

# 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 and micro-organisms and dust filter grades for the removal of dry particulate and micro-organisms.

Compressed air purification equipment must deliver uncompromising performance and reliability whilst 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 CO<sub>2</sub> emissions.



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### 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 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 CO<sub>2</sub> into the environment



ENGINEERING YOUR SUCCESS.

# Filtration Grades

Filtration Grade	Filter Type	Particle removal (inc water & oil aerosols)	Max Remaining Oil Content at 21°C (70°F)	Filtration Efficiency	Initial Dry Differential Pressure	Initial Saturated Differential Pressure	Change Element Every	Precede with Filtration Grade
AO	Coalescing	Down to 1 micron	0.6 mg/m <sup>3</sup> 0.5 ppm(w)	99.925%	<70 mbar (1psi)	<140 mbar (2psi)	12 months	WS (for bulk liquid)
AA	Coalescing	Down to 0.01 micron	0.01 mg/m <sup>3</sup> 0.01 ppm(w)	99.9999%	<140 mbar (2psi)	<200 mbar (3psi)	12 months	AO
AR	Dry Particulate	Down to 1 micron	N/A	99.925%	<70 mbar (1psi)	N/A	12 months	N/A
AAR	Dry Particulate	Down to 0.01 micron	N/A	99.9999%	<140 mbar (2psi)	N/A	12 months	AR

# Product Selection

Stated flows are for operation at 7 bar g (100 psi g) with reference to 20°C, 1 bar a, 0% relative water vapour pressure. For flows at other pressures apply the correction factors shown.

	Model	Pipe Size	L/S	m <sup>3</sup> /min	m <sup>3</sup> /hr	cfm	Replacement Element kit	No.			
									Line Pressure bar g	psi g	Correction Factor pressure (CFP)
Cast Aluminum Filters	grade 005A [ ][ ] X	1/4"	6	0.4	22	13	005 grade	1	1	15	2.65
	grade 005B [ ][ ] X	3/8"	6	0.4	22	13	005 grade	1	1	22	2.16
	grade 005C [ ][ ] X	1/2"	6	0.4	22	13	005 grade	1	1	29	1.87
	grade 010A [ ][ ] X	1/4"	10	0.6	36	21	010 grade	1	1	37	1.67
	grade 010B [ ][ ] X	3/8"	10	0.6	36	21	010 grade	1	1	44	1.53
	grade 010C [ ][ ] X	1/2"	10	0.6	36	21	010 grade	1	1	51	1.41
	grade 015B [ ][ ]	3/8"	20	1.2	72	42	015 grade	1	1	58	1.32
	grade 015C [ ][ ]	1/2"	20	1.2	72	42	015 grade	1	1	66	1.25
	grade 020C [ ][ ]	1/2"	30	1.8	108	64	020 grade	1	1	73	1.18
	grade 020D [ ][ ]	3/4"	30	1.8	108	64	020 grade	1	1	80	1.13
	grade 020E [ ][ ]	1"	30	1.8	108	64	020 grade	1	1	87	1.08
	grade 025D [ ][ ]	3/4"	60	3.6	216	127	025 grade	1	1	95	1.04
	grade 025E [ ][ ]	1"	60	3.6	216	127	025 grade	1	1	100	1.00
	grade 030E [ ][ ]	1"	110	6.6	396	233	030 grade	1	1	110	0.97
	grade 030F [ ][ ]	1 1/4"	110	6.6	396	233	030 grade	1	1	116	0.94
	grade 030G [ ][ ]	1 1/2"	110	6.6	396	233	030 grade	1	1	124	0.91
	grade 035F [ ][ ]	1 1/4"	160	9.6	576	339	035 grade	1	1	131	0.88
	grade 035G [ ][ ]	1 1/2"	160	9.6	576	339	035 grade	1	1	139	0.86
	grade 040G [ ][ ]	1 1/2"	220	13.2	792	466	040 grade	1	1	145	0.84
	grade 040H [ ][ ]	2"	220	13.2	792	466	040 grade	1	1	153	0.82
grade 045H [ ][ ]	2"	330	19.8	1188	699	045 grade	1	1	160	0.80	
grade 050I [ ][ ]	2 1/2"	430	25.9	1548	911	050 grade	1	1	168	0.78	
grade 050J [ ][ ]	3"	430	25.9	1548	911	050 grade	1	1	174	0.76	
grade 055I [ ][ ]	2 1/2"	620	37.3	2232	1314	055 grade	1	1	183	0.75	
grade 055J [ ][ ]	3"	620	37.3	2232	1314	055 grade	1	1	189	0.73	
grade 060K [ ][ ]	G 4	1000	60	3600	2119	060 grade	3	3	197	0.72	
Carbon Steel Filters	grade 150ND [ ][ ]	DN80	430	25.9	1548	911	150 grade	1	1	203	0.71
	grade 200ND [ ][ ]	DN80	620	37.3	2232	1314	200 grade	1	1	212	0.69
	grade 250OD [ ][ ]	DN100	1000	60	3600	2119	060 grade	3	3	218	0.68
	grade 300OD [ ][ ]	DN100	1300	78	4680	2755	060 grade	4	4	226	0.67
	grade 350PD [ ][ ]	DN150	1950	117	7020	4132	060 grade	6	6	232	0.66
	grade 400QD [ ][ ]	DN200	3250	195	11700	6887	060 grade	10	10		
	grade 450RD [ ][ ]	DN250	5200	313	18720	11019	060 grade	16	16		
grade 500SD [ ][ ]	DN300	7800	469	28080	16528	060 grade	24	24			

# Correction Factors

Line Pressure		Correction Factor pressure (CFP)
bar g	psi g	
1	15	2.65
1.5	22	2.16
2	29	1.87
2.5	37	1.67
3	44	1.53
3.5	51	1.41
4	58	1.32
4.5	66	1.25
5	73	1.18
5.5	80	1.13
6	87	1.08
6.5	95	1.04
7	100	1.00
7.5	110	0.97
8	116	0.94
8.5	124	0.91
9	131	0.88
9.5	139	0.86
10	145	0.84
10.5	153	0.82
11	160	0.80
11.5	168	0.78
12	174	0.76
12.5	183	0.75
13	189	0.73
13.5	197	0.72
14	203	0.71
14.5	212	0.69
15	218	0.68
15.5	226	0.67
16	232	0.66
When ordering an AO/AA filter for pressures above 16 bar g (232 psi g), use manual drain. Replace F with M in product code. e.g. 015BBFX becomes 015BBMX. Models 150 - 500 not suitable for pressures above 16 bar g (232 psi g)		
16.5	241	0.65
17	248	0.64
17.5	256	0.63
18	263	0.62
18.5	270	0.62
19	277	0.61
19.5	285	0.60
20	290	0.59

Note: Connection sizes, (005 - 055) BSPT/NPT option available, G = BSPP and DN = flanged connection.

To correctly select a filter model, the flow rate of the filter must be adjusted for the minimum operating pressure of the system

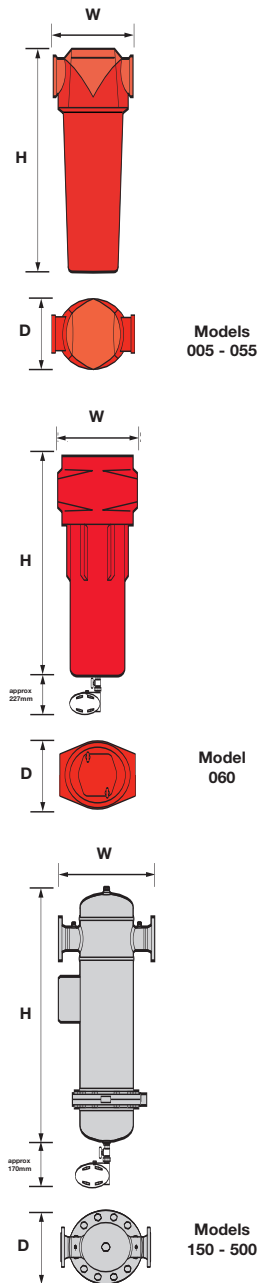
- Obtain the minimum operating pressure and maximum compressed air flow rate at the inlet of the filter.
- Select the correction factor for minimum operating pressure from the CFP table (always round down e.g. for 5.3 bar, use 5 bar correction factor)
- Calculate the minimum filtration capacity  
Minimum Filtration Capacity = Compressed Air Flow Rate x CFP
- Using the minimum filtration capacity, select a filter model from the flow rate tables above (filter selected must have a flow rate equal to or greater than the minimum filtration capacity)

## Technical Data

Filter Grade	Filter Models	Min Operating Pressure		Max Operating Pressure		Min Operating Temp		Max Operating Temp	
		bar g	psi g	bar g	psi g	°C	°F	°C	°F
AO/AA	005 <input type="checkbox"/> FX - 055 <input type="checkbox"/> FX	1	15	16	232	2	35	80	176
AO/AA	005 <input type="checkbox"/> MX - 055 <input type="checkbox"/> MX	1	15	20	290	2	35	100	212
AO/AA	060 K <input type="checkbox"/> FX	1	15	16	232	2	35	66	150
AO/AA	060 K <input type="checkbox"/> MX	1	15	20	290	2	35	100	212
AO/AA	150 NDFX - 500 SDFX	1	15	16	232	2	35	66	150
AO/AA	150 NDMX - 500 SDMX	1	15	16	232	2	35	100	212
AO/AA	005 <input type="checkbox"/> FI - 055 <input type="checkbox"/> FI	1	15	16	232	2	35	80	176
AO/AA	005 <input type="checkbox"/> MI - 055 <input type="checkbox"/> MI	1	15	20	290	2	35	100	212
AO/AA	060 K <input type="checkbox"/> FI	1	15	16	232	2	35	66	150
AO/AA	060 K <input type="checkbox"/> MI	1	15	20	290	2	35	66	150
AO/AA	150 NDFI - 500 SDFI	1	15	16	232	2	35	66	150
AO/AA	150 NDMI - 500 SDMI	1	15	16	232	2	35	66	150
AR/AAR	005 <input type="checkbox"/> MX - 055 <input type="checkbox"/> MX	1	15	20	290	2	35	100	212
AR/AAR	060 K <input type="checkbox"/> MX	1	15	20	290	2	35	100	212
AR/AAR	150 NDMX - 500 SDMX	1	15	16	232	2	35	100	212
AR/AAR	005 <input type="checkbox"/> MI - 055 <input type="checkbox"/> MI	1	15	20	290	2	35	100	212
AR/AAR	060 K <input type="checkbox"/> MI	1	15	20	290	2	35	66	150
AR/AAR	150 NDMI - 500 SDMI	1	15	16	232	2	35	66	150

## Weights and Dimensions

Model	Pipe Size	Height (H)		Width (W)		Depth (D)		Weight	
		mm	ins	mm	ins	mm	ins	kg	lbs
005A	1/4"	154	6.1	76	3.0	64	2.5	0.5	1.1
005B	3/8"	154	6.1	76	3.0	64	2.5	0.5	1.1
005C	1/2"	154	6.1	76	3.0	64	2.5	0.5	1.1
010A	1/4"	181	7.2	76	3.0	64	2.5	0.6	1.3
010B	3/8"	181	7.2	76	3.0	64	2.5	0.6	1.3
010C	1/2"	181	7.2	76	3.0	64	2.5	0.6	1.3
015B	3/8"	235	9.3	97	3.8	84	3.3	1.1	2.4
015C	1/2"	235	9.3	97	3.8	84	3.3	1.1	2.4
020C	1/2"	235	9.3	97	3.8	84	3.3	1.1	2.4
020D	3/4"	235	9.3	97	3.8	84	3.3	1.1	2.4
020E	1"	235	9.3	97	3.8	84	3.3	1.1	2.4
025D	3/4"	275	10.8	129	5.1	115	4.5	2.2	4.8
025E	1"	275	10.8	129	5.1	115	4.5	2.2	4.8
030E	1"	364	14.3	129	5.1	115	4.5	2.7	5.9
030F	1 1/4"	364	14.3	129	5.1	115	4.5	2.7	5.9
030G	1 1/2"	364	14.3	129	5.1	115	4.5	2.7	5.9
035F	1 1/4"	432	17.0	170	6.7	156	6.1	5.1	11.2
035G	1 1/2"	432	17.0	170	6.7	156	6.1	5.1	11.2
040G	1 1/2"	524	20.6	170	6.7	156	6.1	5.7	12.5
040H	2"	524	20.6	170	6.7	156	6.1	5.7	12.5
045H	2"	524	20.6	170	6.7	156	6.1	5.7	12.5
050I	2 1/2"	641	25.3	205	8.1	181	7.1	11.1	24.4
050J	3"	641	25.3	205	8.1	181	7.1	11.1	24.4
055I	2 1/2"	832	32.8	205	8.1	181	7.1	13.9	30.6
055J	3"	832	32.8	205	8.1	181	7.1	13.9	30.6
060K	G 4	847	33.3	420	16.5	282	11.1	44.5	98.1
150ND	DN80	1000	39.4	370	14.6	285	11.2	60	132
200ND	DN80	1220	48.0	370	14.6	285	11.2	70	154
250OD	DN100	1345	53.0	500	19.7	405	15.9	145	320
300OD	DN100	1345	53.0	500	19.7	405	15.9	145	320
350PD	DN150	1445	56.9	580	22.8	460	18.1	190	420
400QD	DN200	1710	67.3	750	29.5	640	25.1	375	827
450RD	DN250	1840	72.4	862	33.9	715	28.1	495	1090
500SD	DN300	1930	76.0	1000	39.4	840	33.1	600	1323



## Filter coding example

### Cast aluminium filters 005 - 060

GRADE	MODEL	PIPE SIZE	CONNECTION TYPE	DRAIN OPTION	INCIDENT MONITOR OPTION
AO, AA, AR, AAR	3 digit code denotes filter housing size	Letter denotes pipe size	B = BSPT N = NPT	F = Float M = Manual	X = None I = Incident Monitor (Not available on models 005 & 010)
AA	010	A	B	F	X

} Example code

### Carbon steel filters 150 - 500

GRADE	MODEL	PIPE SIZE	CONNECTION TYPE	DRAIN OPTION	DIFFERENTIAL PRESSURE MONITOR OPTION
AO, AA, AR, AAR	3 digit code denotes filter housing size	Letter denotes Flange connection	D = DN	F = Float M = Manual	X = None I = Incident Monitor
AA	150	N	D	F	X

} Example code

## Optional accessories



### Incident monitor

Used to indicate premature high differential pressure. Indicator can be retrofitted to existing housings without depressurising the system.



### Filter fixing kits

Fixing clamp allows quick and simple connection of multiple filter housings.



### Filter mounting brackets

Mounting brackets provide additional support to filters installed in flexible piping systems or OEM equipment.

Filter model	
015 - 055	DPM
060	DPM - 060
150 - 500	DPM - FAB

Filter model	
005 - 010	FXKE1
015 - 020	FXKE2
025 - 030	FXKE3
035 - 045	FXKE4
050 - 055	FXKE5

Filter model	
005 - 010	MBKE1
015 - 020	MBKE2
025 - 030	MBKE3
035 - 045	MBKE4
050 - 055	MBKE5

## Other filtration products

- Bulk liquid / water separators
- Oil vapour removal filters
- Filters with working pressures to 50 bar g
- Filters with working pressures to 350 bar g
- Alternative compressed air filter elements
- Oil / water separators
- Sterile air filtration
- Stainless steel filters
- Vacuum pump protection filters
- Vacuum pump exhaust filters
- Medical vacuum filters