

EN ISO 16890-1:2016 Air Filter Test Results

GENERAL

Test no.:	194011	Device receiving date:	22.8.2019
Test requested by:	Vado Oy / Ultramare AB	Date of test:	22. - 29.8.2019
Device delivered by:	Vado Oy	Operator:	JR
		Supervisor:	AK

DEVICE TESTED

Model	VFP-ePM1-65-592-592-635-10-PN		Manufacturer	Vado Oy	Construction	10 pockets
Type of medium	Net effective filtering area	Filter dimensions (width × height × depth)				
Synthetic	7.2 m ²	590 mm x 590 mm x 640 mm				

TEST DATA

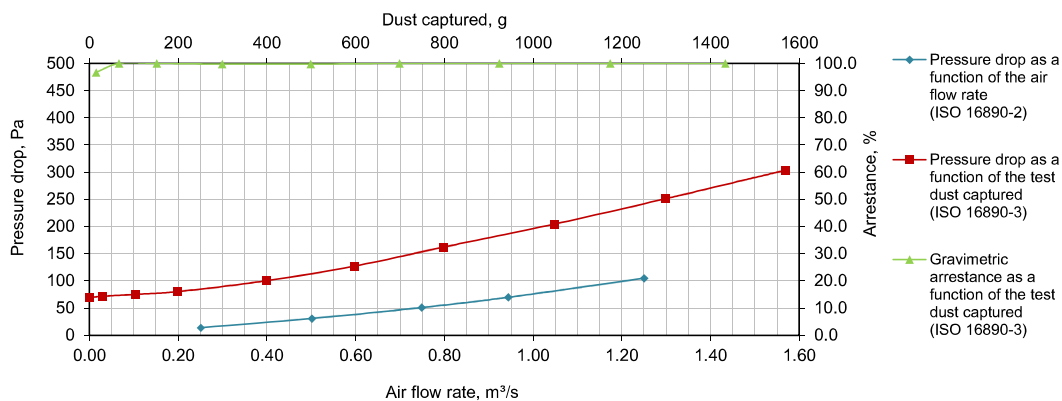
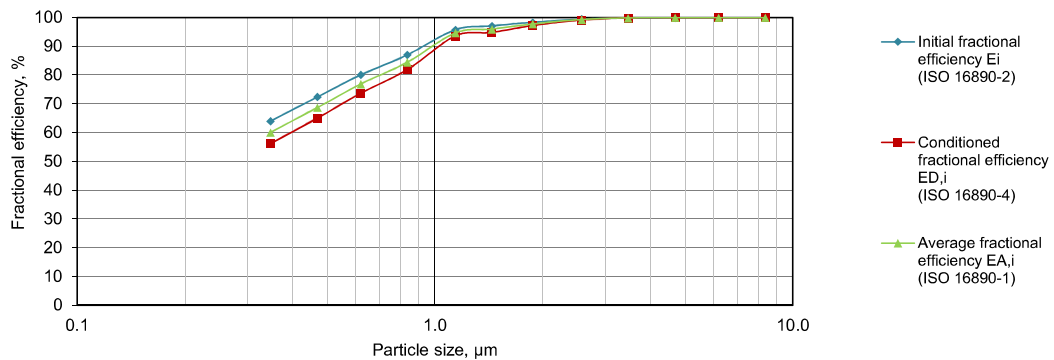
Test air flow rate	Test air temperature	Test air relative humidity	Test aerosol	Loading dust
0.944 m ³ /s	20 - 23 °C	42 - 51 %	DEHS and KCl	ISO 12103 A2 Fine

CONDITIONING ROOM

Time of conditioning	Room temperature	Room relative humidity	Barometric pressure	Evaporated IPA amount
96 h	20 - 21 °C	50 - 55 %	102.4 - 102.7 kPa	511 g

RESULTS

Initial pressure drop	Initial gravimetric arrestance	ePM _{1, min}	ePM _{2.5, min}	ePM _{10, min}	ISO rating ISO ePM₁ 70 %
70 Pa	>95 %	67 %	76 %	93 %	
Final test pressure drop	Test dust capacity	ePM ₁	ePM _{2.5}	ePM ₁₀	
300 Pa	1550 g	71 %	79 %	93 %	
Remarks:	-				



NOTE: The results of this test relate only to the test device in the condition stated herein. The performance results cannot be themselves be quantitatively applied to predict filtration performance in all "real life" environments.



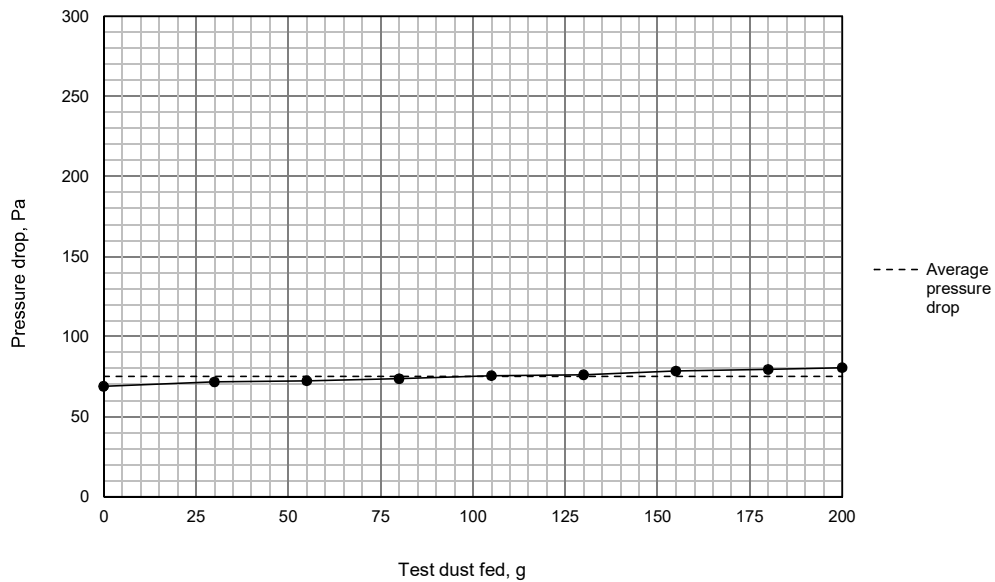
The results are only valid for the tested sample(s).
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Energy efficiency evaluation of air filter
Eurovent Document 4/21 - 2018

Air filter: VPF-ePM1-65-592-592-635-10-PN
Test no.: 194011

Filter class	ISO ePM ₁ 70 %
Air flow rate, q_v	0.944 m ³ /s
Initial pressure drop, Δp_i	69 Pa
Test dust loading, M_x	200 g
Average pressure drop, $\Delta \bar{p}$	75.1 Pa
Fan efficiency, η	0.50 -
Time of operation, t	6000 h
Annual Energy Consumption, W	851 kWh/Annum
Energy efficiency class *)	A+

*) According to Eurovent Rating Standard RS 4/C/001-2019



Step	m_{tot} g	Δp Pa	Δm g	$\Delta \bar{p}$ Pa
0	0	69	-	-
1	30	72	30	70.4
2	55	72	25	71.2
3	80	74	25	71.8
4	105	76	25	72.5
5	130	76	25	73.1
6	155	79	25	73.8
7	180	80	25	74.5
8	200	81	20	75.1

Symbols and units

m_{tot} Cumulative mass of dust fed to filter, g
 Δp Pressure drop after dust increment (air density 1.20 kg/m³), Pa
 Δm Dust increment fed to the air filter, g
 $\Delta \bar{p}$ Average pressure drop of an air filter, Pa