LIQUID RING VACUUM PUMPS

# NL SERIES

**Pumps. Systems. Service. Support.** — One Source.

SINGLE-STAGE LIQUID RING VACUUM PUMP — DUAL CONE

MODELS: NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000



**Drop-in replacement for Nash* Classic CL Series pumps — direct internal and external part interchangeability, up to 10,000 CFM.**

### — FIT

**Drop-in replacement** for classic Nash* CL series; parts and repair kits available to fit Nash* CL Series.

### — MATERIALS

**Standard cast iron** construction with Teflon packing; optional 304 or 316 stainless steel.

### — CONFIGURATION

**Bare pump, direct drive,** or V-belt systems; optional factory-installed mechanical seals.

### — WARRANTY

**2-year factory warranty** against manufacturer's defects.

## Single stage. Dual cone. Up to 10,000 CFM.

NES Company Inc. NL Series single stage/dual cone vacuum pumps are designed to be drop-in replacements for the Nash* Classic CL Series. Available models include NL-400, 700, 1000, 1500, 2000, 3000, 4000, 6000, 9000, and 14000 (up to 10,000 CFM). Standard Construction is Cast Iron with Teflon packing. NES NL Series vacuum pumps are performance-tested and include a 2-year warranty against manufacturer’s defects.

| CAPACITY RANGE | POWER RANGE | MAX VACUUM | MODELS |
|---|---|---|---|
| 300–10,000 | 25–550 HP | 27.5" Hg | 12 Models |
| CFM capacity range | Motor power range | Maximum vacuum | NL200 through NL14000 |

# Overview / Features / Notes

## SPECIFICATION SUMMARY

| | |
|---|---|
| **Type** | Single-Stage, Dual Cone |
| **Models** | NL200, NL300, NL400, NL700, NL1000, NL1500, NL2000, NL3000, NL4000, NL6000, NL9000, NL14000 |
| **Power Range** | 25–550 HP |
| **Capacity Range** | 300–10,000 CFM |
| **Max Vacuum** | 27.5" Hg |

## CONSTRUCTION

Available in NL-400, 700, 1000, 1500, 2000, 3000, 4000, 6000, 9000, and 14000 (up to 10,000 CFM). Standard construction is cast iron with Teflon packing with options for Stainless Steel 304 / 306 / Bronze Cladding. The NL Series is designed to be a drop-in replacement with direct internal and external part interchangeability with the Nash* Classic CL Series.

## FEATURES

- **Drop-in replacement for classic Nash* CL series**
- **Standard construction is 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* CL 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/dual cone NL Series liquid ring vacuum pumps. These conical lobe liquid ring vacuum pumps have been designed to be drop-in replacements for classic Nash* CL Series pumps. NES pumps are factory performance tested and include a 2-year warranty against manufacturer's defects.

### FULL TECHNICAL DATA

The following pages cover vacuum pump technical data, variation and application tables, dimensions and shaft data, exploded views for each frame size, and composite performance curves. **Contact NES** at info@nescompany.com or 800-297-3550 for application support.

# Technical Data / Vacuum Pump

| Model | Max Vacuum ["Hg] | Speed [RPM] | Capacity [CFM] @ 10" Hg | Motor Power [HP] | Inlet [in] | Discharge [in] | Seal Water Usage [GPM] | Seal Water Size [in] | Weight Dry - Cast Iron [lbs.] | Weight Dry - Stainless Steel [lbs.] |
|---|---|---|---|---|---|---|---|---|---|---|
| NL402 | 26 | 1170 | 360 | 25 | 3 FL | 2-1/2 FL | 5 - 15 | 3/4 NPT | 490 | 540 |
| NL402 | 26 | 1320 | 400 | 25 | 3 FL | 2-1/2 FL | 5 - 15 | 3/4 NPT | 490 | 540 |
| NL402 | 26 | 1470 | 430 | 30 | 3 FL | 2-1/2 FL | 5 - 15 | 3/4 NPT | 490 | 540 |
| NL403 | 27.5 | 1170 | 285 | 25 | 3 FL | 2-1/2 FL | 5 - 15 | 3/4 NPT | 490 | 540 |
| NL403 | 27.5 | 1320 | 330 | 25 | 3 FL | 2-1/2 FL | 5 - 15 | 3/4 NPT | 490 | 540 |
| NL403 | 27.5 | 1470 | 395 | 30 | 3 FL | 2-1/2 FL | 5 - 15 | 3/4 NPT | 490 | 540 |
| NL701 | 19 | 800 | 550 | 25 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL701 | 19 | 890 | 600 | 30 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL701 | 19 | 980 | 660 | 40 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL701 | 19 | 1050 | 720 | 40 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL701 | 19 | 1170 | 800 | 50 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL702 | 25 | 890 | 550 | 30 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL702 | 25 | 980 | 650 | 40 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL702 | 25 | 1050 | 700 | 40 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL702 | 25 | 1170 | 770 | 50 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL703 | 27 | 890 | 400 | 25 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL703 | 27 | 980 | 475 | 30 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL703 | 27 | 1050 | 510 | 30 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL703 | 27 | 1170 | 600 | 40 | 4 FL | 3 FL | 10 - 20 | 1 NPT | 800 | 881 |
| NL1001 | 20 | 630 | 860 | 40 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1001 | 20 | 690 | 930 | 50 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1001 | 20 | 770 | 1025 | 50 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1001 | 20 | 820 | 1100 | 60 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1001 | 20 | 880 | 1150 | 75 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1002 | 25 | 690 | 875 | 40 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1002 | 25 | 770 | 960 | 50 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1002 | 25 | 820 | 1010 | 60 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1002 | 25 | 880 | 1125 | 75 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1003 | 27 | 690 | 710 | 40 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1003 | 27 | 770 | 810 | 50 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1003 | 27 | 820 | 840 | 50 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1003 | 27 | 880 | 900 | 60 | 5 FL | 4 FL | 10 - 30 | 1 NPT | 1224 | 1348 |
| NL1501 | 20 | 490 | 1010 | 50 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1501 | 20 | 525 | 1100 | 50 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1501 | 20 | 590 | 1250 | 60 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1501 | 20 | 640 | 1380 | 75 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1501 | 20 | 705 | 1490 | 75 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1501 | 20 | 800 | 1690 | 100 | 6 FL | 4 FL | 25 - 30 | 1 NPT | 2012 | 2215 |
| NL1502 | 27.5 | 525 | 990 | 50 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1502 | 27.5 | 590 | 1200 | 60 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1502 | 27.5 | 640 | 1300 | 75 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1502 | 27.5 | 705 | 1400 | 75 | 6 FL | 4 FL | 20 - 25 | 1 NPT | 2012 | 2215 |
| NL1502 | 27.5 | 800 | 1510 | 100 | 6 FL | 4 FL | 25 - 30 | 1 NPT | 2012 | 2215 |
| NL2001 | 19.5 | 450 | 1600 | 75 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2001 | 19.5 | 500 | 1790 | 100 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2001 | 19.5 | 550 | 1940 | 100 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2001 | 19.5 | 590 | 2090 | 125 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2001 | 19.5 | 640 | 2200 | 150 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2002 | 24.5 | 450 | 1450 | 75 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2002 | 24.5 | 500 | 1700 | 75 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2002 | 24.5 | 550 | 1950 | 100 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |

| Model | Max Vacuum ["Hg] | Speed [RPM] | Capacity [CFM] @ 10" Hg | Motor Power [HP] | Inlet [in] | Discharge [in] | Seal Water Usage [GPM] | Seal Water Size [in] | Weight Dry - Cast Iron [lbs.] | Weight Dry - Stainless Steel [lbs.] |
|---|---|---|---|---|---|---|---|---|---|---|
| NL2002 | 24.5 | 590 | 2050 | 100 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2002 | 24.5 | 640 | 2210 | 125 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2003 | 27 | 470 | 1140 | 75 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2003 | 27 | 500 | 1300 | 75 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2003 | 27 | 550 | 1500 | 75 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2003 | 27 | 590 | 1700 | 100 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL2003 | 27 | 640 | 1740 | 100 | 6 FL | 5 FL | 10 - 60 | 1 NPT | 2934 | 3230 |
| NL3001 | 19.7 | 400 | 2550 | 125 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3001 | 19.7 | 450 | 2800 | 125 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3001 | 19.7 | 500 | 3000 | 150 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3001 | 19.7 | 530 | 3200 | 200 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3002 | 24.5 | 400 | 2350 | 125 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3002 | 24.5 | 450 | 2780 | 125 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3002 | 24.5 | 500 | 3075 | 150 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3002 | 24.5 | 530 | 3200 | 200 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3003 | 27.5 | 400 | 1400 | 100 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3003 | 27.5 | 450 | 1620 | 125 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3003 | 27.5 | 500 | 2100 | 125 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL3003 | 27.5 | 530 | 2280 | 150 | 8 FL | 6 FL | 10 - 70 | 1 NPT | 4850 | 5340 |
| NL4001 | 17.5 | 300 | 3190 | 125 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4001 | 17.5 | 327 | 3500 | 150 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4001 | 17.5 | 360 | 3850 | 150 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4001 | 17.5 | 400 | 4300 | 200 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4001 | 17.5 | 450 | 4800 | 250 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4002 | 24 | 327 | 3195 | 150 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4002 | 24 | 360 | 3500 | 200 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4002 | 24 | 400 | 3800 | 200 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4002 | 24 | 450 | 3390 | 250 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4003 | 27 | 327 | 2400 | 125 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4003 | 27 | 360 | 2980 | 125 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4003 | 27 | 400 | 3190 | 200 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL4003 | 27 | 450 | 3700 | 200 | 10 FL | 8 FL | 30 - 100 | 1-1/2 NPT | 8400 | 9408 |
| NL6001 | 18 | 257 | 4900 | 200 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6001 | 18 | 377 | 5400 | 250 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6001 | 18 | 300 | 6000 | 250 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6001 | 18 | 327 | 6500 | 300 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6001 | 18 | 360 | 7000 | 350 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6002 | 22.5 | 277 | 5100 | 250 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6002 | 22.5 | 300 | 5600 | 250 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6002 | 22.5 | 327 | 6200 | 300 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6002 | 22.5 | 360 | 6850 | 350 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6003 | 26.5 | 277 | 3400 | 200 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6003 | 26.5 | 300 | 4000 | 250 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6003 | 26.5 | 327 | 4400 | 300 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL6003 | 26.5 | 360 | 4950 | 350 | 12 FL | 10 FL | 40 - 140 | 1-1/2 NPT | 14000 | 15000 |
| NL9001 | 18 | 215 | 7150 | 250 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9001 | 18 | 240 | 7900 | 300 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9001 | 18 | 257 | 8750 | 350 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9001 | 18 | 277 | 9250 | 400 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9001 | 18 | 300 | 9900 | 400 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9002 | 23 | 240 | 7500 | 350 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9002 | 23 | 257 | 8200 | 400 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9002 | 23 | 277 | 8900 | 400 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9002 | 23 | 300 | 9550 | 400 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |

| Model | Max Vacuum ["Hg] | Speed [RPM] | Capacity [CFM] @ 10" Hg | Motor Power [HP] | Inlet [in] | Discharge [in] | Seal Water Usage [GPM] | Seal Water Size [in] | Weight Dry - Cast Iron [lbs.] | Weight Dry - Stainless Steel [lbs.] |
|---|---|---|---|---|---|---|---|---|---|---|
| NL9003 | 27 | 257 | 6750 | 350 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9003 | 27 | 277 | 7500 | 400 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL9003 | 27 | 300 | 8100 | 400 | 14 FL | 12 FL | 50 - 200 | 2 NPT | 19000 | 21300 |
| NL14001 | 17.5 | 240 | 11600 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14001 | 17.5 | 257 | 12600 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14001 | 17.5 | 277 | 14000 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14001 | 17.5 | 300 | 14900 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14002 | 24.5 | 240 | 11550 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14002 | 24.5 | 257 | 12450 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14002 | 24.5 | 277 | 14000 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14002 | 24.5 | 300 | 14800 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14003 | 26.5 | 257 | 9950 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14003 | 26.5 | 277 | 11150 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |
| NL14003 | 26.5 | 300 | 12000 | 400 | 18 FL | 14 FL | 80 - 300 | 3 NPT | 31000 | - |

# Variation / Application Tables

## VARIATION TABLE

| Variations | 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 |

## APPLICATION TABLE

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

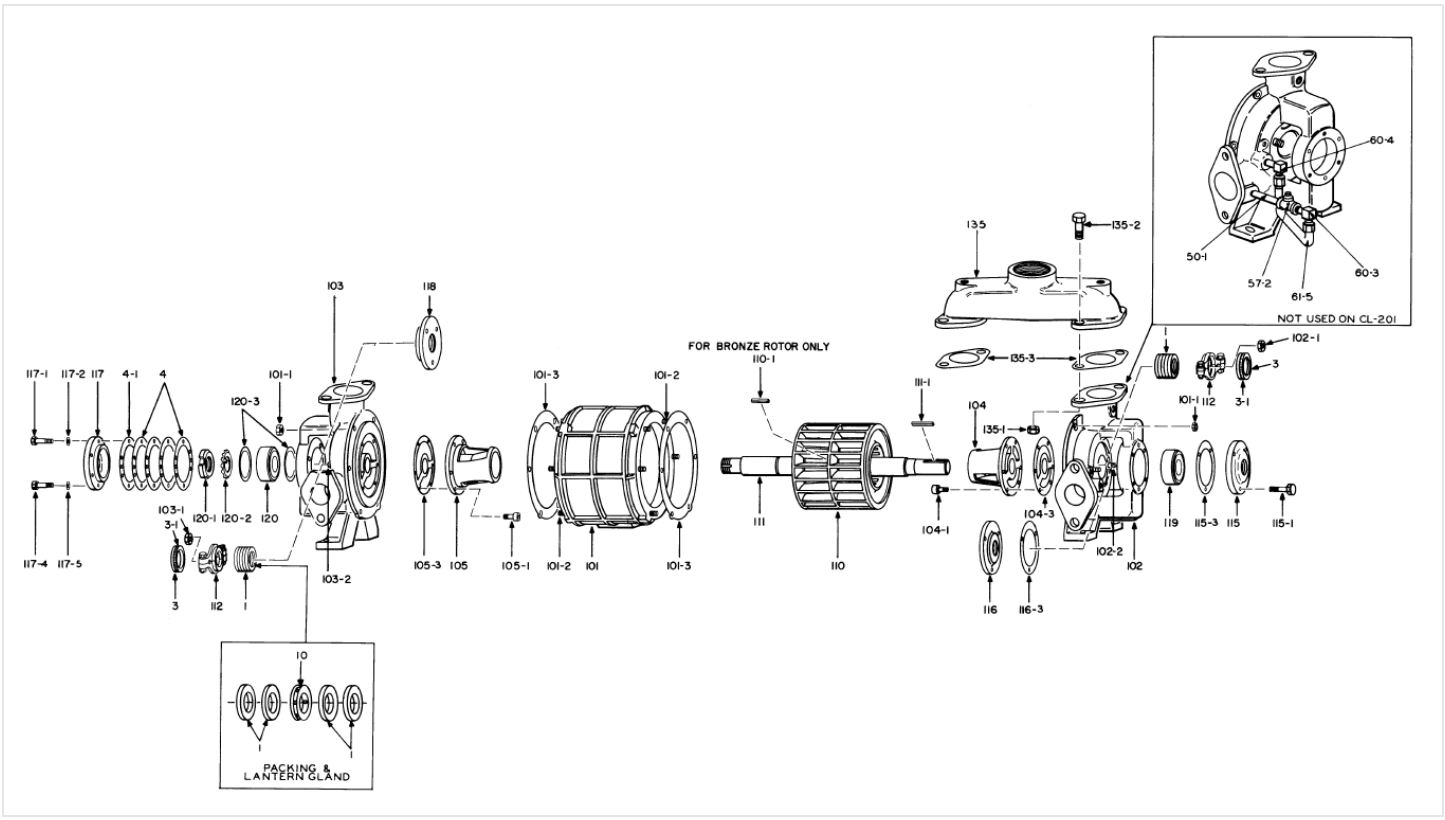
# Dimensions / Keyway & Shaft Data

## VACUUM PUMP — LENGTH, HEIGHT, BREADTH, KEYWAY, SHAFT DIAMETER

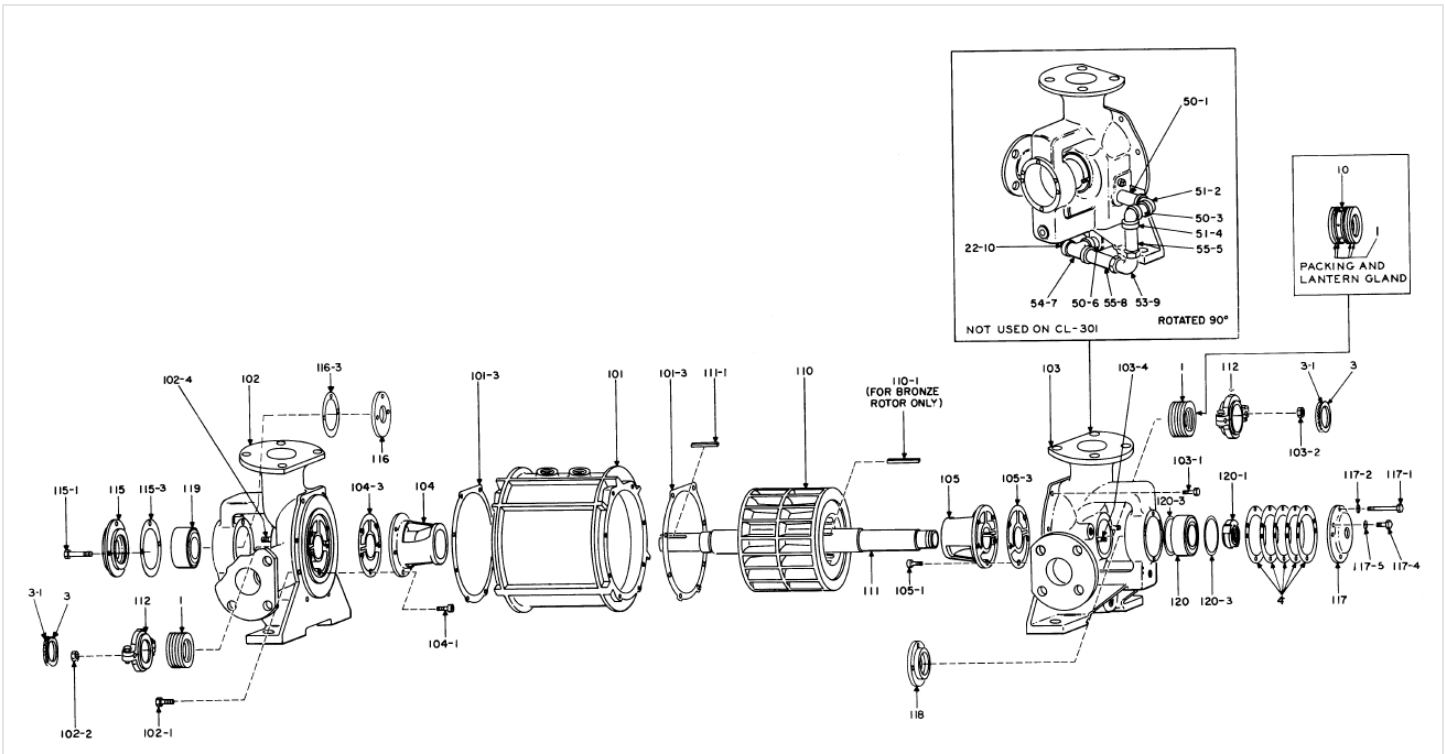
| Model | Length (Inches) | Height (Inches) | Breadth (Inches) | Configuration | Key Way (Inches) | Shaft Diameter (Inches) |
|---|---|---|---|---|---|---|
| NL200 | 25 | 17-3/8 | 8-3/4 | | 5/16 x 5/32 | 1.375 ± 0.005 |
| NL300 | 32 | 16 | 13-1/2 | | 3/8 x 3/16 | 1.500 ± 0.0005 |
| NL400 | 35-1/2 | 18 | 15-1/2 | | 3/8 x 3/16 | 1.625 ± 0.001 |
| NL700 | 40-3/8 | 19-3/4 | 19-1/2 | | 1/2 x 1/4 | 2.000 ± 0.001 |
| NL1000 | 47-7/8 | 26 | 24 | | 5/8 x 5/16 | 2.750 ± 0.001 |
| NL1500 | 54-7/8 | 54-1/2 | 30 | | 3/4 x 3/8 | 3.000 ± 0.001 |
| NL2000 | 59-3/8 | 23 | 33 | | 7/8 x 7/16 | 3.625 ± 0.001 |
| NL3000 | 68 | 33-1/4 | 39-1/2 | | 1 x 1/2 | 4.000 ± 0.001 |
| NL4000 | 91-3/4 | 50-1/4 | 47-5/8 | Single Belt or Coupling | 1-1/4 x 5/8 | 5.000 |
| | | | | Double Coupling | 1-1/4 x 5/8 | 5.250 |
| NL6000 | 99-1/2 | 53-1/2 | 57-3/4 | Single Belt | 1-1/2 x 3/4 | 5.938 |
| | | | | Single Coupling | 1-1/4 x 5/8 | 4.875 |
| | | | | Double Coupling | 1-1/2 x 3/4 | 6.438 |
| NL9000 | 108 | 64 | 69-1/2 | | 1-1/2 x 3/4 | 6.875 ± 0.001 |
| NL14000 | 139-1/2 | 100-1/2 | 71-1/2 | | 2 x 3/4 x 11 | 8.250 ± 0.002 |

# Exploded Views / Reference Drawings

## EXPLODED VIEW — NL 200

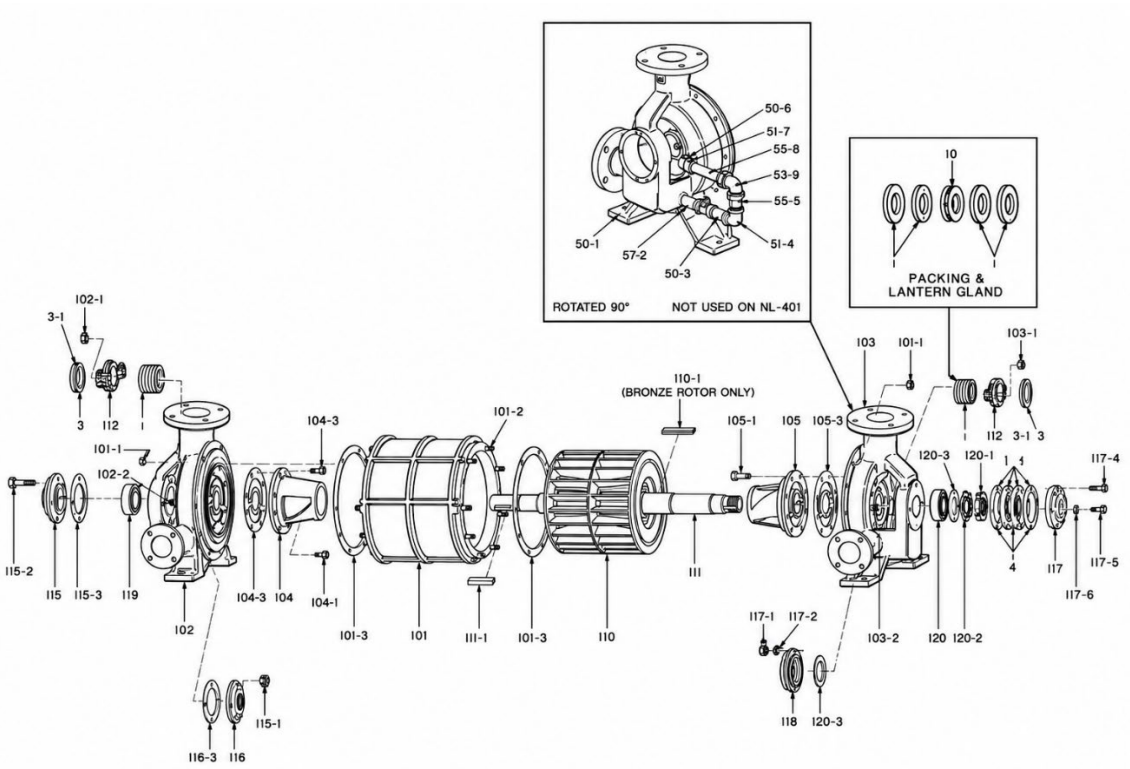



## EXPLODED VIEW — NL 300

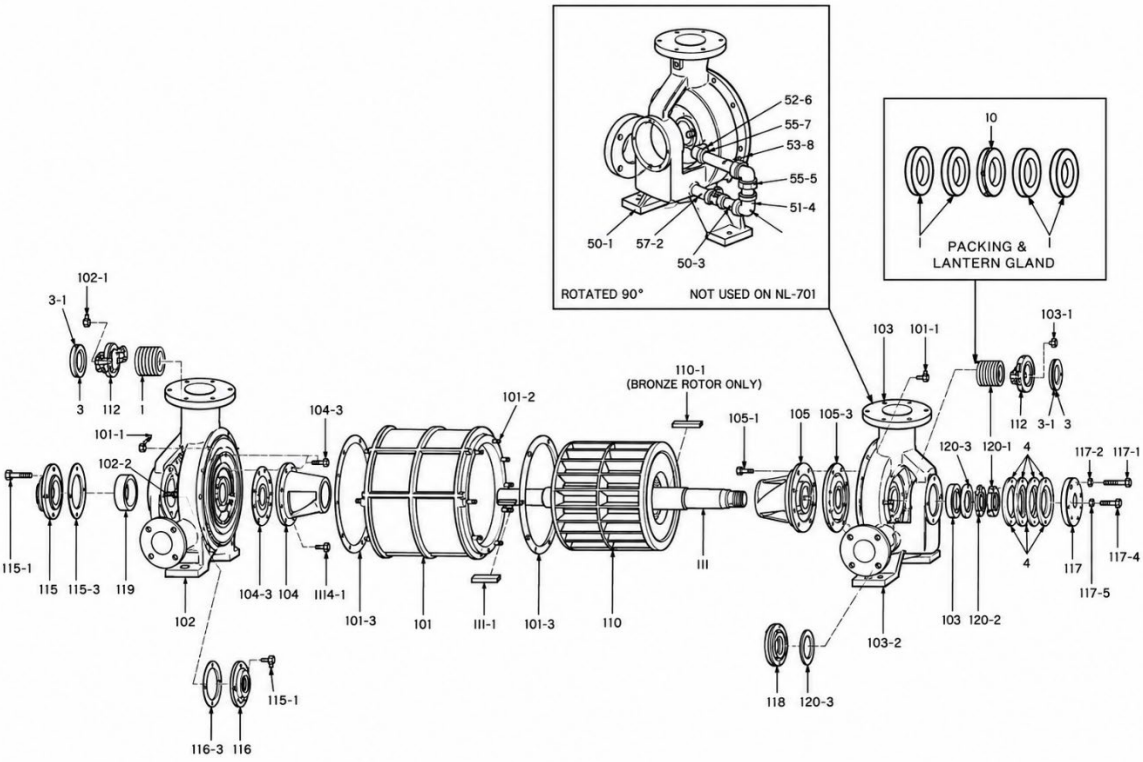


# Exploded Views / Reference Drawings (continued)

## EXPLODED VIEW — NL 400

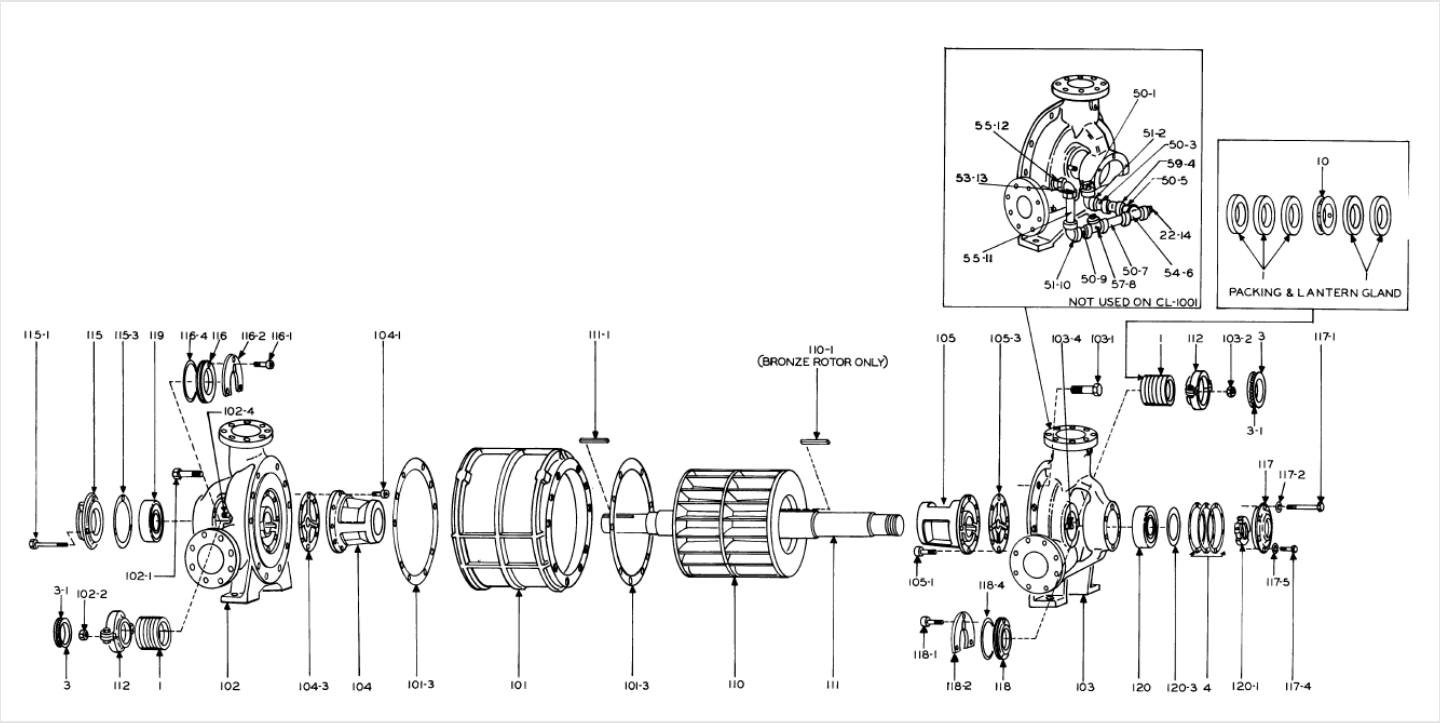



## EXPLODED VIEW — NL 700

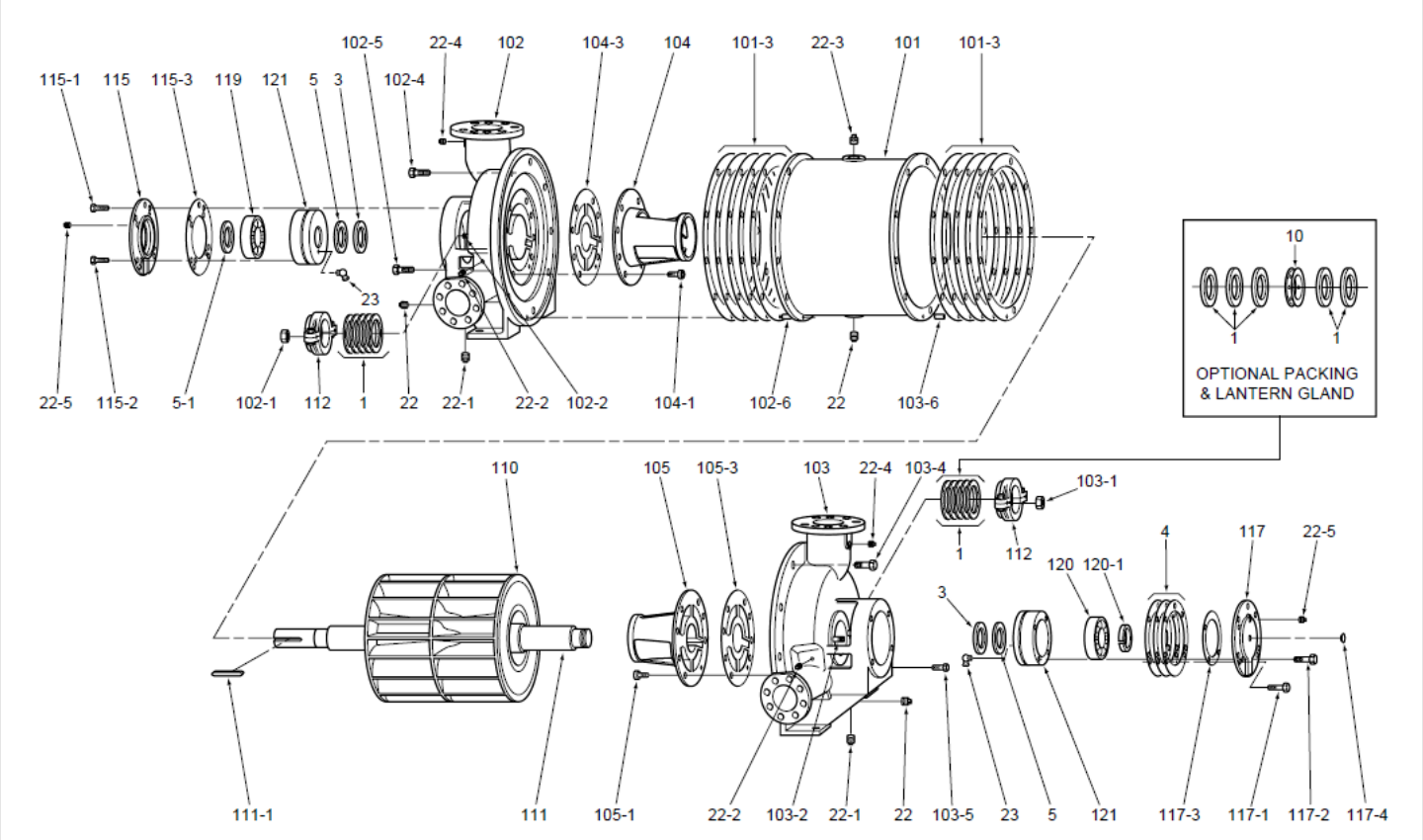


# Exploded Views / Reference Drawings (continued)

## EXPLODED VIEW — NL 1000

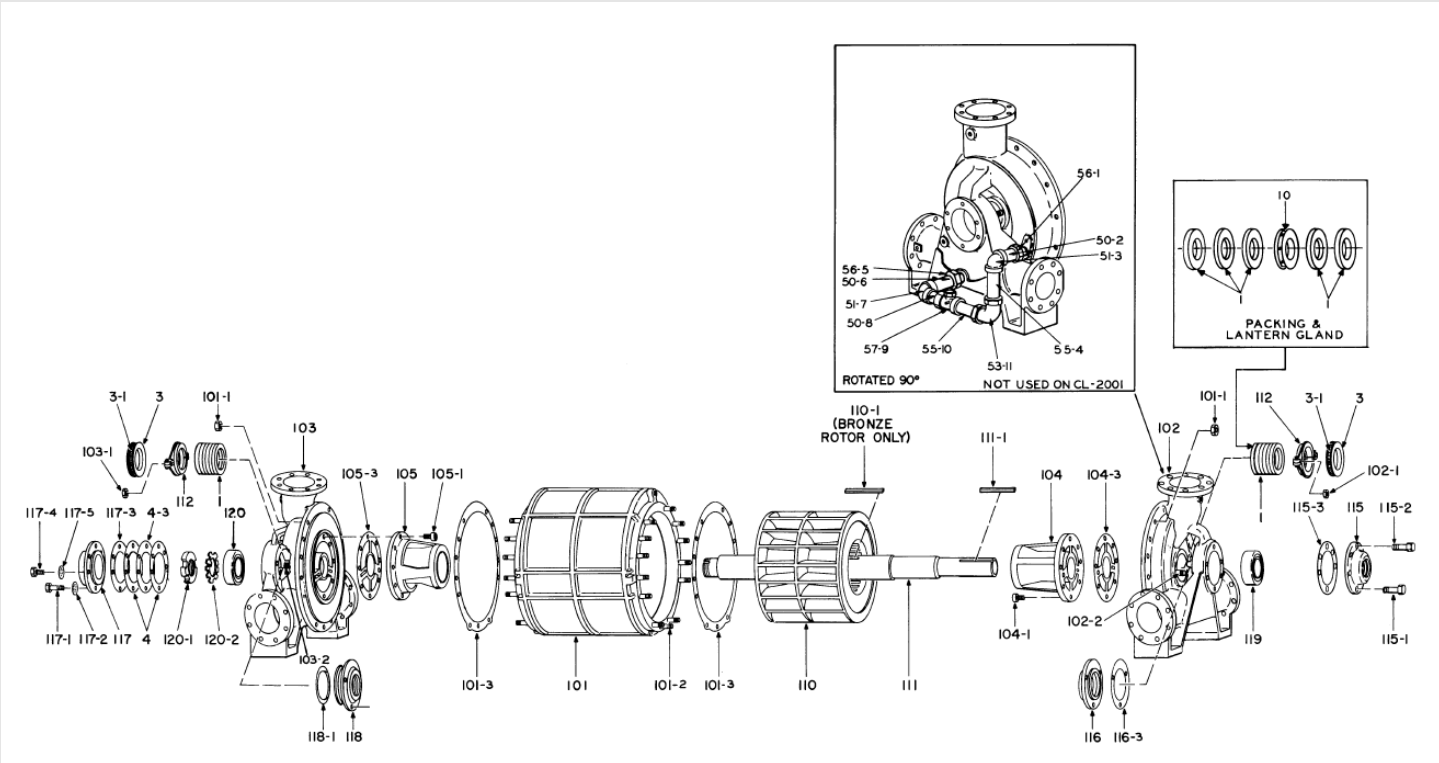



## EXPLODED VIEW — NL 1400, 1500

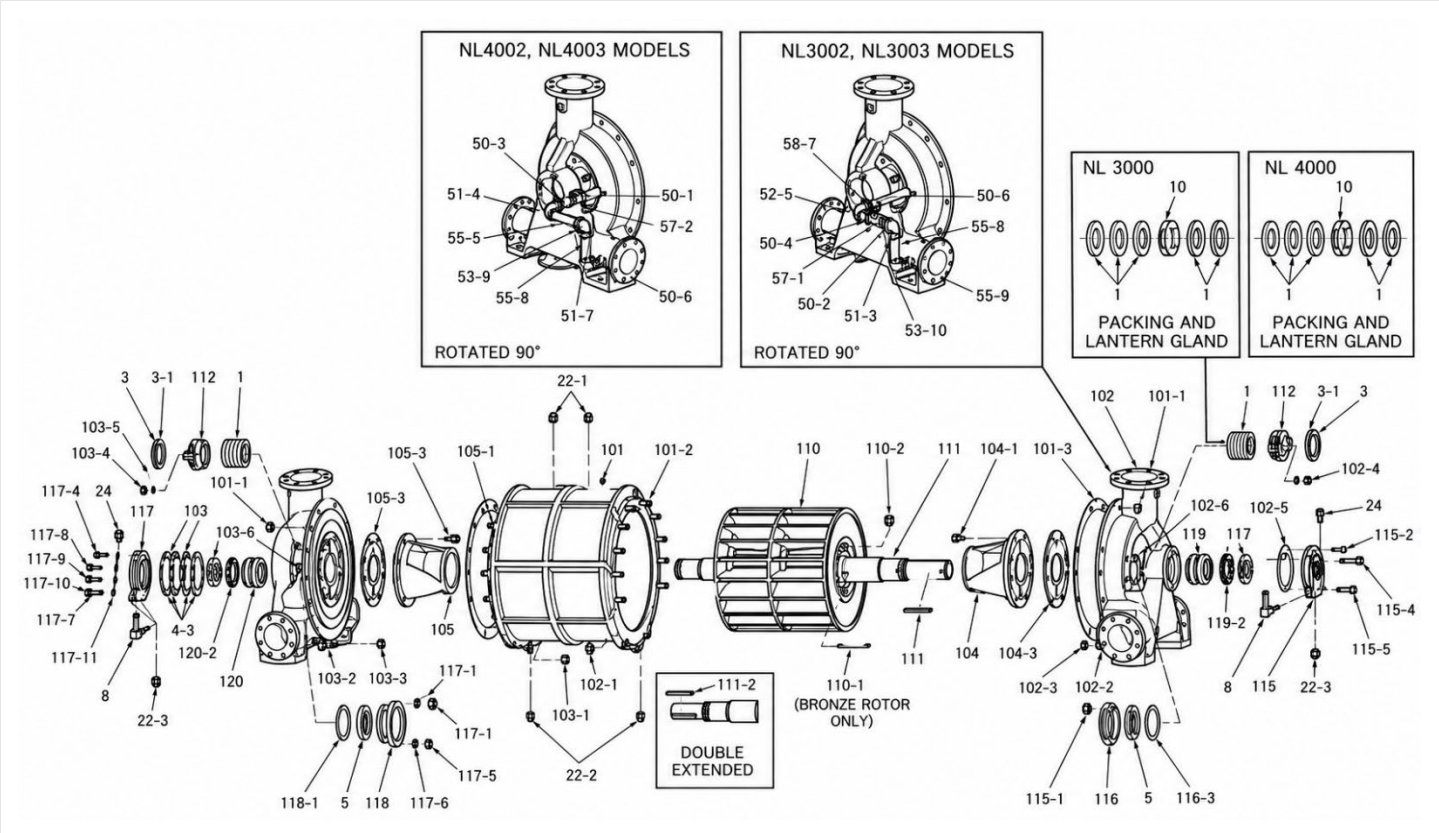


# Exploded Views / Reference Drawings (continued)

## EXPLODED VIEW — NL 2000

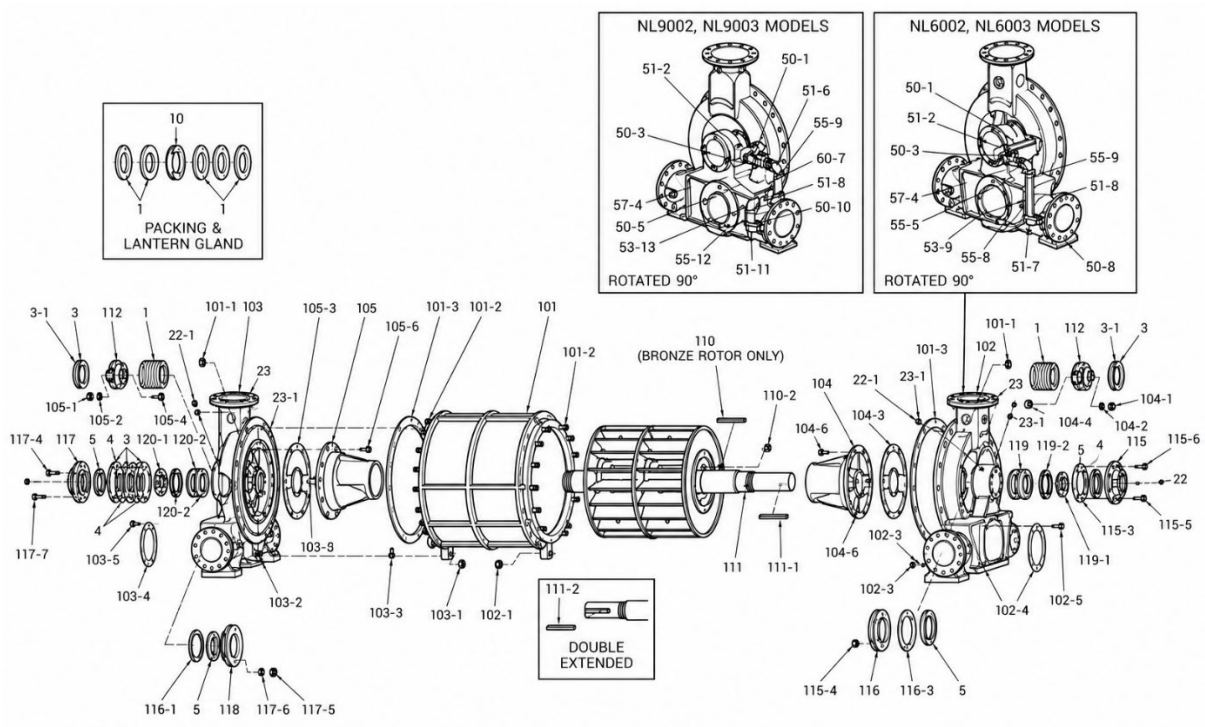



## EXPLODED VIEW — NL 3000, 4000

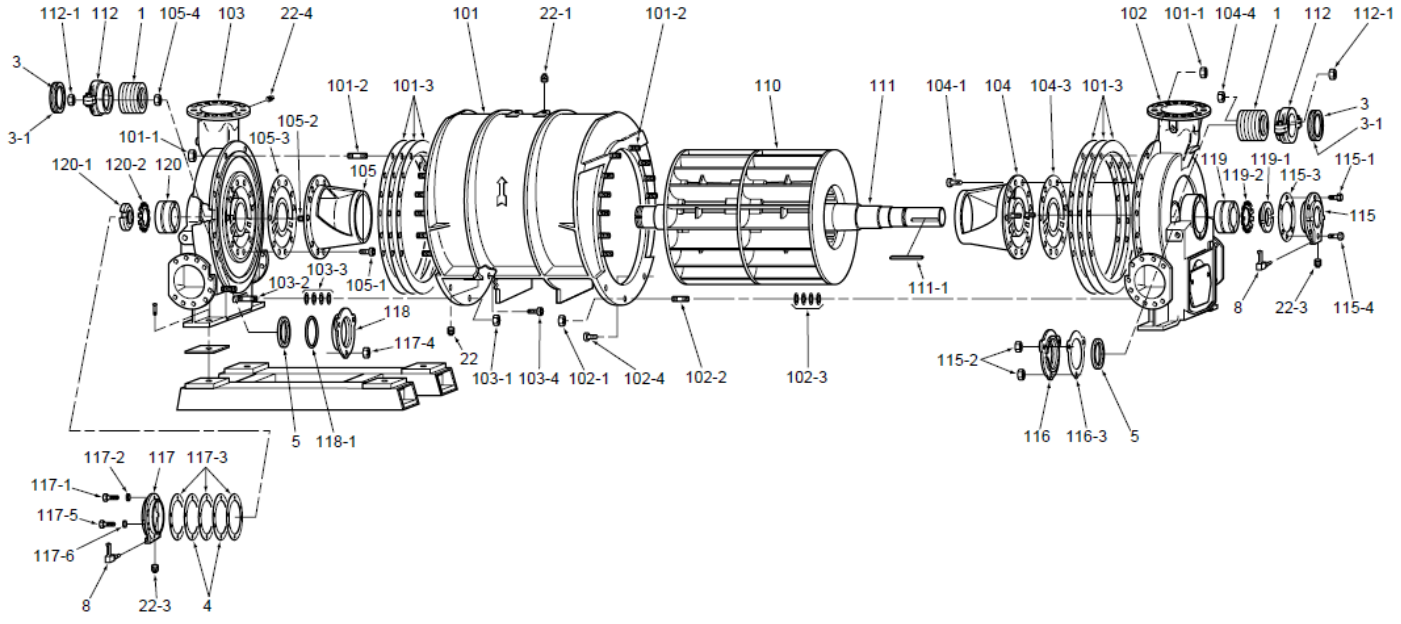


# Exploded Views / Reference Drawings (continued)

## EXPLODED VIEW — NL 6000, 9000

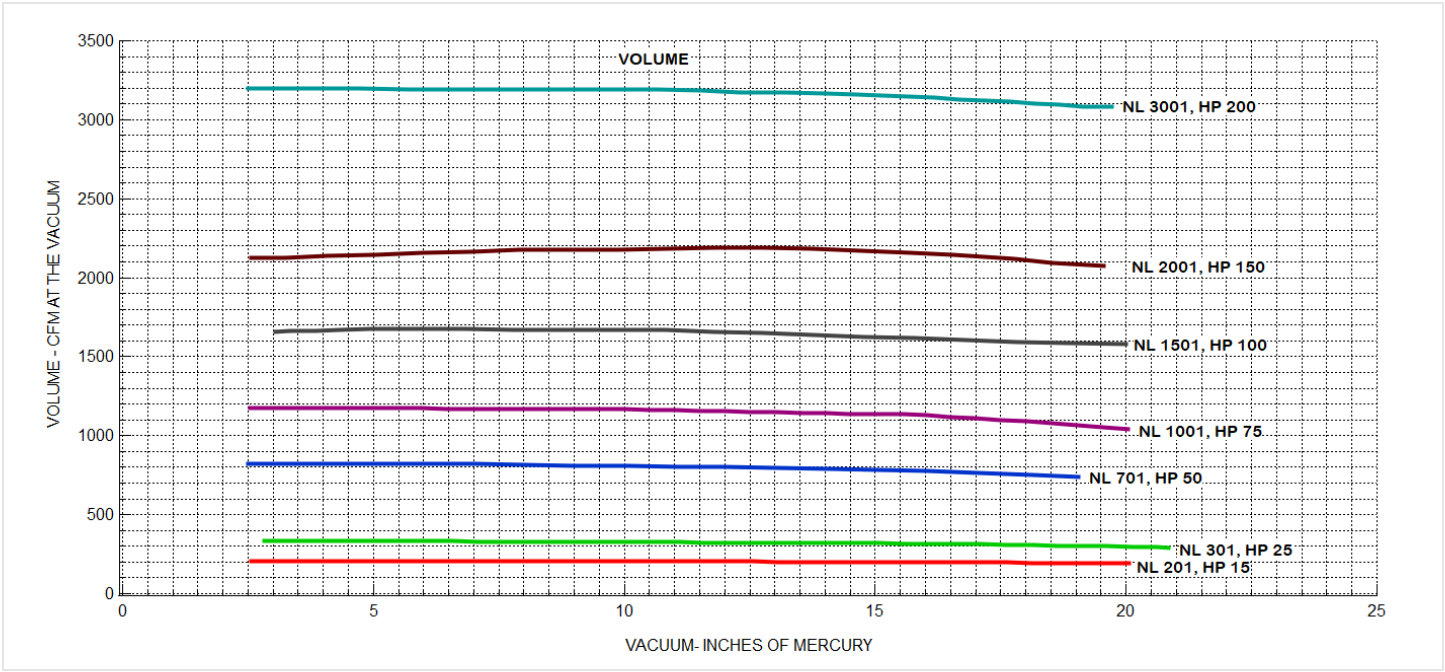



## EXPLODED VIEW — NL 14000

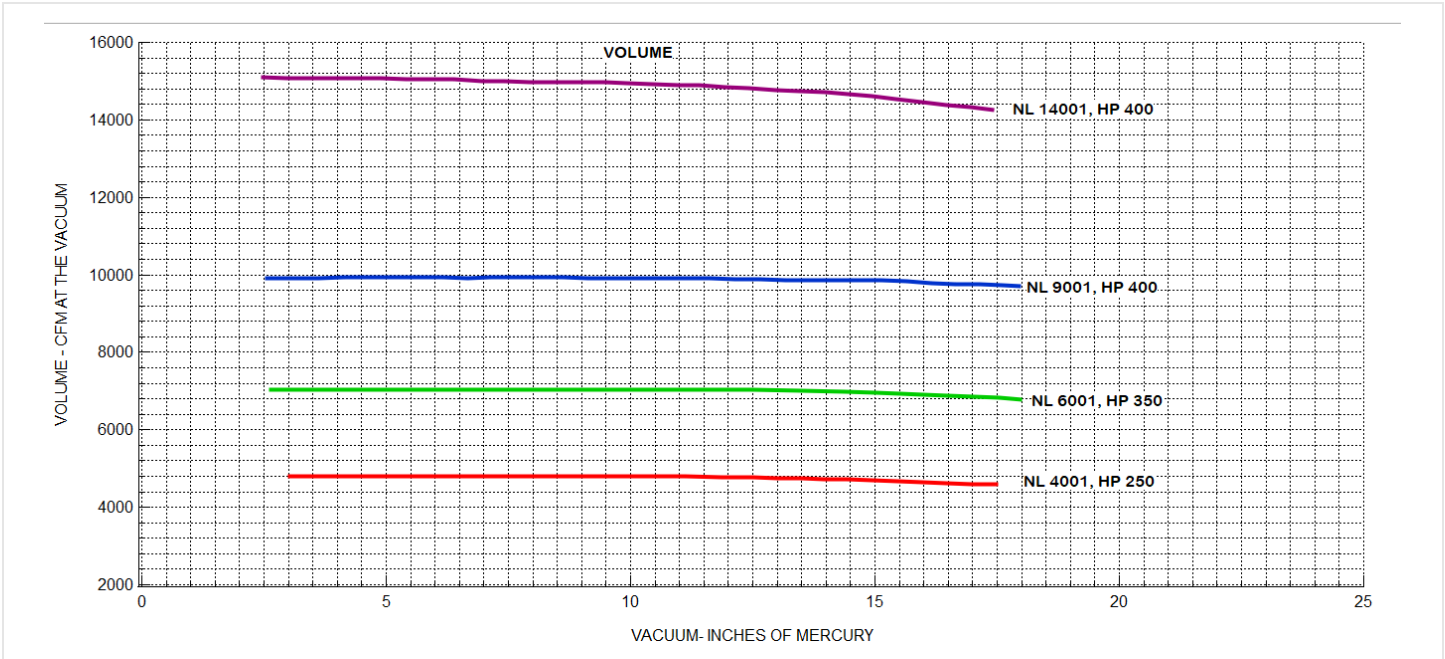


# Composite Curves / Performance Data

## COMPOSITE CURVE — NL 201 TO NL 3001

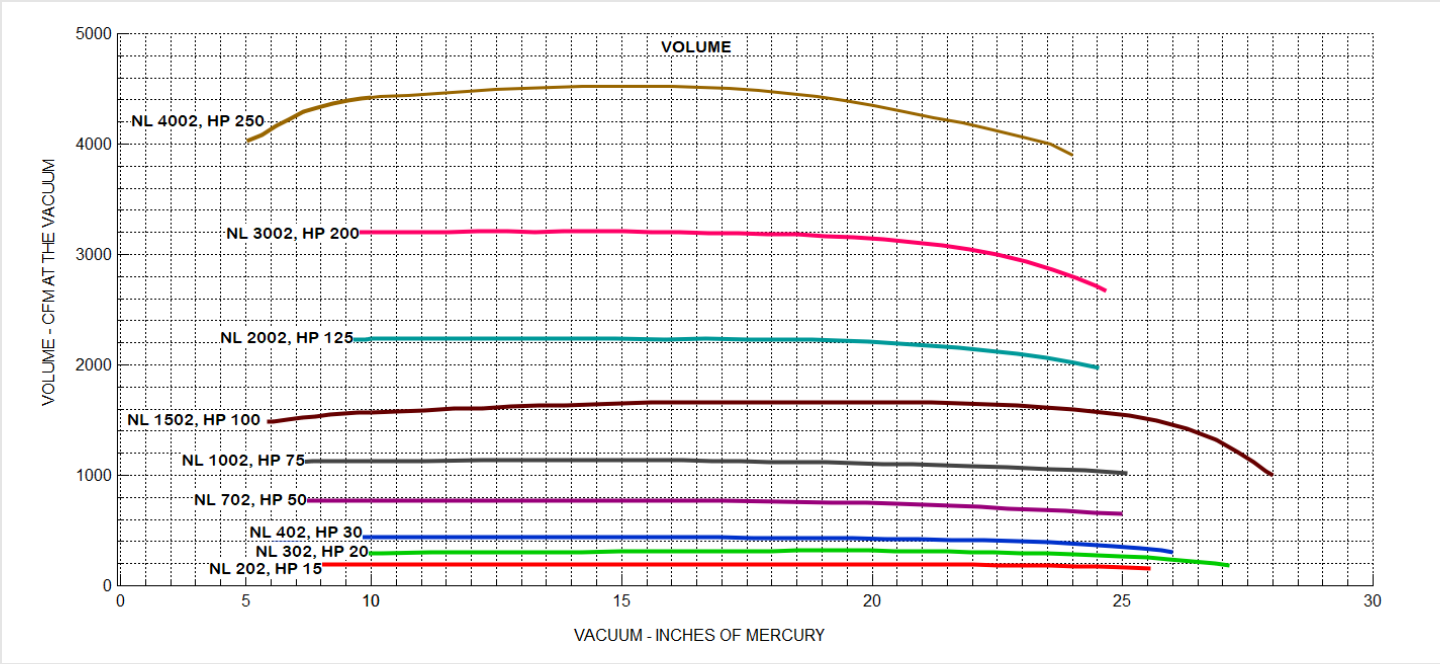



## COMPOSITE CURVE — NL 4001 TO NL 14001

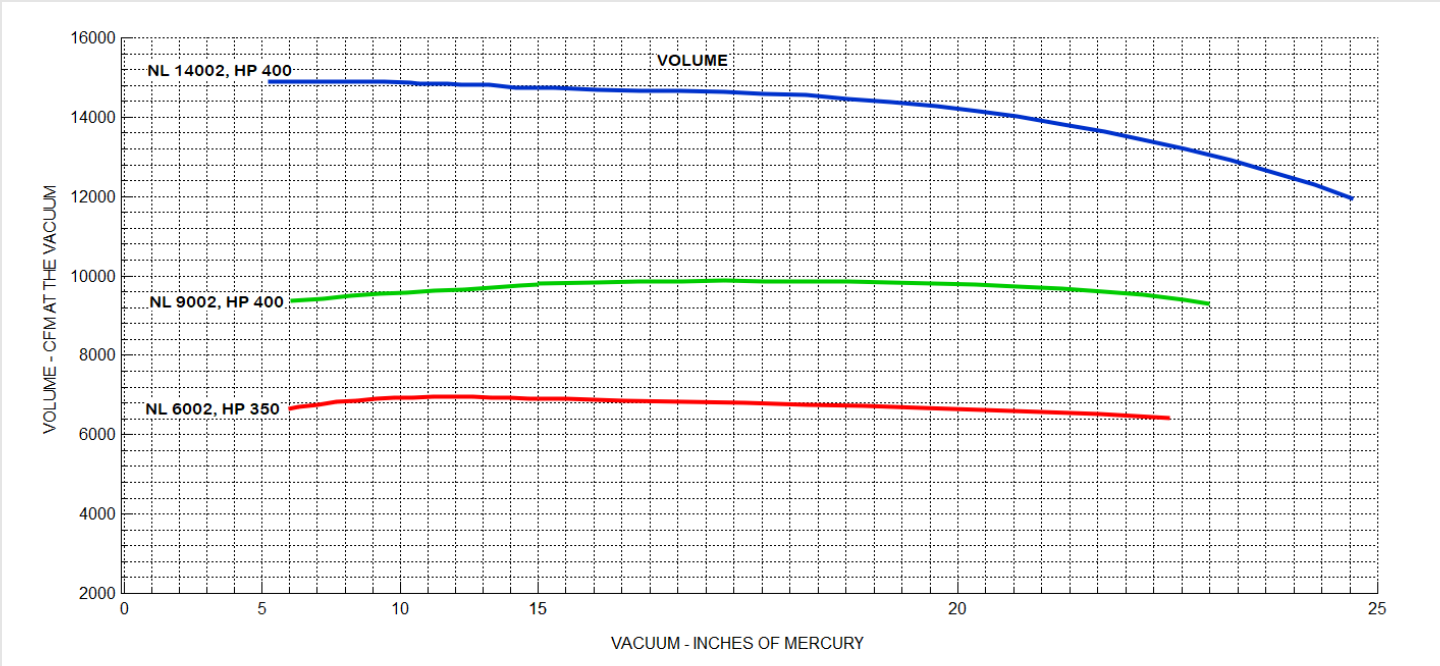


# Composite Curves / Performance Data (continued)

## COMPOSITE CURVE — NL 202 TO NL 4002

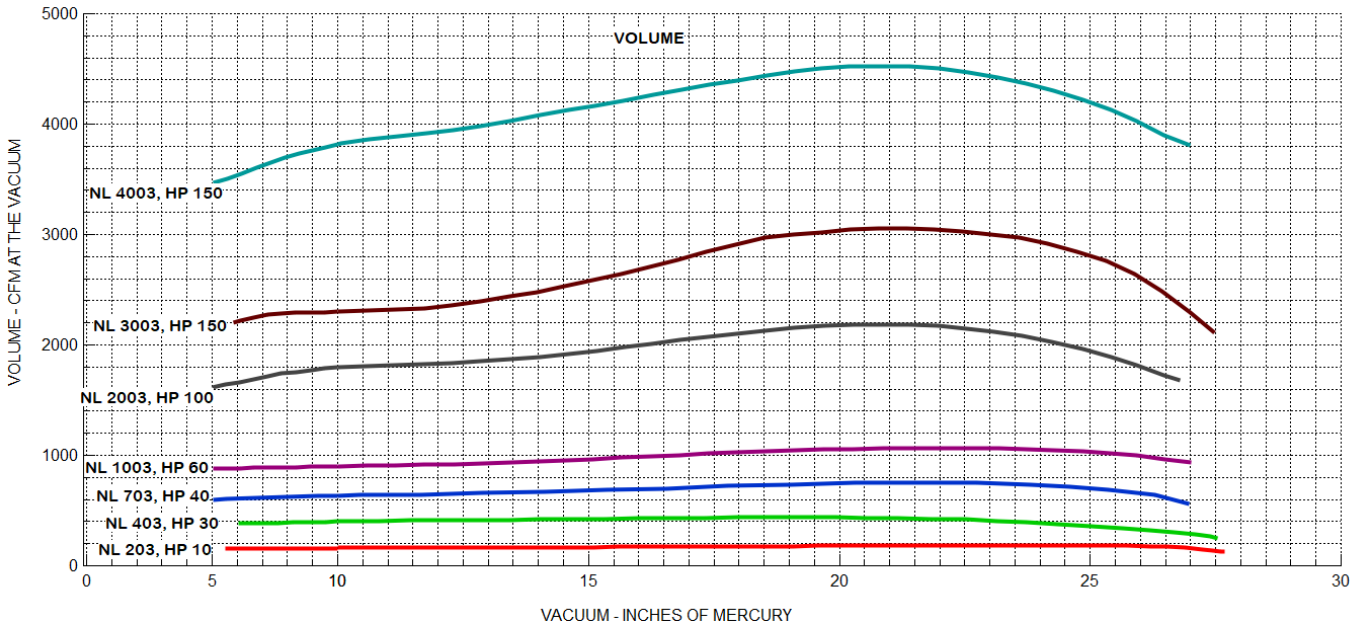



## COMPOSITE CURVE — NL 6002 TO NL 14002



# Composite Curves / Performance Data (continued)

## COMPOSITE CURVE — NL 203 TO NL 4003




## COMPOSITE CURVE — NL 6003 TO NL 14003

