

Filter Media

Type ZL



TROX

6295 E Molloy Rd Suite 3, East Syracuse, NY 13057
sales-amn@troxgroup.com
www.trox-northamerica.com



TROX Social:



General information	2	Order code	5
Technical data	3	Dimensions	6
Specification text	4		

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 (in.)]

ISO Coarse to ISO 16890
 (comparable to ASHRAE
 52.2 MERV ratings)
 ISO ePM10 to ISO 16890
 (comparable to ASHRAE
 52.2 MERV ratings)

Filter classes

Coarse 90 % [MERV 11]
 ePM10 50 % [MERV 10]

Construction

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

Filter classes

Filter groups

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 (MERV))

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 (comparable to ASHRAE 52.2 MERV ratings) depending on the tested values

Technical data

Gravimetric efficiency Coarse [%] according to ISO 16890	90	–
Fractional efficiency ePM10 [%] to ISO 16890	–	50
Estimated ASHRAE 52.2 Rating	MERV 11	MERV 10
Nominal face velocity [m/s (fpm)]	2.5 (492)	2.5 (492)
Initial differential pressure [Pa (in. w.g.)] at nominal volume flow rate for T = 48 mm (2 in.)	50 (0.20)	90 (0.36)
Initial differential pressure [Pa (in. w.g.)] at nominal volume flow rate for T = 96 mm (4 in.)	35 (0.14)	70 (0.28)
Maximum operating temperature [°C(°F)]	80 (176)	80 (176)
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 programme.

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 (comparable to ASHRAE 52.2 MERV ratings). 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
- PLAF: Frame made of plastic with 25 mm (1 in.) flange
- GAL: Frame made of galvanised steel
- ALU: Frame made of aluminium

Sizing data

- Filter group [ISO 16890 (MERV)]
- Efficiency [%]
- Volume flow rate [m³/h (cfm)]
- Initial differential pressure [Pa (in. w.g.)]
- Nominal size [mm(in.)]

Order code

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
(acc. to ASHRAE 52.2)

ePM10 Fractional efficiency ePM10 according to ISO 16890
(acc. to ASHRAE 52.2)

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 (1 in) flange

GAL Frame made of galvanised steel

ALU Frame made of aluminium

5 Nominal size [mm (in)]

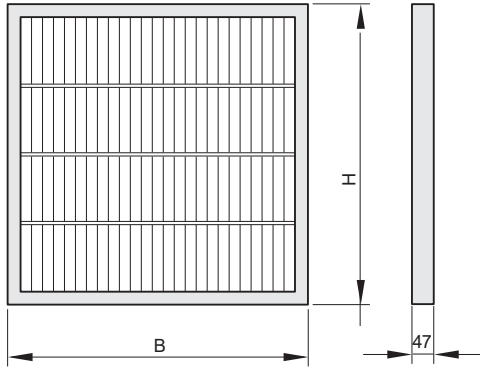
B × H × T

ZL-Coarse-90%-PLA/592×592×48

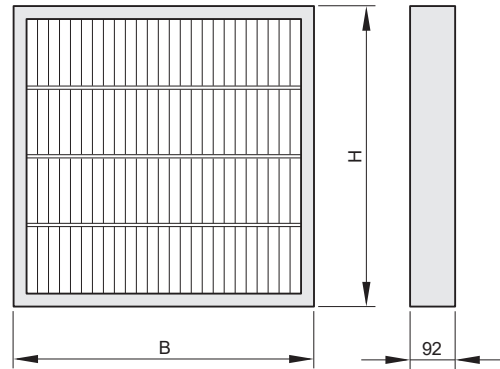
Classification	ISO Coarse to ISO 16890 (ASHRAE 52.2)
Efficiency	90 %
Construction	Plastic frame
Nominal size	592 (23 5/16) × 592 (23 5/16) × 48 (1 7/8) mm (in.)

Dimensions

Dimensional drawing of ZL, 47 mm (1 7/8 in.)



Dimensional drawing of ZL, 92 mm (3 5/8 in.)



ZL Dimensions

Product specific data

(1)						Filter class		(2)				(3)		(4)		(5)	
B		H		T				qv				ΔpA		Area		Mass	
[mm]	[in]	[mm]	[in]	[mm]	[in]			[l/s]	[cfm]	[m³/h]	[cfm]	[Pa]	[in. w.g.]	[m²]	[sqft]	[kg]	[lb]
394	15 1/2	495	19 1/2	47	1 7/8	Coarse 90 %	MERV 11	488	1034	1755	1034	50	0.20	0.7	7.5	0.5	1.1
495	19 1/2	495	19 1/2	47	1 7/8	Coarse 90 %	MERV 11	613	1299	2205	1299	50	0.20	0.9	9.7	0.6	1.3
287	11 5/16	592	23 5/16	47	1 7/8	Coarse 90 %	MERV 11	432	916	1555	916	50	0.20	0.7	7.5	0.5	1.1
592	23 5/16	592	23 5/16	47	1 7/8	Coarse 90 %	MERV 11	885	1876	3185	1876	50	0.20	1.4	15.1	0.8	1.8
394	15 1/2	622	24 1/2	47	1 7/8	Coarse 90 %	MERV 11	613	1299	2205	1299	50	0.20	0.9	9.7	0.6	1.3
495	19 1/2	622	24 1/2	47	1 7/8	Coarse 90 %	MERV 11	769	1630	2770	1630	50	0.20	1.2	12.9	0.7	1.5
394	15 1/2	495	19 1/2	92	3 5/8	Coarse 90 %	MERV 11	488	1034	1755	1034	35	0.14	1.5	16.1	0.9	2.0
495	19 1/2	495	19 1/2	92	3 5/8	Coarse 90 %	MERV 11	613	1299	2205	1299	35	0.14	1.9	20.5	1.1	2.4
287	11 5/16	592	23 5/16	92	3 5/8	Coarse 90 %	MERV 11	432	916	1555	916	35	0.14	1.3	14.0	0.8	1.8
592	23 5/16	592	23 5/16	92	3 5/8	Coarse 90 %	MERV 11	885	1876	3185	1876	35	0.14	2.7	29.1	1.5	3.3
394	15 1/2	622	24 1/2	92	3 5/8	Coarse 90 %	MERV 11	613	1299	2205	1299	35	0.14	1.9	20.5	1.1	2.4
495	19 1/2	622	24 1/2	92	3 5/8	Coarse 90 %	MERV 11	769	1630	2770	1630	35	0.14	2.4	25.8	1.3	2.9
394	15 1/2	495	19 1/2	47	1 7/8	ePM1050 %	MERV 10	488	1034	1755	1034	90	0.36	0,7	7.5	0.5	1.1
495	19 1/2	495	19 1/2	47	1 7/8	ePM1050 %	MERV 10	613	1299	2205	1299	90	0.36	0.9	9.7	0.6	1.3
287	11 5/16	592	23 5/16	47	1 7/8	ePM1050 %	MERV 10	432	916	1555	916	90	0.36	0.7	7.5	0.4	0.9
592	23 5/16	592	23 5/16	47	1 7/8	ePM1050 %	MERV 10	885	1876	3185	1876	90	0.36	1.4	15.1	0.8	1.8
394	15 1/2	622	24 1/2	47	1 7/8	ePM1050 %	MERV 10	613	1299	2205	1299	90	0.36	0.9	9.7	0.6	1.3
495	19 1/2	622	24 1/2	47	1 7/8	ePM1050 %	MERV 10	769	1630	2770	1630	90	0.36	1.2	12.9	0.7	1.5
394	15 1/2	495	19 1/2	92	3 5/8	ePM1050 %	MERV 10	488	1034	1755	1034	70	0.28	1.5	16.1	0.9	2.0
495	19 1/2	495	19 1/2	92	3 5/8	ePM1050 %	MERV 10	613	1299	2205	1299	70	0.28	1.9	20.5	1.1	2.4
287	11 5/16	592	23 5/16	92	3 5/8	ePM1050 %	MERV 10	432	916	1555	916	70	0.28	1.3	14.0	0.8	1.8
592	23 5/16	592	23 5/16	92	3 5/8	ePM1050 %	MERV 10	885	1876	3185	1876	70	0.28	2.7	29.1	1.5	3.3
394	15 1/2	622	24 1/2	92	3 5/8	ePM1050 %	MERV 10	613	1299	2205	1299	70	0.28	1.9	20.5	1.1	2.4
495	19 1/2	622	24 1/2	92	3 5/8	ePM1050 %	MERV 10	769	1630	2770	1630	70	0.28	2.4	25.8	1.3	2.9

(1) Nominal size (2) Nominal volume flow rate (3) Initial differential pressure (4) Filter area (5) Weight