WALKER FILTRATION

The ultimate filtration & drying technology

Alpha Series

The next generation of compressed air and gas filters

www.walkerfiltration.com

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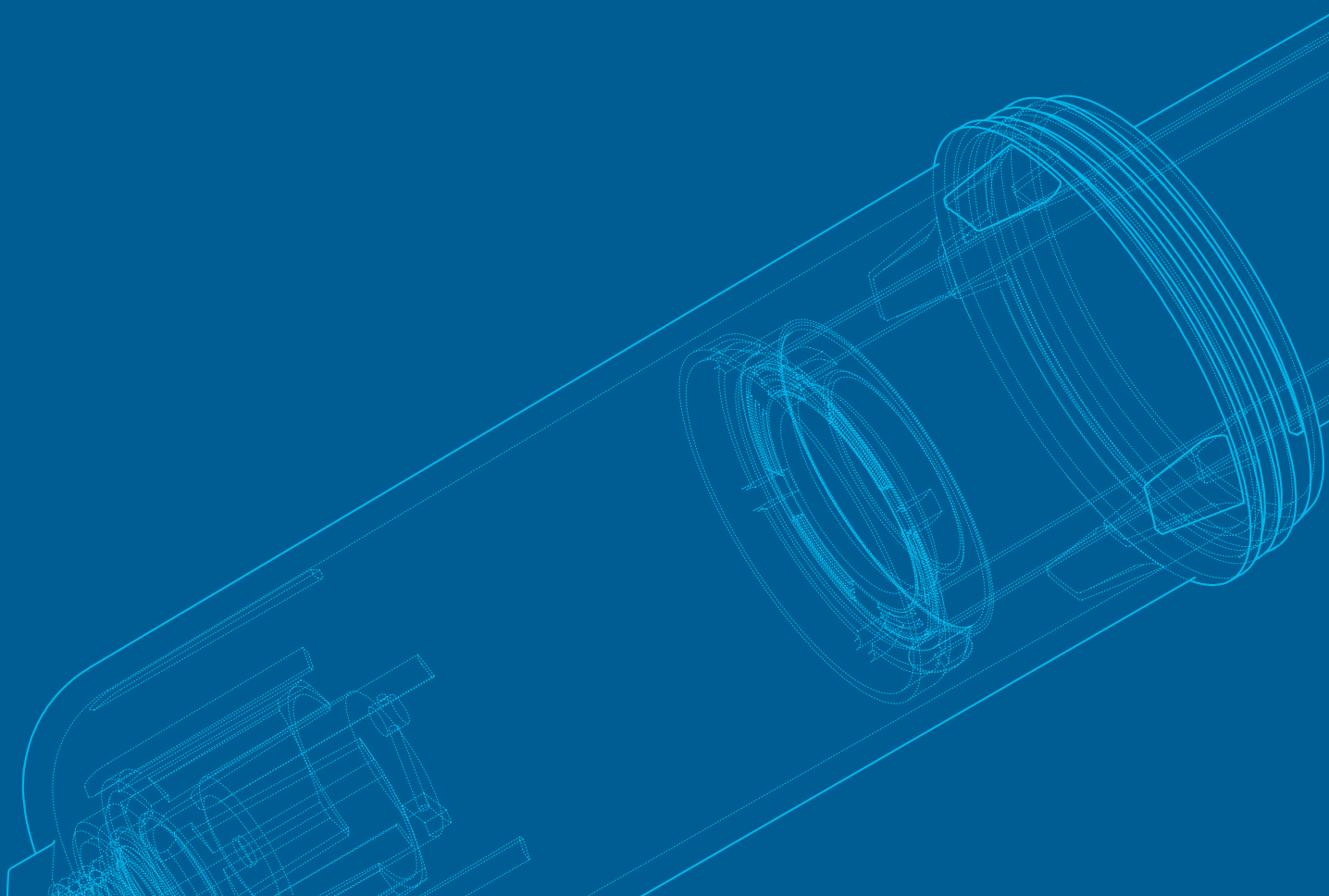


We know filtration
it's the core of our business

To ensure we stay ahead of the field we continuously develop new technologies and processes. Our products are relied upon around the world within compressed air and gas, medical, vacuum and sterile applications.

Operating and competing on a global scale for over 25 years, we have built an enviable reputation as the experts in filtration.

Our customers rely on our superior technical capability and exacting manufacturing standards. They are guaranteed superior value, high quality, exceptional service and tailored solutions.

Clean and dry compressed air

Compressed air is a versatile and important power source and almost all industrial businesses use it to run equipment such as hand tools, valve actuators, pistons and machinery. In fact, over 10% of electricity supplied to industry is used to compress air.

In any compressed air system, impurities are inevitable as the quality of your compressed air is only as good as the intake air. Dust, oil and particulates reduce air quality and can significantly affect the system efficiency, including the performance and life of the end-use equipment. Poor system efficiency also means higher running costs.

Filtration and treatment of your compressed air system is critical to:

- **Guarantee optimum performance**
- **Ensure energy costs are minimised**

Water condensate is also a significant problem which needs to be removed in order to achieve optimum performance. A single 30kW compressor can generate 20 litres of water in 8 hours from the condensation of the air during the compression process.

Minimising waste and maximising air treatment offers the greatest potential for cost savings in a typical compressed air system.

Source: Carbon Trust

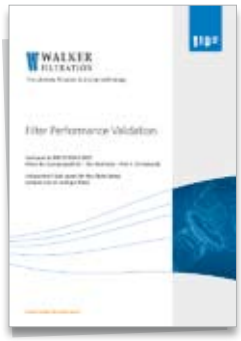
The Alpha Series, the next generation of filter

The technologically advanced design boasts enhanced housing and element performance. It is also specifically developed for ease of installation and maintenance for engineers.

This extended range of filter housings and elements has been designed to suit almost every industrial environment.

Advancements in leak reduction and enhanced custom filter media deliver improved filtration performance. This means you get reduced pressure loss, increased energy efficiency levels and lower energy costs.

Tested to ISO 12500 standards, this filter range has been independently validated to guarantee the highest levels of air quality, making the Alpha Series your ultimate filtration solution.



The Next Generation

- Optimum Performance
- Easy to Install
- Comprehensive Range
- Energy Efficient
- Performance Assured

Delivers Optimum Performance

Custom engineered multi-layer filter media and new annular location ring mean quicker and more efficient liquid removal. Shown here by the significantly reduced wet band.

Filter Element Features

Double O-ring secures against contaminant by-pass

Perforated stainless steel cylinders provide strength, rigidity and corrosion resistance

Spiral wound inner coil spring on larger size elements for extra strength

Deep bed filter media provides low operating differential pressure resulting in improved energy efficiency

Hydrophobic and oleophobic borosilicate customised glass fibre media for improved coalescing

Unique anti re-entrainment layer minimises pressure losses and improves liquid removal

Chemically treated custom outer drainage layer prevents oil carry over

New improved ultrasonic seam weld process provides greater strength

Air distribution duct gives uniform air flow for improved filtration and low operating differential pressure

Drop-fit, self locating element with no tie rods for ease of installation, servicing and maintenance

Corrosion resistant colour coded endcaps for easy and accurate filtration grade indication

Lower annular location ring prevents element vibration, improves stability in reverse flow dust removal applications and improves drainage

Certificate of Conformity supplied with every filter element

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Filter Housing Features

Extensive range –¼" to 3" (BSP & NPT) and flow capacities up to 2550 Nm³/hr

Compact design allowing installation in confined spaces

Modular design enables easy and simple close coupling assembly

Housing design optimised with Computer Aided Engineering tools

Aluminium pressure die cast housing gives enhanced strength and robustness

Advanced E-coat™ protection coupled with a polyester coating gives exceptional corrosion resistance

Multi-thread to bowl design with full 3 turns to ensure safety

Unique seal configuration ensures security of the pressure envelope

Housing cover manufactured from nylon for durability

Internal deflector rib ensures centrifugal action in water separators

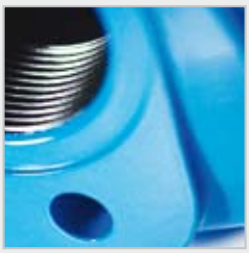
Large reservoir to provide quiet zone for bulk oil collection

Automatic drain with manual override fitted as standard

Hexagon spanner locator on bowl for efficient element change

Minimal clearance required for filter change and no specialist tools

Suitable for both **mineral and synthetic oils**



Comprehensive Range

With the introduction of the Alpha Series, we have extended our product range to ensure our customers have choice and flexibility.

Simplex, duplex and fabricated filter housings plus a comprehensive range of elements for a wide range of applications.

Alpha Series offers the ultimate filtration solution for any industry.

Compressed Air & Gas Filters

A comprehensive range of simplex and duplex compressed air and gas filters with silicone free options and specialist LABSfrei capability.

Dust Filters

Dust filters for installation downstream of regenerative compressed air and gas dryers.

Vacuum Pump Protection

Our range of filters offer high efficiency and optimum contaminant removal for vacuum pump protection.

Vacuum Pump Exhaust

Three types of vacuum pump exhaust filters to remove oil mist from oil injected vacuum pumps.

Medical Sterile

This range of filters is specifically designed for medical compressed air plants.

Medical Vacuum

A range of vacuum filters to protect medical installations from liquid, solid and bacterial contamination.

Water Separators

Water separators to deal effectively with bulk water contamination in compressed air installations.

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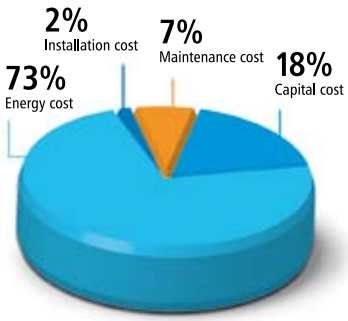
Optimised & Energy Efficient

Get the best out of your compressed air system

Once you have a well designed compressed air system with suitable air treatment and filtration, it is vital to maintain and monitor that system. Over a ten-year life of a compressor, the cost of energy to run the system far outweighs the capital investment. Maintenance accounts for only 7% of the total costs, yet this is a crucial activity for maximising the energy efficiency of any compressor.

Repeated exposure to oil, vapour and particulate matter can, over time, cause the filter elements to become clogged. This creates an increase in pressure drop compromising not only performance but also an increase in energy use.



Optimised filtration pays for itself

Every 1 barg (100kPa) of pressure drop represents a 7% increase in compressor energy costs. It is vital to observe a scheduled maintenance programme which includes replacement of filter elements.

This is why we recommend that filter elements are replaced at least every 12 months (6 months for activated carbon). All our filters and elements are supplied with an element change out label which adheres to the filter housing and shows when the next change should take place.

Source: Carbon Trust

7%
INCREASE IN OPERATING COSTS FOR EVERY 1 BARG

Extensive Applications



Applications include

- General Compressor Room
- Vacuum Pumps
- Laser Cutting
- Pharmaceutical Equipment
- Food & Beverage Production
- Paint Spraying Booths
- Pneumatic Machinery
- Air Motors
- Process Controllers
- Portable Breathing Air
- Medical Vacuum Systems
- CNG

Solutions for any industry

Recognising that processes using compressed air often have differing requirements, we have tailored the features of the new Alpha Series air and gas filter range to suit almost every industry.

A typical air-treatment system will comprise the following components:

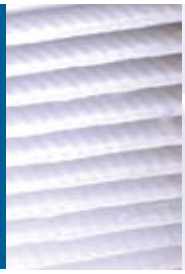
Water separators	Are designed to remove bulk liquid and particulate contamination within a compressed air system and are typically positioned after the compressor/aftercooler.
Pre-filters	Normally installed after the water separator and prior to the dryer to remove particulates and aerosols (water and oil) down to acceptable levels to prevent contamination of downstream equipment.
Dryer	Installed to remove moisture within the system in vapour form in order to prevent pipe corrosion, shortened service life of equipment and product spoilage. Depending on the application, dryers can either be located as part of centralised compressed air system to provide general ring main protection or decentralised to provide point of use protection.
After-filters	Provide filtration to remove dust particulates introduced from the dryer and/or other additional potential sources of contamination such as pipescale. Additional filters can used as necessary to provide further air treatment such as removing oil vapours/odours and ensuring that the air is sterile for medical applications.

contaminants	water separator	desiccant dryer	dust filter	coalescing filter	medical sterile
Condensed H_20	✓				
H_20 Vapour		✓			
H_20 Aerosols				✓	
Particulate Matter			✓	✓	✓
Micro Organisms					✓
Oil & Oil Aerosols				✓	

A Range of Filtration Technology

As the experts, our filtration elements are not confined to wrapped technology. We also design and manufacture high performance vacuum-formed tube cartridges and pleated elements.

Whatever the challenge and specification, we have the solution.

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OEM Tailoring

Build and brand for OEM

We pride ourselves on our exceptional design capabilities. This means we are specialists at meeting the exacting demands of the OEM customer. We have designed and developed many successful OEM products for a broad range of prestigious industry leaders all over the world.

With the expertise of our dedicated design team, we work in partnership to develop the right solution. We understand the timely turnaround expected from development to prototype launch and consider all aspects from brand management, packaging, language support, unique part numbers to transport details.

CONSULTATION & DEVELOPMENT → **TESTING & APPROVAL** → **MANUFACTURE & DELIVERY**

Development of an OEM product

Every OEM solution developed by our team at Walker Filtration is unique.

We start by working with our OEM customers to establish the best filtration solution. This can be a combination of methodologies or manufaturing abilities. We then use our technical expertise, experience and latest Computer Aided Engineering to design and deliver a custom solution.

In order to ensure complete product assurance and performance, our OEM developments are extensively tested to the highest standards.

Our international manufacturing ability to complex requirements puts us at the forefront of filtration production. This means we have manufacturing flexibility, logistical superiority and shorter lead times.

Performance Assured

Optimised design

Our commitment to exacting quality and performance does not end at design. Optimised performance, although assured through extensive Computer Aided Design technology, finite element analysis and computational fluid dynamics, is extensively proven throughout the research and development phase.

- 1000 hour neutral salt spray test for corrosion to ISO 9227:2006
- Burst pressure tested in excess of 80 barg for a 5:1 safety factor
- All housings are 100% tested for pressure leaks. Fine filters are 100% aerosol integrity tested.

Compressed air treatment

The Alpha Series is available in a complete range of contaminant removal grades designed to meet the compressed air purity requirements throughout industry.

- **ISO 8573-1** Compressed air purity standard
- **ISO 12500 Series** International standard for compressed air filter testing

Independent validation

Product performance is validated and tested with in-house and independent external laboratory protocols, in accordance with international filtration standards.

- **Pressure Equipment Directive (97/23/EC only)**
  Lloyd's Register EMEA – Notified Body No 0038.
  71 Fenchurch Street, London, EC3M 4BS. England
- **ISO 9001 Quality Systems – LRQ0930553**
  Lloyd's Register EMEA – Notified Body No 0038.
  Hiramford, Middlemarch Office Village, Siskin Drive, Coventry, CV3 4FJ. England
- **Performance to ISO 12500 independently verified**
  For full details and test report see our separate Validation brochure

Accessories

To accompany our standard product range, we supply a comprehensive range of spares and accessories including: differential pressure equipment, drain valves, mounting bracket and connecting kits as well as O-ring sealing kits. (For full details, please reference our Price Guide)

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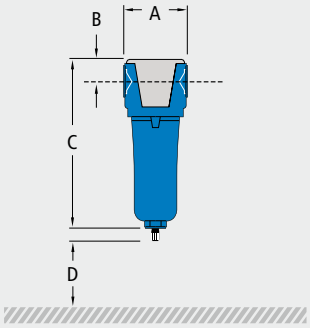
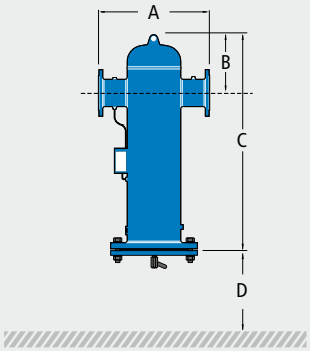
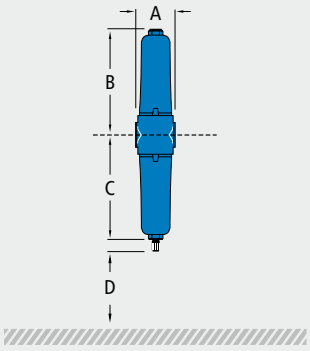
Technical Specification

filter model	pipe size	flow rate		dimensions (mm)				approx. weight Kg	element model
		Nm³/h	SCFM	A	B	C	D		
A018 (grade)	¼	13.6	8	50	18	152	75	0.3	E0304 (grade)
A019 (grade)	¼	25.5	15	50	18	152	75	0.3	E0305 (grade)
A028 (grade)	¼	42.5	25	70	25	191	85	0.6	E0406 (grade)
A038 (grade)	⅜	59.5	35	70	25	191	95	0.6	E0407 (grade)
A058 (grade)	½	85.0	50	70	25	232	135	0.7	E0413 (grade)
A059 (grade)	½	119	70	100	35	276	155	1.6	E0613 (grade)
A078 (grade)	¾	144	85	100	35	276	155	1.6	E0613 (grade)
A079 (grade)	¾	212	125	100	35	396	225	2.0	E0620 (grade)
A108 (grade)	1	229	135	100	35	396	225	2.0	E0620 (grade)
A109 (grade)	1	297	175	100	35	396	275	2.0	E0625 (grade)
A128 (grade)	1¼	476	280	122	42	460	320	2.8	E0730 (grade)
A158 (grade)	1½	545	320	122	42	460	320	2.8	E0730 (grade)
A159 (grade)	1½	680	400	146	52	482	325	4.2	E0830 (grade)
A208 (grade)	2	765	450	146	52	482	325	4.2	E0830 (grade)
A209 (grade)	2	1190	700	146	52	785	630	6.3	E0860 (grade)
A254 (grade)	2½	1445	850	210	66	595	410	8.5	E1140 (grade)
A340 (grade)	3	1530	900	210	66	595	410	8.5	E1140 (grade)
A360 (grade)	3	2125	1250	210	66	815	630	10.5	E1160 (grade)
A390 (grade)	3	2550	1500	210	66	975	785	12.0	E1175 (grade)
A391 (grade)	DN80	2160	1270	450	265	1205	700	58	E139 (grade)
A483 (grade)	DN100	3100	1824	520	285	1245	700	74	E88 (grade)
A484 (grade)	DN100	4250	2500	520	285	1245	700	74	E88 (grade)
A686 (grade)	DN150	6500	3824	680	400	1400	700	165	E88 (grade)
A688 (grade)	DN150	8720	5130	780	400	1430	700	208	E88 (grade)
A8810 (grade)	DN200	11000	6470	780	400	1460	700	260	E88 (grade)
A10816 (grade)	DN250	17000	10000	900	550	1570	700	450	E88 (grade)
A12824 (grade)	DN300	25500	15000	900	600	1620	700	740	E88 (grade)
D028 XAC	¼	42.5	25	70	163	159	85	0.9	E0406 XA / DAC
D038 XAC	⅜	59.5	35	70	163	159	95	0.9	E0407 XA / DAC
D058 XAC	½	85.0	50	70	204	200	135	1.0	E0413 XA / DAC
D059 XAC	½	119	70	100	240	236	155	2.3	E0613 XA / DAC
D078 XAC	¾	144	85	100	240	236	155	2.3	E0613 XA / DAC
D079 XAC	¾	212	125	100	360	356	225	3.1	E0620 XA / DAC
D108 XAC	1	229	135	100	360	356	225	3.1	E0620 XA / DAC
D109 XAC	1	297	175	100	360	356	275	3.2	E0625 XA / DAC







	X25	X5	X1	XA	AC
Maximum particle size class*	-	3	2	1	1
Maximum oil content class*	-	4	2	1	1
Particle removal	25 micron	5 micron	1 micron	0.01 micron	0.01 micron
Maximum oil carryover at 20°C (68°F)	10 mg/m³	5 mg/m³	0.1 mg/m³	0.01 mg/m³	0.003 mg/m³
Maximum temperature**	120°C (248°F)	120°C (248°F)	120°C (248°F)	120°C (248°F)	25°C (77°F)
Maximum working pressure	16 barg (232 psig)	16 barg (232 psig)	16 barg (232 psig)	16 barg (232 psig)	16 barg (232 psig)

* to ISO 8573-1:2001 (E). **depending upon model and configuration.

pressure correction factors

for maximum flow rate, multiply model flow rate by the correction factor corresponding to the pressure

Operating pressure barg (psig)	4 (58)	5 (72)	6 (87)	7 (100)	8 (115)	10 (145)	12 (174)	14 (203)	16 (232)
7 barg - correction factor	0.76	0.84	0.92	1.00	1.07	1.19	1.31	1.41	1.51

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