

# EHPA Position Paper

## Testing and Calculation Methods

EHPA would like to thank the Commission and the study teams for the work already carried out on the review of the Ecodesign Regulation 813/2013. We appreciated the opportunity to have additional technical meetings to further explain our concerns. Please find below our comments and recommendations following the one-on-one meeting of 29 June 2022.

## General recommendations

Before going in more details regarding the test methods, EHPA would like to share some general recommendations.

According to the “New Approach” laid down in a Council Resolution of 7 May 1985 on a new approach to technical harmonisation and standards, the Regulation should as straight forward as possible and only mention the main objectives. The legal texts should not contain details on measurements and calculations which should be left to the harmonised standards.

Having technical details in the Regulation may create some unexpected loopholes. Learning from the winter package, it will increase the number of errors and the need for amending regulations. EHPA has already sent a detailed analysis to the Commission and consultant highlighting the inconsistencies in the draft Regulations 813/2013, 814/2013, 811/2013 and 812/2013. For this reason, we recommend removing the details on test methods/test conditions from the Regulations.

## Compensation Method

Before sharing our feedback on the control verification procedure, we would like to quickly reiterate EHPA position on the compensation method. While we welcome and support BAM investigations on the compensation method, EHPA strongly disagrees with the assumption that the compensation method is ready to be employed, and not even with the optional approach proposed in the draft regulations. The compensation method is still not fit for short-term introduction. As explained in our previous [position paper](#), further work is needed before assessing whether the method can be introduced.

## Control Verification Procedure (CVP)

The CVP procedure could help enhancing the current test method as it confirms the settings indicated by the manufacturer for performance test are within the normal operating range of the product. This confirmation prohibits circumvention and that manufacturer declare specific settings only for performance rating. It allows to verify the operation of the compressor during testing without fixed compressor speeds.

The CVP method has been introduced following extensive study and tested for commercial air conditioners (JIS B 8616:2015 for Package Air conditioner up to 56kW and lately in AHRI 1230:2021 VRF and Multi-Split Air conditioning and HP equipment with a capacity  $\geq 19$  kW). The CVP is a mature and straightforward methodology, used for CAC, with a high repeatability and reproducibility of the test. As such, it offers a more mature and proven alternative to the compensation method, that still require more extensive




standardization work, while addressing the main concern of differences between test at fixed settings with real operation.

The control verification procedure up until now was only used with air enthalpy method and mostly for commercial air conditioning products. The application of CVP requires its adoption for other range of equipment (RAC or hydronic HP) and testing method. Therefore, further assessment of the compatibility with such equipment and test methods could be carried out by experts in relevant standardization committees before its introduction (temperature slope control, chamber homogeneity, uncertainties range).

The CVP test chamber temperature settings is required; they need to be selected from a pre-designed range of temperature values for heating or for cooling mode of operation. The CVP test chamber may also require additional control at slow pace of temperature change.

Furthermore, this new test (up to 8 hours in the JIS standard, 14h in some cases<sup>1</sup>) could add on to the already important test burden for RAC and HP equipment increasing the gap with other technologies and inevitably hindering faster introduction to the market of these equipment and affecting their affordability to consumers.

 <b>Pros</b>	<b>Cons</b>
<ul style="list-style-type: none"><li>• Allow to observe the operation of compressor without fixed speeds and link it to test part load data.</li><li>• High repeatability and reproducibility of the test for CAC due to its straightforward methodology.</li><li>• Avoid that systems potentially declare part load capacities that do not occur in real life. Support reflection of real-life situation.</li></ul>	<ul style="list-style-type: none"><li>• Test chamber temperature settings for the CVP test is required: select from a pre-defined range of temperature values for heating and for cooling mode of operation.</li><li>• The CVP test chamber may require additional control at slow pace of temperature change.</li><li>• The CVP will add on test burden, at least 8 hours.</li></ul>

By this mean, EHPA want to express the observations on the CVP made so far and share it with the European Commission for further consideration.

<sup>1</sup> If thermostat-off is not reached within 6 hours then the test is extended to 14 hours (JIS Standard, in the alternative testing methods report, page 28)