

PG-ERC position concerning new hygienic-related construction requirements for plate exchangers in revised EN 13053:2019

In a nutshell

The revised EN 13053:2019 introduced a new rule for construction and cleaning requirements of plate heat exchangers. Members of the Eurovent Product Groups 'Energy Recovery Components' are of the opinion that the new rule might be misleading and constrain application of plate exchangers. With this position paper addressed to members of the Eurovent Product 'Air Handling Units' and experts of CEN TC 156 WG 5, manufactures of heat exchangers intend to provide an explanatory note on correct interpretation of new requirements.

Background

The revised draft of well-established and fundamental for AHU manufactures standard EN 13053 '*Air handling units - Rating and performance for units, components and section*' was approved by CEN in a Formal Vote last year and is expected to be published in next weeks.

New requirements in revised EN 13053

For hygienic reasons, the final draft introduced in paragraph 6.5.4. a new rule for construction and cleaning requirements of plate heat exchangers

For hygienic reasons plate heat exchangers with a fin space of 3 mm should be installed in a manner that enables cleaning (e.g. installation in segments) when the depth exceeds 1 200 mm. In case of larger distances between the fins the maximum depth can be expanded linearly

Extended clarification for correct interpretation of the new rule

Members of the Eurovent Product Groups 'Energy Recovery Components' assert that the current wording of this rule leaves room for incorrect interpretation and could constrain application of plate exchangers facing increased ErP requirements.

In order to provide for unambiguous definitions and to allow for a level playing field for all technologies on the market, suppliers of energy recovery components recommend to Air Handling Units manufactures consideration of the following extended clarification statement for correct interpretation of the revised standard rule:

For hygienic reasons plate heat exchangers with perpendicular distance between air inlet and outlet planes exceeding 1200 mm should have a plate spacing of more than 3,0 mm (including material thickness) that enables cleaning. Alternatively, the use of blocks is recommended as it means installed in segments

The above statement is valid both for the cross-flow and counter-flow plate exchangers.

The distance between air inlet and outlet planes is shown on fig 1:

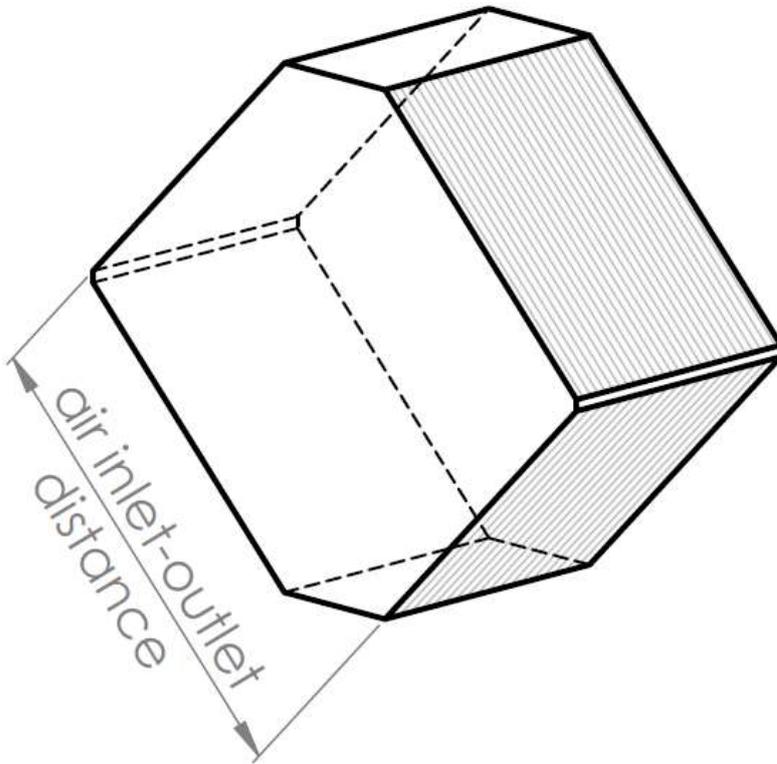


Fig 1: distance between air inlet and outlet planes

This position will be also submitted to experts of CEN TC 156 WG 5 for consideration by the next revision of EN 13053.

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