



VACUBE

Intelligent & Economical



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VACUBE is a synonym for innovation and intelligence. Oil lubricated screw technology and a variable speed drive offer excellence in system performance, energy demand and work space environment. VACUBE generates vacuum on demand, it is controlled and maintained by an internal controller. The systems offer superior performance for a wide range of rough vacuum applications.

- Pump efficiency
 - Variable speed drive (VSD)
 - Internal controller
- Power demand
 - Sustainable power saving due to on-demand vacuum generation
 - Most economical rough vacuum pump principle
- Work space environment
 - Most efficient oil retention system
 - Quiet operation, noise level bench mark
 - Small footprint – pallet size dimensions (up to VQ 800)
 - “Plug and play” system set up
- Sustainable productivity
 - Programmable operation modes
 - Long maintenance intervals

This new generation of intelligent, oil-sealed screw vacuum pumps features Variable Speed Drive (VSD) technology. Its complete and innovative design enables a plug-and-play installation and operation.



A broad range of variants -
select the best for your application

4 different models

i – model

Ideal for standard vapor free applications as needed in central vacuum systems for holding, lifting and moving of parts and components.

iH – model

This variant is best suited for applications with high water vapor ingress. The high water vapor tolerance level makes the iH – model best suited for humid applications.

iC – model

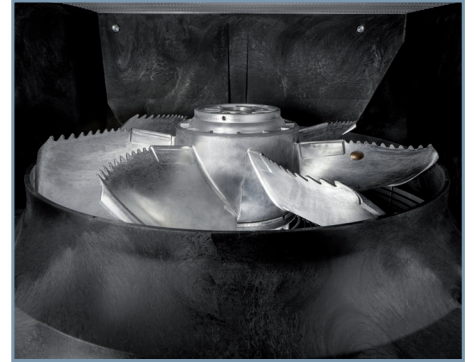
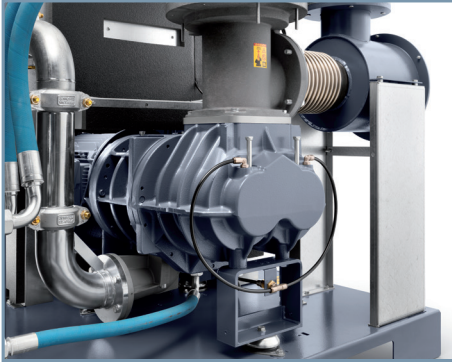
The iC – VACUBE variant is specifically designed to support the special needs in short cycling applications, as for example common in vacuum packaging or assembly lines for electronic equipment.

iCH – model

The combination of „iH“ and „iC“ offers high water vapor tolerance and short cycling ability.

	Application challenge		
	standard	humid	cycling
VACUBE VQ xxxx i	■	–	–
VACUBE VQ xxxx iH	–	■	–
VACUBE VQ xxxx iC	–	–	■
VACUBE VQ xxxx iCH	–	■	■

„Best in class“ –



Screw Technology

- Highly efficient oil-sealed rotary screw
- Outstanding performance
- Robust design

Inlet control valve

- Provides modulating vacuum control in conjunction with the VSD+ drive to minimize energy consumption

Guaranteed oil retention

- Optimum design for maximum oil retention
- The special pumps design ensures that the oil separators are never overloaded which extends the filter cartridge life-time
- The innovative, patented oil restraint system minimizes the discharge of oil mist into the environment to $< 3 \text{ mg/m}^3$ even at rough pressure operation

Integrated frequency inverter

- In-house designed inverter for industrial-grade usage
- Robust aluminium enclosure for trouble-free operation in the harshest conditions
- Minimal components: compact, simple and user-friendly

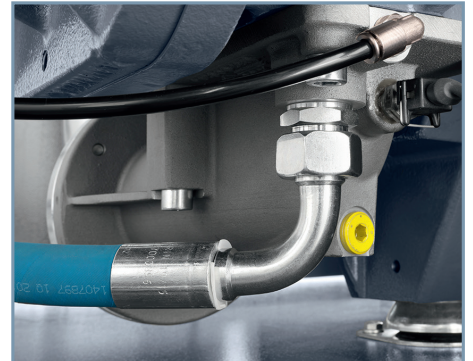
Water-cooled variants

NEW

- Same functionalities and product offerings as the air-cooled variants
- Simply connectable with the water supply



Innovative technology



Energy recovery options

- Allowing you to recover up to 75% of the power input

Easy to use

- The „plug & play“ system design supports quickest installation and start-up without complicated programming
- The top cover of the oil separator has a unique hinge mechanism. It slips the cover to the side, allowing easy access and fast exchange of the oil separators.
- The exhaust pipe design (drip drain leg) enables condensate collection which back-flows from the exhaust pipe

Canopy with hot-cool zones

- The VACUBE series features a canopy with a hot-cool design. All heat-producing components plus those which need to stay warm to handle vapors are divided from those which should stay cold.

As cool running means higher reliability, this feature extends the lifetime of electronic components and leads to a longer Mean Time Between Maintenance (MTBM).

In addition the canopy is sound insulated and ensures the very low noise level of the pump.



VACUBE – Controller / Monitoring System

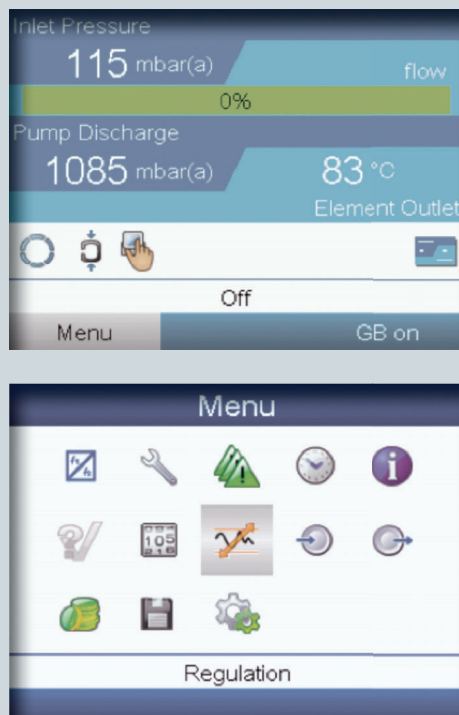


The VACUBE controller offers extensive functionalities:

- + Protection of the pump
- + Pressure monitoring
- + Speed control
- + User settings

The controller can be operated intuitively. A comfortable 3,5" – color display is used as graphic user interface to call up menus or to input customized settings easily. LED's inform about maintenance and service demands.

Multiple controllers can be linked with each other.



Further features:

- Set point pressure selection
- Gas Ballast on/off
- Displays:
 - Pressures (inlet, discharge)
 - Temperatures
 - Alarms and warnings
 - Counters (e.g. running hours, pump starts, etc.)
- Week timer function
- Language and unit selection

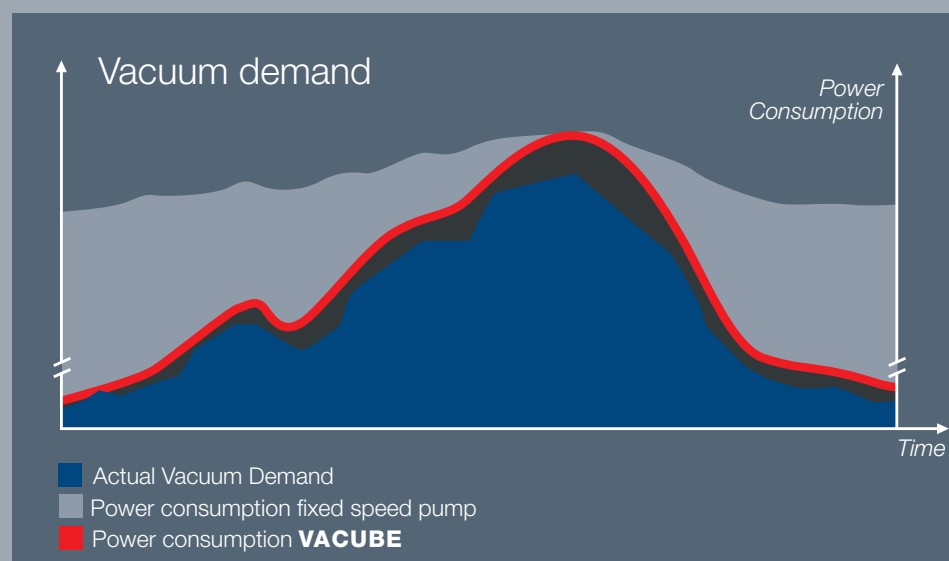
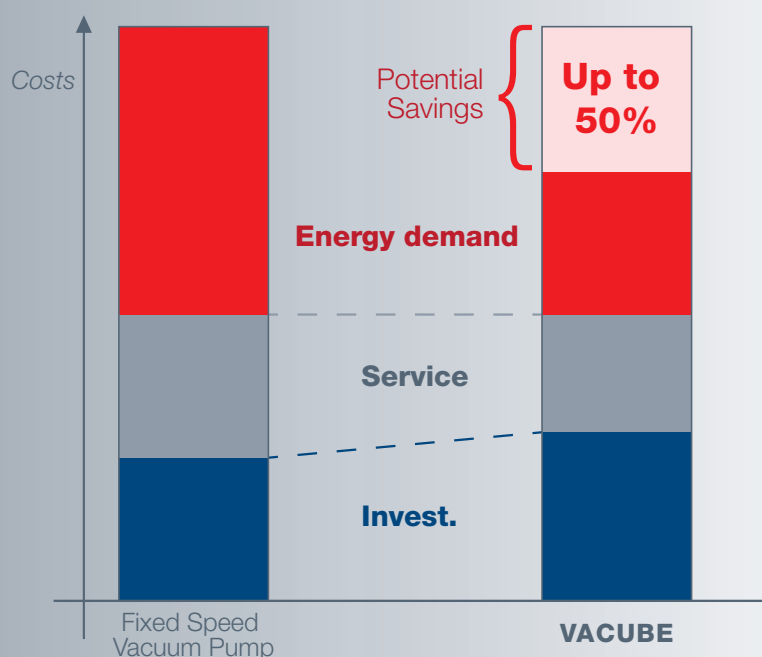
VACUBE – Energy Optimized Operation

In rough vacuum, VACUBE is a real game changer offering the highest energy saving potential. The power consumption changes proportional to the real vacuum demand, often allowing energy savings up to 50% compared to other vacuum pump technologies.

Typical production plants have a fluctuating vacuum demand. Today's vacuum solutions consume widely constant power nearly independent on vacuum demand.

VACUBE advantages:

- Energy saving mechanics
- Most efficient oil sealed screw technology with outstanding performance
- IE3 motors with variable frequency drive
- Limitation of starting power by modulating valve technology
- Energy saving electronics
- Smart pressure control
- Operation exactly at set point – not higher, not lower
- Load depending speed control to minimize energy demand



Only pay for what you really need

With reduced vacuum demand pumps without speed control simply lower the pressure level, which is not necessary for the process. Running at lower pressure such pumps require only little less energy.

By its rotary speed adjustment, the VACUBE will keep the pressure exactly on the required level. At reduced speed the VACUBE will proportionally reduce its power demand, enabling significant energy savings.

VACUBE – the best choice for a wide range

Holding, lifting and moving

- Print & Paper
- Packaging
- Electronic manufacturing
- Woodworking
- Li-ion cell manufacturing
- Glass manufacturing

Forming and shaping

- Plastics (e.g. bath tubs, shower trays, white goods internals)
- Packaging materials (e.g. thermoformed parts)
- Glass items such as bottles and windscreens
- Wood lamination

Preserving

- Meat packaging (skin, modified atmosphere MAP)
- Poultry packaging
- Canning
- Food freeze drying



of applications in various industries.

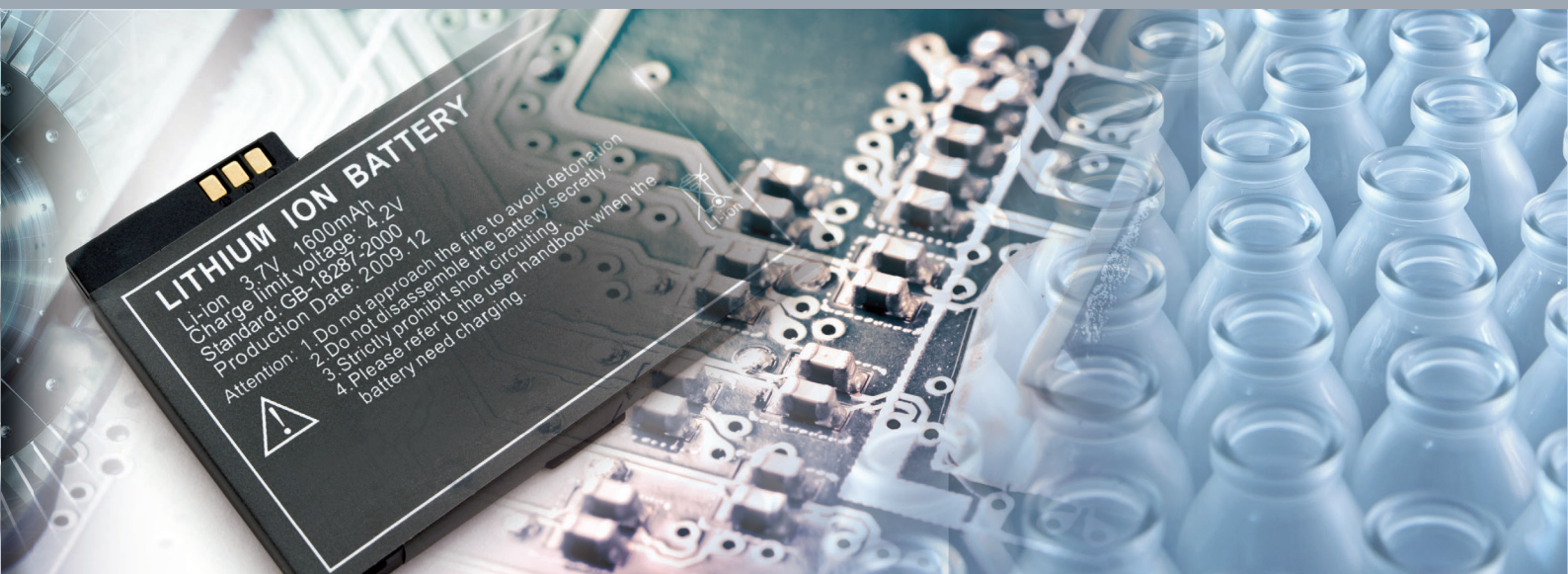
Dehumidification

- Vacuum cooling
- Roof tile and brick manufacture
- Pipeline drying

Special demands

- Altitude testing
- Special evacuation duties
- Coating
- Clean environments

And many more ...



Technical Specifications

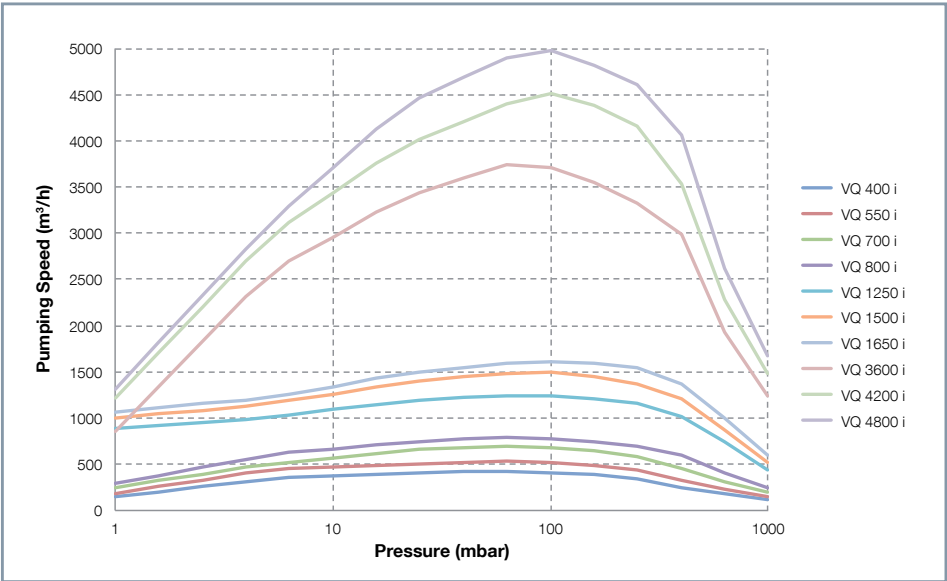
VACUBE variants	Max. eff. pumpspeed	Ultimate pressure	Motorshaft power	Noise level **	Ambient Temp.	Weight
	m³/h / cfm	mbar / Torr	kW / hp	dB (A)	°C / °F	kg / lbs
VQ 400 i - iH	420 / 247	0.35 / 0.26	5.5* / 7.5*	51 - 65	0-46 / 32-115	500 / 1102
VQ 550 i - iH - iC - iCH	530 / 310	0.35 / 0.26	7.5 / 10	51 - 65	0-46 / 32-115	500 / 1102
VQ 700 i - iH - iC - iCH	700 / 412	0.35 / 0.26	11 / 15	51 - 73	0-46 / 32-115	510 / 1125
VQ 800 i - iH - iC - iCH	790 / 465	0.35 / 0.26	15 / 20	51 - 76	0-46 / 32-115	520 / 1147
VQ 1250 i - iH	1250 / 736	0.35 / 0.26	22 / 29	65 - 75	0-46 / 32-115	1058 / 2333
VQ 1500 i - iH - iC - iCH	1490 / 877	0.35 / 0.26	30 / 40	65 - 75	0-46 / 32-115	1058 / 2333
VQ 1650 i - iH - iC - iCH	1620 / 955	0.35 / 0.26	37 / 50	65 - 80	0-46 / 32-115	1073 / 2366
VQ 3600 i - iH	3739 / 2230	0.35 / 0.26	55 / 74	70 - 83	0-46 / 32-115	3945 / 8697
VQ 4200 i - iH - iC - iCH	4516 / 2685	0.35 / 0.26	75 / 101	70 - 84	0-46 / 32-115	3980 / 8774
VQ 4800 i - iH - iC - iCH	4972 / 2921	0.35 / 0.26	90 / 121	70 - 85	0-46 / 32-115	4000 / 8818

* Specification for 7.5 kW power motors

** According to DIN EN ISO 2151

- Supply voltages:
- Standard power supply: 380-460V, 3ph, 50/60Hz. Special variants (200-230V or 500-575V, 3ph, 50/60Hz) are available on request. All pumps are CE, UL/CSA compliant. Contact Leybold for more details.
 - Each pump is available with air or water cooling, in case of watercooling the pump is more silent but has a higher weight. Contact Leybold for more details.

VACUBE Pumping Speeds



Leybold Service - Easy, competent, reliable

Original Equipment Manufacturer Service from one Source

- On-site service
- 24/7 support
- Organization of back up pools
- Managed maintenance contracts for carefree operation

High-quality products are combined with our comprehensive after sales service, a worldwide service network and an internationally unified quality standard.

Our service capability guarantees fast and efficient on site support close to your location and in your local language.



Field Service

Our specialized engineers perform regular maintenance and overhaul as well as commissioning, trouble shooting and upgrades.

Managed Maintenance Contracts

Our managed maintenance contracts offer the possibility to concentrate on your processes.

Depending on the application, we work out a tailor-made maintenance plan for your equipment. We take care about the scheduling, necessary spares and consumables to keep your vacuum pump running. We also offer a fixed price model which includes on-site trouble shooting.

An optional remote monitoring system upgrades your traditional time-based maintenance schedule to a condition based concept, offering significant cost-of-ownership saving potential.

Reliable Original Equipment Manufacturer Service from one Source

Dimensions



VACUBE 400 – 800

Width: 1266 mm
Depth: 934 mm
Height: 1083 mm

VACUBE 1250 – 1650

Width: 1420 mm
Depth: 1590 mm
Height: 1470 mm

VACUBE 3600 – 4800

Width: 1940 mm
Depth: 2850 mm
Height: 1890 mm

Leybold – our product philosophy: “More than just enough”

Leybold is the leading supplier for vacuum products. Since the year 1850, customers all over the world rely on our experience and expertise as their partner in vacuum technology.

All products must pass an extended qualification program with strict toll gates before they are released into the market. For all serial products we have a continuous improvement program in place.



Pioneering products. Passionately applied.