EFFICIENT AIR FILTRATION IN CLEANROOMS – HEPA FILTERS WITH ALUMINUM FRAME

FILTER CLASS H 13, FROM PLEAT DEPTH 125 MM

The application
Viledon® HEPA filters of filter class H 13 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with high and ultra-stringent requirements for clean air quality and sterility, e.g.

- in sophisticated air-conditioning applications (operating theatres/intensive care units of hospitals, labs, cleanrooms, etc.)
- in sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food/beverages, micro-electronics, etc.)

The special features and benefits
- High-efficiency micro-glass-fiber papers are used as filter media.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units”.
- Easy handling and mounting, thanks to high twist strength and a continuous, homogeneously foamed-on polyurethane gasket.
- Each filter element is tested for leak-proofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- Viledon® HEPA filters feature protection grids on both sides made of powdercoated expanded metal.

<table>
<thead>
<tr>
<th>FILTER CLASS ACC. TO EN 1822:2009</th>
<th>FILTER CLASS ACC. TO ISO 29463</th>
<th>FRAME DEPTH [mm]</th>
<th>PLEAT DEPTH [mm]</th>
<th>STANDARD DIMENSIONS [mm]</th>
<th>GASKET [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>H13</td>
<td>ISO 35H</td>
<td>150</td>
<td>125</td>
<td>305 × 610</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>ISO 35H</td>
<td>292</td>
<td>175</td>
<td>457 × 457</td>
<td>6</td>
</tr>
</tbody>
</table>

**KEY DATA**

- **Frame depth** mm 150|292
- **Pleat depth** mm 125|175
- **Nominal volume flow rate** m³/h 1,750|2,600
- **Initial pressure drop** Pa 250
- **Arrestance efficiency MPPS** % ≥ 99.95
- **Recommended final pressure drop*** Pa 600
- **Max. permissible pressure drop** Pa 1,000
- **Thermal stability** °C 70
- **Moisture-resistance (rel. hum.)** % 100

* Only available in frame depth 292 mm

** Most Penetrating Particle Size

*** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.

Item code of product line H13 (Example)

<table>
<thead>
<tr>
<th>SF 13</th>
<th>A</th>
<th>0610</th>
<th>0610</th>
<th>150</th>
<th>12</th>
<th>N</th>
<th>1</th>
<th>3</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

- HEPA filter class H13
- Frame material: A = aluminum
- Frame width [mm]: 4 digits
- Frame length [mm]: 4 digits
- Frame depth [mm]: 3 digits
- Pleat depth [cm]: 2-stellig
  12 = 125 mm
  17 = 175 mm

Type of gasket:
N = PU semicircular profile gasket
Z = without

Position of gasket:
0 = without
1 = one side
3 = both sides

Protection grid:
3 = both sides / powdercoated metal mesh

Execution:
N = standard
S = special version
EFFICIENT AIR FILTRATION
IN CLEANROOMS – HEPA FILTERS
WITH ALUMINUM FRAME

FILTER CLASS H13, UP TO PLEAT DEPTH 60 MM

The application
Viledon® HEPA filters of filter classes H13 are used in intake and recirculated air filtration for cleanrooms and in laminar flow boxes with ultra-stringent requirements for clean air and sterility, e.g.
• in sophisticated air-conditioning applications (operating theatres/intensive care units of hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.)
• in sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food/beverages, microelectronics, etc.)
• in ceiling outlets and modules for flexible cleanroom systems

The special features and benefits
• The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
• The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
• Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units”.
• Easy handling and mounting, thanks to high twist strength and a continuous, homogeneously foamed-on polyurethane gasket.
• Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
• Viledon® HEPA filters feature protection grids on both sides made of powdercoated expanded metal.

KEY DATA

<table>
<thead>
<tr>
<th>Frame depth</th>
<th>mm</th>
<th>610 × 1,220</th>
<th>610 × 610</th>
<th>457 × 457</th>
<th>305 × 305</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pleat depth</td>
<td>mm</td>
<td>68</td>
<td>78</td>
<td>150</td>
<td>68</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>m³/h</td>
<td>2,400</td>
<td>1,200</td>
<td>670</td>
<td>250</td>
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<tr>
<td>Initial pressure drop</td>
<td>Pa</td>
<td>250</td>
<td>210</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Arrestance efficiency MPPS*</td>
<td>%</td>
<td>≥99.95</td>
<td>≥99.95</td>
<td>≥99.95</td>
<td>≥99.95</td>
</tr>
<tr>
<td>Recommended final pressure drop**</td>
<td>Pa</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>Pa</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>°C</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

![Graph showing pressure drop curves for different filter sizes.]

- **Nominal volume flow rate**

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.

Item code of product line H13 (Example)

| SF | 13 | A | 0610 | × | 0610 | × | 068 | × | 05 | – | N | 1 | 3 | N |
|----|----|----|------|---|------|---|-----|---|----|---|---|---|---|
| 1  | 2  | 3  | 4    | 5 | 6    | 7 | 8   | 9 | 10 | 11 | 12 | 13 | 14 |

- **HEPA filter class H13**
- **Frame material:** A = aluminum
- **Frame width [mm]:** 4 digits
- **Frame length [mm]:** 4 digits
- **Frame depth [mm]:** 3 digits
- **Pleat depth [cm]:** 2 digits
  - 05 = 50 mm
  - 06 = 60 mm
  - 07 = 70 mm
- **Type of gasket:**
  - N = PU semicircular profile gasket
  - Z = without
- **Position of gasket:**
  - 0 = without
  - 1 = one side
  - 3 = both sides
- **Protection grid:**
  - 3 = both sides / powdercoated metal mesh
- **Execution:**
  - N = standard
  - S = special version

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
EFFICIENT AIR FILTRATION
IN CLEANROOMS – HEPA FILTERS
WITH ALUMINUM FRAME

FILTER CLASS H14, FROM PLEAT DEPTH 125 MM

The application
Viledon® HEPA filters of filter class H14 are used in intake, exhaust and recirculating air filtration in air-conditioning systems with high and ultra-stringent requirements for clean air quality and sterility, e.g.
- in sophisticated air-conditioning applications (operating theatres/ intensive care units of hospitals, labs, cleanrooms, etc.)
- in sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food/beverages, micro-electronics, etc.)

The special features and benefits
- High-efficiency micro-glass-fiber papers are used as filter media.
- The MiniPleat technology employs equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units”.
- Easy handling and mounting, thanks to high twist strength and a continuous, homogeneously foamed-on polyurethane gasket.
- Each filter element is tested for leakage-proofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- Viledon® HEPA filters feature protection grids on both sides made of powdercoated expanded metal.

<table>
<thead>
<tr>
<th>FILTER CLASS ACC. TO EN 1822:2009</th>
<th>FILTER CLASS ACC. TO ISO 29463</th>
<th>FRAME DEPTH [mm]</th>
<th>PLEAT DEPTH [mm]</th>
<th>STANDARD DIMENSIONS [mm]</th>
<th>GASKET [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>H14</td>
<td>ISO 45H</td>
<td>150</td>
<td>125</td>
<td>305 x 610</td>
<td>6</td>
</tr>
<tr>
<td>H14</td>
<td>ISO 45H</td>
<td>292</td>
<td>175</td>
<td>457 x 457 / 593 x 593*</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KEY DATA</th>
<th>610 x 610</th>
<th>593 x 593</th>
<th>457 x 457</th>
<th>305 x 610</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame depth</td>
<td>mm</td>
<td>150</td>
<td>292</td>
<td>150</td>
</tr>
<tr>
<td>Pleat depth</td>
<td>mm</td>
<td>125</td>
<td>175</td>
<td>125</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>m³/h</td>
<td>2,000</td>
<td>2,400</td>
<td>2,250</td>
</tr>
<tr>
<td>Initial pressure drop</td>
<td>Pa</td>
<td>250</td>
<td>230</td>
<td>250</td>
</tr>
<tr>
<td>Arrestance efficiency MPPS**</td>
<td>%</td>
<td>≥ 99,995</td>
<td>≥ 99,995</td>
<td>≥ 99,995</td>
</tr>
<tr>
<td>Recommended final pressure drop***</td>
<td>Pa</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>Pa</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>°C</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

* Only available in frame depth 292 mm
** Most Penetrating Particle Size
*** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

![Graph showing pressure drop curves vs. volume flow rate]

- **Item code of product line H14 (Example)**

<table>
<thead>
<tr>
<th>SF14</th>
<th>A</th>
<th>0610</th>
<th>×</th>
<th>0610</th>
<th>×</th>
<th>150</th>
<th>×</th>
<th>12</th>
<th>N</th>
<th>1</th>
<th>3</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td>4</td>
<td></td>
<td>5</td>
<td></td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

  - **Item Code Explanation**
    - SF: HEPA filter class H14
    - A: Frame material: A = aluminum
    - Frame width [mm]: 4 digits
    - Frame length [mm]: 4 digits
    - Frame depth [mm]: 3 digits
    - Pleat depth [cm]: 2 digits
      - 12 = 125 mm
      - 17 = 175 mm
    - Type of gasket:
      - N = PU semicircular profile gasket
      - Z = without
    - Position of gasket:
      - 0 = without
      - 1 = one side
      - 3 = both sides
    - Protection grid:
      - 3 = both sides / powdercoated metal mesh
    - Execution:
      - N = standard
      - S = special version

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EFFICIENT AIR FILTRATION IN CLEANROOMS – HEPA FILTERS WITH ALUMINUM FRAME

FILTER CLASS H14, UP TO PLEAT DEPTH 70 MM

The application
Viledon® HEPA filters of filter classes H14 are used in intake and recirculated air filtration for cleanrooms and in laminar flow boxes with ultra-stringent requirements for clean air and sterility, e.g.
- in sophisticated air-conditioning applications (operating theatres / intensive care units of hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.)
- in sensitive and highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food/beverages, micro-electronics, etc.)
- in ceiling outlets and modules for flexible cleanroom systems

The special features and benefits
- High-efficiency micro-glass-fiber papers are used as filter media.
- The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
- The frame consists of extruded, anodized aluminum and is extremely solid and moisture-resistant.
- Viledon® HEPA filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units”.
- Easy handling and mounting, thanks to high twist strength and a continuous, homogeneously foamed-on polyurethane gasket.
- Each filter element is tested using state-of-the-art scanning equipment for arrestance efficiency and leak-proofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- Viledon® HEPA filters feature protection grids on both sides made of powdercoated expanded metal.

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.

<table>
<thead>
<tr>
<th>FILTER CLASS ACC. TO EN 1822-2009</th>
<th>FILTER CLASS ACC. TO ISO 29463</th>
<th>FRAME DEPTH [mm]</th>
<th>PLEAT DEPTH [mm]</th>
<th>STANDARD DIMENSIONS [mm]</th>
<th>GASKET [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>H14</td>
<td>ISO 45 H</td>
<td>60</td>
<td>50</td>
<td>305 x 305</td>
<td>6</td>
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<tr>
<td>H14</td>
<td>ISO 45 H</td>
<td>70</td>
<td>60</td>
<td>457 x 457</td>
<td>6</td>
</tr>
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<td>H14</td>
<td>ISO 45 H</td>
<td>80</td>
<td>70</td>
<td>610 x 610</td>
<td>6</td>
</tr>
<tr>
<td>H14</td>
<td>ISO 45 H</td>
<td>150</td>
<td>50</td>
<td>610 x 1,220</td>
<td>6</td>
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</table>

<table>
<thead>
<tr>
<th>KEY DATA</th>
<th>610 x 1,220</th>
<th>610 x 610</th>
<th>457 x 457</th>
<th>305 x 305</th>
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<tr>
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<td>68/78/88</td>
<td>68/78/88</td>
<td>68/78/88</td>
</tr>
<tr>
<td>Pleat depth</td>
<td>mm</td>
<td>50/60/70</td>
<td>50/60/70</td>
<td>50/60/70</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>m³/h</td>
<td>1,200</td>
<td>600</td>
<td>335</td>
</tr>
<tr>
<td>Initial pressure drop</td>
<td>Pa</td>
<td>120/100/90</td>
<td>120/100/90</td>
<td>120/100/90</td>
</tr>
<tr>
<td>Recommended final pressure drop**</td>
<td>Pa</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>Pa</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>°C</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

![Graph showing initial pressure drop curves for different filter dimensions.](image)

- ① 305 mm × 305 mm / Frame depth 68 mm
- ② 305 mm × 305 mm / Frame depth 78 mm
- ③ 305 mm × 305 mm / Frame depth 88 mm
- ④ 305 mm × 305 mm / Frame depth 150 mm
- ⑤ 610 mm × 610 mm / Frame depth 68 mm
- ⑥ 610 mm × 610 mm / Frame depth 78 mm
- ⑦ 610 mm × 610 mm / Frame depth 88 mm
- ⑧ 610 mm × 610 mm / Frame depth 150 mm
- ⑨ 610 mm × 1,220 mm / Frame depth 68 mm
- ⑩ 610 mm × 1,220 mm / Frame depth 78 mm
- ⑪ 610 mm × 1,220 mm / Frame depth 88 mm
- ⑫ 610 mm × 1,220 mm / Frame depth 150 mm

- Pleat depth 50 mm
- Pleat depth 60 mm
- Pleat depth 70 mm
- Nominal volume flow rate

Item code of product line H14 (Example)

<table>
<thead>
<tr>
<th>SF14</th>
<th>A</th>
<th>0610</th>
<th>×</th>
<th>0610</th>
<th>×</th>
<th>068</th>
<th>×</th>
<th>05</th>
<th>N</th>
<th>1</th>
<th>3</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- HEPA filter class H14
- Frame material: A = aluminum
- Frame width [mm]: 4 digits
- Frame length [mm]: 4 digits
- Frame depth [mm]: 3 digits
- Pleat depth [cm]: 2 digits
- 05 = 50 mm
- 06 = 60 mm
- 07 = 70 mm
- Type of gasket: N = PU semicircular profile gasket
- Z = without
- Position of gasket: 0 = without
- 1 = one side
- 3 = both sides
- Protection grid: 3 = both sides / powdercoated metal mesh
- Execution: N = standard
- S = special version

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
HIGH VOLUME FLOW FILTERS FOR CLEANROOMS
FILTER CLASS H13

The application
Viledon® high volume flow filters are used in intake, exhaust and recirculated air filtration in cleanrooms in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.
- in sophisticated air-conditioning technology (operating theaters/intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.)
- in sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, micro-electronics, etc.)

The special features and benefits
- High-efficiency micro-glass-fiber papers are used as filter media.
- The MiniPleat technology employed, plus the V-shaped configuration of the pleat package, ensure a particularly large filtering area for maximum air flow rate per filter element together with homogeneous media velocity, coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation with a very long lifetime.
- Viledon® high volume flow filters feature recessed grips at the side and a gripping lug for easier handling and installation.
- The frame consists of galvanized steel or stainless steel sheeting and is extremely solid and moisture-resistant.
- Each filter element is tested for leak-proofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- Viledon® high volume flow filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units.”
- A continuous and homogeneously foamed-on profile gasket made of polyurethane. Also available with a flat gasket on request.

<table>
<thead>
<tr>
<th>KEY DATA</th>
<th>762 × 610</th>
<th>610 × 610</th>
<th>305 × 610</th>
<th>305 × 305</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame depth</td>
<td>mm</td>
<td>292</td>
<td>292</td>
<td>292</td>
</tr>
<tr>
<td>Filtering area</td>
<td>m²</td>
<td>44</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>m³/h</td>
<td>4,700</td>
<td>4,000</td>
<td>2,000</td>
</tr>
<tr>
<td>Initial pressure drop</td>
<td>Pa</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Arrestance efficiency MPPS*</td>
<td>%</td>
<td>≥ 99.95</td>
<td>≥ 99.95</td>
<td>≥ 99.95</td>
</tr>
<tr>
<td>Recommended final pressure drop**</td>
<td>Pa</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>Pa</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>°C</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

![Graph showing initial pressure drop curves with various volume flow rates and pressure drops for different filter sizes.](image)

<table>
<thead>
<tr>
<th>Filter Size</th>
<th>Nominal Volume Flow Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>305 x 305 mm</td>
<td>305 x 610 mm</td>
</tr>
<tr>
<td>610 x 610 mm</td>
<td>762 x 610 mm</td>
</tr>
</tbody>
</table>

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.

Item code of product line H13 (Example)

```
SF13 - B - 0610 x 0610 x 292 / V12 x 25 - N 1 0 N
```

- HEPA filter class H13
- Frame material:
  - B = galvanized steel sheets
  - S = stainless steel sheets
- Frame width [mm]: 4 digits
- Frame length [mm]: 4 digits
- Frame depth [mm]: 3 digits
- Number and pleat depth of the panels [mm]: e.g. V12 x 25 = 12 panels, 25 mm pleat depth
- Type of gasket:
  - N = PU semicircular profile gasket
  - W = glued-on flat gasket
- Z = without
- Position of gasket:
  - 0 = without
  - 1 = one side
  - 3 = both sides
- Protection grid:
  - 0 = without
- Execution:
  - N = standard
  - S = special version

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
The application
Viledon® high volume flow filters are used in intake, exhaust and recirculated air filtration in cleanrooms in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.
- in sophisticated air-conditioning technology (operating theaters/intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.)
- in sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, micro-electronics, etc.)

The special features and benefits
- High-efficiency micro-glass-fiber papers are used as filter media.
- The MiniPleat technology employed, plus the V-shaped configuration of the pleat package, ensure a particularly large filtering area for maximum air flow rate per filter element together with homogeneous media velocity, coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation with a very long lifetime.
- Viledon® high volume flow filters feature recessed grips at the side and a gripping lug for easier handling and installation.
- The frame consists of galvanized steel or stainless steel sheeting and is extremely solid and moisture-resistant.
- Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
- Viledon® high volume flow filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units.”
- A continuous and homogeneously foamed-on profile gasket made of polyurethane. Also available with a flat gasket on request.

<table>
<thead>
<tr>
<th>FILTER CLASS ACC. TO EN 1822:2009</th>
<th>FILTER CLASS ACC. TO ISO 29463</th>
<th>FRAME DEPTH [mm]</th>
<th>STANDARD DIMENSIONS [mm]</th>
<th>GASKET [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>H13</td>
<td>ISO 35 H</td>
<td>292</td>
<td>305 × 305 305 × 610 610 × 610 762 × 610</td>
<td>6</td>
</tr>
</tbody>
</table>

KEY DATA 762 × 610 610 × 610 305 × 610 305 × 305

<table>
<thead>
<tr>
<th>Frame depth</th>
<th>292</th>
<th>292</th>
<th>292</th>
<th>292</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filtering area</td>
<td>44</td>
<td>38</td>
<td>19</td>
<td>9</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>4,700</td>
<td>4,000</td>
<td>2,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Nominal pressure drop</td>
<td>250</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Arrestance efficiency MPPS*</td>
<td>≥99.95</td>
<td>≥99.95</td>
<td>≥99.95</td>
<td>≥99.95</td>
</tr>
<tr>
<td>Recommended final pressure drop**</td>
<td>600</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>70</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
</tbody>
</table>
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

<table>
<thead>
<tr>
<th>Pressure drop [Pa]</th>
<th>Volume flow rate [m³/h]</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>1,000</td>
</tr>
<tr>
<td>10</td>
<td>2,000</td>
</tr>
<tr>
<td>15</td>
<td>3,000</td>
</tr>
<tr>
<td>20</td>
<td>4,000</td>
</tr>
<tr>
<td>25</td>
<td>5,000</td>
</tr>
<tr>
<td>30</td>
<td>6,000</td>
</tr>
<tr>
<td>305 × 305 mm</td>
<td>305 × 610 mm</td>
</tr>
<tr>
<td>610 × 610 mm</td>
<td>762 × 610 mm</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td></td>
</tr>
</tbody>
</table>

Item code of product line H13 (Example)

SF 13   – B   – 0610 × 0610 × 292 / V12 × 25 – N 1 0 N

- HEPA filter class H13
- Frame material:
  B = galvanized steel sheets
  S = stainless steel sheets
- Frame width [mm]: 4 digits
- Frame length [mm]: 4 digits
- Frame depth [mm]: 3 digits
- Number and pleat depth of the panels [mm]: e.g., V12 × 25 = 12 panels, 25 mm pleat depth
- Type of gasket:
  N = PU semicircular profile gasket
  W = glued-on flat gasket
  Z = without
- Position of gasket:
  0 = without
  1 = one side
  3 = both sides
- Protection grid:
  0 = without
- Execution:
  N = standard
  S = special version

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
HIGH VOLUME FLOW FILTERS FOR CLEANROOMS
FILTER CLASS H14

The application
Viledon® high volume flow filters are used in intake, exhaust and recirculated air filtration in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.
• in sophisticated air-conditioning technology (operating theaters/intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.)
• in sensitive and highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, microelectronics, etc.)
• in dust-removing machines and devices, where hazardous dust is filtered and the air is circulated back to the working environment

The special features and benefits
• High-efficiency micro-glass-fiber papers are used as filter media.
• The MiniPleat technology employed, plus the V-shaped configuration of the pleat package, ensure a particularly large filtering area for maximum air flow rate per filter element together with homogeneous media velocity, coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation with a very long lifetime.
• Viledon® high volume flow filters feature recessed grips at the side and a gripping lug for easier handling and installation.
• The frame consists of galvanized steel or stainless steel sheeting and is extremely solid and moisture-resistant.
• Each filter element is tested for leak-proofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
• Viledon® high volume flow filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units”.
• A continuous and homogeneously foamed-on profile gasket made of polyurethane. Also available with a flat gasket on request.
• Meet the requirements laid down in DIN EN 60335-2-69 for filters being used in dust-eliminating machines and equipment of dust class “H”.

<table>
<thead>
<tr>
<th>FILTER CLASS ACC. TO EN 1822:2009</th>
<th>FILTER CLASS ACC. TO ISO 29463</th>
<th>FRAME DEPTH [mm]</th>
<th>STANDARD DIMENSIONS [mm]</th>
<th>GASKET [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>H14</td>
<td>ISO 45 H</td>
<td>292</td>
<td>305 × 305</td>
<td>6</td>
</tr>
</tbody>
</table>

**KEY DATA**

<table>
<thead>
<tr>
<th></th>
<th>762 × 610</th>
<th>610 × 610</th>
<th>305 × 610</th>
<th>305 × 305</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame depth</td>
<td>mm</td>
<td>292</td>
<td>292</td>
<td>292</td>
</tr>
<tr>
<td>Pleat depth</td>
<td>m²</td>
<td>44</td>
<td>38</td>
<td>19</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>m³/h</td>
<td>5,000</td>
<td>4,000</td>
<td>2,000</td>
</tr>
<tr>
<td>Initial pressure drop</td>
<td>Pa</td>
<td>320</td>
<td>320</td>
<td>320</td>
</tr>
<tr>
<td>Recommended final pressure drop**</td>
<td>Pa</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>Pa</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>°C</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.

Item code of product line H14 (Example)

<table>
<thead>
<tr>
<th>SF14</th>
<th>B</th>
<th>0610</th>
<th>×</th>
<th>0610</th>
<th>×</th>
<th>292</th>
<th>/</th>
<th>V12 × 25</th>
<th>N</th>
<th>1</th>
<th>0</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

HEPA filter class H14
Frame material:
B = galvanized steel sheets
S = stainless steel sheets
Frame width [mm]: 4 digits
Frame length [mm]: 4 digits
Frame depth [mm]: 3 digits
Number and pleat depth of the panels [mm]: e.g. V12 × 25 = 12 panels, 25 mm pleat depth
Type of gasket:
N = PU semicircular profile gasket
W = glued-on flat gasket
Z = without
Position of gasket:
0 = without
1 = one side
3 = both sides
Protection grid:
0 = without
Execution:
N = standard
S = special version

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
The application
Viledon® high volume flow filters are used in intake, exhaust and recirculated air filtration in air-conditioning systems with ultra-stringent requirements for clean air quality and sterility, e.g.
• in sophisticated air-conditioning technology (operating theaters/intensive care units in hospitals and medical institutes, pharmacies, sterile rooms, labs, research centers, etc.)
• in sensitive and highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food and beverage processing, microelectronics, etc.)
• in dust-removing machines and devices, where hazardous dust is filtered and the air is circulated back to the working environment.

The special features and benefits
• High-efficiency micro-glass-fiber papers are used as filter media.
• The MiniPleat technology employed, plus the V-shaped configuration of the pleat package, ensure a particularly large filtering area for maximum air flow rate per filter element together with homogeneous media velocity, coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation with a very long lifetime.
• Viledon® high volume flow filters feature recessed grips at the side and a gripping lug for easier handling and installation.
• The frame consists of galvanized steel or stainless steel sheeting and is extremely solid and moisture-resistant.
• Each filter element is tested for leak-proofing in accordance with EN 1822, and delivered together with the corresponding test certificate.
• Viledon® high volume flow filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units”.
• A continuous and homogeneously foamed-on profile gasket made of polyurethane. Also available with a flat gasket on request.
• Meet the requirements laid down in DIN EN 60335-2-69 for filters being used in dust-eliminating machines and equipment of dust class “H”.

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
**TECHNICAL FILTER TEST DATA TO EN 1822**

Initial pressure drop curves

![Graph showing pressure drop curves with volume flow rate in m³/h.

### Item code of product line H14 (Example)

<table>
<thead>
<tr>
<th>SF14</th>
<th>-</th>
<th>B</th>
<th>0610</th>
<th>×</th>
<th>0610</th>
<th>×</th>
<th>292</th>
<th>/</th>
<th>V12</th>
<th>×</th>
<th>25</th>
<th>-</th>
<th>N</th>
<th>1</th>
<th>0</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- HEPA filter class H14
- Frame material:
  - B = galvanized steel sheets
  - S = stainless steel sheets
- Frame width [mm]: 4 digits
- Frame length [mm]: 4 digits
- Frame depth [mm]: 3 digits
- Number and pleat depth of the panels [mm]: e.g. V12 × 25 = 12 panels, 25 mm pleat depth
- Type of gasket:
  - N = PU semicircular profile gasket
  - W = glued-on flat gasket
  - Z = without
- Position of gasket:
  - 0 = without
  - 1 = one side
  - 3 = both sides
- Protection grid:
  - 0 = without
- Execution:
  - N = standard
  - S = special version

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Freudenberg Filtration Technologies SE & Co. KG
69465 Weinheim, Germany
Phone +49 (0) 6201 80-6264 | Fax +49 (0) 6201 88-6299
viledon@freudenberg-filter.com | www.freudenberg-filter.com
EFFICIENT AIR FILTRATION IN CLEANROOMS – HEPA FILTERS WITH MDF FRAME

FILTER CLASS H13

The application
Viledon® HEPA filters of filter class H13 are used in intake, exhaust and recirculated air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.:
• in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.)
• in sensitive industrial processes
• as final filters in ceiling air outlets
• as “police filters” in dust removal systems

The special features and benefits
• High-efficiency micro-glass-fiber papers are used as filter media.
• The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
• The frame consists of MDF (medium-density fiber board) and is fully incinerable.
• The entire filter element is non-corrodible and easy to dispose of, as it is metal-free.
• Protection grids on request.
• Continuous, homogeneously foamed-on polyurethane gasket; on request also available with a flat gasket.
• Each filter element is tested for leak-proofing in accordance with EN 1822, and delivered together with the corresponding test certificate.

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.

KEY DATA

<table>
<thead>
<tr>
<th>Frame depth</th>
<th>610 × 610</th>
<th>457 × 457</th>
<th>305 × 610</th>
<th>305 × 305</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>78</td>
<td>150</td>
<td>150</td>
<td>292</td>
</tr>
<tr>
<td>Pleat depth</td>
<td>mm</td>
<td>50</td>
<td>50</td>
<td>125</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>m³/h</td>
<td>1,200</td>
<td>1,200</td>
<td>1,700</td>
</tr>
<tr>
<td>Initial pressure drop</td>
<td>Pa</td>
<td>250</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>Arrestance efficiency MPPS*</td>
<td>%</td>
<td>≥ 99.95</td>
<td>≥ 99.95</td>
<td>≥ 99.95</td>
</tr>
<tr>
<td>Recommended final pressure drop**</td>
<td>Pa</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>Pa</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>°C</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
EFFICIENT AIR FILTRATION IN CLEANROOMS – HEPA FILTERS WITH MDF FRAME

FILTER CLASS H14

<table>
<thead>
<tr>
<th>FILTER CLASS ACC. TO EN 1822:2009</th>
<th>FILTER CLASS ACC. TO ISO 29463</th>
<th>FRAME DEPTH [mm]</th>
<th>PLEAT DEPTH [mm]</th>
<th>STANDARD DIMENSIONS [mm]</th>
<th>GASKET [mm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>H14</td>
<td>ISO 45 H</td>
<td>78</td>
<td>50</td>
<td>305 × 305</td>
<td>6</td>
</tr>
<tr>
<td>H14</td>
<td>ISO 45 H</td>
<td>150</td>
<td>50</td>
<td>125</td>
<td>6</td>
</tr>
<tr>
<td>H14</td>
<td>ISO 45 H</td>
<td>292</td>
<td>200</td>
<td>610 × 610</td>
<td>6</td>
</tr>
</tbody>
</table>

The application

Viledon® HEPA filters of filter class H14 are used in intake, exhaust and recirculated air filtration in air-conditioning systems with stringent requirements for clean air quality and sterility, e.g.,
• in sophisticated air-conditioning technology (operating theaters, intensive care units in hospitals, laboratories, cleanrooms, etc.)
• in sensitive and highly sensitive industrial processes
• as final filters in ceiling air outlets
• as “police filters” in dust removal systems

The special features and benefits

• High-efficiency micro-glass-fiber papers are used as filter media.
• The MiniPleat technology employed ensures flow-friendly geometry and equidistance of the pleats, with homogeneous media velocity coupled with a very low pressure drop. This means particularly cost-efficient and dependable operation plus a quasi-laminar outflow.
• The frame consists of MDF (medium-density fiber board) and is fully incinerable.
• The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
• Protection grids on request.
• Continuous, homogeneously foamed-on polyurethane gasket; on request also available with a flat gasket.
• Each filter element is tested for leakproofing in accordance with EN 1822, and delivered together with the corresponding test certificate.

<table>
<thead>
<tr>
<th>KEY DATA</th>
<th>610 × 610</th>
<th>457 × 457</th>
<th>305 × 610</th>
<th>305 × 305</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame depth</td>
<td>mm</td>
<td>78</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Pleat depth</td>
<td>mm</td>
<td>50</td>
<td>50</td>
<td>125</td>
</tr>
<tr>
<td>Nominal volume flow rate</td>
<td>$m^3$/h</td>
<td>600</td>
<td>600</td>
<td>900</td>
</tr>
<tr>
<td>Initial pressure drop</td>
<td>Pa</td>
<td>125</td>
<td>125</td>
<td>125</td>
</tr>
<tr>
<td>Recommended final pressure drop**</td>
<td>Pa</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>Max. permissible pressure drop</td>
<td>Pa</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Thermal stability</td>
<td>°C</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Moisture-resistance (rel. hum.)</td>
<td>%</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

![Pressure drop curves diagram]

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Item code of product line H14 (Example)

<table>
<thead>
<tr>
<th>SF 14</th>
<th>M</th>
<th>0610</th>
<th>×</th>
<th>0610</th>
<th>×</th>
<th>292</th>
<th>×</th>
<th>20</th>
<th>N</th>
<th>1</th>
<th>0</th>
<th>N</th>
</tr>
</thead>
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</tr>
</tbody>
</table>

- EPA filter class H14
- Frame material: M = MDF
- Frame width [mm]: 4 digits
- Frame length [mm]: 4 digits
- Frame depth [mm]: 3 digits
- Pleat depth [cm]: 2 digits
  05 = 50 mm
  12 = 125 mm
  20 = 200 mm
- Type of gasket:
  N = PU semicircular profile gasket
  W = flat gasket
- Position of gasket:
  1 = one side
  3 = both sides
- Protection grid:
  0 = without
  3 = both sides / powder-coated metal mesh
- Execution:
  N = standard
  S = special version

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
The application
Viledon® Efficient Particulate Air (EPA) filters of filter class E11 are used for intake, exhaust and recirculating air filtration of ventilation systems with special requirements for clean air quality, such as
- in sophisticated air-conditioning applications (hospitals, labs, cleanrooms, museums, etc.)
- in sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food/beverages, microelectronics, etc.)
- as downstream policing filters in dust removal applications

The special features and benefits
- High-efficiency micro-glassfiber papers with a special thermoplastic bonding system are used as filter media.
- Our patented thermal embossing technique ensures the optimum V-shaped geometry and equidistance of the pleats, and therefore maximum, homogeneous air passage at a very low pressure drop. This results in a remarkably economical and reliable operation.
- The frame consists of halogen-free plastic and is exceptionally distortion-resistant, moisture-resistant and fully incinerable. Also available with a galvanized or stainless steel sheet frame on request.
- The entire filter element is non-corroding and easy to dispose of, as it is metal-free.
- Protection grids on both sides minimize the risk of damage to the filter medium. Plastic protection grids on both sides for filters with 280 mm pleat depths, for filters with 100 and 200 mm pleat depths available upon request.
- Easy handling and mounting, thanks to exceptionally low weight and a continuous, homogeneously foamed-on polyurethane gasket.
- Viledon® Efficient Particulate Air (EPA) filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units”.

* Most Penetrating Particle Size
** For cost-efficiency or system-specific reasons it may be appropriate to change the filters before reaching the stated final pressure drop. It can also be exceeded in certain applications.
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

![Pressure drop curves graph](image)

- Pleat depth 100 mm
- Pleat depth 200 mm
- Pleat depth 280 mm
- Nominal air flow rate

Item code of product line E11 (Example)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>SF11</td>
<td>EPA filter class E11</td>
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<tr>
<td>K</td>
<td>Frame material:</td>
</tr>
<tr>
<td>0610</td>
<td>K = halogen-free plastic</td>
</tr>
<tr>
<td>0610</td>
<td>B = galvanized steel sheets</td>
</tr>
<tr>
<td>292</td>
<td>S = stainless steel sheets</td>
</tr>
<tr>
<td>20</td>
<td>Frame width [mm]: 4 digits</td>
</tr>
<tr>
<td>N</td>
<td>Frame length [mm]: 4 digits</td>
</tr>
<tr>
<td>1</td>
<td>Frame depth [mm]: 3 digits</td>
</tr>
<tr>
<td>0</td>
<td>Pleat depth [cm]: 2 digits</td>
</tr>
<tr>
<td>N</td>
<td>Protection grid:</td>
</tr>
<tr>
<td>0</td>
<td>0 = without (only for 100 and 200 mm pleat depth)</td>
</tr>
<tr>
<td>1</td>
<td>3 = both sides/powdercoated metal mesh</td>
</tr>
<tr>
<td>2</td>
<td>4 = both sides/aluminium mesh</td>
</tr>
<tr>
<td>3</td>
<td>8 = both sides/halogen-free plastic</td>
</tr>
<tr>
<td>4</td>
<td>Execution:</td>
</tr>
<tr>
<td>5</td>
<td>N = standard</td>
</tr>
<tr>
<td>6</td>
<td>S = special version</td>
</tr>
</tbody>
</table>

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.
EFFICIENT AIR FILTRATION IN CLEANROOMS – HEPA FILTERS WITH PLASTIC FRAME

FILTER CLASS H13

The application
Viledon® High Efficient Particulate Air (HEPA) filters of filter class H13 are used for intake, exhaust and recirculating air filtration of ventilation systems requiring the highest clean air quality and sterility, such as:
- in sophisticated air-conditioning applications (operating theatres/intensive care, units of hospitals, labs, cleanrooms, etc.)
- in highly sensitive industrial processes (pharmaceuticals, biotechnology, chemicals, optics, food/beverages, micro-electronics, etc.)
- in the treatment of dangerous substances (asbestos disposal, heavy metals, carcino-genic dusts, etc.)
- as downstream policing filters in dust removal applications.

Our patented thermal embossing technique ensures the optimum V-shaped geometry and equidistance of the pleats, and therefore maximum homogeneous air passage at a very low pressure drop. This results in a remarkably economical and reliable operation.

The entire filter element is non-corroding and easy to dispose of, as it is metal-free.

Protection grids on both sides minimize the risk of damage to the filter medium. Plastic protection grids on both sides for filters with 280 mm pleat depths, for filters with 100 and 200 mm pleat depths available upon request.

Easy handling and mounting, thanks to exceptionally low weight and a continuous, homogeneously foamed-on polyurethane gasket. On request also with a flat gasket.

Viledon® Efficient Particulate Air (EPA) filters are microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 “Hygiene requirements for HVAC systems and units”.

Each filter element is leakproofed in accordance with DIN EN 1822 and delivered together with the corresponding test certificate.

Filters with a pleat depth of 280 mm meet the requirements laid down in DIN EN 60335-2-69 for filters being used in dust-eliminating machines and equipment of dust class “H”.

The special features and benefits
- High-efficiency micro-glassfiber papers with a special thermoplastic bonding system are used as filter media.
- Arrestance efficiency MPPS* ≥ 99.95
- Initial pressure drop Pa 220 | 250 | 250
- Nominal volume flow rate m³/h 1,500 | 2,500 | 3,400
- Recommended final pressure drop** Pa 600
- Frame depth mm 150 | 192 | 280
- Pleat depth mm 100 | 200 | 280
- Thermal stability °C 70
- Moisture-resistance (rel. hum.) % 100
- Standard dimensions mm 610 × 610
- Gasket mm 6
- Arrestance efficiency MPPS* ≥ 99.95
- Initial pressure drop Pa 220 | 250 | 250
- Nominal volume flow rate m³/h 1,500 | 2,500 | 3,400
- Recommended final pressure drop** Pa 600
- Frame depth mm 150 | 192 | 280
- Pleat depth mm 100 | 200 | 280
- Thermal stability °C 70
- Moisture-resistance (rel. hum.) % 100
- Standard dimensions mm 610 × 610
- Gasket mm 6
- Arrestance efficiency MPPS* ≥ 99.95
- Initial pressure drop Pa 220 | 250 | 250
- Nominal volume flow rate m³/h 1,500 | 2,500 | 3,400
- Recommended final pressure drop** Pa 600
- Frame depth mm 150 | 192 | 280
- Pleat depth mm 100 | 200 | 280
- Thermal stability °C 70
- Moisture-resistance (rel. hum.) % 100
- Standard dimensions mm 610 × 610
- Gasket mm 6
TECHNICAL FILTER TEST DATA TO EN 1822

Initial pressure drop curves

![Pressure drop vs Volume flow rate graph]

- Item code of product line H13 (Example)
  - SF13 - K - 0610 × 0610 × 292 × 20 - N 1 0 N
    - EPA filter class H13
    - Frame material:
      - K = halogen-free plastic
      - B = galvanized steel sheets
      - S = stainless steel sheets
    - Frame width [mm]: 4 digits
    - Frame length [mm]: 4 digits
    - Frame depth [mm]: 3 digits
    - Pleat depth [cm]: 2 digits
      - 10 = 100 mm
      - 20 = 200 mm
      - 28 = 280 mm
    - Type of gasket:
      - N = PU semicircular profile gasket
      - W = flat seal
    - Position of gasket:
      - 1 = one side
      - 3 = both sides
    - Protection grid:
      - 0 = without (only for 100 and 200 mm pleat depth)
      - 3 = both sides/powdercoated metal mesh
      - 4 = both sides/aluminium mesh
      - 8 = both sides/halogen-free plastic
    - Execution:
      - N = standard
      - S = special version

The figures given are mean values subject to tolerances due to the normal production fluctuations. Our explicit written confirmation is always required for the correctness and applicability of the information involved in any particular case. Subject to technical alterations. You will find instructions on how to handle and dispose of loaded filters in our information on product safety and eco-compatibility.