

Damp Solutions - Are 12 Volt Sub-Floor Ventilation Systems Powerful Enough?

Left, 240 volt. Right, Envirofan's 12 volt sub-floor ventilation solution.

In answering this question 'are low voltage sub floor ventilation systems powerful enough in providing damp solutions' really depends on who provides you with the answer. A company that installs 240 volt sub floor ventilation systems would probably tell you, 'No'. A company that installs low voltage ventilation systems trust implicitly that 12 volt systems would do the job and have been since the 1970's...



What are the facts?

The pictures above represent 12 volt sub floor ventilation system and 240 volt ventilation system. See how dissimilar these systems are in providing damp solutions for sub floor areas. Each system has its own characteristics especially when it comes to the accessories needed.

Accessories

Low Voltage Sub floor Ventilation Systems

The accessories needed for low voltage system are none, as the 12 volt system replaces certain terracotta vents that are already existing around the home. The term used is 'retrofit' and rightly so. Damp solutions is achieved by humid air been drawn toward the strategically placed sub floor system thus allowing the air to flow freely out from the problem area.

240 Volt Ventilation Systems

240 volt sub floor ventilation systems (as shown) requires flexible ducting, dampers, branch fittings etc. These materials are installed in the sub floor area as well as the sub floor ventilation system itself. Sub floor ventilation has to flow around these objects. Often these ducts penetrate through sub walls which means that the penetration has to be large enough to accommodate the 150mm ductwork, which to some extent weakens the sub wall structure.

As the consumer in looking for damp solutions which installation method appeals to you?

Effectiveness

Do low voltage sub floor ventilation systems have the capacity to provide effective damp solutions? Please consider these examples first.

Companies that install 240 volt systems use one fan and sometimes multiple units to draw humid air into the piping system and then to the outside thus providing their version of damp solutions. The flow rate of these units are 8,000 litres or more per minute, at a noise rating of around 48-60dba at 240 volt

Companies that install low voltage sub floor ventilation systems use multiple units that replace certain terracotta vents to provide damp solutions for the specific damp area. The airflow rate of these units are 5,500 litres per minute at a noise rating of 27dba at 12 volts.

Conclusion

Experience over the years and in testing process of low voltage sub floor ventilation systems since the 1970's shows three things.

Effectiveness in providing damp solutions is not extracting massive amounts of air in a short period of time but moving lower volumes of damp air over a longer period. Secondly in providing an installation which doesn't impact on the building structure itself and thereby retrofitting existing terracotta vents is less invasive.

Thirdly in getting an effective damp solution, utilising 12 volt sub floor ventilation systems you don't need all that paraphernalia that comes with a 240 volt sub floor ventilation installation or that greater power consumption to drive them.

'If It Is Not Envirofan, Then It Isn't One'