Z-LINE FILTER, CONSTRUCTION NWO

Z-LINE FILTER, CONSTRUCTION PLA

Z-line filter, construction PLA

ZL

FOR HIGH DUST CONCENTRATIONS OR AS A PREFILTER FOR FINE DUST FILTERS

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

- Filter groups ISO Coarse (coarse dust filter) and ePM10 (fine dust filter)
- Large filter area due to folding
- Low differential pressures at high volume flow rates
- Moisture-resistant, frame made of non-woven fibres
- Optional frame made of plastic, galvanized steel, aluminum
- Tested to ISO 16890

General information

Application

- Z-line filter for the separation of coarse and fine dust in ventilation and air conditioning systems
- Coarse dust filter: Prefilter in ventilation systems
- Fine dust filter: Prefilter or final filter 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 groups

- ISO Coarse to ISO 16890
- ISO ePM10 to ISO 16890

Filter classes

- Coarse 90 %
- ePM10 50 %

Construction

- NWO: Frame made of non-woven fibres
- PLA: Frame made of plastic
- PLAF: Frame made of plastic with 25 mm flange
- GAL: Frame made of galvanised steel
- ALU: Frame made of aluminium

Copy of Useful additions

- Standard cell frame (SCF-B)

Construction features

- Folded filter media
- Moisture-resistant, sturdy filter frame made of nonwoven fabric
- Available in various filter classes and sizes, including commercial installation depths and cross-sections

Materials and surfaces

- Filter media made of synthetic fibres
- Frame made of non-woven fibres
- Optional frame made of plastic, galvanized steel, aluminum

Standards and guidelines

- Test according to ISO 16890; international standard for general ventilation and air conditioning; classification of arrestance efficiency based on the measured fractional arrestance efficiency, which is processed into a reporting system for the fine dust arrestance 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 INFORMATION

Technical data, Specification text, Order Code

Gravimetric efficiency Coarse [%] according to ISO 16890	90	–
Fractional efficiency ePM10 [%] to ISO 16890	–	50
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]	80	80
Maximum relative humidity [%]	100	100

Z-line filters type ZL for the separation of coarse dust when used as prefilters, and for the separation of fine dust when used as prefilters or final filters in ventilation systems. Available in various filter classes and sizes, including common installation depths and cross-sections, filter groups ISO Coarse and ISO ePM10 according to ISO 16890. Filter media is folded; this increases the dust holding capacity and extends 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
- Frame made of non-woven fibres
- Optional frame made of plastic, galvanized steel, aluminum

Construction

- NWO: Frame made of non-woven fibres
- 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]

ZL	-	Coarse	-	90%	-	NWO	/	592 × 592 × 47
1		2		3		4		5

1 Type
ZL Z-line filters

2 Classification
Coarse Gravimetric efficiency according to ISO 16890
ePM10 Fractional efficiency ePM10 according to ISO 16890

3 Efficiency [%]
According to ISO 16890

4 Construction
NWO Frame made of non-woven fibres
PLA Frame made of plastic
PLAF Frame made of plastic with 25 mm flange
GAL Frame made of galvanised steel
ALU Frame made of aluminium

5 Nominal size [mm]
B × H × T

ZL–Coarse–90%–PLA/592×592×48
Classification ISO Coarse to ISO 16890
Efficiency   90 %
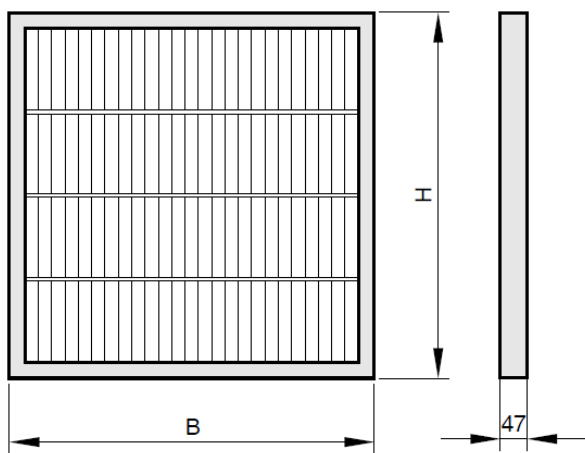Construction Plastic frame
Nominal size 592 × 592 × 48 mm

Dimensions

(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]
394	495	47	Coarse 90 %	488	1755	50	0.7	0.5
495	495	47	Coarse 90 %	613	2205	50	0.9	0.6
287	592	47	Coarse 90 %	432	1555	50	0.7	0.5
592	592	47	Coarse 90 %	885	3185	50	1.4	0.8
394	622	47	Coarse 90 %	613	2205	50	0.9	0.6
495	622	47	Coarse 90 %	769	2770	50	1.2	0.7
394	495	92	Coarse 90 %	488	1755	35	1.5	0.9
495	495	92	Coarse 90 %	613	2205	35	1.9	1.1
287	592	92	Coarse 90 %	432	1555	35	1.3	0.8
592	592	92	Coarse 90 %	885	3185	35	2.7	1.5
394	622	92	Coarse 90 %	613	2205	35	1.9	1.1
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ZL, 47mm Dimensions

ZL, 92mm Dimensions