



LUXURIA HOMES
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WINTER MAINTENANCE



MANUAL

Winter Ready Homes

THE LUXURIA HOME'S
GUIDE TO WINTERIZING
YOUR HOME

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Introduction



This manual guides you through the essential steps of preparing your home for Calgary's unique winter season.

Calgary's winter can be challenging with cold temperatures, heavy snowfall, and rapid temperature swings. These conditions require specific attention to ensure your home remains comfortable, safe, and energy efficient. This guide provides practical advice and step-by-step instructions tailored to for this climate.

We will cover critical areas such as insulating your home, maintaining heating systems, protecting plumbing from freezing, and preparing the exterior and interior for the colder months. This guide also includes tips for emergency preparedness specific to Calgary's winter conditions.

We aim to equip you with the knowledge and skills to effectively winterize your Luxuria Home, ensuring a warm and secure environment throughout the winter season.



Section 1

NAVIGATING CALGARY'S UNIQUE WINTER WEATHER PATTERNS

Calgary's climate is known for its subarctic characteristics, which include severe winters with substantial snowfall and cool summers.

The winter months, extending from October through April, are particularly challenging due to significant snowfall and temperatures that frequently fall below freezing. The coldest months, December and January, see average lows around -11.5°C , with February and December experiencing the most intense snowfall.



A unique aspect of Calgary's winter weather is its rapid temperature swings, often called "Chinooks." These warm wind events can cause temperatures to rise dramatically within a few hours, leading to quick thaws. While Chinooks can provide a welcome respite from the cold, they also present challenges for maintaining a stable home environment. The sudden temperature changes can lead to issues such as attic rain, fluctuating indoor humidity levels, and increased stress on home heating systems.

1.0 Winterization Checklist

EXTERIOR

Inspect Roof:

- Check for missing, damaged, or loose shingles and repair as needed to prevent leaks.

Clean Gutters:

- Remove leaves and debris from gutters and downspouts to ensure proper drainage.

Check Insulation:

- Ensure attic insulation is adequate to maintain heat and reduce ice dams.

Seal Gaps and Inspect Weather Stripping:

- Caulk around windows and doors to prevent drafts and increase energy efficiency. Inspect weather stripping and replace if necessary.

Drain and Store Garden Hoses:

- Protect outdoor pipes from freezing temperatures.

Inspect the Chimney:

- Ensure the chimney is clean and in good condition before using the fireplace.

Secure Outdoor Furniture:

- Store or cover patio furniture to protect it from the elements.

1.0 Winterization Checklist

INTERIOR

Test Heating System:

- Make sure the furnace or heating system is working efficiently.

Replace Filters:

- Clean or replace furnace filters to improve air quality and efficiency.

Check Smoke and Carbon Monoxide Detectors:

- Replace batteries and test to ensure they are functioning properly.

Inspect Windows and Doors:

- Look for drafts, reseal or insulate as necessary, and check the weather stripping and caulking around windows and doors, replacing as needed.

Reverse Ceiling Fans:

- Change the direction to clockwise to push warm air down.

Prepare Emergency Kits:

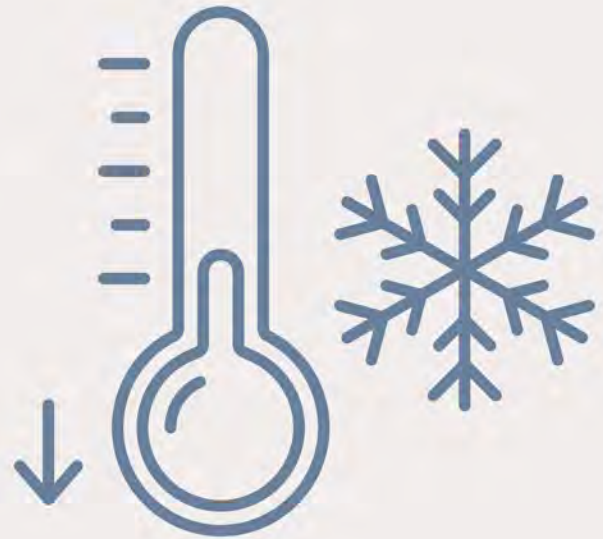
- Include flashlights, batteries, blankets, and a first-aid kit for winter storms.

Plumbing:

- Insulate Pipes:
 - Prevent freezing and bursting by insulating exposed plumbing.
- Know Main Water Valve Location:
 - In case of a burst pipe, knowing how to turn off the water quickly is crucial.
- Check Water Heater:
 - Ensure it is functioning correctly and set at an appropriate temperature.

1.1 Impact of Temperature Swings on Home Humidity and Maintenance

The rapid warming and cooling cycles in Calgary can significantly affect the humidity levels inside your Luxuria Home. During Chinooks, the outdoor air becomes drier, and when this dry air enters your home, it can lower the indoor humidity. Low humidity can cause discomfort, exacerbate respiratory problems, and even lead to damage of wooden furniture and flooring due to shrinkage.



Conversely, when the temperature drops again, the humidity inside the house can increase, potentially leading to condensation on windows and other surfaces. This condensation can promote mold growth and damage window frames and walls if not properly managed.



Tailoring Winterization for Luxuria Homes in Alberta's Climate

To address these challenges, Luxuria Homeowners must implement winterization techniques that account for Calgary's unique climate. This includes:

01

Keep weather stripping and window seals in damage-free condition.

02

Utilizing humidifiers or dehumidifiers to maintain optimal indoor humidity levels for comfort and health

03

Using your HVAC Ventilation Fan during extreme weather conditions.

2.1 Winter Furnace Maintenance: Preventing and Addressing Ice Blockages

Preparing your home's HVAC system for optimal performance is crucial as winter approaches. One common issue during the colder months is ice formation in and around furnace exhaust pipes and vent stacks. This happens when the condensation air from the exhaust pipe gathers snow, accumulating ice. Such blockages can significantly strain your furnace, potentially causing dangerous carbon monoxide gases to be released indoors.



Regular furnace maintenance is essential to avoid these risks, especially during Alberta's severe winters from December to March. This includes dealing with ice accumulation promptly. Let's explore the causes of ice formation in furnace vents and the steps you can take to address this issue.



Steps To Prevent Ice Blockages In HVAC Exhaust

A Locating Your Furnace Vent with Ice Formation

Your furnace's exterior exhaust pipe is usually found on the sidewall of your home, though it can sometimes be located on the roof. The exhaust pipe typically points upwards, while the intake pipe points downwards. These pipes, often made of white or grey PVC, are attached above your furnace.

B Checking Your Attic for Excess Humidity

If your furnace vent is roof-mounted, inspect the attic for signs of excess moisture, such as dark stains along ceiling nails.

C Ice Accumulation Around the Exterior Exhaust Pipe

High-efficiency furnaces, while energy-efficient, produce a lot of moisture that doesn't escape quickly, unlike traditional furnaces. This moisture can collect snow and freeze, forming ice. Setting higher indoor temperatures can make the furnace work harder, accelerating ice formation.

D Addressing Ice Formation

If you notice ice around your furnace exhaust vent, carefully remove it using a broom or a soft material to avoid damaging it. You may need to reset your furnace once you have removed the ice and snow.

Steps to Reset Your Furnace

1. Electrical Power

Locate your home's main circuit breaker and turn off the power supply to the furnace. This ensures no electrical current flows to the furnace during the reset process.

2. Furnace Switch

Find the furnace switch, resembling a regular light switch, typically mounted on or near the furnace. Turn this off for complete safety.

3. Check the Furnace Filter

Remove and inspect the furnace filter. Clean or replace it if it is dirty, as a clogged filter can impair the furnace's function.

4. Restore Power

Turn the power back on at the main circuit breaker and then the furnace switch.

5. Locate the Reset Button

Often found in or near the blower compartment, this button is usually red or yellow.

6. Press the Reset Button

Hold the reset button for about 30 seconds, then release. Wait a few minutes for the furnace to restart. Some models might require multiple presses.

7. Observe the Furnace

Monitor the furnace for a few minutes to ensure it starts correctly. Watch for unusual noises or smells. If the furnace doesn't start or something seems off, turn off the power and seek professional help.

Additional Tips

Know Your Furnace

Familiarize yourself with your specific furnace model. Most furnaces have online manuals and video guides, which may outline unique reset procedures.

Safety First

If you detect a gas smell or suspect a leak, do not attempt to reset the furnace. Evacuate immediately and contact emergency services or a professional.

Home Maintenance Responsibility

Note that if your furnace shuts down due to ice buildup, this is typically not covered under a builder's warranty. It's considered a home maintenance issue. Regularly clear ice from the exhaust pipe to prevent such occurrences.

3.1 Introduction to Wind Wash in Alberta

Windwash is unavoidable in Alberta, particularly where Chinooks and strong winds are expected. This occurrence happens when external air currents, typically entering through soffit or roof vents, disrupt the distribution of properly installed loose-fill insulation in an attic. This leads to uneven coverage and exposed areas, which can be problematic.

3.2 Homeowner Responsibilities

Regular attic inspections for signs of wind wash are critical to home maintenance. If windwash is not addressed, it can lead to various issues. Insufficient insulation in parts of the attic can cause the rooms directly beneath to become colder, leading to an imbalance in temperature. This can result in moisture accumulation and frost buildup both in the attic and on the ceilings of the rooms below.

Dealing with insulation displacement due to wind wash is a homeowner's responsibility. Regular checks and maintenance are essential, especially considering Alberta's variable climate.

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Attic Inspection Tips:

- **Partner Assistance:** Always have someone to assist with ladder use.
- **Lighting:** Use a flashlight for better visibility.
- **Protection:** Wear a dust mask to avoid inhaling particulates.
- **Awareness:** Be cautious of the attic's infrastructure, including wires and pipes.
- **Redistribution:** Homeowners should gently move the insulation back into exposed areas to ensure even coverage.
- **Additional Insulation:** If problems persist, adding a layer of batt insulation over the loose-fill insulation can provide stability.

3.3 Understanding Attic Rain and Its Occurrence in Alberta

Attic rain is natural, particularly in regions like Alberta, where temperatures can swing dramatically between cold and hot conditions.

This phenomenon happens when heat and moisture from everyday activities in the home rise into the attic and turn into frost in freezing temperatures. When it warms up, this frost melts, potentially causing attic rain. While it's impossible to prevent attic rain entirely due to these natural temperature fluctuations, homeowners can take several precautions to minimize its impact and prevent damage to their homes.

Steps For Attic Rain Prevention

These steps are essential to mitigate the risk of attic rain and protect your home from potential water damage. Regular maintenance, including clearing exhaust vents, is vital in this process.

1. Adjust Humidifiers

Keep indoor humidity below 20% during freezing temperatures.

2. Use Ventilation Fans

Reduce window condensation by using ventilation fans.

3. Utilize Bathroom Fans

Always turn these on during showers or baths.

4. Open Drapes or Blinds

This helps warm air circulate and prevents ice buildup.

5. Manage Window Ice

Wipe off any ice or moisture on your windows.

6. Turn On Kitchen Fans

Use these when cooking to control moisture.

7. Avoid Indoor Air Drying

Don't air dry clothes indoors in cold temperatures.

8. Promote Air Circulation

Keep doors open throughout the house for better airflow.

9. Maintain Adequate Heating

Keep your home warm, especially at night.

10. Extra Measures

Below -25°C, continuously run your home's ventilation, bathroom, and kitchen fans.

11. Clear Exhaust Vents

Ensure you clear built-up ice and snow from the outside exhaust vents daily. This is crucial for maintaining proper ventilation and preventing moisture buildup.

3.2 Protocol for Handling Attic Rain Incidents

In the situation of attic rain, homeowners must inform the warranty technician whether all preventative measures were followed. These measures include maintaining appropriate humidity levels, effectively using ventilation systems, and performing regular maintenance tasks such as clearing ice and snow from exhaust vents.

Upon being notified of an attic rain occurrence, a warranty technician will comprehensively assess the attic. This evaluation is not only to determine if there are any structural defects but also to check for adequate insulation. If the attic is structurally sound, well-insulated, and free from defects, and the attic rain is attributed to external factors or non-adherence to preventative steps, no repair will be necessary.

Homeowners are obligated to minimize any potential damage from attic rain actively. This includes immediate actions like wiping down any drips or moisture accumulations as they are noticed to help prevent more extensive damage and mitigate the effects of attic rain.

Homeowners must understand that consistent adherence to the recommended preventative measures is crucial in reducing the likelihood of attic rain and its associated impacts. Regular maintenance and vigilance are key in effectively managing this issue.