Air Filtration
EMTEC Products Ltd., a well-established filter company, manufacture and supply an extensive range of air filtration products suitable for all applications in the heating, ventilating and air-conditioning industries.

EMTEC filters range from disposable, low level filtration up to extremely robust, high level filtration products.

We have been manufacturing filters in our factory in Hayes, Middlesex for over 35 years and currently fabricate all our Panel and Bag Filters ready for delivery within five working days of receiving a customer order.

For queries and further information regarding specific applications please contact EMTEC and we will be pleased to assist you with your individual requirements.

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**Introduction to EMTEC Air Filtration Products**

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**EMTEC Air Filtration Product Statistics:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Eurovent Rating</th>
<th>Efficiency* at 1 micron particle size (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>EU1</td>
<td>~20</td>
</tr>
<tr>
<td>G2</td>
<td>EU2</td>
<td>20 - 32</td>
</tr>
<tr>
<td>G3</td>
<td>EU3</td>
<td>32 - 46</td>
</tr>
<tr>
<td>G4</td>
<td>EU4</td>
<td>46 - 58</td>
</tr>
<tr>
<td>F5</td>
<td>EU5</td>
<td>58 - 70</td>
</tr>
<tr>
<td>F6</td>
<td>EU6</td>
<td>70 - 83</td>
</tr>
<tr>
<td>F7</td>
<td>EU7</td>
<td>83 - 88</td>
</tr>
<tr>
<td>F8</td>
<td>EU8</td>
<td>88 - 97</td>
</tr>
<tr>
<td>F9</td>
<td>EU9</td>
<td>97 - 99</td>
</tr>
<tr>
<td>H10</td>
<td>EU10</td>
<td>99 - 100</td>
</tr>
<tr>
<td>H11</td>
<td>EU11</td>
<td>100</td>
</tr>
<tr>
<td>H12</td>
<td>EU12</td>
<td>100</td>
</tr>
<tr>
<td>H13</td>
<td>EU13</td>
<td>100</td>
</tr>
<tr>
<td>H14</td>
<td>EU14</td>
<td>100</td>
</tr>
</tbody>
</table>

*Efficiency for guidance purposes only.

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**EMTEC Filter Ref.**

- GF: Glassfibre panels
- SYN: Synthetic panels
- PLD: Pleated panels
- SB: Synthetic Bag filters
- MPB: Multi-pocket Bag filters
- RP: Rigid Bag filters
- G/W: Grease/Washable
- RF: Rod Frame filters
- PHF: Pad Holding Frames
- HEP: Hepa filters
Panel Filters

Glassfibre Panel (GF)

Filter Type: Grade G2/G3
Depth Sizes Available:
- 12mm
- 25mm
- 50mm
- 100mm

Emtec Glassfibre Panel Filters are used in ventilation and air conditioning systems. These filters are disposable and can either be used as a main filter or a pre-filter to extend the life of high efficiency systems.

Construction
Emtec Glassfibre Panel Filters consist of a coated, graduated, continuously spun glassfibre filament in pad form. This is contained within a heavy duty cardboard frame with a supporting card lattice on each side. The panel is securely fixed and tape sealed to provide an extremely robust construction.

Both options are available in standard and non-standard sizes.
Stiffening bars can be provided on all filters.

For further information see EMTEC Air Filtration data sheet No. 130/03.

Synthetic Panel (SYN)

Filter Type: Grade G3/G4
Depth Sizes Available:
- 12mm
- 25mm
- 50mm
- 100mm

Emtec Synthetic Panel Filters provide a superior performance to the Glassfibre Panel for higher air filtration requirements. And are more suitable for use in areas such as hospitals and the food industry.

Construction
Emtec Synthetic Panel Filters consist of a dry, flame retardant, non-woven, synthetic fibre media in pad form. This is contained within a heavy duty cardboard frame and a supporting card lattice on each side.

This filter is also available with a perforated metal sheet facing securely encapsulated in a card channel outer frame.

Both options are available in standard and non-standard sizes.
Stiffening bars can be provided on all filters.

For further information see EMTEC Air Filtration data sheet No. 131/03.

Pleated Panel (PLD)

Filter Type: Grade G4
Depth Sizes Available:
- 25mm
- 50mm
- 100mm

Emtec G4 Pleated Panel Filters are designed for use in ventilation and air conditioning systems that require a higher volume and efficiency than a Glassfibre or Synthetic Panel can provide.

Emtec standard Pleated Panel Filters have a grade G4 efficiency however, we can supply filters with efficiencies of up to F9.

Construction
Emtec Pleated Panel Filters consist of a dry, non-woven, pleated media with a supporting wire mesh contained within a heavy duty cardboard frame and a supporting card lattice on each side. The panel is securely fixed and tape sealed to provide an extremely robust construction.
Also available in perforated metal sheet encapsulated in a card outer channel.

Both type of filter construction are available in standard and non-standard sizes.
Stiffening bars can be provided on all filters.

For further information see EMTEC Air Filtration data sheet No. 132/03.
Bag Filters

G4 / F5 Bag (SB)

Grades Available:
- G4
- F5

Standard Sizes: (Actual / mm)
- 592 x 592
- 592 x 492
- 592 x 287

Header Sizes:
- 20 mm
- 22 mm
- 25 mm

Construction
Emtec G4 and F5 Bag Filters are manufactured from thermally bonded synthetic fibre.

This filter is constructed on a copper rod assembly with a heavy gauge, galvanized header frame. Tags are fitted to keep media pockets separate for optimum filtration.

Non-standard sizes are also available.

For further information see EMTEC Air Filtration data sheet No. 133/03.

Multi-Pocket Bag (MPB)

Grades Available:
- F5
- F6
- F7
- F8
- F9

Standard Sizes: (Actual / mm)
- 592 x 592
- 592 x 492
- 592 x 287

Header Sizes:
- 20mm
- 22mm
- 25mm

Construction
Emtec Multi-Pocket Bag Filters are manufactured from thermally bonded synthetic microfibres. Using continuously welded spacer technology, rows of internal spacers are provided to allow the filter to inflate and maintain an even airflow distribution. This results in full utilization of the filter and a substantially reduced initial resistance.

Internal seals are designed to withstand burst pressure in excess of 100 pa whilst the absence of needle holes and hotmelt gives an aesthetically pleasing, leak-free product.

Non-standard sizes are also available.

For further information see EMTEC Air Filtration data sheet No. 134/03.

Rigid Bag (RP)

Grades Available:
- RP5 F5
- RP6 F6
- RP7 F7
- RP8 F8
- RP9 F9

Standard Sizes: (Actual / mm)
- 592 x 592 x 292
- 592 x 490 x 292
- 592 x 287 x 292

Max. Temperature - 80ºc
Max. Humidity - 100%RH

Emtec RP Filters have been manufactured with gas turbine and HVAC applications in mind. Specific features of the product include: antimicrobial filter media, synthetic construction of 100% polypropylene, an environmentally friendly filter ranging from F5 to F9 efficiencies, Class F1 fire resistant media and a very low initial resistance.

Construction
RP Filters have a Delta V-Cell cartridge type construction. The addition of extruded polypropylene separators to the pleated media gives a unique V-configuration which ensures low initial resistance combined with a long service life.

For further information see EMTEC Air Filtration data sheet No. 135/03.
Metal Framed Filters

Grease & Washable (G/W)

<table>
<thead>
<tr>
<th>RH Operating Level</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Operating Level</td>
<td>65°C</td>
</tr>
</tbody>
</table>

Emtec Grease and Washable Filters are of robust construction and are used for grease and dust collection. They are ideal as a pre-filter of large particle containments and are widely used in high air volume installations, particularly in the catering industry, where above average air velocities are prevalent.

Construction

The metal frames are constructed of a strong U-shaped channel in aluminium, galvanized steel or stainless steel (304 Grade).

The media used within the filters is expanded metal mesh in galvanized or stainless steel (304 Grade).

Panels are available in actual thickness sizes of 100mm, 50mm, 40mm, 25mm, 20mm, 12mm, 10mm and 8mm (±/− 1mm)

For further information see EMTEC Air Filtration data sheet No. 136/03.

Rod Frame (RF)

Filter Type: Grade G3
Nominal Depth: 3mm (20 ppi)

The Emtec RF Rod Frame Filter is widely used in small air conditioning and fan coil units to prevent the migration of dust and dirt particles by providing filtration in as small a space as possible.

The filter is available with 2 types of media:
White non-woven Synthetic Polyurethane Foam

Construction

The RF Filter media is supported by a welded wire frame manufactured from 3mm coated steel rod.

These filters can be manufactured to any reasonable size.

Nylon mesh Rod Frame filters are also available. These have no filtration rating and are available only as dust covers.

For further information see EMTEC Air Filtration data sheet No. 137/03.

Pad Holding Frames (PHF)

Emtec Pad Holding Frames have a replaceable synthetic pad system. They can substitute card panel filters for use in ventilation and air conditioning systems. This reduces costs because the frame is retained whilst the pad is thrown away and replaced.

Various types of pad can be used in these frames:
Synthetic media
Washable polyfoam media

Construction

Pad Holding Frames consist of a galvanized steel, aluminium or a stainless steel channel frame (304 Grade) with facing mesh attached to the downstream side of the cell.

A retaining clip is attached to the clean air face of the panel to prevent the media falling forward when the filter is in situ.

For further information see EMTEC Air Filtration data sheet No. 138/03.
Ultra High Velocity HEPA Filters

With the increased demands of advancing technology the Emtec Ultra High Velocity HEPA Filter provides the solution to the requirement for high velocity air-flow at low initial resistance.

HEPA Filters are suitable for use in turbulent HEPA filtration applications. The MDF version of the HEPA Filter, being fully flammable, is particularly suitable where this form of disposal of the spent filter is anticipated (i.e.: hospital, bacteriological, toxological etc).

Construction
HEPA Filters are manufactured using high quality mini-pleated micro-glass paper with thermoplastic cord separators to create a rigid pack. Packs are bonded into the filter in ‘V’ formation. The physical stability of the filter is enhanced by its outer casing manufactured from either galvanized steel or MDF. A sealing gasket is then fitted on the clean air side of the filter.

EN1822 (HEP)

Standard Size Reference:
HEP 13-122412G: Galvanised framed HEPA - 292mm x 592mm x 292mm
HEP 13-242412G: Galvanised framed HEPA - 592mm x 592mm x 292mm
HEP 13-122412M: MDF framed HEPA - 292mm x 592mm x 292mm
HEP 13-242412M: MDF framed HEPA - 592mm x 592mm x 292mm

Max. Humidity : 100% RH-Galvanised framed filters
: 80% RH-MDF framed filters

Max Operating Temperature : 100°C-Galvanised framed filters
: 80°C-MDF framed filters

For further information see EMTEC Air Filtration data sheet No. 139/03.
Glassfibre Media
This material is produced from a continuous spun glass filament. It is available dry or oiled.

Thicknesses available: 100mm, 50mm, 25mm, 12mm
(In pad or roll form)

Roll sizes available:
0.497m x 60m
0.597m x 60m
1.524m x 60m (50mm thick)
1.524m x 90m (25mm thick)

Non-woven Synthetic Media
Manufactured entirely from thermally bonded fibres. These are built up progressively towards the air exit face to form a high density matrix with excellent mechanical strength and performance characteristics.
This product is toxic-free.

Thickness available:
50mm, 25mm, 12mm, 6mm
(In both pad or roll form).

Roll sizes available:
1m or 2m wide x 20m (12mm or 25mm)
1m or 2m wide x 16m (50mm)

Polyurethane Foam Media
A reticulated Open Cell Polyester Foam Media that is available in varying densities designated from 10 ppi to 80 ppi ( pores per inch).
This washable material can be used in any practical thickness and a range of pore sizes.

Thickness available:
3mm
6mm
12mm
25mm
50mm

Sheet size available:
It is available in sheets of 2m x 1m or as cut pads as required.

For further information see EMTEC Air Filtration data sheet No. 140/03.
Data sheets are issued in all good faith and the information given is current at the time of printing. However, EMTEC reserves the right to alter, amend or withdraw products as and when necessary. All rights to the products described in this data sheet are reserved to EMTEC.

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