

	<b>JOB DESCRIPTION CODE:</b>	<b>ENGEE</b>
	<b>REVISION DATE:</b>	<b>09/17/20</b>

<b>JOB TITLE: Electrical Engineer, Design - SolidWorks</b>	<b>SHIFT: 1<sup>st</sup></b>
<b>DEPARTMENT: Engineering</b>	<b>SAFETY SENSITIVE: NO</b>
<b>REPORTS TO: Engineering Manager</b>	<b>FLSA STATUS: Exempt</b>

<b>POSITION PURPOSE:</b>
<ul style="list-style-type: none"> <li>Responsible for designing and developing the electrical hardware systems that drive custom built OEM machinery.</li> </ul>

<b>ESSENTIAL DUTIES &amp; RESPONSIBILITIES:</b>
<p>Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.</p> <ul style="list-style-type: none"> <li>Design, develop, test, lead, and manage electrical engineering projects in support of new product development and changes to existing products.</li> <li>Interface with mechanical engineers and designers to ensure that: <ul style="list-style-type: none"> <li>The mechanisms designed can be adequately controlled.</li> <li>The control elements can be integrated into the mechanisms.</li> </ul> </li> <li>Interface with Control Engineers to include PLC, HMI, and other intelligent devices into the electrical schematics, panel layouts, and Bill of Materials.</li> <li>Select the appropriately sized motors, VFDs, and/or motor starters based on the horsepower requirements of the machine.</li> <li>Calculate proper incoming and branch circuit protection.</li> <li>Interface with customers and vendors/suppliers regarding project specifications.</li> <li>Select control components to minimize cost without sacrificing safety or quality.</li> <li>Create, maintain, control, and deliver machine Bills of Materials, electrical design drawings, panel layouts, and technical documents necessary to manufacture, assemble, and operate equipment.</li> <li>Communicate with vendors for the component requirements and receive quotations.</li> <li>Commission the electrical hardware design systems.</li> <li>Troubleshoot and resolve any issues with the electrical hardware.</li> <li>Assist in sales cycle to provide appropriate quotes and timeframes.</li> <li>Research and provide input for customer upgrades and equipment modifications.</li> <li>Use technical writing skills to contribute to operation and maintenance manuals for industrial machines.</li> <li>Perform and/or assist in start-up integrations at customer's facility.</li> </ul>

**KNOWLEDGE / SKILLS / ABILITIES:**

- Excellent communication both written and verbal. Team Player.
- Must possess the following qualities; strong attention to detail, strong follow-through, ability to multi-task, efficient time management and organization skills
- The ability to conceptualize how a machine should function to meet customer specifications.
- Must be able to use Microsoft Office products, especially Word and Excel.
- Use ERP system to integrate between Engineering and Production
- Thorough understanding of the math behind machine motion.

**QUALIFICATIONS / PRIOR EXPERIENCE:**

- Bachelor's Degree in Electrical Engineering.
- 5-10 years of experience in electrical controls, preferably in design of industrial equipment. Prior experience with Winders and Cable Equipment a plus.
- Proficient with SolidWorks® Electrical (AutoCAD Electrical experience is a plus) and experience designing and creating:
  - Electrical schematics
  - Control panel layouts
  - Machine wiring diagrams
  - Pneumatic schematics and design a plus
  - Hydraulic schematics and design a plus
- Familiarity with national and international electrical and safety standards a plus including:
  - NFPA 70 (NEC)
  - NFPA 79
  - CSA
  - CE/ European Safety standards
  - UL 508A
- Variable Speed Drive (Rockwell/Allen Bradley, Yaskawa, Schneider Electric, Siemens) integration, configuration and commissioning.
- Familiarity with communications protocols: serial, Ethernet, etc.
- Programmable Logic Controller (PLC) programming experience for industrial machinery, primarily with Rockwell Automation products a plus
- HMI programming experience for industrial machinery Rockwell Automation, Yaskawa, IDEC, Unitronics, and Red Lion a plus.
- Safety Programming, both stand-alone Safety Controllers (Banner and Pilz) and integrated Safety Processors (Rockwell Automation, Siemens) is plus.

**WORK ENVIRONMENT:**

- The work performed is conducted in a non-climate-controlled facility with moderate noise levels that are within OSHA limits
- Must be able to lift 25 – 50 lbs.
- Must be able to walk, talk, sit, stand, and communicate verbally continuously throughout an 8-10-hour period
- Travel 5% of the time, or when job requires.

The above statement reflects the general details considered necessary to describe the principal functions of the job identified and shall not be construed as a detailed description of all the work requirements that may be inherent in the job.

<b>APPROVAL:</b>		
<b>TYPE OR PRINT NAME</b>	<b>TITLE</b>	<b>SIGNATURE</b>

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**Employee Signature**

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**Date**