

Solid-Fuel Burning Appliances

Alberta's Safety System

Alberta Municipal Affairs works in partnership with the Safety Codes Council, municipalities, corporations, agencies, and other organizations, to deliver effective community-focused public safety programs and services to Albertans.

Do you need a permit?

It is the owner's responsibility to obtain a building permit before installing or modifying any solid fuel-burning appliance as prescribed by the current edition of the Alberta Building Code.

IMPORTANT: Whenever solid fuel burning appliances are to be installed in manufactured homes, they must be tested and labelled "for use in a manufactured home".

Acceptable appliances and equipment

Appliances, accessories, components, and equipment are required to satisfy the requirements of one of the following, whichever is applicable:

- ULC-S628, *Fireplace Inserts*
- CAN/ULC-S629, *650° Factory-Built Chimneys*
- CAN/CSA-B365, *Installation Code for Solid-Fuel Burning*
- the requirements of the authority having jurisdiction.

The manufacturer's installation instructions are checked as part of the certification process to ensure safe operation of your solid fuel burning system. Labels on certified appliances are your assurance that a product has been tested and conforms to recognized safety standards.

Importance of permits

The *Safety Codes Act* requires that permits in Alberta be obtained prior to commencing work on any buildings covered by the Alberta Building and Fire Codes, the Canadian Electrical Code, the Gas Code, or the National Plumbing Code.

Permits are part of a process to access compliance to a minimum standard of construction safety for the benefit of all Albertans. If construction projects are undertaken without required permits, the owner may be subject to penalties and extra costs incurred to bring a project into compliance.

As the property owner, you are responsible to obtain all necessary permits. A contractor can look after this on your behalf; however, you should specify in writing, who will get the required permits. Some jurisdictions may require a letter of authorization before a contractor can apply for permit(s) on your behalf.

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NOTE: Appliances and equipment without permanent certification labels that confirm testing to their applicable standard will **not** be allowed for use, unless accepted by the authority having jurisdiction.

Professional Installation

To achieve maximum performance from a solid fuel burning appliance and to be assured of its safety, you should have the system professionally installed. Seek out people trained in proper installation procedures who are Wood Energy Technical Transfer (WETT) certified. For additional service and safety information, contact: Wood Energy Technical Transfer Inc. at 1-888-358-9388 or visit wettinc.ca.

Installation of solid fuel-burning appliances

The design, construction and installation of solid fuel burning appliances and equipment, including stoves, ranges and space heaters, shall conform to *CAN/CSA-B365, Installation Code for Solid Fuel Burning Appliances and Equipment*.

This standard covers issues such as accessibility, air for combustion and ventilation, chimney and venting and mounting and floor protection, wall and ceiling clearances, installation of ducts, pipes, thimbles and manifolds, and control and safety devices.

If you have questions or would like to place an order for the CAN/CSA-B365-10 standard, please contact:

Canadian Standards Association
1-800-463-6727 or visit them online at csa.ca.

Canadian Standards Association, Western Region Phone: 780-490-2007

Canada Mortgage and Housing Corporation (CMHC) has produced safety information on the safe installation of a solid fuel burning appliances and equipment in a document called "*A Guide to Residential Wood Heating*". If you have questions or you wish to obtain this publication, visit their website at cmhc.ca or call 1-800-668-2642.

Benefits of getting a permit

When you get a permit, certified safety codes officers (inspectors) will:

- give you expert advice,
- review your plans to find any potential problems,
- inspect your project, and
- make sure your project meets the Alberta Building Code.

Making changes at the planning stage can save you money, rather than making costly corrections after construction. Certified safety codes officers will give you an inspection report(s) and follow-up on deficiencies to make sure your project is safe and in compliance.

Where do you get a permit?

Permits are available through municipalities that administer the *Safety Codes Act* and through agencies that provide inspection services on behalf of municipalities or the province. If you don't know whether your municipality issues permits, contact the Alberta Safety Codes Authority (ASCA) at 1-877-413-6725 or visit safetycodes.ab.ca/ASCA.

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Protection of the floor

Any combustible flooring or floor covering beneath a solid fuel burning appliance requires protection from hot embers during fire tending or ash removal. Combustible floors must be protected by a continuous, durable, non-combustible pad made of a 0.38mm (0.015") thick metal sheet or a grouted ceramic floor tile installed in accordance with the National Building Code of Canada. Floor protection pads must extend not less than 400 mm (18") in front of the loading door and 200 mm (8") beyond the other sides and back.

Protection for uncertified appliances

If acceptable to the authority having jurisdiction, non-tested appliances, must provide adequate floor protection related to the height of the unit supported off the combustible floor structure. Floor protection is based on the *Mounting and Floor Protection section of CAN/CSA-365, Installation Code for Solid Fuel Burning Appliances and Equipment*.

Wall and ceiling clearances

The minimum clearance between any solid fuel burning appliance and combustible material (other than the floor), whether or not such material is covered with non-combustible material such as plaster, shall conform to *Table 2: Clearances to Combustible Material for Appliances Using Solid Fuel of CAN/CSA-B365, Installation Code for Solid Fuel Burning Appliances and Equipment*, unless the appliance is certified for lesser clearances.

Certified appliances, accessories, components, and equipment, shall be installed in accordance with the manufacturer's installation instructions. When a difference exists between the manufacturer's installation instructions and the *CAN/CSA-B365, Installation Code for Solid Fuel Burning Appliances and Equipment Standard*, the manufacturer's installation instructions shall govern.

Reduction in wall and ceiling clearances

Clearances for uncertified and certified appliances may be reduced in accordance with the clearance provisions of certified heat shields or if the requirements are satisfied as set out in *Table 3: Reduction in Appliance and Ductwork Clearance from Combustible Material with Specified Forms of Protection of CAN/CSA-B365 Installation Code for Solid Fuel Burning Appliances and Equipment*.

The common feature of the clearance reduction rules is air space behind the shield material. This space sets up a convection flow air, which prevents the appliance's heat from reaching the walls and ceilings.

Applying for a building permit

When applying for a building permit, you must submit the following information to your local authority:

- details of the project or occupancy to be covered by the permit.
- details of the land on which the project will be located, including a description that will easily identify and locate the building lot.
- plans, specifications and other documents showing, in detail, the proposed occupancy of all parts of the building. state the value of the proposed project.

Hire qualified tradespeople

Specific trades such as electricians, plumbers and gasfitters must be certified to work in Alberta. To find out if the tradespeople you are hiring need to be certified in Alberta or to verify an individual's status, you may contact *The Apprenticeship and Industry Training* office by calling 310-0000.

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Chimneys

Where certified for use with a specific chimney or class of venting system, a solid-fuel-burning appliance shall be used with that chimney or venting system.

Factory-built chimneys acceptable for use with solid fuel-burning appliances and their installation must conform to the current CAN/ULC-S629-M, "650°C Factory-Built Chimneys."

Masonry and concrete chimneys must conform to the Alberta Building Code and should be constructed by a qualified tradesperson.

Combustion air

Appliances that have a **direct supply** of combustion air shall be tested and labelled for this application. Ducts supplying combustion air from outdoors may only be connected directly to the air inlet of an appliance that is tested and labeled for such a connection.

The installation and the components of the combustion air system must conform to the manufacturer's installation instructions or to CAN/CSA-B365, *Installation Code for Solid Fuel Burning Appliances and Equipment*.

Make-up air and carbon monoxide alarms

Even at a relatively low level of depressurization, certain open-type or even closed-type solid fuel burning appliances whose stoking doors are left open, can spill products of combustion into the house when operating in their "die down" or smoldering stages.

The Alberta Building Code addresses the potential for spillage in dwellings that contain solid fuel burning appliances and equipment with requirements for **make-up air** (fresh air drawn from outside the home), and **carbon monoxide alarms**.

Carbon Monoxide Alarms: Carbon monoxide alarms shall be installed in every home containing a solid-fuel-burning appliance as prescribed under the current edition of the Alberta Building Code.

These brochures may be updated periodically. They have no legal status and cannot be used as an official interpretation of the various bylaws, codes and regulations currently in effect.

More information:

Alberta Municipal Affairs

Community & Technical Support
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10155 - 102 Street
Edmonton, Alberta T5J 4L4

 Toll-free: 1-866-421-6929
 safety.services@gov.ab.ca
 municipalaffairs.gov.ab.ca

Safety Codes Council

Suite 1000
10665 - Jasper Ave NW
Edmonton, Alberta T5J 3S9

Toll-free within Alberta:
 1-888-413-0099
1-888-424-5134
 webmaster@safetycodes.ab.ca
 safetycodes.ab.ca

Alberta Safety Codes Authority (ASCA)

Toll-free within Alberta:
 1-877-413-6725
 askasca@safetycodes.ab.ca
 safetycodes.ab.ca/ASCA

Call (or click) before you dig!

Alberta One Call will locate utility lines on your property. Call or click before you start any project that involves digging in your yard. Alberta One Call will locate gas, water, electricity, drainage, telephone and cable TV lines. Allow at least two full working days for Alberta One Call to locate your utility lines.