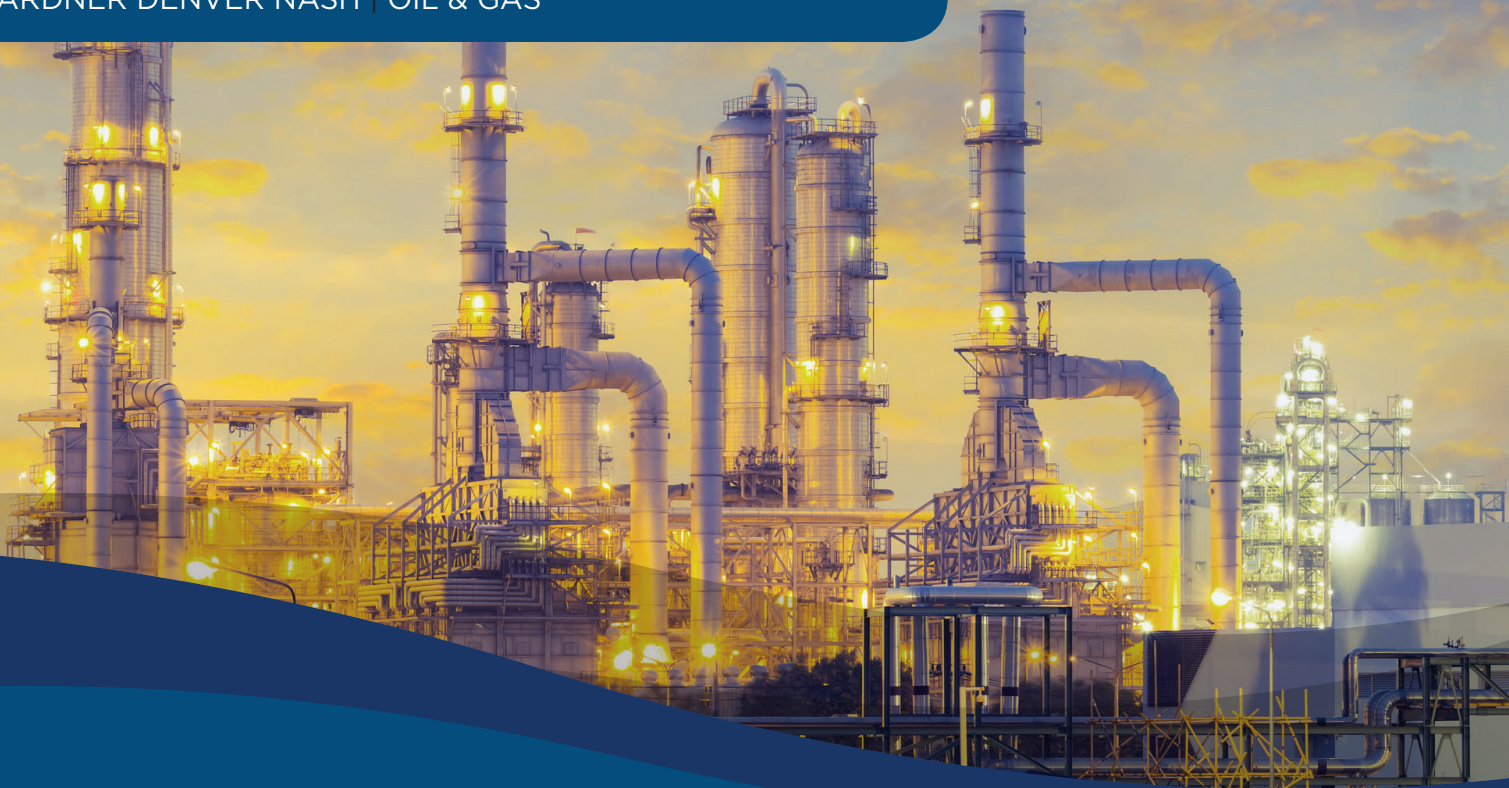




VACUUM PUMPS, COMPRESSORS & SYSTEMS FOR THE

OIL & GAS Industry





Proven Solutions. Unparalleled Expertise. A WINNING COMBINATION.

We are the original NASH® Pumps – and we prove “Smarter Works Harder.” It sounds simple, because it is. No matter the market, we provide “smarter” solutions, including:

- The highest-quality liquid ring vacuum pumps and compressors, proven to deliver the lowest total cost of ownership.
- Engineered systems designed based on decades of application-based expertise that drives performance and value for your operation.
- A global network of NASH CERTIFIED™ Service and support built to deliver immediate solutions and lower total cost of ownership.

We’re the innovator behind the original liquid ring technology. For more than 110 years, we’ve developed solutions proven to lower costs and enhance performance.

The oil and gas industry is a competitive field. May the smartest company win.

NASH® & GARO® Liquid Ring Technology for Oil & Gas Applications

For over 55 years, Nash has provided liquid ring pumps, compressors and systems to the oil & gas industry. Through strategic partnerships with Gardner Denver® and Garo, proven leaders in the oil & gas industry, Nash has advanced liquid ring technology and offers reliable, efficient liquid ring pumps, compressors and systems for the most demanding oil & gas applications.

- Highest Reliability - Design Life of 40+ Years
- Reduced Maintenance - no internal lubricant required
- Wear-free Performance - no metal to metal contact
- Minimal process upset - handles carryover even in severe applications
- Cool running - ideal for handling explosive gases, vapor recovery and other temperature-sensitive applications

Quality Sustainable Solutions

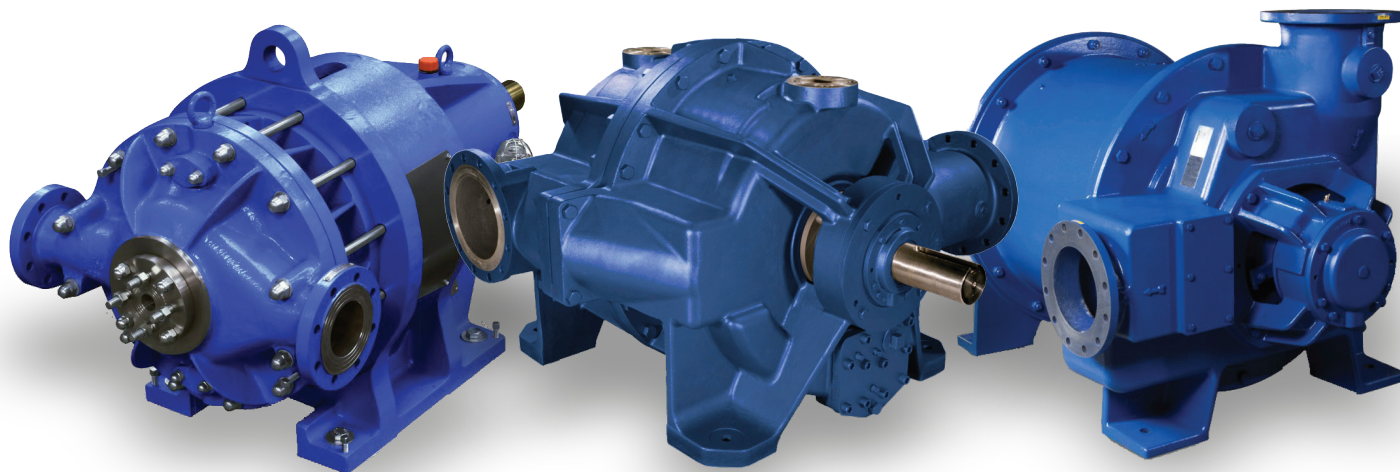
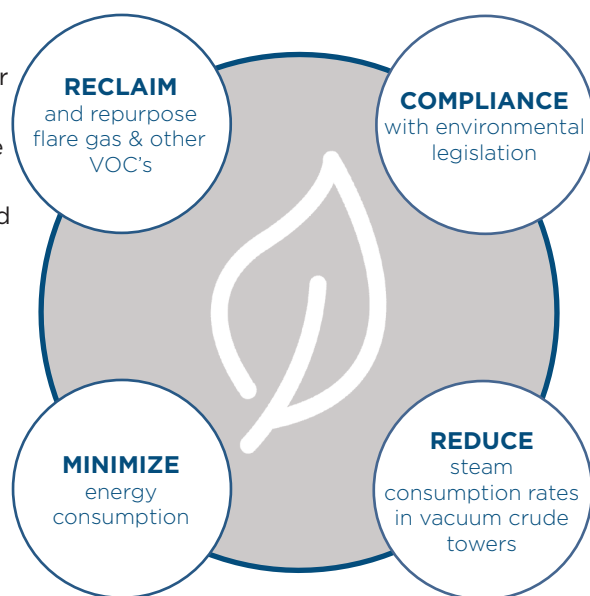
Nash is committed to providing sustainable solutions that help your company comply with environmental regulations while lowering total cost of ownership. Our products and systems reduce resource consumption and emissions, while operating reliably with minimal maintenance requirements. Together we build more sustainable and profitable refineries.

API COMPLIANT

NASH & GARO products comply with API requirements. The isothermal compression characteristic of our pumps and compressors enable NASH and GARO products to run cooler than any other technology.

ISO CERTIFICATION

In our ongoing effort to provide quality, sustainable solutions, Nash manufacturing & service facilities are ISO 9001:2008, ISO 14001:2004, and OHSAS 18001 certified.



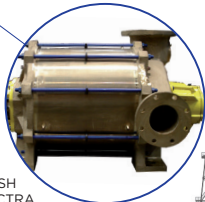
Oil & Gas Application Expertise

NASH® and GARO® have a history of reliable installations in oil & gas applications including:

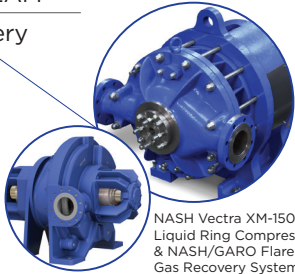
APPLICATIONS	EQUIPMENT
OFFSHORE & UPSTREAM	<ul style="list-style-type: none"> • Deaeration • Gas Compression • Vapor Recovery • MEG (Glycol) Recovery • Flare Gas Recovery • Vent Gas Compression • Wellhead Stimulation • Wellhead Recovery
MIDSTREAM	<ul style="list-style-type: none"> • NASH WELLPAK™ Engineered Packages • NASH VECTRA Pump/Compressor Series
DOWNSTREAM	<ul style="list-style-type: none"> • Vacuum Distillation / Crude Tower Vacuum Systems • Vapor Recovery • Flare Gas Recovery • Amine Treating • Coker • Fluid Catalytic Cracking (FCC) • Naphtha/Solvent Recovery • Solvent Dewaxing

OFFSHORE OIL RIGS & UPSTREAM

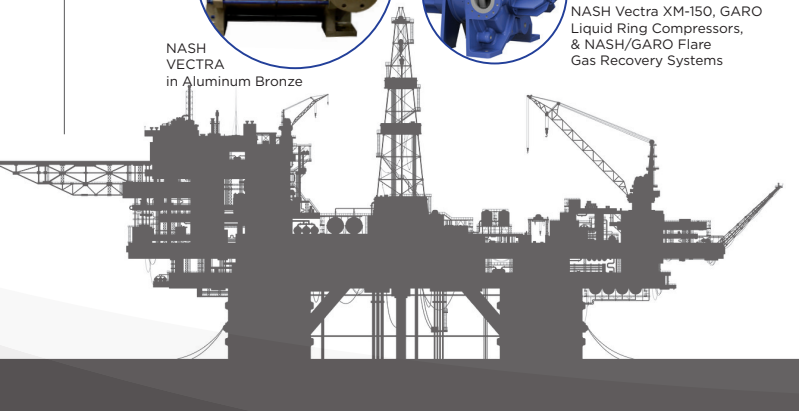
Vapor, MEG, Flare Gas Recovery
Deaeration



NASH VECTRA in Aluminum Bronze

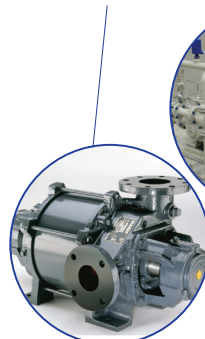


NASH Vectra XM-150, GARO Liquid Ring Compressors, & NASH/GARO Flare Gas Recovery Systems

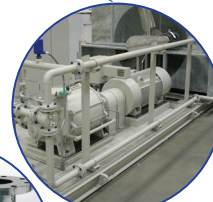


OIL FIELD & MIDSTREAM

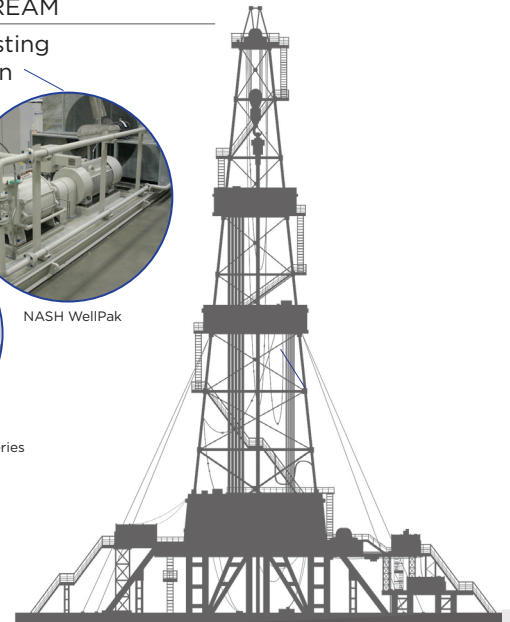
Oil Field Gas Boosting
Crude Stabilization



NASH VECTRA Series

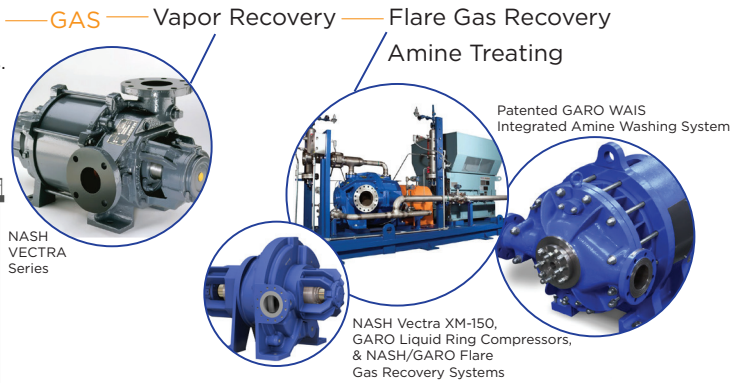


NASH WellPak



FUEL/GAS RECOVERY

Gas is extracted from distillation columns and other refinery processes where it can be cleaned and repurposed into products.



DISTILLATION

Atmospheric Distillation
Uses heat to separate crude oil into naphtha, light oils, and heavy oils.

Vacuum Distillation
Atmospheric residue is further distilled to extract oils under vacuum conditions.



HYDROTREATING & CRACKING

NAPHTHA

Naphtha Hydrotreater

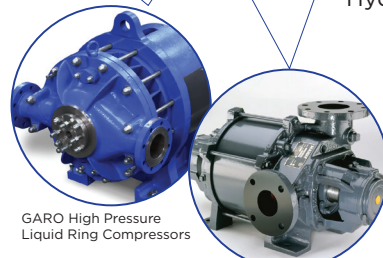
LIGHT OILS

Kerosene Hydrotreater

HEAVY OILS

Using several processes the heavy oils are cracked into usable products

Fluid Catalytic Cracker
Coker



NASH VECTRA Series

Solvent Dewaxing

Solvent/Naphtha Recovery



Gasoline Blending

Distillate Blending

Gasoline Hydrotreater

Diesel Hydrotreater

Hydrocracker

Engineered & Packaged Solutions

We'll never forget our roots. As the original Nash Engineering Company, and today operating as Gardner Denver Nash, we know customized engineered solutions.

We utilize our extensive knowledge of liquid ring technology and decades of application expertise to design innovative, and reliable systems for the most demanding oil & gas applications.

From packaged systems such as flare gas recovery systems, and our ENER-JET™ Hybrid Vacuum System, to completely customized packaged solutions, Nash is the name you can trust for efficient, reliable systems that perform under the most demanding conditions.

- Experienced Oil & Gas Application Engineers
- Optimum Solutions For Your Process
- Lower Operating Costs
- Lower Maintenance Costs
- Complete System Warranty
- Environmental compliance
- Industry Compliance: API 681 & 682, NEMA, IEEE, ATEX, HEI
- Global Sales & Engineering Support
- Regional Manufacturing & Assembly Centers

Flare Gas Recovery

NASH® HP & GARO® Compressors & Systems

Simple, reliable systems that recover fuel gas and condense valuable hydrocarbons.

- Meets environmental legislation
- Lowest total life cycle management cost
- Runs cool and cleans the gas as it is condensed, eliminating the need for downstream after condensers and scrubbers

Crude Tower Vacuum Distillation

NASH ENER-JET Hybrid Vacuum Systems

In the NASH ENER-JET Hybrid Vacuum Systems, NASH ENER-JET ejectors & NASH liquid ring pumps combine into a powerful, efficient hybrid vacuum system that offers a 2-year payback through energy savings.

- More efficient than all ejector systems
- Reduced greenhouse gas emissions

Naphtha/Solvent Recovery

NASH Vectra Liquid Ring Vacuum Pumps & Systems

NASH vacuum pumps can use naphtha and other chemicals as a seal liquid, allowing you to seal the pump with the same liquid that is being condensed.

- Reclaims solvents without contamination
- Recovered solvent can be reused in the process or sold

Vacuum Filtration for Solvent Dewaxing

NASH 2BE Series Liquid Ring Vacuum Pumps

NASH pumps are used extensively as the vacuum source on rotary drum and disc filters used for solvent dewaxing.

- Removes water efficiently
- Handles carryover reliably

Vapor Recovery

NASH Vectra Liquid Ring Vacuum Pumps

Non-sparking and cool running NASH liquid ring pumps recover hydrocarbon vapors vented from storage tanks, and the condensate can be used as a seal liquid.

- Avoids contamination of recovered product
- Eliminates waste
- Reduce pump size by condensing gas vapors



NASH HP-9 Flare Gas Recovery System

NASH CERTIFIED™ Service & Support

Count on Nash - the original innovators in liquid ring technology, for the highest quality repairs and service at a competitive price. We know your pump, compressor or system - after all, we designed it! There is a reason you invested in NASH and GARO equipment in the first place. Protect your investment by maintaining performance and reliability with NASH CERTIFIED Service.



Repairs & Remanufacturing

Only NASH CERTIFIED Service Centers can return your NASH or GARO product to factory tolerances and clearances, guaranteeing that your rebuilt pump or compressor will perform at 95% of new.

In-House Repair Capabilities:

- Remanufacturing
- Custom Manufacturing
- Machining
- Honing
- Polishing
- Cladding
- Sandblasting
- Painting
- Absolute Drying Capabilities
- Dynamic Balancing



Replacement, Spare & Exchange Pumps

Stock a spare, or replace your original NASH or GARO model with an identical, warranted, remanufactured unit. Some of our most common models are available at our global distribution and service centers, and through our Unit Exchange program we can quickly ship a replacement model to your door in as little as 24 hours.



Replacement Parts

Quality tested, OEM parts in stock and only a phone call away. Whether it is for an emergency or back up, we have a full supply of NASH CERTIFIED parts available for quick shipment. Each part is designed and built to our legendary standards and is guaranteed to perform as well as the original.



Field Service and Troubleshooting

From full system evaluation to installation & commissioning, inspections, troubleshooting, maintenance and updates our team of NASH CERTIFIED technicians are available to supplement your in-house maintenance operations year round.



Inspections & System Analysis

- Performance Testing - NASH CERTIFIED Service Centers can performance test your NASH or GARO units to ensure it meets OEM specifications, and your expectations. Think your pump or compressor is under performing? Let us test it and we'll find out why.
- Failure Analysis - We perform a failure analysis on every pump & compressor that we inspect. This allows us to identify the cause of failure, and work with you to adjust processes and maintenance to mitigate the risk of future issues.
- Positive Materials Identification
- Liquid Penetrant Testing
- Hydrogen & Nitrogen Testing
- Metallurgical Analysis
- Material Traceability
- Vibration Testing



Gardner Denver Nash Products & Systems



NASH® Liquid Ring Vacuum Pumps & Systems

The reliable and durable solution for demanding process applications. Through ongoing commitment to innovation, Nash continues to introduce liquid ring vacuum pumps that meet the rigors of the most demanding applications while improving efficiency and lowering total cost of ownership.



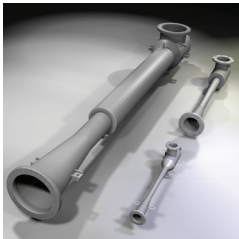
NASH and GARO® Liquid Ring Compressors & Systems

The rugged, reliable solution for demanding process applications. Designed to handle toxic, explosive and corrosive gases, and backed by a reliable history of performance under the most demanding conditions.



DRY-PRO® Dry Vacuum Pumps & Systems

Designed to meet your specific process needs, NASH engineered systems are ready for operation, easy to integrate into process automation, help minimize installation & operating costs, and meet the rigors of the most demanding applications.



ENER-JET™ Ejectors & Systems

Whether on their own, or as part of a NASH ENER-JET Hybrid Vacuum System, NASH steam jet ejectors are engineered for optimum efficiency, reducing steam consumption, while maintaining their ability to handle large volumes at very high vacuum levels.



NASH


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Gardner Denver

 Please recycle after use.