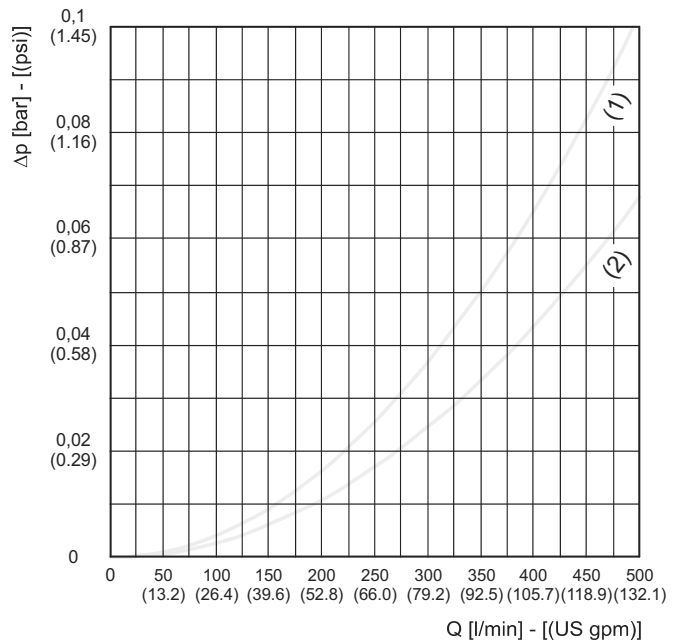
**MI060**



**MS090**



**MI125**



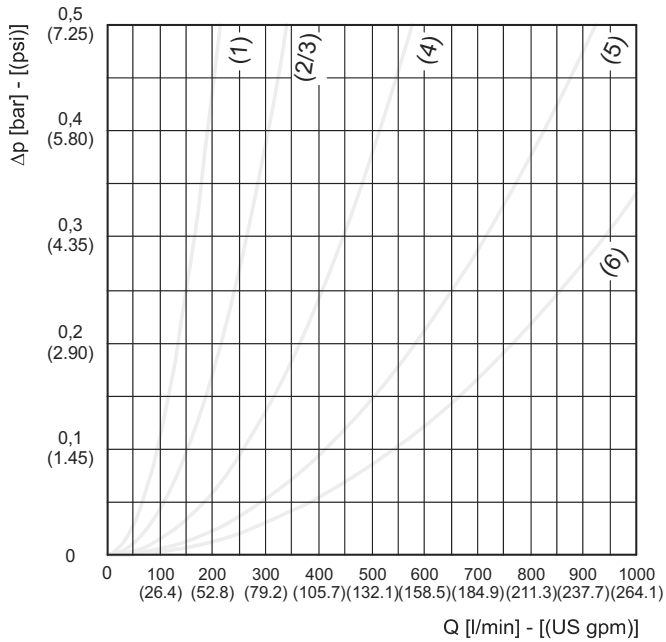
01/07.2010

## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-40

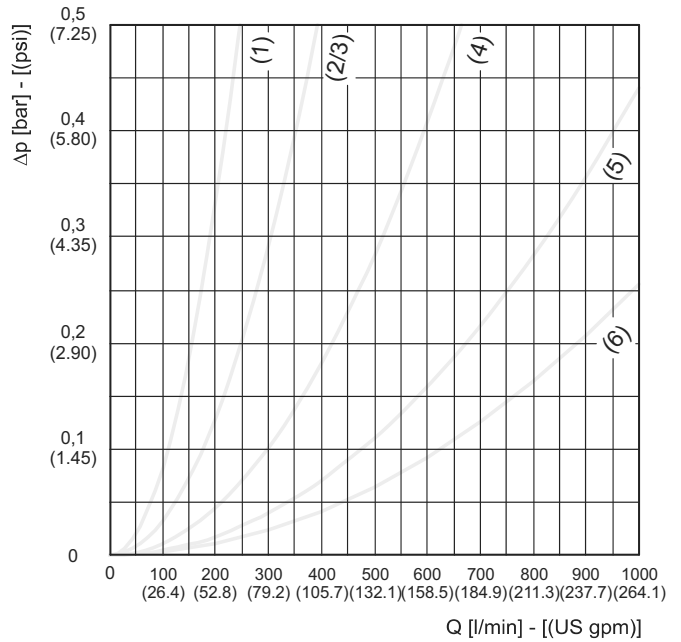
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

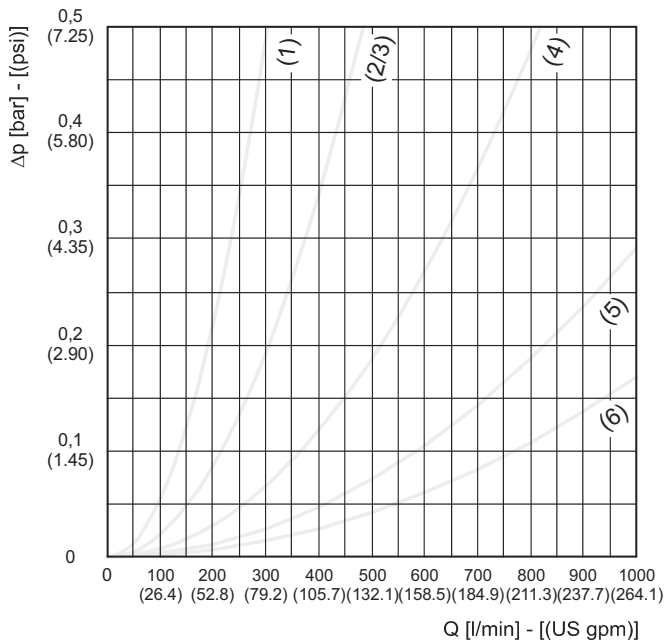
**FG003**



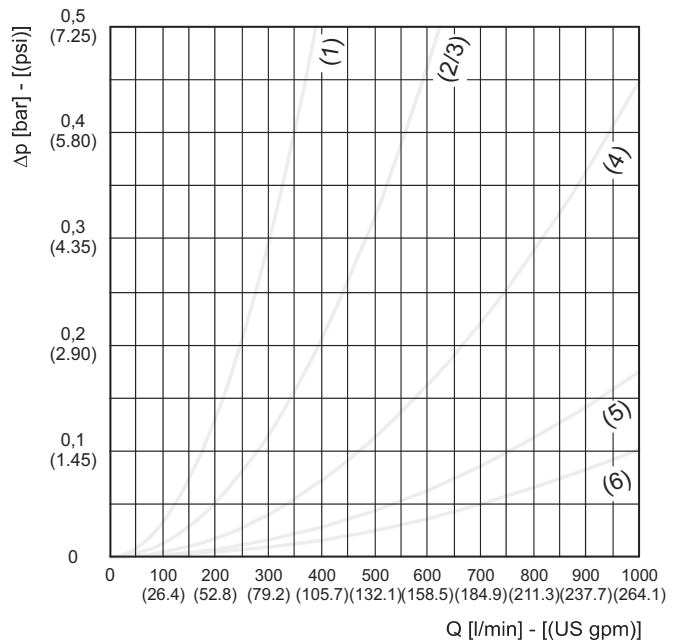
**FG006**



**FG010**



**FG025**



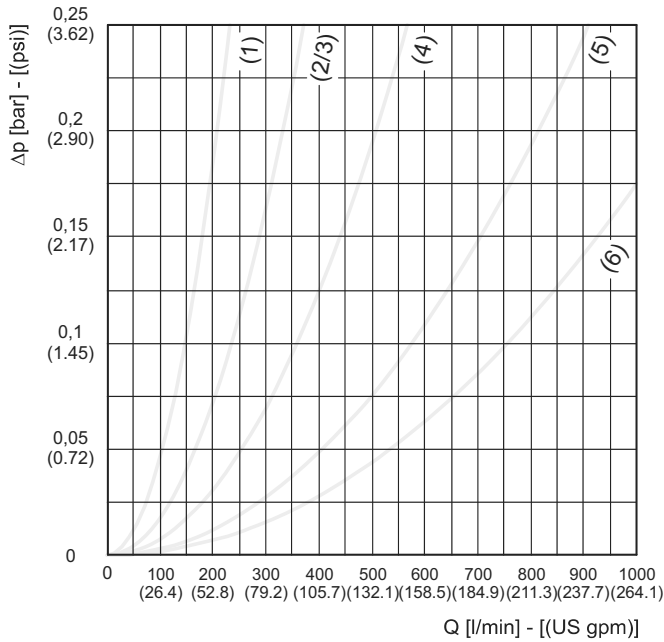
01/07.2010

## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-40

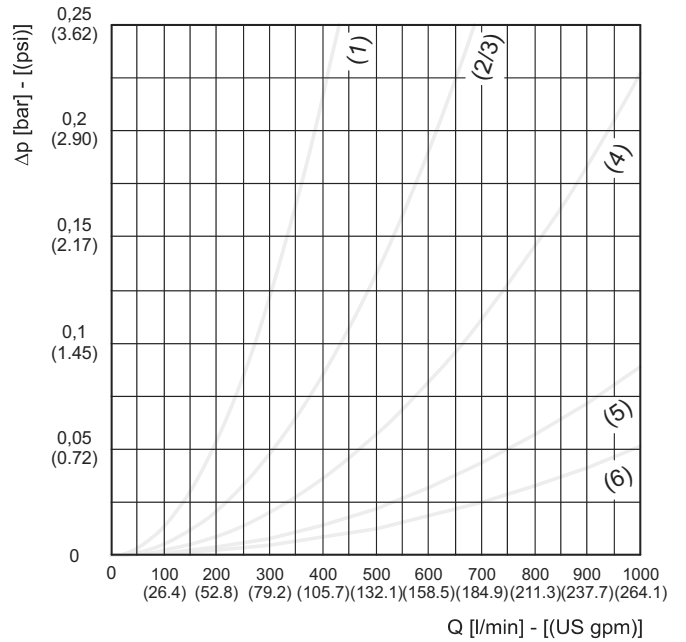
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

**RP010**



**RP025**



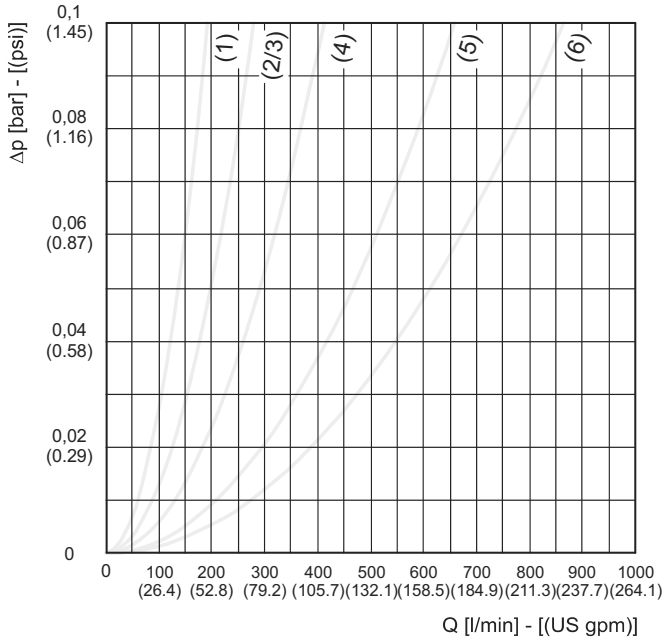
01/07.2010

## PRESSURE DROP CURVES THROUGH THE ELEMENT HEK02-40

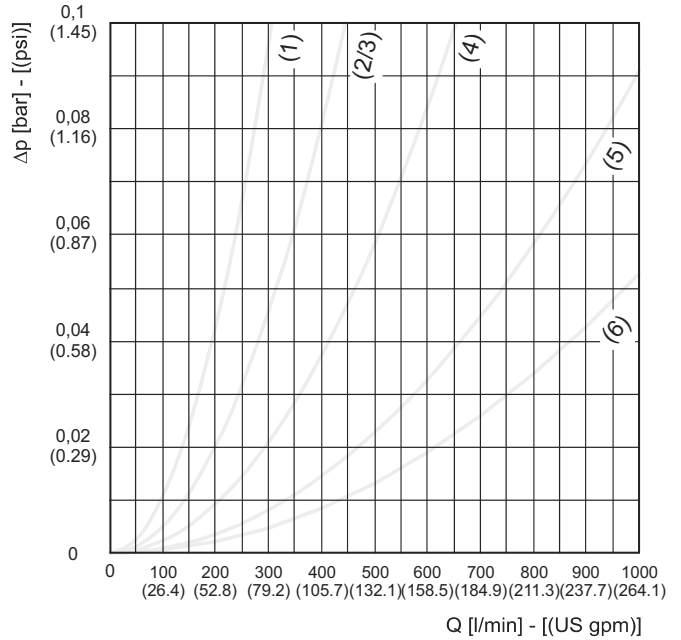
The curves are obtained in the following conditions:  
 Mineral oil type SAE 10  
 Kinematic viscosity 120 SSU (30 cSt)  
 Density 7.29 lb/gal (0,856 kg/dm<sup>3</sup>).

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

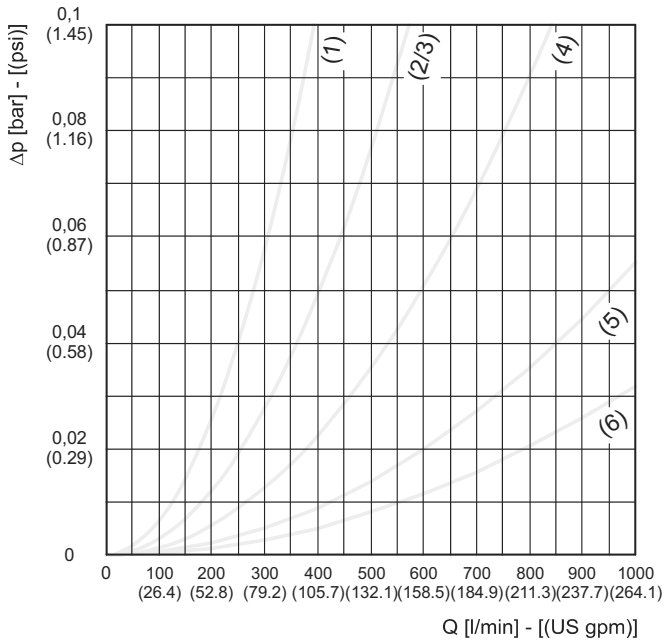
**MI025**



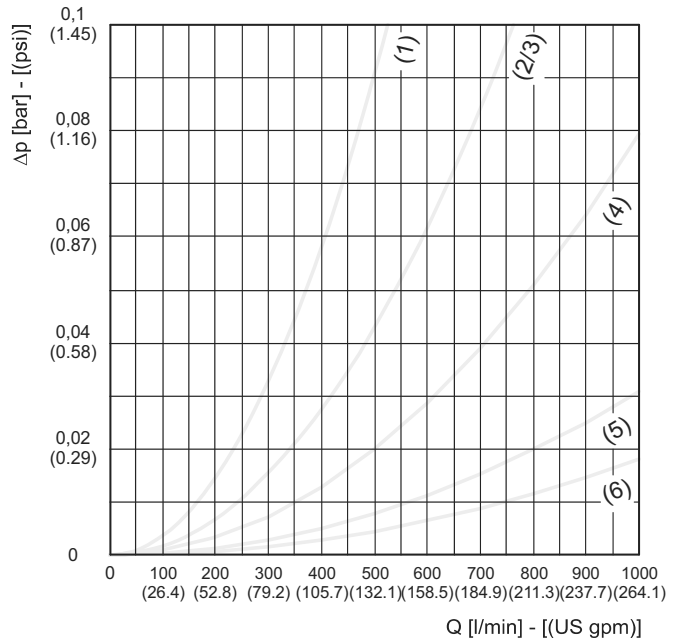
**MI060**



**MS090**



**MI125**



01/07.2010

## 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)

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## FLOWS - FILTERS WITH SINGLE INLET PORT

Filter type	Inlet port			Degree of filtration			
				MI025	MI060	MS090	MI125
	GAS (BSPP)	NPT	SAE J514b	Flow $\Delta p = 5.8 \text{ psi (0,4 bar)}$ (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)
HF 502-20.122	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)
	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)
HF 502-20.201	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)
	G 1/2	1/2 NPT	3/4-16 UNF-2B	22.5 (85)	25.1 (95)	25.1 (95)	25.1 (95)
HF 502-20.280	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 502-30.195 HF 508-30.195	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)
HF 502-30.239 HF 508-30.239	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)
	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 502-40.122 HF 508-40.122	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 502-40.194 HF 508-40.194	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)
	G 2	2 NPT	2 1/2-12 UNF-2B	81.9 (310)	105.7 (400)	116.2 (440)	124.2 (470)
HF 502-40.195 HF 508-40.195	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)
	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)
	G 2	2 NPT	2 1/2-12 UNF-2B	132.1 (500)	150.6 (570)	155.9 (590)	161.1 (610)
HF 502-40.390 HF 508-40.390	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)
	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)
HF 502-40.512 HF 508-40.512	G 2	2 NPT	2 1/2-12 UNF-2B	155.9 (590)	162.5 (615)	163.8 (620)	166.4 (630)

01/07.2010

**FLOWS - 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
	G 1 1/2	1 1/2 NPT	1 7/8-12 UNF-2B	1 1/2	(170)	(190)	(230)	(270)	(270)	(370)
HF 508-30.239	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)
	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)
HF 508-40.122	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
	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)
HF 508-40.194	-	-	-	2	50.2	55.5	66.0	84.5	71.3	118.9
	-	-	-	2 1/2	(190)	(210)	(250)	(320)	(270)	(450)
	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)
HF 508-40.195	G 2	2 NPT	2 1/2-12 UNF-2B	2	76.6	84.5	97.7	118.9	105.7	150.6
	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
	-	-	-	2 1/2	(290)	(330)	(400)	(490)	(430)	(660)
HF 508-40.390	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)
	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)
HF 508-40.512	-	-	-	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
	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)
ICAT014-002	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)
	-	-	-	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)
21	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
	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)

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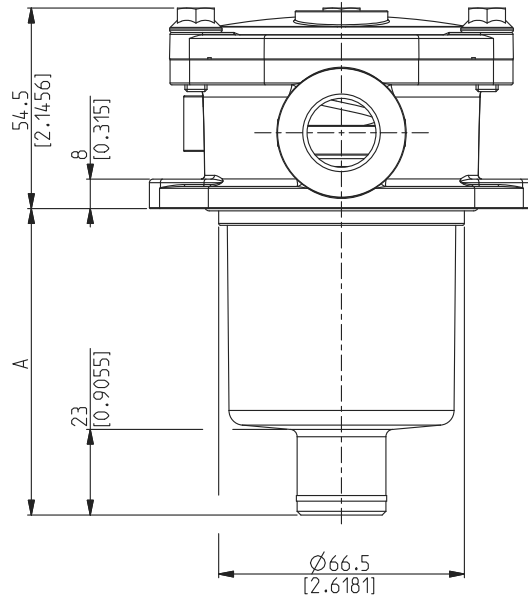
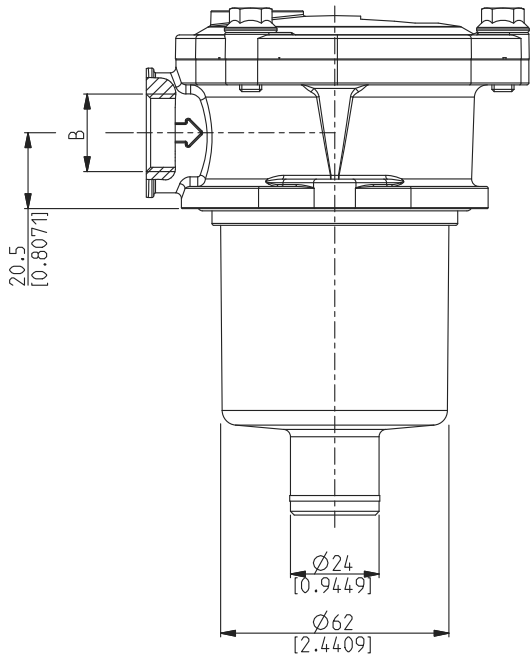


**FLOWS - FILTERS WITH DOUBLE INLET PORTS**

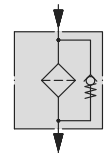
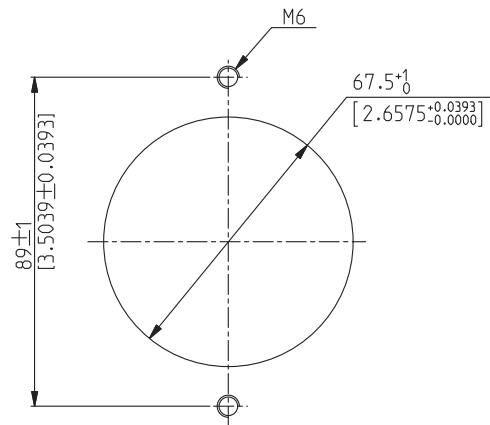
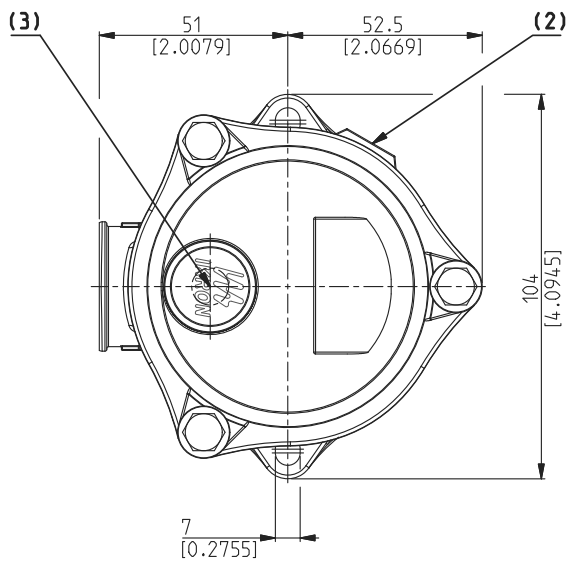
Filter type	Inlet ports				Degree of filtration			
					MI025	MI060	MS090	MI125
	GAS (BSPP)	NPT	SAE J514b	SAE 3000 Nom. dim.	Flow Δp= 5.8 psi (0,4 bar) (values referred to standard filtering surfaces)			
					US gpm (l/min)			
HF 508-30.195	G 1 1/4	1 1/4 NPT	1 5/8-12 UNF-2B	1 1/4	71.3	89.8	97.7	103.0
	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)
HF 508-40.194	-	-	-	2	92.5	126.8	145.3	163.8
	-	-	-	2 1/2	(350)	(480)	(550)	(620)
	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)
HF 508-40.195	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)
	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)
HF 508-40.239	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 508-40.390	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)
HF 508-40.512	-	-	-	2	169.1	211.3	227.2	243.0
	-	-	-	2 1/2	(640)	(800)	(860)	(920)
	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)
HF 508-40.194	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)
	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)
HF 508-40.512	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)

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### HF502-10 DIMENSIONS



**RESERVOIR MOUNTING  
HOLE DIMENSIONS**



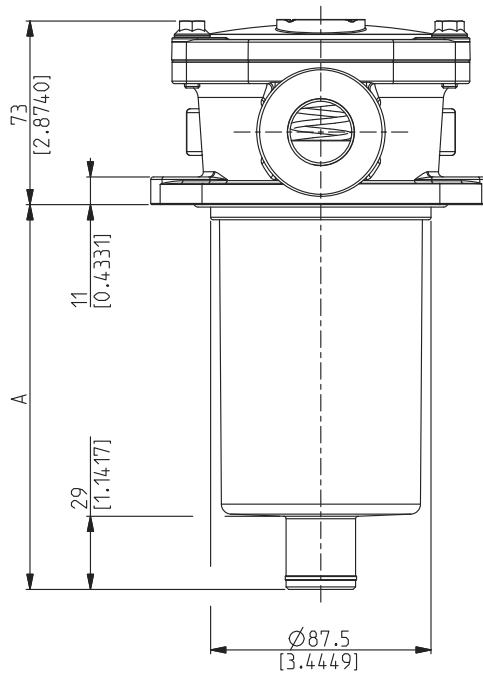
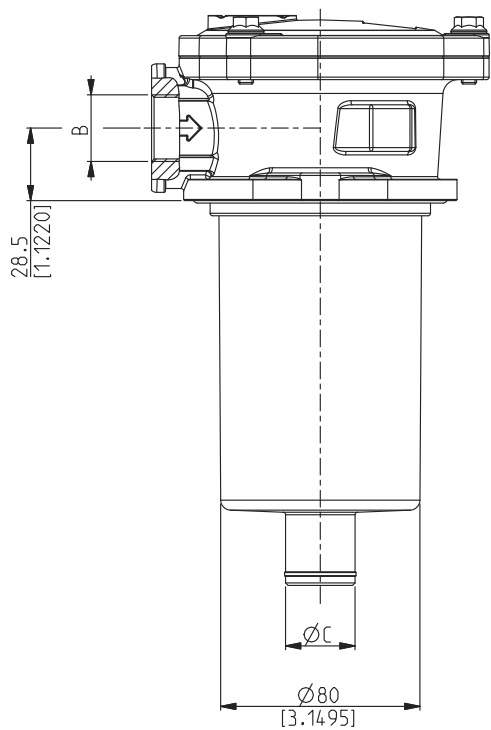
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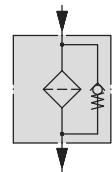
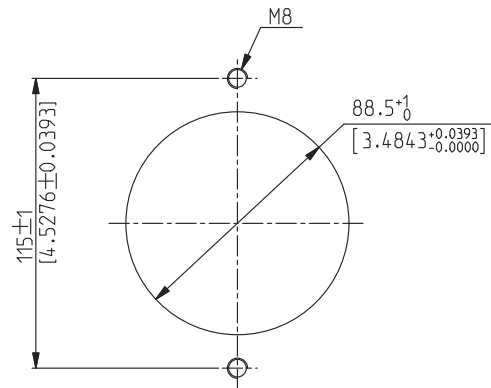
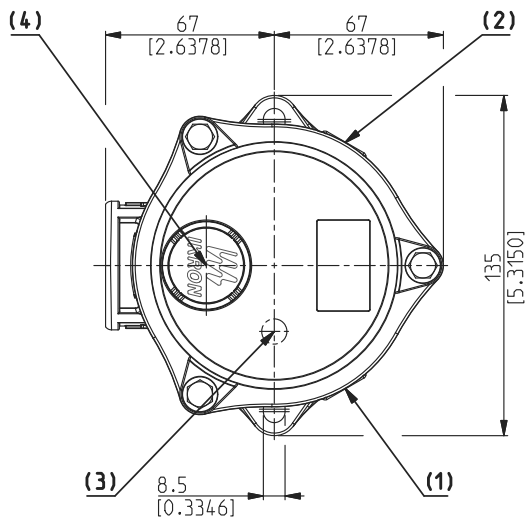
Filter type	Weight	A	B (GAS-BSPP)		(3)(GAS-BSPP) Secondary inlet	(2)(3)(GAS-BSPP) Indicators
			kg(lbs)	mm(in)		
HF 502-10.060	0,43 (0.94)	83 (3.2677)	G 1/2	G 3/8 - G 3/4	G 3/8	G 1/8
HF 502-10.129	0,52 (1.14)	152 (5.9842)	G 3/4	G 3/8 - G 1/2		

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

### HF502-20 DIMENSIONS



**RESERVOIR MOUNTING HOLE DIMENSIONS**



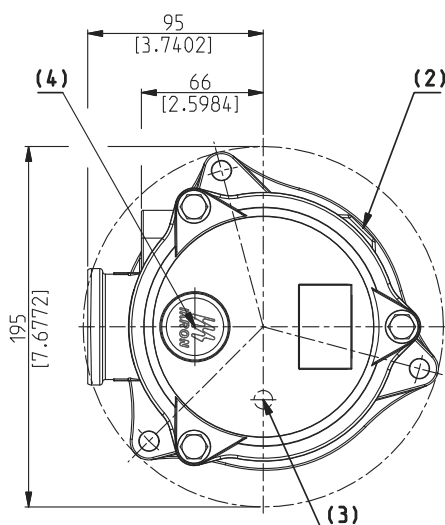
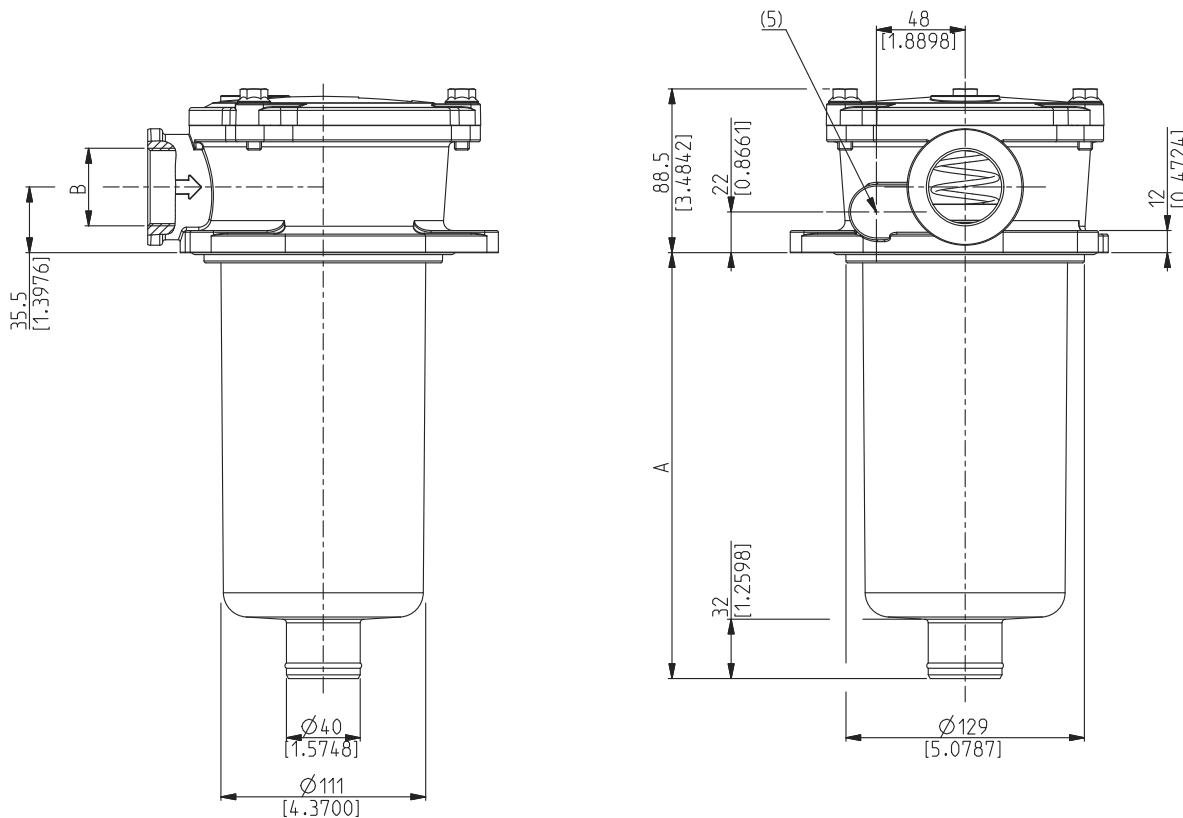
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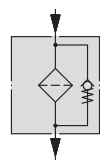
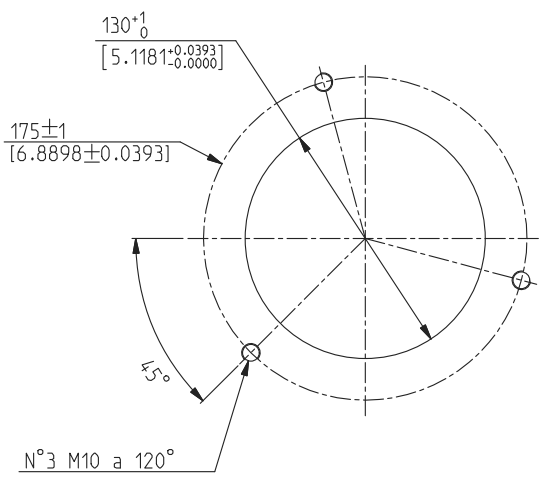
Filter type	Weight kg(lbs)	A mm(in)	B (GAS-BSPP)		ØC mm(in)	(4)(GAS-BSPP)	(1)(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request		Secondary inlet	Indicators	Filler cap
HF 502-20.077	0.96 (2.11)	103 (4.0551)	G 3/4	G 1/2 - G 1 - G 1 1/4	27.5 (1.0826)			
HF 502-20.122	1.07 (2.35)	148 (5.8267)	G 1	G 1/2 - G3/4 - G 1 1/4		G 3/8 G 1/2	G 1/8	
HF 502-20.201	1.23 (2.71)	229 (9.0157)	G 1 1/4	G 1/2 - G 3/4 - G1	40 (1.5747)	G 3/4		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**



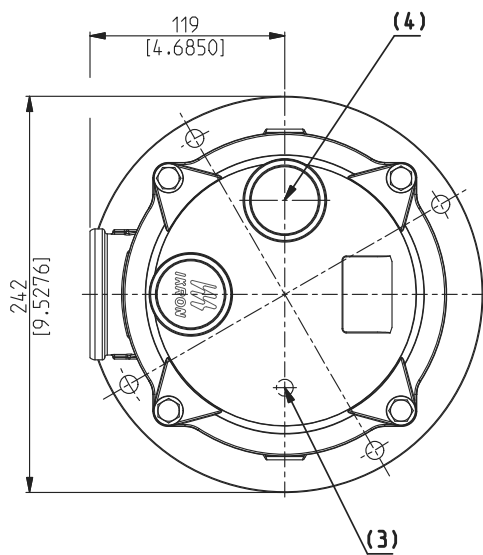
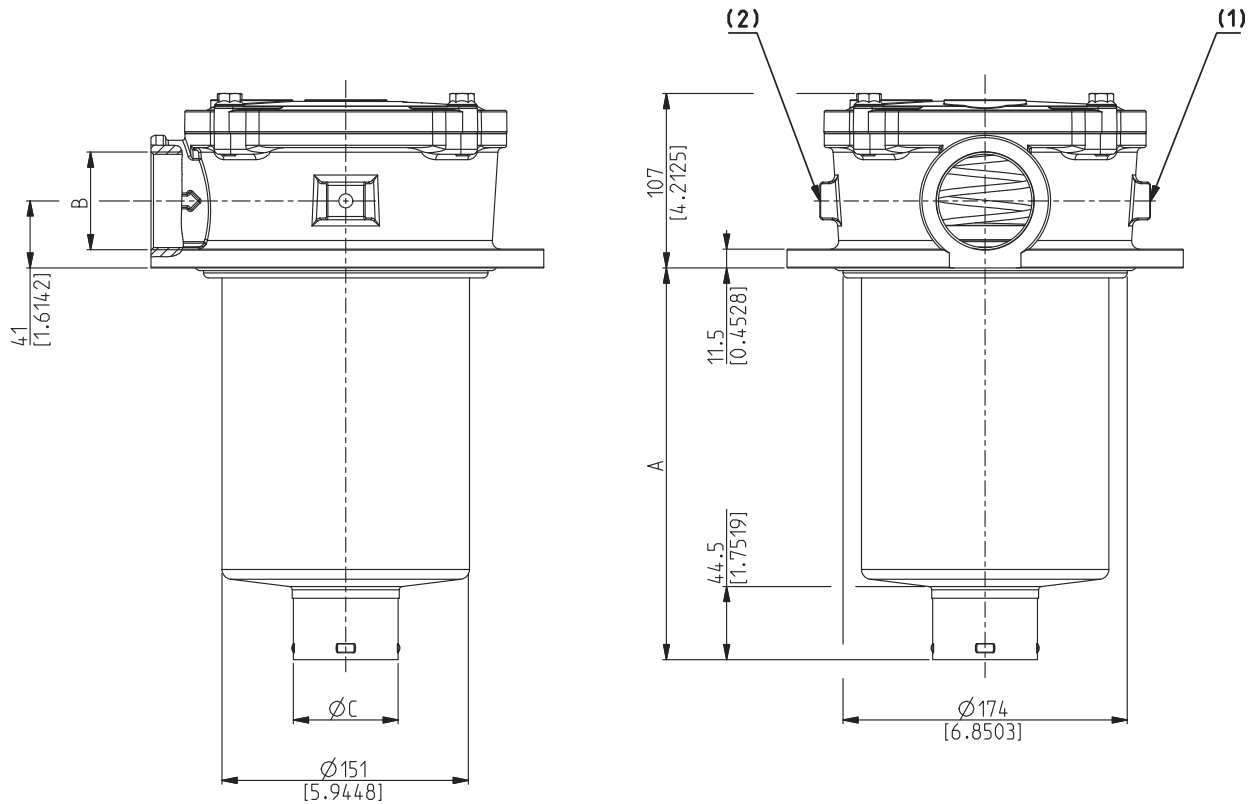
01/07.2010

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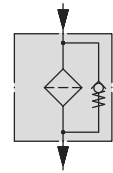
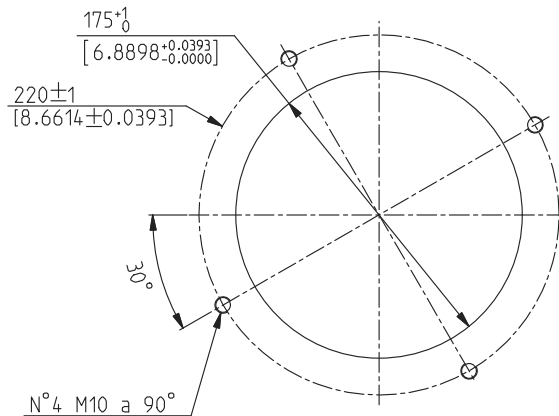
Filter type	Weight kg(lbs)	A mm(in)	B (GAS-BSPP)		(4)(5)(GAS-BSPP)	(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request	Secondary inlet	Indicators	Filler cap
HF 502-30.195	2,24 (4.93)	230 (9.0550)	G 1 1/4	G 1 - G 1 1/2	G 3/8 Pos.(5) G 1/2 Pos.(4)-(5)	G 1/8	G 3/4
HF 502-30.239	2,46 (5.42)	273 (10.7480)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



RESERVOIR MOUNTING HOLE DIMENSIONS



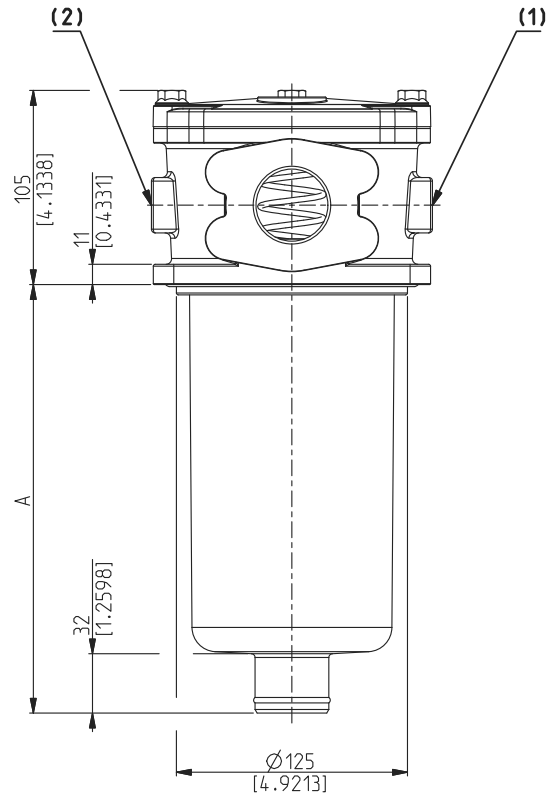
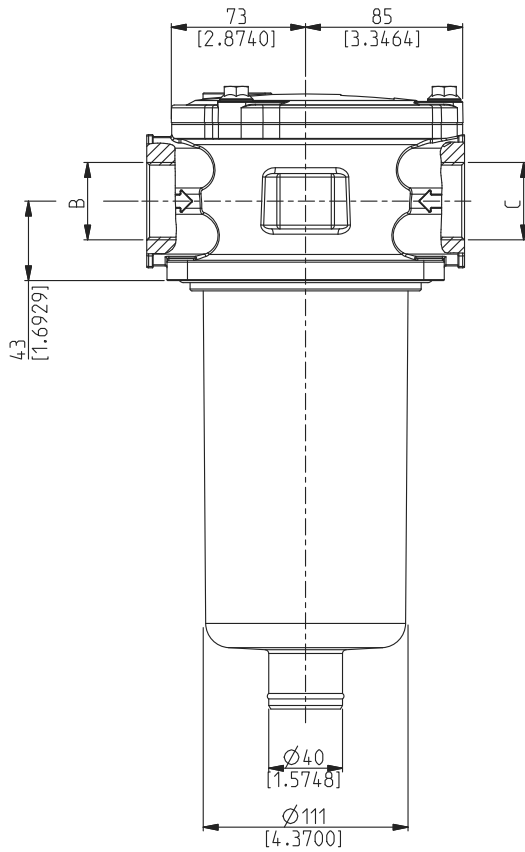
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Filter type	Weight kg(lbs)	A mm(in)	B (GAS-BSPP)		ØC mm(in)	(1)(2)(4)(GAS-BSPP)	(1)(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request		Secondary inlet	Indicators	Filler cap
HF 502-40.122	3.97 (8.75)	173 (6.8110)			50 (1.9684)			
HF 502-40.194	4.34 (9.56)	239	G 1 1/2	G 2		G 3/8 Pos.(1)-(2)-(4)		
HF 502-40.195	4.42 (9.74)	(9.4094)				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)						

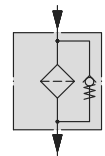
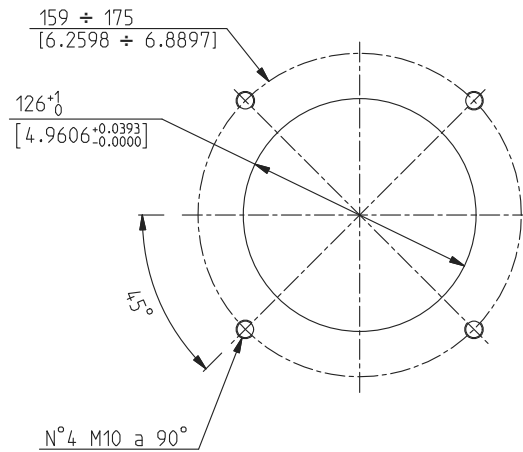
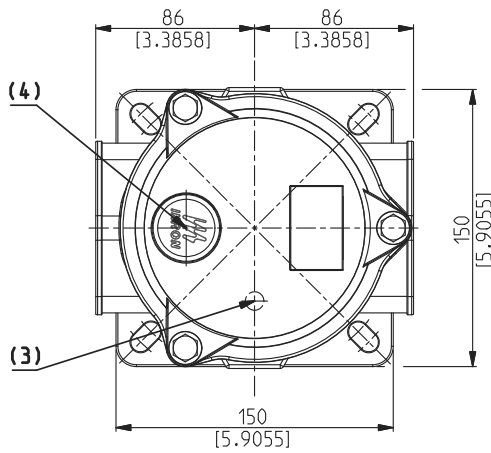
NPT, metric and SAE UN-UNF threads are available (consult our technical department).

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HF508-30 DIMENSIONS



RESERVOIR MOUNTING HOLE DIMENSIONS



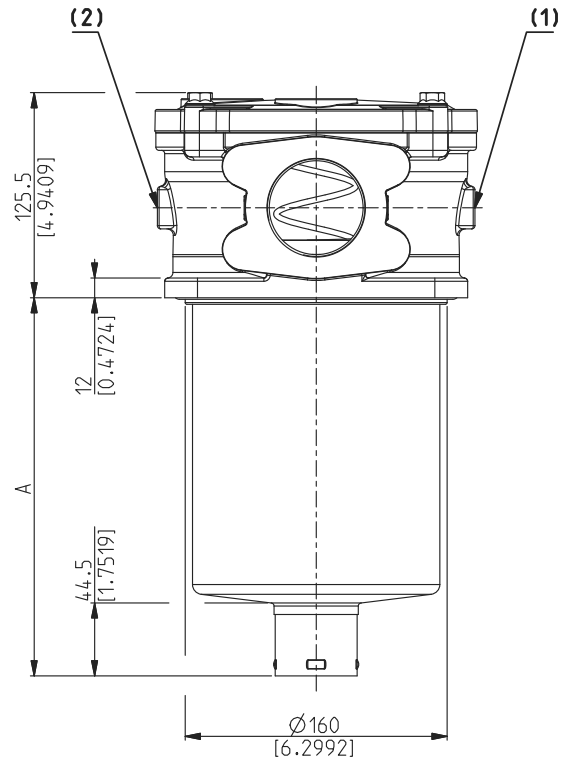
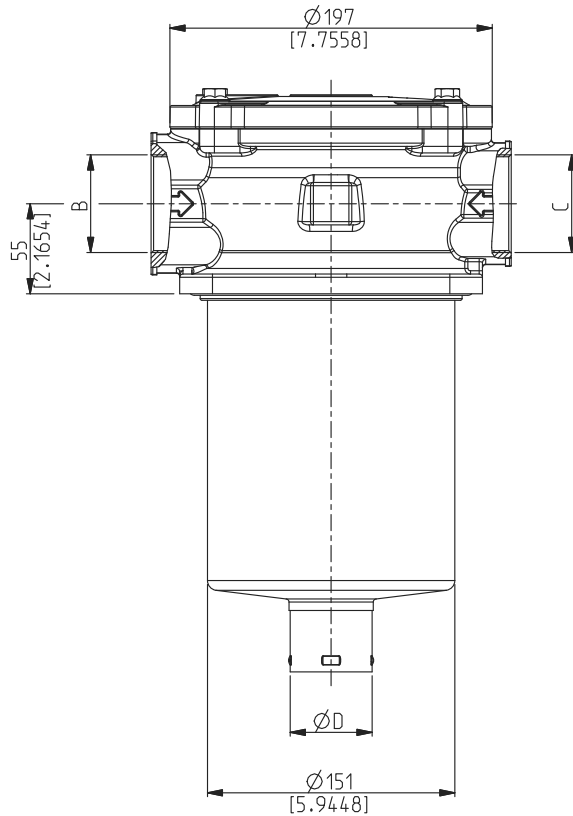
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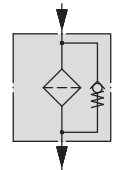
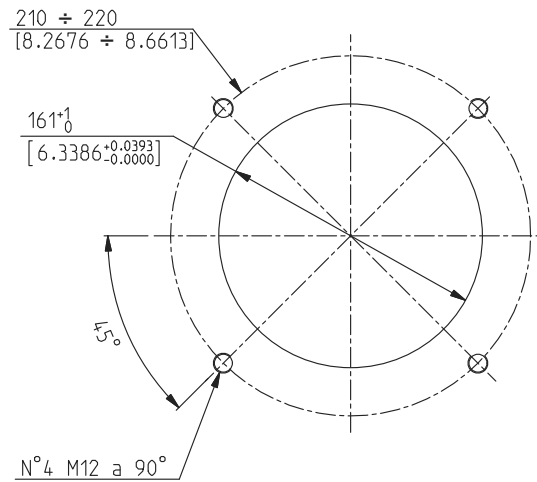
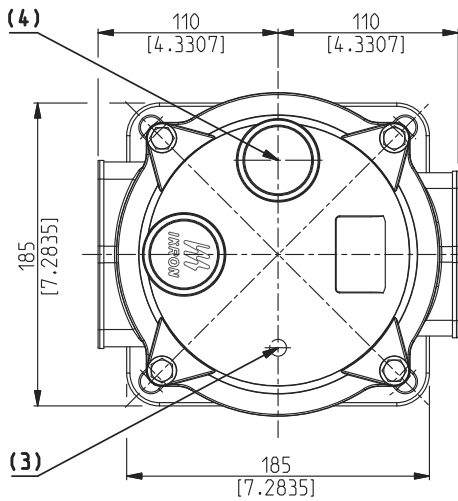
Filter type	Weight kg(lbs)	A mm(in)	B/C (GAS-BSPP)		(1)(2)(4)(GAS-BSPP)	(1)(2)(3)(GAS-BSPP)	(4)(GAS-BSPP)
			Standard	On request	Secondary inlet	Indicators	Filler cap
HF 508-30.195	2,85 (6.28)	232 (9.1338)	G 1 1/4	G 1 - G 1 1/2	G 3/8 Pos.(1)-(2) G 1/2 Pos.(1)-(2)-(4)	G 1/8	G 3/4
HF 508-30.239	3,07 (6.76)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



**RESERVOIR MOUNTING HOLE DIMENSIONS**



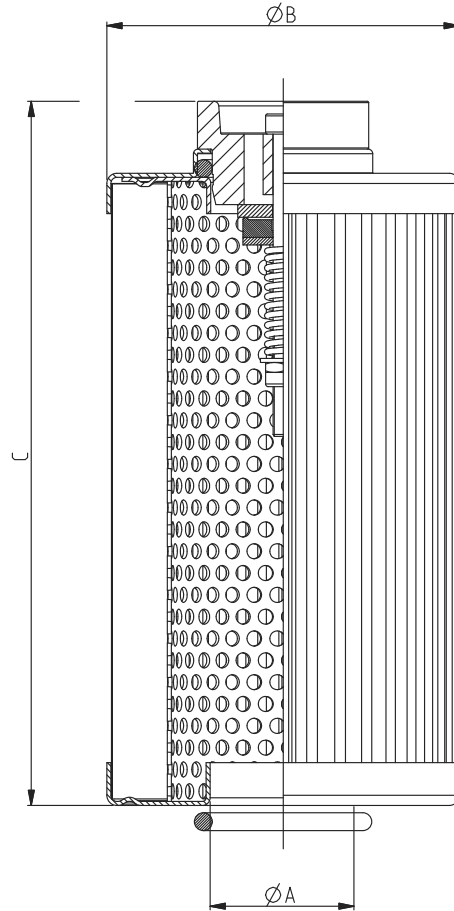
ICAT\_014\_006\_HF502

Filter type	Weight kg(lbs)	A mm(in)	B/C (GAS-BSP)		ØD mm(in)	(1)(2)(4)(GAS-BSP)	(1)(2)(3)(GAS-BSP)	(4)(GAS-BSP)
			Standard	On request		Secondary inlet	Indicators	Filler cap
HF 508-40.122	4.37 (9.63)	165 (6.4960)			50 (1.9684)	G 3/8 Pos.(1)-(2)-(4)		
HF 508-40.194	4.74 (10.44)	231 (9.0944)	G 1 1/2	G 2		G 1/2 Pos.(1)-(2)-(4)		
HF 508-40.195	4.65 (10.25)						G 1/8	G 1 1/4
HF 508-40.239	4.98 (10.97)	291 (11.4566)			64 (2.5196)	G 1 Pos.(4)		
HF 508-40.390	7.49 (16.51)	435 (17.1259)	G 2	G 1 1/2		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).

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ELEMENTS DIMENSIONS FOR HF 502 / HF 508



ICAT\_014\_007\_HF502

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 <sup>2</sup> (in <sup>2</sup> )	cm <sup>2</sup> (in <sup>2</sup> )	cm <sup>2</sup> (in <sup>2</sup> )
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)		140 (5.5117)	AS	1113 (172.5153)	615 (95.3251)	1347 (208.7854)
HEK02-20.201	41	70	225 (8.8582)	AS	1680 (260.4005)	929 (143.9953)	2034 (315.2706)
HEK02-20.280	(1.6141)	(2.7558)	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)

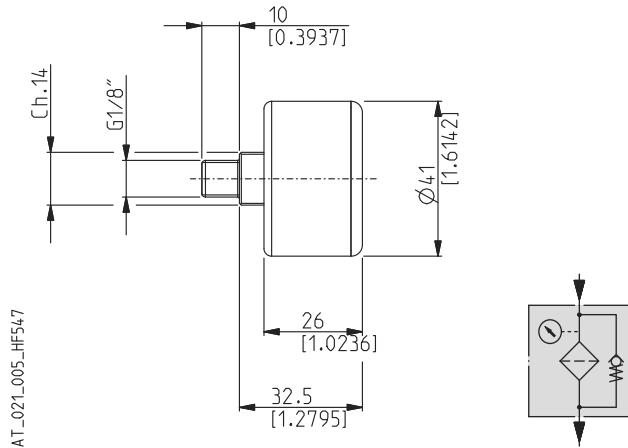
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## INDICATORS

### REAR MANOMETER

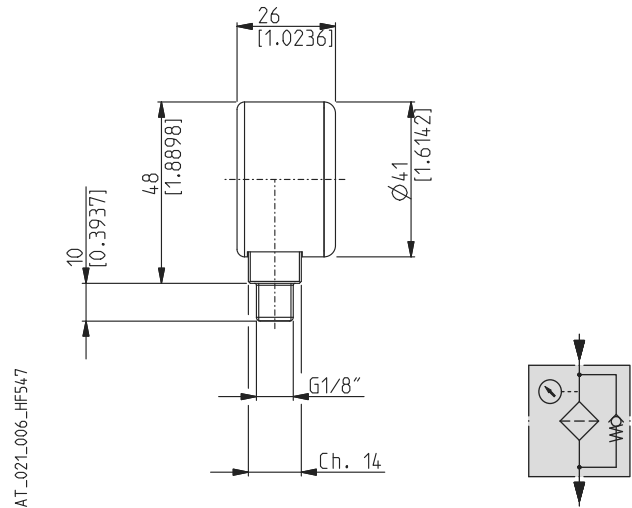
Code: **M**



Scale 0 + +145 psi (0 + +10 bar)

### RADIAL MANOMETER

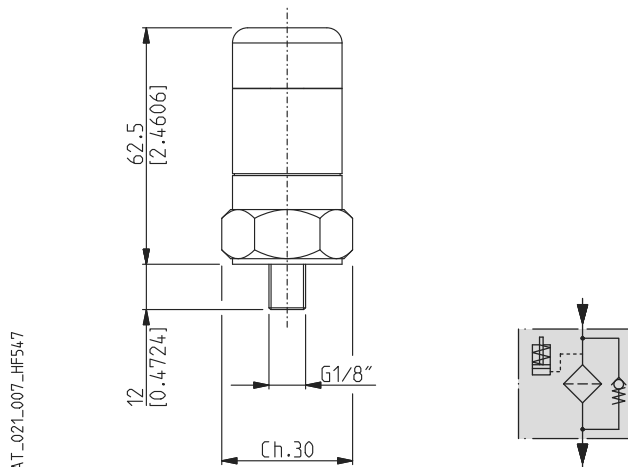
Code: **N**



Scale 0 + +145 psi (0 + +10 bar)

### VISUAL INDICATOR

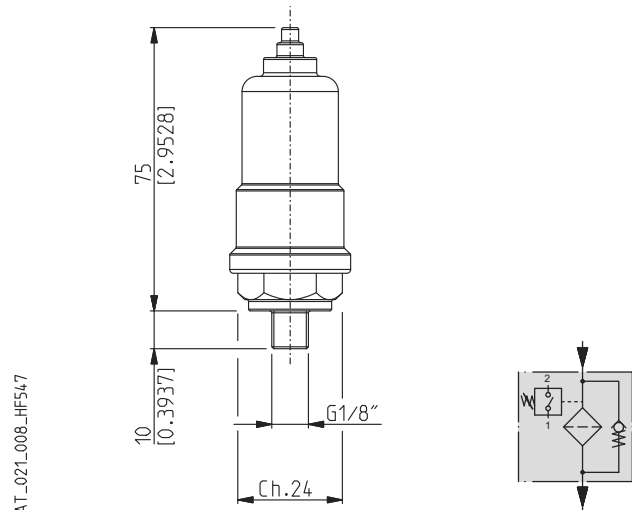
Code: **P**



Pressure setting 21.8 psi (1,5 bar)

### ELECTRICAL INDICATOR

Code: **S**



Pressure setting 21.8 psi (1,5 bar)

Max. working voltage 220 VCA  
30 VCC

Max. working current 0,5 A (resistivity)  
0,2 A (inductive)

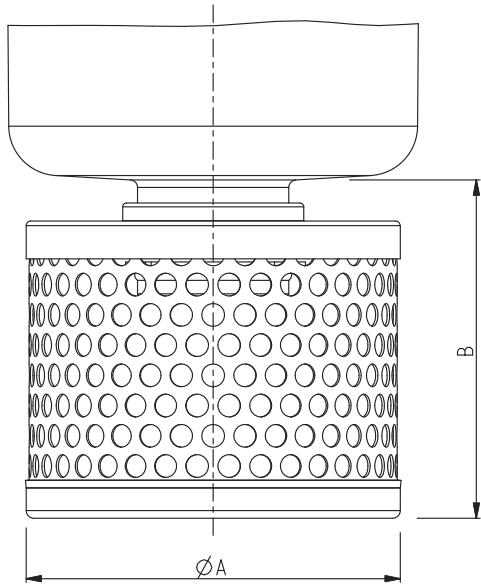
Protection class IP65

Contacts N.O.contact

01/07.2010

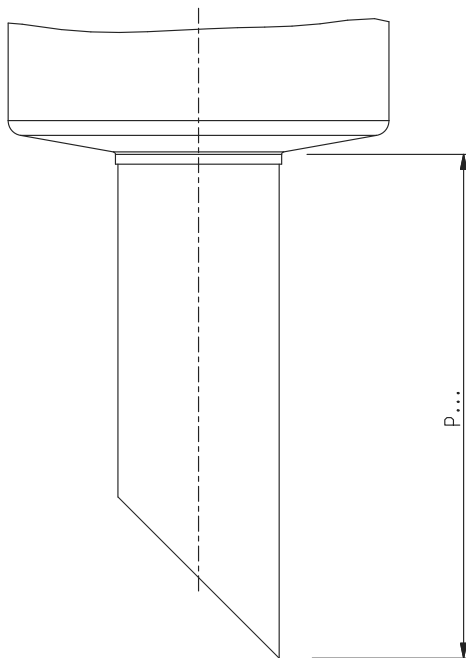
ACCESSORIES

WITH DIFFUSER

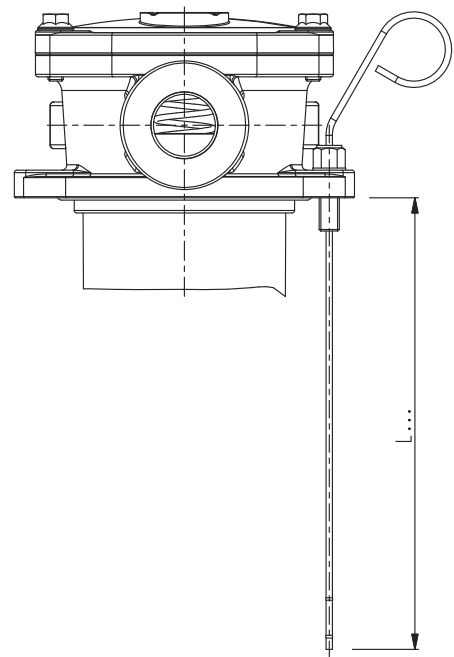


Filter type	A	B
	mm(in)	mm(in)
HF 502-10	52 (2.0472)	50 (1.9684)
HF 502-20	70 (2.7558)	65 (2.5590)
HF 502-30 HF 508-30	99 (3.8976)	90 (3.5432)
HF 502-40 HF 508-40	140 (5.5117)	150 (5.9054)

WITH BOWL EXTENSION



WITH LEVEL DIPSTICK



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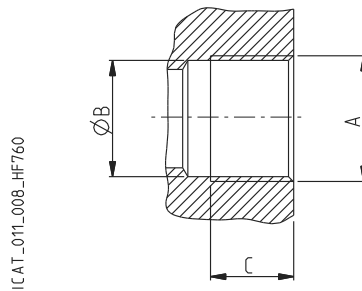
ICAT\_014\_008\_HF502

### INLET PORTS

Filter type	PORTS TYPE					
	Nominal size	Gas BSP	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

<b>GAS THREAD</b>	<b>BSP</b>
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Cylindrical GAS thread (55°) in accordance with UNI - ISO 228



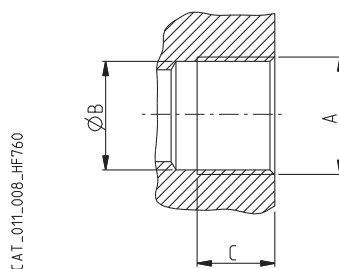
CODE	Nominal size	A	Ø B		C	Nm (lbf in)
			mm (in)	mm (in)		
GC	3/8"	G 3/8	15 (0.5905)	14 (0.5511)	15 <sup>+1</sup> (133 ÷ 142)	
GD	1/2"	G 1/2	19 (0.7480)	17 (0.6692)	20 <sup>+1</sup> (177 ÷ 186)	
GE	3/4"	G 3/4	24,5 (0.9645)	20 (0.7873)	30 <sup>+2,5</sup> (266 ÷ 288)	
GF	1"	G 1	30,5 (1.2007)	22 (0.8661)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

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## INLET PORTS

<b>NPT THREAD</b>	<b>NPT</b>
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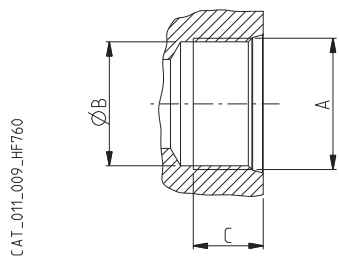
NPT thread (60°) in accordance with ANSI - ASME B1-20



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

<b>SAE J514 THREAD</b>	<b>ODT</b>
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American thread UNC-UNF 60° in accordance with ANSI B 1.1



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

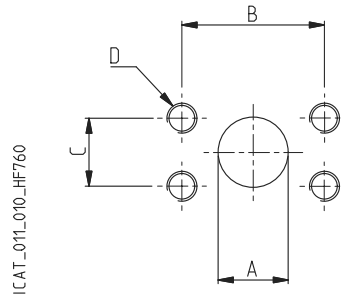
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## INLET PORTS

### SAE FLANGED PORTS J518 - Standard pressure series 3000 PSI

**SSM**

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

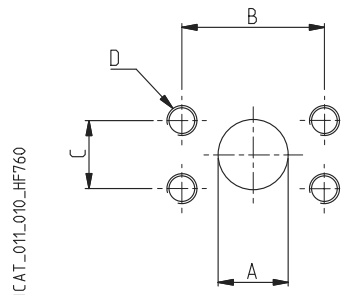


CODE	Nominal size	Ø A		B		C		D	
		mm (in)	mm (in)	mm (in)	mm (in)	mm (in)	Thread Depth mm(in)	Nm (lbf in)	
MD	1 1/4	31,8 (1.252)	58,7 (2.311)	30,2 (1.189)	M 10 15,0 (0.591)	20 <sup>+1</sup> (177 ÷ 186)			
ME	1 1/2	38,1 (1.252)	69,8 (2.748)	35,7 (1.406)	M 12 18,0 (0.709)	30 <sup>+2,5</sup> (265 ÷ 287)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

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## ASSEMBLY AND REPLACING ELEMENT INSTRUCTIONS

### MOUNTING

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

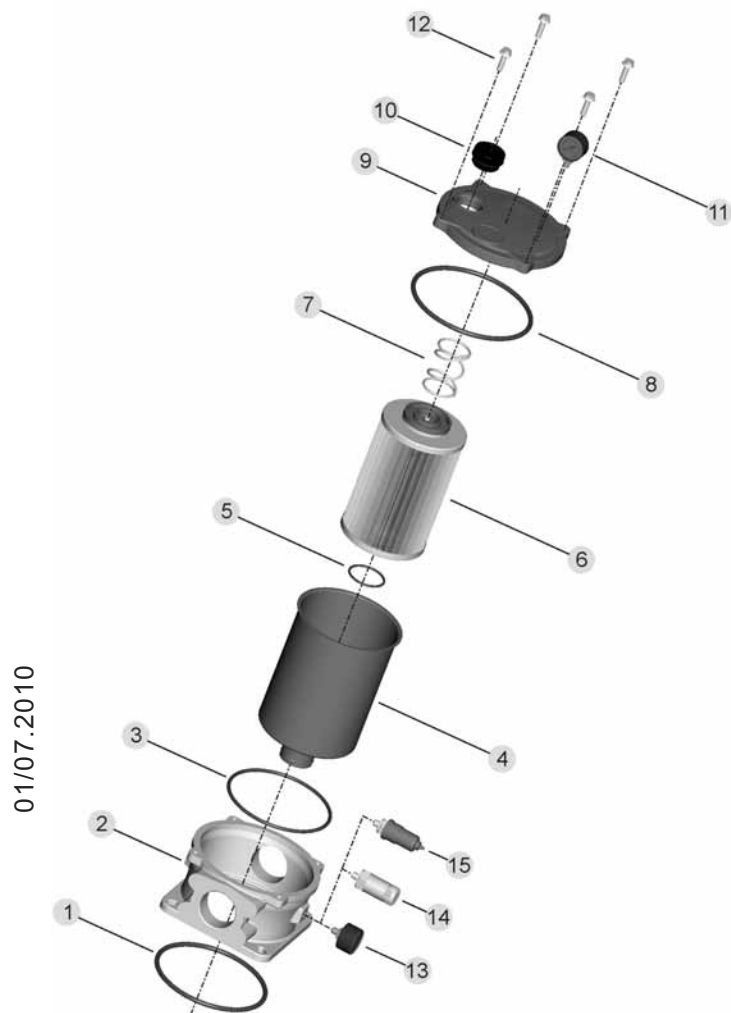
- A Take off the protection cap from the inlet port.
- B Secure the filter in the tank through the holes in the body's flange (pos.2) tightening them as follows:  
HF502-10 e HF502-20 = 44 lbf in (5 Nm)  
HF502-30 e HF508-30 = 62 lbf in (7 Nm)  
HF502-40 e HF508-40 = 88 lbf in (10 Nm)
- C Connect the 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 lbf in (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 lbf in (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

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## HOW TO ORDER A COMPLETE FILTER HF 502

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

<b>1</b>	<b>Filter type</b>	<b>CODE</b>
	See table from pag. 23 to pag. 26	HF502..
<b>2</b>	<b>Filtering surface</b>	<b>CODE</b>
	Standard	AS
	Oversize	FS
<b>3</b>	<b>Degree of filtration</b>	<b>CODE</b>
	3 [µm] Micro-fibre glass	FG003
	6 [µm] Micro-fibre glass	FG006
	10 [µm] Micro-fibre glass	FG010
	25 [µm] Micro-fibre glass	FG025
	25 [µm] Stainless steel wire mesh	MI025
	60 [µm] Stainless steel wire mesh	MI060
	125[µm] Stainless steel wire mesh	MI125
	90 [µm] Steel wire mesh	MS090
	10 [µm] Cellulose	SP010
	25 [µm] Cellulose	SP025
	10 [µm] Reinforced cellulose	RP010
	25 [µm] Reinforced cellulose	RP025
<b>4</b>	<b>By-pass setting valve</b>	<b>CODE</b>
	With By-pass setting valve 25 [psi] (1,7 [bar])	B17
	With By-pass setting valve 51 [psi] (3,5 [bar])	B35
<b>5</b>	<b>Inlet port</b>	<b>CODE</b>
	<b>GAS threads (BSPP)</b>	
	G 3/8	GC
	G 1/2	GD
	G 3/4	GE
	G 1	GF
	G 1 1/4	GG
	G 1 1/2	GH
	G 2	GL
	<b>NPT threads</b>	
	3/8	NC
	1/2	ND
	3/4	NE
	1	NF
	1 1/4	NG
	1 1/2	NH
	2	NL
	<b>SAE threads ODT</b>	
	3/8	OA
	1/2	OB
	3/4	OD
	1	OF
	1 1 /4	OG
	1 1/2	OH
	2	OI

<b>6</b>	<b>Seals</b>	<b>CODE</b>
	Buna	B
	Viton	V
<b>7</b>	<b>Filler cap</b>	<b>CODE</b>
	Without	H
	With filler cap (except HF502-10)	L
<b>8</b>	<b>Magnetic set</b>	<b>CODE</b>
	Without	Z
	With magnetic set	R
<b>9</b>	<b>Indicators arranged</b>	<b>CODE</b>
	Without	XN
	On the housing - right (1)(except HF502-10 and HF502-30)	XA
	On the housing - left (2)	XB
	On the cover (3)	XD
<b>10</b>	<b>Indicator's ports dimensions</b>	<b>CODE</b>
	<b>GAS Threads (BSPP)</b>	
	G 1/8	GA
	G 1/8 with plug	DA
<b>11</b>	<b>Indicators</b>	<b>CODE</b>
	Without	G
	Manometer - rear connection	M
	Manometer - radial connection	N
	Visual indicator	P
	Electrical indicator	S
<b>12</b>	<b>Secondary ports</b>	<b>CODE</b>
	Without	YN
	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
<b>13</b>	<b>Secondary ports dimensions</b>	<b>CODE</b>
	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
<b>14</b>	<b>Accessories</b>	<b>CODE</b>
	Without	K
	With diffuser	D
	With bowl extension(ex. bowl extension length 150=P150)	P...
	With level dipstick(ex. level dipstick length 175=L175)	L...

Standard       On request

01/07.2010

## 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	7	Seals	CODE
	See table from pag. 27 to pag. 28	HF508..		Buna	B
				Viton	V
2	Filtering surface	CODE	8	Filler cap	CODE
	Standard	AS		Without	H
	Oversize	FS		With filler cap	L
3	Degree of filtration	CODE	9	Magnetic set	CODE
	3 [µm] Micro-fibre glass	FG003		Without	Z
	6 [µm] Micro-fibre glass	FG006		With magnetic set	R
	10 [µm] Micro-fibre glass	FG010	10	Indicators arranged	CODE
	25 [µm] Micro-fibre glass	FG025		Without	XN
	25 [µm] Stainless steel wire mesh	MI025		On the housing - right (1)	XA
	60 [µm] Stainless steel wire mesh	MI060		On the housing - left (2)	XB
	125[µm] Stainless steel wire mesh	MI125		On the cover (3)	XD
	90 [µm] Steel wire mesh	MS090	11	Indicator's ports dimensions	CODE
	10 [µm] Cellulose	SP010		<b>GAS threads (BSPP)</b>	
	25 [µm] Cellulose	SP025		G 1/8	GA
	10 [µm] Reinforced cellulose	RP010		G 1/8 with plug	DA
	25 [µm] Reinforced cellulose	RP025	12	Indicators	CODE
4	By-pass setting valve	CODE		Without	G
	With By-pass setting valve 25 [psi] (1,7 [bar])	B17		Manometer - rear connection	M
	With By-pass setting valve 51 [psi] (3,5 [bar])	B35		Manometer - radial connection	N
5	Main inlet port	CODE		Visual Indicator	P
6	Supplementary inlet port	CODE		Electrical indicator	S
	<b>GAS threads (BSPP)</b>		13	Secondary ports	CODE
	G 1 1/4	GG		Senza	YN
	G 1 1/2	GH		On the housing - right (1)	YA
	G 2	GL		On the housing - left (2)	YB
	<b>NPT threads</b>			On the cover (4)	YD
	1 1/4	NG	14	Secondary ports dimensions	CODE
	1 1/2	NH		G 3/8	GC
	2	NL		G 1/2	GD
	<b>SAE threads ODT</b>			G 3/4	GE
	1 1/4	OG		G 1 (only for HF 508-40)	GF
	1 1/2	OH		G 1 1/4 (only for HF508-40)	GG
	2	OI	15	Accessories	CODE
	<b>Flanged SAE (SSM) - 3000 PSI</b>			Without	K
	1 1/4	MD		With diffuser	D
	1 1/2	ME		With bowl extension(ex. bowl extension lenght 150=P150)	P150
	2	MF		With level dipstick(ex. level dipstick lenght 175=L175)	L175
	2 1/2 (only for main inlet port HF 508-40)	MG			
	<b>Flanged SAE (SSS) - 3000 PSI</b>				
	1 1/4	SD			
	1 1/2	SE			
	2	SF			
	2 1/2 (only for main inlet port HF 508-40)	SG			
	<b>Only for supplementary inlet port</b>				
	Blind unmachined port	00			

Standard  On request



## HOW TO ORDER A REPLACEMENT ELEMENT

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>						
HEK02-	20.201	-	AS	-	FG010	-	VM	-	B17	-	B

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

2	Filtering surface	CODE
	Standard	AS
	Oversize	FS

3	Degree of filtration	CODE
	3 [µm] Micro-fibre glass	FG003
	6 [µm] Micro-fibre glass	FG006
	10 [µm] Micro-fibre glass	FG010
	25 [µm] Micro-fibre glass	FG025
	25 [µm] Stainless steel wire mesh	MI025
	60 [µm] Stainless steel wire mesh	MI060
	125[µm] Stainless steel wire mesh	MI125
	90 [µm] Steel wire mesh	MS090
	10 [µm] Cellulose	SP010
	25 [µm] Cellulose	SP025
	10 [µm] Reinforced cellulose	RP010
	25 [µm] Reinforced cellulose	RP025

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

5	By-pass setting valve	CODE
	With By-pass setting valve 25 [psi] (1,7 [bar])	B17
	With By-pass setting valve 51 [psi] (3,5 [bar])	B35

6	Seals	CODE
	Buna	B
	Viton	V

Standard  
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HF 434  
HF 437

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HF 508  
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HF 554  
HF 570  
HF 575  
HF 578

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HF 625  
HF 650

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HF 705  
HF 710  
HF 725  
HF 735  
HF 745  
HF 760  
HF 761

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