



Jack & Sons
WELDING AND FABRICATING LLC



www.jackandsonsfab.com

EQUIPMENT LIST

Precision fabrication, machining, and welding equipment supporting complex commercial and defense work.

Jack & Sons maintains in-house fabrication, machining, and welding equipment to support complex build-to-print and custom manufacturing projects. Our equipment base allows us to process demanding materials, control quality, and support repeatable production for high-spec applications.

MACHINING

Equipment	Capacity	Key Advantage	Notes
HAAS UMC 750	X – 30" Y – 20" X – 20" B - 120° to 35-° C - 360°	✓ Reduced number of setups ✓ 5-axis capability for complex geometries ✓ Improved accuracy on multi-side parts ✓ Efficient machining of intricate components	• (x2) Units • Max Part Swing – 27" • Max Speed – 12000 / 15000rpm
HAAS VF-5/50	X – 60" Y – 26" Z – 25"	✓ Large work envelope for bigger parts ✓ Rigid platform for heavier cuts ✓ Strong performance on tough materials ✓ Well-suited for high-volume machining	• Max Speed – 7500rpm
HAAS Mini Mill	X – 16" Y – 12" Z – 10"	✓ Fast turnaround on small parts ✓ Efficient for prototype and short-run work ✓ Cost-effective machining for simpler components	• Max Speed – 6000rpm
HAAS TL-1 Lathe	X – 8" Y – 30"	✓ Efficient turning for shaft and round components ✓ Ideal for simple, repeatable lathe work ✓ Quick setup for short-run production ✓ Reliable machining of smaller turned parts	• Max Speed – 1800rpm

CUTTING

Equipment	Capacity	Key Advantage	Notes
Mitsubishi ML3015eX-F60 Plus	Max Thickness Cutting: • Carbon Steel – 1" • Stainless Steel – 1" • Aluminum – 1" • Copper – 3/8" • Titanium – 3/8"	✓ High-speed fiber laser cutting with strong precision, efficiency, and capacity for complex sheet metal processing.	• 6Kw • <u>Bed Size - 60" x 120"</u>
Hypertherm PowerMax 125 CNC Plasma Table	• Recommended cutting - 1.5" • Heavier recommended cut - 1.75" • Maximum severance cut - 2.25"	✓ Supports efficient CNC cutting of thicker materials with strong cut quality and repeatability.	• <u>Bed Size - 5' x 10'</u>
DoAll 500SNC Horizontal Saw	Material - 18" wide x 14" thick	✓ Automatic horizontal sawing with mitering capability for efficient, repeatable cutting of structural shapes and larger stock.	• Helps streamline material preparation for downstream machining, welding, and fabrication operations.
Hypertherm PowerMax 30	• Recommended cutting – 5/16" • Maximum severance cut – 5/8"	✓ Portable plasma cutting with built-in air, giving the unit strong flexibility for shop use, field work, and quick setup.	• A strong fit for lighter plate work, repair jobs, brackets, and general fabrication tasks where portability and ease of use are important



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CUTTING (Cont.)

Equipment	Capacity	Key Advantage	Notes
Oxyacetylene Torch	Oxyacetylene cutting and heating capability for manual cutting, material heating, freeing seized components, and general fabrication support.	✓ Well suited for maintenance work, fit-up adjustment, and applications where thermal heating or hand torch work is required.	• A useful support tool for handling fabrication, repair, modification, and general torch work as part of broader manufacturing activities.
Miller - Spectrum 500 Plasma Cutter	- Carbon Steel – 5/8" - Stainless Steel – 5/8" - Aluminum – 3/8"	✓ Portable plasma cutting capability for fast, efficient cutting and gouging in general fabrication and repair work.	• Flexible cutting support for brackets, plate, repair work, and general fabrication tasks.

BENDING

Equipment	Capacity	Key Advantage	Notes
AccurPress Press Brake	Max Bend Length – 120" Tonnage – 250T	✓ Supports accurate, repeatable bending for larger fabricated parts. ✓ Strong tonnage capacity for heavier material forming applications.	• Full CNC programmable

WELDING

Equipment	Capacity	Key Advantage	Notes
Fronius - Trans Pulse Synergic 4000	Pulse synergic MIG/MAG welding capability for carbon steel, stainless steel, and aluminum applications. Built for fabrication and production work where arc stability, reduced spatter, and weld consistency are important.	✓ Advanced pulse welding control helps improve weld quality, reduce cleanup, and support efficient production.	• Well suited for applications where weld appearance, process stability, and repeatable results are important across a range of materials.
Lincoln Electric – Power Mig 350MP	Multi-process welding capability including MIG, pulse MIG, FCAW, stick, and DC TIG . Suitable for carbon steel, stainless steel, and aluminum applications.	✓ Versatile all-in-one welding platform for a wide range of fabrication needs.	• (x10) Units • Well suited for fabrication, repair, and short-run production work.
Lincoln Electric – Power Wave 300C	Multi-process welding capability for MIG, pulse MIG, FCAW, SMAW, and TIG applications. Suitable for carbon steel, stainless steel, aluminum, and other specialty materials.	✓ Advanced arc control with strong versatility across multiple welding processes and material types.	• (x2) Units • Supports higher-end fabrication work where weld quality and repeatability are priorities.



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WELDING (Cont.)

Equipment	Capacity	Key Advantage	Notes
Lincoln Electric – Ranger 225	Engine-driven multi-process welding capability for SMAW, TIG, MIG, and FCAW applications.	✓ Combines welding output and portable generator power in one versatile field-ready unit.	• Ideal for on-site welding, repair work, and jobs requiring mobility without sacrificing capability.
Miller – Syncrowave 280	AC/DC TIG and SMAW welding capability for aluminum, stainless steel, and carbon steel applications.	✓ Strong control for precision TIG work across a range of materials, including aluminum.	• (x5) Units • A good fit for detail-oriented welding, cleaner cosmetic welds, and applications where process control matters.
Miller – Invision 450MPa	High-output MIG and synergic pulsed MIG welding capability for carbon steel, stainless steel, and aluminum applications. Built for production and heavier fabrication work where weld consistency and arc performance are critical.	✓ Strong output with advanced pulse control for improved weld quality, repeatability, and productivity.	• A strong fit for higher-demand fabrication and production environments where material mix, weld quality, and throughput all matter.
Miller - Syncrowave 250	AC/DC TIG and SMAW welding capability for aluminum, stainless steel, and carbon steel applications. Built for precision welding, repair work, and general fabrication where clean weld quality and operator control are important.	✓ Proven AC/DC TIG platform with strong versatility for both aluminum and steel work.	• A dependable fit for handling a mix of precision TIG work, repair welding, and everyday fabrication needs.
Fanuc Arc Mate 50iC 5L powered by Miller-Powerwave 500	Robotic arc welding cell built for repeatable MIG and pulse MIG welding in production environments. Combines automated torch movement with high-output welding power for consistent weld quality, improved throughput, and reduced operator variation.	✓ Delivers consistent, repeatable robotic welding performance for production work where quality and efficiency are critical.	• A strong fit for repeat-production components, more complex weld paths, and jobs where automation helps improve consistency, speed, and overall process control.
Miller – Aluma Power 450MPa	High-output MIG and pulsed MIG welding capability optimized for aluminum applications. Well suited for fabrication and production work where arc stability, weld consistency, and productivity are important.	✓ Designed to improve aluminum weld quality and efficiency through advanced pulse control and process stability.	• A strong fit for aluminum fabrication where cleaner welds, repeatable results, and better overall process control are important.



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SUPPORT EQUIPMENT

Equipment	Capacity	Key Advantage	Notes
Bug-O Go-Fer III HS	Portable mechanized travel carriage for straight-line welding and cutting applications. Configurable for welding, plasma cutting, or oxy-fuel cutting, with all-position rack-and-pinion travel and speed ranges documented around 8–100 in./min for the plasma kit.	✓ Improves consistency and productivity by mechanizing torch travel for straighter cuts, more uniform welds, and reduced operator variation.	• For repetitive straight-line work, bevel prep, and jobs where more controlled travel helps improve quality and reduce rework.
CK Worldwide – Tig Cold Wire Feeder	Cold-wire feed capability for TIG welding applications, allowing <i>automated filler metal</i> addition during manual or mechanized welding. Supports multiple wire sizes and helps improve consistency, deposition control, and overall process efficiency in precision TIG work.	✓ Improves TIG productivity and weld consistency by automating filler wire addition.	• A strong fit for higher-spec TIG applications where repeatability, cleaner filler control, and better operator efficiency are important.
Fabrication Tables	Dedicated fabrication table capacity for layout, fit-up, fixturing, and assembly work across a range of component sizes. Includes two 47" x 94.5" tables and one 60" x 60" table , supporting both longer weldments and more complex fabrication tasks.	✓ Provides stable, repeatable work surfaces that help improve fit-up accuracy and overall shop efficiency.	• Supports day-to-day fabrication work by giving the team flexible table space for part setup, welding preparation, and assembly operations.
5-T Overhead Crane	For material handling, part movement, and shop support during fabrication, assembly, and loading operations. Supports safe handling of larger weldments, heavy components, and production materials throughout the facility.	✓ Improves efficiency and safety when moving heavier parts and assemblies through the shop. ✓ Allows manipulation of large welded assemblies.	• A valuable asset for handling larger workpieces, reducing manual strain, and supporting smoother workflow during fabrication and assembly.
Tumbler – Boss Tables CNC T-42	Automated parts tumbling capability for deburring, edge softening, and surface cleanup of cut or fabricated components.	✓ Improves finishing efficiency by processing parts in batches and reducing manual deburring labor.	• Improved part consistency, streamline post-cut cleanup, and reduce time spent on secondary finishing operations.