# N 1200 SERIES
# PROCESS VACUUM PUMPS AND COMPRESSORS

N 1200 SP.9 E

## ADVANTAGES

- Twofold safety: The combination of a working diaphragm and an additional safety diaphragm prevents gas from escaping in the event of a fracture (.12)
- The robust design will hold up to challenging operating conditions
- High pressure up to 6 bar rel./87 psig
- High level of gas tightness Following leakage rates are available:
  .9 ≙ < 6 x $10^{-3}$ mbar l/s
  SP.13 ≙ < 6 x $10^{-6}$ mbar l/s
  ST.13 ≙ < 1 x $10^{-5}$ mbar l/s
  SP.12 ≙ < 6 x $10^{-6}$ mbar l/s

## POSSIBLE AREAS OF USE

- Energy technology – especially in nuclear facilities
- Chemical industry
- Process industry
- Research and development

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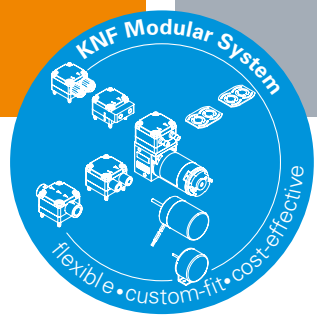



| PERFORMANCE DATA | | | | | |
|---|---|---|---|---|---|
| **Series model** | **N 1200** | | | | |
| **Material design** | **SP.9 E** | **SP.13 E** | **ST.13 E** | **ST.9 E** | **SP.12 E** |
| Pump head | Stainless steel | | | | |
| Diaphragm | EPDM | | PTFE-coated | | EPDM |
| Valves | Stainless steel | | | | |
| Flow rate at atm. pressure (l/min) | 130.0 ± 10 % | | 120.0 ± 10 % | | 130.0 ± 10 % |
| Ultimate vacuum (mbar abs.) | 150 | | | | |
| Max. operating pressure (bar rel./psig) | 6.0/87.0 | | | | 3.0/43.5 |
| Permissible ambient temperature (°C) | +5 ... +40 | | | | |
| Permissible media temperature (°C) | +5 ... +40 | | | | |
| Weight (kg/lbs) | 57.0/125.7 | | | | 60.0/132.3 |
| **ELECTRICAL DATA** | | | | | |
| Voltage (V) | 230/400 | | | | |
| Motor | Three-phase motor | | | | |
| Protection class motor | IP 55 | | | | |
| Frequency (Hz) | 50 | | | | |
| Power $P_1$ (W) | 900 | | | | |
| $I_{max}$ (A) | 7.80/4.50 | | | | |

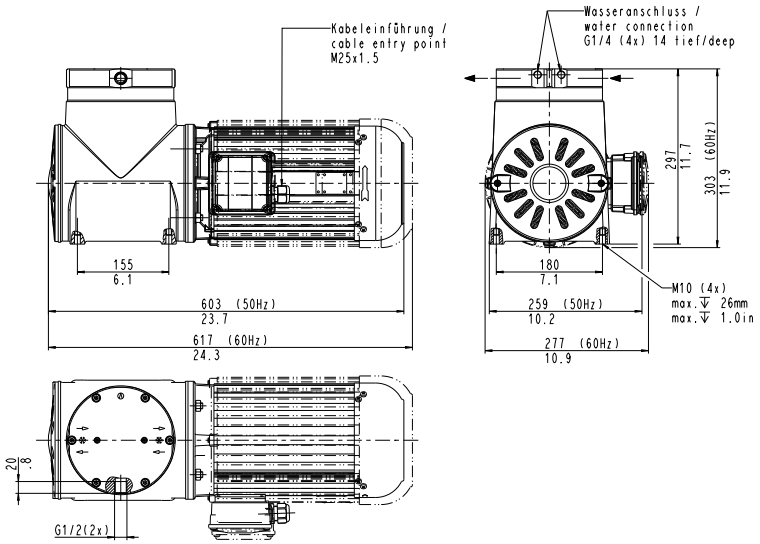
# N 1200 SP.9 E | SP.13 E | ST.9 E | ST.13 E

## PERFORMANCE DATA

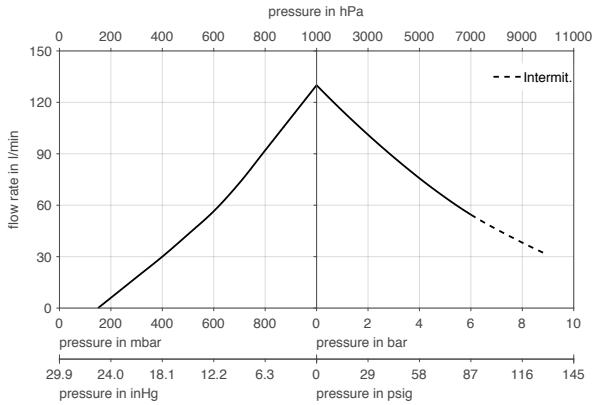
| Series model | Flow rate at atm. pressure (l/min) | Max. operating pressure (bar rel./psig) | Ultimate vacuum (mbar abs.) |
|---|---|---|---|
| N 1200 SP.9 E | 130.0 ± 10 % | 6.0/87.0 | 150 |
| N 1200 SP.13 E | 130.0 ± 10 % | 6.0/87.0 | 150 |
| N 1200 ST.9 E | 120.0 ± 10 % | 6.0/87.0 | 150 |
| N 1200 ST.13 E | 120.0 ± 10 % | 6.0/87.0 | 150 |

Flow rate determined at 20 °C, 1013 mbar abs.
(Pressure 0 to 1013 mbar abs. in accordance with ISO 21360-1/2)

## N 1200 S_.9 E | S_.13 E

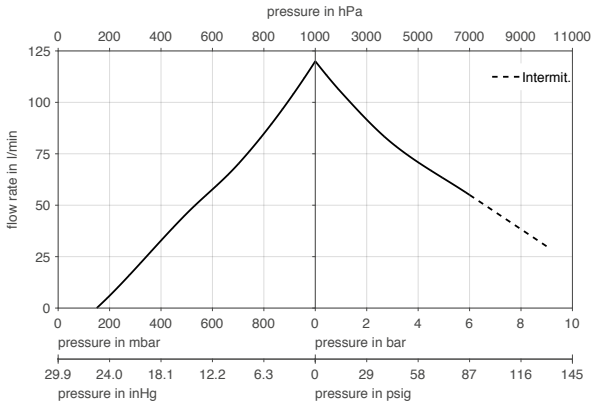



## N 1200 SP.9 E | SP.13 E



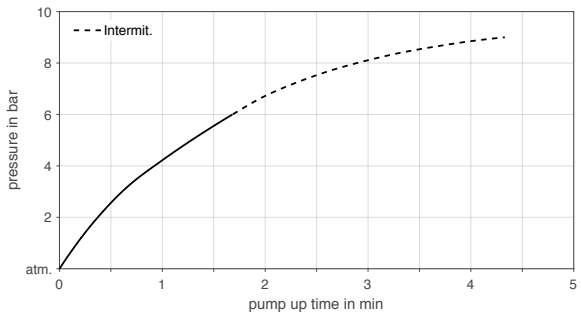

Flow rate determined at 20 °C, 1013 mbar abs.
(Pressure 0 to 1013 mbar abs. in accordance with ISO 21360-1/2)

## N 1200 ST.9 E | ST.13 E




Flow rate determined at 20 °C, 1013 mbar abs.
(Pressure 0 to 1013 mbar abs. in accordance with ISO 21360-1/2)

## N 1200 S_.9 E | S_.13 E | PUMP UP TIME FOR 20 LITER VESSEL



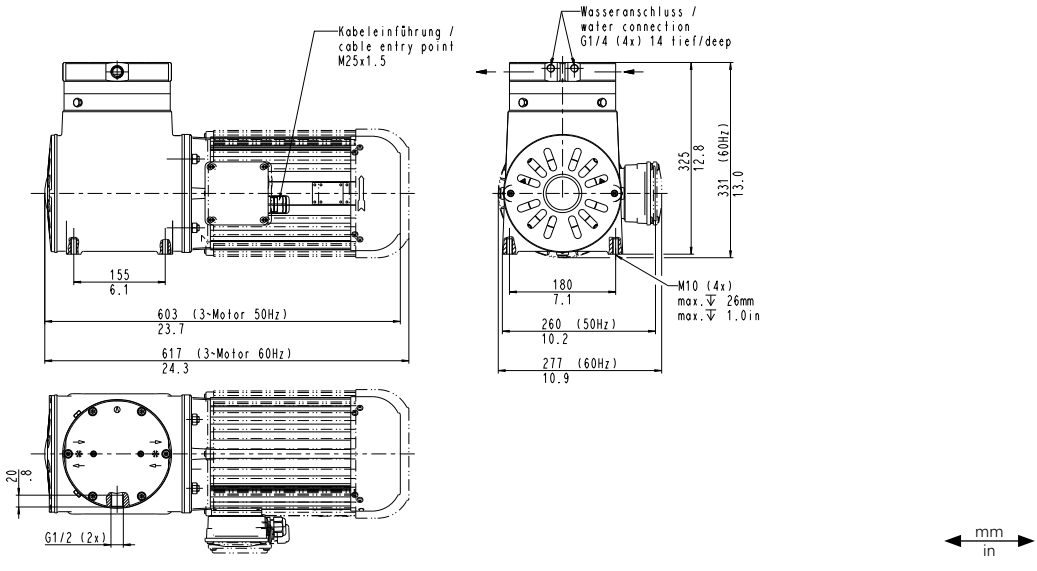
# N 1200 SP.12 E

## PERFORMANCE DATA

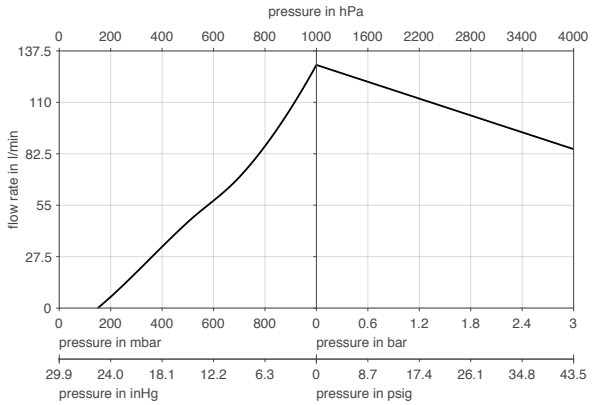
| Series model | Flow rate at atm. pressure (l/min) | Max. operating pressure (bar rel./psig) | Ultimate vacuum (mbar abs.) |
|---|---|---|---|
| N 1200 SP.12 E | 130.0 ± 10 % | 3.0/43.5 | 150 |

Flow rate determined at 20 °C, 1013 mbar abs.
(Pressure 0 to 1013 mbar abs. in accordance with ISO 21360-1/2)

## N 1200 SP.12 E

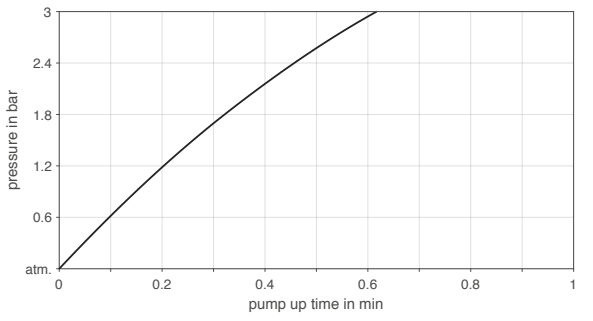



## N 1200 SP.12 E




Flow rate determined at 20 °C, 1013 mbar abs.
(Pressure 0 to 1013 mbar abs. in accordance with ISO 21360-1/2)

## N 1200 SP.12 E | PUMP UP TIME FOR 20 LITER VESSEL



## ACCESSORIES

| Description | Part No. |
|---|---|
| Base plate with rubber-bonded metals | 304440 |
| Connection water cooling S_.9 \| S_.13 \| SP.12 | 305998 |
| O-ring for screw plug | 026056 |
| Wrench for retainer plate | 018816 |

## SPARE PARTS

| Description | Part No. |
|---|---|
| **N 1200 SP.9 E \| SP.13 E** | |
| Diaphragm | 027252 |
| Reed valve | 003475 |
| O-ring D55x3.0 EPDM | 047016 |
| O-ring (.13 only) D150x3.0 EPDM | 047372 |
| O-ring (.13 only) D34x3.0 EPDM | 047373 |
| **N 1200 ST.9 E \| ST.13 E** | |
| Diaphragm | 118095 |
| Reed valve | 003475 |
| O-ring D55x3.0 FPM | 002458 |
| O-ring (.13 only) D150x3.0 FPM | 002461 |
| O-ring (.13 only) D34x3.0 FPM | 045499 |
| **N 1200 SP.12 E** | |
| Working diaphragm | 027252 |
| Safety diaphragm | 047379 |
| Reed valve | 003475 |
| O-ring D55x3.0 EPDM | 047016 |
| O-ring D150x3.0 EPDM | 047372 |
| O-ring D34x3.0 EPDM | 047373 |

The performance values for the series models shown on this data sheet were determined under test conditions.
The actual performance values may differ and depend in particular on the usage conditions and therefore on the specific application, on the parameters of the components involved in the user's system and on any technical modifications carried out which deviate from the standard configuration or the as delivered condition.

If individual designs have been created for specific customers on the basis of series models, other technical performance data may apply.
Before operation begins, the relevant operating instructions and/or assembly or installation instructions should be read and the safety information contained in these instructions should be noted.
KNF reserves the right to make changes to the product and the associated documentation without prior notice to the customer.

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