Filter Media Specifications

Filter Elements

Standard Media

5 µm Polyester: 5 micron, 99+% efficiency
- ID: “odd number”: i.e. 1***9®***, 23***5***P™
- Classification: ePM$_{10}$ 75% (ISO 16890)
- Pleated industrial needle felt polyester media
- Plastisol potting
- Temperature min: -26°C (-15°F), max: 104°C (220°F)
- Reinforced epoxy coated steel wire on ID and OD

2 µm Paper: 2 micron, 99+% efficiency
- ID: “even number”: i.e. 1***8***™, 23***4***P™
- Classification: ePM$_{2.5}$ 50% (ISO 16890)
- Heavy duty industrial strength paper
- Plastisol potting
- Galvanized expanded metal
- Temperature min: -26°C (-15°F), max: 104°C (220°F)

High Efficiency

1 µm Polyester - Z Media: 1 micron, 99+% efficiency
- ID: “odd number” & “Z” suffix: i.e. 1***9Z***, 23***5Z***P
- Classification: ePM$_{2.5}$ 60% (ISO 16890)
- Epoxy coated steel wire on both sides of media
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Washable - lukewarm water & mild detergent

4 µm Polyester - N Media: 4 micron, 99+% efficiency
- ID: “odd number” & “N” suffix: i.e. 1***5N***, 37***7N***P
- Temp min: -26°C (-15°F), max: 104°C (220°F)

E12 - HE Media: 0.3 um, 99,97%
- ID: “HE” prefix & “even number”: i.e. ***HE***23***0***, ***HE***33***4***P
- Classification: E12 under EN 1822/ISO 30E under ISO 29463)
- Heavy duty industrial strength glass surrounded by galvanized expanded metal
- Maximum oversizing required to minimize pressure drop
- Plastisol potting standard
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Options: silicone potting, viton gaskets

H14 - UL Media: 0.1 micron, 99.995% efficiency
- ID: “UL” prefix & “even number”: i.e. ***UL***23***4***
- Classifcation: H14 under EN1822/ISO45H under ISO 29463
- Plastisol potting
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Options: silicone potting, viton gaskets

Dutch Twill Weave - DT Media
- ID: “DT” prefix & “odd number”: i.e. ***DT***24***5***
- Classification: ePM$_{10}$ 70% (ISO 16890)
- Stainless steel woven wire cloth
- Viton gaskets & epoxy potting
- Temp min: -26°C (-15°F), max: 190°C (375°F)

Chemical / Food / Pharmaceutical

Stainless Steel Wire Mesh - S2 Media
- Stainless steel pleated wire mesh
- ID: “even number” & “S2” suffix: i.e. 1***4S2***
- Stainless steel expanded metal
- Chemical resistant and high temperature resistant
- Available with silicone endcaps

Polypropylene (PP) - Y Media: 5 micron, 99+% efficiency
- ID: “odd number” & “Y” suffix: i.e. 3***1Y***, 34***5Y***P
- Epoxy coated steel wire on ID and OD

PTFE - TG Media: 0.3 micron, 99.5% efficiency
- ID: “TG” prefix & “odd number”: i.e. ***TG***37***5***
- Classification: E11 under EN1822/ISO 15E under ISO 29463
- High temperature, chemical, & moisture resistant
- Options: viton gaskets, epoxy potting
- Temp (intermittent): Up to 250°C (482°F)

PTFE - TF Media: 0.3 micron, 99.5% efficiency
- ID: “TF” prefix & “odd number”: i.e. ***TF***27***5***
- Classification: E11 under EN1822/ISO 15E under ISO 29463
- Chemical & moisture resistant
- Minimal pressure drop
- Temp (intermittent): 104°C (220°F)
- Options: viton gaskets, epoxy potting

PPS - RY Media

- Broad chemical resistant media, high temp
- ID: “RY” prefix & “odd number”: i.e. ***RY***48***5***
- Temp min: -15°F (-26°C), max: 220°F (104°C)
- Options: viton gaskets, epoxy potting

Coarse Efficiency

25 µm Polyester - U Media: 25 micron, 99+% efficiency

- ID: “odd number” & “U” suffix: i.e. 1***9U***, 68***5U***P
- Temp min: -26°C (-15°F), max: 104°C (220°F)

100 µm Polyester - W Media: 100 micron, 99+% efficiency

- ID: “odd number” & “W” suffix: i.e. 1***5W***, 38***5W***P
- Temp min: -26°C (-15°F), max: 104°C (220°F)

Wire Mesh - S Media

- Epoxy coated pleated wire mesh
- ID: “even number” & “S” suffix: i.e. 27***4S***, 34***4S***P
- Expanded metal
- Temp min: -26°C (-15°F), max: 104°C (220°F)

Stainless Steel - S2 Media

- Stainless steel pleated wire mesh
- ID: “even number” & “S2” suffix: i.e. 23***4S2***
- Chemical resistant and high temperature resistant
- Stainless steel expanded metal
- Temp min: -26°C (-15°F), max: 104°C (220°F)
- Options: silicone or epoxy potting, viton gaskets

High Temperature

Nomex - MX Media: 5 Micron, 99+% efficiency

- ID: “odd number” & “MX” suffix: i.e. 37***7MX***
- Classification: ePM_{10} 80% (ISO 16890)
- Silicone potting
- Temperature min: -15°F (-26°C), max: 385°F (196°C)
- Reinforced epoxy coated steel wire on ID and OD

Nomex with Stainless Steel Support - MXD Media

- 5 micron, 99+% efficiency
- ID: “odd number” & “MX” suffix: i.e. 377***MXD***
- Classification: ePM_{10} 80% (ISO 16890)
- Silicone potting
- Reinforced stainless steel wire mesh on ID and OD
- Temperature min: -26°C (-15°F), max: 196°C (385°F)

Note 1: Elements rated for higher temperatures can be achieved with optional gasket material and potting compounds.

Note 2: Classifications are best estimates based on ISO 16890-1:2016.

Chemical Adsorption

Activated Carbon - AC Media: 10 micron, 99+% efficiency

- ID: “AC” prefix & “even number”: i.e. ***AC***1***8***
- Removes gas or vapour odors, contaminants, & particulate
- Pleated media
- Reinforced with epoxy coated steel wire on both sides of cloth

Activated Carbon Granulate - ACG Media

- ID: “ACG” prefix & “even number”: i.e. ***ACG***3***0***
- Removes gaseous or vapour odors
- Granulates are enclosed within a polyester wrap and expanded metal on the ID and OD

Activated Alumina - AA Media

- ID: “AA” prefix & “even number”: i.e. ***AA***85***0***
- Desiccant used in the adsorption of water & oil vapour and the prevention of backstreaming in pumps
- Adsorbs up to 40% of media’s weight

Activated Carbon - GMAC Media

- 3 micron, 70% efficiency
- ID: “GMAC” prefix & “odd number”: i.e. ***GMAC***23***5***
- Superior odor removal
- Chemically inert

Coalescing Media

PSG Media, FG Media, GL Media

- 0.3 micron, 99.97% efficiency
- ID: “PSG” prefix & “even number”: i.e. ***PSG***34***4***
- ID: “FG” prefix: i.e. ***FG***9
- ID: “GL” prefix: i.e. ***GL***915
- Heavy duty industrial glass media, reinforced with epoxy coated steel wire & expanded metal
- Continuous operating temp: 20°C (68°F) to 80°C (180°F)
- Environmentally friendly sealing material
- High D.O.P. efficiency - low oil carryover
- Multiple media configurations, contact factory

Technical Data

Filter Elements

Filter Element Efficiency

When choosing a filter media type, an accurate and useful filter efficiency rating must have two components: efficiency and micron filtration rating. The micron rating of a media means very little if the efficiency percentage is unknown. For example, a 1 micron media rated at 60% efficiency may offer less filtration than a 5 micron media rated at 99% efficiency. Always make sure you have both when you compare different media types for your application.

Element Maintenance

Filter elements should be replaced once the pressure drop reaches 37-50 mbar above the initial pressure drop of the installation. Cleaning an element is also an option. We recommends replacing dirty elements for optimal performance. Any damage which results from by-pass or additional pressure drop created by element cleaning is the sole responsibility of the operator.

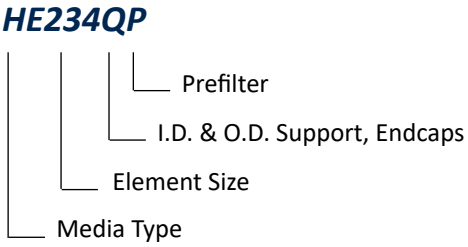
Note: The overall performance of a filter element is altered once cleaned. The initial pressure drop after subsequent cleanings will be greater than the original, clean pressure drop of the element. After each cleaning, the pressure drop will continue to increase. Under all circumstances, the initial pressure drop of the element needs to be maintained at less than 37 mbar.

If the pressure drop exceeds 50 mbar at start-up, it should be replaced with a new element. With many types of equipment, the maximum pressure drop allowed will be dictated by the ability of the equipment to perform to its rated capacity. Under all circumstances, the operator should avoid exceeding the manufacturer's recommended maximum pressure drop for their specific equipment.

Request the appropriate maintenance manual for more in-depth information from your local representative or through www.solbergmfg.com.

Identification

The element part number designates media type, and depending on the element: support material, gasket type, potting adhesive, and if it comes with an element prefilter wrap. For example, the following part number HE234QP, identifies the filter element as having a HEPA media "HE", with dimensions of a 234™ element, "Q" designates stainless steel ID & OD & endcaps, and "P" means it has a prefilter wrap. See partial list below for other filter media designations.



Filter Media Nomenclature (contact us for other media types and stainless steel.)

Polyester Std.: 5 µm, i.e. 385™
Paper Std.: 2 µm, i.e. 384™
Z Media: 1 µm Polyester, i.e. 15Z
HE Media: HEPA, i.e. HE10
UL Media: ULPA, i.e. UL234
DT Media: Dutch Twill, i.e. DT375
MX Media: Nomex, i.e. 377MX

TF Media: PTFE, i.e. TF345
TG Media: Hi-Temp PTFE, i.e. TG235
PSG Media: Coalescing, i.e. PSG244
AC Media: Activated Carbon, i.e. AC18
GMAC Media: Activated Carbon, i.e. GMAC19
AA Media: Activated Alumina, i.e. AA850
ACG Media: AC Granulate, i.e. ACG30

RY Media: PPS, i.e. RY485
Y Media: Polypropylene, i.e. 849Y
ZE Media: Zeolite, i.e. ZE848
S Media: Wire Mesh, i.e. 274S
N Media: 4 µm Polyester, i.e. 231N
U Media: 25 µm Polyester, i.e. 685U
W Media: 100 µm Polyester, i.e. 15W

Polyester Element Features

- Identified typically by “odd number” nomenclature: i.e. 19®, 235P™
- Pleated industrial needle felt polyester media
- Reinforced with epoxy coated steel wire on both sides of the media
- Dust loading capacity is increased 40-50% with prefilter “P” designation at end of element part number i.e.: 235P™

Technical Specifications

- 5 micron, 99+% efficiency
- Media classification: EU6
- Temperature min: -26°C (-15°F), max: 104°C (220°F)

Advantages

- Less maintenance: washable
- More durable
- Moisture resistant
- Handles hot air and oil mist from unload cycle of reciprocating/piston compressor

Paper Element Features

- Identified typically by “even number” nomenclature: i.e. 18™, 234P™
- Heavy duty industrial strength paper surrounded by galvanized expanded metal
- Dust loading capacity is increased 40-50% with prefilter “P” designation at end of element part number i.e.: 234P™

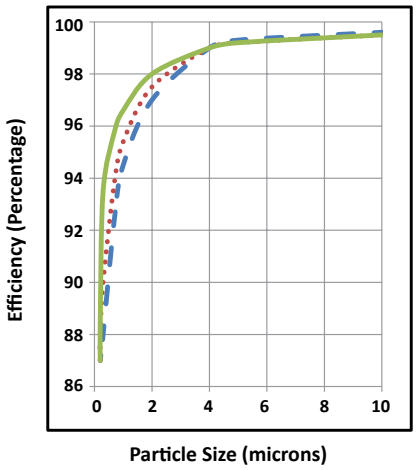
Technical Specifications

- 2 micron, 99+% efficiency
- Media classification: EU6
- Temperature min: -26°C (-15°F), max: 104°C (220°F)

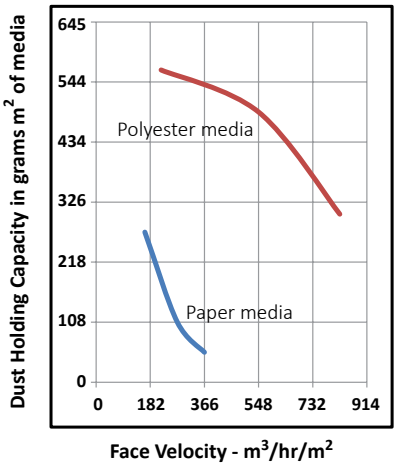
Advantages

- Optimal surface area available
- Higher efficiency than many alternative media
- Cost effective

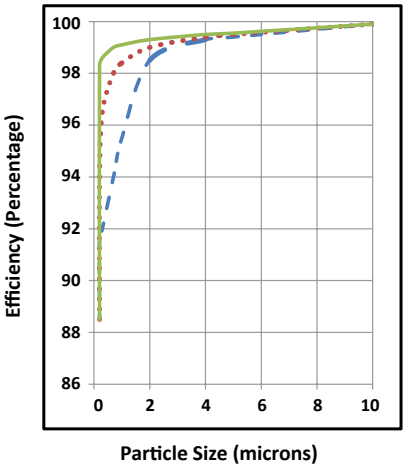
Polyester Media Efficiency



Face Velocity vs. Dust Holding Capacity



Paper Media Efficiency



Indicated Face Velocity:

275 m³hr/m² media
550 m³hr/m² media
825 m³hr/m² media

Indicated Face Velocity:

185 m³hr/m² media
275 m³hr/m² media
365 m³hr/m² media

Note: Efficiency charts are based on SAE Fine Dust Test.