CANADIAN HOME BUILDERS' ASSOCIATION BRITISH COLUMBIA

The Voice of the Residential Construction Industry in BC

R-2000

R-2000* Home Program Overview

The R-2000 Home Program is a voluntary building standard with a known and respected name that goes beyond minimum building code standards. It is a standard back by 20 years of research and development.

The R-2000 home is recognized as leading edge construction that has had an impact on Canadian housing technology through the "trickle-down" of technologies to conventional construction. The houses you are building today are much improved over those built a generation ago, and include some technologies that were pioneered in the program. The R-2000 program was launched in 1982 and updates to the Standard have been done from time to time. Since 1982 more than 12,000 builders have received training; more than 8,600 R-2000 houses have been certified, and more than 25,000 "clones" have been built.

The National Strategy on Climate Change (Buildings Table) has recommended increased funding to the program, with a target 10% market share for R-2000 homes. The federal government has made an increased funding commitment to the R-2000 program.

Homeowner Benefits of R-2000 Homes

- Healthier indoor air quality (Health Canada reports 30% improvement in health symptoms)
- Improved comfort
- Independent quality assurance by inspectors licensed by the Government of Canada
- Reduced energy bills
- Reduced greenhouse gas emissions (by 20%)
- More resource efficient

The R-2000 Technical Standard contains requirements for:

- Minimum energy performance standards
- Indoor air quality
- Environmental responsibility
- Quality assurance

Energy Performance:

An Annual energy target for heating and hot water energy use is calculated for each house, by HOT2000 computer analysis. The performance standard encourages choices, innovation and measures suited to each builder. Most home designs can be modified to meet performance requirements. This generally means higher insulation levels, where possible optimizing for passive solar gains, high-performance windows, and/or higher efficiency mechanical equipment than may be standard practice. There is also a minimum required air tightness confirmed by testing when the house is completed.

If you are interested in becoming a member with the Canadian Home Builders' Association, please contact our office:

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Indoor Air Quality:
To achieve superior indoor air quality, a continuous mechanical ventilation system to provide fresh air to all rooms is required. Typically this means using a Heat Recovery Ventilator. Where combustion equipment is used, it must be non spillage-susceptible and measures must be taken to prevent building depressurization. As well, a "pick-list" of healthier building materials and finishes is offered to reduce off-gassing.

Environmental Responsibility:
To reduce the impact a house will have on the environment, it must not only have low energy consumption, but also use less water, generate less sewage, and be built in a manner to reduce construction waste. That is why water-efficient plumbing fixtures must be used. A "pick-list" of building materials that reduce waste and/or which have recycled material content is also provided.

Quality Assurance:
Quality assurance plus training is central to the R-2000 program. This includes training and licensing of R-2000 buildings; training and licensing of ventilation and mechanical equipment installers, plan evaluators, air leakage testers and inspectors. Independent third party evaluation, testing and inspection of each R-2000 Home are done to ensure that it complies with the R-2000 Technical Standard.

R-2000 Certification:
Homes that comply with the standard are issued a certificate by NRCan to the homeowner upon completion of the final inspection and tests. A central registry is maintained in Ottawa.

Requirements for Participation:
The R-2000 program is open to all professional builders who are prepared to take a builder workshop (the Building Science course offered by CHBA BC) and maintain their status with periodic update courses.

Plans must be evaluated before construction for compliance with the technical standards. The first home built will receive a pre-drywall inspection and a final compliance inspection. At completion, the house is also test by a blower door test to ensure compliance with the air-tightness standard. The mechanical ventilation system must be installed by a qualified installer, who must sign off a form indicating compliance with the CSA F326 standard. At completion of construction, the builder signs a final builder repot saying that construction was done according to the technical standards.

Administration:
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