Filter Element Information

Index

Filter Elements
How to Select the Filter Element

1) Select the Size of the Filter Element

Filter Elements have a part number arranged in three sections, for example 25.64.5K

The first part refers to the nominal inside diameter (mm), the second figure refers to the overall length (mm) and the third part is the designation for the type and grade.

Are you using a Filter Housing?

Check the data sheet for the Filter Hosuing to find which Filter Element size is required. In this example we are using the SS215.221 Filter Housing so the Filter Element size will be 25.64.☐

Filter Element Code (5)	25.64.☐
Cartridge Code (6)	25.64.AD☐

2) Select the Type of Filter Element

Is the application for solid particulate removal, or do you need to seperate liquid from gases (coalecsing)?

Particulate Types

- **Disposable Glass Microfibre** → .☐E, .☐K, .☐S, .☐L
- **Stainless Steel (5-Layer)** → .S☐V, .S☐E, .S☐N, .S☐T, .S☐H
- **Stainless Steel (Single Layer)** → .SS☐
- **PTFE** → .T☐
- **PE** → .PE☐
- **Ceramic** → .C☐

Coalescing Types

- **Disposable Glass Microfibre** → .☐CE, .☐CK, .☐CR, .☐CS, .☐W

3) Select the Grade of Filter Element

Refer to the following Filter Element data sheets to select the grade required.

These are examples of the filter elements with the grade selected -

Particulate Grades

- **Disposable Glass Microfibre** → 25.64.5K
- **Stainless Steel (5-Layer)** → 25.64.S20V
- **Stainless Steel (Single Layer)** → 25.64.SS25
- **PTFE** → 25.64.T2
- **PE** → 25.64.PE20
- **Ceramic** → 15/30.75.C20

Coalescing Grades

- **Disposable Glass Microfibre** → 25.65.5CE, 25.64.5CK, 25.64.5CR, 25.64.5CS, 25.64.5W

Filter Elements
Disposable Type Binders

Disposable Filter Elements

Disposable bonded microfibre filter elements are manufactured from precise mixtures of borosilicate glass microfibres to the very highest standards of quality control. These elements offer exceptional filtration efficiency at very low pressure drops and being +90% void volume they give a very long service life.

The elements are bonded to impart high strength and eliminate fibre shedding and the choice between the different binders available will depend on each application. Disposable elements are self-sealing and sealed into a filter housing by axial compression.

Glass Microfibres

Particulate Filter Element

Coalescing Filter Element

Coalescing or Particulate Applications

There are two types of filter element available, particulate and coalescing. The particulate filter elements use a single layer of filter media whereas coalescing elements have a fine capture layer and a coarse drainage layer.

The coarsest grade that will adequately protect the application should be chosen as this will result in the most economical solution to the contamination problem by extending the service life. Disposable bonded microfibre filter elements are suitable for both gas and liquid applications.

Binder Types	
Particulate Applications	
E	Epoxy ester binder suitable for all general purpose particulate removal applications in non-corrosive gases and liquids
K	PVDF binder has an excellent chemical resistance for use with corrosive gases and liquids. Very low levels of adsorption.
S	Silica binder giving a completely inorganic filter element. For high temperatures and solvent applications.
L	Silicone binder is hydrophobic and prevents the pores being filled with condensate. The maximum temperature is 200ºC
Coalescing Applications	
CE	Epoxy ester binder suitable for all general purpose aerosol and particulate removal applications in non-corrosive gases
CK	PVDF binder has an excellent chemical resistance for use with corrosive gases. Very low levels of adsorption
CR	PVDF binder as above with the addition of a reinforcing mesh embedded within the structure
CS	Silica binder giving a completely inorganic filter element. For high temperatures and solvent applications.
W	Silicone binder is hydrophobic and prevents the pores being filled with condensate. The maximum temperature is 200ºC

Filter Elements are available in a wide range of standard diameters and lengths. These are based on traditional industry standard sizes and allow the elements to be installed in other proprietary equipment. For more information about sizes, see page CF/2.1/020a.

Standard Sizes								
10.32.☐	12.20.☐	16.32.☐	22.30.☐	25.30.☐	38.58.☐	45.178.☐	51.89.☐	63.476.☐
10.57.☐	12.25.☐	16.41.☐	22.35.☐	25.35.☐	38.64.☐	45.230.☐	51.115.☐	63.762.☐
	12.32.☐	16.57.☐	22.64.☐	25.51.☐	38.115.☐	45.250.☐	51.127.☐	
	12.38.☐			25.64.☐	38.152.☐		51.230.☐	
	12.57.☐			25.127.☐	38.178.☐		51.476.☐	
	12.76.☐			25.152.☐				
				25.178.☐				

Replace the ☐ in the part numbers shown with the grade selected from the tables below. More information about the binder types can be found on page CF/2.1/021.

Efficiency of the Filter Elements

Each filter element type is available in a selection of grades covering a efficiency range from coarse bulk contamination removal and the essentially complete removal of submicron particles.

Standard Grades

Particulate Applications (Gas)

			% removal of 0.01 micron particles				
Binder		Max. Temp.	+99.9999%	+99.99%	+99.5%	+95%	+75%
E	Epoxy Ester	150ºC	4E	5E	6E	7E	8E
K	PVDF Flourocarbon	150ºC	4K	5K	6K	7K	8K
S	Silica Inorganic	500ºC	4S	5S	6S	7S	8S
L	Silicone	200ºC	4L		6L		

Coalescing Applications (Gas)

			% removal of 0.01 micron particles & aerosols			
Binder		Max. Temp.	+99.99%	+99.5%	+95%	+75%
CE	Epoxy Ester	150ºC	5CE	6CE	7CE	8CE
CK	PVDF Flourocarbon	150ºC	5CK	6CK	7CK	8CK
CR	PVDF Flourocarbon	150ºC	5CR	6CR	7CR	8CR
CS	Silica Inorganic	500ºC	5CS	6CS	7CS	8CS
W	Silicone	200ºC	5W	6W	7W	8W

Particulate Applications (Liquid)

			+98% removal of particles at stated size					
Binder		Max. Temp.	0.3µm	1µm	2µm	8µm	25µm	75µm
E	Epoxy Ester	150ºC	3E	4E	5E	6E	7E	8E
K	PVDF Flourocarbon	150ºC	3K	4K	5K	6K	7K	8K
S	Silica Inorganic	500ºC	3S	4S	5S	6S	7S	8S

Special Sizes

Special size filter elements can also be manufactured in a wide range of different diameters and lengths.

Inside Diameters: **6mm to 100mm**

Lengths: **9mm to 1000mm**

Disposable Filter Element Dimensions & Tolerances

Filter elements are available in a wide range of standard diameters and lengths. These are based on traditional industry standard sizes and allow the element to be installed in other proprietary equipment.

This chart shows you a list of all our standard disposable filter elements, particulate and coalescing, along with their actual sizes in millimetres and the standard tolerances we use in manufacturing.

Particulate Types

Element Code	Inside Ø mm	Tolerance mm	Outside Ø mm	Tolerance mm	Length mm	Tolerance mm
10.32.☐	10.0	±0.25	14.0	±0.50	32.0	±0.25
10.57.☐	10.0	±0.25	14.0	±0.50	57.0	±0.25
12.20.☐	12.5	±0.25	17.0	±0.50	20.0	±0.25
12.25.☐	12.5	±0.25	17.0	±0.50	25.0	±0.25
12.32.☐	12.5	±0.25	17.0	±0.50	32.0	±0.25
12.57.☐	16.0	±0.25	17.0	±0.50	57.0	±0.25
12.76.☐	16.0	±0.25	17.0	±0.50	76.0	±0.25
16.32.☐	16.0	±0.25	22.0	±0.50	32.0	±0.25
16.41.☐	25.5	±0.25	22.0	±0.50	41.0	±0.25
25.30.☐	25.5	±0.25	31.0	±0.50	30.0	±0.25
25.51.☐	25.5	±0.25	31.0	±0.50	51.0	±0.25
25.64.☐	25.5	±0.25	31.0	±0.50	64.0	±0.25
25.127.☐	25.5	±0.25	31.0	±0.50	127.0	±0.25
25.178.☐	25.5	±0.25	31.0	±0.50	178.0	±0.25
38.58.☐	38.5	±0.25	45.0	±0.50	58.0	±0.25
38.89.☐	38.5	±0.25	45.0	±0.50	89.0	±0.25
38.115.☐	38.5	±0.25	45.0	±0.50	115.0	±0.25
38.152.☐	38.5	±0.25	45.0	±0.50	152.0	±0.25
38.178.☐	38.5	±0.25	45.0	±0.50	178.0	±0.25
51.89.☐	51.2	±0.25	59.0	±0.50	89.0	±0.25
51.230.☐	51.2	±0.25	59.0	±0.50	230.0	±0.25
51.476.☐	51.2	±0.25	59.0	±0.50	476.0	±0.25
63.476.☐	63.5	±0.25	72.0	±0.50	476.0	±0.25
63.762.☐	63.5	±0.25	72.0	±0.50	762.0	±0.25

Coalescing Types

Element Code	Inside Ø mm	Tolerance mm	Outside Ø mm	Tolerance mm	Length mm	Tolerance mm
10.57.☐	10.0	±0.25	18.0	±0.50	32.0	±0.25
10.57.☐	10.0	±0.25	18.0	±0.50	57.0	±0.25
12.32.☐	12.5	±0.25	19.0	±0.50	32.0	±0.25
12.57.☐	12.5	±0.25	19.0	±0.50	57.0	±0.25
12.76.☐	12.5	±0.25	19.0	±0.50	76.0	±0.25
25.35.☐	25.5	±0.25	35.0	±0.50	35.0	±0.25
25.64.☐	25.5	±0.25	35.0	±0.50	64.0	±0.25
27.64.☐	27.0	±0.25	39.0	±0.50	64.0	±0.25
25.127.☐	25.5	±0.25	35.0	±0.50	127.0	±0.25
25.178.☐	25.5	±0.25	35.0	±0.50	178.0	±0.25
38.58.☐	38.5	±0.25	50.0	±0.50	58.0	±0.25
38.89.☐	38.5	±0.25	50.0	±0.50	89.0	±0.25
38.115.☐	38.5	±0.25	50.0	±0.50	115.0	±0.25
38.152.☐	38.5	±0.25	50.0	±0.50	152.0	±0.25
38.178.☐	38.5	±0.25	50.0	±0.50	178.0	±0.25
51.89.☐	51.2	±0.25	63.0	±0.50	89.0	±0.25
51.230.☐	51.2	±0.25	63.0	±0.50	230.0	±0.25
51.476.☐	51.2	±0.25	63.0	±0.50	476.0	±0.25
63.476.☐	63.5	±0.25	76.0	±0.50	476.0	±0.25
63.762.☐	63.5	±0.25	76.0	±0.50	762.0	±0.25

Special Sizes

Special size filter elements can also be produced that are not included on this chart.
We can manufacture in a wide range of different diameters and lengths.

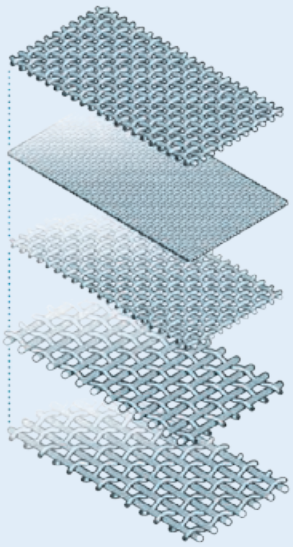
Please enquire if you have any specific requirements.

5-Layer Sintered Stainless Steel Elements

Stainless steel filter elements are made up of five layers of 316L mesh that are sintered together to form an integrated porous element. The middle mesh is of very fine wire gauge and determines the filtration rates, this layer is then overlaid with inner and outer layers of coarser mesh to give support and protection.

These elements are very useful in heavily contaminated applications and for use as pre-filters before disposable type final filters. These filter elements can be cleaned by back-flushing in situ for extended service life. Or, they can be removed and cleaned with an ultrasonic cleaner.

Seals are required and the options are shown below.



Five Layers of SS Mesh

One layer of mesh determines the filtration rate and this is overlaid with inner and outer layers of coarser mesh to give support.

Filter Elements are available in a wide range of standard diameters and lengths. These are based on traditional industry standard sizes and allow the elements to be installed in other proprietary equipment. Custom sizes are readily available.

Standard Sizes				
10.32.☐	12.32.☐	25.64.☐	38.152.☐	51.230.☐
10.57.☐	12.57.☐	25.127.☐	38.178.☐	51.476.☐
	12.76.☐	25.178.☐		

Replace the ☐ in the part numbers shown with the grade selected from the tables below.

Standard Grades									
Seals	Max. T.	1µm	2µm	5µm	10µm	20µm	40µm	100µm	200µm
Viton	200°C	S1V	S2V	S5V	S10V	S20V	S40V	S100V	S200V
Nitrile	110°C	S1N	S2N	S5N	S10N	S20N	S40N	S100N	S200N
EPDM	150°C	S1E	S2E	S5E	S10E	S20E	S40E	S100E	S200E
PTFE	200°C	S1T	S2T	S5T	S10T	S20T	S40T	S100T	S200T
Copper	480°C	S1H	S2H	S5H	S10H	S20H	S40H	S100H	S200H

Efficiency Ratings		
Grade	Nominal (+98%)	Absolute (100%)
S1	1µm	2µm
S2	2µm	5µm
S5	5µm	10µm
S10	10µm	20µm
S20	20µm	35µm
S40	40µm	75µm
S100	100µm	150µm
S200	200µm	250µm

PTFE Seals

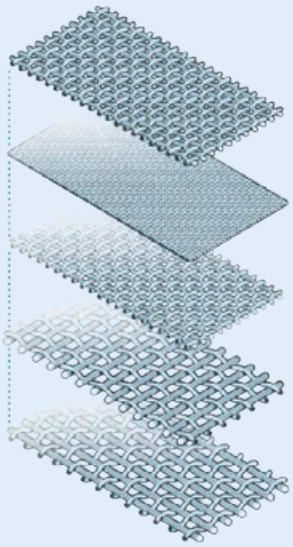
Viton Seals

5-Layer Sintered Stainless Steel Elements

Stainless steel filter elements are made up of five layers of 316L mesh that are sintered together to form an integrated porous element. The middle mesh is of very fine wire gauge and determines the filtration rates, this layer is then overlaid with inner and outer layers of coarser mesh to give support and protection.

These elements are very useful in heavily contaminated applications and for use as pre-filters before disposable type final filters. These filter elements can be cleaned by back-flushing in situ for extended service life. Or, they can be removed and cleaned with an ultrasonic cleaner.

Seals are required and the options are shown below.



Five Layers of SS Mesh

One layer of mesh determines the filtration rate and this is overlaid with inner and outer layers of coarser mesh to give support.

Filter Elements are available in a wide range of standard diameters and lengths. These are based on traditional industry standard sizes and allow the elements to be installed in other proprietary equipment. Custom sizes are readily available.

Standard Sizes				
10.32.☐	12.32.☐	25.64.☐	38.152.☐	51.230.☐
10.57.☐	12.57.☐	25.127.☐	38.178.☐	51.476.☐
	12.76.☐	25.178.☐		

Replace the ☐ in the part numbers shown with the grade selected from the tables below.

Standard Grades									
Seals	Max. T.	1µm	2µm	5µm	10µm	20µm	40µm	100µm	200µm
Viton	200°C	S1V	S2V	S5V	S10V	S20V	S40V	S100V	S200V
Nitrile	110°C	S1N	S2N	S5N	S10N	S20N	S40N	S100N	S200N
EPDM	150°C	S1E	S2E	S5E	S10E	S20E	S40E	S100E	S200E
PTFE	200°C	S1T	S2T	S5T	S10T	S20T	S40T	S100T	S200T
Copper	480°C	S1H	S2H	S5H	S10H	S20H	S40H	S100H	S200H

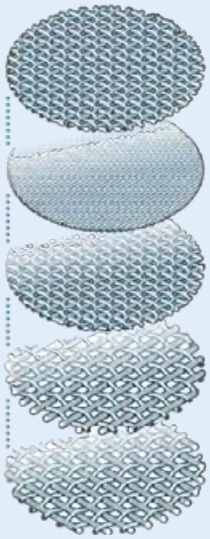
Efficiency Ratings		
Grade	Nominal (+98%)	Absolute (100%)
S1	1µm	2µm
S2	2µm	5µm
S5	5µm	10µm
S10	10µm	20µm
S20	20µm	35µm
S40	40µm	75µm
S100	100µm	150µm
S200	200µm	250µm

PTFE Seals

Viton Seals

Sintered Stainless Steel Filter Discs

Stainless steel filter discs are made up of five layers of 316 mesh that are sintered together to form an integrated porous element. The middle mesh is of very fine gauge and determines the filtration rates, this layer is then overlaid with inner and outer layers of coarser mesh to give support and protection.



Five Layers of SS Mesh

One layer of mesh determines the filtration rate and this is overlaid with inner and outer layers of coarser mesh to give support.

Filter discs are 1.75mm thick and are available in a range of standard diameters.

Standard Sizes					
FD.13.☐	FD.25.☐	FD.33.☐	FD.47.☐	FD.61.☐	FD.101.☐

Replace the ☐ in the part numbers shown with the grade selected from the tables below.

Standard Grades									
Seals	Max. T.	1µm	2µm	5µm	10µm	20µm	40µm	100µm	200µm
Viton	200°C	S1V	S2V	S5V	S10V	S20V	S40V	S100V	S200V
Nitrile	110°C	S1N	S2N	S5N	S10N	S20N	S40N	S100N	S200N
EPDM	150°C	S1E	S2E	S5E	S10E	S20E	S40E	S100E	S200E

Special Sizes

Special size filter discs can also be produced . We can manufacture in a wide range of different diameters.

Single Layer Woven Mesh SS Filter Elements

These stainless steel filter elements are made up of a single layer of 316 woven wire mesh in welded tube. Ideal for applications where a low cost stainless steel filter alternative is required.

Due to the method of the construction these filter elements do not require any seals.

Standard Sizes				
12.32.☐	12.57.☐	25.64.☐	25.178.☐	38.152.☐

Replace the ☐ in the part numbers shown with the grade selected from the tables below.

Standard Grades									
25µm	50µm	75µm	100µm	150µm	200µm	250µm	300µm	350µm	400µm
SS25	SS50	SS75	SS100	SS150	SS200	SS250	SS300	SS350	SS400

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Pleated Stainless Steel Elements

Stainless steel pleated filter elements are made up of 316L components filtration mesh, end caps and support core, with various o-ring seals. These cartridges are designed to be installed into our standard SS series filter housings giving increased flexibility when specifying for liquid and gas applications.

The pleated mesh gives much larger surface area and allows for increased flow rates, lower pressure drops, or extended service intervals.

The PCS series are available in a range of standard diameters, lengths and grades. These are based on traditional industry standard sizes and allow the elements to be installed in other proprietary equipment. Custom sizes are readily available.

Standard Sizes				
25.64.☐	25.178.☐	38.152.☐	38.178.☐	51.230.☐

Replace the ☐ in the part numbers with the grade selected from the tables below.

Standard Grades						
Seals	Max. T.	5µm	10µm	20µm	40µm	100µm
Viton	200°C	PCS5V	PCS10V	PCS20V	PCS40V	PCS100V
Nitrile	110°C	PCS5N	PCS10N	PCS20N	PCS40N	PCS100N
EPDM	150°C	PCS5E	PCS10E	PCS20E	PCS40E	PCS100E

Efficiency Ratings		
Grade	Nominal (+98%)	Absolute (100%)
S5	5µm	10µm
S10	10µm	20µm
S20	20µm	35µm
S40	40µm	75µm
S100	100µm	150µm

Special Applications

Need an unconventional or bespoke filter element and housing?

No problem.

Our skilled designers and engineers will work alongside you to build a custom-made solution that suits your particular filtration requirements and specifications. Get in touch today for a no obligation consultation on how we can meet your needs.

Special Materials With a plethora of materials, from the most exotic metals through to standard 316L stainless steel and aluminium, we can design and manufacture the most suitable filter housings and elements to suit you and your company's needs.

Special Ports Threaded ports and flange connections can be manufactured to specification, ensuring you receive a filter that fits seamlessly with your existing equipment.

PTFE Filter Elements

PTFE filter elements are produced by sintering pure PTFE granules, no other substances are used in the construction. These filter elements are usually offered when only 100% pure PTFE can be used. Normally it is preferable to offer a K type disposable filter element, if these are suitable, as both pressure drop and service life characteristics are superior to the PTFE filters.

The advantages of PTFE is the higher maximum temperature, up to 200°C, and a better chemical resistance to certain substances. PTFE elements can be ultrasonically cleaned.

PTFE Filter Element

PTFE Granules

Standard Sizes				
12.32.☐	15/30.75.☐	25.64.☐	38.58.☐	51.230.☐
12.57.☐	15/30.150.☐	25.178.☐	38.152.☐	51.476.☐

Replace the ☐ in the part numbers shown with the grade from the table below.

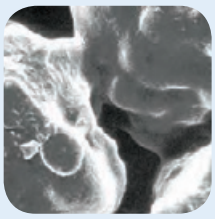
Standard Grades			
2µm	20µm	40µm	70µm
T2	T20	T40	T70

PE Filter Elements

These polyethylene filter elements are sintered using pure PE granules. The maximum temperature is 150°C

Ideal for applications where a low cost plastic filter element is required. Due to the method of the construction these filter elements do not require any seals.

PE Filter Element



PE Granules

Standard Sizes				
12.32.☐	12.57.☐	25.64.☐	25.178.☐	38.58.☐

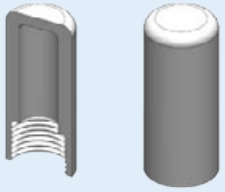
Replace the ☐ in the part numbers shown with the grade from the table below.

Standard Grades				
2µm	10µm	20µm	40µm	100µm
T2	T10	T20	T40	T100

Special Sizes

Both the PTFE and PE elements can be supplied with special diameters and lengths. We also work with a number of OEMs to supply custom filter for sensor applications.

Let us know what you need.



Custom PTFE Filter Element for Sensor Application

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Ceramic Filter Elements

Ceramic filter elements have a very useful role to play in the world of filtration. The porous ceramic media s chemically inert, stable and have temperature capabilities of up to 900ºC. These filter elements can be cleaned in situ by back-flushing to extend the service life in heavily contaminated applications.

Our ceramic filter elements are available in a range of standard diameters, lengths and grades. These are based on traditional industry standard sizes and allowing the elements to be installed in other proprietary equipment.

Custom sizes are also available.

Standard Sizes				
15/30.75.☐	15/30.150.☐	20/50.135.☐	20/50.190.☐	25/40.100.☐

Replace the ☐ in the part numbers with the grade selected from the tables below.

Standard Grades			
2µm	10µm	20µm	40µm
C2	C20	C20	C40

We have a range of flat seals that can be used in conjunction with the ceramic filter elements. Let us know what you need.

Special Applications

Need an unconventional or bespoke filter element and housing?

No problem.

Our skilled designers and engineers will work alongside you to build a custom-made solution that suits your particular filtration requirements and specifications. Get in touch today for a no obligation consultation on how we can meet your needs.

Special Materials With a plethora of materials, from the most exotic metals through to standard 316L stainless steel and aluminium, we can design and manufacture the most suitable filter housings and elements to suit you and your company's needs.

Special Ports Threaded ports and flange connections can be manufactured to specification, ensuring you receive a filter that fits seamlessly with your existing equipment.

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for rådgivning og hjælp til
at finde filtre og filterhus