



# Devicix

Engineering the Future of Medicine

## Mechanical Engineering

Mechanical engineering touches virtually every aspect of a medical device's appearance, function, and certification compliance.

Devicix's mechanical engineers use a Phase Gate design methodology, a rigorous approach employing five phases; from concept development to commercialization.

With users, we define requirements, target values, and minimum acceptable values for each aspect of a device, taking OSHA and FDA guidelines into account. Beginning with conceptual sketches and moving towards more elaborate models, we create and test prototype devices and manufacture initial units for design verification testing.

### Devicix's capabilities provide/address:

- FEA (Finite Element Analysis) and CFD (Computational Fluid Dynamics) analysis.
- Final design, refinement and verification services for prototypes or existing devices.
- Structural, packaging or marketing design.
- End effectors that operate from a system's terminal point.
- Motion control systems that provide correct performance speed, acceleration and accuracy of position; feedback loops that report whether a system has achieved desired requirement.
- User interface requirements, i.e. FDA/IEC/OSHA rules, repetitive motion inquiry prevention, ease of use, identification, labeling, instructions for use, and lights.
- Body compatibility issues, including heat toxicity, and sterilization.
- Temperature, power response and maintenance, including the ability to protect electronic device components.
- Material selection appropriate to device's anticipated life-span, expense, mechanical load, and physical environment.

