

C O L D F O R M I N G &



M A C H I N I N G S P E C I A L I S T S



Custom Headed Products began as a manufacturer of specialty fasteners and cold formed parts in 2000. Our goal was to serve companies that were looking for cost effective manufacturing solutions to their complex engineered component needs. Over the next few years CHP continued to expand by adding centerless grinding, CNC machining capabilities, and then a complete department of multi-spindle screw machines for a one-stop-shop of custom fasteners and engineered components.

CHP ADVANTAGES

By blending cold forming with secondary machining, CHP has a unique capability to engineer long term cost effective solutions for our customers. As a premier cold forming and machining house, CHP has built its reputation for excellence on engineering value and delivering quality components to its customer's satisfaction. This commitment to continuous improvement is the foundation for developing strategic relationships with our customers. We look forward to building a strategic relationship with you and matching your requirements with the most cost effective manufacturing solution.

WHY COLD FORMING?

Cold forming typically results in a much higher material yield, higher run rates and superior material properties compared to machining. This all translates into a cost-effective and superior performing solution.



CHP is ISO 9001:2008 certified and has dedicated quality and engineering support to make your product right the first time.



C O L D F O R M I N G

At CHP our Cold Forming process produces parts at room temperature by forging the material past its elastic limits resulting in a new shape. Cold forming takes wire from a coil, cuts it to a precise length, then progressively forms the blank through multiple dies and punches. This produces one finished product per machine cycle. Through this process it is possible to produce complex precision parts at high speed with little or no material waste.

Cold forming or cold heading, as it is sometimes referred, can produce components in net or near-net shape at rates significantly faster than machining.

At CHP we are able to convert many parts from machining to cold forming resulting in lower total cost and higher performance components. Cold forming is a process with both cost, quality and performance advantages.

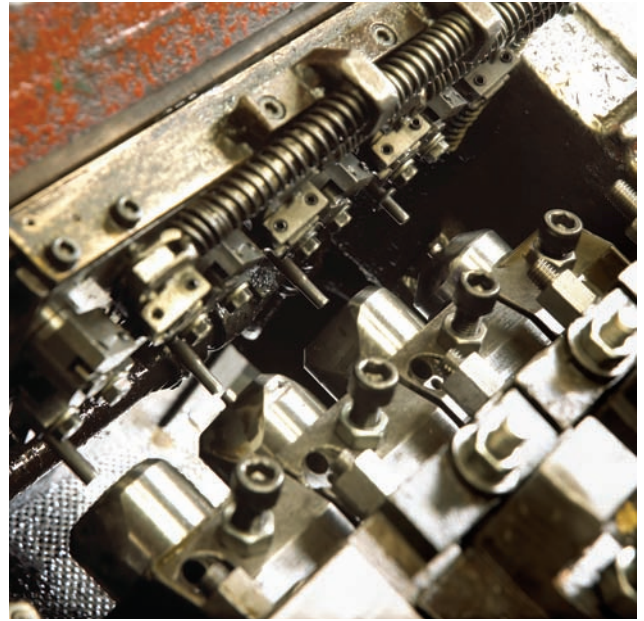
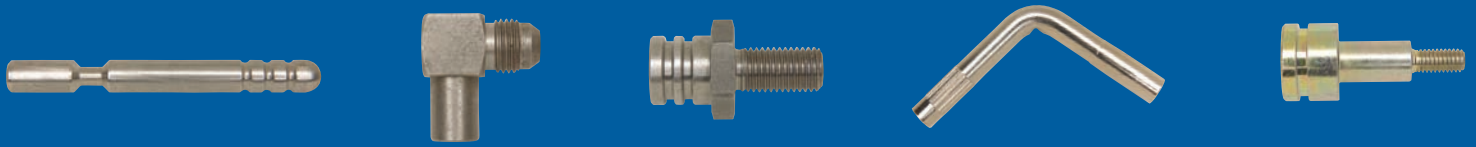


Photo above depicts a cold forming progression. Parts first start as a raw blank and then are progressively formed with dies to shape and trim parts.

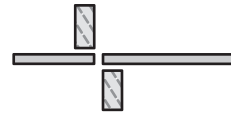
Secondary processes can include; thread rolling, heat treating, CNC machining, grinding and plating.



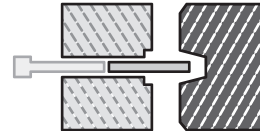


HOW COLD FORMING WORKS

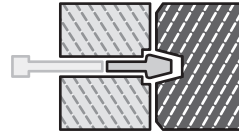
Blank is Cut
from a coil of wire.



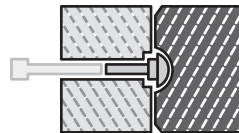
Advanced for Forming
The blank is advanced into the first station.



1st Form
The blank is formed then advanced to the next station.



2nd Form
During the same stroke of the machine, the previous part is formed again in the second station. Work is performed on multiple parts to produce one finished part per machine stroke.



Some parts require multiple dies and blows to form the intended design.

Formed Part
Completed part is ejected from die.



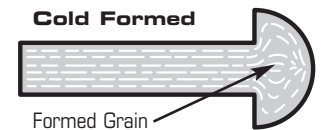
MACHINED OR COLD FORMED?

Our Engineers will perform a "Process Analysis" on your part to determine the optimal manufacturing strategy.

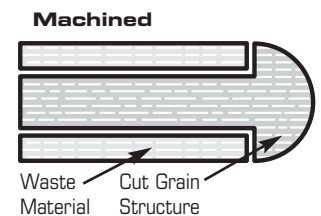
Based on the quantity, component geometries, performance and cost objectives, our engineer will develop a process that may be cold forming, machining or a combination of both.

Machined parts have some cost advantages for small quantities and complex geometries that don't lend themselves to cold forming.

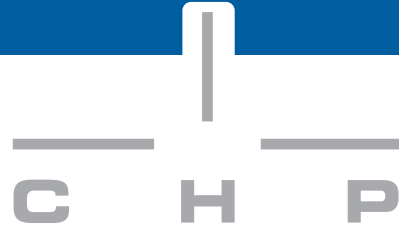
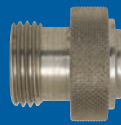
Cold forming forges the finished part using cold work to maintain grain structure and produce a stronger part with a superior surface finish.



Machined parts are produced by cutting through the grain structure of the base material to produce a part and waste.



Eccentric and irregular shapes are excellent candidates for cold forming, as are parts requiring more strength.



CAPABILITIES

Cold-formed parts can be produced up to 100X faster than machined parts, but there are times when design features require precision machining.

At CHP, we also have extensive machining experience using a full range of automatic multi-spindle screw machines and CNC machining centers. Our engineers utilize state-of-the-art methods to develop the manufacturing process for your component with the optimum cost effective production techniques.

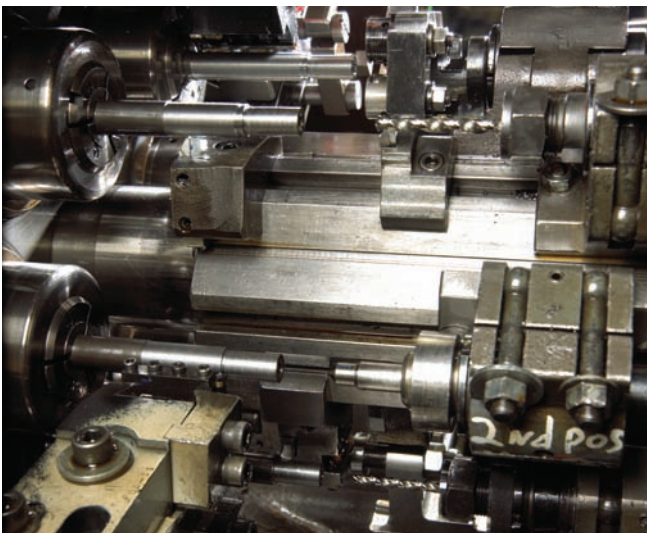
Our capabilities include:

- Multi-Die Cold Forming Machines for various wire diameters up to 5/8 inch
- Multi-Spindle Automatic Screw Machines up to 2 inch diameter
- CNC Machining
- Centerless Grinding
- Thread Rolling
- Secondary Machining & Assembly
Milling, Cross Drilling, Deburring
- Multiple Material types including:
Low & High Carbon Steel, Stainless Steel, Brass, Bronze, Aluminum and various plastics.

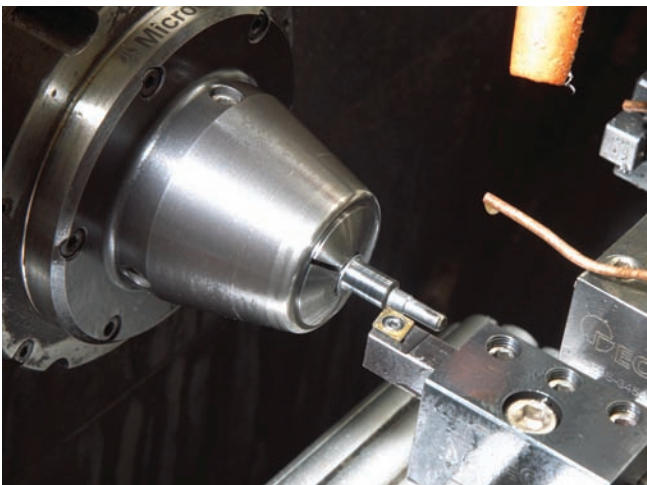
Learn more and visit our website at www.customheadedproducts.com or call a CHP representative for your engineered component consultation **651.277.0740**



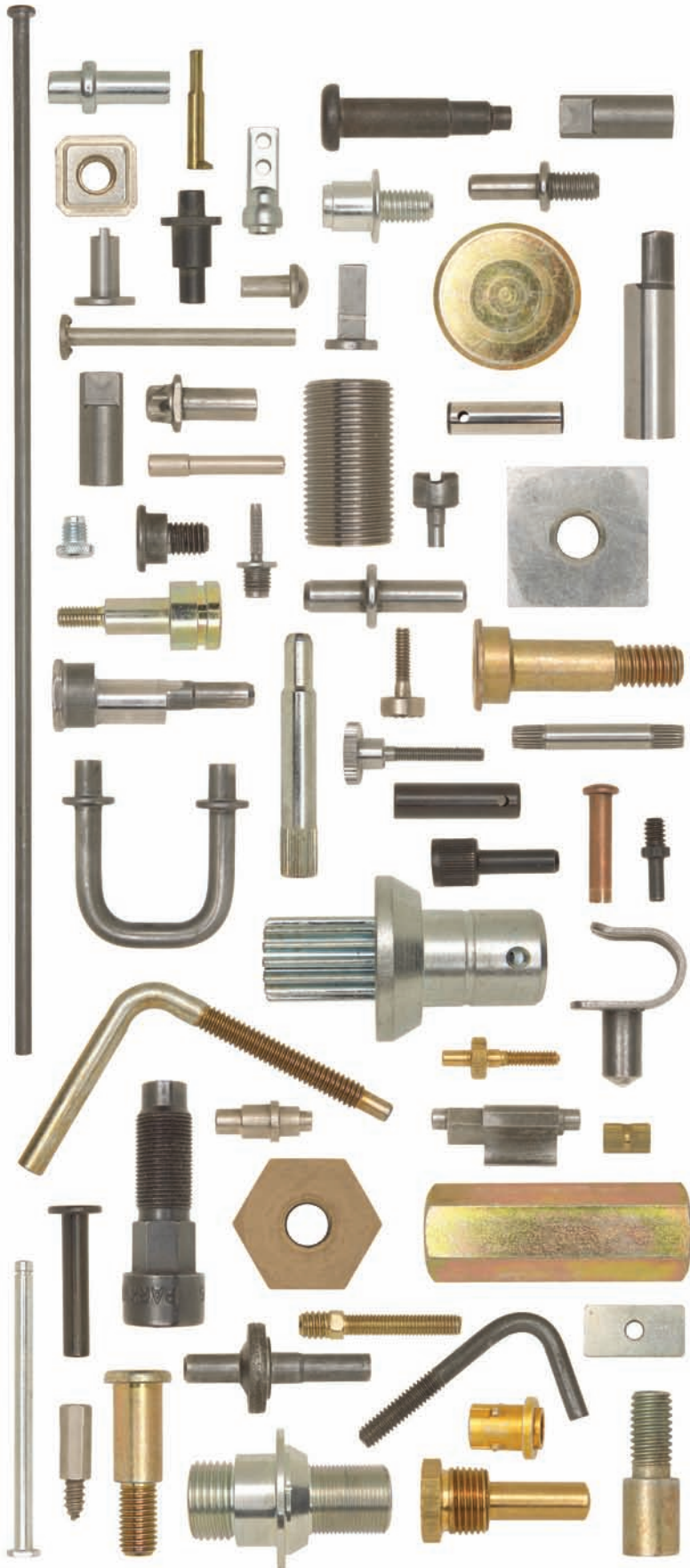
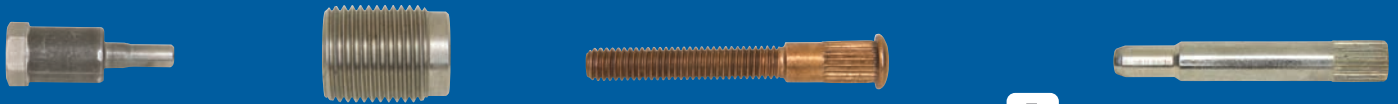
CHP quality lab & component testing.



Multi-spindle screw machine.



Precision CNC Machining.



C H P

**Cold Heading & Specialty Machining
of Custom Engineered Components**

"It is our mission to deliver the highest quality and cost effective specialty fasteners and engineered components for our customers."

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