

# NX Series

## Liquid Ring Vacuum Pumps

Models: NX-35,45,60,80,100,130,250, 350 and 500



**Description:** Single-Stage Liquid Ring Vacuum Pump

**Type:** Single Cone

**Models:** NX-35, 45, 60, 80, 100, 130, 250, 350, and 500

**Power Range:** 7.5 - 200 HP

**Capacity Range:** 117 -3000 CFM

**Max Vacuum:** 28" Hg

### OVERVIEW

Our NX Series are designed as drop-in replacements for the Nash\* classic XL/GL series vacuum pumps. This 117-3000 CFM single cone liquid ring vacuum pump is designed to have only one moving part to induce maximum mechanical stability with maximum reliability. This cast-iron single cone liquid ring vacuum pump is suited to deliver vacuum at maximum capacity in tough conditions of sudden water and particle slugs. We offer version with capacities ranging from 117-3000 CFM.

### CONSTRUCTION

Our 7.5-200 HP NX Series [liquid ring vacuum pumps](#) are [designed](#) to be [drop-in replacements](#) for the XL/GL series. Available in NX- 35, 45, 60, 80, 100, 130, 250, 350 & 500 (up to 3000 CFM). Standard construction is Stainless steel with Teflon packing. NES provides Stainless Steel Single cone liquid ring vacuum pumps that are performance tested and include a 2-year warranty.

### FEATURES

- **Drop-in replacement** for Nash\* XL/GL series
- Standard construction is robust **Cast Iron** with Teflon Packing.
- Optional 304 or 316 **Stainless Steel construction**.
- Optional factory installed **mechanical seals**.
- **Parts and repair kits available** to fit Nash\* XL/GL Series
- Available in bare pump, direct drive or V-belt systems
- **2-year factory warranty** against manufacturer's defects.



### NOTES

NES Company is proud to offer our single stage/single cone NX Series liquid ring vacuum pumps. These new pumps have been designed to be drop-in replacements for classic Nash\* XL/GL Series pumps. NES NX Series liquid ring vacuum pumps are factory performance tested and include a 2-year warranty.

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## GENERAL TECHNICAL DATA

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| Model     | Max Vacuum<br>["Hg] | Speed<br>[RPM] | Capacity<br>[CFM] @<br>20" Hg | Motor Power<br>[HP] | Inlet<br>[in] | Discharge<br>[in] | Seal Water Usage<br>[GPM] | Seal Water Size<br>[in] | Pump Weight Dry<br>[lbs.] |                 |
|-----------|---------------------|----------------|-------------------------------|---------------------|---------------|-------------------|---------------------------|-------------------------|---------------------------|-----------------|
|           |                     |                |                               |                     |               |                   |                           |                         | Cast Iron                 | Stainless Steel |
| NX - 35   | 28                  | 1450           | 117                           | 7.5                 | 3 FL          | 2 FL              | 1.5 - 3                   | ½ NPT                   | -                         | 216             |
|           |                     | 1750           | 145                           | 10                  |               |                   |                           |                         |                           |                 |
|           |                     | 2300           | 192                           | 15                  |               |                   |                           |                         |                           |                 |
| NX - 45   | 28                  | 1450           | 160                           | 10                  | 3 FL          | 2 FL              | 1.5 - 3                   | ½ NPT                   | -                         | 231             |
|           |                     | 1750           | 198                           | 15                  |               |                   |                           |                         |                           |                 |
|           |                     | 2300           | 260                           | 20                  |               |                   |                           |                         |                           |                 |
| NX – 60   | 28                  | 980            | 193                           | 15                  | 4 FL          | 3 FL              | 5 - 10                    | ¾ NPT                   | -                         | 395             |
|           |                     | 1170           | 240                           | 15                  |               |                   |                           |                         |                           |                 |
|           |                     | 1450           | 303                           | 20                  |               |                   |                           |                         |                           |                 |
|           |                     | 1750           | 365                           | 25                  |               |                   |                           |                         |                           |                 |
| NX – 80   | 28                  | 980            | 260                           | 20                  | 4 FL          | 3 FL              | 5 - 10                    | ¾ NPT                   | -                         | 435             |
|           |                     | 1170           | 320                           | 20                  |               |                   |                           |                         |                           |                 |
|           |                     | 1450           | 420                           | 25                  |               |                   |                           |                         |                           |                 |
|           |                     | 1750           | 500                           | 40                  |               |                   |                           |                         |                           |                 |
| NX - 100  | 28                  | 800            | 290                           | 20                  | 4 FL          | 4 FL              | 6 - 12                    | 1 NPT                   | -                         | 662             |
|           |                     | 880            | 328                           | 20                  |               |                   |                           |                         |                           |                 |
|           |                     | 980            | 380                           | 20                  |               |                   |                           |                         |                           |                 |
|           |                     | 1170           | 460                           | 25                  |               |                   |                           |                         |                           |                 |
|           |                     | 1450           | 560                           | 40                  |               |                   |                           |                         |                           |                 |
| NX – 130  | 28                  | 800            | 400                           | 25                  | 4 FL          | 4 FL              | 6 - 12                    | 1 NPT                   | -                         | 733             |
|           |                     | 880            | 455                           | 25                  |               |                   |                           |                         |                           |                 |
|           |                     | 980            | 510                           | 25                  |               |                   |                           |                         |                           |                 |
|           |                     | 1170           | 620                           | 40                  |               |                   |                           |                         |                           |                 |
|           |                     | 1450           | 775                           | 50                  |               |                   |                           |                         |                           |                 |
| NX -- 250 | 25                  | 600            | 730                           | 40                  | 6 FL          | 6 FL              | 14-28                     |                         |                           |                 |
|           |                     | 705            | 875                           | 40                  |               |                   |                           |                         |                           |                 |
|           |                     | 750            | 940                           | 40                  |               |                   |                           |                         |                           |                 |
|           |                     | 880            | 1100                          | 60                  |               |                   |                           |                         |                           |                 |
|           |                     | 980            | 1225                          | 75                  |               |                   |                           |                         |                           |                 |
|           |                     | 1080           | 1340                          | 75                  |               |                   |                           |                         |                           |                 |
| NX – 350  | 25                  | 500            | 1120                          | 50                  | 8 FL          | 6 FL              | 15-30                     |                         |                           |                 |
|           |                     | 600            | 1360                          | 60                  |               |                   |                           |                         |                           |                 |
|           |                     | 705            | 1625                          | 75                  |               |                   |                           |                         |                           |                 |
|           |                     | 750            | 1730                          | 100                 |               |                   |                           |                         |                           |                 |
|           |                     | 880            | 2000                          | 125                 |               |                   |                           |                         |                           |                 |
| NX – 500  | 25                  | 450            | 1825                          | 75                  | 10 FL         | 8 FL              | 25-50                     |                         |                           |                 |
|           |                     | 500            | 2050                          | 100                 |               |                   |                           |                         |                           |                 |
|           |                     | 590            | 2460                          | 125                 |               |                   |                           |                         |                           |                 |
|           |                     | 705            | 2900                          | 150                 |               |                   |                           |                         |                           |                 |
|           |                     | 735            | 3000                          | 200                 |               |                   |                           |                         |                           |                 |

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**Variation Table**

| Varations Table            | Particulars                                     |
|----------------------------|---|
| Metallurgy                 | Standard Cast Iron                              |
|                            | Stainless Steel 304                             |
|                            | Stainless Steel 316L                            |
|                            | Duplex Steel                                    |
|                            | Bronze  |
| Direction                  | Clockwise                                       |
|                            | Counter- Clockwise Rotation                     |
| Purpose                    | Vacuum Pump                                     |
|                            | Compressor                                      |
| Sealing                    | Standard Available as Gland Packing             |
|                            | Available with Single Seal                      |
|                            | Available with Single Cartridge Seal            |
|                            | Available with Dual Cartridge Seal and Seal Pot |
| Configuration              | Once Through                                    |
|                            | Partial Recovery                                |
|                            | Full Sealant Recovery                           |
| Other System Configuration | Simplex   |
|                            | Duplex  |
|                            | Triplex   |
|                            | Quadruplex                                      |

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### Vacuum pump Length, Height, Breadth, Keyway, Shaft diameter

| Model    | Length<br>(Inches) | Height<br>(Inches) | Breadth<br>(Inches) | Keyway (Inches) | Shaft diameter<br>(Inches) |
|----------|--------------------|--------------------|---------------------|-----------------|----------------------------|
| NX – 35  | 35                 | 13.4               | 14                  | 0.4724 X 0.197  | 1.6543                     |
| NX – 45  | 33                 | 13.4               | 14                  | 0.4724 X 0.197  | 1.6543                     |
| NX – 60  | 36                 | 17                 | 16                  | 0.551 X 0.218   | 1.8905                     |
| NX – 80  | 39                 | 17                 | 16                  | 0.551 X 0.218   | 1.8905                     |
| NX – 100 | 42                 | 19                 | 20                  | 0.709 X 0.276   | 2.3634                     |
| NX – 130 | 46                 | 19                 | 20                  | 0.709 X 0.276   | 2.3634                     |
| NX – 250 | 55                 | 26                 | 25                  | -               | -                          |
| NX – 350 | 64                 | 29                 | 31                  | -               | -                          |
| NX – 500 | 81                 | 39                 | 41                  | -               | -                          |

### Application table

| Variation      | Applications           |
|----------------|------------------------|
| High Vacuum    | Central Vacuum Systems |
|                | De-aeration            |
|                | Drying                 |
|                | Evaporating            |
|                | Autoclaves             |
|                | Evaporating            |
|                | Priming                |
|                | Forming                |
|                | Fiber Setting          |
|                | Gas Stripping          |
|                | Molding                |
|                | Power Plants           |
|                | Container Filling      |
| Water Handling | Filtering              |
|                | Extruder Venting       |
|                | Eviscerating           |
|                | Foods & Fats           |



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### Material Details

| Index No                  | Description               | Quantity | Index No | Description                     | Quantity |
|---------------------------|---------------------------|----------|----------|---------------------------------|----------|
| 1                         | *Packing                  | 4        | 105 – 1  | Bolt, I.E. Cone                 | 20       |
| 2                         | *Seal Assembly            | 2        | 105 – 2  | Studs                           | AR       |
| 3                         | Slinger                   | 2        | 105 – 3  | *Gasket, I.E. Cone              | 1        |
| 3 – 1                     | Spring                    | 2        | 108      | Bearing Bracket, D.E.           | 1        |
| 4                         | *Shim                     | AR       | 108 – 1  | Bearing Bracket Bolt, D.E.      | 4        |
| 5                         | *Lip Seal                 | 2        | 109      | Bearing Bracket, I.E.           | 1        |
| 5 – 1                     | *Lip Seal, D.E., Outer    | 1        | 109 – 1  | Bearing Bracket Bolt, I.E.      | 4        |
| 6                         | Retainer Seal             | 2        | 110      | Rotor                           | 1        |
| 6 – 1                     | Retainer Seal Bolt        | 8        | 111      | Shaft                           | 1        |
| 6 – 3                     | Retainer Seal Gasket      | 2        | 111 – 1  | Shaft Key                       | 1        |
| 10                        | Lantern Gland             | 2        | 112      | Gland                           | 2        |
| 18                        | Check Valve Ball          | 2        | 115      | Cap, Outer D.E.                 | 1        |
| 18 – 1                    | Check Valve Ball Retainer | 1        | 115 – 1  | Bolts, D.E. Outer Bearing Cap   | 3        |
| 18 – 2                    | Retainer Screw            | 2        | 115 – 3  | *Gasket, D.E. Outer Bearing Cap | 1        |
| 18 – 4                    | Stop Plate                | 1        | 117      | Cap, Outer I.E.                 | 1        |
| 18 – 5                    | Stop Plate Screw          | 1        | 117 – 1  | Bolts, I.E. Outer Bearing Cap   | 3        |
| 22                        | Pipe Plugs                | 2        | 117 – 2  | Cap, Inner D.E.                 | 1        |
| 22 – 1                    | Pipe Plugs                | 7        | 117 – 3  | *Gasket, I.E. Outer Bearing Cap | 1        |
| 22 – 2                    | Pipe Plugs                | 2        | 119      | *Bearing, D.E.                  | 1        |
| 22 – 4                    | Pipe Plugs                | 1        | 120      | *Bearing, I.E.                  | 1        |
| 101                       | Body                      | 1        | 120 – 1  | *Locknut, I.E. Bearing          | 1        |
| 101 – 2                   | Axial Rod                 | 5        | 120 – 3  | *Lockwasher, I.E. Bearing       | 1        |
| 101 – 3                   | *Gasket                   | 2        | 147      | Cover Plate                     | 1        |
| 101 – 4                   | Rod Nuts                  | AR       | 147 – 1  | Cover Plate Screw               | 6        |
| 101 – 5                   | Rod Washers               | AR       | 147 – 3  | Cover Plate Gasket              | 1        |
| 103                       | Head, I.E.                | 1        | 150      | End Plate                       | 1        |
| 103 – 1                   | Gland Nut, I.E.           | 2        | 150 – 1  | Gland Nut, D.E.                 | 2        |
| 103 – 2                   | Gland Stud, I.E.          | 2        | 150 – 2  | Gland Stud, D.E.                | 2        |
| 105                       | Cone, I.E.                | 1        |          |                                 |          |
| *Recommended Spare Parts. |                           |          |          |                                 |          |
| AR – As Required.         |                           |          |          |                                 |          |

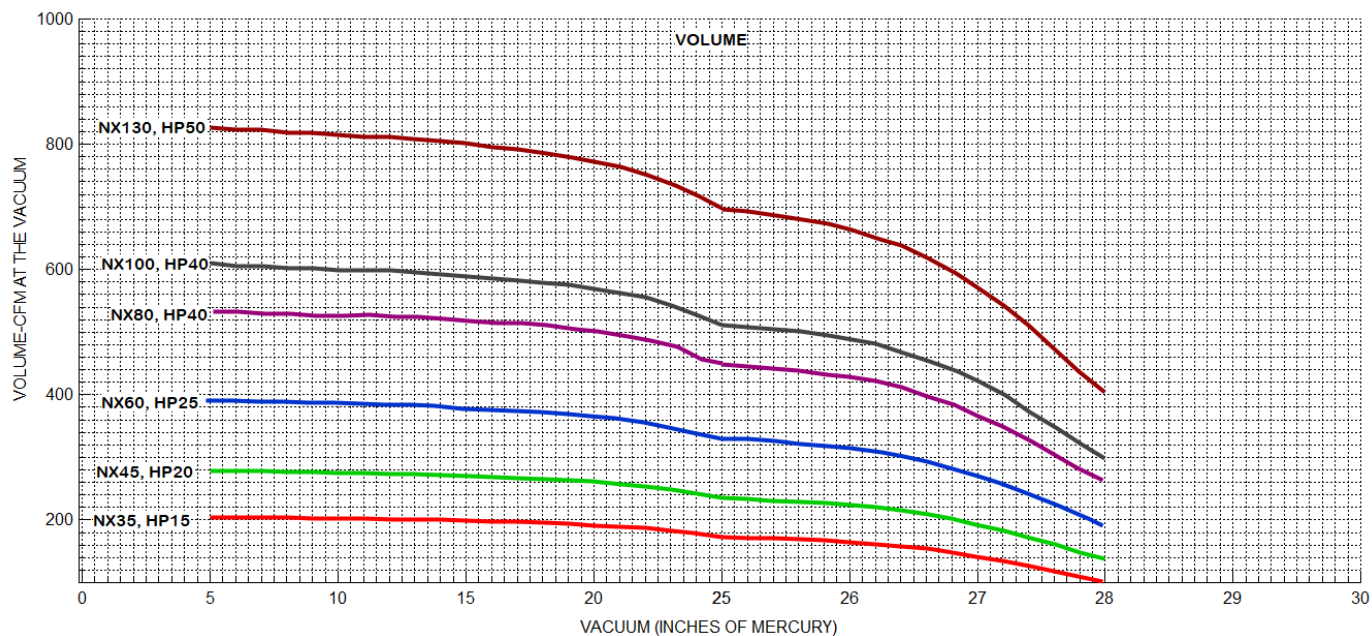
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### Composite Curve NX35, NX45, NX60, NX80, NX100, NX130



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### Composite Curve NX250, NX350, NX500

