



Sciometric Technologies India Pvt. Ltd  
 Fourhum Center, Lane # 1, Renuka Nagar,  
 Warje, Pune, Maharashtra 411058

|                   |                            |                         |            |
|-------------------|----------------------------|-------------------------|------------|
| <b>Job Title:</b> | Mechanical Design Engineer | <b>Travel Required:</b> | Occasional |
| <b>Location:</b>  | Pune, India                | <b>Position Type:</b>   | Full Time  |

**Job Description**

**Position Summary and Primary Responsibilities:**

This Mechanical Design and Pre-Sales Engineer position utilizes 3D CAD software, SolidWorks (preferred), and performs two functions described below:

**Pre-Sales activities:** Develop concept design, compile bill of material, create pricing workbook and develop proposal for Special Purpose Machines (SPM) for Leak Test Solutions.

**Project Design Engineering:** Design and present machine virtualizations to customers in order to gain approval to build a Special Purpose Machine that meets the customers specifications and requirements.

**Pre-Sales activities:**

Work closely with Application Engineering (AE) and Sales + Business Development team at group company’s front sales office. Obtain and study Requests for Quote (RFQ), understand customer’s requirements / scope. Communicate directly with AEs to get clarifications on the customer data and to discuss proposed solution/solutions.

Develop Concept Design, compile Bill of Material, develop pricing workbook, develop proposal independently and submit to AE/ Sales / Business Development team. Discuss changes and implement those.

Carry out revisions to the proposals, as and when required.

**Project Design Engineering:**

Work closely with the Project engineers/Design/Controls engineers to achieve the goal of a complete machine design.

- plans, designs, and coordinates the integration of machinery and equipment into manufacturing processes with a high level of proficiency.
- does design calculations, selects the proper components which will not only serve functionality but also lead to a cost effective optimize design.
- converts the 3D design to a properly tolerance 2D drawing package.
- creates Bill of Materials, identifies “wear” parts and creates recommended spare parts lists,
- Additionally, the detailed component drawings as well as the assembly drawings are released to the factory floor in preparation for machine assembly. If inadequacies are found during the assembly and test processes, the Mech Design Engineer may have to revise the machine design to address these issues. The designer should also be able to take corrective actions to resolve problems arising on the machine shop floor.



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This is an intermediate-level position, capable of designing and troubleshooting complex mechanical functions while working mostly independently. A Mech Design Engineer shall possess the following traits at a minimum:

- Independent thinker.
- Strong conceptual skills.
- Strong understanding of machine fundamentals and material properties.
- Strong English language communication skills – both written and verbal.
- Ability to present concepts and engineering proposals in an effective manner to customers and colleagues.
- Strong time management.
- Budgetary awareness.
- Strong decision-making capability.
- Strong leadership/mentorship traits.

This Mech Design Engineer position is based in Pune, Maharashtra, India and works with TASI Group company's front sales office, who will schedule the Mech Design Engineer to work with specific teams for Pre-Sales and Design phases of projects.

During project assignments, the Mech Design Engineer will take direction from the Sr. Mech Design Engineer.

#### **Essential Job Functions:**

- Create drawings and visualizations using computerized 2D and 3D CAD software.
- Define dimensions, angles, curvatures, and part relationships.
- Utilize mathematics and knowledge of machine design practices.
- Extensive knowledge of computer assisted design/drafting equipment.
- Knowledge of material properties and design practices for fixtures and tooling.
- Create detailed bill of materials.
- Responsible for issuing revised drawings as controlled documents.
- Communicate with customers to determine specifications.
- Require knowledge of layout, machining, and assembly.
- May assist in the test and tryout of custom machinery.
- Responsible for sizing and specifying components and working with component vendors to meet project budget and schedule.
- Presenting concepts and designs at customer review meetings.

#### **OTHER JOB REQUIREMENTS**

- Fluent written and verbal English language communication skills.
- Willingness to travel to customer, supplier, or TASI Group Company's design and build locations as necessary.
- Fluency to read and understand English language documents and drawings.
- Ability to work cooperatively with others.
- Ability to work professionally and politely with customers and/or coworkers.
- Ability to perform several tasks at once.
- Ability to use hands and fingers to handle or feel.
- Other duties as assigned by managers.



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### Qualifications:

Bachelor of Engineering degree in Mechanical Engineering or equivalent.  
4 ~ 6 years of experience in automation machine design.

### Skills:

#### Interpersonal Skills

- Ability to read, analyze, and interpret blueprints.
- Ability to write English language in a clear and concise manner.
- Ability to speak English language effectively, to present information/respond to questions in a clear and concise manner, etc.
- Ability to take ownership and to be accountable for the assigned task/ project.

#### Technical Skills

- Computer skills, including a proficiency with SolidWorks design package.
- Mathematical and problem-solving skills.
- Microsoft Office Suite.
- SPM (Special purpose machines)
- Automation
- Machine design
- Pneumatics
- Basic design calculations

#### Other Skills

- Ability to effectively plan and organize.
- Ability to work under pressure to meet scheduled project timelines and maximize efficiency.

#### Nice to Have

- SPM Designing, Automation background.
- Leak testing machines knowledge
- SolidWorks skills.

**Last Updated By:**

Harish Phatak/ Manoj  
Patil

**Date:**

15-Jan-2024