

Appendix 1

ISO 16890-1:2016 - Air Filter Test Results					Testing Organization:	
					RISE Research Institutes of Sweden AB Brinellgatan 4, 501 15 Borås, Sweden +460105165000	
GENERAL						
Report no.: 9P02123I-rev1		Date of tests: 2019-04-16 - 2019-04-25		Date of report: 2019-06-18		
Supervisor: TEr			Device obtained (when and how obtained):			
Test(s) requested by: Scandcenter AB			The device was sent and obtained on 2019-04-16			
DEVICE TESTED						
Model: 592x592x635/10 T-G ePM10 65%		Manufacturer: Scandcenter AB		Construction: Pocket filter, 10 Pockets		
Article number: -	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 aerosole: KCl (1-10 µm) DEHS (0.3-1 µm)	Test report to ISO 16890-2		Report no. 9P02123I-rev1 Appendix 2		
		Test report to ISO 16890-3		Report no. 9P02123I-rev1 Appendix 3		
		Test report to ISO 16890-4		Report no. 9P02123I-rev1 Appendix 4		
RESULTS						
Initial pressure differential: 52 Pa		Initial grav. arrestance: 92 %		ePM _{1, min} 18 %	ePM _{2.5, min} 30 %	ePM _{10, min} 69 %
Final test pressure differential: 300 Pa		Test dust capacity: 1598 g		ePM ₁ 18 %	ePM _{2.5} 30 %	ePM ₁₀ 69 %
						ISO rating ISO ePM₁₀ 65 %
Remarks:						
<p>Graph 1: Fractional efficiency (%) vs Particle size (µm). The x-axis is logarithmic from 0.1 to 10.0 µm. The y-axis is linear from 0.0 to 100.0%. Three data series are shown: Initial fractional efficiency Ei (ISO 16890-2) in blue diamonds, Conditioned fractional efficiency ED,i (ISO 16890-4) in red squares, and Average fractional efficiency EA, i (ISO 16890-1) in green triangles. All series show an increasing trend with particle size, reaching approximately 95% efficiency at 10 µm.</p>						
<p>Graph 2: Pressure differential and Arrestance (%) vs Air flow rate (m³/s). The x-axis is linear from 0.0 to 1.4 m³/s. 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. Three data series are shown: Pressure differential as a function of the air flow rate (clean filter) (ISO 16890-2) in blue diamonds, Pressure differential as a function of the test dust captured (ISO 16890-3) in red squares, and Grav. arrestance as a function of the test dust captured (ISO 16890-3) in green triangles. The clean filter pressure differential increases slightly with flow rate. The test dust pressure differential increases significantly with flow rate. Grav. arrestance remains relatively constant around 90%.</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.						