

N 1200 SERIES

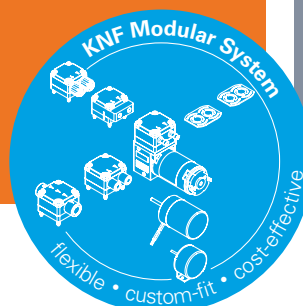
PROCESS VACUUM PUMPS AND COMPRESSORS



N 1200 SP9 E

ADVANTAGES

- Provides high continuous pressure of 87 psig (6 bar) - 118 psig (9 bar) intermittently
- Additional safety containment diaphragm available to prevent media from escaping even in the event of a diaphragm fracture (.12)
- Class 1, Div 1 HazLoc versions available
- High level of gas tightness - Leakage per model type:
 .9 all materials $\leq 6 \times 10^{-3}$ mbar l/s
 .12 & .13 EPDM $\leq 6 \times 10^{-6}$ mbar l/s
 .12 & .13 PTFE $\leq 1 \times 10^{-5}$ mbar l/s
- Available with NPT ports



POSSIBLE AREAS OF USE

- Energy technology – especially in nuclear facilities
- Handling dangerous and precious media
- Solvent recovery (or botanical extraction - oil processing)
- Research & development
- Chemical & Process
- Oil & gas

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PERFORMANCE DATA

Series model	N 1200				
Material design	SP9 E	SP13 E	ST.13 E	ST.9 E	SP12 E
Pump head	316 stainless steel				
Diaphragm	EPDM		PTFE-coated		EPDM
Valves	316 stainless steel				
Flow rate at atm. pressure (l/min)	150.0 ± 10 %		140.0 ± 10 %		150.0 ± 10 %
Ultimate vacuum (mbar abs./inHg)	150/25.5				
Max. operating pressure (bar g/psig)	6.0/87.0				3.0/43.5
Permissible ambient temperature (°C/°F)	5° C to 40° C/ 41° F to 104° F				
Permissible media temperature (°C/°F)	5° C to 40° C/ 41° F to 104° F				
Weight (kg/lbs)	57.0/125.7				60.0/132.3

ELECTRICAL DATA

Voltage (V)	230/400
Motor	3-phase motor
Motor protection class	IP 55
Frequency (Hz)	60
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

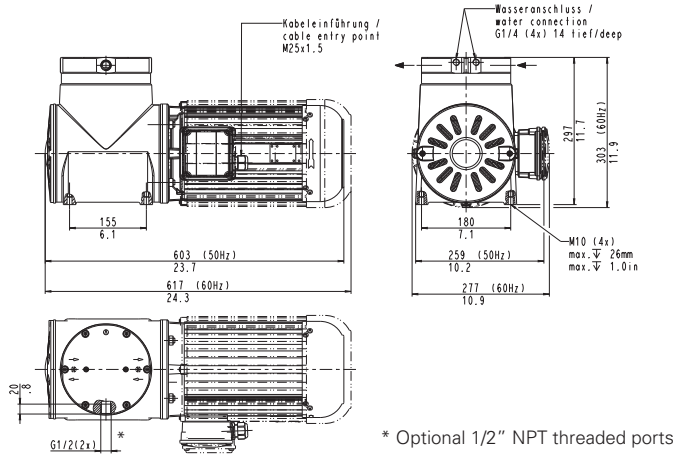
PERFORMANCE DATA

Series model	Flow rate at atm. pressure (l/min)	Max. operating pressure (bar g/psig)	Ultimate vacuum (mbar abs./inHg)
N 1200 SP.9 E	150.0 ± 10 %	6.0/87.0	150/25.5
N 1200 SP.13 E	150.0 ± 10 %	6.0/87.0	150/25.5
N 1200 ST.9 E	140.0 ± 10 %	6.0/87.0	150/25.5
N 1200 ST.13 E	140.0 ± 10 %	6.0/87.0	150/25.5

Flow rate determined at 20 °C, 1013 mbar abs.

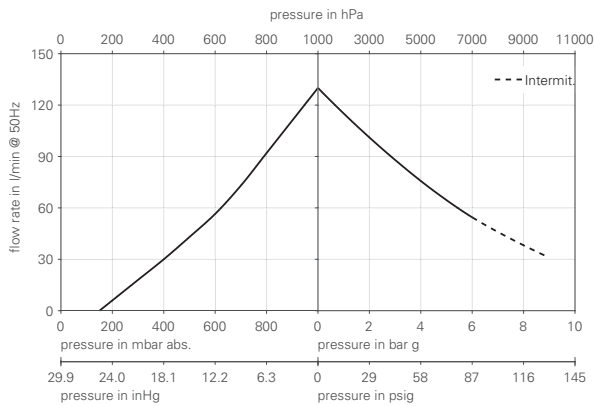
(Pressure 0 to 1013 mbar abs. in accordance with ISO 21360-1/2)

N 1200 S_.9 E | S_.13 E

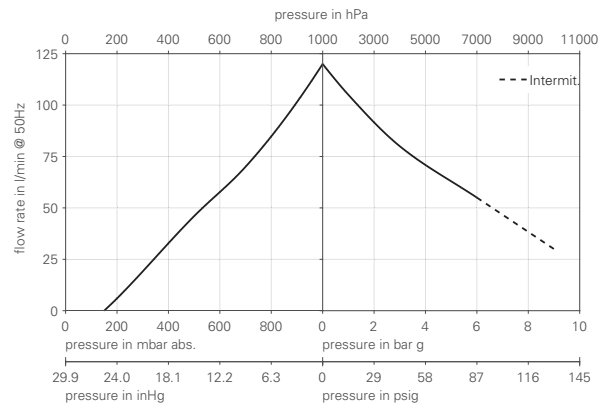


Flow rate on 60Hz version will be ~ 20% higher than shown in the following 50Hz performance curves

N 1200 SP.9 E | SP.13 E



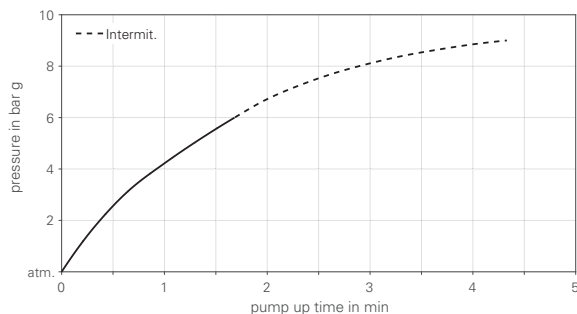
N 1200 ST.9 E | ST.13 E



Pump up times on 60Hz version will be ~ 20% less than shown in the following 50Hz version curve

N 1200 S_.9 E | S_.13 E

PUMP UP TIME FOR 20 LITER VESSEL



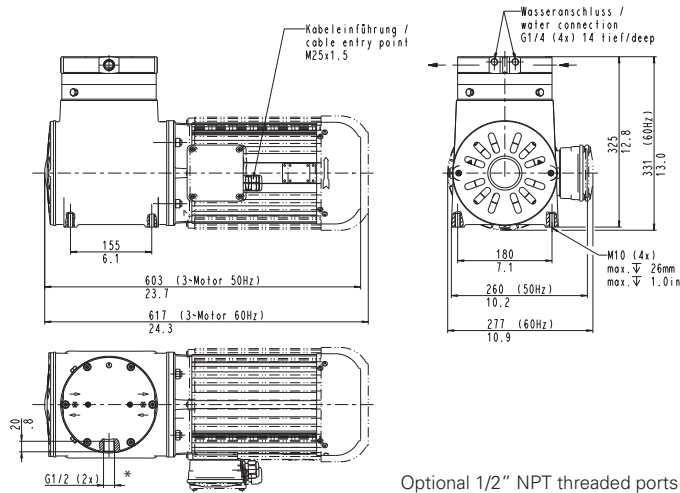
N 1200 SP.12 E

PERFORMANCE DATA

Series model	Flow rate at atm. pressure (l/min)	Max. operating pressure (bar g/psig)	Ultimate vacuum (mbar abs./inHg)
N 1200 SP.12 E	150.0 ± 10 %	3.0/43.5	150/25.5

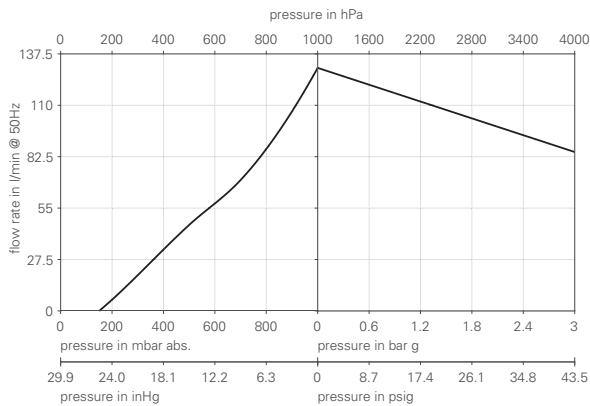
Flow rate determined at 20 °C, 1013 mbar abs.
(Pressure 0 to 1013 mbar abs. in accordance with ISO 21360-1/2)

N 1200 SP.12 E



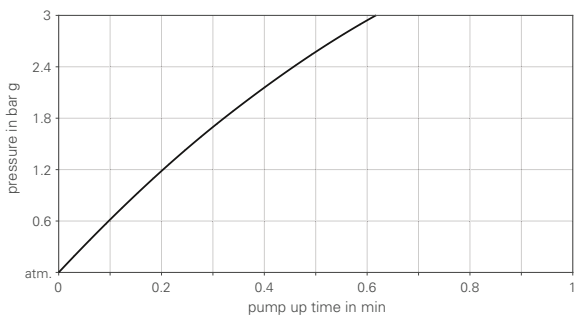
Flow rate on 60Hz version will be ~ 20% higher than shown in the following 50Hz performance curve



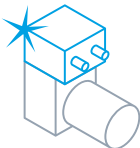
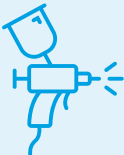


N 1200 SP.12 E



Pump up times on 60Hz version will be ~ 20% less than shown in the following 50Hz version curve




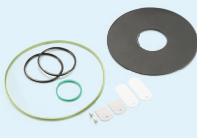

N 1200 SP.12 E | PUMP UP TIME FOR 20 LITER VESSEL



OPTIONS		
Description	Illustration	Details
Mechanical adjustment of pumping capacity		The pumping capacity can be adjusted at the factory to accommodate inlet pressure and for accurate alignment with the customer's system.
Versions for special gases		Adjustment of the pump head for use with highly corrosive gases. Options include Hastelloy pump head components or a coating.
Cleaned contact material parts		For the use of the pump with gases with high oxygen concentrations the parts that come into contact with the medium can be cleaned using a certified process.
Special coating		Special coatings for high corrosion protection (C4) for use in industrial areas and coastal areas with moderate salinity, such as maritime applications.
Certified head components		The components that come into contact with the medium are available with material certificates.
Ex-proof pumps		Pumps for explosion-proof areas are available with the following certificates on request: IEC Ex, NEC Ex, KOSHA, PESO, NEPSI, JIS.

ACCESSORIES		
Description	Illustration	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		128753
Inlet filter G1/2		316662

SPARE PARTS

Description	Illustration	Part No.	Details
Spare parts kit N 1200 SP.9 E		308371	Spare parts kit consists of: 1x diaphragm, 2x reed valve, 2x valve stopper, 2x O-rings, 2x screws. This set is required to maintain the pump.
Spare parts kit N 1200 SP.13 E		315478	Spare parts kit consists of: 1x diaphragm, 2x reed valve, 2x valve stopper, 4x O-rings, 2x screws. This set is required to maintain the pump.
Spare parts kit N 1200 ST.9 E		315480	Spare parts kit consists of: 1x diaphragm, 2x reed valve, 2x valve stopper, 2x O-rings, 2x screws. This set is required to maintain the pump.
Spare parts kit N 1200 ST.13 E		315481	Spare parts kit consists of: 1x diaphragm, 2x reed valve, 2x valve stopper, 4x O-rings, 2x screws. This set is required to maintain the pump.
Spare parts kit N 1200 SP.12 E		315479	Spare parts kit consists of: 2x diaphragm, 2x reed valve, 2x valve stopper, 8x O-rings, 3x screws, 1x serrated washer. This set is required to maintain the pump.

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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