



CSA Medical truFreeze System

Next Generation CryoAblation Device

Key Goals and Accomplishments

Improved Efficiency of Cryogen Delivery for Greater Consistency & Safety
Improved Usability by Automating Features
Established Instrument Robustness with Solid Reliability Growth Program

Approach and Tools

Concept Diagramming, Bread-boarding & Feasibility Testing
Critical Parameter / Tolerance & Stack-Up Analysis
Module Specifications & Requirements Traceability Analysis
Detailed System Design, Mechanical Assembly & Component Design (SolidWorks)
Embedded Control Architecture and Implementation (LabVIEW)
Statistical Experiment Design (DOE)
Test Planning, Protocols, Execution and Reports
Mechanical Safety Test Support and Coordination
Instrumentation & Automated Test Stand Development (LabVIEW)
User Validations & Pre-Clinical (Medical Device) Validations
Reliability Test & Growth Programs
Structured Problem Solving & Continuous Improvement Programs
Overall Project Planning & Management

Results and Recognition

SmartCEO March 2012 Technology Award
Rapid FDA 510(k) Clearance
Enabled \$20.5M Financing

