

## Cartridge filter AFM

### 1. Introduction

The MAHLE housings type AFM are industrial cartridge filter housings in stainless steel.

Four different sizes are available to suit various flow rates. The AFM cartridge housings are an economical solution for all industrial non-hazardous liquid applications.



## 2. Features

- Cover closing with hinged eye bolts and eye nuts (galvanised steel)
- Flat cover with hinge and handle
- O-ring sealing: standard Buna-N. Other materials on request
- Compact design
- Pickled and passivated
- Suitable for 6 filter cartridges of 10", 20", 30" or 40" length
- Available from stock

## 4. Models

MAHLE Industrial Filtration can supply four standard sizes in stainless steel from stock. These are available with flanged connections.

### *Other standard filter housings*

MAHLE Industrial Filtration also supplies other standard filter housings suitable for all industrial liquid and gas applications for various flow rates.

For more information please contact your representative.

## 3. Standard specifications

Design pressure	: 10 bar(g)
Design temperature	: 0 / 90 °C
Operating temperature	: depending on the filter media and gaskets used
PED 97/23/EC	: article 3 paragraph 3
Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge

The internal construction is designed to suit:

- Double Open End X0, X4 and X9
- Single Open End X3

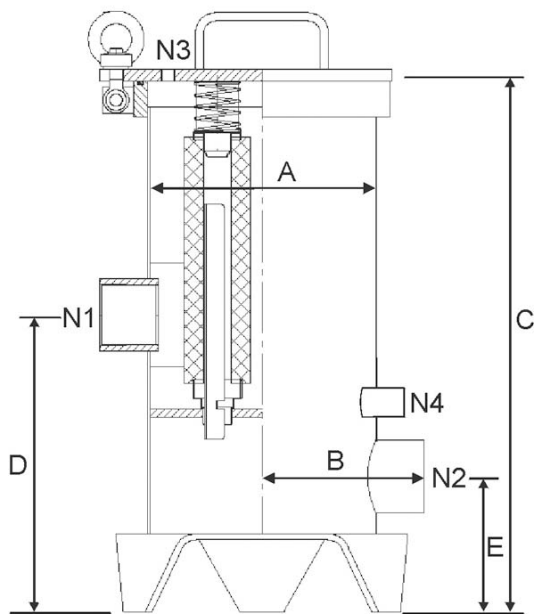
For use of DOE cartridges, tube guides and compression springs are supplied for quick and trouble free installation. For filter cartridges with X3 end cap configuration a compression plate is recommended.

## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in our housings as well as those of other manufacturers.

For detailed information about filter cartridges, please contact your representative.

## 6. Dimensions



### Nozzle specification

N1 :	Inlet
N2 :	Outlet
N3 :	Vent (Rp $\frac{1}{4}$ - ISO7-1)
N4:	Dirt drain (Rp $\frac{1}{2}$ - ISO7-1)

Model	Dimensions						
	Diameter [mm] A	Standout [mm] B	Height [mm] C	Nozzle height [mm] D	Nozzle height [mm] E	Volume [dm <sup>3</sup> ]	Weight [kg]
AFM6	219	156	505	280	130	17	20
AFM12	219	156	765	280	130	26	23
AFM18	219	156	1020	280	130	36	26
AFM24	219	156	1295	280	130	45	29

Height required for changing cartridges is height C plus cartridge length. Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

## 7. Ordering code

Example

AFM12 2 T 2

### Type

AFM6  
AFM12  
AFM18  
AFM24

### Cartridge length

1 = 10"  
2 = 20"  
3 = 30"  
4 = 40"

### Material

T = 316Ti (1.4571)

### Inlet/outlet

2 = RP2 - ISO7-1  
2B = Ø52.1x1.5 acc. DIN11850 (Only available for type AFM 24)

## Cartridge filter AFK6-24

### 1. Introduction

The MAHLE Industrial Filtration housings type AFK 6 -24 are industrial cartridge filter housings in stainless steel. These two models are mid size models in the AFK range, to suit various flow rates. The AFK cartridge housings are an economical solution for all industrial liquid and gas applications conform to PED 97/23/EC category III.



## 2. Features

- Cover closing with hinged eye bolts and eye nuts (stainless steel)
- Flat cover with hinge and handle
- Fully drainable vessel
- O-ring sealing: standard Buna-N. Other materials on request
- Compact design
- Pickled and passivated
- Suitable for 6 filter cartridges of 10", 20", 30" or 40" length
- Available from stock

## 4. Models

MAHLE Industrial Filtration can supply four standard sizes in stainless steel from stock. These are available with flanged connections.

### *Other standard filter housings*

MAHLE Industrial Filtration also supplies other standard filter housings suitable for all industrial liquid and gas applications for various flow rates.

For more information please contact your representative.

### *Special models to suit customer requirements*

Other options of supply and manufacture are non-standard types for higher temperatures, pressures and other materials according to current design codes are available on request.

## 3. Standard specifications

Design pressure	: -1 / 10 bar(g)
Design temperature	: -10 / 150 °C
Operating temperature	: depending on the filter media and gaskets used
Design	: AD-2000 Regelwerk
Approval	: PED 97/23/EC cat. II/III
Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge

The internal construction is designed to suit:

- Double Open End X0, X4 and X9
- Single Open End X3

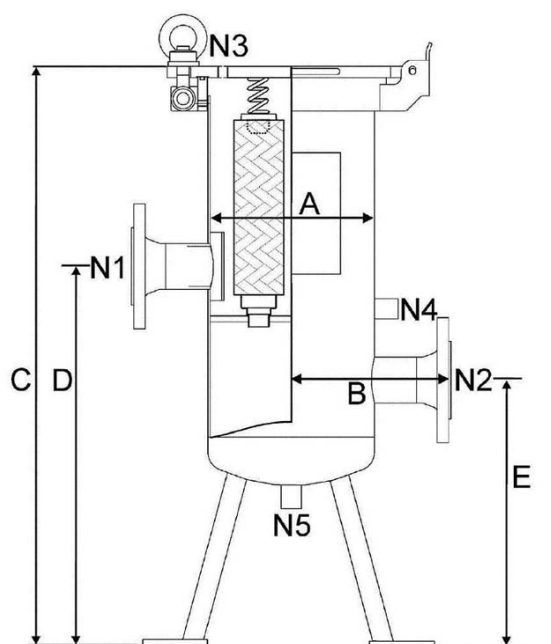
For use of DOE cartridges, tube guides and compression springs are supplied for quick and trouble free installation. For filter cartridges with X3 end cap configuration a compression plate is recommended.

## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in amafilter housings as well as those of other manufacturers.

For detailed information about filter cartridges, please contact your representative.

## 6. Dimensions



### Nozzle specification

N1 :	Inlet (DN50 EN1092-1 PN16)
N2 :	Outlet (DN50 EN1092-1 PN16)
N3 :	Vent (Rp $\frac{1}{4}$ - ISO7-1)
N4 :	Dirt drain (Rp $\frac{1}{2}$ - ISO7-1)
N5 :	Clean drain (Rp $\frac{1}{2}$ - ISO7-1)

Model	Dimensions						
	Diameter [mm] A	Standout [mm] B	Height [mm] C	Nozze height [mm] D	Nozze height [mm] E	Volume [dm <sup>3</sup> ]	Weight [kg]
AFK6	219	210	750	500	350	19	31
AFK12	219	210	1010	500	350	28	35
AFK18	219	210	1265	500	350	38	39
AFK24	219	210	1540	500	350	47	44

Height required for changing cartridges is height C plus cartridge length. Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

## 7. Ordering code

Example

AFK12 2 T 2F

### Type

AFK6  
AFK12  
AFK18  
AFK24

### Cartridge length

1 = 10"  
2 = 20"  
3 = 30"  
4 = 40"

### Material

T = 316Ti (1.4571)

### Inlet/outlet

2F = DN50 acc. EN10921/PN16

2FA =ASME 150 lbs RF (on request)

## Cartridge filter AFK6-24 ATEX

### 1. Introduction

A multi-cartridge housing suitable for medium flow.  
These AFK filter housings conform to PED 97/23/EC category II / III.  
This ATEX cartridge filter housing can be used within the specified explosive atmospheres.

#### ATEX

This cartridge filter housing is certified to conform to Ex II 2G T4 as described in directive 94/9/EC. The Ex marking indicates industrial equipment category 2 suitable for gases, vapours and mists with a maximum surface temperature of 135 °C.

This filter is suitable for an explosive atmosphere caused by gases, vapours and mists that occasionally occurs, this is zone 1 as described in directive 99/92/EC. This filter provides a high level of safety. Devices suitable for zone 1 are also suitable for zone 2. This filter is only suitable for media that do not generate static electricity.



## 2. Features

- Cover closing with hinged eye bolts and eye nuts (stainless steel). Designed with special devices on the eye bolts preventing them from falling onto the housing
- Flat cover with handle and special hinge device for ATEX safe opening and closing.
- Earthing connection between cover and body
- Earthing lug on leg
- CE and ATEX name plates
- Fully drainable vessel
- O-ring sealing: standard Buna-N. Other materials on request
- Pickled and passivated
- Suitable for 6 filter cartridges of 10", 20", 30" or 40" length

## 4. Models

This ATEX cartridge filter housing is available in four standard sizes in stainless steel. These are available with flanged connections.

### *Other standard filter housings*

MAHLE Industrial Filtration also supplies other standard filter housings suitable for all industrial liquid and gas applications for various flow rates. For more information please contact your representative.

## 3. Standard specifications

Design pressure	: -1 / 10 bar(g)
Design temperature	: -10 / 150 °C (ATEX 135 °C)
Operating temperature	: depending on the filter media and gaskets used
ATEX	: Ex II 2G T4
Design	: AD-2000 Regelwerk
Approval	: PED 97/23/EC cat. II/III
Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge

The internal construction is designed to suit:

- Double Open End X0, X4 and X9
- Single Open End X3

For use of DOE cartridges, tube guides and compression springs are supplied for quick and trouble free installation. For filter cartridges with X3 end cap configuration a compression plate is recommended.

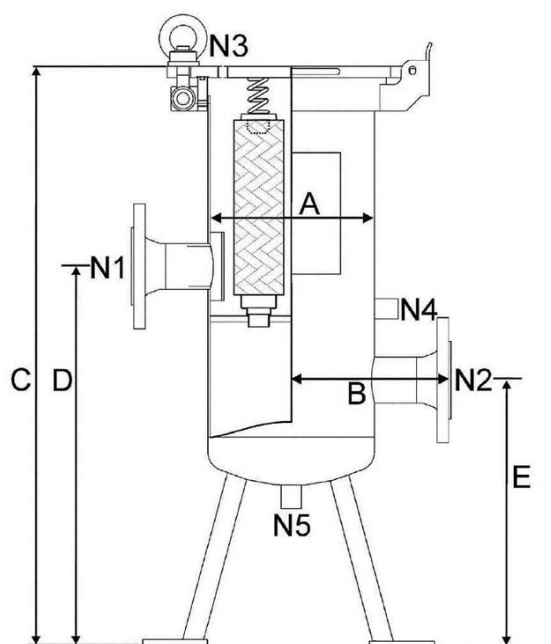
## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in our housings as well as those of other manufacturers.

For detailed information about filter cartridges, please contact your representative.



## 6. Dimensions



### Nozzle specification

N1 :	Inlet (DN50 EN1092-1 PN16)
N2 :	Outlet (DN50 EN1092-1 PN16)
N3 :	Vent (Rp $\frac{1}{4}$ - ISO7-1)
N4 :	Dirt drain (Rp $\frac{1}{2}$ - ISO7-1)
N5 :	Clean drain (Rp $\frac{1}{2}$ - ISO7-1)

Model	Dimensions						
	Diameter [mm] A	Standout [mm] B	Height [mm] C	Nozzle height [mm] D	Nozzle height [mm] E	Volume [dm <sup>3</sup> ]	Weight [kg]
AFK6	219	210	750	500	350	19	31
AFK12	219	210	1010	500	350	28	35
AFK18	219	210	1265	500	350	38	39
AFK24	219	210	1540	500	350	47	44

Height required for changing cartridges is height C plus cartridge length. Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

## 7. Ordering code

### Example

Type	AFK12	2	T	2F	EX
AFK6					
AFK12					
AFK18					
AFK24					
Cartridge length					
1 = 10"					
2 = 20"					
3 = 30"					
4 = 40"					
Material					
T = 316Ti (1.4571)					
Inlet/outlet					
2F = DN50 acc. EN10921/PN16					
2FA =ASME 150 lbs RF (on request)					
ATEX					
EX = Ex II 2G T4					

## Cartridge filter AFK30-40

### 1. Introduction

The MAHLE Industrial Filtration housings type AFK 30 - 40 are industrial cartridge filter housings in stainless steel. These two models are mid size models in the AFK range, to suit various flow rates. The AFK cartridge housings are an economical solution for all industrial liquid and gas applications conform to PED 97/23/EC category III.



## 2. Features

- Cover closing with hinged eye bolts and eye nuts (stainless steel)
- Flat cover with hinge and handle
- Fully drainable vessel
- O-ring sealing: standard Buna-N. Other materials on request
- Compact design
- Pickled and passivated
- Suitable for 10 filter cartridges of 30" or 40" length
- Available from stock

## 4. Models

MAHLE Industrial Filtration can supply two standard sizes in stainless steel from stock.

These are available with flanged connections.

### *Other standard filter housings*

We also supply other standard filter housings suitable for all industrial liquid and gas applications for various flow rates.

For more information please contact your representative.

## 3. Standard specifications

Design pressure	: -1 / 10 bar(g)
Design temperature	: -10 / 150 °C
Operating temperature	: depending on the filter media and gaskets used
Design	: AD-2000 Regelwerk
Approval	: PED 97/23/EC cat. II/III

Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge

The internal construction is designed to suit:

- Double Open End X0, X4 and X9
- Single Open End X3

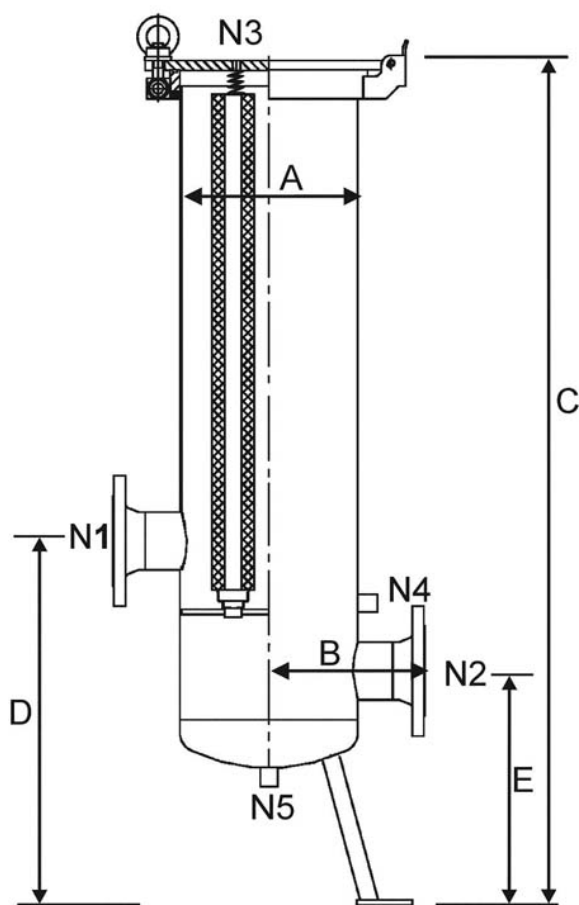
For use of DOE cartridges, tube guides and compression springs are supplied for quick and trouble free installation. For filter cartridges with X3 end cap configuration a compression plate is recommended.

## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in amafilter housings as well as those of other manufactures.

For detailed information about filter cartridges, please contact your representative.

## 6. Dimensions



### Nozzle specification

N1 :	Inlet (DN80 EN1092-1 PN16)
N2 :	Outlet (DN80 EN1092-1 PN16)
N3 :	Vent (Rp $\frac{1}{4}$ - ISO7-1)
N4 :	Dirt drain (Rp $\frac{1}{2}$ - ISO7-1)
N5 :	Clean drain (Rp $\frac{1}{2}$ - ISO7-1)

Model	Dimensions						
	Diameter [mm] A	Standout [mm] B	Height [mm] C	Nozzle height [mm] D	Nozzle height [mm] E	Volume [dm <sup>3</sup> ]	Weight [kg]
AFK30	273	240	max. 1285	560	360	60	max. 60
AFK40	273	240	max. 1560	560	360	75	max. 65

Height required for changing cartridges is height C plus cartridge length.

Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

## 7. Ordering code

Example

AFK30 3 T 3F

### Type

AFK30

AFK40

### Cartridge length

3 = 30"

4 = 40"

### Material

T = 316Ti (1.4571)

### Inlet/outlet

3F = DN80 acc. EN1092/PN16

## Cartridge filter AFK30-40 ATEX

### 1. Introduction

The AFK cartridge filter housings conform to PED 97/23/EC category III.

This ATEX cartridge filter housing can be used within the specified explosive atmospheres.

#### *ATEX*

This cartridge filter housing is certified to conform to Ex II 2G T4 as described in directive 94/9/EC.

The Ex marking indicates industrial equipment category 2 suitable for gases, vapours and mists with a maximum surface temperature of 135 °C.

This filter is suitable for an explosive atmosphere caused by gases, vapours and mists that occasionally occurs, this is zone 1 as described in directive 99/92/EC. This filter provides a high level of safety. Devices suitable for zone 1 are also suitable for zone 2. This filter is only suitable for media that do not generate static electricity.



## 2. Features

- Cover closing with hinged eye bolts and eye nuts (stainless steel)
- Designed with special devices on the eye bolts preventing them from falling onto the housing
- Flat cover with handle and special hinge device for ATEX safe opening and closing
- Earthing connection between cover and body
- Earthing lug on leg CE and ATEX name plates
- Fully drainable vessel
- O-ring sealing: standard Buna-N Other materials on request
- Compact design
- Pickled and passivated
- Suitable for 10 filter cartridges of 30" or 40" length

## 4. Models

This ATEX cartridge filter housing is available in two standard sizes in stainless steel. These are available with flanged connections.

### *Other standard filter housings*

MAHLE Industrial Filtration also supplies other standard filter housings suitable for all industrial liquid and gas applications for various flow rates. For more information please contact your representative.

## 3. Standard specifications

Design pressure	: -1 / 10 bar(g)
Design temperature	: -10 / 150 °C (ATEX 135 °C)
Operating temperature	: depending on the filter media and gaskets used
ATEX	: Ex II 2G T4
Design	: AD-2000 Regelwerk
Approval	: PED 97/23/EC cat. II/III
Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge

The internal construction is designed to suit:

- Double Open End X0, X4 and X9
- Single Open End X3

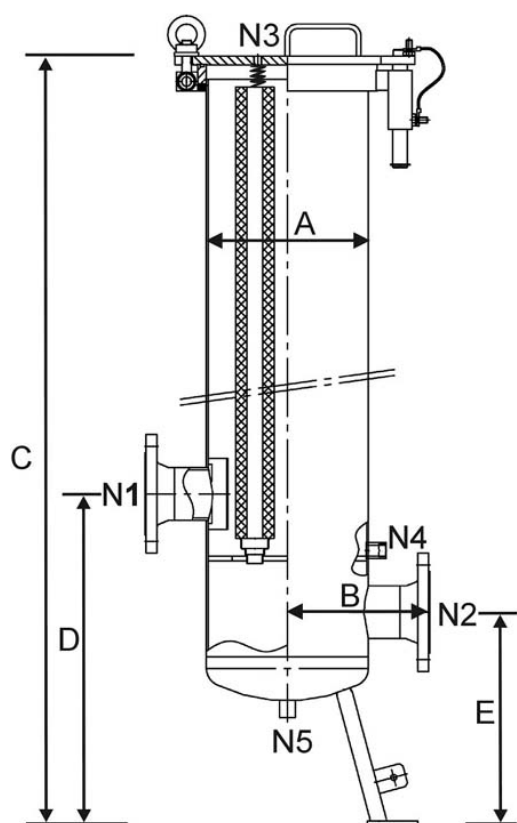
For use of DOE cartridges, tube guides and compression springs are supplied for quick and trouble free installation. For filter cartridges with X3 end cap configuration a compression plate is recommended.

## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in our housings as well as those of other manufactures.

For detailed information about filter cartridges, please contact your representative.

## 6. Dimensions



### Nozzle specification

N1 :	Inlet (DN80 EN1092-1 PN16)
N2 :	Outlet (DN80 EN1092-1 PN16)
N3 :	Vent (Rp $\frac{1}{4}$ - ISO7-1)
N4 :	Dirt drain (Rp $\frac{1}{2}$ - ISO7-1)
N5 :	Clean drain (Rp $\frac{1}{2}$ - ISO7-1)

Model	Dimensions						
	Diameter [mm] A	Standout [mm] B	Height [mm] C	Nozzle height [mm] D	Nozzle height [mm] E	Volume [dm <sup>3</sup> ]	Weight [kg]
AFK30	273	240	max. 1285	560	360	60	max. 60
AFK40	273	240	max. 1560	560	360	75	max. 65

Height required for changing cartridges is height C plus cartridge length.

Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

## 7. Ordering code

### Example

AFK30	3	T	3F	EX
<b>Type</b>				
AFK30				
AFK40				
<b>Cartridge length</b>				
3 = 30"				
4 = 40"				
<b>Material</b>				
T = 316Ti (1.4571)				
<b>Inlet/outlet</b>				
3F = DN80 acc. EN1092/PN16				
<b>ATEX</b>				
EX = Ex II 2 G T4				

## Cartridge filter AFK72

### 1. Introduction

The MAHLE Industrial Filtration housing type AFK 72 is an industrial cartridge filter housing in stainless steel. This model is a large size model in the AFK range, to suit various flow rates. The AFK cartridge housing is an economical solution for all industrial liquid and gas applications conform to PED 97/23/EC category IV.





## 2. Features

- Cover closing with hinged eye bolts and eye nuts (stainless steel)
- Hinged cover with handle
- Fully drainable vessel
- O-ring sealing: standard Buna-N. Other materials on request
- Compact design
- Pickled and passivated
- Suitable for 18 filter cartridges of 40" length
- Available from stock or at short notice

## 4. Models

MAHLE Industrial Filtration can supply this filter in stainless steel with flanged connections.

### *Other standard filter housings*

We also supply other standard filter housings suitable for all industrial liquid and gas applications for various flow rates.

For more information please contact your representative.

### *Special models to suit customer requirements*

Other options of supply and manufacture are non-standard types for higher temperatures, pressures and other materials according to current design codes are available on request.

## 3. Standard specifications

Design pressure	: -1 / 12 bar(g)
Design temperature	: -10 / 150 °C
Operating temperature	: depending on the filter media and gaskets used
Design	: AD-2000 Regelwerk
Approval	: PED 97/23/EC cat. III

Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge

The internal construction is designed to suit:

- Double Open End X0, X4 and X9
- Single Open End X3

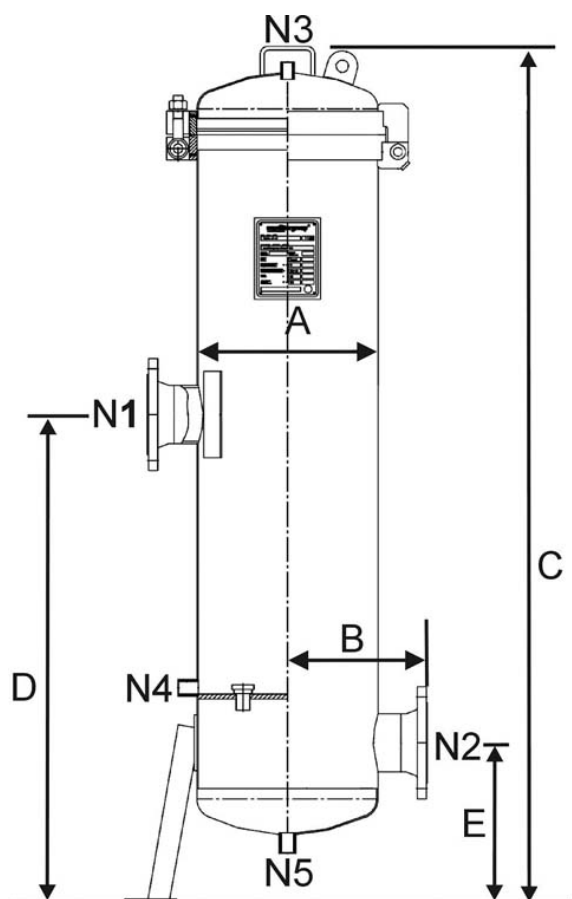
For use of DOE cartridges, tube guides and compression springs are supplied for quick and trouble free installation. For filter cartridges with X3 end cap configuration a compression plate is recommended.

## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in our housings as well as those of other manufactures.

For detailed information about filter cartridges, please contact your representative.

## 7. Dimensions



### Nozzle specification

N1 :	Inlet (DN100 EN1092-1 PN16)
N2 :	Outlet (DN100 EN1092-1 PN16)
N3 :	Vent (Rp½ - ISO7-1)
N4 :	Dirt drain (Rp¾ - ISO7-1)
N5 :	Clean drain (Rp¾ - ISO7-1)

Model	Dimensions						Volume [dm³]	Weight [kg]
	Diameter [mm] A	Standout [mm] B	Height [mm] C	Nozzle height [mm] D	Nozzle height [mm] E			
AFK72	356	275	1685	960	315	142		180

Height required for changing cartridges is height C plus cartridge length.

Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

## 8. Ordering code

Example

AFK72 4 T 4F

**Type**

AFK72

**Cartridge length**

4 = 40"

**Material**

T = 316Ti (1.4571)

**Inlet/outlet**

4F = DN100 acc. EN1092/PN16

## Cartridge filter AFK136

### 1. Introduction

Our housing type AFK 136 is an industrial cartridge filter housing in stainless steel. This model is the largest model in the AFK range, to suit various flow rates.

The AFK cartridge housing is an economical solution for all industrial liquid and gas applications conform to PED 97/23/EC category IV.



## 2. Features

- Cover closing with hinged eye bolts and eye nuts (stainless steel)
- Coverlift assembly
- Fully drainable vessel
- O-ring sealing: standard Buna-N. Other materials on request
- Compact design
- Pickled and passivated
- Suitable for 34 filter cartridges of 40" length
- Available from stock or at short notice

## 4. Models

MAHLE Industrial Filtration can supply this filter in stainless steel with flanged connections.

### *Other standard filter housings*

We also supply other standard filter housings suitable for all industrial liquid and gas applications for various flow rates.

For more information please contact your representative.

### *Special models to suit customer requirements*

Other options of supply and manufacture are non-standard types for higher temperatures, pressures and other materials according to current design codes are available on request.

## 3. Standard specifications

Design pressure	: -1 / 12 bar(g)
Design temperature	: -10 / 150 °C
Operating temperature	: depending on the filter media and gaskets used
Design	: AD-2000 Regelwerk
Approval	: PED 97/23/EC cat. IV

Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge

The internal construction is designed to suit:

- Double Open End X0, X4 and X9
- Single Open End X3

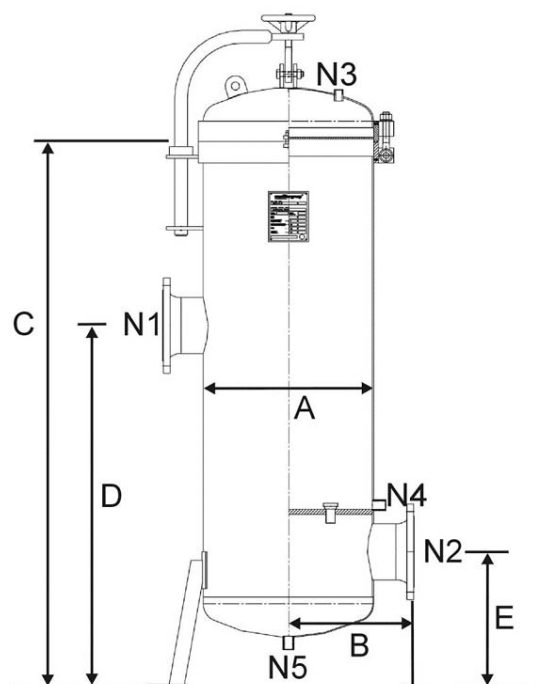
For use of DOE cartridges, tube guides and compression springs are supplied for quick and trouble free installation. For filter cartridges with X3 end cap configuration a compression plate is recommended.

## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in our housings as well as those of other manufactures.

For detailed information about filter cartridges, please contact your representative.

## 7. Dimensions



### Nozzle specification

N1 :	Inlet (DN150 EN1092-1 PN16)
N2 :	Outlet (DN150 EN1092-1 PN16)
N3 :	Vent (Rp½ - ISO7-1)
N4 :	Dirt drain (Rp¾ - ISO7-1)
N5 :	Clean drain (Rp¾ - ISO7-1)

Model	Dimensions						
	Diameter [mm] A	Standout [mm] B	Height [mm] C	Nozze height [mm] D	Nozze height [mm] E	Volume [dm³]	Weight [kg]
AFK136	508	375	1630	1080	405	302	330

Height required for changing cartridges is height C plus cartridge length.

Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

## 8. Ordering code

Example

AFK136 4 T 6F

### Type

AFK136

### Cartridge length

4 = 40"

### Material

T = 316Ti (1.4571)

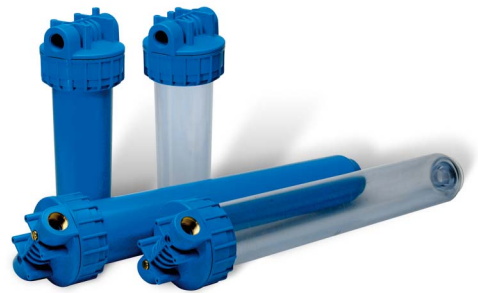
### Inlet/outlet

6F = DN150 acc. EN1092/PN16

## Cartridge filter AFL1

### 1. Introduction

An economic and shatter resistant three piece filter housing, designed for a wide range of applications, for example food and beverage, plating, chemical processes and water.



## 2. Features

- Suitable for a single cartridge
- Three piece construction with cover closing by means of a nut
- Filter housing materials conform to the FDA requirements
- O-ring sealing standard EPDM. Other materials on request.
- Vent plug standard
- Spanner for tighten the nut included
- Drain plug on 20" housing

*Optional*

- Mounting brackets

## 4. Standard specifications

Bowl	: polypropylene or styrene acrylonitril (SAN)
Head	: polypropylene or polypropylene with brass inserts
Nut	: polypropylene
Vent plug	: polypropylene or brass
Drain plug	: polypropylene
Operating pressure	: max. 8 bar(g)
Operating temperature	: max. 50 °C

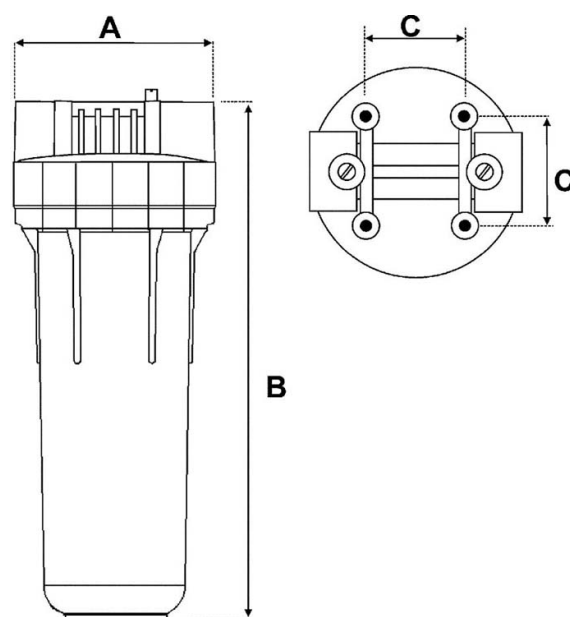
The internal construction is designed to suit Double Open End (code X0) filter cartridges.

## 3. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in our housings as well as those of other manufacturers.

For detailed information about filter cartridges, please contact your representative.

## 5. Outline drawing



Dimensions			
Filter model	A [mm]	B [mm]	C [mm]
AFL1-10	126	350	58
AFL1-20	126	615	58

## 6. Ordering code

Type	AFL1	10	P	1	PV
AFL1					
Cartridge length					
10 = 10" or 9 3/4"					
20 = 20"					
Material bowl					
P = polypropylene					
A = styrene acrylonitrile (SAN)					
Inlet/Outlet					
3/4 = 3/4" BSP					
1 = 1" BSP					
Material head					
No symbol = polypropylene with brass inserts					
PV = polypropylene					

## Cartridge filter AFL1-SS

### 1. Introduction

The AFL1 stainless steel cartridge filter housing is designed to accommodate a single DOE style filter cartridge. The spring seal construction allows for small deviations in cartridge length. The T-handle avoids the need for using tools for changing the filter cartridge. The filter cartridge housings are suitable for filtering non dangerous liquids and conforms to the PED article 3, paragraph 3.





## 2. Features

- Suitable for a single DOE cartridge 10" and 20", other lengths on request
- All stainless steel 316 construction
- Viton® O-ring sealing standard, other materials on request
- ½", ¾" and 1" NPT connections, other connections on request
- No tools required for changing the filter cartridge
- Vent and drain plugs are standard

## 4. Standard specifications

Bowl	: stainless steel 316
Head	: cast stainless steel 316
Cover O-ring	: Viton®, other materials on request
T-handle O-ring	: PTFE
Operating pressure	: max. 12 bar(g) @ 65 °C
Operating temperature	: max. 90 °C

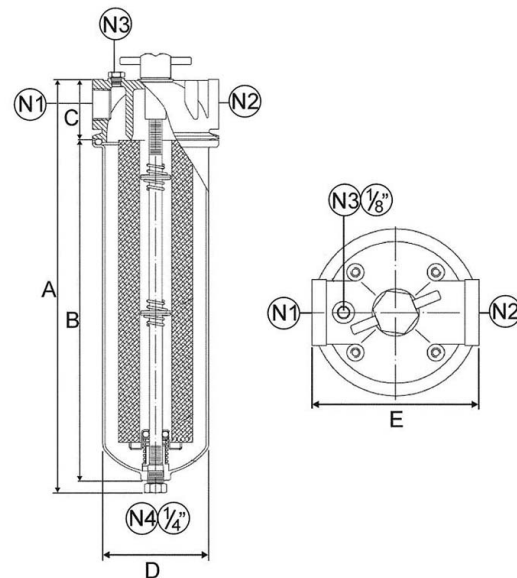
The internal construction is designed to suit Double Open End (code X0) filter cartridges.

## 3. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different materials, pore sizes, dimensions and models to fit in our housings as well as those of other manufacturers.

For detailed information about filter cartridges, please contact your representative.

## 5. Outline drawing



N1: Inlet, N2:Outlet, N3: Vent, N4: Drain

Dimensions [mm]					
Filter model	A	B	C	D	E
AFL1-10	369	287	72	89	106
AFL1-20	623	541	72	89	106

## 6. Ordering code

<b>Type</b>	AFL1	10	S	1
AFL1				
<b>Cartridge length</b>				
10 = 10"				
20 = 20"				
Other lengths on request				
<b>Material</b>				
S = stainless steel 316				
<b>Inlet/Outlet</b>				
½ = ½" NPT				
¾ = ¾" NPT				
1 = 1" NPT				
Other connections on request				

## Cartridge filter AFS1-8

### 1. Introduction

Specially designed for sterile filter applications we can offer a range of high quality sanitary filter housings in stainless steel. MAHLE Industrial Filtration supplies a complete range of filter housings. These housings have proven their quality in the pharmaceutical and beverage industries. For models from 12 up to 30 cartridges, please see Data Sheet AFS12-30.



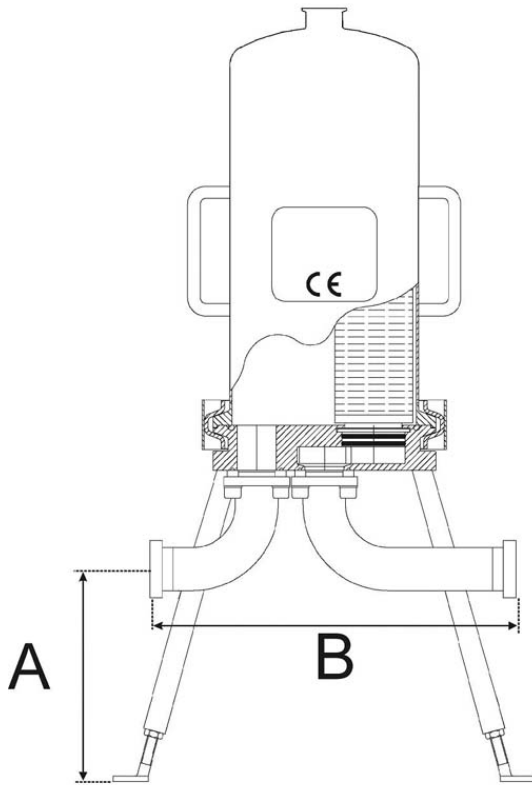
## 2. Features

- Compact design
- For 10", 20", 30" or 40" cartridges
- O-ring sealing: standard silicone, FDA / BfR approved
- Vessel material stainless steel 1.4404 (316L)
- Internally mechanically polished ( $R_a < 0.8 \mu\text{m}$ ).
  - On request:
    - Internally mechanically polished ( $R_a < 0.4 \mu\text{m}$ )
    - Electropolishing (internal/external)
- Externally mechanically polished
- Tri-clamp closing
- Three adjustable support legs
- One vent connection (1.5" clamp)
- Drain connections optional
- Various instrument configurations possible

## 3. Standard specifications

Design pressure	: 0 / 10 bar(g) at 40 °C 0 / 7.5 bar(g) at 150 °C
Test pressure	: 14.5 bar(g)
Design temperature	: 0 / 150 °C
Operating pressure	: depending on application
Operating temperature	: depending on application, filter cartridge and gasket
Design code	: AD-Merkblätter
Approval	: PED 97/23/EC
Hazard category	: I
Fluid group	: 1 and 2

#### 4. Housing data and dimensions



A = Height Inlet / Outlet  
B = Distance Inlet / Outlet

Housing data					
		Number of cartridges			
Diameter	Cartridge length	1	3	5	8
		102	169	219	273
Total height [mm]	10"	800	810	825	846
	20"	1050	1060	1075	1096
	30"	1300	1310	1325	1346
	40"	1550	1560	1575	1596
Additional height required for lifting bowl [mm]	10"	300	290	290	290
	20"	550	540	540	540
	30"	800	790	790	790
	40"	1050	1040	1040	1040
Volume [dm³]	10"	3.0	7.3	11.0	21.3
	20"	4.8	12.6	20.0	35.5
	30"	6.7	17.8	29.1	49.7
	40"	8.6	23.1	38.2	63.9
Total weight empty [kg]	10"	7.0	17.4	18.0	27.0
	20"	8.2	19.4	22.0	30.0
	30"	9.4	21.4	22.0	33.0
	40"	10.6	23.4	24.0	36.0
Bowl weight [kg]	10"	2.0	4.0	5.3	7.0
	20"	3.3	6.0	7.5	10.0
	30"	4.6	8.0	10.2	13.0
	40"	5.9	10.0	12.9	16.0

Dimensions																
Inlet / Outlet connections		Weld					DIN 11851 male part					Clamp				
		1.0"	1.5"	2.0"	2.5"	3.0"	DN25	DN40	DN50	DN65	DN80	1.0"	1.5"	2.0"	2.5"	3.0"
	[mm]	381	340	310	281	253	381	340	310	281	253	381	340	310	281	253
1 cartridge	no drains	163	-	-	-	-	221	-	-	-	-	189	-	-	-	-
	with drains	244	-	-	-	-	-	-	-	-	-	270	-	-	-	-
3 cartridges	no drains	-	285	-	-	-	-	351	-	-	-	-	310	-	-	-
	with drains	-	360	-	-	-	-	426	-	-	-	-	385	-	-	-
5 cartridges	no drains	-	305	353	-	-	-	371	423	-	-	-	331	379	-	-
	with drains	-	380	420	-	-	-	446	490	-	-	-	406	446	-	-
8 cartridges	no drains	-	331	379	442	498	-	379	449	518	588	-	357	405	469	524
	with drains	-	406	446	522	578	-	472	516	602	658	-	432	472	548	604

Dimensions are for reference only. Use dimensional drawing for installation purposes.  
Subject to technical alteration without prior notice.

## 5. Ordering code

Example

AFS3 4 2 B 0 7

### Type

AFS1 = 1 cartridge  
AFS3 = 3 cartridges  
AFS5 = 5 cartridges  
AFS8 = 8 cartridges

### Cartridge length

1 = 10"  
2 = 20"  
3 = 30"  
4 = 40"

### Inlet / outlet size

1 = 1.0" / DN25  
1.5 = 1.5" / DN40  
2 = 2.0" / DN50  
2.5 = 2.5" / DN65  
3 = 3.0" / DN80

### Inlet / outlet connection

B = weld  
M = DIN 11851 male part  
T = clamp

### Drain connections

0 = no drains  
2 = two drains (clamp 1.5", for AFS1 clamp 1")

### Cartridge style

7 = X7 and X6 style  
8 = X8 and X3 style

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03/2013

## Cartridge filter AFS12-30

### 1. Introduction

Specially designed for sterile filter applications we can offer a range of high quality sanitary filter housings in stainless steel. MAHLE Industrial Filtration supplies a complete range of filter housings. These housings have proven their quality in the pharmaceutical and beverage industries. For models from 1 up to 8 cartridges, please see Data Sheet AFS1-8.



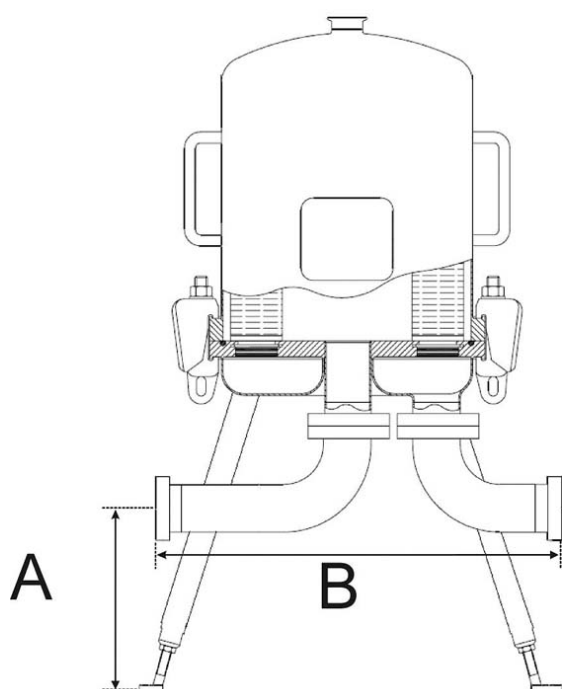
## 2. Features

- Compact design
- For 10", 20", 30" or 40" cartridges
- O-ring sealing: standard silicone, FDA / BfR approved
- Vessel material stainless steel 1.4404 (316L)
- Internally mechanically polished ( $Ra < 0.8 \mu m$ ).
  - On request:
    - Internally mechanically polished ( $Ra < 0.4 \mu m$ )
    - Electropolishing (internal/external)
- Externally mechanically polished
- Tri-clamp closing
- Three adjustable support legs
- One vent connection (1.5" clamp)
- Drain connections optional
- Various instrument configurations possible

## 3. Standard specifications

Design pressure	: <i>AFS 12</i> 0 / 9 bar(g) at 40 °C 0 / 7 bar(g) at 150 °C <i>AFS18, 24, 30</i> 0 / 8 bar(g) at 40 °C 0 / 6.2 bar(g) at 150 °C
Test pressure	: <i>AFS12</i> 14.5 bar(g) <i>AFS18, 24, 30</i> 11.5 bar(g)
Design temperature	: 0 / 150 °C
Operating pressure	: depending on application
Operating temperature	: depending on application, filter cartridge and gasket
Design code	: AD-Merkblätter
Approval	: PED 97/23/EC
Hazard category	: I
Fluid group	: 1 and 2

## 4. Housing data and dimensions



A = Height Inlet / outlet  
B = Distance inlet / outlet

Housing data					
		Number of cartridges			
Diameter	Cartridge length	12	18	24	30
		350	400	450	500
Total height [mm]	10"	930	950	825	1000
	20"	1180	1200	1075	1250
	30"	1430	1450	1325	1500
	40"	1680	1700	1575	1750
Additional height required for lifting bowl [mm]	10"	290	290	290	290
	20"	540	540	540	540
	30"	790	790	790	790
	40"	1040	1040	1040	1040
Volume [dm³]	10"	41	54	73	118
	20"	66	85	112	176
	30"	89	115	151	235
	40"	113	146	190	293
Total weight empty [kg]	10"	58	59	85	93
	20"	62	90	63	101
	30"	66	95	68	109
	40"	70	74	100	117
Bowl weight [kg]	10"	10	12	15	28
	20"	14.5	17	20	38
	30"	19	22	25	48
	40"	23	27	30	58

Dimensions													
Inlet / outlet connections		Weld				DIN 11851 male part				Clamp			
		2.0"	2.5"	3.0"	4.0"	DN50	DN65	DN80	DN100	2.0"	2.5"	3.0"	4.0"
A Height inlet / outlet [mm]													
12 cartridges		350	326	298	295	350	326	316	295	350	326	298	295
18 cartridges		-	325	297	292	-	325	310	292	-	325	297	292
24 cartridges		-	300	272	292	-	300	310	292	-	300	272	292
30 cartridges		-	300	272	292	-	300	310	292	-	300	272	292
B Distance inlet / outlet [mm]													
12 cartridges	no drains	449	467	523	483	519	547	535	507	474	493	536	515
	with drains	518	547	603	563	586	627	615	667	544	573	629	594
18 cartridges	no drains	-	524	540	604	-	604	582	604	-	550	566	630
	with drains	-	604	620	580	-	684	662	684	-	630	646	612
24 cartridges	no drains	-	538	554	534	-	618	616	638	-	564	580	566
	with drains	-	618	634	614	-	698	696	718	-	644	660	640
30 cartridges	no drains	-	639	660	630	-	719	712	734	-	665	686	662
	with drains	-	719	740	710	-	800	792	814	-	745	766	742

Dimensions are for reference only. Use dimensional drawing for installation purposes.  
Subject to technical alteration without prior notice.



## 5. Ordering code

Example

AFS12      4      2      B      0      7

### Type

AFS12 = 12 cartridges

AFS18 = 18 cartridges

AFS24 = 24 cartridges

AFS30 = 30 cartridges

### Cartridge length

1 = 10"

2 = 20"

3 = 30"

4 = 40"

### Inlet / outlet size

2 = 2.0" / DN50

2.5 = 2.5" / DN65

3 = 3.0" / DN80

4 = 4" / DN100

See possible connection sizes in table Dimensions.

### Inlet / outlet connection

B = weld

M = DIN 11851 male part

T = clamp

### Drain connections

0 = no drains

2 = two drains (clamp 1.5")

### Cartridge style

7 = X7 and X6 style

8 = X8 and X3 style

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## Cartridge filter AFT 7-28

### 1. Introduction

The MAHLE Industrial Filtration AFT series of cartridge filter housings have been designed to offer a cost effective range of stainless steel filter housings. Available in a wide range of options these housings are suitable for a broad range of applications, particularly in water applications.



## 2. Features

- Accepts a wide range of end fittings - Single open end (with or without fin) and Double open end (DOE)
- Suitable for multiple numbers of cartridges
- V clamp closure design
- 304 or 316 stainless steel for wide chemical compatibility
- Ease of use design and construction
- Wide range of inlet/outlet options
- O-ring sealing: EPDM

## 4. Models

MAHLE Industrial Filtration can supply several standard sizes in stainless steel. These are available with threaded connections or flanged.

### *Other standard filter housings*

We also supply other standard filter housings suitable for all industrial liquid and gas applications for various flow rates. For more information please contact your local representative.

## 3. Standard specifications

Design pressure	: 10 bar(g)
Design temperature	: - 10 / 90 °C
Operating temperature	: depending on the filter media and gaskets used
PED 97/23/EC cat.	: article 3 paragraph 3
Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge installed

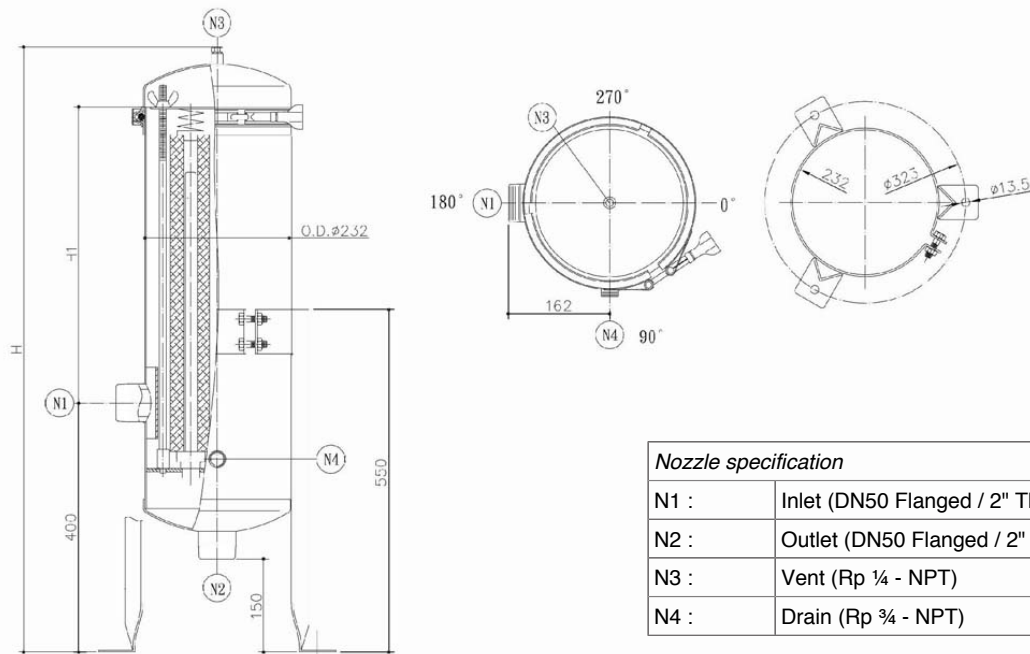
The internal construction is designed to accept:

- Double open end (X0, X4 and X9)
- Single open end (X3 and X8)

## 5. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different medias, pore sizes, dimensions and models to fit in our housings as well as those of other manufacturers. For detailed information about filter cartridge options, please contact your local representative.

## 6. Dimensions



Dimensions				
Size	Diameter [mm] A	Height [mm] H	Height [mm] H1	Volume [dm³]
10"	232	717	221	20
20"	232	971	475	30
30"	232	1225	729	40
40"	232	1489	983	50

Dimensions are for reference only. Use dimensional drawing for installation purposes. Subject to technical alteration without prior notice.

## 7. Ordering code

Example

<b>Type</b>	AFT 7	1	A	2
AFT 7 = 7 cartridges (10")				
AFT 14 = 7 cartridges (20")				
AFT 21 = 7 cartridges (30")				
AFT 28 = 7 cartridges (40")				
<b>Cartridge length</b>				
1 = 10"				
2 = 20"				
3 = 30"				
4 = 40"				
<b>Material</b>				
A = stainless steel 304				
S = stainless steel 316				
<b>Inlet/outlet</b>				
2 = Rp2 - ISO7-1 (standard)				
2F = DN50 acc. EN1092/PN16				
<b>Cartridge style</b>				
no code = X0, X4, X9 style				
X3 = X3, X8 style				

## Cartridge filter AFT36

### 1. Introduction

The MAHLE Industrial Filtration AFT 36 cartridge filter housing has been designed to offer a cost effective high flow rate, stainless steel housing. The AFT 36 is suitable for a wide range of applications and exhibits excellent performance in water filtration in particular.



## 2. Features

- Accepts a wide range of cartridge end fittings – single open end (with or without fin) SOE and double open end (DOE) due to innovative sealing system.
- Suitable for 9 x 40" cartridges for maximum flow rate
- Clamp closure for design
- 304 or 316 stainless steel construction for maximum chemical compatibility
- Ease of use design and construction
- DN65 flange inlet / outlet as standard
- O ring sealing: EPDM

## 4. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different medias, pore sizes, dimensions and models to fit any of its existing housings as well as those of other manufacturers. For detailed information about filter cartridges option, please contact your local representative.

Dimensions		Nozzle specifications	
A	268 mm	N1	Inlet DN65 EN1092/PN16
B	1482 mm	N2	Outlet DN65 EN1092/PN16
C	370 mm	N3	Vent Rp 1/4"
D	200 mm	N4	Drain Rp 3/4"
		N5	Drain Rp 1/4"

## 3. Standard specifications

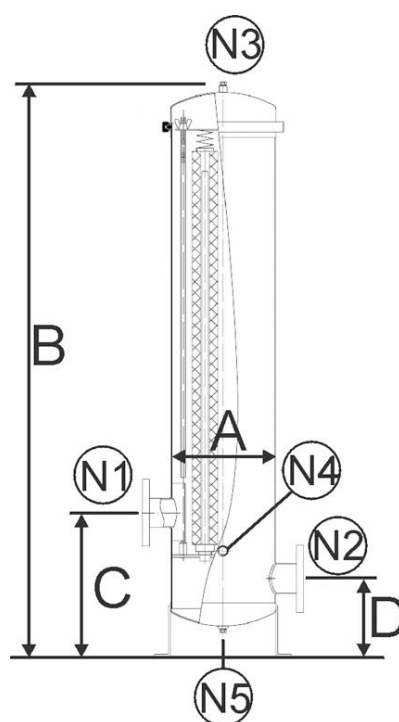
Design pressure	: 10 bar(g)
Design temperature	: -10 / 90 °C
PED 97/23/EC	: article 3 paragraph 3

Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge installed

The internal construction is designed to suit:

- Double Open End (X0, X4 and X9)
- Single Open End (X3 and X8)

## 5. Dimensions



## 6. Ordering code

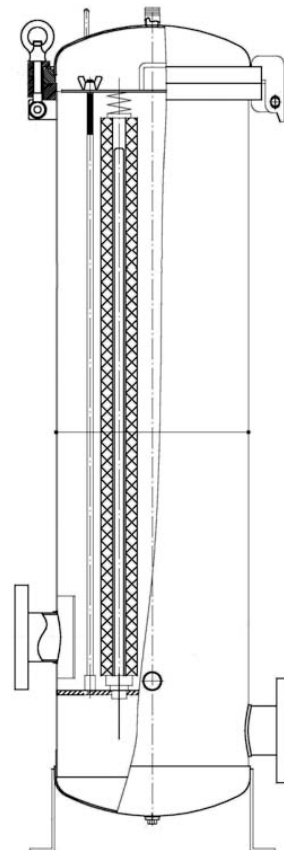
Example

<b>Type</b> AFT36	<b>Cartridge length</b> 4 = 40"	<b>Material</b> A = stainless steel 304 S = stainless steel 316	<b>Inlet/outlet</b> 2.5F = DN65 acc. EN1092/PN16	<b>Cartridge style</b> No code = X0, X4 and X9 style X3 = X3, X8 style
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## Cartridge filter AFT72

### 1. Introduction

The MAHLE Industrial Filtration AFT 72 cartridge filter housing has been designed to offer a cost effective high flow rate, stainless steel housing. The AFT 72 is suitable for a wide range of applications and exhibits excellent performance in water filtration in particular.



## 2. Features

- Accepts a wide range of cartridge end fittings – single open end (with or without fin) SOE and double open end (DOE) due to innovative sealing system.
- Suitable for 18 x 40" cartridges for maximum flow rate
- Hinged cover
- Eyebolt closure for added security
- 304 or 316 stainless steel construction for maximum chemical compatibility
- Ease of use design and construction
- DN80 flange inlet / outlet as standard
- O ring sealing: EPDM

## 4. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different medias, pore sizes, dimensions and models to fit any of its existing housings as well as those of other manufacturers. For detailed information about filter cartridges option, please contact your local representative.

Dimensions		Nozzle specifications	
A	350 mm	N1	Inlet DN80 EN1092/PN16
B	1537 mm	N2	Outlet DN80 EN1092/PN16
C	390 mm	N3	Vent Rp ¾"
D	220 mm	N4	Drain Rp 1"
		N5	Drain Rp ¼"

## 3. Standard specifications

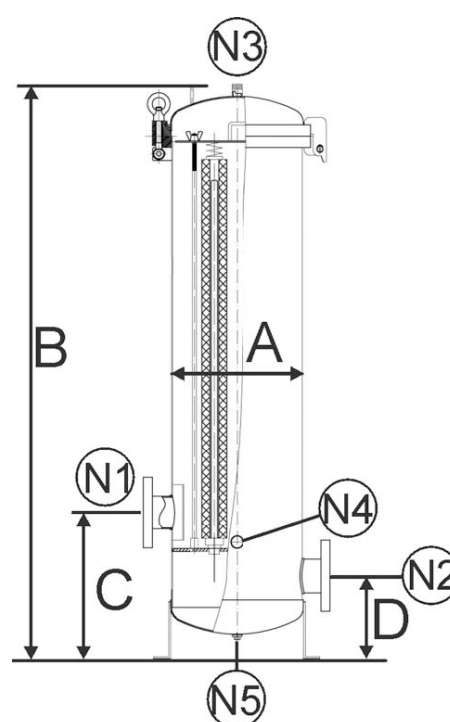
Design pressure	: 10 bar(g)
Design temperature	: -10 / 90 °C
PED 97/23/EC	: article 3 paragraph 3

Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge installed

The internal construction is designed to suit:

- Double Open End (X0, X4 and X9)
- Single Open End (X3 and X8)

## 5. Dimensions



## 6. Ordering code

Example

	AFT72	4	A	3F	
<b>Type</b>	AFT72				
<b>Cartridge length</b>		4 = 40"			
<b>Material</b>					
A = stainless steel 304					
S = stainless steel 316					
<b>Inlet/outlet</b>					
3F = DN80 acc. EN1092/PN16					
<b>Cartridge style</b>					
No code = X0, X4 and X9 style					
X3 = X3, X8 style					



## Cartridge filter AFT144

### 1. Introduction

The MAHLE Industrial Filtration AFT 144 cartridge filter housing has been designed to offer a cost effective high flow rate, stainless steel housing. The AFT 144 is suitable for a wide range of applications and exhibits excellent performance in water filtration in particular.



## 2. Features

- Accepts a wide range of cartridge end fittings – single open end (with or without fin) SOE and double open end (DOE) due to innovative sealing system.
- Suitable for 36 x 40" cartridges for maximum flow rate
- Davit arm as standard
- Eyebolt closure for added security
- 304 or 316 stainless steel construction for maximum chemical compatibility
- Ease of use design and construction
- DN150 flange inlet / outlet as standard
- O ring sealing: EPDM

## 4. Filter cartridges

MAHLE Industrial Filtration supplies a wide range of filter cartridges in different medias, pore sizes, dimensions and models to fit any of its existing housings as well as those of other manufacturers.

For detailed information about filter cartridges option, please contact your local representative.

Dimensions		Nozzle specifications	
A	506 mm	N1	Inlet DN150 EN1092/PN16
B	2148 mm	N2	Outlet DN150 EN1092/PN16
C	450 mm	N3	Vent Rp 1"
D	498 mm	N4	Drain Rp 1½"
E	673 mm	N5	Pressure gauge connection Rp ¼"

## 3. Standard specifications

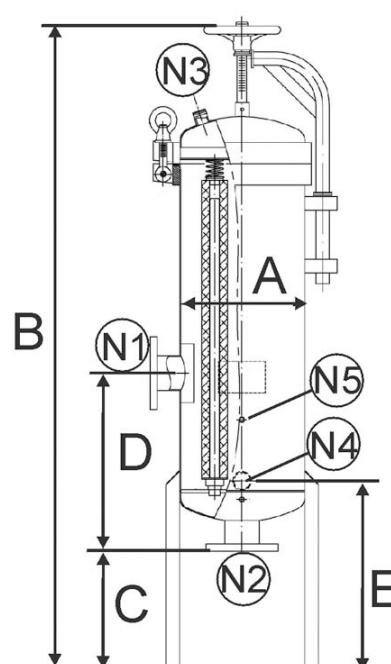
Design pressure	: 10 bar(g)
Design temperature	: -10 / 90 °C
PED 97/23/EC	: article 3 paragraph 3

Maximum differential pressure	
design	: 2.5 bar
operating	: depending on type of filter cartridge installed

The internal construction is designed to suit:

- Double Open End (X0, X4 and X9)
- Single Open End (X3 and X8)

## 5. Dimensions



## 6. Ordering code

Example

<b>Type</b>	AFT144	4	A	6F
<b>Cartridge length</b>	4 = 40"			
<b>Material</b>	A = stainless steel 304 S = stainless steel 316			
<b>Inlet/outlet</b>	6F = DN150 acc. EN1092/PN16			
<b>Cartridge style</b>	No code = X0, X4 and X9 style X3 = X3, X8 style			

## High flow cartridge housing HFH

### 1. Introduction

The HFH High Flow single and multiple cartridge filter housings have been designed specifically with high throughputs in mind whilst occupying a small “footprint” area. These housings can be used in both the horizontal and vertical orientation depending on the availability of space. The standard model is horizontal. The in-line horizontally mounted housing minimises pressure drop and is also more accessible.

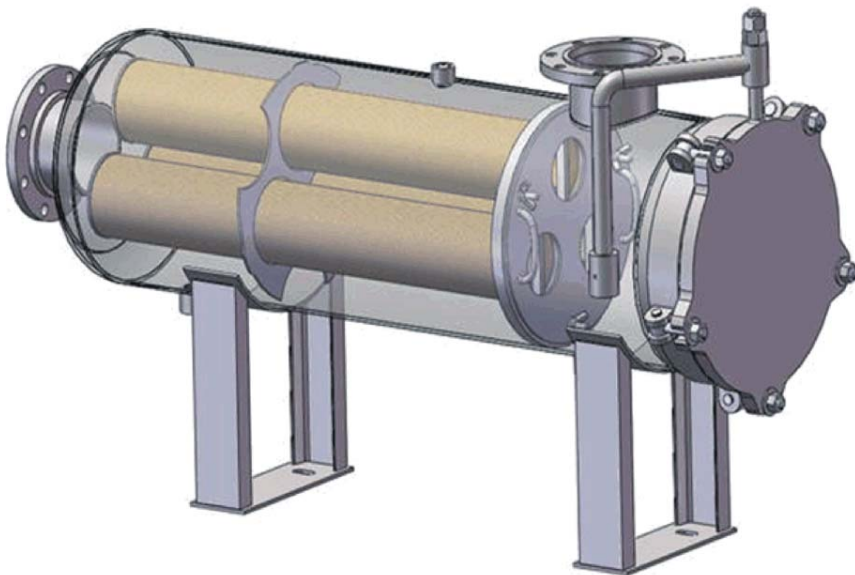


## 2. Features

- Single and multi cartridge housing available
- Designed specifically to complement the amaGuard HF-PP cartridge
- The filters are available in stainless steel 304 or 316
- All components are stainless steel
- Eyebolt design option allows for quick and easy change-out
- The cover is opened using a davit arm as a standard construction
- Fewer filter elements to change-out
- Inside to outside flow minimises the possibility of contamination during cartridge change-out
- Guide tubes included for multi cartridge housings
- Different housing specifications possible
- O-ring sealing: standard in EPDM. Viton®, PTFE encapsulated Viton® and silicone available on request
- The housings are equipped with legs

## 3. Standard specifications

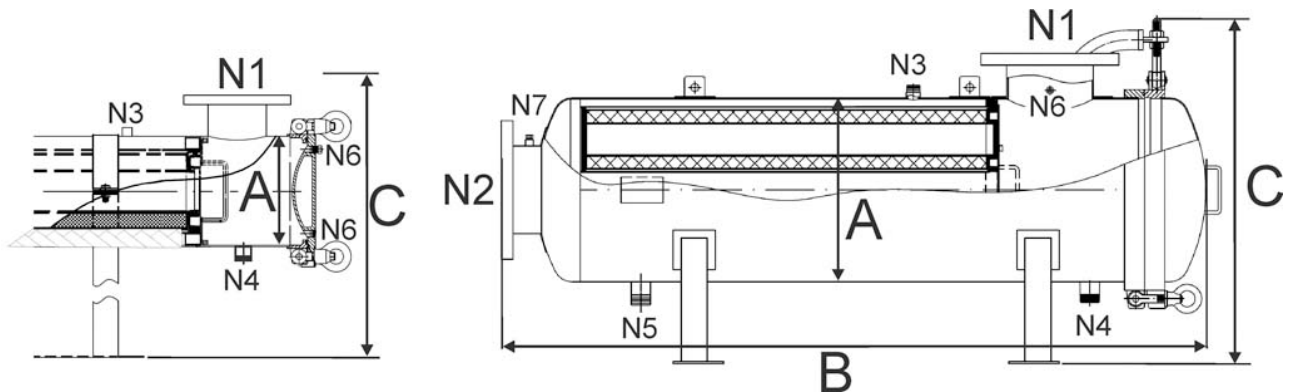
Design pressure	: 10 bar(g)
Design temperature	: 90 °C
Operating temperature	: depending on the filter media and gaskets used
Design	: ASME
Approval	: PED 97/23/EC article 3, paragraph 3 (other codes on request)
Maximum differential operating pressure	: 2.1 bar



## 4. Dimensions

Nozzle specification HF1		
N1 :	Inlet	
N2 :	Outlet	
N3 :	Vent	1/4"
N4 :	Dirt drain	3/4"
N5 :	Clean drain	3/4"
N6 (2x) :	Pressure gauge (dirt side)	1/4"

Nozzle specification HFH2-HFH19		
N1 :	Inlet	
N2 :	Outlet	
N3 :	Vent	1"
N4 :	Dirt drain	1.5"
N5 :	Clean drain	1.5"
N6 :	Pressure gauge (dirt side)	1/4"
N7 :	Pressure gauge (clean side)	1/4"



HFH1

HFH2-HFH19

Space required for changing cartridges is length B plus cartridge length. Dimensions are for reference only. Use dimensional drawing for installation purposes.

Subject to technical alteration without prior notice.

	Dimensions [mm]				
	A Diameter	B Length	C Height	N1 Inlet	N2 Outlet
HFH1	216	1460	688	DN100	DN100
HFH2	406	1676	797	DN150	DN150
HFH3	456	1751	852	DN200	DN200
HFH4	508	1790	898	DN200	DN200
HFH5	558	1870	951	DN250	DN250
HFH7	610	1951	1001	DN300	DN300
HFH9	710	2064	1101	DN350	DN350
HFH12	812	2171	1207	DN400	DN400
HFH15	916	2285	1357	DN450	DN450
HFH17	966	2293	1409	DN450	DN450
HFH19	1016	2376	1459	DN500	DN500

## 5. Ordering code

Example

	HFH	7	6	A	12F
Type					
HFH					
Number of cartridges					
1, 2, 3, 4, 5, 7, 9, 12, 15, 17, 19					
Length of cartridges					
2 = 20" (HFH1)					
4 = 40" (HFH1-9)					
6 = 60"					
Material					
A = stainless steel 304					
S = stainless steel 316					
Inlet/outlet flanges					
4F = DN100 (HFH1)	14F = DN350 (HFH9)				
6F = DN150 (HFH2)	16F = DN400 (HFH12)				
8F = DN200 (HFH3, 4)	18F = DN450 (HFH15, 17)				
10F = DN250 (HFH5)	20F = DN500 (HFH19)				
12F = DN300 (HFH7)					

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