



## Position Description

**Title:** CAD Designer / Drafter

**Department:** Engineering

**Reports To:** Engineering/Production/Service Manager

**FLSA Status:** Non-exempt

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**Summary:** This individual will utilize 2-D software and create and modify 3-D models to design, plan, and resolve issues as necessary, of manufacturing and fabrication equipment and functions.

**Essential Duties:** Essential job duties for this position include the following items. Other duties must be performed as assigned or required.

- Create, modify and print 2-D drawings in AutoCAD Mechanical Desktop format.
- Create and modify 3-D models in SolidWorks format, including models of physical items that can be measured by hand, or intangible items such as 2-D manufacturer-issued drawings.
- Coordinate with and consult other workers to design, lay-out, or detail components and systems and to resolve design or other problems.
- Verify models by taking physical measurements of the actual equipment.
- Convert 3-D models to construction prints to be issued to the fabrication shop.
- Create and maintain drafting standards.
- Correspond with customers regarding transmittal of drawings.
- Verify and maintain congruence between all drawings in a project, i.e. if a valve lies before the blower on one drawing, it must lie before the blower on all drawings.
- Answer questions about drawings for fabrication personnel.
- Review completed equipment or products and update drawings as necessary.
- Work toward continuous quality improvement
- Stay current with changing technology, including software and position/industry specific programs
- Uphold, support, and promote all company policies and procedures

**Supervisory Responsibilities:** None

**Qualifications:** To perform this job successfully, the individual in this position must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the minimum knowledge, skills and ability required.

**Education/Experience:**

- High School Diploma, Trade School or college training highly desired.
- Certificate or other sufficient training in computer aided drafting, or proven comparable experience of necessary knowledge, skills, and abilities preferred.
- Experience using 2-D AutoCAD software, Solidworks modeling software, and Microsoft Office, with strong computer skills, preferred.



## Position Description

- Experience with measurement devices, such as calipers and micrometers, and ability to use basic shop equipment, such as levels and tape measures, preferred.

### Language Skills:

- Ability to read, analyze, and interpret general business periodicals, professional journals, technical procedures, or governmental regulations.
- 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, percentages, ratios, and proportions to practical situations, and utilize a calculator.

### Reasoning Ability:

- Ability to apply spatial reasoning, define problems, collect data, establish facts, and draw valid conclusions.
- Ability to interpret an extensive variety of technical instructions in mathematical or diagram form and deal with several abstract and concrete variables.

### Certificates, Licenses, Registrations:

- CAD certification preferred

**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.

- Standing – Approximately less than 1/3 of on-the-job time.
- Walking – Approximately less than 1/3 of on-the-job time.
- Sitting – Approximately greater than 2/3 of on-the-job time
- Use of hands to finger, handle or feel – Approximately greater than 2/3 of on-the-job time.
- Reaching with hands and arms – Approximately greater than 2/3 of on-the-job time.
- Climbing or balancing – Approximately less than 1/3 of on-the-job time.
- Stooping, kneeling, crouching or crawling – Approximately less than 1/3 of on-the-job time.
- Talking or hearing – Approximately 1/3 to 2/3 of on-the-job time.
- Tasting or smelling – Approximately less than 1/3 of on-the-job time.
- Weight lifted/Force exerted – An average of approximately more than 50 pounds, less than 1/3 of on-the-job time, non-continuously..

Physical demand requirements listed are primarily applied to performance of various business office related tasks, including physical ability of using a computer input device, such as a keyboard or mouse.

- Vision – Close vision (clear vision at 20 inches or less), Color vision (ability to identify and distinguish colors), Peripheral vision (ability to observe an area that can be seen up and down or to the left and right, while eyes are fixed on a given point), Depth perception



### Position Description

(three-dimensional vision, ability to judge distances and spatial relationships), and Ability to adjust focus (ability to adjust the eye to bring an object into sharp focus).

Vision requirements listed are primarily applied to reading computer monitors, CAD drawings and related detailed drafting work.

**Work Environment:** The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of the job.

Environmental – Exposure to potentially hazardous environmental conditions may include the following:

- Wet or humid conditions (non-weather) – Approximately less than 1/3 of on-the-job time.
- Work near moving mechanical parts – Approximately less than 1/3 of on-the-job time.
- Work in high, precarious places – Approximately less than 1/3 of on-the-job time.
- Fumes or airborne particles – Approximately less than 1/3 of on-the-job time.
- Toxic or caustic chemicals – Approximately less than 1/3 of on-the-job time.
- Outdoor weather conditions – Approximately less than 1/3 of on-the-job time.
- Extreme cold (non-weather) – Approximately less than 1/3 of on-the-job time.
- Extreme heat (non-weather) – Approximately less than 1/3 of on-the-job time.
- Risk of Electrical Shock – Approximately less than 1/3 of on-the-job time.
- Vibration – Approximately less than 1/3 of on-the-job time.

Noise: Moderate (business office with computers and printers, light-to-moderate foot traffic)

### Acknowledgement:

I acknowledge this position description was reviewed with me and a copy was provided to me. I agree to and accept the terms and conditions and acknowledge this does not represent a contract of employment.

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Supervisor Signature

\_\_\_\_\_  
Date