NASH®
An Ingersoll Rand Business

# NASH NRV-1100 & 1300

## OIL-LUBRICATED ROTARY VANE VACUUM PUMP

Rotary vane pumps operate by expanding volume at the inlet and compressing that volume at the exhaust. This is accomplished by placing the rotor eccentrically inside of the cylindrical housing, such that it is nearly touching the housing at the top, and is distanced from the bottom, as can be seen in the graphic. This rotor houses the vanes, and when it spins, centrifugal force causes these vanes to be slung out of the grooves they sit in until they contact the cylinder wall.

When the vanes are in this extended position, they create an effective gas barrier that splits the pump cavity into multiple sections. As they rotate, the sections exposed to the inlet port will continually be expanding, and the sections exposed to the exhaust port will continually be contracting. This causes the process gas to be drawn into the inlet, compressed within the pump, and expelled out the exhaust port.

| NRV | | 1100 | | 1300 | |
|---|---|---|---|---|---|
| Nominal Capacity | acfm | 777 | | 903 | |
| Ultimate Vacuum | Torr | 0.75 | | | |
| Nominal Motor Power | hp | 40 | 40 | 40 | 50 |
| Speed | rpm | 1140 | | | |
| Average Noise Level | dB(A) | 83 | 85 | 84 | 85 |
| Weight | lbs | 2564 | 2700 | 2579 | 2720 |
| Oil Capacity | qt | 26.0 | | | |

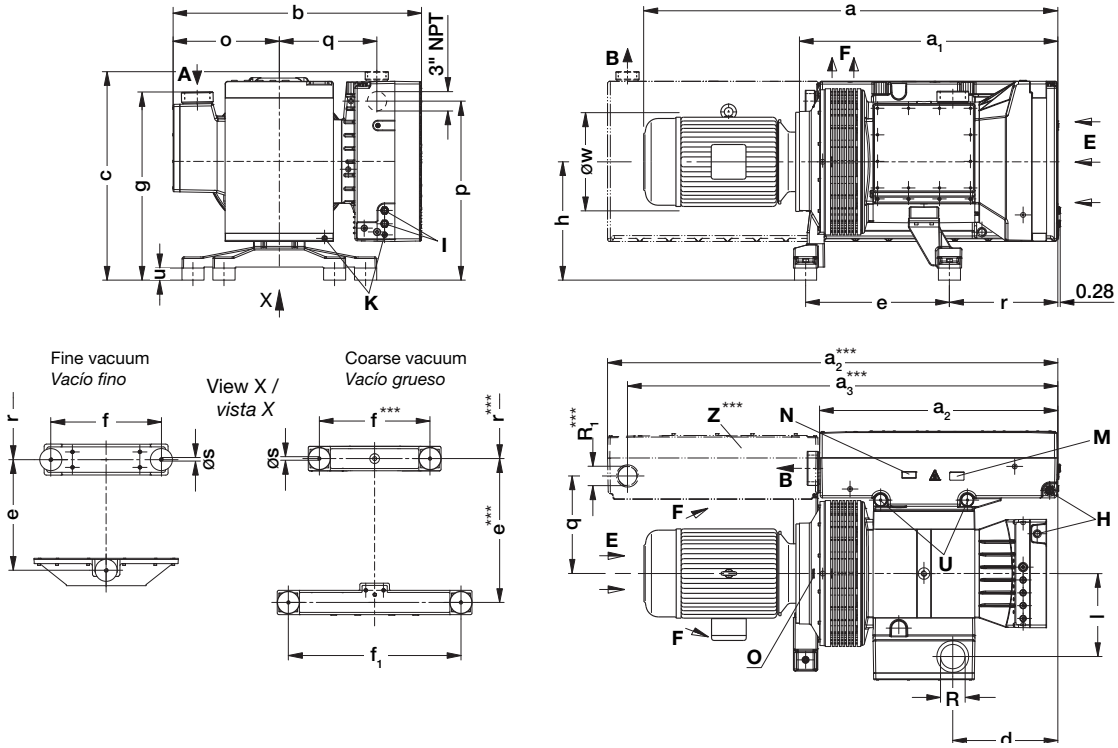
acfm * Relates to pump inlet conditions.

Curves, table contents (tolerance ±10%) refer to vacuum pump at normal operating temperature.

The motor dimensions as well as the full load amperage may vary because of different motor manufacturers.

Technical information is subject to change without notice.

## DIMENSIONS

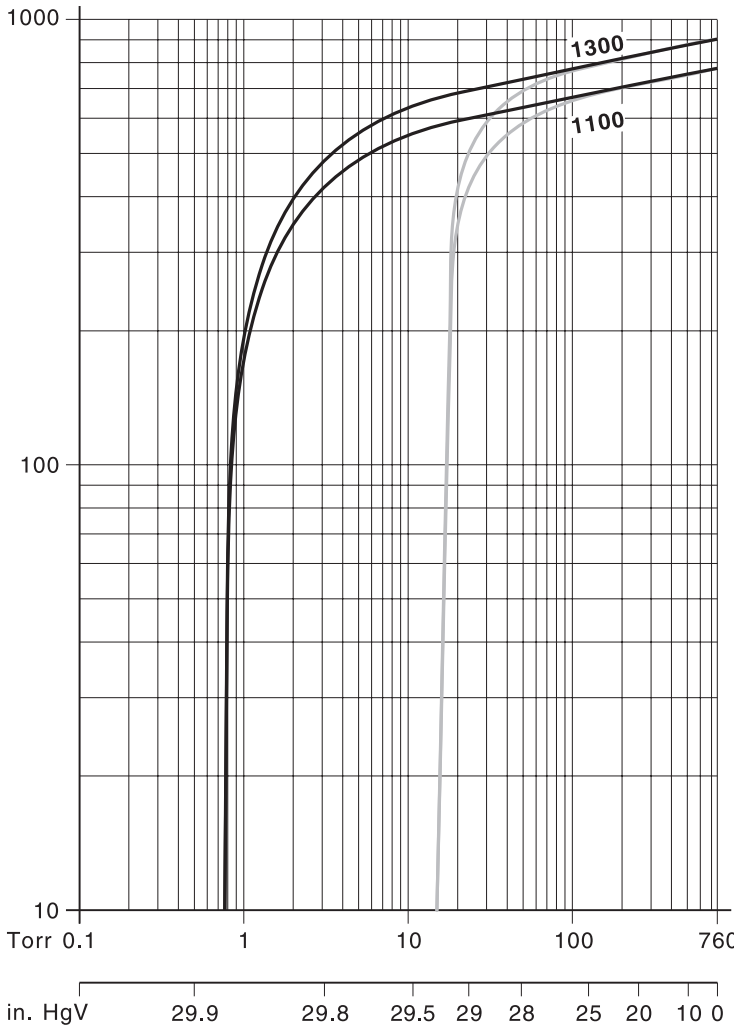



| | |
|---|---|
| A | Vacuum connection |
| B | Exhaust |
| E | Cooling air entry |
| F | Cooling air exit |
| H | Oil filling point |
| I | Oil sight glass |
| K | Oil drain point |
| M | Oil type plate |
| N | Data plate |
| O | Rotation direction plate |
| U | Gas ballast valve |

| NRV | 1100 | 1300 |
|---|---|---|
| h | 16.73 \| 21.06 | 16.73 \| 21.06 |
| l | 14.76 | 14.76 |
| o | 18.90 | 18.90 |
| p | 27.52 \| - | 27.52 \| - |
| q | 17.36 | 17.36 |
| r | 23.82 \| 19.29 | 23.82 \| 19.29 |
| s | M 16 | M 16 |
| u | 2.17 | 2.17 |
| øw | 19.50 | 19.50 |
| | | |
| R | 4" NPT | 4" NPT |

| NRV | 1100 | 1300 |
|---|---|---|
| a | 73.96 | 73.96 |
| $a_1$ | 46.14 | 46.14 |
| $a_2$ | 42.28 \| 80.08 | 42.28 \| 80.08 |
| $a_3$ | - \| 76.57 | - \| 76.57 |
| b | 44.17 | 44.17 |
| c | 31.69 \| 38.27 | 31.69 \| 38.27 |
| d | 18.58 | 18.58 |
| e | 19.69 \| 25.59 | 19.69 \| 25.59 |
| f | 19.69 \| 19.69 | 19.69 \| 19.69 |
| $f_1$ | - \| 30.71 | - \| 30.71 |
| g | 29.02 \| 33.35 | 29.02 \| 33.35 |

## PERFORMANCE CURVE

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