



domnick hunter

OIL-X
EVOLUTION

**The most energy efficient
compressed air filters
in the world**

www.domnickhunter.com

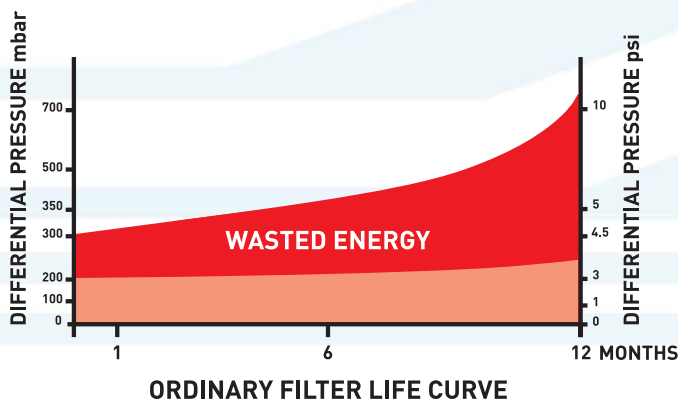
OIL-X EVOLUTION

The most energy efficient compressed air filter

Don't drive your compressor

Old filtration technology

Ordinary compressed air filters have always consumed too much energy, as they are by design, a restriction to air flow. During their working life, this restriction increases dramatically, and typically over one year, can consume more energy than they are worth. Technically, service life is dependent upon differential pressure. Most manufacturers recommend a replacement filter element at between 500 mbar (7 psi) and 700 mbar (10 psi) differential. This will cost you a massive 5% extra in compressor energy. In fact you are driving your compressor with the brakes on!



NEW filtration technology

OIL-X EVOLUTION compressed air filters use very little energy as they have a low resistance to air flow. Advancements such as deep bed pleating, graded density media and an oleophobic coating have led to a high performance filter element with low initial energy costs. Differential pressure starts low and stays low throughout its life. Service life is no longer dependent upon differential pressure, but on annual filter element change backed up with a one year air quality guarantee.



energy efficient filters in the world

compressor with the brakes on!

Guarantee a quality future

All domnick hunter OIL-X EVOLUTION filters have two guarantees.

The first is a one year compressed air quality guarantee. This ensures that the solid particle, oil aerosol, and vapour content selected conforms to the ISO 8573.1 international standard. This guarantee is automatically extended when service recommendations are followed.

The second guarantees the filter housing for ten years under recommended operating conditions.

Further details of these quality guarantees are available to download free of charge from www.domnickhunter.com



Independently tested

The performance of OIL-X EVOLUTION filters exceeds the latest International ISO 8573.1 air quality standard. This new range of compressed air filters is not only tried and tested by domnick hunter, but is independently verified by:



Copies of independent test certificates are available to download free of charge from www.domnickhunter.com



domnick hunter

ISO 9001:2000



ISO 14001



INTERNATIONAL APPROVALS



CRN



AS1210

ASME VIII National Board



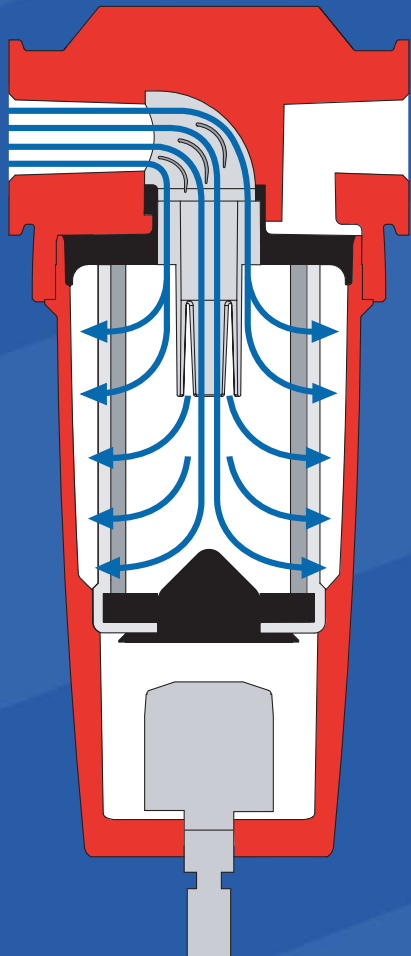
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OIL-X EVOLUTION

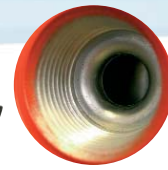
The new domnick hunter OIL-X EVOLUTION range of compressed air filters has been designed from the outset to meet current and forthcoming requirements for compressed air quality. Using aerospace technology, domnick hunter has optimised the flow path through the housing and element, significantly reducing air turbulence and pressure losses. Providing an optimal flow path is key to reducing system operating costs.



The most energy efficient filter element in the world

Full Flow Inlet

Inlet conduit matches inlet diameter, reducing pressure drop and running costs.



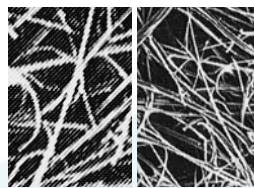
Even Flow Distribution

Air flow is distributed evenly throughout the filter element using a flow distributor.



Deep Bed Pleating

For particle and aerosol removal, deep bed pleating provides 4.5 x more filter media than an ordinary element, giving a larger filtration area, lower flow velocities, increased dirt holding capacity, lower running costs and a more compact filter element.

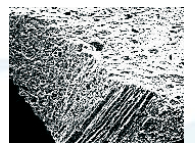


Graded density nanofibre filter media

Graded density further improves filter life and overall performance by trapping larger particles in the pre-filtration layer of the filter media.

Oil Vapour Removal

Whilst mechanical filtration is capable of removing extremely fine liquids and solid particles, it cannot remove gaseous contaminants such as oil vapour or odours. To efficiently remove these vapours, OIL-X EVOLUTION ACS/OVR filters employ adsorption techniques using a deep bed of activated carbon.

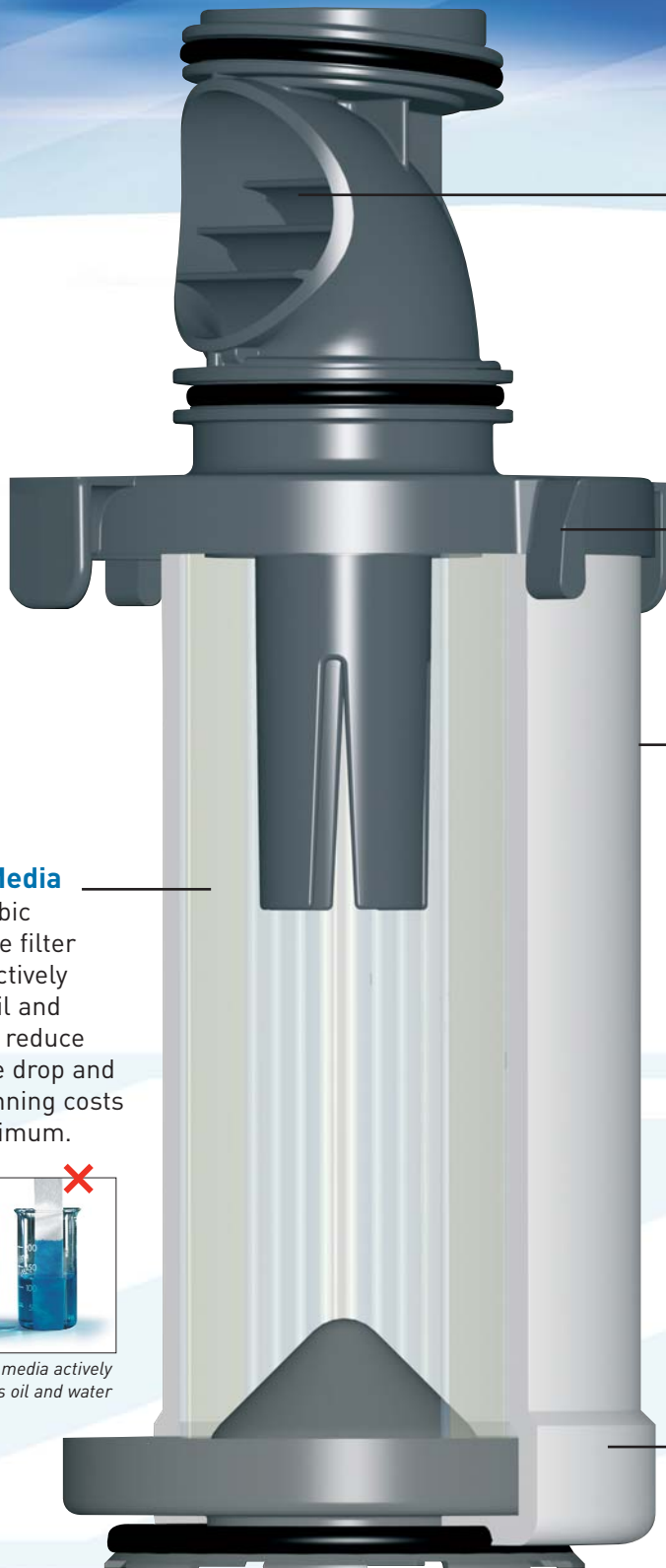


Activated carbon



Conical Air Diffuser

Air flow distribution is further improved by elimination of turbulence.



Aerospace Turning Vanes

Turning vanes effectively direct air flow into the filter element.



Air Stabilisers

Smooth outlet air flow.

High Efficiency Drainage Layer

Ensures coalesced liquids are removed quickly and efficiently.

Drainage Ribs

Filter housing and element integrate to provide capillary action which greatly improves liquid drainage. Interaction between housing and element also ensures maximum coalescing performance is achieved at all times.



No Wet Band Formation

Allows 40% more air flow through a smaller filter element.

Special Filter Media

Oleophobic nanofibre filter media actively repels oil and water to reduce pressure drop and keep running costs to a minimum.



Filter media actively repels oil and water

OIL-X EVOLUTION

Advanced filter housings



Filter Connections

More port sizes are available to match both pipe size and system flow rate giving additional customer choice.



'Clean Change' Filter Element

Element changes are now easy and do not require the user to touch the contaminated element during annual element change.

Minimal Service Clearance

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



No corrosion with Alocrom treatment.



Rapid corrosion of untreated aluminium.

Fully Corrosion Protected

Alocrom & dry powder epoxy coated for full corrosion protection



Compact & Lightweight

Advanced housing and element design has also provided a smaller, more compact and lightweight filter which is quick, easy and clean to maintain.



Incident monitor (optional)

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



Fixing Clamp

Joins two filters and is a wall mounting bracket in one!



Float drain



Electronic drain

Choice of Drains

Manual, float and electronic drain options available. Easy connection with standard fittings via 1/2" threaded drain port.

Annual filter element changes are essential

To maintain your guaranteed air quality, filter elements must be replaced every year with genuine domnick hunter parts.

Throughout its life, the filter element is constantly under bombardment from oily, acidic condensate and high velocity dirt particles, which it has to remove and retain to protect your compressed air system. Over time, this can weaken the filter media and reduce filtration performance. This potential but critical reduction in filtration performance cannot be detected by simple differential pressure monitoring techniques.

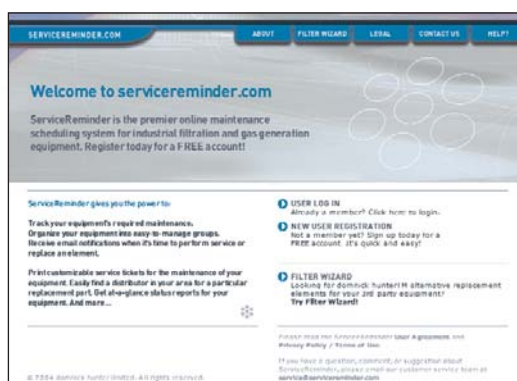
Annual filter element changes are therefore essential, and failure to replace every year could result in reduced production performance, degrading air quality and increased operational costs.

Annual filter element changes ensure :

- **Optimal performance is maintained**
- **Air quality continues to meet international standards**
- **Performance guarantee is extended for a further 12 months**
- **Low operational costs**
- **Continued protection of downstream equipment & processes**
- **Peace of mind**

Service contracts

For peace of mind, domnick hunter can manage your compressed air quality and guarantee future performance with a world-wide service contract. Further details can be found on www.domnickhunter.com



Helping you manage your maintenance programs

domnick hunter can help you manage your filter or other compressed air treatment equipment maintenance programs by reminding you when maintenance is due, parts required and equipment location. Further details can be found on www.servicereminder.com

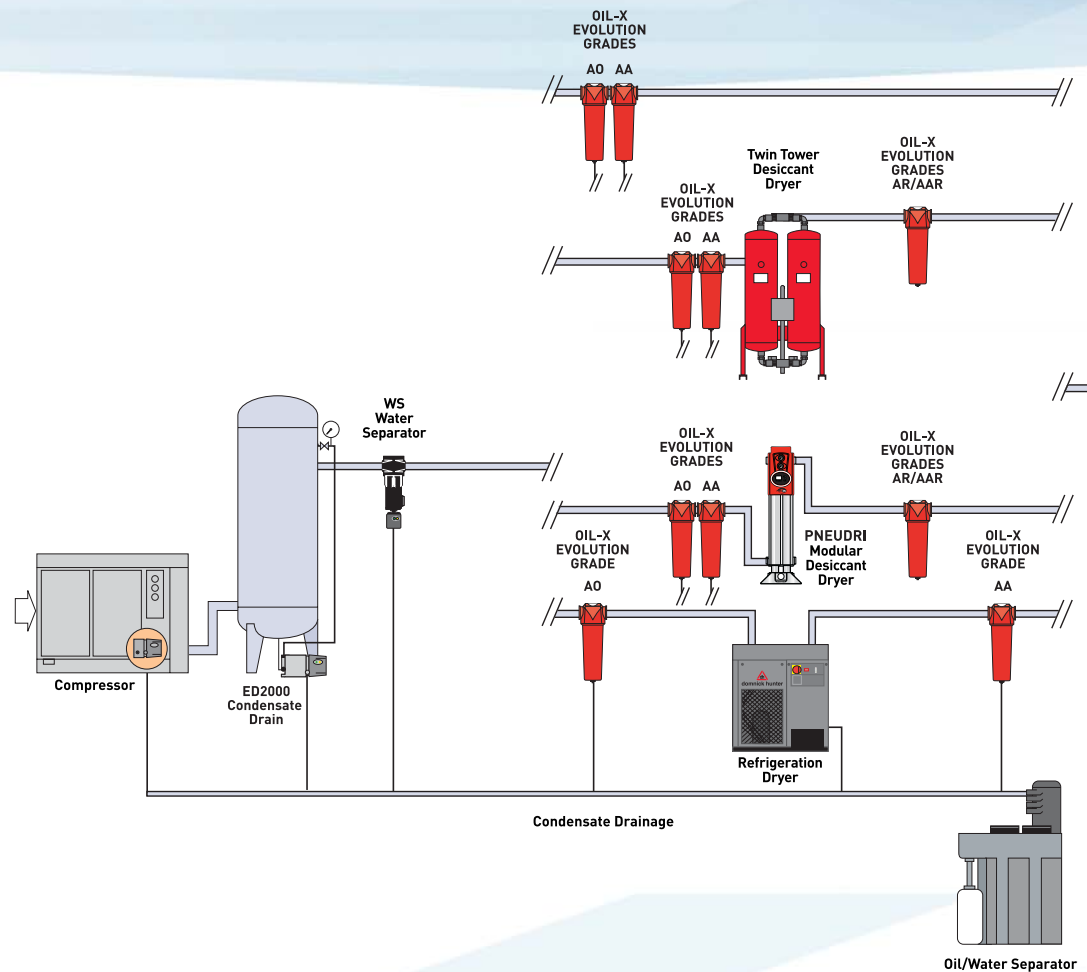


Filter element service kit

OIL-X EVOLUTION

High quality compressed air from generation to application

Compressor room



GRADE WS

Water Separators

For the removal of up to 99% of bulk liquid contamination. *(For further information refer to publication ref: 17 400 4413)*

GRADE AO

High Efficiency General Purpose Protection

Particle removal down to 1 micron, including water and oil aerosols.

Maximum remaining oil aerosol content :
0.6 mg/m³ at 21°C / 0.5 ppm(w) at 70°F.

GRADE AA

High Efficiency Oil Removal Filtration

(Precede with Grade AO filter)

Particle removal down to 0.01 micron, including water and oil aerosols.

Maximum remaining oil aerosol content :
0.01 mg/m³ at 21°C / 0.01 ppm(w) at 70°F.

GRADE AR

General Purpose Dust Filtration

Dry particle removal down to 1 micron

GRADE AAR

High Efficiency Dust Filtration

Dry particle removal down to 0.01 micron

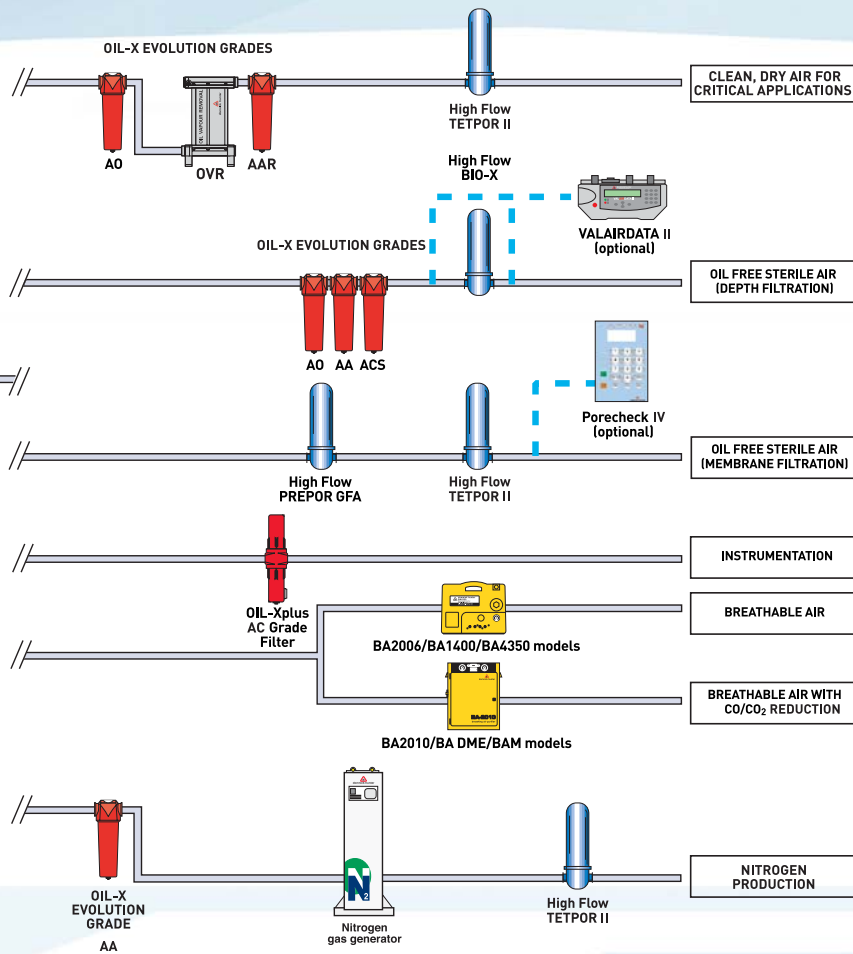
GRADE ACS & OVR

Oil Vapour & Odour Removal

(Precede Grade ACS with Grade AA filter)

Maximum remaining oil vapour content :
0.003 mg/m³ at 21°C / 0.003 ppm(w) at 70°F.

The quality of air required throughout a typical compressed air system can vary. The extensive range of filtration grades from domnick hunter is ideal for both centralised and decentralised compressed air systems. This allows the user to specify the air quality for each application, from general purpose ring main protection to critical point of use clean dry air (CDA) systems.



Application

Compressed Air Quality & Product Selection

COMPRESSED AIR QUALITY TO ISO 8573.1

The international standard for compressed air quality provides a simple system of classification for the three main contaminants present in any compressed air system - DIRT, WATER and OIL. To specify the quality class required for a particular application, simply list the class for each contaminant in turn. For further information on how to achieve ISO 8573.1 air quality standards, refer to publication reference 17 400 4765.

Class	Solid Particle Maximum number of particles per m ³			Water Pressure Dewpoint °C	Oil (incl. vapour) mg/m ³
	0.1-0.5micron	0.5-1 micron	1.0-5micron		
1	100	1	0	-70	0.01
2	100,000	1,000	10	-40	0.1
3	-	10,000	500	-20	1
4	-	-	1,000	3	5
5	-	-	20,000	7	-
6	-	-	-	10	-

Product selection & technical data

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

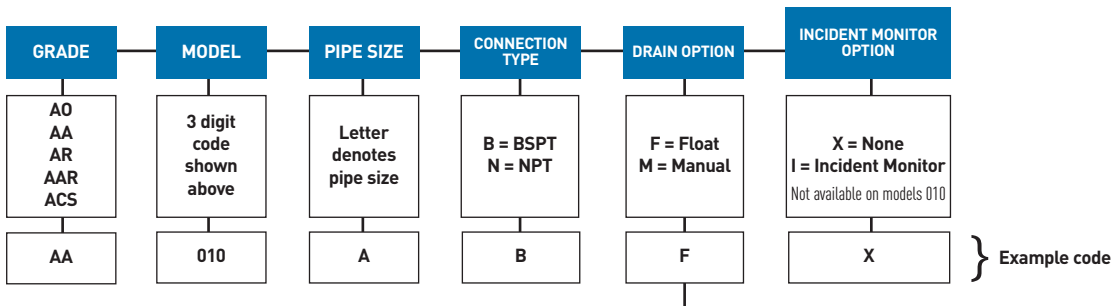
Model	Pipe Size	L/s	Nm ³ /min	Nm ³ /hr	scfm	Replacement Element Kit	No.
grade 010A [] [] X	¼"	10	0.6	36	21	010 grade	1
grade 010B [] [] X	⅜"	10	0.6	36	21	010 grade	1
grade 010C [] [] X	½"	10	0.6	36	21	010 grade	1
grade 015B [] [] []	⅜"	20	1.2	72	42	015 grade	1
grade 015C [] [] []	½"	20	1.2	72	42	015 grade	1
grade 020C [] [] []	½"	30	1.8	108	64	020 grade	1
grade 020D [] [] []	¾"	30	1.8	108	64	020 grade	1
grade 020E [] [] []	1"	30	1.8	108	64	020 grade	1
grade 025D [] [] []	¾"	60	3.6	216	127	025 grade	1
grade 025E [] [] []	1"	60	3.6	216	127	025 grade	1
grade 030E [] [] []	1"	110	6.6	396	233	030 grade	1
grade 030F [] [] []	1¼"	110	6.6	396	233	030 grade	1
grade 030G [] [] []	1½"	110	6.6	396	233	030 grade	1
grade 035F [] [] []	1¼"	160	9.6	576	339	035 grade	1
grade 035G [] [] []	1½"	160	9.6	576	339	035 grade	1
grade 040G [] [] []	1½"	220	13.2	792	466	040 grade	1
grade 040H [] [] []	2"	220	13.2	792	466	040 grade	1
grade 045H [] [] []	2"	330	19.8	1188	699	045 grade	1
grade 050I [] [] []	2½"	430	25.8	1548	911	050 grade	1
grade 050J [] [] []	3"	430	25.8	1548	911	050 grade	1
grade 055I [] [] []	2½"	620	37.2	2232	1314	055 grade	1
grade 055J [] [] []	3"	620	37.2	2232	1314	055 grade	1

Line Pressure		Correction Factor
bar g	psi g	
1	15	0.38
2	29	0.53
3	44	0.65
4	58	0.76
5	73	0.85
6	87	0.93
7	100	1.00
8	116	1.07
9	131	1.13
10	145	1.19
11	160	1.25
12	174	1.31
13	189	1.36
14	203	1.41
15	218	1.46
16	232	1.51
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. 015BFX now 015BFXM		
17	247	1.56
18	261	1.60
19	275	1.65
20	290	1.70

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

$$= \sqrt{\frac{\text{System Operating Pressure}}{\text{Nominal pressure}}} = \sqrt{\frac{8.5 \text{ bar g}}{7 \text{ bar g}}} = 1.10$$

Filter coding

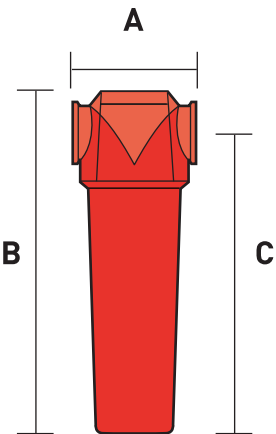


Note: AO / AA grade filters for use up to 16 bar g (232 psi g) are supplied with a float drain [F] as standard. For pressures of 16 to 20 bar g (232 to 290 psi g) a manual drain [M] must be used. ACS / AR / AAR grade filters are supplied with a manual drain [M] as standard.

Filter Grade	Filter Models	Max Operating Pressure		Max Recommended Operating Temperature		Min Recommended Operating Temperature	
		bar g	psi g				
AO	010 [] [] F [] - 055 [] [] F []	16	232	80°C	176°F	1.5°C	35°F
AO	010 [] [] M [] - 055 [] [] M []	20	290	100°C	212°F	1.5°C	35°F
AA	010 [] [] F [] - 055 [] [] F []	16	232	80°C	176°F	1.5°C	35°F
AA	010 [] [] M [] - 055 [] [] M []	20	290	100°C	212°F	1.5°C	35°F
AR	010 [] [] M [] - 055 [] [] M []	20	290	100°C	212°F	1.5°C	35°F
AAR	010 [] [] M [] - 055 [] [] M []	20	290	100°C	212°F	1.5°C	35°F
ACS	010 [] [] M [] - 055 [] [] M []	20	290	50°C	122°F	1.5°C	35°F

Weights and dimensions

Model	Pipe Size	A		B		C		Weight	
		mm	ins	mm	ins	mm	ins	kg	lbs
010A	1/2"	76	3.0	181.5	7.2	153.2	6.0	0.4	0.88
010B	3/8"	76	3.0	181.5	7.2	153.2	6.0	0.4	0.88
010C	1/2"	76	3.0	181.5	7.2	153.2	6.0	0.4	0.88
015B	3/8"	97.5	3.8	235	9.3	201	7.9	1	2.2
015C	1/2"	97.5	3.8	235	9.3	201	7.9	1	2.2
020C	1/2"	97.5	3.8	235	9.3	201	7.9	1	2.2
020D	3/4"	97.5	3.8	235	9.3	201	7.9	1	2.2
020E	1"	97.5	3.8	235	9.3	201	7.9	1	2.2
025D	3/4"	129	5.1	274.8	10.8	232.5	9.2	2.2	4.84
025E	1"	129	5.1	274.8	10.8	232.5	9.2	2.2	4.84
030E	1"	129	5.1	364.3	14.3	322	12.7	2.6	5.72
030F	1 1/4"	129	5.1	364.3	14.3	322	12.7	2.6	5.72
030G	1 1/2"	129	5.1	364.3	14.3	322	12.7	2.6	5.72
035F	1 1/4"	170	6.7	432.5	17.0	382.5	15.1	4.5	9.9
035G	1 1/2"	170	6.7	432.5	17.0	382.5	15.1	4.5	9.9
040G	1 1/2"	170	6.7	524.5	20.6	474.5	18.7	5.25	11.55
040H	2"	170	6.7	524.5	20.6	474.5	18.7	5.25	11.55
045H	2"	170	6.7	524.5	20.6	474.5	18.7	5.25	11.55
050I	2 1/2"	204.8	8.1	641.6	25.3	581.6	22.9	10	22
050J	3"	204.8	8.1	641.6	25.3	581.6	22.9	10	22
055I	2 1/2"	204.8	8.1	832.1	32.8	772.1	30.4	12	26.4
055J	3"	204.8	8.1	832.1	32.8	772.1	30.4	12	26.4



Complementary OIL-X EVOLUTION products

4" Cast aluminium filters

A cast aluminium filter with a 4" connection and flow rate of 60m³/min (2119 scfm) is also available.

Please refer to publication reference 17 400 4762



Fabricated carbon steel filters

Fabricated filters of carbon steel or stainless steel construction and flow rates from 13.2m³/min (466 scfm) are available.

Please refer to publication reference 17 400 4763

Long-life oil vapour removal filters

The lifetime of ACS oil vapour removal elements can vary due to oil type, inlet vapour concentration, temperature and relative humidity. ACS elements may require multiple changes during a 12 month period. For critical applications or installations requiring longer service periods, use the domnick hunter OVR range of oil vapour removal filters.

Please refer to publication reference 17 400 4764



1963

1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981

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