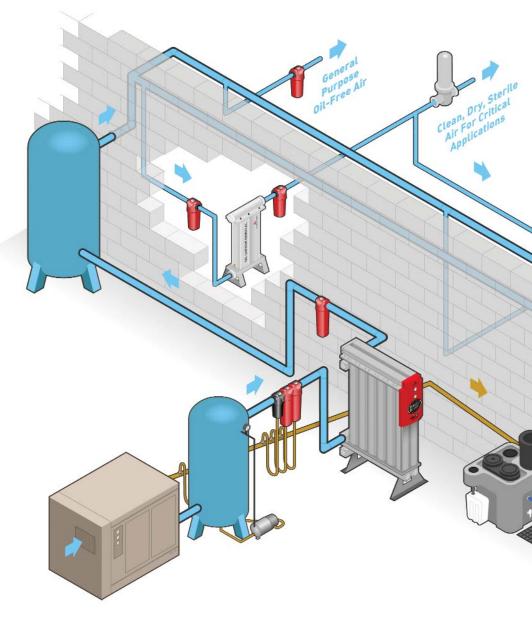




aerospace
climate control
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filtration
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process control
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OIL-X EVOLUTION

High Efficiency Compressed Air & Gas Filters







OIL-X EVOLUTION

High Efficiency Compressed Air Filtration

OIL-X EVOLUTION is a range of high efficiency compressed air filters consisting of coalescing filter grades for the removal of water and oil aerosols, solid particulates & micro-organisms, dust filter grades for the removal of dry particulate and micro-organisms and adsorption filters for the removal of oil vapor and odors.

Compressed air purification equipment must deliver uncompromising performance and reliability while providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or indeed their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.

The Parker domnick hunter Design Philosophy

Parker domnick hunter has been supplying industry with high efficiency filtration and purification products since 1963. Our philosophy 'Designed for Air Quality & Energy Efficiency' ensures products that not only provide the user with clean, high quality compressed air, but also with low lifetime costs and reduced $\rm CO_2$ emissions.





Benefits:

- Delivered Air quality in accordance with ISO 8573-1:2001, the international standard for compressed air quality.
- Filtration performance independently verified by Lloyds Register.
- Coalescing filters performance tested to the stringent requirements of ISO 12500-1.
- Dust removal and adsorption filters tested in accordance with the test methods of the ISO 8573 series.
- Suitable for all compressed air applications and all compressor types.
- Pressure losses start low and stay low to save energy, money and the environment.
- · Low lifetime costs.
- Coalescing and dust removal filters are covered by one year compressed air quality guarantee which is automatically renewed with annual maintenance.
- All OIL-X EVOLUTION filter housings are covered by a 10 year housing guarantee.
- Helps reduce the release of CO₂ into the environment.



Air quality

The Parker domnick hunter OIL-X EVOLUTION range of die-cast compressed air filters have been designed from the outset to meet the air quality requirements of ISO 8573-1:2001, when validated in accordance with the requirements of ISO 12500-1.

Correct selection of filtration media

Coalescing and dust removal filters use a high efficiency borosilicate glass nanofiber material which has a 96% voids volume, providing media with excellent filtration efficiency and a high dirt holding capacity.



Construction of the filtration media into a filter element

OIL-X EVOLUTION filter media is constructed into a filter element using a unique deep bed pleating technique in place of the more conventional wrapped construction. This provides 450% more filtration surface area when compared to a traditional wrapped filter element and around 200% more surface area compared to a traditional pleated element.

Deep bed pleating also reduces the air flow velocity within the media, which <u>further improves filtration</u> performance.

Additionally, the high efficiency AA and AAR grade elements have a unique graded density media construction which provides even greater filtration performance without adding to pressure loss or energy consumption.



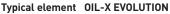
OIL-X EVOLUTION coalescing filters utilize four drainage methods to ensure high performance liquid removal, while conventional filters use only one.





Drainage method 1

High efficiency drainage layer provides increased liquid drainage, improved chemical compatibility and higher operational temperatures when compared to ordinary materials.







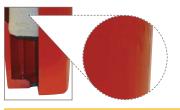
Drainage method 2

Typical filter elements have a build up of liquid known as a "wet band" where the drainage layer is glued into the lower endcap. The OIL-X EVOLUTION design wraps the drainage layer under the lower endcap to remove coalesced liquid from the air flow path, increasing liquid removal efficiency, and providing more usable filtration surface area.



Drainage method 3

Surface tension breakers on the lower filter element endcap provide fast and efficient drainage of coalesced liquid.



Drainage method 4

Drainage ribs cast into the filter bowl compress the lower part of the filter element, allowing bulk liquid to rapidly drain from the filter element through capillary action.

Energy efficiency

Any restriction to airflow within a filter housing and element will reduce the system pressure. To generate compressed air, large amounts of electrical energy are consumed, therefore any pressure lost within the system can be directly converted into a cost for wasted energy. The higher the pressure loss, the higher the energy costs.

Providing an optimal flow path for the compressed air through the filter housing and element is key to reducing system operating costs

Pressure loss in a compressed air filter is a combination of fixed pressure losses and incremental pressure losses.

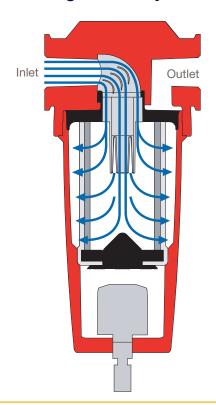
Fixed pressure losses are derived from the filter housing and the interface between the filter housing and filter element.

Incremental pressure losses are directly related to the filter element as it blocks up with contamination.

In most filters, high operational costs can be attributed to a poorly designed airflow path within the filter housing element and poorly selected filtration media.

In addition to this, the high differential pressure "change points" recommended by many filter manufacturers increase operational costs even further.

OIL-X EVOLUTION die-cast filters optimized flow path from patented Aerospace Flow Management System





"Bell mouth" housing inlet & full flow inlet conduit



Smooth 90° elbow & aerospace turning vanes



Flow distributor



Conical flow diffuser



Deep bed pleating

Deep bed pleating reduces the air flow velocity within the filtration media. This both improves filtration performance of the filter element and also reduces pressure losses.



Specialist media treatment

All OIL-X EVOLUTION coalescing and dust removal filter media includes a specialist treatment. This actively repels oil and water to ensure that coalesced liquid does not reduce the voids volume. Maintaining a high voids volume reduces the risk of premature blockage, system pressure losses and high energy consumption.

Advanced filter housings

OIL-X EVOLUTION die-cast and carbon steel fabricated filter housings provide simple installation, and long housing life with reduced maintenance. The unique design of the OIL-X EVOLUTION die-cast filter also provides more port sizes to give greater application flexibility. A 'clean change' element design ensures that service technicians do not have to directly handle contaminated filter elements during maintenance.







Filter connections

More port sizes are available to match both pipe size and system flow rate giving additional customer choice and reduced installation costs. Standard range suitable for pressures up to 232 psi g (16 bar g).



No corrosion Rapid corrosion with Alocrom of untreated aluminum.

Compact and lightweightAdvanced element design provid

Advanced element design provides a smaller, more compact filter.

Full corrosion protection

OIL-X EVOLUTION filter housings undergo cleaning, de-greasing and Alocrom treatment before painting. This not only primes the aluminum surface for painting, but also provides corrosion protection. All OIL-X EVOLUTION filter housings are protected with a tough, durable dry powder epoxy coating.



'Clean change' filter element

Filter element changes are now easy and do not require the user to directly handle the contaminated element during annual maintenance.

Minimal service clearance

Space saving design minimizes service clearance and allows installation in confined spaces.



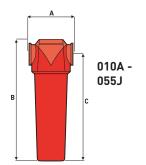
Special endcap design allows for quick and easy maintenance.

NT Easy fit element technology for carbon steel fabricated filters

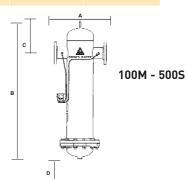
- Low pressure drop when compared to traditional wrapped filter elements.
- Drainage layer is suitable for use up to 212°F (100°C) and is compatible with all compressor oils.
- No tie-rod to reduce pressure drop and simplify installation.

Technical specifications

Model	Drain Option	Drain Option Maximum Operating Pressure		Minimum Recommended Operating Temperature	
AO/AA 010 - 060	Float	232 psi g (16 bar g)	212°F (100°C)	35°F (1.5°C)	
AO/AA/AR/AAR 010 - 060	Manual	290 psi g (20 bar g)	212°F (100°C)	35°F (1.5°C)	
ACS 010 - 060	Manual	290 psi g (20 bar g)	86°F (30°C)	35°F (1.5°C)	
AC	Automatic	232 psi g (16 bar g)	86°F (30°C)	35°F (1.5°C)	
AO/AA/AR/AAR/ACS 100M - 500S	Manual & Float	232 psi g (16 bar g)	212°F (100°C)	35°F (1.5°C)	









Weights and dimensions

Model	Pipe Size	1	4	ı	В		С		D	l l	E	Weig	ght
модец	Pipe Size	ins	mm	ins	mm	ins	mm	ins	mm	ins	mm	lbs	k
010A	1/4" NPT	3.0	76	7.2	181.5	6.0	153.2	-	-	-	-	0.88	C
010B	³/₃" NPT	3.0	76	7.2	181.5	6.0	153.2	-	-	-	-	0.88	C
010C	1/2" NPT	3.0	76	7.2	181.5	6.0	153.2	-	-	-	-	0.88	(
015B	³∕₃" NPT	3.8	97.5	9.3	235	7.9	201	_	_	_	_	2.2	
015C	1/2" NPT	3.8	97.5	9.3	235	7.9	201	-	-	-	-	2.2	
020C	1/2" NPT	3.8	97.5	9.3	235	7.9	201	-	_	-	-	2.2	
020D	3/4" NPT	3.8	97.5	9.3	235	7.9	201	_	_	_	_	2.2	
020E	1" NPT	3.8	97.5	9.3	235	7.9	201	_	_	_	_	2.2	
025D	3/4" NPT	5.1	129	10.8	274.8	9.2	232.5	_	_	_	_	4.84	2
025E	1" NPT	5.1	120	10.8	274.8	9.2	232.5	_	_	_	_	4.84	2
030E	1" NPT	5.1	129	14.3	364.3	12.7	322		_			5.72	2
030F	11/4" NPT	5.1	129	14.3	364.3	12.7	322		_		_	5.72	2
030G	1½" NPT	5.1	129	14.3	364.3	12.7	322	_	_		_	5.72	2
035F	11/4" NPT	6.7	170	17.0	432.5	15.1	382.5		_		_	9.9	4
035G	1½" NPT	6.7	170	17.0	432.5	15.1	382.5		_			9.9	4
040G	1½" NPT	6.7	170	20.6	524.5	18.7	474.5	_	_	_		11.55	5
040H	2" NPT	6.7	170	20.6	524.5	18.7	474.5	-	-	-		11.55	5
045H	2" NPT		170		524.5		474.5	-	-	-			5
		6.7		20.6		18.7		-	-	-	-	11.55	
0501	21/2" NPT	8.1	204.8	25.3	641.6	22.9	581.6	-	-	-	-	22	
050J	3" NPT	8.1	204.8	25.3	641.6	22.9	581.6	-	-	-	-	22	
0551	21/2" NPT	8.1	204.8	32.8	832.1	30.4	772.1	-	-	-	-	26.4	
055J	3" NPT	8.1	204.8	32.8	832.1	30.4	772.1	-	-	-	-	26.4	
060K	4" NPT	16.5	420	3.2	82	43.1	1095	13.2	335	22.4	570	98	4
2100M*	2" Flg	CF	CF	CF	CF	CF	CF	CF	CF	-	-	CF	(
2150N*	3" Flg	CF	CF	CF	CF	CF	CF	CF	CF	-	-	CF	(
2200N*	3" Flg	14.6	371.5	48.0	1219.2	10.0	254.0	21.0	533.4	-	-	CF	(
22500*	4" Flg	21.1	536.6	55.9	1419.9	13.0	330.2	21.0	533.4	-	-	330.0	14
23000*	4" Flg	21.1	536.6	55.9	1419.9	13.0	330.2	21.0	533.4	-	-	330.0	14
2350P*	6" Flg	23.8	603.3	56.6	1437.6	14.4	365.1	24.0	609.6	-	-	360.0	16
2400Q*	8" Flg	28.8	730.3	66.0	1676.4	19.0	482.6	30.0	762.0	-	-	400.0	18
2450R*	10" Flg	29.1	739.8	63.4	1610.4	19.3	489.0	31.5	800.1	-	-	450.0	20
2500S*	12" Flg	39.4	1000.1	71.3	1811.0	22.0	558.8	36.0	914.4	-	-	600.0	27
AC010A	1/4" NPT	3	76	6	153.5	12.3	311.5	-	-	-	-	1.79	0
AC010B	³∕₃" NPT	3	76	6	153.5	12.3	311.5	-	-	-	-	1.79	0
AC010C	1 / 2" NPT	3	76	6	153.5	12.3	311.5	-	-	-	-	1.79	0
AC015B	³∕/₃" NPT	3.8	97.5	9.3	235	18.7	474.5	-	-	-	-	3.53	1
AC015C	1 / 2" NPT	3.8	97.5	9.3	235	18.7	474.5	-	-	-	-	3.53	1
AC020C	1 / 2" NPT	3.8	97.5	9.3	235	18.7	474.5	-	-	-	-	3.20	1
AC020D	3/4" NPT	3.8	97.5	9.3	235	18.7	474.5	-	-	-	-	3.20	1
AC020E	1" NPT	3.8	97.5	9.3	235	18.7	474.5	-	-	-	-	3.20	1
AC025D	3 / 4" NPT	5.1	129	10.8	275	21.8	554	-	-	-	-	7.80	3
AC025E	1" NPT	5.1	129	10.8	275	21.8	554	-	-	-	-	7.60	3
AC030E	1" NPT	5.1	129	14.3	364	28.9	733	-	-	-	-	9.04	4
AC030F	11/4" NPT	5.1	129	14.3	364	28.9	733	-	-	-	-	9.04	4
	1½" NPT	5.1	129	14.3	364	28.9	733					9.04	4

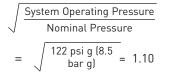
Product selection

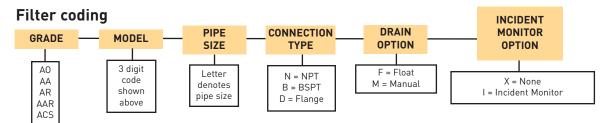
Stated flows are at 100 psi g (7 bar g) ANR conditions. For flows at other pressures apply the correction factors shown.

Model	Pipe Size	scfm	Nm³/hr	L/s	Replacement Element Kit	No.
(grade) 010 AN□X	1/4" NPT	21	36	10	010 (grade)	1
(grade) 010BN□X	⅓" NPT	21	36	10	(010) grade	1
(grade) 010CN□X	1/2" NPT	21	36	10	(010) grade	1
(grade) 015BN□□	%" NPT	42	72	20	015 (grade)	1
(grade) 015CN□□	1/2" NPT	42	72	20	015 (grade)	1
(grade) 020CN□□	1/2" NPT	64	108	30	020 (grade)	1
(grade) 020DN□□	3/4" NPT	64	108	30	020 (grade)	1
(grade) 020EN□□	1" NPT	64	108	30	(020) grade	1
(grade) 025DN□□	3/4" NPT	127	216	60	025 (grade)	1
(grade) 025EN□□	1" NPT	127	216	60	025 (grade)	1
(grade) 030EN□□	1" NPT	233	396	110	030 (grade)	1
(grade) 030FN□□	11/4" NPT	233	396	110	030 (grade)	1
(grade) 030GN□□	1½" NPT	233	396	110	030 (grade)	1
(grade) 035FN□□	11/4" NPT	339	576	160	035 (grade)	1
(grade) 035GN□□	1½" NPT	339	576	160	035 (grade)	1
(grade) 040GN□□	1½" NPT	466	792	220	040 (grade)	1
(grade) 040HN□□	2" NPT	466	792	220	040 (grade)	1
(grade) 045HN□□	2" NPT	699	1188	330	045 (grade)	1
(grade) 050IN□□	21/2" NPT	911	1548	430	050 (grade)	1
(grade) 050JN	3" NPT	911	1548	430	050 (grade)	1
(grade) 055IN□□	21/2" NPT	1314	2232	620	055 (grade)	1
(grade) 055JN🗆🔾	3" NPT	1314	2232	620	055 (grade)	1
(grade) 060KN□□	4" NPT	2119	3600	1000	060 (grade)	3
(grade) 2100MD□□	2" Flg	466	792	220	100 (grade)	1
(grade) 2150ND	3" Flg	911	1548	430	150 (grade)	1
(grade) 2200ND	3" Flg	1314	2232	620	200 (grade)	1
(grade) 22500D□□	4" Flg	2119	3600	1000	060 (grade)	3
(grade) 23000D	4" Flg	2755	4681	1300	060 (grade)	4
(grade) 2350PD□□	6" Flg	4132	7020	1950	060 (grade)	6
(grade) 2400QD□□	8" Flg	6886	11700	3250	060 (grade)	10
(grade) 2450RD□□	10" Flg	11018	18720	5200	060 (grade)	16
(grade) 2500SD□□	12" Flg	16524	28075	7799	060 (grade)	20

Line P	Correction			
		Factor		
psi g	bar g	ractor		
15	1	0.38		
29	2	0.53		
44	3	0.65		
58	4	0.76		
73	5	0.85		
87	6	0.93		
100	7	1.00		
116	8	1.07		
131	9	1.13		
145	10	1.19		
160	11	1.25		
174	12	1.31		
189	13	1.36		
203	14	1.41		
218	15	1.46		
232	16	1.51		
247	17	1.56		
261	18	1.60		
275	19	1.65		
290	20	1.70		

To find the Correction factor for 122 psi g (8.5 bar g) =





Ordering Example: To order a grade AO filter, model 040 with 2" connection, NPT threaded, float drain with incident monitor, your nomenclature would be AO040HNFI.

- 1. Incident monitor is not available on model 010.
- 2. AC/AAR/AC must be ordered with manual drain.
- 3. AA/AO available only with manual drain for pressures above 232 psi g.

OIL-X EVOLUTION Grade AC Combination Filters

Model	Pipe Size	scfm	Nm³/hr	L/s	Replacement Elements
AC010AN□I	1/4" NPT	13	22	6	010AA & 010AC
AC010BN□I	⅓" NPT	13	22	6	010AA & 010AC
AC010CN□I	1/2" NPT	13	22	6	010AA & 010AC
AC015BN□I	3/8" NPT	27	46	13	015AA & 015AC
AC015CN□I	1/2" NPT	27	46	13	015AA & 015AC
AC020CN□I	1/4" NPT	53	90	25	020AA & 020AC
AC020DN□I	3/4" NPT	53	90	25	020AA & 020AC
AC020EN□I	1" NPT	53	90	25	020AA & 020AC
AC025DN□I	3/4" NPT	84	143	40	025AA & 025AC
AC025EN□I	1" NPT	136	231	65	025AA & 025AC
AC030EN□I	1" NPT	180	305	85	030AA & 030AC
AC030FN□I	11/4" NPT	180	305	85	030AA & 030AC

^{*} Grade AA and AC elements required for double stage filter. **AC combination filter includes automatic float drain.

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