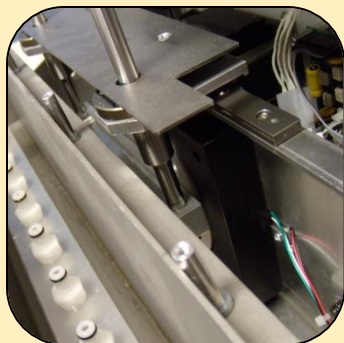
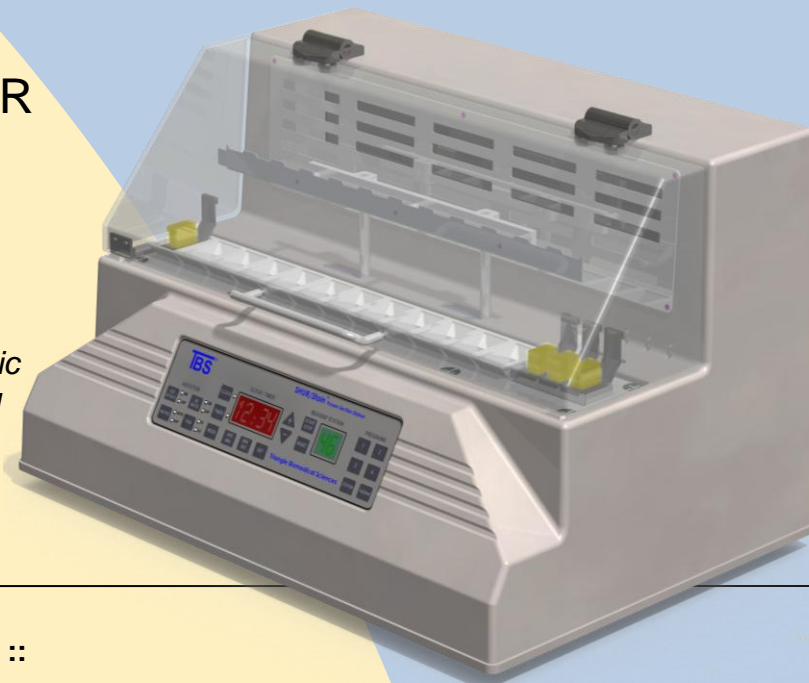


CASE STUDY :: P211

FROZEN SECTION STAINER

File Under: Product Development
Prototyping

Ground-up design and prototyping of an economical (yet feature-rich) semi-automatic frozen section stainer for use in histological laboratories



SYNOPSIS ::

Descher was selected to champion the design and prototyping of a new Frozen Section Stainer (FSS) for use in preparing & staining slide-mounted tissue samples in histological laboratories. The FSS was required to compete with products already on the market, with a focus on offering a feature-rich alternative to the customer's competitors. Design for manufacturability and (of course) cost considerations were also critical project drivers. The skinning and user interface were required to dovetail with the customer's existing product line.

SOLUTION ::

Descher worked with the customer to identify existing products in the marketplace and develop a feature-focused competitor matrix. From there, Descher worked with the customer's engineering staff to champion the FSS' mechanical design and collaborate on its controls development, from board-level electronics to the custom user interface. After the project design, Descher launched the FSS prototyping phase, augmenting in-house capabilities with laser-cutting, rapid prototyping, and thermoforming shops to build out a five-unit pilot program.

Key Features:

- *Semi & full automatic operation with continuous and timed dip modes*
- *Stepper-driven gear & cam walking-beam assembly*
- *Servo-driven unload stager*
- *H₂O trough & controls for sample irrigation & drainage*
- *Integral fume capture & exhaust system*
- *Injected molded slide carriers and irrigation wells*
- *Thermoformed housing with ingrained mold texture*
- *Acetate control pad overlays with embossed buttons and LED windows*

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