

Certified Service™

Request a quote to extend service life
& **reach the highest performance!**

The NASH logo consists of the word "NASH" in a bold, blue, sans-serif font. Above the letters "A" and "S" is a stylized grey swoosh that curves over the top of the letters.

Leveraging over 100 years of experience as the trusted market leaders in vacuum technology, Nash Certified Service provides our customers with a comprehensive range of support.



Turn to the Trusted Market Leader!

Benefits + Agenda

Our team of factory trained, certified experts

Provide the highest levels of care and attention, from routine maintenance, repairs and troubleshooting, to genuine OEM parts, equipment remanufacturing and tailored service agreements. **What you get:**



Lower Maintenance
& Operating Costs



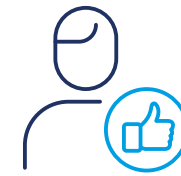
Increased Performance
& Efficiency



Increased Reliability
& Service Life



Reduced Downtime



Complete Peace
of Mind

Agenda

With us, your plant will be in the best possible hands. Browse the brochure & discover the full range of Nash aftermarket services!

Service Agreements

Nash offers tailored service agreements that are designed to meet your specific needs and offering access to our full range of services.

Regular, scheduled service can help you not only **improve the performance and efficiency** of your liquid ring vacuum pump or compressor, but also help you **manage operating costs and inventory**.

Service agreements scope

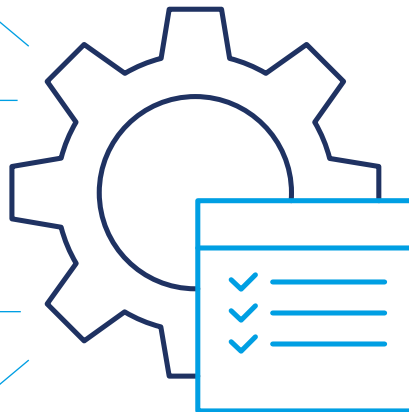
Field & Factory Service

Operational & Performance Inspections

Equipment Pick-up & Delivery

High quality OEM Parts, Spare Kits & Upgrades

Customer Trainings



Startup, commissioning & troubleshooting

Nash can help you troubleshoot and solve even the most complex start-up issues, helping you get your systems and equipment up and running faster.

Take advantage of our capabilities to achieve:

- **Easier** integration
- **Reduced** downtime
- **Fine-tuned** system

Contact us to choose the best solution for your business!

Field Service

Fiberscope inspections

Fiberscope inspections allow us to track the wear and condition of your pumps internals without having to dismantle the unit.

The information provided will allow you to:

- Accurately plan your maintenance
- Schedule and anticipate any repairs before the breakdown occurs
- Save time & money by reducing the risk of unplanned downtime

Fiberscope inspection process includes:

- **Inspecting the condition of the interior of the pump**, rotor, housing, and port plate/cones
- **Identifying any signs** of damage and wear, as well as signs of contamination or foreign objects inside the pump
- **Following the inspection, a report is compiled detailing the overall condition of the pump**, as well as any signs of damage
- **Developing an action plan to remedy any issues** that may be required, before a pump failure occurs

Nash will carry out fiberscope inspections while the plant is stopped or at any other time that is appropriate, to minimize or eliminate any impact on your operations.



Field Service

Inspections, Maintenance & Repairs

We provide a complete range of inspections, maintenance and repair services, either on site or at our state of the art Service Centers.

Each NASH Certified repair job guarantees that your equipment:

- **Provides 95%**, or greater, or new pump performance
- Is repaired or remanufactured **using high-quality OEM parts and latest design, engineering drawings and updates**

Our team will:

- Perform a detailed pump inspection to gain an in-depth understanding of the problem
- Develop a tailored action plan to repair your pump & optimize it for your application
- Outline ways to extend pump life with a range of repair and upgrade options, giving you full control & allowing you to select the course of action that best suits your budget and needs



Field Service

Laser alignment

Laser alignment process is the most efficient method for aligning machine shafts. By using an adaptive laser alignment system instead of conventional tools.

The goals set out below are achieved:

- minimized vibrations
- minimized need for future pump repairs
- extended service life and maintenance intervals
- increased machine availability
- reduced power consumption

Capacity measurement

Nash offers capacity tests that can be carried out in the field using port plates and/or test headers, with your pump in situ or at our state of the art facilities.

Complete capacity measurement that allows us to:

- **Accurately assess** the needed repairs or replacements
- **Optimize your equipment's** performance for the future

Nash Service Centers can also collect **vibration analysis** data on your equipment in the field, and establish a history that can be used to better prepare you for any required repairs before you dismantle your pump.

*Vibration analysis units can also be installed permanently on your pumps for around the clock the clock monitoring.



Genuine Spare Parts & Spare Kits

All of our genuine OEM parts and spares are engineered to meet the highest industry and quality standards.

Choose to use Nash OEM parts and spares, you are automatically getting the latest performance upgrades and improvements; guaranteed and backed by our certified manufacturer's warranty. We manufacture and stock parts for all pump models that are currently operating - **even if the pump was manufactured decades ago.**

Get the Benefits of Genuine Spare Parts



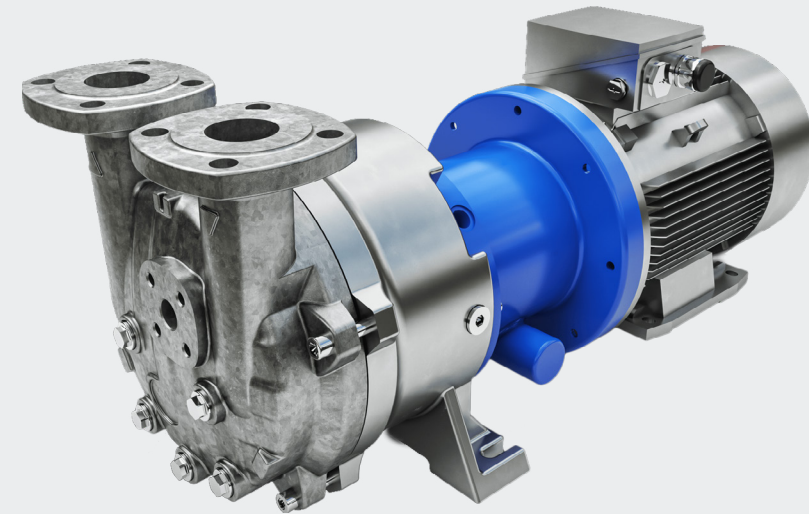
Guaranteed
Performance



100% Compatibility
with your Equipment



Minimum 1 Year
Manufacturer's Warranty



Service center



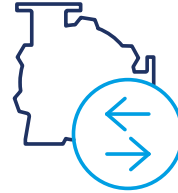
ATEX repairs

Our experienced, factory trained engineers also conduct repairs in strict accordance with ATEX guidelines. We provide the **necessary proof of materials used and tests conducted, certified in accordance with ISO 9001 and 94/9/EC**. We can also convert an existing pump to ensure full compliance with the ATEX standard.



Refurb of existing parts

Where technically feasible and/or economically practical, existing components can be reclaimed or repaired. Our state of the art machine tools ensure that all key dimensions and tolerance are maintained, and adhere to applicable engineering designs and drawings. **Professional welding technology allows us to weld onto shafts and perform welding repair on housings and impellers.**



Pump Exchange Program

Replace your existing pump with an overhauled exchange pump from our pump pool. This will allow you to keep your operations running even when your pump isn't. Regardless of the manufacturer or pump model, we will deliver and assemble the replacement pump at a time most suitable for you, taking your existing pump back to our Service Center for repairs. **Each exchanged pump is assembled to your specifications, simply provide us with the:**

- Speed
- Material
- Seal Type (single or dual acting)
- Other Specifications as Required (ask our representative)

In the process we use new and used stock parts.



Performance testing

Complete performance testing and capacity measurement is available on request, at an additional cost. Every pump is inspected prior to shipping, with all open nozzles covered by special shipping covers to protect your pump against a range of hazards.

Energy Saving

Coatings and linings

Production processes change, aggressive media can be introduced, or systems can be modified to run in a closed circuit. Our pump-specific knowhow, combined with our application expertise, allows us to efficiently and economically **extend the service life of your pump** (gray cast-iron pumps in particular):

Stainless Steel Lining

Protection from issues such as corrosion, which can be caused by using a range of aggressive media.

Stainless Steel Cladding or Ceramic Material Coating

Reduction of process-related mechanical and chemical wear for cast iron pumps. Based on our manufacturer's drawings and dimensions - recommended way to increase the performance and service life of your older liquid ring pumps!

Polyisoprene Coating

Increased service life of the pump.

Ceramic coating

Extended performance and service life - an inexpensive alternative to replacing your pumps impeller with a stainless steel unit.

Energy Saving

Precise Measurement & Analysis

Having your equipment checked regularly is crucial to maintaining perfect efficiency and optimizing energy consumption. Our Certified methods of measurement and analysis are used to check the flow rates of your pump, ensuring that results are accurate to within $\pm 4\%$. We also monitor energy consumption by checking all relevant operating parameters with our toolkit of precisely calibrated test instruments.

Pump cleaning

Pump cleaning is an essential, and often overlooked, method of **ensuring performance and efficiency**. Over time, lime scale deposits can develop within your pump, adversely affecting flow and performance.

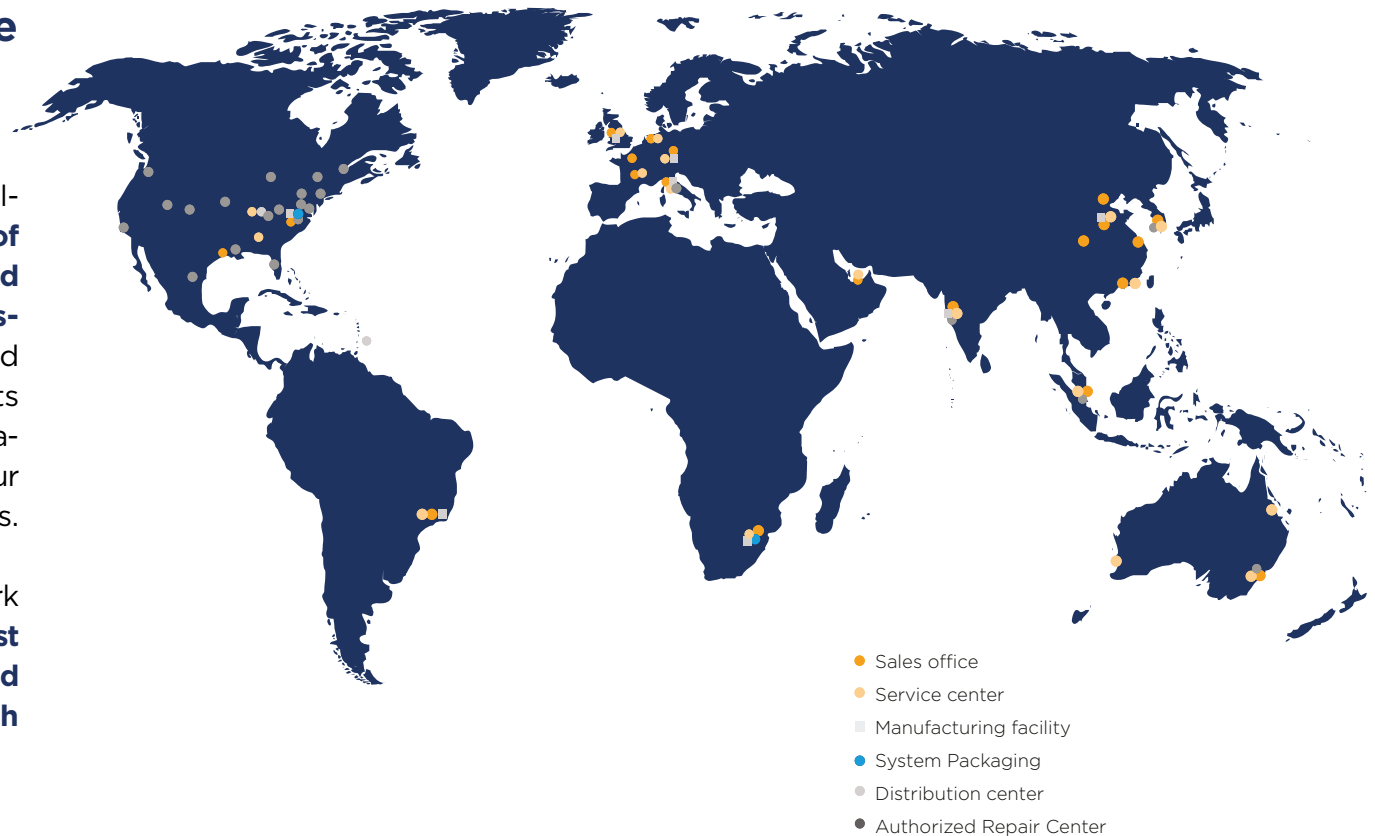
Our team uses special liquid solutions that ensure that:

- Your pump is cleaned thoroughly, yet harmlessly
- Any build-up or deposits of lime scale are removed
- All surfaces are smooth and allow the uninterrupted flow of gas, resulting in reduced energy consumption:
- All without the need for disassembly.

Over 100 Years of Experience with Vacuum & Compressor Systems

As the original innovators in liquid ring technology, **Nash has over a century of experience of experience of designing, manufacturing, and working with vacuum pump and compressor systems.** In this time, we have developed an extensive knowledge of how our products work in a wide range of industries and applications; as well as an expert understanding of our customer's plants, equipment, and processes.

This experience and expertise allows us to work with our customers, **to help them get the most out of their vacuum pumps, compressors, and systems; and ensure that they achieve both their operational and process goals.**



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