
K.LUND
OFFSHORE
An Ingersoll Rand Business
FLARE GAS RECOVERY PACKAGES
Monetize Waste Gas & Protect The Environment
With K. LUND Offshore Systems
REQUEST A QUOTE
Your Trusted Supplier for Effective Flare Gas Recovery Solutions
Ingersoll Rand Engineered systems and services
www.kl-offshore.com

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K. LUND OFFSHORE - YOUR PARTNER IN ADVANCED COMPRESSION SOLUTIONS

With roots stretching back to 1898, K. LUND Offshore has established itself as a cornerstone of excellence in the air and gas compression industry, based in the strategic oil capital of Norway, Stavanger.

Our legacy is built on providing specialized, custom-engineered air and gas compression systems that serve a multitude of sectors, demonstrating not only our rich history but also our adaptability to the evolving demands of the industry.

Our offerings encompass **a broad spectrum of rotating machinery**, from high-performance liquid ring compressors for environmentally conscious operations to robust centrifugal compressors designed for utmost durability and efficiency. Quality is the hallmark of our structural designs, ensuring that **every component withstands the rigors of industrial use while maximizing output.**

ADDRESSING GLOBAL SUSTAINABILITY IN ENERGY RECOVERY

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REDEFINING RESOURCE RECOVERY

K. LUND Offshore is at the forefront of addressing sustainability challenges within the energy sector with its advanced Flare Gas Recovery (FGR) systems. Our state-of-the-art solutions are engineered to capture and repurpose energy from waste gases—a byproduct of oil and gas extraction processes. By harnessing this spare energy, our systems play a crucial role in contributing to the industry's sustainability efforts.

These FGR solutions are more than a technological advancement; they represent a commitment to environmental stewardship. They are designed to seamlessly integrate with existing operations, significantly cutting down greenhouse gas emissions by redirecting flaring gases into productive use. This proactive approach aligns with the global shift towards sustainable energy practices and demonstrates our dedication to mitigating environmental impacts.

PIONEERING EMISSIONS REDUCTION

As the energy industry undergoes a transformative shift, K. LUND Offshore's FGR Systems are a key player in reducing emissions from conventional flaring processes. Our systems are adept at diminishing the release of harmful gases such as hydrogen sulfide, which is paramount to improving air quality and ensuring safety in operations.

Our commitment to environmental sustainability extends through every facet of our FGR systems. They are meticulously designed to capture waste gases, thereby reducing greenhouse emissions, curbing air pollution, and enhancing the safety of energy operations. With the ability to customize these solutions to meet the unique requirements of each customer, K. LUND Offshore is dedicated to paving the way for a more sustainable and environmentally conscious energy landscape.

ENHANCING PRODUCTION WITH FLARE GAS RECOVERY SYSTEMS

K. LUND Offshore Flare Gas Recovery Systems transform waste gas emissions from oil and gas production into assets for improved safety, cost savings, and environmental management.

ENVIRONMENTAL RESPONSIBILITY:

Our systems markedly lower greenhouse gas emissions, aligning with eco-friendly practices by effectively recapturing and repurposing flare gases.

OPERATIONAL SAFETY:

The technology curtails the escape of volatile organic compounds (VOCs), bolstering safety and lessening explosion risks.

COST EFFICIENCY:

Leveraging repurposed flare gas as on-site fuel minimizes external energy purchases, resulting in significant operational cost reductions.

REDUCED TAX COSTS:

Deployment of our systems may reduce fiscal burdens related to environmental emissions.

EXTENDED EQUIPMENT LIFE:

Less frequent flaring from our systems means reduced wear on flare tips and infrastructure, which translates to longer equipment life and fewer repairs.

REDUCED FLARING ASSOCIATED IMPACT:

Diminished flaring activities lead to smaller environmental footprints, with notable reductions in smoke, thermal radiation, and noise pollution.

IMPROVED SAFETY:

Our systems help eliminate routine flaring, further decreasing fire hazards and explosion risks.

ENERGY TRANSITION ALIGNMENT:

Incorporating our Flare Gas Recovery Systems showcases your commitment to sustainable energy practices and supports the global energy transition.

CUSTOMIZATION – ETO:

We provide engineered-to-order (ETO) systems tailored to meet customer specifications, ensuring optimal integration and performance.

PROJECT SUPPORT:

Our team offers end-to-end support, guaranteeing efficient operation from initial design to after-installation service.

UNDERSTANDING THE FLARE GAS RECOVERY PROCESS

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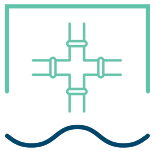

GAS COLLECTION FROM FLARE NETWORK:

Waste gases are collected through a network of piping headers, known as the flare network. These gases can come from multiple sources within the production site, such as utilities, process unit safety valves, vent gas feeds, storage tanks, and pressure control valves that maintain operational pressures.

K. LUND OFFSHORE FLARE GAS RECOVERY SYSTEM POSITIONING:

We place the FGR system upstream of the flare stack to intercept the waste gases. This strategic positioning allows for the maximum recovery of gases before they are directed to the flare and combusted.

GAS COMPRESSION:

To transport the captured gases for further use, they must be compressed from the low pressures at which they are collected to higher pressures suitable for processing or transportation. This is where our Liquid Ring Compressor comes into play, effectively increasing the pressure of the gas to meet the requirements of its next use phase, whether it be for reinjection, as fuel gas, or for other applications within the facility.

SEPARATION OF COMPONENTS:

Once the waste gases have been compressed, they are channeled into a separator vessel. Here, the gas stream encounters a demister, effectively reducing its water content. The slower gas velocity within the separator allows for gravity to facilitate the separation of condensed hydrocarbons and water.

COOLING AND ADDITIONAL SEPARATION:

Post-separation, the water is further cooled to enhance the separation process and is then recycled back to the compressor. This ensures the system operates efficiently, conserving resources. The condensed hydrocarbons, now separated from the water, are safely extracted from the system.

PROCESS WATER MAKEUP:

To maintain consistent performance, a make-up water line continuously supplies the compressor, preserving the water ring essential for the compressor's functionality.

TREATED GAS FOR UTILIZATION:

The purified gas, free from water and hydrocarbons condensate, is then routed to a subsequent processing unit or directly to the Fuel Gas header or for further compression in export gas compressors. There, it becomes a valuable on-site fuel source for the facility, ensuring no waste of potential energy, or generation gas sales revenue.

ADAPTABILITY TO DYNAMIC LOADS:

Our FGR systems are built to accommodate fluctuating flare gas volumes, ensuring stable operation during routine activities and emergency situations. This adaptability is critical for maintaining safety and efficiency in variable operational conditions.

UNDERSTANDING THE FLARE GAS RECOVERY PROCESS

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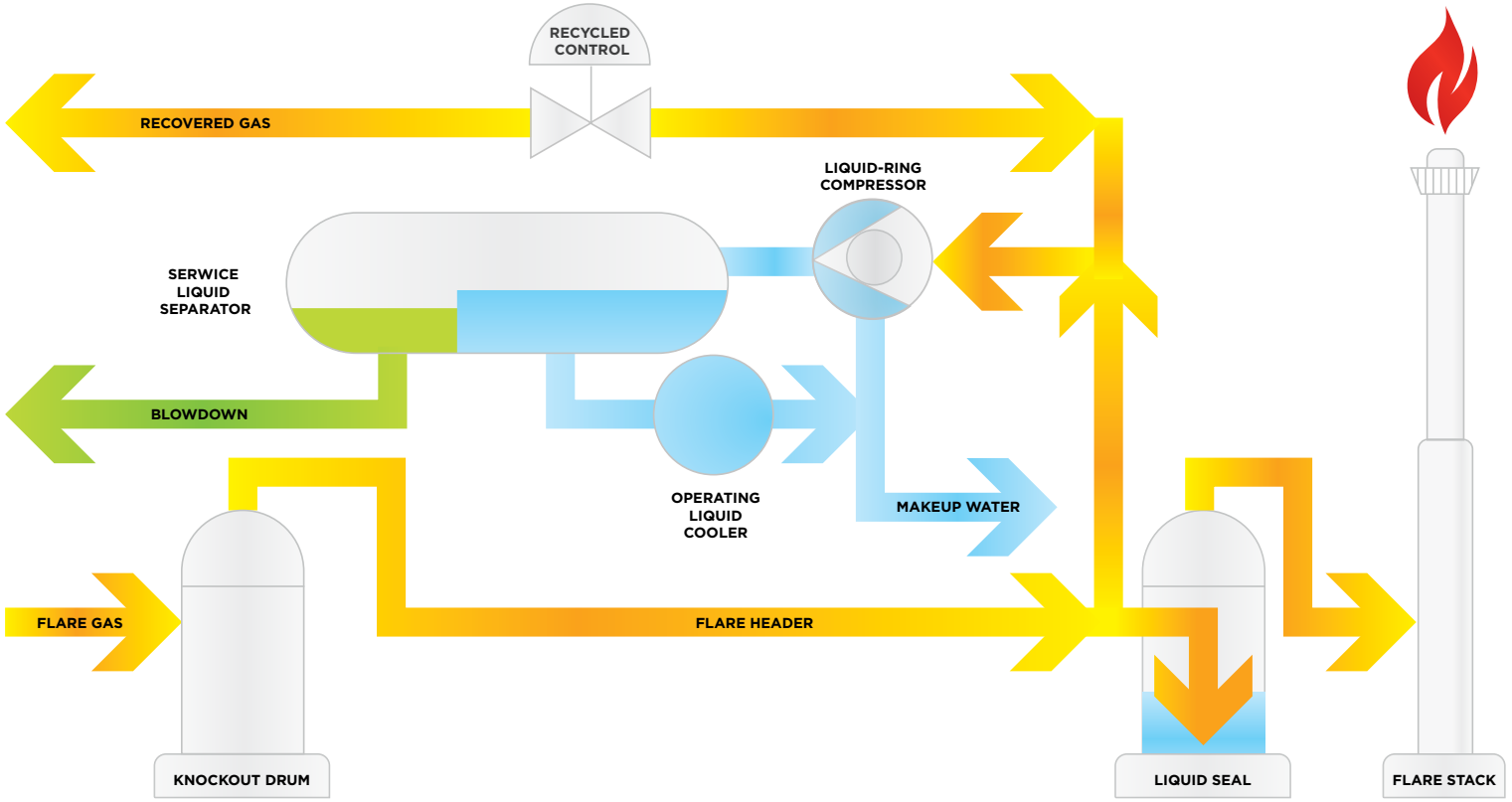
The Flare Gas Recovery (FGR) process designed is a sophisticated method of reclaiming and repurposing waste gases from oil and gas production, which would otherwise be released into the atmosphere. Flare gas recovery systems saves 20-30.000 tonnes CO2, per pack, annually – that's equivalent to 15.000 cars.

Here is an overview of the key steps in the FGR process:



ADVANTAGES OF K. LUND OFFSHORE LIQUID RING COMPRESSORS

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At the heart of K. LUND Offshore's Flare Gas Recovery Packages are our Liquid Ring Compressors, a testament to our pledge for reducing emissions and championing environmental stewardship.

By reclaiming waste gases, these compressors play a vital role in diminishing the adverse effects of conventional flaring, such as smoke, thermal radiation, and auditory pollution.

ENHANCING PRODUCTION WITH FLARE GAS RECOVERY SYSTEMS

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Flare Gas Recovery Systems (FGRS) are specialized compression packages, which aim to recover and repurpose gasses and emissions, that would normally be burned during the flaring process.

The process involves capturing the gas from the flare knock-out vessel and compressing it using liquid ring compressors. The so-recovered gases can be reused within the facility's fuel gas Systems, as refinery feedstock or for re-injection.

Technical Data & Benefits

TECHNICAL DATA*	
Flow Rate (m^3/h)	50 - 39000
Operation Pressure (barg)	up to 14
Power (kW)	up to 1000

** This data can be modified based on customer needs*

Read More

REDUCED NOISE AND VIBRATION

ENERGY SAVINGS

SAFE AND RELIABLE OPERATION

HIGH EFFICIENCY

OPERATE IN HARSH ENVIRONMENTS

ADVANTAGES OF K. LUND OFFSHORE LIQUID RING COMPRESSORS

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Key Benefits of K. LUND Offshore Liquid Ring Compressors:

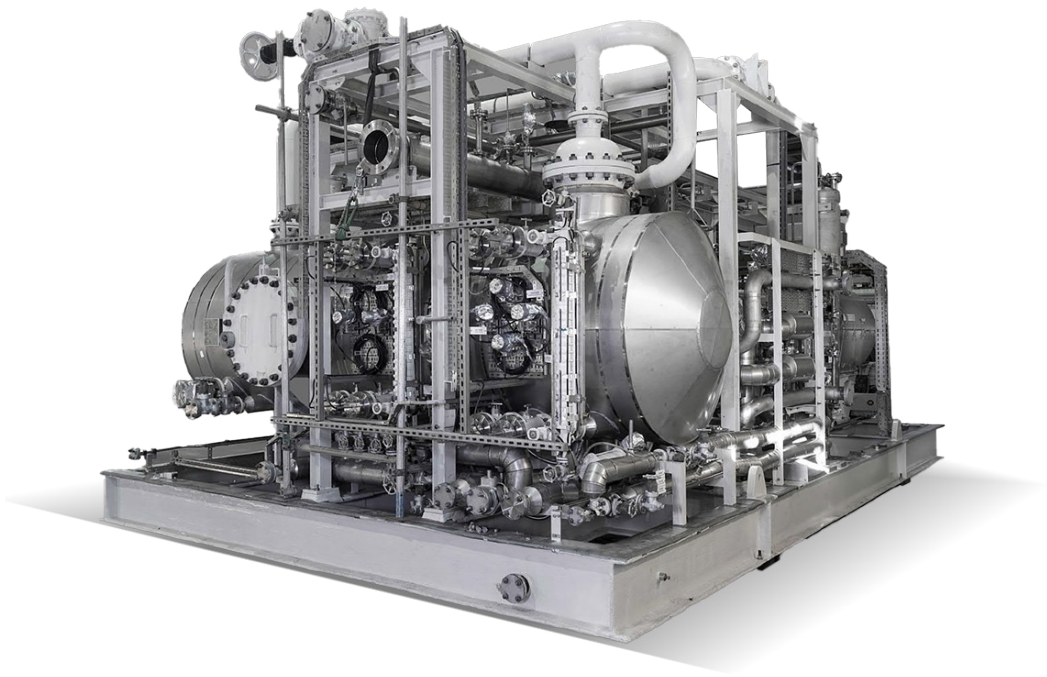
INHERENT SAFETY AND COOLING:
The operation within a liquid bath ensures that the compression process is intrinsically safe, with the added benefit of active cooling to maintain operational integrity.

ISOTHERMAL COMPRESSION:
The seal liquid's cooling effect allows for near isothermal compression, which effectively removes fine particulates from the gas stream, enhancing the purity of the recovered gases.

LIQUIDS HANDLING:
With a design tolerant of liquids, our compressors can sometimes remove the need for additional suction knock-out equipment, streamlining the recovery process.

OPERATIONAL RELIABILITY:
Engineered for low-speed operation, these compressors offer reliability with reduced noise and vibration, leading to lower maintenance requirements over time.

MATERIAL VERSATILITY:
We construct our compressors from a variety of materials, allowing us to meet diverse and specific operational requirements.



ADVANTAGES OF K. LUND OFFSHORE LIQUID RING COMPRESSORS

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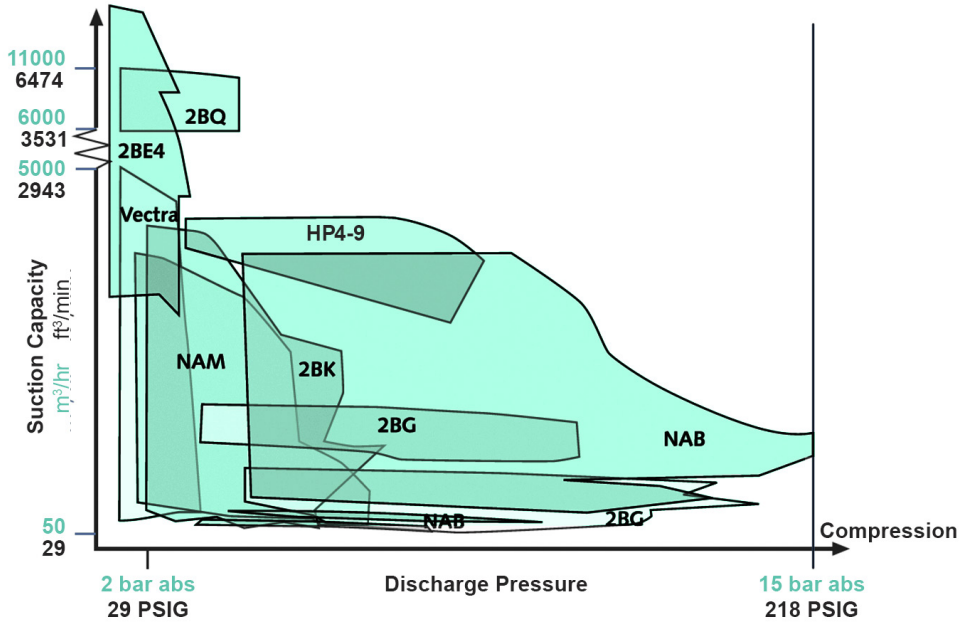
Key Benefits of K. LUND Offshore Liquid Ring Compressors:

GAS COMPOSITION FLEXIBILITY:
Our compressors are adept at handling a wide range of gas compositions, including those that are dirty, potentially explosive, or corrosive.

HIGH CONDENSATE GASES:
They are also particularly well-suited for gases prone to high levels of condensate formation.

EFFECTIVE WITH HIGH H_2S/CO_2 LEVELS:
Our compressors excel at managing gases with high concentrations of hydrogen sulfide (H2S) and carbon dioxide (CO2).

ENVIRONMENTAL AND ECONOMIC UPSIDE:
The reduction in toxic gas release not only bolsters environmental credentials but also translates to tangible economic advantages.



STREAMLINED AFTERMARKET SUPPORT FOR PEAK PERFORMANCE

EFFICIENT SUPPORT BY EXPERT ENGINEERS:

K. LUND Offshore is committed to your project's success with a full suite of service support. Our Service Engineers are proficient in the full range of equipment lifecycle services, from initial setup to routine and on-demand maintenance, leveraging our comprehensive system knowledge for optimal outcomes.

EXTENDING EQUIPMENT LIFE:

Our field overhaul program, inclusive of diagnostics, maintenance, and upgrades, is tailored to enhance your equipment's longevity and reliability, with K. LUND Offshore as the only approved distributor and service operator in Norway for Ingersoll Rand and Reavell Compressors.

AFTERMARKET SERVICE CORE:

Our Aftermarket division is fueled by our Service Engineers' expertise and our back-office team's efficiency, ensuring swift and effective technical support and customer service.

EXPERTISE THROUGH CERTIFICATION:

Service Engineers at K. LUND Offshore undergo rigorous training and certification, ensuring high-quality, consistent service across all our compressor systems.

TRAINING FOR EMPOWERMENT:

We facilitate ongoing training for our customers' teams, offering specialized courses for a wide array of equipment, ensuring they are equipped to maintain and operate their systems effectively.

CONTACT US

TRUSTED BY SOME OF THE BIGGEST BRANDS IN THE ENERGY INDUSTRY

ConocoPhillips · Neptune Energy · Archer · AkerBP · Morrow · Total · Woodside Energy · Vinson · vår energi · Alcoa · Rosenberg WorleyParsons Group · Hydro · AkerSolutions · Shell · equinor · Petrobras

CASE STUDIES: PROVEN SUCCESS IN FLARE GAS RECOVERY

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We offer several case studies that provide a detailed look at how K. LUND Offshore's collaborative efforts with customers forged successful outcomes:

EKOFISK FLARE GAS PROJECT, NORWAY

Partnering with a premier engineering firm, K. LUND Offshore delivered a custom-designed liquid ring compressor system for the Ekofisk Flare Gas initiative. This system not only achieved a remarkable 99% reduction in flaring activities but also propelled the project to completion ahead of schedule and under budget. The result was a significant decrease in CO2 and NOx emissions, alongside an upsurge in gas production and operational cost savings.

These case studies exemplify K. LUND Offshore's dedication to achieving our clients' goals through tailored solutions and strategic partnerships, solidifying our role as a trusted ally in the energy sector.

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How to contact us

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Social media

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