

FUNCTIONAL JOB DESCRIPTION

**JOB TITLE:** Mechanical Engineer

**DEPARTMENT:** Engineering

# REPORTS TO: Engineering Manager

**FLSA STATUS:** Exempt

**JOB OBJECTIVE:** Designs and directs installation of mechanical products or plan systems by performing the following duties.

**ESSENTIAL DUTIES AND RESPONSIBILITIES** include the following. Other duties may be assigned**:**

* Read and interpret blueprints, technical drawings, schematics, and computer-generated reports.
* Research and analyze customer design proposals, specifications, manuals, and other data to evaluate the feasibility and maintenance requirements of designs or applications.
* Specify system components or direct modification of products to ensure conformance with engineering design and performance specifications.
* Research, design, evaluate, install, operate, and maintain mechanical products, equipment, systems and processes to meet requirements, applying knowledge of engineering principles.
* Assist drafters in developing the structural design of products, using computer-assisted design/drafting equipment and software.
* Provide feedback to design engineers on customer problems and needs.
* Oversee installation, operation, maintenance, and repair to ensure that machines and equipment are installed and functioning according to specifications.
* Establish and coordinate the maintenance and safety procedures, service schedule, and supply of materials required to maintain machines and equipment in the prescribed condition.
* Recommend design modifications to eliminate machine or system malfunctions.
* Develop and test models of alternate designs and processing methods to assess feasibility, operating condition effects, possible new applications and necessity of modification.
* Analyze test data and reports to determine if design meets functional and performance specifications.
* Perform personnel functions, such as supervision of production workers, technicians, technologists and other engineers, and design of evaluation programs.
* Demonstrate professional, respectful interaction with other team members.
* Write performance requirements for product development or engineering projects.
* Develop and monitor all aspects of production, including selection of manufacturing methods, fabrication, and operation of product designs.
* Daily shop inspections to ensure proper manufacture of parts.
* Occasional travel for engineering purposes is required.
* Work with outside vendors in selection of parts and materials.

**SUPERVIOSRY RESPONSIBILITIES:** This job has no supervisory responsibilities.

**SKILLS/KNOWLEDGE/ABILITIES REQUIRED:**

* Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry.
* Ability to apply concepts such as fractions, tolerances, percentages, ratios, and proportions to practical situations.
* Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists.
* Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.
* Understanding of manufacturing workflow, including planning activities.
* Knowledge of ISO 9000 requirements.
* High skill level in CAD software. Ability to learn new graphic software to compliment the presentation of CAD designs.
* Understand basic electrical and mechanical engineering principles.
* Ability to communicate effectively, make presentations and write routine reports, operating instructions and correspondence.
* Ability to work with vendors, customers, and employees.

**QUALIFICATIONS:** To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. 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.

**EDUCATION AND/OR EXPERIENCE:** Four-year college or university program certificate; or two to four years related experience and/or training; or equivalent combination of education and experience.

**LANGUAGE SKILLS:** Ability to read, analyze and interpret general business periodicals, professional journals, technical procedures, or governmental regulations. Ability to write routine reports and correspondence. Ability to write reports, business correspondence, and procedure manuals. Ability to effectively present information and respond to questions from groups of managers, clients, customers, and the general public.

**MATHEMATICAL SKILLS:** Ability to work with mathematical concepts such as probability and statistical inference, and fundamentals of plane and solid geometry and trigonometry. Ability to apply concepts such as fractions, tolerances, percentages, ratios, and proportions to practical situations. Ability to mathematically analyze designs for safety factors, design strength and impact resistance.

**REASONING ABILITY:** Ability to solve practical problems and deal with a variety of concrete variables in situations where only limited standardization exists. Ability to interpret a variety of instructions furnished in written, oral, diagram, or schedule form.

**COMPUTER SKILLS:** To perform this job successfully, an individual should have knowledge of SolidWorks and AutoCAD design software.

**PHYSICAL DEMANDS:** The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is regularly required to sit; use hands to finger, handle, or feel and reach with hands and arms. The employee is frequently required to stand; walk and talk or hear. The employee is occasionally required to climb or balance and stoop, kneel, crouch, or crawl. The employee must frequently lift and/or move up to ten pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception and ability to adjust focus.

**WORK ENVIRONMENT:** The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently exposed to moving mechanical parts. The employee is occasionally exposed to wet and/or humid conditions; extreme cold; extreme heat and risk of electrical shock. The noise level in the work environment is usually moderate.

\*Each employee should be aware that changes in this job description could occur at any time. Also this job description is not to be considered or construed to be a contract of employment.

**APPROVAL DATE**

Employee Signature Date

Engineering Manager Date

Division Manager Date