

Prototype Injection Molding

A Cost-Effective Alternative to Traditional Injection Molding for very Low Volumes and Prototyping

Below is case study to illustrate the benefits of a 3D printed mold vs a traditional steel mold when injection molding. We do not believe that 3D printed molds can replace traditional steel tooling. However, it does simplify design changes; making it the ideal solution when prototyping.

The advantages of using 3D printed molds designed and manufactured at Eck Plastic Arts:

- ✓ Parts in 1-2 weeks
- ✓ Prototypes are fully functional
- ✓ Low cost part modifications
- ✓ Manufactured in the same material as production parts
- ✓ Minimal mold cost
- ✓ Same manufacturing process as production parts



	Prototype Injection Molding In a 3D Printed Mold	Production Injection Molding In a Steel Mold
Tooling Cost (a)	\$1,875.00	\$8,250.00
Cost of New Cavity Inserts to Facilitate Design Changes (b)	\$ 325.00	\$2,250.00
Total Tooling Costs	\$2,200.00	\$10,500.00
Mold Build Time	1 - 2 Weeks	8 - 12 Weeks
Tooling Surface Finish	Matte	All finishes available
Price Per Part	1.63	0.63
Total Cost for Mold and 500 Parts	\$3,015.00	\$10,815.00
Tooling Life Expectancy (c)	Typically 350 to 750 Parts Before New Inserts Have To Be Printed	Guaranteed For the Life of Your Product
Part Intellectual Property Ownership (d)	Customer	Customer
Physical Mold Ownership (d)	Eck Plastic's	Customer

- a) Tooling cost includes a custom mold base that only has to be purchased once, and 3D printed plastic mold inserts which may have to be repurchased for higher volumes.
- b) Second set of mold inserts to facilitate part design changes can easily be printed at a minimal cost.
- c) Our 3D printed molds can produce just about anything a steel mold can, but longevity of the plastic mold cavity is dependent on the polymer your part is made out of, and the design of your part.
- d) Because of the proprietary knowledge in our 3D printed molds, Eck Plastic Arts will retain the physical mold. Eck Plastic has no rights to share your design or sell your product. We are solely providing you with a custom manufacturing service.

We've proven a business can grow without losing that personal touch.

You can count on the Eck team to provide sound advice on the manufacturability of your design, and deliver high quality parts on time. Contact us today for more information.

87 Prospect Avenue, Binghamton, New York 13901
607-722-3227 • info@eckplastics.com

