

# Filter Fan (17 to 412)CFM and Exhaust Filter

7F  
SERIES



Drying kilns



Textile machines



Machines  
for paper  
processing



Machines  
for ceramics



Wood-  
processing  
machines



Panels for  
electrical  
distribution



Control panels



Forced-air  
ventilators





**Filter Fan for electrical cabinets and enclosures 120 V or 230 V AC versions**

- Very low acoustic noise
- Minimal depth within enclosure
- Nominal voltage: 120 or 230 V AC (60 Hz)
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Filter Fan supplied in Reverse flow mode (7F.21)
- Black color RAL 9004 Available

**7F.20.8.xxx.1020**



- Nominal voltage 120 or 230 V AC
- Air volume 17 CFM
- Size 1

**7F.20.8.xxx.2055**



- Nominal voltage 120 or 230 V AC
- Air volume 37 CFM
- Size 2

**7F.20.8.xxx.3100**



- Nominal voltage 120 or 230 V AC
- Air volume 68 CFM
- Size 3

For outline drawing see page 14

**Fan data**

|   |        |       |       |       |
|---|--------|-------|-------|-------|
| Air volume (free flow): 60 Hz                     | CFM    | 17    | 37    | 68    |
| Air volume (with exhaust filter installed): 60 Hz | CFM    | 10    | 27    | 50    |
| Noise level                                       | dB (A) | 27    | 42    | 42    |
| Life time at 104 °F                               | h      | 50000 | 50000 | 50000 |

**Electrical data**

|                                   |              |                          |      |                            |      |                            |      |
|-----------------------------------|--------------|--------------------------|------|----------------------------|------|----------------------------|------|
| Nominal voltage (U <sub>N</sub> ) | V AC (60 Hz) | 120                      | 230  | 120                        | 230  | 120                        | 230  |
| Operating range                   | AC           | (0 to 1.1)U <sub>N</sub> |      | (0.8 to 1.1)U <sub>N</sub> |      | (0.8 to 1.1)U <sub>N</sub> |      |
| Current consumption: 60 Hz        | A            | 0.18                     | 0.08 | 0.21                       | 0.11 | 0.21                       | 0.11 |
| Rated power: 60 Hz                | W            | 21                       | 18   | 25                         | 25   | 25                         | 25   |

**Other data**

|  |   |            |  |  |  |  |  |
|--|---|------------|--|--|--|--|--|
| Housing, cover                             | Plastics according to UL94 V-0  |            |  |  |  |  |  |
| Filter mat (included)                      | G3 according to EN 779, filtering degree (80 to 90)%  |            |  |  |  |  |  |
| Filter material                            | Synthetic fiber with progressive construction, temperature resistant to +100 °C, self extinguishing, Class F1 (DIN 53438) |            |  |  |  |  |  |
| Electrical connections                     | Push-in terminals   |            |  |  |  |  |  |
| Wire size (mm <sup>2</sup> )               | min/max   | 0.7/2.5    |  |  |  |  |  |
| Wire size (AWG)                            | min/max   | 18/14      |  |  |  |  |  |
| Ambient temperature range                  | °F  | +5 to +131 |  |  |  |  |  |
| Protection category according to EN 60529  | IP 54   |            |  |  |  |  |  |
| Protection category according to NEMA / UL | Type 12 / UL Type 12  |            |  |  |  |  |  |

**Approvals** (according to type)



**Filter Fan for electrical cabinets and enclosures 120 V or 230 V AC versions**

- Very low acoustic noise
- Minimal depth within enclosure
- Nominal voltage: 120 or 230 V AC (60 Hz)
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Filter Fan supplied in Reverse flow mode (7F.21)
- Black color RAL 9004 available

**7F.20.8.xxx.4250**


- Nominal voltage 120 or 230 V AC
- Air volume 174 CFM
- Size 4

**7F.20.8.xxx.4400**


- Nominal voltage 120 or 230 V AC
- Air volume 262 CFM
- Size 4

For outline drawing see page 15

**Fan data**

|   |        |       |       |
|---|--------|-------|-------|
| Air volume (free flow): 60 Hz                     | CFM    | 174   | 262   |
| Air volume (with exhaust filter installed): 60 Hz | CFM    | 134   | 177   |
| Noise level                                       | dB (A) | 56    | 72    |
| Life time at 104 °F                               | h      | 50000 | 50000 |

**Electrical data**

|                                   |              |                            |      |                            |      |
|-----------------------------------|--------------|----------------------------|------|----------------------------|------|
| Nominal voltage (U <sub>N</sub> ) | V AC (60 Hz) | 120                        | 230  | 120                        | 230  |
| Operating range                   | AC           | (0.8 to 1.1)U <sub>N</sub> |      | (0.8 to 1.1)U <sub>N</sub> |      |
| Current consumption: 60 Hz        | A            | 0.40                       | 0.22 | 1                          | 0.49 |
| Rated power: 60 Hz                | W            | 48                         | 50   | 120                        | 112  |

**Other data**

|  |  |            |   |  |
|--|--|------------|---|--|
| Housing, cover                             | Plastics according to UL94 V-0, light gray (RAL 7035)  |            |   |  |
| Filter mat (included)                      | G3 according to EN 779,<br>filtering degree (80 to 90)%  |            | G4 according to EN 779,<br>filtering degree (80 to 90)% |  |
| Filter material                            | Synthetic fiber with progressive construction, temperature resistant to +100 °C,<br>self extinguishing, Class F1 (DIN 53438) |            |   |  |
| Electrical connections                     | Push-in terminals  |            |   |  |
| Wire size (mm <sup>2</sup> )               | min/max  | 0.7/2.5    |   |  |
| Wire size (AWG)                            | min/max  | 18/14      |   |  |
| Ambient temperature range                  | °F   | +5 to +131 |   |  |
| Protection category according to EN 60529  | IP 54  |            |   |  |
| Protection category according to NEMA / UL | Type 12 / UL Type 12   |            |   |  |

**Approvals (according to type)**


**Filter Fan for electrical cabinets and enclosures  
120 V or 230 V AC versions**

- Very low acoustic noise
- Minimal depth within enclosure
- Nominal voltage: 120 or 230 V AC (60 Hz)
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Filter Fan supplied in Reverse flow mode (7F.21)
- Black color RAL 9004 available

**7F.20.8.xxx.5550**



- Nominal voltage 120 or 230 V AC
- Air Volume 356 CFM
- Size 5

**NEW**

**7F.20.8.xxx.5700**



- Nominal voltage 120 or 230 V AC
- Air Volume 412 CFM
- Size 5

For outline drawing see page 15

| Fan data   |              |   |      |   |      |
|--|--------------|---|------|---|------|
| Air volume (free flow): 60 Hz                    | CFM          | 356   |      | 412   |      |
| Air volume (with exhaust filter installed): 60Hz | CFM          | 259   |      | 277   |      |
| Noise level                                      | dB (A)       | 75  |      | 72  |      |
| Life time at 104 °F                              | h            | 50000   |      | 50000   |      |
| Electrical data                                  |              |   |      |   |      |
| Nominal voltage (U <sub>N</sub> )                | V AC (60 Hz) | 120   | 230  | 120   | 230  |
| Operating range                                  | AC           | (0.8 to 1.1)U <sub>N</sub>  |      | (0.8 to 1.1)U <sub>N</sub>                              |      |
| Current consumption : 60 Hz                      | A            | 0.85  | 0.49 | 1.14  | 0.53 |
| Rated power: 60 Hz                               | W            | 102   | 116  | 140   | 120  |
| Other data                                       |              |   |      |   |      |
| Housing, cover                                   |              | Plastics according to UL94 V-0, light gray (RAL 7035)   |      |   |      |
| Filter mat (included)                            |              | G4 according to EN 779,<br>filtering degree (80 to 90)%   |      | G3 according to EN 779,<br>filtering degree (80 to 90)% |      |
| Filter material                                  |              | Synthetic fiber with progressive construction, temperature resistant to 100 °C,<br>self extinguishing, Class F1 (DIN 53438) |      |   |      |
| Electrical connections                           |              | Push-in terminals   |      | Screw terminals   |      |
| Wire size (mm <sup>2</sup> )                     | min/max      | 0.7/2.5   |      |   |      |
| Wire size (AWG)                                  | min/max      | 18/14   |      |   |      |
| Ambient temperature range                        | °F           | +14 to +158   |      |   |      |
| Protection category according to EN 60529        |              | IP 54   |      |   |      |
| Protection category according to NEMA / UL       |              | Type 12 / UL Type 12  |      |   |      |
| Approvals (according to type)                    |              |   |      |   |      |

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**Filter Fan for electrical cabinets and enclosures 24 V DC versions**

- Very low acoustic noise
- Minimal depth within enclosure
- Nominal voltage: 24 V DC
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Filter Fan supplied in Reverse flow mode (7F.21)
- Black color RAL 9004 Available

**7F.20.9.024.1020**



- Nominal voltage 24 V DC
- Air volume 14 CFM
- Rated power 3.6 W
- Size 1

**7F.20.9.024.2055**



- Nominal voltage 24 V DC
- Air volume 32 CFM
- Rated power 7 W
- Size 2

**7F.20.9.024.3100**



- Nominal voltage 24 V DC
- Air volume 59 CFM
- Rated power 7 W
- Size 3

For outline drawing see page 14

| Fan data                                   |         |  |                            |                            |
|--|---------|--|----------------------------|----------------------------|
| Air volume (free flow)                     | CFM     | 14   | 32                         | 59                         |
| Air volume (with exhaust filter installed) | CFM     | 8  | 24                         | 44                         |
| Noise level                                | dB (A)  | 37.5   | 46                         | 45                         |
| Life time at 104 °F                        | h       | 50000  | 50000                      | 50000                      |
| Electrical data                            |         |  |                            |                            |
| Nominal voltage (U <sub>N</sub> )          | V DC    | 24   | 24                         | 24                         |
| Operating range                            | DC      | (0.8 to 1.1)U <sub>N</sub>   | (0.8 to 1.1)U <sub>N</sub> | (0.8 to 1.1)U <sub>N</sub> |
| Current consumption                        | A       | 0.15   | 0.32                       | 0.32                       |
| Rated power                                | W       | 3.6  | 7                          | 7                          |
| Other data                                 |         |  |                            |                            |
| Housing, cover                             |         | Plastics according to UL94 V-0   |                            |                            |
| Filter mat (included)                      |         | G3 according to EN 779, filtering degree (80 to 90)%   |                            |                            |
| Filter material                            |         | Synthetic fiber with progressive construction, temperature resistant to 100 °C, self extinguishing, Class F1 (DIN 53438) |                            |                            |
| Electrical connections                     |         | Push-in terminals  |                            |                            |
| Wire size (mm <sup>2</sup> )               | min/max | 0.7/2.5  |                            |                            |
| Wire size (AWG)                            | min/max | 18/14  |                            |                            |
| Ambient temperature range                  | °F      | +5 to +131   |                            |                            |
| Protection category according to EN 60529  |         | IP 54  |                            |                            |
| Protection category according to NEMA / UL |         | Type 12 / UL Type 12   |                            |                            |
| Approvals (according to type)              |         |  |                            |                            |

**Filter Fan for electrical cabinets and enclosures 24 V DC versions**

- Very low acoustic noise
- Minimal depth within enclosure
- Nominal voltage: 24 V DC
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Filter Fan supplied in Reverse flow mode (7F.21)
- Black color RAL 9004 Available

**7F.20.9.024.4250**



- Nominal voltage 24 V DC
- Air volume 147 CFM
- Rated power 43 W
- Size 4

For outline drawing see page 15

**Fan data**

|  |        |       |
|--|--------|-------|
| Air volume (free flow)                     | CFM    | 147   |
| Air volume (with exhaust filter installed) | CFM    | 115   |
| Noise level                                | dB (A) | 64    |
| Life time at 104 °F                        | h      | 50000 |

**Electrical data**

|                                   |      |                            |
|-----------------------------------|------|----------------------------|
| Nominal voltage (U <sub>N</sub> ) | V DC | 24                         |
| Operating range                   | DC   | (0.8 to 1.1)U <sub>N</sub> |
| Current consumption               | A    | 1.8                        |
| Rated power                       | W    | 43                         |

**Other data**

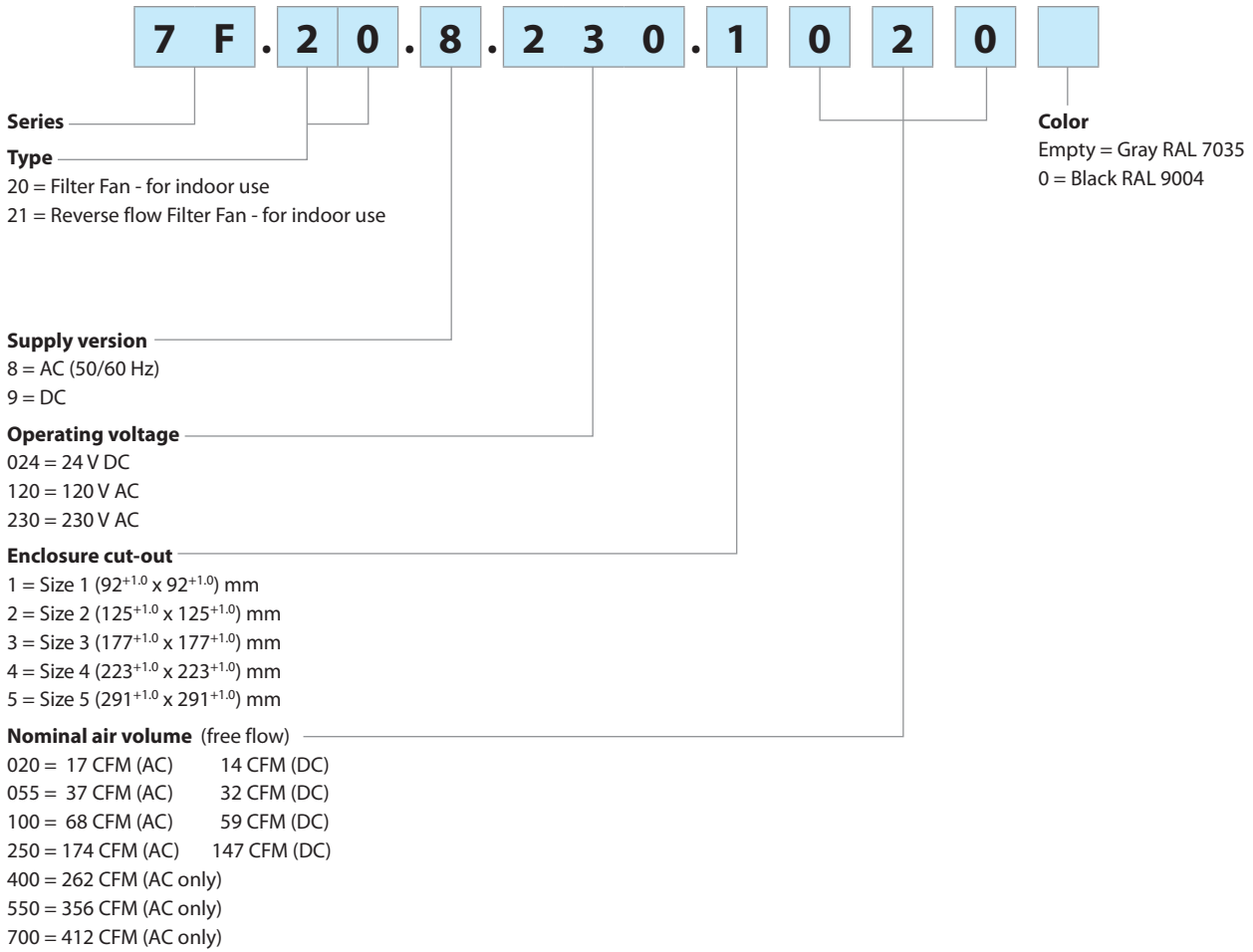
|  |  |            |
|--|--|------------|
| Housing, cover                             | Plastics according to UL94 V-0   |            |
| Filter mat (included)                      | G3 according to EN 779, filtering degree (80 to 90)%   |            |
| Filter material                            | Synthetic fiber with progressive construction, temperature resistant to 100 °C, self extinguishing, Class F1 (DIN 53438) |            |
| Electrical connections                     | Push-in terminals  |            |
| Wire size (mm <sup>2</sup> )               | min/max  | 0.7/2.5    |
| Wire size (AWG)                            | min/max  | 18/14      |
| Ambient temperature range                  | °F   | +5 to +131 |
| Protection category according to EN 60529  | IP 54  |            |
| Protection category according to NEMA / UL | Type 12 / UL Type 12   |            |

**Approvals** (according to type)



## Ordering information

Example: Series 7F, Filter Fan for mounting in sidewalls, nominal voltage 230 V AC, size 1, air volume 17 CFM.



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### Filter Fans - All versions

| Standard versions | Reverse flow versions |                    |
|-------------------|-----------------------|--------------------|
| 7F.20.8.120.1020  | 7F.21.8.120.1020      | Filter Fan, Size 1 |
| 7F.20.8.120.2055  | 7F.21.8.120.2055      | Filter Fan, Size 2 |
| 7F.20.8.120.3100  | 7F.21.8.120.3100      | Filter Fan, Size 3 |
| 7F.20.8.120.4250  | 7F.21.8.120.4250      | Filter Fan, Size 4 |
| 7F.20.8.120.4400  | 7F.21.8.120.4400      | Filter Fan, Size 4 |
| 7F.20.8.120.5550  | 7F.21.8.120.5550      | Filter Fan, Size 5 |
| 7F.20.8.120.5700  | 7F.21.8.120.5700      | Filter Fan, Size 5 |
| 7F.20.8.230.1020  | 7F.21.8.230.1020      | Filter Fan, Size 1 |
| 7F.20.8.230.2055  | 7F.21.8.230.2055      | Filter Fan, Size 2 |
| 7F.20.8.230.3100  | 7F.21.8.230.3100      | Filter Fan, Size 3 |
| 7F.20.8.230.4250  | 7F.21.8.230.4250      | Filter Fan, Size 4 |
| 7F.20.8.230.4400  | 7F.21.8.230.4400      | Filter Fan, Size 4 |
| 7F.20.8.230.5550  | 7F.21.8.230.5550      | Filter Fan, Size 5 |
| 7F.20.8.230.5700  | 7F.21.8.230.5700      | Filter Fan, Size 5 |
| 7F.20.9.024.1020  | 7F.21.9.024.1020      | Filter Fan, Size 1 |
| 7F.20.9.024.2055  | 7F.21.9.024.2055      | Filter Fan, Size 2 |
| 7F.20.9.024.3100  | 7F.21.9.024.3100      | Filter Fan, Size 3 |
| 7F.20.9.024.4250  | 7F.21.9.024.4250      | Filter Fan, Size 4 |

**Note:**

The technical features (air volume, dimensions and electrical parameters) for the Standard Filter Fans (7F.20 ) and the Reverse flow versions (7F.21) - are exactly the same. Other versions on request.



**Exhaust Filter**

The size of the Exhaust Filter should match the size of the Filter Fan to achieve the best ventilation within the cabinet

- Minimum depth within enclosure
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Black color RAL 9004 Available

**7F.02.0.000.1000**



- For Filter Fans 7F.20.x.xxx.1020
- Size 1

**7F.02.0.000.2000**



- For Filter Fans 7F.20.x.xxx.2055
- Size 2

**7F.02.0.000.3000**



- For Filter Fans 7F.20.x.xxx.3100
- Size 3

For outline drawing see page 14

**Other data**

Housing, cover

Plastics according to UL94 V-0

Filter mat (included)

G3 according to EN 779, filtering degree (80 to 90)%

Filter material

Synthetic fiber with progressive construction, temperature resistant to +100 °C, self extinguishing, Class F1 (DIN 53438)

Protection category according to EN 60529

IP 54

Protection category according to NEMA / UL

Type 12 / UL Type 12

**Approvals** (according to type)



**Exhaust Filter**

The size of the Exhaust Filter should match the size of the Filter Fan to achieve the best ventilation within the cabinet

- Minimum depth within enclosure
- Time-saving installation and maintenance
- Easily replaceable filter mat
- Black color RAL 9004 Available

**7F.02.0.000.4000**



- For Filter Fans  
7F.20.x.xxx.4250 or  
7F.20.8.xxx.4400
- Size 4

**7F.02.0.000.5000**



- For Filter Fans  
7F.20.8.xxx.5550
- Size 5

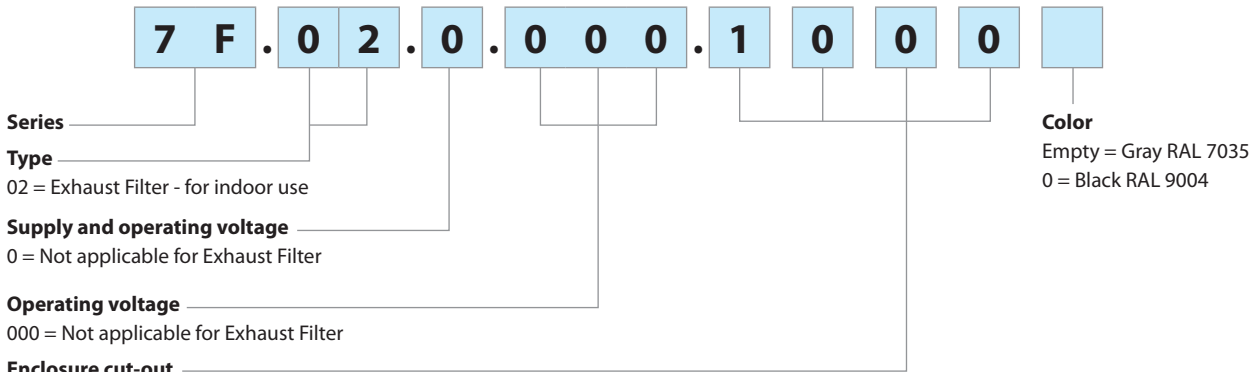
For outline drawing see page 15

**Other data**

|  |   |
|--|---|
| Housing, cover                             | Plastics according to UL94 V-0, light gray (RAL 7035)   |
| Filter mat (included)                      | G3 according to EN 779, filtering degree (80 to 90)%  |
| Filter material                            | Synthetic fiber with progressive construction, temperature resistant to +100 °C, self extinguishing, Class F1 (DIN 53438) |
| Protection category according to EN 60529  | IP 54   |
| Protection category according to NEMA / UL | Type 12 / UL Type 12  |
| <b>Approvals</b> (according to type)       |   |

### Ordering information

Example: Series 7F, Exhaust Filter for mounting in sidewalls, size 1.



#### Exhaust Filter - All versions

| Standard-versions |                        |
|-------------------|------------------------|
| 7F.02.0.000.1000  | Exhaust Filter, Size 1 |
| 7F.02.0.000.2000  | Exhaust Filter, Size 2 |
| 7F.02.0.000.3000  | Exhaust Filter, Size 3 |
| 7F.02.0.000.4000  | Exhaust Filter, Size 4 |
| 7F.02.0.000.5000  | Exhaust Filter, Size 5 |

### Components

| Standard-Filter Fan | Standard-Exhaust Filter | Filter mat                     | Size |
|---------------------|-------------------------|--------------------------------|------|
| 7F.20.8.xxx.1020    | 7F.02.0.000.1000        | 07F.15                         | 1    |
| 7F.20.8.xxx.2055    | 7F.02.0.000.2000        | 07F.25                         | 2    |
| 7F.20.8.xxx.3100    | 7F.02.0.000.3000        | 07F.35                         | 3    |
| 7F.20.8.xxx.4250    | 7F.02.0.000.4000        | 07F.45                         | 4    |
| 7F.20.8.xxx.4400    | 7F.02.0.000.4000        | 07F.46 (07F.45 for 7F.02-4000) | 4    |
| 7F.20.8.xxx.5550    | 7F.02.0.000.5000        | 07F.56 (07F.55 for 7F.02-5000) | 5    |
| 7F.20.8.xxx.5700    | 7F.02.0.000.5000        | 07F.55                         | 5    |
| 7F.20.9.024.1020    | 7F.02.0.000.1000        | 07F.15                         | 1    |
| 7F.20.9.024.2055    | 7F.02.0.000.2000        | 07F.25                         | 2    |
| 7F.20.9.024.3100    | 7F.02.0.000.3000        | 07F.35                         | 3    |
| 7F.20.9.024.4250    | 7F.02.0.000.4000        | 07F.45                         | 4    |

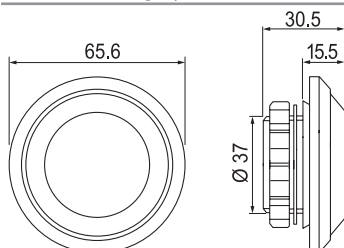
| Spare Filter mats   | 07F.15 | 07F.25 | 07F.35 | 07F.45/46 | 07F.55/56 |
|---------------------|--------|--------|--------|-----------|-----------|
| Protection category | IP54   |        |        |           |           |

### Accessories



07F.80

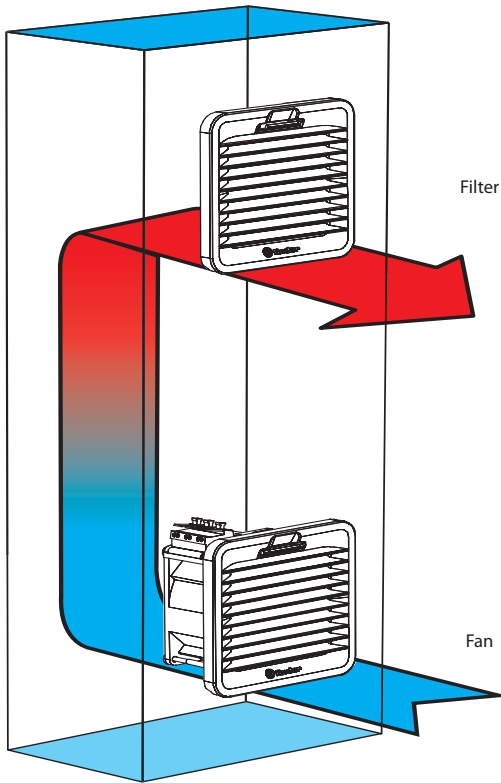
| Pressure compensation device, for pressure compensation in closed cabinets or enclosures | 07F.80                          |
|--|---------------------------------|
| Air interface area   | cm <sup>2</sup><br>7            |
| Mounting   | PG 29 thread with union nut     |
| Torque   | Nm<br>5 (max. 10)               |
| Material   | plastic according to UL94-V0    |
| Dimensions (diameter/depth)  | mm<br>65.5/30.5                 |
| Mounting position  | upper part of cabinet sidewalls |
| Ambient temperature  | °F<br>-49 to +158               |
| Protection category  | IP 55                           |



Unit package contains 2 pressure compensation devices

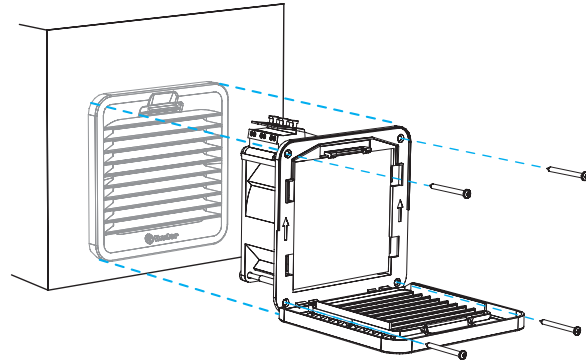
## Mounting instructions for Filter Fans

### Mounting arrangement of Filter Fans and Exhaust Filter



Filter

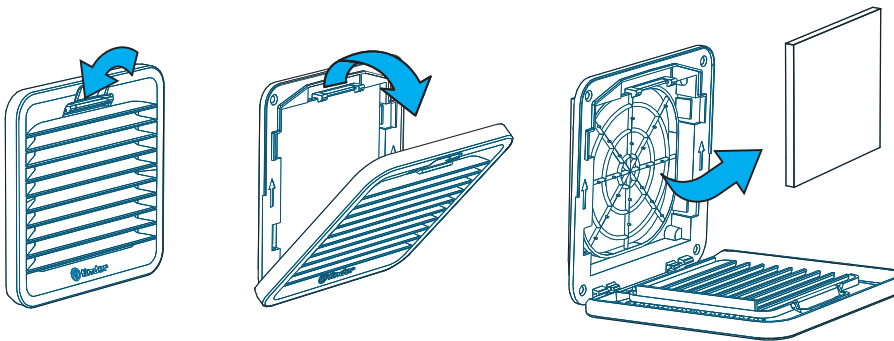
Fan



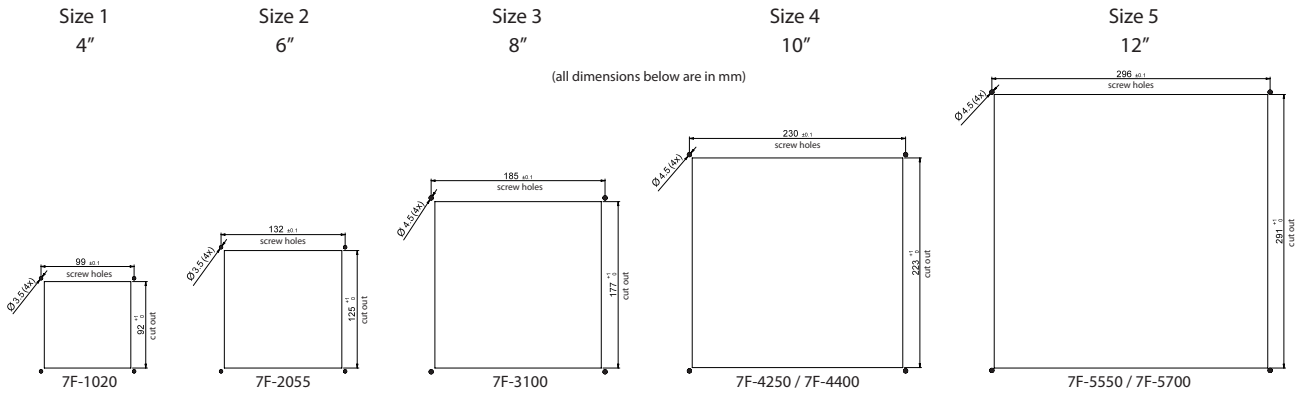
The installation with the only clips is optimized for 1.5 mm thick sheets; it is also possible with thicknesses from 1 to 2.5 mm. Fixing with screws (supplied) is recommended. Tightening torque 0.3 Nm.

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## Replacement of Filter mat ( Type 7F.20)



## Drilling template and mounting cut-outs for Filter Fans and Exhaust Filter



### Mounting and maintenance

1. Make the panel cut-out according to the size of the Filter Fan or Exhaust Filter in the sidewall of the cabinet as appropriate.  
A template of the panel cut-out is included in the packaging of the Filter Fan or Exhaust Filter.
2. Make the electrical connection.
3. Mount by simply snapping the side-located lugs on the Filter Fan or Exhaust Filter into the panel cut-out (without using screws for sidewall thickness of 1.2...2.4 mm).  
At other thickness it is recommended to mount the Filter Fan by the screws supplied (for size 1, the template shows the mounting cut-out only).
4. When screws are needed for the mounting, remove the plastic cover and fix the Filter Fan with the 4 screws supplied.  
Then insert the filter mat and snap the plastic cover to the mounting frame.
5. During maintenance or when replacing the filter mat remove the plastic cover, replace the filter mat and snap on the plastic cover.

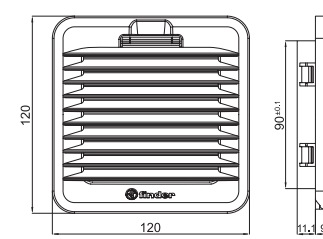
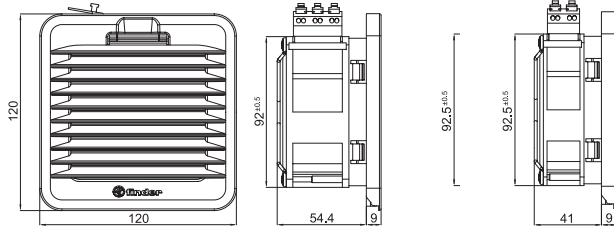
Outline drawings

Type 7F.20.x.xxx.1020

AC version

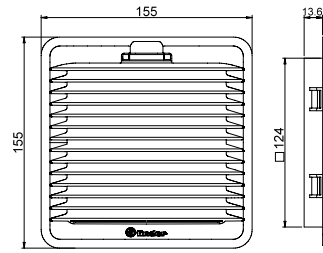
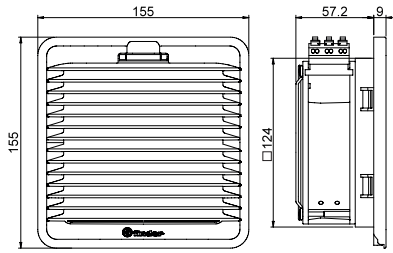
DC version

Type 7F.02.0.000.1000



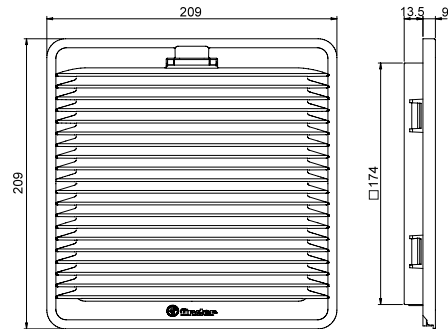
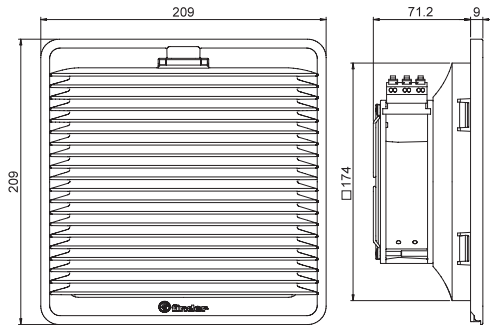
Type 7F.20.x.xxx.2055

Type 7F.02.0.000.2000



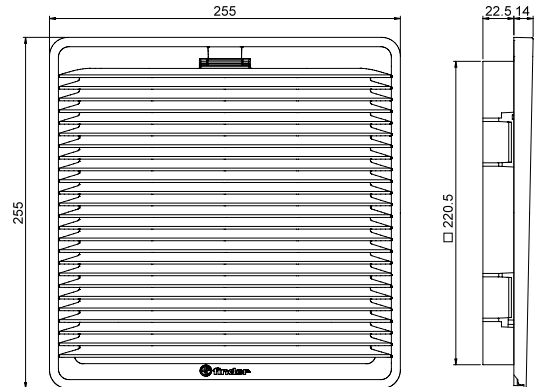
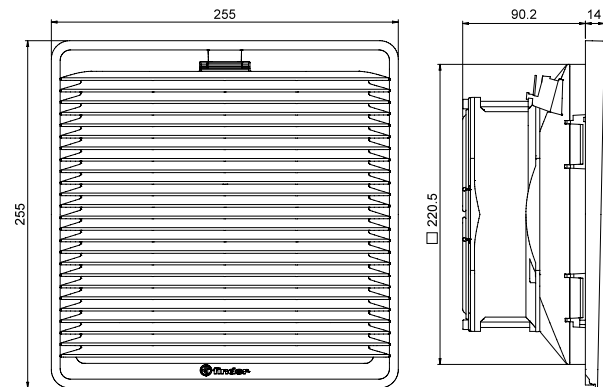
Type 7F.20.x.xxx.3100

Type 7F.02.0.000.3000



Type 7F.20.x.xxx.4250

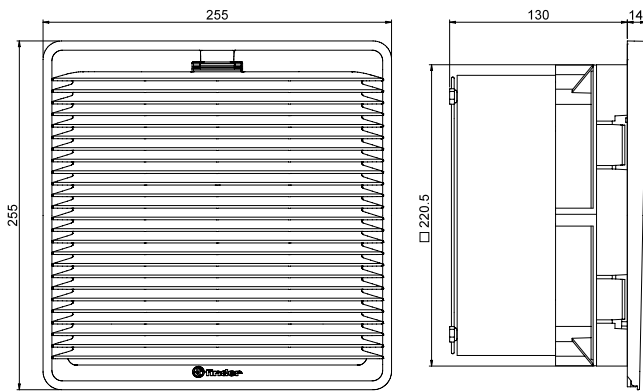
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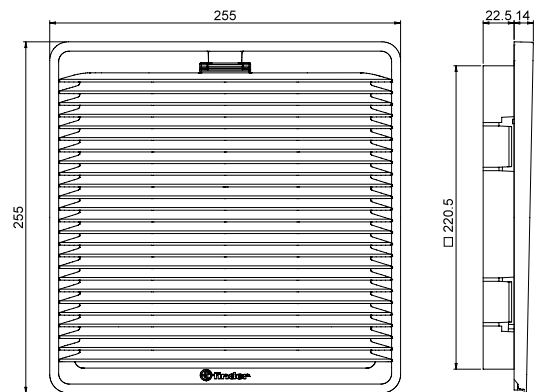
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Outline drawings

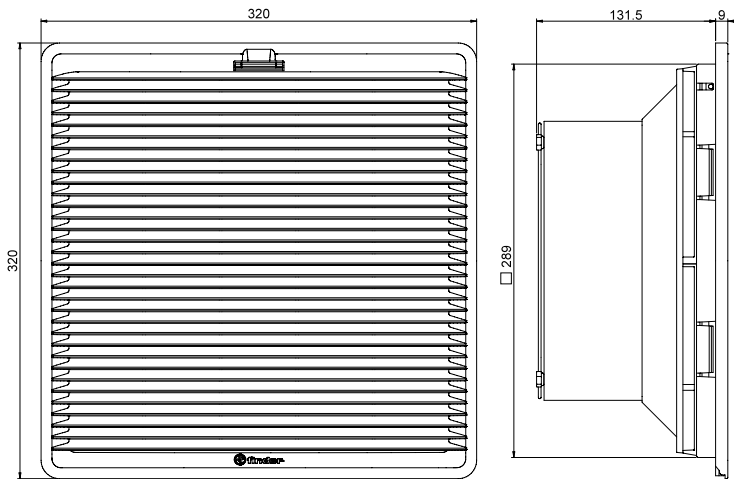
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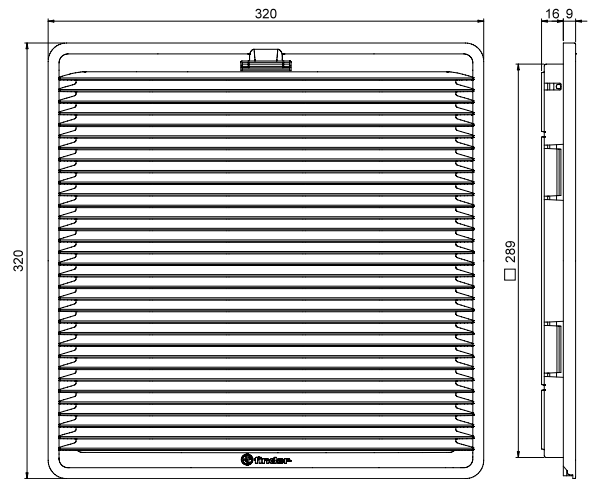
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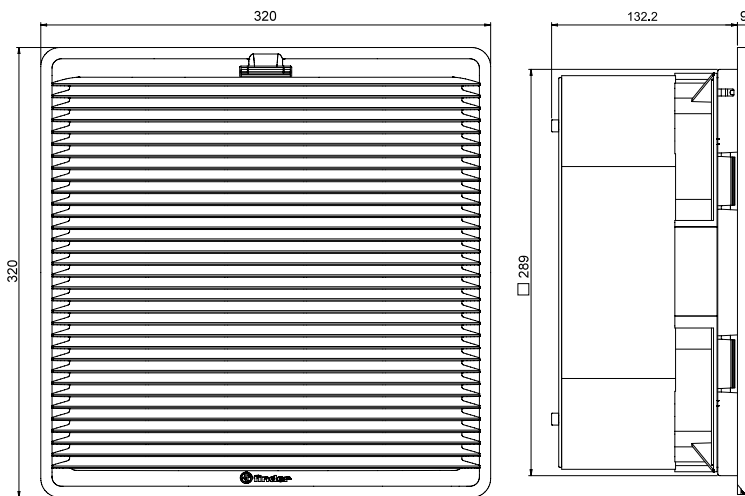
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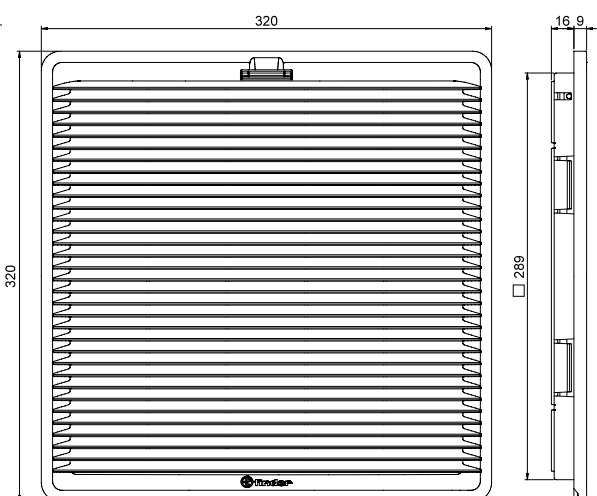
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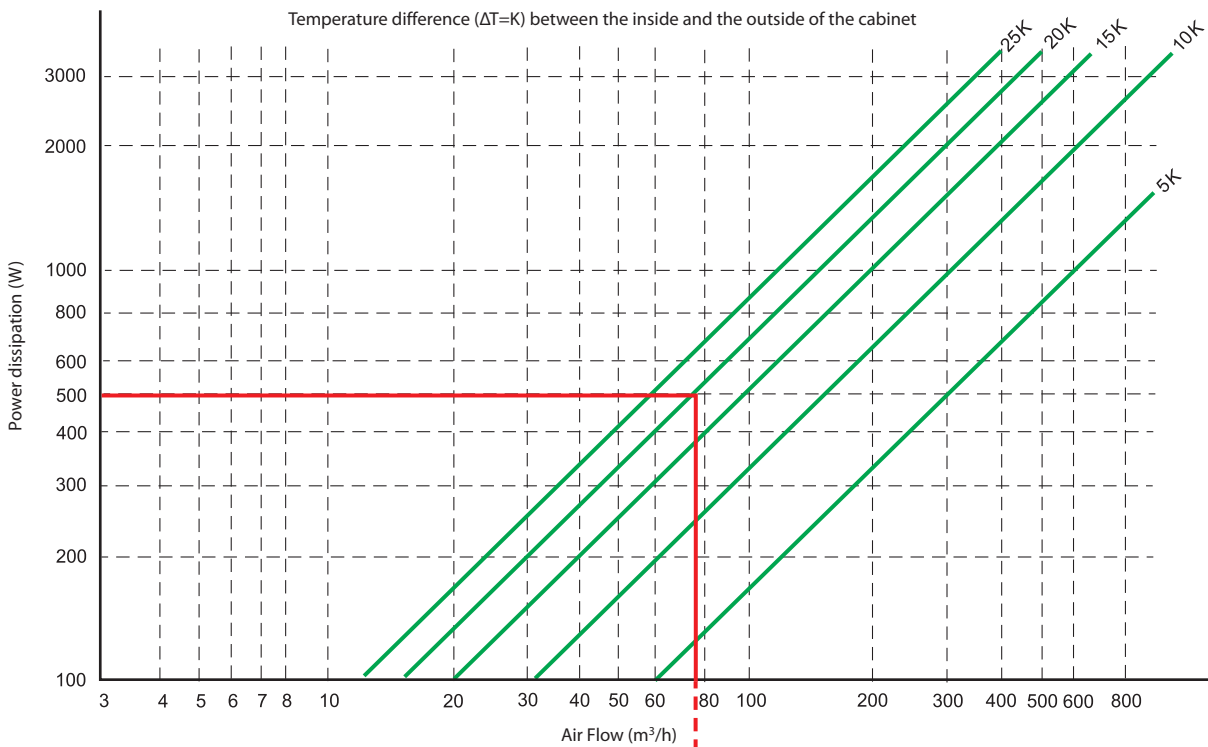
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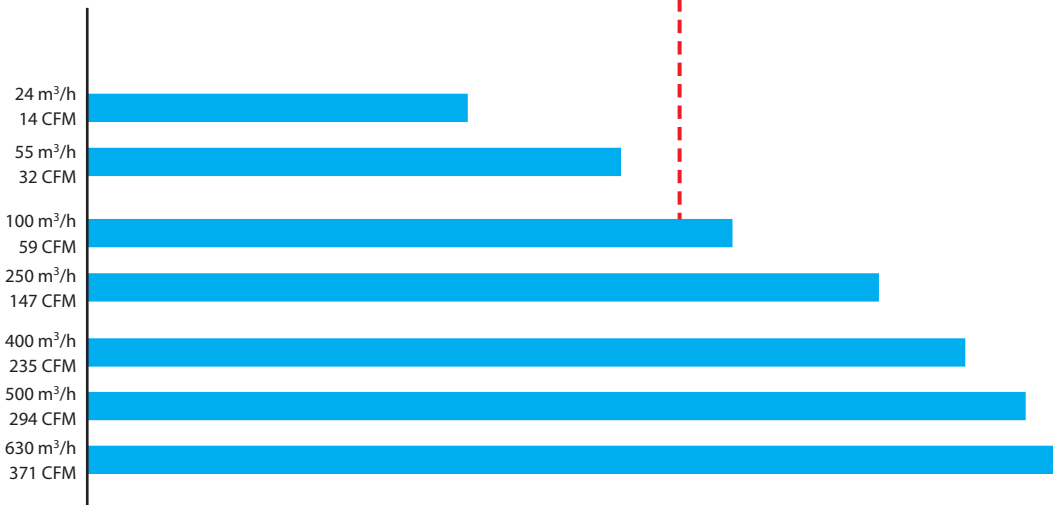
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### Fan selection



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#### Example

First, estimate the power dissipated within the cabinet. Then calculate the maximum difference between the internal and external temperature (green lines) by considering the difference between the maximum permitted internal temperature (as dictated by the temperature rating of the enclosed components, or specification) and the maximum temperature expected outside the cabinet.

The projection onto the X axis, of the intersection between the power (watts) and the appropriate green line, corresponds to the air flow rate in  $m^3/h$  required to meet the maximum internal temperature limit. Extending this line vertically to intersect with the blue horizontal lines, indicates the most appropriate model of 7F fan to be fitted to the cabinet to provide the requisite air flow.

The example above considers a cabinet with an internal thermal power dissipation of 500 W, and assumes the maximum temperature difference between the inside and the outside of the cabinet to be 20K. The required air flow can be seen to be a little less than 80  $m^3/h$ .

It is suggested that this is increased by 10% to allow for the affects of a dirty filter.

And so, it can be seen that models of the 7F with 100  $m^3/h$  flow rate will provide the proper dissipation of heat under these circumstances.

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## Application notes

### Filter Fan

The ball-bearing axial fan housing is made of aluminium and the rotor is made of plastic or metal (depending on the type).

### Filter classes

Within EN 779 are specified 9 filter classes, categorised into 4 coarse dust filters and 5 fine dust filters.

The coarse dust filters G1 - G4 are able to filter particles > 10 µm and the fine dust filters G5 - G9 are able to filter particles from (1...10)µm.

| Filter classes         | Example of particle  | Particle size |
|------------------------|--|---------------|
| G1 - G4<br>(EU1 - EU4) | Textile fibers, hair, sand,<br>pollen, spores, insects,<br>cement dust | > 10 µm       |
| G5 - G9<br>(EU5 - EU9) | Pollen, spores, cement dust,<br>tobacco smoke, oil smoke,<br>soot      | (1...10)µm    |

### Filtering degree (Am)

The degree of filtering (Am) is the percentages of dust, by weight, that is caught and retained by the filter.

### Filter mats

The quality of these filter mats has been independently tested, according to EN 779 and branded after passing the test.

The filter mats are to filter class G3 and have an average filtering degree of (80...90)%.

### Filter material

The filter material consists of a synthetic fiber with progressive construction which is moisture-resistant to 100% RH and temperature resistant to +100 °C.

According to the strict requirements of fire class F1, DIN 53438, these filter mats are self-extinguishing.

### Progressive construction at filter mats

The individual fibers of these filter mats are bonded by a special process to provide a progressive construction where the fiber size and spacing varies through the thickness of the filter mat.

This means that coarse dust particles are caught early and fine dust later through the thickness of the mat. In this way the entire depth of the filter mat is used.

### Flammability class of the housing and the cover

The plastic materials used comply with flammability class V-0, according to UL94.

### Filter Fan in "reverse flow" version

As supplied, the standard Filter Fan is in "Draw-In"- mode, which means that cool air is filtered and drawn into the cabinet. In some cases it may be required that the warm air is blown out of the cabinet.

In which case it is possible to get Filter Fans in "Exhaust Filter" mode version (7F.21).

### Mounting of the pressure compensation device

In sealed cabinets and enclosures the internal pressure can vary due to changes in temperature. The pressure compensation device (07F.80) will relieve this internal/external pressure differential whilst maintaining a high level of protection - preventing the ingress of dust and moisture into the cabinet or the enclosure. The pressure compensation device is approved for use in cabinets and enclosures according to DIN EN 62208.

Drill a hole Ø 37<sup>+1.0</sup> mm in the housing wall and fix the pressure compensation device with the accompanying nut. It is important to ensure that the sealing ring is located on the outside. To ensure optimum pressure balance, it is recommended to fit 2 pressure compensation devices at the upper sides of the cabinet or enclosure.

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