

Mechanical Drafter – Power Distribution & Control Products

Position Summary

The Mechanical Drafter is responsible for creating, modifying, and maintaining engineering documentation, 3D models, fabrication drawings, assembly drawings, installation drawings, and bills of material (BOMs) for low and medium voltage power distribution equipment and packaged electrical systems.

This position supports the mechanical design of:

○ Panelboards	○ Medium Voltage Metal-Clad Switchgear
○ Switchboard/Switchgear	○ Medium Voltage Metal-Enclosed Switchgear
○ Automatic/Manual Transfer Switches (LV/MV)	○ Medium Voltage Circuit Breakers
○ Disconnect Switches, Load-break Switches	○ Medium Voltage Load-Break and Disconnect Switches
○ Transformers	○ E-House & PDC
○ Motor Control Center (MCC)	○ Integrated Power Rack/Skid (LV/MV)
○ VFD & Soft Starter Packaged Solutions (LV/MV)	○ Energy Storage

The Mechanical Drafter works closely with mechanical engineers, electrical engineers, manufacturing personnel, project managers, sourcing teams, and quality personnel to develop accurate engineering documentation that supports fabrication, assembly, testing, shipping, installation, and commissioning activities.

Key Engineering Responsibilities

Product & Application

Serve as a mechanical engineering resource supporting packaged electrical equipment and power distribution systems including switchboards, switchgear, MCCs, transformers, transfer switches, E-Houses, power skids, and battery energy storage systems.

- Create and maintain detailed 3D CAD models and assemblies utilizing Autodesk Inventor & AutoCAD.
- Produce engineering documentation including:
 - Fabrication drawings
 - Assembly drawings
 - Installation drawings
 - General Arrangement (GA) drawings
 - Structural drawings
 - Detail drawings
- Generate and maintain accurate bills of materials (BOMs).
- Create sheet metal flat patterns and fabrication drawings.
- Develop enclosure and equipment layouts based on engineering requirements.
- Prepare manufacturing documentation packages for production release.
- Incorporate engineering markups and revision changes into engineering drawings and CAD models.
- Verify drawing completeness and consistency before release.
- Create exploded assembly views and installation details to support manufacturing and field installation activities.
- Generate equipment layout drawings for E-Houses, switchgear lineups, and integrated power systems.
- Support creation of lifting, rigging, shipping, and handling drawings.
- Maintain engineering drawing libraries and standard design templates.

CAD Modeling & Design Support

- Assist mechanical engineers with development of:
 - Equipment assemblies
 - Structural frames

- Sheet metal components
 - Equipment supports
 - Mounting systems
- Develop 3D models of:
 - Enclosures
 - Structural assemblies
 - Bus support systems
 - Equipment integration layouts
- Generate manufacturing-ready drawings from approved engineering models.
- Apply company drafting standards, drawing conventions, and CAD best practices.
- Support tolerance definition and GD&T implementation as directed by engineering.
- Ensure dimensional accuracy, material specifications, and fabrication requirements are properly documented.
- Coordinate with engineers to resolve drawing conflicts and improve design documentation.
- Support design revisions throughout project execution.

Manufacturing Support

- Support fabrication and assembly teams by providing accurate engineering documentation.
- Update drawings and BOMs to reflect approved manufacturing changes.
- Assist in resolving manufacturing questions related to:
 - Drawing details
 - Dimensions
 - Part identification
 - Material specifications
 - Assembly requirements
- Support engineering change order (ECO) implementation activities.
- Maintain revision control and document traceability.
- Participate in design reviews and manufacturing review meetings.
- Assist in preparation of as-built documentation packages.
- Coordinate with purchasing and manufacturing personnel regarding drawing discrepancies and documentation updates.

Internal Customer Support

- Assist engineering teams in preparation of technical documentation packages.
- Prepare drawing updates based on customer comments and engineering review feedback.
- Support generation of installation and field service documentation.
- Maintain professional communication with internal departments and external suppliers regarding engineering documentation.

Required Qualifications

- Associate degree in Drafting Technology, Mechanical Design, Engineering Technology, CAD Technology, or equivalent experience.
- 1+ years of drafting or CAD experience in industrial equipment, power distribution equipment, electrical equipment, structural systems, or related industries.
- Proficiency with:
 - SolidWorks
 - Autodesk Inventor
 - AutoCAD
 - Microsoft Office
- Knowledge of:
 - Mechanical drafting principles
 - Engineering drawings

- Manufacturing documentation
 - Sheet metal design practices
 - Structural steel detailing
- Understanding of:
 - GD&T fundamentals
 - Engineering revision control
 - Bill of Material (BOM) development
 - Manufacturing and fabrication processes
- Ability to read and interpret:
 - Mechanical drawings
 - General Arrangement (GA) drawings
 - Electrical one-line diagrams
 - Equipment layouts
 - Engineering specifications
- Strong attention to detail and organizational skills.
- Ability to manage multiple assignments in a fast-paced engineering environment.

Preferred Qualifications

- Experience supporting:
 - Switchgear
 - Switchboards
 - MCCs
 - E-Houses
 - PDCs
 - Integrated Power Skids
 - Battery Energy Storage Systems
- Experience with:
 - Product Data Management (PDM) systems
 - Product Lifecycle Management (PLM) systems
- Familiarity with:
 - Sheet metal fabrication
 - Welded structures
 - Mechanical packaging
 - Modular equipment design
- Exposure to:
 - UL-listed equipment
 - Industrial control systems
 - Utility equipment
 - Data center infrastructure products

Core Competencies

- The successful candidate will demonstrate:
- Advanced CAD modeling and drafting skills
- Technical drawing development
- Engineering documentation accuracy
- Attention to detail
- BOM development and management
- Revision and configuration control
- Sheet metal and structural drafting knowledge
- GD&T fundamentals
- Manufacturing documentation support

- Cross-functional collaboration
- Time management and project execution
- Quality-focused work habits

Key Performance Expectations

Success in this position will be measured by the accuracy and completeness of engineering documentation, timely completion of assigned drawings, effective support of engineering and manufacturing teams, proper implementation of revisions and engineering changes, maintenance of CAD standards and document control requirements, and contribution to delivering high quality, manufacturable, and compliant power distribution products.