

# Efficient air filtration in cleanrooms

## HEPA filters with plastic frame

### Filter class H 13



Filter class	Frame Depth [mm]	Pleat Depth [mm]	Standard Dimensions [mm]	Gasket [mm]	Test Standard
H 13	150	100	305×305 457×457	6	EN 1822
H 13	292	200   280	610×305 610×610	6	EN 1822




#### The application

Viledon® High Efficient Particulate Air (HEPA) filters of class H 13 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, carcinogenic dusts, etc.)
- as downstream polishing filters in dust removal applications
- in the intake air filtration of turbomachinery

#### 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.

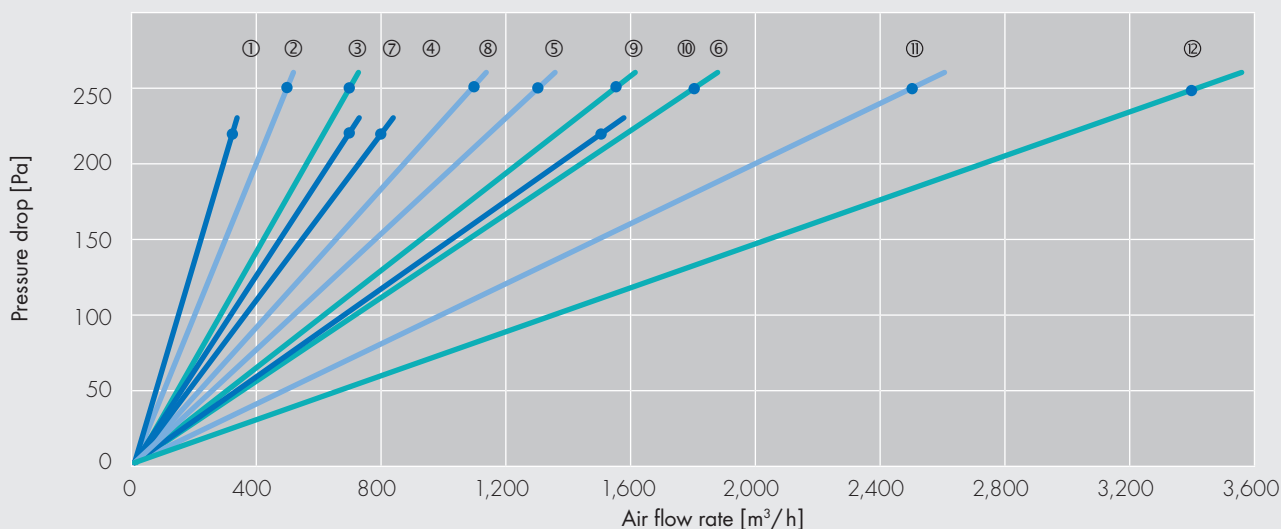
- **Easy handling and mounting**, thanks to exceptionally **low weight** and a continuous, homogeneously foamed-on polyurethane gasket. On request also with a flat gasket.
- Viledon® Efficient Particulate Air (EPA) filters are **microbiologically inactive and meet all hygiene requirements of the German VDI Guideline 6022 "Hygiene requirements for HVAC systems and units"**.
- Each filter element is **leakproofed in accordance with EN 1822** and delivered together with the corresponding test certificate.
- Filters with a pleat depth of 280 mm **meet the requirements laid down in EN 60335-2-69** for filters being used in dust-eliminating machines and equipment of dust class "H" (see table).

Parameters		610×610	610×305	457×457	305×305
Frame depth	mm	150   292   292	150   292   292	150   292   292	150   292   292
Pleat depth	mm	100   200   280	100   200   280	100   200   280	100   200   280
Nominal volume flow rate	● m <sup>3</sup> /h	1,500   2,500   3,400	700   1,100   1,550	800   1,300   1,800	325   500   700
Initial pressure drop	Pa	220   250   250	220   250   250	220   250   250	220   250   250
Arrestance efficiency MPPS*	%	≥99.95	≥99.95	≥99.95	≥99.95
Recommended final pressure drop**	Pa	600	600	600	600
Max. permissible pressure drop	Pa	3,000	3,000	3,000	3,000
Thermal stability	°C	70	70	70	70
Moisture-resistance (rel. hum.)	%	100	100	100	100

# Technical filter test data to EN 1822

## Initial pressure drop curves

Pleat depth 100 — Pleat depth 280 — Nominal air flow rate ●  
Pleat depth 200 —



- |  |  |  |
|--|--|--|
| ① 305 mm x 305 mm / Pleat depth 100 mm | ⑤ 457 mm x 457 mm / Pleat depth 200 mm | ⑨ 610 mm x 305 mm / Pleat depth 280 mm |
| ② 305 mm x 305 mm / Pleat depth 200 mm | ⑥ 457 mm x 457 mm / Pleat depth 280 mm | ⑩ 610 mm x 610 mm / Pleat depth 100 mm |
| ③ 305 mm x 305 mm / Pleat depth 280 mm | ⑦ 610 mm x 305 mm / Pleat depth 100 mm | ⑪ 610 mm x 610 mm / Pleat depth 200 mm |
| ④ 457 mm x 457 mm / Pleat depth 100 mm | ⑧ 610 mm x 305 mm / Pleat depth 200 mm | ⑫ 610 mm x 610 mm / Pleat depth 280 mm |

## Item code of product line H 13

Example: SF 13 - K - 0610 x 0610 x 292 x 20 - N 1 0 N

▼        ▼        ▼        ▼        ▼        ▼        ▼        ▼        ▼  
 ①        ②        ③        ④        ⑤        ⑥        ⑦        ⑧        ⑨        ⑩

- |  |   |
|--|---|
| ① EPA filter class H 13  | ⑤ Frame depth [mm]: 3 digits  |
| ② Frame material:<br>K = halogen-free plastic<br>B = galvanized steel sheets<br>S = stainless steel sheets | ⑥ Pleat depth [cm]: 2 digits<br>10 = 100 mm<br>20 = 200 mm<br>28 = 280 mm |
| ③ Frame width [mm]: 4 digits   | ⑦ Type of gasket:<br>N = PU semicircular profile gasket<br>W = flat seal  |
| ④ Frame length [mm]: 4 digits  |   |

- ⑧ Position of gasket:  
1 = one side  
3 = both sides
- ⑨ 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
- ⑩ Execution:  
N = standard  
S = special version

\* 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.

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.

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