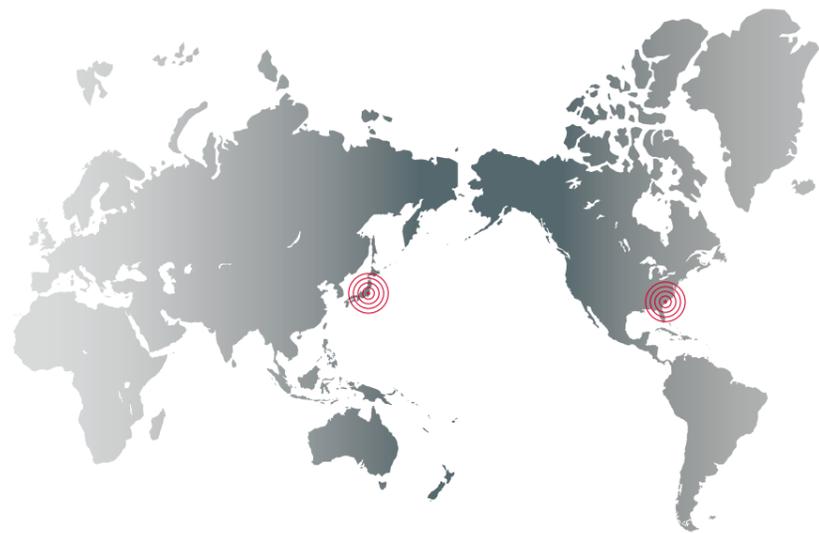


Precision Mold Making

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Working in harmony with the world's industry through ultra-precise molds

Canon's dedication to mold making technology is at the heart of our business. For more than four decades, Canon has been driven to attain the ideal in metal-mold design and production. Starting from our technical tradition of manufacturing excellence, we have reworked our design and production processes and actively invested in the latest equipment to address the varied demands of our customers.

Whether our customers' business is in the medical, automotive, industrial, consumer, or any other industry, Canon aims to be a corporation that further refines, and continually improves, its metal-mold production technology to meet and exceed our customers' expectations.

Canon's corporate philosophy is based on the concept of kyosei - "living and working together for the common good". In keeping with this corporate stewardship, Canon intends to contribute to the world's manufacturing by fully applying our store of technologies and expertise to the world's mold production industry.

Canon Mold Making

Achieving our ambitions of superior precision, durability, and productivity with high-precision core technologies

Metal molds are dubbed by the manufacturing industry as “mother tools” since these molds enable the mass production of literally thousands of products and parts we encounter every day. Canon’s mold making facilities are specialized manufacturers of metal molds. Our molds are used in the making of an enormous range of products, including automobiles, electronic products, cameras, office equipment, food containers, medical devices, recreational equipment, industrial, and lawn and garden supplies. We produce outstanding molds known for their superior precision, durability, and productivity. Canon’s mold making facilities are steadfast in Canon’s concept of “Manufacturing in the Market” and continue to make products in the market where they are sold (For the United States, molds are manufactured at our Virginia site in Newport News, VA. For Japan, molds are manufactured at our Ami and Tomobe sites).

Aiming to create molds that earn the trust and confidence of our customers is the ultimate reflection of the Canon Mold Making Spirit. We are single-minded in our pursuit of perfection in metal mold manufacturing. We harness new and original technologies to spearhead advances in mold making and adhere to the creativity and tradition of skilled artisans. By carefully fusing the old and the new, Canon’s mold making facilities contribute to our world with peerless molds used in premier manufacturing sites around the globe. In keeping with this, Canon’s mold making philosophy is dependent on three resolute concepts: putting the customer first, respecting all, and undertaking difficult challenges.

The Canon Mold Making Spirit

Customer is No. 1 Always work with the customer in mind
Always bring our “A” game

Respect is essential Ideas are Valued
Pull together as an integral whole

Embrace Difficult Challenges Be different from other companies
Always strive for the top



Making quality our top priority upholds our customers' trust and confidence



From left: laser modeling system, roundness measuring instrument, gear measuring instrument, 3D measuring instrument

One constant in the manufacturing industry, the scene of tremendous technical innovation, is the demand for high precision and highly durable metal molds. This demand results from the productivity gains that top-quality molds (which deliver micron-level precision) can give to our customers. Canon endeavors to incorporate exceptional precision and quality throughout our company, from design to production, and to assure quality and accuracy standards are met to fulfill the exacting needs of our customers. We constantly strive for better quality to meet and exceed our customers' expectations. A few current initiatives include the continual monitoring and controlling of the heat treatment process which helps control the quality of the material; Canon's proprietary design technology which helps provide higher production efficiencies and Canon's cutting edge measurement technology to ensure precision.

Our people make the difference

In the production of precision molds, blocks of metal must be fabricated in to complex shapes with accuracy on a micron or submicron scale. Our highly skilled craftsmen carefully hone each individual mold to ensure its precision. Because even with the ever-improving performance of industrial machine tools, all manufacturing processes require the highly proficient skills and meticulous finishing that only our skilled craftsmen can provide.

Along with a quality mold, Canon provides dedicated customer service through a cross-functional team comprised of engineering, manufacturing, materials and program management. A Customer Account Manager leads this team and serves as the single point of contact. By having this system in place for every job—regardless of size—Canon can meet and exceed all of our customers' expectations at every stage of mold production.



Injection molding equipment for trial runs: Our customers' precision specifications cover not only the dimensional accuracy of the mold components but also the dimensional accuracy of the molded parts. Having the ability to test these data sets against each other makes it possible to quickly determine any compensation or correction values that may be required. Canon manages a system designed to address our customers' rigorous dimensional specifications.



Mold Shop: Our mold shop factory boasts a bright, spotless environment and features top-end fabrication equipment. Accurate, high-quality metal molds cannot be manufactured without constant temperature and humidity conditions. Maintaining these conditions is so imperative we cannot stop the factory's air-conditioning system even when the plant is closed for a holiday.

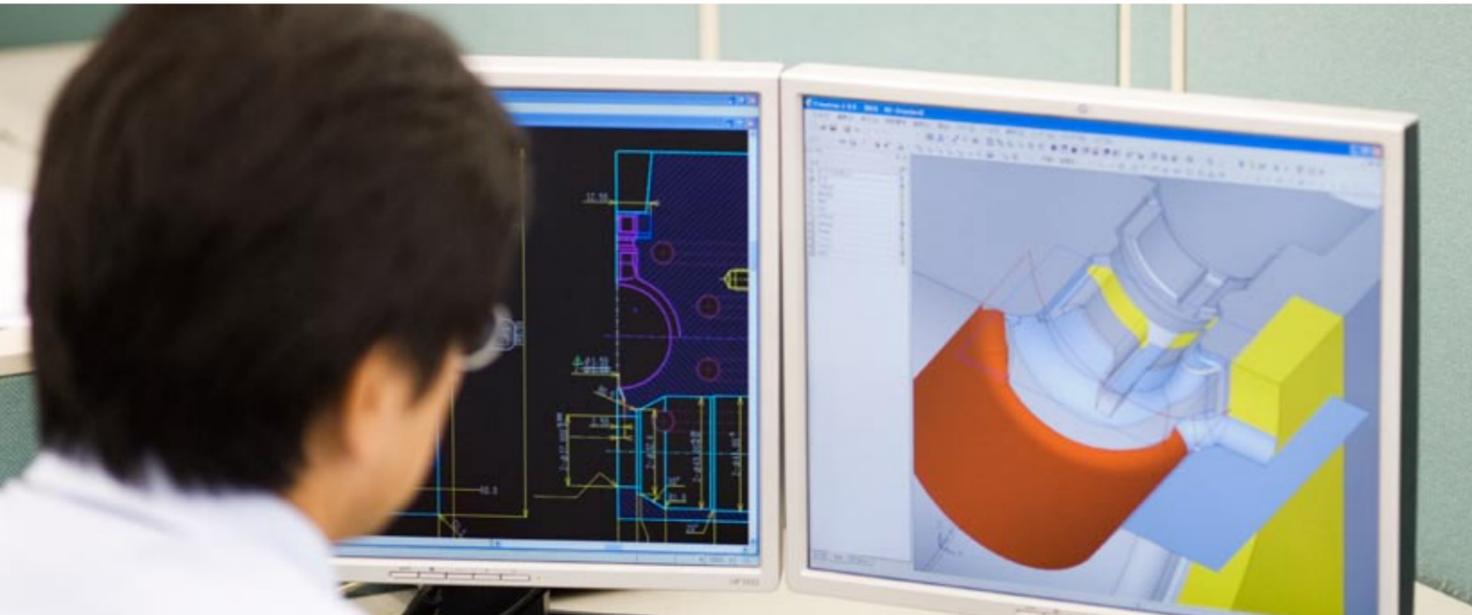


Vacuum thermal processing equipment: Critical to maximizing the metallic properties of our molds is maintaining vacuum quenching (quick cooling) conditions suitable for the raw materials used for a given mold component. To understand these conditions, we have established a vacuum quenching facility where we record data on quenching conditions for later use. With this system in place, we can apply our accumulated data and expertise to derive the best metallic properties for our molds.



Our people make the difference: Our highly skilled craftsmen carefully hone each individual mold to ensure its precision.

State-of-the-art technologies plus in-house technologies keep us ahead of the curve

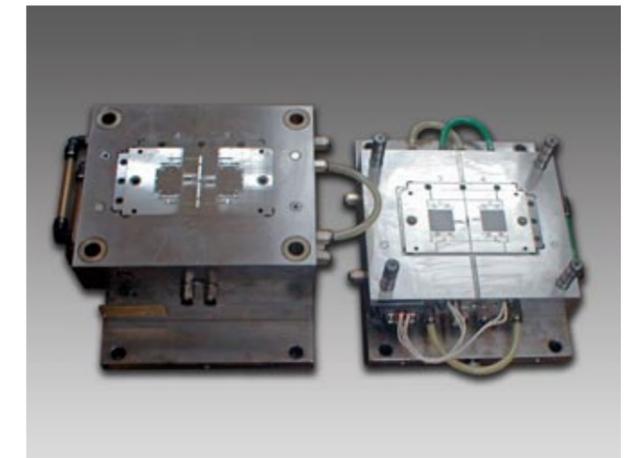


We have been reviewing our libraries of data and technical experience with mold design and production from a fresh starting point and incorporating our hard-won knowledge into our cutting-edge CAD and CAM systems.

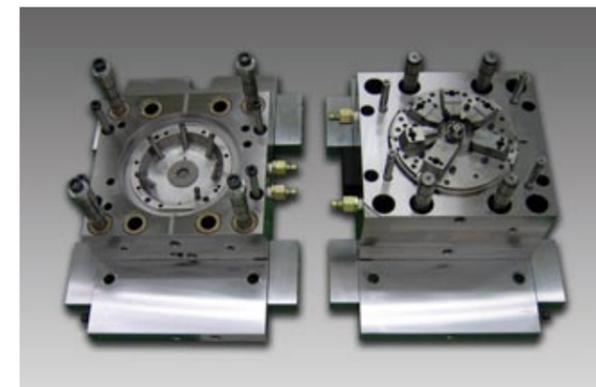
Production of ultra-precise metal molds requires sophisticated technical innovation that keeps in step with the ever-changing demands of the times. Consequently, a major theme for us is applying the latest technologies to the design and production of precision molds. We continually develop our own proprietary technologies and make effective utilization of experienced-backed technical information. Canon, in partnership with our customers, uses concurrent design (design for manufacturing), which closely coordinates product design and mold design. We use various analytic software packages to view designs from a multitude of perspectives including gate settings, heat accumulation, deformation, and strength so we can meet and surpass the high standards our customers expect from our molds and the parts they produce.



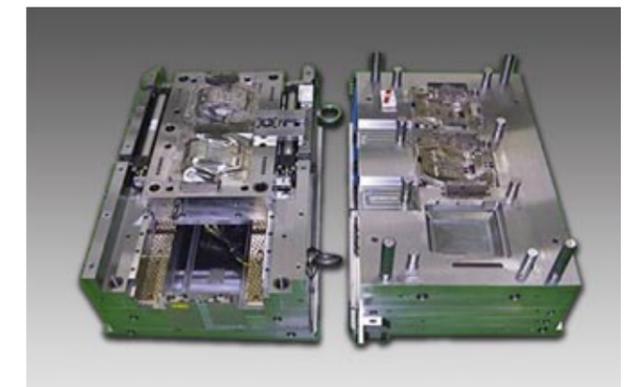
2+2 Stack Mold: Design technology; highly accurate fabrication technology, craftsman-grade finishing; molding technology (Industrial Industry)



Diffusion Technology Mold: Thin wall technology (exceeds the limit of resin flow), high speed injection capacity; high speed pressure injection capacity (Packaging Industry)



Complex Mechanism Mold: Collapsible core (allows for injection molding of parts with severe undercuts), cutting (Consumer Electronics Industry)



In-Mold Assembly: Die slide injection mold, machining tolerances, hot runner technology; molding technology. (Automotive Industry)

Canon constantly thrives on building challenging molds.

Canon specializes in difficult molds:

- Complex Mechanisms
- In-Mold Assembly
- Stack
- Long Life
- Class 101+
- Diffusion Welding
- Two-Shot
- High Cycle
- High Cavitation
- Ultra-Precise (achieving machining tolerances with molding)

Talk to us about your next-to-impossible mold project.

Up-to-date facilities and optimal production environment to unfailingly meet performance requirements



Dedicated die-set factory: Mold bases are the most important components of precision metal molds. Canon die sets are produced in house to live up to the trust of our customers.

A mold maker must possess a formidable level of production competence to measure up to the precision and quality demands of its customers. To this end, Canon continually works to further optimize our production environment. For example, we run extensive air-conditioning systems and use other factory infrastructure enhancements to ensure parallel accuracy during processing and to avoid temperature variations in the metallic components that serve as raw materials for molds. We also use leading-edge machining tools that deliver exceptionally precise and efficient fabrications in order to incorporate into each of our molds our advanced designs and fine artisan skill. Equipping ourselves with the latest fabrication technology, which can form any shape at any accuracy, is symbolic of the specialized mold manufacturer we aim to be. Never ones to rest on our laurels, we will work to further upgrade our cutting-edge equipment and production environments so our customers will continue to give us their trust with confidence.



electrical discharge machine (left), NC gear grinding machine (right)

Top: high-speed five-axis machining center (left), compound process lathe (right)
Middle: horizontal wirecut machine (left), parallel grinding machine (right)

Canon Mold Making Equipment

Canon maintains a vast inventory of state-of-the-art machining equipment, including over 100 machining centers and 70 EDMs in facilities throughout Japan and the U.S.A.



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