

#5083

The new Building Regulations Document F1990 will have a big effect on domestic ventilation standards and ventilation equipment sales.

APV Vent-Axia's marketing manager Christopher Stride explains.



Designed to extract moisture-laden air at the Building Regulations' specified 245m³/h, the VA150A and 150P extract units provide a healthier, more comfortable atmosphere throughout the home - and help to prevent condensation damage.

F1990 — The reason why

TO HELP ensure a healthier indoor environment and to tackle the bane of condensation, Building Regulations Document F1990 is a welcome addition to our national domestic building standards - after all severe condensation in the UK affects over 4.5 million homes and costs an estimated £500 million every year.

One of the main reasons for this costly consideration is the British climate. The 'Dry' South East of England has an outside humidity level of more than 70% RH for over 50% of the time. Across large areas of western Britain it's at least that humid for 70-80% of the time.

Poor standards of ventilation, inadequate heating and water vapour from bathrooms and kitchens compound the problem, to create the 'perfect' conditions for domestic condensation.

Contrary to what one might expect, condensation is not confined to low quality housing - the best-insulated and draught-sealed properties suffer too. The absence of flues in many modern buildings and artificially low ventilation rates due to sealing of windows to conserve heat, trap excess water vapour indoors. And trapped water vapour inevitably finds the relatively cooler surfaces in bedrooms, halls and cupboards where it condenses - and starts the rot.

Occupants suffer too. Damp air, mould growth, stale cooking smells, cigarette smoke and body odours all contribute to a significant health risk.

That's why Building Regulations Document F1990 and the standards it sets are so important.

Document F means that newly-constructed houses, extensions and conversions must be fitted with adequate ventilation - moisture extraction at source, occasional rapid ventilation, and background

'trickle' ventilation are all required.

Table 1 on page 38 summarises the situation.

F1990 requirements

All 'habitable rooms' must each be provided with controllable openings of at least 4000mm² for 'trickle' ventilation and an opening window is also acquired to allow occupants to further increase the ventilation rate.

And irrespective of whether or not they have windows, all kitchens and all bathrooms must be fitted with power ventilation. This is perhaps the most important new requirement, which carries through to internal common spaces and all internal toilets too.

Market potential

It all adds up to a lot of fans; 170,000 housing starts a year plus countless conversions and extensions are already creating considerable demand so the outlook for manufacturers and especially installation contractors is distinctly promising.

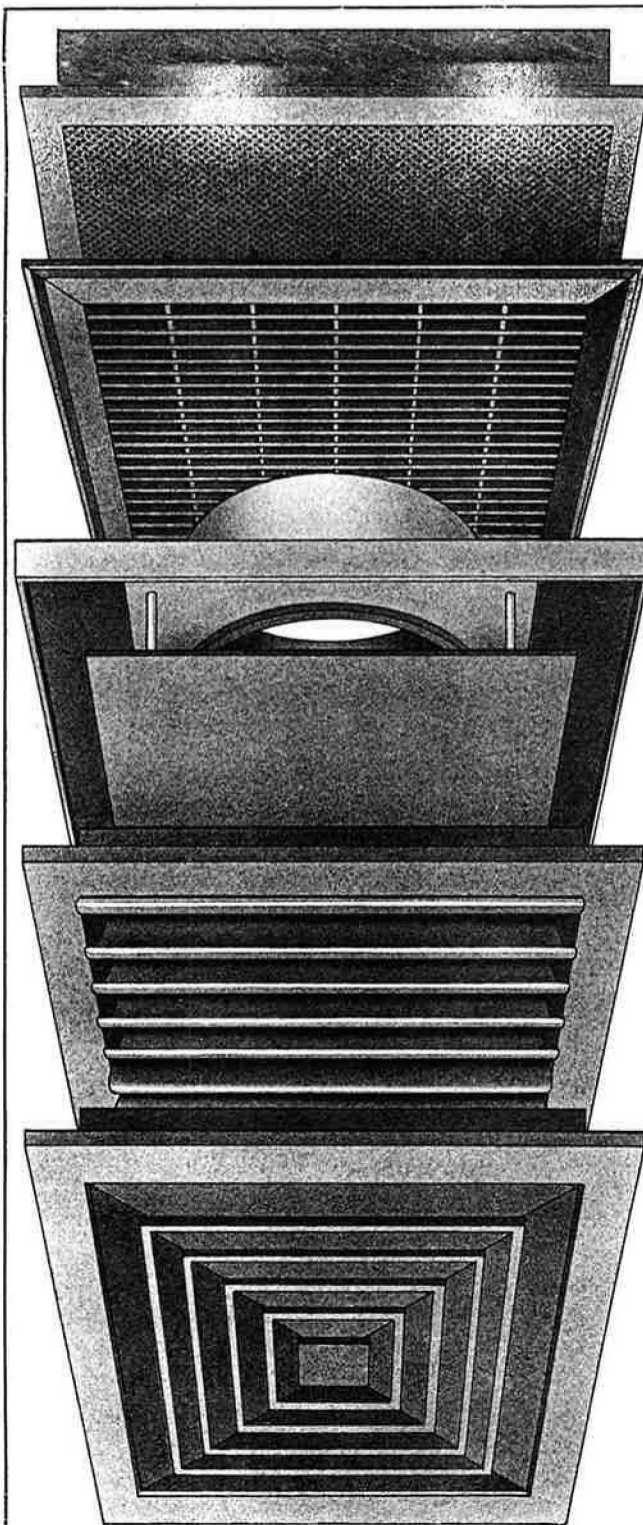
Choosing equipment

Success will depend on choosing the right equipment which has been purpose-designed in anticipation of Document F1990 to meet the new Regulations.

The first criterion to satisfy is airflow performance - look for BS5750 Registered Firm status which confirms proper laboratory performance testing, the right level of quality assurance, and validates manufacturers' published performance data.

Kitchens

A fan with a minimum rate of extraction of 220m³/h (60 litres/s) is called for to give rapid ventilation of kitchens -



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THIS MONTHS

REVIEW

VENTILATION

Ventilation

F1990 — the reason why

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and ideally should also provide the trickle ventilation required by means of shutters which can be set partially open to eliminate the need for a separate ventilation opening or window ventilator. The latest Vent-Axia VA 150 P & A models are designed to provide both functions. So too is the Vent-Axia T Series 6in unit which also offers the added advantage of multi-speed operation, and can continuously deliver at least one air change per hour at low speed (around 50m³/h — 14 litres/s) for a medium domestic kitchen), as an alternative to trickle ventilation.

Bathrooms

If there's an outside wall or window, then a 100mm axial fan will usually do the job — that's an extraction rate of 55m³/h (15 litres/s). Where ducting is

required from an internal bathroom or toilet, then a centrifugal fan will probably be necessary to overcome the extra resistance. Better still, an integrated system of fan and ductwork, such as the Vent-Axia System 25 flat ductwork and Solo centrifugal fan, makes neat, easy work of installation and ensures good overall performance for the extraction system.

Toilets

The additional feature of a minimum 15 minute overrun plus the capacity to ensure three air changes per hour is called for by the Regulations for toilets, and bathrooms which include a water closet. Choosing between centrifugal and axial fans will depend on the use of ductwork.

Controls

Besides dealing with the primary problems of condensation and stale air, fan installations should be energy-efficient too. So there's plenty of scope for the latest generation of control

devices which can activate ventilation fans automatically in response to temperature, humidity or air quality — yet minimise the total amount of valuable warm air extracted.

Some extract fans have such features built-in, or can be easily connected to electronic controllers to operate in this more sophisticated way.

A fan which varies its extract rate automatically according to the humidity level in the room — switching on to low speed when the humidity reaches a pre-set level, then increasing speed as the moisture level rises towards saturation — can make a big contribution to energy saving.

Minimum speed operation also keeps noise levels down — reducing disturbance to others during nocturnal visits to the bathroom!

An authoritative guide to the interpretation of Document F1990 has been published by

Continued on page 39

Table 1: VA equipment selection guide.

HABITABLE ROOMS Opening window and Trickle ventilation	or Mechanical ventilation Fan to provide 3 air changes/hour + overrun of 15 minutes ■ VA 100 LTE ■ VA 100 XE ■ Solo T	KITCHENS Mechanical ventilation: Fan of at least 220m ³ /h (60 l/s) capacity ■ VA 150P ■ VA 150A ■ T Series or a ducted cooker hood to the outside of at least 110m ³ /h (30 l/s) and Trickle ventilation or Mechanical ventilation: Fan giving 1 air change/hour
COMMON SPACES Opening window	BATHROOMS Mechanical ventilation: Fan of at least 55m ³ /h (15 l/s) capacity ■ All Solo models, especially Solo DP ■ All VA 100 models	
TOILETS & BATHROOMS INCLUDING TOILET Opening window		



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The Professionals

Circle 313

Ventilation

F1990 — the reason why
Continued from page 38

APV Vent-Axia, available on request via the reader reply service, or direct from anyone of the thirteen APV Vent-Axia Regional Centres or Crawley Head Office.

The Building Regulations Document F1990 is the way ahead. Clear standards for domestic ventilation will create a better indoor climate — and open up real opportunities for installers of powered ventilation systems.

Circle 140

Robertson brochure

THE ROBERTSON range of ventilation solutions is described in a new six page, full colour brochure.

The brochure outlines solutions for natural ventilation, including high heat ventilation applications, louvre systems and sunscreens.

In addition, Robertson offers a range of natural and powered fire and smoke ventilation systems which incorporate flap, louvres and multi-function ventilators.

All Robertson ventilation products are available with a wide range of accessories including insulation, acoustic arrangements, variable operating control systems, weather seals, bird-guards and insect screens.

Circle 143

Genovent attraction

KILOHEAT has won an order to supply 46 of its new Genovent range of roof and smoke extract units to Cotamex Environmental Systems for a £14m visitor attraction called 'The White Cliffs Experience' being constructed for Dover District Council as part of a major campaign to attract more tourists to the town.

The smoke extract units have been tested at 400°C for 120 minutes at CTICM, Metz, France. The new Genovent fans were specified for this contract by consultants Michael Jones & Associates of Reigate and are being supplied between April and July 1990.

In addition, 54 direct driven Kiloheat fans were specified by Michael Jones & Associates for the supply air handling units to be manufactured by Fresh Air Systems of Crawley.

A variable volume ventilation system based on the fully integrated supply and extract fans will give the building heating, ventilating and comfort cooling.

Scheduled to open in the Spring of 1991, the new multi-purpose building will incorporate three linked areas — the exhibition, the town museum and restaurant/retail.

Circle 141

GGG introductions

A NEW design of supply/exhaust valve has been introduced by GGS into the UK market following a period of research by DEC International of Holland.

The Venti-Dec air valve allows for a simple and secure ducted fitting, at its rear.

The valves are manufactured from polypropylene and are fitted with an adjustable central air balancing disc for air movement regulation. They are suitable for use in kitchens, bathrooms and toilets.

Venti-Dec is available in 100mm, 125mm, 150mm and 200mm diameter sizes catering for duties up to 350m³/sec (200cfm) at a maximum temperature of 100°C.

A new range of flexible reinforced lightweight aluminium laminated ducting has also been



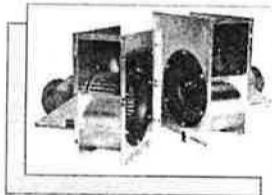
The Venti-Dec valve from GGS.

introduced into the UK market by GGS.

Called Combi-Dec, it is suitable for low, medium and high pressure air conditioning and ventilation supply or exhaust systems.

Circle 142

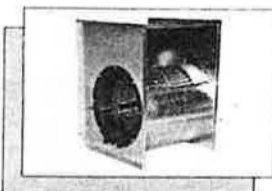
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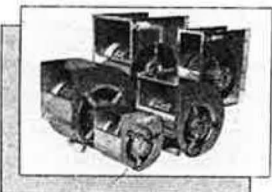
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Circle 324

NEW CMF CEILING MOUNTED DUCT FANS.

It all slots into place.

XPELAIR has launched an ingenious range of ceiling mounted duct fans designed to make installation particularly easy. The fans slot into a specially designed duct.

Xpelair have taken a fresh look at ceiling mounted duct fans with both the customer and the installer in mind.

Whenever condensation or stale air is a problem this new range of CMF fans has the answer.

In public washrooms, changing rooms, canteens, kitchens, offices, workplaces and either domestic or commercial bathrooms.

The fan unit is cassette style.

This allows ducting to be fitted during building so that the extractor fan finally slots into place. Installation is as simple as that.

There are three models suitable for different applications each can be fitted with either a Time Delay or a humidistat control available as plug in optional ancillaries.

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