

# VACUBE

## Intelligent & Economical



# More than a vacuum pump...

At Leybold, we have been bringing useful innovations to the vacuum world since 1850. **VACUBE** exemplifies the quality of innovation with intelligent pumping. **VACUBE**, with oil lubricated technology and a variable frequency

controller, delivers optimal pumping performance, energy savings and a better working environment for a wide range of industrial vacuum applications.



## Energy-Efficient

**VACUBE** constantly adjusts its speed and uses the right amount of energy to pump **only what you need**.



## Plug & Pump

**VACUBE** gives you **everything you need** to create vacuum **in a compact box**: inlet gas filter, inlet valve, vacuum pump, exhaust oil filters, cooling system, frequency controller and electrical cabinet. Quick and easy installation & set up.



## Extended Uptime

We build **VACUBE** with robust material. The internal controller monitors and optimizes cooling. You get **longer maintenance intervals** and a vacuum pump that **delivers extended uptime**.



## Smart Control

**VACUBE** come with a built-in **VAControl™** to give you added features and excellent connectivity.





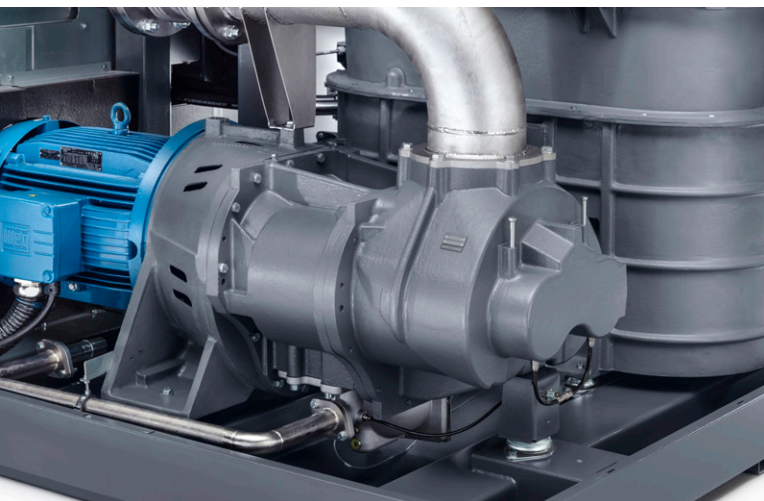
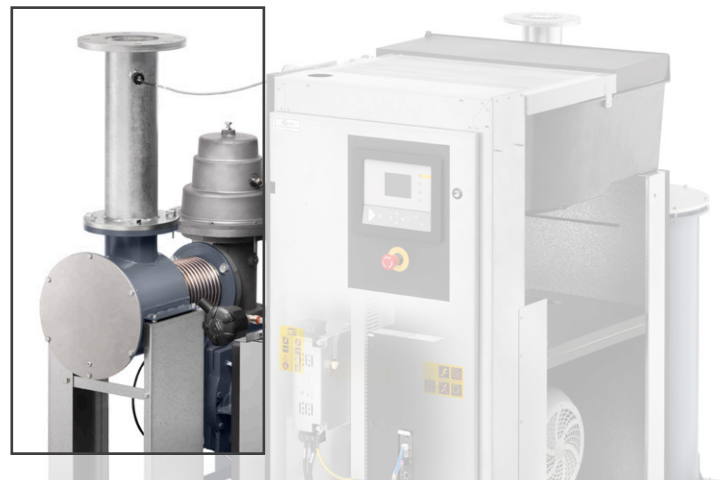


### All connections on top:

- Inlet and exhaust pipes are located on top of the machine for easy connection.
- Exhaust pipes offer a drain point to remove condensation.
- The radiator and fan blow heat out the top to avoid heating up nearby machines.

### Inlet filter and valve:

- The inlet filter protects the pump from particles over 5µm and is easy to access and clean when required.
- The inlet valve works in combination with the frequency controller to optimize performance & power consumption

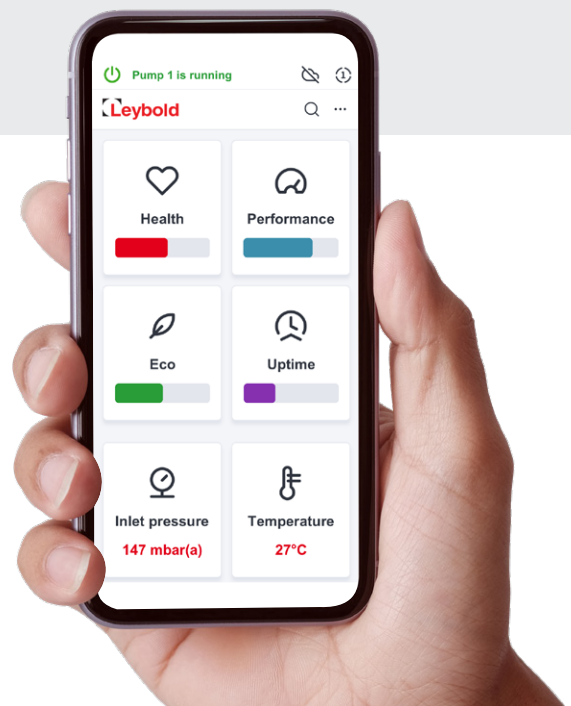


### Lubricated screw technology:

- Lubricated technology for high efficiency at all pressures
- High-precision screws for enhanced performance

### On-board Leybold VAControl™ for industry 4.0:

- High-performance controller with two processors
- Ability to control & optimize performance
- Ability to securely manage local and remote pump connections. Remote includes: LAN, Wi-Fi, cellular 4G and IP internet connections.
- Ready to connect to industrial communication protocols: Modbus, Profibus, Profinet and others.



# VACUBE for your applications

## ✔ Food industry

- Meat or fresh products packaging (skin, modified atmosphere MAP)
- Canning
- Freeze drying
- Vacuum cooling



## ✔ Forming and molding

- Thermoforming of food packaging
- Large plastic forming (e.g. Automotive & truck components, bathtubs, shower trays, white goods internals)
- Glass forming (e.g., bottles and windshields)
- Wood/lamination
- Manufacturing of composites



## ✔ Holding, lifting and moving

- Pick and place (e.g., electronics, glass panels, pallet machines, etc.)
- Woodworking
- Machining of non-ferrous materials



## ✔ Dehumidifying and degassing

- Vacuum cooling
- Roof tiles and brick manufacturing
- Pipeline drying
- Lithium battery filling and degassing

## ✔ Special demands

- Altitude testing
- Special evacuation duties



Please contact your local LEYBOLD representative to discuss your vacuum needs.

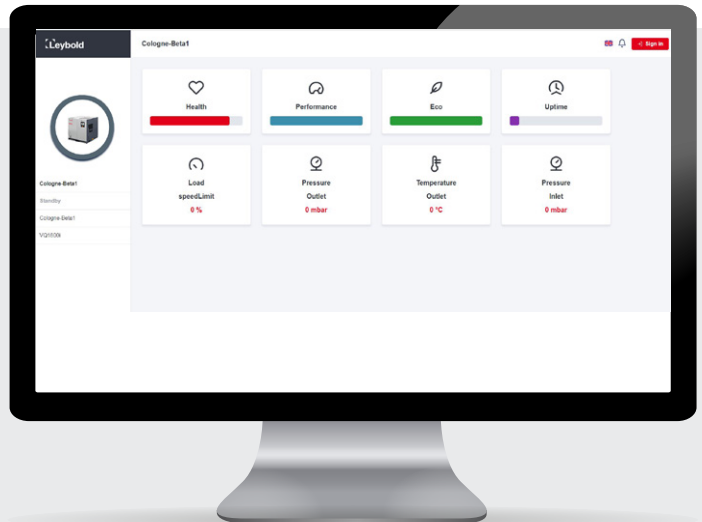


# Managing your vacuum

**The on-board Leybold VAControl™ is here to help you achieve optimal vacuum production**

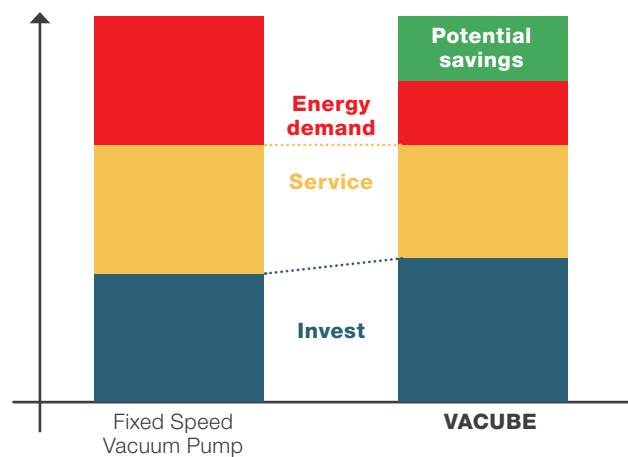
**Leybold VAControl™ allows you to:**

- Grant or block access to pump parameters
- Measure and control vacuum performance
- Track your energy consumption
- Anticipate maintenance and receive alerts
- Keep an eye on the pump from your desk or from anywhere in the world



## Energy-optimized operation

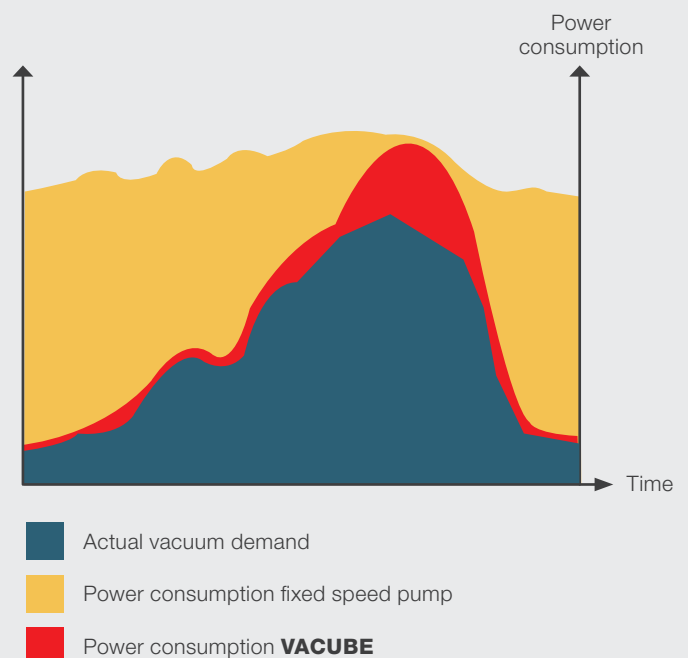
Whether your **VACUBE** is standalone or used in tandem with central vacuum systems, you'll enjoy significant energy savings. Power consumption changes in relation to realtime vacuum requirements.



**Only pay for what you really need**

With reduced vacuum demand, pumps without speed control simply lower the pressure level which is not what the process requires. Running at lower pressures, these pumps use only a little less energy.

With its rotary speed adjustment, **VACUBE** will maintain the pressure exactly as required. At reduced speeds, **VACUBE** proportionally reduces its power consumption, resulting in significant energy savings.





# VACUBE models

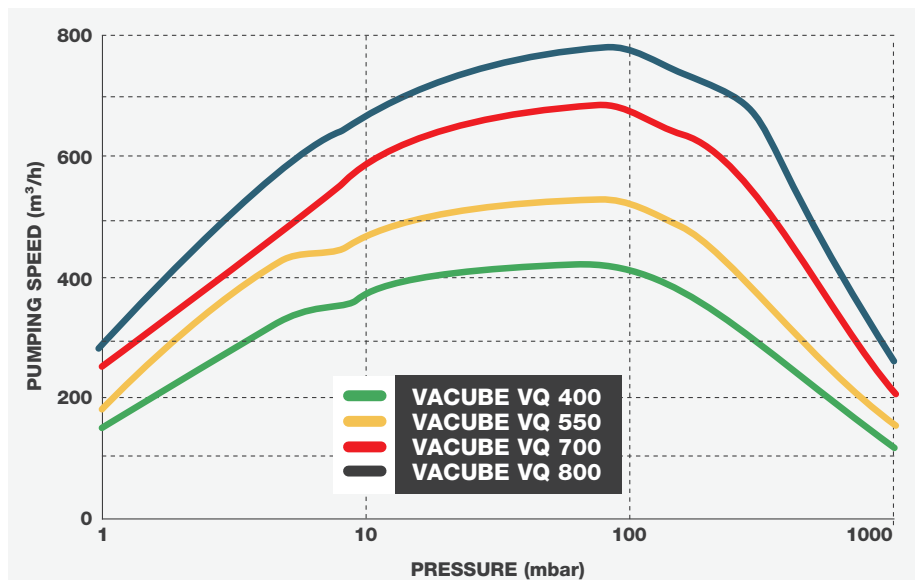
## VQ 400 – 800 i

- Compact canopy design
- Pallet format: easy to move and install
- Comes with high grade synthetic oil
- Choose between HMI or Touchpad interface
- Available in standard “i” and humid “iH” versions
- Now available with **VAControl™** controller on board



| Technical Data         |                         | VACUBE                   |           |            |            |
|------------------------|-------------------------|--------------------------|-----------|------------|------------|
|                        |                         | VQ 400 i                 | VQ 550 i  | VQ 700 i   | VQ 800 i   |
| Max. pumping speed     | m <sup>3</sup> /h (cfm) | 420 (247)                | 530 (310) | 700 (412)  | 790 (465)  |
| Ultimate pressure      | mbar (Torr)             | 0.35 (0.26)              |           |            |            |
| Optimal pressure range | mbar (Torr)             | 5-400 (3,75-300)         |           |            |            |
| Motorshaft power       | kW (hp)                 | 5.5 (7.5)                | 7.5 (10)  | 11 (15)    | 15 (20)    |
| Noise level (min-max)  | dB(A)                   | 51 – 65                  |           | 51 – 73    | 51 – 76    |
| Ambient temperature    | °C (°F)                 | 0 – 46 (32 – 115)        |           |            |            |
| Weight                 | kg (lbs)                | 500 (1102)               |           | 510 (1125) | 520 (1147) |
| Protection class       | IP                      | 54                       |           |            |            |
| Supply voltages*       | kW                      | 380 – 460V, 3ph, 50/60Hz |           |            |            |
| Inlet flange           |                         | DN80 PN6                 |           |            |            |
| Exhaust flange         |                         | DN65 non Std             |           |            |            |

### Pumping Speed



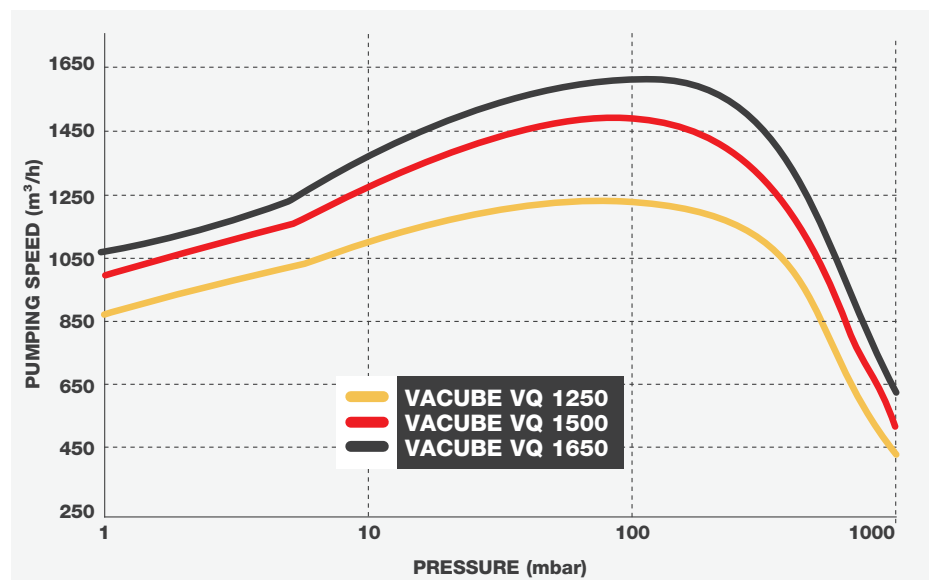
# VQ 1250 – 1650 i

- Optimized canopy design: easily removable panels
- Wide pump speed variations for greater energy savings
- Comes with high grade synthetic oil
- Excellent thermal management- optional energy recovery
- Available in standard “i” and humid “iH” versions
- “iC” and “iCH” are available for short-cycle applications



| Technical Data         |                         | VACUBE                   |            |             |
|------------------------|-------------------------|--------------------------|------------|-------------|
|                        |                         | VQ 1250 i                | VQ 1500 i  | VQ 1650 i   |
| Max. pumping speed     | m <sup>3</sup> /h (cfm) | 1250 (736)               | 1490 (877) | 1620 (955)  |
| Ultimate pressure      | mbar (Torr)             | 0.35 (0.26)              |            |             |
| Optimal pressure range | mbar (Torr)             | 5-400 (3,75-300)         |            |             |
| Motorshaft power       | kW (hp)                 | 22 (29)                  | 30 (40)    | 37 (50)     |
| Noise level (min-max)  | dB(A)                   | 65 – 75                  |            | 65 – 80     |
| Ambient temperature    | °C (°F)                 | 0 – 46 (32 – 115)        |            |             |
| Weight                 | kg (lbs)                | 1058 (2333)              |            | 1073 (2366) |
| Protection class       | IP                      | 54                       |            |             |
| Supply voltages*       | kW                      | 380 – 460V, 3ph, 50/60Hz |            |             |
| Inlet flange           |                         | DN150 PN10               |            |             |
| Exhaust flange         |                         | DN100 PN10               |            |             |

## Pumping Speed



# VACUBE models

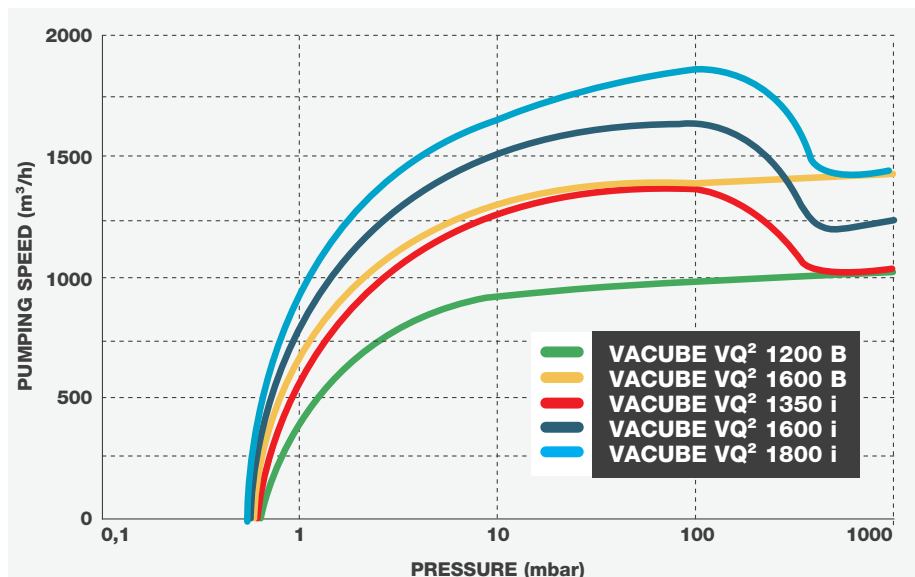
## VQ<sup>2</sup> 1200 – 1800 i

- IE5 motor
- Excellent pumping speeds at all pressures – perfect for pump-down as well as central vacuum applications
- Compact canopy design
- Pallet format: easy to move and install
- Comes with high grade synthetic oil
- Choose between HMI or Touchpad interface
- Available in standard “i” and humid “iH” versions
- Now available with **VAControl™** controller on board



| Technical Data                 |                         | VACUBE                   |                        |                        |                        |                        |
|--------------------------------|-------------------------|--------------------------|------------------------|------------------------|------------------------|------------------------|
|                                |                         | VQ <sup>2</sup> 1200 B   | VQ <sup>2</sup> 1600 B | VQ <sup>2</sup> 1350 i | VQ <sup>2</sup> 1600 i | VQ <sup>2</sup> 1800 i |
| Max. pumping speed             | m <sup>3</sup> /h (cfm) | 1050 (617)               | 1450 (853)             | 1370                   | 1570                   | 1770                   |
| Ultimate pressure              | mbar (Torr)             | 0.35 (0.26)              |                        |                        |                        |                        |
| Optimal pressure range         | mbar (Torr)             | 5-500 (3.75-375)         |                        |                        |                        |                        |
| Pumping speed at atm. pressure | m <sup>3</sup> /h (cfm) | 1050 (617)               | 1450 (853)             | 1050 (617)             | 1280 (753)             | 1450 (853)             |
| Motorshaft power               | kW (hp)                 | 22 (29)                  | 37 (50)                | 22 (29)                | 30 (40)                | 37 (50)                |
| Noise level (max)              | dB(A)                   | 76                       | 78                     | 76                     | 78                     | 78                     |
| Ambient temperature            | °C (°F)                 | 0 – 46 (32 – 115)        |                        |                        |                        |                        |
| Weight                         | kg                      | 1210                     | 1220                   | 1210                   | 1220                   | 1230                   |
| Protection class               | IP                      | 54                       |                        |                        |                        |                        |
| Supply voltages*               | kW                      | 380 – 460V, 3ph, 50/60Hz |                        |                        |                        |                        |
| Motor efficiency and class     |                         | 96% - Class IE4 / IE5    |                        |                        |                        |                        |
| Inlet flange                   |                         | DN150 PN10               |                        |                        |                        |                        |
| Exhaust flange                 |                         | DN125 PN10               |                        |                        |                        |                        |

### Pumping Speed





# VQ<sup>2</sup> 1350 – 1800 iR

- IE5 motor
- Excellent pumping speeds at all pressures – perfect for pump-down as well as central vacuum applications
- Special design for assembling roots on the inlet flange
- Comes with high grade synthetic oil
- Plug&pump: roots are managed by the pump's controller
- Excellent thermal management- optional energy recovery
- **VAControl™** on board



| Technical Data                 |                         | VACUBE                                      |                         |
|--------------------------------|-------------------------|---|-------------------------|
|                                |                         | VQ <sup>2</sup> 1350 iR                     | VQ <sup>2</sup> 1800 iR |
| Max. pumping speed             | m <sup>3</sup> /h (cfm) | 1340 (788)                                  | 1760 (1035)             |
| Ultimate pressure              | mbar (Torr)             | 0.35 (0.26)                                 |                         |
| Optimal pressure range         | mbar (Torr)             | 5-500 (3.75-375), 0.1-200 mbar with Booster |                         |
| Pumping speed at atm. pressure | m <sup>3</sup> /h       | 1050  | 1450                    |
| Motorshaft power               | kW (hp)                 | 22 (29)                                     | 37 (50)                 |
| Noise level (max)              | dB(A)                   | 74  | 78                      |
| Ambient temperature            | °C (°F)                 | 0 – 46 (32 – 115)                           |                         |
| Weight                         | kg                      | 1290  |                         |
| Protection class               | IP                      | 54  |                         |
| Supply voltages*               | kW                      | 380 – 460V, 3ph, 50/60Hz                    |                         |
| Inlet flange                   |                         | DN150 PN10                                  |                         |
| Exhaust flange                 |                         | DN100 PN10                                  |                         |

## VQ<sup>2</sup> offers more benefits:



**Perfect for fast pump-down**



**Optimal for central vacuum at all pressures**



**Equipped for industry 4.0**

# VACUBE models

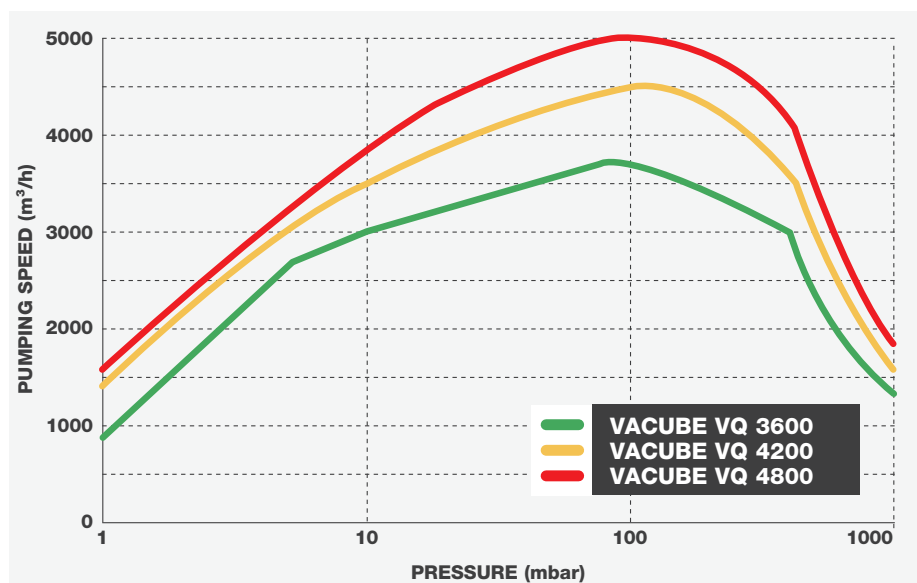
## VQ 3600 – 4800 i

- Very high pumping speeds
- Optimized canopy design: easily removeable panels
- Wide pump speed variations for greater energy savings
- Comes with high grade synthetic oil
- Excellent thermal management - optional energy recovery
- Available in standard “i” and humid “iH” versions



| Technical Data                 |                         | VACUBE                   |             |             |
|--------------------------------|-------------------------|--------------------------|-------------|-------------|
|                                |                         | VQ 3600 i                | VQ 4200 i   | VQ 4800 i   |
| Max. pumping speed             | m <sup>3</sup> /h (cfm) | 3739 (2230)              | 4516 (2685) | 4972 (2921) |
| Ultimate pressure              | mbar (Torr)             | 0.35 (0.26)              |             |             |
| Optimal pressure range         | mbar (Torr)             | 5-500 (3.75-375)         |             |             |
| Pumping speed at atm. pressure | m <sup>3</sup> /h (cfm) | 1240                     | 1485        | 1672        |
| Motorshaft power               | kW (hp)                 | 55 (74)                  | 75 (101)    | 90 (121)    |
| Noise level (min-max)          | dB(A)                   | 70 - 83                  | 70 - 84     | 70 - 85     |
| Ambient temperature            | °C (°F)                 | 0 – 46 (32 – 115)        |             |             |
| Weight                         | kg (lbs)                | 3945 (8697)              | 3980 (8774) | 4000 (8818) |
| Protection class               | IP                      | 54                       |             |             |
| Supply voltages*               | kW                      | 380 – 460V, 3ph, 50/60Hz |             |             |
| Inlet flange                   |                         | DN200 PN10 - ANSI8"      |             |             |
| Exhaust flange                 |                         | DN150 PN10 - ANSI6"      |             |             |

### Pumping Speed



# Additional products

## Accessories

**VACUBE is available with various accessories for your special process needs:**

- Inlet and exhaust adaptors according to local requirements (BSP or NPT)
- Additional inlet filters and liquid separators for more challenging processes
- Power transformers compatible with local power grid specifications: 200-230V and 500-575V
- Optimized sensor options
- Gateway options for connectivity to industrial PLCs
- Your local LEYBOLD representative can help you find the best solution

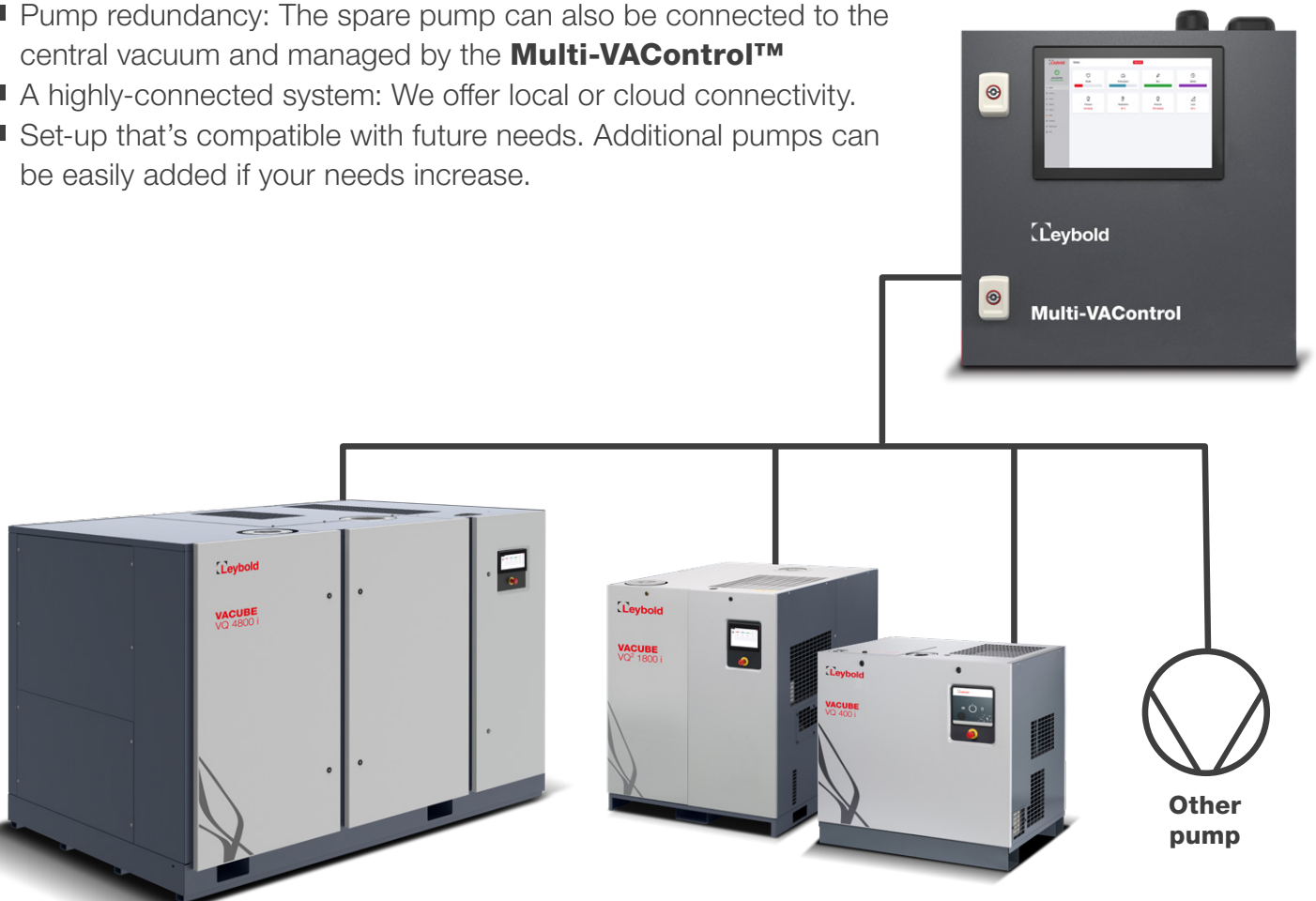


## Run VACUBE together:

Easily synchronize multiple **VACUBEs** with **Multi-VAControl™**

**When one pump isn't enough, we offer a complete system with multiple VACUBE pumps, all centralized via the Multi-VAControl™. This solution offers:**

- An easy-to-install solution for central vacuum systems: The central controller and pumps are connected by communication cables.
- Pump redundancy: The spare pump can also be connected to the central vacuum and managed by the **Multi-VAControl™**
- A highly-connected system: We offer local or cloud connectivity.
- Set-up that's compatible with future needs. Additional pumps can be easily added if your needs increase.





# Service: Easy, Competent, Reliable

## We are where you are

With our comprehensive range of innovative service solutions, we offer unrivaled support for your Leybold vacuum pumps, and we're committed to:

- **Providing you with reliable, first-class service throughout the life of your pump, no matter where in the world it's installed**
- **Maximizing your pump's uptime and ensuring it receives the best possible service**
- **Offering you specialized support with preventive maintenance and repairs**



Maintaining your uptime and reducing the risk of production downtime is critical. Wherever you are, Leybold is there to support you as your vacuum service partner. Our Field Service Team and our fully-equipped Service Technology Centers are at your disposal.

- Oil and spare parts
- Exchange pumps
- Certified used vacuum pumps
- Pump repair centers
- Service agreements
- On-site service
- Pump rentals



Pioneering products. Passionately applied.