

AB / AA / ABH / AAH / MAB / MAA / DAB / DAA



| | AB-ABH - MAB-DAB | AA-AAH - MAA-DAA |
|-------------------------------|------------------|------------------|
| EN 1822:2009 classification | H14 | U15 |
| MPPS efficiency | 99,995% | 99,9995% |
| Suggested final pressure drop | 400 Pa | 400 Pa |
| Maximum pressure drop | 600 Pa | 600 Pa |
| Maximum operating temperature | 70 °C | 70 °C |
| Maximum relative humidity | 90% | 90% |
| Declaration of CE conformity | • | • |

HEPA filters available in all HEPA and ULPA efficiency classes in various heights suitable for applications where a unidirectional flow is required. The compact structure typical of these filters simplifies the maintenance procedures and reduces the system down time.

MATERIAL AND FINISH

- Frame in anodized aluminum.
- Medium in fire-proof micro-fibre glass.
- Protective grids in epoxy painted anodized aluminum.
- Hot-melt separators.
- Bicomponent polyurethane sealant
- Semi-circular expanded polyurethane one-piece gasket.

APPLICATION

- In laminar flow hoods, isolators, downcross and LAF systems.

- In terminal filter housings (DIF - Pharmsafe) to ensure the best cleanliness level of pharmaceutical production zones, production machinery and weighing systems.
- In ceiling filtration systems of operating rooms and in ancillary rooms of the hospital sector.
- Inside exhaust grilles (DEC-A, DEC-S) in contamination controlled environments.
- In production tunnels in the electronics industry.

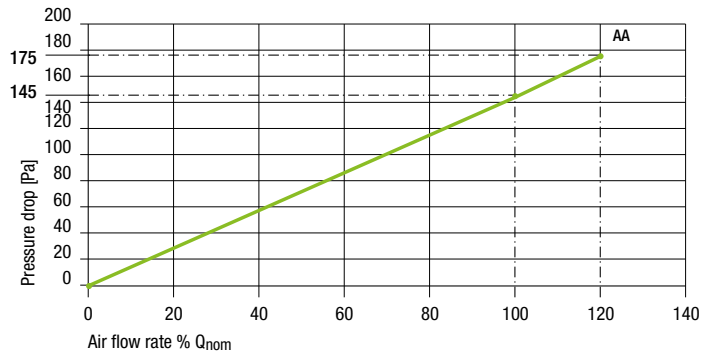
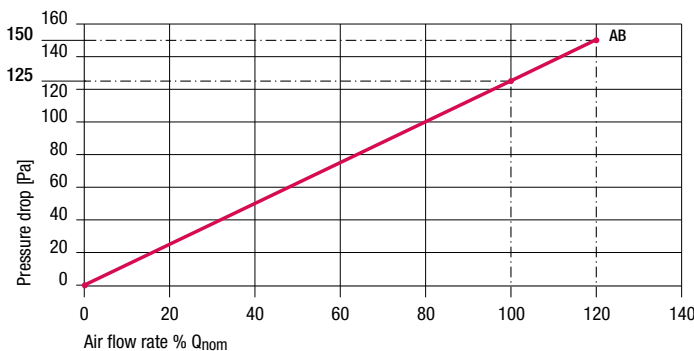
VERSIONS.

- ATEX II 2 GD T6.
- Seal (see page 88).
- PLUS (20% lower initial pressure drop compared to the standard version).

ACCESSORIES

- Double gasket.
- Equalizer membrane.
- AISI 304 stainless steel protective grids.

CHARACTERISTIC CURVES



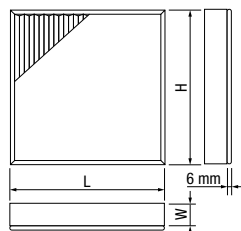
Q_{nom} is measured at face speed velocity of V_f 0,45m/s

AB / AA / ABH / AAH**DIMENSIONS AND TECHNICAL DATA**

| Code | Dimensions [mm] | | | Nominal air flow rate Q | | | Filtering surface [m ²] | Initial pressure drop [Pa] | | AB € | AA € |
|------|-----------------|------|----|-------------------------|-------|------------------------|--|----------------------------|-----|---------|---------|
| | L | H | W | [m ³ /h] | [l/s] | [ft ³ /min] | | AB | AA | | |
| 2 | 203 | 203 | 68 | 65 | 18 | 38 | 1 | 125 | 145 | | - |
| 3 | 305 | 305 | 68 | 150 | 42 | 88 | 2,5 | 125 | 145 | • | |
| 42 | 305 | 610 | 68 | 300 | 84 | 177 | 5 | 125 | 145 | • | |
| 33 | 305 | 762 | 68 | 375 | 105 | 221 | 6 | 125 | 145 | | - |
| 34 | 305 | 915 | 68 | 450 | 125 | 265 | 7 | 125 | 145 | | - |
| 43 | 457 | 457 | 68 | 340 | 95 | 200 | 5,5 | 125 | 145 | • | |
| 41 | 457 | 610 | 68 | 450 | 125 | 265 | 7 | 125 | 145 | • | |
| 44 | 515 | 515 | 68 | 430 | 120 | 253 | 7 | 125 | 145 | • | - |
| 4 | 610 | 610 | 68 | 600 | 167 | 353 | 10 | 125 | 145 | • | |
| 7 | 610 | 762 | 68 | 750 | 209 | 441 | 12 | 125 | 145 | • | |
| 8 | 610 | 915 | 68 | 900 | 250 | 530 | 14 | 125 | 145 | • | |
| 9 | 610 | 1219 | 68 | 1200 | 333 | 706 | 20 | 125 | 145 | • | |
| 10 | 610 | 1524 | 68 | 1500 | 417 | 883 | 24 | 125 | 145 | • | |
| 11 | 610 | 1829 | 68 | 1800 | 500 | 1059 | 28 | 125 | 145 | • | |
| 71 | 762 | 762 | 68 | 940 | 261 | 553 | 15 | 125 | 145 | • | |
| 72 | 762 | 915 | 68 | 1130 | 314 | 665 | 18 | 125 | 145 | • | |
| 73 | 762 | 1219 | 68 | 1500 | 418 | 883 | 23 | 125 | 145 | • | |
| 74 | 762 | 1524 | 68 | 1880 | 523 | 1107 | 29 | 125 | 145 | • | |
| 75 | 762 | 1829 | 68 | 2260 | 627 | 1330 | 35 | 125 | 145 | • | |
| 82 | 915 | 915 | 68 | 1360 | 378 | 800 | 21 | 125 | 145 | | - |
| 83 | 915 | 1219 | 68 | 1800 | 502 | 1059 | 28 | 125 | 145 | | - |
| 84 | 915 | 1524 | 68 | 2260 | 627 | 1330 | 35 | 125 | 145 | | - |
| 85 | 915 | 1829 | 68 | 2700 | 753 | 1589 | 42 | 125 | 145 | | - |
| 96 | 1219 | 1219 | 68 | 2400 | 667 | 1413 | 40 | 125 | 145 | | - |

• Products in stock

| Code | Dimensions [mm] | | | Nominal air flow rate Q | | | Filtering surface [m ²] | Initial pressure drop [Pa] | | ABH € | AAH € |
|------|-----------------|------|----|-------------------------|-------|------------------------|--|----------------------------|-----|----------|----------|
| | L | H | W | [m ³ /h] | [l/s] | [ft ³ /min] | | ABH | AAH | | |
| 3 | 305 | 305 | 78 | 150 | 42 | 88 | 3 | 110 | 125 | | |
| 42 | 305 | 610 | 78 | 300 | 84 | 177 | 6 | 110 | 125 | | |
| 43 | 457 | 457 | 78 | 340 | 95 | 200 | 6,6 | 110 | 125 | | |
| 41 | 457 | 610 | 78 | 450 | 125 | 265 | 8,4 | 110 | 125 | | |
| 4 | 610 | 610 | 78 | 600 | 167 | 353 | 12 | 110 | 125 | | |
| 7 | 610 | 762 | 78 | 750 | 209 | 441 | 14 | 110 | 125 | | |
| 8 | 610 | 915 | 78 | 900 | 250 | 530 | 17 | 110 | 125 | | |
| 9 | 610 | 1219 | 78 | 1200 | 333 | 706 | 24 | 110 | 125 | | |
| 10 | 610 | 1524 | 78 | 1500 | 417 | 883 | 29 | 110 | 125 | | |
| 11 | 610 | 1829 | 78 | 1800 | 500 | 1059 | 34 | 110 | 125 | | |

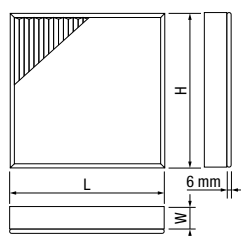


MAB / MAA

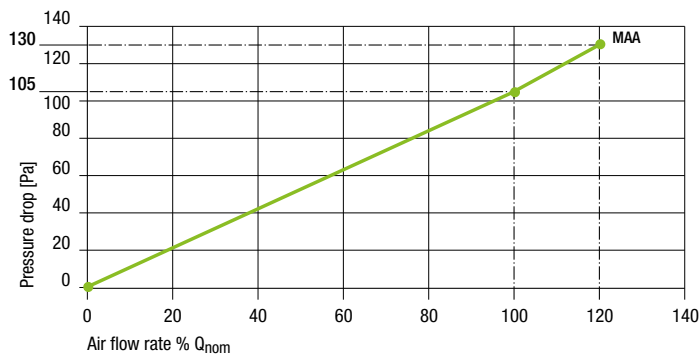
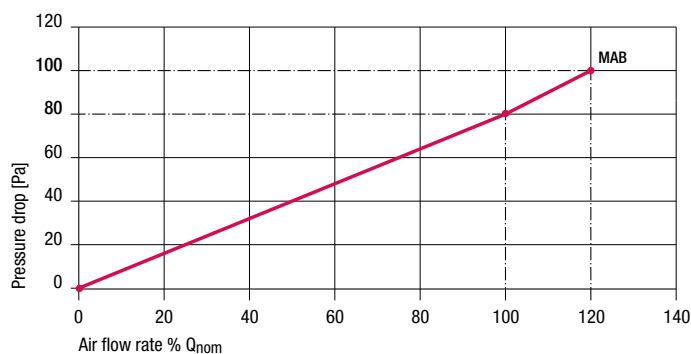
DIMENSIONS AND TECHNICAL DATA



| Code | Dimensions [mm] | | | Nominal air flow rate Q | | | Filtering surface [m ²] | Initial pressure drop [Pa] | | MAB € | MAA € |
|------|-----------------|------|----|-------------------------|-------|------------------------|-------------------------------------|----------------------------|-----|-------|-------|
| | L | H | W | [m ³ /h] | [l/s] | [ft ³ /min] | | MAB | MAA | | |
| 3 | 305 | 305 | 90 | 150 | 42 | 88 | 3,6 | 80 | 105 | - | - |
| 42 | 305 | 610 | 90 | 300 | 84 | 177 | 7 | 80 | 105 | - | - |
| 33 | 305 | 762 | 90 | 375 | 105 | 221 | 9 | 80 | 105 | - | - |
| 34 | 305 | 915 | 90 | 450 | 125 | 265 | 11 | 80 | 105 | - | - |
| 43 | 457 | 457 | 90 | 340 | 95 | 200 | 8 | 80 | 105 | - | - |
| 41 | 457 | 610 | 90 | 450 | 125 | 265 | 11 | 80 | 105 | - | - |
| 4 | 610 | 610 | 90 | 600 | 167 | 353 | 15 | 80 | 105 | - | - |
| 7 | 610 | 762 | 90 | 750 | 209 | 441 | 18 | 80 | 105 | - | - |
| 8 | 610 | 915 | 90 | 900 | 250 | 530 | 22 | 80 | 105 | - | - |
| 9 | 610 | 1219 | 90 | 1200 | 333 | 706 | 29 | 80 | 105 | - | - |
| 72 | 762 | 915 | 90 | 1130 | 314 | 665 | 28 | 80 | 105 | - | - |
| 73 | 762 | 1219 | 90 | 1500 | 418 | 883 | 36 | 80 | 105 | - | - |
| 82 | 915 | 915 | 90 | 1360 | 378 | 800 | 33 | 80 | 105 | - | - |
| 83 | 915 | 1219 | 90 | 1800 | 502 | 1059 | 44 | 80 | 105 | - | - |



CHARACTERISTIC CURVES



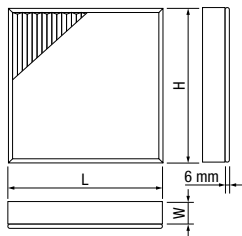
Q_{nom} is measured at face speed velocity of V_f 0,45 m/s

DAB / DAA

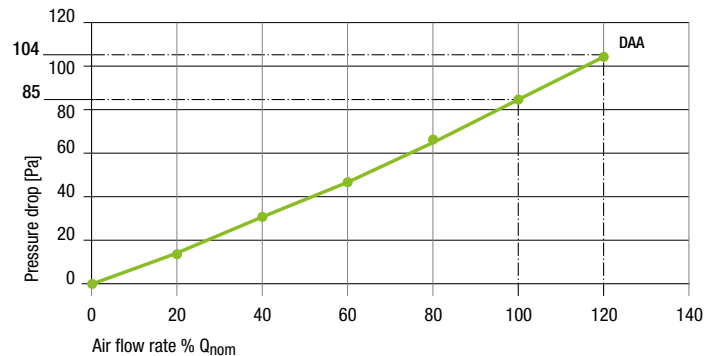
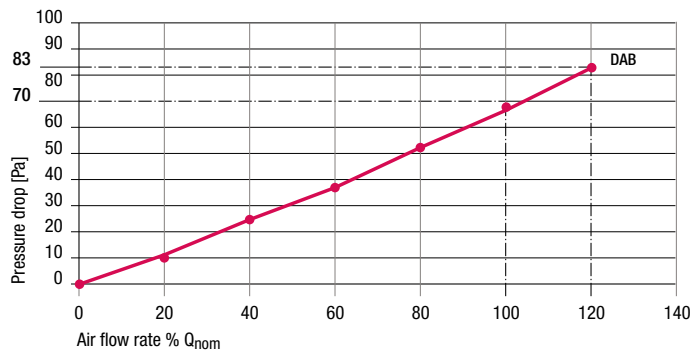
DIMENSIONS AND TECHNICAL DATA



| Code | Dimensions [mm] | | | Nominal air flow rate Q | | | Filtering surface [m ²] | Initial pressure drop [Pa] | | DAB € | DAA € |
|------|-----------------|------|-----|-------------------------|-------|------------------------|-------------------------------------|----------------------------|-----|-------|-------|
| | L | H | W | [m ³ /h] | [l/s] | [ft ³ /min] | | DAB | DAA | | |
| 3 | 305 | 305 | 115 | 150 | 42 | 88 | 5 | 70 | 85 | - | - |
| 42 | 305 | 610 | 115 | 300 | 84 | 177 | 10 | 70 | 85 | - | - |
| 43 | 457 | 457 | 115 | 340 | 95 | 200 | 11 | 70 | 85 | - | - |
| 41 | 457 | 610 | 115 | 450 | 125 | 265 | 14 | 70 | 85 | - | - |
| 4 | 610 | 610 | 115 | 600 | 167 | 353 | 20 | 70 | 85 | - | - |
| 7 | 610 | 762 | 115 | 750 | 209 | 441 | 24 | 70 | 85 | - | - |
| 8 | 610 | 915 | 115 | 900 | 250 | 530 | 28 | 70 | 85 | - | - |
| 9 | 610 | 1219 | 115 | 1200 | 333 | 706 | 40 | 70 | 85 | - | - |
| 72 | 762 | 915 | 115 | 1130 | 314 | 665 | 38 | 70 | 85 | - | - |
| 73 | 762 | 1219 | 115 | 1500 | 418 | 883 | 50 | 70 | 85 | - | - |
| 82 | 915 | 915 | 115 | 1360 | 378 | 800 | 45 | 70 | 85 | - | - |
| 83 | 915 | 1219 | 115 | 1800 | 502 | 1059 | 60 | 70 | 85 | - | - |



CHARACTERISTIC CURVES

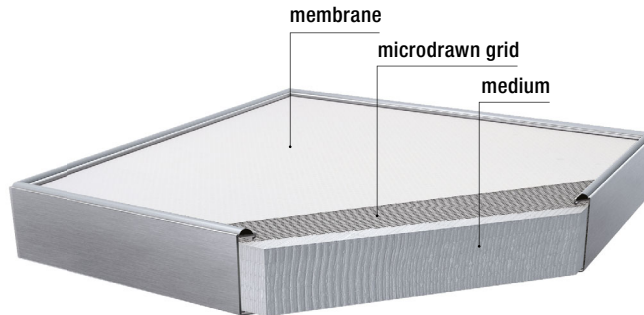


Q_{nom} is measured at face speed velocity of V_f 0,45 m/s

Filters can work up to 300% of their rated airflow value, but their efficiency would be one class downrated

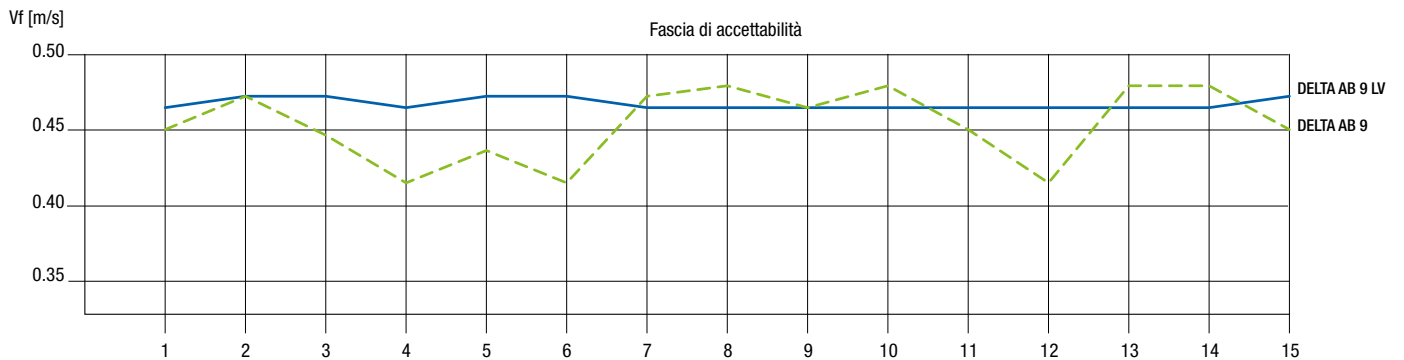
Special versions

LV VERSION



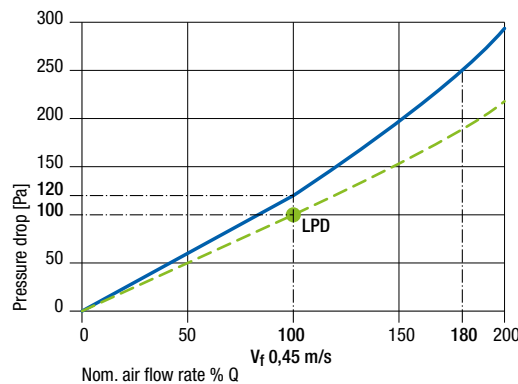
Thanks to a special equalizer downstream, it is possible to obtain both perfect air distribution over all the filter surface, with air velocity uniformity never achieved before with similar filters, and also a high degree of environmental purity according to the prescriptions of the various international regulations.

COMPARISON CURVE OF AIR DIFFUSION BETWEEN A TRADITIONAL MINI PLEATED FILTER AND DELTA-STAR FILTER WITH "LV" EQUALIZER



Note: The measurements have been performed in 3 points on the side 610 mm with 200 mm pitch on the side 1219 mm.

PLUS VERSION



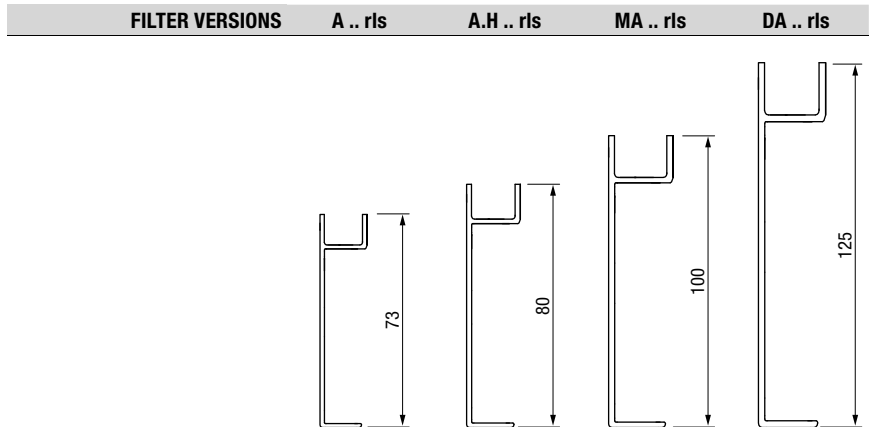
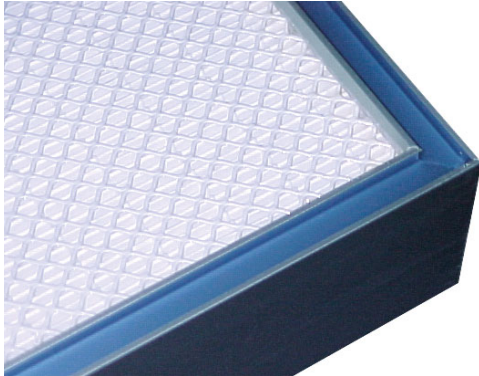
The low pressure drop PLUS version reduces the pressure drop, by about 20%.

This solution is to be used for all systems since with reduction of the pressure drop there is a proportionate reduction of fan energy consumption, increased operating life of the filter and lower labour and disposal costs.

When these factors are satisfied, we can consider the system built "to the highest standard".

A.. rls / A.H.. rls / MA.. rls / DA.. rls
A.. ls / A.. ls-est

rls
Reverse liquid seal version with gel gasket all around



Frame dimension W [mm]

Installation

In knife edge structures

Liquid seal

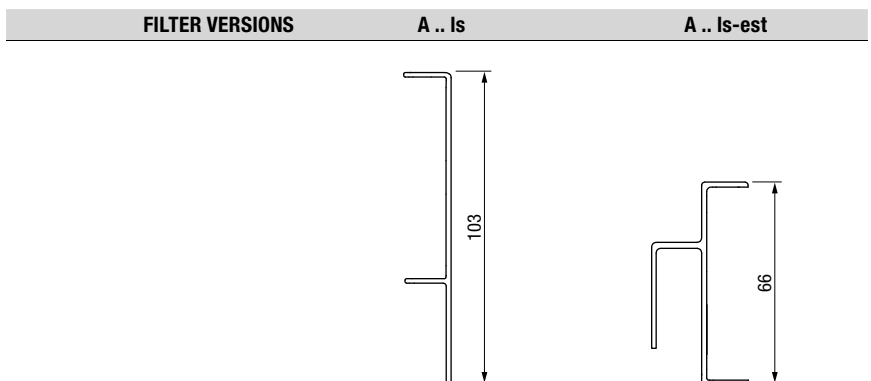
Polyurethane or silicone

Terminal filter housings for liquid seal filters

- **AB - AA rls** version with reverse liquid seal can be installed in the following terminal filter housings:
 - **DLS FL**: plenum and perforated plate diffuser.
 - **DLS WT**: plenum in anodized high induction swirl diffuser.
- **MAB - MAA rls / DAB - DAA rls** version with reverse liquid seal can be installed in the following terminal filter housings:
 - **DLS-2 FL**: plenum and perforated plate diffuser.
 - **DLS-2 WT**: plenum in anodized high induction swirl diffuser.

ls
Knife edge

ls-est
External knife edge



Frame dimension W [mm]

Installation

In liquid seal structure