

Appendix 1

ISO 16890-1:2016 - Air Filter Test Results					Testing Organization:	
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GENERAL						
Report no.: O100222-173518A		Date of tests: 2021-10-13 - 2021-10-25			Date of report: 2021-10-26	
Supervisor: Ter				Device obtained (when and how obtained):		
Test(s) requested by: Scandcenter AB				The device was handed and obtained on 2021-10-08		
DEVICE TESTED						
Model: 592x592x635/10 T-G ePM10		Manufacturer: Scandcenter AB		Construction: Pocket filter, 10 Pockets		
Article number: 5106001TG		Type of medium: Glass		Net effective filtering area: 7.9 m ²		Filter dimensions (width x height x depth) 592 mm x 592 mm x 635 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. O100222-173518A Appendix 2
				Test report to ISO 16890-3		Report no. O100222-173518A Appendix 3
				Test report to ISO 16890-4		Report no. O100222-173518A Appendix 4
RESULTS						
Initial pressure differential: 38 Pa		Initial grav. arrestance: 92 %		ePM _{1, min} 14 %	ePM _{2.5, min} 24 %	ePM _{10, min} 63 %
Final test pressure differential: 300 Pa		Test dust capacity: 1199 g		ePM ₁ 12 %	ePM _{2.5} 23 %	ePM ₁₀ 63 %
						ISO rating ISO ePM₁₀ 60 %
Remarks:						
<p>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 diamonds, Conditioned fractional efficiency E_{D,i} (ISO 16890-4) as a red line with squares, and Average fractional efficiency E_{A, i} (ISO 16890-1) as a green line with triangles. All three series show an increasing trend in efficiency as particle size increases, starting around 10% at 0.3 µm and reaching nearly 100% at 10 µm.</p> <p>The bottom graph has two y-axes. The left y-axis is Pressure differential, 1.2 kg/m³ (Pa) from 0 to 400. The right y-axis is Arrestance (%) from 0 to 100. The x-axis is Air flow rate (m³/s) from 0.0 to 1.4. It shows three data series: Pressure differential as a function of the air flow rate (clean filter) (ISO 16890-2) as a blue line with diamonds, Pressure differential as a function of the test dust captured (ISO 16890-3) as a red line with squares, and Grav. arrestance as a function of the test dust captured (ISO 16890-3) as a green line with triangles. The grav. arrestance remains relatively constant around 90% across the flow rate range. The pressure differentials increase with flow rate, with the clean filter pressure differential reaching about 60 Pa at 1.2 m³/s and the test dust captured pressure differential reaching about 320 Pa at 1.2 m³/s.</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.						