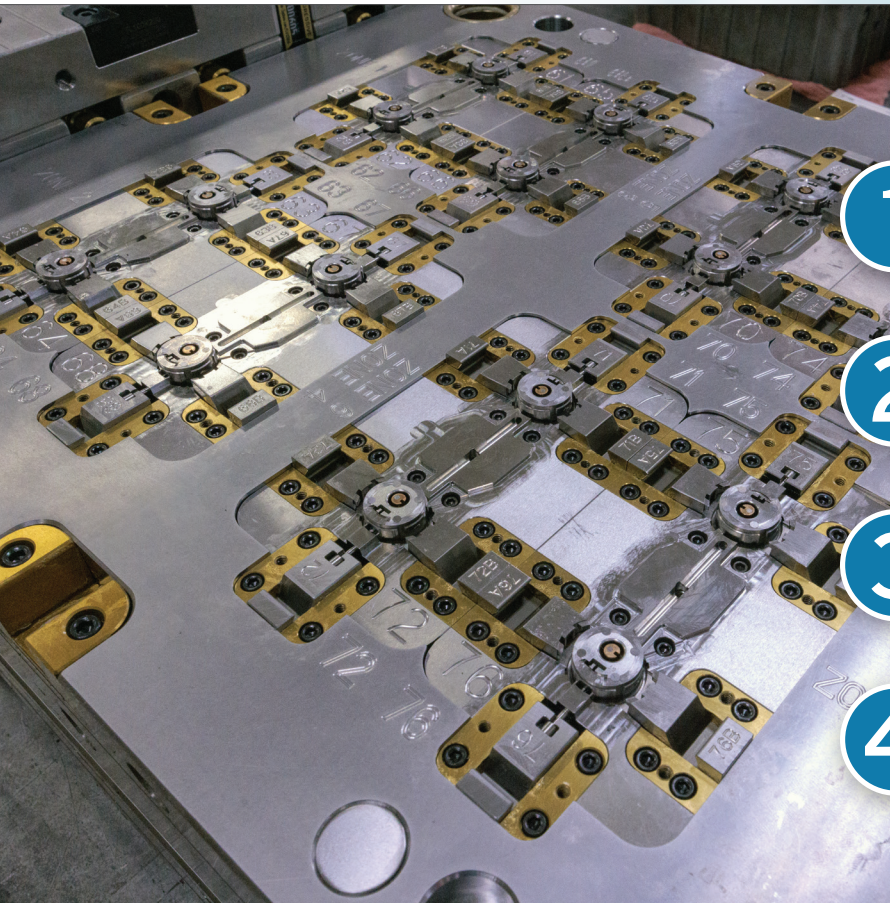


TOOLING SOLUTIONS

IN-HOUSE CONTROL
AT EVERY STEP

THE SMART CHOICE

Our dedicated mold manufacturing facility provides in-house control at every step, ensuring optimal performance and longevity—whether you need rapid prototypes, support through validation and commercialization support, or full-scale production.



4-STEP BUILDING PROCESS

1

Roughing

We utilize high-speed CNC machining for turning, milling and drilling. This is typically followed by heat treating, when appropriate.

2

Precision Finishing

Utilizing grinding, high-speed CNC machining, wire EDM and sinker EDM. We cut all our own EDM electrodes in-house. This enhances our ability to create highly complex geometries with high precision and tight tolerances.

3

Inspection

Each part of the tool is thoroughly inspected and measured to ensure quality and accuracy. These tools measure to accuracies as fine as 5 microns.

4

Fitting/Assembly

Includes test runs of the tool to ensure it produces parts that meet exact specifications before going into full production.

*“We **design, build and maintain** the tooling for the most optimal performance.”*



Shorter
Lead Times



Easier
Optimization



Cost
Control

THE RIGHT TOOLS

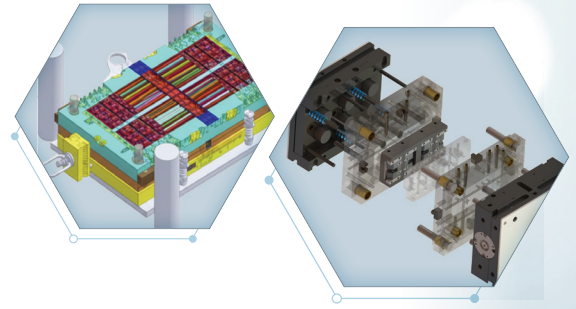
We provide tooling for every stage: from prototype molds for quick turns, low- to high-volume production, covering all SPI classes from 101 to 105. Having the latest equipment allows us to control the process in-house.

MEDBIO[®]

www.medbiollc.com | 616.245.0214 | info@medbiollc.com

Medbio's team of **in-house engineers**

We work closely with you to optimize the part design, applying key **Design for Manufacturability** principles to reduce costs and maximize tool integrity.



With **multiple state-of-the-art tool rooms** and expert mold designers at our four primary domestic facilities, Medbio produces everything from quick-turn bridge molds to complex, high-cavitation SPI 101 class production molds.

We also maintain relationships with other key domestic and offshore tooling partners for any special needs that may arise.



PROTOTYPE **Plus**™

	PRODUCTION TOOLING			PROTOTYPE-PLUS™ BRIDGE TOOLING			PROTOTYPE
	Free-standing production tooling allows the most part complexity and side actions—up to 128 cavitations for high-volume production.			Our Prototype-Plus™ process offers distinct advantages over traditional prototyping—supporting short-run or low-volume production for the entire product lifecycle.			
	High Volume	Low- to Mid-Volume	MUD (Master Unit Die)	Free Standing	Speedbase	MUD (Master Unit Die)	Traditional Prototype
SPI Class	(SPI 101-102)	(SPI 103)	(SPI 101-102)	(SPI 101-104)	(SPI 103-104)	(SPI 103-104)	(SPI 105)
Material	420SS, H13, S7, Caldie, hardened tool steel	P-20, H13, S7, pre-hard or hardened tool steel	Hardened tool steel	P-20, H13, S7, pre-hard or hardened tool steel	P-20, H13, S7, pre-hard or hardened tool steel	P20 steel	Aluminum, P-20
Typical volume capability	1m+	Up to 500k	Up to 500k	Up to 100k	Up to 100k	Up to 100k	Up to 5k
Part complexity	●	●	◐	◐	◐	◐	◐
# Years (warranty)	5 years in production	3 years in production	3 years in production	2 years in production	2 years in production	2 years in production	1 year
# of Cavities	1 - 128	1 - 128	1-4	1-4	1-4	1-4	1-2
Max length (die)	No Limit	No Limit	12"	No Limit	12"	12"	No Limit
Max width (die)	No Limit	No Limit	10"	No Limit	4"	10"	No Limit
Turnaround time	◐	◐	◐	◐	◐	●	●
Typical cost of tool	◐	◐	◐	◐	◐	●	●

● = Highest Rating ◐ = Moderate Rating ○ = Lowest Rating

