



**CMCA** Limited

**Innovative solutions  
for extreme environments**

## History Briefing

Since its formation in 1998 CMCA has built an enviable global reputation for the provision of high performance, reliable air conditioning solutions capable of operating in the most extreme environments. It designs, manufactures and delivers specialist air conditioning systems and auxiliary power supply units, as well as providing expert technical support, to the highest possible standards.

Within two years of working out of a dedicated design and manufacturing facility in County Durham in the north east of England the company had successfully completed several key projects for the UK Ministry of Defence as well as Thales Defence Systems and BAE Systems.

Assessed and accredited as conforming to the quality assurance standard ISO 9001:2000 CMCA has used its unique expertise in design, project delivery and support in building a planned and sustained period of growth securing major contracts around the world.

In 2003 the company established an office in Santiago, Chile through which major projects with the Chilean Government have been secured. The Chilean office also allows CMCA to test its products in some of the most extreme environments on earth.



*CMCA's office in Santiago, Chile*

**EXTREME**  
versatility





**JFACHQ** established the company as a key supplier to the UK Ministry of Defence. The brief was, within four months, to design and manufacture a new generation of air conditioning system for a command and control complex known as JFACHQ (Joint Forces Allied Command Head Quarters). CMCA developed and manufactured the C250-S mobile air conditioning unit and the air distribution systems within the MOD's program and in doing so gained major recognition for its products and services. Shortly after delivery to the MOD the JFACHQ system was deployed to the Middle East where it performed exactly to specification.

### UK Ministry of Defence Rapid Deployment

**Projects:** Following on from the JFACHQ project the C250-S was specified for other rapid deployment applications. Through these projects the C250-S gained a reputation for its reliability to perform in extreme environments, conditions in which many other established air conditioning systems failed to function. Utilising the same technology as the C250-S, CMCA developed the C120-S for smaller applications. These projects included conditioning field hospitals, communication complexes, aircraft and their sub systems.

**Aircraft Cooling :** A variation of the battle proven C120-S mobile air conditioning systems saw the introduction of the C120-X specifically designed for cooling aircraft on the flight line. This unit can take in ambient air up to +55 deg C, cool the air down to approximately 20 deg C, and then deliver the conditioned air to an aircraft and its electronic systems. The C120-X allows aircraft to remain in a state of operational readiness despite the harsh environments it may be operating in.

**Radar and Communication Systems:** To date, over 100 packaged air conditioning units and their associated control systems have been supplied by CMCA to the UK Ministry of Defence for installation into unmanned strategic radar and communication sites. These sites are routinely exposed to extreme weather conditions in remote areas. It is therefore absolutely critical that the air conditioning systems are reliable and maintain a stable environment around the sensitive electronic equipment they are there to protect. These units have a proven performance record which is supported by CMCA's comprehensive, product support package.

**Chilean Army:** The company has supplied over 200 packaged air conditioning/filtration units for use with Leopard 1 main battle tanks and several other military vehicles in service with the Chilean Armed Forces . These units are operating on a daily basis and must cope in a wide range of environments from the extreme cold of Patagonia to the extreme heat, altitude, and volcanic dust of the Ataplano desert. Through such projects CMCA has gained approved supplier status with the Chilean Ministry of Defence.



## Power on Demand

CMCA's Power Products Division personnel, have a long history of providing high quality Military Mobile Generators and Auxiliary Power Units (APU's) to the UK, NATO and International defence forces. They draw on unrivalled experience to produce modern, state of the art, efficient electrical power systems which offer the customer the ultimate combination of performance, versatility, reliability, and above all, value for money. CMCA has the capability and expertise to provide extremely technically sophisticated power generation and distribution systems to exacting military standards, including all aspects of Integrated Logistic Support (ILS).

The very latest diesel engines and alternators are combined with purpose designed and built control panels to provide all of the functionality and performance sought by the customers' system specification. Proud of the Company's proven record for supplying highly reliable military air-conditioning installations, the Power Products Division utilises the same principles of design excellence.

Other areas of specialist design and manufacture include the supply and fitting out of shelters and containers, electrical distribution systems, control boards, cable manufacture, feeder pillars, and a whole host of supplementary electro-mechanical work. Beyond design and manufacture, repair and refurbishment contracts can also be undertaken with a full military-style Contractor Logistic Support (CLS) package on offer. Everything can be fully supported in operation, including servicing and repairs. CLS engineers are available under this cover on a 24 hour, 365 day basis, anywhere in the world

All types of Power Products are supplied, such as Generators from 1kW to 1MW, On-board vehicle Auxiliary Power Units (APU's) (AC and DC). Pumps, Welders, Mobile Battery Chargers and 28v dc generators, Aircraft Starting Units and Ground Power Units (GPU's) as well as electrical distribution systems, Splitter Boxes and Feeder Pillars.

Added to its wealth of generator design experience, CMCA also has considerable expertise in EMP and full nuclear hardening requirements as well as counter-surveillance aspects, including acoustic, thermal, EMC, and radar signature reduction techniques.





**Multi functional In-house Resource**

From enquiry through technical design to manufacturing, integration, user training and product support, it's all handled internally. Innovation and creativity are strong themes in the growth of the business. They are evident throughout the workforce of CMCA and are critical to the continued success of the company. Through the ideas and energy of its people, the company has grown on the principle of meeting the needs of its customers. Their ever-changing requirements are the driving force behind the development of all our products, technologies and support services.

**In-house Resources/Core Skills Include**

- Technical sales/application engineering
- Design engineers/CAD/system modeling
- Project planning/management (ensures projects are delivered to specification, budget and schedule)
- Resource planning/procurement
- Manufacture/assembly
- Testing facilities
- Training facilities for CMCA personnel and customers
- Product support

**Thermal Analysis Capability**

An understanding of the particular, specific needs of the customer starts with an assessment of the application then converting this data into a thermal or power model through which the air conditioning or generator solution can be designed and applied. This model allows both CMCA and its customer to vary design parameters, assess the cause and affect of operating in extreme environments and consequently design the optimum system to provide the perfect solution.



**A GLOBAL  
reputation**

## Our Philosophy and Expertise

A combination of passion for excellence and a true understanding of the market and its problems have ensured the continued growth and success of CMCA. The company is young, vibrant, fast moving and flexible with a proven willingness to change in recognition of a changing world and its culture.

Working in three product sectors, temperature control, power generation and water supply all CMCA products are designed to operate successfully in extreme operating environments. Conditions in which commercial systems cannot function.

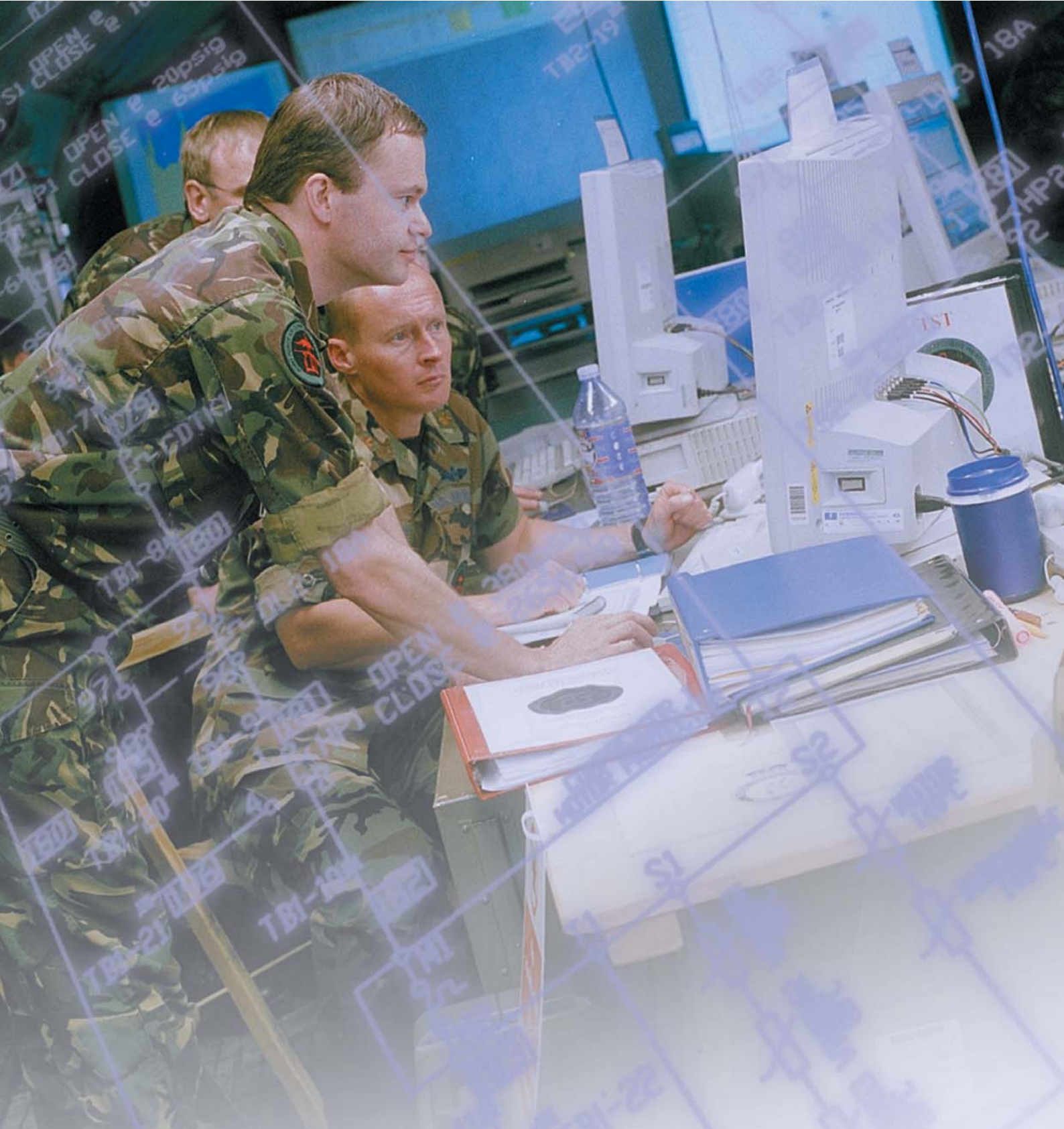
A combination of the right expertise and services enabling tailor made solutions to the individual requirements of each customer. A truly consultative approach rather than 'off the shelf' solutions which fall short of meeting many customers strategic objectives.

A proven track record in delivering advanced solutions alongside a dedicated support mechanism combine to deliver truly outstanding performance in the most testing of environments.

Consistent use of in depth knowledge and experience of the market to develop an understanding of customer requirements. Not simply the production of air conditioning or auxiliary power units, but the development of solutions which ensure that customers strategic objectives are not only met, but at times exceeded.

A unique combination of quality, flexibility and engineering excellence has developed an enviable reputation with its products recognized world wide for their quality and reliability. The company is now well positioned to deliver all-encompassing bespoke solutions and support that cover every eventuality.





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