

# MECHANICAL DESIGN ENGINEER

## PURPOSE OF POSITION

Design of custom, diamond finishing systems, assemblies, fixtures, and tooling used worldwide for a variety of manufacturing processes and finished goods. Support design work in all product groups as required by sales trends and volume.

## CONTACTS

Reports to the Machine Build Manager and has no supervisory responsibility. Has inside contacts with engineering staff, manufacturing personnel and order processing department. Has outside contacts with customers, distributors, and vendors.

## ESSENTIAL QUALIFICATIONS

The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

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## ESSENTIAL DUTIES AND RESPONSIBILITIES

- Use 3D modeling software (Solidworks) to perform accurate design and detail work to ensure proper mechanical design based on project requirements and adhering to customer specifications.
  - Create assembly and part files using best-practice techniques with a concentrated effort on DFM principles within the scope of the company's manufacturing capacity.
  - Continuously review products and suggest cost reductions for new and existing designs.
  - Update designs, assemblies, files, and prints as required to reflect changes, modifications, and revisions.
  - Complete final file of drawings, BOMs, technical notes, build instructions, and manual updates as necessary to describe both standard and custom assemblies and machines.
  - Update MRP data to match new and revised engineering designs and prints.
  - Respond to customer support inquiries at all stages of product design and life cycle.
  - Assist sales team and marketing with layout proposals, quotations, and marketing literature.
  - Maintains a high level of professionalism in communicating with customers, performing demonstrations, providing technical support, and resolving problems.
  - Support the machine build team as needed to meet deadlines by performing occasional manual labor, inventory counting, and demand planning.
- Adheres to ISO 9001:2015 quality procedures.

# MECHANICAL DESIGN ENGINEER

## ESSENTIAL QUALIFICATIONS

- (The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.)
- A Bachelor's degree in Mechanical Engineering or related Engineering discipline; 3+ years of mechanical design experience with machine components; experience designing shop/machine tooling and fixtures.
- Ability to read, analyze and interpret an extensive variety of technical instructions and concepts in mathematical or schematic form.
- Ability to write reports, business correspondence, and technical documents. Ability to communicate effectively, orally, and in written form, with engineering staff, manufacturing operations, management personnel, and peers.
- While performing the duties of this job, the employee is occasionally exposed to work near moving mechanical parts and risk of electrical shock. The performance of this position may occasionally require exposure to the manufacturing areas where certain areas require the use of personal protective equipment such as safety glasses with side shields.
- To perform this job successfully an individual should have knowledge of Word Processing software; 3D CAD software, Spreadsheets; Order processing systems; Manufacturing software; Database software, and Contact Management systems; proficiency in the use of computer-aided drafting (CAD) software, computer-aided manufacturing (CAM) software; knowledge of standard design techniques, engineering practices, mechanical drawings, and mechanical system design.

The above statements reflect the general details necessary to describe the principal functions of the occupation described and is not intended to be an all-inclusive list of duties and responsibilities, and does not constitute an employment agreement between the employer and employee and is subject to change by the employer as the needs of the employer and requirements of the job change. - Revised 7/2021