



Maibec CanExel™

Engineered siding

Installation Guide

Maibec CanExel™ Ridgewood/Ultra Plank
Prefinished Lap Siding

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INTRODUCTION

These instructions are in accordance with the standards of the National Building Code of Canada, section 9.27 and are intended to cover the normal building practices encountered in Canada and the United States.

In QC and coastal provinces (NFLD, NS, NB, PEI, BC) CANEXEL SIDINGS MUST BE APPLIED ON FURRING STRIPS ("STRAPPING"). We also recommend the use of a humidistat-controlled mechanical ventilation system, as specified in the N.B.C., in conjunction with strapping. This represents good building practice. Strapping is also required by certain manufacturers of breather-type building paper.

In all cases, consult your national and local building codes to ensure appropriate installation.

Installation of the siding over furring strips allows ventilation behind the siding, thus reducing the damage that could occur should there be moisture accumulation in the walls due to exfiltration and infiltration. Automatically controlled mechanical

ventilation also greatly reduces the risk of condensation moisture problems occurring in the walls.

Canadian Construction Materials Centre (CCMC) recommends that ALL types of horizontal, vertical, and panel sidings for use on NHA housing in the Atlantic Provinces be installed over furring strips.

IN NON-TRADITIONAL ICF AND SIP ASSEMBLIES, THE ICF OR SIP MANUFACTURER MUST PRESCRIBE THE FASTENING SPECIFICATIONS. NOTE: MAIBEC CANEXEL DOES NOT RECOMMEND CANEXEL FOR USE IN THESE NON-TRADITIONAL ASSEMBLIES. IF USED, MAIBEC CANEXEL WILL NOT WARRANT FOR BUCKLING AND SHRINKAGE. HOWEVER, BALANCE OF WARRANTY DOES REMAIN INTACT.

At the time of manufacture, CanExel siding meets or exceeds the performance standards set forth in Composite Panel Association ANSI 135.6-2006 and conform to "CAN/CGSB-11.5 M87"

STORAGE

Do not store CanExel Siding in heated buildings. Storage in heated buildings will dry out the siding and make it susceptible to buckling.

The siding must be kept on Maibec CanExel supplied pallets so that it remains flat, and must be covered with a water resistant shroud provided by Maibec CanExel.

Keep siding clean and dry. Inspect prior to application.

Allow siding to adjust to atmospheric conditions before application.

STUD SPACING

CanExel Siding may be installed over sheathing or unsheathed walls (single-skin application) and NAILED INTO STUDS SPACED NOT MORE THAN 16 in. (400 mm) O.C. Use a code approved breathable barrier between the siding and the studs or sheathing.

ALLOW AT LEAST 8 in. (203 mm) BETWEEN THE BOTTOM EDGE OF THE SIDING AND THE GROUND. SIDING SHOULD NOT COME IN DIRECT CONTACT WITH CONCRETE. These measures will reduce moisture absorption by the siding.

Siding may be applied over masonry construction as long as furring strips are utilized and securely attached to the masonry assembly on sixteen (16) in. centers.

Studs must be a minimum 1.5 in. x 3.5 in. (38 mm x 89 mm)

MOISTURE

Moisture control and moisture vapor control are critical elements of proper housing design. Check your local building codes for application procedures for handling moisture and moisture vapor in your area.

As with all wood products, do not apply engineered wood siding to a structure having excessive moisture conditions such as drying

concrete or plaster. If such conditions exist, the building should be well ventilated to allow it to dry prior to the applications of the siding.

Siding must not be applied to green or crooked structural framing members. Do not apply siding over rain-soaked or buckled sheathing materials.

Moisture (cont'd)

Gutters are recommended for control of roof water run off.

Dirt or gravel floors in basements or crawl spaces are major sources of moisture. It is therefore essential that such floors be sealed (by a layer of concrete, asphalt, polyethylene, etc.) to minimize the risk of moisture damage to the structure and siding.

New construction produces a lot of moisture as the concrete, lumber and drywall dry out. In colder weather it is recommended that windows be left partially open to dissipate this surge of moisture.

A vapor barrier with a perm rating less than 1 (e.g. polyethylene or foil) must be installed on the WARM SIDE or interior surface of the wall, and extend behind partition walls to form continuous protection of exterior walls. This is necessary to prevent condensation from damaging the components of the wall system. (Note that exterior building paper is not a vapor barrier.)

SECONDARY WEATHER RESISTANT BARRIER

A properly installed breathable water-resistive barrier is required behind the siding. Special care must be taken to completely seal all openings for electrical boxes, conduits, pipes, wiring, and joints or tears in the water-resistive barrier to prevent moisture from entering the wall cavity.

Consult your local building code for details. Maibec CanExel will assume no responsibility for water penetration.

GAPS & SEALANTS

Seal all gaps with a high quality, non-hardening, paintable sealant. Follow the sealant manufacturer's instructions for application.

FLASHING, WINDOWS, DOORS & OPENINGS

All openings must be properly sealed or flashed in a manner that prevents moisture intrusion or buildup. Several examples that accomplish this are shown on the following pages. (See Figures 1-3).

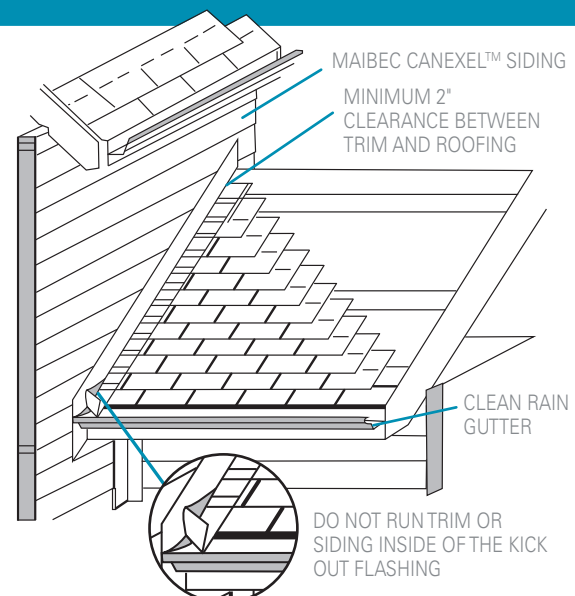
Siding applied adjacent to porches, patios, walks, etc. must have a clearance of at least 2" above any surface. The surface must be sloped or otherwise designed to provide proper drainage so the siding is at no time directly exposed to standing water.

Space nails 8 in. (200 mm) O.C. along edge of siding under windows: shim where necessary. DO NOT FORCE OR SPRING SIDING INTO PLACE as this will cause buckling.

ALWAYS LEAVE A 3/16 in. (4 mm) SPACE WHEREVER SIDING BUTTS AGAINST TRIM OR OTHER MATERIALS to allow for expansion. Use J-mould or sealant.

KICK-OUT FLASHING

- Install kick-out flashing to direct the water into the gutter
- Install step flashing with minimum 4-inch upper leg
- Properly integrate flashing with the secondary water-resistive barrier. Use housewrap, flashing tape, z-flashing, or other items as needed to maintain the counterflashing principle.
- DO NOT extend the siding or trim into the kick-out flashing or gutter
- Maintain a clearance between the end of the gutter and the adjoining wall to allow for proper maintenance of the siding
- Paint ALL exposed cut edges



FURRING STRIPS (STRAPPING)

See detailed installation Instructions. Furring strip use will vary with the various orientations of the siding (horizontal, vertical or diagonal).

RE-SIDING OF EXISTING BUILDINGS

The new siding **MUST** be installed on furring strips (strapping) after the weather resistive barrier (building paper or housewrap) has been replaced. The old siding must be removed.

INSULATED SHEATHINGS

Maibec CanExel™ Sidings may be installed over low-compression rigid foam or fiberglass sheathings. The following precautions must be followed:

- a) Adequate bracing of the wall in accordance with the National Building Code or other ruling building code is required.
- b) For rigid foam sheathing up to 1" (25.4 mm) thick, siding may be nailed directly to the foam sheathing unless a drainage plane is required by the local building code. Nail length must be increased to ensure a minimum 1-1/4" fastener penetration into the structural framing.
- c) For rigid foam sheathing greater than 1" (25.4 mm) or for fiberglass sheathings, a minimum 1-1/4" (31.75 mm) thick by 4" (101.6 mm) wide strapping must be installed over the sheathing to provide a solid, level nailing base for the siding. The strapping must be securely fastened to structural framing spaced no greater than 16" OC (406 mm) with a minimum nail penetration of 1-1/4 inches (31.75 mm) and a maximum nail spacing no greater than the width of the siding.

Maibec CanExel will assume no responsibility for any damage or condition arising from the use of foam sheathing.

NAILS/FASTENING

Maintain a minimum 1-1/4 in. fastener penetration into the stud, strapping, or combination thereof

- Nailable sheathing may be included in the penetration requirement
- 1.125 in. minimum stud penetration for spiral shank

Increase nail penetration if code requires.

Blind nailing is required except around windows and other wall openings.

Use corrosion-resistant nails with a minimum 0.113 in. diameter shank and a 0.240 in. head

Fasten along the nail-line no greater than 16" OC

DO NOT USE STAPLES!

CONDITION		CORRECTION	
Snug		OK	
Flush		OK	
Visible fiber		Paint	
Countersunk 1/16 in. - 1/8 in.		Seal with caulking	
Countersunk more than 1/8 in.		Seal with caulk and re nail	

HORIZONTAL LAP FASTENING SPECIFICATION OVER INSULATED CONCRETE FORM (ICF) ASSEMBLIES

THE FOLLOWING FASTENING SPECIFICATIONS ARE STRICTLY LIMITED TO HORIZONTAL APPLICATIONS.

- Use a minimum #8 corrosion resistant screw with minimum penetration of 3/8" past the nailing flange
- Larger screws may be required by the ICF manufacturer based on the following minimum withdrawal requirements
 - Minimum withdrawal value of the ICF nailing flange must be 50.0 lbs with maximum 12" OC screw spacing
 - Minimum withdrawal value of the ICF flange may be 31.0 lbs with maximum 6" OC screw spacing

- The minimum head diameter of screw shall be 0.297"
- When strapping or furring strips are required, they must be installed VERTICALLY and fastened securely over the full height of the wall. The strapping must be a minimum 1/4" (6 mm) thick by 3" (7.6 mm) wide.
 - TO ENSURE VENTILATION, BOTH THE TOP AND BOTTOM OF THE SPACE BETWEEN THE STRAPPING MUST BE LEFT OPEN. The opening at the bottom should be open to the outside and protected with insect screen. Locations above and below windows and above doors must maintain a 2" space between the furring strips and horizontal framework, trim or moulding.

Nails/Fastening (cont'd)

- The strapping must be parallel with and attached to the nailing flange and may be spaced up to 12" OC if the minimum with-drawal value of the nailing flange is 50.0 lbs using a #8 screw.
- The strapping must be parallel with and attached to the nailing flange and may be spaced up to 6" OC if the minimum with-drawal value of the nailing flange is 31.0 lbs using a #8 screw.
- Fasten the strapping to the nailing flange such that the strapping will remain centrally located over the nailing flange while the siding is installed.
- Increase the length of the screw by the thickness of the strapping such that the screw penetrates the siding, strapping, and 3/8" beyond the center of nailing flange.
- Space the strapping at the bottom of all ICF walls no greater than 6" OC so the first two courses of siding are supported over strapping no greater than 6" OC apart. This will require shorter strapping inserted between the primary strapping if the primary strapping is spaced 12" OC. This narrower spacing at the bottom of the wall provides uniform support to the siding and the insect screen.

TRIM

Trim should be thick enough so the siding does not extend beyond the face of the trim.

Trim and fascia must be applied in a manner that will not allow moisture intrusion or water buildup.

ACCESSORIES

A complete range of accessories are available to complement your siding including:

- | | |
|---|---|
| a) Metal starter strips | c) Color-matched touch-up paint or stain |
| b) Color-matched mouldings for joints, inside and outside corners, J-mouldings, drip caps and Z flashings | d) Color-coordinated caulk/sealant
Available at www.aluminiumdepotinc.com |

SIDING APPLICATOR INSTRUCTIONS

Ridgewood D-5 may be applied horizontally or diagonally. Ultraplank may be applied vertically or diagonally. Ultraplank must not be installed horizontally. Slightly different techniques for proper application are required for each type of use. Be sure to note the correct method for each type of installation.

1. HORIZONTAL APPLICATION: RIDGEWOOD D-5

Level and install metal starter strips along bottom edge of sheathing or sill plate, or up to 1 in. (25mm) below these, as required by course layout. Install first course of siding so that the machined groove on the lower back of the siding fits over the edge of the starter strip. Fasten the siding by nailing into the nailing line (about 1/2 in. (12mm) from the top edge of siding) at each stud or furring strip located over the stud, leave no more than 16 in. (400mm) between nails.

Install subsequent courses of siding so that the machined lower edge on the back of the siding fits over the top edge of the previously installed piece of siding.

When furring strips are required they must be installed vertically and must be nailed into wall studs, 16 in. (400mm) O.C. over the full height of the wall. Furring strips must not be less than 1/4 in. (6mm) thick and nail penetration into the stud a minimum of 1.25 inches.

To ensure ventilation, both the top and bottom of the space between furring strips must be left open. The opening at the

bottom should be open to the outside except for the insect screen. Under and above windows and above doors maintain spacing of 2 in. between furring strip and horizontal framing (see diagram). At the bottom, a short furring strip about 12 in. (300mm) long should be installed vertically centered between each main furring strip. This will provide better support and will ensure that the insect screen fills the opening.

2. VERTICAL APPLICATION: ULTRAPLANK

For Ontario, vertical application must be made over horizontal furring strips spaced not more than 16 in. (400mm) O.C. In Québec and Maritimes double-furring or diagonal furring is mandatory. Furring strips must be a minimum of 1 in. (actual) (25 mm) thick and nailed directly into the framing or combined structural wood sheathing and framing.

To ensure ventilation when applying siding vertically the horizontal furring strips must have periodic spacing at abutments (see diagram).

When siding is installed vertically the lower end of the laps must be protected from the elements.

This can be done by coating the exposed ends with the appropriate CanExel touch-up paint or stain. (see steps 4 & 5 for more details)

Siding Applicator Instructions (cont'd)

3. DIAGONAL APPLICATION: RIDGEWOOD D-5 AND ULTRAPLANK

Diagonal application must be made over horizontal (for Ontario) or diagonal furring strips. Nail spacing should not exceed 16 in. (400mm). Furring should be spaced 12 in. O.C. (300mm) and securely nailed into the structural framing. Furring strips must be a minimum of 1 in. (actual) (25mm) thick and nailed securely into the combined structural wood sheathing and framing.

When siding is installed diagonally the lower end of the laps must be protected from the elements.

This can be done by coating the exposed ends with the appropriate CanExel touch-up paint or stain. (see steps 4 & 5 for more details)

4. JOINT TREATMENT

The vertical joint between adjacent siding pieces must be located over the middle of a stud or furring strip that is also located over a stud. Leave a 3/16 in. (5 mm) gap between siding pieces and nail into the stud or furring strip. Nail on each side at the top nailing line. For Ridgewood D-5, insert a joint moulding into the gap or seal. For Ridgewood D-5 used in diagonal applications, a sealant must be used in the 3/16 in. joint. All Ultraplank joints must be sealed with a high quality paintable non-hardening sealant. Use special care to not overlap sealant onto the painted surface. Stagger joints from one course to the next.

5. TWO STORY OR MORE WALLS (NEW CONSTRUCTION ONLY)

Where siding is applied vertically or diagonally on walls two stories or more, cut the siding at each floor line leaving a 3/16 in. (5 mm) gap between the bottom and top pieces. Finish the gap by sealing the gap with a high quality paintable non-hardening sealant. If a horizontal band or trim separates the siding between floors, install a Z flashing and seal the end of the siding with the Canexel touch up paint.

6. CORNER TREATMENT

Siding should be butted to inside and outside corners leaving a 3/16 in. (5 mm) gap. When Canexel inside and outside corners are used they should be applied BEFORE the siding; if not, wood trim should be applied over the siding after its installation.

7. TOUCH-UPS

Color-matched touch-up paint can be used to repair small scratches and chips that may occur during installation. Dab the touch-up with a Q-tip or point of a cloth to soak in to the raw surface, do not brush or rub.

CARE OF CANEXEL PREFINISHED SIDING

All Canexel Siding finishes are long wearing and require little maintenance. For best results, siding must be washed annually using non-abrasive household cleaners according to the manufacturer's recommendations. Test cleaners on a small area to ensure they do not damage the finish. Rinse siding surface thoroughly after cleaning. **DO NOT USE PRESSURE WASHER.**

For further product information in the US and Canada, please call 1 800 363-1930 or write to: Maibec CanExel™, 202 - 1984, 5^e Rue, Lévis, Québec G6W 5M6, Canada.

See the maintenance guide at canexel.ca for more details.

FIGURE 1
 ESTABLISH STRAIGHT REFERENCE LINES

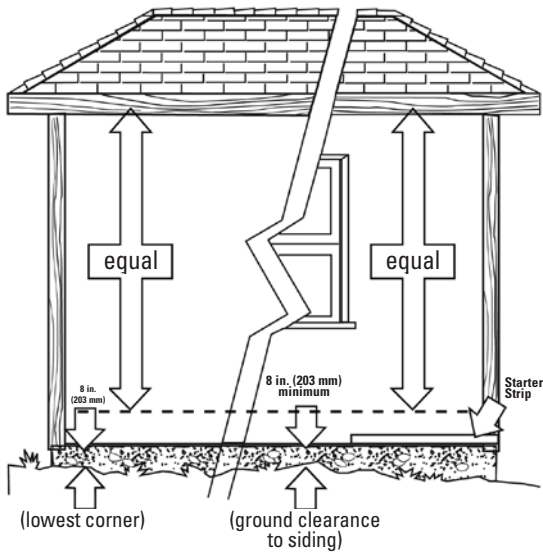


FIGURE 2
 ROOF FLASHING DETAIL

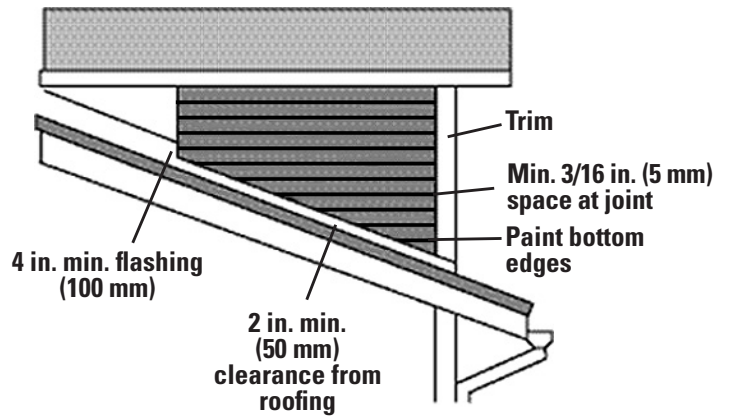


FIGURE 3

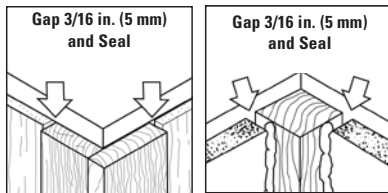


FIGURE 3G

FIGURE 3H

FIGURE 3A

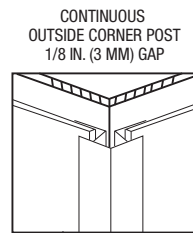
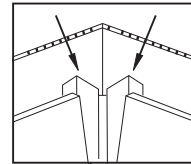


FIGURE 3B

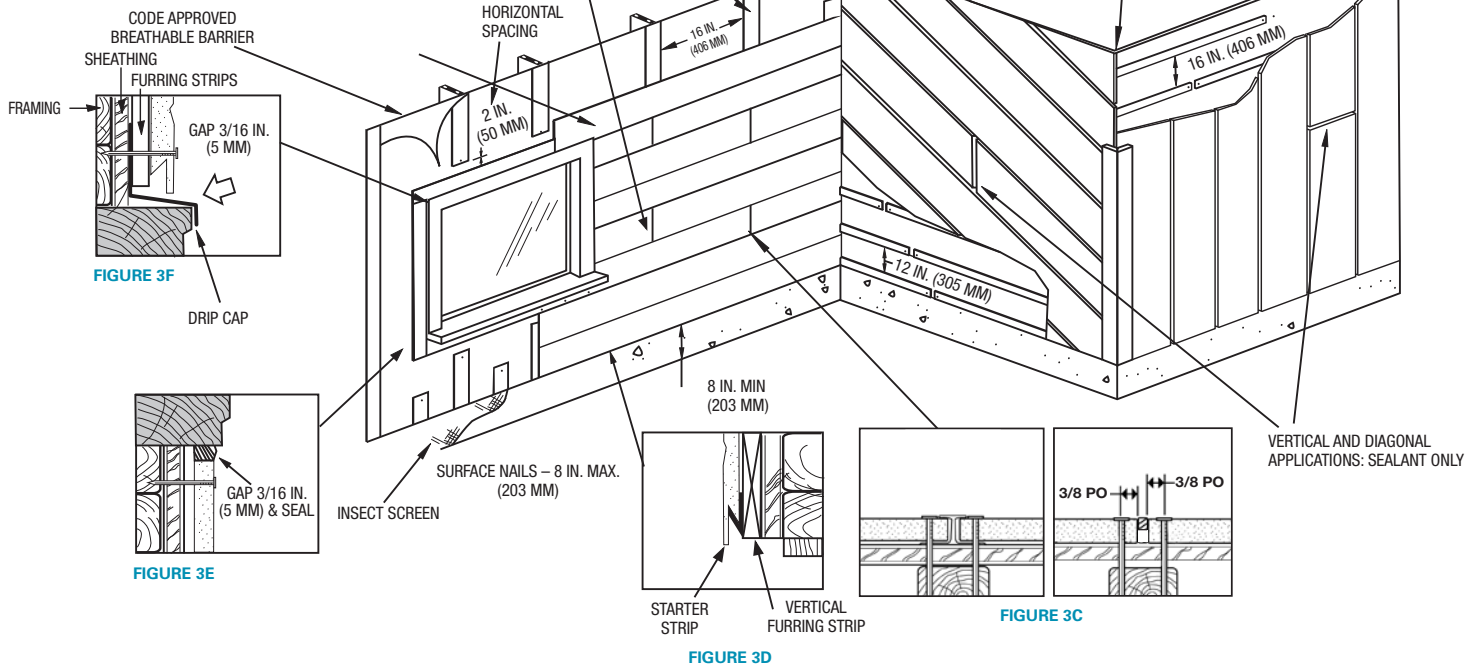


FIGURE 3F

FIGURE 3E

FIGURE 3D

FIGURE 3C

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