

# Compressed Air Filters



JLA, JT & JW Series

# Compressed Air Filters

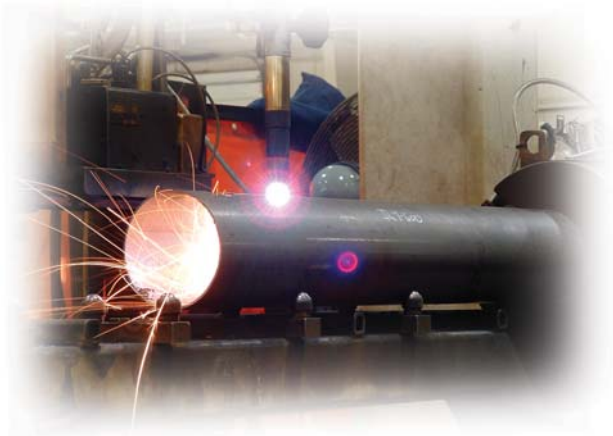
The atmosphere that surrounds us is contaminated with varying concentrations of hydrocarbons and solid particles. These contaminants, when compressed, form a pressurized concentration of contaminated gases, varnished oil and soiled water. Production downtime and unscheduled business interruptions are all too often caused by these concentrated contaminants. Airtek filters protect your air system by removing contaminants before they can do any damage. Keeping your compressed air clean, dry and oil-free is Airtek's specialty.

Maintaining a dry air system, free of unwanted contaminants, results in long life and maximum efficiency of air operated equipment. The investment is small in comparison to the long-term benefits.

There are two types of Airtek JLA filters. The particulate filter removes solids; the coalescing filter removes liquid, aerosols and mists.

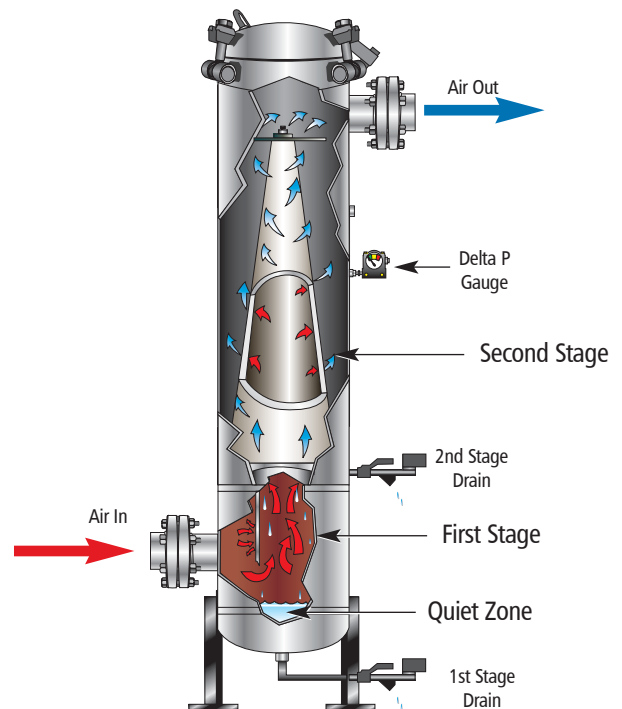


JLA Series



## The JLA Filter Offers:

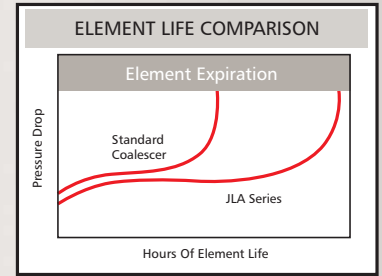
- **Lowest Pressure Drop**
  - Multi-stage design removes bulk liquids and particulate contaminants before they reach the high efficiency element.
- **Greatly Extended Element life**
  - After pre-separation, only a small percentage of contaminants remain to reach the element.
  - Typical element life under normal conditions can exceed one year.
- **Simple Installation & Maintenance**
  - Convenient "top-loading" elements allow for changeout without disturbing inlet/outlet piping or drains.
- **Simple Visual Assurance Of Performance**
  - Standard differential pressure gauge.
- **Lowest Overall Cost Of Operation**
  - As a result of the features noted above, Airtek JLA filters offer the lowest operating cost, saving you thousands of dollars (see page 3).



# Pressure Drop - The Hidden Cost

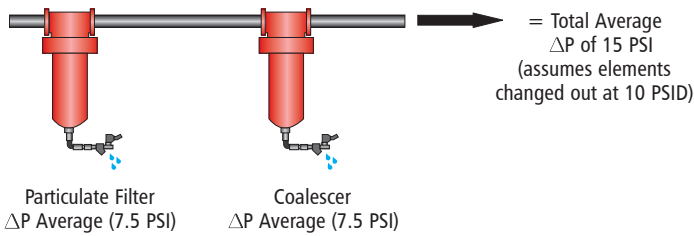
Airtek's JLA Filters provide the highest level of filtration efficiency with the lowest overall operating cost.

- Average pressure drop of only 3.5 PSID over an extended element life, 3-4 times longer than conventional coalescers.
- Element condition indicator standard.
- Element life extended by two-stage design.
- Contaminant load is pre-separated through impingement action and "quiet zone" gravity.
- Remaining oil mist is directed into high efficiency coalescing element.



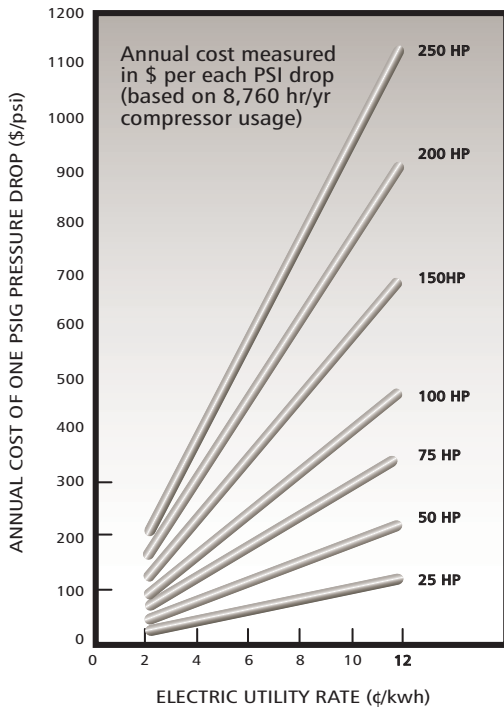
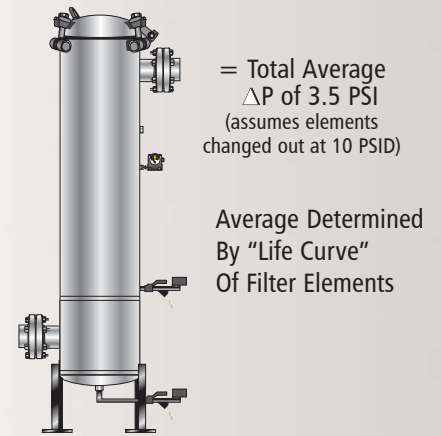
## Typical Competitors Filter Installation

Pressure drop and element life is dependent upon the total contaminant load. Pre-filter is required to remove solids and particles



## Airtek JLA Filter Installation

Two stage filtration process eliminates the need for pre-filters. Contaminants that cause pressure drop are pre-separated, so that they don't become lodged in the element. Average pressure drop, if changed out at 10 PSID, would be only 3.5 PSID.



EXAMPLE: JLA Cost of Pressure Drop, 100 HP Compressed Air System			
<b>KW</b>	= BHP X $\frac{.746}{.90}$	<b>ANNUAL POWER COST</b>	= KW X \$/KWH X HRS/YR
	= 108 X $\frac{.746}{.90}$		= 90 X \$.08 X 8000
	= 90 KW		= \$57,600.00
<b>1 PSIG PRESSURE DROP</b>		= 1/2% OF TOTAL POWER COST	
		= .005 X \$57,600.00	
		= \$288.00	
<b>COMPETITORS FILTER INSTALLED</b>		<b>AIRTEK JLA FILTER INSTALLED</b>	
<b>15 PSIG ΔP</b>	= \$288.00 X 15 PSIG	<b>3.5 PSIG ΔP</b>	= \$288.00 X 3.5 PSIG
	= \$4,320.00		= \$1,008.00
<b>SAVINGS</b> = COST OF COMPETITORS - COST OF AIRTEK JLA FILTER			
= \$4,320.00 - \$1,008.00			
= \$3,312.00 PER YEAR			

# JLA High Performance Elements

Airtek is proud to introduce a revolutionary new concept in filtration. The unique conical shape of Airtek's Apex® elements housed in a cylindrical vessel allows for the reduction of annular velocities as compressed air flows through. Annular velocity is measured in the space between the outside of the filter element and the inside wall of the filter housing. It is in this space that oil particles can be re-entrained into the effluent air stream.

In addition to reduced annular velocities, coalesced oil drains more effectively from the JLA element. As seen in the illustration, with a typical cylindrical element, the coalesced oil in the drain layer must drop out and fall against the flow of air making its way out of the housing. In the JLA element the oil rolls down the outer drain layer and is virtually unaffected by the airflow. This combination results in the most effective separation of contaminant from the air stream.

With typical cylinder shaped elements the purified air flows along the element, the velocity continually increases to its maximum speed at the top of the element. The higher the annular velocity the greater the potential for liquid re-entrainment back into your air system.

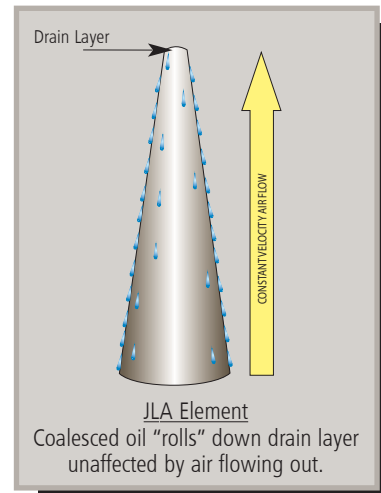
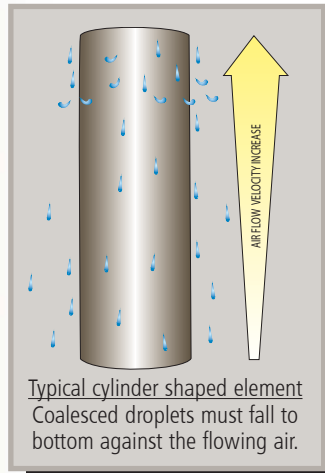
With the Apex® element there is no increase in velocity, rather the airflow is evenly distributed across the face of the element. This design has also been proven to be less affected by slugs of liquids, thereby enhancing performance and reliability.

Combined with the pre-separation of bulk contaminants in the dual-stage filter housing, the JLA filter offers superior performance, and economy.

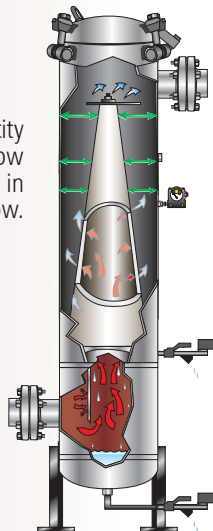


- Coalescing - Standard
  - Removes Aerosols and Solids Down to .001  $\mu\text{m}$ 
    - .008 PPM
    - 99.9+% DOP Rated (0.3 to 0.6  $\mu\text{m}$ )
    - <1 PSID - Clean

- Particulate
  - Removes Solids
    - 98.5% DOP
    - 0.9 Micron Absolute
    - <1 PSID - Clean



Annular velocity remains low and constant in direction of flow.



- Extremely low pressure drop
- Extended element life
- High removal efficiency
- No hassle element replacement
- Economical

# JW & JT In-Line Filters

Airtek "JW" and "JT" in-line filters are designed for standard industrial service. They are ideal for small to medium size systems, point of use applications and the replacement of older, less efficient filters.

The "JW" housing (15 to 300 SCFM) consists of two sections. The head section is a die cast zinc. The two sections work synergistically with the filter element to purify the flow of compressed air.

The fabricated steel "JT" housing (400 to 1600 SCFM) is engineered to maintain low velocities, minimize pressure drop and prevent re-entrainment.

All Airtek filter assemblies are available with pressure differential indicators and electronic drain systems. The JLA and "JT" come standard with stainless steel identification plates. To prolong element life and prevent overloading, both "JW" and "JT" filters should be installed downstream of an air receiver, after cooler and centrifugal separator. A high quality electronic drain valve protected by an in-line "Y" strainer is recommended for all drain points. When excessive contamination is present, a particulate filter should be installed upstream from the coalescer.



JW Series

JT Series

## Accessories

Airtek has a complete selection of automatic condensate drains for use with your filters. The product line consists of Mechanical Drains, Electronic Timed Drains, Zero Air Loss Demand Drains, and Pneumatically Operated Drains.



Airtek Oil/Water Separators set a new standard in providing the most advanced technology for reducing the lubricant volume in compressed air condensate, destined for disposal. Using an Airtek Oil/Water Separator can reduce the cost of handling contaminated condensate by as much as 98%.

Standard equipment on all JLA and JT Filters, pressure differential gauges indicate the need for element replacement.



# Typical Compressed Air System

Compressed Air Source

## Coalescer

**General Plant Air:** High efficiency coalescing applications when removal of liquid and suspended fines are required.

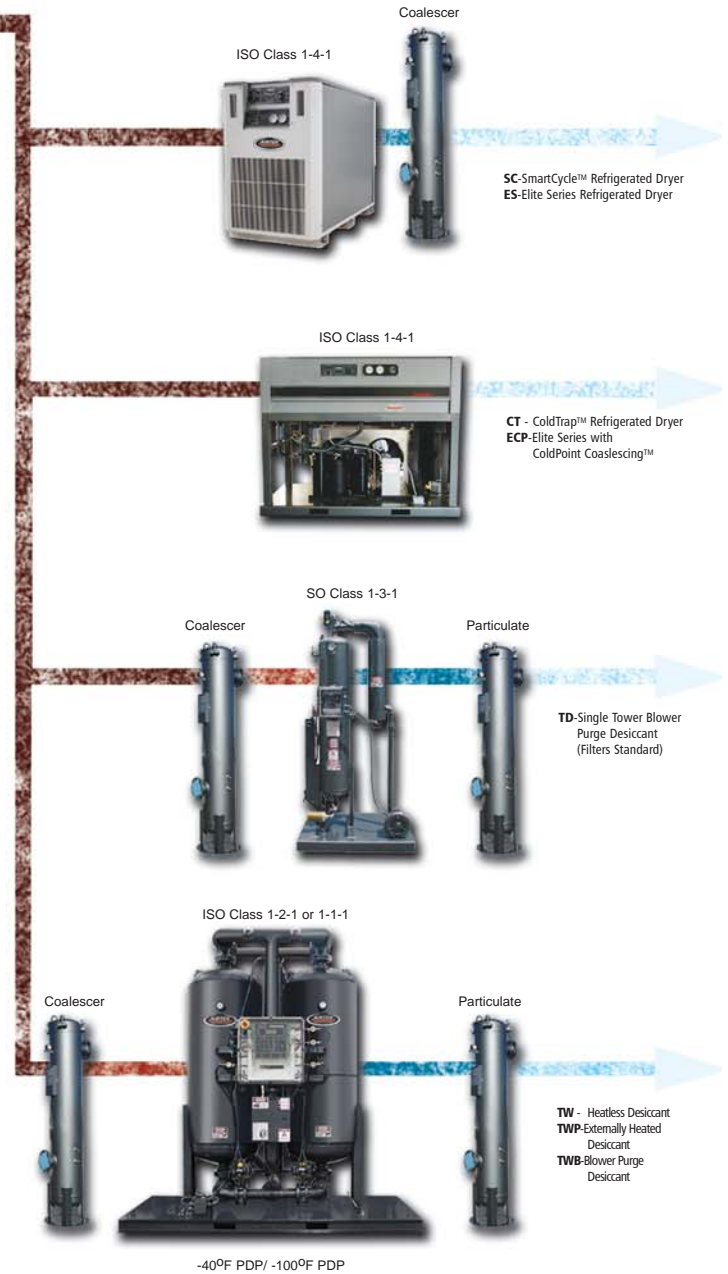
**Air Dryer System:** Pre-filter protection for desiccant type air dryers. Maintains dryer efficiency by preventing coating of bed with oil or varnish. Removes condensed water, leaving only vapors for dryer to remove. Prevents catastrophic oil flood should separator fail.

## Particulate

**General Plant Air:** Prefilter for coalescers where solid particle contaminates show heavy presence. Source particulate filtration where very high dirt loading capacity is required.

**Air Dryer System:** Safety after-filter for desiccant type dryers to control dusting to the 3µm absolute level.

Note: Airtek JLA Series Filters do not require particulate pre-filtration as they incorporate a multi-stage design that satisfies the pre-filter requirements stated above.



## Correction Factors

Line Pressure	bar g	1	2	3	4	6	7	8	11	14	17
	psig	15	30	45	60	85	100	115	150	200	250
Correction Factor		0.29	0.38	0.48	0.64	0.83	1.00	1.15	1.44	1.85	2.32

For Maximum flow rate, multiply model flow rate shown by the correction factor corresponding to the working pressure.

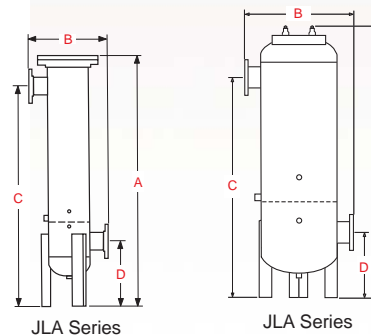
ISO 8573.1 Quality Class	Solid		Water		Oil
	Maximum Particle Size (µm)	Max. Concentration ppm (mg/m <sup>3</sup> )	Max. Pressure Dewpoint °F (°C)		Max. Concentration ppm (mg/m <sup>3</sup> )
1	0.1	.08 (0.1)	-94 (-70)		.008 (0.01)
2	1	.8 (1)	-40 (-40)		.08 (0.1)
3	5	4.2 (5)	-4 (-20)		.83 (1)
4	15	6.7 (8)	37 (+3)		4.2 (5)
5	40	8.3 (10)	45 (+7)		21 (25)
6	-	-	50 (+10)		-

# JLA Specifications & Dimensions

JLA - Coalescer Series									
Model	Capacity SCFM @ 100 PSIG (Nm <sup>3</sup> /min@6.9 Bar)		Pipe Size	Filter Quantity	Dimensions				Weight Lbs (Kg)
					A In (mm)	B In (mm)	C In (mm)	D In (mm)	
JLA-200-C	200	(5.6)	2" NPT	1	26" (660)	6" (152)	22 1/4" (565)	4 1/2" (114)	18 (8)
JLA-400-C	400	(11.3)	2.5" NPT	1	41 7/8" (1064)	6" (152)	37" (940)	4 1/2" (114)	71 (32)
JLA-800-C	800	(22.6)	2.5" NPT	1	64 3/4" (1645)	7 5/8" (194)	56 1/4" (1429)	12" (305)	80 (36)
JLA-803-C	800	(22.6)	3" NPT	1	64 3/4" (1645)	7 5/8" (194)	56 1/4" (1429)	12" (305)	87 (39)
JLA-1100-C	100	(31.1)	3" FLG	1	64 3/4" (1645)	12 3/4" (324)	56 1/4" (1429)	12" (305)	98 (44)
JLA-1104-C	100	(31.1)	4" FLG	1	64 3/4" (1645)	12 3/4" (324)	56 1/4" (1429)	12" (305)	112 (51)
JLA-1600-C	1600	(45.3)	4" FLG	2	80 1/4" (2038)	19 5/8" (498)	65" (1651)	16 1/2" (419)	196 (89)
JLA-2100-C	2100	(59.5)	4" FLG	3	80 1/4" (2038)	19 5/8" (498)	65" (1651)	16 1/2" (419)	201 (91)
JLA-2106-C	2100	(59.5)	6" FLG	3	80 1/4" (2038)	19 5/8" (498)	65" (1651)	16 1/2" (419)	221 (100)
JLA-3200-C	3200	(90.6)	4" FLG	4	86 3/8" (2194)	22" (559)	71 3/4" (1822)	18" (457)	430 (195)
JLA-3206-C	3200	(90.6)	6" FLG	4	86 3/8" (2194)	22" (559)	71 3/4" (1822)	18" (457)	450 (204)
JLA-3600-C	3600	(101.9)	6" FLG	5	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	370 (168)
JLA-4500-C	4500	(127.4)	6" FLG	6	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	373 (169)
JLA-5000-C	5000	(141.6)	6" FLG	7	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	376 (171)
JLA-5008-C	500	(141.6)	8" FLG	7	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	390 (177)
JLA-5600-C	5600	(158.6)	6" FLG	7	88 1/8" (2238)	26" (660)	71 3/4" (1822)	18" (457)	590 (268)
JLA-5608-C	5600	(158.6)	8" FLG	7	88 1/8" (2238)	26" (660)	71 3/4" (1822)	18" (457)	596 (270)
JLA-7200-C	7200	(203.9)	8" FLG	9	98" (2489)	28" (711)	79 3/4" (2026)	25" (635)	610 (277)
JLA-7210-C	7200	(203.9)	10" FLG	9	98" (2489)	28" (711)	79 3/4" (2026)	25" (635)	620 (281)
JLA-9500-C	9500	(269)	8" FLG	12	101 1/4" (2572)	30" (762)	79 3/4" (2026)	25" (635)	980 (445)
JLA-9510-C	9500	(269)	10" FLG	12	101 1/4" (2572)	30" (762)	79 3/4" (2026)	25" (635)	996 (452)
JLA-12000-C	12000	(339.8)	10" FLG	15	102 1/8" (2594)	32" (813)	79 3/4" (2026)	25" (635)	896 (406)
JLA-12012-C	12000	(339.8)	12" FLG	15	102 1/8" (2594)	32" (813)	79 3/4" (2026)	25" (635)	910 (412)

JLA - Particulate & High Temperature Series										
Particulate Model	High Temp Model	Capacity SCFM @ 100 PSIG (Nm <sup>3</sup> /min@6.9 Bar)		Pipe Size	Filter Quantity	Dimensions				Weight Lbs (Kg)
						A In (mm)	B In (mm)	C In (mm)	D In (mm)	
JLA-330-F	JLA-330-FH	330	(9.3)	2" NPT	1	26" (660)	6" (152)	22 1/4" (565)	4 1/2" (114)	18 (8)
JLA-650-F	JLA-650-FH	650	(18.4)	2.5" NPT	1	41 7/8" (1064)	6" (152)	37" (940)	4 1/2" (114)	71 (32)
JLA-1250-F	JLA-1250-FH	1250	(35.3)	2.5" NPT	1	64 3/4" (1645)	7 5/8" (194)	56 1/4" (1429)	12" (305)	80 (36)
JLA-1253-F	JLA-1253-FH	1250	(35.3)	3" NPT	1	64 3/4" (1645)	7 5/8" (194)	56 1/4" (1429)	12" (305)	87 (39)
JLA-1800-F	JLA-1800-FH	1800	(50.9)	3" FLG	1	64 3/4" (1645)	12 3/4" (324)	56 1/4" (1429)	12" (305)	98 (44)
JLA-1804-F	JLA-1804-FH	1800	(50.9)	4" FLG	1	64 3/4" (1645)	12 3/4" (324)	56 1/4" (1429)	12" (305)	112 (51)
JLA-2600-F	JLA-2600-FH	2600	(73.6)	4" FLG	2	80 1/4" (2038)	19 5/8" (498)	65" (1651)	16 1/2" (419)	196 (89)
JLA-3500-F	JLA-3500-FH	3500	(99.1)	4" FLG	3	80 1/4" (2038)	19 5/8" (498)	65" (1651)	16 1/2" (419)	201 (91)
JLA-3506-F	JLA-3506-FH	3500	(99.1)	6" FLG	3	80 1/4" (2038)	19 5/8" (498)	65" (1651)	16 1/2" (419)	221 (100)
JLA-5300-F	JLA-5300-FH	5300	(150)	4" FLG	4	86 3/8" (2194)	22" (559)	71 3/4" (1822)	18" (457)	430 (195)
JLA-5306-F	JLA-5306-FH	5300	(150)	6" FLG	4	86 3/8" (2194)	22" (559)	71 3/4" (1822)	18" (457)	450 (204)
JLA-6000-F	JLA-6000-FH	6000	(169.9)	6" FLG	5	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	370 (168)
JLA-7500-F	JLA-7500-FH	7500	(212.3)	6" FLG	6	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	373 (169)
JLA-8300-F	JLA-8300-FH	8300	(235)	6" FLG	7	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	376 (171)
JLA-8308-F	JLA-8308-FH	8300	(235)	8" FLG	7	87 7/8" (2232)	25" (635)	71 3/4" (1822)	18" (457)	390 (177)
JLA-9300-F	JLA-9300-FH	9300	(263.3)	6" FLG	7	88 1/8" (2238)	26" (660)	71 3/4" (1822)	18" (457)	590 (268)
JLA-9308-F	JLA-9308-FH	9300	(263.3)	8" FLG	7	88 1/8" (2238)	26" (660)	71 3/4" (1822)	18" (457)	596 (270)
JLA-12000-F	JLA-12000-FH	12000	(339.8)	8" FLG	9	98" (2489)	28" (711)	79 3/4" (2026)	25" (635)	610 (277)
JLA-12010-F	JLA-12010-FH	12000	(339.8)	10" FLG	9	98" (2489)	28" (711)	79 3/4" (2026)	25" (635)	620 (281)
JLA-15000-F	JLA-15000-FH	15000	(424.7)	8" FLG	12	101 1/4" (2572)	30" (762)	79 3/4" (2026)	25" (635)	980 (445)
JLA-15010-F	JLA-15010-FH	15000	(424.7)	10" FLG	12	101 1/4" (2572)	30" (762)	79 3/4" (2026)	25" (635)	996 (452)
JLA-20000-F	JLA-20000-FH	20000	(566.3)	10" FLG	15	102 1/8" (2594)	32" (813)	79 3/4" (2026)	25" (635)	896 (406)
JLA-20012-F	JLA-20012-FH	20000	(566.3)	12" FLG	15	102 1/8" (2594)	32" (813)	79 3/4" (2026)	25" (635)	910 (412)

Note - Due to continuing research and development specifications and dimensions are subject to change without notice.

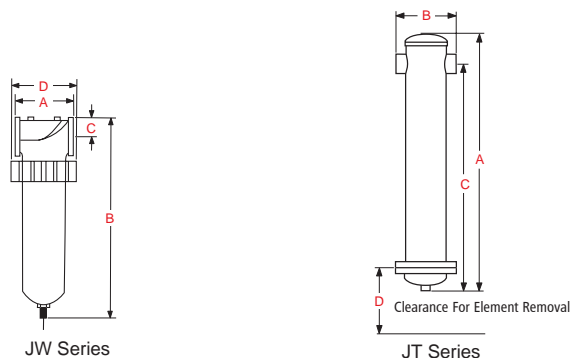


# JW & JT Specifications and Dimensions

JW & JT Series													
Model No.	Pipe Size	Capacity SCFM @ 100 PSIG (Nm <sup>3</sup> /hr @ 7 bar)					Dimensions				Weight lbs. (kg.)	Replacement Elements	
		Coalescer			Particulate F	Adsorber A	A	B	C	D		Model No.	Box Qty.
		Grade C Std.	Grade C 8	Grade C 10									
JW0015-*	1/4"	15 (26)	20 (34)	25 (43)	25 (43)	15 (26)	3 1/4" (82.6)	7 1/4" (184.2)	1" (25.4)	3 3/4" (95.3)	3 (2)	JE-*0020	8
JW0020-*	3/8"	20 (34)	27 (47)	33 (57)	33 (57)	20 (34)	3 1/4" (82.6)	7 1/4" (184.2)	1" (25.4)	3 3/4" (95.3)	3 (2)	JE-*0020	8
JW0050-*	1/2"	50 (85)	68 (116)	83 (144)	83 (144)	50 (85)	3 1/4" (82.6)	10 3/8" (263.5)	1" (25.4)	3 3/4" (95.3)	3 (2)	JE-*0050	4
JW0085-*	3/4"	85 (147)	116 (201)	141 (245)	141 (245)	85 (147)	4" (101.6)	13" (330.2)	1 1/4" (31.8)	5" (127)	5 (3)	JE-*0110	4
JW0110-*	1"	110 (191)	150 (260)	166 (288)	166 (288)	110 (191)	4" (101.6)	13" (330.2)	1 1/4" (31.8)	5" (127)	5 (3)	JE-*0110	4
JW0150-*	1"	150 (260)	205 (355)	232 (402)	232 (402)	150 (260)	4" (101.6)	22 5/8" (574.7)	1 1/4" (31.8)	5" (125)	8 (4)	JE-*0150	2
JW0200-*	1 1/2"	220 (382)	293 (508)	365 (634)	365 (634)	220 (382)	5 1/4" (133.4)	23 1/2" (596.9)	1 5/8" (41.3)	5 1/4" (133.4)	16 (8)	JE-*0200	1
JW0300-*	1 1/2"	300 (521)	400 (694)	500 (868)	500 (868)	300 (521)	5 1/4" (133.4)	23 1/2" (596.9)	1 5/8" (41.3)	5 1/4" (133.4)	16 (8)	JE-*0300	1
JT0400-*	2"	400 (694)	532 (923)	664 (1153)	664 (1153)	400 (694)	36 3/4" (933.4)	8 7/8" (225.4)	32 1/2" (825.5)	23" (584.2)	53 (24)	JE-*0400	1
JT0600-*	2"	650 (1128)	830 (1440)	1035 (1796)	1035 (1796)	650 (1128)	36 3/4" (933.4)	8 7/8" (225.4)	32 1/2" (825.5)	23" (584.2)	53 (24)	JE-*0600	1
JT0602-*	2 1/2"	650 (1128)	830 (1440)	1035 (1796)	1035 (1796)	650 (1128)	36 3/4" (933.4)	8 7/8" (225.4)	32 1/2" (825.5)	23" (584.2)	53 (24)	JE-*0600	1
JT0800-*	2 1/2"	800 (1389)	1064 (1847)	1223 (2123)	1223 (2123)	800 (1389)	41 1/4" (1047.8)	10 1/2" (266.7)	37" (939.8)	28" (711.2)	57 (26)	JE-*0800	1
JT0803-*	3"	800 (1389)	1064 (1847)	1223 (2123)	1223 (2123)	800 (1389)	41 1/4" (1047.8)	10 1/2" (266.7)	37" (939.8)	28" (711.2)	59 (27)	JE-*0800	1
JT1000-*	3"	1000 (1736)	1330 (2308)	1660 (2882)	1660 (2882)	1000 (1736)	48 1/4" (1225.6)	13 3/8" (339.7)	41" (1041.4)	28" (711.2)	225 (102)	JE-*1000	1
JT1250-*	3" FL	1250 (2170)	1600 (2777)	2080 (3611)	2080 (3611)	1250 (2170)	53 3/4" (1365.3)	21" (533.4)	43 5/8" (1158.9)	28" (711.2)	360 (164)	JE-*1600	1
JT1600-*	4" FL	1600 (2777)	1800 (3124)	2490 (4323)	2490 (4323)	1600 (2777)	53 3/4" (1365.3)	21" (533.4)	43 5/8" (1158.9)	28" (711.2)	366 (166)	JE-*1600	1
JT2000-*	4" FL	2000 (3472)	2400 (4166)	3320 (5764)	3320 (5764)	2000 (3472)	50 1/2" (1282.7)	23" (584.2)	40 3/4" (1035.1)	25" (635)	450 (204)	JE-*2000	1
JT2600-*	4" FL	2600 (4513)	3120 (5416)	4330 (7517)	4330 (7517)	2600 (4513)	61 1/2" (1562.1)	23" (584.2)	51 1/2" (1308.1)	36" (914.4)	460 (209)	JE-*3000	1
JT3000-*	6" FL	3000 (5208)	3600 (6250)	4980 (8645)	4980 (8645)	3000 (5208)	61 1/2" (1562.1)	23" (584.2)	51 1/2" (1308.1)	36" (914.4)	460 (209)	JE-*3000	1

\*Add appropriate suffix (C6, C8, C10, F, A) to designate coalescer, particulate or adsorber.

Note - Due to continuing research and development specifications and dimensions are subject to change without notice.



Patents issued: 6,099,620; 5,207,072; 5,099,655; 5,062,571; other patents pending. The equipment indicated in the catalog is meant for use in operating "compressed air driven" apparatuses. At no time should any Airtek equipment be used for breathing air situations unless all government regulations regarding breathing air are met.

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