WHY ARE TRICKLE VENTILATORS NEEDED?

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HARDWARE

This has long been a controversial and puzzling question in the fenestration market since its introduction. The typical question has been - ''Why having developed thermally efficient window systems do we then rout a hole in the top?''

Over the last few revisions of the regulations, the airtightness of buildings has become an increasing issue. On the one hand, there has been a drive to improve the thermal efficiency of windows whilst reducing energy consumption, as we build greener buildings.
The consequence has been that as dwellings are made more airtight and internally generated pollutants affect disproportionately indoor air quality. This may cause adverse health effects unless unobtrusive background ventilation is installed. Background ventilation is, therefore, necessary to provide a healthy indoor environment for the occupants.
The primary purpose of trickle ventilation is to remove polluted indoor air from a building and replace it with 'Fresh' outside air. Background Ventilation is a key product for a healthy living environment. Small trickle ventilators are designed to deliver controllable whole room ventilation. Background ventilation using trickle ventilators provides; Low Co2 footprint, as this system consumes no electrical power once installed. Security, installation footprints prevent intrusion into the property. Whilst allowing constant ventilation even when the window is locked, locking handles can be a risk.

Controllable:
Ventilators are designed to deflect the airflow to minimize draughts. Cost effective, the lowest cost route for provision of background ventilation without the need for air bricks and no ongoing electricity costs.

Cleaner building designs:
As background ventilation is delivered through the window reveal no additional means of ventilation need to be installed. Noise reduction, a property in a noisier location, E.g. near a busy road or airport. Trickle ventilators provide ventilation without the need to open the windows, reducing noise levels.

NEW VENTILATION REGULATIONS FROM 15TH JUNE 2022

As of the 15th June 2022 the regulations are changing.
From this date ALL replacement windows regardless of whether you home is a new build or not should be fitted with trickle vents regardless of whether the windows being replaced had vents in them or not, if no background ventilation alternative is being installed.

Condensation reduction:
Some properties may have an existing problem with condensation, especially in colder weather. Fitting windows with suitable trickle ventilation may improve the problem and the potential risk of mould growth is reduced, which could minimise damage to internal surfaces.

Clean:
Fresh air may reduce health problems, E.g. Asthma sufferers. Whilst also helping to manage background air the levels of pollutants such as carbon monoxide and carbon dioxide. The building regulations require the number of inhabitants in a property to be a consideration when planning a ventilation requirement.

24 hours operation:
Even at night and whilst you are on holiday they can still operate. Controlled heat loss, by using calculated background ventilation the need for purge and extraction of warm air is managed. Background ventilation can assist with air temperature movement between the habitable room and the atmosphere. Thermal comfort, trickle vents are designed and located (typically 1.70mabove floor level) to control air movement (draughts) in habitable rooms. Other ventilation types include 'Purge' and 'Extraction', which are mechanical and used locally within a building typically for kitchens and bathrooms where pollutants and water vapour are removed to prevent spreading throughout the building.

Why Ventilation?
Exploring the reason why passive trickle vents are put in thermally efficient windows seems counter productive and unsightly... So Why were Trickle vents introduced many decades ago? Primarily for a low-cost non-electric background controllable ventilation to allow fresh air in from the outside to create a healthy living environment. This type of ventilation did not compromise the security of the window as the sash could be closed and locked instead of being in a night vent or open position. This was particularly important in social housing where open windows to allow condensation from tumble dryers, washing machines, and inhabitants would be a serious compromise to the security of the dwelling. Noise reduction can be achieved by simply opening the vent instead of the window, this is important in areas of high-density housing.

Condensation, carbon monoxide, and carbon dioxide are background air pollutants that can cause (especially in kitchens) health problems, mould growth, and damage to internal surfaces. This was a major factor in why Trickle (passive) ventilation was written into building regulation Ventilation: Approved Document F. Ventilation of a window is a very important contribution to the health of the inhabitants and the fabric of a home and in new build a law, below are some more articles and information on this topic.

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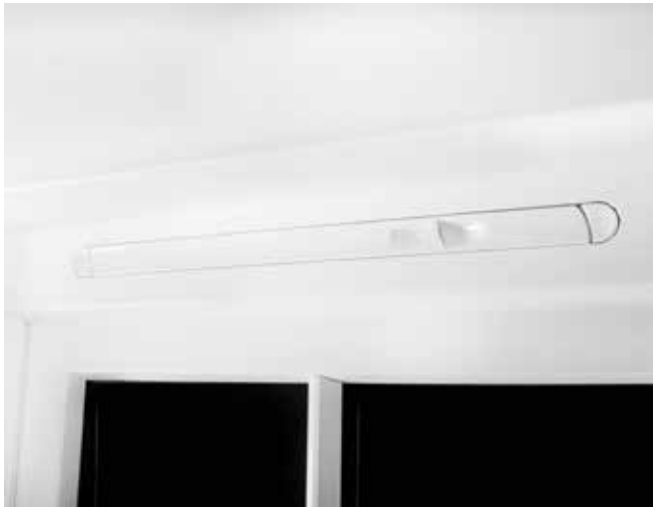

Further resources:

SCAN CODES

https://www.gov.uk/government/publications/ventilation-approved-document-f

http://myhealthmyhome.com/

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