

Fori's

LOCATIONS IN THE USA, MEXICO, BRAZIL, GERMANY, INDIA, CHINA & KOREA

October 2013

www.foriauto.com

Welding SYSTEMS

GLOBAL DESIGN & BUILDER OF WELDING SYSTEMS



CAPABILITIES

SALES, ENGINEERING (MECHANICAL / CONTROLS / SOFTWARE), MANUFACTURING, ASSEMBLY, FULL SYSTEM INTEGRATOR & INSTALLATION & SERVICE ON 5 CONTINENTS

EXPERIENCE

FORI AUTOMATION IS A WORLD LEADER IN CRADLE, FRAME, UNDERBODY, AXLE & EXHAUST WELDING SYSTEMS SUPPORTED BY A GLOBAL SALES AND SERVICE NETWORK OF FORI COMPANIES.

FORI AUTOMATION INC.

SUSPENSION CRADLE WELDING



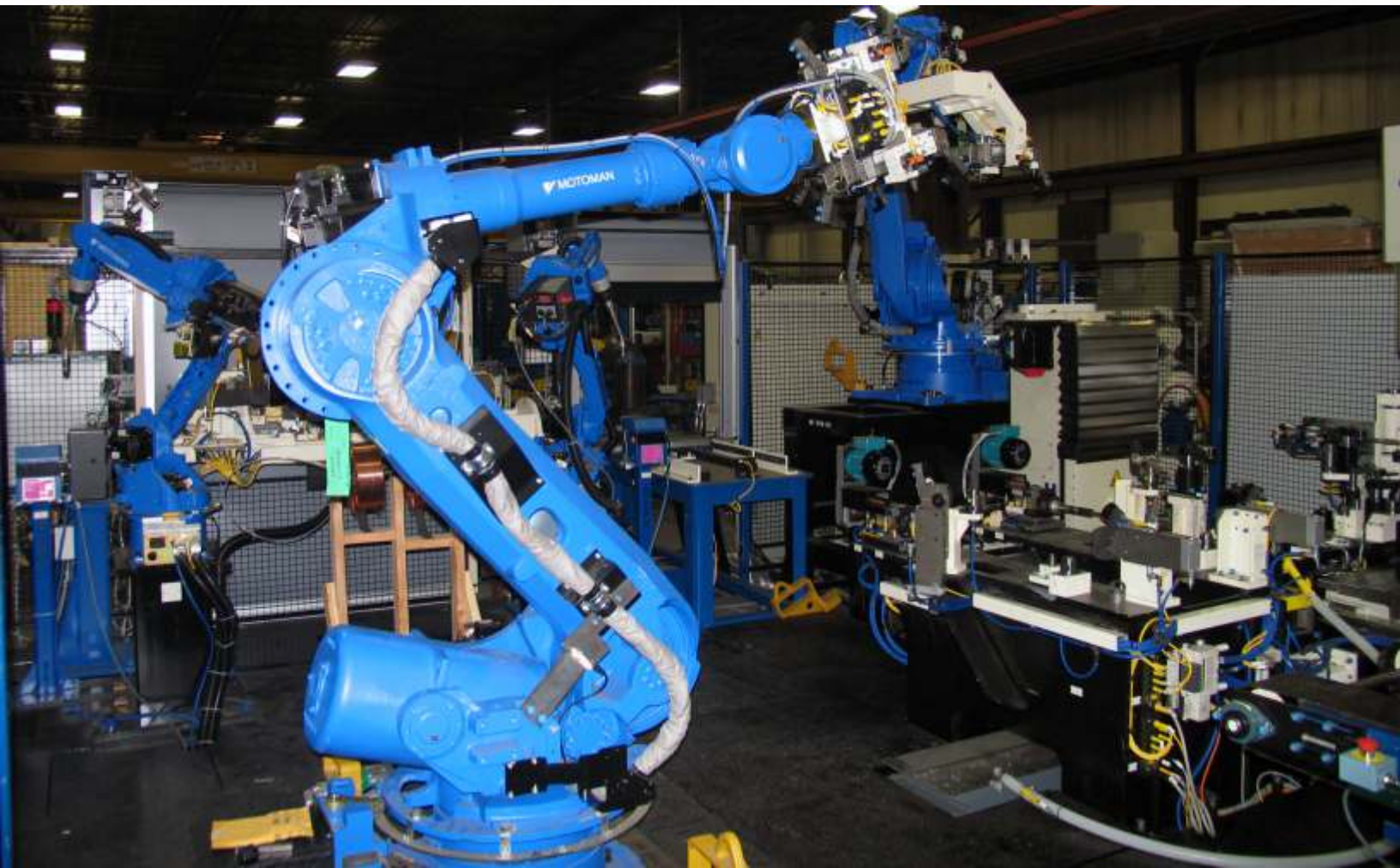
Fori Automation front cradle welding system can produce four variants for a total of over 1 million cradles per year running four lines. Utilizing effective tooling design, distinctive layouts in regards to safety guarding and material flow and a distinguishing part preset laser / vision system. Further development includes a message / Quality Alert system to be integrated into the operator HMI allowing the plant engineers to provide production with the most up-to-date information quickly and easily, even from their office computers. Most notably the laser / vision system will improve overall equipment efficiency (OEE) by at least five percent by eliminating fixed part present switches on the MIG welding fixtures. Finally, the system includes a Fori designed state of the art machining system capable of piercing and holding while machining vertically and horizontally to produce the most dimensionally accurate machined cradle created to date.



SPOT WELDING SYSTEMS

Spot weld system includes MIG welding cells for the A-Pillar, B-Pillar deck lid and panel welding. The system is capable of welding both two and four door vehicle styles in the time range of 69-156 seconds.

A projection stud multi welder capable of quick change for multiple vehicle models. This unique design can be used for multiple future applications.



UNDERBODY WELDING SYSTEM

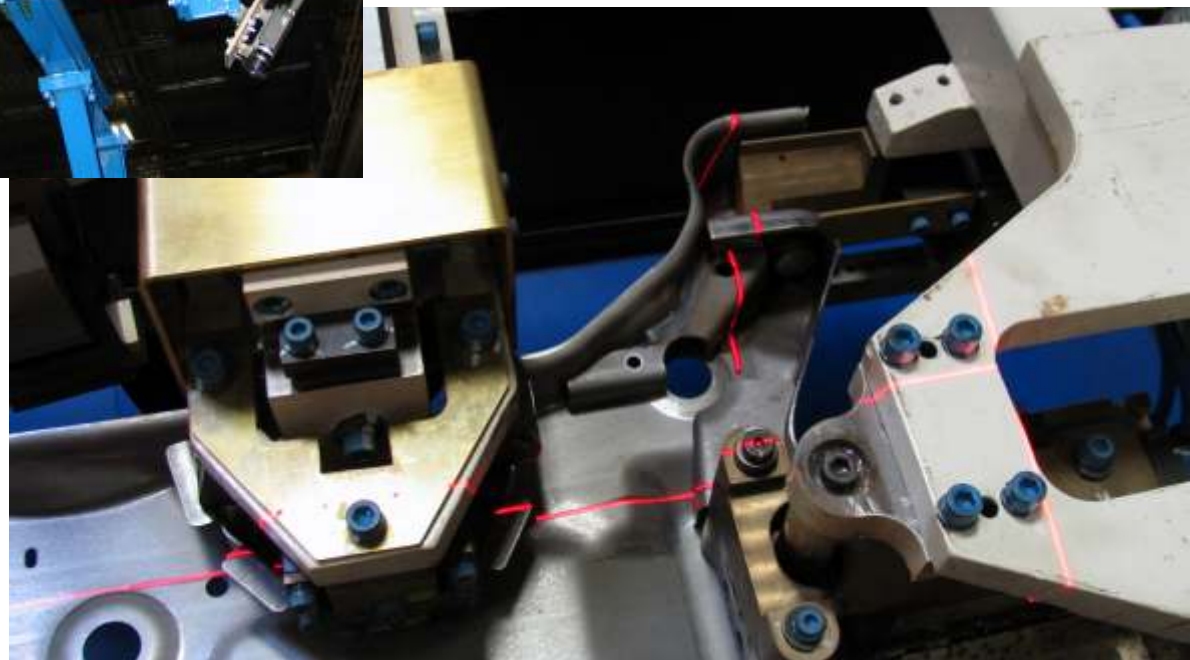


Fori Automation devolved an underbody welding system. The product welds the rear underbody to the vehicle. The process is capable of producing 5,000 underbodies per year. The Fori Automation proposal, while initially considered aggressive, has proven to be one of the most flexible systems produced. One of the most notable features is the fact that there is only one spot weld gun design for all four welding robots. The system includes: welding the structural spider and all of its sub assemblies, the underbody pan and its sub assemblies, adhesive and sealer apply as well as strategic CMT MIG welding.

VISION INSPECTION



Laser Lines are cast over specific areas and cameras "see" if the parts are in the correct location. Each camera consists of an Inspection Part Detection (IPD) system which is interfaced with a digital input / output (I/O) for camera selection and part inspect program. The IPD system controls Pass/Fail signals wired to the Station PLC. The IPD is used to verify each assembly step prior to the Welding and assembly process at each station.



The IPD system is installed in each Operator Interface (HMI) panel and has a VGA output interfaced directly to the HMI to display the live inspection screens. Each IPD has a keyboard/mouse interface located inside the HMI and can be taught at each station. Communication and or programming can be accessed through ENET or an internet webpage.

AXLE WELDING SYSTEMS



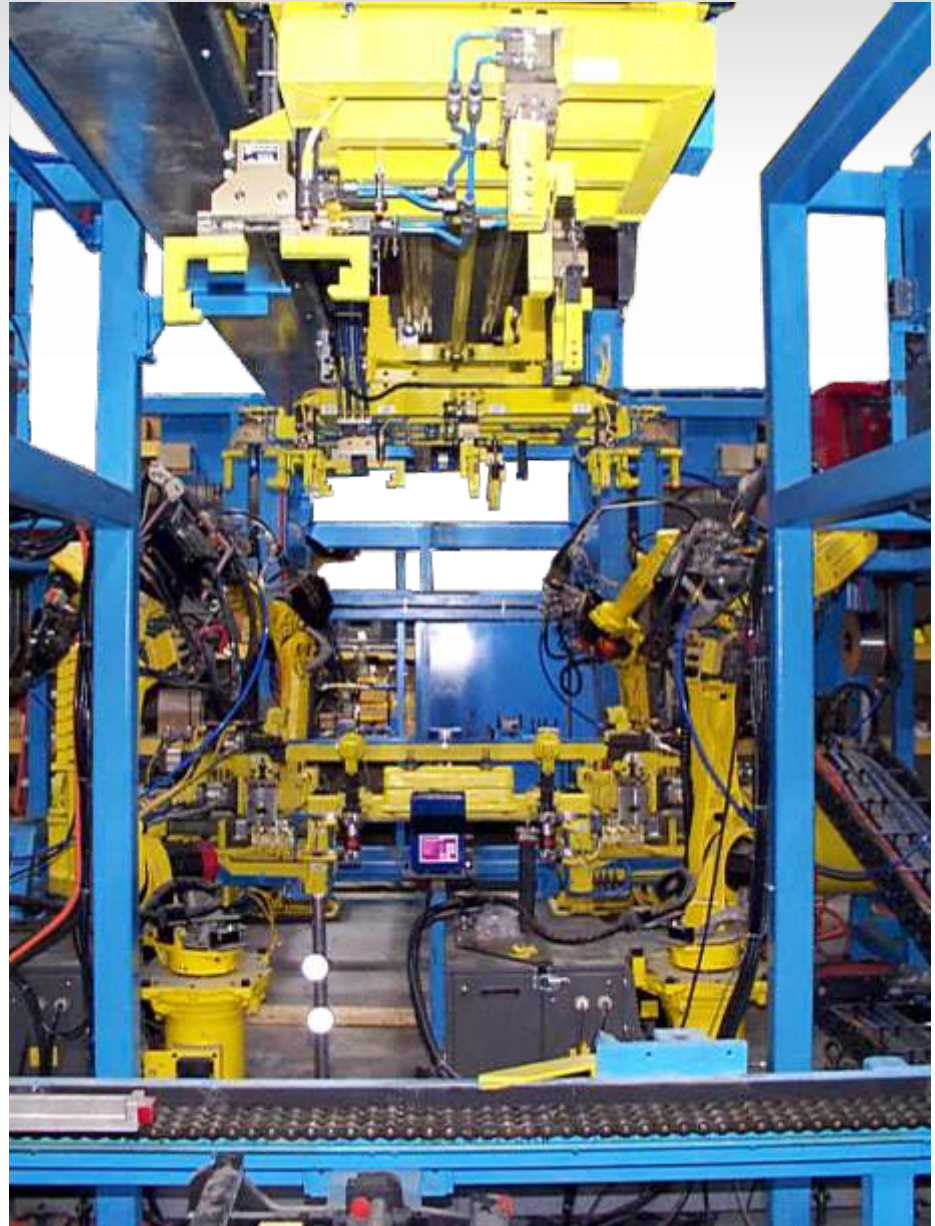
Automatic welding cells with main axle automatic press and geometric locating fixture with one MIG welding robot, MH transfer robot with holding position for MIG robot pickup.



FRAME WELDING SYSTEMS

FEATURES

- Light & medium frames
- Brackets, rails, cross-members, modules, full frames and post welding
- High volume: 200,000+ annual volume
- One to 200+ MIG welding robots
- Automatic transfers, dials and robot transfers

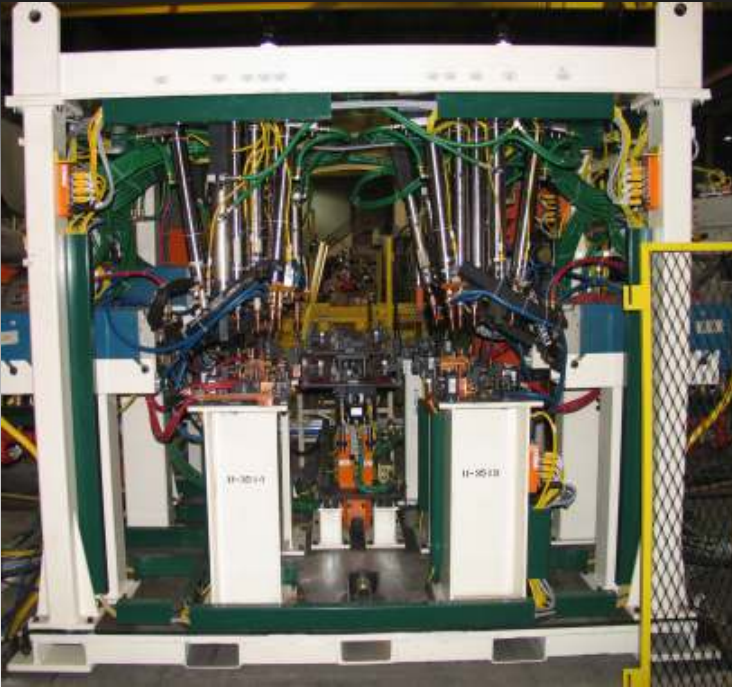


The systems provide, projection welding, spot welding, mig welding and arc stud welding operations, with individual assemblies requiring up to fifty eight (58) structural welds and up to fifteen (15) welded fasteners.

The systems will be capable of producing the assemblies at a rate of just over 100 per hour, for a total annual capacity of more than 300,000 vehicle sets.



UNDER BODY SUB ASSEMBLY WELDING



Material handling robots that load, weld and unload the components at a rate of over 100 an hour. Systems provide projection welding, spot welding, mig welding and arc stud welding. Systems are capable of multiple welding assemblies to meet any need. Process is streamlined by using Fori Automation's squeezers to align and secure the sub-assembly components in place during the welding process.

Precise component placement and welding paths with over 60 structural welds with the capability to weld over 15 fasteners. Systems are designed to produce over 300,000 vehicle sets per year.



Mission Statement

To provide our customers with sound, imaginative and competitive solutions to their production needs, applying innovative technology in practical ways. To provide rewarding employment with personal growth and educational opportunities for our people, challenging their resourcefulness to find better ways and encouraging them to take ownership; to be enthusiastic team players and to take pride in their accomplishments. To have a performance reputation that allows us to become "The Customer's Choice".

Worldwide Locations

FORi AUTOMATION INC.

Worldwide Family of Companies

FORi CHINA

FORi AUTOMATION do BRASIL LTD

FORi GERMANY



- Fori Company
- Fori Representative

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