

# AF 105 AIR BREATHER

## TECHNICAL DATA

AF 105 air breathers are used for air filtration that is entering the tank from the outside to control the fluid contamination level.

Connection to the tank is made of zinc-plated steel while the protective cloche is made of painted steel with high resistance to weather conditions.

- Fast connection to the tank
- Filtering element easy to replace

### MATERIALS

Cloche	Painted steel
Tank connection	Zinc-plated steel
End cap	Zinc-plated steel
Seals	Buna
Filtering media	Cellulose

### FLOW

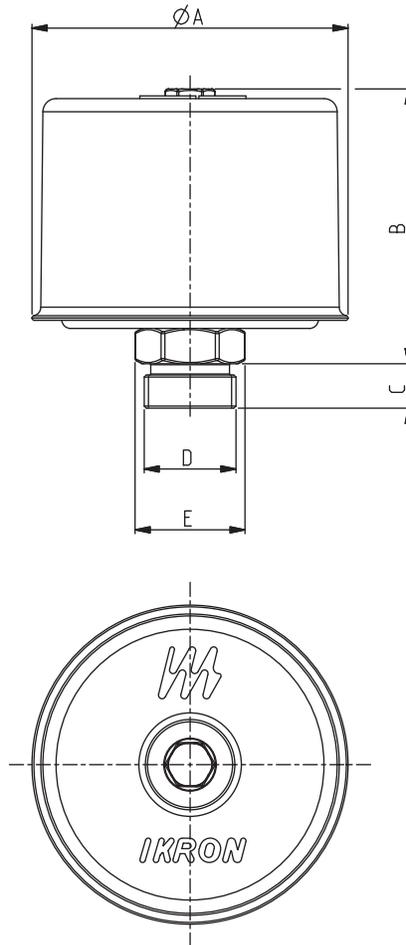
Maximum flow	264.2 US gpm (1000 l/min)
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### WORKING TEMPERATURE

-22 ÷ 195 °F (-30 ÷ 90 °C)
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01/09.2011

### DIMENSIONS



ICAT\_024\_019\_AF105

Filter type	Weight	Ø A	B	C	D			E	Replacement element
	Kg(lbs)	mm(in)	mm(in)	mm(in)	GAS (BSPP)	NPT	Metric	mm(in)	
AF 105-10	0,11 (0.24)				G 1/4	1/4 NPT	M 12x1,5	ch.14 (0.5512)	HEK 105-10
	0,13 (0.29)	52 (2.0472)	45 (1.7717)	9 (0.3543)	G 3/8	3/8 NPT	M 18x1,5	ch.19 (0.7480)	
	0,17 (0.37)				G 1/2	1/2 NPT	M 22x1,5	ch.24 (0.9449)	
AF 105-20	0,27 (0.59)	72 (2.8346)	62 (2.4409)	10 (0.3937)	G 1/2	1/2 NPT	M 22x1,5	ch.22 (0.8661)	HEK 105-20
	0,30 (0.66)				G 3/4	3/4 NPT	M 27x2	ch.34 (1.3386)	
AF 105-30	0,45 (0.99)	108 (4.2520)	78 (3.0709)	15 (0.5906)	G 1	1 NPT	M 33 x2	ch.34 (1.3386)	HEK 105-30

### FLOWS

Filter	Degree of filtration		
	SP005	SP010	SP040
	Flow		
	US gpm (l/min)		
AF 105-10	26.4 (100)	42.3 (160)	52.8 (200)
AF 105-20	92.5 (350)	105.7 (400)	132.1 (500)
AF 105-30	184.9 (700)	224.5 (850)	264.1 (1000)

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## ASSEMBLY INSTRUCTIONS

AF 105 air breathers get connected to the tank by screwing them into a dedicated seat. Make sure there are no burrs. Put a sufficient quantity of Teflon on the male thread of the cap and then tighten until it is locked.

Tightening torques are as follows:

G 1/4 = 133 lbf in (15 Nm)

G 3/8 = 133 lbf in (15 Nm)

G 1/2 = 177 lbf in (20 Nm)

G 3/4 = 266 lbf in (30 Nm)

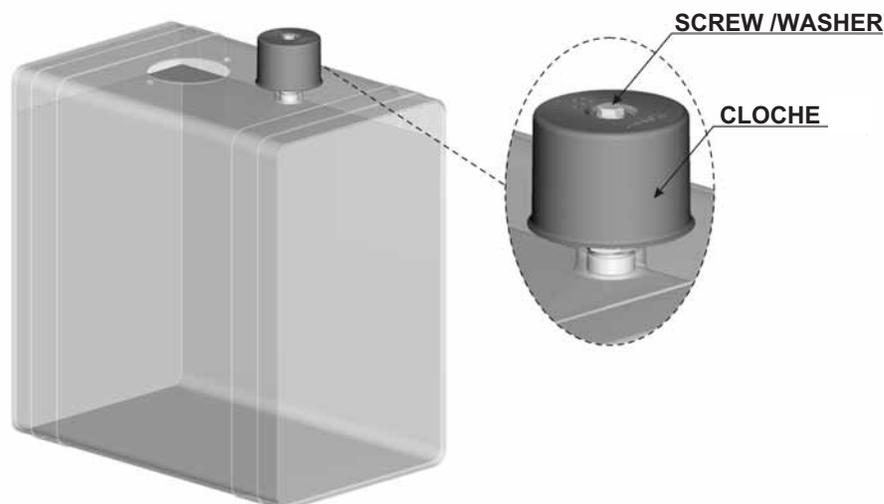
G 1 = 442 lbf in (50 Nm)

## FILTER ELEMENT REPLACEMENT

In order to guarantee an efficient air exchange in the tank it is necessary to periodically replace the cap containing the filtering element by following the machine's instructions manual.

Proceed as follows:

- Unscrew the upper screw;
- Take off the screw and the washer;
- Take off the cloche;
- Take off the clogged element;
- Insert the new element;
- Mount the cloche;
- Put the washer and the screw in the dedicated seat and then tighten to a torque of 44 lbf in (5 Nm).



01/09.2011

## HOW TO ORDER AN AF 105 BREATHER

<b>1</b>	<b>2</b>	<b>3</b>
<b>AF 105</b>	-	<b>20</b>
		-
	<b>GD</b>	-
		<b>SP010</b>

1	Filter type	CODE
	See table on page 24	<b>AF 105-..</b>

2	Thread connection	CODE
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### GAS thread (BSPP)

G 1/4	<b>GB</b>
G 3/8	<b>GC</b>
G 1/2	<b>GD</b>
G 3/4	<b>GE</b>
G 1	<b>GF</b>

### NPT thread

1/4 NPT	<b>NB</b>
3/8 NPT	<b>NC</b>
1/2 NPT	<b>ND</b>
3/4 NPT	<b>NE</b>
1 NPT	<b>NF</b>

### Metric thread

M 12x1,5	<b>TB</b>
M 18x1,5	<b>TE</b>
M 22x1,5	<b>TG</b>
M 27x1,5	<b>TM</b>
M 33x1,5	<b>TP</b>

3	Degree of filtration	CODE
	5 [µm] Cellulose	<b>SP005</b>
	10 [µm] Cellulose	<b>SP010</b>
	40 [µm] Cellulose	<b>SP040</b>

Standard  
 On request

## HOW TO ORDER AN HEK 105 ELEMENT

<b>1</b>	<b>2</b>
<b>HEK 105</b>	-
	<b>SP010</b>

1	Element	CODE
	See table on page 24	<b>HEK 105-..</b>

2	Degree of filtration	CODE
	Cellulose 5 [µm]	<b>SP005</b>
	Cellulose 10 [µm]	<b>SP010</b>
	Cellulose 40 [µm]	<b>SP040</b>

Standard  
 On request

# AF 106 AIR FILTER

## TECHNICAL DATA

AF 106 air filters are strongly recommended for hydraulic systems with high air exchange and for very polluted environments.

In addition to cellulose elements 3µm microfiber elements are available with high retention efficiency that are highly effective against fluid contamination.

The air breathers are connected to the tank through flanges with screws or with welding tang.

- Absolute filtration
- High retention efficiency
- Maximum flow 792.5 US gpm (3000 l/min)

### MATERIALS

Flange with screws	Zinc-plated steel
Welding tang	Steel - Zinc-plated steel
Seals	Buna
Filtering media	Inorganic micro-fibre glass
	Cellulose

### FLUIDS COMPATIBILITY

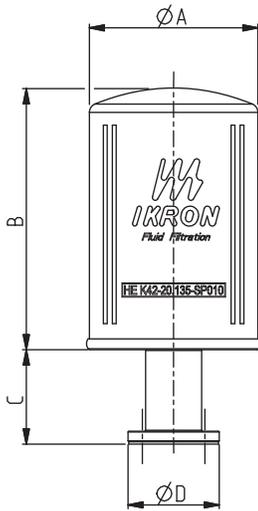
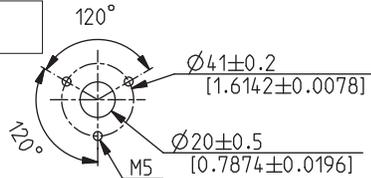
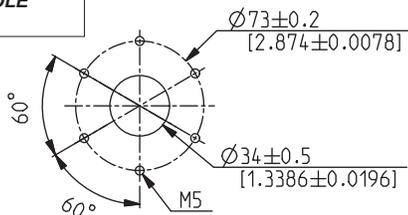
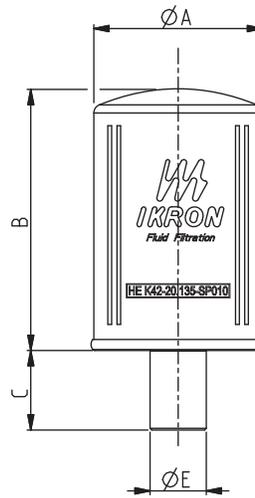
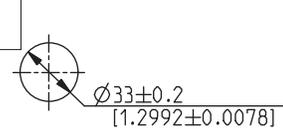
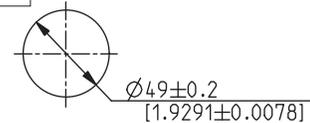
According to ISO 2943 (Norm ISO 6743/4)

Mineral oils	HH - HL - HM - HR - HV - HG
Water emulsions	HFAE - HFAS
Glycol water	HFC
Synthetic fluids	HS - HFDR - HFDU - HFDS

### WORKING TEMPERATURE

-22 ÷ 195 °F (-30 ÷ 90 °C)

01/09.2011

**AIR FILTER DIMENSIONS - V FIXING**

**RESERVOIR HOLE**  
**AF 106-20**

**RESERVOIR HOLE**  
**AF 106-30**

**AIR FILTER DIMENSIONS - S FIXING**

**RESERVOIR HOLE**  
**AF 106-20**

**RESERVOIR HOLE**  
**AF 106-30**


[CAT\_024\_020\_AF106

Filter type	Weight	Ø A	B	C	Ø D	Ø E	Replacement element
	Kg (lbs)						
<b>AF 106-20.135</b>	0,85 (1.87)	96 (3.7795)	148 (5.8268)	54 (2.1260)	52 (2.0472)	32 (1.2598)	<b>HEK 42-20.135</b>
<b>AF 106-20.180</b>	1,10 (2.42)		210 (8.2677)				<b>HEK 42-20.180</b>
<b>AF 106-30.155</b>	1,80 (3.97)	126 (4.9606)	180 (7.0866)		83 (3.2677)	48 (1.8898)	<b>HEK 42-30.155</b>
<b>AF 106-30.210</b>	2,10 (4.63)		228 (8.9764)		<b>HEK 42-30.210</b>		

**FLOWS**

Filter type	Degree of filtration			
	FG003	FG006	FG010	SP010
	Flow US gpm (l/min)			
<b>AF 106-20.135</b>	264.1 (1000)	317.0 (1200)	369.8 (1400)	396.2 (1500)
<b>AF 106-20.180</b>	317.0 (1200)	383.0 (1450)	449.1 (1700)	475.5 (1800)
<b>AF 106-30.155</b>	475.5 (1800)	581.2 (2200)	660.4 (2500)	713.3 (2700)
<b>AF 106-30.210</b>	528.3 (2000)	634.0 (2400)	739.7 (2800)	792.5 (3000)

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## ASSEMBLY INSTRUCTIONS

AF 106 air filters provide 2 connections:

- **Connection through a plane flange with fixing screws**

Put the seal between the fixing flange and the reservoir and then tighten the two components with the screws equipped.

Complete the mounting by screwing the spin-on element to the male thread on the flange.

Once you make contact with the o-ring tighten the spin-on element 1/4 turn (AF106-20) or 1/8 turn (AF106-30).

- **Connection through a welding tang**

Insert the tang in the dedicated seat of the tank and look for the perfect uprightness, then start welding for the whole tang's circumference.

Complete the mounting by screwing the spin-on element to the male thread on the flange.

Once you reach contact with the o-ring tighten the spin-on element for 1/4 turn (AF106-20) or 1/8 turn (AF106-30).

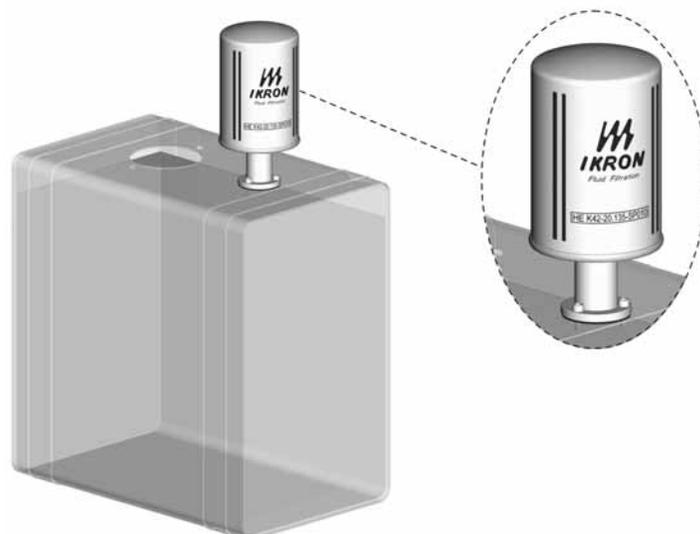
Before making any connections please make sure there are no burrs in the AF 106 mounting seats.

## FILTER ELEMENT REPLACEMENT

In order to guarantee an efficient air exchange in the tank it is necessary to periodically replace the spin-on element containing the filtering element by following the machine's instructions manual.

Proceed as follows:

- Unscrew the clogged element;
- Screw the new element until it makes contact with the o-ring;
- Tighten 1/4 turn (AF 106-20) or 1/8 turn (AF 106-30).



01/09.2011

## HOW TO ORDER AN AF 106 FILTER

<b>1</b>	<b>2</b>	<b>3</b>
<b>AF 106</b>	<b>20.135</b>	<b>SP010</b>

1	Filter type	CODE
See table on page 28		<b>AF 106-..</b>

2	Degree of filtration	CODE
	Micro-fibre glass 3 [ $\mu\text{m}$ ]	<b>FG003</b>
	Micro-fibre glass 6 [ $\mu\text{m}$ ]	<b>FG006</b>
	Micro-fibre glass 10 [ $\mu\text{m}$ ]	<b>FG010</b>
	Cellulose 10 [ $\mu\text{m}$ ]	<b>SP010</b>

3	Fixing	CODE
	Flange with screws	<b>V</b>
	Welding tang	<b>S</b>

- Standard  
 On request

## HOW TO ORDER AN HEK 42 ELEMENT

<b>1</b>	<b>2</b>
<b>HEK 42-20.135</b>	<b>SP010</b>

1	Element	CODE
See table on page 28		<b>HEK 42-..</b>

2	Filtration degree	CODE
	Micro-fibre glass 3 [ $\mu\text{m}$ ]	<b>FG003</b>
	Micro-fibre glass 6 [ $\mu\text{m}$ ]	<b>FG006</b>
	Micro-fibre glass 10 [ $\mu\text{m}$ ]	<b>FG010</b>
	Cellulose 10 [ $\mu\text{m}$ ]	<b>SP010</b>

- Standard  
 On request