


**VDE Test Report**

Report No.	234655-AS4-1	
VDE File No.	960800-2510-0029/234655	
Date of issue.....	2017-02-23	
Laboratory	VDE Testing and Certification Institute	
Address:	Merianstrasse 28 63069 Offenbach/Main; Germany	
Testing location/ address	VDE Testing and Certification Institute Merianstrasse 28, 63069 Offenbach/Main; Germany	
Applicant's name	Stein & Co. GmbH	
Applicant's address	Wülfrather Straße 47-49; 42553 Velbert; Germany	
Applied standard(s)	<p>German standard: DIN EN 60312-1 (VDE 0705-312-1): 2014-01; EN 60312-1: 2013</p> <p>European standard: The calculations are based on the Commission Delegated Regulation (EU) No 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU. All procedures not accurately described in this directive were conducted according to EN 60312-1:2013-05.</p>	
Test item description	Floor-type vacuum cleaner	
Trade Mark		
Type reference(s)	SEBO AIRBELT E1	
	Brand:	SEBO
	Model:	---
	Nozzle:	---
	Identification No.:	E 365012000
Ratings	Rated voltage:	220-240V
	Rated current:	---
	Rated power consumption:	890W
	Rated frequency:	50/60Hz

Report No.:	234655-AS4-1	Page	1	of	8
Disclaimer:					
This test report contains the result of a singular investigation carried out on the product submitted. A sample of this product was tested to found the accordance with the thereafter listed standards or clauses of standards resp.					
The test report does not entitle for the use of a VDE Certification Mark and considers solely the requirements of the specifications mentioned below.					
Whenever reference is made to this test report towards third party, this test report shall be made available on the very spot in full length.					



Test sample condition	<input checked="" type="checkbox"/> Non-damaged sample
	Remark: New
Sample entry date	2017-02-08
Date (s) of performance of tests	2017-02-09

Tested by		
Name, Signature	Pfeiffer, Dennis (Authorization of test report)	
Function	Testing engineer	
Verified by		
Name, Signature	Czaika, Ralf	
Function	Reviewer	

Factory(ies)	---
--------------------	-----

Possible test case verdicts:	
Test case does not apply to the test object :	N/A
Test object does meet the requirement	P (Pass)
Test object does not meet the requirement :	F (Fail)

Final Verdict:	<input checked="" type="checkbox"/> P	<input type="checkbox"/> F
Remark	---	

Mains voltage during the test (if not otherwise specified)	Nominal voltage:	230 V
	Nominal frequency:	50 Hz

Environmental conditions (if applicable)	Ambient temperature	Atmospheric pressure	Relative humidity
Rated values	23±2 °C	860-1060 hPa	50±5 %
Verified values	See measuring form(s)	Range confirmed by: Deutscher Wetterdienst (Meteorological service)	See measuring form(s)

Report No.:	234655-AS4-1	Page	2	of	8
-------------	--------------	------	---	----	---



Clause	Requirement + Test	Note – Result – Remark	Verdict
4.	General conditions for testing		—
4.1	Atmospheric conditions		P
4.2	Test equipment and materials		P
4.3	Voltage and frequency		P
4.4	Running-in of vacuum cleaner		P
4.5	Equipment of the vacuum cleaner		P
4.6	Operation of the vacuum cleaner		P
4.7	Conditioning prior to each test		P
4.8	Mechanical operator		P
4.9	Number of samples		P
4.Z1	Reference vacuum cleaner system		N/A
5.	Dry vacuum cleaning tests		—
5.1	Dust removal from hard flat floors		N/A
5.2	Dust removal from hard flat floors with crevices		N/A
5.3	Dust removal from carpets		N/A
5.4	Dust removal along walls		N/A
5.5	Fibre removal from carpets and upholstery		N/A
5.6	Thread removal from carpets		N/A
5.7	Maximum usable volume of dust receptacle		N/A
5.8	Air data		N/A
5.9	Performance with loaded dust receptacle		N/A
5.10	Total emission while vacuum cleaning		N/A
5.11	Filtration efficiency of the vacuum cleaner	(see appendix “Measuring form of dust re-emission regarding energy label, Tab.1”)	P

Performed tests and calculations are based on the Commission Delegated Regulation (EU) No 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU. All procedures not accurately described in this directive were conducted according to EN 60312-1:2013-05.



Clause	Requirement + Test	Note – Result – Remark	Verdict
6.	Miscellaneous test		—
6.1	General		N/A
6.2	Motion resistance		N/A
6.3	Cleaning under furniture		N/A
6.4	Radius of operation		N/A
6.5	Impact resistance for detachable cleaning heads		N/A
6.6	Deformation of hose and connecting tubes		N/A
6.7	Bump test		N/A
6.8	Flexibility of the hose		N/A
6.9	Repeated bending of the hose		N/A
6.10	Life test		N/A
6.11	Mass		N/A
6.12	Weight in hand		N/A
6.13	Specific cleaning time		N/A
6.14	Dimension		N/A
6.15	Noise level		N/A
6.16	Energy consumption		N/A
7.	Test material and equipment		—
7.1	General		P
7.2	Material for measurements		P
7.3	Equipment for measurements		P

Performed tests and calculations are based on the Commission Delegated Regulation (EU) No 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU. All procedures not accurately described in this directive were conducted according to EN 60312-1:2013-05.



Clause	Requirement + Test	Note – Result – Remark	Verdict
8.	Instruction for use		—
Annex A (informative)	Information on materials		
Annex B (informative)	Information for point of sale		
Annex C (normative)	Guidance specification on verified carpets		
C.3.1	General		
C.3.2	Category-C-Carpet (7.2.1.3.5)		
Annex ZA (normative)	Normative references of international publications with their corresponding European publications		
Annex ZB (normative)	Calculation of the number of double strokes X_{calc} to reach the reference level K_{ref} for hard floor with crevice and normalised reference level K_{calc} for carpet		
Supplementary information:			
N/A			

Performed tests and calculations are based on the Commission Delegated Regulation (EU) No 665/2013 of 3 May 2013 supplementing Directive 2010/30/EU. All procedures not accurately described in this directive were conducted according to EN 60312-1:2013-05.



Measuring form of dust re-emission regarding energy label, Tab.1

Test identification					
Operator	PFD	Date	09.02.2017		
File name	2017-02-09 EMI SEBO - Typ Airbelt E1# Time		11:20:05		
Particle counter	15392	Ambient pressure	101,4kPa		
Dilution intake/exhaust	1: 10000 / 1:10	Ambient temp.	24,3°C		
Test voltage	230 VAC 50Hz	Relative humidity	48,8%		
Comment	---				
Test device					
Type	Airbelt E1	Serial number	E 365012000		
Manufacturer	SEBO	Device data	220-240V; 50/60Hz		
State	New	acc. type plate	890W		
Filter equipment					
Dust bag	ULTRA-Bag	Manufacturer	SEBO		
Motor protection	Fleece	Manufacturer	---		
Exhaust filter	Fleece	Manufacturer	---		
Test results					
Volumetric air flow	31,0/s	DRE	0,02%	Class : A	
Dust type	SAE Fine	ACC	0,010%		
Dust feed	1,858g	calculated values for particle size range $d_{MIN} - d_{MAX}$			
Dust concentration	100mg/m ³			d MIN 0,3 µm	d MAX 10,0 µm
Individual test data					
Test phase	Start time [hh:mm:ss]	Duration [hh:mm:ss]	DRE [%]	Q [l/s]	T _{EXHAUST} [°C]
Background	11:30:16	0:02:03		31,5	41,4
Conditioning	11:33:50	0:10:11		31,2	41,9
Measurement	11:46:39	0:09:20	0,02	31,2	41,9
Statistic values measurement					
Particle registration and evaluation					DRE-values
adjusted size ranges		geometric diameter	statistic evaluated particle sums for 5 individual test runs		for statistical evaluated particle sums
d_{CLASS_MIN}	d_{CLASS_MAX}	d_{GEO}	intake air	exhaust air	
[µm]	[µm]	[µm]	[#]	[#]	[%]
0,3	0,5	0,4	418650400	204695	0,04889
0,5	0,7	0,6	228080671	32010	0,01403
0,7	1,1	0,9	190157928	8761	0,00461
1,1	1,7	1,4	149355379	2224	0,00149
1,7	2,7	2,2	105527262	707	0,00067
2,7	4,2	3,5	58175718	308	0,00053
4,2	6,5	5,4	29280042	235	0,00080
6,5	10,0	8,3	15059930	158	0,00105
			1194287330	249098	

Photo documentation:



Vacuum cleaner



Marking plate

**List of the applied measurement instruments and testing means**

Inventory-No.	Instrument	Type	Manufacturer	Calibration Date	
				Last	Due
1070227	DIGITAL WATTMETER	WT310	YOKOGAWA	2015-10-05	2017-01-05
1301172	DATALOGGER FOR HUMIDITY AND TEMPERATURE	HYGROCLIP	ROTRONIC	2015-11-04	2017-05-04
1301434	DATALOGGER FOR HUMIDITY AND TEMPERATURE	HYGROCLIP	ROTRONIC	2016-01-05	2017-07-05
1301435	DATALOGGER FOR HUMIDITY AND TEMPERATURE	HYGROCLIP	ROTRONIC	2016-01-05	2017-07-05
1301439	DATALOGGER FOR HUMIDITY AND TEMPERATURE	HYGROCLIP	ROTRONIC	2016-01-05	2017-07-05
1301739	ASOLUTE PRESSURE TRANSDUCER	PAAA-33X	KELLER	2016-03-31	2017-09-29
2300360	ANALYTICAL SCALE	ABS 220-4N	KERN	2015-04-16	2017-04-14
5200354	DUST EMISSION TEST EQUIPMENT	N.N.	SLG	2016-08-01	2017-07-31

Uncertainty of measurement (optional according to sub-clause 5.10.3.1.c of IEC 17025):

N/A