



ENGINEERED VACUUM SYSTEMS WITH

Vacuum Boosters





Proven SOLUTIONS
Unparalleled EXPERTISE

A WINNING COMBINATION

NASH is the global leader in highly engineered vacuum & compression solutions. We have been serving process industries such as petroleum, chemical and pharmaceutical for more than a century. NASH has the expertise and knowledge to ensure you receive a solution that best meets your unique process requirements. You can count on us to design and deliver the right solution for your vacuum pump and compressor system application.

For most process applications, “off the shelf” solutions do not adequately address requirements. We take the time to evaluate your needs and objectives through a comprehensive analysis of your process. We then design the system beginning with the fundamentals – parameters such as capacities, vacuum or pressure levels and the unique demands your process will require. In addition, we also consider your operating cost objectives, initial capital investment, impact on environment, and safety of operating personnel. Then, we engineer a NASH system to satisfy all of your needs.



Vacuum Boosters Increase Performance

Engineered vacuum systems with boosters are multi-stage systems including one or more vacuum booster pumps and a primary pump. Vacuum boosters are always installed upstream of a primary pump, which discharges to atmospheric pressure. Systems with vacuum boosters have significantly higher performance than the primary pump alone. This means faster pumping speeds and deeper vacuum levels.



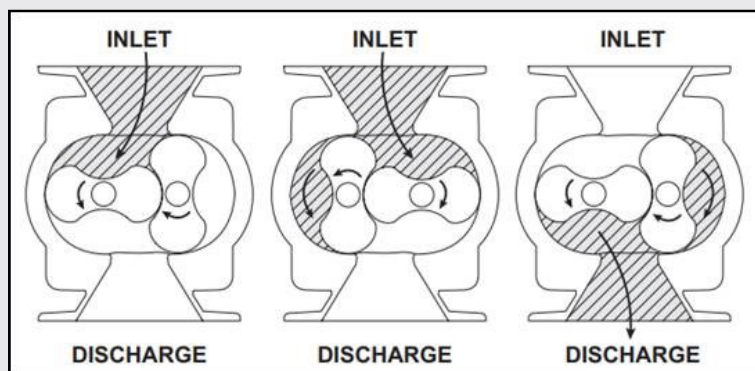
What Are Vacuum Boosters?

Vacuum boosters are positive displacement, two-lobe rotary blowers. Very tight running clearances enable the pump to operate efficiently without the need for lubrication in the process chamber.

The lobes, which are synchronized by timing gears in the oil box, convey the gas from the inlet to the discharge along the inner wall of the casing.

The gas flow path is very short, which reduces potential for condensation and material buildup in the pump.

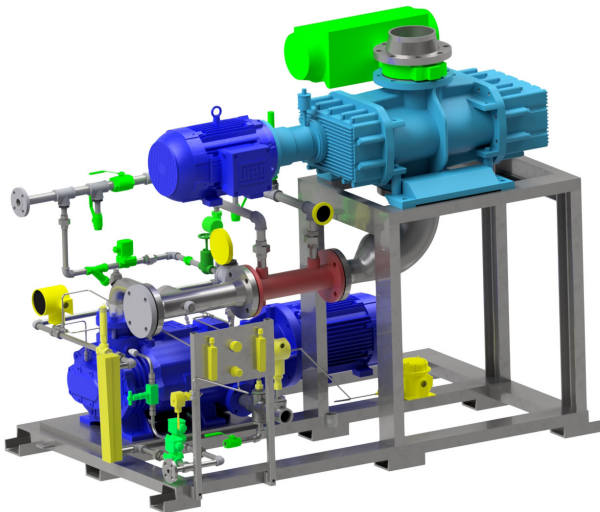
Various materials of construction and shaft sealing options are available to meet process requirements. Vertical and horizontal flow installation options are also available.



Benefits

NASH multi-stage systems with vacuum boosters are robust and rugged, offering:

- Higher pumping speed and deeper vacuum than a primary pump alone
- Reliable system operation due to the expertise of NASH applications engineers who ensure selection and system design meet process and safety requirements
- High flexibility due to potential for customization of system features and components
- Economical & efficient solution with favorable total power consumption for total pumping speed



Engineering Reliable Systems for Your Process Needs

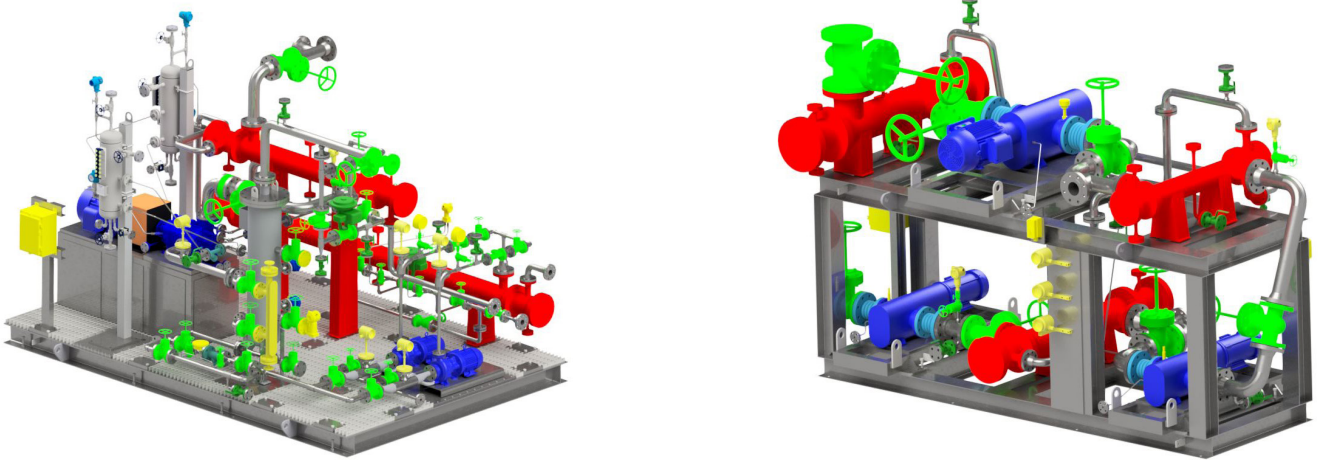
Multi-stage vacuum systems are fit-for-purpose solutions designed for your single operating point.

Many different considerations – from selecting and configuring boosters and primary pumps to engineering system features – go into designing such systems which can take very different shapes and forms, depending on the nature of the given application.

NASH applications engineers utilize proprietary sizing and simulation tools to select the optimal system design after considering such variables as:

- Required pressures, flow rates and temperatures
- Composition of chemicals being pumped
- Number of boosters in series of parallel
- Inter-stage cooling requirements
- Startup options including bypass valves and VFD operation
- Multiple modular skid arrangements for easy shipping and simple assembly at site
- And many more...

With its large portfolio of rugged, battle-tested primary vacuum pumps and a wide selection of boosters, NASH is your partner in engineering safe and reliable multi-stage vacuum systems best suited for your chemical process requirements.

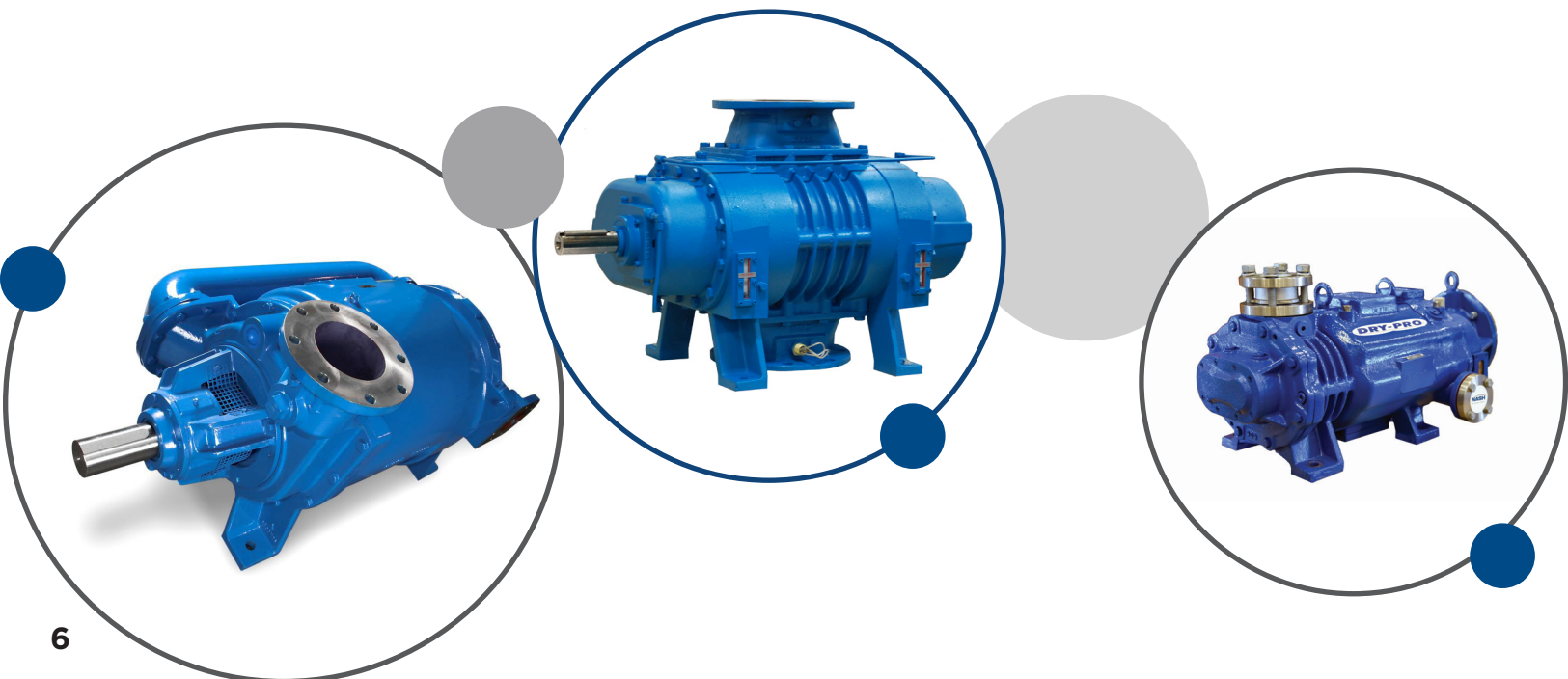
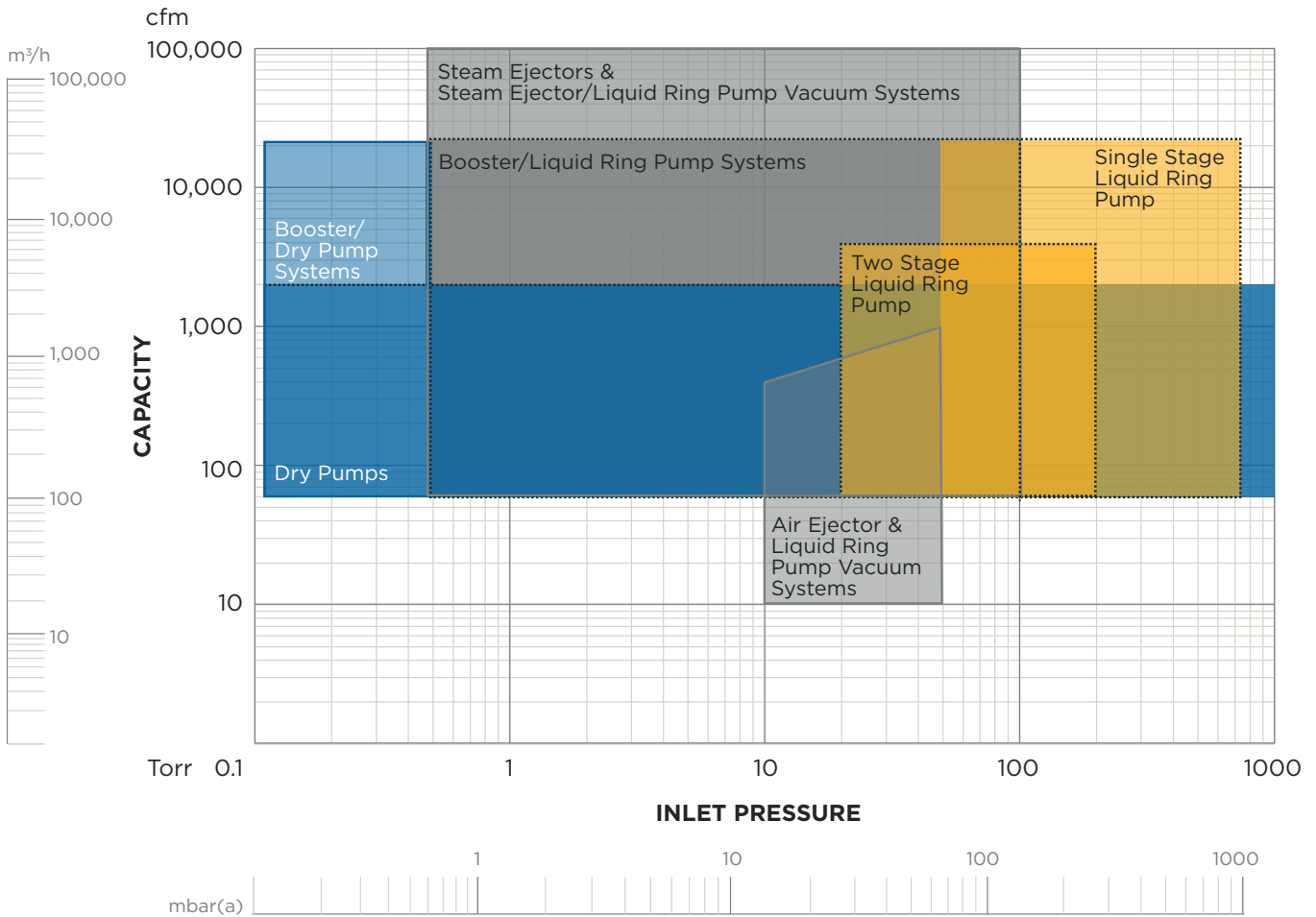


Example of multiple modular skid arrangement

Total Vacuum Solutions for Process Applications

Vacuum Technology

Performance Range



Trusted Service, Global Support



Know That Your Pumps & Systems Are Protected With Nash®

NASH CERTIFIED™ Support & Service

Every Booster System is backed by our global network of service and support.

NASH CERTIFIED™ Field Service Team

Available to supplement your in-house maintenance operations and keep your system running efficiently and reliably. Factory-trained, and located around the globe, NASH Certified Field Service will help you identify needed repairs, prevent costly downtime, and increase mean time between failures.

NASH CERTIFIED™ OEM Parts

Every part is certified and built to our high quality standards using the latest designs and innovations for optimum performance and efficiency. Emergency quick ship parts are available at NASH locations worldwide.

Factory Service

Certified service centers in key industrial regions as well as field service technicians on hand to provide technical guidance and support. We keep your vacuum equipment and processes running smoothly, no matter how challenging the application.

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.



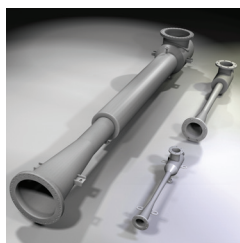
NASH® Mag Drive Liquid Ring Vacuum Pumps & Compressors

Provides leak-free performance for applications requiring the highest levels of security. Through a magnetic drive with static o-ring seals, the 2BM series achieves non-contact torque transmission, allowing for a hermetically sealed pump body. This key feature eliminated leaks while reducing maintenance.



NASH Dry Vacuum Pumps & Systems

Designed to meet your specific process needs, NASH dry systems are ready for simple process integration and operation, help minimize installation & operating costs, and reliably 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.

