

**Vectra XL**  
**Liquid Ring Vacuum Pumps and Compressors**



# NASH Vectra XL Vacuum Pumps & Compressors

## Industry Workhorses

NASH liquid ring vacuum pumps produced by Gardner Denver Nash have been known for more than 100 years as tireless workhorses, designed to stand up to the rigorous, nonstop demands of the harshest industrial environments. Built better than industry standards, NASH pumps are known for their reliability.

Vectra XL vacuum pumps and compressors, created specifically for the chemical process industry, combine 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 from the ground up based on customer defined market requirements; and the input from R&D, manufacturing, marketing, and most importantly, process engineers, Vectra XL pumps are a revolutionary line of pumps tough enough to be branded NASH.

These pumps include technological advancements such as a patented cone design and rotor configuration. These machines have been specifically designed to excel in applications that require discharging against a positive back pressure. 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.

## Vacuum technology for chemical processing

Vectra XL pumps are designed to stand up to the harsh environments found in the chemical process industry. They are available in both ductile iron and stainless steel. and can accommodate a variety of mechanical seals. Key elements of the design are the improved cone angles, which decrease the size of the pump, and NASH patented Gas Scavenging Technology, which dramatically improves pump performance at high vacuum levels.

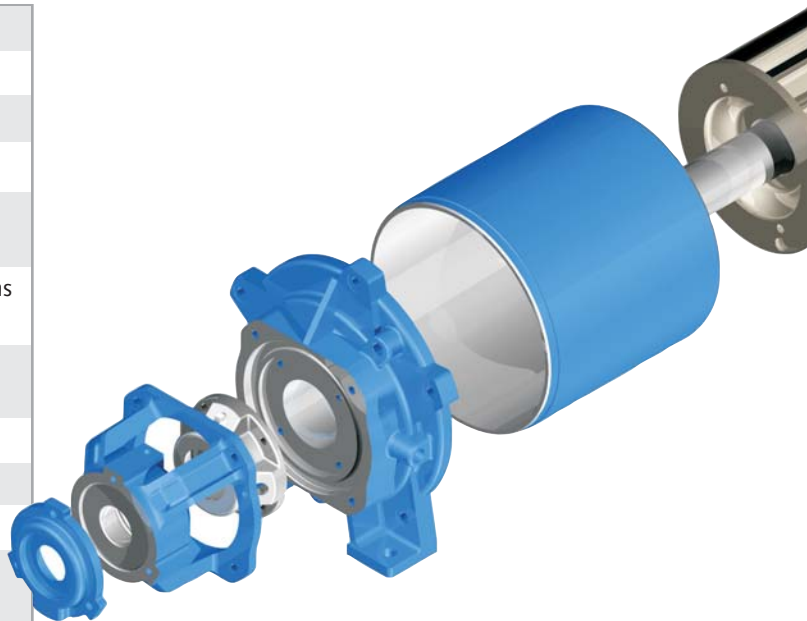
### Basic specifications

Vacuum range	0-29 in Hg vac/ to 33 mbar abs.
Mechanical seals*	Single, double and cartridge
Differential pressure capability	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)
Construction material	Ductile iron, stainless steel

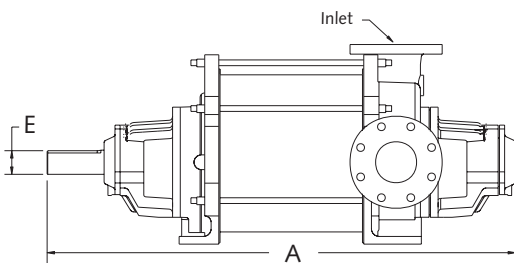
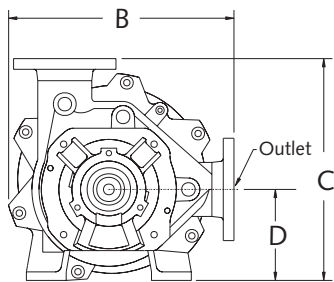
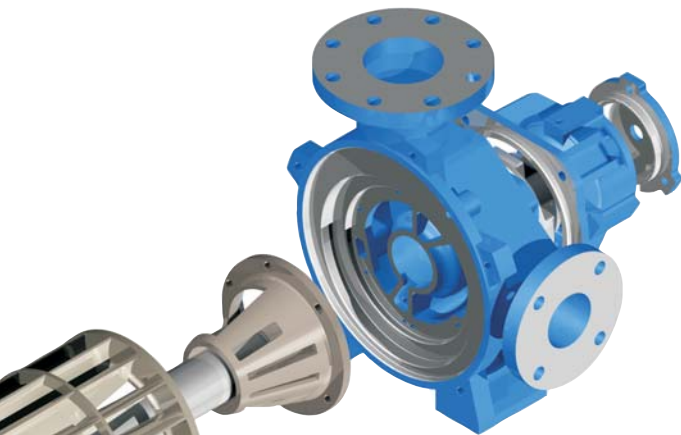
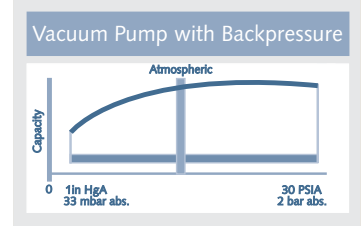
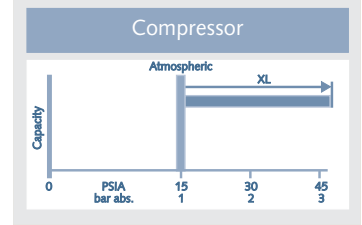
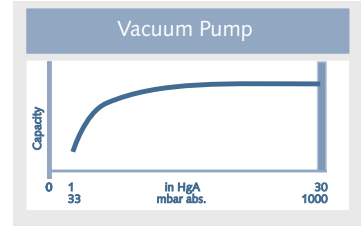
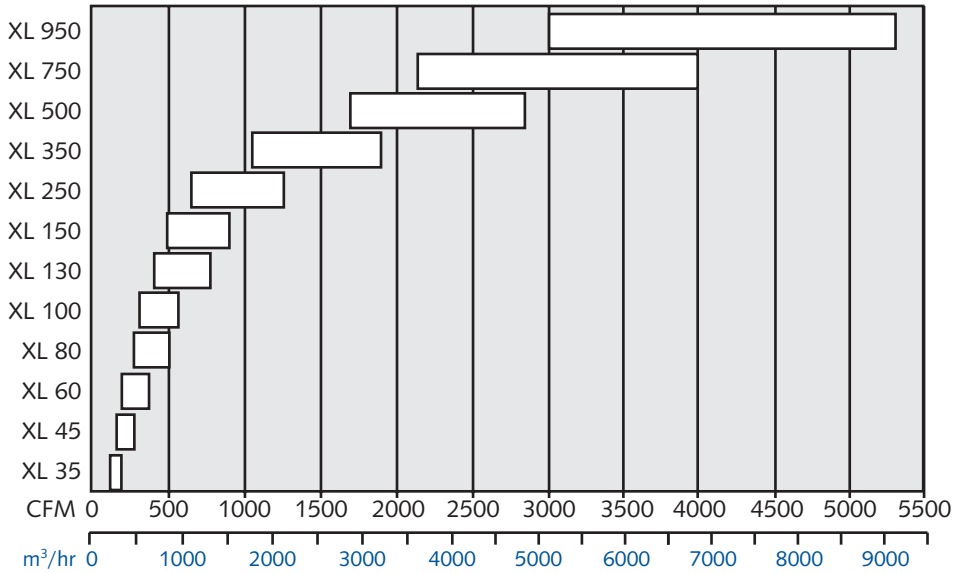
\*Mechanical seals are standard on stainless steel Vectra XL 35 - 150 models.

Optional on others.

Features	Benefits
Compact design	Less floor space required
External mechanical seals	Flexibility & ease of maintenance
Universal stuffing box	Accepts variety of mech. seals
Global product design	Direct drive speeds for 60 Hz & 50 Hz motors
Extended pressure ratings	Ability to handle tough applications where back pressure is required
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
NASH patented Gas Scavenging	Increased performance at high vacuum levels
Redesigned cone angle	Reduced pump length
Optimum design using finite element analysis	Improved efficiency, performance and value
100% performance tested	Trouble-free start-up and operation



## Performance



## Dimensions - in (mm)

Pump	A	B	C	D	E	Inlet	Outlet
XL 35	30 762	13.4 340	14 356	6 152	1.5 38	3 in. FLG 80 mm FLG	2 in. FLG 50 mm FLG
XL 45	33 838	13.4 340	14 356	6 152	1.5 38	3 in. FLG 80 mm FLG	2 in. FLG 50 mm FLG
XL 60	36 914	17 432	16 406	6.8 173	1.9 48	4 in. FLG 100 mm FLG	3 in. FLG 80 mm FLG
XL 80	39 991	17 432	16 406	6.8 173	1.9 48	4 in. FLG 100 mm FLG	3 in. FLG 80 mm FLG
XL 100	42 1067	19 483	20 508	8 203	2.4 61	4 in. FLG 100 mm FLG	4 in. FLG 100 mm FLG
XL 130	46 1168	19 483	20 508	8 203	2.4 61	4 in. FLG 100 mm FLG	4 in. FLG 100 mm FLG
XL 150	48 1219	21 533	21 533	9.3 236	2.5 64	6 in. FLG 150 mm FLG	4 in. FLG 100 mm FLG
XL 250	55 1397	26 660	25 635	11.5 292	3 76	6 in. FLG 150 mm FLG	6 in. FLG 150 mm FLG
XL 350	64 1626	29 737	31 787	13 380	3.4 86	8 in. FLG 200 mm FLG	6 in. FLG 150 mm FLG
XL 500	81 2057	39 991	41 1041	18 457	3.5 89	10 in. FLG 250 mm FLG	8 in. FLG 200 mm FLG
XL 750	81.5 2070	49 1244	47.3 1200	20.5 520	5.1 130	10 in. FLG 250 mm FLG	8 in. FLG 200 mm FLG
XL 950	89.5 2273	55.4 1407	53.5 1360	23.2 590	5.9 150	12 in. FLG 300 mm FLG	10 in. FLG 250 mm FLG

All dimensions are approximate

## Other NASH Products

**2BV** Compact liquid ring vacuum pumps built for serious cost savings  
Use up to 50 percent less water than other liquid ring pumps  
Monoblock and pedestal designs available  
Capacity of 4 to 350 CFM with vacuum to 29+” HgV  
Capacity of 7 to 595 m<sup>3</sup>/h with vacuum to 31 mbar abs



**Steam Jet Ejectors** Sizes range from one-inch (25mm) to 78-inch (2 meters) inlets  
Capacities range from 20 CFM to 20,000 CFM  
Capacities range from 34 m<sup>3</sup>/h to 34,000 m<sup>3</sup>/h  
Multi-stage system pressures as low as 0.001 mm HgA



**2BE3/P2620** Large liquid ring vacuum pumps with superior corrosion resistance  
Top discharge capability which eliminates need for trench  
Self-recirculating seal water, reducing need for external seal water source  
Capacity of 4,000 to 23,000 CFM with vacuum to 24” HgV  
Capacity of 6,800 to 39,000 m<sup>3</sup>/h with vacuum to 200 mbar abs



**TC/TCM** Integral 2 stage liquid ring pumps with improved performance at vacuum levels down to 0.8” HgA (27 mbar)  
Designed to handle large amounts of liquid carryover without difficulty  
Capacity of 100 to 2,240 CFM with vacuum to 0.8” HgA  
Capacity of 170 to 3,740 m<sup>3</sup>/h with vacuum to 27 mbar



**Compressors** Wide range of liquid ring compressors designed for many applications. Rugged and reliable, they can handle highly toxic, explosive and corrosive gases  
Specifically developed for applications such as flare-gas, Chlorine and Vinyl Chlorine Monomer (VCM) recovery  
Capacity of 60 to 2,200 SCFM with pressure to 200 PSIG  
Capacity of 100 to 3,740 m<sup>3</sup>/h with pressure to 15 bar abs  
Single and two stage models available



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