

DIY FIXTURE TABLE ASSEMBLY GUIDE

Build the table. Keep the precision.

A practical center-out fit-up sequence for Datum precision laser-cut welding fixture table kits.

1/4" STEEL Precision laser-cut components	5/8" HOLES Fixture holes on 2-inch centers	TAB + SLOT Internal rib and stiffener matrix
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READ BEFORE WELDING

- + Inventory every component before assembly. Internal rib, stiffener, and draw-plate quantities vary by table size.
- + Dry-fit the complete internal structure before committing to welds.
- + Use the included assembly draw plates to seat the rib matrix against the underside of the tabletop.
- + Final table flatness and geometry depend on fit-up, weld sequence, heat control, and fabrication technique.

LASER-CUT COMPONENT TOLERANCE	+/- 0.015" unless otherwise specified
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This component tolerance is not a finished-table flatness guarantee.

INVENTORY. CLEAN. DRY-FIT.

Do the boring work first. Discovering a missing part after welding is a spectacularly inefficient way to spend a Saturday.

COMPONENT	TYPICAL KIT CONTENT
Tabletop	1 laser-cut top
Perimeter	2 side panels, 1 front panel, 1 rear panel
Internal structure	Ribs and stiffeners; quantities vary by size
Leg connection	4 leg mounting plates
Assembly tooling	Laser-cut draw plates; quantities vary by size

BEFORE ASSEMBLY

- 01

Inventory the kit

Lay out the tabletop, perimeter panels, ribs, stiffeners, leg plates, and draw plates. Report missing or incorrectly supplied components before assembly begins and within 7 calendar days of pickup or delivery.
- 02

Prepare the contact surfaces

Remove cutting residue, heavy oxidation, and debris from tabs, slots, and mating surfaces. Minor mill marks, scratches, discoloration, and light oxidation are normal on unfinished raw steel.
- 03

Confirm fit before welding

Dry-fit the rib and stiffener matrix. Tabs should seat without forcing the table out of shape. Resolve fit issues before tack welding.

CUSTOMER RESPONSIBILITY

DIY kits require welding and fabrication by the customer. Distortion, dimensional errors, damage, or poor results caused by customer assembly or welding are not manufacturing defects.

WORK FROM THE CENTER OUT.

The goal is to seat the internal structure evenly against the underside of the tabletop without locking distortion into the assembly.

START NEAR CENTER - WORK OUTWARD



01

Place the tabletop face-down

Support the tabletop on a clean, stable, level work surface. Protect the finished working face from debris and weld spatter.

02

Install the internal matrix

Fit the ribs and stiffeners into their tab-and-slot locations. Keep the structure loose enough to settle as draw plates are tightened.

03

Install draw plates near the center

Bolt the first assembly draw plates through the fixture grid near the center. Snug them to pull the rib structure tight against the underside of the tabletop.

04

Continue outward

Add and tighten draw plates progressively from the center toward the perimeter. Do not fully clamp one edge while the opposite side remains loose.

05

Recheck earlier plates

Neighboring connections can loosen slightly as the matrix seats. Revisit the previous draw plates and retighten as needed.

LOCK THE FIT. CONTROL THE HEAT.

- 06

Verify the seated matrix

Confirm that tabs are engaged, ribs are seated against the tabletop, and all draw plates are snug. Check the overall assembly before welding.
- 07

Tack the tab-and-slot joints

Use small, controlled stitch tacks at the tab-and-slot connections. Distribute heat and avoid finishing one area while the rest of the structure remains loose.
- 08

Install the perimeter panels

Fit the front, rear, and side panels after the internal matrix is seated and tacked. Verify corner and tab engagement before adding weld.
- 09

Build the base while inverted

The leg or base structure can be assembled while the tabletop remains face-down. Keep the draw plates installed while completing the fabrication sequence.
- 10

Flip only when stable

Leave the assembly draw plates installed during the flip. Use lifting equipment and help appropriate to the table's size and weight.
- 11

Remove draw plates last

Remove the draw plates only after fabrication is complete and the structure is stable. Draw plates are temporary assembly tools, not finished-table workholding accessories.

FINAL CHECK

+ All supplied components accounted for	+ Rib matrix seated and tacked
+ Perimeter panels fully engaged	+ Heat distributed during welding
+ Base structure stable before flip	+ Draw plates removed after completion

NEED HELP?

Contact Riverside Laser before continuing if a manufactured component appears incorrect or does not fit as intended.

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