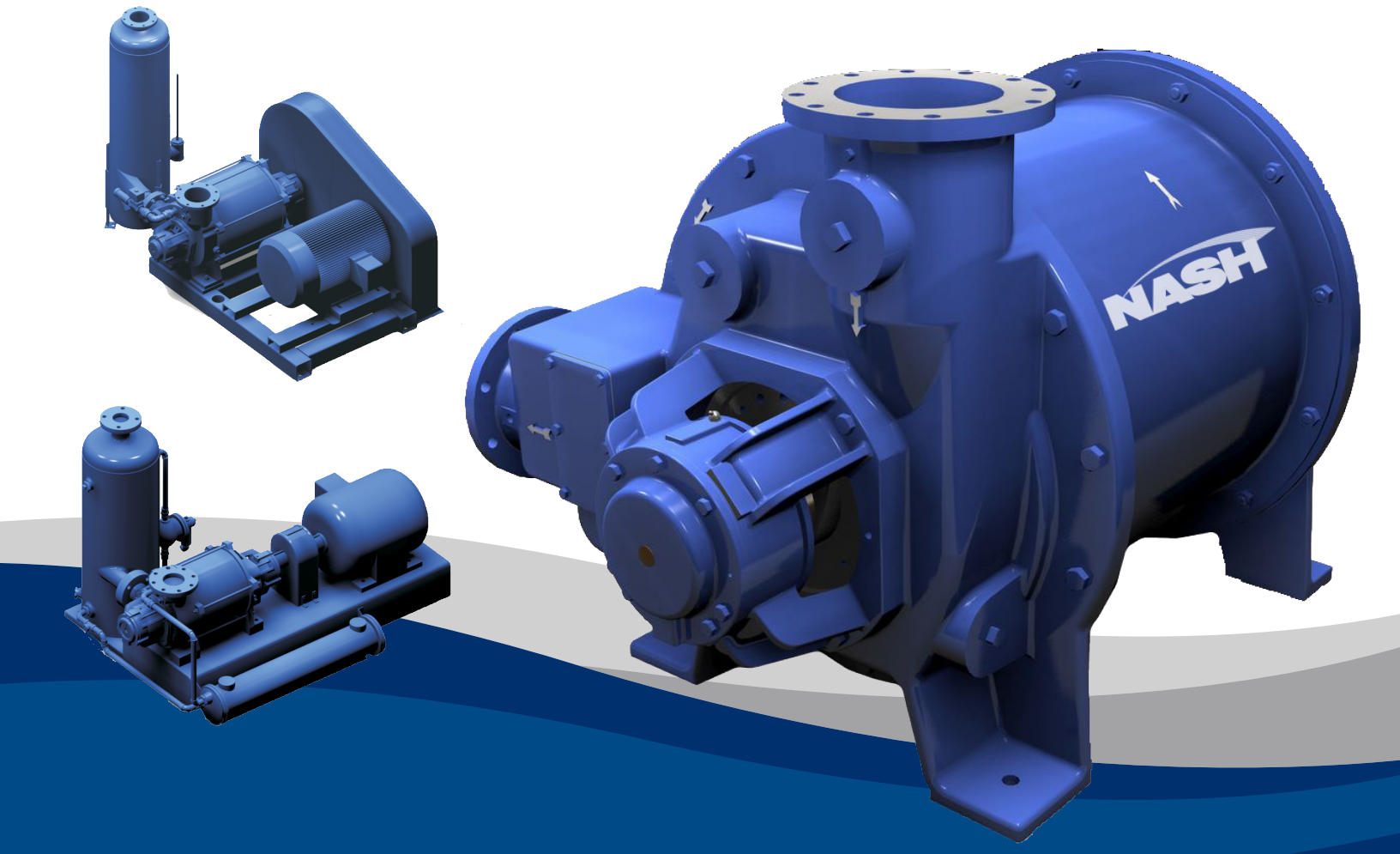
NASH
by Gardner Denver

LIQUID RING PUMPS, COMPRESSORS & SYSTEMS

VECTRA XL SERIES



NASH VECTRA XL SERIES

Pumps, Compressors & Systems

NASH liquid ring vacuum pumps are known as tireless workhorses, designed to stand up to the rigorous, nonstop demands of harsh industrial environments. Built better than industry standards, NASH pumps have been known for their reliability for over 110 years.

The Vectra XL series combines the highest standard of this reliability with a new level of ingenuity. Gardner Denver Nash employs advanced design technologies to achieve optimum performance and unprecedented production efficiencies. As a result, Vectra XL pumps are economical and provide great value to our customers.

Designed based on customer defined market requirements; and the input from R&D, manufacturing, marketing, and most importantly, process engineers, the Vectra XL series is a revolutionary line of pumps tough enough to be branded NASH.

Need efficient and reliable vacuum solutions? You need NASH.

NASH LIQUID RING TECHNOLOGY ADVANTAGES

Cool Running
- Safe handling of process gases

One Moving Part
- Long term reliability

Quiet Operation
- Improved work environment

Handles Liquid Carryover
- Minimizes process downtime

NASH CERTIFIED™ 2-Year Performance Guarantee

RELIABLE TECHNOLOGY FOR DEMANDING INDUSTRIAL PROCESSES

Based on over 110 years of engineering expertise, the Vectra XL series delivers patented features and design elements that only the NASH engineering team can provide.

- NASH Patented Gas Scavenging – Increased High Vacuum Performance
- Meets High Combustible Range Standards
- Precision Cast 316 Stainless Steel Mechanical Seal Standard Up to XL 150
- Improved Cone Angles - Decreased Pump Size

PACKAGE SYSTEM SOLUTIONS

Our package system offers NASH engineered soutions in a pre-configured design for fast turnaround, and delivery in as little as 6 weeks*.

- Pre-engineered Solutions
- Quick Delivery
- Configured to Meet the Demands of a Wide Range of Industrial Applications
- Plug & Play Installation

CERTIFICATIONS

Vectra XL pumps meet high combustible range standards and are ATEX certified. These vacuum pumps and compressors are in accordance with guideline 94/9/EG, category 1 and 2 and were also designed with API 681 specifications in mind.

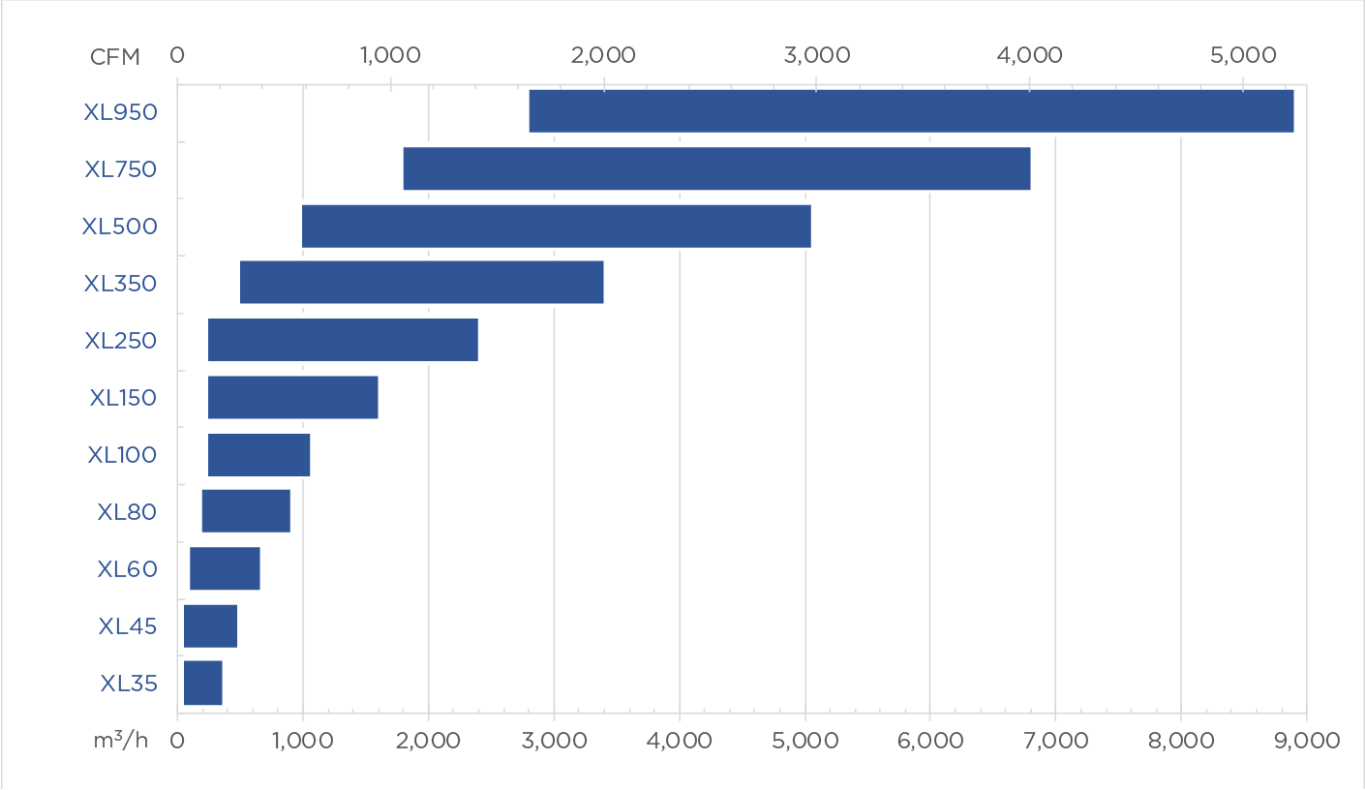
DEPENDABLE & EFFICIENT PERFORMANCE FOR A WIDE RANGE OF INDUSTRIAL APPLICATIONS

HIGH VACUUM
- Bottling
- Central Vacuum Systems
- Chucking
- Deaeration/Degassification
- Distillation
- Ethanol Evaporation
- Evisceration
- Fiber Molding
- House Vacuum
- Packaging
- Paper Converting
- Poultry Processing
- Wood Treatment

COMPRESSOR
- Wastewater Treatment
- Digester Gas
- Aeration
- Gas Boosting

*Depending on Pump Stock & Availability

VECTRA XL LIQUID RING VACUUM PUMPS & COMPRESSORS	
INDUSTRIES & APPLICATIONS	designed to stand up to harsh environments found in a wide range of industries
MATERIALS OF CONSTRUCTION	ductile iron, stainless steel & aluminum bronze
TECHNOLOGICAL ADVANCEMENTS	patented cone design & rotor configuration
DESIGN SPECIFICATIONS	designed to excel in applications requiring discharging against positive back pressure

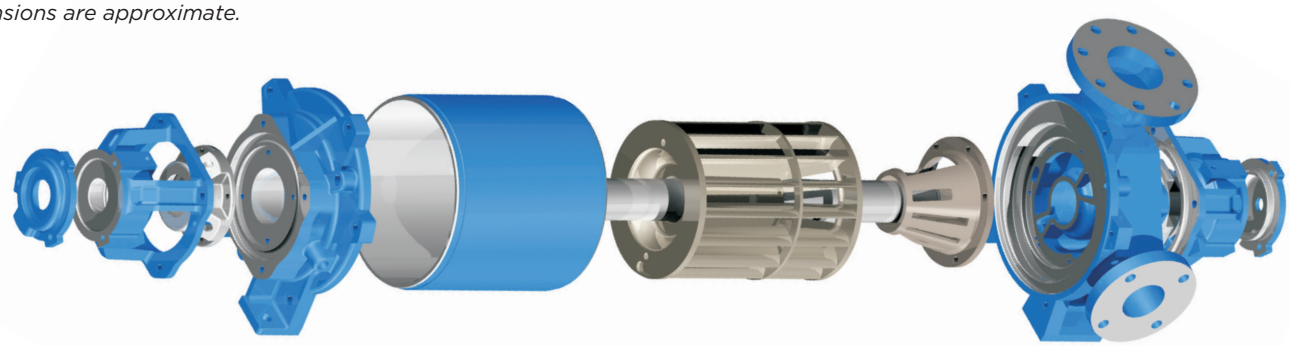


PERFORMANCE	SPECIFICATIONS
VACUUM RANGE	0-29in. Hg; to 33 mbar abs.
MECHANICAL SEAL	single, double and cartridge
DIFFERENTIAL PRESSURE	30 psi/2 bar
COMPRESSOR PRESSURE	30 psig/3 bar abs.
HYDROTEST PRESSURE	150 psig/11 bar abs. standard (225 psig/16 bar abs. optional)

DIMENSIONS - IN INCHES (MM IN BLUE)

MODEL	LENGTH	WIDTH	HEIGHT	INLET	OUTLET
XL 35	30 762	13.4 340	14 356	3 FLG 80 FLG	3 FLG 80 FLG
XL 45	33 838	13.4 340	14 356	3 FLG 80 FLG	2 FLG 50 FLG
XL 60	36 914	17 432	16 406	4 FLG 100 FLG	3 FLG 80 FLG
XL 80	39 991	17 432	16 406	4 FLG 100 FLG	3 FLG 80 FLG
XL 100	42 1067	19 483	20 508	4 FLG 100 FLG	4 FLG 100 FLG
XL 130	46 1168	19 483	20 508	4 FLG 100 FLG	4 FLG 100 FLG
XL 150	48 1219	21 533	21 533	6 FLG 150 FLG	4 FLG 100 FLG
XL 250	55 1397	26 660	25 635	6 FLG 150 FLG	6 FLG 150 FLG
XL 350	64 1626	29 737	31 787	8 FLG 200 FLG	6 FLG 150 FLG
XL 500	81 2057	39 991	41 1041	10 FLG 250 FLG	8 FLG 200 FLG
XL 750	81.5 2070	49 1244	47.3 1200	10 FLG 250 FLG	8 FLG 200 FLG
XL 950	89.5 2273	55.4 1407	53.5 1360	12 FLG 300 FLG	10 FLG 250 FLG

All dimensions are approximate.



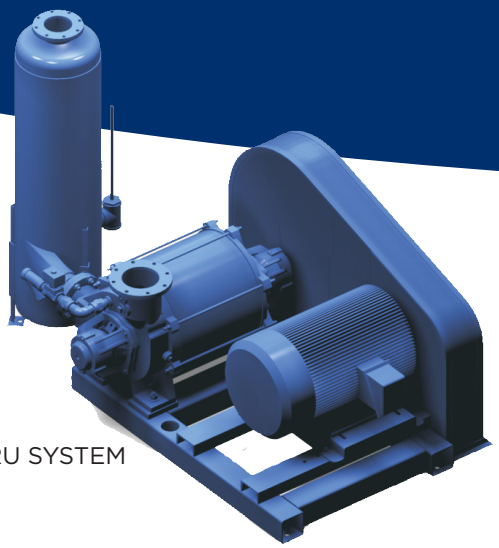
NASH VECTRAPAK STANDARD & CONFIGURED-TO-ORDER PACKAGES

- **Quick Delivery** - delivery in 6 weeks*
- **Plug & Play -** quick installation
- **System Options -** once-thru, fully recirculated
- **Materials of Construction -** iron, stainless steel
- **Vacuum Levels -** to 29in. Hg (to 33 mbar abs.)
- **Additional Option -** Oil Sealed Packages

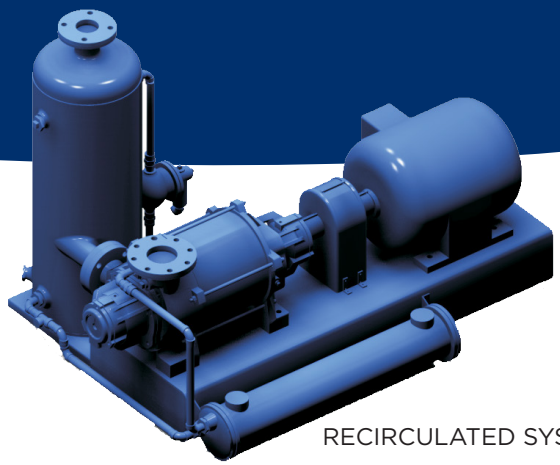
**Depending on Pump Stock & Availability*

SYSTEM OPTIONS	ONCE-THRU	FULLY RECIRCULATED
High Vacuum Flow Controls	X	X
Inlet Check Valve	X	X
Inlet Isolation Valve	X	X
Mechanical Seals (Standard for Stainless Steel up to XL 150)	X	X
Relief Valve	X	X
Vacuum Gauge	X	X
Flow Switch	X	
Partial Recirculated Seal	X	
Seal Line Isolation Valve	X	
Spray Nozzle	X	
Variable Speed Drive	X	X
Motor Enclosures: • TEFC (Standard) • TEFC-SD • Explosion Proof	X	X

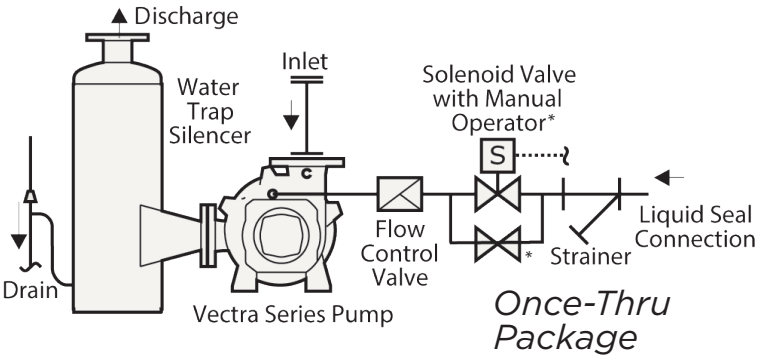
	MOUNTED PUMPS	ONCE-THRU	RECIRCULATED
Use When...	...replacing an existing system or where accessories can be reused	...contamination is not a problem and the supply of seal liquid is plentiful	...liquids and gases are hazardous or toxic and where contamination is a concern
Benefits	• Lowest initial cost	• Simplicity • Low initial cost	• Low water consumption • Condensable inlet gases may be recovered • Seal liquid contained and isolated from non-hazard-ous coolant systems
Standard Components	• Pump • Base • Drive • Guard • TEFC motor	• Pump • Base • TEFC motor/drive/guard • Seal water accessories • Water trap silencer	• Pump • Base • TEFC motor/drive/guard • Seal water accessories • ASME-coded separator with sight glass • Heat exchanger • Automatic makeup system

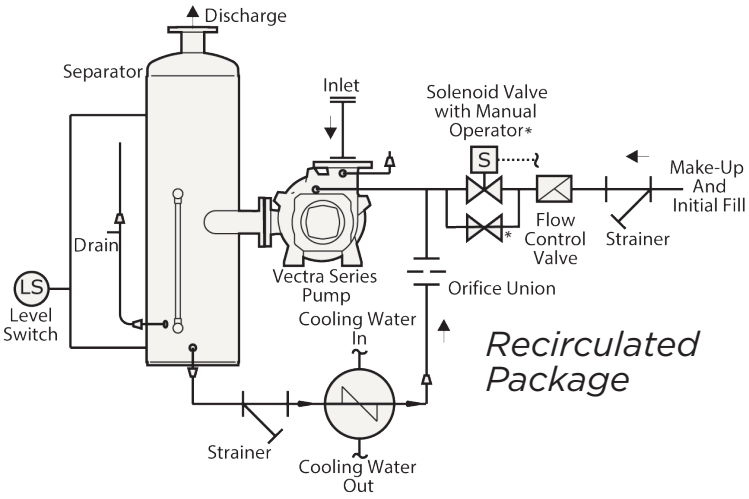


ONCE-THRU SYSTEM



RECIRCULATED SYSTEM





With Manual Operator or Manual Bypass Line with Ball Valve.

FEATURES	BENEFITS
External Mechanical Seals (Optional on Iron, Standard on Stainless Steel up to XL 150)	Flexibility and Ease of Maintenance
Universal Stuffing Box	Accepts Variety of Mechanical Seals
Direct Drive Speeds for 60 & 50 Hz Motors	Global Product Design for Worldwide Use
Extended Pressure Ratings	Ability to handle tough applications where backpressure is required
NASH Patented Gas Scavenging	Increased High Vacuum Performance
Conical Design	Better Ability to Handle Water/Particulate Slugs
One Moving Part	Long Term Reliability
Variable Port Design	High Efficiency
Lobe Purges	Reduce Erosion Wear
Optimum Design Using Finite Element Analysis	Improved Efficiency, Performance, and Value
100% Performance Tested	Trouble-Free Start-Up & Operation
Backed by a 2-Year Warranty and Over 100 Years of Experience	Peace of Mind

Gardner Denver Nash Products & Systems

NASH® Liquid Ring Vacuum Pumps & Systems

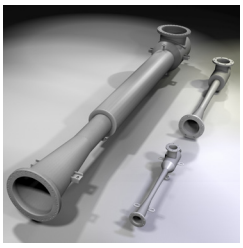
The reliable and durable solution for demanding process applications. Through ongoing commitment to innovation, Nash continues to introduce liquid ring vacuum pumps that meet the rigors of the most demanding applications while improving efficiency and lowering total cost of ownership.

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.

Gardner Denver

NASH

Gardner Denver Nash, LLC

www.GDNash.com

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Please recycle after use.