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**Use of Passive Stack Systems in Multi-storey
Dwellings: Assessment of Performance**

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Abstract

The use of PSV (Passive Stack Ventilation) systems in two and three storey dwellings is now widely accepted as a method of achieving adequate ventilation levels for indoor air quality control.

However, the application of PSV systems to multiple-storey dwellings is, in the United Kingdom, in its infancy. This paper provides detailed performance data relating to extensive monitoring of PSV systems in multi-storey dwellings in three EC countries (France, Belgium and Holland).

The data presented looks at predicted and actual levels of PSV system performance, variations in internal humidity levels, the influence of buoyancy and wind effects. To remove uncertainties with climatic variations between France, Belgium, Holland and the UK, standard weather years have been used to predict PSV system performance.

The overall aim of the paper is to provide sufficient information to enable PSV system design for optimum performance in UK located multi-storey dwellings.