

INDUSTRIAL GASES

Filter for high pressure HD



MAIN FEATURES & BENEFITS

- Innovative filtration technology, high retention rate, low pressure loss
- Filter housing available in carbon steel, aluminium and stainless steel respectively designed for operating pressure up to 5802 psi and operating temperatures from 14°F to 176°F
- For the purification of compressed air and gases according to ISO 8573-1
- Flow-optimized design for low differential pressure (saving of energy costs)

PRODUCT DESCRIPTION

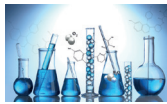
HD high pressure housings are designed for the purification of compressed air and industrial gases group 1 and 2 in industrial applications.

The HD housing design is optimized to provide low differential pressures at high flow rates.

A wide range of housing sizes are available with several connection options to match application requirements.

The HD series offers 8 housing sizes capable of handling flows of 53 cfm to 21,600 cfm and pressures up to 5,800 psi.

INDUSTRIES



- Chemical and pharmaceutical industry



- Gas industry



- Environmental technology



- Machine building industry and plant engineering / construction

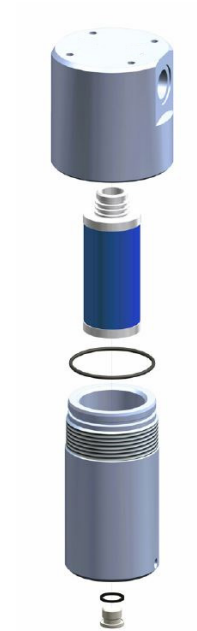


- Green energy (H₂ / CO₂ / Biogas)

PRODUCT DESCRIPTION

The HD filter is designed and developed for the following applications:

- Downstream applications:**
Final filtration for high-pressure for process industrial gases, including removal of oil vapours and hydrocarbons
- Adsorption dryers:**
Pre-filter to protect adsorption dryers, dust filter downstream adsorption dryers
- H₂ filtration:**
Complying with the H₂ high purity pressure requirements for bottle refilling, refueling station and other applications according to ISO 14687:2019 for fuel cells



PRODUCT SPECIFICATIONS

FEATURES	BENEFITS
Validated performance data according to ISO 12500-1 and ISO 12500-3	Reliable achievement of compressed air quality according to ISO 8573-1
Intelligent overall concept	Unique housing and element design assist in large range of flow rates, filtration grades, and efficiencies that meet requirements for compressed air purification and various technical gases.
Fine thread connection between filter head and filter bowl with radial sealing-up O-ring	Very rugged construction with excellent sealing characteristics
Flow optimized design	Low pressure losses, thereby saving energy costs
Filter housings are made of anodized aluminium or electroless nickle plated carbon steel	Ensures long-term corrosion protection against environment influences

PRODUCT SPECIFICATIONS

TECHNICAL DATA	
Max. operating pressure:	PN 363 - PN 1450: 363 psi / 580 psi / 928 psi / 1450 psi PN 1450 - PN 5801: 1450 psi / 3626 psi / 5801 psi
Test pressure:	PN 363 - PN 1450: 522 psi / 830 psi / 1334 psi / 2074 psi PN 1450 - PN 5801: 2074 psi / 5185 psi / 8296 psi
Max. operating temperature:	14°F / 176°F

FILTER ELEMENTS (FOR DETAILED PERFORMANCE DATA SEE SEPARATE DATA SHEET)	
CF filter Coalescence filter / particle filter	Initial differential pressure: 2.17 psi Efficiency: 100% related to 25 µm 1
SB filter Particle filter	Initial differential pressure: 1.74 psi Efficiency: 100% related to 25 µm 1
AK filter Activated carbon filter	Initial differential pressure: 1.89 psi Residual oil content (total): 0.00mg/m ³ 1 3
FF filter Coalescence filter / particle filter	Initial differential pressure: 1.6 psi Residual oil content (total): < 0.2 mg/m ³ 1 2
MF filter Coalescence filter / particle filter	Initial differential pressure: 2.61 psi Residual oil content (total): < 0.03 mg/m ³ 1 2
SMF filter Coalescence filter / particle filter	Initial differential pressure: 4.79 psi Residual oil content (total): < 0.01 mg/m ³ 1 2
CFE filter Particle filter Fluid group 1	Initial differential pressure: 2.17 psi Efficiency: 100% related to 25 µm 1
SMFE filter Coalescence filter / particle filter Fluid group 1	Initial differential pressure: 4.79 psi Residual oil content (total): < 0.01 mg/m ³ 1 2
1 related to nominal performance at 100 psi, dry condition 2 related to an inlet connection of 3 mg/m ³ 3 when upstream connected to an MF or SMF filter	

Due to special conductive design element type SMFE and CFE are applicable for the use in ATEX Zone 1 and 2, for example bio-methane and hydrogen applications.

PRODUCT SPECIFICATIONS

Aluminium Filter Housings					
Type	Connection	Flow Rates, nominal pressure			
HD	NPT	363 psi	580 psi	928 psi	1450 psi
		SCFM*	SCFM*	SCFM*	SCFM*
0003	1/4"	52.94	70.63	141.26	211.89
0006	3/8"	105.89	141.26	282.52	423.78
0012	1/2"	211.89	282.52	565.03	847.55
0018	3/4"	317.83	423.78	847.55	1271.33
0027	1"	476.75	635.66	1271.33	1906.99
0036	1 1/4"	635.66	847.55	1695.10	2542.66
0048	1 1/2"	847.55	1130.07	2260.14	3390.21
0072	2"	1271.33	1695.10	3390.21	5085.31

*SCFM at 14.5 psi abs. and +68 °F

Carbon Steel Filter Housings				
Type	Connection	Flow Rates, nominal pressure		
HD	NPT	1450 psi	3625 psi	5801 psi
		SCFM*	SCFM*	SCFM*
0003	1/4"	211.89	211.89	211.89
0006	3/8"	423.78	423.78	423.78
0012	1/2"	847.55	847.55	847.55
0018	3/4"	1271.33	1271.33	1271.33
0027	1"	1906.99	1906.99	1906.99
0036	1 1/4"	2542.66	2542.66	2542.66
0048	1 1/2"	3390.21	3390.21	3390.21
0072	2"	5085.31	5085.31	5085.31

*SCFM at 14.5 psi abs. and +68 °F

Stainless Steel Filter Housings							
Type	Connection	Flow Rates, nominal pressure					
HD	NPT	363 psi	580 psi	928 psi	1450 psi	3625 psi	5801 psi
		SCFM*	SCFM*	SCFM*	SCFM*	SCFM*	SCFM*
0003	1/4"	52.97	70.63	141.26	211.89	211.89	211.89
0006	3/8"	105.94	141.26	282.52	423.78	423.78	423.78
0012	1/2"	211.89	282.52	565.03	847.55	847.55	847.55
0018	3/4"	317.83	423.78	847.55	1271.33	1271.33	1271.33
0027	1"	476.75	635.66	1271.33	1906.99	1906.99	1906.99
0036	1 1/4"	635.66	847.55	1695.10	2542.66	2542.66	2542.66
0048	1 1/2"	847.55	1130.07	2260.14	3390.21	3390.21	3390.21
0072	2"	1271.33	1695.10	3390.21	5085.31	5085.31	5085.31

*SCFM at 14.5 psi abs. and +68 °F

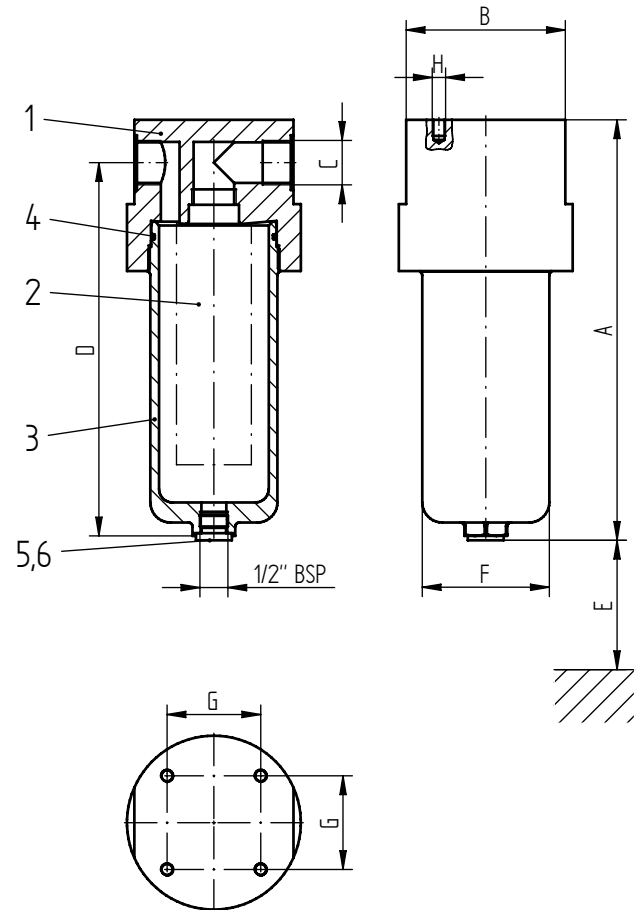
MATERIALS/DIMENSIONS

Aluminium Filter Housings

Pos.	Pcs.	Description
1	1	Filter head
2	1	Filter element
3	1	Filter bowl
4	1	Housing O-Ring
5	1	Screw plug
6	1	Sealing

Materials Filter housing	
Filter housing	Aluminium, anodized
Sealings	Perbunan, compound-free

Classification acc. to 2014 / 68 / EU for fluids of group 2	
HD 0003- 0036	Art. 4, par. 3
HD 0048 363 - 928 psi HD 0072 363 - 928 psi	Cat. I
HD 0048 1450 psi HD 0072 1450 psi	Cat. II



HD	Volume gal	Weight lbs *	Dimensions								Element
			A inch	B inch	C	D inch	E inch	F Ø inch	G inch	H	
0003	0.05	3.5	6.2	3.3	NPT 1/4	5.5	5.1	2.4	1.97	4xM8	03/05
0006	0.05	3.7	6.3	3.3	NPT 3/8	5.6	5.1	2.4	1.97	4xM8	03/10
0012	0.11	4.6	8.7	4.1	NPT 1/2	8.0	7.5	2.8	1.97	4xM8	04/20
0018	0.11	4.8	8.9	4.1	NPT 3/4	8.1	7.5	2.8	1.97	4xM8	05/20
0027	0.29	9.3	12.4	4.7	NPT 1	11.1	7.5	3.7	2.75	4xM10	05/25
0036	0.29	9.3	12.4	4.7	NPT 1 1/4	11.1	9.8	3.7	2.75	4xM10	07/25
0048	0.36	20.7	15.5	6.4	NPT 1 1/2	14.1	9.8	4.7	3.15	4xM12	07/30
0072	0.63	25.3	15.9	7.3	NPT 2	14.3	13.4	4.7	4.3372	4xM12	10/30

* without filter element

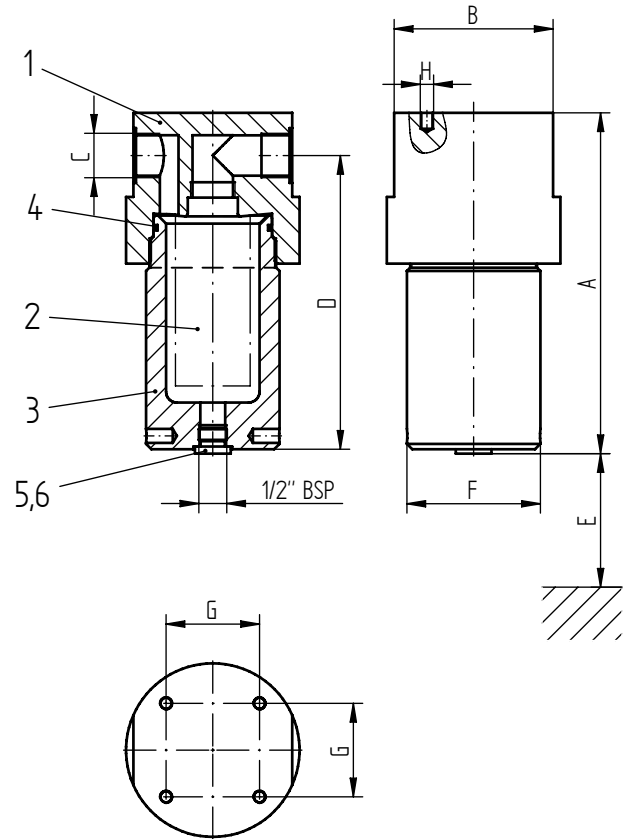
MATERIALS/DIMENSIONS

Carbon Steel Filter Housings

Pos.	Pcs.	Description
1	1	Filter head
2	1	Filter element
3	1	Filter bowl
4	1	Housing O-Ring
5	1	Screw plug
6	1	Sealing

Materials Filter housing	
Filter housing	Carbon Steel, electroless nickel
Sealings	Perbunan, compound-free

Classification acc. to 2014 / 68 / EU for fluids of group 2	
HD 0003- 0036	Art. 4, par. 3
HD 0048 1450 psi	Cat. I
HD 0048 3625 - 5801 psi HD 0072 1450 - 3625 psi	Cat. II
HD 0072 5801 psi	Cat. III



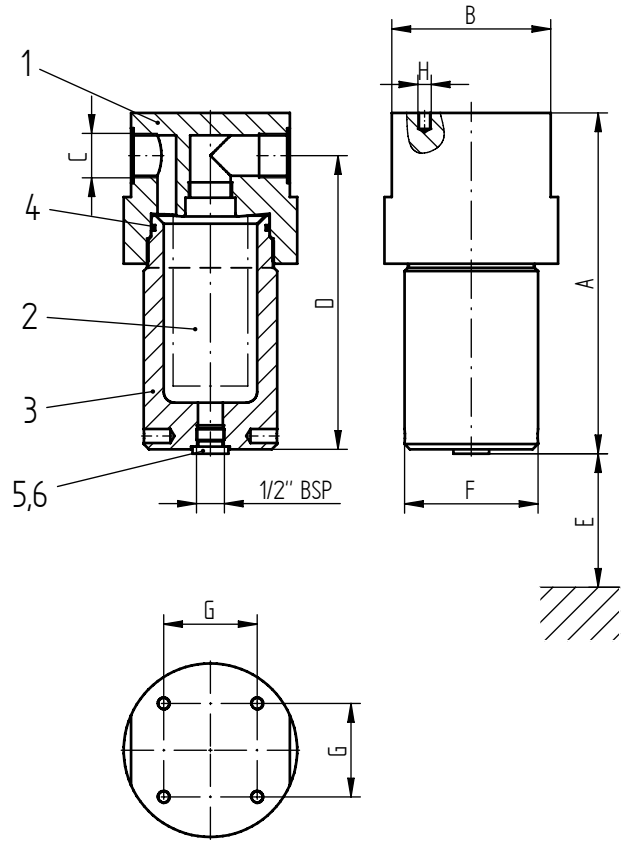
HD	Volume gal	Weight lbs *	Dimensions								Element
			A inch	B inch	C	D inch	E inch	F Ø inch	G inch	H	
0003	0.05	11.0	6.7	3.3	NPT 1/4	5.9	5.1	2.7	2.0	4xM8	03/05
0006	0.05	11.0	6.7	3.3	NPT 3/8	5.9	5.1	2.7	2.0	4xM8	03/10
0012	0.11	19.8	8.3	4.1	NPT 1/2	7.4	7.4	3.3	2.0	4xM8	04/20
0018	0.13	20.9	9.2	4.1	NPT 3/4	8.4	7.4	3.3	2.0	4xM8	05/20
0027	0.17	31.9	9.8	4.7	NPT 1	8.6	7.4	3.9	2.7	4xM10	05/25
0036	0.23	35.3	12.0	4.7	NPT 1 1/4	10.6	9.8	3.9	2.7	4xM10	07/25
0048	0.45	60.6	12.9	5.9	NPT 1 1/2	11.6	9.8	5.1	3.1	4xM10	07/30
0072	0.80	132.3	16.5	7.3	NPT 2	14.9	13.4	5.1	4.3	4xM12	10/30

* without filter element

MATERIALS / DIMENSIONS

Stainless Steel Filter Housings

Pos.	Pcs.	Description
1	1	Filter head
2	1	Filter element
3	1	Filter bowl
4	1	Housing O-Ring
5	1	Screw plug
6	1	Sealing



Materials Filter housing	
Filter housing	Stainless steel PN25-PN64: 1.4301 PN100-PN400: 1.4571
Sealings	Perbunan, compound-free

Classification acc. to 2014 / 68 / EU for fluids of group 2	
HD 0003- 0036	Art. 4, par. 3
HD 0048 1450 psi	Cat. I
HD 0048 3625 - 5801 psi HD 0072 1450 - 3625 psi	Cat. II
HD 0072 5801 psi	Cat. III

HD	Volume gal	Weight lbs *	Dimensions								Element
			A inch	B inch	C	D inch	E inch	F Ø inch	G inch	H	
0003	0.05	11.0	6.7	3.3	NPT 1/4	150	130	70	50	4xM8	03/05
0006	0.05	11.0	6.7	3.3	NPT 3/8	150	130	70	50	4xM8	03/10
0012	0.11	19.8	8.3	4.1	NPT 1/2	190	190	85	50	4xM8	04/20
0018	0.13	20.9	9.2	4.1	NPT 3/4	215	190	85	50	4xM8	05/20
0027	0.17	31.9	9.8	4.7	NPT 1	220	190	100	70	4xM10	05/25
0036	0.24	35.3	12.0	4.7	NPT 1 1/4	270	250	100	70	4xM10	07/25
0048	0.45	60.6	12.9	5.9	NPT 1 1/2	295	250	130	80	4xM10	07/30
0072	0.8	132.3	16.5	7.3	NPT 2	380	340	130	110	4xM12	10/30

* without filter element