

**NASH**

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



# NASH Vectra XL Series Liquid Ring Vacuum Pumps and 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.

| Basic Specifications NASH Vectra XL |  |
|-------------------------------------|--|
| Vacuum range                        | to 33 mbar abs. (0-29 in Hg vac)                                   |
| Mechanical seals*                   | Single, double and cartridge                                       |
| Differential pressure capability    | 2 bar (30 psi)   |
| Compressor pressure                 | 3 bar abs. (30 psig)   |
| Hydrotest pressure                  | 16 bar abs. (225 psig) optional<br>11 bar abs. (150 psig) standard |
| Construction material               | Ductile iron, stainless steel                                      |

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

## Vacuum and compressor technology for chemical processing

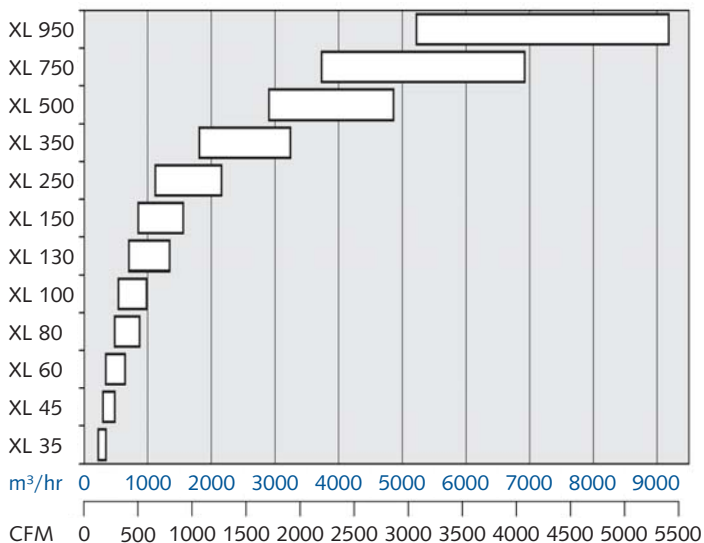
Vectra XL pumps are designed to stand up to the harsh environments found in the chemical process industry. They are available in both ductile iron and stainless steel and can accommodate a variety of mechanical seals. Key elements of the design are the improved cone angles, which decrease the size of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



| Features                                       | Benefits   |
|--|--|
| Compact design                                 | Less floor space required  |
| External mechanical seals                      | Flexibility & ease of maintenance                                    |
| Universal stuffing box                         | Accepts variety of mechanical seals                                  |
| Direct drive speeds for 60 Hz and 50 Hz motors | Global product design  |
| 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                                  |

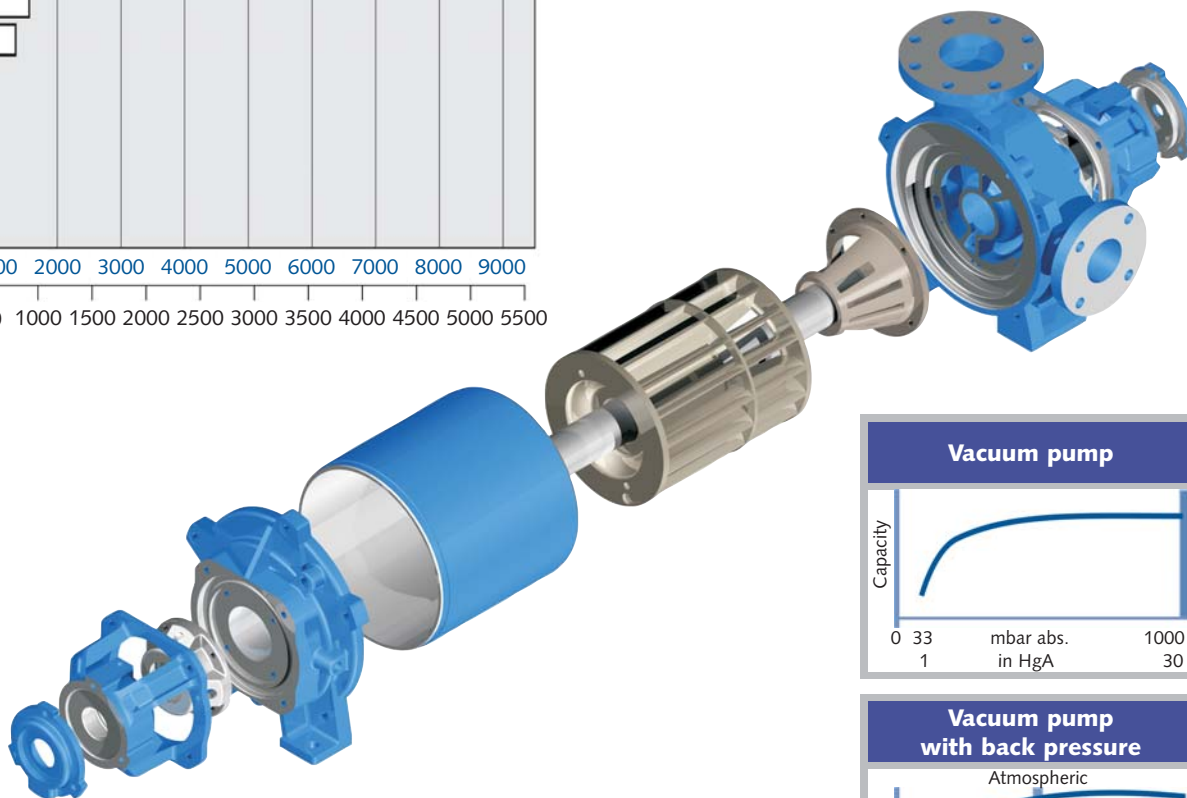
# NASH Vectra XL Series World Class Design and Performance

## Performance : Suction Capacity



## Performance : Vacuum and Compressor Range

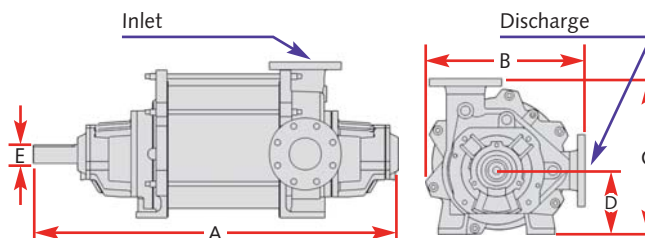
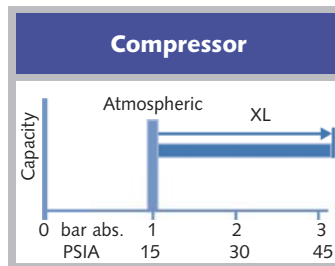
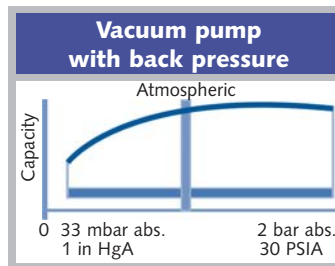
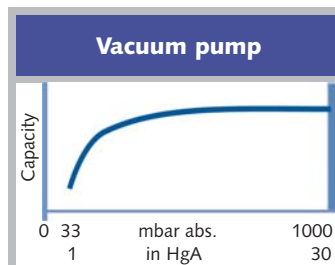
|     |     |     |           |      |     |          |      |     |     |
|-----|-----|-----|-----------|------|-----|----------|------|-----|-----|
| 28  | 33  | 160 | mbar abs. | 1013 | 1.0 | bar abs. | 2.0  | 2.5 | 3.0 |
| 0.8 | 1.0 | 4.7 | in HgA    | 30.0 | 0   | PSIG     | 14.5 | 22  | 30  |



## Dimensions

all dimensions are approximate; technical data subject to change

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



## Other NASH Products:

### 2BE4 / 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: 6,800 to 39,000 m<sup>3</sup>/h (4,000 to 23,000 CFM)
- Vacuum: to 160 mbar abs. (25" HgV)



### TC/TCM

- Integral 2 stage liquid ring pumps with improved performance at high vacuum levels
- Designed to handle large amounts of liquid carryover without difficulty
- Capacity: 170 to 3,740 m<sup>3</sup>/h (100 to 2,240 CFM)
- Vacuum: to 27 mbar abs. (0.8" HgA)



### Vectra SX

- Liquid ring vacuum pumps and compressors
- Available in monoblock or lantern design
- Water handling version for large amounts of liquid carryover
- Capacity: 35 to 260 m<sup>3</sup>/h (20 to 155 CFM)
- Vacuum: to 33 mbar abs. (29"+ HgV)



### Service for Liquid Ring Pumps

We have the know-how, the experience and the specialists: We provide professional service to keep your pumps running and efficient for decades. Our Service Centers are located in:

- Australia
- Brazil
- China
- Germany
- Korea
- The Netherlands
- Singapore
- South Africa
- United Kingdom
- USA



### Steam Jet Ejectors

- Sizes range from 25mm to 2 meters (1" to 78") inlets
- Capacity: 34 to 34,000 m<sup>3</sup>/h (20 to 20,000 CFM)
- Vacuum: Multi-stage system pressures as low as 0.034 mbar abs. (0.001 mm HgA)



Gardner Denver Nash has many ISO 9001 certifications.



Gardner Denver Nash has an extensive network of sales offices and representatives all over the world.

### Nash - Zweigniederlassung der Gardner Denver Deutschland GmbH

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