Raising standards for consumers

The Consumer Voice in Europe

CONSUMER ORGANISATIONS' COMMENTS ON ECODESIGN AND ENERGY LABELLING FOR VACUUM CLEANERS

European Commission's draft legislative proposal of September 2019

Contact: Aline Maigret – sustainability@beuc.eu – anec@anec.eu

Reference: BEUC-X-2019-100
ANEC-PT-2019-ErP-005

ANEC, THE EUROPEAN ASSOCIATION FOR THE CO-ORDINATION OF CONSUMER REPRESENTATION IN STANDARDISATION
Av. de Tervueren 32, box 27 – 1040 Brussels - +32 (0)2 743 24 70 - www.anec.eu
EC register for interest representatives: identification number 507800799-30

BUREAU EUROPÉEN DES UNIONS DE CONSOMMATEURS AISBL | DER EUROPÄISCHE VERBRAUCHERVERBAND
Rue d'Arlon 80, B-1040 Brussels • Tel. +32 (0)2 743 15 90 • www.twitter.com/beuc • consumers@beuc.eu • www.beuc.eu
EC register for interest representatives: identification number 9505781573-45

Funded by the European Union

Why it matters for consumers

Thanks to EU energy-efficiency rules, consumers can save electricity – hence money – when vacuuming their homes. Over the lifetime of their vacuum cleaners, consumers have saved around 55 euros thanks to Ecodesign[1]. The measures also improve convenience and health of consumers thanks to noise and dust-pick up requirements for example.

Summary

Vacuum cleaners are covered at EU level by Ecodesign requirements since 2013[2]. We welcome that the European Commission is now reviewing these requirements to reflect technological developments and current usage patterns.

In this paper, European consumer organisations, ANEC and BEUC, give recommendations pertaining to the draft legislative proposals put forward by the European Commission in September 2019. Here is a summary of what we expect the European Commission to do:

- Include robot vacuum cleaners in both the Ecodesign and Energy labelling scopes;
- Modify definitions to avoid loopholes;
- Tighten the maximum operating power to 750W;
- Set stricter sound power level requirements;
- Keep the dust re-emission requirement and apply it to cordless vacuum cleaners;
- Keep the requirement on motion resistance;
- Keep the lifetime and resource efficiency requirements, put forward a requirement on (battery) lifetime of an active nozzle and refine the list of spare parts to be made available;
- Ensure the comprehensibility of the Energy label and of individual icons via a consumer survey.

[1] Our 2016 study shows that consumers can save up to €6.4 per year thanks to Ecodesign rules for vacuum cleaners. The lifespan of a vacuum cleaner is typically between 8 to 10 years.
[2] Commission Regulation (EU) No 666/2013 of 8 July 2013.

1. Scope: Robot vacuum cleaners should benefit from Ecodesign and Energy labelling measures

Firstly, robot vacuum cleaners should be included in the scope. Excluding those appliances would mean they will not have to meet any Ecodesign requirements or display the well-known Energy label, which is not acceptable as it is a growing market segment.

We acknowledge the difficulty to apply the exact same requirements for different type of vacuum cleaners. Indeed, certain proposed requirements for mains-operated appliances would be unambitious when applied on robots, while other requirements could take almost all the robot vacuum cleaners off the market, thus reducing consumer choice.

Still, we believe a right balance is possible and that **the European Commission should put forward requirements for robot vacuum cleaners** to push for more efficient and performant robot vacuum cleaners on the EU market. As their sales is expected to increase in the EU[3], and their performance could be improved[4], it is of importance to regulate them.

A survey on lifetime of appliances from our Austrian member[5], AK Wien, reveals that only 23% of interviewees that own or have owned a robot vacuum cleaner would buy one again. Although the motivations can be diverse, one could suspect that robot vacuum cleaners do not meet consumers' expectations.

When developing requirements on robot and cordless vacuum cleaners, **the European Commission should especially focus on durability and battery-related issues.** We are indeed concerned about their lifetime as robot vacuum cleaners are used much more intensively, i.e. higher number of hours per week, than regular vacuum cleaners. It is indeed our understanding that consumers do not use robots to perform the big clean up every week/month, but rather to maintain a certain level of cleanliness. A motor lifetime of 1,200 hours, as mentioned in the review study (page 244) seems reasonable. Furthermore, a battery lifetime comparable to the one proposed for cordless vacuum cleaners should be considered, combined with a requirement that the battery should be easily replaceable by consumers.

In order to acknowledge the time needed for standardisers to come up with suitable performance tests, we would favor working with a two-tier approach when it comes to robot vacuum cleaners: 1) material efficiency and durability requirement as of 2023, and 2) performance requirements as of e.g. 2026.

Secondly, we welcome that no distinction has been made between larger and smaller handstick cordless vacuum cleaners. We agree that the scope subcategorization of cordless vacuum cleaners should be kept to a minimum in order not to complicate the regulations and avoid loopholes.

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[3] See preparatory study

[4] According to the testing results of our UK member, Which?, none of the robot vacuum cleaners are close to reaching the requirements set for main-operated vacuum cleaners at the moment.

[5] Unpublished to date. The results will be shared with the European Commission once published.

The European Commission should consider to:

- ➔ **Include robot vacuum cleaners in both the Ecodesign and Energy labelling scope.**
- ➔ **Work with a two-tier approach for these appliances: 1) a first tier directly applying material efficiency and durability requirements, i.e. as of 2023, and 2) a second tier setting performance requirements as of e.g. 2026 (to acknowledge the standardisation issues).**

2. ECODESIGN

2.1. Definitions need improvement

(39), ED act: We welcome the new wording for 'maximum operating power' as it closes loopholes in comparison with the current text, by explicitly stating that the machine should not be capable of exceeding this power in any conditions.

(9), (10), ED act: We believe the definitions on cordless and handheld vacuum cleaner are not clear enough as they could allow manufacturers to get around the rules by classifying a cordless vacuum cleaner as a handheld one. This would mean for example that the definition of handled vacuum cleaners could reasonably include the Dyson V11, which would exempt the Dyson V11 and similar vacuum cleaners from this legislation.

- ➔ **We welcome the definition of 'maximum operating power'**
- ➔ **Definitions (9), (10), ED act should be modified to avoid any loopholes. We propose for example that the definition of handheld includes 'a handheld vacuum cleaners should not be suitable for floor cleaning from a standing position, or come provided with floor heads which are designed for cleaning large areas of floor', under both Ecodesign and Energy labelling measures.**

2.2. Energy efficiency requirements: No need for full-throttle power

The maximum operating power should be tightened to 750W. Tests from consumer organisations have shown that vacuum cleaners operating well below that power can have excellent cleaning performance.

➔ **ANEC and BEUC propose a maximum operating power of 750W instead of 900W as proposed by the European Commission.**

2.3. Functional requirements: Sound, dust and motion functions can get better

Although we welcome that the requirements on **sound level power** are stricter than the current ones, the proposed levels lack ambition (except for upright vacuum cleaners), especially for cordless appliances at 85 dB(A). Based on tests of BEUC's UK member, Which?, the average noise on carpet for cordless vacuum cleaner is around 80dB, and 77dB for corded vacuum cleaners. We would therefore recommend 80dB for cordless vacuum cleaners and 75 dB for mains-powered vacuum cleaners.

We support the requirement on **dust re-emission** but believe this needs to apply to both types of vacuum cleaners. Tests from our UK member, Which? show that it is perfectly possible for a cordless vacuum to match, or even exceed the dust re-emission level of a corded device. Allowing a much higher re-emission for cordless vacuum cleaners is not acceptable as consumers' health needs to be protected irrespective of the vacuum cleaner model used.

We welcome that the European Commission is putting forward a requirement on **motion resistance**. The vacuum cleaner designer needs to optimise the balance between vacuum power/air flow, which is required to maximise pick up, and the product sucking itself onto the carpet hence creating motion resistance. Many examples have shown that via a good nozzle design, very good performance is possible also with lower motion resistance. Reducing the motion resistance, will increase consumer comfort overall when cleaning their carpets and floors, but will also maintain access to users with less muscle strengths - such as elderly people.

However, this requirement must be further detailed, specifying e.g. the type of carpet and at what power level. In addition, we would in the future recommend going further with a value between 30 and 35N. Although the 40N cut off is a positive step, it will not completely solve the problem of vacuum cleaners that are too hard to push for consumers. Based on some recent Which? tests, we note that a push force of 40N on Wilton Carpet, test carpet used in the standard, can be as much as 80N on thicker carpets, like Saxony, which are harder to move vacuum cleaner on and are also very common in the UK, and other parts of northern Europe.

In order to improve the functional requirements, we propose to:

- ➔ **Set stricter sound power level requirements, i.e. 80dB for cordless vacuum cleaners and 75 dB for mains-powered vacuum cleaners.**
- ➔ **Keep the dust re-emission requirement but also apply it to cordless vacuum cleaners.**
- ➔ **Keep the requirement on motion resistance but 1) detail it to avoid loopholes and 2) consider proposing a lower value in the future (review close).**

2.4. Lifetime and resource efficiency requirements: Extend vacuum's lifetime even further

According to the European Commission's proposal, the **operational motor lifetime** shall be greater or equal to 550 hours with an empty receptacle. As already stated during the preparatory study, we believe that if the current product lifetime of mains-operated vacuum cleaners is assumed to be 10 years, 500 hours motor lifetime is not enough and instead, 600 hours should be proposed. A 2015 study from our Austrian member, AK Wien, confirms that the average expected lifetime of a vacuum cleaner is 10,3 years[6].

We welcome that the **hose** shall be durable so that it is still useable after 40 000 oscillations under strain.

The European Commission proposes that **battery lifetime for cordless vacuum** cleaners shall be at least 600 cycles while maintaining 70% capacity. We welcome this requirement but wonder how representative the test is. Research from our UK member, Which? shows that consumers use their cordless vacuum cleaners often but for very short periods at a time, and they tend not to completely drain the battery before re-charging. It is important that batteries last - but should also be tested the way that consumers use them.

We regret that no requirement on **(battery) lifetime of an active nozzle** is put forward. Neither is there a requirement on the availability and interchangeability of its battery. Consumers might therefore throw away the entire vacuum cleaner if a battery-operated active nozzle stops functioning. We believe therefore that a requirement on lifetime of the active nozzle requirements on availability and interchangeability of its battery should be considered.

We welcome that the European Commission proposes to align the ED draft for vacuum cleaners with other product groups when it comes to **resource efficiency**. We therefore overall welcome the requirement on 1) the availability of spare parts, 2) the maximum delivery time, 3) the access to repair and maintenance information and 4) dismantling for

[6] https://wien.arbeiterkammer.at/service/studien/Konsument/Produktnutzungsdauer.html

material recovery and recycling while avoiding pollution. However, we provide recommendations for improvement:

- Spare parts related to motor failure (incl. carbon brushes) have been omitted from the list of parts that should be made available to **professional repairers**. A study by consumer organisations in 2016[7] has shown that in an extended motor lifetime test, all motor failures were caused by worn-out carbon brushes. And that replacing a carbon brush, when this part was easily accessible, resulted in a doubling of motor lifetime.
- No differentiation should be made between corded and cordless vacuum cleaners when it comes to the minimum period for the availability of spare parts. Our UK member, Which?, found that that consumers expect cordless vacuum cleaners to last a similar amount of time to corded.
- Hose and handle should also be made available **to consumers** (and not only professional repairers). Upright vacuum cleaners for example are simple machines without complicated electronics, and any layman can solve a number of typical problems themselves.

One of BEUC German members, Stiftung Warentest, has assessed repair profitability for various appliances, including vacuum cleaners. Based on the assumption that two repairs would take place and the first one after 8 years[8], Stiftung Warentest found that it is currently not interesting financially for consumers to repair their vacuum cleaners[9]. However, Stiftung Warentest notes that a repair taking place in the first four year after the purchase then becomes interesting from a financial perspective. Same is true for older appliances, especially when self-repair[10] comes into play.

We support the lifetime and resource efficiency requirements, and put forward suggestions for improvement:

- ➔ **The operational motor lifetime shall be greater or equal to 600 hours, instead of 550 hours, if a 10 years lifetime is taken as assumption.**
- ➔ **Keep the requirement on the hose durability, i.e. that it shall be durable so that it is still useable after 40 000 oscillations under strain.**
- ➔ **Put forward a requirement on (battery) lifetime of an active nozzle.**
- ➔ **Keep the resource efficiency requirements that provides alignment with other product groups. However, refine further the list of spare parts to be made available (see above).**

[7] Study results available on request.

[8] User fixes twice: calculated for a median purchase price of 170 euros and two repairs of an average of 78 euros each; first repair after 8 years (Stiftung Warentest Test 4/2017).

[9] Stiftung Warentest Test 4/2017.

[10] For example, upright vacuum cleaners are simple machines without complicated electronics, so that any layman can solve typical problems themselves.

3. Energy labelling

As the Energy label is a well-known tool among consumers, the European Commission should ensure its overall comprehensibility remain, and that consumer understand all icons. For this sake, we encourage the European Commission to undertake a consumer survey to try and increase the understanding of the Energy label for vacuum cleaners, as made possible under the 2017 Energy labelling framework.

It is currently unclear whether consumers understood the previous label for vacuum cleaners and whether the one proposed will be clear enough as it is very dense. The consumer survey should try to find out what information consumers value the most, and how understandable all icons are, both individually and as one label. An overloaded label risks diluting the main message and should be avoided.

More concretely, the consumer survey could look into whether the dust re-emission icon is properly understood by consumers. We also would like the European Commission to assess whether the maximum usable volume (MUV) could be interesting to include in the label[11].

> ➔ **The European Commission should ensure that overall comprehensibility of the Energy label for vacuum cleaners is enhanced, and that consumer understand all icons. This can be checked via a consumer survey.**

END

[11] The reasoning of some of our members is that without the stated MUV on the energy label, some manufacturers might be tempted to claim, somewhere in their manual/on their website, a very small MUV to allow for less dust loading during the new energy label tests which will likely have to be performed with half loaded receptacles. Thus, giving them an unfair advantage. Also, the MUV in itself can be of interest to consumers, because it gives an indication of the frequency with which the vacuum cleaner has to be emptied. Some consumer groups therefore already now include MUV in their comparisons of vacuum cleaners.
Similarly, our UK member, Which?, displays MUV in their reviews as they believe it is important information for consumers.