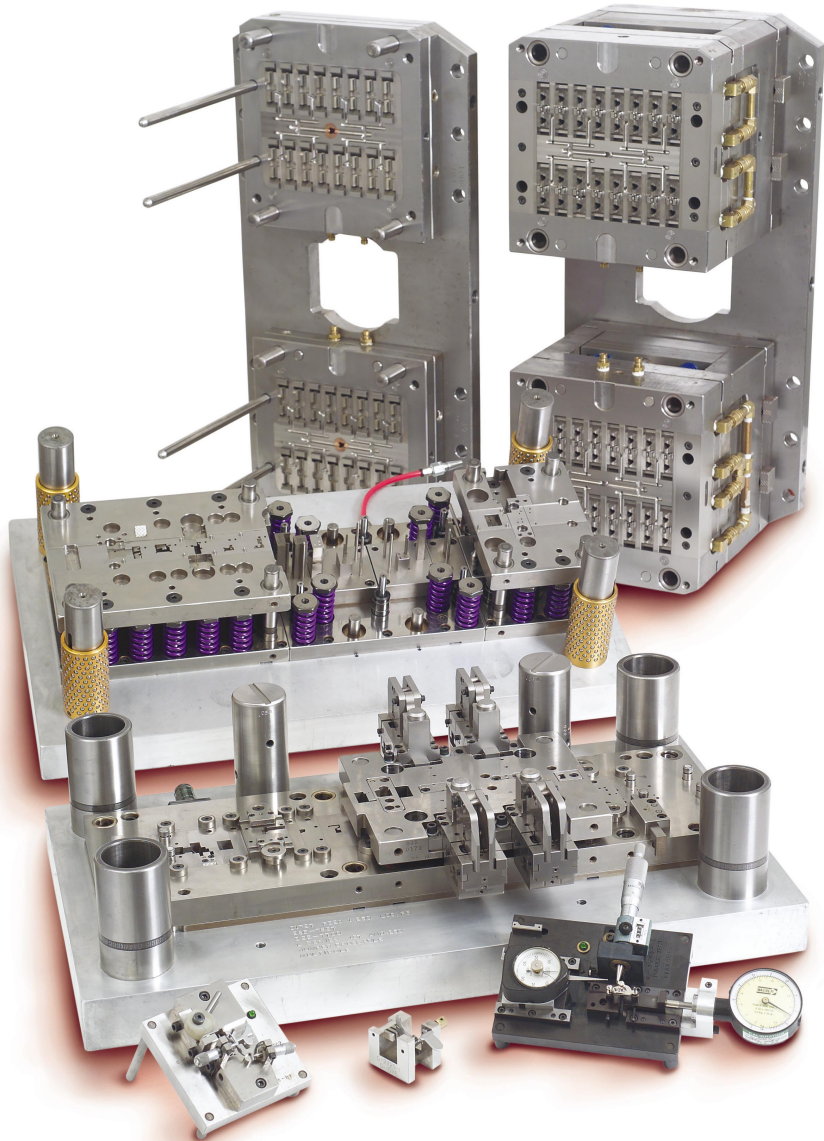
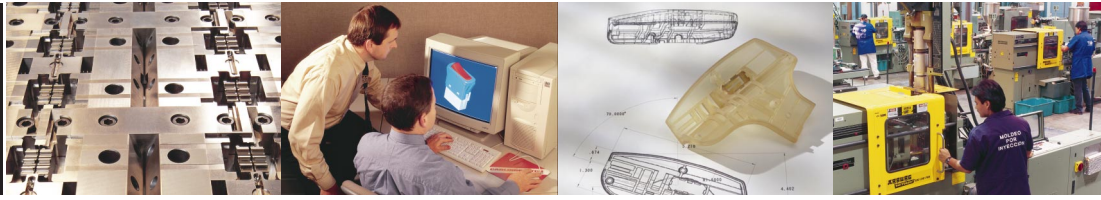


Carling Tool & Die

Design &
Manufacture of
Dies, Molds,
Fixtures & Gages
since 1920



Carling Tool & Die™
a division of Carling Technologies®

Transforming Customer Needs into Customized Powerful Solutions

At Carling, we do much more than design and build precision tools, dies, fixtures, and gages. We transform your needs into powerful solutions.

We're a "full service" company offering a customer-focused team of highly skilled tool and die specialists.

We listen attentively to your needs and specifications to provide you with the tool and die designs and products that will meet your needs. Our mission is to build long term business relationships with customers who want to outsource their tool design, tool making, prototype and production parts manufacturing operations. With over 80 years experience in manufacturing, we're equipped to provide you with the highest quality parts when you need them, at globally competitive prices.

Our services range from new product tool design to prototype or manufacturing production

runs in both metal and plastic components. We also offer secondary manufacturing designs and solutions, assembly cell line design, and component assembly. In addition, our engineering staff is equipped with the latest "state-of-the-art" 3D modeling software and can provide stereolithography samples, prior to designing "hard tooling".

With five ISO certified locations and over 400 employees in tool design, molding and metal fabrication in manufacturing sites across the globe, we provide solutions to OEMs in a variety of industries.

We're small enough to take care of you and your bottom line...and large enough to propel your products into the global marketplace far ahead of your competition! Add up all the advantages that Carling offers — and you'll see that we truly put the power you need in your control!



Carling Technologies, Inc. World Headquarters, Plainville, CT, USA

Design & Tooling Capabilities

Our tooling expertise ranges from designing and building short run prototype tooling to making tooling to produce millions of parts. Our tool designers can work with your product designers to build your dies, molds, fixtures and gages, and cut your time to market by half.

Unlike “typical tooling operations”, we have the knowledge, equipment and expertise to produce parts that are superior in the industry. Whether your tooling requirement is for a progressive die or a large multi-cavity mold, we will design and build your tooling to make the parts complete without costly secondary operations or modifications.

We provide accurate design information based on your requirements and concurrently pass that

information to our CNC specialists, thereby reducing design cycle time. To achieve this, we have a team of expert designers, toolmakers and machinists, combined with a heavy equipment investment in the latest tool making equipment and technology.

We can work with your drawings via prints or as IGES, STEP, DWG, or DXF type files, which we load directly into our CAM systems, and then download directly to the required machines, resulting in the production of quality dies, molds, fixtures and gages in record time!

Using industry-leading Pro-E design software, Carling engineers can evaluate multiple design alternatives to develop dies, molds, fixtures, gages and prototype parts on-time, and within budget, while simultaneously working with special and related manufacturing processes.

The result? Functionally superior and aesthetic parts — produced faster and more economically — thanks in large measure to our diverse range of tool and die services. Just one more reason you’ll think of Carling as much more than an approved supplier, but rather as a proven partner.





OKUMA
MX-45VAE

BOSTOMATIC

A workstation area featuring a wooden desk with a computer monitor displaying a blue logo, a keyboard, and various office supplies. A worker in a blue shirt is seated at the desk, and another worker in a white apron is standing nearby. A third worker in a green shirt is holding a clipboard and talking to the worker in the apron.

A mobile workstation or tool cart with a wooden top and metal frame, containing various tools and equipment.

A wooden desk or counter with various tools, including a metal cone-shaped object and other mechanical parts.

Molds & Plastic Components

At Carling, we're capable of running conventional injection molds to produce thermoplastic or thermoset components. We have over 80 plastic injection molding machines ranging from 10 to 309 tons that are the cutting edge in the industry. In addition, we're the leaders in our industry for **two shot** injection molding.

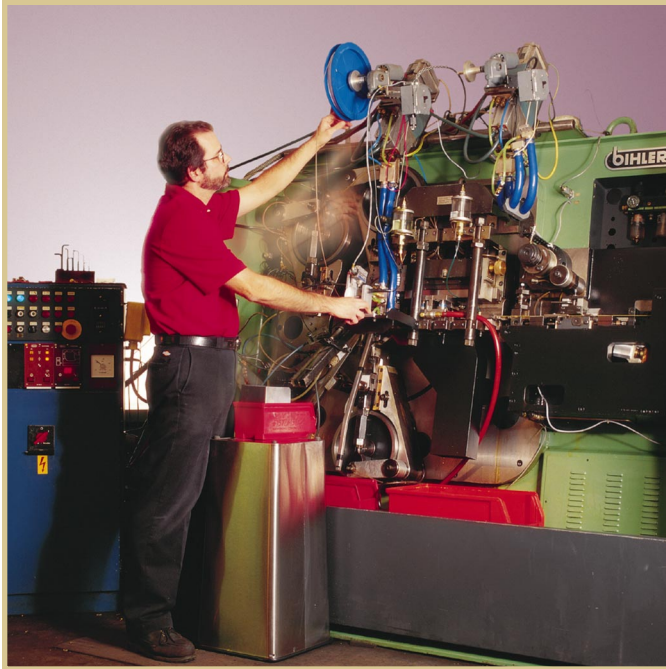
We're the first to design and manufacture small complicated molded components with two different types of plastics, and we're one of the first to build hot runner molds that produce parts without costly runners, thereby minimizing scrap and lowering part costs.

Having molding operations in two locations (USA and Mexico) gives us the capabilities to supply parts with cost savings to our customers throughout the world.



Dies & Metal Components

We're experts in die design and new die construction, tool alterations, improvements, repairs and maintenance. With our vast experience, we design and build many types and sizes of dies

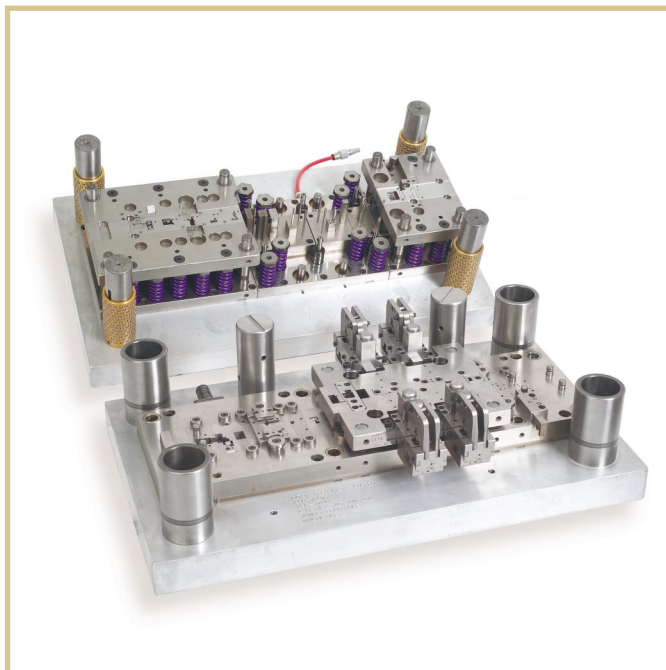


including simple prototypes, complex progressive, blanking, compound, and form dies with material thicknesses ranging from .009" to .250".

In-line tapping for threaded holes, in-line feeding to assemble contacts, and difficult sub-assemblies with in-line welded attachments are a few of the tasks we are capable of completing. At Carling, we stamp precision high tolerance, quality critical components from:

- Cold Rolled Steel
- Stainless Steel
- Beryllium Copper
- Customer supplied materials
- Copper
- Brass
- Phos Bronze

Our expertise allows us to produce high quality parts quickly, without the need for costly secondary operations.



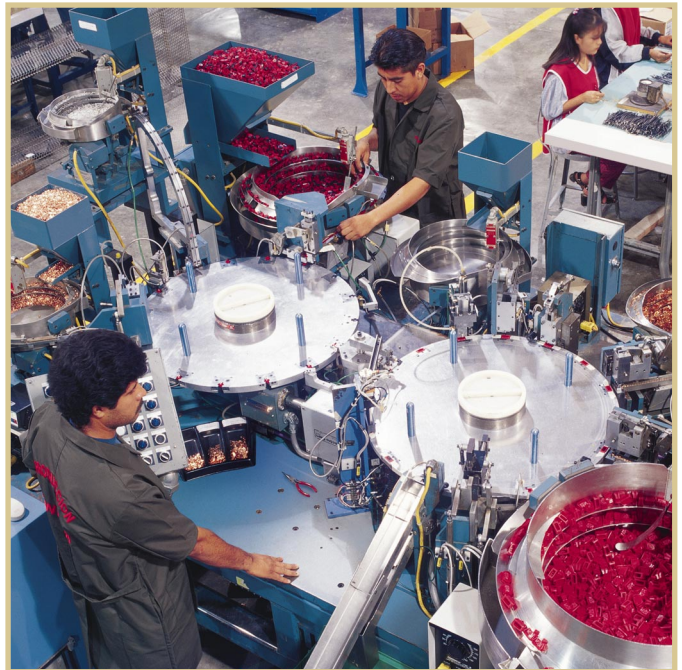
Assembly Tools

Over the last 80 years, we've become the industry experts in many assembly tools including:

- assembly fixtures
- inspection gages
- electrical test fixtures
- riveting

In addition to making thousands of various types of fixtures and gages, we also design and build cell lines and semi-automated tooling, and assemble finished product in our five manufacturing plants worldwide.

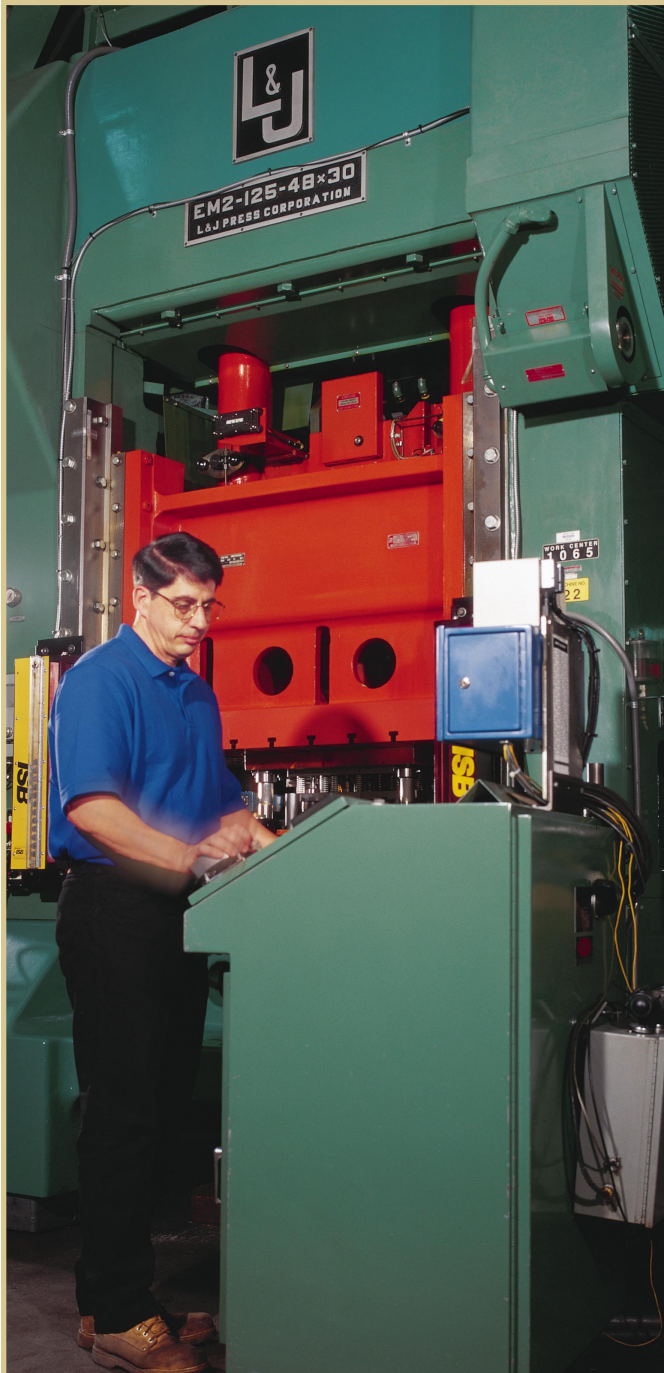
If your requirement is to develop or improve your assembly operation, you can count on Carling to meet and exceed your needs.



In-House Test Facility

After die or mold fabrication is complete, sample parts are run and submitted to our tool inspection department. With our Optical Measuring System, areas of each part are measured at magnifi-

cation ranging from 50:1 to 324:1, with accuracy as close as $\pm .0001$. These close measurements allow us to ensure dimensions meet the customer's specifications. We fully test all tooling, and invite you to inspect your die or mold running fully automatic, prior to shipment. Our goal, as your partner, is to deliver dies and molds on time, within budget, and in specification to any designated international location. We guarantee your complete satisfaction!



Global Support & Manufacturing

Not only have Carling products earned world-wide approvals, our staff provides global technical sales and service support. Whether you're in the U.S., Europe, or Asia, you'll find knowledgeable Carling Tool & Die technical sales and support teams close at hand. Plus, our international organization of sales representatives is backed by an experienced applications staff and corporate tool and die experts.

At Carling, we have the worldwide service and capacity to meet your delivery requirements. And the highly trained staff to assure you of quality designs, dies, molds & fixtures.

Our extensive manufacturing capabilities — ranging from plastic injection molding through automated assembly — all utilize state-of-the-art

CAM equipment, ensuring optimum performance. Because we are committed to maximizing yield and minimizing costs, we continually invest in the latest technology in order to produce the most cost-effective parts.

Our plants and staff are equipped and ready to handle orders in quantities from several hundred to several thousand precision parts with the speed and accuracy to meet your requirements. Our continued investment in equipment upgrades such as in-house wire EDM, plate grinding, CNC milling and CNC jig grinding provide customers with quick “turn-around” solutions.

Our global operations allow us to supply products, with cost savings, to customers in any part of the world.



Equipment List

Vertical Machining Centers

- Willis Microcut 1050 Milling Machines
- Enshu UMC 610 Vertical Machines
- Fryer Model MB-11 Milling Machines with Anilam Series W 100 CNC Controllers
- Bostomatic CNC Machining Centers with Automatic Tool Changers & High Speed Heads
- Okuma MX-45 Vertical CNC Machining Centers
- Bridgeport Manual Milling Machines

Die Sinker & Wire EDM Machines

- Charmilles Roboform 5 CNC 4-Axis Die Sinker EDM with Erowa
- Mitsubishi FX 10K CNC 4-Axis EDM Machines
- Mitsubishi M35K C4 4-Axis EDM Machines
- Mitsubishi 90H CNC EDM Machines
- Fanuc Wire EDM Machines

Engineering & Programming Software

- Pro-E
- Mastercam Solids
- Espirit Programming Software

Inspection Equipment

- RAM Optical Video Probe
- Gage Block Sets, Metric
- Granite Surface Plates, 12" x 18" to 48" x 96"

Surface, Jig & Cylindrical Grinding Machines

- Moore Model G18 High Precision Jig Grinder with Hi-Cut Cooling Systems
- Okamoto Precision Automatic Surface Grinders 8" x 20", 12" x 24", 16" x 32"
- 1632 Okomato Surface Grinder

82 Injection Molding Machines

- Arburg - 40 to 110 tons
- New Britain - 100 tons
- Nissei - 11 to 254 tons

28 Press Machines

- L8J - 27 to 125 tons
- Minster - 32 to 100 tons
- Niagara - 35 to 45 tons
- Federal - 20 to 50 tons

5 Bihler Machines

- Mach-05 - Automatic High-Speed Punching & Forming Machine

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