AIRFILTER® ENGINEERING

www.airfilterengineering.com

Filter Technical Information

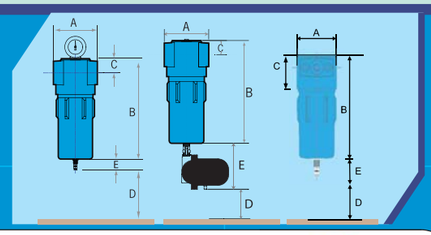
	Filter Model AFE	Pipe Conn.	16 Bar (232 Psi) Max Capacity @ 7 bar g		50 Bar (725 Psi) Max Capacity @ 50 bar g		Approx. weight (kg)	Dimensions					Replacement Element Model
			m³/h	cfm	m³/h	cfm		A	B	C	D	E*	
THREADED	Z002	G¼	30	18	75	44	0.86	61	133	14	65	41	EZ1030
	Z003	G¼	50	29	125	74	1.35	87	179	21	75	41	EZ1050
	Z005	G⅜	70	41	175	103	1.32	87	179	21	95	41	EZ1070
	Z007	G½	100	59	250	147	1.62	87	249	21	140	41	EZ1140
	Z009	G¾	180	106	450	265	3.54	130	285	43	135	41	EZ2010
	Z011	G1	300	176	750	441	4.52	130	385	43	235	41	EZ2020
	Z012	G1 ½	470	276	1175	691	5.01	130	485	43	335	41	EZ2030
	Z013	G1 ½	700	412	1750	1029	7.45	130	685	43	525	41	EZ2050
	ZE014	G2	940	553	2600	1529	10.53	162	687	55	520	140	EZ3050
	ZE017	G2 ½	1450	853	-	-	12.58	162	921	55	770	140	EZ3075
			12 Bar (174 Psi) Max										
	ZE018	G3	1940	1141	-	-	29.15	252	908	79	610	140	EZ5060
	ZE019	G3	2400	1412	-	-	32.29	252	1058	79	760	140	EZ5075

Capacity Correction Factor For Various Operating Pressure

Pressure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor	0.25	0.38	0.50	0.65	0.75	0.88	1.00	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.00	2.13

Filter Grade	Particle Removal Down To	Oil Removal Down To*	Nominal initial Pressure Drop
P	3 micron	–	0.03 bar g
U	1 micron	0.1mg/m³	0.05 bar g
H	0.01 micron	0.01mg/m³	0.09 bar g
S	0.01 micron	0.001mg/m³	0.10 bar g
C	–	0.003mg/m³	0.10 bar g

*at 20°C



GENERAL INFORMATION

- Filter housings comply to the PED 2018/68/EU (Max 16 bar for Z002-ZE017; Max 12 Bar for ZE018-ZE019)
- Maximum recommended operating temperature of 60°C (high temperature range is also available)
- Minimum recommended operating temperature 1°C. • Maximum recommended operating presure of 16 bar g and 50 bar g.
- Maximum recommended presure differential for element change is 0.6 bar g. (Except Grade C)
- Material for Z-Type filters is aluminium. • Filters come complete with auto-drain (16 bar) or manual drain (50 bar)
- The weights provided are approximate and do not include packaging and gauge

Note: Will also make filters to customer's requirement, subject to negotiation

Airfilter Engineering reserves the right to change specifications without prior notice (V12/10/18)

CERTIFIED ISO 9001 — UKAS MANAGEMENT 001

Approval Number 0047637

AIRFILTER® ENGINEERING

COMPRESSED AIR FILTERS

High efficiency filtration for clean & technically oil-free compressed air

Z-SERIES

Engineering Solutions to Cleaner Air

AIRFILTER® ENGINEERING

Why We Need To Purify Our Compressed Air

In just one cubic metre of air, there are millions of particles potentially harmful to your machines and equipments. These are primarily made up dust, bacteria, viruses, smoke, fumes, hydrocarbons, water, oil and other contaminants derived from human and industrial activities. When this air is sucked into your compressor and compressed to 8 bar pressure, for instance, the concentration of particles will increase by eight times. This will make the air more troublesome by eightfold.

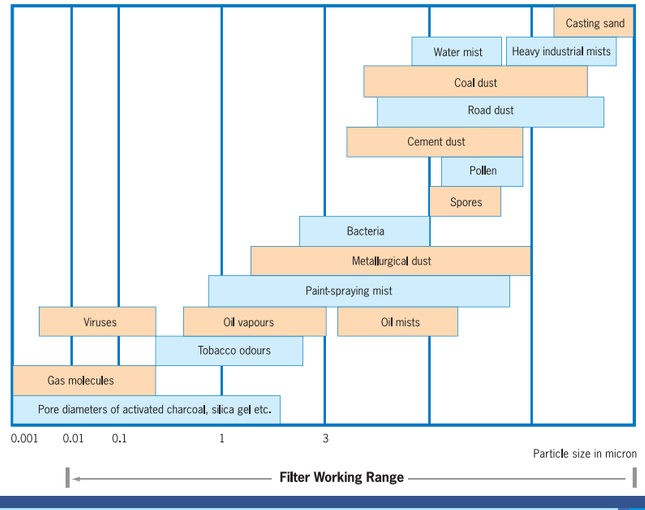
Troublesome in the sense that roughly 80% of these particles are so small that they will pass easily through your compressor's intake filters and find their way to your process line to cause either frequent expensive downtime of your pneumatic machine or adversely affect the quality of your end products.

This is why it makes economical sense to incorporate compressed air treatment into your compressed air system as the benefits would outweigh the cost, which would probably be only a small fraction of your total business investment.

With this in mind, Airfilter Engineering has ventured forth to produce a range of high quality filters, with essential parts being imported from renowned suppliers in Europe.

However, in the end, it is the highly efficient pleated filtration media produced by Airfilter Engineering that makes all the difference.

Nature And Extent Of Air Impurities



AFE Filter Grades

Airfilter Engineering (AFE) has developed a comprehensive range of filter grades to cater to the requirements of different applications. All our filter media are of pleated design to ensure higher filtration area. Here at AFE, filters and elements can also be custom-made to suit your needs.

P U H S C

AFE Filter Grade P
- For coarse pre-filtration
- Particle removal down to 3 micron

AFE Filter Grade U
- For general filtration
- Particle removal down to 1 micron
  Oil content down to 0.1 mg/m^3 at 20°C

AFE Filter Grade H
- For high performance filtration
- Particle removal down to 0.01 micron
  Oil content down to 0.0 1 mg/m^3 at 20°C

AFE Filter Grade S
- For high performance filtration
- Particle removal down to 0.01 micron. Oil content down to 0.001 mg/m^3 at 20°C in conjunction with filter grade H

AFE Filter Grade C
- Activated carbon filter.
  For odour removal. Applicable in oil lubricated compressors.
- For removal of oil content down to 0.003 mg/m^3 at 20°C in conjuction with filter grade H

Accessories

Internal Auto Drain
IAD 516A
CODE = I5A

External Auto Drain
EAD 416
CODE = E4

Electronic Timer Drain
ETD216
CODE = T2

Electronic Timer Drain
ETD150
CODE = T5

Semi Auto Drain
SAD 116 (for G10 – G220)
CODE = S1

Semi Auto Drain
SAD 216 (for ZE014-ZE019)
CODE = S2

Electronic Zero Loss Drain
ESD100
CODE = Z1

Differential Pressure Indicator
DP 11
CODE = A

Mounting Kits
MB 1030
MB 55220

Connecting Kits
CK1 & CK2

Differential Pressure Gauge
DP 12
CODE = B

The basic benefits that we can offer with our pleated filter media are:

- Higher effective filtration area
- Higher dirt holding capacity
- Lower pressure drop
- Possibility of higher air flow

ISO 8573-1 : 2010 - TABLE OF CONTAMINANTS AND PURITY CLASSES

Purity Class	PARTICLES				HUMIDITY AND LIQUID WATER		OIL
	Maximum number of particles per cubic metre as a function of particle size, d			Mass Concentration C_p	Pressure Dewpoint	Concentration Of Liquid Water, C_w	Concentration Of Total Oil (Liquid, Aerosol & Vapour)
	0.1 µm < d ≤ 0.5 µm	0.5 µm < d ≤ 1.0 µm	1.0 µm < d ≤ 5.0 µm	mg/m³	°C	g/m³	mg/m³
0	As specified by the equipment user or supplier and more stringent than Class 1						
1	≤ 20 000	≤ 400	≤ 10	-	≤ -70	-	≤ 0.01
2	≤ 400 000	≤ 6 000	≤ 100	-	≤ -40	-	≤ 0.1
3	Not specified	≤ 90 000	≤ 1 000	-	≤ -20	-	≤ 1
4	Not specified	Not specified	≤ 10 000	-	≤ +3	-	≤ 5
5	Not specified	Not specified	≤ 100 000	-	≤ +7	-	-
6	-	-	-	$0 < C_p \leq 5$	≤ +10	-	-
7	-	-	-	$5 < C_p \leq 10$	-	$C_w \leq 0.5$	-
8	-	-	-	-	-	$0.5 < C_w \leq 5$	-

The ISO 8573-1 is a key element of the ISO 8573 series of documents and it specifies the various purity classes of compressed air with respect to particles, water and oil.
EXAMPLE OF DESIGNATION:
ISO 8573-1:2010 [1:2:1] indicate,
- purity Class 1 for particles
- purity Class 2 for humidity and liquid water
- purity Class 1 for oil