



Job Title: Mechanical Design Engineer

Company Overview: Bushman Equipment (www.bushman.com), a subsidiary of Xtek, Inc, specialize in designing and manufacturing custom-engineered lifting devices for heavy-duty industrial applications. Our products are engineered to address challenging material handling needs in steel, aluminum, and other industries worldwide.

Job Summary: The Mechanical Design Engineer will be responsible for designing and optimizing mechanical systems, with a focus on heavy-duty, below-the-hook lifting equipment. This role requires applying engineering techniques to create and refine designs, often leveraging similar prior designs. The engineer will also support internal departments and provide customer assistance, ensuring projects align with industry standards and specifications.

Key Responsibilities:

- **Design & Development:** Create designs for below-the-hook lifting equipment using SolidWorks and AutoCAD. Generate solid models, component layouts, and detailed drawings.
- **Quality Assurance & Compliance:** Review customer and industry standards to ensure all designs meet regulatory and project-specific requirements. Perform engineering checks on designs and fabrication drawings.
- **Project Management & Documentation:** Independently plan and manage projects, set goals, adhere to budgets, and ensure timely completion. Maintain accurate documentation, including bills of materials (BOMs) in Bushman's ERP systems (Bluestar PLM and Microsoft D365).
- **Calculations & Analysis:** Conduct hand calculations and use spreadsheet tools to validate design integrity, optimizing for safety and functionality.
- **Collaboration & Liaison:** Work closely with the shop floor, sales, and service engineering teams to resolve design and production issues. Provide engineering support to customers via phone, email, and occasional site visits.
- **Vendor Coordination:** Evaluate vendor bids and ensure their drawings align with project specifications.

Typical Requirements:

- **Education & Experience:** Bachelor's degree in mechanical or Electro-Mechanical Engineering and 3+ years of relevant experience, particularly in designing heavy-duty mechanical systems or lifting equipment.
- **Technical Skills:** Proficient in SolidWorks (3+ years), AutoCAD, and Microsoft Office. Strong knowledge of design detailing, BOM management, welding, and machining processes. Familiarity with, hydraulic systems, and electrical/automation is a plus.
- **Soft Skills:** Excellent organizational, planning, and communication skills. Ability to troubleshoot, make decisions, and evaluate solutions independently.
- **Preferred Qualifications:** Hands-on mechanical experience is valued, along with experience in leadership, supervision, or project management.



Please provide written answers to the questions on the following key employee qualities:

- 1. Adaptability:** "Can you describe a time when you had to quickly adapt to a significant change at work? How did you handle the transition, and what was the outcome?"
- 2. Communication Skills:** "Effective communication is crucial in any role. Can you provide an example of how you successfully communicated complex information to a team or client who was unfamiliar with the topic?"
- 3. Problem-Solving Abilities:** "Tell me about a challenging problem you encountered at work. What steps did you take to address it, and what did you learn from the experience?"