

# Machined Aluminum Injection Tooling



## SNAPSHOT:

**Life:** Up to 100,000+ production parts

**Prices Beginning at:** \$7500

## AT A GLANCE:

A tooling solution with extended durability and abrasion resistance, aluminum molds are the paramount choice for rapid tool creation and quality parts. Lighter and more easily machined than steel and epoxy, aluminum conducts heat five times faster, shortening production cycles by nearly 40%. The ability to capture complex geometric designs coupled with inexpensive part prices makes this metal a top choice when designing your custom tool.

## PERFECT FOR:

Engineered Plastics, Thermoplastic Rubbers and Thermoplastic Urethanes

## NOTABLE CUSTOMERS:

Black & Decker, Safariland LLC,  
US Armed Forces

## ATTRIBUTES



THERMAL  
CONDUCTIVITY



LONG LIFE  
EXPECTANCY



HIGH  
STRENGTH



EXCELLENT  
SURFACE DETAIL

## Creative Strategy

### SIZE & COMPLEXITY

- Maximum 48" x 48". Molds can be constructed as single or multiple cavity.
- Considerations: hardware, knock out pin, parting line, removable cores, runner gate and sprue

### MATERIALS

- ABS, Acetal, Acrylic, Nylon, PBT, PET, PVC, Polycarbonate, Polycarbonate/ABS, Polyethylene, Polypropylene, Thermoplastic Elastomer

**COLOR CHART:** *view online at [www.rsalberts.com](http://www.rsalberts.com)*

### DRAFT

Amount of taper for molded or cast parts perpendicular to the parting line. An angle is incorporated into a wall of a mold so that the opening of the cavity is wider than its base. Draft angles allow for easier ejection of the part from the mold.

- Smooth Texture: 1° draft preferred minimum
- Light Texture: 3° draft preferred minimum
- Heavy Texture: 5° draft or more preferred minimum

### SURFACE FINISH

As aluminum passes through the cutting area of a milling machine, the bits excavate fragments of material at uniform intervals creating ridges, known as a milled surface displaying tool marks.

- De-burring, Remove Sharp Edges
- Media Blasting, Matte Finish
- Sand Blasting, Matte Finish

### TOLERANCES

Allowable variation for any given size in order to achieve proper function when considering the design intent. As with all molded products, part material's shrink value should be considered when building your pattern and mold.

- $\pm .005"$



**RALPH S. ALBERTS**  
COMPANY INCORPORATED

60 Choate Circle Montoursville, PA 17754

Phone: (570) 368-MOLD (6653)

Fax: (570) 368-6353

[rsalberts.com](http://rsalberts.com)