Headline Filters

Fine Filtration Systems for Industry

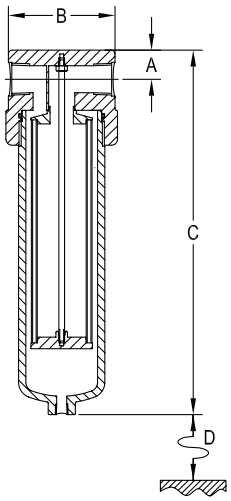
Product Information

Filters for Process Gases

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Stainless Steel 150 Series

316L stainless steel construction
Designed to BS5500
100 bar pressure rating and above
High flow rates, low pressure drops
Removal of aerosols and particulate





150



152

Headline 150 series housings are constructed entirely from 316L stainless steel, with either viton or PTFE seals. Suitable for both liquids and gases, these housings are ideal for high flow corrosive applications with 1” to 2” line sizes. A variety of flange connections is also available and the housing can be supplied in exotic materials such as Monel and Hastelloy.

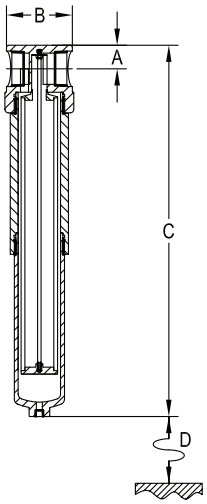
Principal Specifications

Housing Model	150	151	152	150HP	151HP	152HP	150VP	151VP	152VP
Port Size - NPT	1”	1 1/2”	2”	1”	1 1/2”	2”	1”	1 1/2”	2”
Drain - NPT	1/4”	1/4”	1/4”	1/4”	1/4”	1/4”	1/4”	1/4”	1/4”
Maximum Pressure - Bar (1)	100	100	100	200	200	200	400	400	400
Maximum Temperature - ºC (2)	200	200	200	200	200	200	200	200	200
Materials of Construction (3)									
Head, Bowl & Internals	316L	316L	316L	316L	316L	316L	316L	316L	316L
Gaskets	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton
Principal Dimensions									
A - mm	30	30	41	38	52	52	36	50	52
B - mm	110	110	115	120	130	130	150	150	164
C - mm	382	382	402	363	393	393	411	434	434
D - mm	247	247	247	247	247	247	247	247	247
Volume - cc	1500	1500	1500	1500	1500	1500	1500	1500	1500
Weight - kg	9	9	9	17.3	17.3	17.3	22	22	22
Accessories									
Standard Gasket Set	GV150	GV150	GV150	GV150HP	GV150HP	GV150HP	GV150VP	GV150VP	GV150VP
PTFE Gasket	GP150	GP150	GP150	GP150HP	GP150HP	GP150HP	GP150VP	GP150VP	GP150VP
Support Core	SC150	SC150	SC150	SC150	SC150	SC150	SC150	SC150	SC150
Mounting Bracket	MB150	MB150	MB150	MB150	MB150	MB150	MB150VP	MB150VP	MB150VP
Filter Element Codes (4)									
Disposable Element	51-230-xx	51-230-xx	51-230-xx	51-230-xx	51-230-xx	51-230-xx	51-230-xx	51-230-xx	51-230-xx
Stainless Steel Element	SS-150-xx	SS-150-xx	SS-150-xx	SS-150-xx	SS-150-xx	SS-150-xx	SS-150-xx	SS-150-xx	SS-150-xx
PTFE Element	PT-150-xx	PT-150-xx	PT-150-xx	PT-150-xx	PT-150-xx	PT-150-xx	PT-150-xx	PT-150-xx	PT-150-xx

Notes
(1) Above 200ºC the pressure rating is reduced, consult Headline for the exact rating at any specific temperature
(2) Maximum temperature 200ºC using standard seals. For temperatures up to 450ºC use a high temperature gasket
(3) Material abbreviations, 316L = 316L Stainless steel, PTFE = Polytetrafluoroethene
(4) Replace ‘xx’ with grade required, e.g. 51-230-50C, SS-150-25, PT-150-03

Stainless Steel 160 Series

316L stainless steel construction
Designed to BS5500
100 bar pressure rating and above
High flow rates, low pressure drops
Removal of aerosols and particulate





160



160HP

Headline 160 series housings are constructed entirely from 316L stainless steel, with either viton or PTFE seals. Suitable for both liquids and gases, these housings are ideal for high flow corrosive applications with 1" to 2" line sizes. A variety of flange connections is also available and the housing can be supplied in exotic materials such as Monel and Hastelloy.

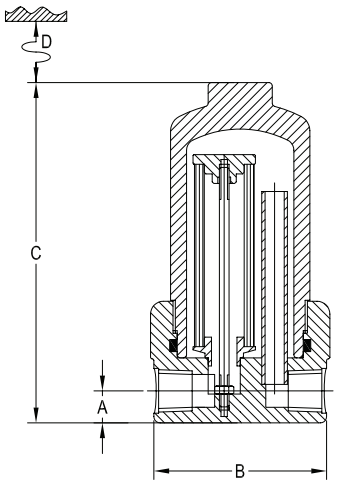
Principal Specifications

Housing Model	160	161	162	160HP	161HP	162HP	160VP	161VP	162VP
Port Size - NPT	1"	1 1/2"	2"	1"	1 1/2"	2"	1"	1 1/2"	2"
Drain - NPT	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"	1/4"
Maximum Pressure - Bar (1)	100	100	100	200	200	200	400	400	400
Maximum Temperature - ºC (2)	200	200	200	200	200	200	200	200	200
Materials of Construction (3)									
Head, Bowl & Internals	316L	316L	316L	316L	316L	316L	316L	316L	316L
Gaskets	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton	Viton
Principal Dimensions									
A - mm	30	30	41	38	52	52	36	50	52
B - mm	110	110	115	120	130	130	150	150	164
C - mm	619	619	648	608	639	639	657	680	680
D - mm	492	492	492	492	492	492	492	492	492
Volume - cc	2700	2700	2700	2700	2700	2700	2700	2700	2700
Weight - kg	18	18	18	24	24	28	28	28	28
Accessories									
Standard Gasket Set	GV160	GV160	GV160	GV160HP	GV160HP	GV160HP	GV160VP	GV160VP	GV160VP
PTFE Gasket	GP160	GP160	GP160	GP160HP	GP160HP	GP160HP	GP160VP	GP160VP	GP16VP
Support Core	SC160	SC160	SC160	SC160	SC160	SC160	SC160	SC160	SC160
Mounting Bracket	MB150	MB150	MB150	MB150	MB150	MB150	MB150VP	MB150VP	MB150VP
Filter Element Codes (4)									
Disposable Element	51-476-xx	51-476-xx	51-476-xx	51-476-xx	51-476-xx	51-476-xx	51-476-xx	51-476-xx	51-476-xx
Stainless Steel Element	SS-160-xx	SS-160-xx	SS-160-xx	SS-160-xx	SS-160-xx	SS-160-xx	SS-160-xx	SS-160-xx	SS-160-xx
PTFE Element	PT-160-xx	PT-160-xx	PT-160-xx	PT-160-xx	PT-160-xx	PT-160-xx	PT-160-xx	PT-160-xx	PT-160-xx

Notes
(1) Above 200ºC the pressure rating is reduced, consult Headline for the exact rating at any specific temperature
(2) Maximum temperature 200ºC using standard seals. For temperatures up to 450ºC use a high temperature gasket
(3) Material abbreviations, 316L = 316L Stainless steel, PTFE = Polytetrafluoroethene
(4) Replace 'xx' with grade required, e.g. 51-476-50C, SS-160-25, PT-160-03

Process Gas & Analyser Filter Housings

These filters can be used in high pressure applications up to 100 bar
Easy maintenance no tools required





129S



170



137G-3136

The new 129, 170 and 137G-3 Models allow permanent pipe work (inlet, outlet and drain) and easy maintenance. The filter bowl can be removed by hand, without un-doing any pipe work, as the drain is in the head. This is achieved by installing the filter housing with the bowl up. A compact and effective design for analyser protection. This housing can also be supplied in a four-port option with a 1/4" NPT port in the top of the bowl. The 170 housing is available with a long bowl and longer element. (22-64).

The 129 housings are also available with a PTFE seal, which requires a modified sealing design: simply add an 'S' to the housing code eg: 129S.

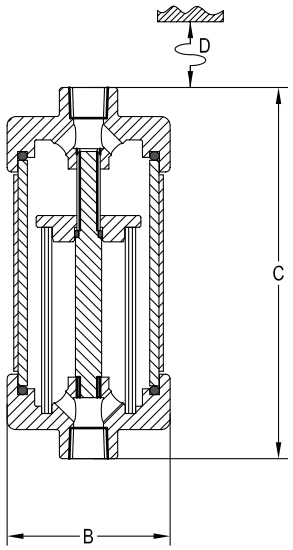
Principal Specifications

Housing Model	**129**	**170**	**170-LB**	**137G-3136**
Port Size - NPT	1/4"	1/4"	1/4"	1/4"
Maximum Pressure - Bar	100	100	100	7
Maximum Temperature - ºC	200	200	200	100
Materials of Construction (1)				
Head, Bowl & Internals	316L	316L	316L	316L
Bowl	316L	316L	316L	Pyrex
Gaskets	Viton	Viton	Viton	Viton
Principal Dimensions				
A - mm	10	11	11	13
B - mm	54	54	54	56
C - mm	107	82	111	126
D - mm	64	42	72	70
Volume - cc	65	50	85	110
Weight - kg	0.92	0.66	0.75	1.0
Accessories				
Gasket Set	GV129	GV170	GV170	GV137G-3B6
Mounting Brackets	MB129	MB170	MB170	
Filter Element Codes (2)				
Disposable Element	12-57-xx	22-35-xx	22-64-xx	25-64-xx
Stainless Steel Element	SS-120-xx	SS-170-xx	SS-170L-xx	SS-130-xx
PTFE Element	PT-120-xx	PT-170-xx	PT-170L-xx	PT-130-xx

Notes (1) Material abbreviations, 316L = 316L Stainless steel, Pyrex = Borosilicate glass
(2) Replace 'xx' with grade required, e.g. 12-57-50C, 22-35-50C

Inline Filters

These Inline filters allow visual inspection of the element. They are used on low pressure applications providing a low-cost alternative as the housing is permanent - all that needs replacing is the disposable element, resulting in a more environmentally friendly solution.





705-IL



127G-IL



137G-IL

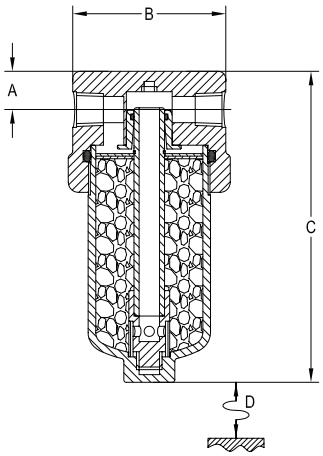
Principal Specifications

Housing Model	705N-IL	127G-IL	137G-IL
Port Size - NPT or spigot dia	7.0	1/4”	1/4”
Maximum Pressure - Bar	7	7	7
Maximum Temperature - ºC	50	100	100
Materials of Construction (1)			
Head, Base & Internals	PVC-Nylon	316L	316L
Bowl	Nylon	Pyrex	Pyrex
Gaskets	Viton	Viton	Viton
Principal Dimensions			
A - mm	-	-	-
B - mm	44	40	56
C - mm	137	99	128
D - mm	62	58	60
Volume - cc	60	360	105
Weight - kg	0.06	0.21	0.65
Accessories			
Gasket Set	GV705	GV127	GV137
Filter Element Codes (2)			
Disposable Element	12-32--xx	12-57-xx	25-64-xx
Stainless Steel Element	SS-110-xx	SS-120-xx	SS-130-xx
PTFE Element	PT-110-xx	PT-120-xx	PT-130-xx

Notes (1) Material abbreviations, 316L = 316L Stainless steel, Pyrex = Borosilicate glass
(2) Replace ‘xx’ with grade required, e.g. 12-32-50C, 12-57-50C

Stainless Steel Adsorption Housings

Headline's range of stainless steel adsorption filters are frequently specified for applications requiring a large volume of adsorbent. For pressures above 100 bar, the HP & VP ranges should be used. These filters can be used in high pressure applications providing vapour adsorption over a full range of line pressures. Considerations will be the volume of adsorbent and the contact time.





134CC 146VPCC

Adsorbent	Code	Principal Uses
Activated Carbon	CC	Adsorption of hydrocarbons and other organic vapours
Molecular Sieve 4A	4A	Adsorption of CO2, NH3, H2S, SOx
Molecular Sieve 13X	13X	Adsorption of CO2, NH3, H2S, SOx, aromatics, amines
Silica Gel	SG	Adsorption of water vapour
Mixed Bases	MB	Removal of acidic gases, CO2, SOx, NOx, HCl
Potassium permanganate	PP	Removal or SOx and other acidic gases
Hopcalite	HO	Removal of CO by catalytic oxidation to CO2

Principal Specifications

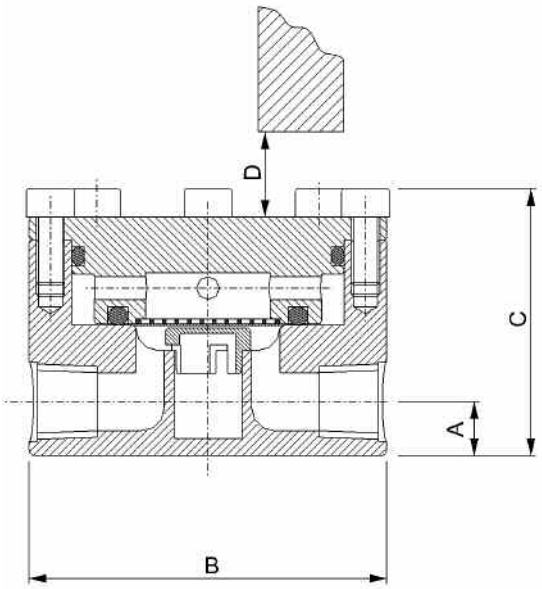
Housing Model	134CC	134VPCC	146CC	146VPCC
Port Size - NPT	1/4"	1/4"	1/2"	1/2"
Maximum Pressure - Bar	100	400	100	400
Maximum Temperature - ºC	200	200	200	200
Materials of Construction (1)				
Head,Bowl & Internals	316L	316L	316L	316L
Gaskets	Viton	Viton	Viton	Viton
Principal Dimensions				
A - mm	15	21	15	21
B - mm	60	85	60	85
C - mm	122	164	236	276
D - mm	35	42	35	42
Volume - cc	110	160	265	320
Weight - kg	0.7	4.5	1.1	6.5
Accessories				
Gasket Set	GV130	GV130VP	GV130	GVF130VP
Mounting Brackets	MB130	MB150	MB130	MB150

Stainless Steel Membrane Housings HFM100

316L stainless steel construction
100 bar pressure rating
High flow PTFE membrane
Removal of liquids, aerosols and particulate



HFM100



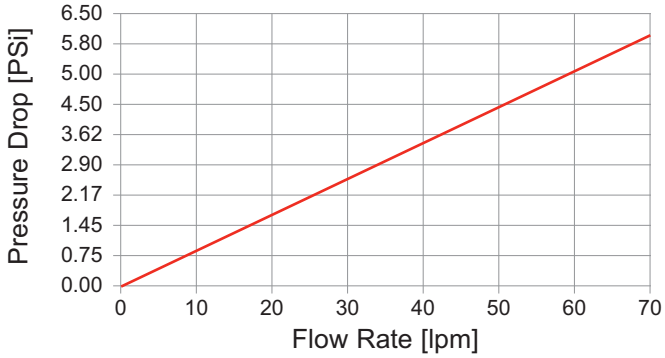
The Headline Membrane filter consists of a highly porous PTFE membrane in a stainless steel housing with two bypass ports and inlet and outlet ports. The ports are designed to allow for permanent pipework, thereby enabling easy maintenance of the filter membrane. Within the housing 3 angled venturies cause the gas to be rotated beneath the membrane, helping to keep the membrane clean and at the same time allowing the finer gas molecules to pass through the membrane for gas sampling and leaving the larger liquid molecules to exit through the bypass ports. Further benefits of the Headline Membrane Filter are that it is extremely inert and is recommended for most applications, the only exception being hydrofluoric acid. It is always recommended to use a coalescing pre-filter and to use the membrane filter as the last form of protection. The membrane is currently available in high flow applications.

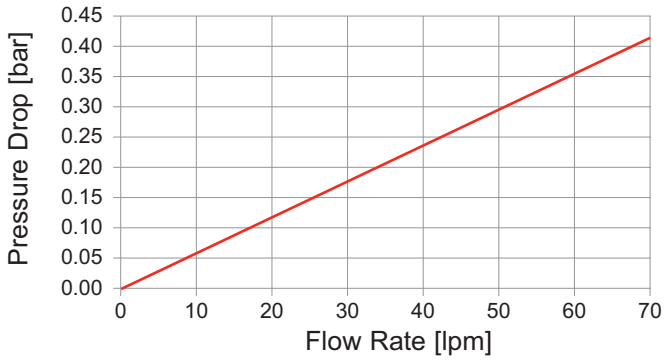
Principal Specifications

Housing Model	HFM100
Port Size - NPT	1/4”
Maximum Pressure - Bar	150
Maximum Temperature - ºC	200
Materials of Construction (1)	
Head,Bowl & Internals	316L
Gaskets	Viton
Principal Dimensions	
A - mm	9.5
B - mm	63.5
C - mm	42
D - mm	15
Volume - cc	10
Weight - kg	0.64
Accessories	
Gasket Set	GVHFM100
Mounting Brackets	MBHFM100

Flow Rate vs Pressure Drop

High Flow Membrane





Air Flow Rates 150 & 160

HOUSING MODEL 150

Air flow at 0.15 bar (2.2p.s.i.) Pressure Drop and 20°C

SS-150&PT-150		Approx Micron Rating		0.1		0.3		10		25	
Line Pressure		Grade 30		Grade 40		Grade 50 & 50C		Grade 60		Grade 70	
Bar	p.s.i.g.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.
0	0	12	7.1	22	13	38	22	89	52	101	59
1	14.5	24	14	44	26	76	45	178	105	202	119
2	29	36	21	66	39	113	67	268	158	303	178
3	43.5	48	28	83	49	151	89	357	210	404	238
4	58	59	35	110	65	189	111	446	263	505	297
5	72.5	71	42	133	78	227	134	535	315	607	357
6	87	83	49	155	91	265	156	624	367	708	417
7	102	95	56	177	104	302	178	714	420	809	476
8	116	107	63	199	117	340	200	803	473	910	536
9	131	119	70	221	130	378	222	892	525	1010	594
10	145	131	77	243	143	416	245	981	577	1110	653

Water flow at 0.15 bar (2.2p.s.i.) Pressure Drop and 20°C

Grade 30		Grade 40		Grade 50 & 50C		Grade 60		Grade 70	
l/hr	g.p.h.	l/hr	g.p.h.	l/hr	g.p.h.	l/hr	g.p.h.	l/hr	g.p.h.
214	47	400	88	705	155	1770	390	1910	420

HOUSING MODEL 160

Air flow at 0.15 bar (2.2p.s.i.) Pressure Drop and 20°C

SS-160&PT-160		Approx Micron Rating		0.1		0.3		10		25	
Line Pressure		Grade 30		Grade 40		Grade 50 & 50C		Grade 60		Grade 70 & 70C	
Bar	p.s.i.g.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.	Nm³/hr	s.c.f.m.
0	0	25	15	44	26	65	38	107	63	114	67
1	14.5	49	29	87	51	129	76	213	125	228	134
2	29	74	44	131	77	194	114	320	188	341	201
3	43.5	99	58	175	103	258	152	426	251	455	268
4	58	123	72	219	129	323	190	533	314	569	335
5	72.5	148	87	262	154	387	228	640	377	683	402
6	87	172	101	306	180	152	266	746	439	797	467
7	102	197	116	350	206	516	304	853	502	911	536
8	116	222	131	394	232	581	342	960	565	1020	600
9	131	246	145	497	257	646	380	1070	630	1140	671
10	145	271	160	481	283	710	418	1170	689	1250	736

Water flow at 0.15 bar (2.2p.s.i.) Pressure Drop and 20°C

Grade 30		Grade 40		Grade 50 & 50C		Grade 60		Grade 70	
l/hr	g.p.h.	l/hr	g.p.h.	l/hr	g.p.h.	l/hr	g.p.h.	l/hr	g.p.h.
410	90	780	172	1200	264	2070	455	2240	493

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