# AQUACULTURE AIR SYSTEMS & SOLUTIONS



















## KERR Compressor Engineers

Compressors • Vacuum Pumps • Blowers Nitrogen Generation • Fluid Power

COMPRESSED AIR, ON-SITE NITROGEN & FLUID POWER PRODUCT SPECIALISTS IN SCOTLAND FOR OVER 40 YEARS





Compressed air, on-site nitrogen and fluid power product specialists in Scotland for over 40 Years, we provide a reliable, professional, quality service and are an experienced supplier to the Scottish Aquaculture community.

5-Star rated on Google, an experienced supplier to the Scottish Aquaculture community and the UK's number 1 Authorised Distributor for KAESER HPC, we are proud of our reputation as a respected and recommended provider of quality products, parts, solutions and services. Specialist KAESER products are used in the whole value chain of Aquaculture from hatcheries, over grow out facilities, on land as well as offshore. From the first point of contact, we believe in continuity of care, courtesy and professionalism.



Our specialist compressed air engineers are multi-skilled, factory trained and have a wealth of experience installing, servicing and maintaining compressed air systems. With the resources and ability to respond to any situation or requirement at short notice; we provide professional service and support of the highest quality to customers 24/7 and 365 days a year throughout Scotland.



**e-power**Ask about our **emmissions-free**,

Ask about our **emmissions-free**, whisper-quiet **e-power** electrive drive **MOBILAIR** portable compressors





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# Specialist Air Solutions for Onshore & Offshore Aquaculture Applications



SCREW COMPRESSORS • LOW PRESSURE BLOWERS • QUALITY AIR TREATMENT

VACUUM SYSTEMS • MOBILAIR PORTABLE COMPRESSORS • PIPEWORK SOLUTIONS

**KERR** Sales & Service Centres in:

**GLASGOW • PERTH • ABERDEEN • INVERNESS** 



Operators of fish farms, whether onshore or offshore, depend on a reliable, quality supply of low pressure air and compressed air for a variety of specialist Aquaculture equipment, systems and processes.



## **HOW IS COMPRESSED AIR USED IN AQUACULTURE?**

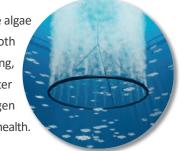
Low pressure air and compressed air is used in a variety of different Aquaculture applications:

**BUBBLE CURTAINS:** When a jellyfish or algae bloom threat is reported or identified, a compressor is activated to deliver air to an underwater delivery system that produces a ring of air bubbles around the sea pen. The rising bubbles and water turbulence effectively create a 'curtain', preventing algae or jellyfish from entering the fish pen. The natural marine current then drives the threat alongside the bubble curtain until it passes safely beyond the farm.



FEED BARGES: Feed barges are essential for the efficient operation of modern offshore fish farms. Some are capable of carrying up to 850 tonnes of feed. Innovative and efficient rotary blower technologies from KAESER generate the airflow required to deliver the feed into the farming pens. Feed barges may also be equipped with a rotary screw air compressor for Sea Pen Aeration (SPA) systems, bubble curtains or airlift systems to remove morts from the pens.

**SEA PEN AERATION (SPA):** Two major problems of sea pen farming are algae blooms and oxygen deficiency. Sea Pen Aeration (SPA) systems can solve both problems at the same time. A compressor is used to blow air into a diffuser ring, this generates an upward flow within the pen that lifts cool, oxygen-rich water from the depths into the sea pen. The rising bubbles also increase the oxygen saturation of the water, thus lowering the feed conversion ratio improving fish health.



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**FISH PROCESSING:** Once fish stock is harvested, it must be processed quickly and efficiently. Fish processing systems are pneumatic applications. Accurate automated conveying, sorting, gutting and processing systems operated by compressed air and vacuum helps to reduce failure rates and results in a reduction of manpower on manual cleaning lines. Exhausters facilitate efficient operation of suction lines for quick and effective gut / waste removal.

**AIRLIFT SYSTEMS:** Dead fish are vectors for diseases and infections, causing further mortality if not removed effectively and efficiently. The most reliable and efficient prevention is removing the morts via an airlift system. Here, a conical device supplied with compressed air is placed at the deepest point of an aquaculture pen. A rotary screw compressor provides the air required to retrieve and transfer the remains and waste through tubing onto a support vessel.







A range of reliable KAESER air products are specifically designed and built to provide maximum durability in Aquaculture environments and ensure maximum process reliability to minimise the risk of downtime.

#### SPECIALISED AQUACULTURE PRODUCTS & SOLUTIONS

Durable, reliable, energy efficient Aquaculture products for onshore & offshore applications:

**ROTARY SCREW COMPRESSORS:** deliver a reliable and efficient supply of quality compressed air. They are the preferred choice for users requiring constant pressure over prolonged periods. In Aquaculture applications they are preferably used to supply PSA oxygen generators with compressed air, to form bubble curtains against algae or jellyfish incursion, or to create artificial up-welling in order to lift cool water from deeper layers up to the surface.



mobilar portable compressors: Compressed air whenever you need it, wherever you need it — even under the toughest offshore conditions: specially designed and modified powerful mobilar Portable Compressors with advanced, fuel efficient engines and heavy-duty construction are available in a wide range of models and configurations (incl. e-power). Simple and intuitive operation & optimal maintenance point accessibility prevents unnecessary downtime.

ROTARY BLOWERS & EXHAUSTERS: Low-maintenance, highly reliable KAESER Rotary Blowers deliver pressurised air quietly and efficiently for multiple Aquaculture marine applications. These include the pneumatic conveying of bulk loads, for on-board wastewater treatment, bubble curtains and in anti-heeling systems. Two innovative KAESER design concepts help to meet your specific requirements, OMEGA Rotary Lobe Blowers and SIGMA Rotary Screw Blowers.





AESER

SPECIALIST AIR TREATMENT: Refrigerant Air Dryers and Compressed Air

**Filtration** ensure dry, clean, quality compressed to ISO Standards by removing potentially harmful contaminants from the supply and combating the enemies of compressed air applications- water, oil and dust. Dryers, filters and specialist air treatment equipment provide effective, reliable protection against condensate damage or contaminants affecting systems, processes and productivity.

AIR STORAGE & PIPEWORK SOLUTIONS: Air receivers store and maintain large volumes of compressed air at pressure. Practical, versatile and cost effective, the EQOfluids range of aluminium tube and stainless steel pipe system products provide advanced solutions for the distribution of compressed air, nitrogen and industrial fluids The smooth bore drastically reduces pressure losses in relation to traditional galvanised piping and the versatility of the range is ideal for aquaculture pipework systems.



### WHERE STANDARDS MATTER INTERNATIONAL STANDARDS & INDUSTRIAL ACCREDITATIONS















Enjoy the benefits and assurance of working with a national compressor company providing expert service at local supplier rates. Compressed Air, Nitrogen and Fluid Power specialists in Scotland for over 40 years, our international standards and industrial accreditations include:



NQA ISO 9001:2015 Accreditation - Quality Management System



NQA ISO 45001:2018 Accreditation - Health & Safety Management System



NQA ISO 14001:2015 Accreditation - Environmental Management System



CHAS Accreditation - Contractors Health & Safety Assessment Scheme



JOSCAR Registered - Fully registered on this supplier accreditation register



Avetta Assessed SSiP Approval - CDM Scope : Contractor



ECITB Safety Passports - All Kerr Engineers are accredited and certified



Achilles UVDB Verified - Safety, Health, Environmental & Quality practices and procedures (B2)



Alcumus SafeContractor Accreditation - Categories include Compressor Services, Refrigeration Systems Services plus Category Related Activities



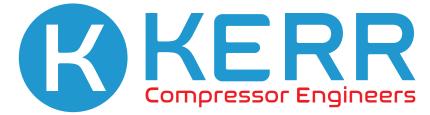
Sole Authorised Distributor in Scotland for KAESER Compressors & HPC since 1990



HPC Authorised Distributor of the Year - 13 years running (2010/11 to 2022/2023)



BCAS Member since 1998 Full & active member of the British Compressed Air Society





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