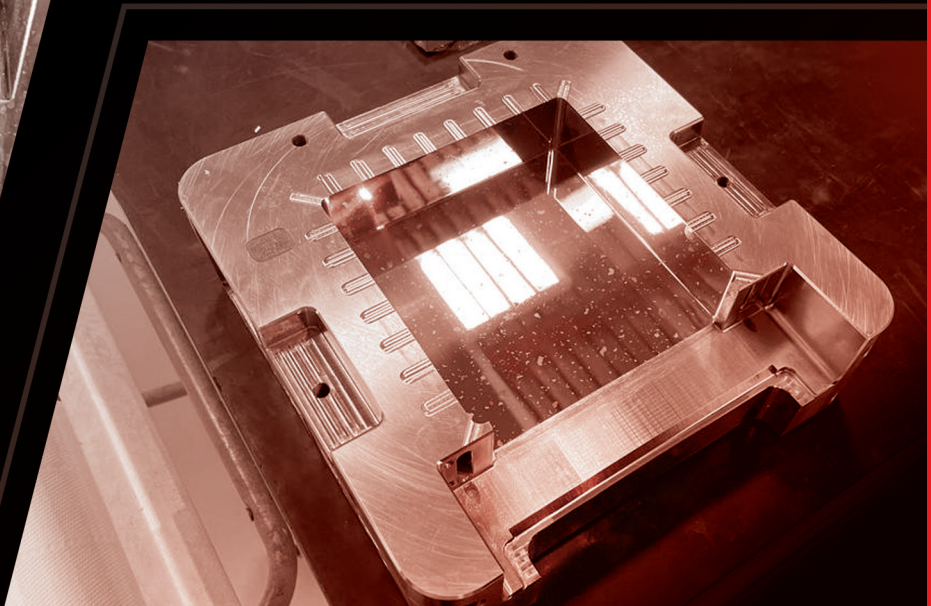




SPECIALIZED TEXTURING AND MOLDING SOLUTIONS MADE EASY
STANDEX ENGRAVING MOLD-TECH AND ROCTOOL PARTNERSHIP



ONE PARTNER, WE MAKE IT EASY

CUSTOM MOLDING SOLUTION SUPPLIER

We know you want to add a beautiful surface finish to your product to make it more attractive than what the competition offers. You also want it to reflect the thoughtful design sensibility of your brand and to be produced consistently at a very high quality.

To do all of that, you need Custom Molding Solution Suppliers. The problem is that having multiple suppliers is complicated, expensive and time consuming, which creates frustration and inefficiencies.

We believe in a worry-free approach to the process of custom texture design, laser engraving and then optimizing the tool for manufacturing.

That's why Standex Engraving Mold-Tech and Roctool have partnered to be your single Custom Molding Solution Supplier using our combined global reach to support your project from start to finish.

Our two companies have a global agreement to leverage our technical expertise and provide mold solutions that were previously unattainable, especially in the replication of fine textures at the smallest scale.

Combining global texturing capabilities from Standex Engraving Mold-Tech and Roctool's induction heat and cooling technology conveniently offers access to global expertise, world-wide support and technology, all in one step.

WHO WE ARE



Standex Engraving Mold-Tech creates custom textures on tooling to enhance the beauty and function of a wide range of consumer goods and automotive products we all use every day. We manage every step of the process from custom texture design and engraving, to preparing the tool for manufacturing with worry-free results. We make it easy for our customers by offering a full range of services: Architexture Design Studio, Laser, Chemical and Hybrid Engraving; Soft Trim Tooling; Roll-Tech and Tool Finishing.

www.mold-tech.com



Roctool, specializes in rapid heat and cool technologies for plastic injection and composite molding. The processes developed by Roctool are in production in the following industries: automotive, electronics, consumer products, renewable energy, beauty packaging and medical. Roctool is an induction molding technology, working with plastic and composite including recycled materials. Roctool offers Engineering services, induction generators, tooling hardware and on-site support to manufacturers around the globe.

www.roctool.com

PRECISE TEMPERATURE CONTROL FOR PRECISE TEXTURES

Our partnership enables Standex Engraving's strengths of custom texture design and laser engraving to be combined with Roctool's rapid heat and cooling technology within the same mold. Here's why it works:

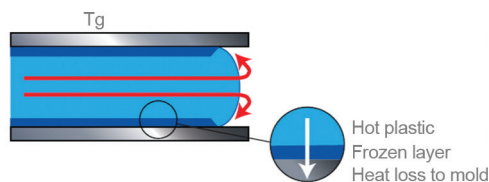
With Roctool's dynamic heating, the mold is hot when the injected polymer hits the engraved surface, allowing every microscopic cavity of the texture to be formed with ultimate precision.

If the hot polymer hits a cold surface, the heat from the plastic escapes into the mold leaving a cold, hardened layer. The texture will not be transferred as accurately into this cold layer compared to hot polymer which is more malleable.

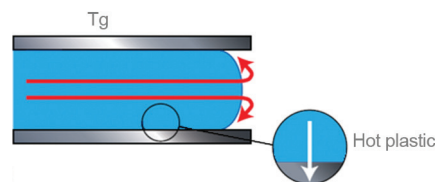
Roctool can quickly heat the laser engraved surface with induction coils and then cool it with water lines embedded in the mold for precise temperature control. This high level of surface finishing at the nano level is not possible with conventional molding applications.

DYNAMIC HEATING COMPARED TO CONVENTIONAL

Conventional Molding
Mold Temperature < Tg Polymer



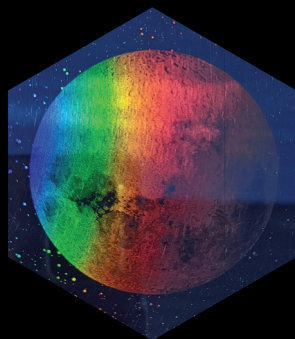
Roctool Molding
Mold Temperature > Tg Polymer



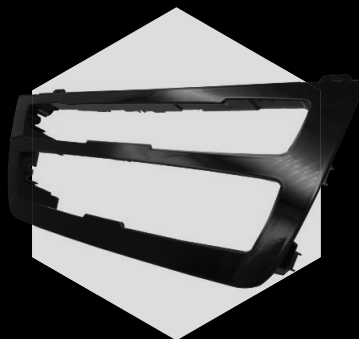
PARTNERSHIP BENEFITS

- Gloss Improvement
- No Surface Defects, (Weld lines, Sink Marks)
- 3D and Fine texture replication
- Light diffusion
- High Gloss
- No secondary operation

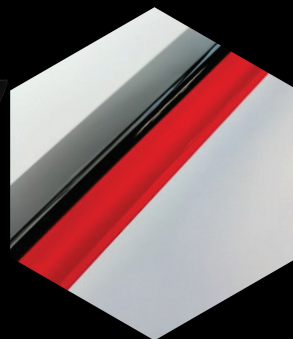
- No paint required with Soft Touch Paint Textures
- High gloss and low gloss on the same part
- No weld lines
- Use of Sustainable Materials
- Cycle Time Reduction
- Texture up to holographic Scale



MOLD TEXTURE REPLICATION
RATE UP TO 97%



100% WELD LINE ELIMINATION
ON MOST RESINS



UP TO 133% GLOSS
IMPROVEMENT



APPLICABLE FOR 3D SHAPES

CASE STUDY - TV BOX, ELECTRONIC HOUSING

An example of the unique products Standex Engraving and Roctool create together is an ultra-thin electronic housing box for a television component that sparkles with rainbow flecks. A recycled ABS material was used to create the ultra-thin 1.2mm part. The challenge was to demonstrate how recycled materials can be used to create a high-quality housing part with a gloss surface.

The brilliant iridescent effect was engraved by Standex's Functional Division, using FEMTO laser technology. At the nano level, textures can be design-engineered, and laser engraved to create a rainbow-like reflection cleanly, without the use of paint. Roctool's temperature control technology in the mold enabled the iridescent flecks to be flawless, without any surface defects and no visible weld lines.



- Product dimensions: ~145*140mm*H40mm.
- Thickness 1.2mm
- Thermal cycle: 80 → 120 → 80°C (real parameters)
- Roctool heated on cavity (on moving side) and slider (on fixed side)
- Material: PCR ABS
- Cycle time: 35.6s

OUR PROCESS

STEP 1

- Material Check and Initial Feedback
- Texture development and verification with Standex Engraving Mold-Tech
- Power estimation
- Budget review

STEP 2

- Complete Feasibility report
- Integration of tooling layout
- Identify Power required
- Establish Power consumption
- Identify Cycle Time

STEP 3

- Engineering, simulation and flow analysis
- Thermal Analysis
- CAS Design and BOM

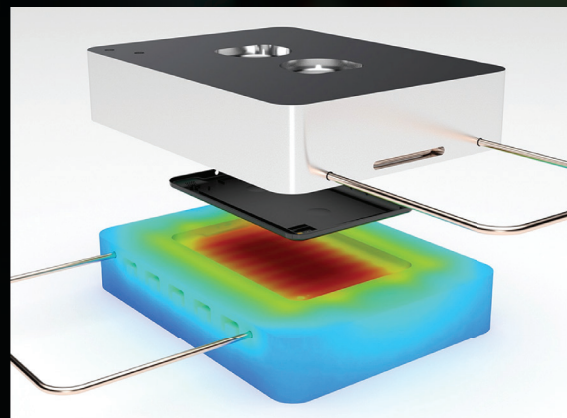
Schedule a call with a member of our sales team to explore how this global partnership can support your next project from design inception to producing the final parts, all with just a single supplier. We Make it Easy.

STEP 4

- Supply of Mold Inductive Components and Roctool System

STEP 5

- Installation, training and Process Support
- Installation of tooling hardware in the mold
- Connection of the inductive system to the press and the mold
- Process start-up – Mold surface mapping, FOT with Roctool cycle time optimization



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www.mold-tech.com

ROCTOOL
MOLDING MATTERS.

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