COMPRESSED AIR FILTER ELEMENTS Product overview





COMPRESSED AIR QUALITY CLASSES ACCORDING TO ISO 8573-1

		SOLID PARTICLES		HUMIDITY AND	LIQUID WATER	0	IL
CLASS	Maximum num fun	ber of particles per control of particles per control of particle size,	ubic meter as a d ⁽²⁾	Pressure	dew point	Concentration (liquid, aeros	n of total oil ⁽²⁾ ol and vapor)
	0,1 µm < d ≤ 0,5 µm	0,5 µm < d ≤ 1,0 µm	1,0 µm < d ≤ 5,0 µm	°C	°F	mg/m³	ppm/w/w
0		As spe	cified by the equipme	nt user or supplier and	d more stringent than	class 1	
1	≤ 20.000	≤ 400	≤ 10	≤ -70	-94	≤ 0,01	≤ 0,008
2	≤ 400.000	≤ 6.000	≤ 100	≤ -40	-40	≤ 0,1	≤ 0,08
З	Not specified	≤ 90.000	≤ 1.000	≤ -20	-4	≤ 1	≤ 0,8
4	Not specified	Not specified	≤ 10.000	≤ +3	38	≤ 5	≤ 4
5	Not specified	Not specified	≤ 100.000	≤ +7	45	Not specified	Not specified
6				≤ ±10	50		
	M	lass concentration(2)-(C _P	LIQUID WATER	CONTENT ⁽²⁾ - C _w		
		mg/m³		g/	m³		
6		$0 < C_p \le 5$				Not specified	Not specified
7		$5 < C_p \le 10$		C _w ≤	s 0,5	Not specified	Not specified
8		Not specified		0,5 ≤	C _w ≤ 5	Not specified	Not specified
9		Not specified				Not specified	Not specified
Х		$C_{p} > 10$				> 5	> 4

⁽¹⁾ To qualify for a class designation, each size range and particle number within a class shall be met.

(2) At reference conditions: air temperature of 20° C, absolute air pressure of 100 kPa (1 bar), 0 relative water vapor pressure.



ISO 9001:2008

Bureau Veritas Certification certified, that Management System of OMEGA AIR d.o.o. Ljubljana has been audited and found to be in accordance with the requirements of the management system standard ISO 9001:2008.



CE-PED-H

BUREAU VERITAS S.A. acting within the scope of its notification (notified body number 0062), attests that the quality system operated by the manufacturer for design, manufacture, final inspection and testing of the pressure equipment identified has been examined against the provisions of annex III, module H, of the Pressure Equipment directive n°97/23/EC, and found to satisfy the provisions of the directive which apply to it.



IUTA

Filter elements harmony to standard ISO 8573-1 is tested by Institute of Energy and Environmental Technology e.V. (IUTA Germany) in Duisburg-Essen.

Filtration principles



A ² grade adsorption	H ² grade catalyst	MS ² grade molecular sieve	l grade 20 μm prefilter	sterile sterilisation	N grade prefilter
quality class (ISO 8573-1)	quality class (ISO 8573-1)	quality class (ISO 8573-1)	quality class (ISO 8573-1)	quality class (ISO 8573-1)	quality class (ISO 8573-1)
solids: 1	solids: 1	solids: 1	solids: -	solids: 1	solids: -
oils 0/1	oils -	oils -	oils -	oils -	oils -
material	material	material	material	material	material
- activated carbon - borosilicate micro fibres	- hopcalite - borosilicate micro fibres	- molecular sieve - borosilicate micro fibres	- sintered stainless steel 1.4404	 borosilicate micro fibres NOMEX 	- stainless steel mesh

Compressed air filter elements

NOTE: Endcaps of filter series may differ from pictures below





compressed air

Filter media	sintered INOX 1.4404
Operating temperature	0 - 150 °C
Differential pressure (dry)	60 mbar

compressed air

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perating temperature	0 - 150 °C
Differential pressure (dry)	60 mbar

([process and culinary steam

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Filter media	borosilicate micro fibre
Operating temperature	1,5 - 120 °C
Differential pressure (dry)	80 mbar
Particle retention (nominal)	99,9999% (0,01 µm)

		applicable to .	AFs series
MS grade	0,1 μm	Ss grade	0,01 μm
МІ	CROFILTER particulate	МІ	ICROFILTER particulate
	ACCCARDING TO ISO 8573-1Solid particlesClass 2WaterClass -OilsClass 2		Solid Class 1 water Class - Oils Class 1 Class - Oils Class 1 Class 1 Class 1
silicone free filter eleme high efficient removal of and bulk liquids from co Filter media	ents f coarse solid particles ompressed air borosilicate micro fibres	silicone free filter eleme high efficient removal of and bulk liquids from co Filter media	ents - f coarse solid particles ompressed air borosilicate micro fibres
Operating temperature	1,5 - 65 °C	Operating temperature	1,5 - 65 °C
Differential pressure (dry)	50 mbar	Differential pressure (dry)	80 mbar
Particle retention (nominal)	99,9999% (0,1 µm)	Particle retention (nominal)	99,9999% (0,01 µm)
Particle retention rate ISO	99,98 %	Particle retention rate ISO	99,998 %
Residual oil content	<0,1 mg/m ³	Residual oil content	<0,01 mg/m ³



Structure of typical filter element

UPPER END CAP

Upper end cap holds filter medias together in compact form. Depending of application and filter type it can be made of plastic, aluminium or stainless steel.

INTERNAL NONWOVEN LAYER

Internal nonwoven layer gives basic protection of filter media

COALESCENT FILTER MEDIA

Coalescing filter media collects oil and water aerosols.

EXTERNAL STAINLESS STEEL

MESH Stainless steel expanded mesh supports filtration media and give them stability.

LOWER END CAP

Lower end cap assures reliable cartridge fitting and binding of filter media. Depending of application and filter type it can be made of plastic, aluminium or stainless steel.

SEALING O-RING

Ensures reliable tightnes between filter head and filter element.

INNER STAINLESS STEEL MESH

Stainless steel expanded mesh supports filtration media and give them stability.

PLEATED FILTER MEDIA

Pleated filter media provides significant larger surface filter area than wrapped and lower pressure drop. This layer removes solid particles.

FOAM

Drainage madia on outer side of filter element provides drainage of oil and water to lower sections of filter.

omega

AIR

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