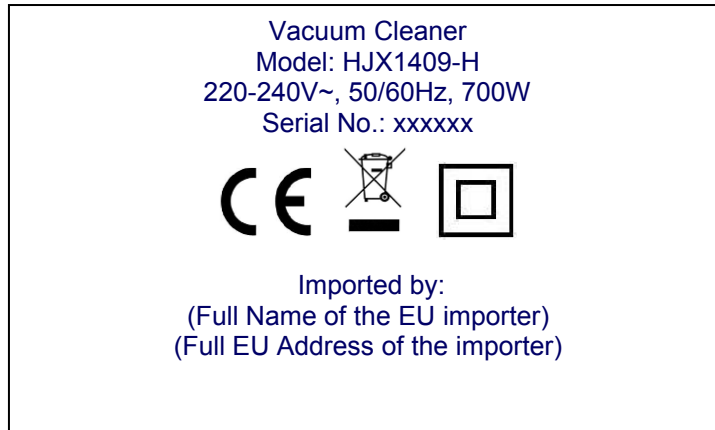


TEST REPORT COMMISSION REGULATION (EU) No 666/2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for vacuum cleaners and COMMISSION DELEGATED REGULATION (EU) No 665/2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of vacuum cleaners	
Report Reference No.	EFSH17041685-IE-01-P01
Tested by (name + signature)	Victor Xu/Project Engineer 
Approved by (name + signature)	Squall Huang/Project Supervisor 
Date of issue	2017-05-18
Total number of pages	31 pages
Testing Laboratory	Eurofins Product Testing Service (Shanghai) Co., Ltd.
Address	No. 395 West Jiangchang Road, Jing'an District, Shanghai, China
Applicant's name	
Address	
Test specification:	
Test standard	COMMISSION REGULATION (EU) No 666/2013 COMMISSION DELEGATED REGULATION (EU) No 665/2013
Non-standard test method	N/A
Test Report Form No.	EU_665&666_2013_C
TRF Originator	Eurofins
Master TRF	Dated 2016-08
Copyright © 2013 Eurofins, All rights reserved. This publication may be reproduced in whole or in part for non-commercial purposes as long as the Eurofins is acknowledged as copyright owner and source of the material. Eurofins takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context	
Test item description	Vacuum Cleaner
Trade Mark	--
Manufacturer's name	Same as the applicant
Manufacturer's address	Same as the address of the applicant
Model/Type reference	HJX1405, HJX1405-H, HJX1406, HJX1406-H, HJX1409, HJX1409-H
Ratings	220-240V~, 50/60Hz, 700W, Class II

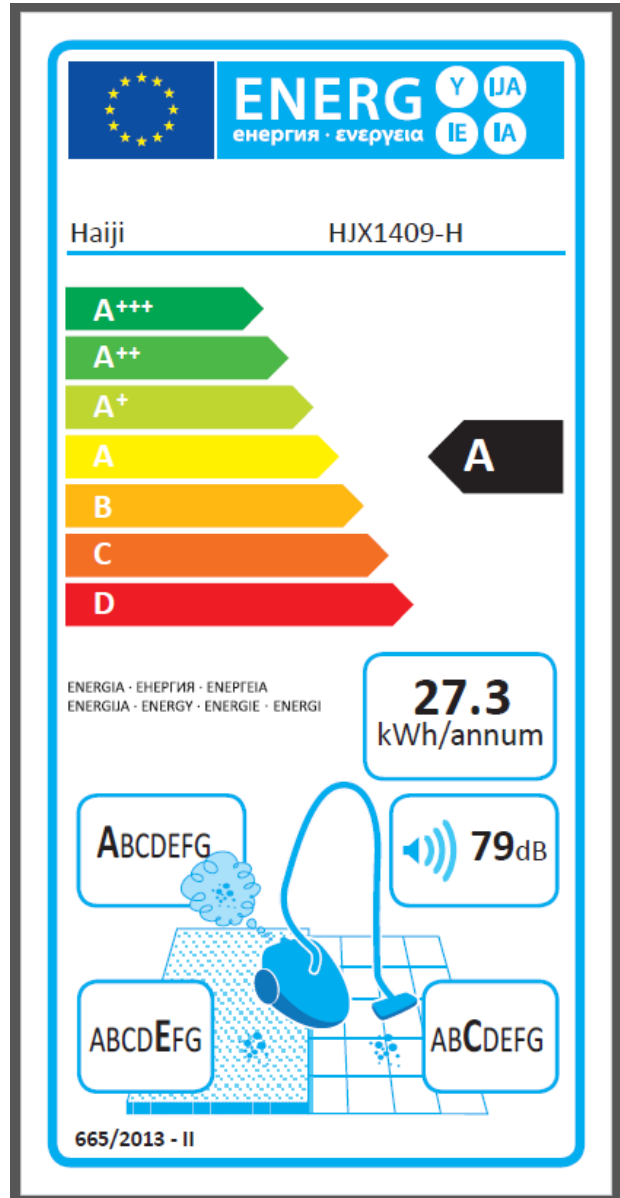
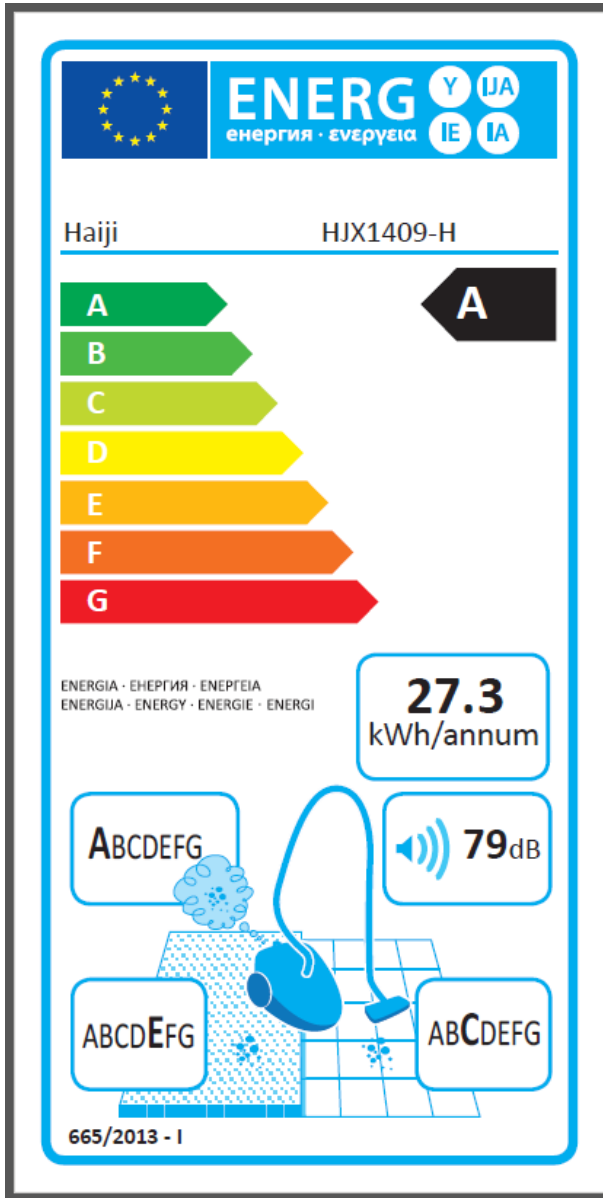
Marking plates (rating label and energy label):
(Representative, may differ with the model number)
Rating label:



Energy label provided by customer:

For stage 1

For stage 2



Remark:

The label shall be at least 75 mm wide and 150 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above.

Summary of testing:

1, From the result of our inspection and tests on the submitted sample(s), we conclude they comply with COMMISSION DELEGATED REGULATION (EU) No 665/2013 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of vacuum cleaners

2, From the result of our inspection and tests on the submitted sample(s), we conclude they comply with the followed stage, according to requirements of COMMISSION REGULATION (EU) No 666/2013 of 8 July 2013 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for vacuum cleaners:

 Stage I: From September 1, 2014 to August 31, 2017:

as indicated in COMMISSION REGULATION (EU) No 666/2013 Annex I, point 1(a) and point 2.

 Stage II: From September 1, 2017:

as indicated in COMMISSION REGULATION (EU) No 666/2013 Annex I, point 1(b) and point 2.

Test item particulars : Canister type vacuum cleaner

Classification of installation : Household and indoor use, dry pick-up

Intended use:

— General purpose use : Yes

— Carpet use only : N/A

— Hard floor use only : N/A

— Other specific use by vacuum function : N/A

— Other purposes other than vacuum cleaning : N/A

Vacuum cleaner sample status:

— age : new already be used _____ hours

— condition : Good

— history of the vacuum cleaner : provided by manufacturer

provided by buyer/retailers

other sources: _____.

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)

Testing :

Date of receipt of test item : 2017-04-20

Date (s) of performance of tests : 2017-04-20 to 2017-05-18

General remarks:

The test results presented in this report relate only to the object tested.

This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

Throughout this report a comma is used as the decimal separator.

Determination of the test results includes consideration of measurement uncertainty from the test equipment and methods.

Tests and measurements have been performed in accordance with EN 60312-1: 2013, EN 60335-2-2: 2010 + A11: 2012 +A1: 2013, EN 60704-2-1:2015, to the extent possible if applicable.

This report was issued for checking the technical data on energy label according to the COMMISSION DELEGATED REGULATION (EU) NO 665/2013.

The regulations on energy using products are undergoing a steady development. For testing and evaluating of the above mentioned products, the hereby applied standards and regulations are the most suitable and applicable test fundamentals for the time being. However, it is possible, that these will be superseded by more product specific regulations as soon as they come into force, which might require other tests or evaluations.

General product information:

The product covered by this test report is dry pick-up, canister type vacuum cleaner for household and indoor use.

Also, the product is general purpose vacuum cleaner, which can be used for both carpet and hard floor cleaning.

HJX1405, HJX1406 and HJX1409 are identical except for different model names and little difference of appearance decoration. So are HJX1405-H, HJX1406-H and HJX1409-H.

HJX1405 and HJX1405-H are identical except for HJX1405 has speed control function while HJX1405-H has not. So are HJX1406, HJX1406-H and HJX1409, HJX1409-H.

After review, HJX1409-H was selected to do the tests and recorded the data.

Other information related:

1. Power input:

Pf [W]	Pi [W]	Pm=(Pf+Pi)/2 [W]
659	482	570,5

Note:

P_f: is the power input in watts, after 3 min of operation with the air inlet unobstructed.

P_i: is the power input in watts, after a further 20 s of operation with the air inlet blocked.

2. Air data

Max. input power [W]	640,4
Max. vacuum [kPa]	14,09
Max. air flow [l/s]	18,23
Max. suction power [W]	63,4
Max. efficiency [%]	10,68

Tests were conducted at 230V~, 50Hz.

COMMISSION REGULATION (EU) No 665/2013 & 666/2013**Definitions:****A - General definition:**

- (1) 'vacuum cleaner' means an appliance that removes soil from a surface to be cleaned by means of an airflow created by underpressure developed within the unit;
- (2) 'hybrid vacuum cleaner' means a vacuum cleaner that can be powered by both electric mains and batteries;
- (3) 'battery operated active nozzle' means a cleaning head provided with an agitation device powered by batteries to assist dirt removal;
- (4) 'water filter vacuum cleaner' means a dry vacuum cleaner that uses more than 0,5 litre of water as the main filter medium, whereby the suction air is forced through the water entrapping the removed dry material as it passes through;
- (5) 'household vacuum cleaner' means a vacuum cleaner intended for household or domestic use, declared by the manufacturer as such in the Declaration of Conformity pertaining to Directive 2006/95/EC of the European Parliament and of the Council;
- (6) 'general purpose vacuum cleaner' means a vacuum cleaner supplied with a fixed or at least one detachable nozzle designed for cleaning both carpets and hard floors, or supplied with both at least one detachable nozzle designed specifically for cleaning carpets and at least one detachable nozzle for cleaning hard floors;
- (7) 'hard floor vacuum cleaner' means a vacuum cleaner supplied with a fixed nozzle designed specifically for cleaning hard floors, or supplied solely with one or more detachable nozzles designed specifically for cleaning hard floors;
- (8) 'carpet vacuum cleaner' means a vacuum cleaner supplied with a fixed nozzle designed specifically for cleaning carpets, or supplied solely with one or more detachable nozzles designed specifically for cleaning carpets;
- (9) 'equivalent vacuum cleaner' means a model of vacuum cleaner placed on the market with the same input power, annual energy consumption, dust pick up on carpet and hard floor, dust re-emission, sound power level, hose durability and operational motor lifetime as another model of vacuum cleaner placed on the market under a different commercial code number by the same manufacturer.

B - Technical definition:

- (1) 'hard floor test' means a test of two cleaning cycles where the cleaning head of a vacuum cleaner operating at maximum suction setting passes over a wooden test plate test area with width equal to the cleaning head width and appropriate length, featuring a diagonally (45°) placed test crevice, where the time elapsed, electric power consumption and the relative position of the centre of the cleaning head to the test area are continuously measured and recorded at an appropriate sample rate and where at the end of each cleaning cycle the mass decrease of the test crevice is appropriately assessed;
- (2) 'test crevice' means a removable U-shaped insert with appropriate dimensions filled at the beginning of a cleaning cycle with appropriate artificial dust;

COMMISSION REGULATION (EU) No 665/2013 & 666/2013

- (3) 'carpet test' means a test with an appropriate number of cleaning cycles on a Wilton carpet test rig where the cleaning head of a vacuum cleaner operating at maximum suction setting passes over the test area with width equal to the cleaning head width and appropriate length, soiled with equally distributed and appropriately embedded test dust of appropriate composition, where the time elapsed, electric power consumption and the relative position of the centre of the cleaning head to the test area are continuously measured and recorded at an appropriate sample rate and at the end of each cleaning cycle the mass increase of the appliance dust receptacle is appropriately assessed;
- (4) 'cleaning head width' in m, at an accuracy of 3 decimal places, means the external maximum width of the cleaning head;
- (5) 'cleaning cycle' means a sequence of 5 double strokes of the vacuum cleaner on a floor-specific test area ('carpet' or 'hard floor');
- (6) 'double stroke' means one forward and one backward movement of the cleaning head in a parallel pattern, performed at a uniform test stroke speed and with a specified test stroke length;
- (7) 'test stroke speed' in m/h means the appropriate cleaning head speed for testing, preferably realized with an electromechanical operator. Products with self-propelled cleaning heads shall try to come as close as possible to the appropriate speed, but a deviation is permitted when clearly stated in the technical documentation;
- (8) 'test stroke length' in m means the length of the test area plus the cleaning head distance covered by the centre of the cleaning head when moving over the appropriate acceleration zones before and after the test area;
- (9) 'dust pick up' (dpu), at an accuracy of 3 decimal places, means the ratio of the mass of the artificial dust removed, determined for carpet through the mass increase of the appliance dust receptacle and for hard floor through the mass decrease of the test crevice, after a number of double strokes of the cleaning head to the mass of artificial dust initially applied to a test area, for carpet corrected for the specific test conditions and for hard floor corrected for the length and positioning of the test crevice;
- (10) 'reference vacuum cleaner system' means electrically operated laboratory equipment used to measure the calibrated and reference dust pick-up on carpets with given air related parameters to improve the reproducibility of test results;
- (11) 'rated input power' in W means the electric input power declared by the manufacturer, whereby for appliances that are enabled to function also for other purposes than vacuum cleaning only the electric input power relevant to vacuum cleaning applies;
- (12) 'dust re-emission' means the ratio, expressed as a percentage at an accuracy of 2 decimal places, of the number of all dust particles of a size from 0,3 to 10 μ m emitted by a vacuum cleaner to the number of all dust particles of the same size range entering the suction inlet when fed with a specific amount of dust of that particle size range. The value includes not only dust measured at the vacuum cleaner outlet but also dust emitted elsewhere either from leaks, or generated by the vacuum cleaner;
- (13) 'sound power level' means airborne acoustical noise emissions, expressed in dB(A) re 1 pW and rounded to the nearest integer.

COMMISSION REGULATION (EU) No 665/2013 & 666/2013**General conditions for testing:****Atmospheric conditions**

Unless otherwise specified, the test procedures and measurements shall be carried out under the following conditions (in accordance with ISO 554):

Standard atmosphere 23/50

Temperature: (23 ± 2) °C

Relative humidity: (50 ± 5) %

Air pressure: 86 kPa to 106 kPa

Test equipment and materials

To minimize the influence of electrostatic phenomena, measurements on carpets shall be carried out on a flat floor consisting of a smooth untreated pine plywood or equivalent panel, at least 15 mm thick and of a size appropriate for the test.

Equipment and materials for measurements (devices, test carpets, test dust etc.) to be used in a test shall, prior to the test, be kept hanging free or laying flat for at least 16 h at above standard atmospheric conditions.

Voltage and frequency

Unless otherwise stated, measurements shall be carried out at rated voltage with a tolerance of ± 1 % and, if applicable, at rated frequency.

Vacuum cleaners designed for d.c. only shall be operated at d.c.. Vacuum cleaners designed for both a.c. and d.c. shall be operated at a.c.. Vacuum cleaners not marked with rated frequency shall be operated at either 50 Hz or 60 Hz, as is common in the country of use.

For vacuum cleaners with a rated voltage range, measurements shall be carried out at the mean value of the voltage range if the difference between the limits of the range does not exceed 10 % of the mean value. If the difference exceeds 10 % of the mean value, measurements shall be carried out both at the upper and lower limits of the voltage range.

If the rated voltage differs from the nominal system voltage of the country concerned, measurements carried out at rated voltage may give test results misleading for the consumer, and additional measurements may be required. If the test voltage differs from the rated voltage, this shall be reported.

Running-in of vacuum cleaner

Prior to the first test on a new vacuum cleaner it shall be kept running with unrestricted air flow for at least 2 h to ensure adequate running-in. For active nozzles, the agitation device shall be running but not in contact with the floor.

Prior to conducting any series of tests, the age, condition, and history of the product shall be recorded.

Equipment of the vacuum cleaner

If the vacuum cleaner is designed to be used with disposable dust receptacles, it shall, prior to each measurement, be equipped with a new dust receptacle of the type recommended or supplied by the manufacturer of the vacuum cleaner.

If the vacuum cleaner is provided with a reusable dust receptacle (as the sole original dust receptacle or as an enclosure for disposable dust receptacles), the dust receptacle and any additional filters removable without the aid of tools shall, prior to each measurement, be cleaned according to manufacturer's instructions until its weight is within 1 % or 2 g of its original weight whichever is the lower.

COMMISSION REGULATION (EU) No 665/2013 & 666/2013

Some reusable receptacles consist of a rigid container and an integral filter. In this case the container and the filter are considered to be the receptacle and should be treated as if they were a single component.

Vacuum cleaners equipped with separation devices, being part of the appliance, used to separate the dust from the airflow and/or having additional filters to be changed or cleaned by the user, without the use of tools, the weight of such specific devices shall be taken into account for dust removal ability.

Vacuum cleaners with disposable or reusable dust receptacles may have secondary filtration stage devices which do not collect meaningful dust in removal ability tests but which do impact on filtration and life tests. Replacement and/or maintenance of such devices shall be in accordance with relevant sections and carried out according to manufacturer's instructions.

Operation of the vacuum cleaner

The vacuum cleaner and its attachments shall be used and adjusted in accordance with the manufacturer's instructions for normal operation for the test to be carried out. Height adjustment controls for the cleaning head shall be set as appropriate for the surface to be cleaned and the position noted. Any electrical controls shall be set for maximum continuous air flow and, unless the manufacturer's instruction states otherwise, any manually operated air bypass openings for reduction of the suction power shall be closed, and if open, it shall be reported. Any safety-related device shall be allowed to operate.

The tube grip of cleaners with suction hose or the handle of other cleaners shall be held as for normal operation at a height of (800 ± 50) mm above the test floor.

During measurements where the agitation device of an active nozzle is not used as in normal operation, the agitation device shall be running but not in contact with any surface.

Conditioning prior to each tests

If the vacuum cleaner is unused and de-energized for more than 1 h, then the vacuum cleaner and attachments to be used shall be kept running for at least 10 min to allow them to stabilise.

COMMISSION REGULATION (EU) No 665/2013 & 666/2013
Annual energy consumption

The annual energy consumption AE is calculated, in kWh/year and rounded to one decimal place, as follows:

— for carpet vacuum cleaners:

$$AE_c = 4 \times 87 \times 50 \times 0,001 \times ASE_c \times \left(\frac{1 - 0,20}{dpu_c - 0,20} \right)$$

— for hard floor vacuum cleaners:

$$AE_{hf} = 4 \times 87 \times 50 \times 0,001 \times ASE_{hf} \times \left(\frac{1 - 0,20}{dpu_{hf} - 0,20} \right)$$

— for general-purpose vacuum cleaners:

$$AE_{gp} = 0,5 \times AE_c + 0,5 \times AE_{hf}$$

where:

— ASE_c is the average specific energy consumption in Wh/m² during carpet test, calculated as provided below

— ASE_{hf} is the average specific energy consumption in Wh/m² during hard floor test, calculated as provided below

— dpu_c is the dust pick-up on carpet

— dpu_{hf} is the dust pick-up on hard floor

— 50 is the standard number of one-hour cleaning tasks per year

— 87 is the standard dwelling surface to be cleaned in m²

— 4 is the standard number of times that a vacuum cleaner passes over each point on the floor (two double strokes)

— 0,001 is the conversion factor from Wh to kWh

— 1 is the standard dust pick-up

— 0,20 is the standard difference between dust pick-up after five and after two double strokes.

Average specific energy consumption (ASE)

The average specific energy consumption during carpet test (ASE_c) and during hard floor test (ASE_{hf}) shall be determined as an average of the specific energy consumption (SE) of the number of cleaning cycles that constitute the carpet and hard floor test, respectively. The general equation for the specific energy consumption SE in Wh/m² test area, at an accuracy of 3 decimal places, applicable for carpet, hard floor and general purpose vacuum cleaners with the appropriate suffixes, is:

$$SE = \frac{(P + NP) \times t}{A}$$

where:

— P is the average power in W, at an accuracy of 2 decimal places, during the time in a cleaning cycle that the centre of the cleaning head is moving over the test area

— NP is the average power equivalent in W, at an accuracy of 2 decimal places, of battery operated active nozzles, if any, of the vacuum cleaner, calculated as provided below

— t is the total time in hours, at an accuracy of 4 decimal places, in a cleaning cycle during which the centre of the cleaning head, i.e. a point halfway between the side, front and back edges of the cleaning head, is moving over the test area

— A is the surface area in m², at an accuracy of 3 decimal places, passed over by the cleaning head in a cleaning cycle, calculated as 10 times the product of the head width and the appropriate length of test area. If a household vacuum cleaner has a head width of over 0,320 m, then the figure of 0,320 m shall be substituted for head width in this calculation.

For the hard floor tests the suffix hf and parameter names SE_{hf} , P_{hf} , NP_{hf} , t_{hf} and A_{hf} shall be used in the above equation. For the carpet tests the suffix c and parameter names SE_c , P_c , NP_c , t_c and A_c shall be used in the above equation. For each of the cleaning cycles, values of SE_{hf} , P_{hf} , NP_{hf} , t_{hf} , A_{hf} and/or SE_c , P_c , NP_c , t_c , A_c , as applicable, shall be included in the technical documentation.

COMMISSION REGULATION (EU) No 665/2013 & 666/2013
Power equivalent of battery operated active nozzles (NP)

The general equation for the average power equivalent of battery operated active nozzles NP in Wh, applicable for carpet, hard floor and general purpose vacuum cleaners with the appropriate suffixes, is: $NP = E / t_{bat}$

where:

- E is the electricity consumption in Wh at an accuracy of 3 decimal places of the battery operated active nozzle of the vacuum cleaner necessary to return the initially fully charged battery to its originally fully charged state after a cleaning cycle;
- t_{bat} is the total time in hours, at an accuracy of 4 decimal places, in a cleaning cycle in which the battery operated active nozzle of the vacuum cleaner is activated, in accordance with manufacturer's instructions;

In case the vacuum cleaner is not equipped with battery operated active nozzles the value of NP equals zero.

For the hard floor tests the suffix hf and parameter names NP_{hf} , E_{hf} , $t_{bat\ hf}$ shall be used in the above equation. For the carpet tests the suffix c and parameter names NP_c , E_c , $t_{bat\ c}$ shall be used in the above equation. For each of the cleaning cycles, values of E_{hf} , $t_{bat\ hf}$ and/or E_c , $t_{bat\ c}$, as applicable, shall be included in the technical documentation.

Dust pick-up

The dust pick-up on hard floor (dpu_{hf}) shall be determined as the average of the results of the two cleaning cycles in a hard floor test.

The dust pick-up on carpet (dpu_c) shall be determined as the average of the results of the cleaning cycles in a carpet test. To correct for deviations from a test carpet's original properties, the dust pick-up on carpet (dpu_c) shall be calculated as follows:

$$dpu_c = dpu_m \times \left(\frac{dpu_{cal}}{dpu_{ref}} \right)$$

where:

- dpu_m is the measured dust pick-up of the vacuum cleaner;
- dpu_{cal} is the dust pick-up of the reference vacuum cleaner system measured when the test carpet was in original condition;
- dpu_{ref} is the measured dust pick-up of the reference vacuum cleaner system.

Values of dpu_m for each of the cleaning cycles, dpu_c , dpu_{cal} and dpu_{ref} shall be included in the technical documentation.

COMMISSION REGULATION (EU) No 665/2013 & 666/2013**Dust re-emission**

The dust re-emission shall be determined while the vacuum cleaner is operating at its maximum air flow.

Sound power level

Sound power level shall be determined on carpet.

Durability of the hose

The hose shall be considered useable after 40 000 oscillations under strain if it is not visibly damaged after those oscillations. Strain shall be applied by means of a weight of 2,5 kilogram.

Operational motor life-time

The vacuum cleaner shall run with a half-loaded dust receptacle intermittently with periods of 14 minutes and 30 seconds on and 30 seconds off. Dust receptacle and filters shall be replaced at appropriate time intervals. The test may be discontinued after 500 hours and shall be discontinued after 600 hours. The total run-time shall be recorded and included in the technical documentation. Air flow, vacuum and input power shall be determined at appropriate intervals and values shall, along with the operational motor lifetime, be included in the technical documentation.

Hybrid vacuum cleaners

For hybrid vacuum cleaners all measurements shall be executed with the vacuum cleaner powered by the electric mains and any battery operated active nozzle only.

COMMISSION REGULATION (EU) No 666/2013			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX I, ECODESIGN REQUIREMENTS			
1	SPECIFIC ECODESIGN REQUIREMENTS		--
	Vacuum cleaners shall comply with the following requirements:		--
	(a) From 1 September 2014:		--
	— annual energy consumption shall be less than 62,0 kWh/year	Refer to attached Table 3.1	P
	— rated input power shall be less than 1 600 W	See marking plate	P
	— dust pick up on carpet (dpu_c) shall be greater than or equal to 0,70. This limit shall not apply to hard floor vacuum cleaners	Refer to attached Table 1.1	P
	— dust pick up on hard floor (dpu_{hf}) shall be greater than or equal to 0,95. This limit shall not apply to carpet vacuum cleaners	Refer to attached Table 2.1	P
	These limits shall not apply to water filter vacuum cleaners.	Not water filter vacuum cleaner	N/A
	(b) From 1 September 2017:		--
	— annual energy consumption shall be less than 43,0 kWh/year	Refer to attached Table 3.1	P
	— rated input power shall be less than 900W	See marking plate	P
	— dust pick up on carpet (dpu_c) shall be greater than or equal to 0,75. This limit shall not apply to hard floor vacuum cleaners	Refer to attached Table 1.1	P
	— dust pick up on hard floor (dpu_{hf}) shall be greater than or equal to 0,98. This limit shall not apply to carpet vacuum cleaners	Refer to attached Table 2.1	P
	— dust re-emission shall be no more than 1,00 %	Refer to attached Table 4.1	P
	— sound power level shall be less than or equal to 80 dB(A)	Refer to attached Table 5.1	P
	— the hose, if any, shall be durable so that it is still useable after 40 000 oscillations under strain		P
	— operational motor lifetime shall be greater than or equal to 500 hours		P

COMMISSION REGULATION (EU) No 666/2013			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX I, ECODESIGN REQUIREMENTS			
2	INFORMATION TO BE PROVIDED BY MANUFACTURERS		--
	The technical documentation, booklet of instructions and free access websites of manufacturers, their authorised representatives, or importers shall contain the following elements:		--
	—any information required to be published in respect of the vacuum cleaner under any delegated acts adopted under Directive 2010/30/EU of the European Parliament and of the Council		P
	—short title or reference to the measurement and calculation methods used to establish compliance with the above requirements		P
	—for hard floor vacuum cleaners, mention that they are not suitable for use on carpets with the delivered nozzle	General purpose	N/A
	—for carpet vacuum cleaners, mention that they are not suitable for use on hard floors with the delivered nozzle,	General purpose	N/A
	—for appliances that are enabled to function also for other purposes than vacuum cleaning, the electric input power relevant to vacuum cleaning if this is lower than the rated input power of the appliance	No other function	N/A
	—as which of the following three groups the vacuum cleaner should be tested: general purpose vacuum cleaner, hard floor vacuum cleaner or carpet vacuum cleaner.	General purpose	P
	The technical documentation and a part for professionals of the free access websites of manufacturers, their authorised representatives, or importers shall contain the following elements:		--
	—information relevant for non-destructive disassembly for maintenance purposes, in particular in relation to the hose, suction inlet, motor, casing and cable		P
	—information relevant for dismantling, in particular in relation to the motor and any batteries, recycling, recovery and disposal at end-of-life.		P

COMMISSION REGULATION (EU) No 665/2013			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX III, FICHE			
1	The information in the product fiche of the vacuum cleaner shall be given in the following order and shall be included in the product brochure or other literature provided with the product:		--
	(a) supplier's name or trade mark		P
	(b) supplier's model identifier which means the code, usually alphanumeric, which distinguishes a specific vacuum cleaner model from other models with the same trade mark or supplier's name		P
	(c) the energy efficiency class, determined in accordance with Annex I		P
	(d) the annual energy consumption in kWh/year, rounded to one decimal place, as defined in Annex VI; it shall be described as: 'Indicative annual energy consumption (kWh per year), based on 50 cleaning tasks. Actual annual energy consumption will depend on how the appliance is used.'		P
	(e) for general purpose vacuum cleaners and carpet vacuum cleaners, the carpet cleaning performance class determined in accordance with Annex I. For hard floor vacuum cleaners, the declaration 'not suitable for use on carpets with the delivered nozzle'	General purpose vacuum cleaner	P
	(f) for general purpose vacuum cleaners and hard floor vacuum cleaners, the hard floor cleaning performance class determined in accordance with Annex I. For carpet vacuum cleaners, the declaration 'not suitable for use on hard floors with the delivered nozzle'	General purpose vacuum cleaner	P
	(g) the dust re-emission class, determined in accordance with Annex I	Class A on the energy label provided	P
	(h) the sound power level, as defined in Annex VI	79 dB(A) on the energy label provided	P
	(i) the rated input power, as defined in Annex VI	See marking plate	P
	(j) where the vacuum cleaner has been granted an 'EU Eco-label award' under Regulation (EC) No 66/2010, this information may be included		N/A
2	One fiche may cover a number of vacuum cleaner models supplied by the same supplier		N/A
3	The information contained in the fiche may be given in the form of a copy of the label, either in colour or in black and white. Where this is the case, the information listed in point 1 not already displayed on the label shall also be provided		P

COMMISSION REGULATION (EU) No 665/2013			
Clause	Requirement + Test	Result - Remark	Verdict
ANNEX IV, TECHNICAL DOCUMENTATION			
1	The technical documentation referred to in Article 3 shall include:		--
	(a) the name and address of the supplier		P
	(b) a general description of the vacuum cleaner type and/or model and/or commercial code, sufficient for it to be unequivocally and easily identified	General purpose	P
	(c) where appropriate, the references of the harmonised standards applied		P
	(d) where appropriate, the other technical standards and specifications used	EN 60312-1:2013, EN 60335-2-2:2010 + A11: 2012 + A1:2013, EN 60704-2-1:2015, EU 666/2013.	P
	(e) identification and signature of the person empowered to bind the supplier		P
	(f) technical parameters measured and calculated in accordance with Annex VI:		--
	(i) the specific energy consumption during carpet test, where applicable		P
	(ii) the specific energy consumption during hard floor test, where applicable		P
	(iii) the dust pick up on carpet and on hard floor as applicable		P
	(iv) the dust re-emission	0,01% in documentation	P
	(v) the sound power level		P
	(vi) the rated input power		P
	(vii) specific values as indicated in points 3 and 4 of Annex VI as applicable		P
	(g) the results of calculations performed in accordance with Annex VI		P
2	Where the information included in the technical documentation file for a particular vacuum cleaner model has been obtained by calculation on the basis of an equivalent vacuum cleaner, the technical documentation shall include details of such calculations and of tests undertaken by suppliers to verify the accuracy of the calculations undertaken. The technical information shall also include a list of all other equivalent vacuum cleaner models where the information was obtained on the same basis		P
3	The information contained in this technical documentation may be merged with the technical documentation provided in accordance with measures under Directive 2009/125/EC		P

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Clause	Requirement + Test	Result - Remark	Verdict
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Table 1.1	Carpet cleaning performance							P
	Reference vacuum cleaner				HJX1409-H			
Cleaning cycle	dpu _{cal} (%)	m _{DRe} (g)	m _{DRf} (g)	dpu _{ref} (%)	m _{DRe} (g)	m _{DRf} (g)	Dpu _m (%)	Dpu _c (%)
1 st	75,5	52,61	71,04	71,4	649,64	665,28	74,5	78,8
2 nd		52,69	71,12	71,4	650,20	665,86	74,6	78,9
3 rd		52,69	71,09	71,2	650,35	665,92	74,1	78,4
Average Dpu _c (%)								78,7
Brush width(m)	0,315				0,260			
Test length(m)	0,700				0,700			
Dust amount(g)	25,81				21,00			
Supplementary information: N/A.								

Table 1.2	Dust removal from carpet, cleaning performance class		P
	Carpet cleaning performance class	Dust pick up on carpet (dpu _c)	Verdict
	A	dpu _c ≥ 0,91	N/A
	B	0,87 ≤ dpu _c < 0,91	N/A
	C	0,83 ≤ dpu _c < 0,87	N/A
	D	0,79 ≤ dpu _c < 0,83	N/A
	E	0,75 ≤ dpu _c < 0,79	P
	F	0,71 ≤ dpu _c < 0,75	N/A
	G	dpu _c < 0,71	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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Table 2.1		Hard floor cleaning performance					P
Model	cleaning cycles	Dirt in crevice before test (g)	Dirt in crevice after test (g)	Efficiency (%)	Others	Value	
HJX1409-H	1 st	20,80	8,97	106,7	Brush width(m)	0,260	
	2 nd	21,14	9,13	106,6	Test length(m)	0,700	
Efficiency average (%)				106,7	Crevice length (m)	0,690	
Supplementary information: N/A.							

Table 2.2		Hard floor cleaning performance class		P
Hard floor cleaning performance class		Dust pick up on hard floor (dpu _{hf})		Verdict
A		dpu _{hf} ≥ 1,11		N/A
B		1,08 ≤ dpu _{hf} < 1,11		N/A
C		1,05 ≤ dpu _{hf} < 1,08		P
D		1,02 ≤ dpu _{hf} < 1,05		N/A
E		0,99 ≤ dpu _{hf} < 1,02		N/A
F		0,96 ≤ dpu _{hf} < 0,99		N/A
G		dpu _{hf} < 0,96		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
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Table 3.1		Energy efficiency				P
Average power in carpet (W)	Dpu _c (%)	AE _c (kWh)	Average power in crevice (W)	Dpu _{hf} (%)	AE _{hf} (kWh)	
643,67	78,7	32,6	642,50	106,7	22,1	
AE _{qp} (kWh)	27,3					
Supplementary Information: N/A.						

Table 3.2		Energy efficiency classes			P
Energy Efficiency Class	Annual energy consumption (AE) [kWh/yr]		Verdict		
	Label 1	Label 2	Stage I	Stage II	
A+++	n/a	AE ≤ 10,0	N/A	N/A	
A++	n/a	10,0 < AE ≤ 16,0	N/A	N/A	
A+	n/a	16,0 < AE ≤ 22,0	N/A	N/A	
A	AE ≤ 28,0	22,0 < AE ≤ 28,0	P	P	
B	28,0 < AE ≤ 34,0	28,0 < AE ≤ 34,0	N/A	N/A	
C	34,0 < AE ≤ 40,0	34,0 < AE ≤ 40,0	N/A	N/A	
D	40,0 < AE ≤ 46,0	AE > 40,0	N/A	N/A	
E	46,0 < AE ≤ 52,0	n/a	N/A	N/A	
F	52,0 < AE ≤ 58,0	n/a	N/A	N/A	
G	AE > 58,0	n/a	N/A	N/A	

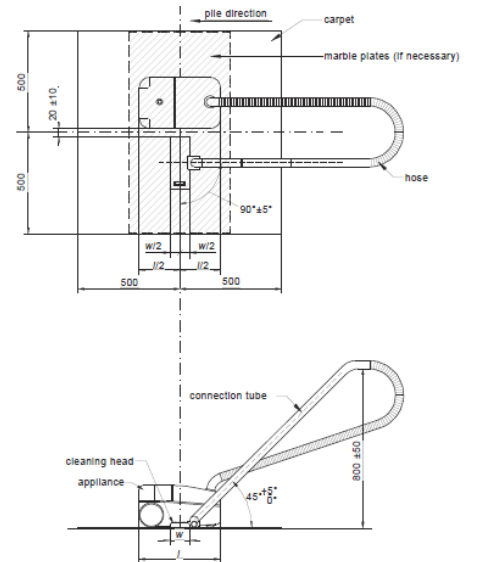
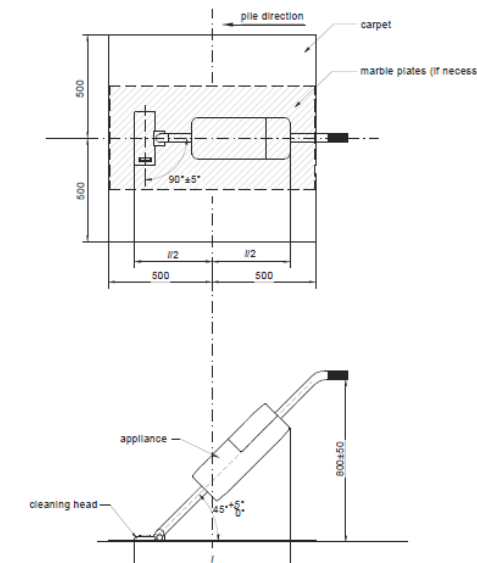
COMMISSION REGULATION (EU) No 665/2013 & 666/2013			
Clause	Requirement + Test	Result - Remark	Verdict

Table 4.1	Dust re-emission				P
Model	Test cycle	1st	2nd	3rd	
HJX1409-H	Test result	0,00%	0,00%	0,02%	
Average of dust re-emission for 0.3-10µm, %			0,01		
Supplementary Information: N/A.					

Table 4.2	Dust re-emission classes		P
Dust Re-emission Class	Dust re-emission (dre)	Verdict	
A	$dre \leq 0,02 \%$	P	
B	$0,02 \% < dre \leq 0,08 \%$	N/A	
C	$0,08 \% < dre \leq 0,20 \%$	N/A	
D	$0,20 \% < dre \leq 0,35 \%$	N/A	
E	$0,35 \% < dre \leq 0,60 \%$	N/A	
F	$0,60 \% < dre \leq 1,00 \%$	N/A	
G	$dre > 1,00 \%$	N/A	

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Clause	Requirement + Test	Result - Remark	Verdict
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Table 5.1		Sound power level	P
Model	HJX1409-H	Measurement accuracy	< 1,0 dB(A)
Test sample set-up	☒	 <p style="text-align: right;"><small>iec 3693/14 Dimensions in millimetres</small></p>	
	☐	 <p style="text-align: right;"><small>iec 3694/14 Dimensions in millimetres</small></p>	
Measured sound power level [dB(A)]	75,8	Declaration value of sound power level [dB(A)]	79
Supplementary information: N/A.			

Appendix – Photographs

Photo 1

Description: Overall view



Photo 2

Description: Front view



Appendix – Photographs

Photo 3

Description: Side view



Photo 4

Description: Side view



Appendix – Photographs

Photo 5

Description: Rear view



Photo 6

Description: Top view



Appendix – Photographs

Photo 7

Description: Bottom view



Photo 8

Description: Air inlet



Appendix – Photographs

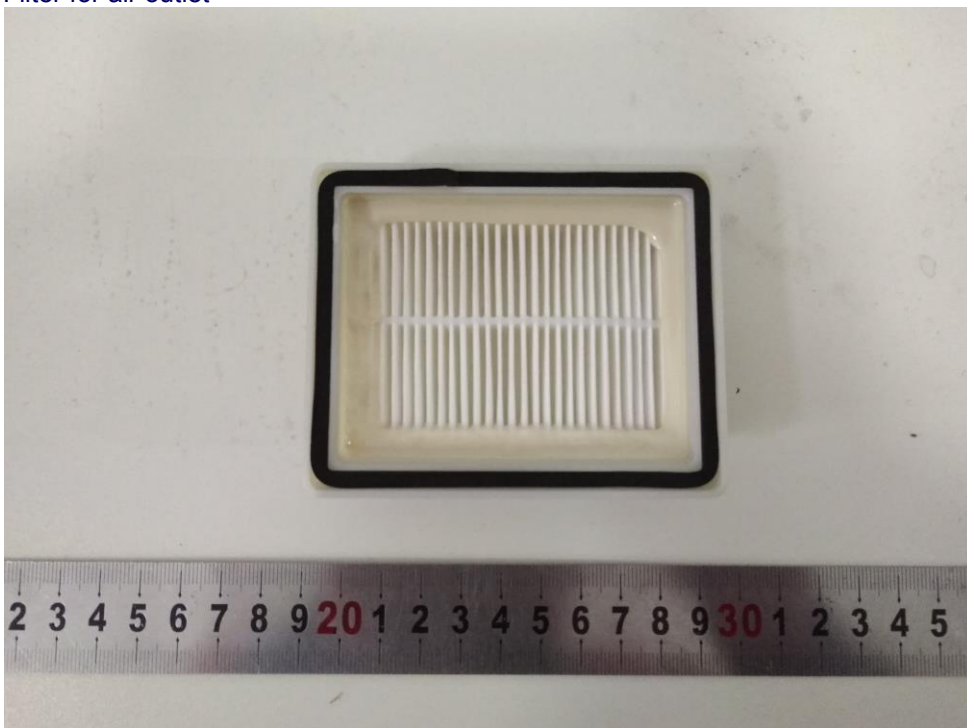
Photo 9

Description: Air outlet



Photo 10

Description: Filter for air outlet



Appendix – Photographs

Photo 11

Description: Open view



Photo 12

Description: Air inlet to motor



Appendix – Photographs

Photo 13

Description: Dust bin

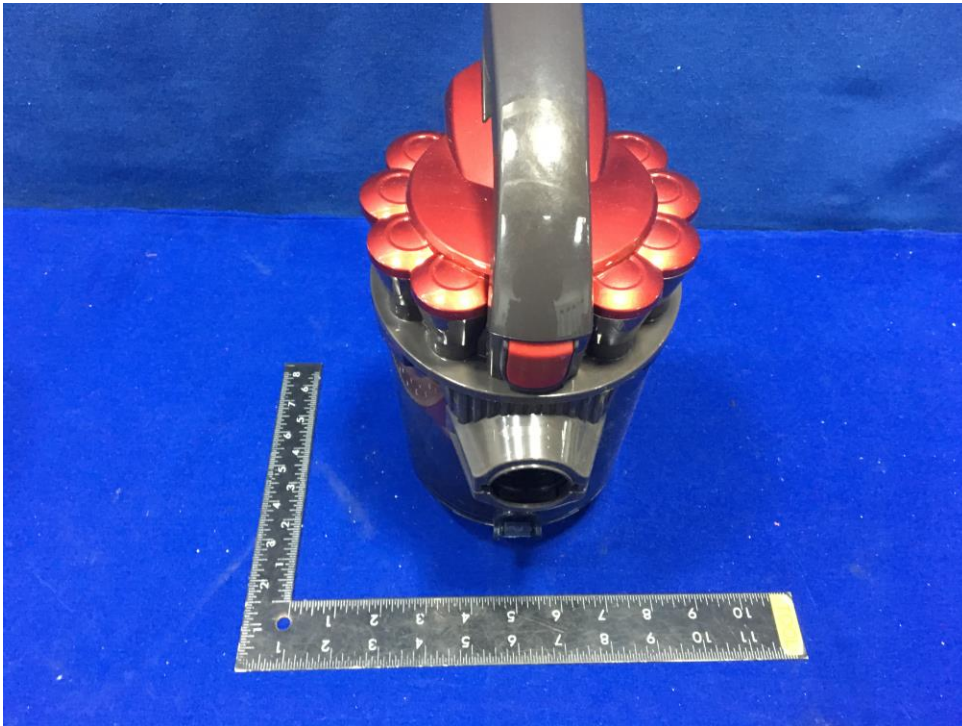


Photo 14

Description: Open view for dust bin



Appendix – Photographs

Photo 15

Description: Filter for dust bin

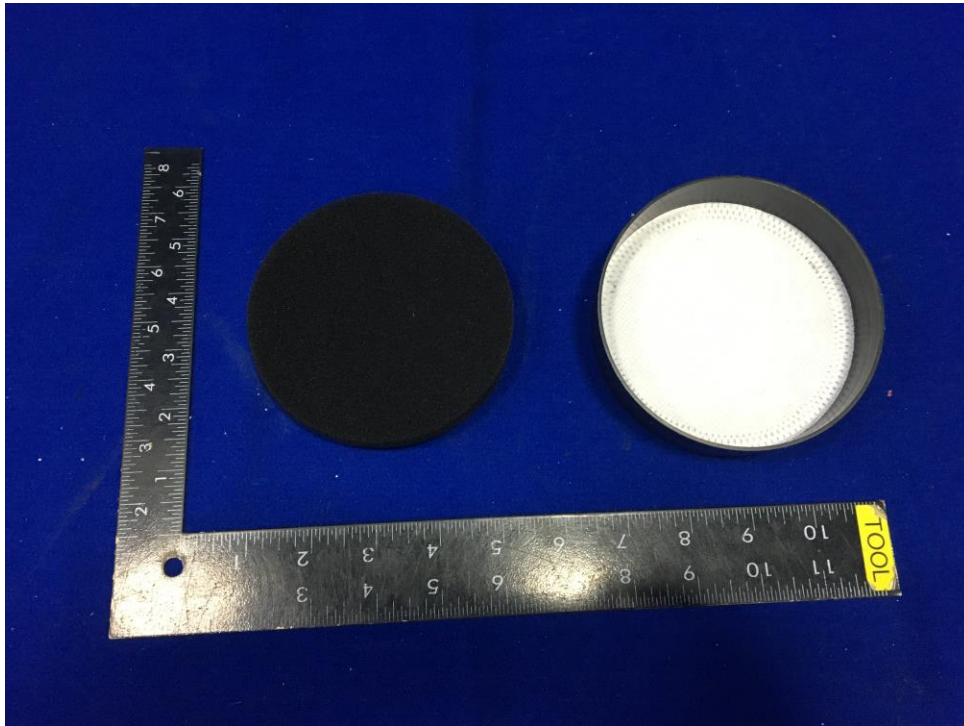


Photo 16

Description: Brush – top view for cleaning



Appendix – Photographs

Photo 17

Description: Brush – bottom view 1 for cleaning



Photo 18

Description: Brush – bottom view 2 for carpet cleaning



Appendix – Photographs

Photo 19

Description: Brush – bottom view 3 for cleaning



Photo 20

Description: Hose

