

Building a Scrap Wood Sauna

Mark Eschbach II

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1 Introduction

I built a two-person dry sauna almost entirely from scrap wood and using mostly free materials. It wasn't perfect at first, but after a few iterations, it's become a cozy retreat that hits those relaxing high temperatures without breaking the bank. In this blog, I'll walk you through the inspiration, the build process, and some key lessons learned.

2 The Inspiration: From Jiu-Jitsu to Sauna Dreams

It all started after a grueling jiu-jitsu session with my friend Alex. He invited me over to unwind in his backyard sauna after training, and I was hooked. The heat melted away the soreness, and I felt rejuvenated, albeit it did take another time to get used to the heat! But it felt like a reset button for my body and mind. I knew I wanted one for myself, but after browsing online, I quickly realized a pre-built sauna could cost thousands of dollars. That was way out of my budget. So, I decided to channel my inner DIY spirit and see if I could build one using mostly free or scavenged materials. Turns out, with some creativity and elbow grease, it's totally doable!

3 How Saunas Work: Why I Went with a Dry Sauna

Before getting into the build, let's talk basics. Saunas are small, heated rooms designed to promote sweating and relaxation through elevated temperatures. There are a few types: wet (steam) saunas, which use humidity from water poured over hot rocks; infrared saunas, which heat your body directly with light waves; and dry saunas, which simply heat the air around you to induce sweating without added moisture.

I opted for a dry sauna because it's simpler to build and maintain, especially in a DIY setup. Dry saunas typically use electric heaters or wood-burning stoves to warm the air

to 150–195°F (65–90°C) with low humidity (around 10–20%). This creates a comfortable, breathable heat that encourages deep sweating, relaxes muscles, and improves circulation Healthline, 2023. It's like sitting in a toasty oven that eases tension without the steamy fog of a wet sauna. Plus, for my outdoor build, dry heat meant less worry about moisture damage over time. Full disclosure, since it is outdoors, I have little control over the humidity. But, I have found that even on humid days dropping the temp down a little (closer to 150°F) still provides an amazing sauna experience.

4 Sourcing Materials: Going Green and Free

The key to keeping costs low was sourcing most materials for free. I scoured Freecycle.com (a fantastic site for giving away unwanted items) and Craigslist's searching for "free" scrap wood, old doors, and other bits. I also collected many heat-treated pallets from local businesses, these are often discarded but perfect for upcycling.

A quick note on pallets: Not all are safe for indoor use like a sauna. You need to distinguish heat-treated (safe) from chemical-treated (potentially toxic) ones. Look for the IPPC stamp on the pallet: "HT" means it's been heat-treated (heated to at least 56°C for 30 minutes to kill pests), which is chemical-free and safe. Avoid "MB" (methyl bromide fumigation), as that's a chemical treatment that can off-gas harmful substances Pallet 101, 2023; Wooden Pallet Association, 2024. I always inspected for stains, odors, or other signs of chemicals before using them. This way, I got sturdy and safe scraps without spending a dime or risking health issues.

The only items I purchased were essentials for safety and functionality:

- Aluminum foil (for vapor barriers and heat reflection)
- Red Devil fireplace silicone caulk (high-heat resistant for sealing gaps)
- Nails and screws
- Outdoor LED lights
- Wiring and conduit (for safely running electrical wires to the sauna)
- A sauna heater (I went with an affordable 3kW electric model rated for small spaces)

These ran me about \$450 total, including the heater—way less than a commercial unit!



Figure 1: Building the Sauna

5 The Build Process: Iterations and Improvements

I started with a basic build: partially buried cinder blocks on top of which I built a 4x6-foot box tall enough to sit comfortably (about 5 and half feet high). I used some heat-treated 2x4 scraps and sturdy whole pallets to build the frame. Then before using pallet wood for walls, ceiling, and floor, I lined the interior with aluminum foil as a wind and weather barrier and sealed joints with the Red Devil fireplace caulk. The door was constructed using pallet wood and aluminum foil. At this point I added no insulation, as I did not think I would need it. I used pallet wood on the outside in an overlapping

siding pattern, which gave it an old cabin look I thought would be fitting. For the roof I was able to obtain some newer metal roofing, which I attached to a slightly sloped roof frame for water run-off.

5.1 Power: Conduit and Wire

I ended up going with a small 3kW heater from Amazon, which required 1 40amp breaker. Based on the distance from the electrical box, it made sense to use conduit and bury a line out to the sauna. I dug a fairly deep trench about 75 feet, ran the wire into the conduit, assembled and glued the conduit, and wired it up to both end points. It went smoothly besides the trenching, doing so encountered a lot of roots. But in the end it looks good, is water tight, and worked out well all things considered.

5.2 First Iteration: Functional but Leaky

The initial version worked okay, it held temperatures up to 150°F, this was in the winter (Dec-Jan). But it was too leaky; heat escaped through gaps in the walls and door, making it inefficient. A strong winter breeze could be felt across the floor during gusts, I began to realize I could get more efficiency if I could insulate more somehow. Sweating sessions were fine, but it took forever to heat up and also didn't get as hot as I wanted.

5.3 Adding Insulation and Zoning

Back to the drawing board, as they say, I came up with some improvements. To fix the leaks, I added rockwool insulation (fire-resistant and great for high heat) to the upper half of the walls and some parts of the lower sections (the pallets used to build the walls were great for this because they created compartments). This created a “hot zone” in the upper 3/4 of the sauna for more intense heat and a “cool zone” lower down for your feet, in case you needed to cool a bit. I also added more layers of aluminum foil to reflect heat inward. Boom, temperatures climbed faster and stayed steady, the door leaking was still something that bothered me, but I figured for now it was fine.

5.4 Dealing with Uninvited Guests: The Mouse Incident

Then came the mice. They nested in the roof insulation during a cold spell, chewing through and making a mess. I had to tear down the roof and rebuild. I stuffed steel wool into potential entry points (mice hate it), added extra aluminum foil layers for barriers, and topped it with three layers of wood for durability. Lesson learned, pest-proofing is key for outdoor builds!

5.5 Sealing the Door and Improving Airflow

The door was becoming a pain point. I decided to make it less leaky with cheap EPDM weather stripping (a flexible rubber seal), but I overdid it, it became too airtight, starving the heater of airflow and slowing heat-up times. The fix? I installed a simple air inlet vent going out the back of sauna near the heater base, and pest-proofed it. This, of course, dramatically improved airflow, allowing the sauna to reach optimal temps in about 30 minutes. Air circulation is crucial in dry saunas for convection, and to prevent stuffiness, while maintaining heat.



Figure 2: Sauna is done!

6 The Final Tally: Cost, Results, and Recommendations

All in, I spent just \$450, including the wiring, sauna heater, and supplies. Compare that to \$2,000+ for a basic kit from a company, and it's a no-brainer. My two-person sauna now hits 180°F reliably, even in cooler weather, and it's become a staple after workouts or tough days.

If you're handy and can hunt for materials, I highly recommend building your own. It takes time (mine spanned many weekends), but the satisfaction of sweating in something you crafted from scraps is unbeatable. Remember to prioritize safety: use heat-treated wood, proper insulation, and consult local codes for electrical work.



Figure 3: Interior of the finished sauna



Figure 4: Interior of the finished sauna

References

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