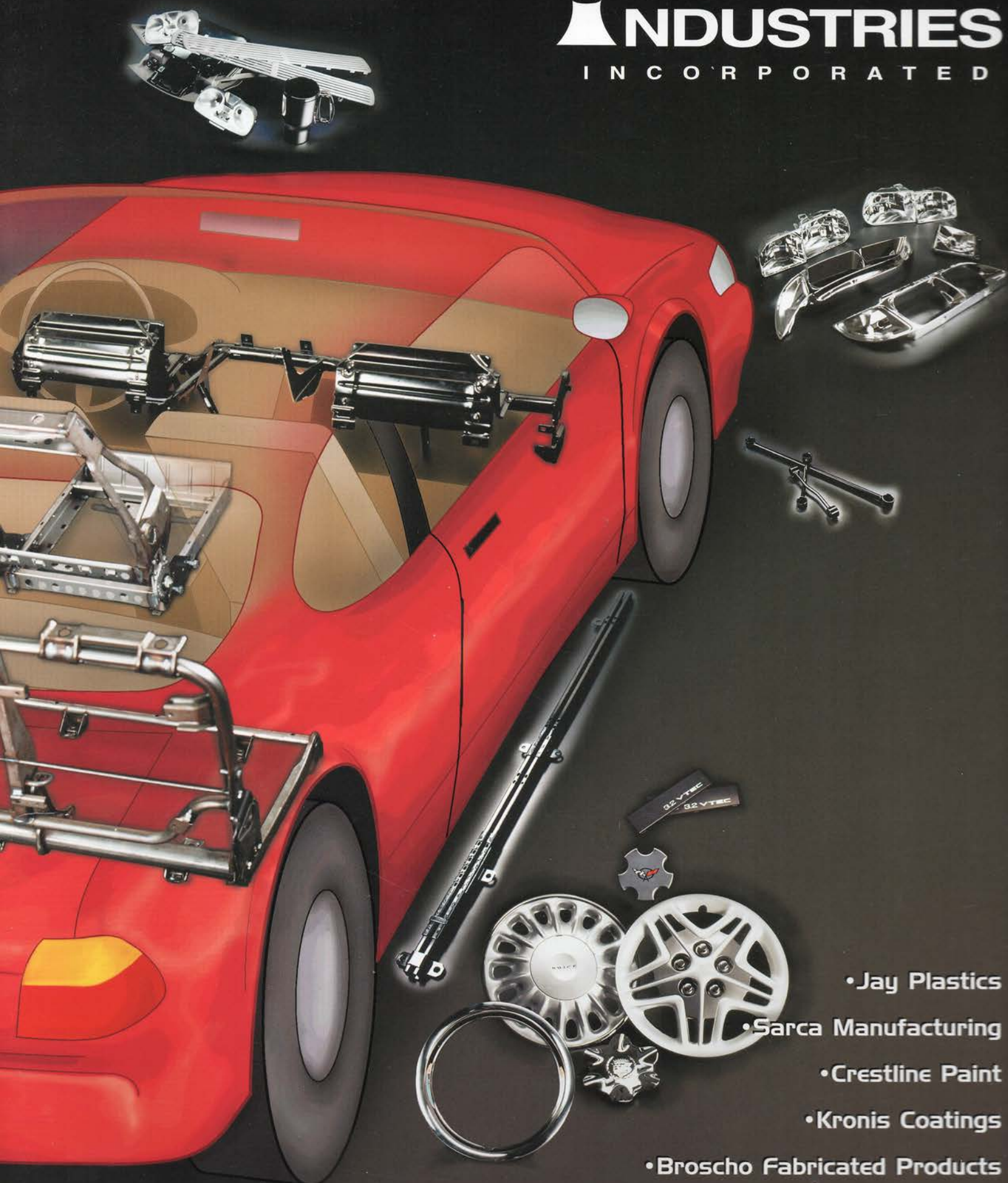


# JAY INDUSTRIES

INCORPORATED



• Jay Plastics

• Sarca Manufacturing

• Crestline Paint

• Kronis Coatings

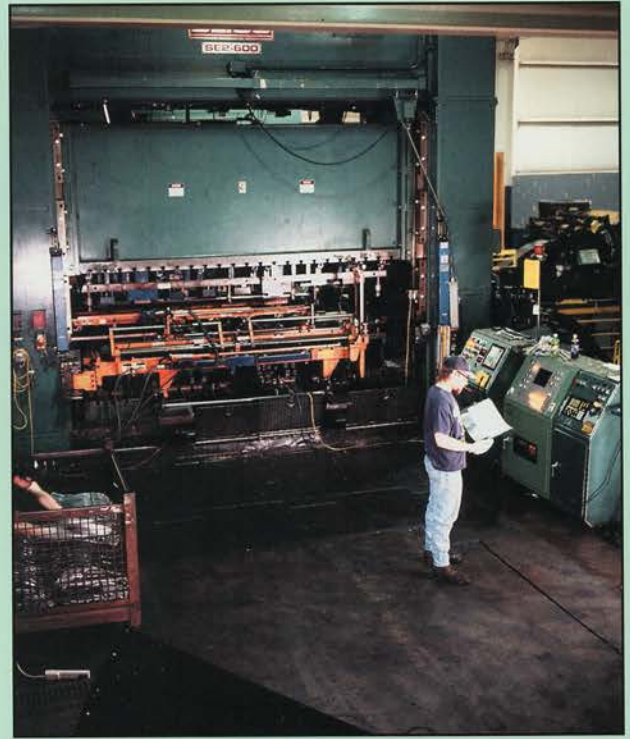
• Broscho Fabricated Products

• Rohr Manufacturing

Founded in 1969, Jay Industries is a vertically integrated manufacturing and assembly company consisting of six complementary divisions. These six divisions each with a separate specialized facility - all located in Mansfield, Ohio - are interactively involved in the fabrication of metal and plastic components for a variety of industries.

Being ISO 9001/9002 certified and having met the requirements of QS 9000, Jay Industries is committed to meeting or exceeding customer expectations. The continuous integration of QS 9000 standards emphasizes defect prevention and the reduction of variation. Customer satisfaction is ensured by conformance to customer specifications and to well defined procedural standards. The highest quality in all products is maintained by continuous visual inspections and quality assurance laboratory testing of statistically-proven random sampling.

This Bliss 600 ton stamping press features a 144" x 60" bolster and slide with a stroke length of 18". The coil fed feeder system accommodates widths up to 40". With full servo control the HMS transfer system is able to provide as many as 9 stations with a range from 10" to 36" in a variety of fixed increments.

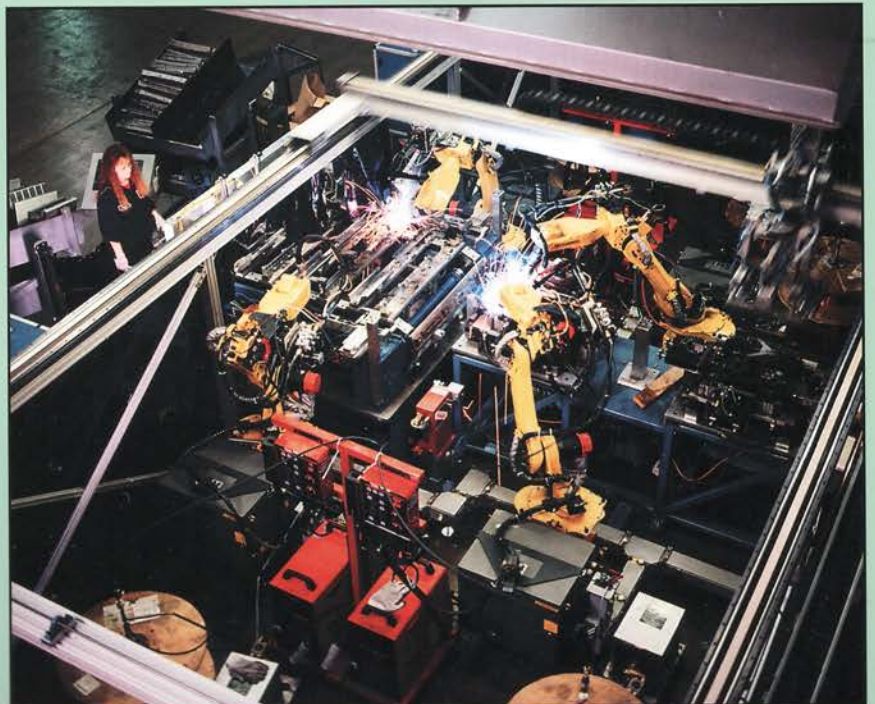


## Efficiency Through Innovation

New technologies and procedural refinements are constantly being adopted to enhance product quality, to minimize costs by maintaining an environment free of waste and to meet the stringent demands of our customers production requirements. A willingness to invest in training, facilities and improved technology, as well as the experience of personnel and the utilization of exacting process techniques are all essential ingredients for maintaining low cost efficiency and quality of products. The ultimate goal of this uncompromising attention to detail, quality and efficiency is to offer the highest quality products, delivered on time and always at the lowest cost possible.



A Mitsubishi EX30 Diesinking EDM and a Mitsubishi FX20 Wire EDM guided by digital engineering systems allow for the generation and reproduction of complex precision tooling



An automated multiple stage welding system with gantry transfer positions and assembles four metal components and eight threaded nuts in one continuous process. This cell is typical of custom designed and constructed facilities dedicated to meeting a customer's specific production requirements

**SARCA**  
MANUFACTURING  
Div. of Jay Industries Corp.

501 Newman Street  
Mansfield, OH 44902  
419-522-3600

A highly automated metal fabricator employing the most advanced industrial technologies involving the welding assembly of formed steel tube with other metal components.

Steel tube is cut to length and forwarded to one of three fabrication systems. These multiple station systems involving robotic transfer perform CNC bending of components requiring multiple short, standard or long radius bends as well as tube inserting, deburring, notching, drilling, shearing, trimming and end forming. Dimensional capability ranges from tubing 0.62" to 3.00" in diameter.

Assembly operations consist of robotic shuttle and turntable MIG and spot welding cells, and automated multiple stage welding systems. Robotic controls allow for continuous weld monitoring to ensure proper penetration, appearance and dimensional stability.

Product conformity to customer specifications is confirmed by a fully instrumented testing

laboratory which includes Coordinate Measuring Machines, digital gauging equipment, weld destruct testing and SPC variance controls.

Having the ability to design, construct and operate custom tooling and fixtures, Sarca Manufacturing is able to fabricate and weld to almost any configuration.



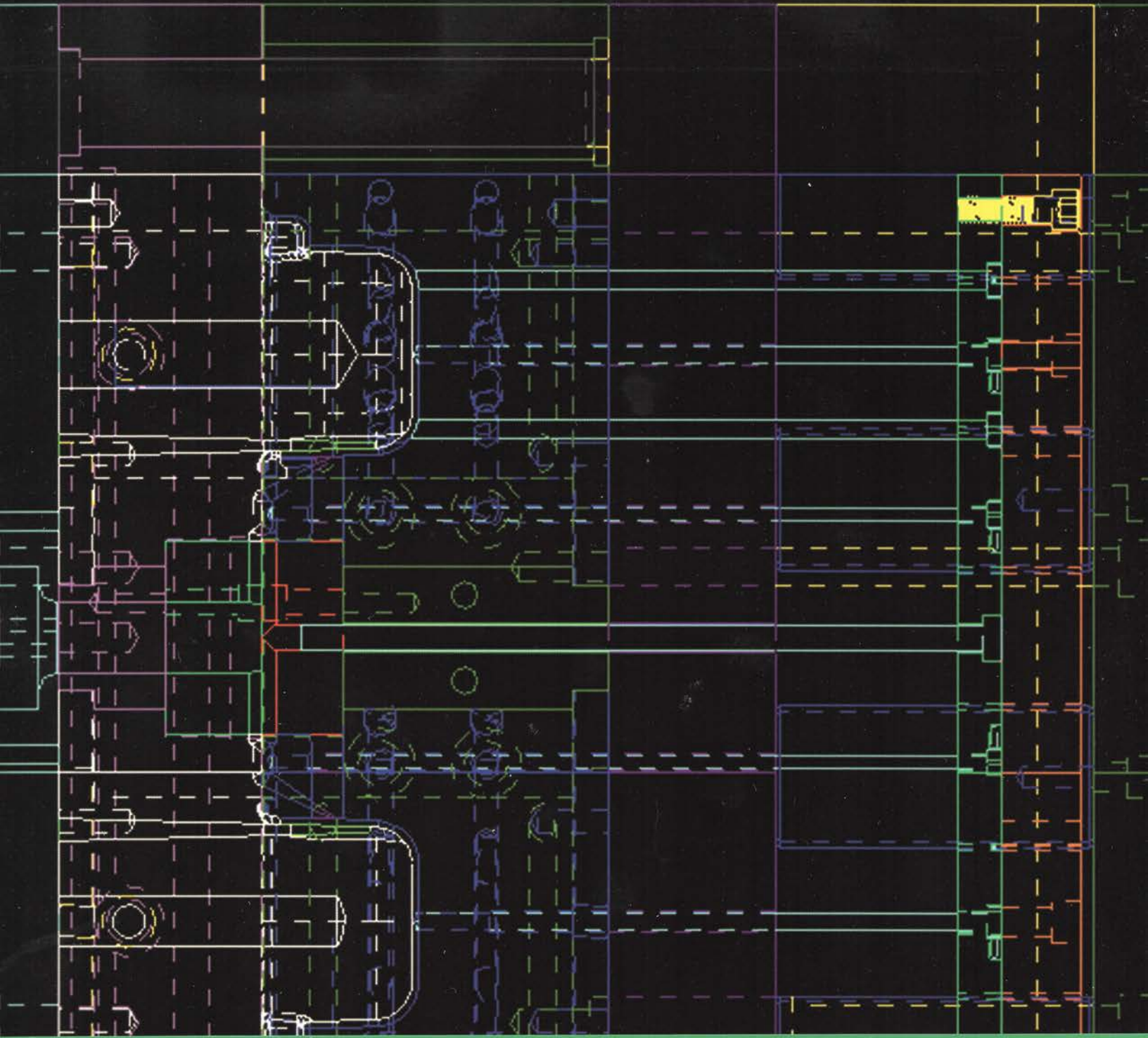
This computer controlled tube bending and forming cell involves four transfer stations, a bender with two plane capability and final trim press.



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JAY  
CRESTLINE  
BROSHCO  
KRONIS  
SARCA



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**JAY PLASTICS**

Injection molding, painting and chrome sputtering of plastics

**CRESTLINE PAINT**

Painting and decorating of plastics and intricate assemblies

**BROSHCO FABRICATED PRODUCTS**

Metal stampings, tube bending, robotic and manual welding assembly and electrodeposition coating

**KRONIS COATINGS**

Powder coating of metals and post finishing assembly

**SARCA MANUFACTURING**

Robotic fabrication and welding of metal tubing

**ROHR MANUFACTURING**

Manufacturing of welded steel tubing

**TAYLOR METAL PRODUCTS**

A direct affiliate - Metal stamping with progressive and transfer dies, automated and manual welding assembly and electrodeposition coating



A highly automated metal fabricator employing the most advanced industrial technologies involving the welding assembly of formed steel tube with other metal components.

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This computer controlled tube bending and forming cell involves four transfer stations, a bender with two plane capability and final trim press.



Assembly operations are organized as sequential welding cells. The arrangement is conducive to the use of common equipment while meeting the specific needs of each application.



Computer monitoring of robotic welds produces a specific assembly in an accurate, repetitive and efficient manner.



# KRONIS COATINGS

Div. of Jay Industries Corp.

1575 W. Longview Avenue  
Mansfield, OH 44906  
419-747-6639

A specialized 57,000 square foot facility constructed in 1995 for the electrostatic spray application of powder coatings to metal components.

Powder coatings are applied utilizing a Nordson Smart-Coat control system which offers constant monitoring of all electrostatic parameters for maximum transfer efficiency. As the automated system identifies the individual racks, spray gun positioning and activation, electrostatic voltage, power flow and atomizing pressures are all automatically adjusted according to preset coordinates. Desiccant compressed-air dryers and oil coalescing filters provide clean dry air to the process. The resulting consistent powder delivery ensures a uniform coating thickness.

Consistent quality is maintained by means of visual inspections of all coated surfaces and by the testing of periodic production samplings by trained technicians.

Components not meeting strict standards are identified and transferred to a well separated area for necessary in-house rework. Access to the intracompany General Motors GP-10 accredited laboratory allows for thorough durability testing.

Additional services including the masking of components and light assembly are available.

Powder is sprayed in a climate controlled atmosphere utilizing a Nordson Smart-Coat operating system with Versa-Screen 486 pc operator interface.



KRONIS



An eight stage pretreatment process consisting of an alkaline cleaner, multiple water rinses, an iron phosphate conversion coating, a nonchrome acid seal rinse, a deionized water rinse and a drying and preheating oven prepare the surfaces for powder coating. Lab technicians titrate the pretreatment tanks and monitor fluid levels and temperatures every four hours for consistent cleaning and coating results.



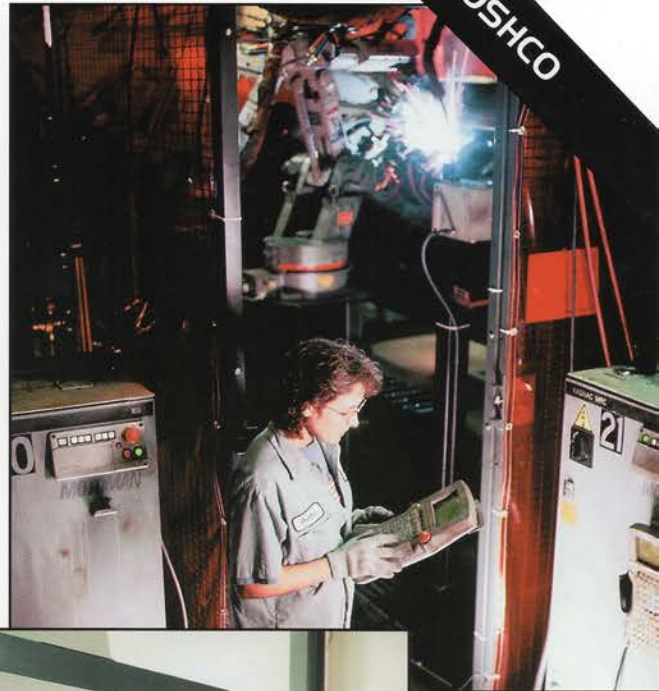
Components to be powder coated progress through the finishing process on custom designed racks by means of an overhead computer monitored power and free conveyor system.

**Brosheco FABRICATED PRODUCTS**  
Div. of Jay Industries Corp.

1595 W. Longview Avenue  
Mansfield, OH 44906  
419-747-4161



This robotic welding cell is typical of the over 30 computer controlled MIG welding installations. Each robotic cell is monitored to operate within consistent sequential performance parameters with precise control of all variables.



**BROSHCO**

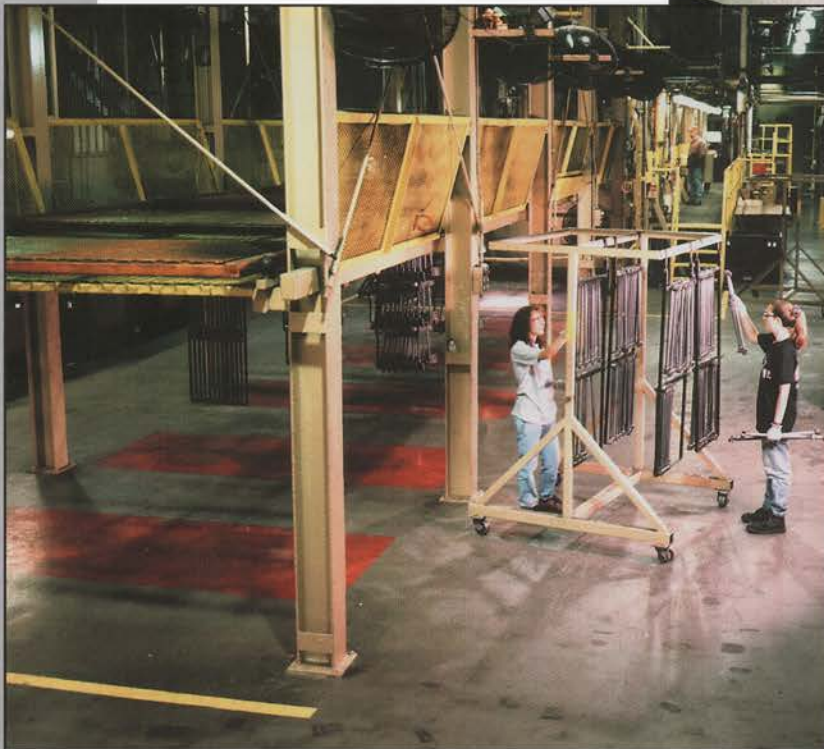
A fabricator of ferrous metal involving modern stamping, metal tube fabrication and welding production equipment. This facility specializes in projects which involve multiple complex stampings and the welding assembly of multiple components to produce a single finished product. Press capacity ranges to 600 tons with progressive and transfer dies. Tube bending is performed on a self loading five axis CNC system and a fully automated nine axis CNC system capable of four radius over mandrel bending. Maximum dimensional capacity is 3" in diameter.

Single and multiple task assembly cells include both manual and robot controlled shuttles and turntable welding systems. Capabilities include MIG, resistance, projection, TIG and spot production welding. A 21 stage cathodic electrodeposition (E-coat) paint coating line with a high temperature curing oven is on site for the painting of metal parts.

Product conformity is monitored by a well trained quality assurance staff. Weld strengths are tested to performance standards. Integrated SPC variance controls include calibrated testing by CMM and variable data and attribute check fixtures.



This Zeiss Coordinate Measuring Machine (CMM) provides accurate dimensional analysis for complete geometric inspections. This CMM has a measuring envelope of 46" (x-axis) x 78" (y-axis) x 24" (z-axis).



The cathodic epoxy electrodeposition paint line features multiple cleaning and rinsing stages, a zinc phosphate coating and paint tank capacity of 2,400 gallons. The indexing carrier system transports custom designed racks with a weight capacity of 900 pounds and maximum dimensions of 84" wide x 60" high x 30" deep. Conductivity monitoring automatically measures and adjusts solution concentrations to maintain consistent composition and quality. A dedicated testing laboratory ensures strict processing controls and uniform coating thickness and curing.



# Crestline Paint

Div. of Jay Industries, Corp.

515 Newman Street  
Mansfield, OH 44902  
419-522-7745



Crestline Paint Company is a multi-faceted facility dealing with the decoration and assembly of primarily plastic components. Operational capabilities include the decorating of plastic components by spray painting, transfer pad printing and the application of medallions, emblems, and overlays. Intricate assemblies include sonic welding, riveting, heat-staking, the application of adhesives and adhesive-backed emblems, crimping of decorative overlays and the light mechanical assembly of plastic and metal parts.

The facility contains three conveyor supplied robotic painting lines. Multiple curing options including 2 gas-fired, hot air batch ovens, two gas fired, infrared conveyor ovens and an ambient drying conveyor system. Painting installations include 7 robots in 9 stations and 1 automated booth and 5 manual painting booths.



A full range of color monitoring equipment including colorimeters, gloss meters and a Macbeth Spectralight color matching booth as well as a close working relationship with paint suppliers ensure compliance to requirements. Access to an accredited intracompany testing laboratory provides continuous evaluation of product conformance. Additional testing procedures can be adopted as requested.

Our flexible operating system enables us to react quickly to the changing requirements of our customers while maintaining our commitment to quality.

This conveyor-fed robotic spray line incorporates two water wash painting booths and dual independent drying ovens. Within minutes two separate paint coatings are applied to the same item.



A variety of custom designed tools and fixtures are utilized on this flexible and synchronous assembly line. Enhancement or additions to these capabilities can be adopted to meet customer needs.



Components to be painted by this robot are placed in a holding fixture and covered by a custom mechanical mask. The automated shuttle then transports the fixture into the booth where the robotically controlled paint gun sprays the exposed area.



150 E. Longview Avenue  
Mansfield, OH 44903  
419-524-3778



A staff of experienced design engineers will examine all aspects of your project for design integrity and production viability

An experienced and progressive manufacturer of high quality injection molded plastic components. Automated molding equipment with hydraulic clamping capacities of up to 660 tons for thermoset and thermoplastic materials provide high production capability with exacting repeatability. Centralized and self diagnostic monitoring protection safeguard against processing irregularities.

Four thin film metal deposition (sputtering) systems-two batch systems and two Leybold DynaMet 4V fast cycle systems-offer high coating reflectivity at a low cost with minimal environmental intrusion. Although highly automated, the systems are capable of accommodating a variety of product configurations.

A high gloss painting process incorporating an automated paint delivery and catalyzing arrangement has been engineered specifically for the application of base and clear coats to plastic components.

An ISO-9001 certified facility, engineering designs are extended from graphic representation by the multiple station Unigraphics CAD system.

Precision production molds are achieved by the application of CAD/CAD technology in conjunction with CNC and EDM machining centers.

A laboratory testing facility with General Motors GP-10 accreditation provides the capability to maintain high product quality standards by environmental, mechanical, dimensional and chemical testing.

The two high speed Leybold DynaMet 4V systems incorporate automated conveyor lines and robotically applied prime coats with UV curing. The application of top coats within the chamber enclosures ensure a quality finish.



This Engle injection molder features closed loop microcomputer process controls and robotic removal and trimming. The sophisticated control system allows for maximum productivity with internal monitoring of all critical functions.

