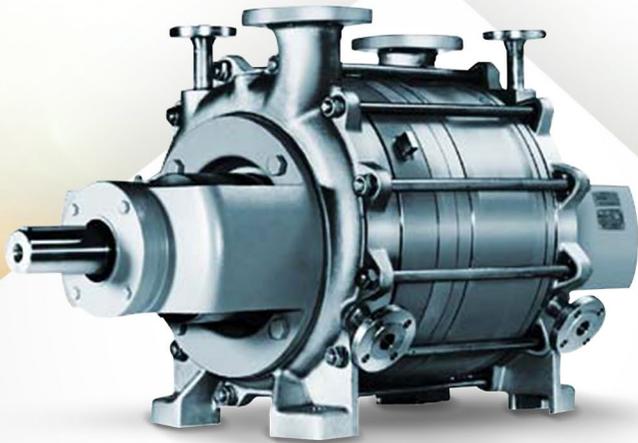


# NASH<sup>®</sup>

An Ingersoll Rand Business



## DISCOVER THE FUTURE OF ENERGY-EFFICIENT HYDROGEN COMPRESSION SYSTEMS

REQUEST A QUOTE

TURN TO THE TRUSTED MARKET LEADER!

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## HYDROGEN COMPRESSION

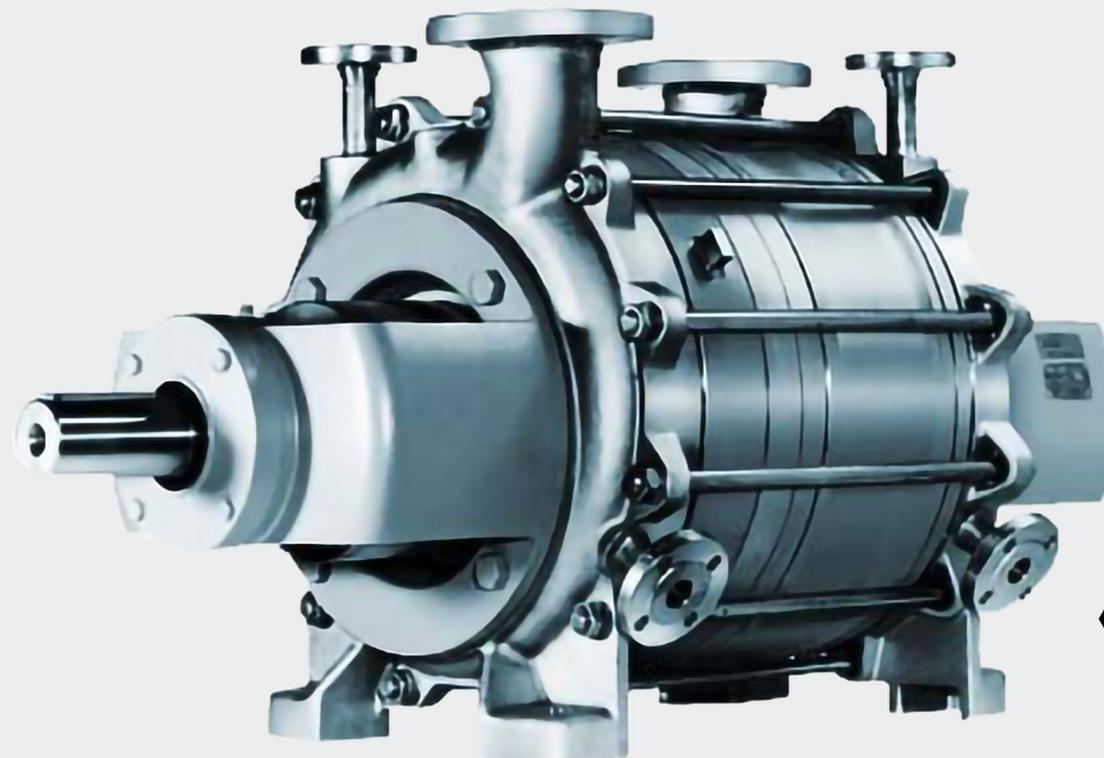
## INTRODUCTION

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Nash has been gaining experience in hydrogen compressor systems for more **than 50 years already**. Our compressors can handle **capacities of more than 20.000 m<sup>3</sup>/h while staying compact and maintaining low energy consumption & complying with directives like Atex**. In Nash, we are serving the newest applications related to **green and environmentally friendly technologies** including fuel cells and electrolysis for hydrogen production. Dozens of our products are already in operation in hydrogen-handling applications around the world, making Nash a contributor to greenhouse gas emissions reduction.

# NASH 2BG SERIES

The NASH 2BG two stage liquid ring compressor series delivers reliable, proven performance for batch and continuous process applications. 2BG compressors are ideal for demanding processes including ozone compression, and other chemical and oil & gas applications. With compressor capacity ranging from 20 to 1,700 m<sup>3</sup>/h (12 to 1,000 SCFM), the 2BG liquid ring compressor is optimal for demanding chemical, petrochemical and oil & gas applications including ozone compression.



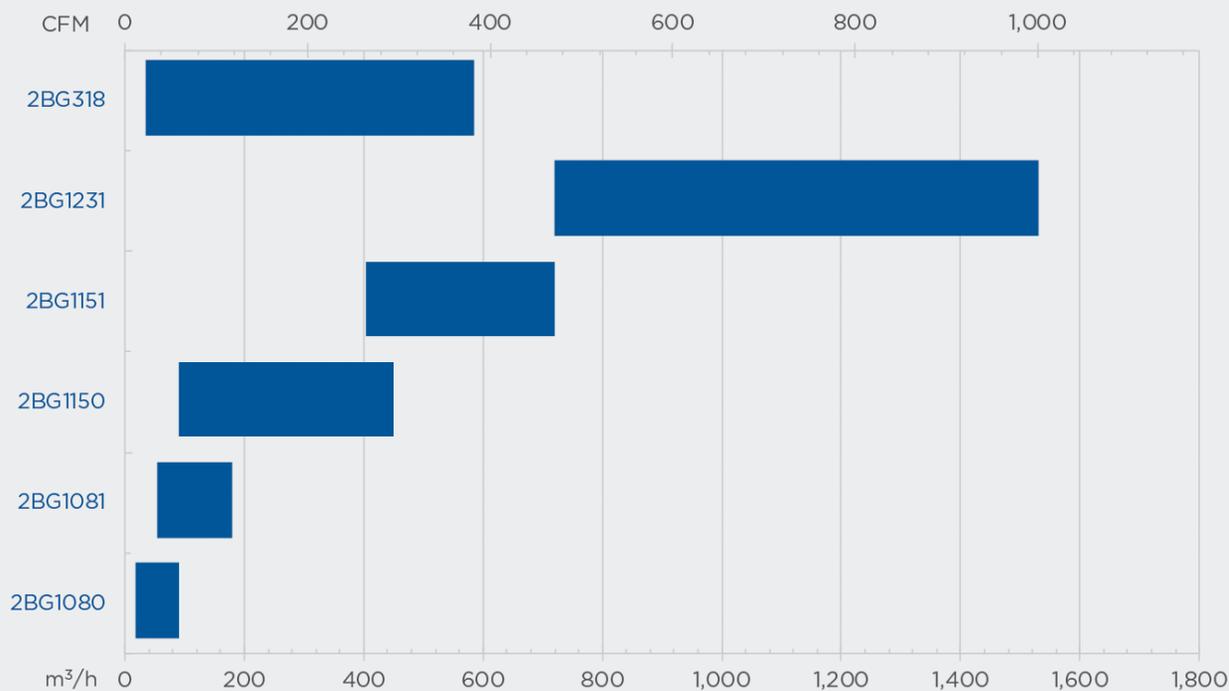
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# NASH 2BG SERIES

## Technical Data NASH 2BG

Suction Capacity	20 to 1,700 m <sup>3</sup> /h (12 to 1,000 SCFM)
Maximum Discharge Pressure	to 14 bar abs. (to 170 psig)
Differential Pressure	13 bar (to 170 psi)
Shaft Sealing	Mechanical Seals (single acting/ double acting)
Materials	Stainless Steel, Cast Iron

## Models and Performance Range



# NASH 2BM1 SERIES

The NASH 2BM Mag Drive liquid ring vacuum pump and compressor series provides reliable, leak free performance for applications requiring the highest levels of safety. Each model is powered by a permanent magnet motor drive system, equipped with static O-ring seals, to provide non-contact torque transmission.

This allows the 2BM series to feature a hermetically sealed pump body, eliminating any possibility of leakage and allowing for safe operation in hazardous and explosive conditions, as well as ensuring compliance with even the strictest environmental regulations. ATEX certification is available for the 2BM series.

Based on the venerable 2BE series pumps and compressors, the 2BM series offer proven reliability. The completely enclosed design, with no rotating shaft seals, eliminates wear and maintenance issues, while the pump's operating fluid ensures optimum lubrication and cooling of the friction bearings and magnetic coupling, further streamlining maintenance.



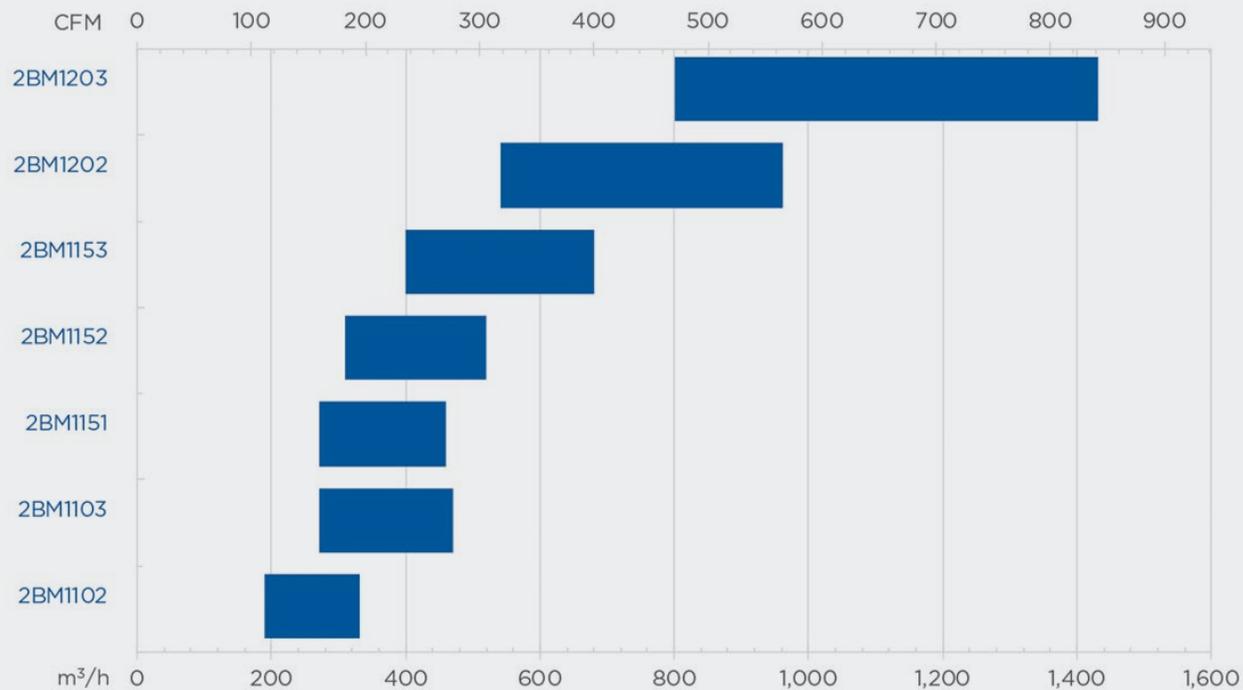
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# NASH 2BM1 SERIES

## Technical Data NASH 2BM1

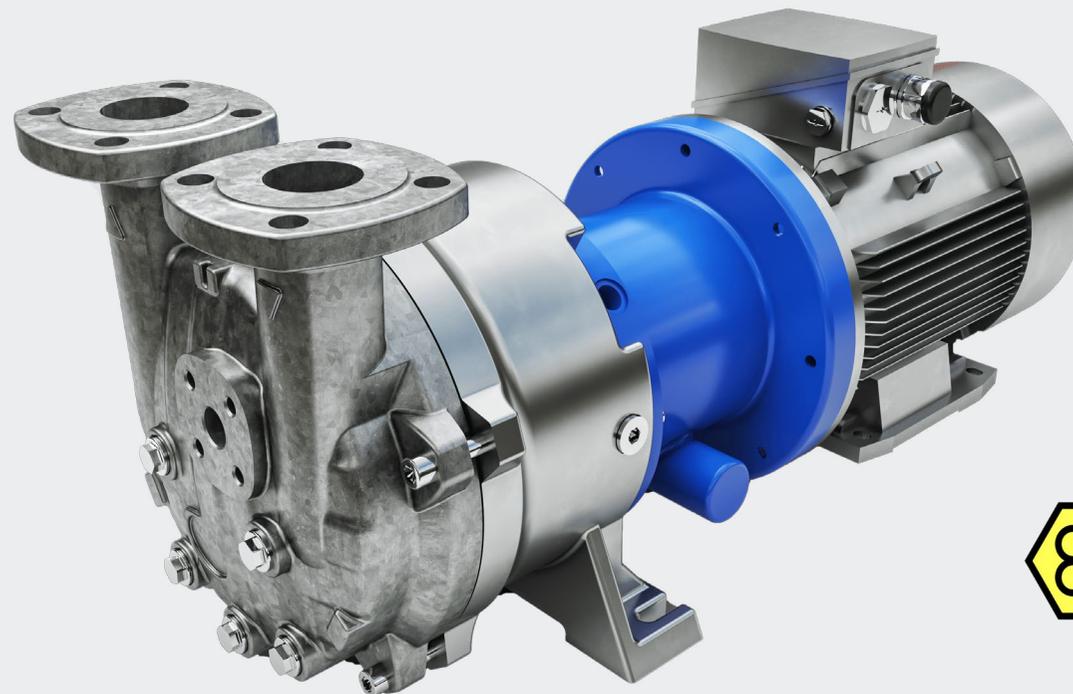
Suction Capacity	125 to 1.400 m <sup>3</sup> /h (75 to 900 ACFM)
Vacuum Range	to 33 mbar abs. (to 1 inHgA)
Maximum Discharge Pressure	2,5 bar abs. (36 psia)
Differential Pressure	to 1,5 bar (to 21.8 psi)
Shaft Sealing	Magnetic seal
Materials	Cast Iron, Stainless Steel

## Models and Performance Range



# NASH 2BM5 SERIES

The NASH 2BM Mag Drive liquid ring vacuum Hydraulics pump and compressor series provides reliable, leak free performance for applications requiring the highest levels of safety. Different than the 2BM1, the 2BM5 model has only 1 inlet and discharge port. With a hermetically sealed pump body and capacity from 75 to 440 m<sup>3</sup>/h (45 to 260 ACFM) the 2BM5 liquid ring pump/compressor is an ideal match for process applications in the chemical, pharmaceutical, petrochemical, and the food industries.



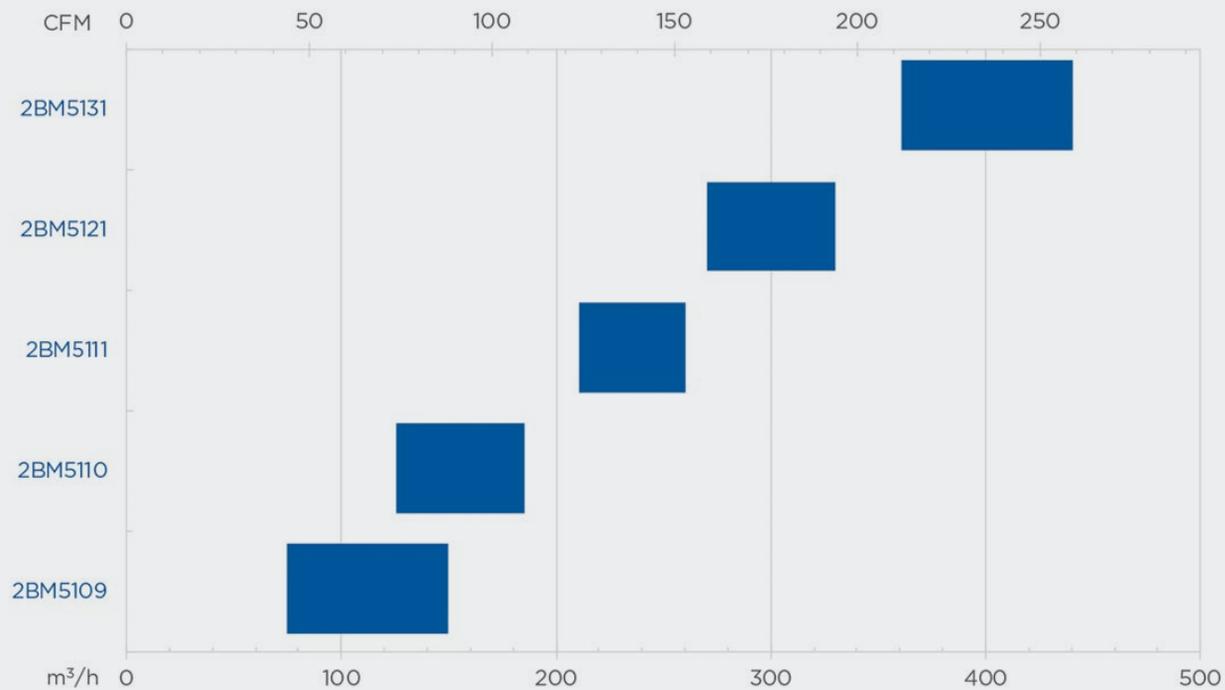
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# NASH 2BM5 SERIES

## Technical Data NASH 2BM5

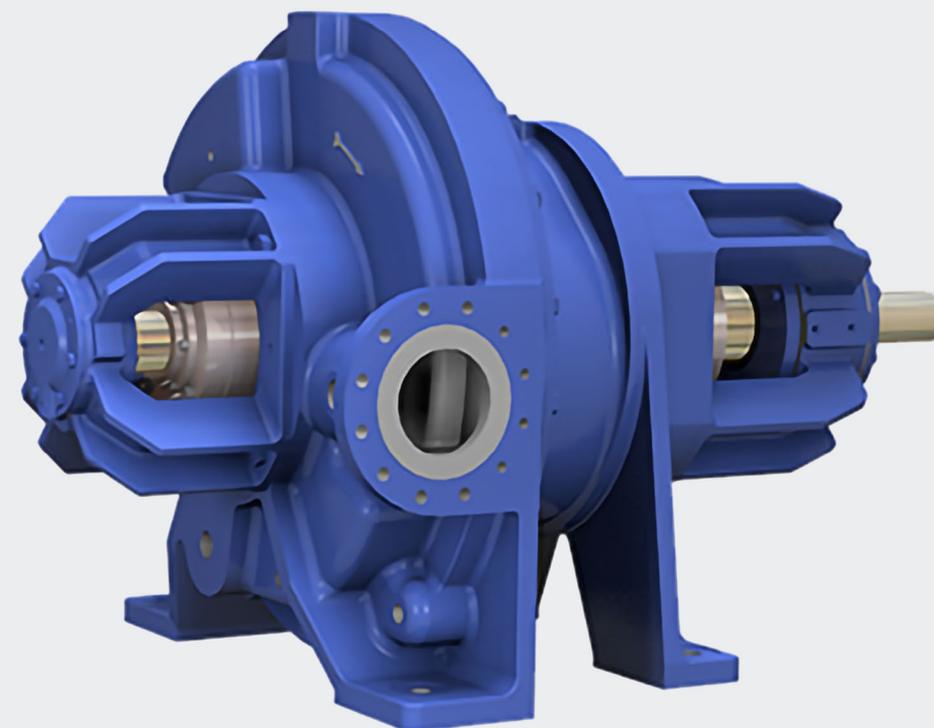
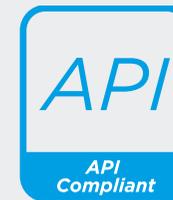
Suction Capacity	75 to 440 m <sup>3</sup> /h (45 to 260 ACFM)
Vacuum Range	to 33 mbar abs. (to 1 inHgA)
Maximum Discharge Pressure	to 2.3 bar abs. (to 33.4 psia)
Differential Pressure	to 19 psi (to 1.3 bar)
Shaft Sealing	Can/O-Ring
Materials	Cast Iron/Bronze, Stainless Steel

## Models and Performance Range



# NASH VECTRA XM-150 SERIES

The NASH Vectra XM-150 liquid ring compressor extends the series of popular and reliable Vectra XL compressors to a higher level of performance. Operating at up to 4.7 bar abs. (70 psig), the patent valid Vectra XM compressor is specifically designed for the higher pressures and performance expected in many process applications such as hydrogen compression, corrosive gas handling, and flare gas recovery.



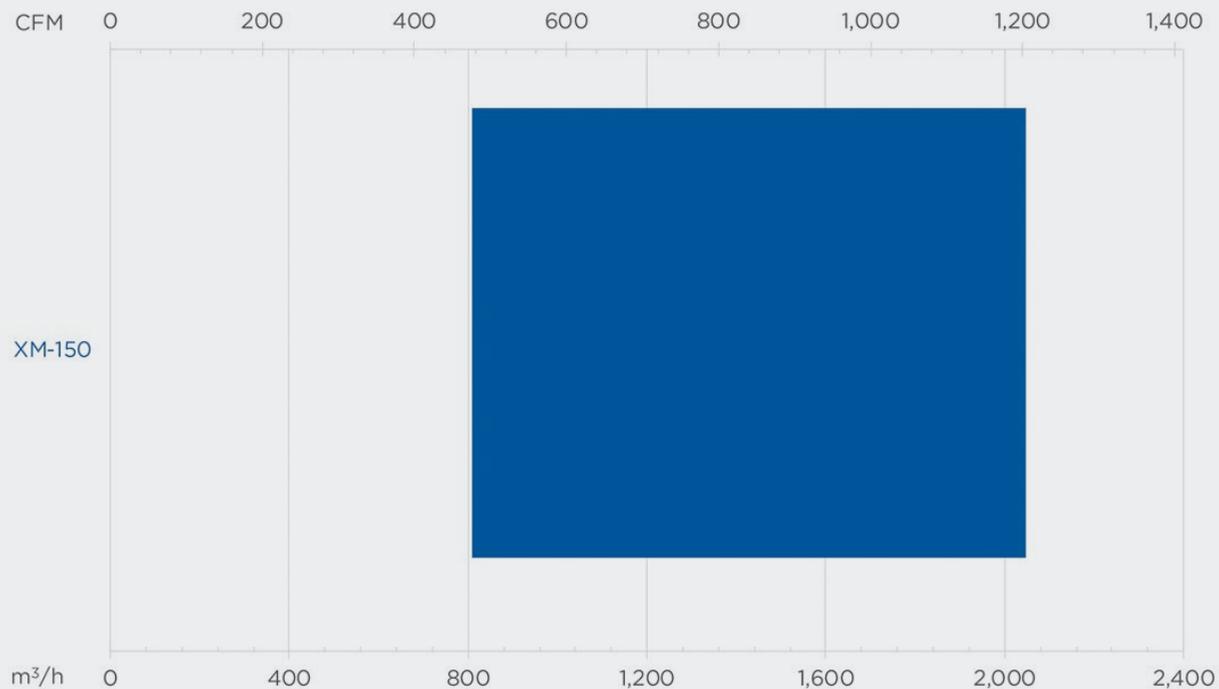
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# NASH VECTRA XM-150 SERIES

## Technical Data NASH VECTRA XM-150

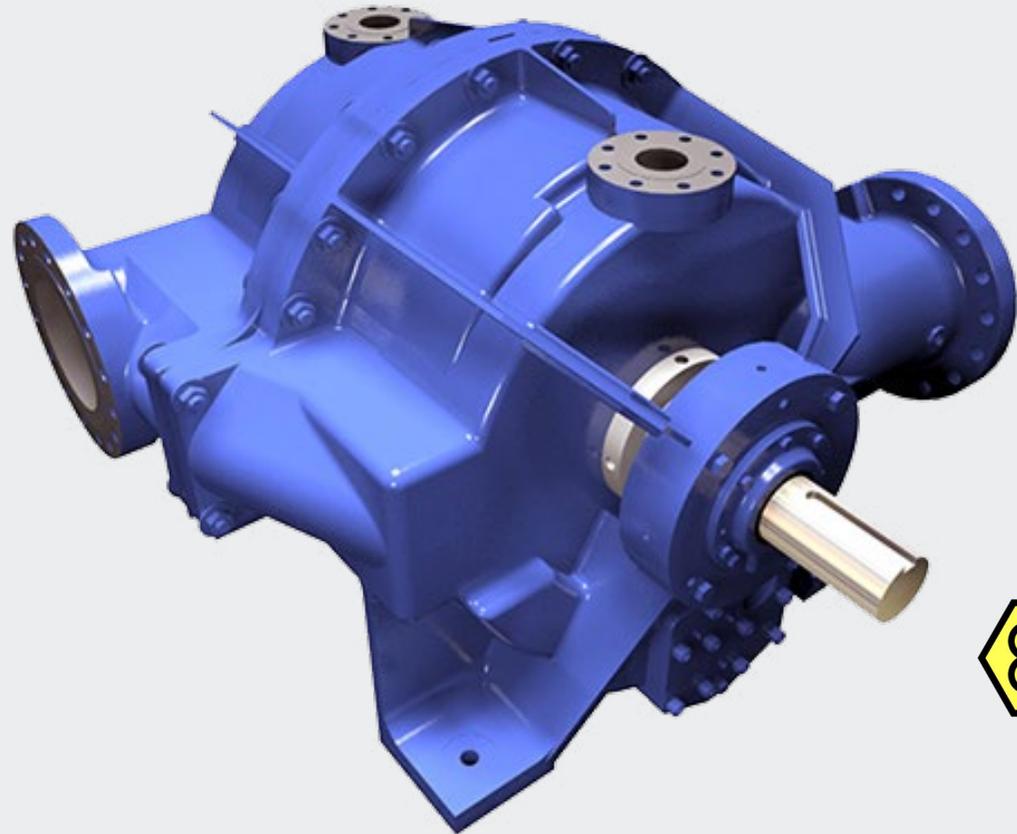
Suction Capacity	800 to 2,000 m <sup>3</sup> /h (470 to 1,200 SCFM)
Maximum Discharge Pressure	to 4.7 bar abs. (to 70 psig)
Shaft Sealing	API 682 shaft seal
Materials	316 Stainless Steel

## Models and Performance Range



# NASH HP4-9 SERIES

The NASH HP-9 liquid ring compressor series reliably handles toxic, explosive, and corrosive gases in oil & gas, petrochemical, and chemical applications including flare-gas recovery and Vinyl Chloride Monomer (VCM) recovery. Together with the NASH/GARO compressor models and our other liquid ring compressors, the HP-9 completes our core compressor product line by providing capacity ranging from 2,500 to 4,300 m<sup>3</sup>/h (1,500 to 2,500 SCFM).



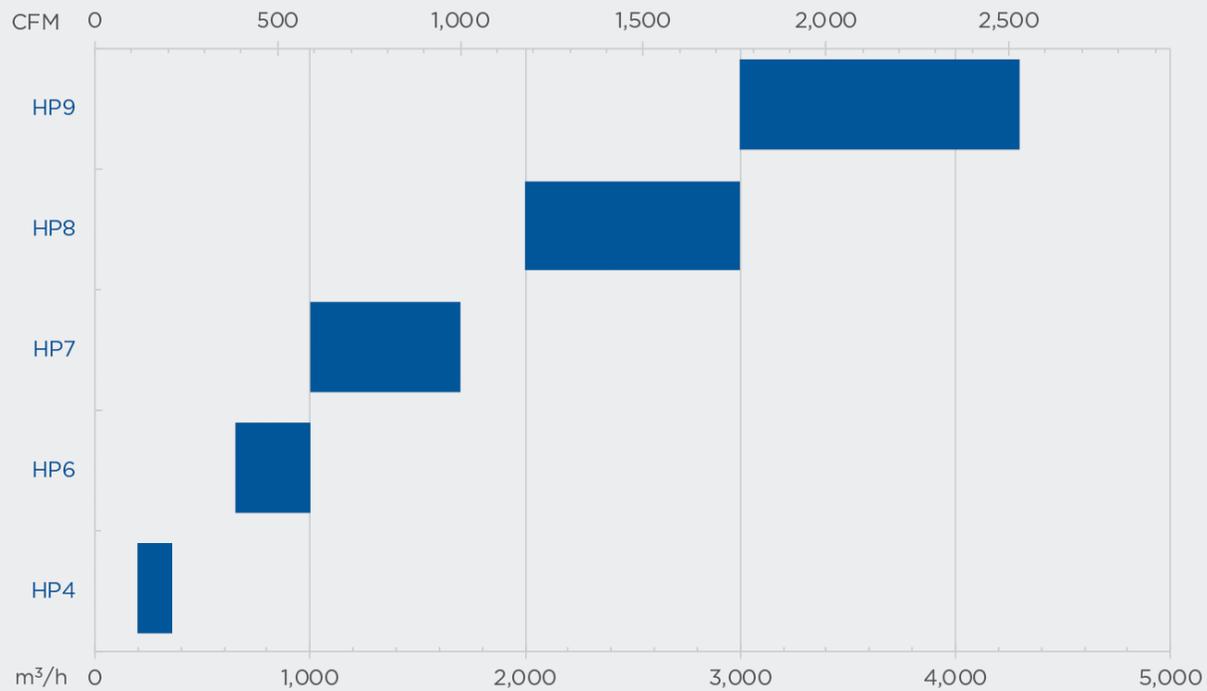
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# NASH HP4-9 SERIES

## Technical Data NASH HP4-9

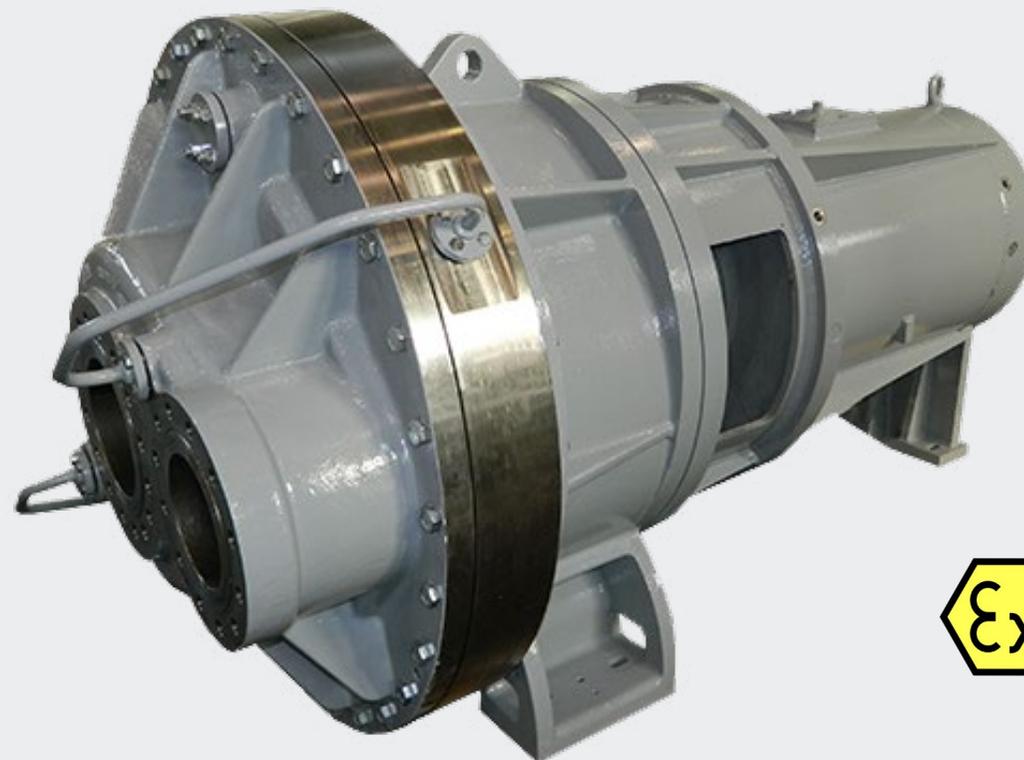
Suction Capacity	200 to 4,300 m <sup>3</sup> /h (1,500 to 2,500 SCFM)
Maximum Discharge Pressure	to 8.5 bar abs. (to 110 psig)
Differential Pressure	to 7.5 bar (to 110 psi)
Shaft Sealing	Mechanical Seals (single acting/double acting)
Materials	Stainless Steel

## Models and Performance Range



# NASH NAB SERIES

NASH's NAM and NAB series are rugged and reliable compressors that are capable of handling highly toxic, explosive, and corrosive gasses. They are ideal for use in petroleum refineries and chemical plants, in applications such as flare gas and Vinyl Chloride Monomer (VCM) recovery. The capacities of the NAB series range from about 70 to 4,750 m<sup>3</sup>/h with pressures of 14 bar.

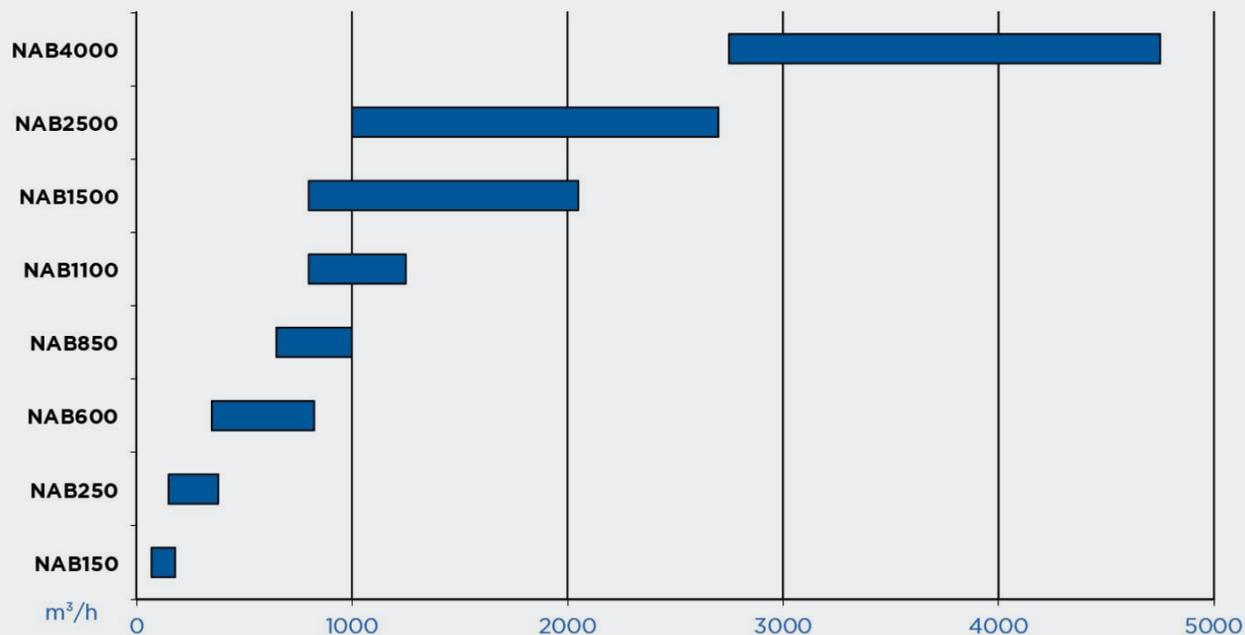


# NASH NAB SERIES

## Technical Data NASH NAB (DOUBLE STAGE)

Suction Capacity	70 to 4,750 m <sup>3</sup> /h
Maximum Discharge Pressure	15 bar abs.
Differential Pressure	14 bar
Shaft Sealing	Mechanical Seals (single acting/double acting) or Cartridge
Materials	Stainless Steel; other materials on request

## Models and Performance Range

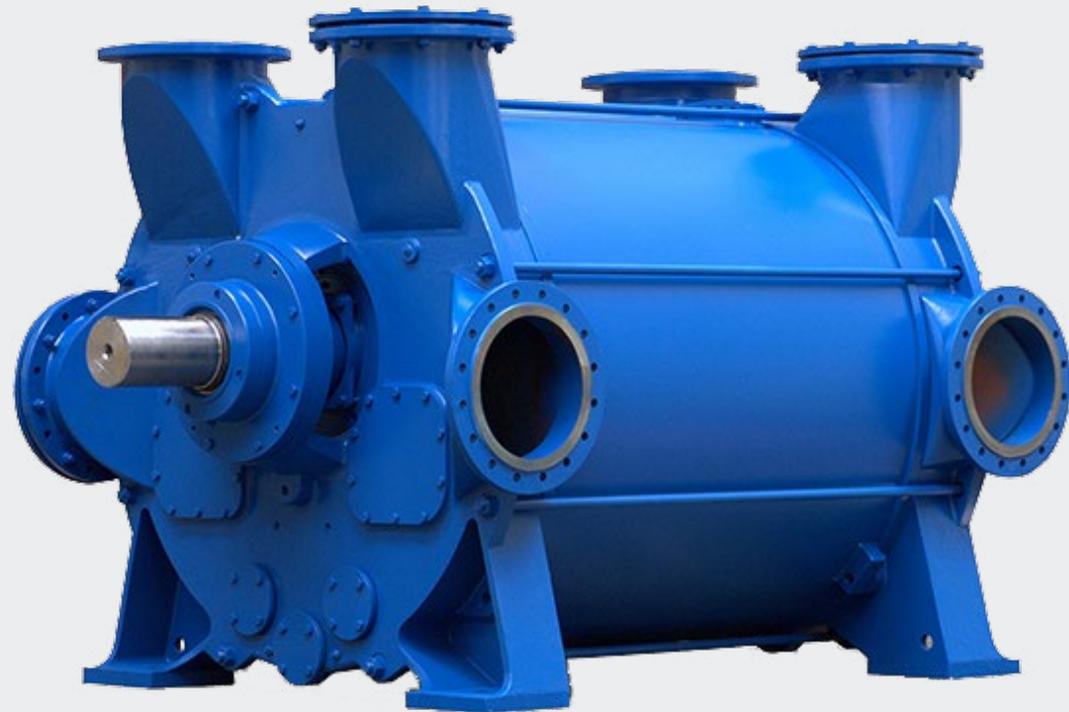
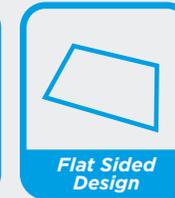


# NASH 2BE4 SERIES

NASH 2BE4 vacuum pumps and compressors have been engineered to provide maximum durability and reliability, with the lowest possible cost of operation.

Based on the proven reliable flat sided liquid ring vacuum pump design, the 2BE4 has a polyisoprene lined body for improved corrosion resistance, unique inlet and discharge connections for maximum flexibility, and a large inspection port for quick and easy access to pump internals. The 2BE4 provides efficient operation across the entire vacuum range, and can also be equipped with a center shroud providing split vacuum differential of up to 12 inHg (400 millibar). This allows the use of fewer vacuum pumps—which saves space and installation costs.

Available in a range of capacities, ranging from 1,950 to 32,100 m<sup>3</sup>/h (1,150 to 18,900 ACFM); the 2BE4 series has been designed to perform in the even the most demanding applications in the pulp & paper, power, mining, and the chemical process industries.



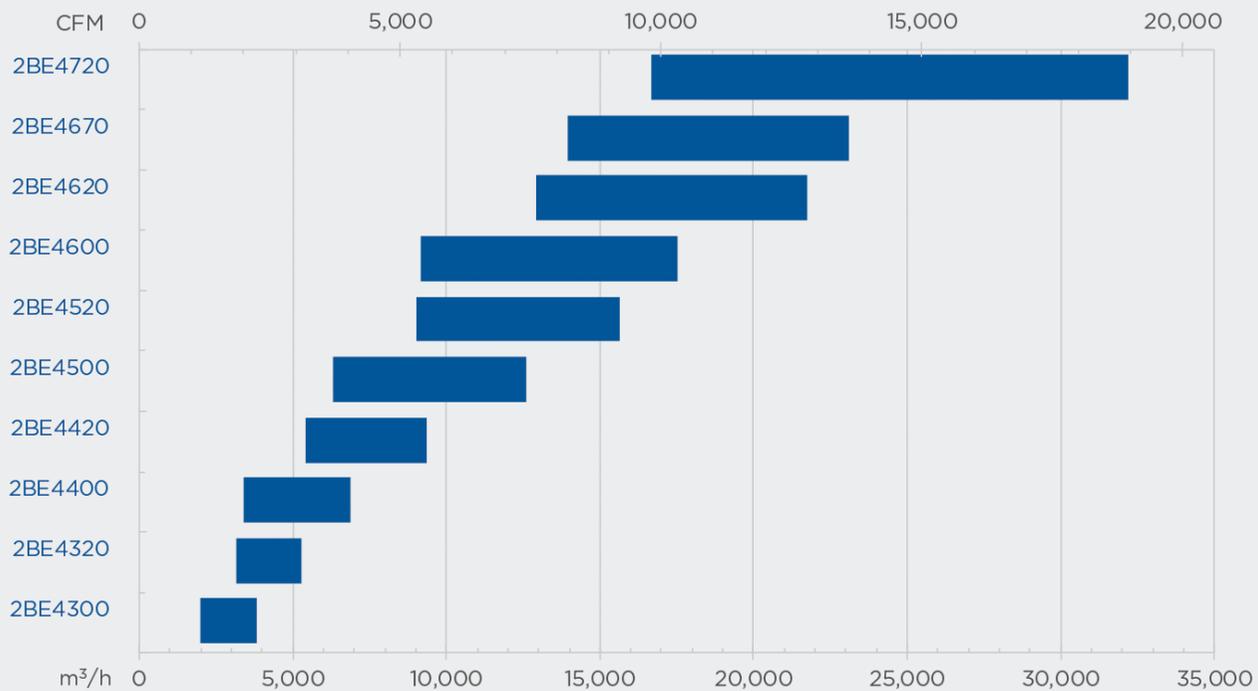
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# NASH 2BE4 SERIES

## Technical Data NASH 2BE4

Suction Capacity	2.000 m <sup>3</sup> /h to 32.200 m <sup>3</sup> /h (1,150 to 18,900 ACFM)
Vacuum Range	to 160 mbar abs. (to 4 inHgA)
Maximum Discharge Pressure	2,5 bar abs. (36 psia)
Differential Pressure	to 1.5 bar (to 22 psi)
Shaft Sealing	Stuffing box (standard), Mechanical Seals (single acting / double acting) on request
Materials	Cast Iron, Stainless Steel, Combination of both materials, Polyisoprene Lining

## Models and Performance Range

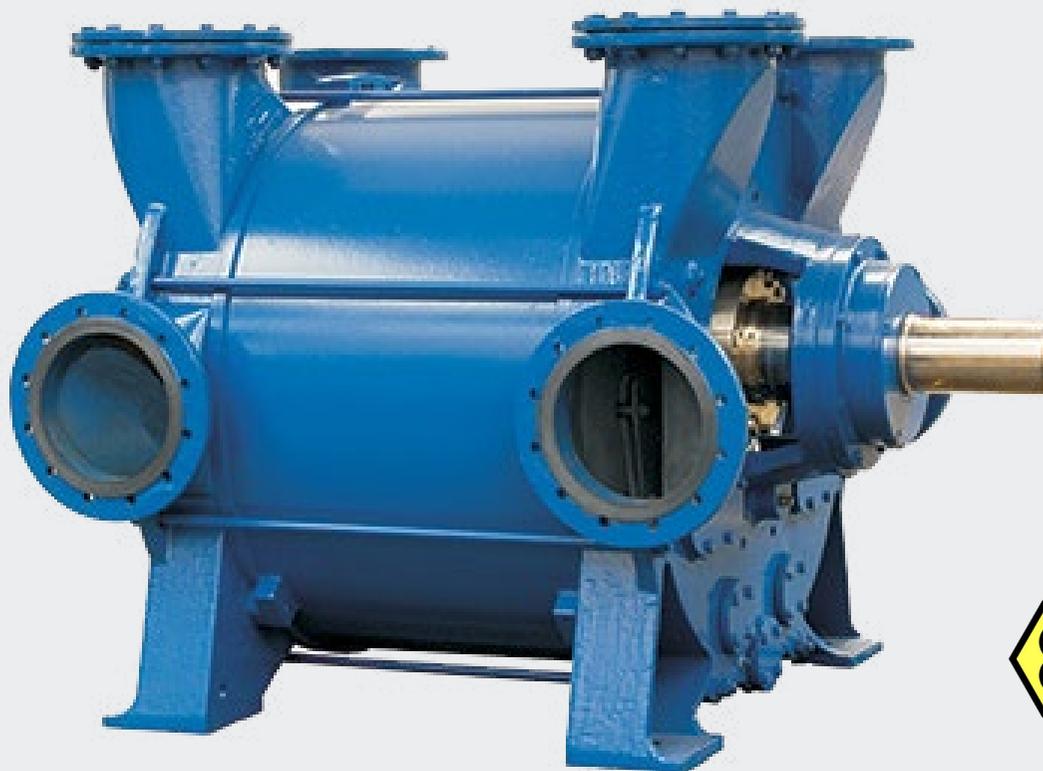


## NASH 2BQ SERIES

NASH's 2BQ series provides proven performance and reliability in a modular package that can be tailored to a range of applications. Based on the renowned 2BE4, the NASH 2BQ series has an improved compressor configuration, as well as compatibility with a comprehensive range of standard components.

Featuring a reinforced rotor, drive shaft, and bearings, the 2BQ series is capable of withstanding higher pressures, up to 1.5 bar abs suction and 3.75 bar abs discharge pressures; as well as a wider range of operating speeds, from 420 to 611 rpm.

The 2BQ series provides the ultimate operational flexibility. In addition to the modular design, each component can be manufactured from application-specific materials such as stainless steel. This ensures that the 2BQ series can be used for a range of demanding processes and applications, including the recovery and compression of hydrocarbons, as well as compression of hydrogen, chlorine, and a range of other process gasses.



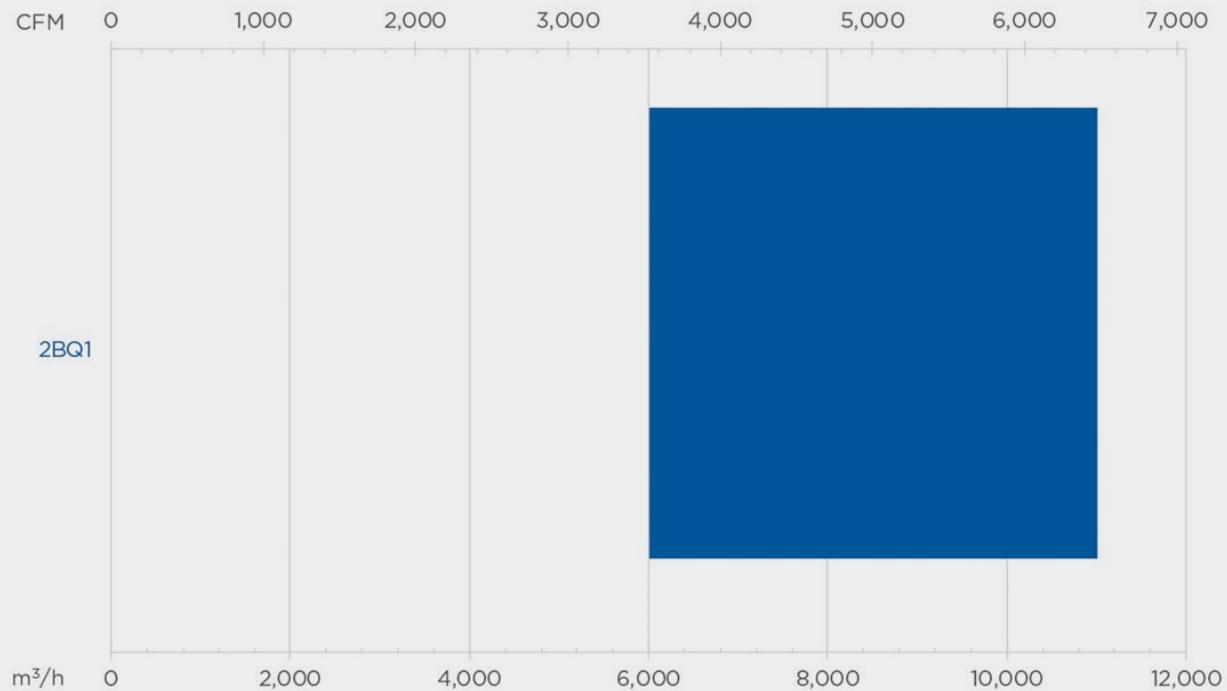
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# NASH 2BQ SERIES

## Technical Data NASH 2BQ

Suction Capacity	6,000 to 11,000 m <sup>3</sup> /h (3,500 to 6,400 SCFM)
Maximum Discharge Pressure	to 3.8 bar abs. (to 40 psig)
Differential Pressure	to 2.8 bar (to 40 psi)
Shaft Sealing	Single acting Mechanical Seal (standard), Stuffing box, double acting Mechanical Seal on request
Materials	Ductile Iron, Stainless Steel

## Models and Performance Range



# NASH 2BK SERIES

The NASH 2BK single stage liquid ring compressor series functions with both negative and positive pressure inlets, and are/is particularly suitable for increased pressures. With capacity ranging from 85 to 4,100 m<sup>3</sup>/h (50 to 2,400 SCFM) the 2BK compressors are relied on for the compression and recovery of hydrocarbons in the oil & gas, petrochemical, and chemical process industries.



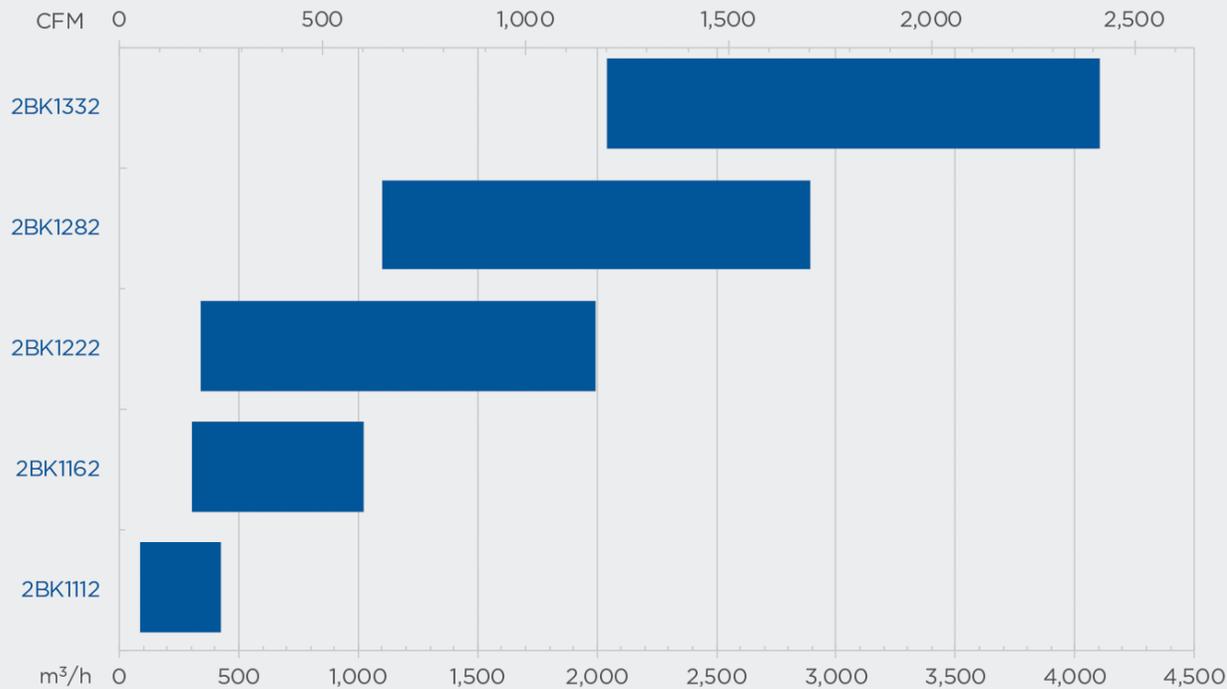
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# NASH 2BK SERIES

## Technical Data NASH 2BK

Suction Capacity	85 to 4,100 m <sup>3</sup> /h (50 to 2,400 SCFM)
Suction Pressure	0.8 to 4 bar abs.
Maximum Discharge Pressure	to 8 bar abs.
Differential Pressure	to 5 bar
Shaft Sealing	Mechanical Seals (single acting/double acting)
Materials	Stainless Steel

## Models and Performance Range



# Service & Support

## Local Support Backed by Global Expertise

Nash offers a comprehensive range of service and support products that are designed to help keep your operations running smoothly and efficiently, avoiding potential equipment failure and costly downtime.

Our **ISO 9001:2008** and **ISO 14001 certified service centers** are strategically located around the world, providing our customers with a range of service and support for your vacuum pump, compressor, or blower system, including:

- Inspections & Repair
- OEM Spare Parts
- Service & Repair Kits
- Conversions and Upgrades
- Materials & Seals
- Coatings & Linings
- ATEX Repairs
- Factory Performance Testing
- Field Service
- Installation & Start-Up Services
- Maintenance
- On-site Capacity & Performance Testing
- Fiberscope Inspections
- Pump Cleaning
- Vacuum Audits

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Each service center is staffed by CERTIFIED, factory trained professionals who have access to a range of state-of-the-art, specialty equipment, tools, and fixtures that are required to rebuild and overhaul a range of pumps, compressors, blowers, screw vacuum pumps and engineered systems. Nash's technical service and support group is also on hand to provide engineering support as required.

Our team of experts relies on the latest engineering drawings and specifications, as well as a complete inventory of high quality OEM parts and spares. This ensures that your equipment is guaranteed to work within the same performance and reliability tolerances as a new pump or compressor.

A world map with a blue background and white outlines of continents. Several location pins are placed on the map: three orange pins in Europe, one white pin in North America, one orange pin in the Middle East, and one white pin in India. The pins are used to mark the locations of Gardner Denver Nash's manufacturing facilities and sales offices.

## Manufacturing Facilities

**Pune India Gardner Denver Engineered Products India Pvt**  
Ltd Gat No: 182, 183, 184 Gat No:  
182, 183, 184, Alandi - Markal Road  
Fulgaon Pune Maharashtra 412216

**Nash - Zweigniederlassung der Gardner Denver**  
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Katzwanger Straße 150  
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Germany  
Tel: +49 911 1454-0

## Sales Office/Service Center

**Zoeterwoude, Netherlands Gardner Denver Nash Benelux BV**  
Produktieweg 10 Zoeterwoude  
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**Winsford UK Cheshire Gardner Denver Ltd**  
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