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The humidity levels of the air in a swimming pool hall can be controlled using various methods including a heat pump based condensation dehumidifier or a mechanical ventilation with heat recovery system [MVHR] which replaces a controlled amount of moist pool hall air with fresh air from outside which typically has a lower moisture content.

The heat recovery efficiency of a MVHR system can be calculated using BS EN 308 which defines the test procedures required to establish the performance of air-to-air heat exchangers.

The Building Regulations 2010 Part F Volume 1 [Dwellings] and Volume 2 [Buildings other than dwellings] approved documents define a strategy for ventilation provision utilizing extract, whole dwelling / building, and purge ventilation by means of mechanical ventilation, natural ventilation, or a combination of both, however the regulations do not mandate the use of MVHR systems.

Condensation dehumidifier technology is not referenced in the regulations.

The Delta and Variheat products are classified as condensation dehumidifiers by the manufacturer [Dantherm Group Ltd] with the primary function of providing dehumidification within a pool environment and a de-chlorination function provided by an air exchange process therefore, they should not be considered as ventilation products under the scope of part F.

Dantherm equipment using condensation dehumidifier technology falls outside the scope of BS EN 308 as the method used to calculate heat recovery efficiency within the standard does not consider the significant amount of energy recovered and transferred through the refrigerant medium.

Therefore, the minimum efficiency for heat recovery in a supply and extract ventilation system documented in Part L cannot be applied directly to the Delta or Variheat products.

Using an alternative calculation method, it can be demonstrated that Dantherm condensation dehumidifiers typically have a higher overall heat recovery efficiency when compared to equivalent MVHR systems.

In conclusion the Delta and Variheat products are not designed to provide a direct route to compliance with the Building Regulations Part F and Part L. However, they can assist system designers as part of an overall package to comply with the relevant regulations.

