

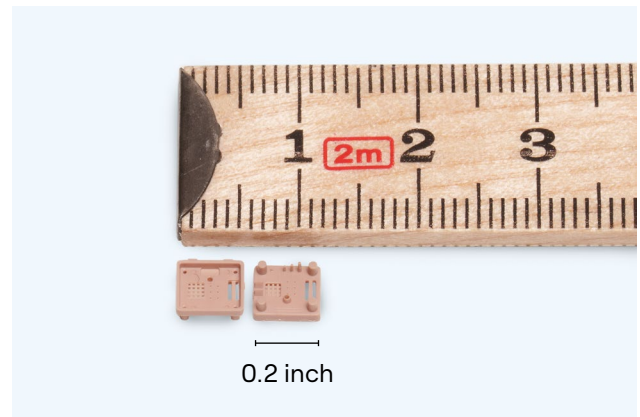
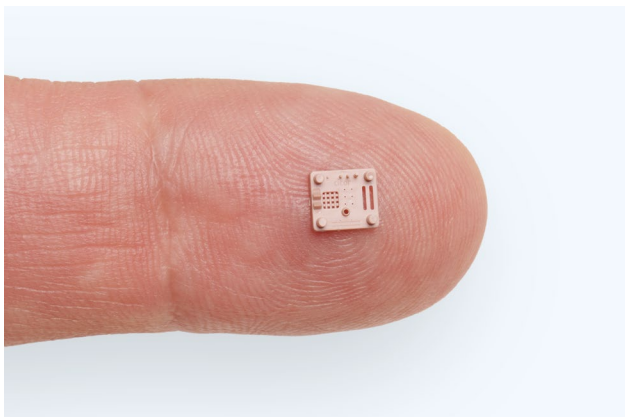


Precision plastics

Tool design and fabrication, micro molding

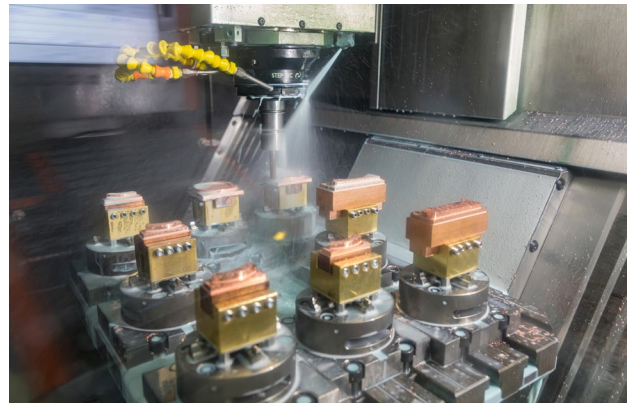
Cicor Group designs and manufactures high-quality precision plastic injection tools & molded parts. We specialize in miniature part sizes with complex part geometries, with the goal to achieve absolute repeatability with uncompromised tolerances in production. Time and precision are our core guiding values. We support our customers with fast development cycles using proven validation methodology.

We implement design for excellence (DfX) from early development stage, to integrate the best-in-class manufacturing technologies and processes to deliver market-leading solutions for your precision needs.





Portfolio



Tool Precision

The tool is always the most important factor to achieve the manufacturing repeatability & scalability. Cicor invest only in the best-in-class equipment to achieve the following toolmaking accuracy.

- CNC Milling machine with accuracy down to 5 μm
- EDM machine to create dimensional accuracy as small as 3 μm
- Wirecut machine that achieve accuracy down to 2 μm

Part Accuracy

- Positional accuracy: 3 μm
- Mold core diameter: 50 μm
- Edges/corners: 20 μm
- Holes: $\varnothing 0.1\text{mm}$
- Wall thickness: 40 μm



General Capabilities

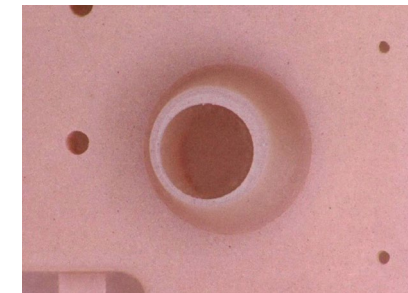
- More than 20 years experience in tool design for precision plastics solutions
- Expertise in microtools, 2 components and vertical insert molds
- Best-in-class EDM, CNC milling and wire-cut machines
- Hot runner systems with high 64 cavitations for precision micro parts
- Conformal inserts for complex cooling channels
- Innovative material know-how for durable and high-strength tooling solutions
- Advanced moldflow, CAD/CAM software
- Class 101 for high-volume production tool with tool life warranties up to 1,000,000 shot cycles
- Registered US FDA facility, adhering to FDA 21 CFR Part 820
- ISO 13485 certified and ISO 7 clean rooms

Micro Molding: Part Size and features

Micro parts typically fall within the size of 10 \times 10 mm. We have manufactured parts as small as 1 \times 1 mm. In the pursuit for miniaturization, the complexity & geometry of the part design will determine its manufacturability. There is a need to identify the most

critical application areas of your part design and make a realistic trade off for other non-critical features to allow repeatability in production.

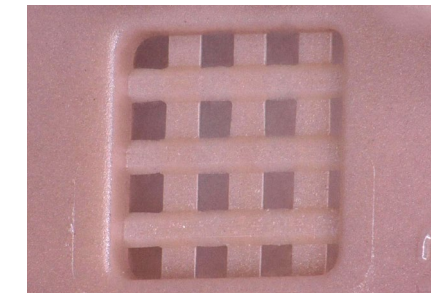
At Cicor, the following part features are achievable.



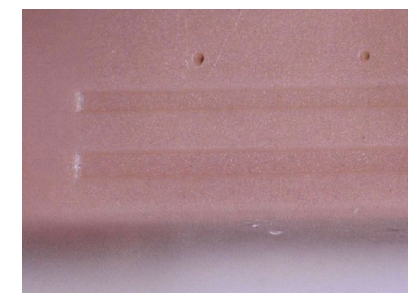
20 μm
Taper Sharp Walls



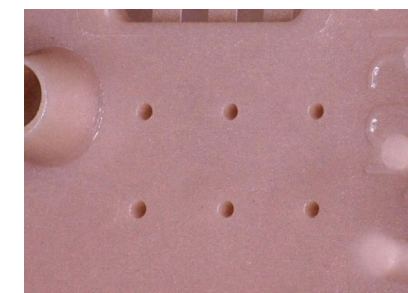
20 μm
Edges / Corners



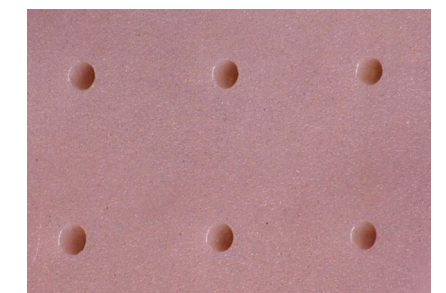
Within $\varnothing 2\text{mm}$
Microstructures



5 μm
Microfluidics



$\varnothing 0.1\text{mm}$
Holes



3 μm
Positional Accuracy

Other features and tolerances

- 100:1 aspect ratios
- Zero draft
- 5 μm parting line mismatch
- 10 μm flash control

Markets



Medical Technology



Industrial



Wearables



Building Technologies

Contact



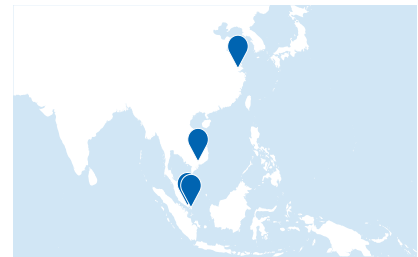
info-ems@cicor.com



[cicor.com/
precision-plastics](https://cicor.com/precision-plastics)

Production Sites

Precision Plastics



- Batam, Indonesia
- Singapore
- Suzhou, China
- Thuan An City, Vietnam

The Cicor Group is a globally active provider of full-cycle electronic solutions from research and development to manufacturing and supply chain management. Cicor's approximately 2,650 employees at 16 locations worldwide are serving leaders from the medical, industrial and aerospace & defence industries. Cicor creates value to its customers through the combination of customer-specific development solutions, high-tech components, as well as electronic device manufacturing.

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