



# **WALKER** FILTRATION

The ultimate filtration & drying technology

## Alpha Series

The next generation of compressed air and gas filters



# 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





## Filter Housing Features

**Extensive range** – 1/4" to 3" (BSP & NPT) and flow capacities up to 2550 Nm<sup>3</sup>/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.





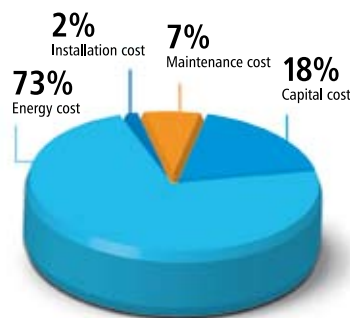
# Optimised & Energy Efficient



## 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:

<b>Water separators</b>	Are designed to remove bulk liquid and particulate contamination within a compressed air system and are typically positioned after the compressor/aftercooler.
<b>Pre-filters</b>	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.
<b>Dryer</b>	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.
<b>After-filters</b>	Provide filtration to remove dust particulates introduced from the dryer and/or other additional potential sources of contamination such as pipescale. Additional filters can be 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 <sub>2</sub> O	✓				
H <sub>2</sub> O Vapour		✓			
H <sub>2</sub> O 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.



# 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



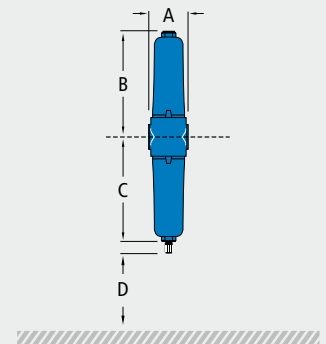
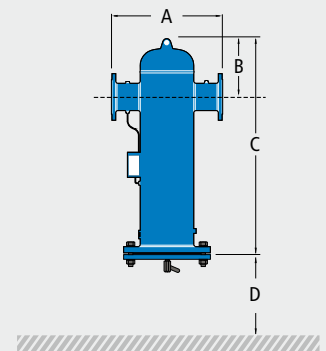
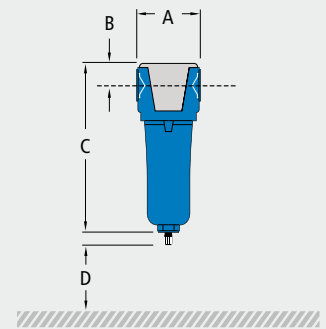
## Accessories

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)



# Technical Specification

filter model	pipe size	flow rate		dimensions (mm)				approx. weight Kg	element model
		Nm <sup>3</sup> /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



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/m <sup>3</sup>	5 mg/m <sup>3</sup>	0.1 mg/m <sup>3</sup>	0.01 mg/m <sup>3</sup>	0.003 mg/m <sup>3</sup>
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

