PURE VACUUM.
NOTHING ELSE.

NEW

10^{-3} mbar vacuum range
+ 100% oil-free
+ Chemically resistant
+ No wear parts

VACUU·PURE® 10C

BRANDTECH® SCIENTIFIC, INC.

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VACUU·PURE®

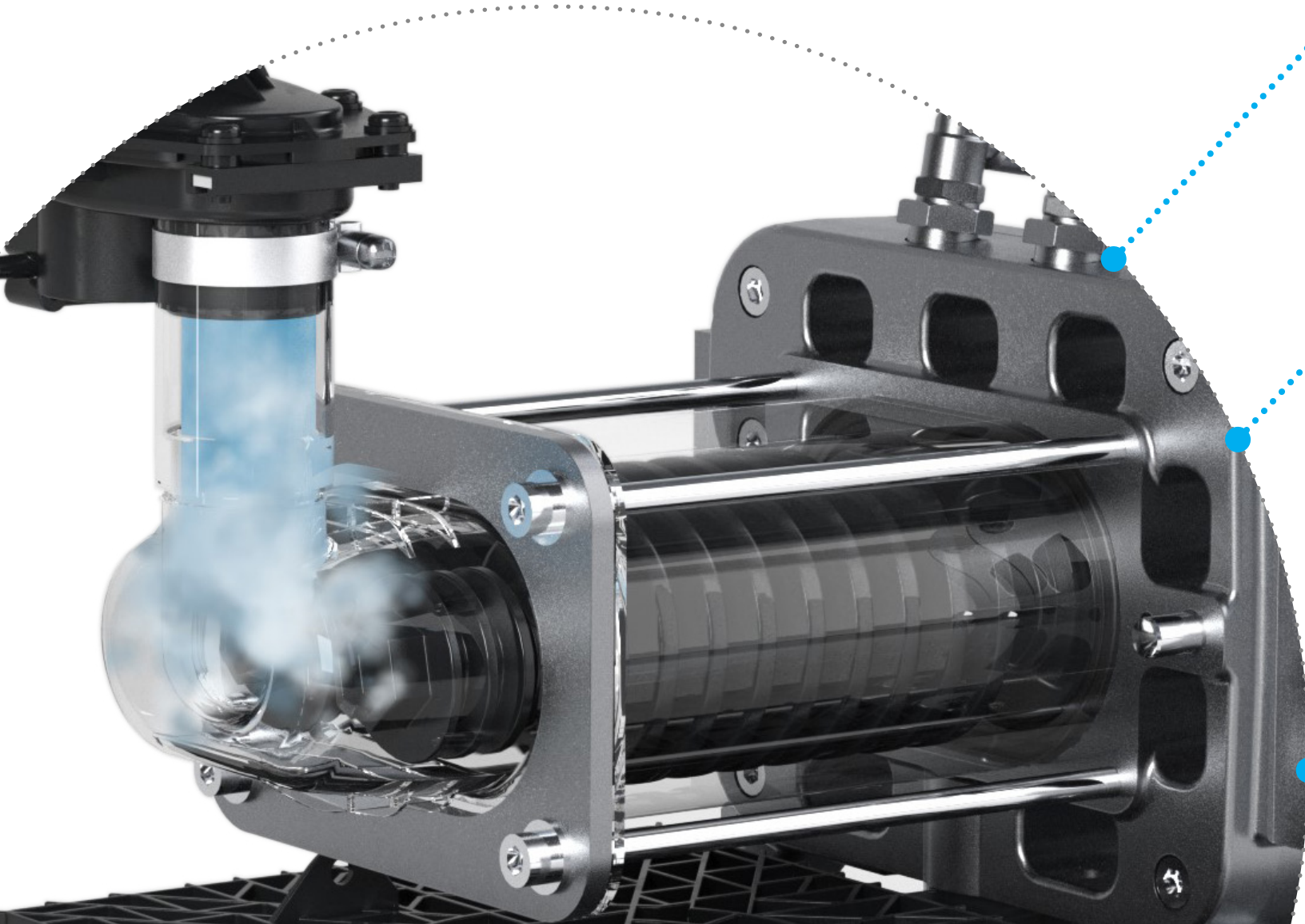
Innovation.

VACUU·PURE reliably delivers the benefits of oil-free vacuum technology in the pressure range of 10^{-3} mbar. The new vacuum pump combines three important benefits for the user:
100% oil-free, chemically resistant, 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 9 m^3/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 complete oil-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.

Chemically resistant

The wetted materials in the vacuum pump are all made of chemically resistant polymers. A thick-walled PEEK encapsulation protects the spindles and stator inside the pumping chamber, providing high chemical resistance.

The chemically resistant wetted materials make VACUU·PURE 10C well-suited for work with aggressive gases and vapors. Cold traps are not typically needed to protect the pump, as it is often the case with other technologies. The new screw pump has an exceptionally high vapor and condensate compatibility. Thanks to the integrated regeneration mode, it dries out quickly after pumping heavy vapor loads and is ready for the next process.

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 takes dry screw pump technology to the next level as a solution for the use in laboratory scale. The special design with two cantilevered spindles and a magnetic gear allows fully oil-free operation.

The spindles and stator are protected by a thick-walled PEEK encapsulation to protect against corrosion by most chemicals. An integrated sealing gas supply protects the bearings from chemical attack. 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

Chemically resistant materials
Throughout the flow path

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.

Drying processes, manipulation of oxygen- or moisture-sensitive compounds (e.g., in Schlenk lines), distillations, and even coating processes can be run with the dry screw pump without downtime for maintenance.

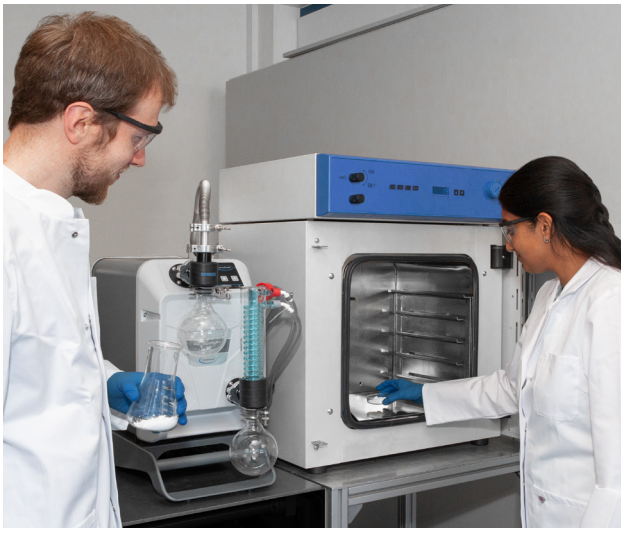
At the same time, the high chemical resistance enables trouble-free operation. A cold trap is rarely needed to protect the pump. This saves time and operating costs and enables continuous processes without interruption. The inconvenience of refilling liquid nitrogen or dry ice, and the danger of liquid oxygen accumulation in the cold trap, is avoided.

- Freeze drying
- Schlenk Line
- Drying
- Fore vacuum generation for turbomolecular pumps
- Analytical applications
- Degassing
- Distillation
- Heat treatment
- Coating

VACUU·PURE can be operated continuously at higher pressures so that in a drying oven, both the primary drying and subsequent residual drying steps can be performed with a single pump. For distillation processes which operate in the transition range from rough to fine vacuum (10 mbar to 0.1 mbar), VACUU·PURE delivers high pumping speeds at low pressures combined with high chemical resistance. In freeze drying, excellent results are achieved during the residual (aka secondary) drying phase due to VACUU·PURE's impressive ultimate vacuum.

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 special design for working with non-corrosive gases and vapors.



Technical data.

Technical data

	VACUU·PURE 10C
Max. pumping speed	9 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.	21.5 kg
Noise (sound pressure level), uncertainty 3 dBA	55 dBA

Ordering information

VACUU·PURE 10C US plug	20751003

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

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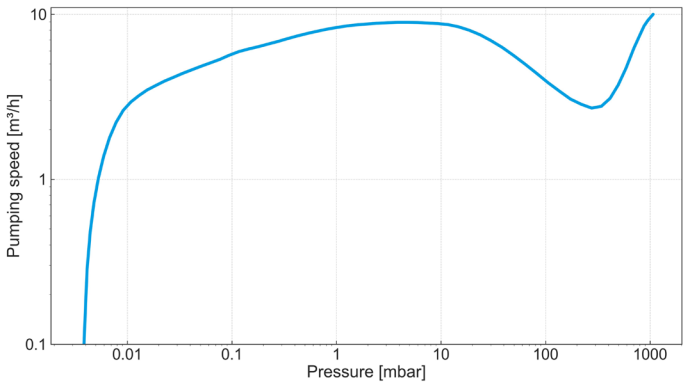
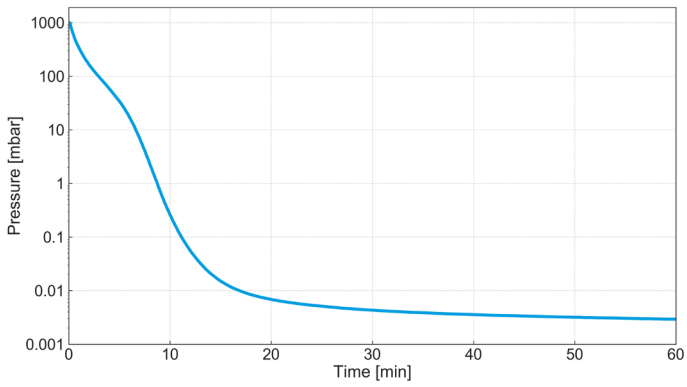
Items supplied

Pump completely mounted, ready for use, connection with small flange KF DN 25 (2x centering and clamping rings included), with manual. To establish a hose nozzle connection, suitable KF flanges with hose nozzle are available for order.

Pumping speed graph



Pump down graph (100 l volume)



Accessories.

Accessories - general

VACUU·PURE shuttle, mobile underframe for VACUU·PURE	20751800
Inlet separator AK with round bottom flask 500 ml, with KF DN 25, for VACUU·PURE	20751802
Emissionskondensator EK 600 mit Glas-Rundkolben 500 ml, mit KF DN 25, für VACUU·PURE	20751801
PTFE tubing antistatic, KF DN 25/1000 mm	20686033
Exhaust hose PVC, 26/19 mm (length in m)	20686056
Small flange with hose nozzle DN 25/SW15, PP	20662808
Centering ring KF DN 20/25C, chemically resistant	20635722
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

Inlet separator (AK)
(20751802)

VACUU·PURE shuttle
(20751800)

Exhaust vapor condenser (EK)
(20751801)

References .

> *We can let VACUU·PURE run overnight without any worries because cold traps with liquid nitrogen are no longer needed. This has led to a significantly higher throughput in the laboratory. This vacuum pump will be a sensation in the market.*

> *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 have a flexible pump which we can use for our processes below and above 1 mbar. Thanks to its high pumping speed, we can even run two processes simultaneously.*

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