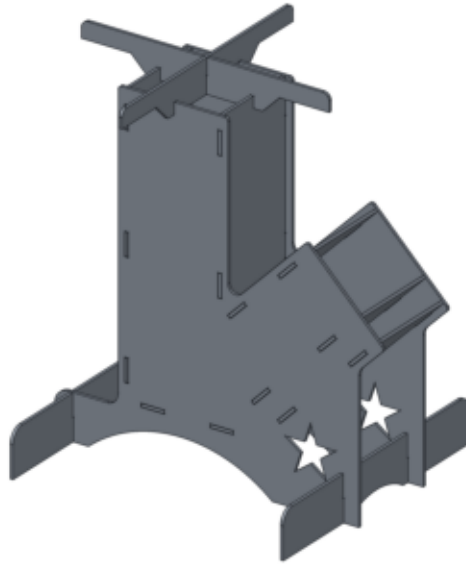


Lone Star Rocket Stove, 4 in



A 4-inch J-tube rocket stove you weld yourself. Twelve laser-cut 10 ga steel parts lock together with tabs and slots: the sticks slide down a 45-degree feed into a 4 x 4 in burn chamber, and a removable pot support sits on the riser.

What's in the box



Side plate x2
Part RS4-01



Riser back x1
Part RS4-02



Floor x1
Part RS4-03



Riser front x1
Part RS4-04



Feed top x1
Part RS4-05



Feed bottom x1
Part RS4-06



Fuel shelf x1
Part RS4-07



Foot x2
Part RS4-08



Pot arm A x1
Part RS4-09



Pot arm B x1
Part RS4-10

What you'll need

- MIG or flux-core welder (a 120 V machine handles 10 ga)
- Angle grinder with a flap disc
- Two or more small clamps and a small square
- Rubber mallet
- Welding helmet, gloves, jacket and safety glasses

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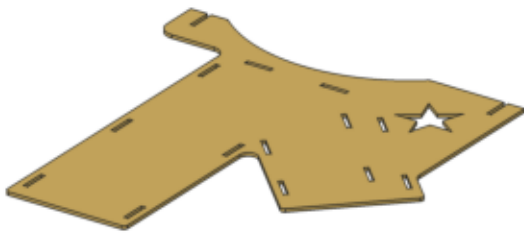
1

Lay the first side plate flat

Lay one side plate on a flat bench. The stove is built lying on its side, so the side plates hold every wall square and no jig is needed.

TIP

The two side plates are identical.



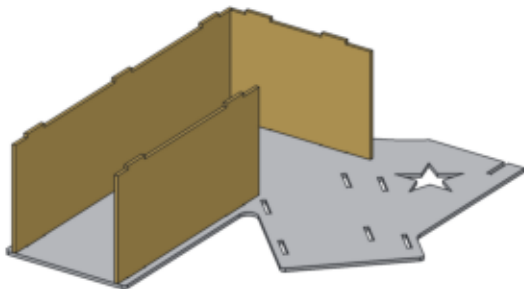
2

Stand the riser walls and the floor in it

Push the tabs of the riser back (the longest strip), the floor and the riser front into their slots, so each strip stands straight up. Each strip fits only its own slots, and only one way round.

TIP

If a strip won't drop in, turn it end for end; don't force it.



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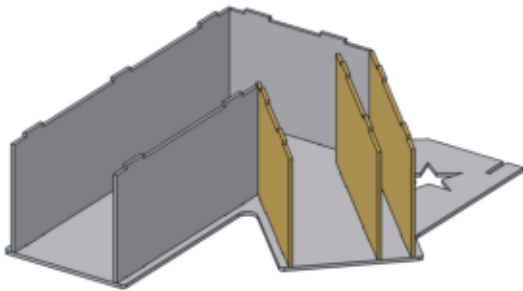
3

Add the feed walls and the fuel shelf

Stand the feed top, the feed bottom and the fuel shelf in the slanted slots. The riser front's bottom end rests on the feed top, and the feed bottom meets the end of the floor.

TIP

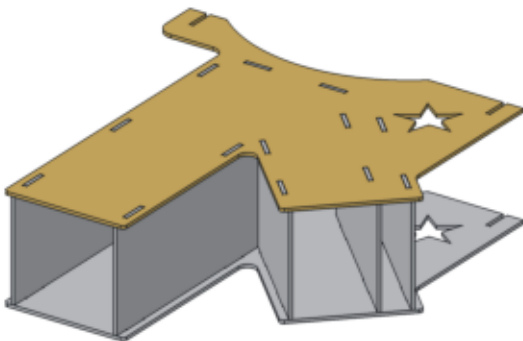
The shelf goes in the row of slots between the two feed walls.



4

Close it with the second side plate

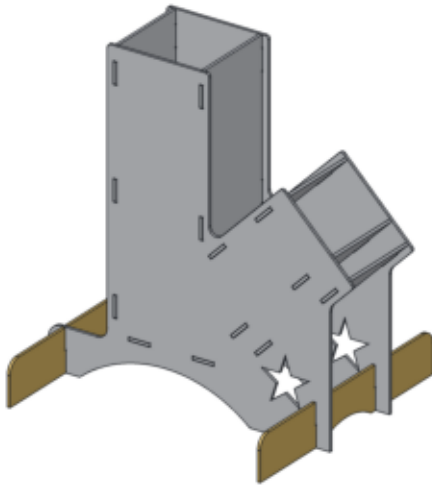
Lower the second side plate on so every tab comes through its slot. Work it down evenly with a rubber mallet, clamp it, check that the riser is square, and tack every tab.



Lone Star Rocket Stove, 4 in

5

Weld it out and set it on its feet



Weld the seams from outside: along the lip where each strip meets the side plates, and the V-grooves where the riser front meets the feed top and where the feed bottom meets the floor. The burn chamber should be sealed, with no gaps. Grind the tabs flush. Then stand the stove up, lay the two feet on the ground with their notches up, and lower the stove so the notches in its base drop over them. Weld the feet.

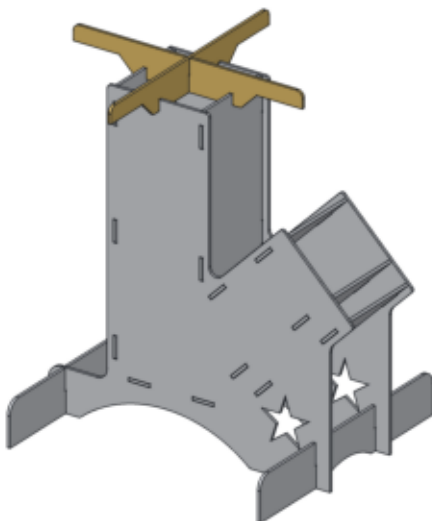
TIP

Weld 1 in stitches and move around the stove so the side plates stay flat, then go back and fill between them.

The feet give a 12 in wide stance; don't leave them off.

6

Drop on the pot support



Set pot arm A (notch on top) across the riser so its notches drop over the riser walls. Lower pot arm B across it so the center notches lock together. It isn't welded: lift it off to pack.

TIP

Either arm goes either way across the riser.

Lone Star Rocket Stove, 4 in

Finishing

- The parts ship bare with a light oil film. Wipe them down with a degreaser before welding.
- Grind the tabs and every outside edge smooth.
- Paint the outside with a high-heat paint rated to 1200 F, or leave it bare and oil it. The riser will burn the paint off near the top; that's normal.
- Burn the first fire outdoors before cooking on it, to cure the paint and burn off any oil.
- Empty the ash when the stove is cold: lift off the pot support and turn the stove over.
- Store it dry with the pot support off.

Fire safety

- Outdoors only. A wood fire makes carbon monoxide: never use it in a tent, vehicle, camper, garage or under an awning or closed roof.
- Set it on bare ground, gravel, stone or concrete, level and clear of dry grass. The floor radiates heat downward: never use it on a table, a tailgate, a deck or a cooler.
- Burn dry sticks and small split wood only. Never use gasoline, lighter fluid or other liquid fuels.
- Center the pot on all four arms. Don't move the stove while it's lit or while a pot is on it.
- The whole stove gets hot enough to burn, and the riser glows. Keep kids and pets back, and use gloves.
- Many campgrounds and public lands ban wood fires and wood stoves during fire restrictions. Check the rules and burn bans before every fire.
- Keep water or an extinguisher nearby, and let it cool completely before you pack it.

This is a kit of raw steel parts. You build the finished product, and the quality of your welds and your judgment about where and how you use it are yours. Weld with proper ventilation and protective gear, and never leave a fire unattended.