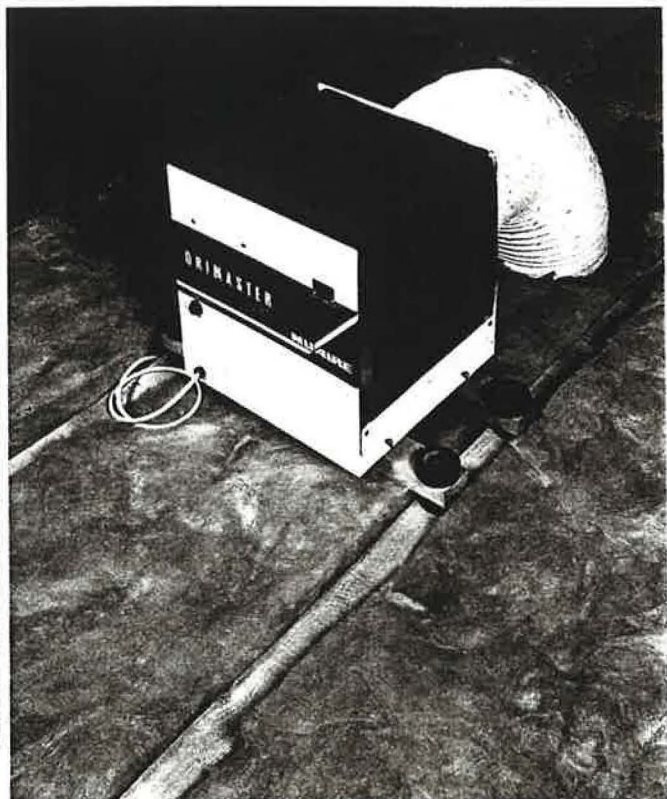


Radon has a blow out

A device originally designed to combat condensation has proved to be useful in reducing radon levels in buildings



Above: Nu-Aire's DriMaster-R can help to reduce radon levels

The results of field trials – closely monitored by scientists from Bristol University – in six radon contaminated houses in Street, Somerset, prove that for dwellings with a contamination level of 200-1000 Becquerels per cubic metre (Bq/m³), installation and operation of a Nu-Aire DriMaster-R whole house ventilation system can reduce radon levels by an average factor of four to five – to well below the National Radiological Protection Board (NRPB) recommended safety level of 200 Bq/m³. For dwellings with a contamination level greater than 1000 Bq/m³. For dwellings with a contamination level greater than 1000 Bq/m³, the DriMaster-R still provides a low-cost method of reducing even these high radon levels.

Estimates indicate that some

250,000 homes in 14 counties have high concentrations of radon – a naturally occurring, cancer-causing radioactive gas, second only to smoking as a cause of lung cancer and, from which, some 2,500 people die each year. Radon gas results from the decay of small amounts of uranium present in soil and rocks and seeps into buildings from beneath the floor (see HAC April p.4). The principle of operation of the DriMaster-R is that it slightly pressurises the building, making it more difficult for the gas to enter the premises. Furthermore any radon gas that does seep in is forced out through natural building leakage points to the atmosphere.

In conjunction with Track Analysis Systems Limited (TASL), a company based at Bristol University, Nu-Aire now offer a comprehensive service for testing and, if necessary, the installation of the DriMaster-R. Gary Moss and his team at the University have developed a method of testing the level of radon gas in a property by using their 'Radiasure' home tester. This device allows a householder to carry out a simple test for later analysis by TASL at the University.

Radiasure

The 'Radiasure' tester is sent through the post. To start the test it is removed from its packaging and placed in a selected location i.e. shelf or mantelpiece for a specified period. This can be as little as 6 days, although more accurate results will be achieved if left for a 28 day period. After this initial test period the 'Radiasure' is returned to TASL in the special packaging provided. The 'Radiasure' is then analysed at the University and the results are sent directly to the householder. If the analysis indicates a level less than 200 Bq/m³, TASL will issue a certificate stating that the measured radon level is below the government action level.

If the level is greater than 200 Bq/m³ the test results will be sent to the householder; if these results show a reading of between 200 – 1000 Bq/m³, i.e. within the proven scope of the DriMaster-R, then a recommendation will be given for a premises

survey by Nu-Aire Limited or their approved agents. If the level is greater than 100 Bq/m³ then the recommendation will be to contact the local Environmental Health officer as it is probable that extensive measures will have to be taken to reduce the radon contamination.

For those premises with a level between 200-1000 Bq/m³, described by Gary Moss as 'not having drastically high levels' the following course of action is recommended. A survey of the property should be carried out by a trained specialist to ensure that the property is suitable for the DriMaster-R. If an estimate will be given for installation which, in most premises, will be between £350-£450, fully installed. Included with the DriMaster-R package will be a 'Radiasure' tester.

Following installation of the DriMaster-R, a repeat test will be carried out with the 'Radiasure' located in the same position as the initial test. After a 28 day period this second tester should be returned to the University for analysis, providing a 'before and after' reading. Where the level of radon has been reduced to less than 200 Bq/m³, a certificate will be issued. TASL will store all records on their database for future reference. The radon level will vary according to the time of year, and whether the reading was taken on ground or first floor level. All this information is taken into account when evaluating the 'Radiasure' test results.

Roof space

Nu-Aire's DriMaster-R comprises a virtually silent centrifugal fan housed in an insulated case which is located in the roof space or attic of a dwelling. The unit takes air from the roof space through its integral filter and discharges it through a specially designed diffuser into the property. This air creates a slight positive pressure which circulates throughout the dwelling. The unit is designed for continuous operation and is maintenance free apart from an annual filter change. The running cost is approximately equivalent to a 60 watt light bulb. The device was originally developed for eliminating condensation in domestic dwellings, and over 14,000 have been installed in the UK and Ireland in all types of property.

Nu-Aire first carried out radon tests using DriMaster-R in a school in Cornwall during the Summer of 1987. This was a long term test by Cornwall County Council which conducted its own monitoring. The results were obtained by two methods: active testing using a Thomson & Neilsen active Radon Tester; and NRPB Passive Track Etch Detectors. Both tests showed that the installation had achieved a minimum radon gas reduction of 266%. **More information—circle 143**