WALKER FILTRATION

HYDROGEN

Hydrogen Flanged Coalescing Filters

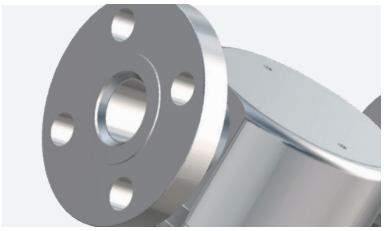
Models | 50H10000F150 to 50H20010F150, 50H10000F300 to 50H20010F300, 100H10000F400 to 100H20010F400, 100H10000F600 to 100H20010F600

Flow Rates 1100 Nm³/hr (647 SCFM) up to 21200 Nm³/hr (12478 SCFM)

Walker Filtration's Class 150, 300, 400 and 600 Hydrogen Flanged Coalescing Filters provide a comprehensive range of high efficiency filters designed to meet the stringent requirements of Hydrogen applications.

Available in two filtration grades of 1 and 5 microns, our hydrogen gas filters provide low pressure drop and offer optimal contamination protection against particle ingress for pressure system components.

Suitable for use with dry hydrogen, these filters are available in a range of flows and pressures to protect the various stages of the developing hydrogen economy. Whatever your requirement, Walker Filtration can support your unique and custom hydrogen filtration solutions.



Flexible Installation
All filter housings supplied with ANSI/ASME flanged ports

Superior Filtration Performance
Specialist hydrogen element with high efficiency particle removal down to 1 micron

- **Advanced Filtration Technology** Optimum design and high efficiency filtration media provides low pressure losses and increased energy savings in line with air quality standard ISO 8573-1: 2010.
- **O-ring Sealing** Push-fit element design and specialist hydrogen compatible O-ring seals eliminate risk of contaminant bypass.
- **Stainless Steel Element End Caps** On all element models.
- **Simplified Serviceability** Hexagonal spanner locator coupled with the internal unique push fit element ensures a simple, quick and reliable servicing process.
- **Quality Guaranteed** All Hydrogen Filters are manufactured in an ISO 9001 certified factory and are PED compliant. Each filter is hydrostatic tested prior to despatch to guarantee quality and performance.

For further information please visit www.walkerfiltration.com

For further information please call: +44 (0) 191 417 7816

Technical Specification

Filter model	Pipe size inches	MAWP Barg (psig)	Hydrogen inlet flow rate*		Dimensions mm (inches)					Weight		Element model
			Nm³/hr	SCFM	A Face to Face	B	C	D	E	kg	lbs	
Class 150												
50H10000F150 (Grade)	1"	19 (276)	1100	647	225 (8.8)	54 (2.1)	275 (10.8)	220 (8.6)	108 (4.2)	11.1	24.5	ETG00300 (Grade)
50H15000F150 (Grade)	1 1/2"	19 (276)	2500	1471	250 (9.8)	63 (2.5)	348 (13.7)	260 (10.2)	153 (6.0)	23.3	51.3	ETG00400 (Grade)
50H20000F150 (Grade)	2"	19 (276)	2500	1471	300 (11.8)	76 (3.0)	374 (14.7)	260 (10.2)	175 (6.9)	32.0	70.5	ETG00500 (Grade)
50H20010F150 (Grade)	2"	19 (276)	5000	2943	300 (11.8)	76 (3.0)	554 (21.8)	450 (17.7)	175 (6.9)	38.0	83.7	ETG00600 (Grade)
Class 300												
50H10000F300 (Grade)	1"	49.6 (719)	2640	1554	225 (8.8)	62 (2.4)	283 (11.1)	220 (8.6)	124 (4.9)	12.0	26.5	ETG00300 (Grade)
50H15000F300 (Grade)	1 1/2"	49.6 (719)	5500	3237	250 (9.8)	77 (3.0)	362 (14.2)	260 (10.2)	155 (6.1)	25.3	55.8	ETG00400 (Grade)
50H20000F300 (Grade)	2"	49.6 (719)	5500	3237	300 (11.8)	82.5 (3.2)	380 (15.0)	260 (10.2)	175 (6.9)	33.3	73.4	ETG00500 (Grade)
50H20010F300 (Grade)	2"	49.6 (719)	10700	6298	300 (11.8)	82.5 (3.0)	560 (22.0)	450 (17.7)	175 (6.9)	39.5	87.0	ETG00600(Grade)
Class 400												
100H10000F400 (Grade)	1"	66.2 (960)	3000	1766	225 (8.8)	62 (2.4)	283 (11.1)	220 (8.6)	124 (4.9)	12.0	26.5	ETG00300 (Grade)
100H15000F400 (Grade)	1 1/2"	66.2 (960)	8000	4709	250 (9.8)	77 (3.0)	362 (14.2)	260 (10.2)	155 (6.1)	25.3	55.8	ETG00400 (Grade)
100H20000F400 (Grade)	2"	66.2 (960)	8000	4709	300 (11.8)	82.5 (3.2)	380 (15.0)	260 (10.2)	175 (6.9)	33.3	73.4	ETG00500 (Grade)
100H20010F400 (Grade)	2"	66.2 (960)	15000	8829	300 (11.8)	82.5 (3.2)	560 (22.0)	450 (17.7)	175 (6.9)	39.5	87.0	ETG00600(Grade)
Class 600												
100H10000F600 (Grade)	1"	66.2 (960)	5320	3078	225 (8.8)	62 (2.4)	283 (11.1)	220 (8.6)	124 (4.9)	12.0	26.5	ETG00300 (Grade)
100H15000F600 (Grade)	1 1/2"	66.2 (960)	10850	6386	250 (9.8)	77 (3.0)	362 (14.2)	260 (10.2)	155 (6.1)	25.3	55.8	ETG00400 (Grade)
100H20000F600 (Grade)	2"	66.2 (960)	10850	6386	300 (11.8)	82.5 (3.2)	380 (15.0)	260 (10.2)	175 (6.9)	33.3	73.4	ETG00500 (Grade)
100H20010F600 (Grade)	2"	66.2 (960)	21200	12478	300 (11.8)	82.5 (3.2)	560 (22.0)	450 (17.7)	175 (6.9)	39.5	87.0	ETG00600(Grade)

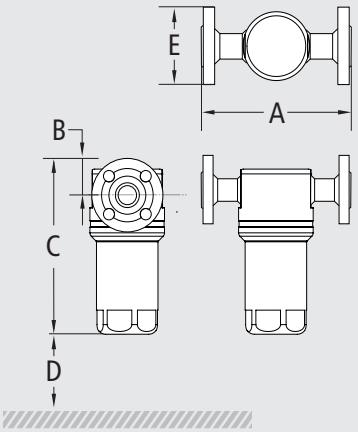
* Rated flow at maximum working pressure, reference conditions at 1 bar (a) 20ºC

Grade	X5		X1	
Particle removal	5 micron		1 micron	
Minimum Temperature	-29°C	-20°F	-29°C	-20°F
Maximum Temperature	130°C	266°F	130°C	266°F
Element end cap colour	Stainless Steel 316			

	Pressure – Temperature Rating by Class (ANSI/ ASME B16.5 Table 2-2.2 Group 2.2 Material) Class			
Temperature °C	150	300	400	600
-29 to 38	19.0	49.6	66.2	99.3
50	18.4	48.1	64.2	96.2
100	16.2	42.2	56.3	84.4
130	15.4	40.0	53.3	79.9

Filter Pipe Size Inches	RF Flange Class and PN	
	ANSI/ ASME B16.5 (Class)	ISO 7005 (PN)
1	150, 300, 400, 600	20, 50, 110
1 ½	150, 300, 400, 600	20, 50, 110
2	150, 300, 400, 600	20, 50, 110

Pressure correction factors		For maximum flow rate, multiply model flow rate by the correction factor corresponding to the minimum operating pressure									
Class 150	Operating pressure barg (psig)	4 (58)	5 (72)	10 (145)	12 (174)	14 (223)	16 (232)	19 (275)			
	Correction factor	0.25	0.30	0.55	0.65	0.75	0.85	1.00			
Class 300	Operating pressure barg (psig)	7 (101)	10 (147)	15 (221)	20 (294)	25 (368)	30 (435)	35 (507)	40 (580)	45 (652)	49.6 (719)
	Correction factor	0.16	0.22	0.32	0.42	0.51	0.61	0.71	0.81	0.91	1.00
Class 400	Operating pressure barg (psig)	7 (101)	20 (290)	30 (435)	35 (507)	40 (580)	45 (652)	50 (725)	55 (798)	60 (870)	66.2 (957)
	Correction factor	0.12	0.31	0.46	0.54	0.61	0.69	0.76	0.84	0.91	1.00
Class 600	Operating pressure barg (psig)	7 (101)	20 (290)	30 (435)	40 (580)	50 (725)	60 (870)	70 (1015)	80 (1160)	90 (1305)	99.3 (1435)
	Correction factor	0.08	0.21	0.31	0.41	0.51	0.61	0.71	0.81	0.91	1.00



50H10000FXXX -
100H20010FXXX

Technical Notes

1. Direction of flow is in to out through the filter element.
2. All Hydrogen Filters are supplied without a drain port/plug.
3. Hydrogen Filters are manufactured from grade 316 Stainless steel and are PED 2014/68/EU compliant for group 1 gases.
4. Flanged connections are raised face type to ANSI/ ASME B16.5 (ISO 7005 (PN) Equivalents) to Table 2-2.2 Group 2.2 Material.
5. Filter elements should be changed every 12 months/ 8000 hours (whichever comes first).

LRQA CERTIFIED ISO 9001 UKAS MANAGEMENT SYSTEMS 0001

MEMBER OF CAGI Compressed Air & Gas Institute

bcas BRITISH COMPRESSED AIR SOCIETY LIMITED

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