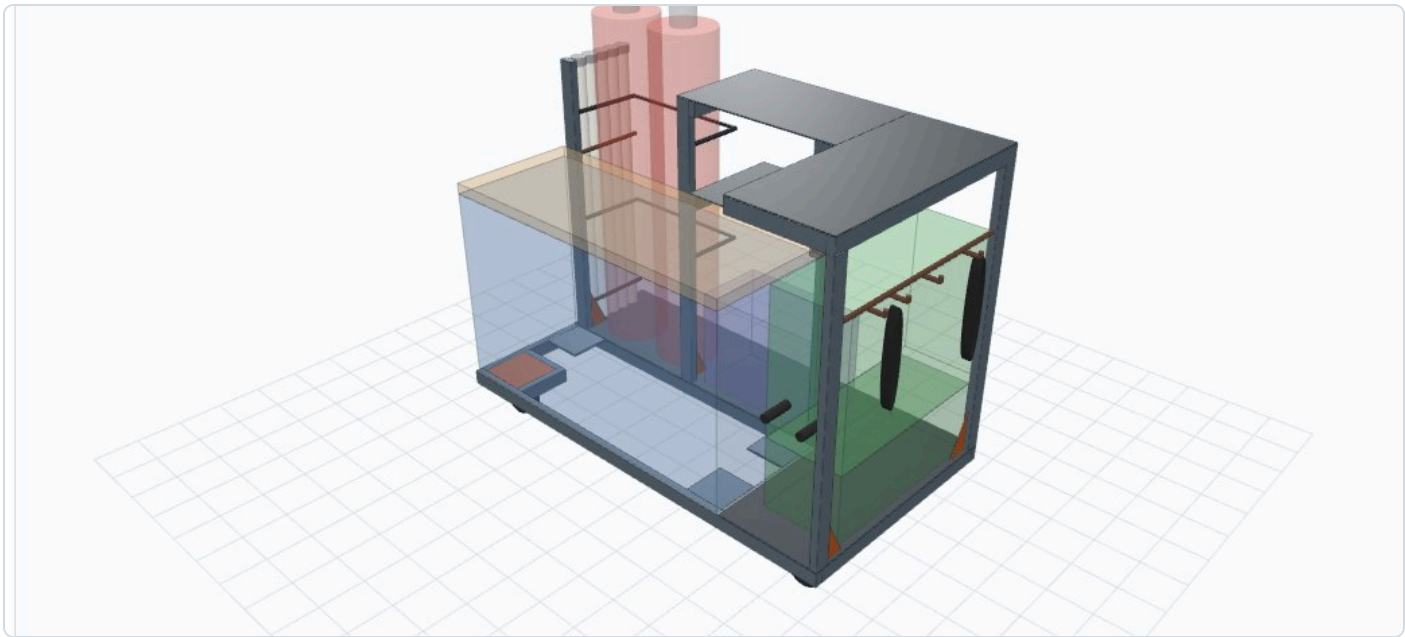


The Ultimate Welding Cart for Big Welders

A 62" × 33" rolling cart in 1×2 steel tube, designed around large multiprocess welders on water coolers, like the Everlast Lightning MTS 275-P on a PowerCool W401. It also carries a 46" workbench, two cylinders, a plasma cutter and TIG rods.



FOOTPRINT 62" L × 33" D	FRAME 1" × 2" × 1/8" wall rectangular tube, on edge	DECK 11 ga sheet, 2 pieces, open under the bench	DECK HEIGHT About 6 ⁷ / ₈ " off the floor
GROUND CLEARANCE About 4 ³ / ₄ " under the frame	CASTERS 4 × 5" × 2" polyurethane, 1,000 lb each, recessed	STEEL Six 10 ft sticks of 1×2, about 4" left on each	WEIGHT About 68 lb of tube plus 45 lb of deck and pads

- 1 · What it carries & fit checklist
- 3 · Frame plan & corner detail
- 5 · Cutting plan for six sticks
- 7 · Build order
- 2 · Equipment layout
- 4 · Cut lists
- 6 · Sheet parts, hardware & storage
- 8 · Views & safety

Interactive 3D model, STEP file for Fusion 360 and the latest version of these plans: ultimate-welding-cart.pages.dev. Not affiliated with Everlast, Harbor Freight, Yukon or FOVERSWIVE. Product names describe the equipment the cart was designed around.

WHAT IT CARRIES

46" Yukon workbench

Casters removed. The bench body is $46\frac{1}{8}" \times 18\frac{3}{16}"$ and sits on four corner pads in an open bay.

A big welder and its cooler

Sized for a 28" deep machine on a water cooler, like the Everlast Lightning MTS 275-P on a PowerCool W401. Controls face front, back flush to the cart.

Two gas cylinders

Up to 250 cu ft each, chained to the spine posts at about $\frac{1}{3}$ and $\frac{2}{3}$ of bottle height.

Plasma cutter

In an $18" \times 10"$ bay behind the bench, with a shelf above it at bench-top height.

TIG rod storage

Five capped 40" PVC tubes in the cylinder-end corner, clamped to two rebar rails.

Leads and power cable

Coils hang on rebar hooks off the welder end, outside the 62" footprint.

BEFORE YOU CUT: FIT CHECKLIST

These plans were drawn around one specific kit. Tick each check off against your own equipment.

- ☐ **Bench height, casters off.** The drawing assumes 29". If yours is different, add or subtract the difference on all five post lengths. Everything above the bench moves with it.
- ☐ **Bench body footprint.** The design uses $46\frac{1}{8}" \times 18\frac{3}{16}"$. The corner pads are 6×6 , so there's some slack, but confirm each caster plate lands on a pad before you weld them in.
- ☐ **Welder and cooler, stacked.** Measure the welder on top of its cooler, including any handle. It needs to be under about 39" above the deck to clear the upper shelf by a hand's width.
- ☐ **Welder length.** The design uses 28" to the farthest point, with 5" in front for the leads. The welder's back sits flush with the back of the cart.
- ☐ **Cylinder diameter.** The rear row is $13\frac{1}{2}"$ deep and sized for cylinders up to 250 cu ft. Check your bottles' diameter against the layout before welding the spine.
- ☐ **Caster height.** The pockets are sized for $6\frac{1}{2}"$ -tall casters with a $4 \times 4\frac{1}{2}"$ top plate and about a 4" swivel radius. Spin one in its pocket before welding. Different casters change the deck height and may need bigger pockets.

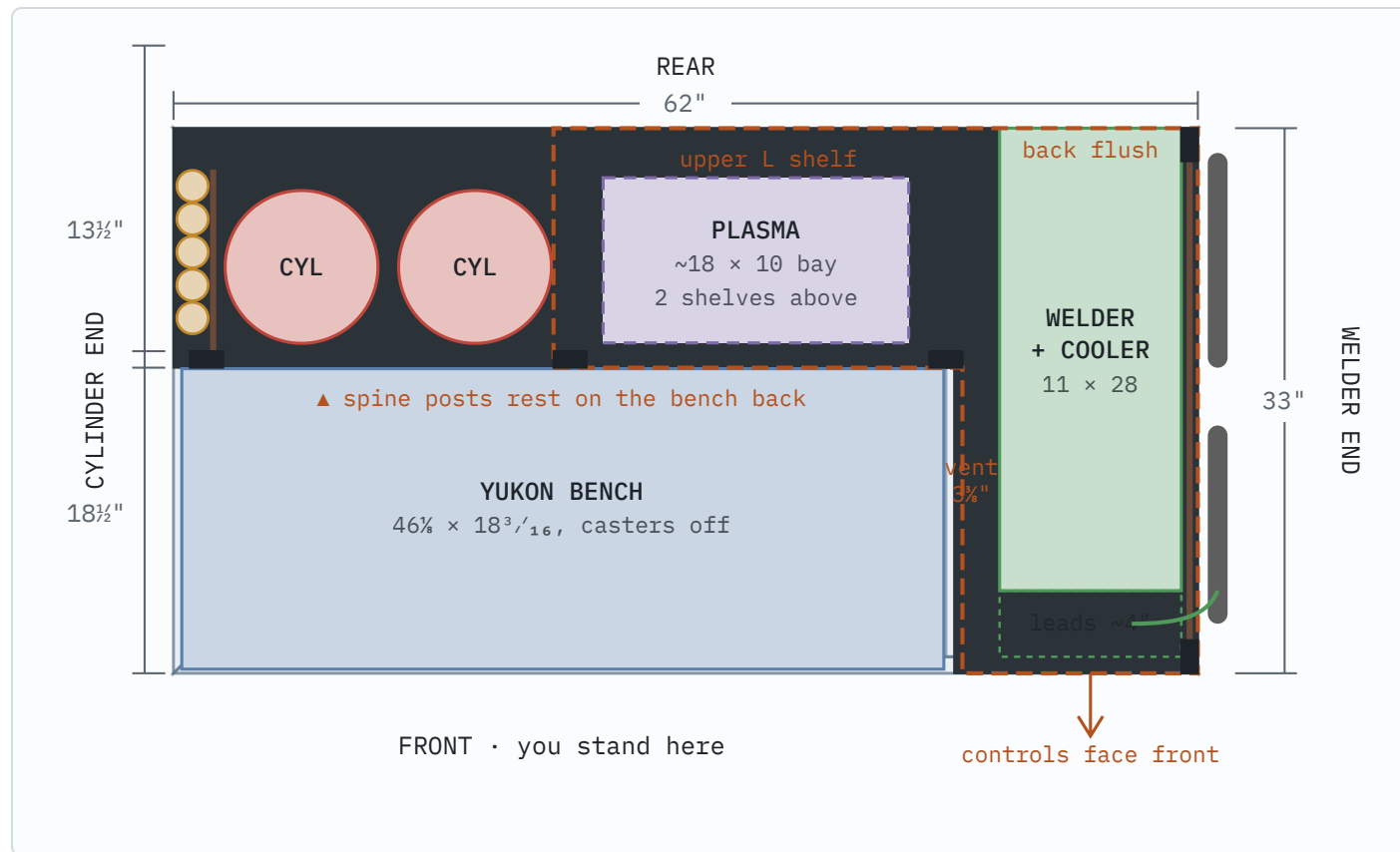
Decide these for your equipment

- ☐ **Which plasma cutter.** The plasma bay is about $18" \times 10"$ with roughly 15" of clearance under the middle shelf. Check your machine fits before committing.
- ☐ **Where the welder and cooler pull air.** The bench side has only a $3\frac{3}{8}"$ gap. The back and the right side are fully open. If your machine breathes from the bench side, that gap is the limit.
- ☐ **Which side the MIG spool door is on.** A spool door on the bench side won't open in a $3\frac{3}{8}"$ gap. If yours is there, plan to move the welder or widen the gap.

SECTION 2

EQUIPMENT LAYOUT

Top view. The bench runs along the front, where you stand. A spine of posts stands right behind it on crossmember D. The 13½" rear row holds the cylinders, plasma bay and TIG rod tubes. The welder sits at the bench's right end, controls facing front, back flush with the cart.



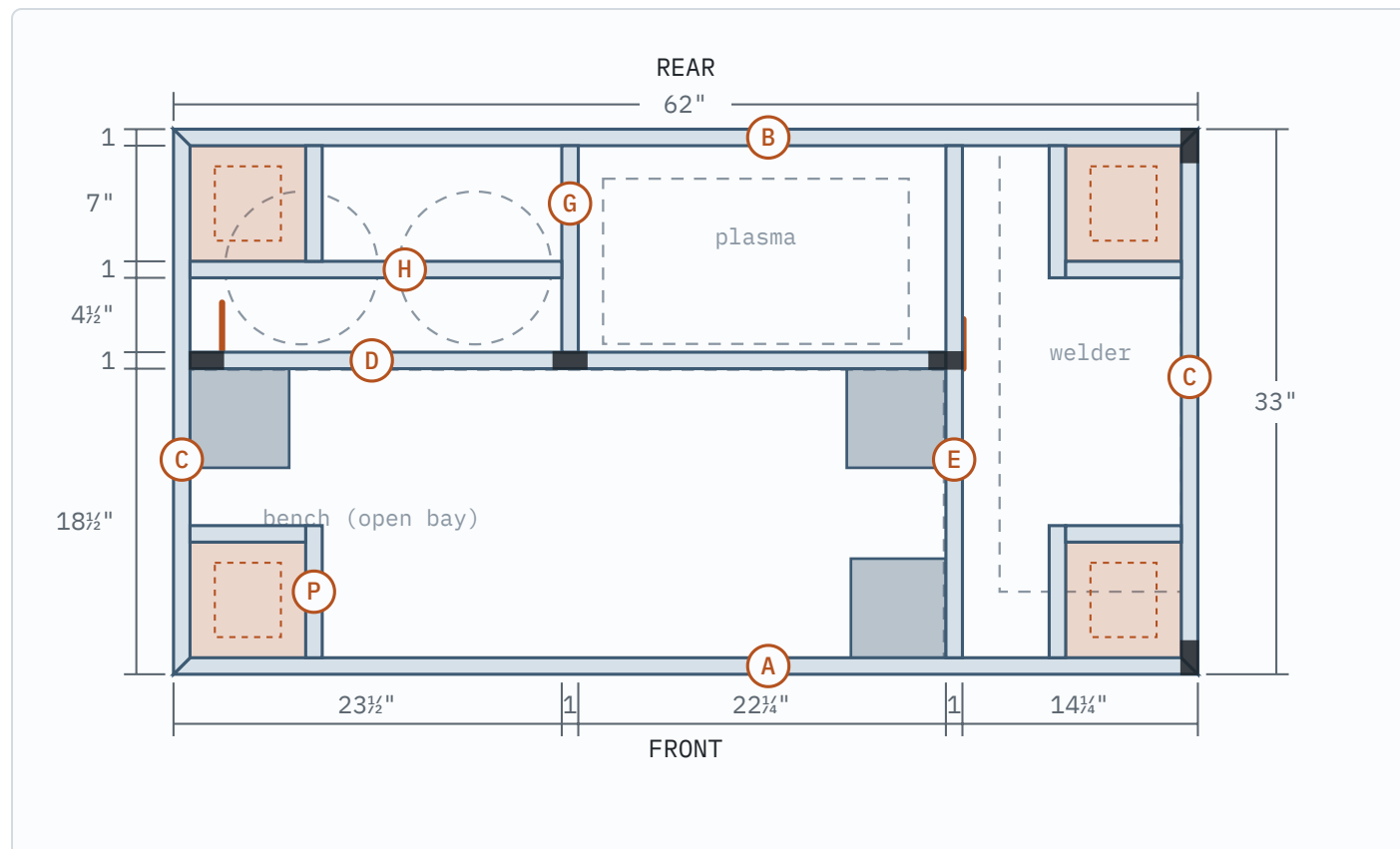
Black rectangles are vertical posts. The dashed orange outline is the upper L shelf, 12½" above the bench top.

The frame and deck stay inside 62" x 33". Only the cord hooks and the lead and power-cable coils hang off the welder end, about 2" past it. Keep the 3¾" vent gap between bench and welder clear.

SECTION 3

FRAME PLAN

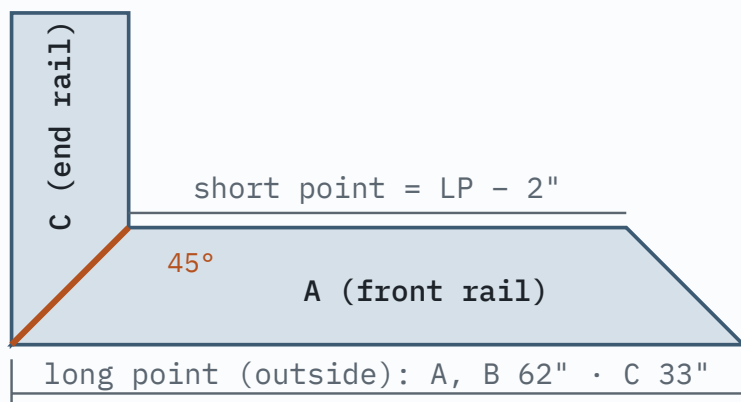
Deck removed. Letters match the cut list. The four outside corners are 45° miters; every interior member butts square into the inside face of the member it meets.



Orange squares are the caster mount plates (2 × 11 ga). Gray squares are bench corner pads (2 × 11 ga). Orange ticks are 3 × 6 post-base gussets.

Mitered corner detail

CORNER DETAIL · 6× scale, front-left shown, all four alike



Cut across the 1" face with the tube on edge.

Interior members (D, E, G, H, P) are square cut and butt inside.

Cut across the 1" face with the tube on edge. Mitered lengths are long point (LP), on the outside face. Short point = LP - 2".

SECTION 4

CUT LIST • FRAME

ID	MEMBER	QTY	ENDS	LENGTH
A	Front rail. Outside corners mitered.	1	45° both ends	62" LP
B	Rear rail. Outside corners mitered.	1	45° both ends	62" LP
C	End rails. Outside corners mitered to A and B.	2	45° both ends	33" LP
D	Spine crossmember. Carries the bench's back edge and every spine post (C to E).	1	square	45¾"
E	Bench-end member, the edge of the welder bay (A to B).	1	square	31"
G	Divider between the cylinders and the plasma (D to B).	1	square	12½"
H	Directly under the cylinder centers, also the front of the rear-left caster pocket (C to G).	1	square	22½"
P	Caster pocket sides: 3 at 8", 4 at 7".	7	square	52" total

CUT LIST • POSTS, RAILS & ARMS

PART	NOTE	QTY	ENDS	LENGTH
Cylinder upright	Left end of the spine. Cap the top.	1	square	41¾"
Shared upright	Cylinders and both shelves. Stops under the upper shelf, which covers its top.	1	square	41¾"
Shelf post	Stops under the upper shelf, which covers its top.	1	square	41¾"
Lead post / end post	Welder end. They stop under the L top frame.	2	square	39¾"
L top rail	Runs along the welder end on top of the lead and end posts.	1	45° both ends	33" LP
L front arm	From the top rail's front corner to the shelf post line. Cap the open end.	1	45° outside, square at vent gap	14¾" LP
L rear arm	Along the back edge, from the top rail's back corner to the shelf-post arm.	1	45° both ends	17¾" LP
Upper shelf arm, shelf post	Laps the shelf post's left side for its full 1" depth, then runs to the back edge.	1	45° back, square front	14½" LP
Upper shelf arm, shared upright	Laps the shared upright's right side for its full 1" depth. Cap the end.	1	square	14½"
Lower shelf arms	Lap the shared upright and the shelf post, flush with the bench top, to the back edge. Cap the ends.	2	square	14½"

Post lengths assume a 29" bench with its casters off. If yours is different, add or subtract the difference on all five posts.

SECTION 5

CUTTING PLAN · SIX 10 FT STICKS

1×2 × 1/8" wall. (M) marks a mitered piece. Leftovers allow 1/8" of kerf per cut plus about 1" of waste for each mitered end, so every miter can be cut from a fresh square end.

STICK	CUTS	USED	LEFT
1	A 62 LP (M) · C 33 LP (M) · upper shelf arm 14½ LP (M)	109½"	~5⅞"
2	B 62 LP (M) · L front arm 14¼ LP (M) · lower shelf arm 14½ · P 7 ×3	111¾"	~4½"
3	D 45¾ · L top rail 33 LP (M) · C 33 LP (M)	111¾"	~3⅞"
4	cylinder upright 41⅜ · end post 39¼ · upper shelf arm 14½ · G 12½ · P 8	115⅞"	~3¾"
5	shelf post 41¼ · shared upright 41¼ · L rear arm 17¼ LP (M) · P 8 · P 7	114¾"	~2⅞"
6	lead post 39¼ · E 31 · H 22½ · lower shelf arm 14½ · P 8	115¼"	~4⅞"

Every stick has about 4" spare. That's room for one bad cut on each, but not two. Cut the mitered pieces first.

Steel stock to buy

1" × 2" × 1/8" wall rectangular tube	6 sticks	10 ft each
11 ga sheet	1 sheet	4 × 10 covers the deck, pads, plates, shelves and gussets
5/8" rebar	~10 ft	Rails, rim and hooks, plus waste

SECTION 6

11 GA SHEET PARTS

PART	QTY	SIZE AND PLACEMENT (INCHES)
Deck, rear row, 11 ga	1	47¼ × 14½, from D's front face to the back edge
Deck, welder bay, 11 ga	1	14¾ × 33. Meets the rear plate over the centerline of E.
Bench corner pads, 11 ga	6	6 × 6, welded together in pairs at A/E, C/D and D/E
Caster mount plates, 11 ga	8	7 × 7, welded together in pairs, countersunk for 3/8" flat heads
Middle shelf, 11 ga	1	20¾ × 14½, top flush with the bench top, covering both arms to their outer edges
Post-base gussets, 11 ga	5	3" × 6" right triangles, one at the base of every post
Upper L shelf, rear leg, 11 ga	1	24¾ × 14½, at bench top + 12½", covering the tops of the shared upright and shelf post
Upper L shelf, welder leg, 11 ga	1	14¼ × 33, over the welder. Welds to the rear leg at x = 47¾.

HARDWARE, REBAR & STORAGE

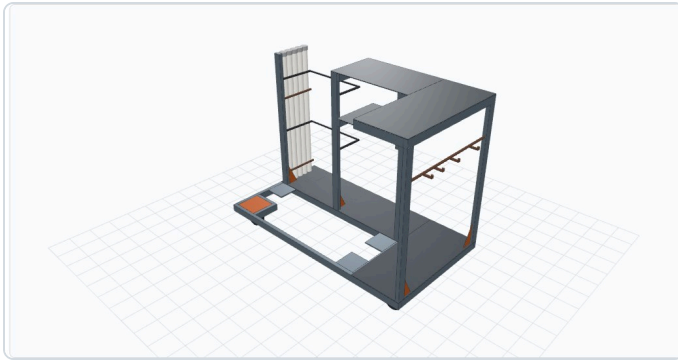
ITEM	QTY	SIZE AND NOTE
Castors, FOVERSWIVE 5" × 2" polyurethane	4	All four swivel with brake, 1,000 lb each, 6½" tall, 4 × 4½ top plate
3/8-16 × 1" flat-head socket cap screws	16	For the castors, with flat washers and nylon-insert lock nuts
Bench bolts	to suit	Through the bench's own caster holes and the corner pads, nuts underneath
Tube end caps, 1×2	5	On every visible open tube end
L shelf rim, 5/8" rebar	1	31", along the free edge of the welder leg
Rod-tube top rail, 5/8" rebar	1	11", 28" above the deck, off the back of the cylinder upright
Rod-tube lower rail, 5/8" rebar	1	11", 4" above the deck
Side rail, 5/8" rebar	1	29", 31" above the deck, between the two end posts
End hooks, 5/8" rebar	4	2" out past the end with a ½" upturn: 2 leads, 1 helmet, 1 power cable
TIG rod tubes, 1½" Sch 40 PVC	5	40" long, glued cap on the bottom, slip cap on top
Cylinder chains	2	About 36" each, hooked to eyes on the back of the cylinder uprights

Weight: about 68 lb of frame tube plus 45 lb of deck and pads. Deck top about 67⅞" off the floor; frame clears the floor by about 4¾".

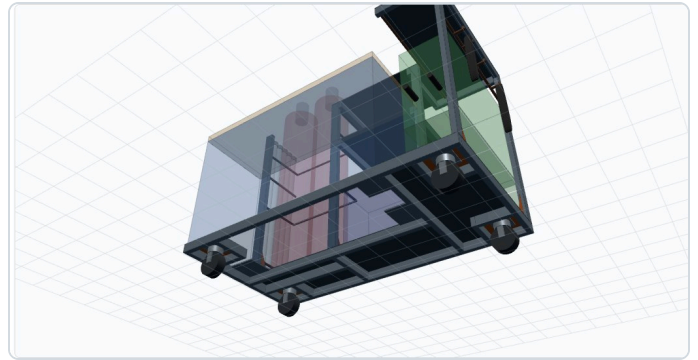
BUILD ORDER

- 1 Cut the tube.** Stand every tube on edge, 2" vertical. Cut the mitered pieces first, measuring long point, and test-fit each corner against a square before cutting its mate. Then cut the square pieces and deburr.
- 2 Make the caster mount plates.** Each of the four plates is two 7 × 7 squares of 11 ga stitched together, drilled on the caster pattern ($2\frac{5}{8} \times 3\frac{3}{8}$, centered; mark it from one of your casters first) and countersunk from the top for 3/8" flat heads.
- 3 Tack the perimeter.** Tack A, B and both Cs on a flat surface and square the frame until the diagonals match within 1/16".
- 4 Tack the interior.** Tack E, D, G, H and the P pocket sides. Check square again, then weld everything out with flush tops.
- 5 Weld in the mount plates.** Weld the plates into the four pockets, flush with the top and welded all around. Bolt on each caster and spin it a full turn to check clearance, then tack each bolt head in its countersink.
- 6 Weld in the bench corner pads.** Weld the three pads flush with the top, along the two members at each corner: A/E, C/D and D/E.
- 7 Drill the deck plates.** Put 3/8" plug-weld holes every 6–8" over the members and pocket plates underneath, plus an extra hole directly under each post location.
- 8 Weld the deck on.** Weld both plates flush with the edges. The rear plate's front edge runs along D. Butt weld the seam over E, stitch the edges with 1½" welds every 4–6", then plug weld the holes.
- 9 Set the bench.** Set the bench on its corner pads, tight against D. Check each caster plate lands on its pad and enlarge a pad if one doesn't. Mark the caster holes, drill, and bolt down with nuts underneath.
- 10 Stand the posts.** Weld each post all around over its plug-welded spot, get it plumb, then weld a 3 × 6 gusset to the post and the deck: on the back of the spine posts and on the inside face of the welder-end posts.
- 11 Add the accessories.** Finish with the parts that hang off the posts.
 - End posts, side rail and end hooks
 - Shelf arms and both shelves
 - TIG rod-tube rails
 - Chain eyes on the back of the cylinder uprights

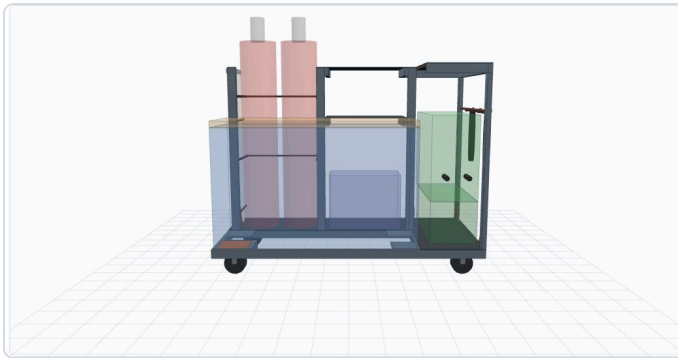
VIEWS



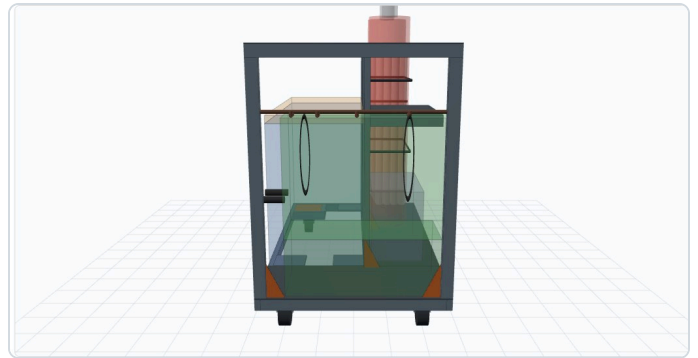
Equipment removed: open bench bay, corner pads, posts and gussets



Underside: boxed caster pockets



Front, where you stand



Welder end: side rail, hooks and coils

SAFETY

- The front and rear casters are 24" apart. With tall bottles aboard, lock the casters while you work, and push from the bench end.
- Chain both cylinders at both heights every time you load one, and keep valve caps on bottles that aren't connected.
- Keep the 3 $\frac{3}{8}$ " gap between the bench and the welder open for ventilation. Don't store anything there.
- These plans are provided as is and have not been reviewed by a licensed engineer. Check every dimension against your own equipment before cutting.

Get the 3D model and STEP file. Orbit the cart in your browser, or download the STEP assembly for Fusion 360 and adapt it to your own welder: ultimate-welding-cart.pages.dev