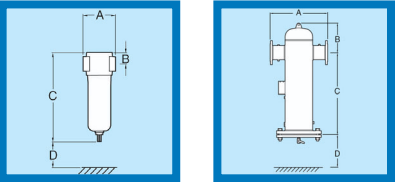


Centrifugal Water Separators – Series AFW-WS

High quality compressed air is essential to pneumatic and automation systems and correct air preparation minimizes component failure, increases the operating life of equipment and reduces energy consumption. Water vapor occurs naturally in air and is present in the hot air discharged from air compressors. The hot air will then release condensate as it meets the colder surfaces of down stream equipment. Although the condensate can be removed via drains, liquid will remain in the air stream. The liquid condensate will break down lubricating oils, increasing friction between moving surfaces and corrode exposed metal components. For compressed air installations where water contamination is a real problem, SMC's range of silicone free water separators can deal simply and effectively with the problem. Typically, water separators are installed downstream of after coolers and air receivers, refrigerant dryers and at strategic points in pipe work installations. The design utilizes an internal spinner which removes large quantities of condensate by centrifugal action. Water separators are available for operating pressures up to 232 psig (1.6 MPa).



Max. recommended operating temperature	248°F (120°C)
Min. recommended operating temperature	35°F (1.5°C)
Typical pressure loss at rated flow	0.7psi (50mbar)
Max. working pressure	232psig (1.6MPa)



Specification

Filter model	Pipe size	Flow		Dimensions mm				Weight		Dimensions inch			
		L/S	CFM	A	B	C	D	kg	lb	A	B	C	D
AFW675-N20-WS	2	318	675	135	50	480	150	4.4	9.70	5 1/2	2	19	6
AFW1000-N25-WS	2 1/2	472	1000	200	68	590	200	11.5	25.5	8	2 3/4	24	8
AFW1500-N30WS	3	707	1500	200	68	590	200	11.5	25.5	8	2 3/4	24	8
AFW1825-N40F-WS	DN100 4Flg	860	1824	520	300	960	700	74	163	20 1/2	12	38	28
AFW3825-N60-WS	DN150 6Flg	1804	3824	680	400	1000	700	165	364	26 3/4	15 3/4	40	28
AFW6470-N80F-WS	DN200 8Flg	3052	6470	780	440	1060	700	260	573	30 3/4	17 1/4	42	28
AFW1000-N100F-WS	DN250 10Flg	4717	10000	900	530	1100	700	450	992	35 1/2	21	44	28
AFW15000-N125F-WS	DN300 12Flg	7075	15000	900	600	1100	700	550	1215	35 1/2	23 1/2	44	28

Corrections Factor

Operating pressure	MPa	0.03	0.06	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	1.5	1.6
	psi	4	9	14.5	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction factor		0.21	0.29	0.38	0.53	0.65	0.76	0.84	0.92	1	1.07	1.13	1.19	1.25	1.31	1.36	1.41	1.46	1.51

Technical Notes

1. Threaded separators are manufactured from aluminum and comply with the Pressure Equipment Directive PED/97/23/EC.	CRN approved for use within Canada.
2. Threaded connections are NPT to ANSI B2.1.	7. Flanged connections are to ANSI class 150.
3. Float operated automatic drain valves, model AD16, with manual override facility are fitted to models AFW675-WS to AFW1500-WS. When high quantities of liquid are anticipated, SMC recommend the use of a "no loss" type drain valve.	8. 1/2" manual drain valves are fitted to AFW1825-WS to AFW6470-WS, 3/4" fitted to AFW10000-WS and AFW15000-WS as standard. An additional 1/2" side entry drain port is included on models AFW1825-WS to AFW6470-WS, 3/4" to AFW10000-WS and AFW15000-WS.
4. Mounting brackets are available for models AFW675-WS to AFW1500-WS. Please contact SMC.	9. Internals of centrifugal separator are manufactured from nylon for AFW675-WS to AFW1500-WS and stainless steel for AFW1825-WS to AFW15000-WS.
5. All aluminum separator bodies are electrophoretically painted and then coated with blue polyester powder paint finish to eliminate corrosion.	10. All flanged separator bodies are coated inside and out with blue polyester powder paint finish to eliminate corrosion.
6. Flanged separators are designed and manufactured in accordance with ASME VIII and U Stamped for the USA,	11. Separators are suitable for use with mineral and synthetic oils plus oil free compressed air applications.
	12. Centrifugal water separators are silicone free.

Large Capacity Compressed Air Filters

Series AFW

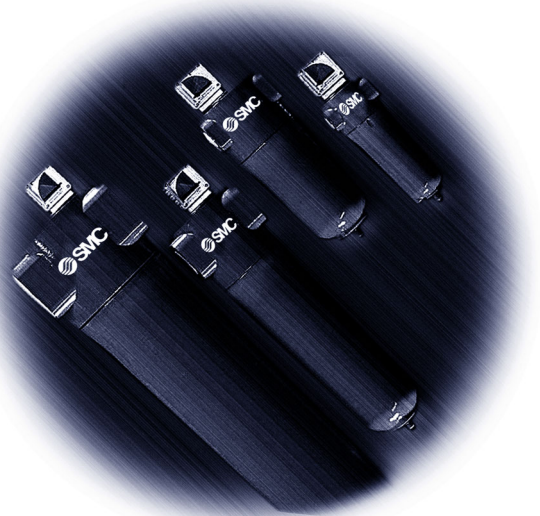
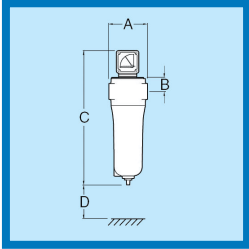


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Compressed Air Threaded Filters – Series AFW

The series AFW threaded filters are offered in 6 models with connections from 2" to 3" NPT ports, offering flow capacities from 470 to 1531CFM. These models incorporate the unique "push on" filter element, which reduces maintenance time and allows the filter to be located in the most confined places. These filters are manufactured using die-cast aluminum housings for pressure ratings up to 232psig (1.6MPa). They are a proven success due to the inclusion of such features as differential pressure indicators which allow continuous monitoring of filter performance.



Specification

Filter model	Port NPT	Flow		Element model	Dimensions mm				Weight		Dimensions inch			
		L/S	CFM		A	B	C	D	kg	lb	A	B	C	D
AFW475-N20-Grade	2"	224	475	EL-AFW475-Grade	135	50	545	150	4.4	9.70	5 1/2	2	22	6
AFW675-N20-Grade	2"	318	675	EL-AFW675-Grade	135	50	745	150	5.0	11.0	5 3/4	2	30	6
AFW950-N25-Grade	2 1/2"	450	954	EL-AFW950-Grade	200	68	805	200	11.5	25.4	8	2 3/4	32	8
AFW950-N30-Grade	3"	450	954	EL-AFW950-Grade	200	68	805	200	11.5	25.4	8	2 3/4	32	8
AFW1300-N30-Grade	3"	614	1301	EL-AFW1300-Grade	200	68	925	200	15.5	34.2	8	2 3/4	37	8
AFW1530-N30-Grade	3"	722	1531	EL-AFW1530-Grade	230	65	1050	300	19	41.9	8	2 3/4	42	12

* Filtration grade to ISO 8573-1:2001 (E) (See table below)

Filtration grade	E25	E5	E1	EA	EC
Max. particle size class *	4	3	2	1	1
Max. oil content class *	N/A	4	2	1	1
Particle removal	25 micron	5 micron	1 micron	0.01 micron	0.01 micron
Max. oil carryover 20°C (68°F)	10ppm (10mg/m³)	5ppm (5mg/m³)	0.1ppm (0.1mg/m³)	0.01ppm (0.01mg/m³)	0.003ppm (0.003mg/m³)
Max. temperature	248°F (120°C)	248°F (120°C)	248°F (120°C)	248°F (120°C)	77°F (25°C)
Pressure loss-clean & dry	0.4psi	0.6psi	1.1psi	1.5psi	1.1psi
Pressure loss-oil saturated	0.7psi	1.1psi	2.2psi	4.4psi	See notes
Pressure loss-change element	6psi	6psi	6psi	6psi	See notes
Max. working pressure	232psig (1.6MPa)	232psig (1.6MPa)	232psig (1.6MPa)	232psig (1.6MPa)	232psig (1.6MPa)

Technical Notes

1. Threaded filters are manufactured from aluminum and comply with the Pressure Equipment Directive PED/97/23/EC.

2. Threaded connections are NPT to ANSI B2.1.

3. Direction of air flow, inside to out through coalescing filter elements and outside to in through activated carbon element.

4. Activated carbon filters must not operate in oil saturated conditions and will not remove certain types of gases including carbon monoxide and carbon dioxide.

5. Grade EC elements must be changed periodically to suit application but at least every 6 months.

6. Activated carbon towers for large applications are available to order. Please contact SMC.

7. Differential pressure indicators are fitted to all models, part number 55DPIW (with the exception of grade EC).

8. Float operated automatic drain valves, model AD16 with manual override facility are fitted to all standard models. Semi automatic drain valves, model SADV 25 with manual override facility are fitted to all EC grade filters.

9. Mounting brackets are available for all models.

10. All filter bodies are electrophoretically painted and then coated with blue polyester powder paint finish to eliminate corrosion.

11. Threaded filters and filter elements are suitable for use with mineral and synthetic oils plus oil free compressed air applications.

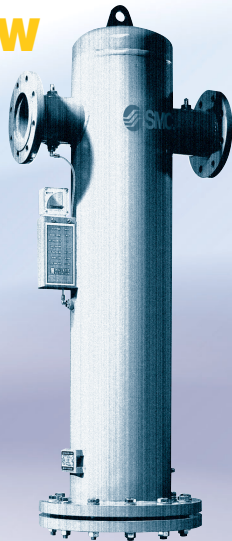
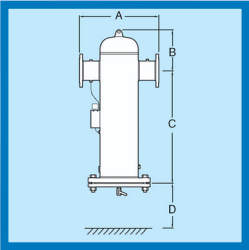
12. For larger flow application, please refer to the flanged filter detail in next page.

13. Threaded filters and filter elements are silicone free.

EC grade filters do not include 55DPIW differential pressure indicator.

Compressed Air Flanged Filters – Series AFW

Series AFW flanged filters are built to ASME VIII and CRN pressure vessel standards. The range includes various model sizes with flow capacities to suit all industrial applications, high capacity filters are available upon request. Unique features of this range include stainless steel internal parts for maintenance free operation, a dual sided differential gauge for easy viewing and a side mounted drain port for permanent connection to an electronic drain or for a drain balance line. Five grades of filter elements are available and have a tie rod construction for easy replacement. The coalescing elements feature a high temperature drainage layer which is resistant to all oils including synthetic coolants. A tough corrosion resistant polyester powder coating both inside and out eliminates corrosion.



Specification

Filter model	Flange size	Flow		Element Model	No. of elements	Dimensions mm				Weight		Dimensions inch			
		L/S	CFM			A	B	C	D	kg	lb	A	B	C	D
AFW1400-N30F-Grade	3"	660	1400	E176-Grade	2	405	190	985	815	98	215	16	7 1/2	39	32
AFW2100-N40F-Grade	4"	990	2100		3	460	245	1005	815	148	326	18 1/4	9 3/4	39 1/2	32
AFW2800-N60F-Grade	6"	1320	2800		4	520	305	1045	815	199	439	20 1/2	12	41	32
AFW3500-N60F-Grade	6"	1651	3500		5	520	305	1045	815	199	439	20 1/2	12	41	32
AFW4200-N60F-Grade	6"	1981	4200		6	560	320	1035	815	243	536	22	12 3/4	40 1/2	32
AFW5600-N80F-Grade	8"	2641	5600		8	610	365	1050	815	293	647	24	14 1/2	41 1/2	32
AFW7000-N80F-Grade	8"	3301	7000		10	710	390	1055	815	353	778	28	15 1/2	41 1/2	32
AFW8400-N100F-Grade	10"	3962	8400		12	710	447	1080	815	353	778	28	17 1/2	42 1/2	32
AFW9800-N100F-Grade	10"	4622	9800		14	710	447	1080	815	425	936	28	17 1/2	42 1/2	32
AFW11200-N100F-Grade	10"	5283	11200		16	840	485	1085	815	551	1214	33	19	42 3/4	32
AFW12600-N100F-Grade	10"	6037	12600		18	840	485	1085	815	551	1214	33	19	42 3/4	32
AFW16100-N120F-Grade	12"	7594	16100		23	On application									

* Filtration grade to ISO 8573-1:2001 (E) (See table below)

Filtration grade	E25	E5	E1	EA	EC
Max. particle size class *	4	3	2	1	1
Max. oil content class*	N/A	4	2	1	1
Particle removal	25 micron	5 micron	1 micron	0.01 micron	0.01 micron
Max. oil carryover 20°C (68°F)	10ppm (10mg/m³)	5ppm (5mg/m³)	0.1ppm (0.1mg/m³)	0.01ppm (0.01mg/m³)	0.003ppm (0.003mg/m³)
Max. temperature	248°F (120°C)	248°F (120°C)	248°F (120°C)	248°F (120°C)	77°F (25°C)
Pressure loss-clean & dry	0.4psi	0.6psi	1.1psi	1.5psi	1.1psi
Pressure loss-oil saturated	0.7psi	1.1psi	2.2psi	4.4psi	See note
Pressure loss-change element	6psi	6psi	6psi	6psi	See notes
Max. working pressure	232psi (1.6MPa)	232psi (1.6MPa)	232psi (1.6MPa)	232psi (1.6MPa)	232psi (1.6MPa)

Note: Reverse flow dust removal filters for installation downstream of regenerative compressed air and gas dryers are available, please insert "R" prior to the filter element grade required. Dust filter elements operate in a dry condition, therefore, the pressure loss oil saturated figure quoted above is not applicable.

Technical Notes

1. Flanged filters are designed and manufactured in accordance with ASME VIII and U Stamped for the USA, CRN approved for use within Canada.

2. Flanged connections are to ANSI class 150.

3. Filter element bottom end caps are internally threaded to ease installation. Direction of air flow inside to out through coalescing filer elements and outside to through activated carbon element.

4. Activated carbon filters must not operate in oil saturated conditions and will not remove certain types of gases including carbon monoxide and carbon dioxide.

5. Grade EC elements must be changed periodically to suit application but at least every 6 months.

6. Activated carbon towers for large applications are available to order. Please contact SMC.

7. Differential pressure indicators are fitted to all models, part number 65DPIW.

8. Inlet and outlet pressure tappings are included to facilitate pressure gauge installation.

9. 1/2" manual drain valves are fitted to AFW1400 to AFW7000, 3/4" fitted to AFW8400 and AFW16100 as standard. An additional 1/2" side entry drain port is included on models AFW1400 to AFW7000, 3/4" to AFW8400 and AFW16100.

10. All filter bodies are coated inside and out with a white paint finish to eliminate corrosion.

11. Flanged filters and filter elements are suitable for use with mineral and synthetic oils plus oil free compressed air applications.

12. Flanged filters and filter elements are silicone free.