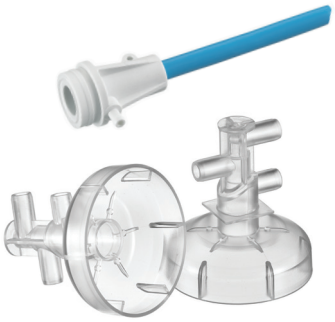
Accelerating New Product Introductions While Redefining the Supply Chain



Quick-Turn Manufacturing (QTM) refers to our process for rapidly turning your CAD files into high quality molded parts, based on your specific project requirements. Through our option-based prototyping system, NPI/Medical offers four DynaClass® tooling choices. ***It all starts with a firm understanding of your needs and letting us work with you to find the best solution for your project.***

Selecting the right tooling and molding option is critical to your New Product Introduction. ***At NPI/Medical, our engineering team leverages our unique DynaClass® Tooling and Molding System*** to help you select the appropriate prototype tooling level for your project. When you choose to partner with NPI/Medical one project manager will guide you from initial concept to launch. A single point-of-contact ensures transparency and eliminates multiple channels of communication to maximize efficiency and save time during the product development prototyping phase. Additionally, our seasoned project managers understand both speed-to-market and precision are crucial to the successful execution of your program. Thus, timelines and on-time delivery remain a priority throughout the prototyping lifecycle and beyond. Your result - seamless communication, OTD and the advantage of working directly with your project manager.

Our customers' generally come to us with design expectations that can't be met with a standardized "black box" tooling approach. DynaClass® fills this void by understanding the importance of iterative design for effective prototyping. Part geometry is not compromised during the molding process, unlike other "rapid" molding processes where other draft or radii may be required. We have CAD engineers design all of our mold halves, and use CNC machined EDM to burn or wire all critical mold geometry that cannot be milled.

DynaClass® parts come standard with 3 to 6 critical-to-function (CTF) inspection requirements to assure accuracy and part function. Process validation services are offered as required by our customers on DynaClass 2 and DynaClass 3 prototype tooling offerings. DynaClass 4 and DynaClass 5 offer custom quality plans in addition to process validations.

DynaClass® Tooling and Molding at NPI/Medical offers one of the most diverse tooling and molding options to service all of your prototyping needs.

NPI/MEDICAL

DynaClass® Tooling and Molding

NPI/Medical	DynaClass 5	DynaClass 4	DynaClass 3	DynaClass 2	SPI Class 101
Uses	Prototype	Tight Tolerance, Advanced Prototypes	Low Volume Molding	Bridge Tooling, Pre-Production	Tight Tolerance Production
Applications	Form, Fit, Function	Part Validation/ Design Verification	Production	High Volume, Pre-Production	Extremely High Production
Cost/Complexity	Low	Low to Moderate	Moderate	Premium	Premium
Maximum Part Size	3"x 4"	6" x 8"	6" X 8"	8" X 8"	10 X 10
Lead Time	1-4 weeks	2-4 weeks	3-6 weeks	4-8 weeks	12-14 weeks
Mold Life	up to 5,000	up to 50,000	up to 100,000	up to 500,000	1,000,000 Plus
Mold Base	Aluminum/P-20 Steel	P-20 or #2 Steel	P-20 or #2 Steel	P-20, #2, #3, & # 7 Steel	#2, #3, #7
Mold Inserts	Limited/Hand Loads	Hand Load & Actions as Needed	Automated	Automated	Automated
Cavity Creation	Machined with Limited EDM	Machined with Some EDM	Machined & EDM	Machined & EDM	Machined & EDM
Inserts	Hardened Steel Cores, Cavities & Inserts as Needed	Hardened Steel Cores, Cavities & Inserts as Needed	Hardened Steel Cores, Cavities & Inserts	Hardened Steel Cores, Cavities & Inserts	Hardened Steel Cores, Cavities, and Inserts
Action	Limited/Hand Loads	Hand Load & Actions as Needed	Automated	Automated	Automated
Standard Tolerances	+/-.005" unless otherwise predetermined	+/-.005" unless otherwise predetermined	+/-.005" unless otherwise predetermined	+/-.005" unless otherwise predetermined	Standard Production molding tolerances
Controlled Environments	Clean Room Molding Options	Clean Room Molding Options	Clean Room Molding Options	Clean Room Molding Options	Clean Room Molding Options
Quality Systems	Custom Quality Plans/ Process Validation	Custom Quality Plans/ Process Validation	Full Process Validation	Full Process Validation	Full Process Validation
Class Equivalent	Class 105	Class 104	Class 103	Class 102	Class 101

DynaClass 5	
Uses	Prototype
Applications	Form, Fit, Function
Maximum Part Size	3"x 4"
Lead Time	1-4 weeks
Mold Life	up to 5,000
Mold Base	Aluminum/P-20 Steel

Your Key Advantage - work with 1 project manager throughout the entire project lifecycle.

Prototype Tool Option	proto labs®	SEAWAY PLASTICS ENGINEERING LLC	NPI/MEDICAL
Material	Aluminum	Aluminum	Steel
Cost/Complexity	Low-Moderate	Moderate-Premium	Premium
Lead Time	1-2 weeks	3-4 weeks	3-4 weeks