



NEO D

A triple hit!

Less noise. Fewer emissions. Less maintenance.



A triple hit vacuum technology for cleaner, quieter, longer-running performance.

Pairing health and safety with efficient processes is a critical need for any workplace, from research labs to industrial manufacturers. When processes rely on continuous vacuum, choosing the correct components becomes all the more essential. Reliable, high-performance vacuum technology not only gets the job done, but also contributes to a better work environment with less noise and fewer emissions. The result is greater well-being and peace of mind – for higher levels of employee productivity and precision in demanding applications.

When it comes to these universal challenges, the **NEO D** rotary vane vacuum pump offers numerous advantages, but most of all, it's cleaner, quieter and virtually maintenance free.

Because good things come in threes

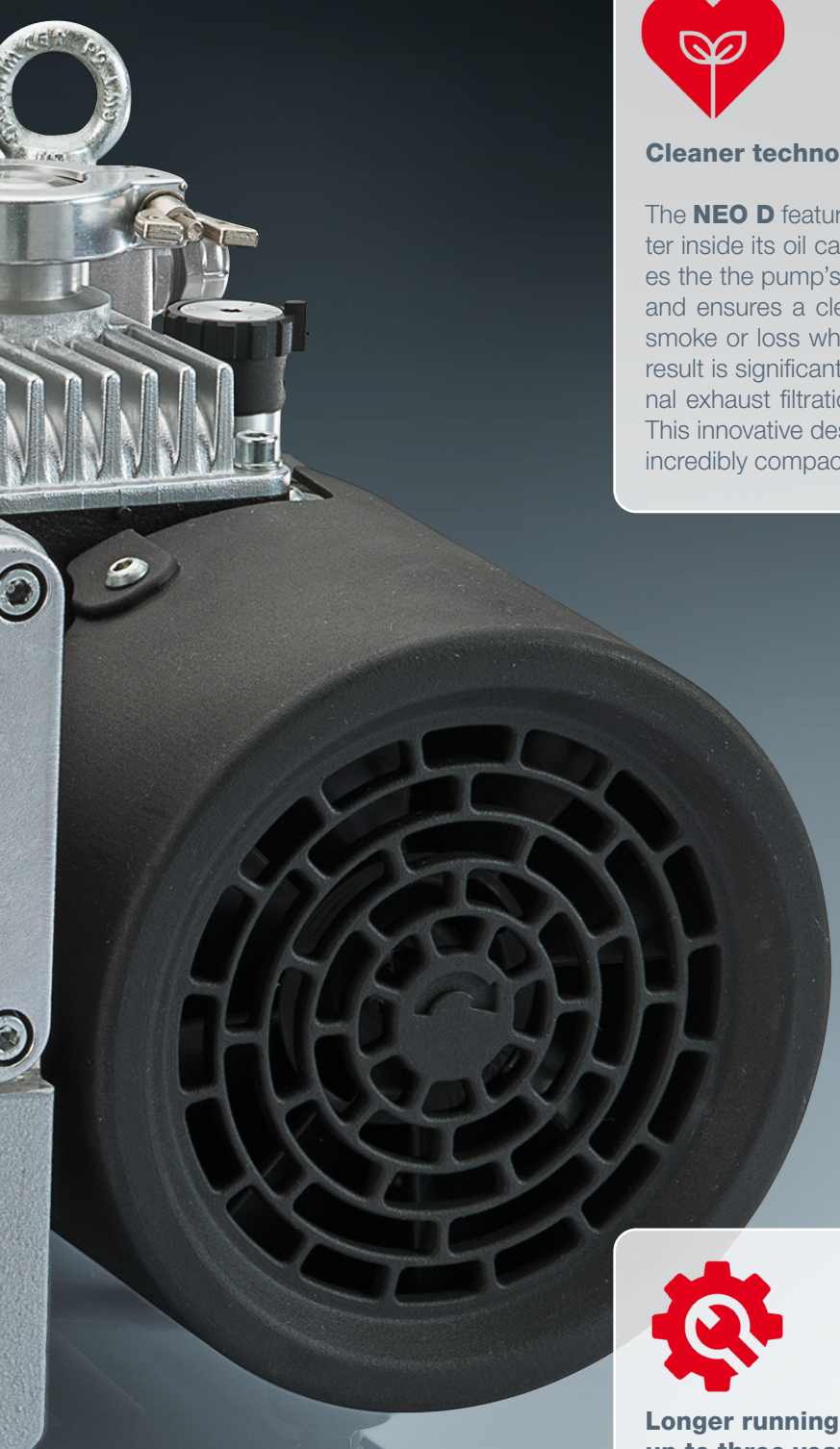


Fully Customized

A number of accessories allow to fine tune the pump to your needs:

- External frequency converter for single phase power supply, data acquisition & monitoring
- Roots adapters for closed coupled Roots mounting up to 500 m³/h on **Neo D** 40 & 65
- Pump Service Indicator to monitor the pump temperature, oil level and filter back pressure visually & electrically





Cleaner technology

The **NEO D** features a high-quality exhaust filter inside its oil casing. Built-in filtration reduces the pump's required integration volume and ensures a clean environment with no oil smoke or loss while pumping down. The end result is significantly less oil loss with no external exhaust filtration – up to 1000 times less! This innovative design also makes the **NEO D** incredibly compact.



Quieter performance by design

Our designers and engineers went to great lengths to improve the acoustic properties of the rotary vane vacuum pump. And they delivered: the **NEO D** sets a new benchmark in perceived noise levels and sound quality.

- **NEO D** 16 & 25 - 54 dB(A)
- **NEO D** 40 & 65 - 57 dB(A)



Longer running – maintenance-free for up to three years

Thanks to its cutting-edge shaft seal technology (designed exclusively for Leybold) and its long-lasting hydrocarbon oils, the **NEO D** is designed to provide maximum uptime. This new generation of vacuum pumps allows for up to three years of maintenance-free operation in clean applications. “Fit it and Forget it” for a new level of performance and convenience!

Two stage medium vacuum pump – ideal for all medium vacuum applications.

Reliable vacuum is indispensable for numerous applications across a variety of industries. Unlike many other pumps, the **NEO D** operates continuously at any inlet pressure from rough to fine vacuum. The **NEO D** rotary vane vacuum pump is suitable for all dual-stage pump applications, and is best used in applications requiring full pumping speed between 0.01 and 1 mbar.

SELECTED APPLICATIONS

Analytix and glove boxes

In analytical instruments such as mass spectrometers or electron microscopes, roughing pumps are essential components for reliable operation.

NEO D advantages:

- Reduces costs: no need for noise enclosures
- Flexible interfaces for remote control
- Pumping speeds from 16 to 80 m³/h with 180...264 V; 50 & 60 Hz 1-phase power supply
- Reduced footprint: No external exhaust filter required
- Saves costs: Up to three years of maintenance-free operation!

Heat treatment & plasma processes

In heat treatment furnaces and plasma processes, vacuum pump technology must perform reliably while exposed to difficult processes.

NEO D advantages:

- Rugged industrial design with oil filter
- No external exhaust filter required
- Different oil types available depending on process!

R&D

Ultra-high vacuum (UHV) applications require reliable fore-vacuum generation for turbomolecular pumps. To avoid disturbing sensitive measurements, noise and vibrations must be kept to an absolute minimum.

NEO D advantages:

- Nice to work with: Extremely quiet and easy to operate
- Sufficient ultimate pressure for UHV performance
- Reduces footprint: No external exhaust filter required
- Saves costs: Up to three years of maintenance-free operation!

Sterilization

In sterilization, vacuum pumps are critical components that are exposed to harsh conditions including large quantities of H₂O₂.

NEO D advantages:

- Silent, user-friendly pump
- No external exhaust filter required





Integrated exhaust filter eliminates oil emissions and oil loss while pumping down

Performance-boosting accessories for pump monitoring and control

Would you like to enjoy multiple pump control options and receive access to predictive maintenance data? We offer a frequency converter (FC) driven version of the **NEO D** for all four pump sizes.

Frequency converter drive (optional):

- Black box FC drive enables
- Speed control
 - Monitoring (RS485 interface)
 - Constant pumping speeds independent of mains frequency
 - Soft start with no inrush current
 - Lower noise and vibration levels than a 1-phase motor
 - 1-phase power supply 180...264 V at 50 & 60 Hz for all pump sizes

Pump service indicator (optional):

Do you need to keep an eye on the status of your pump, even when you're not on site? Our pump failure indicator provides remote monitoring:

1. Oil level

Indicates a low oil level

2. Oil temp

Indicates overheating

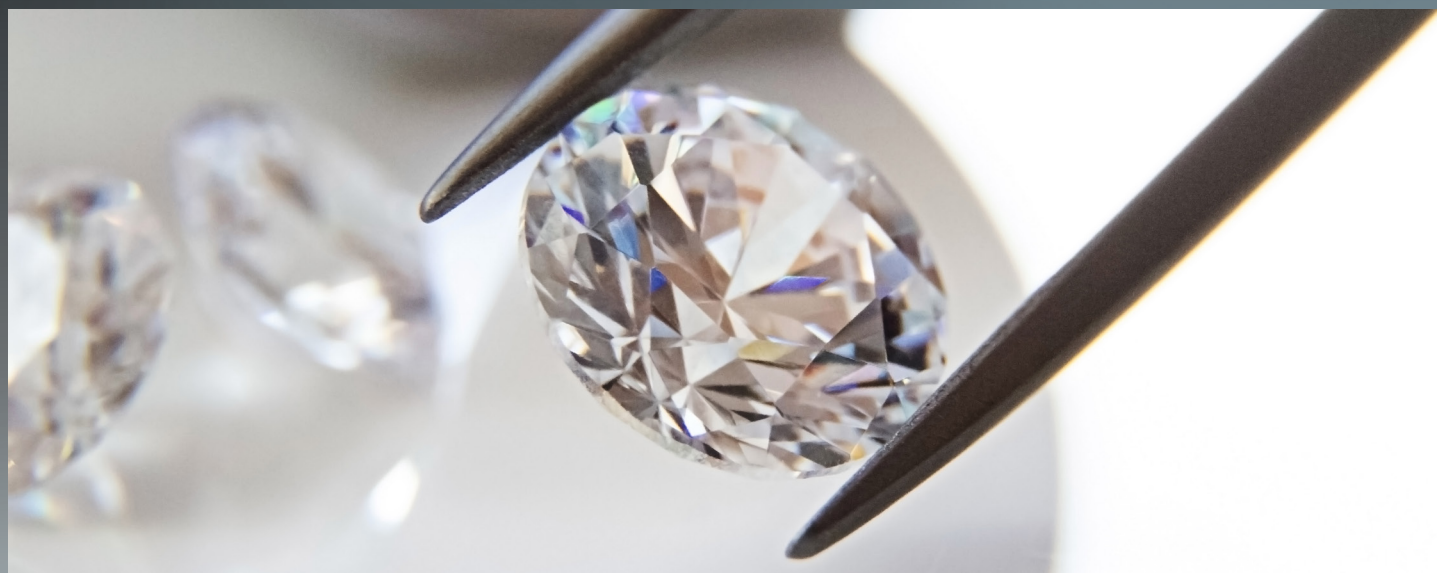
3. Exhaust filter condition (back-pressure)

Indicates when the exhaust filter needs to be changed

Reducing your energy bill and CO₂ footprint

NEO D is engineered to optimize the use of energy with its innovative design. Our customers benefit with typically 20% lower energy consumption as compared to other competitive pumps. Reduced energy consumption leads to a lower carbon footprint which helps you to achieve your environmental targets.

NEO D 16 and 25 have been running 24/7 in the production of artificial diamonds in India, delivering a energy saving of 1600 kWh every year.



The **NEO D** rotary vane vacuum pump is available in four different sizes: 16, 25, 40 or 65 m³/h at 50 Hz. We also offer a variety of motors, oils and accessories, depending on your requirements.

Technical data

| Size | | NEO D 16 | | NEO D 25 | | NEO D 40 | | NEO D 65 | |
|-------------------------------|-------------------|------------------------|-----|------------------------|-----|------------------------|-----|------------------------|-----|
| | | 50 | 60 | 50 | 60 | 50 | 60 | 50 | 60 |
| Frequency | Hz | 50 | 60 | 50 | 60 | 50 | 60 | 50 | 60 |
| Rated pumping speed | m ³ /h | 19 | 23 | 28 | 34 | 47 | 56 | 74 | 89 |
| Eff pumping speed | m ³ /h | 16 | 19 | 24 | 29 | 40 | 48 | 63 | 76 |
| Ult pressure w/o gas ballast | mbar | < 8 x 10 ⁻³ | | < 8 x 10 ⁻³ | | < 8 x 10 ⁻³ | | < 8 x 10 ⁻³ | |
| Ult pressure with gas ballast | mbar | < 1 x 10 ⁻¹ | | < 1 x 10 ⁻¹ | | < 1 x 10 ⁻¹ | | < 1 x 10 ⁻¹ | |
| Water vapor tolerance | mbar | 10 | | 10 | | 10 | | 10 | |
| Motor power | | | | | | | | | |
| 3-phase motor | kW | 0.55 | 0.7 | 0.9 | 1.1 | 1.15 | 1.5 | 2.0 | 2.6 |
| 1-phase motor | kW | 0.75 | 0.9 | 0.9 | 1.1 | 1.3 | 1.5 | - | - |
| Frequency converter | kW | 0.75 | 0.9 | 0.9 | 1.1 | 1.5 | 1.5 | 2.0 | 2.6 |
| Noise level | dB(A) | 54 | | 54 | | 57 | | 57 | |
| Oil volume | l | 1.5 | | 1.5 | | 3 | | 3 | |
| Flanges | | 25 KF | | 25 KF | | 40 KF | | 40 KF | |
| Weight | kg | 48 | | 48 | | 80 | | 88 | |
| Dimensions L x W x H | mm | 516 x 288 x 294 | | 518 x 288 x 294 | | 632 x 356 x 320 | | 669 x 359 x 320 | |

Technical data

Ordering information

One model, four sizes
Find your perfect **NEO D...**

| NEO D models | | | | |
|---|----------|----------|----------|----------|
| Size | NEO D 16 | NEO D 25 | NEO D 40 | NEO D 65 |
| 3-phase world motor 180...264 / 342...457 V, 50 Hz & 180...264 / 342...506 V, 60 Hz | 970102V | 970202V | 970302V | 970402V |
| 1-phase 180 - 264V, 50 & 60 Hz with overload protection | 970100V | 970200V | 970300V | N/A |
| 1-phase 115V +/- 10 %, 60 Hz with overload protection | 970103V | N/A | N/A | N/A |

... plus all the right accessories!

We also offer a line of accessories for enhanced monitoring and control of our pumps. All accessories can be retrofitted to any pump and are designed according to the same basic principles of the **NEO D** series. **NEO D** pumps are also compatible with **TRIVAC B** inlet accessories.

| NEO D accessories Pump monitoring and control | | | | |
|---|---|----------------------|----------------------|-----------|
| Size | NEO D 16 | NEO D 25 | NEO D 40 | NEO D 65 |
| Oil level switch | 9700LS | 9700LS | 9700LS | 9700LS |
| Exhaust filter over-pressure switch | 971471210 | 971471210 | 971471210 | 971471210 |
| Exhaust filter pressure manometer | 95193 | 95193 | 95193 | 95193 |
| Thermal switch to protect the pump from overheating | 9700TS | 9700TS | 9700TS | 9700TS65 |
| PT100 for pump temperature monitoring | N/A | N/A | 971444320 | 971444320 |
| 1-phase driven F/C 180 - 264V, 50 & 60 Hz with overload protection | Accessory P/N 970FC01 to be connected on the 3 phase world motor pump | | | |
| Roots adapter for close-coupled Roots mounting up to 500 m ³ /h | N/A | N/A | 970RA02 | 970RA01 |
| Pump Service Indicator & cables Pump sensors (oil level, oil temperature and exhaust filter condition) not included | N/A | 9700F1 & 9700F1C1 | 9700F1 & 9700F1C2 | |



Pioneering products. Passionately applied.