

MOLDMAKING

The Natech Engineers take a systems approach to moldmaking for reduced risks, improved quality, and higher speed.

◀ MOLD DESIGN

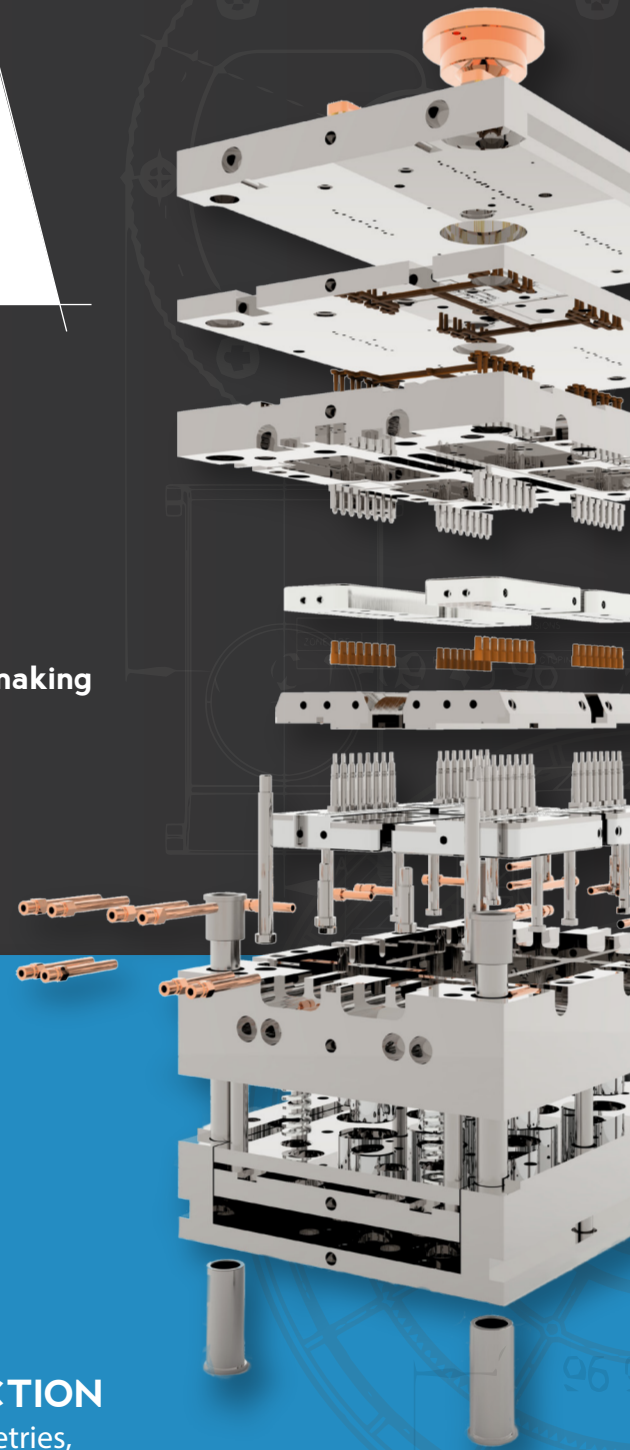
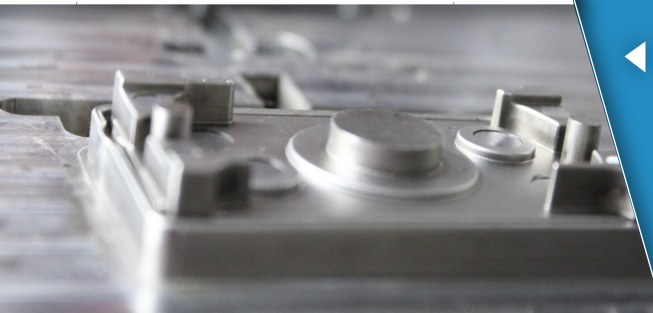
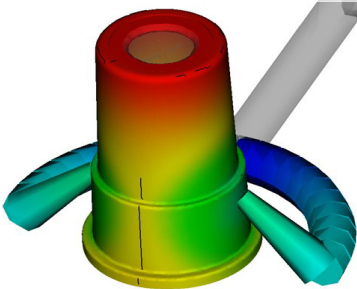
Modeling the parting line, gate geometry, ejection, cooling, runner system, and fill and flow progression reduces manufacturing risks.

◀ MOLD CONSTRUCTION

Optimized runner geometries, balanced fill progression profiles, and uniform cross-sectional melt temperature profiles widen the processing windows for improved part quality.

◀ SCIENTIFIC QUALIFICATION

Process Engineers use sophisticated sensors and software to monitor and adjust the fill/flow rate, temperature, and injection pressure to establish a stable, controlled process.





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SINGLE-CAVITY MOLD DEVELOPMENT GUIDE

"I still have some things to prove out, and my geometry is not too demanding."

"I am ready to make small production lots, and my geometry is not too demanding."

"I still have some things to prove out. My geometry is demanding."

"I have a mature design and defined market. I believe in lowest cost of mold ownership."

PROJECT STAGE	R&D	R&D to Clinical Trials	R&D to High Production	High Production
GEOMETRIC COMPLEXITY	Low to Medium	Low to Medium	Low to High	Low to High
QUANTITY NEEDS	100's to 1,000's	1,000's to 10,000's	10,000's to 100,000's	100,000's to 1,000,000's
RAW MATERIAL	Standard	Standard to Engineering	Standard to High Performance	Standard to High Performance
SPI MOLD CLASS	104	103	102	101
MOLD MATERIAL	Aluminum	P20	Hardened Tool Steel	Hardened Tool Steel+
BUDGETARY ESTIMATE, \$	\$5,000 to \$15,000	\$15,000 to \$40,000	\$25,000 to \$100,000	Highest
PART COST, \$	\$1.00's to \$10.00's	Cents to \$1.00's	Cents to \$1.00's	Lowest
BUDGETARY LEAD TIME (WEEKS)	2 to 5	5 to 8	8 to 10	NA
WARRANTY, MOLD CYCLES	10,000	100,000	500,000	1,000,000