



a CriticalPath Technologies company

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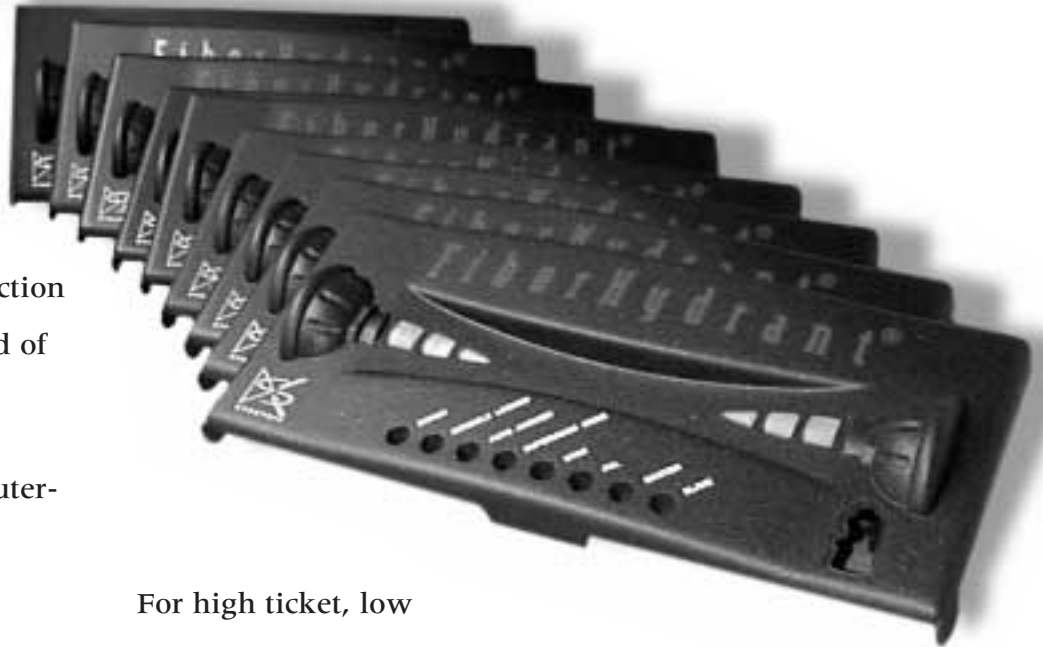
HIGH TECH PERFECTION FOR YOUR LIMITED PRODUCTION RUNS

In just a decade, the technology of rapid prototyping has evolved into a very economical high efficiency delivery system for limited production runs of virtually any kind of manufactured product.

Utilizing the latest computerized laser technology, 3D- CAM provides rapid tooling and accurate plastic duplications for a wide variety of industries and crafts.

As the name implies, rapid prototyping dramatically reduces turnaround time, and lets you ship completed units, assemblies or systems to your customers faster than ever before.

Painted and silk screened to your most exacting specifications, our rapid cast production parts are a cost effective alternative to injection molded or vacuum and pressure formed units.



For high ticket, low volume products, you can reach your target markets in weeks instead of months, with minimal tooling costs.

In our on-site shop, each 3D-CAM master is hand finished, benched, and then verified for dimensional accuracy and surface perfection.

Tools are made encased in a frame of wood or plastic for maximum dimensional stability. (When many duplicates are needed, epoxy tooling is made to prolong the tool's life.)

These tools are created from high grade RTV rubber, assuring the preservation of every minute detail, even in large quantity lots.

Using the most modern, high quality resin formulations, we cast plastic duplicates which combine light weight, maximum flexural strength, and extreme stability.

Finally, our low pressure injection system produces duplicates with higher temperature characteristics similar to ABS plastic.

RAPID PROTOTYPING & TOOLING • COMPLETE CAD/CAM SERVICES • LIMITED RUN PRODUCTION • 818.773.8777 • WWW.3D-CAM.COM

STEREOLITHOGRAPHY APPLICATIONS IN PLASTIC PROCESSING

PLASTIC INJECTION MOLDING

MODEL PARTS:

So you can verify every aspect of your design, 3D-CAM creates perfect parts directly from your CAD files.

PROTOTYPE PARTS:

3D-CAM uses master parts created by stereolithography or other rapid prototyping methods to make silicone rubber molds backed by wood or epoxy. The polyurethane or epoxy prototypes made from these molds are highly accurate, and closely approximate

the thermo-form plastics of the final product in both appearance and strength.

PROTOTYPE TOOLING:

3D-CAM delivers low cost, fast turnaround epoxy, zinc or aluminum tooling. From these tools, cost-effective, low-volume production runs and limited run (100-5,000) prototype

parts can be made.

PRODUCTION TOOLING:

High quality production molds for aluminum and steel tools in 3 to 4 weeks using PRO/E and PRO/Mold CAD software.



STEREOLITHOGRAPHY APPLICATIONS IN METAL CASTING

INVESTMENT CASTING APPLICATIONS

PROTOTYPE PARTS:

Quick cast stereolithography parts are directly invested in plaster or ceramics. Then the stereolithography parts are sublimated from the shell and replaced by aluminum, stainless steel or other non ferrous metals.

TOOLING FOR WAX PATTERNS:

Shrink adjusted stereolithography parts are used to make aluminum epoxy molds for the rapid creation of wax patterns.

WAX INJECTION:

3D-CAM's high capacity in-house wax injection capabilities allow us to provide quick turnaround on the entire wax pattern fabrication process.



SAND CASTING APPLICATIONS

MODEL PARTS:

For design verification, highly accurate parts are made from CAD data.

CASTING PATTERNS:

Shrink adjusted patterns from stereolithography are used directly as sand casting patterns or are used to create core boxes, cope and drag tooling, or match plates for the sand casting process.