



Design Engineer Job Description

Overview

Develops new, and modifies existing parts and assemblies, including layouts and detail drawings of components using CAD. Leads and manages lower-level engineering projects. Electro-mechanical design experience preferred. Shares responsibility for managing engineering test lab.

Essential Duties & Responsibilities

This list of duties and responsibilities is not all inclusive and may be expanded to include other duties and responsibilities as needed.

- Thorough understanding and use of the Dumore's Quality Plan in all phases of engineering
- Design electro-mechanical products (PMDC, BLDC and universal motors and gearboxes), meeting engineering standards, applicable codes, customer specifications, and cost constraints
- Prepare component, sub-assembly, and assembly detailed drawings and schematic diagrams, include all necessary dimensional information to define components and accurate tolerance to ensure proper form, fit, and function
- Calculate dimensions and specifies standard allowances in accordance with established procedures using sound basic drafting practices to complete CAD drawings
- Fully understand the ECR/ECN process and complete necessary forms and paperwork for processing engineering change notices
- Assign drawing number sequence and other required technical data to material specifications and accurately enter them into the current business system.
- Create part numbers and structured bills of material in the MRP system (experience using ERP/MRP software a plus)
- Work with customers, and team members to determine and plan experimental test programs to qualify products, ensure designs meet functional and performance specifications, and comply with all applicable industry standards
- Build and test engineering prototypes
- Control and archive engineering documentation,
- Assist manufacturing with design or product related issues
- Follow departmental procedures and directives in completing work assignments

Qualification Requirements

To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed 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

Bachelor's Degree in Electrical (BSEE) or Mechanical (BSME) Engineering from accredited educational institution. Experience in the development and testing of in-line, right-angle, and planetary gear drives preferred. Experience with motor design and/or gear design software a plus. Requires fluent working knowledge of Solid Works, Onshape, AutoCAD, MS Office, and ERP/MRP Business Software.

Language Skills

Able to read, analyze and interpret technical procedures and scientific and technical journals. Able to effectively present information and respond to questions from team members, customers, and vendors.

Mathematical Skills

Able to apply all general mathematical concepts such as calculus, fundamentals of plane and solid geometry, and trigonometry. Able to apply advanced engineering mathematical concepts for design calculations and analysis.

Reasoning Ability

Must possess a high level of mechanical and electrical aptitude. Able to define problems, collect data, establish facts, and draw valid conclusions. Able to interpret a variety of technical instructions in written, oral and diagram form.

Protective Clothing/Equipment Required

When entering a safety sensitive situation or area, safety equipment and apparel is required and expected to meet applicable regulations and policies.

Physical Demands

The physical demands listed 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, talk and hear. The employee is frequently required to use hands to finger, handle, or feel objects, tools, or controls and reach with hands and arms. The employee is occasionally required to stand for extended periods of time when working in the engineering lab.
- The employee must occasionally lift and/or move up to 50 pounds.
- Specific vision abilities required by this job include close vision, depth perception, and the ability to adjust focus.

Work Environment

The work environment characteristics described 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 occasionally works near moving mechanical parts.
- The noise level in the work environment is usually moderate.