



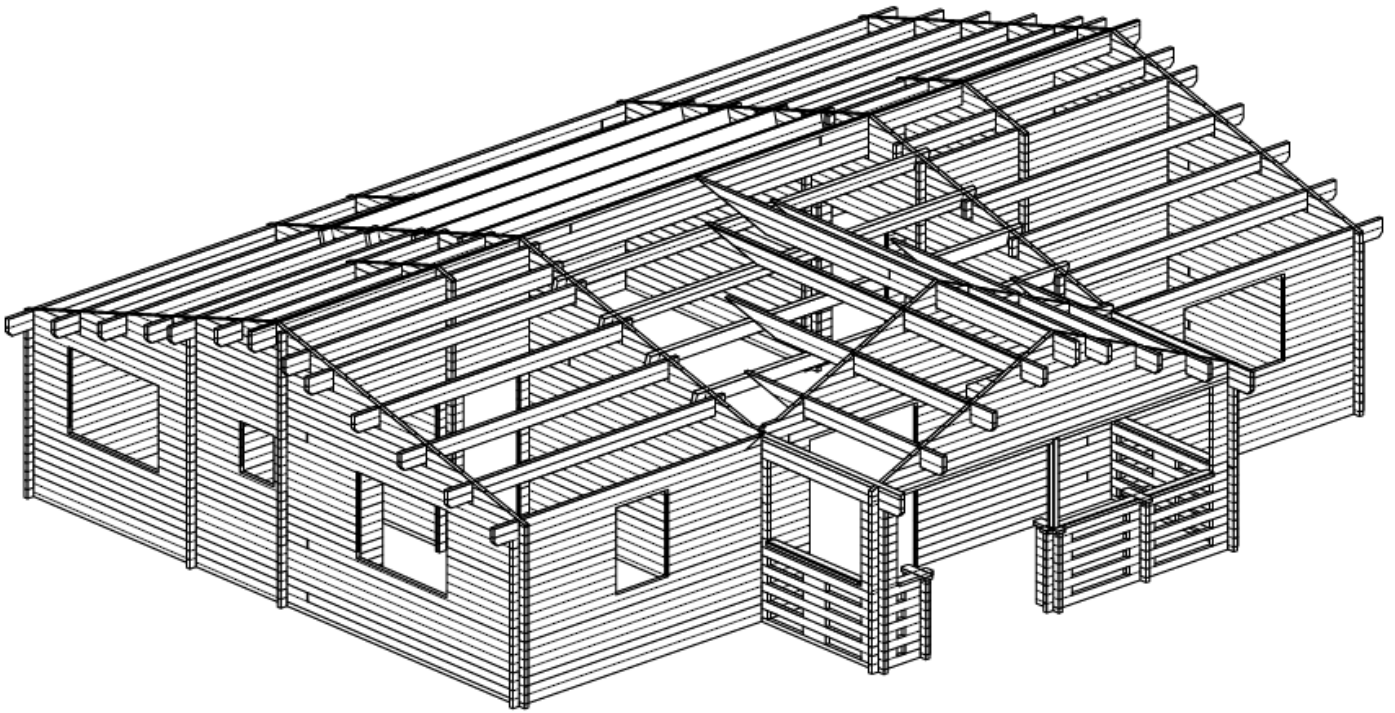
Cabins & Homes



Larger cabins and homes for year round dwellings can be virtually any design. We manufacture to order, and to meet local building code requirements for wind and snow loads. For increasing wall heights, adding roof purlins or changing roof slopes the simplicity and versatility is unmatched.

This all natural construction is efficient, and has virtually no waste. Home packages are delivered to site with components pre-cut. Assembly is simpler than conventional construction, reducing labor costs. With the combined thermal mass of a solid wood wall and the insulation, the energy efficiency has unmatched value.

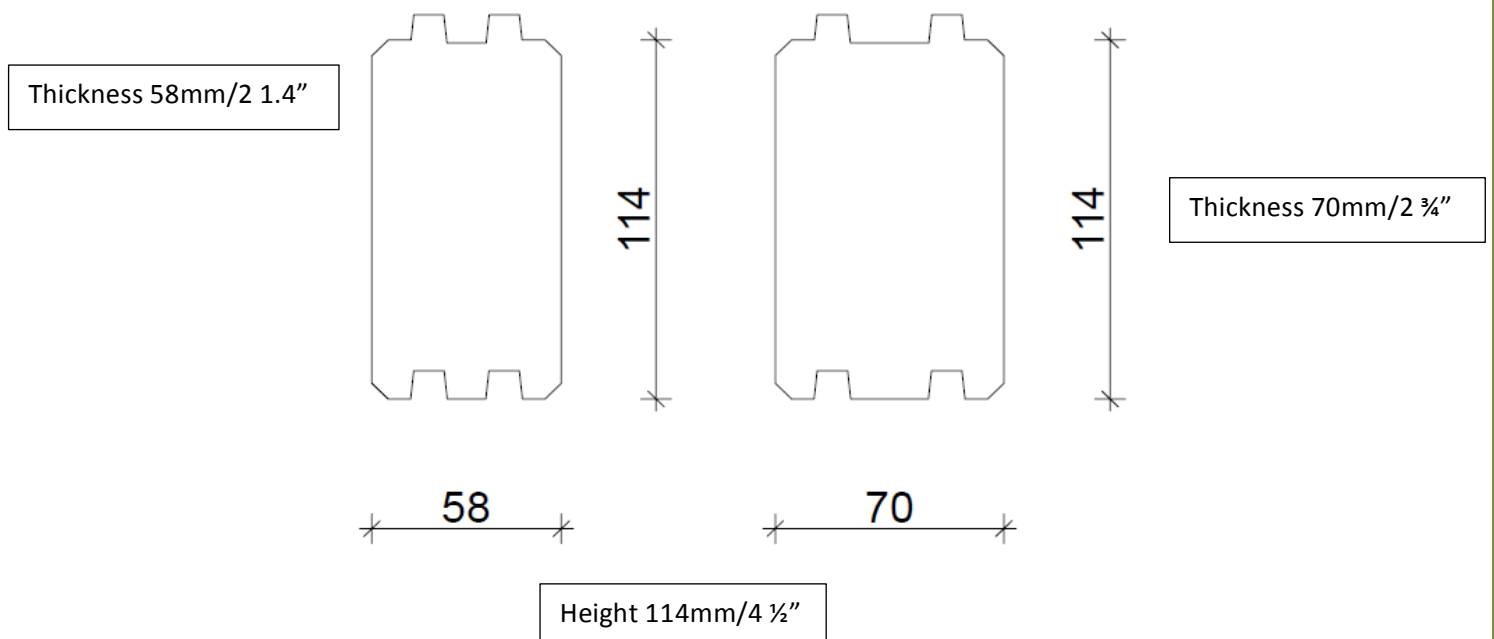
The use of a local engineer is required to adapt our construction methods prior to production to ensure the package meets local requirements.



Type of wood

All material is a northern spruce grown in a cold climate, creating a tight grain and is the most accepted and stable material for log construction. The wall logs sizes and moisture content is consistent, allowing for accurate production and assembly. The wood has been kiln dried to 16% moisture content and can air dry to less than 14% prior to milling.

Wall log sizes

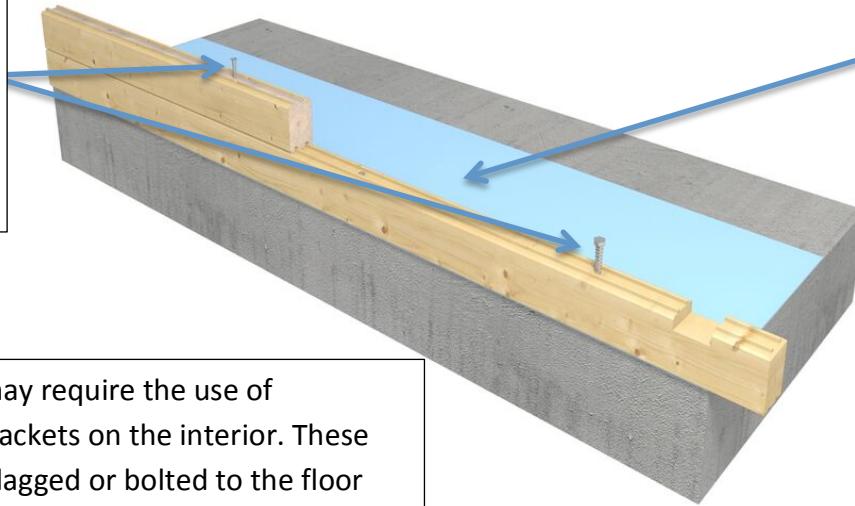


Mounting first two rows of wall logs to foundation

Concrete

The first TWO rows of wall logs must be secured to the foundation using long screws or lag bolts

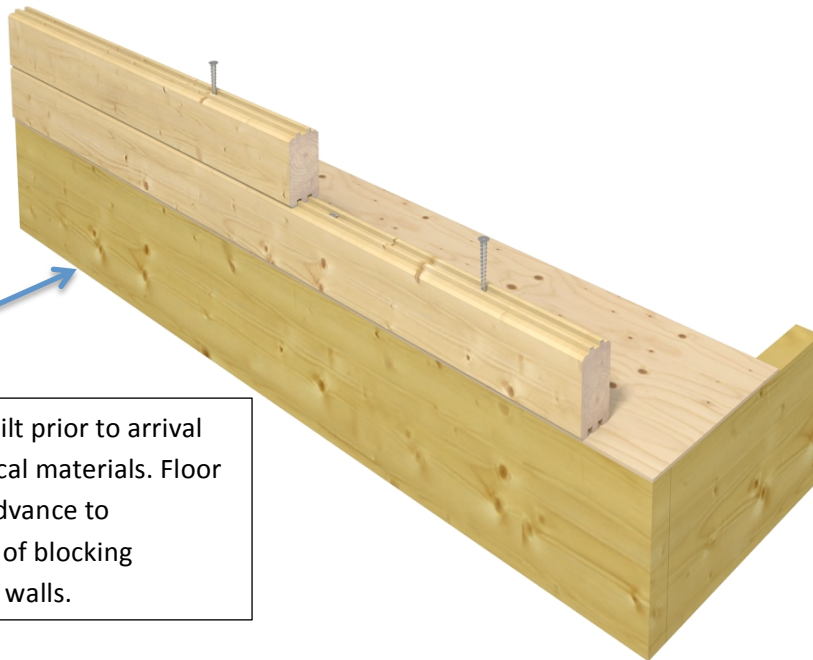
A moisture barrier can be applied between the first wall log and the surface it's being mounted to



Local wind codes may require the use of additional metal brackets on the interior. These brackets would be lagged or bolted to the floor and fastened to the wall log. When insulating the wall these brackets are not seen.

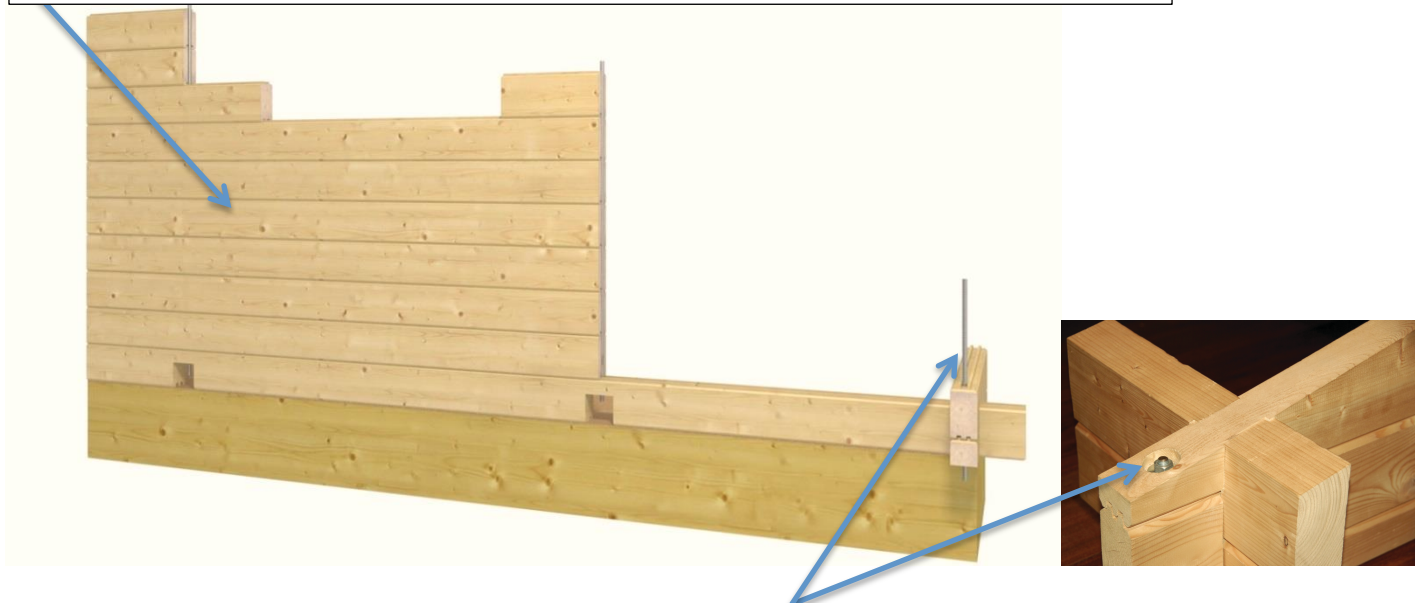
Wood sub floor

Wood sub floors are built prior to arrival of the package using local materials. Floor plans are provided in advance to determine the location of blocking required under interior walls.

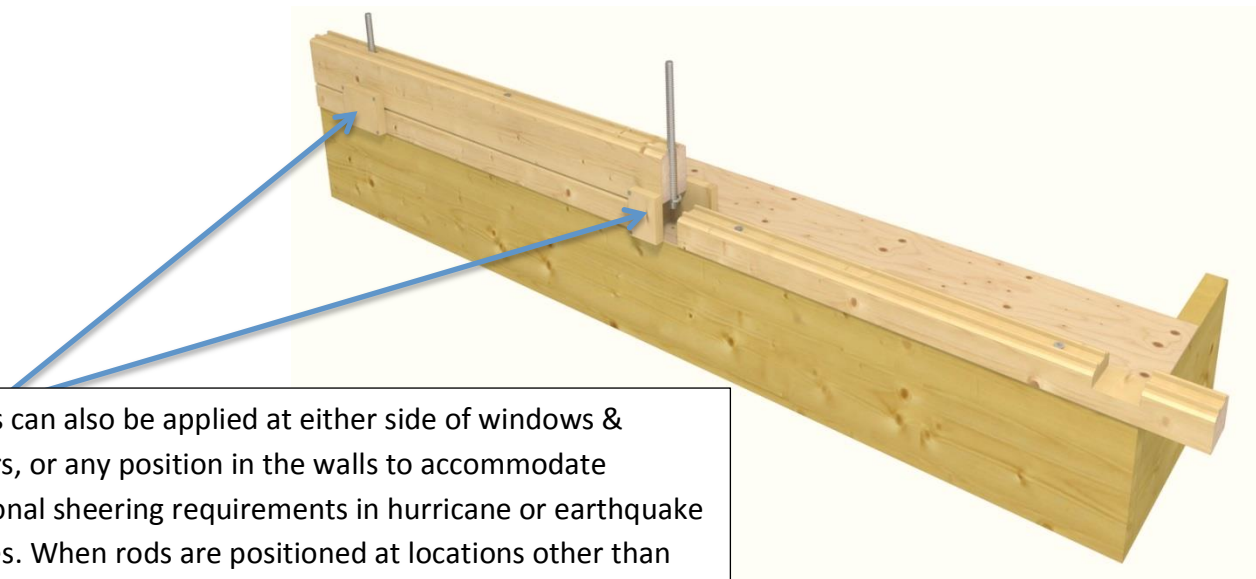


Stacking of wall logs

Logs are stacked without the use of sealants between the logs. The logs must be allowed to expand and contract to climatise with the local environment. A wall height of 8 feet high will shrink up to 1 ¾" over the first year as the moisture content of the lumber neutralizes.



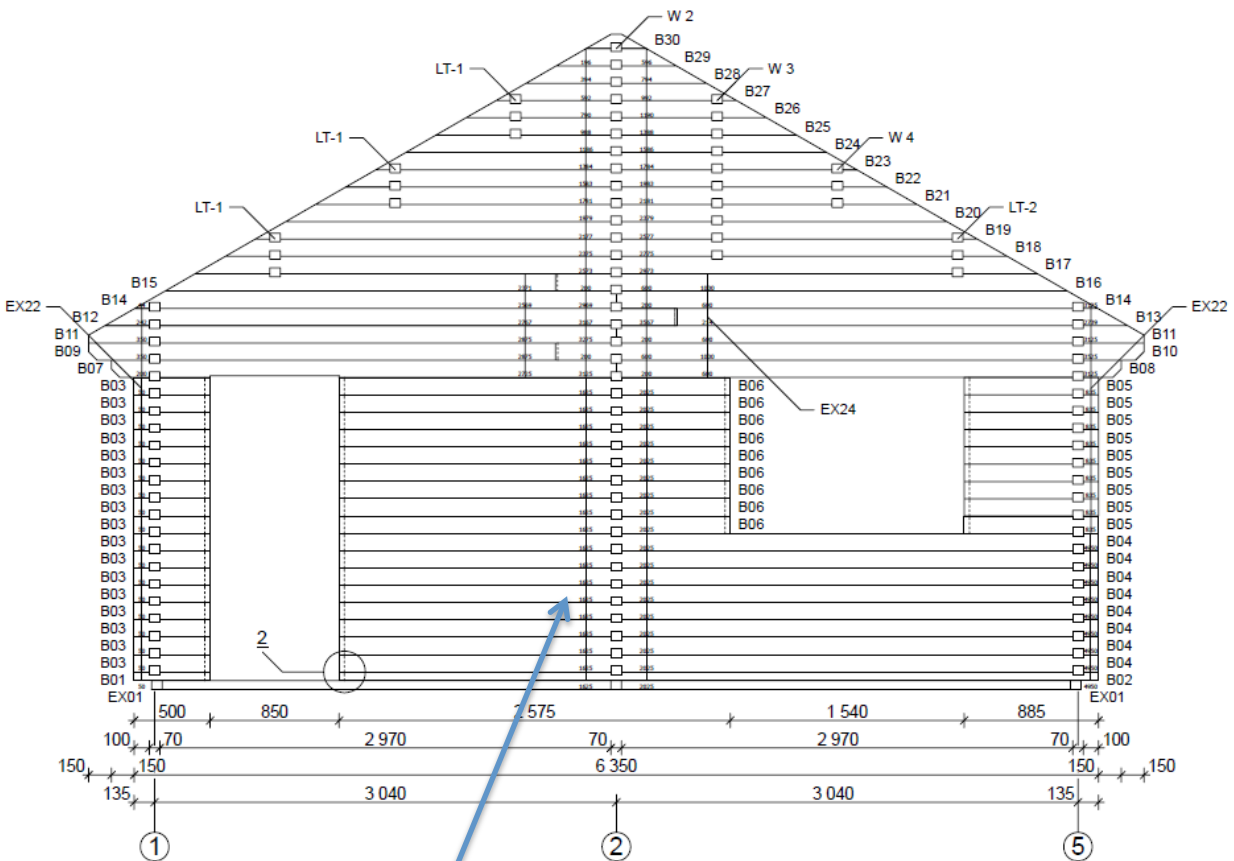
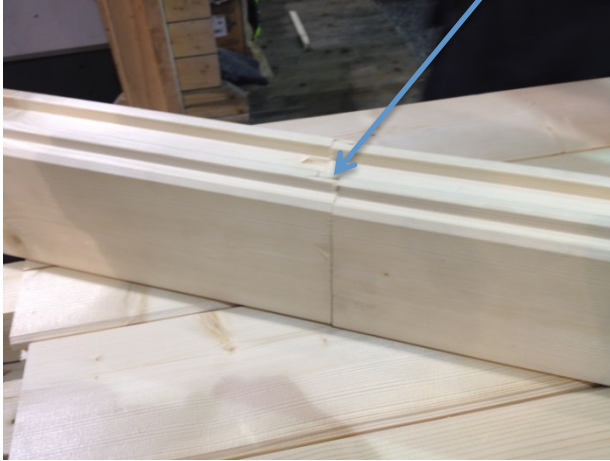
During production wall logs are pre-drilled in the horns to accept 3/8" stainless steel rods that run the entire height of the wall. Upon completion of wall assembly, the provided rods are dropped into the holes from the top and secured using metal washers and nuts. In addition rods are placed at each interlocking junction of all wall logs. The horns hang over the foundation, which allow access to tighten the nuts as the wall logs shrink.



Rods can also be applied at either side of windows & doors, or any position in the walls to accommodate regional sheering requirements in hurricane or earthquake zones. When rods are positioned at locations other than horns an access port for tightening is cut into the logs of 3" wide 3" high at the wall base. Wood plinth blocks are used on the outside & inside to cover the access ports.

Length of wall logs

The longest component used is (5.95 m) 19 ½ ft. When longer walls are required, a dove tail joint is used to connect logs. This joint is pinned on both sides using a wood dowel, driven into pre-drill holes. In long walls wood dowels are used to strengthen the wall.

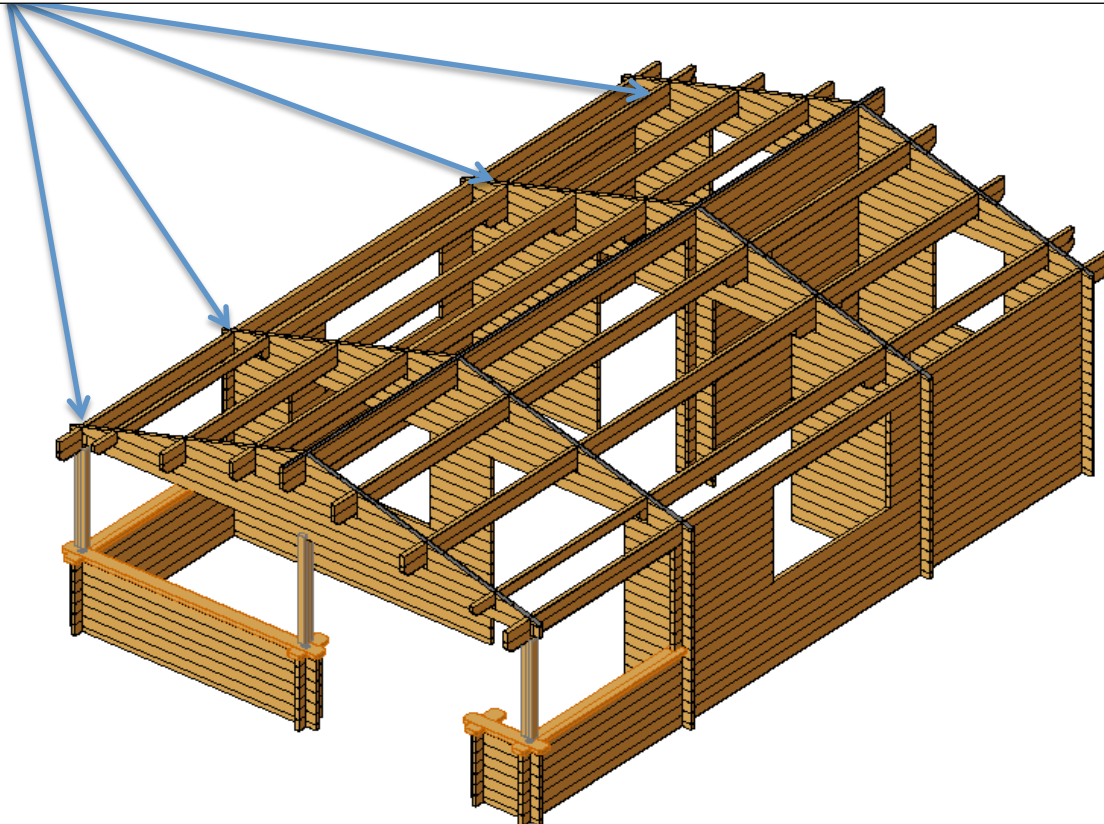


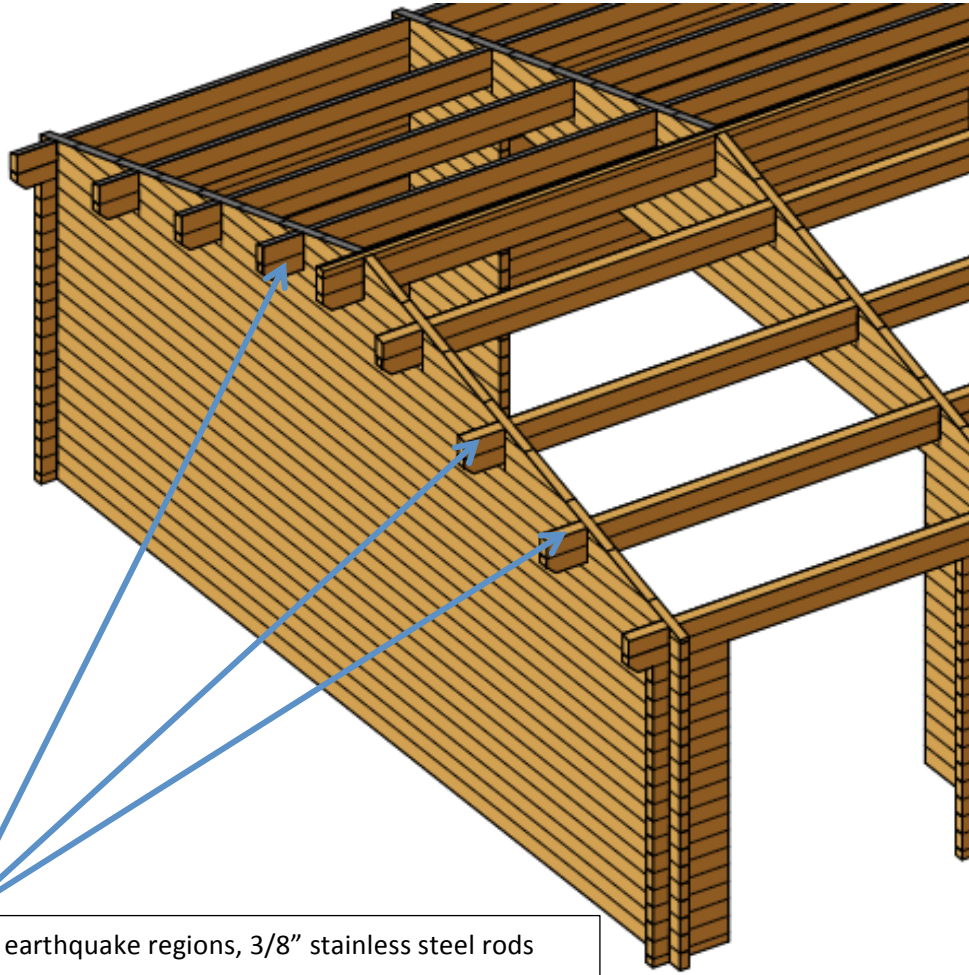
Detailed technical drawings indicate the location of wood dowels.

Gable Ends



Where wall logs are not screwed together, tapered logs used in the gable end walls and interior divisional walls are stacked in sequence and individually screwed together. Purlins of $2\frac{1}{4}$ " or $2\frac{3}{4}$ " x $4\frac{1}{2}$ " and stacked two or three layers high. They are placed in position during the stacking of wall logs and are locked in position by overlaying wall logs. The purlins are screwed to the wall using long screws or lag bolts. Purlins run the length of the building and locked in at all gable positions. When purlins are double or triple high, they are screwed together during assembly.

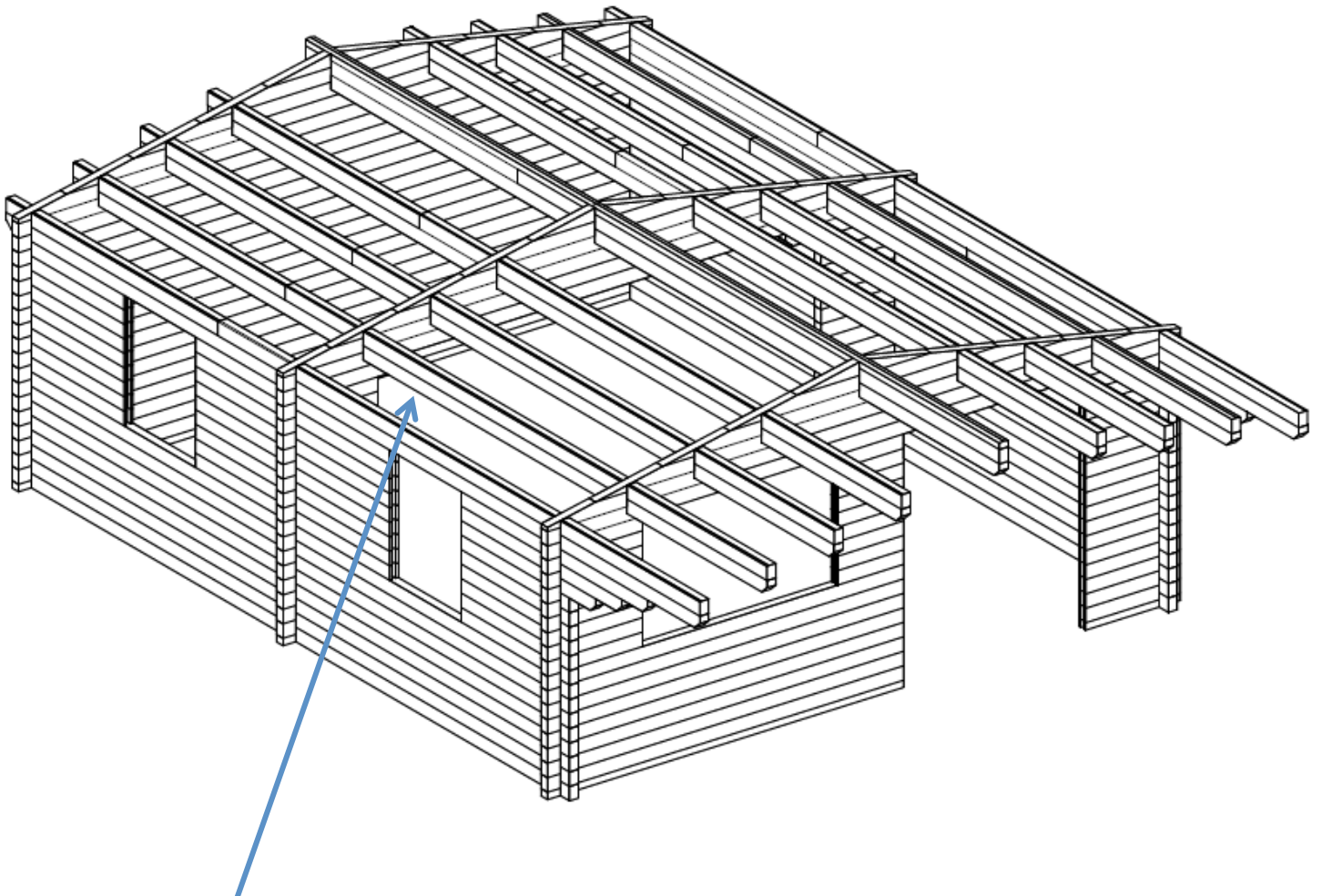




In higher wind or earthquake regions, 3/8" stainless steel rods can inserted through the purlins and the entire height of the wall. This ties the purlins to the building.



Roof Purlins & Snow Loads



To meet local snow load requirements the number of purlins can be increased and the height of purlins can be increased by stacking 2 or 3 high. Purlins for homes & cabins are spaced 24" on center or less at time of production. In most regions, double high purlins will meet snow loads. Local engineering will determine the required size and quantity prior to production.

Windows and doors

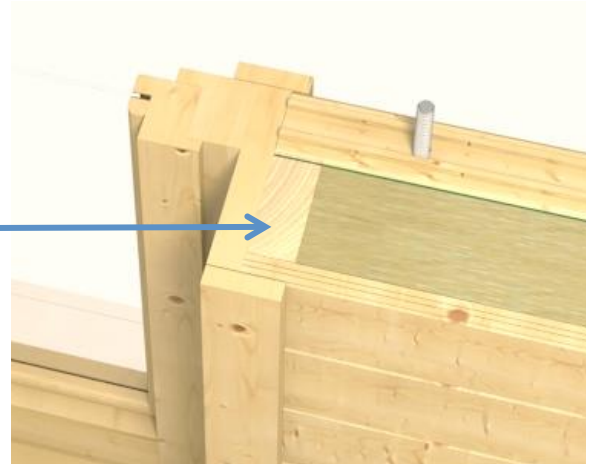
Windows and doors are **NOT** fastened to the wall logs with fasteners. This allows free movement for the logs to settle as they climatise. The wall logs have a dado (groove) cut into the edge at the rough opening and the window jamb has a protruding strip of wood built into the jamb that fits into the dado. This joint prevents with window from coming out of the wall, creates an air barrier and allows the wall logs to settle.



2" of space must be allowed on rough opening at the top of all windows and doors. This cavity is reduced over time as the wall logs settle. Larger trim boards are used on the outside and inside.

Using Local Windows

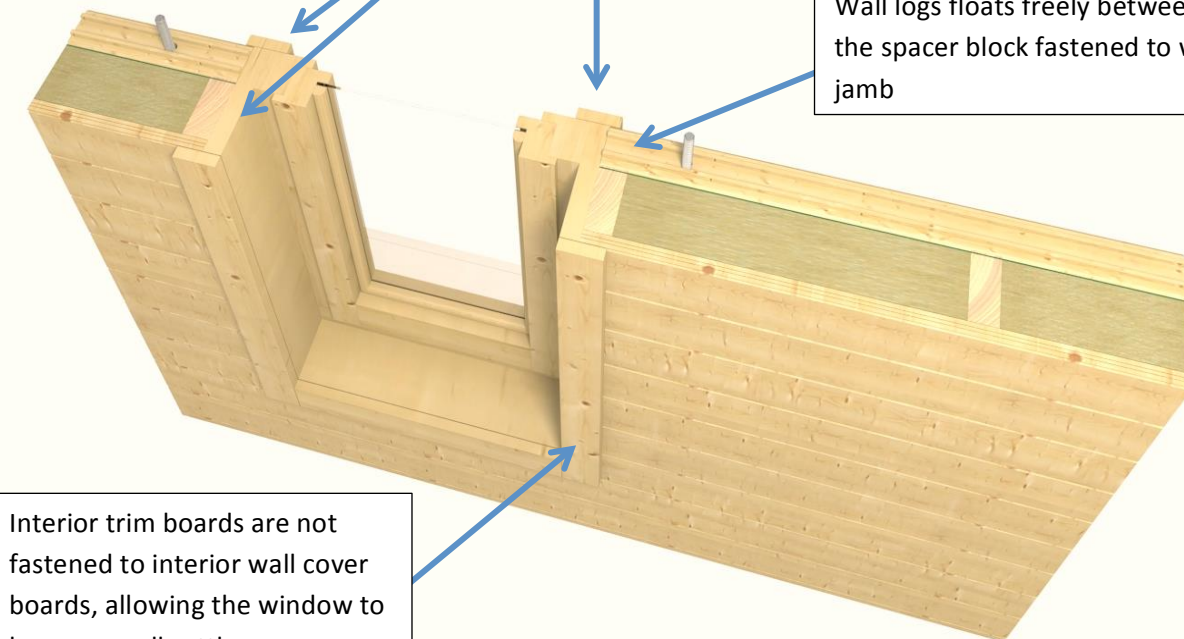
When local building codes require specific windows & doors, local windows are used. Rough openings are cut during production to fit the local windows & door sizes. A spacer block must be fastened to the outside of the window frames at time of installation.



This spacer block is equal to the depth of the studs being used and is sealed and fastened to the bottom and sides of window jambs and sides only of door jambs. (DO NOT apply to the top of jambs)

When the exterior trims (brick mold) is applied on the outside and it creates a cavity for the wall logs to move freely between the spacer block and the exterior trim boards. The exterior trims are not fastened to the wall logs.

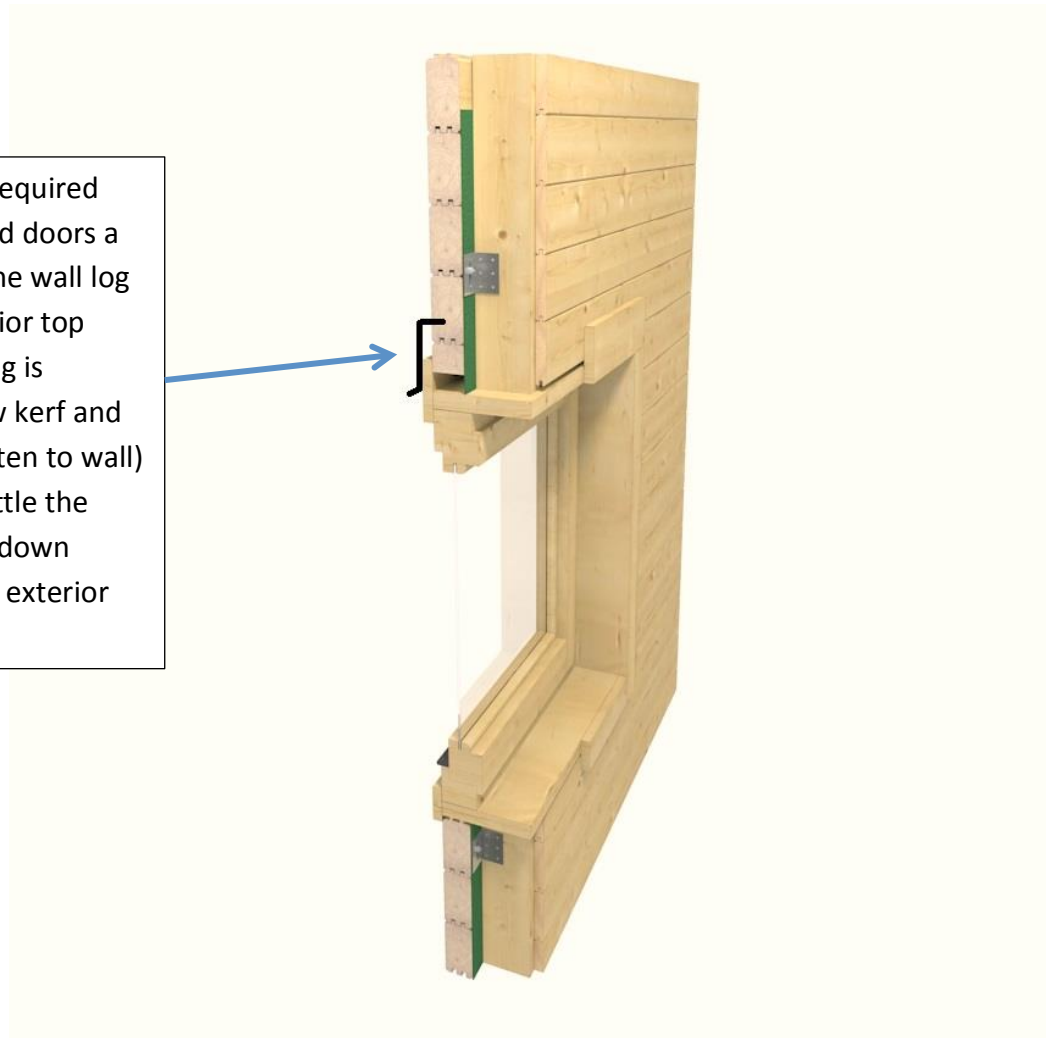
Wall logs floats freely between outside trims and the spacer block fastened to window or door jamb



Interior trim boards are not fastened to interior wall cover boards, allowing the window to lower as wall settles.

Flashing

Where flashing is required above windows and doors a saw kerf is cut in the wall log 2" above the exterior top trim board. Flashing is inserted to the saw kerf and sealed. (do not fasten to wall) As the wall logs settle the flashing will move down freely over the top exterior trim boards.



Insulating Walls



Studs with a depth required for the insulation being used, are installed 16" or 24" on center. Metal brackets are provided to attach the studs to the wall logs. No top plate or bottom plate is required. The metal brackets are designed to allow the exterior wall logs to settle while the studs remain stationary



Studs are cut 2" short of ceiling height to accommodate shrinkage.

A crown molding attached to the ceiling lowers as the wall logs settle

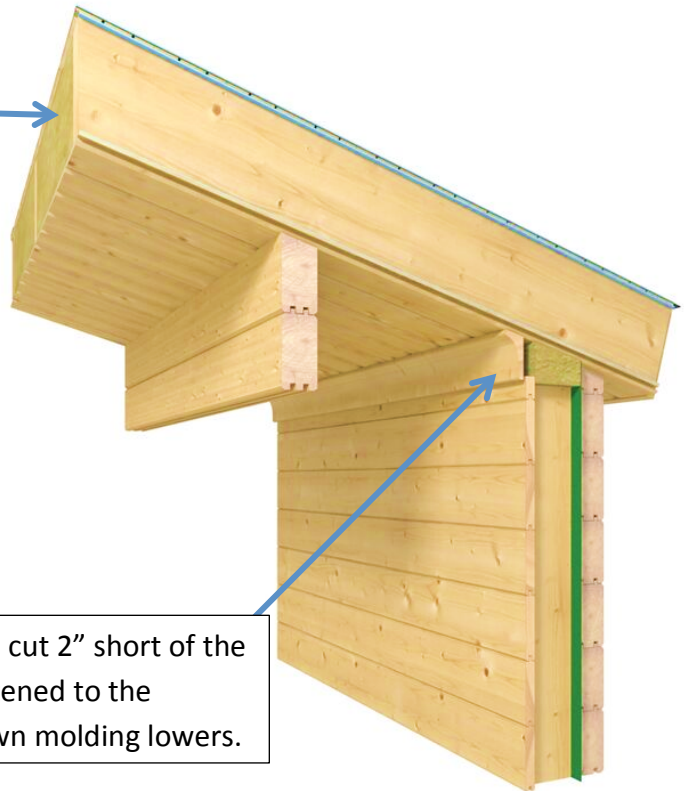
Insulating ceilings - Option 1



Insulating the ceiling can be done from the interior by placing insulation between the purlins and then applying a cover board to the underside of the purlins. Insulating from the underside reduces ceiling heights. Walls can be increased in height if requested.

Insulating ceilings - Option 2

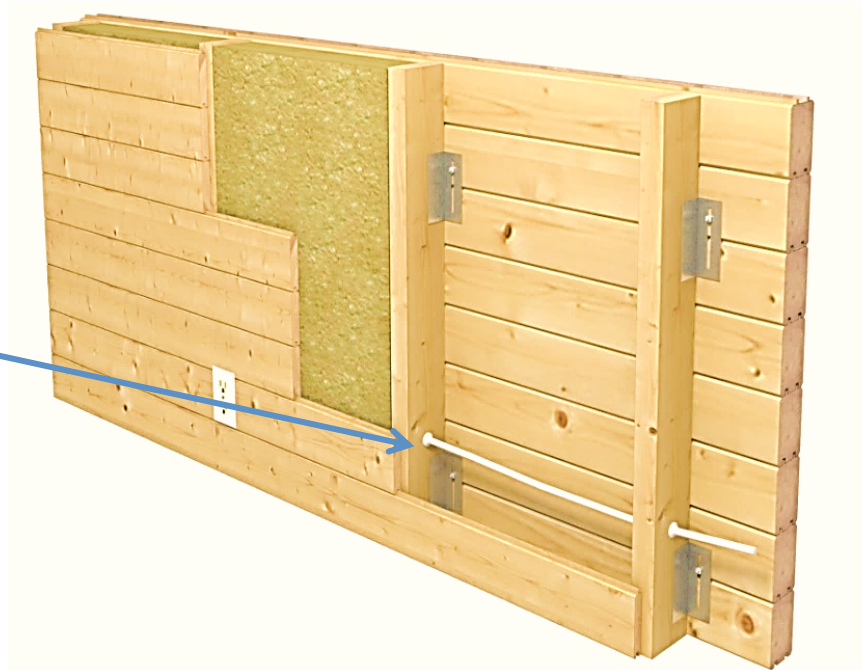
Insulating from the outside requires a buildup using local materials. Insulation is installed and then a layer of plywood before installing the finished roofing materials. Larger fascia trims are required for this method.



Interior wall cover boards must be cut 2" short of the ceiling and a crown molding is fastened to the ceiling. As the wall settles the crown molding lowers.

Electrical Wiring

Wiring installed in studs using the same method as regular construction



Interior divisional walls are pre-drilled with electrical chases during production. Wiring is installed during assembly and surface mounted or countersunk electrical outlets are used.

Vapor Barrier & House Wraps

Must be determined by local engineers based on regions climate

Wood Treatments

The wood must be sealed on the interior and exterior wall surfaces immediately following assembly. High quality treatments are available locally; similar to what is used on wood decks or fences. Research the wood treatments used in your region from approved manufacturers

Maintenance

During the first year, storm rods need to be tightened as the moisture content reduces and the building settles. At the end of the first year tightening will not be required. Exterior and interior staining or painting will be required as recommended by the stain or paint manufacturers
