



ASME Coded Vessels

Compressed Air & Gas Filters

- Coalescing, Particulate & Hydrocarbon Adsorption
- Flows up to 37,000 SCFM (62,000 m³/hr)
- 3" NPT to 16" Flange

Bulletin 1300 - 400/USA



Finite[®]

Finite® Large Capacity

ASME Vessels

Finite Filter's large capacity ASME filter vessels have been designed specifically for our coalescing elements and incorporate large sump capacities and generous exit cavities for maximum performance with low differential pressures.

All units are "U" stamped and conform to ASME Section VIII standard code for pressure vessels. With flow capacities to 37,000 SCFM and optional materials of construction, most compressor source filtration requirements can be met.

Specifications:

Porting to: 16" Flange

Flows to: 37,000 SCFM (63,000 m³/hr)

Design: ASME Code/CRN (Canadian Registration)

Available Options:

High Temperature

High Pressure

All Stainless Construction



Typical Applications

Coalescing (Oil Removal)

- Compressed air system protection
- Dryer protection
- Paint spray booths
- Microelectronics prefiltration

Interceptor (Particulate Removal)

- Natural gas systems
- Desiccant dryer afterfilter
- Prefilter for coalescer
- Systems with high particulate concentration
- Particulate protection for non-lubricated systems

Adsorber (Vapor Removal)

- Odor removal
- Food packaging
- Powder paint systems

Applications & International ISO Standards

International Standard ISO8573-1

is fast becoming the industry standard method for specifying compressed air cleanliness. The chart to the right details the specifications of the classes.

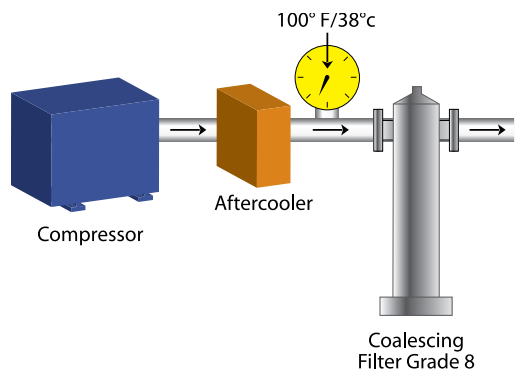
The diagrams below describe various systems in terms of their corresponding ISO classification.

Notification as specified in ISO8573 - 1

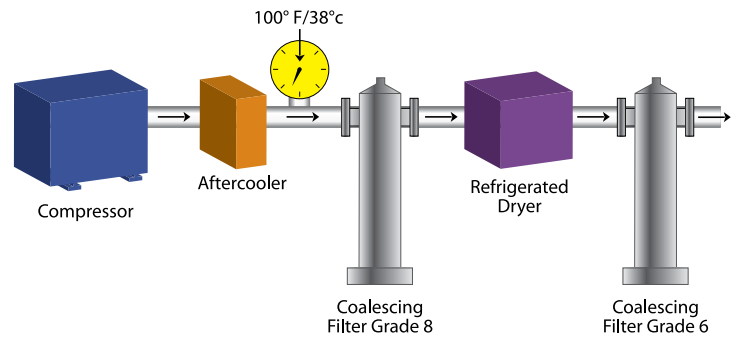
Class	Solid		Water		Oil	
	Maximum particle size (µm)	Maximum Concentration ppm (mg/m ³)	Maximum Pressure Dew point °F	Maximum Pressure Dew point (°C)	Maximum Concentration ppm (mg/m ³)	Maximum Concentration ppm (mg/m ³)
1	0.1	0.08 (0.1)	-94	(-70)	0.008	(0.01)
2	1	0.8 (1)	-40	(-40)	0.08	(0.1)
3	5	4.2 (5)	-4	(-20)	0.83	(1)
4	15	6.7 (8)	37	(+3)	4.2	(5)
5	40	8.3 (10)	45	(+7)	21	(25)
6	-	-	50	(+10)	-	-

Typical Applications

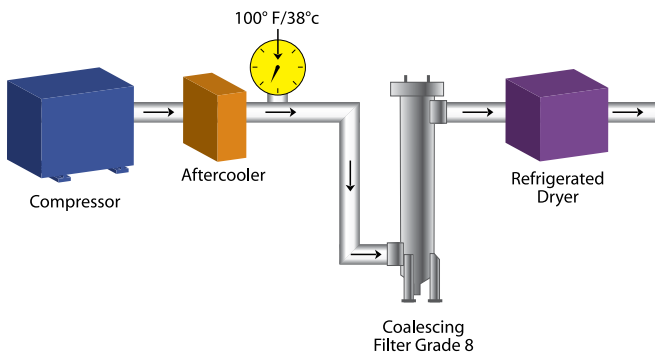
ISO Class 1 Solid 2 Solid Water 3 Oil



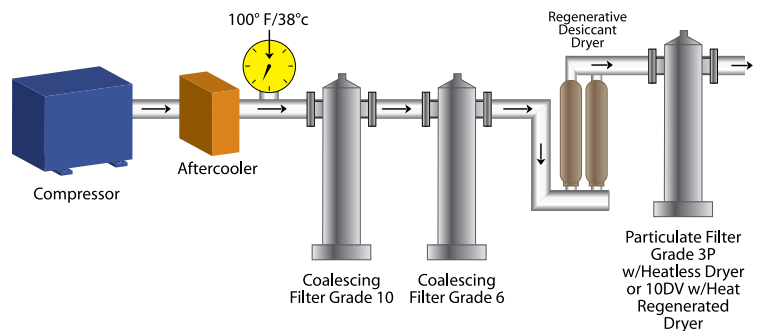
ISO Class 1 Solid 4 Water 1 Oil



ISO Class 2 Solid 4 Water 3 Oil



ISO Class 1 Solid 2 Water 1 Oil



Note: In the pictorial examples shown above, the contribution of hydrocarbon vapors has not been taken into account in determining the oil class category.

Determine your application, media grade, media type and end seals.

Find your (or similar) application from the descriptions below, from the basic application circuits on the previous page, or consult a Finite® application engineer. Determine media grade, media type and end seal required. If your application requires a coalescing element, use the information listed below. For other media types, please see the following page.

Coalescing Elements (removal of liquids and particulate)



Media type C or Q

Available in grades 6, 8 or 10
Air Flow: Inside to Outside

This coalescing element is composed of an epoxy saturated, borosilicate glass micro-fiber tube. Type Q has a pleated cellulose inner layer as a built-in prefilter. This element is metal retained for added strength, and includes a synthetic fabric layer. Media type Q is shown here. Media type C has the same coalescing outer layer, without the inner pleated layer.



Media type D

Available in grades 6, 8 or 10
Air Flow: Inside to Outside

This type D element is composed of a micro-glass coalescer, just like type C, however it is surrounded by two metal retainers. These metal retainers, coupled with a glass drain layer, make this a robust element designed to handle high temperatures.



Media type ME

Air Flow: Inside to Outside

Finite's Mist Eliminator (ME) media consists of two layers. The outer layer consists of a dense matrix of glass fibers. This coalescing layer provides highly efficient aerosol removal and very low pressure drop. The inner layer effectively traps dirt particles, protecting and extending the life of the outer layer. A metal retainer is used for strength and stability.

This media is used in bulk coalescing applications and when high efficiency and low pressure drop are required.

Type ME elements are great prefilters for all types of air dryers. This element maintains dryer efficiency by removing oil before it damages costly desiccant or membranes. It also protects refrigerated dryers by preventing coating of coils with oil or varnish.



Media type 7CVP

Air Flow: Inside to Outside

Finite's 7CVP media consists of two layers. The outer layer consists of a dense matrix of glass fibers. This coalescing layer provides highly efficient aerosol removal and very low pressure drop. The inner layer effectively traps dirt particles, protecting and extending the life of the outer layer. A metal retainer is used for strength and stability.

This media is used in bulk coalescing applications and when relatively high efficiency and low pressure drop are required.

Type 7CVP elements are great prefilters for refrigerated air dryers. This element maintains dryer efficiency by preventing coating of coils with oil or varnish.

For a high temperature version of this element, specify type **7DVP**.

For types C, Q and D... Choose your grade...

Grade 6 filters are used when "total removal of liquid aerosols and suspended fines" is required. Because of its overall performance characteristics, this grade is most often recommended.

A grade 6 element is great prefilter protection for desiccant air dryers. This element prevents oil or varnish from coating the desiccant, while maintaining the dryer efficiency.

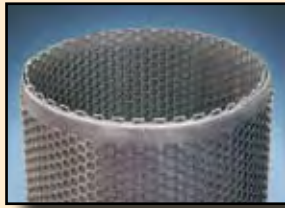
Grade 8 filters combine high efficiency with high flow rate and long element life. A separate prefilter is not required for "normal to light" particulate loading.

A grade 8 element is great prefilter protection for refrigerated air dryers. This element maintains dryer efficiency by preventing coating of coils with oil or varnish.

Grade 10 filters are used as prefilters for grades 6 or 8 to remove gross amounts of liquid aerosols or tenacious aerosols which are difficult to drain.

A grade 10 element coupled with media type D is a recommended afterfilter for heat regenerated type dryers. This grade is often referred to as a coarse coalescer.

Water Separator Element
(removal of bulk liquids)



Media type 100WS

Air Flow: Inside to Outside

This rolled stainless steel mesh element has two metal retainers with rolled mesh steel in between. It is an extremely robust design.

This media is used for the reduction and elimination of excess liquids in gas streams. Excellent prefiltration for coalescing grades 6 and 10 when extreme quantities of liquid contaminants are present.

Interceptor Element
(removal of particulate)



Media type 3P

Air Flow: Outside to Inside

This particulate element is constructed of pleated cellulose with a 3 micron rating. It is metal retained for added strength and includes an outer synthetic fabric layer.

3P particulate interceptor elements are used where very high dirt holding capacity and relatively fine pore structure are required.

Adsorption Element
(removal of odor)



Media type A

Air Flow: Outside to Inside

This hydrocarbon vapor removal element consists of an ultrafine grained, highly concentrated, activated carbon sheet media. It is metal retained for added strength and includes an outer synthetic fabric layer.

This media is used to remove hydrocarbon vapor and is safe for breathing air.

Finite® Media Specifications					
Grade Designation	Coalescing Efficiency 0.3 to 0.6 Micron Particles	Maximum Oil Carryover ¹ PPM w/w	Micron Rating	Pressure Drop (PSID) @ Rated Flow ²	
				Media Dry	Media Wet With 10-20 wt. oil
6	99.97%	0.008	0.01	1.5	4.0
ME	99.95%	0.02	0.3	0.4	1.0
7	99.5%	0.09	0.5	0.25	0.5
8	98.5%	0.2	0.5	1.0	3.5
10	95%	0.85	1.0	0.75	2.5
100WS	N/A	N/A	100	<0.25	<0.50
3P	N/A	N/A	3.0	0.25	N/A

¹Tested per ADF-400 at 40 ppm inlet.

²Add dry + wet for total pressure drop.

³Oil vapor removal efficiency is given for A media.

End Seals available:

End Seals	Available on Media type:	Max temp of element with end seal
U: Molded Urethane (standard)	C	225°F (107°C)
	Q	
	3P	
S: Molded Silicone Rubber	C	350°F (177°C)
	Q	350°F (177°C)
	D	450°F (232°C)
	3P	350°F (177°C)
V: Fluorocarbon gaskets on metal end caps	C	350°F (177°C)
	Q	350°F (177°C)
	D	450°F (232°C)
	ME	225°F (107°C)
	7CVP	225°F (107°C)
	7DVP	400°F (204°C)
	100WS	350°F (177°C)
	3P	350°F (177°C)
	A	225°F (107°C)

PROSEP FILTER SYSTEMS LTD
Unit G19
River Bank Way
Lowfields Business Park
Elland
West Yorkshire
HX5 9DN

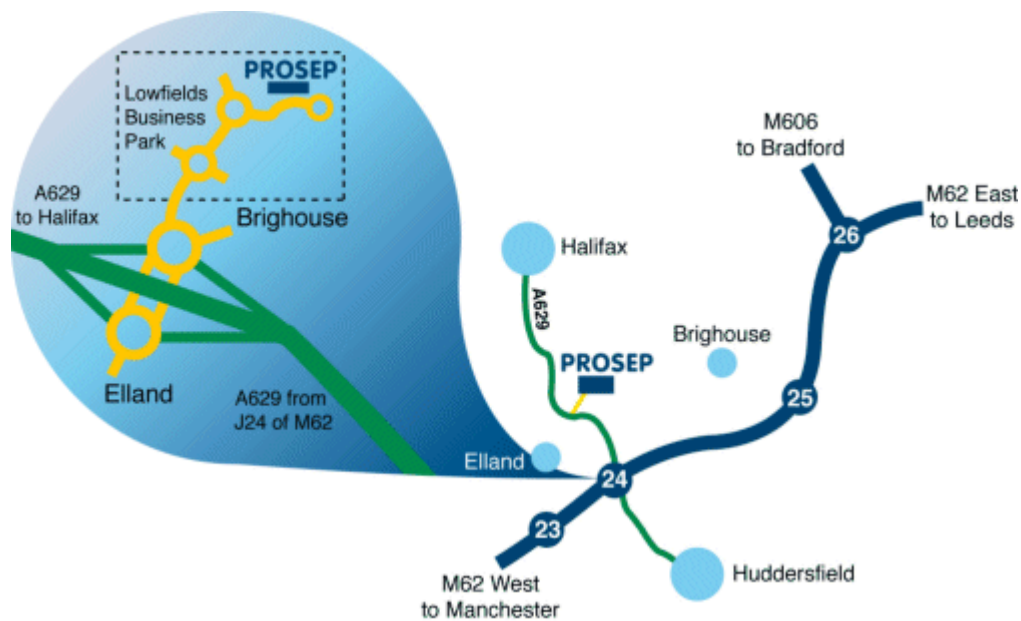
Tel: 01422 377367

Fax: 01422 377369

Email: enquiries@prosep.co.uk

www.prosep.co.uk

Map and Directions to Prosep Filters Limited



Leave M62 at Junction 24.

At roundabout adjacent to Cedar Court Hotel take 2nd exit onto dual carriageway (A629), signposted Halifax.

Take 1st exit slip road.

At roundabout at end of sliproad, take 3rd exit off.

This is the entrance to Lowfields Business Park.

Proceed straight over 1st roundabout.

At next roundabout take 2nd exit onto River Bank Way - Prosep Filters can be found on the left after the S-bend.

[Link to Google Maps](#)