

N 630.1.2 SERIES

PROCESS VACUUM PUMPS AND COMPRESSORS



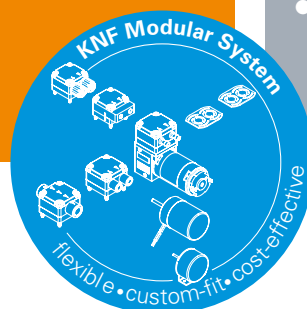
N 630.1.2 SP.9 E

ADVANTAGES

- High chemical resistance
- Durable even with difficult operating conditions
- High level of gas tightness
- Ambient temperatures of up to 60 °C possible with water cooling
- The pump can start against the entire pressure and vacuum range
- Stable transfer rate at all pressure levels throughout process
- Quiet operation with minimal vibration
- .12 version with additional safety diaphragm for preventing gas from escaping through cracks in the working diaphragm

POSSIBLE AREAS OF USE

- Environmental monitoring
- Process industry
- Chemical industry
- Energy technology – e.g. pressure increase for natural gas
- Gas recovery – e.g. in cryostats



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PERFORMANCE DATA

| Series model | N 630.1.2 - 50 60 Hz Version | | | | N 630.1.2 - 50 60 Hz Version | | | |
|--|--|------------|------------------|------------|--|------------|------------------|------------|
| | ST.9 E / ST.13 E | ST.12 E | SP.9 E / SP.13 E | SP.12 E | ST.9 E / ST.13 E | ST.12 E | SP.9 E / SP.13 E | SP.12 E |
| Pump head | Stainless steel | | | | Stainless steel | | | |
| Diaphragm | PTFE-coated | | EPDM | | PTFE-coated | | EPDM | |
| Valves | Stainless steel | | | | Stainless steel | | | |
| Flow rate at atm. pressure (l/min) | 58.0 68.0 | | | | 58.0 68.0 | | | |
| Ultimate vacuum (mbar abs.) | 120 | | | | 120 | | | |
| Max. operating pressure (bar rel./psig) | 7.0/101.5 | 3.0/43.5 | 7.0/101.5 | 3.0/43.5 | 7.0/101.5 | 3.0/43.5 | 7.0/101.5 | 3.0/43.5 |
| Permissible ambient temperature (°C) | +5 ... +60 (+40 without water cooling) | | | | +5 ... +50 (+40 without water cooling) | | | |
| Permissible media temperature (°C) | +5 ... +60 (+40 without water cooling) | | | | +5 ... +60 (+40 without water cooling) | | | |
| Level of gas tightness (mbar x l/s) .9/.13/.12 | 6 x 10 ⁻³ / 5 x 10 ⁻⁵ / 5 x 10 ⁻⁵ | | | | 6 x 10 ⁻³ / 5 x 10 ⁻⁵ / 5 x 10 ⁻⁵ | | | |
| Weight (kg/lbs) | 45.0/99.2 | 47.0/103.6 | 45.0/99.2 | 47.0/103.6 | 45.0/99.2 | 47.0/103.6 | 45.0/99.2 | 47.0/103.6 |

ELECTRICAL DATA

| | | | | | | | | |
|---------------------------|-------------------|---------|----------|----------|-----------------|-------|-----|------|
| Voltage (V) | 230/400 | 200/346 | 220/380 | 277/480 | 230 | 100 | 220 | 115 |
| Motor | Three-phase motor | | | | Capacitor motor | | | |
| Protection class motor | IP 55 | | | | IP 55 | | | |
| Protection class pump | IP 20 | | | | IP 20 | | | |
| Frequency (Hz) | 50 | 50/60 | 60 | 60 | 50 | 50/60 | 60 | 60 |
| Power P ₂ (W) | 750 | | | | 750 | | | |
| I _N (A), 50 Hz | 3.3/1.9 | 3.8/2.2 | - | - | 5.3 | 11.8 | - | - |
| I _N (A), 60 Hz | - | 3.3/1.9 | 3.3/1.92 | 2.6/1.51 | - | 10.6 | 5.7 | 11.0 |

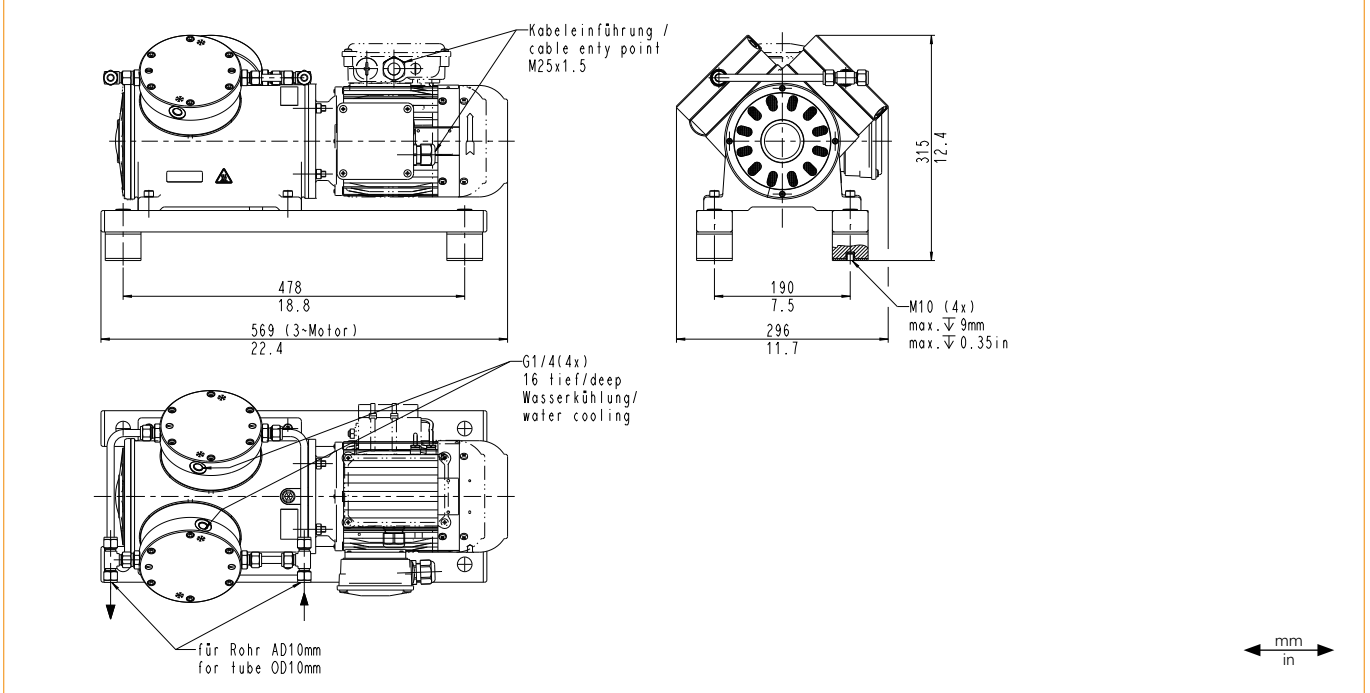
N 630.1.2 ST.9 E | ST.13 E

PERFORMANCE DATA

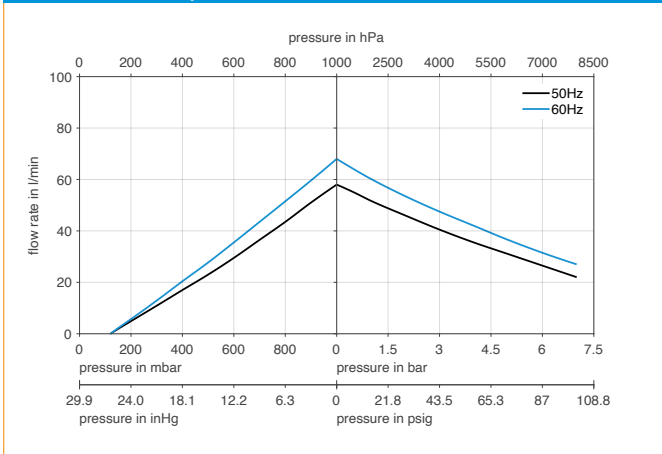
| Series model | Flow rate at atm. pressure (l/min) ¹⁾ | Max. operating pressure (bar rel./psig) | Ultimate vacuum (mbar abs.) |
|---------------------------|--|---|-----------------------------|
| N 630.1.2 ST.9 E - 50 Hz | 58.0 | 7.0/101.5 | 120 |
| N 630.1.2 ST.13 E - 50 Hz | 58.0 | 7.0/101.5 | 120 |
| N 630.1.2 ST.9 E - 60 Hz | 68.0 | 7.0/101.5 | 120 |
| N 630.1.2 ST.13 E - 60 Hz | 68.0 | 7.0/101.5 | 120 |

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

N 630.1.2 ST.9 E | ST.13 E

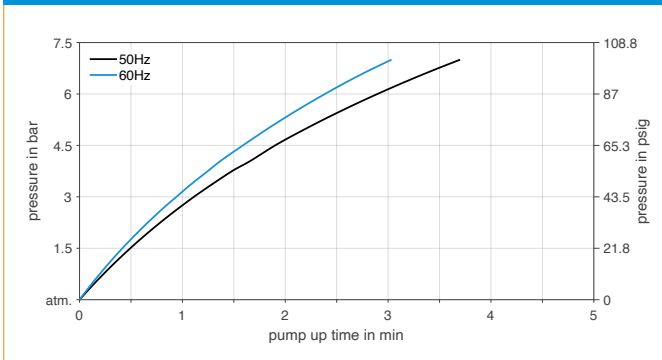


N 630.1.2 ST.9 E | ST.13 E



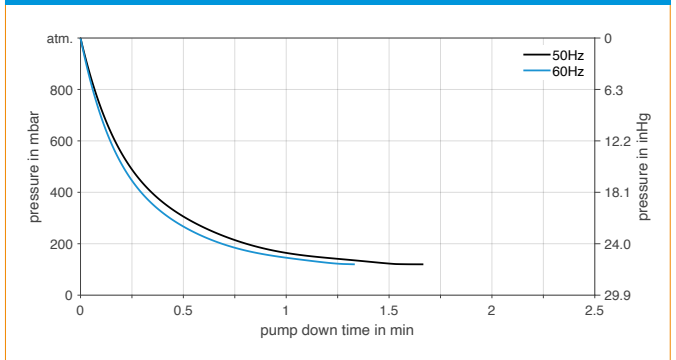
N 630.1.2 ST.9 E | ST.13 E

PUMP UP TIME FOR 20 LITER VESSEL



N 630.1.2 ST.9 E | ST.13 E

PUMP DOWN TIME FOR 20 LITER VESSEL



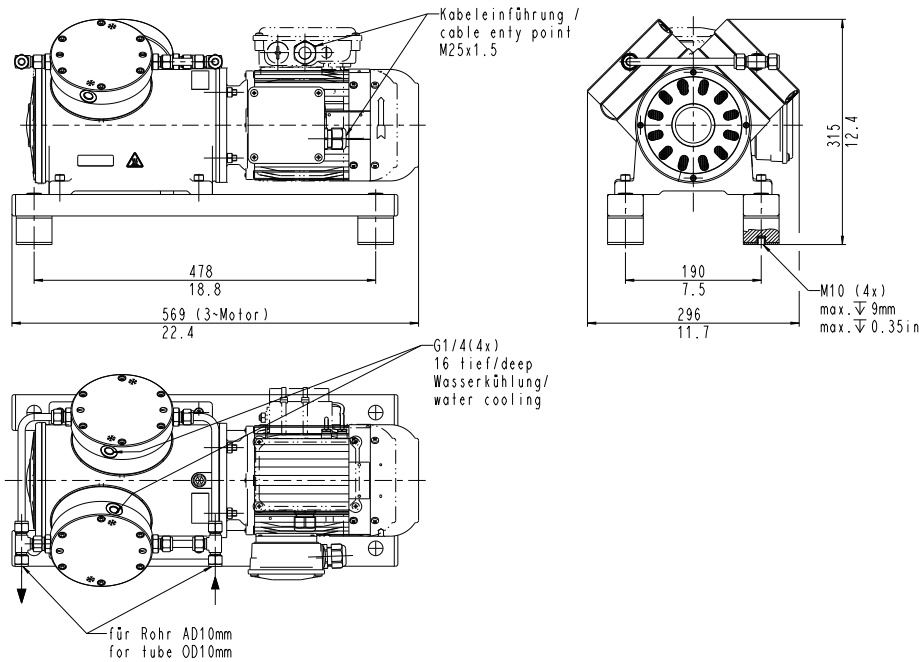
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PERFORMANCE DATA

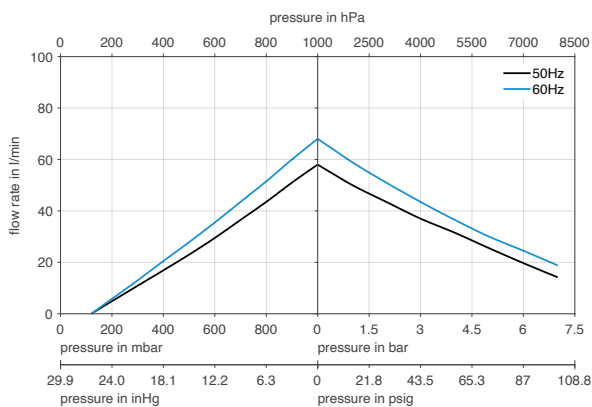
| Series model | Flow rate at atm. pressure (l/min) ¹⁾ | Max. operating pressure (bar rel./psig) | Ultimate vacuum (mbar abs.) |
|---------------------------|--|---|-----------------------------|
| N 630.1.2 SP.9 E - 50 Hz | 58.0 | 7.0/101.5 | 120 |
| N 630.1.2 SP.13 E - 50 Hz | 58.0 | 7.0/101.5 | 120 |
| N 630.1.2 SP.9 E - 60 Hz | 68.0 | 7.0/101.5 | 120 |
| N 630.1.2 SP.13 E - 60 Hz | 68.0 | 7.0/101.5 | 120 |

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

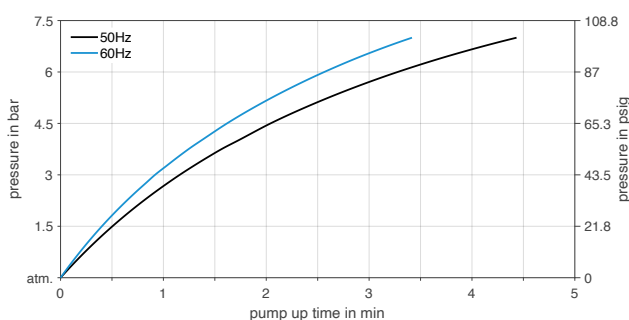
N 630.1.2 SP.9 E | SP.13 E



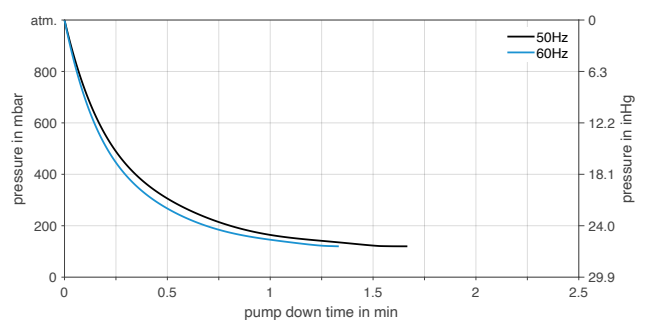
N 630.1.2 SP.9 E | SP.13 E



N 630.1.2 SP.9 E | SP.13 E PUMP UP TIME FOR 20 LITER VESSEL



N 630.1.2 SP.9 E | SP.13 E PUMP DOWN TIME FOR 20 LITER VESSEL



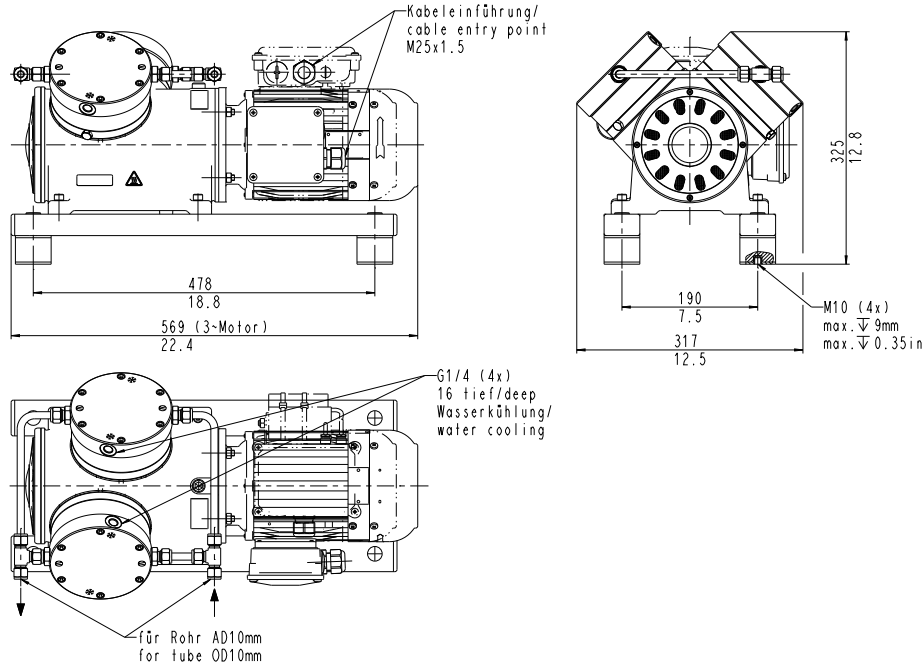
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PERFORMANCE DATA

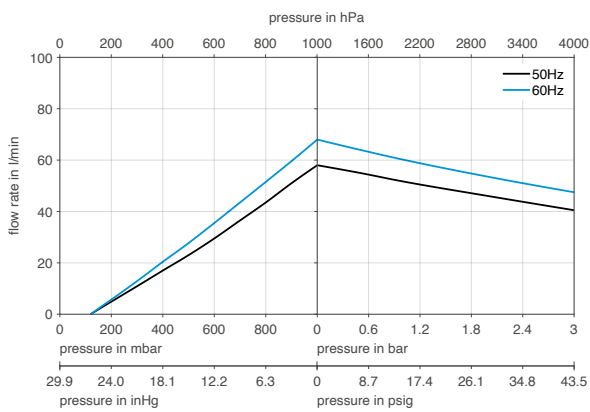
| Series model | Flow rate at atm. pressure (l/min) ¹⁾ | Max. operating pressure (bar rel./psig) | Ultimate vacuum (mbar abs.) |
|---------------------------|--|---|-----------------------------|
| N 630.1.2 ST.12 E - 50 Hz | 58.0 | 3.0/43.5 | 120 |
| N 630.1.2 ST.12 E - 60 Hz | 68.0 | 3.0/43.5 | 120 |

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

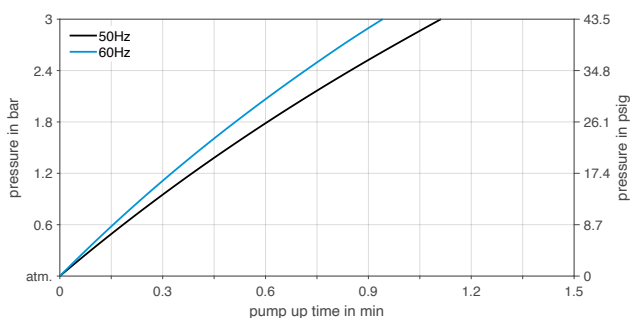
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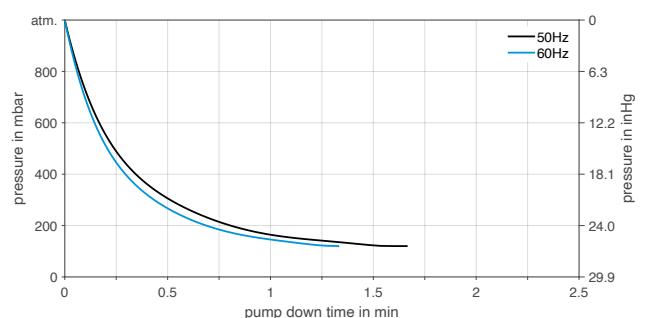
N 630.1.2 ST.12 E



N 630.1.2 ST.12 E | PUMP UP TIME FOR 20 LITER VESSEL



N 630.1.2 ST.12 E | PUMP DOWN TIME FOR 20 LITER VESSEL



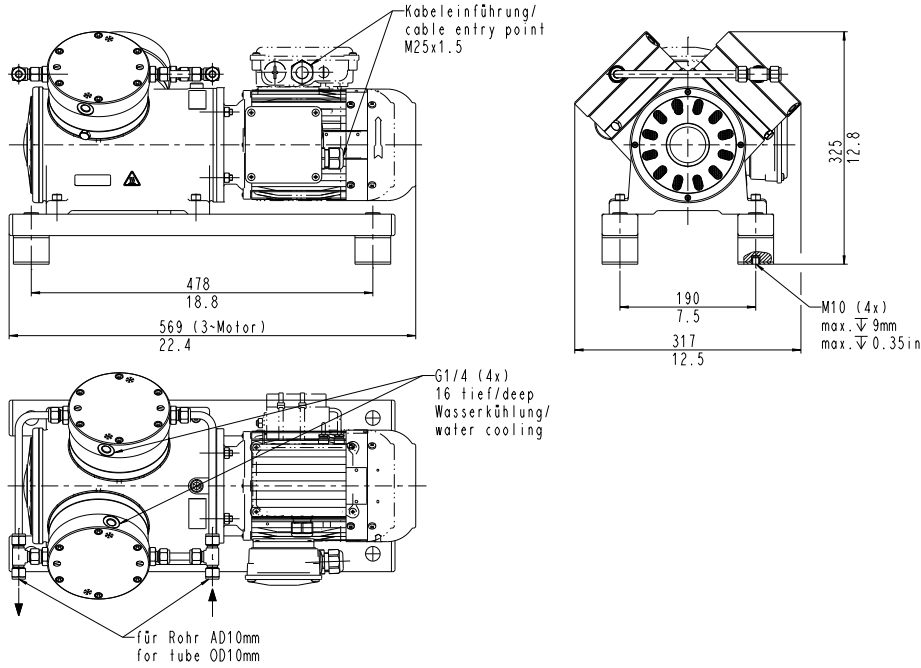
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PERFORMANCE DATA

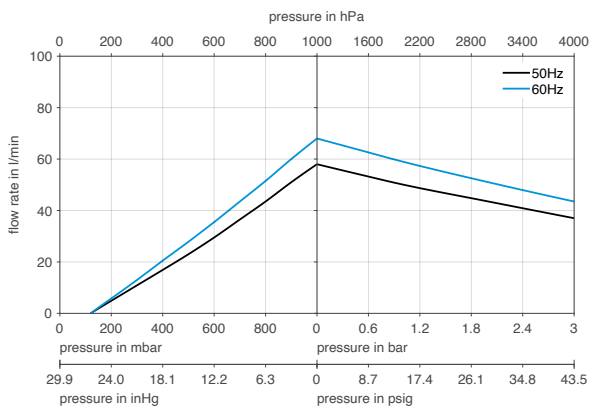
| Series model | Flow rate at atm. pressure (l/min) ¹⁾ | Max. operating pressure (bar rel./psig) | Ultimate vacuum (mbar abs.) |
|---------------------------|--|---|-----------------------------|
| N 630.1.2 SP.12 E - 50 Hz | 58.0 | 3.0/43.5 | 120 |
| N 630.1.2 SP.12 E - 60 Hz | 68.0 | 3.0/43.5 | 120 |

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

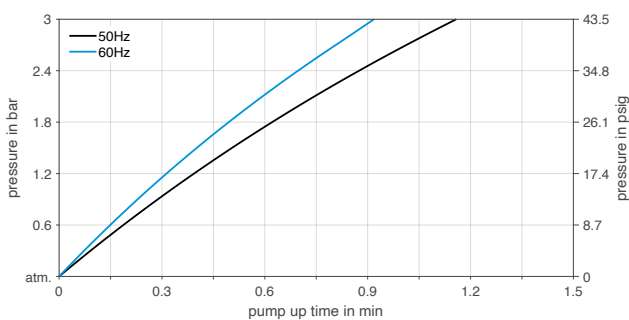
N 630.1.2 SP.12 E



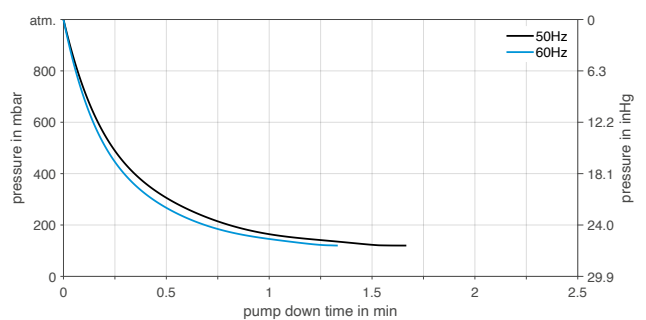
N 630.1.2 SP.12 E






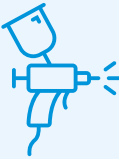


N 630.1.2 SP.12 E | PUMP UP TIME FOR 20 LITER VESSEL










N 630.1.2 SP.12 E | PUMP DOWN 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, for example with certain ozone or chlorine concentrations. Options include Hastelloy or PTFE pump head components or SilcoTek™ 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 |
| Special motors |  | Motors with special approval for maritime applications and motors with higher IP classification and insulation for tropical conditions are available on request |

ACCESSORIES

| Description | Illustration | Part No. |
|--|---|----------|
| Connection water cooling device N 630.1.2 S_9 E S_13 E |  | 310443 |
| Connection water cooling device N 630.1.2 S_12 E |  | 310444 |
| Inlet filter |  | 316661 |
| Transport eyebolt |  | 311535 |
| Wrench for retainer plate |  | 321664 |
| Retainer plate screw N 630.1.2 S_9 E S_13 E |  | 314279 |
| Retainer plate screw N 630.1.2 S_12 E |  | 314280 |

SPARE PARTS

| Description | Part No. |
|-----------------------------------|----------|
| Spare parts kit N 630.1.2 ST.9 E | 321882 |
| Spare parts kit N 630.1.2 ST.13 E | 321883 |
| Spare parts kit N 630.1.2 ST.12 E | 325527 |
| Spare parts kit N 630.1.2 SP.9 E | 321879 |
| Spare parts kit N 630.1.2 SP.13 E | 321880 |
| Spare parts kit N 630.1.2 SP.12 E | 321881 |

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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