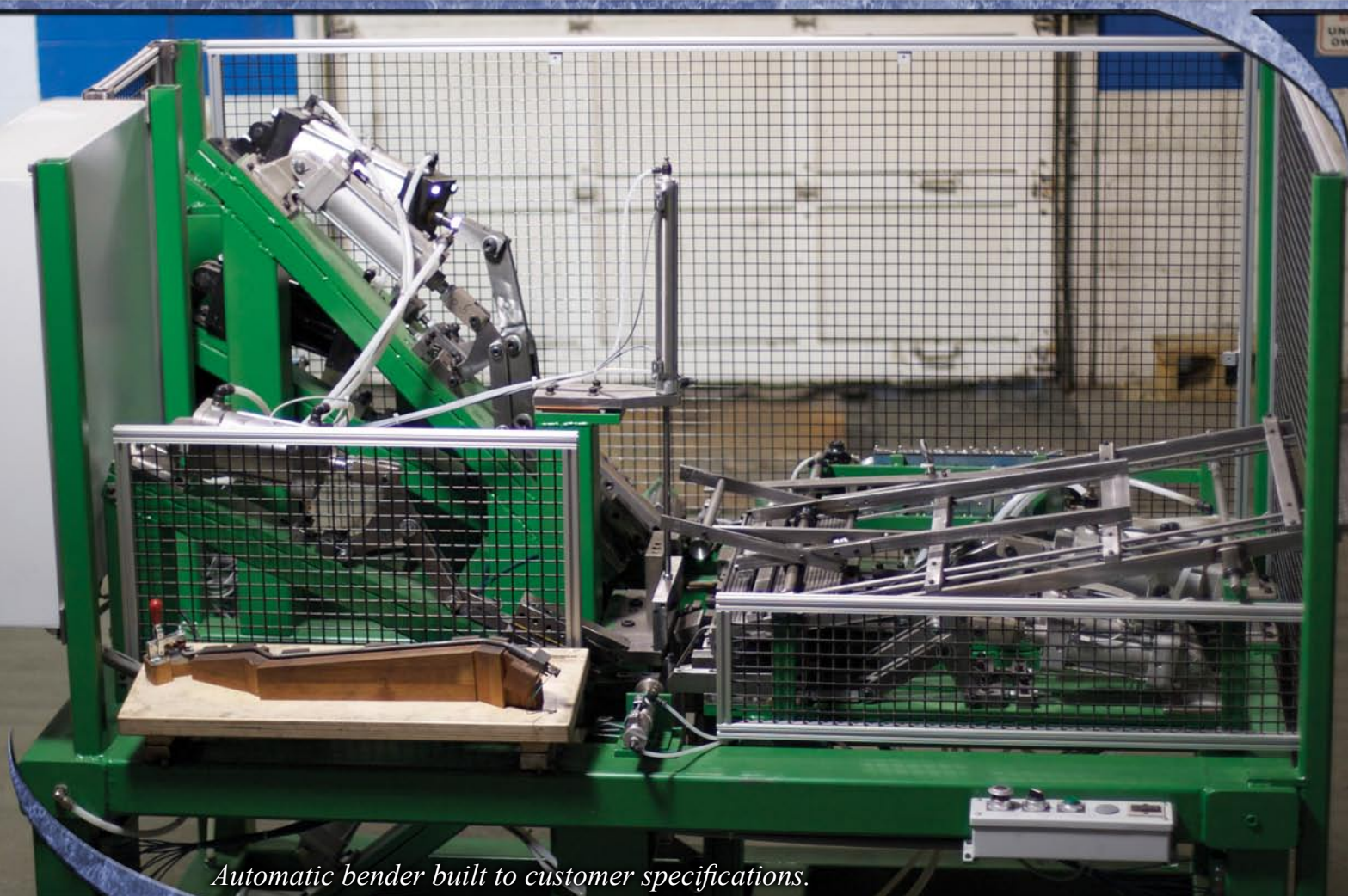


METAL **FINISHING TOUCHES**



Automatic bender built to customer specifications.

Bending Rules!

The keys to finding the right OEM wire formed parts supplier are choosing a company with efficiency and precision as their main focus. What matters most is getting parts made to spec with the highest quality in the least amount of time and at the most competitive price. Although this may sound like a list of conflicting goals, finding a supplier that achieves these goals can provide a tremendous competitive advantage to your organization.

Greg Johnson, President of H.E. Orr sums up their approach to business this

way, "Our philosophy is to focus on every process, product and component and make continual improvements to ensure that we are competitive in today's global economy while maintaining our commitment to safety and the environment."

A thorough analysis of customer specifications and requirements by Orr's technical team determines the most cost-effective way to manufacture the specified parts. Whether working with customer-supplied drawings or custom engineering a design on Orr's in-house CATIA or Auto CAD

systems, efficiency and quality are paramount.

Wire formed parts are manufactured either on a dedicated bender or on a series of punch presses. If the size and scope of the specified part makes a dedicated bender more cost-effective, H.E. Orr's engineering and tooling team works with a local preferred supplier to build the equipment to specification. If the volume is smaller, a punch press and tooling system is often more cost-effective.

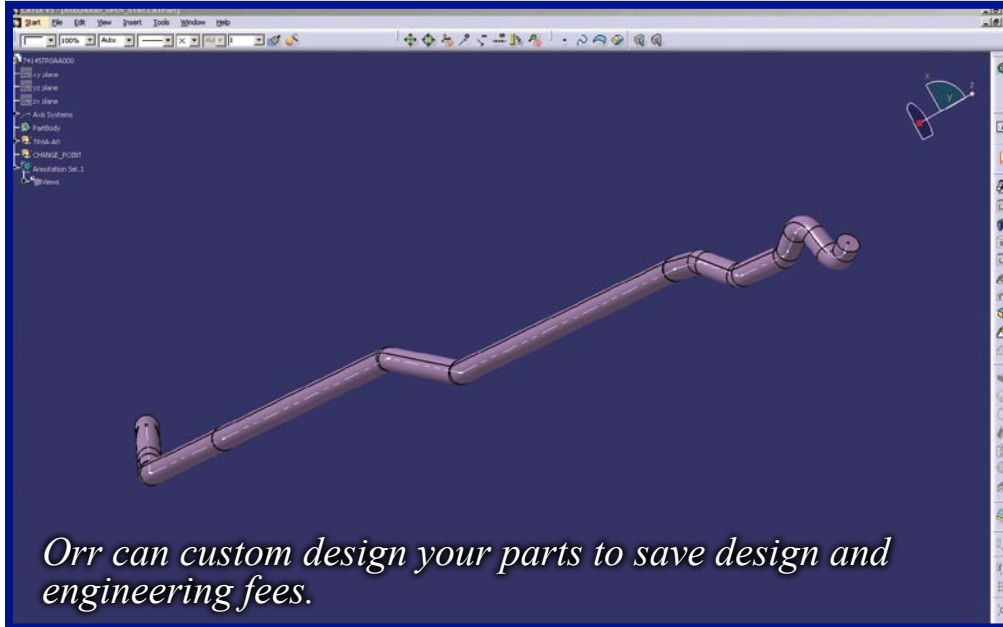
Once the best manufacturing method is determined, the machinery is

Continued on page 2

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Bending Rules!



Orr can custom design your parts to save design and engineering fees.

tooled, and parts are prototyped to assure compliance with customer specifications. Quality inspections and testing comprise the next phase of production. Production begins only when finished prototypes are delivered to the customer's complete satisfaction.

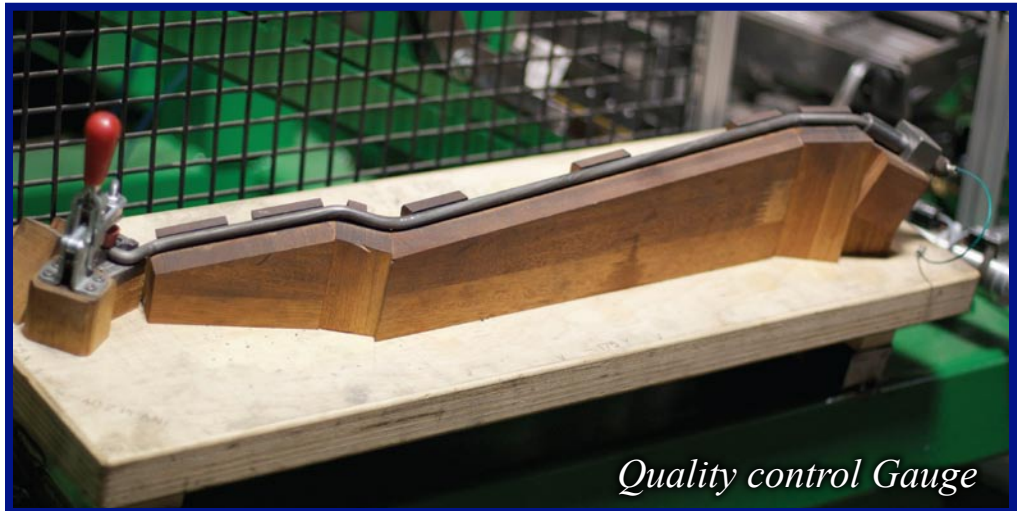
H.E. Orr is a one-stop supplier that manufactures OEM parts from concept to the finished condition wire form. In addition to wire forming, Orr has e-coating and powder coating not only in the same facility, but on the same production line. This, along with sub-assembly capabilities, makes a one-stop shop tough to beat for efficiency and savings. Orr runs 5-6 million parts through their centrally located, Paulding, Ohio, factory each year.

On The Inside

Buying Direct From the Mills

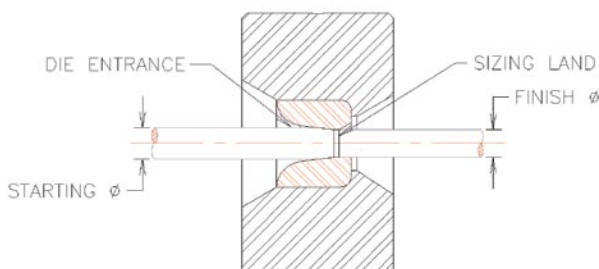
To help reduce costs for wire formed parts, look for suppliers that buy raw materials directly from steel mills rather than in pre-cut bars. This way there is no middle man to add an additional markup and inflate the price for finished parts. H.E. Orr company buys direct to save costs, plus this allows Orr to draw the wire down to the exact specifications needed--keeping a tighter control on tolerances and quality.

For example, a coil of plain carbon steel comes in at twenty-nine sixty-fourths (29/64") of an inch, and specifications might require drawing down to 10mm with



Quality control Gauge

Orr draws down materials to .004" tolerances.



only a four one thousandths (.004") of an inch tolerance. Orr's technicians and equipment can easily meet these requirements. As part of the drawing down process the steel is then cut to length and moves to the forming stage. At this point the "memory" is removed from the steel. Memory is taken out of the

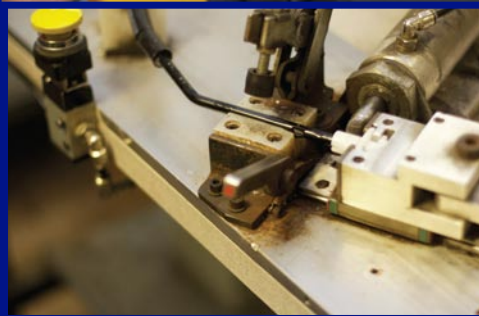
steel to ensure a quality finished product.

H.E. Orr Company can accommodate solid or tube steel from 6 to 12 mm in diameter. To keep pricing as competitive as possible, Orr does not stock materials. Just-in-time inventory management is used for the most cost effective delivery system. Excellent relationships established over 53 years in business with suppliers allow H.E. Orr to get quality materials quickly.

Form and Function



Sub assembly: installing injection molded parts and rubber hoses to wire forms.



Wire forms come off the combination e-coating and powder coating line.

One-Stop Shop Saves Time and Money

To get the most out of a wire formed parts supplier, look for a vendor that can provide a finished condition wire form. Manufacturers can save money by taking a part from the initial concept; to forming, e-coating and powder coating; to sub assembly and packaging all at one location. "We take pride in being able to tackle a job from concept to completion," stated Greg Johnson, President of H.E. Orr. "Our customers appreciate the savings we offer by having all these services under one roof."

Talk to your supplier about the salt spray test hours your parts need to meet. Don't assume that each supplier you contact uses the same coating or pre-treatment processes or chemicals. Zinc phosphate is the standard for pre-treatment in the automotive industry and an 8-stage pre-treatment process delivers superior results.

Depending on the specific applications of the parts being produced, Orr's team of engineers, technicians, and quality control experts works with customers to establish a coating system that will meet specifications

for salt spray test hours. The parts are rigorously tested throughout the manufacturing process to ensure the best quality across the production run. This commitment to quality and testing makes H.E. Orr a parts supplier to major automakers and many other OEM companies.

Customer-owned equipment

With the difficulty of the economy over the past few years, many manufacturers received wire forming equipment as part of an acquisition or consolidation. "Now that they have the equipment, what are they going to do with it?" says Greg Johnson at H.E. Orr. "Rather than trying to run the equipment at their facility, consider sending it to H.E. Orr and letting our team manufacture the parts right here. After all, it's what we do. Why not have it done right?"

Orr will operate customer-owned machinery at their facility in Paulding, Ohio. These customer-owned tooling arrangements are not uncommon. Customers enjoy the cost advantage of owning the equipment, and only paying for labor and materials. Plus, the advantage of wire forming professionals running and maintaining the equipment to assure peak performance is hard to underestimate.



Automotive tool kit

Services and Contacts

Founded in 1957, The H.E. Orr Company is a world-class organization with a reputation built on superior quality, on-time delivery, competitive pricing and technical expertise. H.E. Orr practices cellular manufacturing utilizing the best of both past and state-of-the art technology:

- E-Coat Painting
- Wire Forming
- Cold forming
- Metallurgical lab
- Coordinate Measuring Machine
- Powder Coating - Top coat
- Hot upset forging
- Wire drawing
- CAD/CAM

A diverse product line serving the automotive, agricultural and a variety of other industries.

- Wheel Wrenches
- Accessory Tools
- Tillage Tools
- Automotive Tool-kits
- Hoot Stay Assembly

Key Contacts:

Donna Garman, CEO
Greg Johnson, President
Shawn Hull, Plant Engineer



Donna J. Garman, CEO

H.E. Orr is owned and led by CEO Donna J. Garman. Donna is planning for the future of H.E. Orr by making constant improvements to the processes and new market niches to fill. "We're committed to providing exceptional customer service along with the highest quality coating," stated Garman. We have an excellent team in place and we are well positioned for growth," she concluded.



H.E. Orr meets customer specific needs with personal attention



Parts entering the powder booth system



Wire Forming Hood stays for major auto manufacturers.

Photos by Erika Pease Photography

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