

EVIA Comments on Residential Ventilation Units

3 June 2020

Following the 2nd stakeholder meeting on the review of Regulations (EU) 1253/2014 and 1254/2014 on 7th May 2020 and in addition to the positions submitted previously, EVIA would highlight the following important aspects to be considered in a future revision.

Split requirements for UVU and BVU:

In the stakeholder meeting, a pre-calculation has been shown with labelling results for UVU and BVU's with different kinds of controls. Without any zonal or local sensor/control, a UVU currently scores an F or G energy label.

At a next revision where a F or G label can be deleted these ventilation-units cannot be placed on the market anymore. A zonal or local control requires central or decentralized valves and/or individual ductwork to rooms. This can be problematic in existing buildings.

The minimum requirements are based at an average climate. UVU's without zonal or local controls are perfectly applicable in warmer climate zones.

Whereas we are in favour of keeping a unified label, our proposal is to split the requirements for UVU's and BVU's for the following reasons:

- This might allow UVU without advanced control system to be placed on the market as a replacement.
- This might allow UVU without advanced control system to be placed on the market in the warm climate zones.
- For non-residential ventilation units the Regulation (EU) 1253/2014 already includes different minimum requirements for UVUs and BVUs.
- The same approach is taken in other ecodesign regulations, for example boilers and heat pumps.

Calculation for SEC, Control factors and Labels:

EVIA would greatly appreciate receiving clarification for the formulas used for pre-calculating the control factors and label classes. The new formula must contain a mistake, as with better heat recovery efficiency the SEC value gets worse. This should not be the case.

All DCV systems currently available on the market shall unequivocally be linked to a cell in the CTRL factor table. EVIA would like to highlight the issue of systems slightly different than the ones described in the table presented at the stakeholder meeting. How to handle them? Assigning them a default CTRL = 1 would not be acceptable and would not follow the market and variation in geographical/climatic needs. An alternative table of CTRL-factors, based on- and expanding the current list of CTRL-factors was sent, please consider using this table which is less complex:

CTRL = ...		control			
Sensors / switches		Current 1253	central	zonal ^(b)	local
	manual	1,0	1,0	0,95 ^(c)	0,90 ^(c)
	clock	0,95	0,95	0,85	0,80 ^(c)
	central	0,85	0,85	(a)	(a)
	zonal	0,65	0,75	0,65	(a)
	local	0,65 (0,5)	0,65	0,55	0,45

The EVIA key principles for defining CTRL factors are:

- As the CTRL factor has a huge impact on the result, the determination shall be unequivocal and clear. Robust definitions are required.
- A limited selection of no more than ~8-12 (better less) options shall be offered for the regulation use currently.
- Design engineers and manufacturers might later use the full approach of the VPA tool for individual consulting.
- The building and other (not ErP) related product impacts shall be limited to the main needs to compare products/systems. MISC and INF factors might be updated or integrated in CTRL factors.

At the current level, the impact of different types of sensors (humidity, CO₂, VOC, etc.) and the quality of controls equipment shall not be determined or tested. Current regulation does not specify as there are currently no suitable test procedures for this.

Moreover, he presented results at the 7th May 2020 stakeholder meeting (slides 33 to 34) raise questions about comparable label classes for UVUs and BVUs with heat recovery in warmer climates as an example. Label B should be achievable for the best available technology in each climate, including warm climates.

Ventilation Performance Information:

EVIA proposes not to show ventilation performance information on the label. The control factor is already calculated based on ventilation performance. By using the CTRL-Factor, the SEC is deemed to be determined at the same ventilation performance (airflows from EN 16798-1). Showing the VPI would therefore be redundant.

Volume flows and calculation:

EVIA would greatly appreciate receiving clarification on the below values proposed for the reference airflows:

Whole house VU: 2.50 m³/h/m²
 Local VU for HS : 1.67 m³/h/m²
 Local VU for ES : 0.83 m³/h/m²

The value for the whole house should be 2.8 m³/h/m² the area weighed average of the values for HS and ES based on EN 16798-1.

A split calculation for HS or ES might lead to further open questions that would also require further clarification:

- How to rate single room exhaust system with overflow from HS to ES?
- How to rate single room BVU with a connection duct to other rooms (ES alternative HS)?

- Typically, in most Member States design is exhaust flow in ES and supply in HS with overflows. Exhaust flows and Supply flows cannot simply be added.

EVIA proposes to keep the current procedure with an average flow for all.

Sound Power Level:

EVIA prefers the Sound Power Level at Reference Airflow in combination with the Reference Airflow on the Label. With a remark or in a smaller field the maximum airflow.

Defrosting:

The presented table does not include all defrosting strategies (for example defrosting by using fluids, reduction of defrosting temperature range by using special heat exchanger types like enthalpy heat exchangers) and thus cannot be applied. In addition, the best way would be to refer to existing tables for example in EN 13142.

About EVIA

The European Ventilation Industry Association (EVIA)'s mission is to represent the views and interests of the ventilation industry and serve as a platform between all the relevant European stakeholders involved in the ventilation sector, such as decision-makers at the EU level as well as our partners in EU Member States. Our membership is composed of more than 40 member companies and 6 national associations across Europe, realising an annual turnover of over 7 billion euros and employing more than 45,000 people in Europe.

EVIA aims to promote highly energy efficient ventilation applications across Europe, with high consideration for health and comfort aspects. Fresh and good indoor air quality is a critical element of comfort and contributes to keeping people healthy in buildings.