

## **JOB DESCRIPTION – GAS GENERATION DESIGN ENGINEER**

Job Title	Gas Generation Design Engineer
Date Reviewed	February 2021
Responsible To	Project Director
Responsible For	Design Function for all Gas Generation Projects
Location	Maidenhead

### **Business Profile**

AVK are the UK's leading provider of critical power systems and maintenance that guarantee reliable power. For 31 years we've been supplying UPS systems, standby diesel generators and more recently Battery Storage and Gas Generation solutions providing our clients with reliable back-up power schemes for their mission critical services & systems.

We are trusted by many of the UK's largest Data Centre operators, Finance & Banking providers and Telecommunications companies to design, install and maintain 100% power integrity by providing diesel/gas generators, uninterruptible power systems, battery storage, switchgear, protection relays and turnkey solutions.

AVK specialise in all aspects of the design, planning, implementation and on-going maintenance of critical power systems. We provide solutions for standard or large scale bespoke applications, covering all project sizes from £1k up to £30m. Our extensive and growing client base reflects our highly regarded reputation for both quality and service.

### **Overview**

We are now entering a new market for providing standby power systems using high speed and medium speed gas generators to support major data centre facilities with ratings of 10-100MW.

We require an experienced gas generation design engineer to work on new data centre opportunities for standby gas fired generation systems with a formal mechanical engineering qualification with electrical knowledge.

### **Role Summary**

The Mechanical Gas Engineer would be responsible for the design of mechanical support systems on Gas and Generator projects ensuring compliance with both project specifications and industry standards. The Mechanical Gas Engineer also assists in the development and improvement of engineering processes, best practices and supports the business development group. This role has responsibility for quality, process and the high standards our customers expect. The role is based at our Head Office in Maidenhead with frequent travel to client sites and supplier premises.

## Responsibilities

	Design of gas generation equipment. 1500RPM high speed. 750RPM Medium speed Peak lopping or capacity market experience is an advantage.
	Management of key suppliers, engineering interface
	Ownership of Project from an Engineering perspective, working with the Project Manager and CAD Design team
	Centre of Excellence for all in house Gas Design
	Provide up front technical support to the sales department on the specification and design of Generator systems, specifically focussing on mechanical packages (i.e. Gas Storage & Supply Systems, Cooling Systems, Ventilation Systems, Vibration Transmission, Exhaust Management Systems, Acoustic Attenuation, etc.)
	Assist sales department in the preparation of technical proposals & submissions including; review of client specifications, generation of technical compliance statements, development of proposal drawings and preparation of initial design documentation.
	Take responsibility for the specification & design of mechanical packages on Gas & Generator projects from project handover to completion, providing technical support throughout to the Project Management and Commissioning Team.
	Develop design documentation (drawings, technical data sheets, control philosophies, reference calculations, etc.) in line with project requirements and timescales
	Assist Project Managers with generation of project specific Method Statements and Risk Assessments in accordance with project specifications.
	Generate Factory Witness Test procedures and associated test documentation in line with project specifications and industry standards.
	Develop and write Site Acceptance Test procedures and associated test documentation in line with project specifications.
	Attend client and supplier design meetings as required thought out project cycle, from pre-sales to project completion.
	Provide Projects Administrator with the necessary technical documentation required to complete project O&M Manuals (i.e. as built drawings, datasheets, etc.)
	Identify and lead Technical Studies on both new and existing technologies relevant to Gas Generator Systems
	Where necessary, provide technical assistance during project installation.

## Person specification

<b>Key skills and knowledge</b>	<b>Desired/Essential</b>
Formal mechanical engineering qualification with electrical knowledge	Essential
2-5 years' experience working as a Mechanical Design Engineer. Delivering Gas Generation Schemes	Desired
Good knowledge of fluid transfer systems, ventilation systems, material selection, project management principles, CDM principles, etc	Desired
Basic understanding of electrical distribution systems and components, electronic control systems and components, etc	Desired
Ability to complete technical studies and present findings to both technical and non-technical stakeholders	Desired
Ability to interpret and generate technical design documentation eg, drawings, technical data sheets, control philosophies, equipment schedules, design calculations, etc	Essential
Ability to communicate professionally in interactions with clients, consultants, main contractors and suppliers at senior level	Essential
Ability to manage time effectively, working on multiple concurrent projects, ensuring design documentation is produced in line with project and quality requirements.	Essential
Excellent MS Office and MS Project skills.	Essential
Good knowledge of 2D and 3D CAD software, specifically AutoCAD, Revit	Desired
Commercial awareness	Essential
Ability to meet timescales and programmes	Essential
Process driven to achieve objectives and milestones	Essential
Understanding of submissions and approval process during design and be able to identify value engineering opportunities	Essential
High voltage awareness	Desired
Able and willing to travel abroad to witness Factory Acceptance Testing on UPS & Generator systems (typically 3-5 days per test including travelling time).	Essential
Full UK driving licence	Essential