

Title: Principal Mechanical Engineer
Division: Design, Engineering & Construction (DEC)
Reports to: Director, Design & Engineering
Location: Santa Clara, CA
Job Status: Full-Time

About Vantage Data Centers

At Vantage, we run some of the most customizable and scalable data centers in the world, with a meticulous focus on efficiency, operational excellence, reliability, testing, and maintenance. With campuses in Santa Clara CA, Quincy WA and Ashburn VA, we support the most demanding of large enterprises, technology companies and service providers. Vantage Data Centers was founded on the principle that modern-day data center design should evolve in innovative ways that lead to dramatic gains in energy efficiency. Years later, we're still leading that charge. It's through our focus on efficiency, collaboration, and operational expertise that our customers and company continue to excel.

DEC Department

The Design, Engineering & Construction (DEC) team is responsible for the entire process flow of delivering data centers from conception through commissioning, working with Sales, Operations and management along the way. DEC also works closely with partner contractors to come up with a vertically integrated design and manages these partners to success through technical feedback and review, and actively participating in review of schedule and budget. Many times, a role like this at other companies is purely oversight. One thing that distinguishes Vantage is that our technical staff is given the responsibility and authority to directly drive the process. When compared to external resources, our internal team can align long-term operational sustainability with value engineering and cost metrics to deliver products aligned with corporate goals. This approach empowers each member of the team to drive high- impact decisions and even more impactful results.

Position Description

Vantage is looking for a Principal Mechanical Engineer to lead design and engineering for the largest individual cost center within the construction process and become engaged in all technical aspects. You will be presented with complex engineering challenges and be asked to bring them to resolution with all the tools at your disposal. You will architect, engineer and design new products, system topologies and ensure existing standards are executed and enhanced for each project. You will evaluate designs and provide engineering analysis to balance CAPEX and OPEX costs.

Vantage has a very collaborative work environment and you will need to assume responsibility to interface and coordinate with internal and external stakeholders, customers and contractors. Vantage's DEC team is engaged in the company's sales process and we leverage our internal engineers to cater our product offerings to meet the ever-evolving needs of our customer base. This means you will work with the subject matter experts of our customers to translate requirements to tangible solutions. Your role will have a meaningful impact on the bottom-line profitability and success of the company.

Essential Job Functions

- Architect electrical system topology using Vantage's internal financial modeling tool to select best solutions for the business
- Aide in design and engineering of new and emerging technologies, product development, and patents
- Interface and manage electrical design and design-build contractors on a per-project basis
- Oversee review process of engineering studies of all types
- Visit job sites for field investigations and coordination meetings

Duties

- Provide oversight and review of project plans, equipment and system submittals
- Coordinate heavily with internal engineering team across all disciplines to ensure products delivered to Operations is streamline and optimized to meet the needs of the business across all functions
- Conduct value engineering analyses, and provide system recommendations based on ROI and IRR analysis
- Participate in product development process flow from idea to implementation and work with team to apply for and obtain patents for the company to retain its IP
- Attend project design team meetings and ensure product constructed meets engineering standards and specifications
- Work closely with Operations to find a balance between cost-effective solutions & operational sustainability
- Project coordination and commissioning support
- Develop and/or set minimum requirements for complete sequence of operations for all designed systems
- Utilize engineering analysis programs and professional judgment to analyze the following:
 - CFD (computational fluid dynamic) studies
 - Rack layout optimization
 - Psychrometric chart evaluation
 - ASHRAE extreme annual design day temperatures and relative impact to supply air temperatures
- Help set standards for mechanical commissioning efforts and ensure compliance on each project
- Support Sales during tours, RFP response, both standard and bespoke solutions, and customer meetings
- Additional duties as assigned from time to time by management

Job Requirements

- Bachelor of Science in Mechanical Engineering, or equivalent, from an accredited university or college
- 10 years of experience in mechanical design and construction required, 15+ years preferred
- Registration as a US-based Professional Engineer (P.E.) required
- Data Center and/or mission critical experience is required
- Proficient in AutoCAD, Excel, Word and Sigma6 modeling software
- Working knowledge of critical cooling infrastructure within a data center
- Working knowledge of all building codes and ordinances, including CBC and ASHRAE
- Firm understanding of air side and water side systems and components
- Travel required is expected to be 10 to 15%, but may increase over time as the business evolves

Candidates should submit resumes to: jobs@vantagedatacenters.com. Include the position name in the subject line.