

PURE VACUUM. NOTHING ELSE.



NEW

10⁻³ mbar vacuum range

- + 100% oil-free
- + No abrasion
- + No wear parts

VACUU·PURE® 10

BRANDTECH[®]
SCIENTIFIC, INC.

vacuubrand[®]

www.brandtech.com/product/vacuupure

VACUU·PURE®

Innovation.

VACUU·PURE reliably delivers the benefits of oil-free vacuum technology in the pressure range down to 10^{-3} mbar. The new vacuum pump combines three important benefits for the user: 100% oil-free, no abrasion, and no wear parts.

We listened to you: you asked for contamination-free vacuum that lets your clean processes run efficiently. Our team of experts developed VACUU·PURE for precisely these applications. Our dry screw pumps meet challenges where other technologies fall short.

VACUU·PURE covers many applications. The vacuum pump is especially developed for processes down to 10^{-3} mbar, however, unlike other fine vacuum pump technologies it can be used across the entire pressure range from atmospheric pressure to its ultimate vacuum. With a pumping speed of up to $10 \text{ m}^3/\text{h}$, the vacuum pump is very capable. Additionally, it offers exceptional vapor and condensate compatibility. Easy installation, user friendliness, and the rugged air cooled design enable trouble-free operation. VACUU·PURE is not only a versatile pump for the laboratory, it is an ideal solution for demanding processes.

Want to see if VACUU·PURE pumps are a good fit for your lab? Our team of experts is happy to assist you!



10⁻³ mbar.

100% oil-free

For dry and hydrocarbon-free operation, VACUU·PURE takes the screw pump principle to the next level. The vacuum pump is 100% oil-free.

This enables clean processes and pure products and protects the laboratory and environment. Save both time and operating costs, since there is no need to dispose of waste oil or to interrupt your work for oil changes.

No abrasion

The working principle of VACUU·PURE is based on gap sealing. The unique operating principle enables contact-free rotation of the spindles.

The vacuum pump operates abrasion-free. This ensures an ultrapure vacuum as well as contamination-free exhaust air. In addition, there is no wear due to abrasion, allowing for operation.

No wear parts

A major benefit of VACUU·PURE is that it does not have any wear parts. The spindles rotate contact-free. Components are manufactured with the highest precision, down to the smallest detail.

The special design enables you to run your process without interruption. VACUU·PURE has no scheduled maintenance for replacement of wear parts. This saves time, reduces operating costs, and enables trouble-free operation.

Technology.

VACUU·PURE reliably delivers the benefits of oil-free vacuum technology in the pressure range of 10^{-3} mbar. The special design with two cantilevered spindles and a magnetic gear allows hydrocarbon-free operation.

The unique design of VACUU·PURE gives it an exceptionally high condensate compatibility, making a gas ballast unnecessary even at high vapor loads.

The spindles run contact-free and are thus free of abrasion.



Rotatable inlet

Vertical or horizontal orientation possible

Contact-free operating principle

No particle generation due to abrasion

Cantilevered spindles

100% oil-free flow path

Regeneration mode

Quick drying cycles after high condensate load

Air cooled

Versatile use

Modbus RTU interface

Easy system integration and remote control via process control systems

Applications.

VACUU·PURE is ideal for clean processes and pure products in the vacuum range down to 10^{-3} mbar.

A dry and hydrocarbon-free vacuum is indispensable for many applications such as in ultrahigh vacuum systems. As a dry fore vacuum pump for turbomolecular pumps, VACUU·PURE offers a deep ultimate vacuum that was previously unreachable with oil-free technologies. Additionally it provides high pumping speed for light gases in the pressure range down to 10^{-1} mbar.

VACUU·PURE can operate continuously at higher pressures so that even larger systems can be evacuated from atmospheric pressure down to 10^{-3} mbar without the need for another pump technology.

Without wear parts to change or troublesome oil changes to perform, VACUU·PURE enables continuous operation without the need for regular maintenance.

- ✓ Fore vacuum generation for turbomolecular pumps
- ✓ Analytical applications
- ✓ Regeneration of cryo pumps
- ✓ Vacuum drying
- ✓ Freeze drying
- ✓ Heat treatment
- ✓ Degassing
- ✓ Coating
- ✓ ...

VACUU·PURE can be operated continuously at higher pressures so that in drying processes, both the primary drying and subsequent residual drying steps can be performed with a single pump.

VACUU·PURE easily handles high vapor loads through its extraordinarily high condensate compatibility. A gas ballast is therefore not necessary. The associated disadvantages such as a reduction in pumping speed and increased noise levels are thus avoided. The integrated regeneration mode enables rapid drying of the pump after the end of the process and thus the sample throughput can be significantly increased, as compared to other pump technologies.

VACUU·PURE is also available in a chemically resistant design for working with aggressive gases and vapors.



Technical data.

Technical data

VACUU-PURE 10

Max. pumping speed	10 m ³ /h
Ultimate vacuum (abs.)	5 x 10 ⁻³ mbar (at 1013 mbar ambient pressure)
Max. inlet pressure (abs.)	atmospheric pressure
Max. outlet pressure (abs.)	15 mbar above atmospheric pressure
Ambient temperature range (operation)	10 - 40 °C
Ambient temperature range (storage)	-10 - 60 °C
Inlet connection	small flange KF DN 25
Outlet connection	small flange KF DN 25
Rated motor power	0.7 kW
Protection class	IP 20
Dimensions (L x W x H), approx.	507 x 269 x 413 mm
Weight, approx.	21.1 kg
Noise (sound pressure level), uncertainty 3 dBA	55 dBA

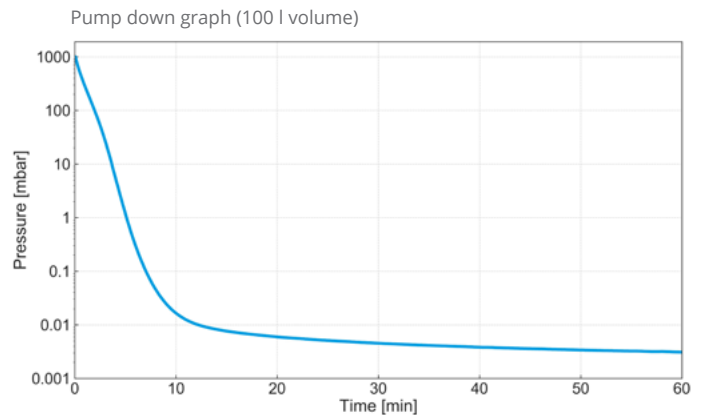
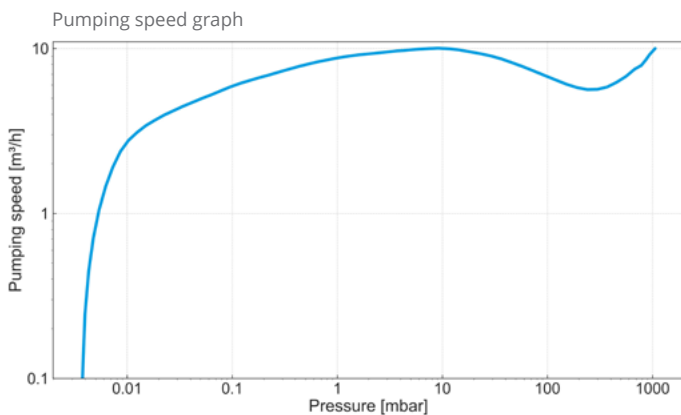
Ordering information

VACUU-PURE 10 US 20750003

Nominal mains voltage / mains frequency : 100-230 V, 50/60 Hz

Items supplied

Pump completely mounted, ready for use, connection with small flange KF DN 25 (2x centering and clamping rings included), with manual.



Accessories.

Accessories - general

VACUU·PURE shuttle, mobile underframe for VACUU·PURE	20751800
Elbow, aluminum, KF DN 25	20669405
External centring ring, PBT, sealing ring FPM, KF DN 20/25	20660196
Clamping ring, aluminum, KF DN 20/25	20660001

Accessories - measurement and control

Vacuum gauge VACUU·VIEW extended, 1100 - 0.001 mbar	20683210
VACUU·SELECT package for fine vacuum control with VACUU·VIEW extended for KF DN 25	20700110

Accessories - VACUU·BUS® and communication

In-line valve VV-B 15C, VACUU·BUS PVDF/PTFE, electromagnetic, DN 25, certification (NRTL): C/US	20674215
Communication Kit, USB VACUU·BUS converter for communication with VACUU·BUS capable devices	20683230



References.

We were particularly impressed by the fact that VACUU-PURE has good flow rate even at higher pressures. For this reason, we can use VACUU-PURE as early as the initial evacuation of our UHV systems (ultrahigh vacuum systems). We avoid switching between different pump technologies for pumping out our systems and use as a backing pump.

In all tests, VACUU-PURE demonstrated very good performance, even in the case of an unusually high vapor load. The regeneration mode of VACUU-PURE is very helpful to be able to start the next process very quickly. We believe that there is no comparable vacuum pump.

With VACUU-PURE, we finally get a hydrocarbon- and abrasion-free vacuum down to 10^{-3} mbar.



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