



**HVAC &  
Refrigeration  
Engineering**

## Overview

HVAC and Refrigeration Engineering Ltd is a highly successful privately owned, international provider of reliable, fit for purpose and cost effective heating, ventilation, air conditioning and refrigeration (HVACR) solutions to the oil and gas, petrochemical and marine industries.

Headquartered in Aberdeen and represented in most of the world's centres of offshore excellence we possess in depth expertise in our field and our team of highly skilled specialists in engineering design, manufacturing and field services relate instinctively to the needs of our customers, the associated industry legislation, compliance issues and the overriding importance of personnel welfare, operational safety and equipment performance.

We act as a single source supplier for many customers and offer impartial and independent advice on HVACR. Our services cover the design and manufacture of systems and equipment, supply of parts & spares, maintenance & overhaul of plant right through to the project management & delivery of complete multi-million pound engineering, procurement, installation and commissioning (EPIC) HVACR packages.

Our HVACR systems and equipment comply with a variety of worldwide industry standards and quality accreditations and our products and service offering can be found in operation around the world. All equipment & products are designed to meet extremes in temperature and climatic conditions associated with the most demanding of offshore and marine environments and onshore petrochemical facilities.

## Company Experience

We are proud of our enviable track record in delivering reliable HVACR solutions in offshore and marine environments for mobile drilling rigs, fixed production platforms, FPSOs and a diverse range of floating marine assets. We deliver all types and sizes of projects including complete system builds & upgrades, 'tropicalisation' of drilling rigs, new equipment provision or upgrades on accommodation modules, SCR rooms, engine rooms, control rooms, drilling modules, VSDs, analyser house units, temporary refuges, shelters, chemical mixing areas, metering stations and many more.

Although the North Sea remains a key market we are a truly global service provider working with customers in Asia Pacific, The Middle East, Caspian, Central Europe, Africa and the Americas. Our reputation in providing quality, reliability and cost effective solutions underpins our success in building long term relationships with many customers who engage with us in partner of choice and preferred supplier arrangements.

Countries where we have completed work include:

Norway

Germany

Holland

India

Mexico

Korea

Egypt

Azerbaijan

Libya

Kazakhstan

Nigeria

Malta

Equatorial Guinea

Trinidad

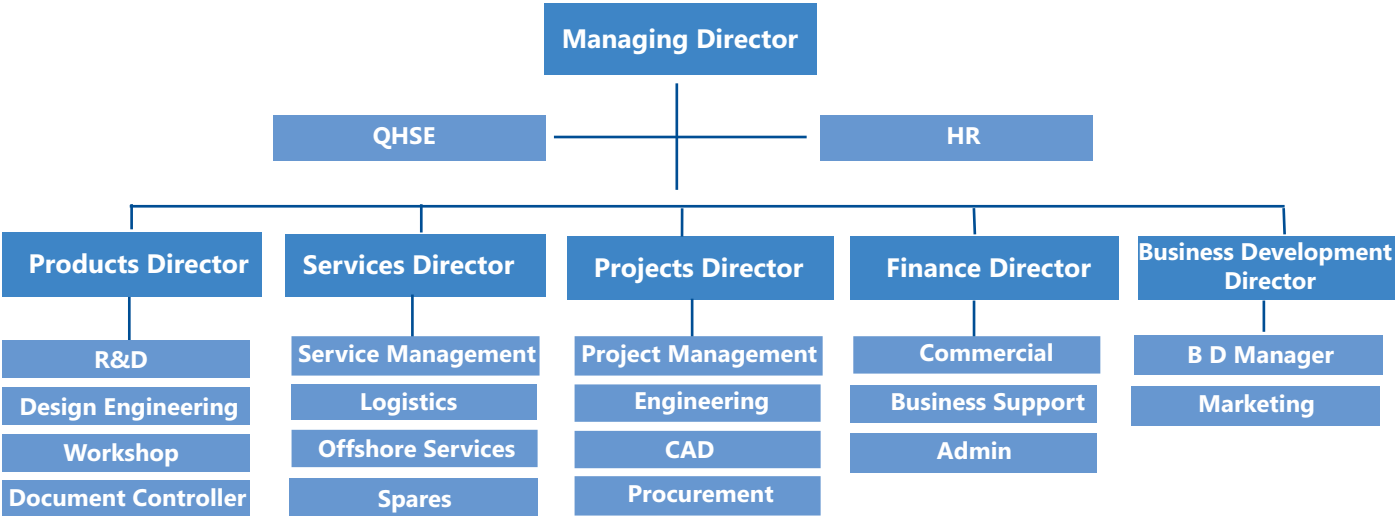
Congo

UAE



# Company Structure

HVAC & Refrigeration Engineering is structured into three divisions Projects, Services and Products, each headed up by an experienced director and leader.



For turnkey or packaged assignments each team draws on the others capabilities, expertise and know-how achieving cross fertilisation of experience which delivers unrivalled service and value for all our customers.

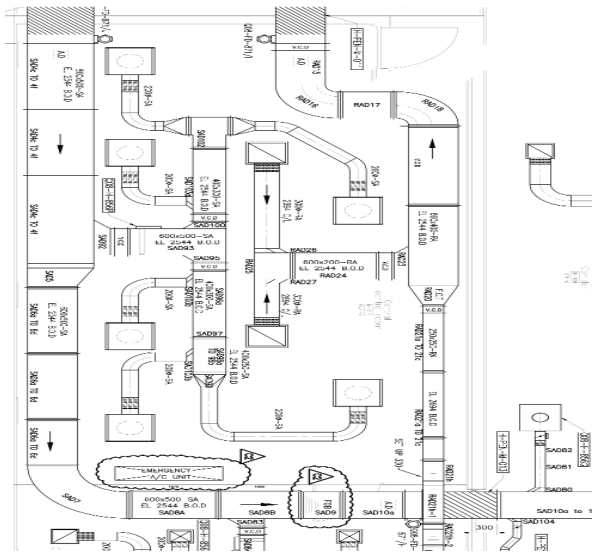
## Projects

Our Projects Division is dedicated to delivering bespoke HVACR engineering solutions to a diverse customer base of offshore and onshore asset owners and service providers around the world. We execute all types of Greenfield and Brownfield projects from small turnkey assignments to multi-million pound upgrades and new system installations. We are fully resourced in-house to provide a complete engineering, procurement, installation and commissioning (EPIC) package, managed by dedicated project managers who act as reliable, single points of contact during the entire project lifecycle.

Our project managers are responsible for coordinating all inter-disciplinary activities and interfaces relating to HVAC and refrigeration engineering and optimising project delivery, working closely with the customer. Our tailored packages focus on managing deadlines and deliverables from design and engineering to manufacture, supply and installation. Ongoing proactive interface and communication with the customer ensures that we meet quality plans, key performance indicators and project milestones.



**Complete Project EPIC Capability**



### Project Execution - from the drawing board to installation and commissioning

Starting at the CAD station our project service ranges from conceptual design to the production of detailed plans, engineering drawings, calculations, construction work packs, related documentation and certification packs working to a variety of international design standards including ISO, ASHRAE, CIBSE and NORSEK.

Design and engineering is supported by our own in-house manufacturing capability as well as our procurement expertise in sourcing and supplying 3rd party 'off-the-shelf' equipment. We also draw upon the extensive installation and commissioning expertise of our services division to provide a seamless integrated service to our customers.

We are competent to also undertake the project management of multi-facet projects beyond the HVACR scope working closely with our approved subcontractors and vendors to deliver associated works such as architectural services, structural engineering, piping, electrical, instrumentation and fire and gas engineering.

## Products

Our Products division specialise in the design and manufacture, under our brand names of Hazcool and Climarine, both a standard product range and customised bespoke equipment to meet the specific application needs of a customer. Operating from a 10,000 square foot modern facility, our dedicated team of R&D specialists, product design engineers and manufacturing specialists deliver cost-effective, tailored solutions to meet the demanding needs of offshore and marine operations. Our range of Climarine and Hazcool products meet the highest QHSE standards and comply with all appropriate industry regulations.

Climarine is our non-hazardous area equipment brand. The Climarine range of units are manufactured under ISO9001 standards and robustly designed and constructed to meet the demands of offshore and marine air conditioning and temperature control requirements. Materials and components are selected to promote long service life and optimum reliability along with standardisation of common components across the range to ensure spare parts are always readily available from stock or our supply chain.



Hazcool, our hazardous area equipment brand, is fast developing the reputation as a market leader in the production of reliable ATEX certified HVACR products.

The Hazcool product range has been specifically developed to meet the demanding and harsh offshore, onshore processing and marine environments. Hazcool products are designed using the latest 3D technology and manufactured under an ISO 9001 quality system that complies with the ATEX directive as well as the new updated Machinery Directive. In addition to providing a standard product range, Hazcool also specialises in designing bespoke hazardous area HVACR equipment, tailored to the specific demands of individual customers and operating environments. All products, standard or bespoke offer customers reliability, quality, longevity and real value for money.



Standard products in the Climarine and Hazcool ranges include air handling units, water chillers, packaged and split systems, pressurisation fans and fire dampers. The equipment ranges are extremely versatile and can be applied to drilling offices, LER / control rooms, ROV power/control rooms, laboratory modules, MWD/Mud logging units, wireline units, metering stations, accommodation modules and many other environments.

To support our product ranges, we provide customers with a full after sales service – encompassing installation, commissioning, operator training, maintenance and service. The after sales service for Climarine and Hazcool products is provided exclusively by the company's own in-house engineering and field service technicians, who are highly trained, knowledgeable and experienced personnel.

## Services

Our Services Division is dedicated and entrusted by our customers to provide complete peace of mind when it comes to the health, safety, compliance, integrity, reliability, uptime maintainability and efficiency of HVACR facilities, equipment and operations. Our experienced teams of highly skilled and specially trained engineers and technicians are available 24/7 on a worldwide dedicated support or call off basis to execute all types of work scopes.

When engaged across a range of services and on multiple owned offshore installations we aim to offer customers a dedicated support service that delivers economies of scale, standardization of service, cost effectiveness and an immediate service response to solutions provision offshore.

Our Compliance Services are designed to provide customers with a range of services including LEV testing, leak detection, FGas compliance etc to ensure assets and equipment comply with the ever increasing demands of the various Offshore and Working Environment legislation. Crucially, this includes the review and audit of all statutory HVACR responsibilities, compilation of reports and recommendations. Once our recommendations have been customer approved, we will carry out any rectification work to meet compliance and provide customers with the option to engage us on an ongoing annual management compliance service contract.



With health, safety and environmental challenges top of the agenda for all offshore operators and contractors, our range of HVAC health, safety and environmental services - ranging from engine room testing, air quality analysis, duct cleaning to noise surveys - ensures the safety, comfort and welfare of all personnel working offshore.



Installation / Maintenance / Integrity Services are core to our service offering and as experts in our field we offer our customers the assurance of niche dedicated expertise when it comes to installation of all types of HVACR equipment, maintenance and responding quickly and efficiently to unexpected breakdowns. We also undertake dedicated campaign maintenance and integrity management services incorporating systems performance monitoring ensuring down time is greatly reduced and equipment is regularly maintained to avoid unnecessary and costly down time or capital equipment replacement as a result of poor maintenance and performance measurement.

Our Services Division also manages our growing and fast expanding spares business which offers a total supply service of HVACR engineering equipment, components and parts from all the industry leading providers such as Carrier, York and Bitzer. Our Services Division also provides and supplies customers with refrigerant gases and oils and the relevant documentation to comply with the FGas Regulations.

# SERVICES

## Compliance Services

- COSHH, LEV Testing, Noise surveys.
- PFEER, Module leakage testing, Pressure relief valve audits.
- Refrigerant leak detection, Fire damper audits.
- Refrigerant conversion, Compex / ATEX surveys.
- Refrigerant gas reclaim and disposal.

## Installation / Maintenance / Integrity Services

- Reactive maintenance / breakdown Ductwork installation.
- Planned maintenance / campaign maintenance.
- Fire damper installation.
- Instrument pipe work installation, Ventilation systems installation.
- Refrigeration system installation, Mechanical equipment repair and refurbishment.

## Health, Safety & Environment Services

- Engine Room environment testing, Water treatment.
- Air quality testing & analysis, Noise surveys. Balancing surveys.
- Ductwork cleaning.

## System Performance Services

- Engine room combustion air testing, Module temperature / humidity profiling.
- Evaporator / condenser coil treatment, Vibration analysis.
- System performance audits, System load performance testing.
- System commissioning and "re-commissioning".

## Compliance Testing

HRE currently carry out separate offshore testing for our Clients on local exhaust ventilation systems, ingress testing and some duct cleanliness inspections.

We offer our clients annual HSE & compliance tests combining of the following:-

- LEV testing
- Ingress testing
- Refrigerant Leak testing
- Ductwork inspections

## REFRIGERANT LEAKAGE SYSTEMS

HRE carry out installation of refrigerant leakage systems- Now high profile with the new F-Gas regulation now becoming mandatory for assets owners to install these systems depending on refrigerant charge.

## REFRIGERANT SYSTEM CONVERSIONS

HRE carry out system refrigerant conversions to allow assets owners to comply with the new F-Gas regulation as above.



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