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Sauna Kit Instructions

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Read all instructions before starting your sauna project.

Scandia Pre-cut Sauna Kit Installation

1. FRAME ROOM TO DESIRED SIZE

Use standard building techniques to frame your room to include openings for the pre-hung door, intake and exhaust vents, and any windows. The sauna ceiling should be set between 6 ½'-7' for proper heat levels. Scandia saunas are supplied with T&G to run either vertically or horizontally in the room. Please verify your order to make sure you run the T&G accordingly before you start the install.

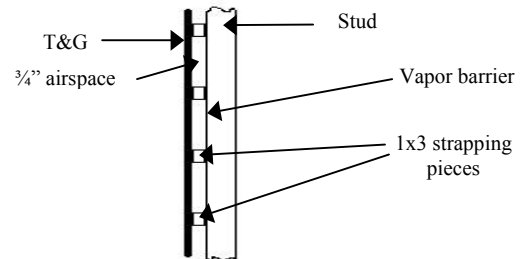
▪ **Applying T&G vertically...**

You will need to attach 1x3 horizontal strapping. You can still use standard 16" on center spacing for you studs. We assume you are using 2 X 4" studs. We offer help with surface or recessed strapping of a stud wall. Both are described below.

Note: Horizontal strapping is applied 12" on center beginning at floor level. Be sure to strap around perimeter of the door frame and any wall vents you're installing before applying wall strapping. Please use kiln-dried strapping to avoid warping and shrinking.

Surface strapping is 1 X 3 horizontal strapping nailed to the surface of the studs, as shown below.

Measurement from stud face to finished cedar face is 1¼"; so double the 1¼" depth (2½") when planning your layout. **Example:** If you want a finished room size of 6 feet, your 2x4 walls should be placed 6' 2½" apart.



Advantage:

- Faster construction.
- Higher R value because of the ¾" airspace.

Disadvantage:

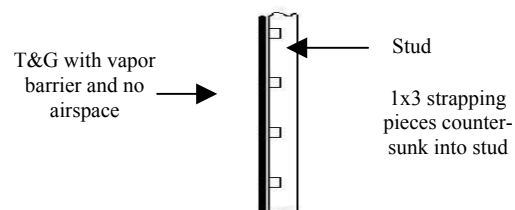
- Less area in the sauna room.
- Requires a wider door jamb.

Note: Apply aluminum foil vapor barrier loosely over vertical studs, before nailing on the horizontal strapping. A ¾" airspace will exist between the cedar paneling and the vapor barrier.

Recessed strapping is 1 X 3 horizontal strapping flush mounted with the surface of the studs. **Note** that this method, while giving a little more room between the sauna walls, is seldom used because of the extra labor and time required. We only offer this method in case you need to use it to maximize your room.

Advantage:

- More usable area in the sauna room.
- Does not require a wider door jamb.



Disadvantage:

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- Takes a little longer and more labor.
- Lower R-value without 3/4" airspace.

Note: Recessing the strapping into the stud is easily done if you trace the outline of the strapping on the stud face. Then set your circular saw blade to the depth of the strapping (usually 3/4"). Run your saw back and forth, staying within your traced lines on each stud face. You do not need to clean out the cut completely. Knock any remaining pieces out of the cut with your hammer.

Suggestion: To save time before building your stud walls, lay all your studs face up, tight together on the ground. Trace your strapping on the faces of the studs, and then cut out the necessary material while they are together. This will be much easier than trying to make your strapping cutouts later, especially in the corners. Now go ahead and build your stud walls, noting which end of each stud should be down at floor level.

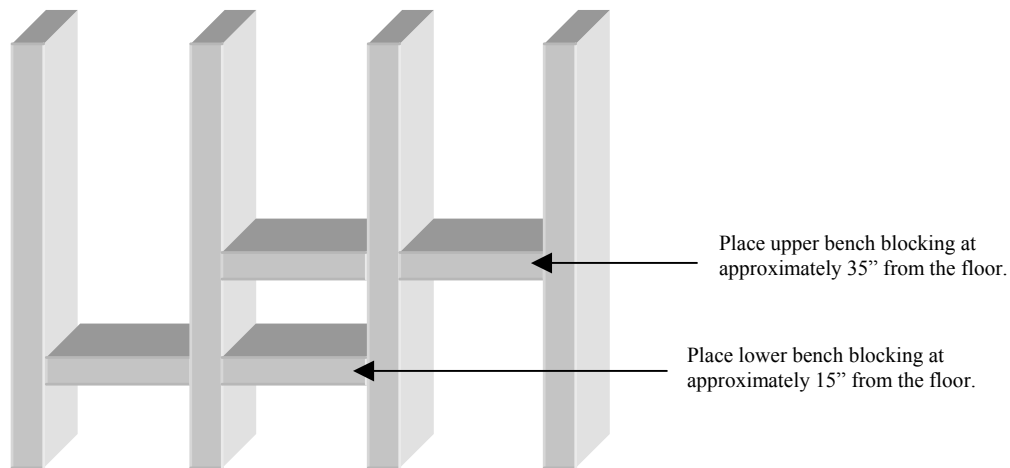
▪ **If applying T&G horizontally...**

Place studs at 1 foot on center intervals, or if the room is already framed, toenail extra studs in so that you have them at 12" on center.

▪ **Attach horizontal nailing boards:**

The nailing boards are what you attach the heater and benches to for support. (see heater instructions).

Wall blocking for benches:



- **Get all wiring done at this stage including lighting. (See heater instructions).**

2. INSTALL PRE-HUNG DOOR

Framing of rough opening

The rough door opening size in your stud wall should be constructed to a width and height, which is 2" larger than the nominal door slab size. This 2" allows for the thickness of the jamb (door frame) and allows the door frame some adjustment space if your wall framing is not square. The difference in space is taken up



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using door shims, or wedges available from a lumber dealer.

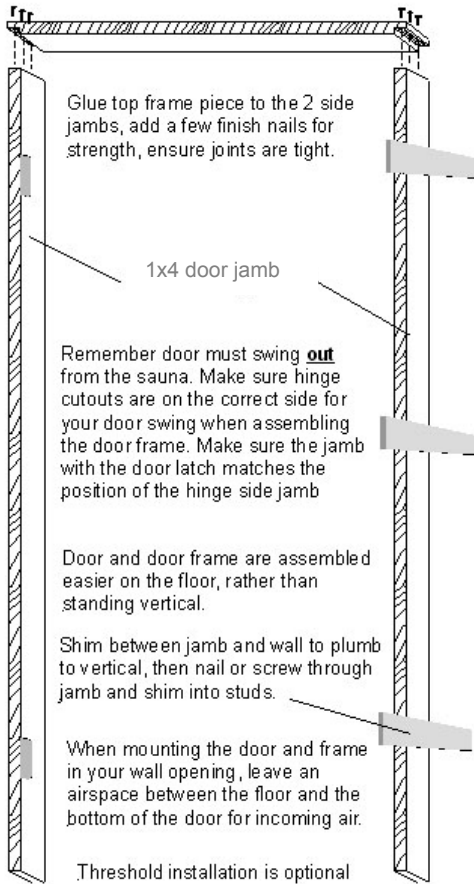
The doorjamb comes in 1"x4" standard cedar. The 1"x4" doorstop may need to be sized to the actual wall thickness to fit the interior T&G finish and the exterior wall finish that you choose.

Installing the door frame

Using "construction terminology", the rough opening for your door in your stud wall should be both "plumb" and "level". By this we mean the horizontal members of your rough opening should be "level", and your vertical side members should be "plumb"....or dead-on for accuracy. If not, don't worry, you will have some adjustment room when you put your door frame into the rough opening in the stud wall. Door frame installation is made a whole lot easier if the door opening is true and square.

At this stage you should have your door frame assembled, with 1/2 of each hinge pair set screwed **loosely** in to hold the door in place when the time comes. Remember the hinge door pins drop in from the top !! Don't install the door slab in the frame yet, we will install the door slab after the frame is nailed in place and "trued" for level.

HINT: For cosmetic reasons, it's good to hide the screw or nails going through the jamb under the door stop

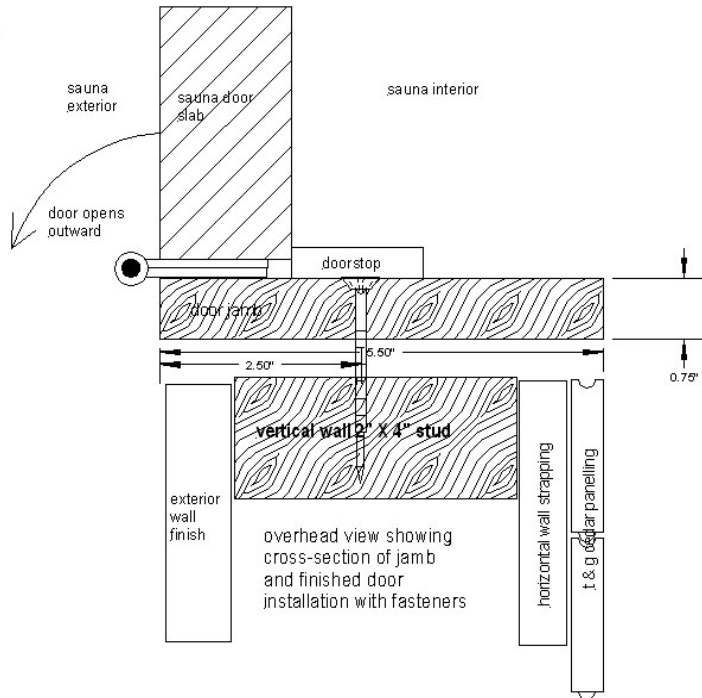


molding you will install after the door slab is in the frame. Pre-drilling screw holes through the jamb will be stronger than just "driving" them through the jamb, and you are less likely to split the cedar jamb. Any holes you pre-drill should be 3-1/4" from the edge of the hinge side of the jamb, this way they will be covered later by the doorstop molding (see diagram below). Drill all 3 pieces of the door frame putting the holes about 12" apart.

If the door threshold is not required, it can be left out.

Installing the Hinge Side:

Only install nails or screws loosely at this point through the jamb. Set the door frame in the opening and lightly





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fasten the hinge side to the adjoining stud through the holes you have already predrilled. Center the jamb so the edges are flush with both sides of the finished walls. If the 2" x 4" stud is plumb, nail or screw the hinge side of the jamb directly to the 2" x 4". If the stud is not plumb, shim as necessary so the jamb is plumb. Always drive the fastener through a shim, not between a shim or you will pull the jamb crooked. Make sure the door frame is up towards the top of the opening so there is some room for ventilation under the door slab. Remember the door must open outwards from the sauna —take time to double check !!

Installing the Top Door Jamb:

Level the top of the doorjamb, install shims as required directly in the path of screws or nails you will put through the jamb. (See illustration above, left.). Install doorjamb flushed to the outside finished wall. You may need to customize/rip the door stop to your space, so that the door stop is flushed with the inside of the sauna.

Installing the Door Slab:

Now you can hang the door slab in the frame. Make sure the hinges attached to the door slab are **not screwed down tight yet**. This will allow some room for fitting. Get another person to help you with holding the door slab and mating the hinge pairs together, then tap the hinge pins down into the hinges binding the door to the hinges on the frame. **Do not close the door yet!!** Next, screw all the hinge screws down tight making sure each hinge fits nicely into the area pre-routed out for it. The screw heads should be level and flush with the hinge surface so they don't bind when the door is closed. Now you can close the door.

Standing inside the sauna, survey the fitting of the frame around the door. Now is the time to "fine-tune" the frame installation, keeping a nice even spacing on all faces of the door between the frame. Here's where using screws is superior to using nails. Adjust your shims in or out as required to take up any slack between the door frame and the rough-in studding. Install the door catch and make sure the door moves smoothly from the latch position through to the full-open position. If the door swings on it's own.... it's not level, adjust the hinge side so it's plumb on all sides. Place your level on the jamb and check the jamb face and the edge-on view to see if they are plumb while standing in the doorway.

Now you can screw down all screws holding the frame to the rough-in stud. Or, if you used nails, hammer them home remembering you want to always screw/nail through the shim, not between shims or you will distort the jamb.

Once you're satisfied with the door installation you are ready to install the doorstop molding. With the door closed you can now nail the doorstops in place. Have someone maintain steady, gentle pressure on the outside of the door. Butt the doorstop molding up to the door slab and nail it into the jamb with small finishing nails.

At this point make sure that you place some blocking between the studs so that you have something to attach the heater brackets to. Don't rely on the cedar to hold the heater on the wall! Refer to the heater instructions for bracket height, or just place the blocking 25-29" off the floor.

You should also place blocking inside the walls where the bench ends will attach. The lower benches are usually placed so that the seat boards are 19" above the floor, the upper bench at 38" above the floor.

Installing the Latch Side:

Plumb the latch side, using shims as necessary, taking care that the measurement at the bottom of the door frame matches the measurement at the top of the frame.

3. INSULATE ROOM

Use R12 Fiberglass household insulation only—do not use foam insulation! Fill gaps between door frame, window frames, etc.

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Tools and materials that will be helpful for kit installation:

- Hammer
- Miter saw (electric is best). Ensure the matching ends of cedar boards are exactly 90 degrees for a good match, if not then trim with the miter saw.
- Carpenter square
- Air powered brad nailer with supply of 1" or 1¼" brad nails, (you will appreciate this before you finish the sauna....a great timesaver!) Rent or borrow one if you can.
- Stapler to fasten aluminum vapor barrier
- Scissors or utility knife for cutting aluminum vapor barrier
- 4-foot carpenter's level

4. APPLY THE ALUMINUM VAPOR BARRIER TO WALLS AND CEILING.

We supply vapor barrier for walls and ceiling sections. For best results, apply vapor barrier vertically on wall sections, starting from the top to bottom. Contrary to the methods used when applying residential poly vapor barrier.... **do NOT** stretch aluminum vapor barrier when installing. Instead, drape it slightly loose and overlap any joints with a 2" overlap. When exposed to the heat of the sauna, the aluminum will shrink over time so allow for this when you're installing it. Start your first section by applying the vapor barrier vertically on the wall sections, starting from top to bottom using a hand stapler (not small office size) to tack the barrier to the studs. A suggestion for those customers wanting the very best installation: joints can be sealed using self-adhesive aluminum tape, (not duct tape).

5. SORT ALL OF THE SAUNA MATERIALS

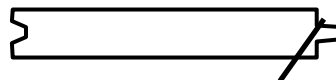
This will help familiarize yourself with the components and allow you to see how much of each size T&G is in your kit. Sort them using the following suggestion:

HINT: You can inconspicuously hide any boards with slight blemishes underneath the upper bench and directly behind the sauna heater.

6. APPLYING THE T&G, (TONGUE AND GROOVE WOOD PANELING)

Tongue-and-groove is supplied in 7-foot lengths. We supply enough T&G to cover the entire sauna room plus a small allowance for mistakes.

Normally, the nailing is done through the "tongue" of the board, at an angle so the next board slips over the tongue without the nail shank impeding it (see below).



START WITH THE CEILING

The cedar is applied perpendicular to the ceiling joists in the sauna room. If cedar is going to be applied parallel to the ceiling joists, then strapping will have to be installed to nail to. The ceiling T&G can be ⅛" short for easier fitting. The last board to be installed should be ripped at an angle to allow it to "slip" into place. You can also rip the backside of the "groove" on a saw so the last board simply needs to be placed in the gap, without fitting over the tongue of the previous board. Surface nailing with finish nails will be necessary on the last board; alternatively you can glue it in place to avoid nails showing.

Be sure to cut any butt joints accurately. For this purpose an electric mitre saw is one of the best tools. **Do not** trust the angle markings on a mitre saw! Unplug the saw and double check the angle markings by locking the blade down into the kerf groove on the mitre saw and aligning the saw blade with a carpenter

square resting against the back fence of the saw. This will show you the true “0” mark. Use this as your reference point for quality joints.

NOW CONTINUE WITH THE WALLS

Start in the corner where the heater will be located and work your way around the room. The corner with the heater is usually not a dominant or noticeable corner (depending on your light) and there is more leeway for an imperfect fit. Finishing with a perfect fit in the last corner requires more finesse than the other corners.

HINT: You can inconspicuously hide any boards with slight blemishes underneath the upper bench and directly behind the sauna heater.

Please note that a right-handed person will find it easier to nail the T&G boards if they are installed with the tongues pointing to their right. Working clockwise from the heater (or counter-clockwise if you are left-handed) will allow you to easily use up any defective pieces regardless of which end of the board is “blemished”. Every board can be used in either the clockwise or counterclockwise application. When planning the location of each T&G board, utilize the natural beauty of the color variation and grain in the wood.

Rip the first board of each wall square to start and the last board with a slight taper for easier fitting. The first board on the adjacent wall will cover any gap so you can just keep going. Only the last board of the fourth wall needs to be properly angled and precisely fitted.

All wall T&G boards should butt tight to the ceiling. Avoid having butt joints at the same level from one row to the next. Mix the lengths of boards on every new section so the eye is not attracted to joints unnecessarily.

Secure T&G to studs using 1¼” finishing nails or brads in an air gun. When nailing the T&G, avoid nailing too close to the end of the board to prevent splitting the wood. If you have to nail near the end of a board, drilling a 1/16” pilot hole can prevent split boards. The nailing should be done in a way that doesn’t interfere with the placement of the next board. Use a nail set to set the nail heads flush if necessary.

DOOR TRIM

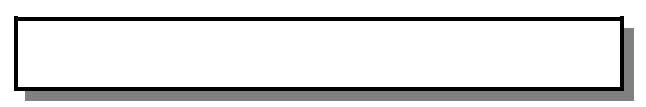
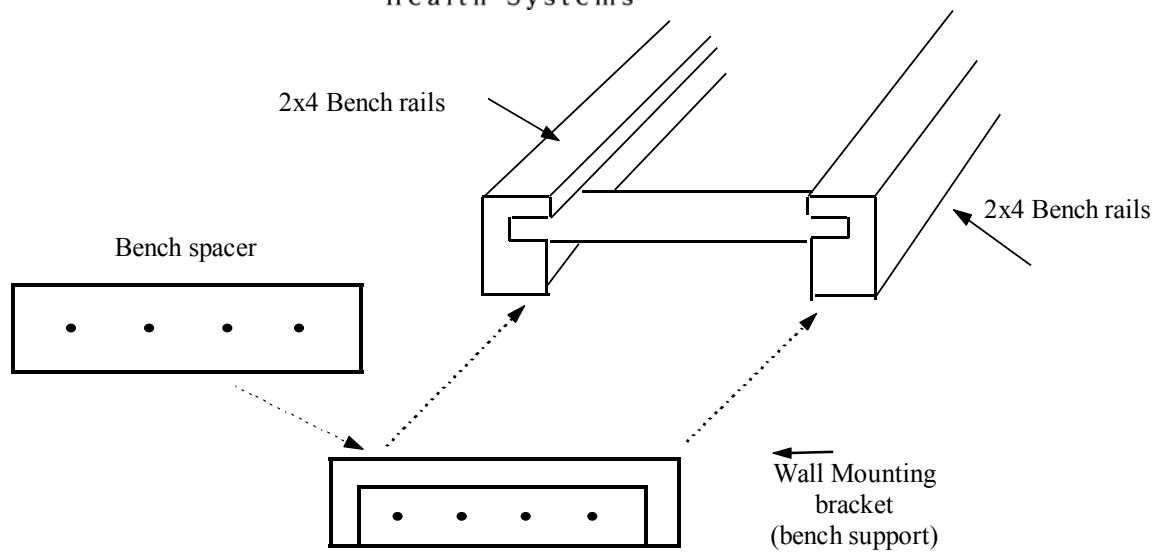
Door casings are installed leaving about 3/16" of the front edge of the doorjamb visible, however personal preferences vary. Layout and mitre the top corners accordingly. Door casing should be level with the doorjamb.

7. BENCH ASSEMBLY

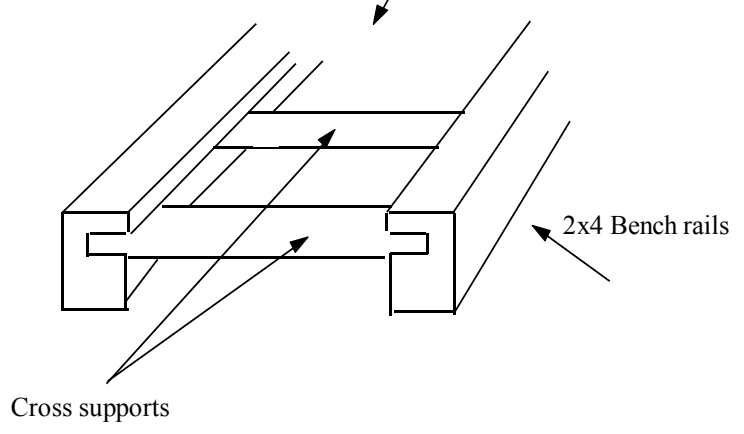
The bench is composed of 5 different parts: (see diagram below)

1. **2 X 4 “rail”**: These are the long boards that run the full length of the bench. The rail is the front face and rear face of the bench.
2. **1 x 4 “Bench boards”**: These are the seat boards that run the length of the bench on the top surface.
3. **“Cross supports”**: These run perpendicular to the runners. Need to be screwed into through the runner by counter-sinking the screw head.
4. **“Bench wall mounting brackets or Bench support”**: Attach to rear wall by screwing into studs, acts as support for middle cross-supports to rest upon when bench is in down position.
5. **“Bench spacers”**: Rests on the bench support and is additionally attached to the wall.

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Bench Boards are placed along with the bench rail, over the cross supports

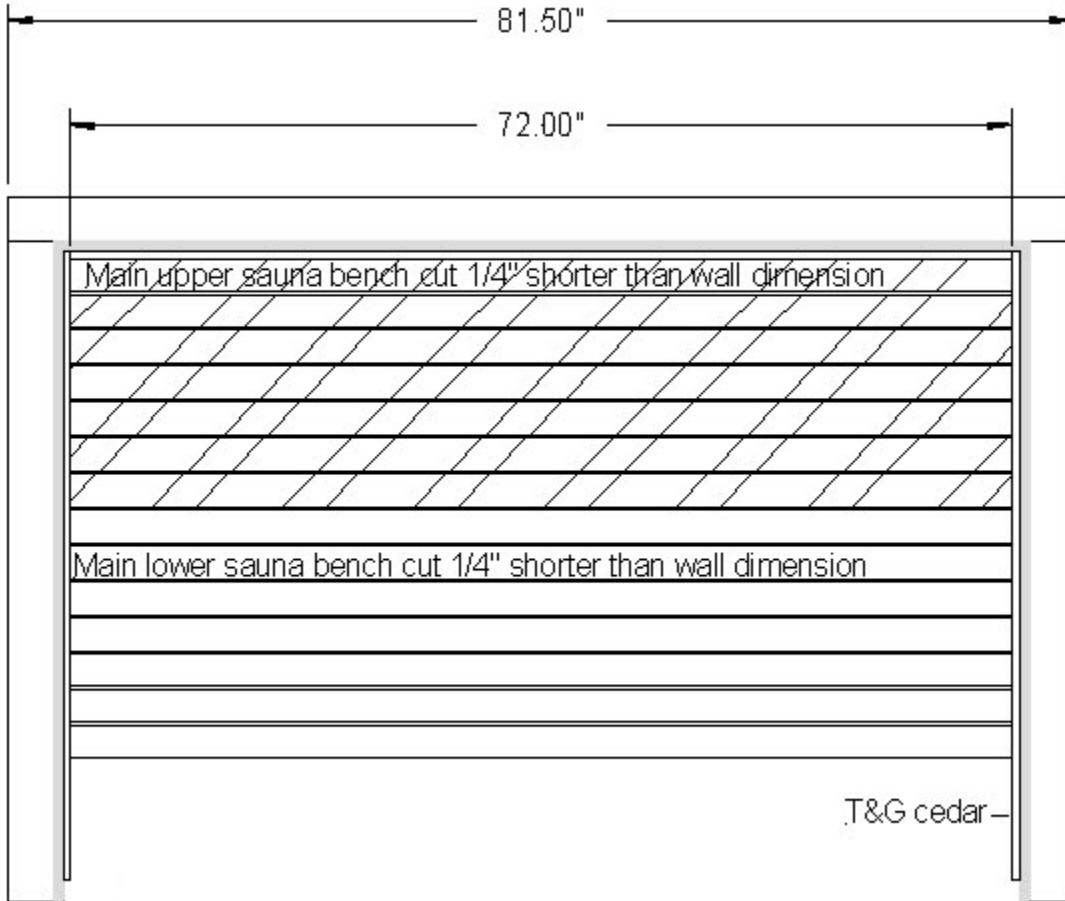


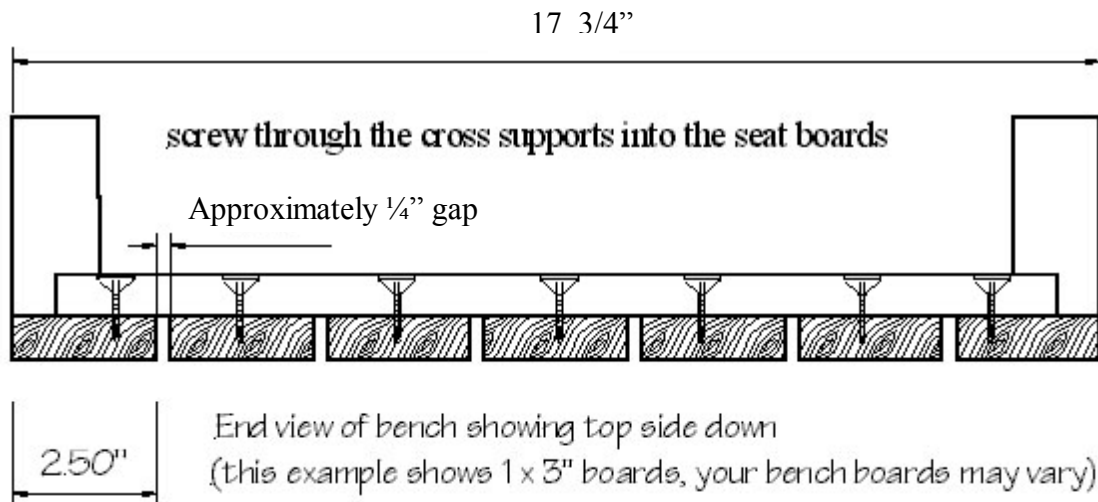


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Assemble benches after the walls are installed. **NOTE: Benches are best assembled upside down to ensure no fasteners will be visible after assembly. Fasteners can cause skin burns in the sauna when in contact with your skin!** Assemble benches on a clean floor, preferably on cardboard to avoid marring the surface of the cedar seat boards. Measure the final dimension between walls where the sauna bench will be installed and cut the length of the "rails" to 1/4" less than the inside dimension of the walls.





All fastening is done from the underside of the bench except for the first seat board and the face of the front rail. In these cases, the screws must be countersunk to avoid the possibility of a skin burn from a protruding metal screw head.

8. HANG AND CONNECT HEATER AND LIGHT

For details, refer to heater installation instructions.

9. CONSTRUCT HEATER FENCE

For details, refer to heater installation instructions.

10. CONSTRUCT DUCKBOARD

This is the flooring for walking. Wooden duckboard flooring is supplied for most sauna kits. Scandia PVC 12" X 12" floor tile is an option that can be supplied instead of the duckboard (upon request). Wooden duckboard or "slats" are used to cover the traffic area in front of the benches for both appearance and walking on. Build the duckboards so they can be removed in sections so the floor can be cleaned. Do not install duckboards under the heater area. The duckboard must be removable when the heater guard is in place.

When assembling cedar duckboards, lay out the top boards, good side down with an equal airspace between. Then lay out the sleepers on the top boards planning for heater guard cutout. Nail or screw the sleepers to top boards so that fasteners do not protrude through. Sleepers are usually placed on 12" centers.

11. FIRE UP YOUR SAUNA!

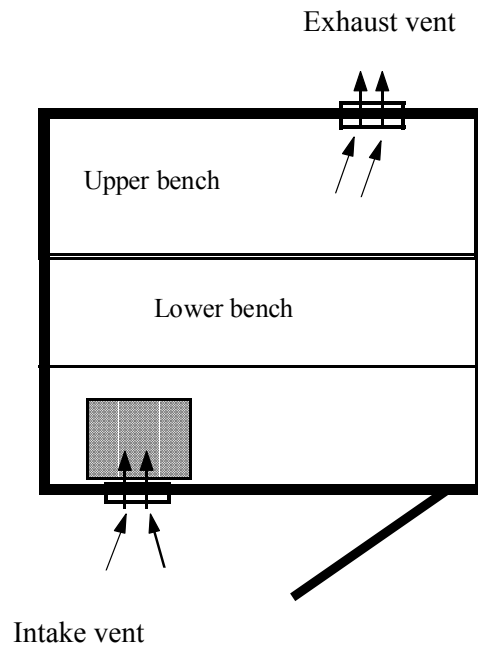
Follow heater instructions for first heat-up.

Sauna Room Venting

Proper venting and positioning of sauna vents is going to result in a more comfortable sauna experience. Ideally, intake and exhaust vents are placed in opposite positions in the sauna room.

The intake vent in the wall should be located immediately behind the heater as low as possible to the floor. Whenever the heater is on, some outside fresh air will be pulled into the low pressure area under the heater. As the hot air rises through the heater, new air must move to replace it under the heater.

The exhaust vent inside the sauna should be placed as far away from the intake vent as possible (ideal location would be on the wall, between the upper and lower bench).



Sauna overview