

SAUNAFIN (TyloHelo) INFRARED SAUNA MATERIAL LINER KIT CONSTRUCTION MANUAL

***** BEFORE YOU BEGIN: READ ALL THE WRITTEN AND DRAWN INSTRUCTIONS AND REVIEW THE MATERIAL LIST *****

IMPORTANT NOTES:

Clear cedar kits use the finest "Grade 'A' & Better" tongue & groove cedar for lining material. But even this top grade allows for 15% 'B' grade; which could be a nick, knot, crack or blemish. You may find certain boards that you do not like. Pre-sort your sauna kit to find this material and make an effort to "hide" these boards or use them where you will be cutting around the element openings. The cedar is finished on two sides to give you more flexibility in selecting the face you prefer.

Unless otherwise discussed and ordered, the door is located on the long wall across from the bench. The material supplied is based on these criteria.

The cedar for the ceiling is generally run the shortest span. (See YOUR "Material List" to confirm.)

If the material delivered does not correspond to your sauna design or layout, contact us before you install. Do not cut down boards intended for something else. We will not provide additional material in these circumstances.

SPECIAL NOTE FOR CONTRACTORS:

We realize you already possess the skill and know-how to build the sauna and you may choose not to read these instructions. At the very least, make sure you carefully review the material list before you begin cutting. Material is supplied in specified lengths for particular uses. The kit has been counted twice before it leaves our factory. 95% of the time, "shortages" are a result of certain pieces being cut incorrectly, leaving a shortfall elsewhere.

FRAMING

NOTE: This instruction manual has no details for general framing. It is assumed that you possess basic carpentry skills to install this kit and have the know how to frame the walls.

Use 2" x 4" kiln-dried SPF (spruce, pine, fir) studs to frame the walls, ceiling and benches.

**** UNLESS OTHERWISE SPECIFIED, INFRARED KITS LINED HORIZONTALLY**

***** Frame or strap the ceiling to an inside height as listed on the Sauna Material List. Height for infrared saunas is generally 78" to 82-1/2". (See YOUR "Material List" to confirm height.)**

The standard sauna door rough opening is 26" x 76-1/2". (See YOUR "Material List" to confirm.)

WIRING

Electrical rough-in of wiring must be done at this time.

Note: Throughout these instructions you will see infrared heaters referred to as heaters or emitters. These terms are interchangeable.

Control panel is installed on the wall outside of the sauna

Stub out wires for emitters to be connected after cedar work is complete. (See separate IS-IR Sauna Rough-In for details of YOUR sauna.)

THE WIRING SHOULD BE DONE ONLY BY A QUALIFIED ELECTRICIAN.

INSULATION

Insulate stud cavity in walls and ceiling with R-12 fiberglass or Roxul.

NAILS

Cedar is installed by nailing into the tongue (known as "BLIND NAILING"). The next boards will then conceal the nail. (See drawing #4)

Nails are galvanised.

INNER LINING

Before you begin, examine all the pieces of tongue and groove cedar. You may find certain boards that you do not like, whether it is due to a knot or color. Make an effort to "hide" these boards.

All kits come with several extra pieces of tongue and groove cedar at no additional charge to allow you to discard some boards altogether.

Use the specified lengths of tongue and groove cedar (see "Material Packing List").

Depending on the actual inside finished size of your sauna, it may be necessary to trim these boards. Nail through the tongue only in order to conceal all nail heads (Blind nailing - see drawing #4).

HORIZONTAL LINING

Start at the floor and work your way up. Ensure the first board is level. Check the level every 4-6 boards. The first cedar piece should be installed with the tongue facing up. Depending on the actual inside finished size of your sauna, it may be necessary to trim these boards. On the last board, score and cut to fit. When lining the walls, you do not have to line up the V-joint in the corners. The corner moulding supplied will cover the seam.

Any gap between top of the wall panels and the ceiling will be covered using the 5/8" corner moulding supplied.

EXTERIOR

Not included unless extra cedar is ordered as an option. For exterior walls, drywall or panelling may be used to match your decor.

BENCHES

Locate CP PK Relay Box under bench.

The top bench is about 24" deep. The bench top is built as a portable section The bench top screwed to the framing as one piece. This is important in order to have access to the electrical connections located under the bench.

Most infrared saunas have a single tier bench (24" deep x 18").

Some (i.e.combinaton Infrared/Traditional) have two tier (Upper 24" x 36" riser, Lower 16" x 18" riser)

BENCHES

(See Drawings #5 - #8 for construction details). There are clear, cedar 2" x 4" boards for the bench construction.

BEFORE DOING ANY FASTENING, select the boards to make sure the BETTER side of the board comes out on the sitting surface. While you build the benches, the better side will be faced down because you are fastening from the bottom. (That way you do not get any screws showing up on finished surface.) Use the 2-1/2" screws supplied. (See Drawings #7 and #8 for bench assembly.)

Top bench is usually 24" wide (6 boards) and bottom bench (if applicable) is 16" wide (4 boards). If the sauna is 4' deep, bottom bench may be narrower

BENCH SUPPORTS

Bench cleats are 2" x 4" with cut corner; girths are 2" x 4" (square) (see drawing #6).

Bench girths and cleats are provided as follows:

24" deep bench -- 22" long
20" deep bench -- 18" long
16" deep bench -- 14" long
(For 12" deep bench, cut down to 10" long)
(For 8" deep bench, cut down to 6" long)

BENCH GIRTHS: Girths are fastened to the bottom of the bench (see drawing #6 and #8).

Up to 6' long --4 Girths
7' + longer --5 Girths
Benches over 6' & "L" benches have centre floor support (see #5,9,12,13)

BENCH CLEATS: Bench cleats are fastened to the side wall of sauna using 2-1/2" screws. Screw through cedar into spruce stud support (see drawings #1, #3 & #6).

Top bench - Use the 18" bench cleats (cut down if bench to be narrower than 20").
Mount 33" from the floor to top of the cleats, tight to the back wall (drawings #1 & #3). If the bench is 7' or longer, install a centre floor support (drawings #5 & #9).

Bottom bench - use the 14" bench cleats (cut down if bench to be narrower than 16").
Mounted 15" from the floor to the top of the cleat, 20-1/4" from the back wall (drawings #1 & #3).
If the bench is 7' or longer, install a centre floor support (drawings #5 & #9).

FLOOR (If applicable)

Use 1" x 4" cedar, square edge laid over 1" x 4" cedar sleepers. Top boards should be spaced 1/2" apart. The sleepers should be placed at 1'-0" on centre. (Built like bench top)

DOOR

The standard size for the sauna door is 24" x 74". Rough opening must be 26" x 76-1/2" from finished floor. (See YOUR "Material List" to confirm.)

DOOR OPENS OUT. This is done as a precaution so that no one can block access to the sauna from the outside. Also, because the sauna floor is raised, a door opening inward is less practical.

The doors are pre-hung on the jamb. The doors are hung to allow for a 3/4" gap at the bottom.

INFRARED EMITTERS (& TRADITIONAL HEATER):

See separate IS-IR Sauna Rough-In for details of YOUR sauna

HOW TO TAKE A SAUNA

1. Set sauna to desired temperature
2. Start with a brief shower using warm water and soap. Rinse thoroughly.
3. Enter the pre-heated sauna after 10-20 minutes. Relax and allow your body to perspire freely in the soft dry heat. Do not expect to begin and finish your sauna in a few minutes. It takes time for your body temperature to respond and for you to begin to perspire freely.

Note: Infrared saunas do not heat like traditional saunas. Infrared heat only works when the emitters are on and you are exposed to their rays. How long you stay in the infrared sauna is up to you. It depends on your comfort level. It is not an endurance test. People often start at 20-30 minute intervals.

4. Take a cold (or cool) shower. Repeat the sauna/cold water cycle as often as you desire.
5. Damp dry yourself, then sit or lie down, relax and let your body air dry.
6. Dress and have a light snack.

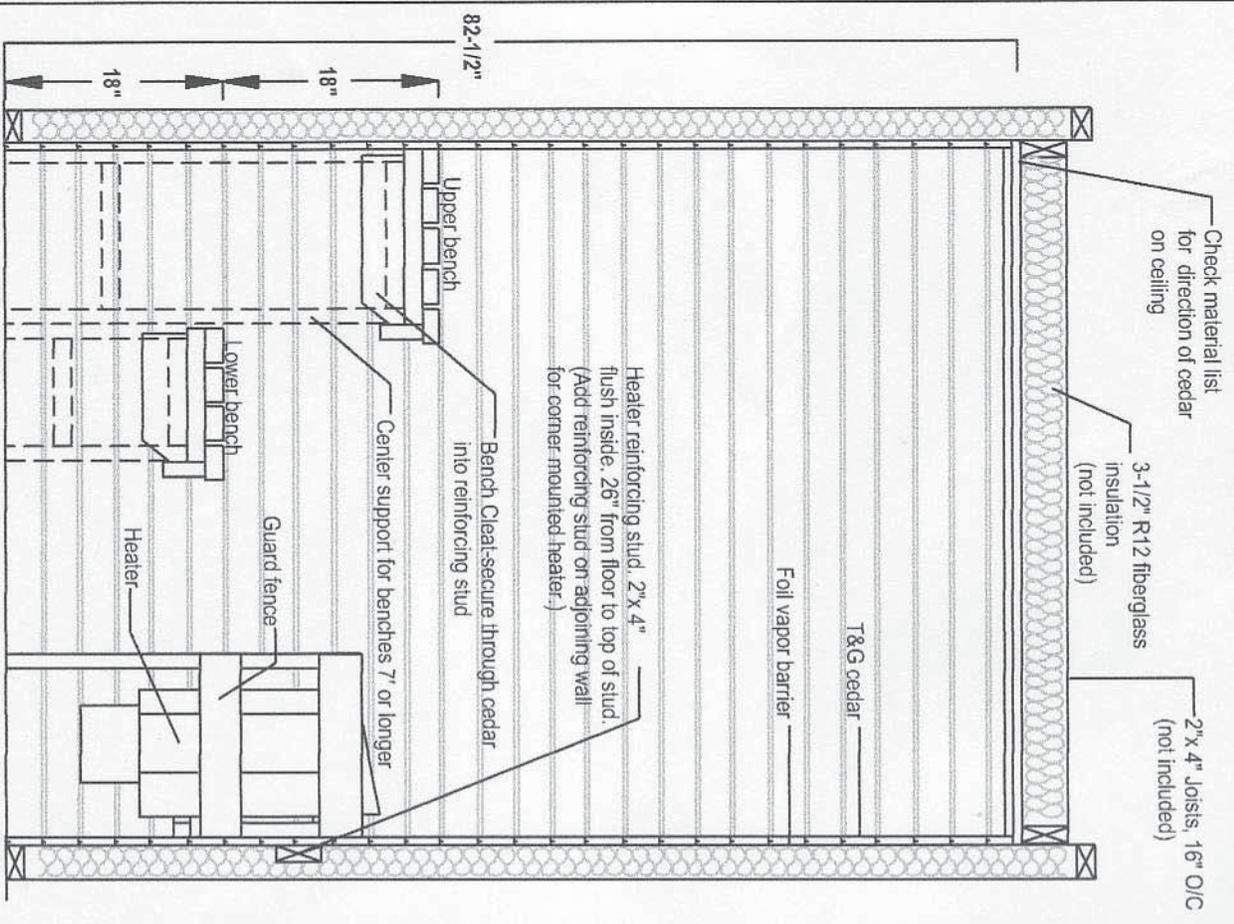
For additional information:

SAUNAFIN SAUNA & STEAM
115 Bowes Road, Unit #2, Concord, Ontario L4K 1H7
Phone: 905-738-4017 Fax: 905-738-2486

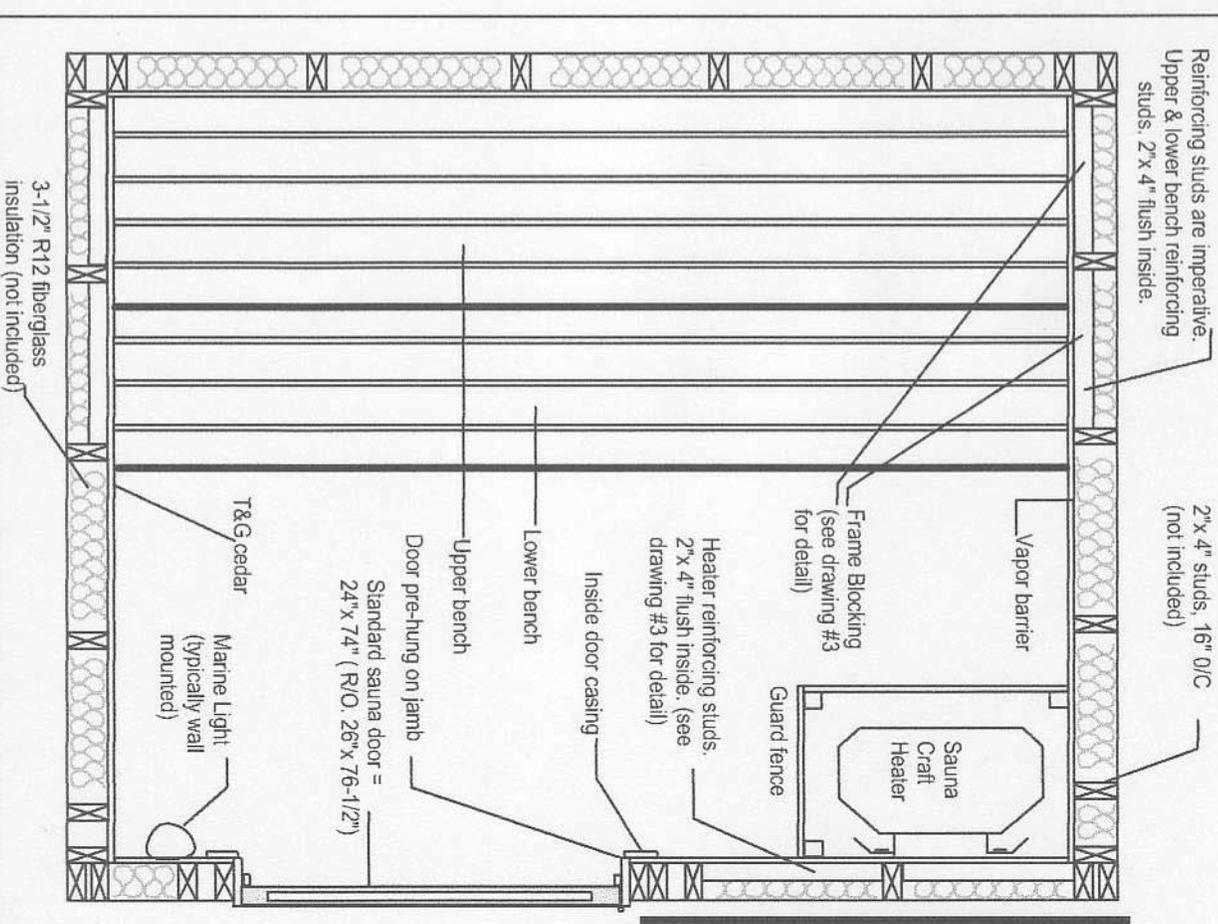
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HORIZONTAL LINING IS STANDARD. CHECK YOUR MATERIAL LIST TO VERIFY YOUR LINING

1 SIDE VEIW CROSS SECTION (FOR SAUNAS LINED HORIZONTALLY) (NOT TO SCALE)

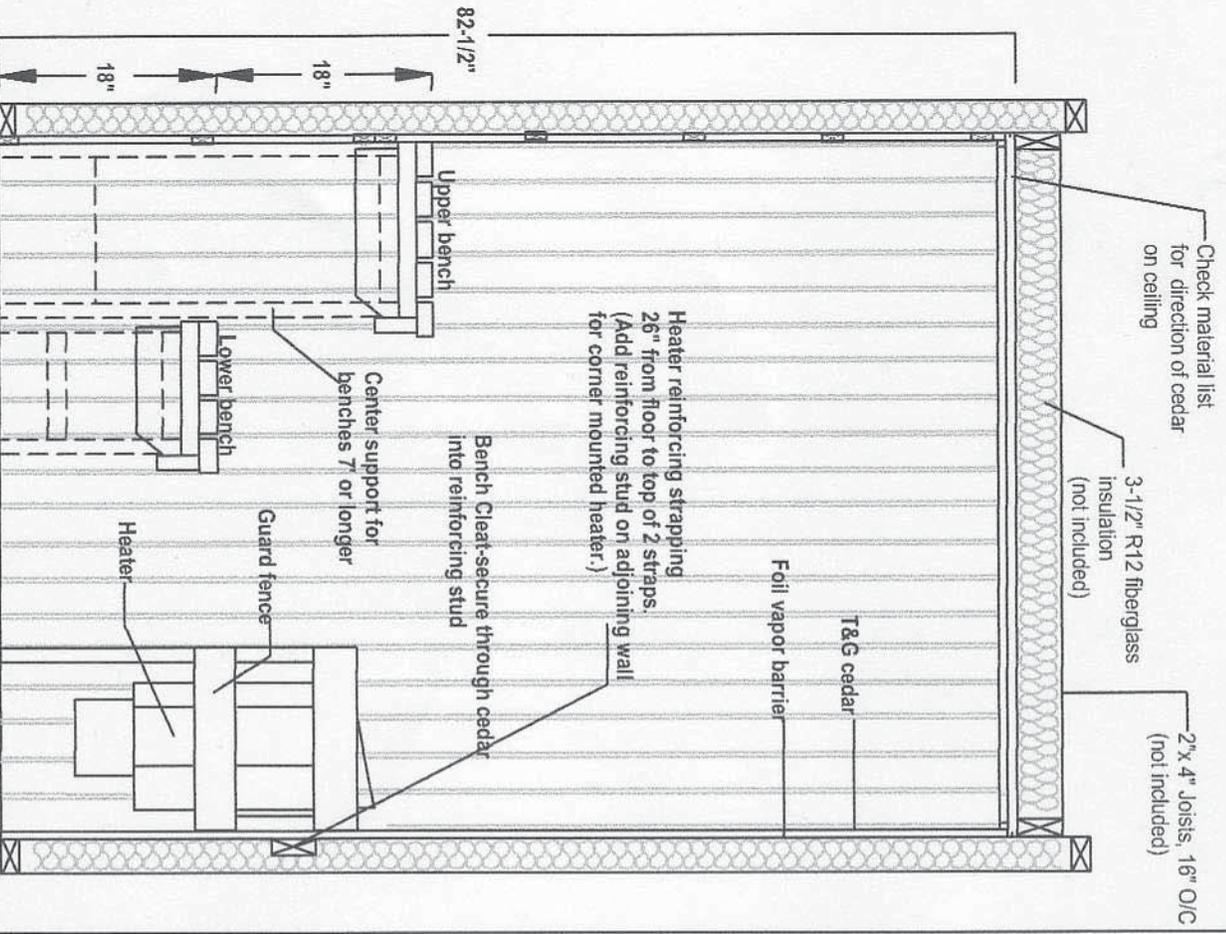


TOP VEIW CROSS SECTION (FOR SAUNAS LINED HORIZONTALLY) (NOT TO SCALE)

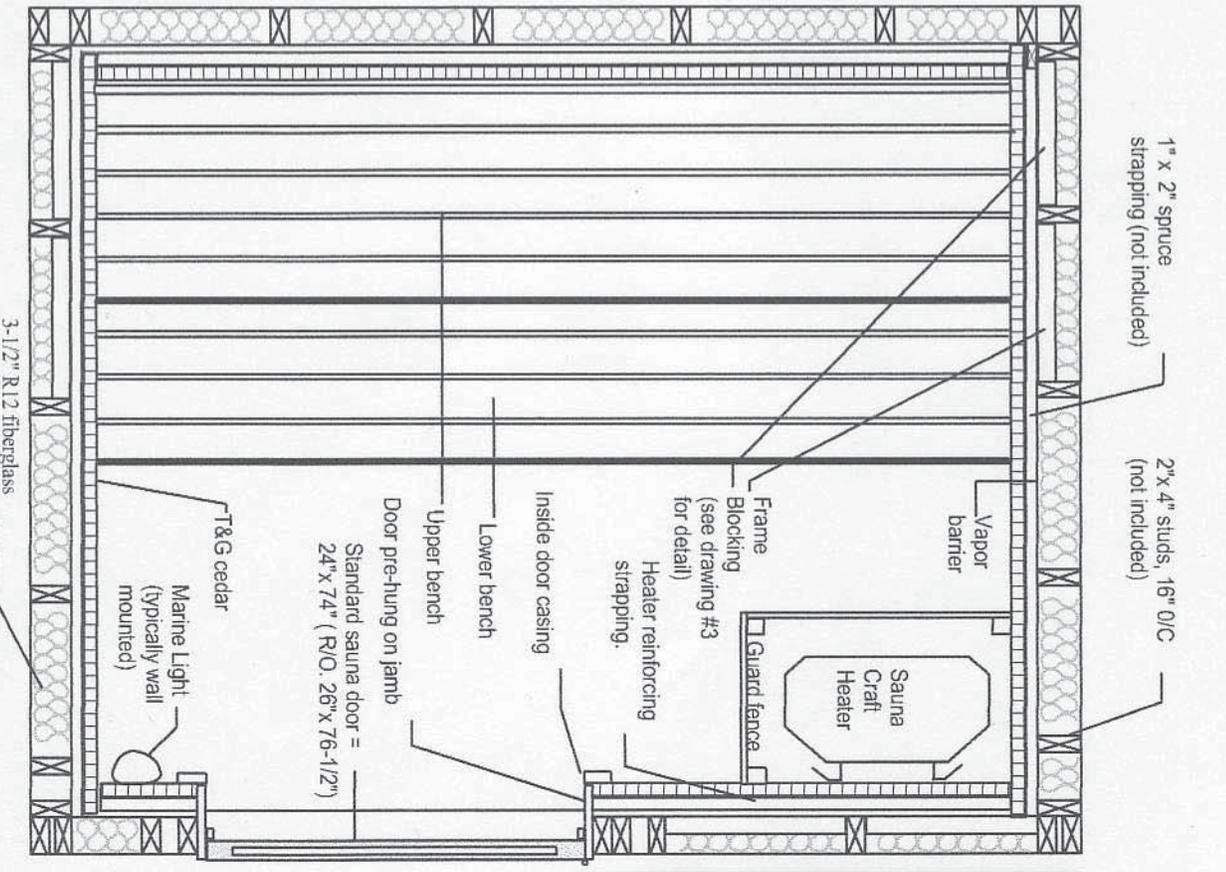


NOTE: This drawing is generic and does not necessarily reflect your exact sauna. Check your Sauna Material List for specifics on your sauna.

2
SIDE VIEW CROSS SECTION
 (FOR SAUNAS LINED VERTICALLY) (NOT TO SCALE)



TOP VIEW CROSS SECTION
 (FOR SAUNAS LINED VERTICALLY) (NOT TO SCALE)

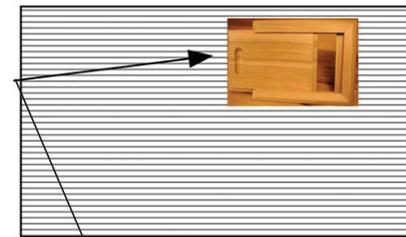
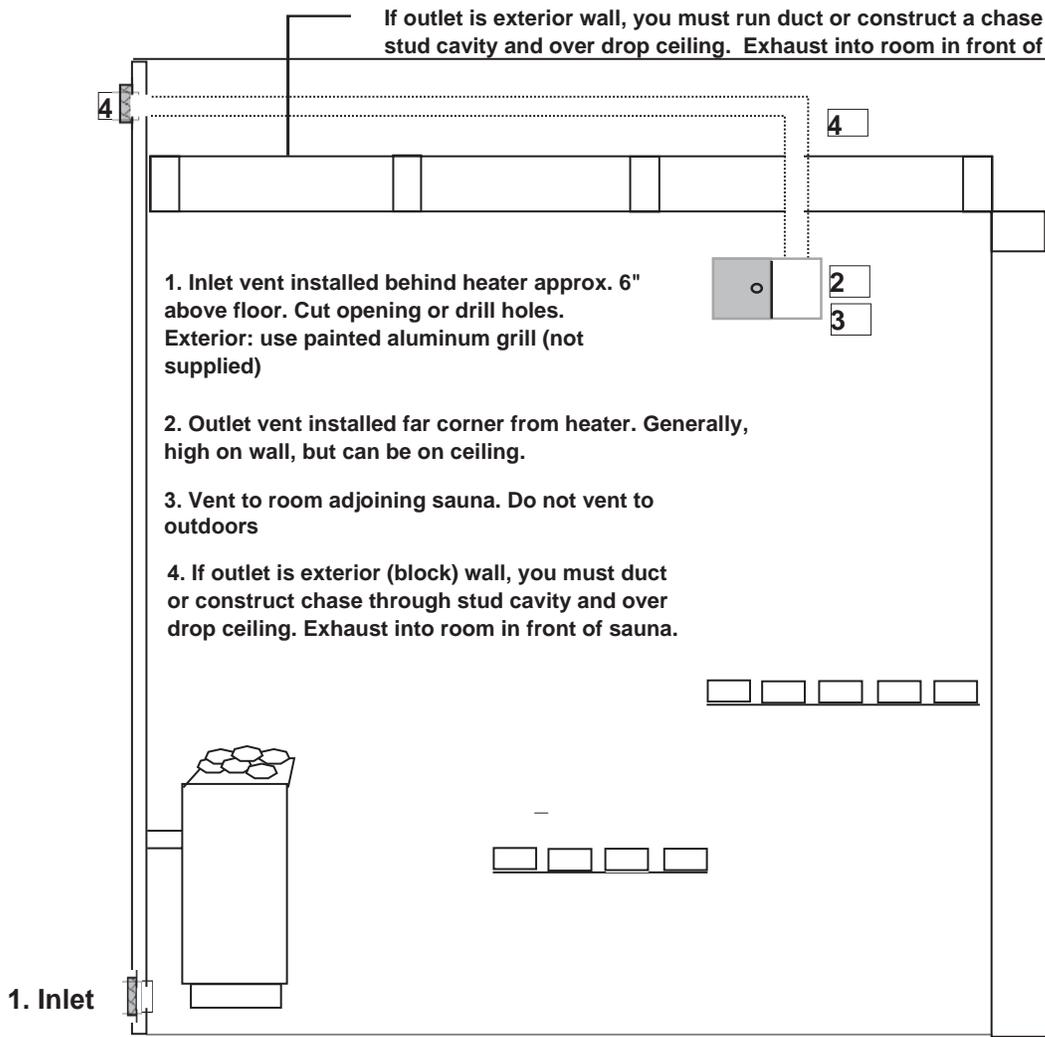


Exterior not included.
 Cedar exterior lining available as option

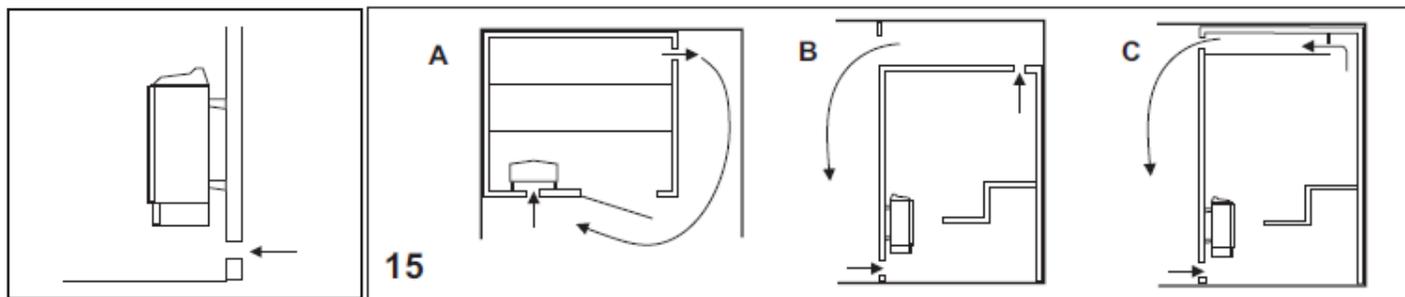
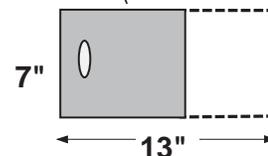
NOTE: This drawing is generic and does not necessarily reflect your exact sauna. Check your Sauna Material List for specifics on you sauna

Slide Vent Cover

If outlet is exterior wall, you must run duct or construct a chase through stud cavity and over drop ceiling. Exhaust into room in front of sauna.



Slide Vent:
Vent when open = 7" x 13"
Wall opening = 4.5" x 4.5"



The inlet vent should be driven straight through the wall directly below the center of the heater. The cross-section of the vent for a family sauna is approx. 19 sq.in. For larger saunas approx. 40 sq.in

Position the air inlet and outlet vents as far away from one another as possible (diagonally opposite). The outlet vent should be located high on a wall or in the ceiling, and should have the same cross-section area as the inlet vent. Spent air should always be led back into the same room from which it is drawn into the sauna – it must never be discharged directly into the open air. In this way, the air flowing from the sauna is continually being replenished in the room outside.

A: Outlet vent through the sauna wall (seen from above). The vent is placed high up, near the ceiling.

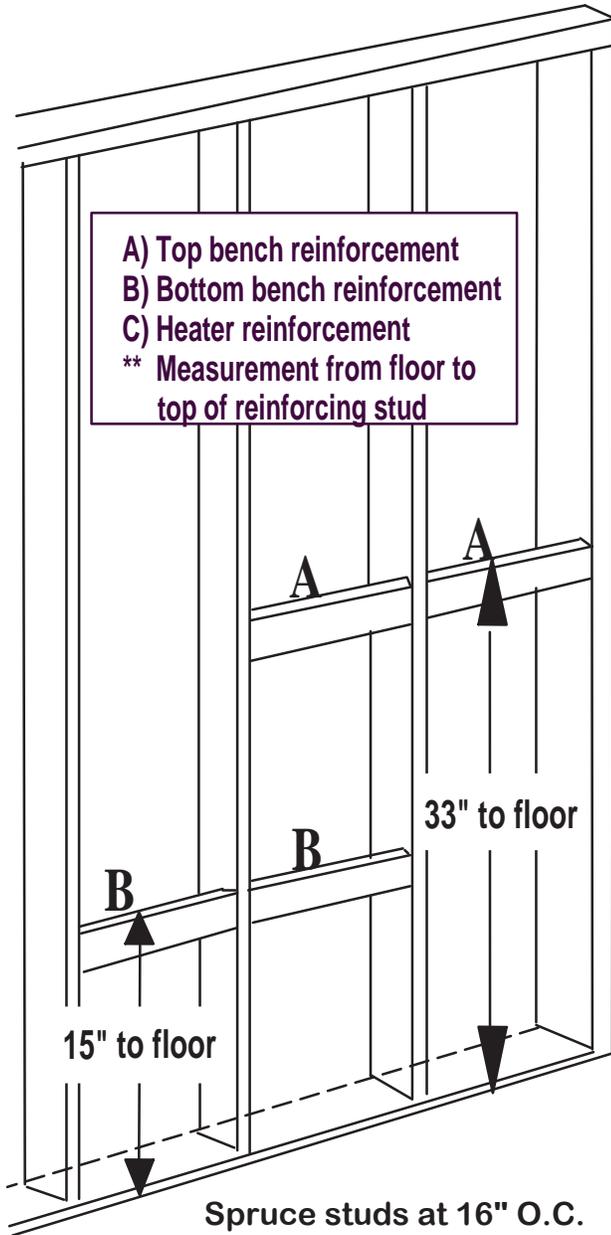
B: Outlet vent through the cavity above the sauna ceiling (seen from the side).

C: Outlet vent through a drum under the ceiling in the sauna (seen from the side). The outlet duct should be placed at an angle between the ceiling and the wall. The drum can be built of wooden panelling and have the same area as the outlet vent.

#3

REINFORCING STUDS for BENCHES and HEATERS

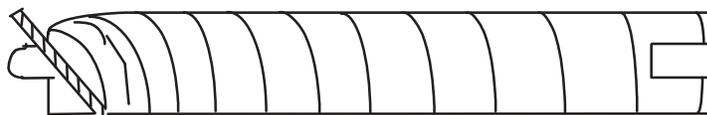
Bench Blocking



#4

NAILING TECHNIQUE

1-1/2" Spiral galvanized finishing nails for lining (supplied)

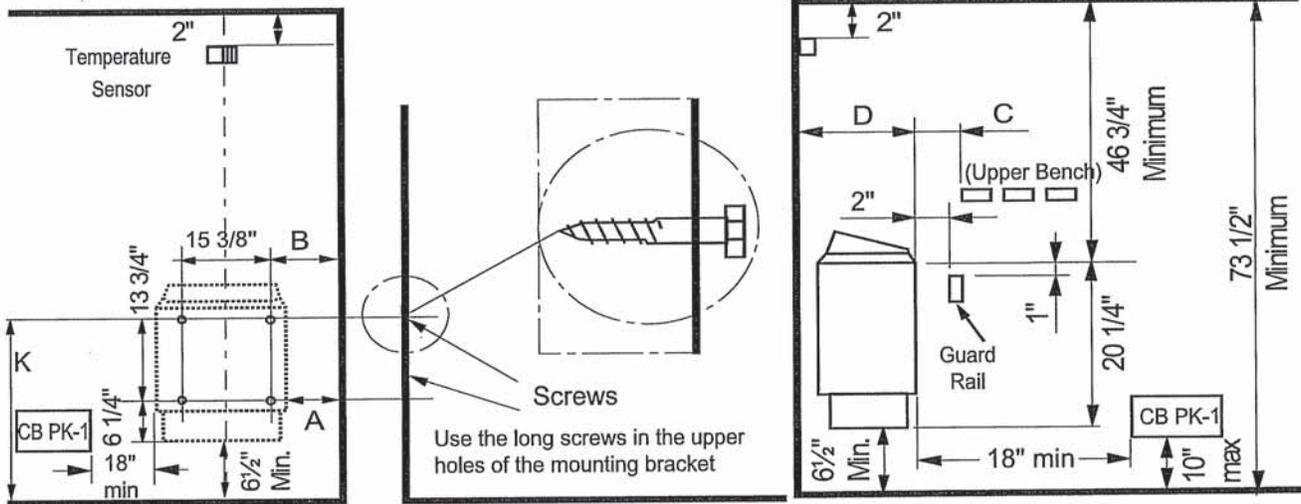


VIKI HEATER

**Used with TyloHelo Combination Sauna
Install spruce blocking as indicated for mounting screws**

DIAGRAM 1

MOUNTING BRACKET LOCATION AND MINIMUM DISTANCE TO COMBUSTIBLE MATERIAL



Recheck your distances from the heater to combustible materials to be sure you have the proper minimum distances.

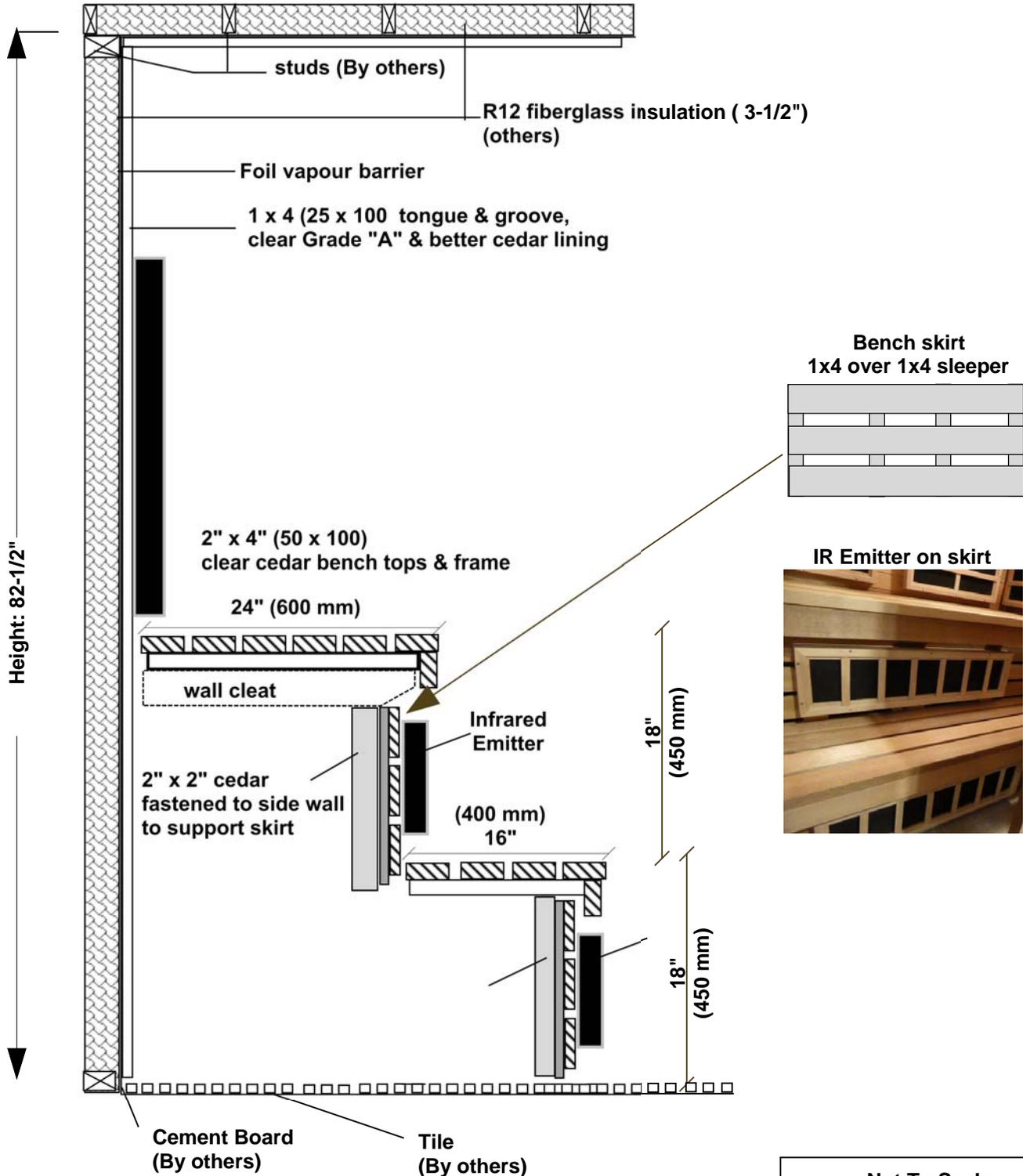
HEATER	MINIMUM				
	"A" DISTANCE	"B" DISTANCE	"C" DISTANCE	"D" DISTANCE	"K" DISTANCE
Viki 4.5	3"	4"	4"	12 1/4"	26 1/2"
Viki 6.0	4"	5"	5"	12 1/4"	26 1/2"
Viki 8.0	5"	6"	6"	12 1/4"	26 1/2"

! OBSERVING MINIMUM DISTANCES IS REQUIRED TO REDUCE FIRE HAZARD

DIAGRAM 2

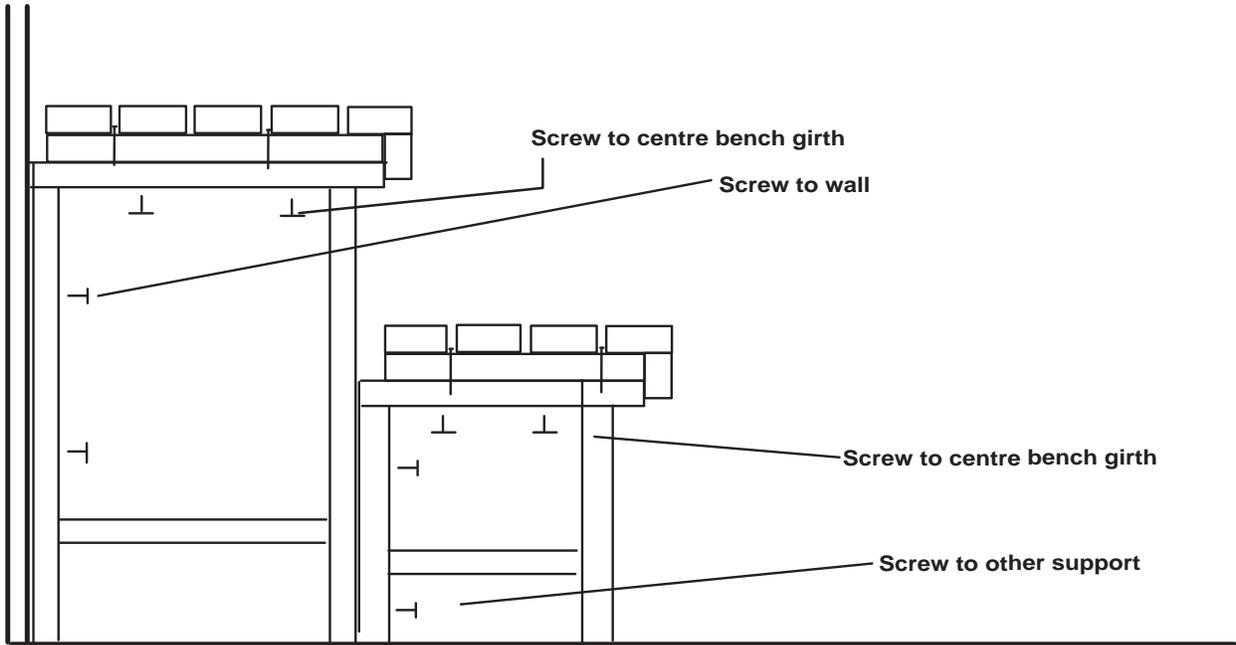
HEATER MODEL/ Product Number	KW	MINIMUM ROOM			MAXIMUM ROOM		PHASE	VAC	AMPS	WIRE SIZE	
		Floor Area	Ceiling Height	Volume Cu.Ft.	Ceiling Height	Volume Cu.Ft.				Power Supply to CB PK-1	CB PK-1 to Heater
Viki 4.5 1720-45-02	4.5	12 sq. ft.	73 1/2"	100	96"	210	1	208	21.6	2 #10AWG+GR	2 #10AWG+ GR
							1	240	18.8	2 #10AWG+GR	2 #10AWG+ GR
							3	208	12.5	3 #12AWG+GR	3 #12AWG+ GR
							3	240	10.8	3 #12AWG+GR	3 #12AWG+ GR
Viki 6.0 1720-60-02	6	21 sq. ft.	73 1/2"	175	96"	310	1	208	28.8	2 #8AWG+GR	2 #8AWG+GR
							1	240	25	2 #10AWG+GR	2 #10AWG+ GR
							3	208	16.7	3 #12AWG+GR	3 #12AWG+ GR
							3	240	14.4	3 #12AWG+GR	3 #12AWG+ GR
Viki 8.0 1720-80-02	8	31 sq. ft.	73 1/2"	250	96"	425	1	208	38.5	2 #8AWG+GR	2 #8AWG+GR
							1	240	33.3	2 #8AWG+GR	2 #8AWG+GR
							3	208	22.2	3 #10AWG+GR	3 #10AWG+ GR
							3	240	19.2	3 #10AWG+GR	3 #10AWG+ GR

INFRARED SAUNA SECTION



#5

CENTER FLOOR SUPPORT FOR BENCHES 7' OR LONGER

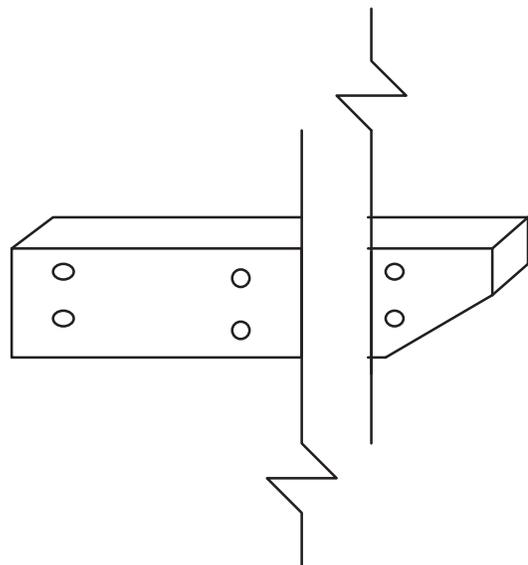
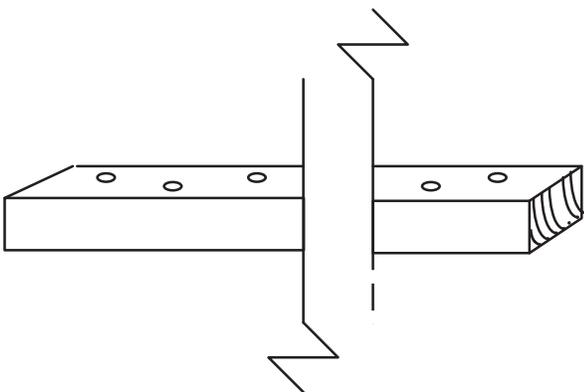


#6

BENCH CLEAT & GIRTH FOR ALL BENCHES

2" x 4" BENCH GIRTH

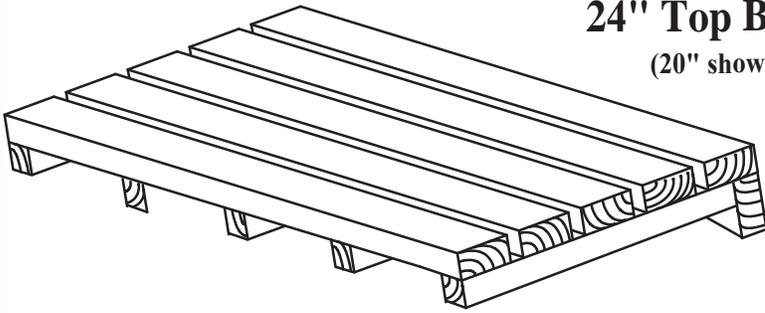
2" X 4" BENCH CLEAT



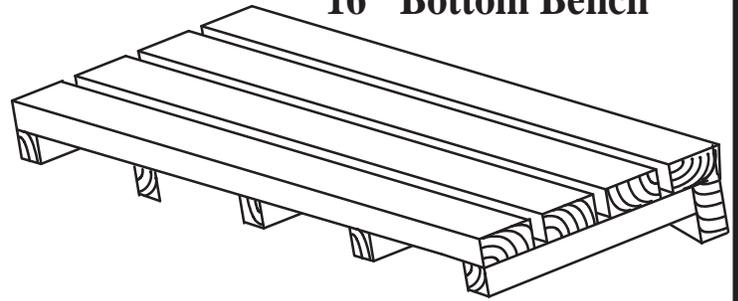
#7

BENCH CONSTRUCTION

24" Top Bench
(20" shown)



16" Bottom Bench

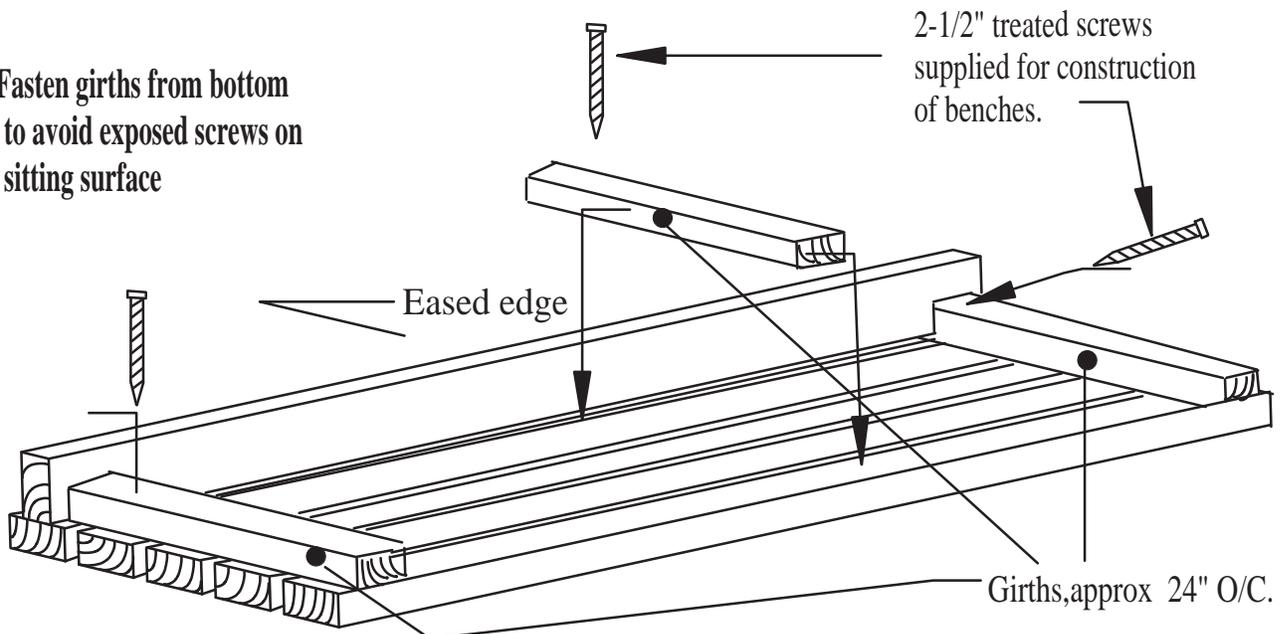


For saunas under 4'-6" deep,
bottom bench is 8" instead of 16"

#8

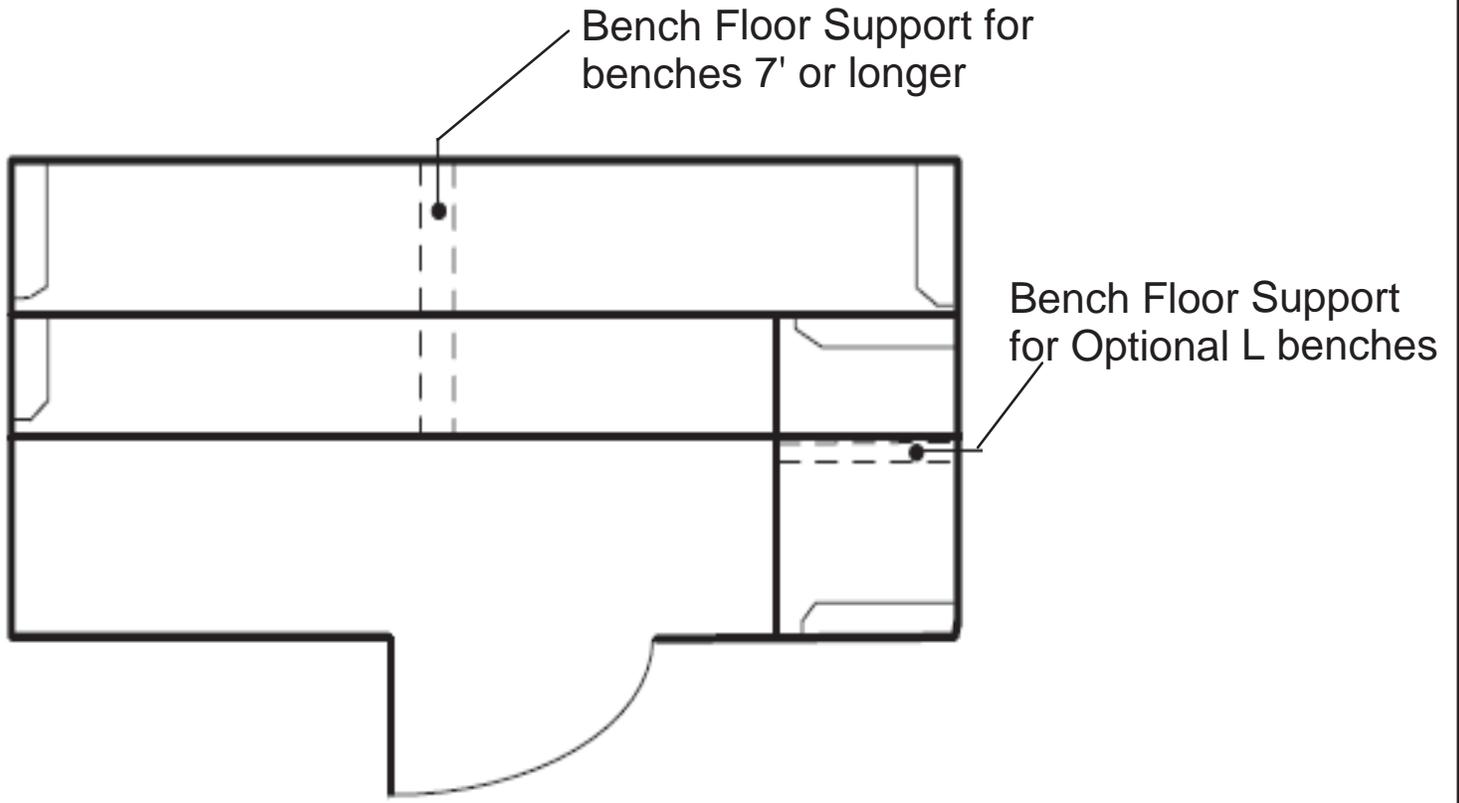
BOTTOM VIEW OF BENCH

NOTE: Fasten girths from bottom
to avoid exposed screws on
sitting surface



9

Bench Floor Support where needed

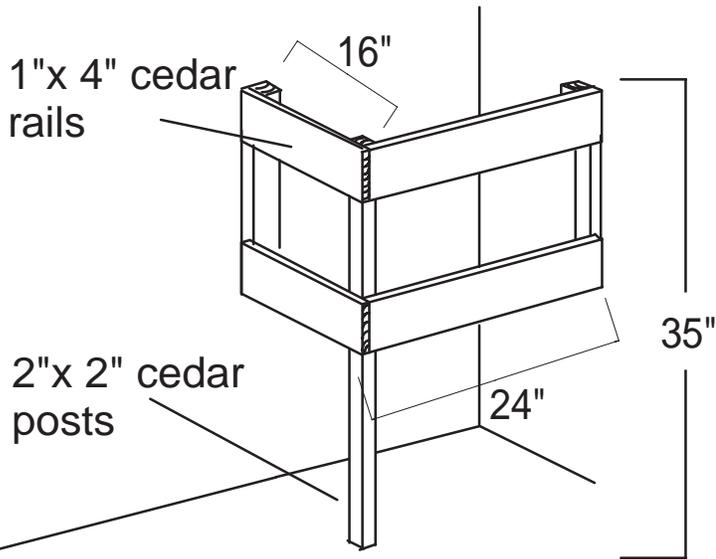


10

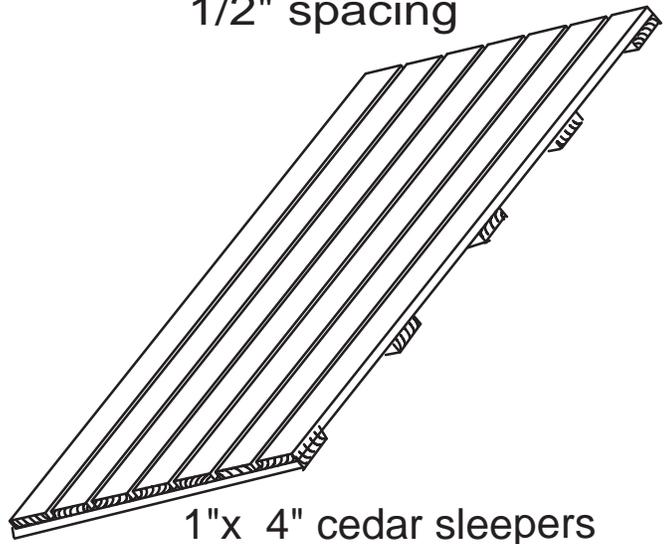
STANDARD HEATER GUARD FENCE (If Viki traditional heater incl)

11

1" x 4" DUCKBOARD FLOOR (where included)

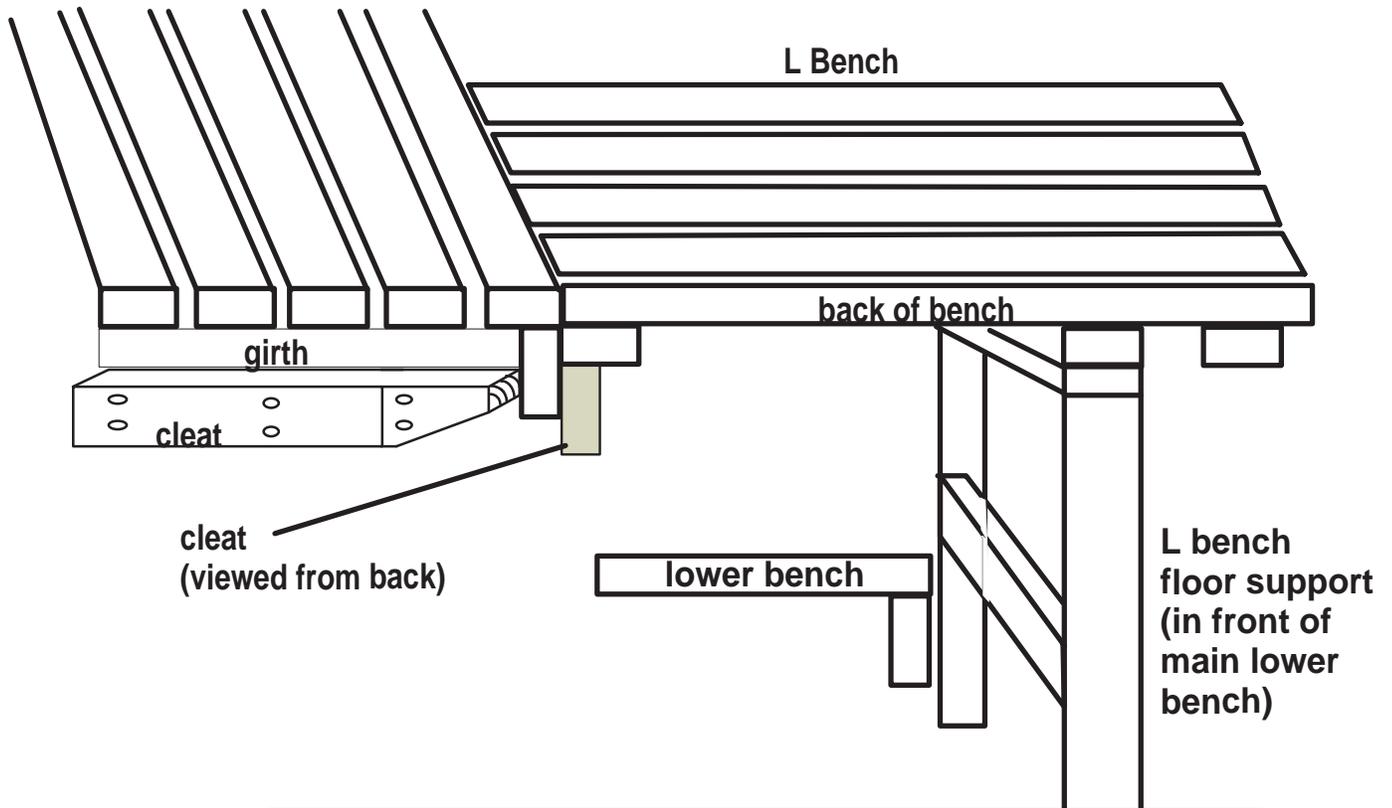


1"x 4" cedar -
1/2" spacing



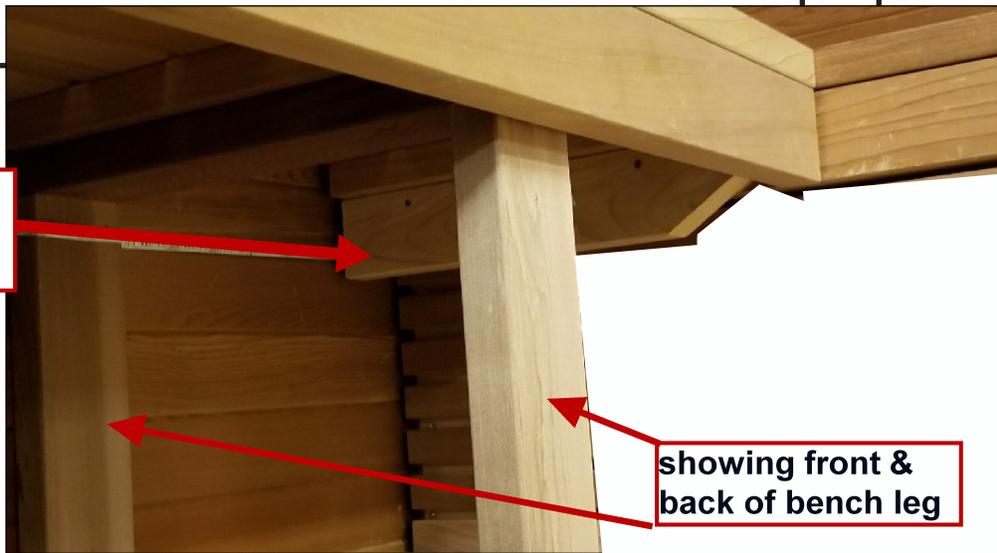
12

"L" BENCH SUPPORT DETAIL



13

**Bench Cleat
screwed to face
of main bench.**



**showing front &
back of bench leg**

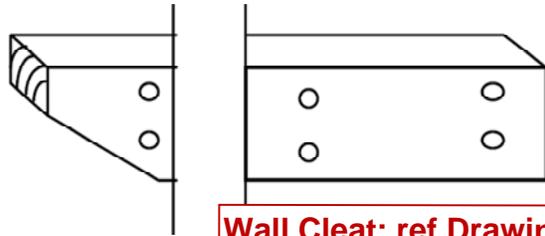
2x4 Bench Detail



2x4 tops over 2x4 girth (sleepers)



2x4 Cleat (attached to side wall)



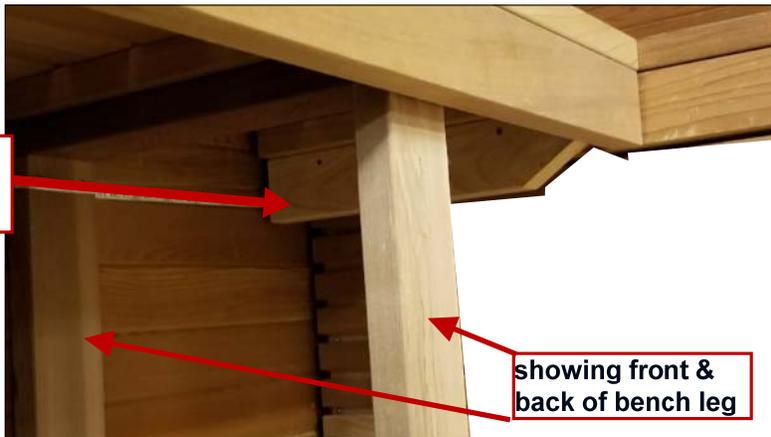
Wall Cleat: ref Drawing #8

2x4 Bench Center Floor Support (for benches over 6')



2x4 L Bench Support Detail

Bench Cleat
screwed to face
of main bench.



showing front &
back of bench leg