



<b>Job Title:</b> Mechanical Design Lead	Department:	Engineering
Reports to: Sr. Engineering Manager	Division:	Ithaca, NY
Hours: Full-time – 40+ Hrs/week	Rev Date:	09-14-20

### **Primary Function**

This position is responsible for performing engineering duties as well as overseeing the planning and designing of products, new product prototypes, accessories and other mechanically functioning equipment.

### **Duties and Responsibilities**

- Make design modifications as needed to support resolution of manufacturing floor product issues
- Design products using SolidWorks and consults with other discipline engineering and manufacturing teammates to ensure the designs are feasible
- Develop and build prototypes and run tests to measure their level of functions
- Record and evaluate test data, altering designs as necessary to bring them to safety, performance and efficiency standards
- Calculate cost estimates for final product designs, and release reports to supervisors, incorporating cost of labor, material, delivery and overhead
- Attend weekly team meetings to provide progress reports, report task progress, completion and issue resolution using Microsoft Project software
- Be an available resource to R&D to discuss upcoming generation of TSI products and support their need for design and building of early prototypes
- Write RFQ technical specifications, interface with and advise on vendor progress and perform first article inspection of new products/parts.
- Produce standard designs using SolidWorks software and create assembly prints, mechanical drawings and fabrication specifications
- Create, develop and test products
- Solve problems by applying the principles of physics, chemistry and mechanics to the design problem
- Prepare calculations on the proposed design before completing technical drawings
- Institute quality control procedures to resolve drawing/design related quality issues
- Establish drawing standards for the company
- Oversee the conversion of older CAD based drawings into SolidWorks
- Perform other work-related duties as requested, directed or assigned by management.

### **Working Relationships**

- Provide support to Manufacturing as product designs are scheduled on the manufacturing floor
- Support training of downstream departments that will be impacted by the product designs



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- Meet with suppliers, clients and project stakeholders to review designs and make changes as needed.

### **Education and Experience**

- Bachelor's degree in mechanical engineering
- Minimum of 10 years of experience in an engineering role
- Strong computer skills with proficiency in SolidWorks and FEA
- PE license preferred
- Experience in designing medical devices is strongly preferred

### **Knowledge, Skills and Abilities**

- Demonstrated competency in remaining current on published design standards as it relates to the various design basis for medical devices, i.e. Injection molding, machining, mechanical fixturing, etc.
- Demonstrated competency in precise engineering design discipline, do it right the first time
- Demonstrated competency in drawing design layout, tolerances, drawing notes
- Demonstrated competency in tolerance stack up tools
- Demonstrated competency in FDA medical device stage gate procedures and mandatory documentation
- Demonstrated competency in adapting multiple versions of same product, must be persistent, strong problem-solving skills, and highly disciplined
- Creativity to generate innovative ideas
- Works fast and accurate
- Must be thorough
- Strong math skills are mandatory
- All workmanship should be world class quality
- Willing to continuously be educated through company-paid training courses
- Can convert end user needs into design requirements
- Knows when to ask for help
- Can prepare accurate time estimates to perform tasks
- Exceptional written and verbal communication skills
- Self-motivated

### **Supervisory Responsibilities**

- Initially, supervise one CAD operator/designer



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### **Physical Demands & Work Environment**

- Position requires sitting, standing, stooping, reaching, lifting/carrying typically less than 25 lbs., talking and walking; includes use of computers, printers, copiers and other office equipment primarily in an open cubicle, office environment
- May also include working with testing equipment and tools with occasional exposure to elements such as odor, noise, dust, heat, cold and/or chemicals in a manufacturing/production environment, machine shop and test labs
- Nature of work requires depth perception, close and far vision, normal color distinction, corrected normal vision, potential for eyestrain and normal finger dexterity.
- Must be capable and willing to adhere to safety requirements
- Flexible approach to work and the ability to adopt to change
- Not driven by 40-hour week. Will put the time in to finish on time all the time
- Able to work in team environment
- Needs minimum supervision
- Willingness to travel on company business as needed <10% of time.

Disclaimer: This Job Description is not intended to be all-inclusive and may be subject to change to include new responsibilities and tasks or change existing ones as management deems necessary to meet the ongoing needs of the company.