



Z-line filter, construction
CBC



Z-line filter, construction
PLA

Filter media

ZLW



For high dust concentrations or as a prefilter for fine dust filters

Z-line filter for the separation of coarse dust, used as the first stage in ventilation and air conditioning units or as prefilters for high-quality filter stages

- Filter group ISO Coarse (Coarse dust filter)
- Large filter area due to folding
- Low differential pressures at high volume flow rates
- Moisture-resistant cardboard frame
- Optional frame made of plastic, galvanised sheet steel, stainless steel or aluminium
- Optionally with flat seal
- Tested according to ISO 16890

| | | | |
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General information

Application

- Z-line filter type ZLW for the separation of coarse dust in ventilation and air conditioning systems
- Coarse dust filter: Prefilter in ventilation systems

Special features

- High dust holding capacity at low initial differential pressure
- Long filter life
- Quick fitting and removal
- Low weight and small transport volume
- Can be easily and safely disposed of in municipal refuse incineration plants as emissions are low in harmful substances

Nominal sizes

- B × H × T [mm]

Filter classes

Filter group

- ISO Coarse to ISO 16890

Filter classes

- Coarse 90 %
- Coarse 60 %

Construction

- PLA: Frame made of plastic
- PLAF: Frame made of plastic with 25 mm flange
- CBG: Cardboard frame glued
- CBC: Cardboard frame punched
- CBS: Cardboard frame stapled
- GAL: Galvanised sheet steel
- STA: Stainless steel
- AL: Aluminium

Useful additions

- Standard cell frame (SCF-B), filter wall (SIF), universal casing (UCA)

Construction features

- Folded filter media
- Moisture-resistant, stable cardboard frame
- Available in various filter classes and sizes, including commercial installation depths and cross-sections

Materials and surfaces

- Filter media made of synthetic fibres
- Cardboard frame
- Optional frame made of plastic, galvanised sheet steel, stainless steel or aluminium
- Optionally with flat profile seal on the upstream or downstream side or on both sides

Standards and guidelines

- Test according to ISO 16890; international standard for general ventilation and air conditioning; classification of efficiency based on the measured fractional efficiency, which is processed into a reporting system for the fine dust efficiency (ePM)
- For coarse dust filters, the gravimetric separation is measured with synthetic dust
- The filters are classified into filter group ISO Coarse depending on the tested values
- For fine dust filters, the fractional arrestance efficiency of a certain size range is determined by aerosols (DEHS and KCl)
- The filters are classified into filter groups ISO ePM10, ISO ePM2.5 and ISO ePM1 depending on the tested values

**Technical data**

| | | |
|--|-----|-----|
| Gravimetric efficiency Coarse [%] according to ISO 16890 | 60 | 90 |
| Nominal face velocity [m/s] | 2.5 | 2.5 |
| Initial differential pressure [Pa] at nominal volume flow rate for T = 48 mm | 50 | 90 |
| Initial differential pressure [Pa] at nominal volume flow rate for T = 96 mm | 35 | 70 |
| Maximum operating temperature [°C] | 60 | 60 |
| Maximum relative humidity [%] | 100 | 100 |

Specification text

This specification text describes the general properties of the product. Texts for variants can be generated with our Easy Product Finder design program.

Specification text

Z-line filter type ZLW for the separation of coarse dust when used as prefilters in ventilation and air conditioning systems. Z-line filters are available in various filter sizes, including common installation depths and cross-sections, filter group ISO Coarse according to ISO 16890. The filter media is folded, increasing the dust holding capacity and extending the filter life.

Special features

- High dust holding capacity at low initial differential pressure
- Long filter life
- Quick fitting and removal
- Low weight and small transport volume
- Can be easily and safely disposed of in municipal refuse incineration plants as emissions are low in harmful substances

Materials and surfaces

- Filter media made of synthetic fibres
- Cardboard frame

- Optional frame made of plastic, galvanised sheet steel, stainless steel or aluminium
- Optionally with flat profile seal on the upstream or downstream side or on both sides

Construction

- PLA: Frame made of plastic
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Sizing data

- Filter group [ISO 16890]
- Efficiency [%]
- Volume flow rate [m³/h]
- Initial differential pressure [Pa]
- Nominal size [mm]

Order code

ZLW – Coarse – 60 % – CBG / 592 × 592 × 48 / FNB
| 1 | 2 | 3 | 4 | 5 | 6

1 Type

ZLW Z-line filter

2 Classification

Coarse Gravimetric separation efficiency according to ISO 16890

3 Separation efficiency

Separation efficiency [%] according to ISO 16890

4 Construction

CBG Cardboard frame, glued

CBC Cardboard frame, punched

CBS Cardboard frame, with clamps

Order example: ZLW-Coarse-60%-CBG/592×592×48

| | |
|-----------------------|--|
| Type | ZLW |
| Classification | Gravimetric separation efficiency according to ISO 16890 |
| Separation efficiency | 60 % |
| Variant | Cardboard frame, glued |
| Nominal size [mm] | Width 592, height 592, depth 48 |

ZLW-Coarse-90%-PLA/592×592×48

| | |
|----------------|-------------------------|
| Classification | ISO Coarse to ISO 16890 |
| Efficiency | 90 % |
| Construction | Plastic frame |
| Nominal size | 592 × 592 × 48 mm |

PLA Plastic frame

PLAF Plastic frame with 25 mm flange

GAL Frame made of galvanised sheet steel

STA Frame made of stainless steel

AL Aluminium frame

5 Nominal size [mm]

Specify size (width × height × depth)

6 Seal

No entry: without seal

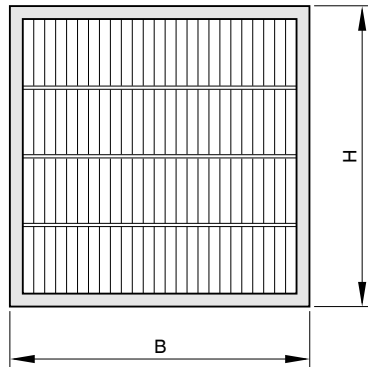
FNU Flat seal on the upstream side

FND Flat seal on the downstream side

FNB Flat seal on both sides

Dimensions

ZLW, 48 mm and 96 mm



Product specific data

Construction CBS

| [1] | | | Filter class | [2] | | [3] | [4] | [5] |
|--------|--------|--------|--------------|----------------------|-----------------------|----------------------|-----|------|
| B [mm] | H [mm] | T [mm] | | q _v [l/s] | q _v [m³/h] | Δp _A [Pa] | m² | [kg] |
| 287 | 287 | 48 | Coarse 60 % | 222 | 800 | 50 | 0.3 | 0.3 |
| 287 | 592 | 48 | Coarse 60 % | 444 | 1600 | 50 | 0.6 | 0.5 |
| 592 | 592 | 48 | Coarse 60 % | 889 | 3200 | 50 | 1.2 | 0.8 |
| 287 | 287 | 96 | Coarse 60 % | 222 | 800 | 75 | 0.6 | 0.4 |
| 287 | 592 | 96 | Coarse 60 % | 444 | 1600 | 75 | 1.1 | 0.8 |
| 592 | 592 | 96 | Coarse 60 % | 889 | 3200 | 75 | 2.2 | 1.5 |
| 287 | 287 | 48 | Coarse 90 % | 222 | 800 | 35 | 0.3 | 0.3 |
| 287 | 592 | 48 | Coarse 90 % | 444 | 1600 | 35 | 0.6 | 0.5 |
| 592 | 592 | 48 | Coarse 90 % | 889 | 3200 | 35 | 1.2 | 0.8 |
| 287 | 287 | 96 | Coarse 90 % | 222 | 800 | 60 | 0.6 | 0.4 |
| 287 | 592 | 96 | Coarse 90 % | 444 | 1600 | 60 | 1.1 | 0.8 |
| 592 | 592 | 96 | Coarse 90 % | 889 | 3200 | 60 | 2.2 | 1.5 |

[1] Nominal size, [2] Nominal volume flow rate, [3] Initial differential pressure, [4] Filter area, [5] Weight