ATEX construction optional

Conforms to VDI 6022

Pocket Filter

Type PFG

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TROX Social:

General information

Application
- Pocket filter made of non-woven glass fibres type PFG for the separation of fine dust
- Fine dust filter: Prefilter or final filter in ventilation systems

Classification
- Eurovent certification for fine dust filters
- Meets the hygiene requirements
- Certificate of conformity for use in areas with a potentially explosive atmosphere

Nominal sizes
- B × H × D [mm (in.)]

Filter classes

Filter groups

- ISO ePM10 / ISO ePM1 to ISO 16890 (comparable to ASHRAE 52.2 MERV ratings)

Filter classes

- ePM10 60% [MERV 8]
- ePM10 75% [MERV 10]
- ePM1 60% [MERV 12]
- ePM1 75% [MERV 13]
- ePM1 90% [MERV 15]

Construction
- PLA: Frame made of plastic
- GAL: Frame made of galvanised steel

Useful additions
- Filter wall (SIF)
- Universal casing (UCA)

Construction features
- Wedge-shaped filter pockets
- Frame depth of construction PLA: 25 mm (1 in.)
- Frame depth of construction GAL: 20 (3/4 in), 25 (1 in.) mm
- Number of pockets: 3, 4, 5, 6, 7, 8

Materials and surfaces
- Filter media made of non-woven glass fibres
- Frame made of plastic or galvanised sheet steel

Standards and guidelines

- Test according to ISO 16890; international standard for general room air distribution; 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 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 and ISO ePM1 **(comparable to ASHRAE 52.2 MERV ratings)** depending on the tested values
- Construction PLA meets the hygiene requirements of VDI 6022, VDI 3803, DIN 1946 Part 4, ÖNORM H 6021 and ÖNORM H 6020, SWKI VA 104-01 and SWKI 99-3, and EN 16798
- Certificate of conformity for correct use in areas with a potentially explosive atmosphere in accordance with guideline 2014/34/EU and compliance with basic health and safety requirements in accordance with EN 80079-36:2016 and EN 80079-37:2016

Technical data

actional efficiency ePM10 [%] to ISO 16890					
actional efficiency ePM1 [%] to ISO 16890					
timated ASHRAE 52.2 Rating	ERV 11	ERV 12	ERV 13	ERV 14	ERV 15
ial pressure difference [Pa (in. w.g.)] at nominal flow rate	(0.22)	(0.28)	(0.32)	0 (0.40)	0 (0.56)
commended final pressure difference [Pa (in. w.g.)]	250 – 350 (1.00 - 1.40)	250 – 350 1.00 - 1.40)	250 – 350 1.00 - 1.40)	250 – 350 1.00 - 1.40)	250 – 350 1.00 - 1.40)
ximum operating temperature [°C (°F)] for plastic frames	(140)	(140)	(140)	(140)	(140)
ximum operating temperature [°C (°F)] for frame made of vanised sheet steel	(194)	(194)	(194)	(194)	(194)

Changing the filter/Final differential pressure

The aim is to find the optimum of the longest possible service life with energetically low differential pressure and safe hygiene. A fixed, recommended value for the final differential pressure can tempt people to insist on keeping to this value, irrespective of its usefulness and today's standards with regard to, for example, energy saving, sustainability or resource conservation. To save costs and energy, we generally recommend the use of technically high-quality filters with low initial differential pressure and a flat differential pressure curve. In addition, the preferred criterion for a filter change should be the differential pressure. For further information, please refer to the installation and maintenance instructions.

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

Pocket filters PFG made of non-woven glass fibres as prefilters or final filters for the separation of fine dust in ventilation systems. Filter pockets provide a high dust holding capacity at a low initial differential pressure. Pocket filters made of non-woven glass fibres are available in standard and special sizes; variable number of pockets and pocket depth; filter groups ISO ePM10 and ISO ePM1 according to ISO 16890 (comparable to ASHRAE 52.2 MERV ratings). Pocket filters made of non-woven glass fibres are Eurovent-certified and compliant with VDI 6022 in terms of hygiene. The pocket filters with optional EX protection PFG-EX may be used in areas with potentially explosive atmospheres of zones 1 and 2 as well as zones 21 and 22 (EX II 2G Ex h IIC Gb and EX II 2D Ex h IIIB Db). The filters must be connected to the ground potential. All conductive and dissipative parts must be connected together and grounded. Conductive dusts are excluded from the application. Under no circumstances should metallic foreign materials enter the filter. Ambient temperature range: -40 ºC ≤ Ta ≤ +80 ºC (-40 °F ≤ Ta ≤ +176 °F).

Materials and surfaces

- Filter media made of non-woven glass fibres
- Frame made of plastic or galvanised sheet steel

Construction

- PLA: Frame made of plastic
- GAL: Frame made of galvanised steel

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

PFG - ePM1 - 90 % - PLA - 25 / 592 x 592 x 600 x 8
2 3 4 6 7

1 Type
PFG Pocket filters made of non-woven glass fibres

2 Classification
ePM1 Fractional efficiency ePM1 acc. to ISO 16890 (acc. to ASHRAE 52.2)
ePM10 Fractional efficiency ePM10 acc. to ISO 16890 (acc. to ASHRAE 52.2)

3 Separation efficiency
ePM10 60% [MERV 8]
ePM10 75% [MERV 10]
ePM1 60% [MERV 12]
ePM1 75% [MERV 13]
ePM1 90% [MERV 15]

4 Construction
PLA Plastic frame
GAL Frame made of galvanised sheet steel
EX Frame made of galvanised sheet steel, for zones 1 and 2 as well as 21 and 22 in areas with potentially explosive atmospheres (EX)

5 Frame depth [mm (in.)]
20 (3/4) (construction GAL only)
25 (1)

6 Nominal size [mm (in)]
Specify width x height x depth

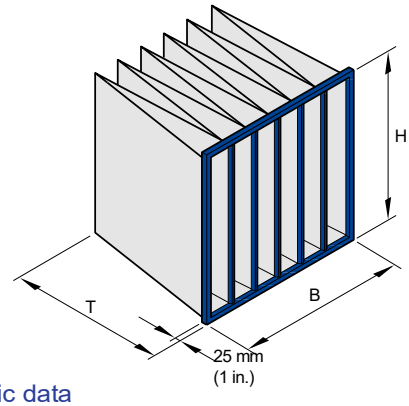
7 Number of pockets
3, 4, 5, 6, 7, 8

PFG-ePM1-90%-PLA-25/592×592×600×8

Classification	ISO ePM1 to ISO 16890 (acc. to ASHRAE 52.2).
Efficiency	90 %
Construction	Plastic frame
Frame depth	25 mm (in.)
Nominal size	592 (23 5/16) × 592 (23 5/16) × 600 (23 5/8) mm (in.)
Number of pockets	8

Dimensions

Dimensional drawing of PFG-&-PLA/&



Product specific data

1									2			3		4		5	
B		H		T		Number of	Filter class		qv			ΔpA		Area		Mass	
[mm]	[in]	[mm]	[in]	[mm]	[in]	pockets			[l/s]	[m3/h]	[cfm]	[Pa]	[in. w.g.]	[m2]	[sqft]	[kg]	[lb]
592	23 5/16	592	23 5/16	600	23 5/8	6	ePM10 60 %	MERV 8	944	3400	2001	55	0.22	4.4	47.3	1.5	3.3
490	19 5/16	592	23 5/16	600	23 5/8	5	ePM10 60 %	MERV 8	778	2800	1648	55	0.22	3.7	39.8	1.3	2.9
287	11 5/16	592	23 5/16	600	23 5/8	3	ePM10 60 %	MERV 8	472	1700	1000	55	0.22	2.2	23.7	0.9	2.0
592	23 5/16	490	19 5/16	600	23 5/8	6	ePM10 60 %	MERV 8	778	2800	1648	55	0.22	3.6	38.7	1.4	3.1
592	23 5/16	287	11 5/16	600	23 5/8	6	ePM10 60 %	MERV 8	472	1700	1000	55	0.22	2.1	22.6	0.9	2.0
287	11 5/16	287	11 5/16	600	23 5/8	3	ePM10 60 %	MERV 8	236	850	500	55	0.22	1.1	11.8	0.5	1.1
592	23 5/16	892	35 1/8	600	23 5/8	6	ePM10 60 %	MERV 8	1417	5100	3002	55	0.22	6.6	71.0	2	4.4
490	19 5/16	892	35 1/8	600	23 5/8	5	ePM10 60 %	MERV 8	1167	4200	2472	55	0.22	5.5	59.2	1.6	3.5
287	11 5/16	892	35 1/8	600	23 5/8	3	ePM10 60 %	MERV 8	708	2550	1501	55	0.22	3.3	35.5	1.1	2.4
592	23 5/16	592	23 5/16	600	23 5/8	6	ePM10 75 %	MERV 10	944	3400	2001	70	0.28	4.4	47.3	1.5	3.3
490	19 5/16	592	23 5/16	600	23 5/8	5	ePM10 75 %	MERV 10	778	2800	1648	70	0.28	3.7	39.8	1.3	2.9
287	11 5/16	592	23 5/16	600	23 5/8	3	ePM10 75 %	MERV 10	472	1700	1000	70	0.28	2.2	23.7	0.9	2.0
592	23 5/16	490	19 5/16	600	23 5/8	6	ePM10 75 %	MERV 10	778	2800	1648	70	0.28	3.6	38.7	1.4	3.1
592	23 5/16	287	11 5/16	600	23 5/8	6	ePM10 75 %	MERV 10	472	1700	1000	70	0.28	2.1	22.6	0.9	2.0
287	11 5/16	287	11 5/16	600	23 5/8	3	ePM10 75 %	MERV 10	236	850	500	70	0.28	1.1	11.8	0.5	1.1
592	23 5/16	892	35 1/8	600	23 5/8	6	ePM10 75 %	MERV 10	1417	5100	3002	70	0.28	6.6	71.0	2	4.4
490	19 5/16	892	35 1/8	600	23 5/8	5	ePM10 75 %	MERV 10	1167	4200	2472	70	0.28	5.5	59.2	1.6	3.5
287	11 5/16	892	35 1/8	600	23 5/8	3	ePM10 75 %	MERV 10	708	2550	1501	70	0.28	3.3	35.5	1.1	2.4
592	23 5/16	592	23 5/16	600	23 5/8	8	ePM1 60 %	MERV 12	944	3400	2001	80	0.32	5.9	63.5	2	4.4
490	19 5/16	592	23 5/16	600	23 5/8	7	ePM1 60 %	MERV 12	778	2800	1648	80	0.32	5.1	54.9	1.7	3.7
287	11 5/16	592	23 5/16	600	23 5/8	4	ePM1 60 %	MERV 12	472	1700	1000	80	0.32	2.9	31.2	1.1	2.4
592	23 5/16	490	19 5/16	600	23 5/8	8	ePM1 60 %	MERV 12	778	2800	1648	80	0.32	4.9	52.7	1.7	3.7
592	23 5/16	287	11 5/16	600	23 5/8	8	ePM1 60 %	MERV 12	472	1700	1000	80	0.32	2.8	30.1	1.1	2.4
287	11 5/16	287	11 5/16	600	23 5/8	4	ePM1 60 %	MERV 12	236	850	500	80	0.32	1.4	15.1	0.6	1.3
592	23 5/16	892	35 1/8	600	23 5/8	8	ePM1 60 %	MERV 12	1417	5100	3002	80	0.32	8.8	94.7	2.4	5.3
490	19 5/16	892	35 1/8	600	23 5/8	7	ePM1 60 %	MERV 12	1167	4200	2472	80	0.32	7.7	82.9	2.2	4.8
287	11 5/16	892	35 1/8	600	23 5/8	4	ePM1 60 %	MERV 12	708	2550	1501	80	0.32	4.4	47.3	1.4	3.1
592	23 5/16	592	23 5/16	600	23 5/8	8	ePM1 75 %	MERV 13	944	3400	2001	100	0.40	5.9	63.5	2	4.4
490	19 5/16	592	23 5/16	600	23 5/8	7	ePM1 75 %	MERV 13	778	2800	1648	100	0.40	5.1	54.9	1.7	3.7
287	11 5/16	592	23 5/16	600	23 5/8	4	ePM1 75 %	MERV 13	472	1700	1000	100	0.40	2.9	31.2	1.1	2.4

1									2			3		4		5	
B		H		T		Number of pockets	Filter class		qv			ΔpA		Area		Mass	
[mm]	[in]	[mm]	[in]	[mm]	[in]				[l/s]	[m3/h]	[cfm]	[Pa]	[in. w.g.]	[m2]	[sqft]	[kg]	[lb]
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592	23 5/16	287	11 5/16	600	23 5/8	8	ePM1 75 %	MERV 13	472	1700	1000	100	0.40	2.8	30.1	1.1	2.4
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490	19 5/16	592	23 5/16	600	23 5/8	7	ePM1 90 %	MERV 15	778	2800	1648	140	0.56	5.1	54.9	1.7	3.7
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592	23 5/16	287	11 5/16	600	23 5/8	8	ePM1 90 %	MERV 15	472	1700	1000	140	0.56	2.8	30.1	1.1	2.4
287	11 5/16	287	11 5/16	600	23 5/8	4	ePM1 90 %	MERV 15	236	850	500	140	0.56	1.4	15.1	0.6	1.3
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