

Appendix 1

ISO 16890-1:2016 - Air Filter Test Results				Testing Organization:		
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GENERAL						
Report no.: 2P07180A-rev1-01		Date of tests: 2020-10-07 - 2020-10-16		Date of report: 2020-12-15		
Supervisor: CM			Device obtained (when and how obtained):			
Test(s) requested by: Kalthoff Luftfilter und Filtermedien GmbH			The device was sent and obtained on 2020-09-24			
DEVICE TESTED						
Model: Ecopac EM515.000.06		Manufacturer: Filtex AB		Construction: Pocket filter, 6 Pockets		
Article number: -	Type of medium: Synthetic	Net effective filtering area: 4,3 m ²		Filter dimensions (width x height x depth) 592x592x600 mm		
TEST DATA AND ATTACHED TEST REPORTS						
Test air flow rate: 0.944 m ³ /s	Test aerosol: KCl (1-10 µm) DEHS (0.3-1 µm)	Test report to ISO 16890-2		Report no. 2P07180A-rev1-01 Appendix 2		
		Test report to ISO 16890-3		Report no. 2P07180A-rev1-01 Appendix 3		
		Test report to ISO 16890-4		Report no. 2P07180A-rev1-01 Appendix 4		
RESULTS						
Initial pressure differential: 46 Pa		Initial grav. arrestance: 88 %	ePM _{1, min} 6 %	ePM _{2,5, min} 14 %	ePM _{10, min} 58 %	ISO rating
Final test pressure differential: 300 Pa		Test dust capacity: 1181 g	ePM ₁ 6 %	ePM _{2,5} 14 %	ePM ₁₀ 58 %	ISO ePM ₁₀ 55 %
Remarks:						
<p>The figure contains two line graphs. The top graph plots Fractional efficiency (%) on the y-axis (0 to 100) against Particle size (µm) on the x-axis (0.1 to 10.0). It shows three data series: Initial fractional efficiency E_i (ISO 16890-2) as a blue line with diamond markers, Conditioned fractional efficiency E_{D,i} (ISO 16890-4) as a red line with square markers, and Average fractional efficiency E_{A,i} (ISO 16890-1) as a green line with triangle markers. All three series show an increasing trend with particle size, starting near 0% at 0.1 µm and reaching approximately 95% at 10 µm. The bottom graph has two y-axes: Pressure differential (Pa) on the left (0 to 400) and Arrestance (%) on the right (0 to 100), both plotted against Air flow rate (m³/s) on the x-axis (0.0 to 1.4). It shows three data series: Pressure differential as a function of air flow rate (clean filter) (ISO 16890-2) as a blue line with diamond markers, Pressure differential as a function of test dust captured (ISO 16890-3) as a red line with square markers, and Grav. arrestance as a function of test dust captured (ISO 16890-3) as a green line with triangle markers. The clean filter pressure differential increases slightly from ~40 Pa to ~60 Pa. The dust-captured pressure differential increases from ~50 Pa to ~300 Pa. The grav. arrestance remains relatively constant around 88%.</p>						
NOTE: The results of this test relate only to the test device in the condition stated herein. The performance results cannot by themselves be quantitatively applied to predict filtration performance in all "real life" environments.						