



**ISO 16890:2016 - AIR FILTER TEST RESULTS**

**Testing organization**

Name: Politecnico di Torino - DENERG  
Address: Corso Duca degli Abruzzi, 24 - Turin - Italy  
Phone: +39 011 090 44 00

**GENERAL**

Report no.: 10/2017	Date of report: 15/11/2017	Supervisor: Paolo Tronville
Test(s) requested by Expansion Electronic S.r.l	Device obtained:	Filter supplied by the customer

**DEVICE TESTED**

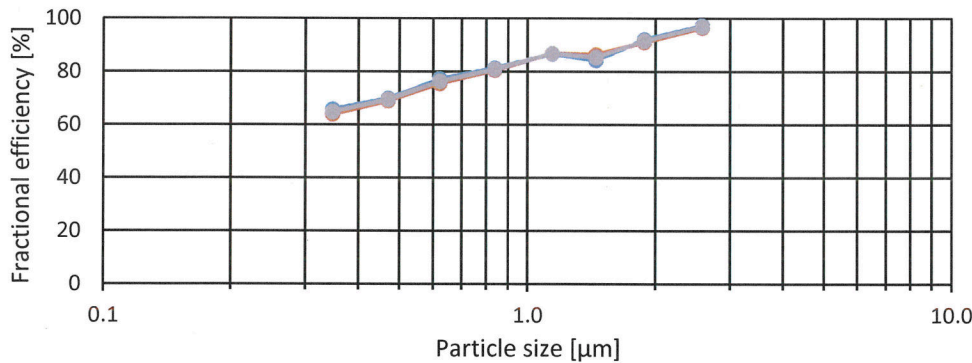
Model: XFE 600 (S/N 7032201501)	Manufacturer: Expansion Electronic S.r.l	Construction: Electrostatic precipitator
Type of media: N/A	Net effective media area [m <sup>2</sup> ]: N/A	Filter dimensions (W x H x D) [mm]: 592 x 592 x 218
Filter/media electrostatic charge: 8300 V DC (Wires) - 5600 V DC (Plates)	Media colour: N/A	Media adhesive: N/A

**TEST DATA AND ATTACHED TEST REPORTS**

Test air flow rate [m <sup>3</sup> /s]: 0.9444	Test report to ISO 16890-2	Report no.: 10/2017-1
	Test report to Eurovent 4/21	Report no.: 10/2017-EU4/21

**RESULTS**

Initial pressure differential [Pa]: 64	Arrestance [%]: N/A	<i>ePM</i> <sub>1,min</sub> [%]: 70%	<i>ePM</i> <sub>2.5,min</sub> [%]: 75%	ISO rating <b>ISO <i>ePM</i><sub>1</sub> 70%</b>
Final pressure differential [Pa]: 64	Test dust capacity [g]: N/A	<i>ePM</i> <sub>1</sub> [%]: 70%	<i>ePM</i> <sub>2.5</sub> [%]: 75% <i>ePM</i> <sub>10</sub> [%]: N/A	



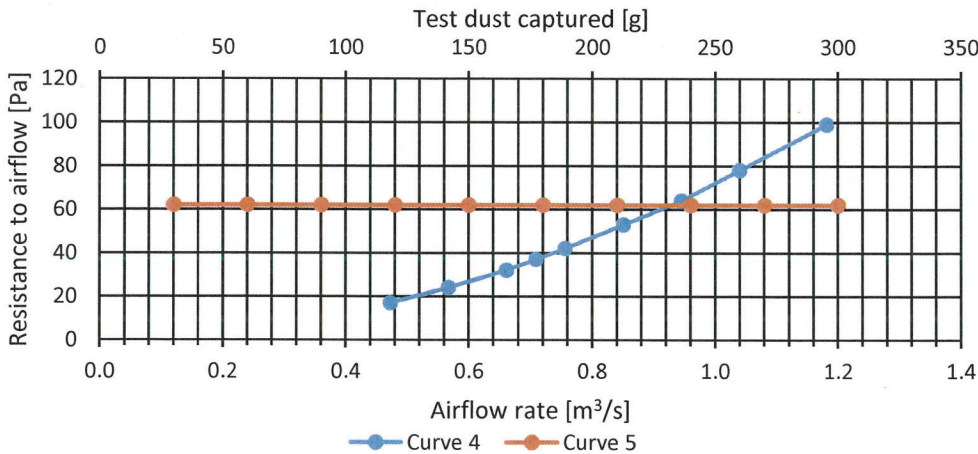
**Curve 1**  
Initial fractional efficiency *E<sub>i</sub>* (ISO 16890-2)

**Curve 2**  
Conditioned fractional efficiency *E<sub>D,i</sub>* (ISO 16890-4)

**Curve 3**  
Average fractional efficiency *E<sub>A,i</sub>* (ISO 16890-1)

**Curve 4**  
Pressure differential as a function of the airflow rate (Clean filter) (ISO 16890-2)

**Curve 5**  
Pressure differential as a function of the test dust captured (ISO 16890-3)



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.

**The Laboratory Manager**

P. Tronville  
*P. Tronville*





**EUROVENT 4/21 - RESULT SUMMARY**

Testing organization	
Name:	Politecnico di Torino - DENERG
Address:	Corso Duca degli Abruzzi, 24, Turin, Italy
Phone:	+39 011 090 44 00

**GENERAL**

Test ID:	10/2017-EU4/21	Date of test:	13/10/2017	Operator:	SC
Particle counter information			Airflow measurement:	Test sample obtained:	
Manufacturer:	Model:	Coincidence value [p/dm <sup>3</sup> ]:	Orifice plate	Filter supplied by the customer	
N/A	N/A	N/A			

**DEVICE TESTED**

Model:	XFE 600 (S/N 7032201501)	Manufacturer:	Expansion Electronic S.r.l	Construction:	Electrostatic precipitator
Type of media:	N/A	Net effective media area [m <sup>2</sup> ]:	N/A	Filter dimensions (W x H x D) [mm]: 592 x 592 x 218	
Filter/media electrostatic charge: 8300 V DC (Wires) - 5600 V DC (Plates)	Media colour:	N/A	Media adhesive:	N/A	
Device condition: Conditioned per ISO 16890-4					
Other descriptive information: N/A					

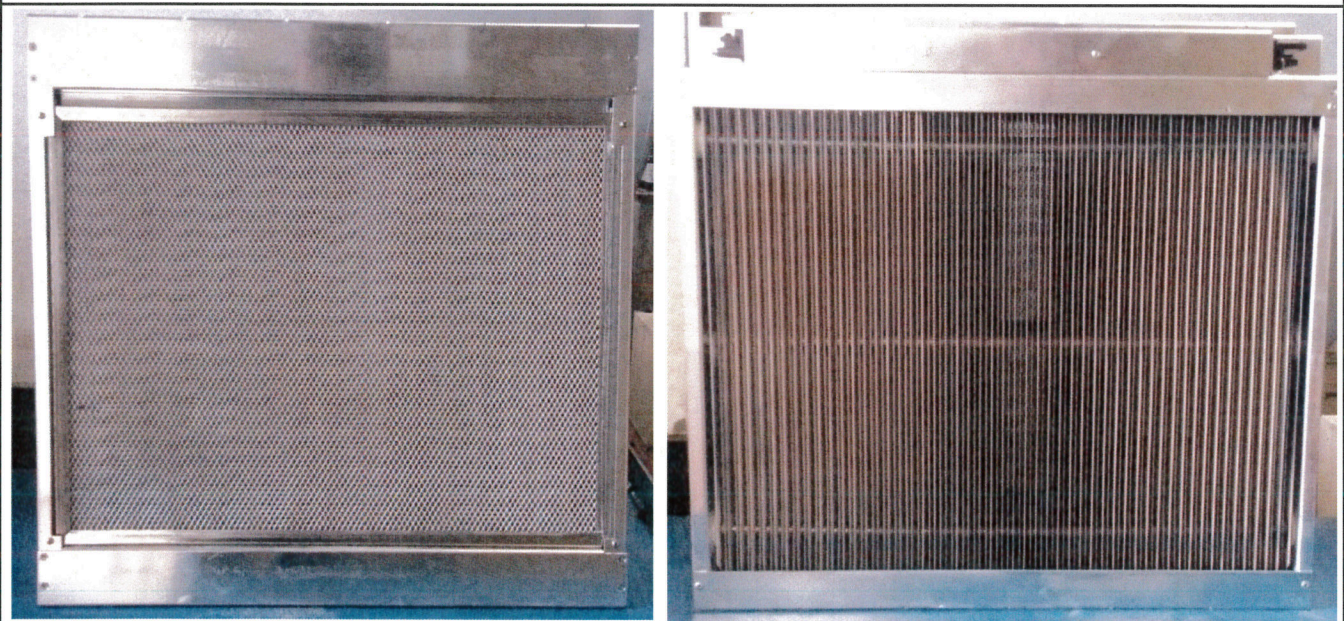
**TEST DATA SUMMARY**

Test airflow rate [m <sup>3</sup> /s]:	Test air temperature [°C]:	Test air RH [%]:	Test aerosol:	Loading dust:
0.9444	20.6 - 21.7	44 - 46	N/A	ISO 12103 - 1 A2 FINE Dust

**RISULTATI**

Resistance to airflow [Pa]		<i>kep</i>	Yearly energy consumption [kWh/y]	Test dust capacity [g]
Measured initial:	Measured final:			
62	62	1.94	702	N/A

Test device photo



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The Laboratory Manager

P. Tronville