

Robotics, Welding & Fixturing: Products, Services and Capabilities Overview

Providing innovative robotic solutions to increase productivity and help drive down cost

Wayne Trail is a “total solution” provider of robotic systems and tooling packages that are designed for automated, semi-automated or full-manual operation for virtually any application, including: thermal systems for welding and cutting; material handling systems for press loading and machine tending; palletizing systems; dispensing systems for glue and other sealing applications; and specialized systems for assembly or inspection.

Along with robotics, welding and fixturing, we are a turnkey supplier of laser processing systems, press automation, tube bending and fabricating systems, & hydroform and structural frame automation, system integration and build-to-print services

We know the positive impact of having efficiently produced, consistent quality components delivered to your downstream operations. When robotics, welding and fixturing is supplied from a single, experienced source - who is also intimately familiar with, or responsible for upstream stamping, forming or bending - everyone benefits. New product launches are accomplished in less time, with better quality and higher through-put. Communication is simpler and more effective. Costs are lower.

One supplier-with the experience, innovation, quality and commitment to get the job done right. That's what you can expect from our Robotics, Welding and Fixturing group - and that's what you've come to depend on from Wayne Trail.



MIG welding system including complex fixturing and “ferris wheel” material handling system



Automated turnkey resistance welding system during pre-shipment testing and acceptance trials

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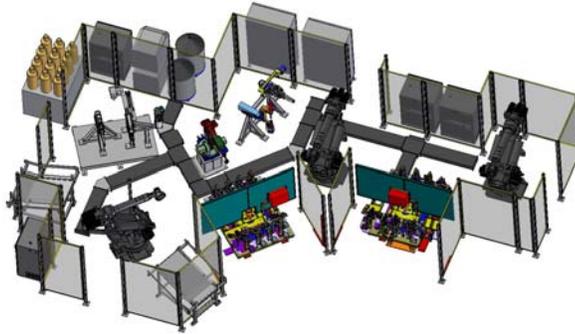
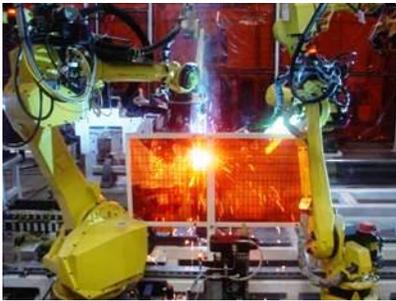
MATERIAL HANDLING & DISPENSING

NAAMS STANDARDIZED FIXTURE COMPONENTS

Robotic Welding and Thermal Systems

The demands of welding on personnel, machines, and tooling are extreme. Knowing these demands and challenges is what makes choosing the right integrator so critical. Let Wayne Trail help you take control of your next weld system or tooling project. We will study your process and develop a robust, affordable concept that you can implement with confidence. We utilize upfront tools such as robot simulation and 3-D design to provide visual verification of system performance before a chip is ever cut.

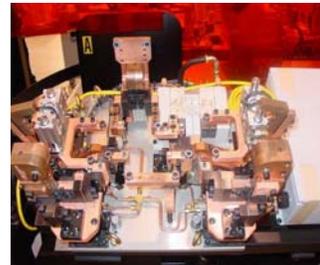
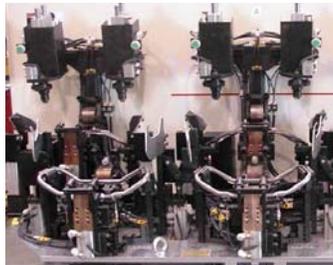
Our control systems are designed to be simple to use, making troubleshooting the equipment fast and easy. Our robot engineers have years of hands-on welding and technical experience that will ensure that the end product produced meets the highest quality requirements while optimizing machine cycle times. We are extremely familiar with domestic and international electrical and mechanical components – and can work within the requirements of your particular specifications. Whether you are building a new system or retrofitting an existing one, it is time to work with the experts at Wayne Trail.



Tooling and Fixturing

Reliable, high quality tooling is the true key to success in a welding system. All tooling designed and supplied by Wayne Trail includes shielding from weld spatter, copper pneumatic air lines, and protective weld covers for all sensor cables. Cylinders are designed in “closed” positions wherever possible to prevent damage to guide rods and seals. Exotic materials and coatings are often used on part locator blocks to prevent spatter buildup from causing quality problems.

Keeping tools as simple as possible helps reduce costs and allows for easy maintenance in the future. We strive to make use of standard off the shelf components to help reduce the need of large inventories of spare parts. The use of NAAMS standards as our baseline for design results in tooling that is cost effective and simple to shim.



Our fixture assemblies feature robust design and construction, copper pneumatic lines, spatter shielding and special coatings to prevent weld contaminant build-up.

Dedicated Machines for Assembly & Fabrication



Multi-station dedicated welding cell

We understand that not all processes justify a robotic solution. Wayne Trail can still support your automation needs. We have built dedicated machines ranging from spot welders for seat backs to gluing systems for carpet inserts. Whether an application calls for a specialized hand tool or a complex assembly cell, we will use our experience and know-how to design and deliver a solution that fits your needs and budget.

Material Handling and Dispensing Robots

Robots are excellent choices for repetitive, harsh or dangerous environments that are too difficult or dangerous for a person to undertake. Whether loading sheet metal into a stamping press, applying glue or sealers in a bonding operation, or handling cartons and boxes at the end of a packaging line – the Wayne Trail robotics team is ready to help. All of our systems feature strong, yet light weight end of arm tooling, with grippers designed for compactness and durability. Robot path programming, and interface to your upstream and downstream processes are handled expertly and efficiently by our engineering and service staff.

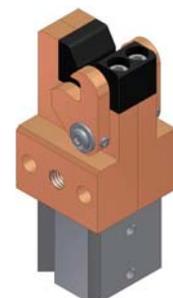
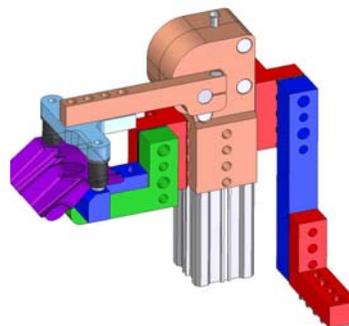
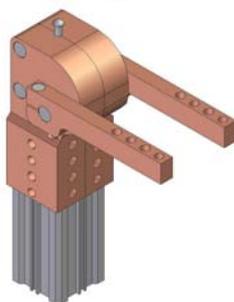
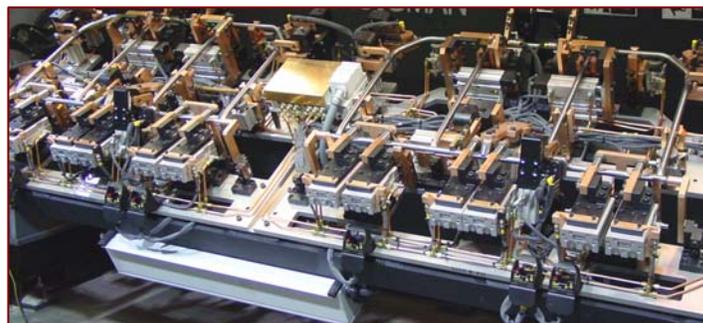


Stacking / palletizing robots increase throughput by manipulating large parts off of conveyor lines (left) or while performing bends in a press brake (right).

Standardized Automation and Fixture components

Twin Fixture Spanner Assembly for welding 'seat frame' components

Ruggedly built, using heavy duty components, all Wayne Trail welding fixtures are designed to use NAAMS blocks (North American Automotive Manufacturing Standards) – to reduce design time and allow for easy, accurate XYZ shimming of all tooling. Wayne Trail toggle clamps and wire clamps are a heavy duty in-house design and also use the standard NAAMS mounting pattern found on the most common NAAMS 'L' blocks and accessories. All weld systems and fixtures are fully tested prior to shipment.





Facilities

With over 120,000 sq. ft. of office, manufacturing and assembly space in multiple buildings, we are located in Fort Loramie, Ohio, close to the Interstate I-75 corridor, and within easy driving distance of several major airports.

All of the technical disciplines at Wayne Trail, from marketing and sales, program management and engineering design, to purchasing, machine shop, tool build and field service - are dedicated to the success of our customers and fully meeting or exceeding their requirements and expectations.

Installation and Start-Up Services



Wayne Trail offers expert installation and start-up support for every system we supply or service. From simple supervision and training, to complete turn-key installation, our field service team is available and eager to help you bring your system up to full production capability. Services we can provide include shipping and logistics, foundation prep, rigging, wiring and piping, area barrier safeguarding, site supervision, production support and more. We also supply system integration services for larger complex lines that require significant coordination between 3rd party vendor supplied equipment or existing, in-place processes. Our know-how and experience makes us the perfect partner for your next project.

Product Support



From the time you first implement your process, to re-tooling or reconfiguration needed to adapt a vintage system to new requirements, Wayne Trail product support is there to help. We provide engineered spare part packages to protect your up-time, and can recommend upgrades that will improve your productivity.

Our service team can also arrange for system relocation, on-site refurbishment or factory rebuild service when required. From warranty needs, to preventative maintenance and replacement parts – our service department is on call 24/7 to provide you with timely and effective product support.