

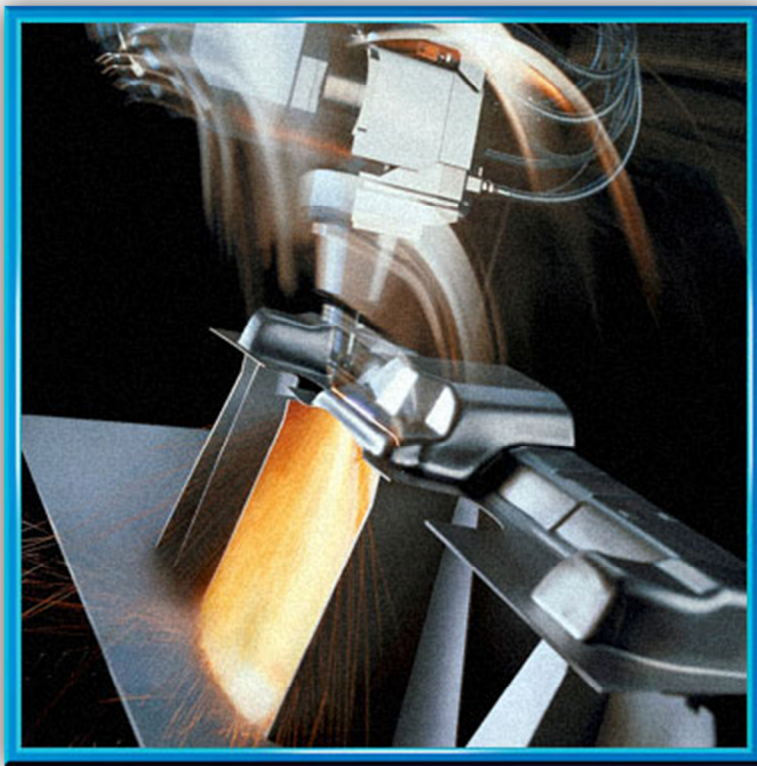


**Superior Joining Technologies, Inc.**  
*A Precision Welding Laboratory*

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## Multi-Axis Laser Cutting and Welding Center

Superior Joining Technologies, Inc. is pleased to offer the service of Multi-Axis, Laser Machining and Welding to our region with the purchase of the 5000 watt TRULASER CELL 7040 from Trumpf.



With a working range of 13 feet X, 5 feet Y, and 30" in the Z axis, and maximum simultaneous axis speeds of 98 inches per second, it is the most advanced system of its kind in the Midwest.

With the ability to construct a cutting and welding program from a cad model, the prep time is greatly reduced.

The use of its integrated rotary axis makes processing of tubular components highly efficient.

"As an observer of manufacturing technology, the automotive market has required a 1/2" flange for robotically spot welding

parts, but with laser welding, less area, and less material in the weld joint will save on gas mileage as well as material costs. Having a machine like this in a job shop environment, which before was really an automotive OEM type machine, opens the door to so many other industries to new joining technologies and helps them become more competitive in their industry."

Lou Derango - Icon Machine Tool



**Technical Data TruLaser Cell 7040 Machine**

**Working Range**

X axis .....	4000 mm / 157"
Y axis .....	1500 mm / 59"
Z axis <sup>3</sup> .....	750 mm/ 29.5"
B axis swivel range .....	± 120°
C axis rotation range .....	n x 360°
Max. load capacity per table.....	2000 x 1500 800 kg

**Max. Material Thickness as a General Rule for Cutting**

Steel.....	25.4mm / 1"
Stainless Steel.....	15.88mm / 5/8"
Aluminum .....	12.7mm / 1/2"

**Workable Clamping Area**

X direction.....	4000 (2x2000) mm / 157 (2x78)"
Y direction.....	1500 mm / 59"
Working height.....	750 mm / 29.5"
Working height with 2D cutting attachment .....	950 mm / 37.5"

**Max. Axes Speeds**

Travel speed in space .....	150 m/min / 492ft./min
X direction.....	100 m/min / 328ft./min
Y and Z direction.....	80 m/min / 262ft./min
B axis / C axis.....	60 1/min

**Max. Accelerations**

X, Y and Z direction.....	8 m/s <sup>2</sup> / 26ft/s <sup>2</sup>
B axis.....	200 rad/s <sup>2</sup> / 11,450°/s <sup>2</sup>
C axis.....	100 rad/s <sup>2</sup> / 5,720°/s <sup>2</sup>

**Accuracy<sup>4</sup>**

Smallest programmable increment .....	0.001 mm / 0.001° / .00004"/0.001°
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**Max. Repeatability**

Linear axes: X, Y, Z.....	0.03 mm /-.0012"
Rotation axes: B, C.....	0.005° / .005°

**Max. Positioning Accuracy**

Linear axes: X, Y, Z.....	0.08 mm / .003"
Rotation axes: B, .....	0.015° / .015°

**TRUMPF CNC CONTROL**

Basis: Siemens Sinumerik 840D  
 Pendant control panel

**Laser**

Laser power TRUMPF CO2 laser .....	2000-12000 watts
Maximum cutting power .....	6000 watts

<sup>3</sup> Reduced accuracy/dynamics with fully extended Z = 750 mm axis for cutting 2D parts. It is recommended to use the 2D cutting box to cut 2D parts.

<sup>4</sup> Pure mechanical accuracy without software compensation, according to VDI 3441 across the entire working range. The accuracy achievable on the work place depends, amongst other things, on the part geometry, it's pre-treatment, material and on its position in the work area.