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COMMISSION REGULATION (EU) …/…

of XXX

supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of vacuum cleaners

(Text with EEA relevance)

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COMMISSION REGULATION (EU) …/…

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supplementing Regulation (EU) 2017/1369 of the European Parliament and of the Council with regard to energy labelling of vacuum cleaners

(Text with EEA relevance)

Article 1
Subject matter and scope

1. This Regulation establishes requirements for the labelling and the provision of supplementary product information for mains-operated and cordless vacuum cleaners, including hybrid vacuum cleaners.
2. This Regulation shall not apply to:
   (a) wet, wet and dry, industrial, or central vacuum cleaners;
   (b) floor polishers;
   (c) robot vacuum cleaners;
   (d) outdoor vacuum cleaners;
   (e) handheld vacuum cleaners.

Article 2
Definitions

For the purpose of this Regulation, the following definitions shall apply:

1. '*mains*' or '*electric mains*' means the electricity supply from the grid of 230 (±10 %) volts of alternating current at 50 Hz;
2. '*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;
3. '*hybrid vacuum cleaner*' means a vacuum cleaner that can be powered by both electric mains and batteries;
4. '*robot vacuum cleaner*' means a battery operated vacuum cleaner that is capable of operating without human intervention within a defined perimeter, consisting of a mobile part and a docking station and/or other accessories to assist its operation;
5. '*commercial vacuum cleaner'* means a mains-operated vacuum cleaner for professional housekeeping purposes and used by laymen, cleaning staff or contracting cleaners in office, shop, hospital and hotel environments, declared by the manufacturer as such in the Declaration of Conformity pertaining to Directive 2006/42/EC of the European Parliament and of the Council[1];

[1] OJ L 157, 9.6.2006, p. 24.

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6. '*wet vacuum cleaner*' means a vacuum cleaner that removes dry and/or wet material (soil) from the surface by applying water-based detergent or steam to the surface to be cleaned, and removing it, and the soil by an airflow created by underpressure developed within the unit, including types commonly known as sprayextraction vacuum cleaners;

7. '*wet and dry vacuum cleaner*' means a vacuum cleaner designed to remove a volume of more than 2,5 litres of liquid in combination with the functionality of a dry vacuum cleaner;

8. '*dry vacuum cleaner*' means a vacuum cleaner designed to remove soil that is principally dry (dust, fibre, threads), including types equipped with a battery operated active nozzle;

9. '*cordless vacuum cleaner*' means a vacuum cleaner powered only by batteries, other than a handheld vacuum cleaner;

10. '*handheld vacuum cleaner*' means a lightweight cordless vacuum cleaner with cleaning head, dirt storage and vacuum generator integrated in a compact housing, allowing the cleaner to held and operated whilst being held in one hand;

11. '*industrial vacuum cleaner*' means a vacuum cleaner designed to be part of a production process, designed for removing hazardous material, designed for removing heavy dust from building, foundry, mining or food industry, part of an industrial machine or tool and/or a commercial vacuum cleaner with a head width exceeding 0,50 m;

12. '*central vacuum cleaner*' means a vacuum cleaner with a fixed (not movable) underpressure source location and the hose connections located at fixed positions in the building;

13. '*floor polisher*' means an electrical appliance that is designed to protect, smoothen and/or render shiny certain types of floors, usually operated in combination with a polishing means to be rubbed on the floor by the appliance and commonly also equipped with the auxiliary functionality of a vacuum cleaner;

14. '*outdoor vacuum cleaner*' means an appliance that is designed for use outdoors to collect debris such as grass clippings and leaves into a collector by means of an airflow created by underpressure developed within the unit and which may contain a shredding device and may also be able to perform as a blower;

15. '*point of sale'* means a location where vacuum cleaners are displayed or offered for sale, hire or hire-purchase;

For the purposes of the Annexes, additional definitions are set out in Annex I.

Article 3
Obligations of suppliers

1. Suppliers of vacuum cleaners shall ensure that:

   (a) each vacuum cleaner is supplied with a printed label in the format as set out in Annex III;

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(b) the parameters of the product information sheet, as set out in Annex V are entered into the product database;

(c) if specifically requested by the dealer of vacuum cleaners, the product information sheet shall be made available in printed form;

(d) the content of the technical documentation, set out in Annex VI, is entered into the product database;

(e) any visual advertisement for a specific model of vacuum cleaner contains the energy efficiency class and the range of energy efficiency classes available on the label in accordance with Annex VII and Annex VIII;

(f) any technical promotional material concerning a specific model of vacuum cleaner including technical promotional material on the Internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(g) an electronic label in the format and containing the information as set out in Annex III shall be made available to dealers for each model of vacuum cleaner;

(h) an electronic product information sheet, as set out in Annex V, is made available to dealers for each model of vacuum cleaner.

2. The energy efficiency class, the cleaning performance classes and the dust re-emission class are defined in Annex II and shall be calculated in accordance with Annex IV

Article 4
Obligation of dealers

Dealers shall ensure that:

(a) each vacuum cleaner, at the point of sale, including at trade fairs, bears the label provided by suppliers in accordance with point 1 (a) of Article 3 in such a way as to be clearly visible on the outside, on the front or top of the vacuum cleaner;

(b) in the case of distance selling and sale through the internet, the label and product information sheet are provided in accordance with Annexes VII and VIII;

(c) any visual advertisement for a specific model of vacuum cleaner contains the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII;

(d) any technical promotional material concerning a specific model of vacuum cleaner including technical promotional material on the Internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of energy efficiency classes available on the label, in accordance with Annex VII.

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Article 5

Obligations of internet hosting platforms

Where a hosting service provider as referred to in Article 14 of Directive 2000/31/EC of the European Parliament and of the Council[2] allows the direct selling of vacuum cleaners through its Internet website, the service provider shall enable the showing of the electronic label and electronic product information sheet provided by the dealer on the display mechanism in accordance with the provisions of Annex VIII and shall inform the dealer of the obligation to display them.

Article 6

Measurement methods

The information to be provided pursuant to Articles 3 and 4 shall be obtained by reliable, accurate and reproducible measurement and calculation methods, which take into account the recognised state-of-the-art measurement and calculation methods set out in Annex IV.

Article 7

Verification procedure for market surveillance purposes

Member States shall apply the procedure laid down in Annex IX when performing the market surveillance checks referred to in point 3 of Article 8 of Regulation (EU) 2017/1369[3].

Article 8

Review

The Commission shall review this Regulation in the light of technological progress and present the results of this review including, if appropriate, a draft revision proposal, to the Consultation Forum no later than *[OP – please insert the date - six years after day of entry into force of this Regulation]*.

The review shall in particular assess the following:

(a) the appropriateness of including robot vacuum cleaners in scope;

(b) the improvement potential with regard to the energy consumption, functional and environmental performance of vacuum cleaners;

(c) the effectiveness of existing measures in realising changes of end-user behaviour in purchasing more energy and resource efficient appliances;

(d) the possibility to address circular economy objectives;

(e) the appropriateness of introducing an Energy Index (EI) in line with that for commercial vacuum cleaners for all types of household vacuum cleaners included in the regulation.

[2] Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the Internal Market (OJ L 178, 17.7.2000, p. 1).

[3] Regulation (EU) 2017/1369 of the European Parliament and of the Council of 4 July 2017 setting a framework for energy labelling and repealing Directive 2010/30/EU (OJ L 198, 28.7.2017, p. 1–23)

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Article 9

Transitional measures

As from *[OP – please insert the day of entry into force of this Regulation]* until 28 February 2023, the product fiche required under point (b) of Article 3 of Regulation (EU) No 1061/2010 may be made available on the product database established by Article 12 of Regulation (EU) 2017/1369 instead of being provided in printed form. In this case the supplier shall ensure that if specifically requested by the dealer, the product fiche shall be made available in printed form.

Article 10

Entry into force and application

This Regulation shall enter into force on the twentieth day following that of its publication in the Official Journal of the European Union.

It shall apply from 1 March 2023.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Commission

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ANNEX I

Definitions applicable for the annexes

The following definitions shall apply:

1. '*battery operated active nozzle*' means a cleaning head provided with an agitation device powered by batteries to assist dirt removal;

2. '*household vacuum cleaner*' means a vacuum cleaner intended for household 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[4];

3. '*general purpose vacuum cleaner*' means a household or commercial mains-operated vacuum cleaner or a cordless 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;

4. '*hard floor vacuum cleaner*' means a household or commercial mains-operated vacuum cleaner or a cordless 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;

5. '*carpet vacuum cleaner*' means a household or commercial mains-operated vacuum cleaner or a cordless 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;

6. '*hard floor crevice test*' means a test of an appropriate number of 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;

7. '*test crevice*' means a removable U-shaped insert with appropriate dimensions filled at the beginning of a cleaning cycle with appropriate artificial dust;

8. '*carpet test*' means a test with an appropriate number of cleaning cycles on an appropriate 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] OJ L 374, 27.12.2006, p. 10.

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9. '*hard floor debris test*' means a test of an appropriate number of cleaning cycles where the cleaning head of a vacuum cleaner operating at maximum suction setting passes over a wooden test plate test area with debris laid out in an appropriate manner, 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 number of debris pieces picked up is appropriately assessed;

10. '*carpet debris test*' means a test with an appropriate number of cleaning cycles on an appropriate carpet test rig where the cleaning head of a vacuum cleaner operating at maximum suction setting passes over the test area with debris laid out in an appropriate manner, 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 number of debris pieces picked up is appropriately assessed;

11. '*debris*' means a standard type of smaller items picked up from the test floor in order to illustrate the removal of larger pieces of dirt from floors;

12. '*cleaning head width*' in m, at an accuracy of 3 decimal places, means the external maximum width of the cleaning head;

13. '*cleaning cycle*' means a sequence of an appropriate number of double strokes of the vacuum cleaner on a floor-specific test area ('carpet' or 'hard floor');

14. '*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;

15. '*test stroke speed*' in m/h means the appropriate cleaning head speed for testing. Products with self-propelled cleaning heads shall come as close as possible to the appropriate speed, but a deviation is permitted when clearly stated in the technical documentation;

16. '*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;

17. '*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;

18. '*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;

19. '*maximum operating power*' in W means the power level that the machine is not capable of exceeding in any operating condition set either by the user or automatically by the appliance;

20. '*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 μm emitted by a vacuum cleaner to the number of all dust particles of the same size

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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;

21. '*sound power level*' means airborne acoustical noise emissions, expressed in dB(A) re 1 pW and rounded to the nearest integer;

22. '*quick response*' (QR) code means a matrix barcode included on the energy label of a product model that links to that model's information in the public part of the product database;

23. '*display mechanism'* means any screen, including tactile screen, or other visual technology used for displaying internet content to users;

24. '*tactile screen'* means a screen responding to touch, such as that of a tablet computer, slate computer or a smartphone;

25. '*nested display'* means a visual interface where an image or data set is accessed by a mouse click, mouse roll-over or tactile screen expansion of another image or data set;

26. '*alternative text'* means text provided as an alternative to a graphic allowing information to be presented in non- graphical form where display devices cannot render the graphic or as an aid to accessibility such as input to voice synthesis applications;

27. *'maintenance mode'* means the mode of a cordless vacuum cleaner, when it is connected to the charging station / docking station and is no longer charging;

28. '*standby mode(s)*' means a condition where the equipment is connected to the mains power source, depends on energy input from the mains power source to work as intended and provides only the following functions, which may persist for an indefinite time:

    (a) reactivation function, or reactivation function and only an indication of enabled reactivation function;

    (b) and/or information or status display;

29. '*reactivation function*' means a function facilitating the activation of other modes, including active mode, by remote switch, including remote control, internal sensor, timer to a condition providing additional functions, including the main function(s);

30. '*network*' means a communication infrastructure with a topology of links, an architecture, including the physical components, organisational principles, communication procedures and formats (protocols);

31. '*networked standby*' means a condition in which the equipment is able to resume a function by way of a remotely initiated trigger from a network connection.

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ANNEX II

A. Energy efficiency classes

The energy efficiency class of a household mains operated or cordless vacuum cleaner shall be determined on the basis of its Annual Energy Consumption (AE) as set out in Table 1.

The AE of a vacuum cleaner shall be determined in accordance with Annex IV.

Table 1
Energy efficiency classes of household mains operated and cordless vacuum cleaners

Energy Efficiency Class	**Annual energy consumption (AE) [kWh/yr]**
A (most efficient)	AE ≤ 10,0
B	10,0 < AE ≤ 16,0
C	16,0 < AE ≤ 22,0
D	22,0 < AE ≤ 28,0
E	28,0 < AE ≤ 34,0
F	34,0 < AE ≤ 40,0
G (least efficient)	AE > 40,0

The energy efficiency class of a commercial vacuum cleaner shall be determined on the basis of its Energy Index (EI) as set out in Table 2.

The EI of a vacuum cleaner shall be determined in accordance with Annex IV.

Table 2
Energy efficiency classes of commercial vacuum cleaners

Energy Efficiency Class	**Energy Index (EI) [m^2/min]**
A (most efficient)	EI > 4,0
B	4,0 ≥ EI > 3,4
C	3,4 ≥ EI > 2,8
D	2,8 ≥ E I> 2,2
E	2,2 ≥ EI > 1,6

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F	$1,6 \geq EI > 1,0$
G (least efficient)	$EI \leq 1,0$

B. Cleaning performance classes

The cleaning performance class of a vacuum cleaner in scope shall be determined in accordance with its dust pick up on carpet (dpu_c) and dust pick on hard floor (dpu_{hf}) as set out in Table 2.

The dpu_c and dpu_{hf} shall be determined in accordance with Annex IV.

Table 3

Cleaning performance classes

Cleaning performance class	**Dust pick up on carpet (dpu_c)**	**Dust pick up on hard floor (dpu_{hf})**
A	$dpu_c > 0,91$	dpu hf > 1,11
B	$0,85 \leq dpu_c < 0,91$	$1,07 \leq dpu_{hf} < 1,11$
C	$0,80 \leq dpu_c < 0,85$	$1,02 \leq dpu_{hf} < 1,07$
D	$dpu_c < 0,80$	$dpu_{hf} < 1,02$

C. Dust re-emission classes

The dust re-emission class of a vacuum cleaner in scope shall be determined in accordance with its dust re-emission (*dre*) as set out in Table 4.

The *dre* shall be determined in accordance with Annex IV.

Table 4*Dust re-emission classes*

Dust re-emission class	**Dust re-emission (*dre*)**
A	$dre \leq 0,02$ %
B	$0,02$ % $< dre \leq 0,2$ %
C	$0,20$ % $< dre \leq 0,60$ %
D	$dre > 0,60$ %

D. Noise power classes

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The noise power class of a vacuum cleaner in scope shall be determined in accordance with its sound power level as set out in Table 5.

The sound power level shall be determined in accordance with Annex IV.

Table 5
Noise power classes

Noise power class	**Sound power level (*dB(A)*)**
A	<50 dB(A)
B	50-65 dB(A)
C	65-80 dB(A)
D	>80 dB(A)

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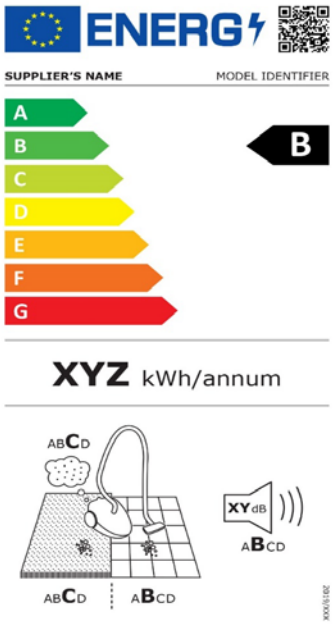
ANNEX III

Label

3. **LABEL**

3.1. General purpose household mains-operated and general purpose cordless vacuum cleaners.

The following information shall be included in the label:



I QR code;

II Supplier's name or trademark;

III Supplier's model identifier

IV The energy efficiency class as defined in Annex II; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V Average annual energy consumption (AE), as defined in Annex IV;

VI Dust re-emission class, determined in accordance with Annex II;

VII Carpet cleaning performance class, determined in accordance with Annex II;

VIII Hard floor cleaning performance class, determined in accordance with Annex II;

IX Sound power level, as defined in Annex IV;

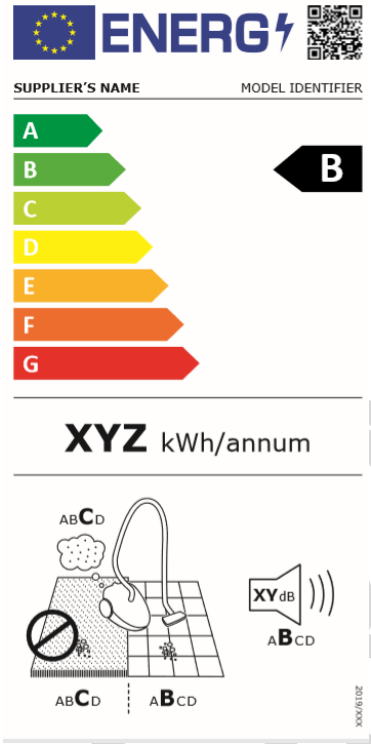
X Noise power class, determined in accordance with Annex II;

XI the number of this Regulation; that is '2022/XXX' [OP - please insert the number of this Regulation in this point and in the right corner of the energy label].

The design of the labels shall be in accordance with point 2.1 of this Annex.

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3.2. Hard floor household mains-operated and hard floor cordless vacuum cleaners. The following information shall be included in the label:



I QR code:

II Supplier's name or trademark;

III Supplier's model identifier;

IV The energy efficiency class as defined in Annex II; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V Average annual energy consumption, as defined in Annex IV;

VI Dust re-emission class, determined in accordance with Annex II;

VII Exclusion sign;

VIII Hard floor cleaning performance class, determined in accordance with Annex II;

IX Sound power level, as defined in Annex IV;

X Noise power class, determined in accordance with Annex II;

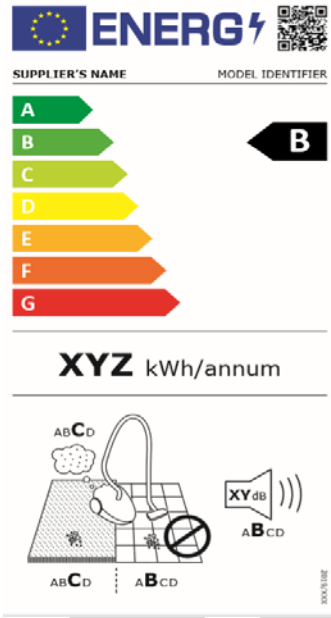
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XI the number of this Regulation; that is '2022/XXX' [OP - please insert the number of this Regulation in this point and in the right corner of the energy label]

The design of the label shall be in accordance with point 2.2 of this Annex

3.3. Carpet household mains-operated and carpet cordless vacuum cleaners.

The following information shall be included in the label:



I QR code;

II Supplier's name or trademark;

III Supplier's model identifier;

IV The energy efficiency class as defined in Annex II; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V Average annual energy consumption, as defined in Annex IV;

VI Dust re-emission class, determined in accordance with Annex II;

VII Carpet cleaning performance class, determined in accordance with Annex II.

VIII Exclusion sign;

IX Sound power level, as defined in Annex IV;

X Noise power class, determined in accordance with Annex II;

XI the number of this Regulation; that is '2022/XXX' [OP - please insert the number of this Regulation in this point and in the right corner of the energy label].

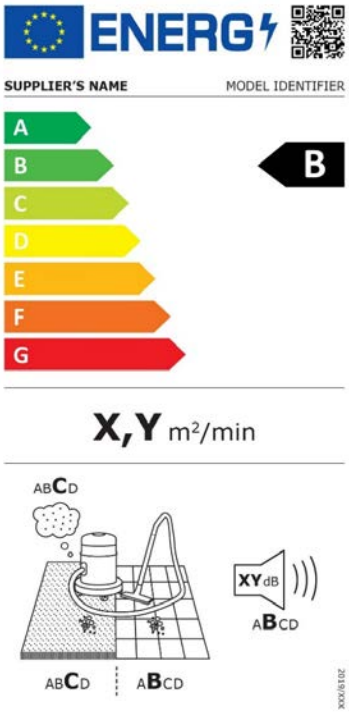
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The design of the label shall be in accordance with point 2.3 of this Annex.

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3.4. General purpose commercial vacuum cleaners.

The following information shall be included in the label:



I QR code;

II Supplier's name or trade mark;

III Supplier's model identifier;

IV The energy efficiency class as defined in Annex II; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V Energy Index, as defined in Annex IV;

VI Dust re-emission class, determined in accordance with Annex II;

VII Hard floor cleaning performance class, determined in accordance with Annex II;

VIII Carpet cleaning performance class, determined in accordance with Annex II;

IX Sound power level, as defined in Annex IV;

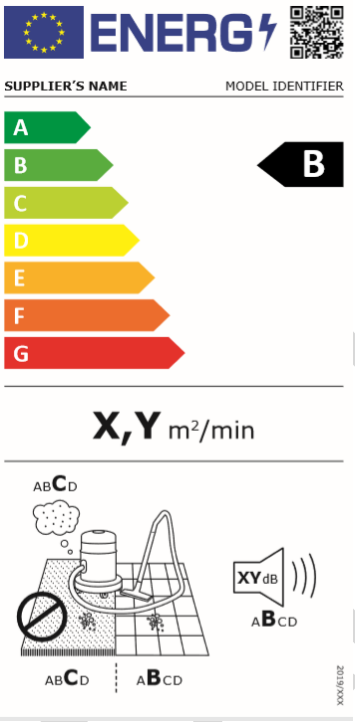
X Noise power class, determined in accordance with Annex II;

IX the number of this Regulation; that is '2022/XXX' [OP - please insert the number of this Regulation in this point and in the right corner of the energy label].

The design of the labels shall be in accordance with point 2.5 of this Annex.

3.5. Hard floor commercial vacuum cleaners.

The following information shall be included in the label:



I QR code;

II Supplier's name or trade mark;

III Supplier's model identifier;

IV The energy efficiency class as defined in Annex II; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V Energy Index, as defined in Annex IV;

VI Dust re-emission class, determined in accordance with Annex II;

VII Hard floor cleaning performance class, determined in accordance with Annex II;

VIII Exclusion sign;

IX Sound power level, as defined in Annex IV;

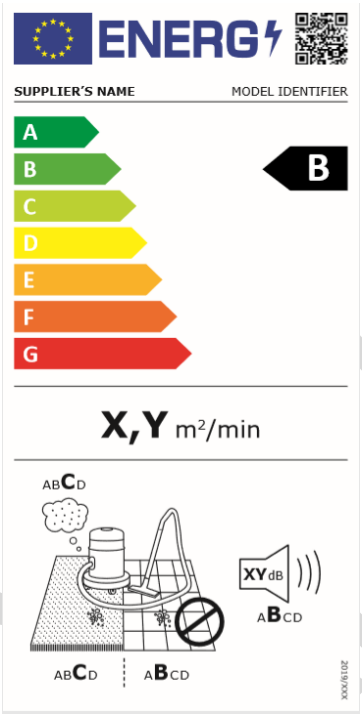
X Noise power class, determined in accordance with Annex II;

IX the number of this Regulation; that is '2022/XXX' [OP - please insert the number of this Regulation in this point and in the right corner of the energy label].

The design of the labels shall be in accordance with point 2.6 of this Annex.

3.6. Carpet commercial vacuum cleaners

The following information shall be included in the label:



I QR code;

II Supplier's name or trade mark;

III Supplier's model identifier;

IV The energy efficiency class as defined in Annex II; the head of the arrow containing the energy efficiency class of the vacuum cleaner shall be placed at the same height as the head of the arrow of the relevant energy efficiency class;

V Energy Index, as defined in Annex IV;

VI Dust re-emission class, determined in accordance with Annex II;

VII Exclusion sign

VIII Carpet cleaning performance class, determined in accordance with Annex II;

IX Sound power level, as defined in Annex IV;

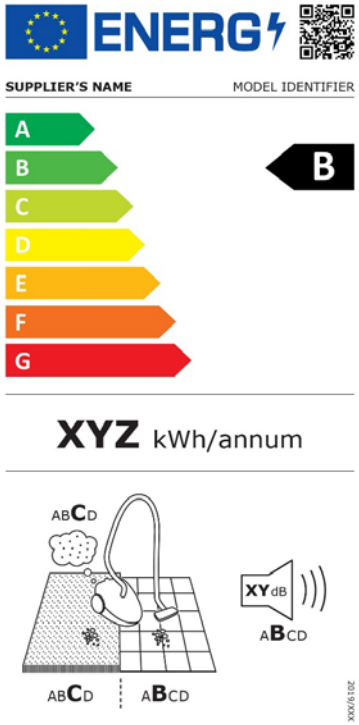
X Noise power class, determined in accordance with Annex II;

IX the number of this Regulation; that is '2022/XXX' [OP - please insert the number of this Regulation in this point and in the right corner of the energy label].

The design of the labels shall be in accordance with point 2.7 of this Annex.

2. LABEL DESIGN

2.1 The design of the labels for general purpose household mains-operated and general purpose cordless vacuum cleaners shall be the following:



Whereby:

(a) the label shall be at least 96 mm wide and 192 mm high. Where the label is printed in a larger format, its content shall nevertheless remain proportionate to the specifications above;

(b) the background of the label shall be 100 % white;

(c) the typefaces shall be Verdana and Calibri;

(d) colours shall be CMYK – cyan, magenta, yellow and black, following this example: 0,70,100,0: 0 % cyan, 70 % magenta, 100 % yellow, 0 % black;

(a) the label shall fulfil all the following requirements (numbers refer to the figure above):

❶ the colours of the EU logo shall be as follows:

– the background: 100,80,0,0;

– the stars: 0,0,100,0;

❷ the colour of the energy logo shall be: 100,80,0,0;

❸ the QR code shall be 100 % black;

❹ the supplier's name shall be 100 % black and in Verdana Bold, 9 pt;

❺ the model identifier shall be 100 % black and in Verdana Regular 9 pt;

❻ the A to G scale shall be as follows:

– the letters of the energy efficiency scale shall be 100 % white and in Calibri Bold 19 pt; the letters shall be centred on an axis at 4,5 mm from the left side of the arrows;

– the colours of the A to G scale arrows shall be as follows:

- A-class: 100,0,100,0;
- B-class: 70,0,100,0;
- C-class: 30,0,100,0;
- D-class: 0,0,100,0;
- E-class: 0,30,100,0;
- F-class: 0,70,100,0;
- G-class: 0,100,100,0;

❼ the internal dividers shall have a weight of 0,5 pt and the colour shall be 100 % black;

❽ the letter of the energy efficiency class shall be 100 % white and in Calibri Bold 33 pt. The energy efficiency class arrow and the corresponding arrow in the A to G scale shall be positioned in such a way that their tips are aligned. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow which shall be 100 % black;

❾ the annual energy consumption shall be in Verdana Bold 28 pt; 'kWh/annum' shall be in Verdana Regular 18 pt; The value and unit shall be centred and 100 % black;

❿ the pictograms shall be as shown as in the label designs and as follows:

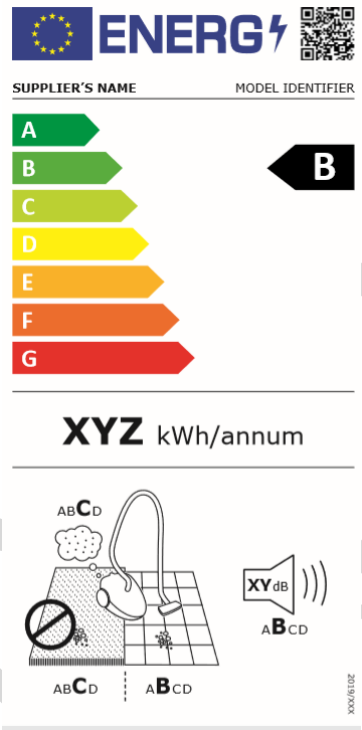
– the range of noise classes (A to D) shall be centred under the pictogram, with the letter of the applicable noise class in Verdana Bold 16 pt and the other letters of the noise classes in Verdana Regular 10 pt;

– the airborne acoustical noise emission pictogram: the number of decibels in the loudspeaker shall be in Verdana Bold 12 pt, with the unit 'dB' in Verdana Regular 9 pt; the range of noise classes (A to D) shall be centred under the pictogram, with the letter of the applicable noise class in Verdana Bold 16 pt and the other letters of the noise classes in Verdana Regular 10 pt;

⓫ the number of the regulation shall be 100 % black and in Verdana Regular 6 pt.

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2.2 The design of the labels for hard floor household mains-operated and hard floor cordless vacuum cleaners shall be the following:



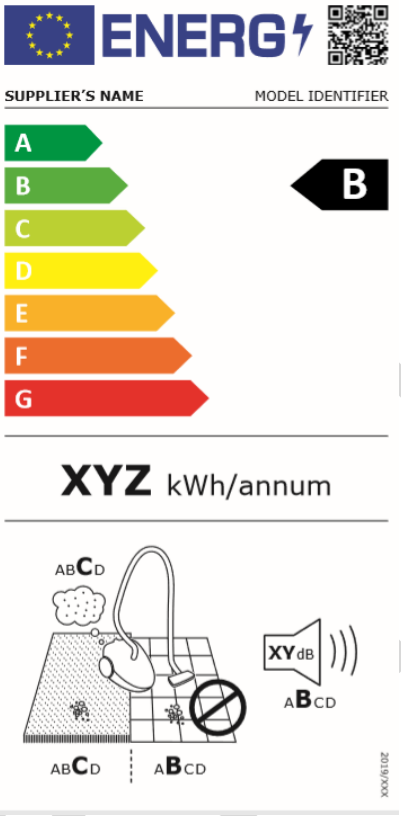
Whereby:

The design description of the label shall be in accordance with point 2.1 of this Annex except for Number 10 where the following applies:

❿ the carpet cleaning class shall not be shown, but instead replaced by an exclusion sign:

– Exclusion sign: border 3 pt – colour: 00-X-X-00 (100 % red) – diameter 16 mm.

2.3 The design of the labels for carpet household mains-operated and hard floor cordless vacuum cleaners shall be the following:



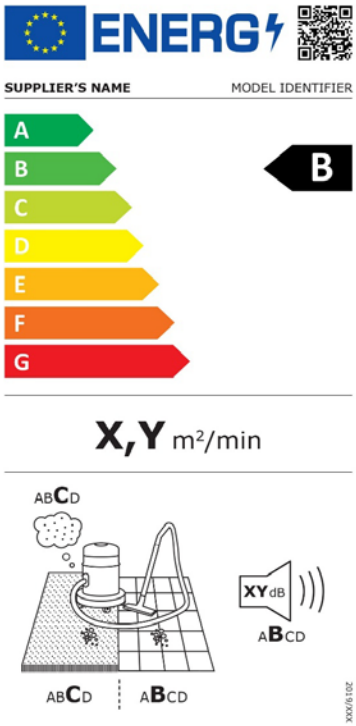
Whereby:

The design description of the label shall be in accordance with point 2.1 of this Annex except for Number 10 where the following applies:

❿ the hard floor cleaning class shall not be shown, but instead replaced by an exclusion sign:

– Exclusion sign: border 3 pt – colour: 00-X-X-00 (100 % red) – diameter 16 mm.

2.4 The design of the labels for general purpose commercial vacuum cleaners shall be the following:

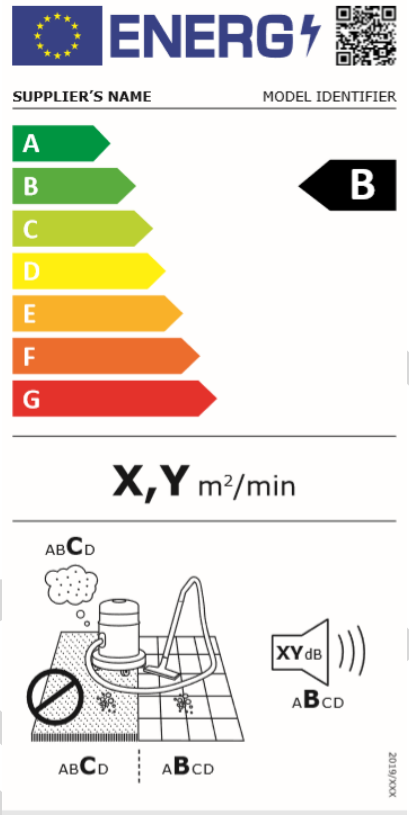


The design description of the label shall be in accordance with point 2.1 of this Annex except for Number 9 where the following applies:

❾ the energy index shall be in Verdana Bold 28 pt; 'm2/min' shall be in Verdana Regular 18 pt; The value and unit shall be centred and 100 % black;

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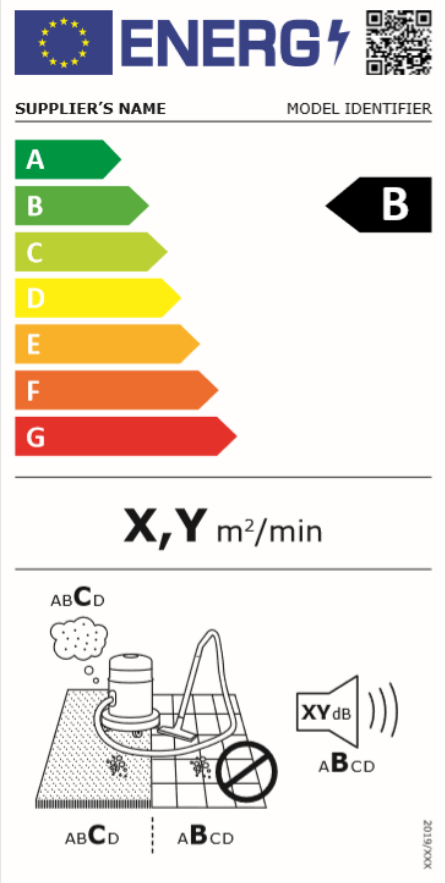
2.5 The design of the labels for hard floor commercial vacuum cleaners shall be the following:



The design description of the label shall be in accordance with point 2.2 of this Annex except for Number 9 where the following applies:

❾ the energy index shall be in Verdana Bold 28 pt; 'm2/min' shall be in Verdana Regular 18 pt; The value and unit shall be centred and 100 % black;

2.6 The design of the labels for carpet commercial vacuum cleaners shall be the following:



The design description of the label shall be in accordance with point 2.3 of this Annex except for Number 9 where the following applies:

❾ the energy index shall be in Verdana Bold 28 pt; 'm2/min' shall be in Verdana Regular 18 pt; The value and unit shall be centred and 100 % black;

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ANNEX IV

Measurement methods and calculations

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the Official Journal of the European Union, or other reliable, accurate and reproducible methods, which take into account the generally recognised state-of-the-art and in line with the following provisions.

The hard floor crevice test and debris test and the carpet dust and debris tests shall be used for the measurement and calculation of the Annual Energy Consumption, the Energy Index and the cleaning performance. The specific energy consumption, the cleaning performance and the dust re-emission shall be measured concurrently.

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

Numbers shall be rounded in accordance with B.3 Rule B of ISO 80000-1:2009. If the rounding takes place in decimals, the omitted places shall not be filled with zeros.

1. ANNUAL ENERGY CONSUMPTION

The annual energy consumption *AE* is calculated, in kWh/year and rounded to one decimal place, as follows for household and commercial electric mains-operated vacuum cleaners:

for carpet:

$$AE_c = \times 87 \times 50 \times 0{,}001 \times ASE_c \times \left(\frac{dpu_c, BASECASE}{dpu_c}\right)$$

for hard floor:

$$AE_{hf} = 4 \times 87 \times 50 \times 0{,}001 \times ASE_{hf} \times \left(\frac{deb_{hf}, BASECASE}{deb_{hf}}\right)$$

for general-purpose:

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

where:

– ASE_c is the average specific energy consumption in Wh/m^2 during carpet test, calculated as provided below

– ASE_{hf} is the average specific energy consumption in Wh/m^2 during hard floor test, calculated as provided below

– dpu_c is the dust pick-up on carpet, determined in accordance with point 4 of this Annex

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- $dpu_{c,BASECASE}$ is the basecase dust pick-up on carpet with a value of 0,8;
- $dpeb_{hf}$ is the debris pick-up on hard floor, determined in accordance with point 4 of this Annex
- $deb_{hf,BASECASE}$ is the basecase debris pick-up on hard floor with a value of 0,85;
- 50 is the standard number of one-hour cleaning tasks per year
- 87 is the standard dwelling surface to be cleaned in m^2
- 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

For hard floor cordless vacuum cleaners:

$$AE_{hf} = 4 \times \left(\frac{87}{4}\right) \times 200 \times 0{,}001 \times ASE \times \left(\frac{deb_{hf}, BASECASE}{deb_{hf}}\right) + \frac{M_h \times 8026}{1000}$$

For carpet cordless vacuum cleaners:

$$AE_c = 4 \times \left(\frac{87}{4}\right) \times 200 \times 0{,}001 \times ASE \times \left(\frac{dpu_c, BASECASE}{dpu_c}\right) + \frac{M_h \times 8026}{1000}$$

For general-purpose cordless vacuum cleaners:

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

where:
- M_h is the power consumption in maintenance mode in W
- 8026 is the annual number of hours spent in maintenance mode

Average specific energy consumption (ASE) for mains operated household vacuum cleaners

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/m^2 test area, at an accuracy of 3 decimal places, applicable for carpet, hard floor and general purpose vacuum cleaners with the appropriate suffixes, is:

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

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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 m^2, at an accuracy of 3 decimal places, passed over by the cleaning head in a cleaning cycle, calculated as twice the number of double strokes times the product of the head width and the appropriate length of test area.

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}, Ph_f, 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.

Average specific energy consumption (ASE) for cordless vacuum cleaners

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/m^2 test area, at an accuracy of 3 decimal places, applicable for carpet, hard floor and general purpose cordless vacuum cleaners with the appropriate suffixes, is:

$$SE = \frac{E_{charge}}{A}$$

where:

– E_{charge} is the electricity consumption in Wh at an accuracy of 3 decimal places of the cordless vacuum cleaner necessary to return the initially fully charged battery to its originally fully charged state after a cleaning cycle;

– *A* is the surface area in m^2, 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.

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For the hard floor tests the suffix *hf* and parameter names SE_{hf}, $E_{charge,hf}$ and A_{hf} shall be used in the above equation. For the carpet tests the suffix *c* and parameter names SE_c, $E_{charge,c}$ and A_c shall be used in the above equation. For each of the cleaning cycles, values of SE_{hf}, $E_{charge,hf}$, A_{hf} and/or SE_c, $E_{charge,c}$, A_c, as applicable, shall be included in the technical documentation.

Power equivalent of battery operated active nozzles (NP)

The general equation for the average power equivalent of battery operated active nozzles NP in W, applicable for carpet, hard floor and general purpose vacuum cleaners with the appropriate suffixes, is:

$$NP = \frac{E}{tbat}$$

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;

– *tbat* 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}, $tbat_{hf}$ shall be used in the above equation. For the carpet tests the suffix *c* and parameter names NP_c, E_c, $tbat_c$ shall be used in the above equation. For each of the cleaning cycles, values of E_{hf}, $tbat_{hf}$ and/or E_c, $tbat_c$, as applicable, shall be included in the technical documentation.

2. ENERGY INDEX FOR COMMERCIAL VACUUM CLEANERS

The Energy Index *EI* is calculated, in m^2/min and rounded to one decimal place, as follows for commercial electric mains-operated vacuum cleaners:

$$EI_{total} = \left(P_{area} \times C_{Q,total}\right) \times \left(C_{power,total}\right)$$

Where:

$$P_{area} = K_1 \times \frac{w_{nozzle}[m] \times v_{stroke}\left[\frac{m}{min}\right]}{n_{ss}}$$

Where:

- P_{area} is the surface cleaning performance (m^2 /min)
- K_1 is a weighting factor with the value 1,00
- W_{nozzle} is the nozzle width

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- v_{stroke} is the velocity of the nozzle over the floor
- 'n_{ss}' is the number of times the nozzle travels at constant speed over the surface during cleaning, with default value 4.

$$C_{Q,total} = K_4 \times \left(\frac{dpu_C}{dpu_{C,BAT}} + \frac{dpu_{hf} + K_5 \times deb_{hf}}{dpu_{hf,BAT} + deb_{hf,BAT}} \right)$$

Where:

- $C_{(Q,total)}$ is the cleaning performance factor
- K_4 is a weighting factor with the value 0,30
- K_5 is a weighting factor with the value 1,00
- dpu_c is the dust pick up on carpet measured in accordance with point 3 of this Annex
- dpu_{hf} is the dust pick up on hard floor measured in accordance with point 3 of this Annex
- deb_{hf} is the debris pick up on hard floor measure din accordance with point 4 of this Annex
- $dpu_{c,BAT}$ is the BAT dust pick up on carpet with a value of 0,95.
- $dpu_{hf,BAT}$ is the BAT dust pick up on hard floor with a value of 1,15
- $deb_{hf,BAT}$ is the BAT debris pick up on carpet with a value of 1,00
-

$$C_{power,total} = K_2 \times \left(\frac{power_{C,BAT}}{power_C} + \frac{power_{hf,BAT}}{power_{hf}} \right)$$

Where

- $C_{(power)}$ is the power factor
- K_2 is a weighting factor with the value 1,00
- $power_c$ is the measured input power during the carpet dust pick-up test cycles
- $power_{hf}$ is the measured input power during the hard floor dust pick-up test cycles
- $power_{c,BAT}$ is the base case input power on carpet with a value of 200 W
- $power_{hf,BAT}$ is the base case input power on hard floor with a value of 250 W

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3. DUST PICK-UP

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

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

4. DEBRIS PICK-UP

The debris pick-up on hard floor (deb_{hf}) shall be the determined as the average of the results of the two cleaning cycles in a hard floor debris test. The debris pick-up on hard floor shall be measured with the same nozzle, nozzle settings and vacuum cleaner settings as used in the measurement of dust pick-up on hard floor.

The debris pick-up on carpet (deb_c) shall be the determined as the average of the results of the two cleaning cycles in a carpet debris test. The debris pick-up on carpet shall be measured with the same nozzle, nozzle settings and vacuum cleaner settings as used in the measurement of dust pick-up on carpet.

5. DUST RE-EMISSION

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

6. SOUND POWER LEVEL

Sound power level for household electric mains operated and cordless vacuum cleaners shall be determined on carpet.

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ANNEX V

Product information sheet

The information part of the product information sheet of vacuum cleaners pursuant to point 1(b) of Article 3 shall be entered into the product database by the supplier according to table 4.

The user manual or other literature provided with the product shall clearly indicate the link to the model in the product database as a human-readable Uniform Resource Locator (URL) or as QR code or by providing the product registration number.

Table 4

Content, order and format of the product information sheet

Supplier's name or trade mark:			
Supplier's address:			
Model identifier:			
Type of vacuum cleaner	[mains-operated, cordless] [General purpose, hard floor, carpet]		
General product parameters:			
Parameter	Value	Parameter	Value
Annual Energy (kWh/year)[a] Energy Index (m2/min)[b]	x,xx	Energy efficiency class	[A/B/C/D/E/F/G]
Dust pick-up on hard floor (%)	x,xx	Dust pick-up class on hard floor	[A/B/C/D/E/F/G]
Dust pick-up on carpet (%)	x,xx	Dust pick-up class on carpet	[A/B/C/D/E/F/G]
Debris pick-up on hard floor (%)	x,xx	No classes	
Debris pick-up on carpet (%)	x,xx		
Sound power level on carpet (dB(A) re 1 pW)	x,xx	Noise power class	[A/B/C/D]
Maintenance mode (W) (where applicable)	x,xx	No classes	
Battery run time[c] (min)	x,xx		

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(if applicable)		

Additional information:

Weblink to the supplier's website, where the information in point 9 of Annex II to Regulation *[OP – please insert Regulation number of the Ecodesign Regulation]*[d] is found:

[a] For household mains operated and cordless vacuum cleaners

[b] For commercial vacuum cleaners

[c] The battery run time of cordless vacuum cleaners shall be measured in the same vacuum cleaner and nozzle settings as the dust pick-up

[d] If the product database automatically generates the definitive content of this cell the supplier shall not enter these data.

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ANNEX VI
Technical documentation

4. For household mains operated and cordless vacuum cleaners, the technical documentation referred to in Article 3(1)(d) shall include:

(a) identification and signature of the person empowered to bind the supplier;

(b) information as set out in Annex V;

(c) information as set out in Table 5;

(d) where appropriate, the references of the harmonised standards applied;

(e) where appropriate, the other technical standards and specifications used;

(f) the details and results of calculations performed in accordance with Annex III;

Table 5
Information to be included in the technical documentation for household mains operated and cordless vacuum cleaners

PARAMETER	UNIT	VALUE
Annual energy consumption AE_c, AE_{hf}, AE_{gp}	kWh/year	x,xx
Average specific energy consumption ASE_c, ASE_{hf}, ASE_{gp}	Wh/m^2	x,xxx
Specific energy consumption SE_c, SE_{hf}	Wh/m^2	x,xxx
Dust pick up dpu_c, dpu_{hf}, dpu_{gp}, dpu_m, dpu_{cal}, dpu_{ref}	%	x,xxx
Debris pick-up deb_c, deb_{hf}, deb_{gp}	%	x,xxx
Dust re-emission dre_c, dre_{hf}	%	x,xxx
Measured energy in test room (if applicable) $E_{measured}$	Wh	x,xxx
Charging energy (if applicable) E_{charge}, $E_{charge,hf}$	Wh	x,xxx
Power during cleaning, P_c, P_{hf}	W	x,xx
Average power equivalent of battery operated active nozzles (If applicable) NP_c, NP_{hf}	W	x,xx
Electricity consumption of the battery operated active nozzle necessary to return the initially fully charged battery to its originally fully charged state after a cleaning cycle E_c, E_{hf}	Wh	x,xxx
The total time in a cleaning cycle in which the	H	x,xxxx

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battery operated active nozzle is activated $tbat_c$, $tbat_{hf}$		
The surface area passed over by the cleaning head in a cleaning cycle, A_c, A_{hf}	m^2	x,xxx
The power consumption in maintenance mode (if applicable) M_h	W	x,xx
The total time, in a cleaning cycle during which the cleaning head is moving over the test area t_c, t_{hf}	h	x,xxxx
Sound power level	dB(A)	x,xx
Battery run time (if applicable)	h	x,xxxx

4.2. For commercial vacuum cleaners, the technical documentation referred to in Article 3(1)(d) shall include:

(a) identification and signature of the person empowered to bind the supplier;

(b) information as set out in Annex V;

(c) information as set out in Table 6;

(d) where appropriate, the references of the harmonised standards applied;

(e) where appropriate, the other technical standards and specifications used;

(f) the details and results of calculations performed in accordance with Annex III;

Table 6
Information to be included in the technical documentation for commercial vacuum cleaners

PARAMETER	UNIT	VALUE
Energy Index EI	m^2/min	x,xx
Input power $power_c$, $power_{hf}$	W	x,xxx
Dust pick up dpu_c, dpu_{hf}, dpu_{gp}, dpu_m, dpu_{cal}, dpu_{ref}	%	x,xxx
Debris pick-up deb_{hf}	%	x,xxx
Dust re-emission dre_c, dre_{hf}	%	x,xxx
Average power equivalent of battery operated active nozzles (If applicable) NP_c, NP_{hf}	W	x,xx
electricity consumption of the battery operated active nozzle necessary to return the initially fully charged battery to its originally fully charged state	Wh	x,xxx

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after a cleaning cycle E_c, E_{hf}		
The total time in a cleaning cycle in which the battery operated active nozzle is activated $tbat_c$, $tbat_{hf}$	H	x,xxxx
The number of double strokes applied in a cleaning cycle, n_{ds}	Integer	x,xxx
The total time, in a cleaning cycle during which the cleaning head is moving over the test area t_c, t_{hf}	h	x,xxxx
Sound power level	dB(A)	x,xx

3 Where the information included in the technical documentation for a particular vacuum cleaner model has been obtained:

- from an equivalent model of the same or a different manufacturer, or
- by calculation on the basis of design or extrapolation from another model of the same or a different manufacturer, or both,

the technical documentation shall include, as appropriate, a list of the all equivalent vacuum cleaners, the details of such calculation, the assessment undertaken by manufacturers to verify the accuracy of the calculation and, where appropriate, the declaration of identity between the models of different manufacturers.

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ANNEX VII

Information to be provided in visual advertisements, in promotional material, in distance selling except distance selling on the internet

5. In visual advertisements for vacuum cleaners, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(e) and Article 4(c), the energy efficiency class and the range of energy efficiency classes available on the label shall be shown an arrow matching the letter of the energy class, as indicated in Figure 1.

6. In promotional material for household vacuum cleaners, for the purposes of ensuring conformity with the requirements laid down in Article 3(1)(f) and Article 4(d), the energy efficiency class and the range of energy efficiency classes available on the label shall be shown with an arrow matching the letter of the energy class, as indicated in Figure 1.

7. Any paper based distance selling of vacuum cleaners must show the energy efficiency class and the range of energy efficiency classes available on the label as with an arrow matching the letter of the energy class, as indicated in Figure 1.

8. The energy efficiency class and the range of energy efficiency classes shall be shown, as indicated in Figure 1, with:

   (b) For vacuum cleaners: an arrow containing the letter of the energy efficiency class, in white and in a font size at least equivalent to that of the price, when the price is shown; and

   (c) the colour of the arrow matching the colour of the energy efficiency class; and

   (d) the range of available energy efficiency classes in 100 % black; and

   (e) the size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow, with a border of 0,5 pt in black placed around the arrow and the letter of the energy efficiency class.

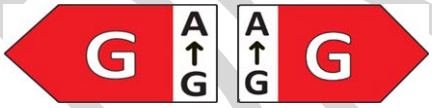


Figure 1: Coloured left/right arrow example, with range of energy efficiency classes indicated

By derogation, if the visual advertisements, technical promotional material or paper based distance selling is printed in black and white, the colour of the arrow can be in black and white in that visual advertisements, technical promotional material or paper based distance selling.

9. Telemarketing based distance selling must specifically inform the customer of the energy classes of the product and of the range of energy classes available on the label, and that the customer can access the label and the product information sheet through the product database website, or by requesting a printed copy.

For all the situations mentioned in points 1 to 3 and 5, it must be possible for the customer to obtain, on request, a printed copy of the label and the product information sheet.

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ANNEX VIII

Information to be provided in the case of distance selling through the internet

10. The appropriate label made available by suppliers in accordance with point 1(g) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the label is clearly visible and legible and shall be proportionate to the size specified in Annex III. The label may be displayed using a nested display, in which case the image used for accessing the label shall comply with the specifications laid down in point 2 of this Annex. If nested display is applied, the label shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the image.

11. The image used for accessing the label in the case of nested display shall:

(a) be an arrow in the colour corresponding to the energy efficiency class of the product on the label; and

(b) indicate the energy efficiency class of the product on the arrow in white in a font size equivalent to that of the price; and

(c) have one of the following two formats, and its size shall be such that the arrow is clearly visible and legible. The letter in the energy efficiency class arrow shall be positioned in the centre of the rectangular part of the arrow:

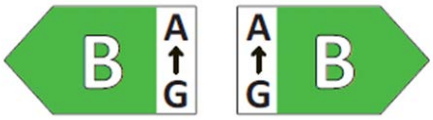


Figure 2: Coloured left/right arrow example, with range of energy efficiency classes indicated

12. In the case of nested display, the sequence of display of the label shall be as follows:

(a) the images referred to in point 2 of this Annex shall be shown on the display mechanism in proximity to the price of the product;

(b) the images shall link to the label as set out in Annex III;

(c) the label shall be displayed after a mouse click, mouse roll-over or tactile screen expansion on the image;

(d) the label shall be displayed by pop up, new tab, new page or inset screen display;

(e) for magnification of the label on tactile screens, the device conventions for tactile magnification shall apply;

(f) the label shall cease to be displayed by means of a close option or other standard closing mechanism;

(g) the alternative text for the graphic, to be displayed on failure to display the label, shall be the energy efficiency classes of the product in a font size equivalent to that of the price.

13. The electronic product information sheet made available by suppliers in accordance with point 1(h) of Article 3 shall be shown on the display mechanism in proximity to the price of the product. The size shall be such that the product information sheet is

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clearly visible and legible. The product information sheet may be displayed using a nested display or by referring to the product database, in which case the link used for accessing the product information sheet shall clearly and legibly indicate ‘Product information sheet’. If a nested display is used, the product information sheet shall appear on the first mouse click, mouse roll-over or tactile screen expansion on the link.

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ANNEX IX

Verification procedure for market surveillance purposes

The verification tolerances set out in this Annex relate only to the verification of the measured parameters by Member State authorities and shall not be used by the supplier as an allowed tolerance to establish the values in the technical documentation. The values and classes on the label or in the product fiche shall not be more favourable for the supplier than the values reported in the technical documentation.

Where a model has been designed to be able to detect it is being tested (e.g. by recognising the test conditions or test cycle), and to react specifically by automatically altering its performance during the test with the objective of reaching a more favourable level for any of the parameters specified in this Regulation or included in the technical documentation or included in any of the documentation provided, the model and all equivalent models shall be considered not compliant.

When verifying the compliance of a product model with the requirements laid down in this Delegated Regulation, the authorities of Member States shall apply the following procedure:

1. The Member State authorities shall verify one single unit of the model.

2. The model shall be considered to comply with the applicable requirements if:

   (h) the values given in the technical documentation pursuant to Article 3(3) of Regulation (EU) 2017/1369 (declared values), and, where applicable, the values used to calculate these values, are not more favourable for the supplier than the corresponding values given in the test reports; and

   (i) the values published on the label and in the product information sheet are not more favourable for the supplier than the declared values, and the indicated energy efficiency class and the condensation efficiency class (where applicable) are not more favourable for the supplier than the class determined by the declared values; and

   (j) when the Member State authorities test the unit of the model, the determined values (the values of the relevant parameters as measured in testing and the values calculated from these measurements) comply with the respective verification tolerances as given in Table 6.

3. If the results referred to in points 2(a) or (b) are not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

4. If the result referred to in point 2(c) is not achieved, the Member State authorities shall select three additional units of the same model for testing. As an alternative, the three additional units selected may be of one or more equivalent models.

5. The model shall be considered to comply with the applicable requirements if for these three units, the arithmetical mean of the determined values complies with the respective tolerances given in Table 6.

6. If the result referred to in point 5 is not achieved, the model and all equivalent models shall be considered not to comply with this Regulation.

7. The Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay after a decision being taken on the non-compliance of the model according to points 3 and 6.

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The Member State authorities shall use the measurement and calculation methods set out in Annex IV.

The Member State authorities shall only apply the verification tolerances that are set out in Table 6 and shall only use the procedure described in points 1 to 7 for the requirements referred to in this Annex. For the parameters in Table 6 no other tolerances, such as those set out in harmonised standards or in any other measurement method, shall be applied.

Table 6 - Verification tolerances

Parameter	**Verification tolerances**
Annual energy consumption (AE)	The determined value* shall not exceed the declared value by more than 4,00 %.
Energy Index (EI) for commercial vacuum cleaners	The determined value* shall not exceed the declared value by more than 4,00 %.
Dust pick up on carpet (dpu_c)	The determined value* shall not be lower than the declared value by more than 0,087..
Dust pick up on hard floor (dpu_{hf})	The determined value* shall not be lower than the declared value by more than 0,053.
Debris pick up on carpet (deb_c)	The determined value* shall not be lower than the declared value by more than 8,00%
Debris pick up on hard floor (deb_{hf})	The determined value* shall not be lower than the declared value by more than 8,00%
Dust re-emission (dre)	The determined value* shall not exceed the declared value by more than 0,12 %.
Power consumption in maintenance mode (M_h)	The determined value* shall not exceed the declared value by more than 0,10 W
Measured recharging energy $E_{measured}$	The determined value* shall not exceed the declared value by more than 1,00 %.
Sound power level	The determined value* shall not exceed the declared value.
Operational motor lifetime	The determined value* shall not be lower than the declared value by more than 5%.

* In the case of three additional units tested as prescribed in point 4, the determined value means the arithmetical mean of the values determined for these three additional units.

Kommentiert [RK1]: Observation: This is 11,6% of the limit value

Kommentiert [RK2]: 5% of limit value

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