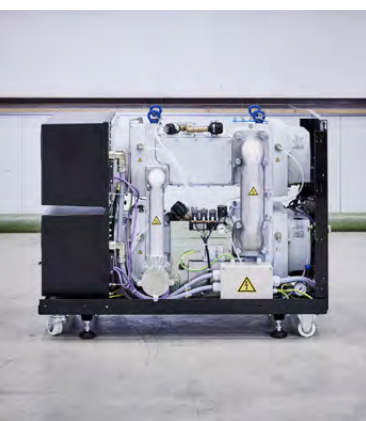




Product overview 2025

Innovative vacuum pumps, systems and components for diverse applications



Contents

Fore vacuum pumps

Oil-sealed vacuum pumps:

Rotary vane pumps SOGEVAC	4
Rotary vane pumps NEO (S)D	4
Rotary vane pumps TRIVAC	5
Oil-sealed screw pumps VACUBE	5

Dry-compressing vacuum pumps:

Multi-stage roots pumps ECODRY plus	6
Claw pumps CLAWVAC and Scroll pumps SCROLLVAC plus	7
Screw pumps VARODRY and VARODRY VDi System	8
Screw pumps DURADRY and LEYVAC	9
Screw pumps SCREWLINE and DRYVAC	10
Screw pumps DRYVAC FP-r and DRYVAC Energy Saver	11
Screw pumps NOVADRY and NOVADRY NDi System	12

Accessories and electronics:

Hygienic Enclosure for wash down	13
Multi-VAControl smart rough vacuum controller	13
LEYTRONIC, Inlet-Filters and Liquid separators	14

Roots pumps:

Roots blower RUVAC WA(U)/WS(U)/WH(U)	15
--------------------------------------	----

High vacuum pumps

Fluid entrainment pumps:

Oil booster pumps DIFFVAC OB	16
Oil diffusion pumps DIFFVAC DP	16
Energy-efficiency control and big valves for diffusion pumps	17

Turbomolecular pumps:

TURBOVAC i/iX with hybrid bearing system	18
TURBOVAC iR with remote drive	18
TURBOVAC i/iX MI multi-inlet line	18
Magnetically levitated TURBOVAC MAGiNTEGRA	19
Magnetically levitated TURBOVAC MAG iS	19

Cryogenic pumps and refrigerator cold heads:

Refrigerator cryo pumps and COOLVAC / COOLPAK	20
Refrigerator cold heads COOLPOWER	20

Ion pumps, accessories and controllers:

HyTan NEG-Ion Pump, TiTan ion pump, NEG pump and TSP's	21
--	----

Vacuum gauges, vacuum controllers	Vacuum gauges and pressure gauges, vacuum controller GRAPHIX	22
Leak detectors	Leak detectors PHOENIX 4	23
	Mobile leak detection systems PHOENIX Cart / PHOENIX MOBILIS	23
Gas analyzers	Residual gas analyzers LEYSPEC	24
	Mobile LEYSPEC Cart residual gas analyzer system	24
Valves	LEYCON valves	25
Components	Flange systems, connecting elements and components	25
Systems + Solutions	Introduction Competence for tailor-made solutions worldwide	26
	Special Systems and DURADRY System	27
	Fore vacuum system EXTRUVAC CP and RUTA System	28
	Screw pump DRYVAC System / DRYVAC PowerBoost	29
	Oil-sealed SOGEVAC / NEO D System	30
	Central vacuum systems CVS	30
	High vacuum pump systems TURBOLAB and TURBOLAB Core	31
	Calibration systems CS	31
	Experimentation and coating systems UNIVEX	32
	Space simulation systems UNIVEX S	33
	Vacuum solutions and systems tailor-made for your application	34
Service	Easy, Competent, Reliable	36
Controllers and calculation tools	Innovative pump and system management	42
	Smart online vacuum system calculation tool LEYCALC	
	Sound analyzer and belt tuner app	
Online shop	leyboldproducts.com	44

Oil-sealed vacuum pumps

SOGEVAC

Single-stage rotary vane pumps



- ✓ **Effective investment, long service life**
- ✓ **No oil loss, low power consumption**

Your needs:

- Industrial rough vacuum generator
- Favorable price-to-performance ratio
- High reliability
- Analytical backing pumps
- ATEX or O₂ applications
- Low noise and clean operation

Our solutions:

- Pumping speeds of 10 to 840 m³/h
- Ultimate pressure $\leq 5 \times 10^{-2}$ mbar
- O₂-compatible versions
- Separate standard product line for food and packaging applications
- Flexible pump design
- Quietest pumps on the market with oil loss of less than 1 ppm
- ATEX directive 2014/34/EU certification
- Direct connection of RUVAC Roots pumps via an adapter
- Compatible with GENIUS Instant Insights



NEO (S)D

Medium vacuum rotary vane pumps

- ✓ **No oil loss with integrated exhaust filter**
- ✓ **Best vapor pumping with no condensation**
- ✓ **Maintenance free up to three years in clean applications**

Your needs:

- Medium vacuum pumps at affordable prices
- No oil loss at exhaust
- Longest possible maintenance intervals
- Monitoring options
- Broad portfolio, can also accommodate special requests

Our solutions:

- Pumping speeds of 16 to 76 m³/h, all sizes available for single or three-phase power supply
- Ultimate pressure $\leq 8 \times 10^{-3}$ mbar
- Integrated exhaust filtration and oil return with oil loss below 1 ppm
- Use of long-life oils and dynamic shaft seals
- Flexible pump design for retrofitting accessories or custom-made variants



TRIVAC

Dual-stage rotary vane pumps

- ✓ **A well-proven vacuum pump for long-term operation**
- ✓ **Extensive line of accessories**

Your needs:

- Rugged vacuum generator
- High reliability
- Optional ATEX explosion protection

Our solutions:

- Pumping speeds
 - TRIVAC B: 4 to 65 m³/h
 - TRIVAC E: 2.5 m³/h
 - TRIVAC L: 40 to 90 m³/h
 - TRIVAC T: 4 to 30 m³/h
- Ultimate total pressure
 - TRIVAC B: 2 x 10⁻³ mbar
 - TRIVAC E: 2 x 10⁻³ mbar
 - TRIVAC L: 3 x 10⁻³ mbar
 - TRIVAC T: 5 x 10⁻³ mbar
- For medium vacuum applications
- Economic OEM product range (TRIVAC T)
- ATEX directive 2014/34/EU certification (TRIVAC B)
- Direct connection of RUVAC Roots pumps via an adapter
- Dedicated variants TRIVAC BCS and accessories for harsh applications



VACUBE

Complete rough vacuum solution with Oil-sealed screw pumps



- ✓ **Compact systems for vacuum generation on demand in industrial rough vacuum applications**
- ✓ **Efficient and productive with long maintenance intervals**

Your needs:

- "Plug and Go" installation
- Suitable for high water vapor applications
- Potential energy savings of 50% or more

Our solutions:

- Highly-efficient oil-sealed rotary screw technology
- Variable pumping speeds of up to 4,980 m³/h
- Ultimate pressure of 0.35 mbar
- Integrated frequency converter for load-dependent speed control
- Controller with configurable interface and automated insights & updates
- Long maintenance intervals
- Ideally to be combined with our Multi-VAControl (see page 13)
- Compatible with GENIUS Instant Insights



Dry-compressing vacuum pumps

ECODRY plus

Dry-compressing multistage roots pumps

ECODRY 25 and 35 plus

- ✓ **High-performance compact vacuum pumps for clean applications**

Your needs:

- Small – Compact, light weight design for easy handling
- Fast – High speed from high pressure down to low ultimate
- Smart – Gauge and valve control
- Green – Low energy consumption, especially with eco-mode
- Maintenance-free pump

Our solutions:

- Each pump in the platform comes with the same compact dimensions and a low weight of less than 30kg
- Pumping speeds of 25/35 m³/h with high pumping speed at atmospheric pressure
- Adaptive speed control via a Leybold vacuum gauge
- Air-cooled pump
- Oil- and particle-free operation



ECODRY 40 and 65 plus

- ✓ **Vacuum pumps with low noise emissions for clean applications**

Your needs:

- Clean and quiet environment
- Easy handling
- High energy-efficiency
- Maintenance-free pump
- Application expertise in challenging R&D applications

Our solutions:

- Two pumping speed variants with ECODRY 40 and 65 plus
- Lowest noise levels in class
- Excellent pumping performance for light gas applications
- Best-in-class water vapor tolerance
- Remote operation with external drive option
- Air-cooled pump
- Oil and particle-free operation

CLAWVAC

Oil free claw pumps

- ✓ **Compact rough vacuum pump for demanding industrial applications including handling of particle and vapor contaminated gases**
- ✓ **Trouble-free and inexpensive**

Your needs:

- Robust, oil-free vacuum pump for rough vacuum generation
- Long maintenance intervals

Our solutions:

- Pumping speeds of 65–1,000 m³/h
- No oil migration into process, no environmental oil contamination
- Extremely efficient air cooling, low heat emissions, non water-cooled
- Corrosion-resistant pump chamber and claws (stainless steel claws for sizes 65 to 300)
- Easy onsite cleanup
- Up to 50% energy savings via operation with variable speed drive



SCROLLVAC plus

Oil-free scroll pumps

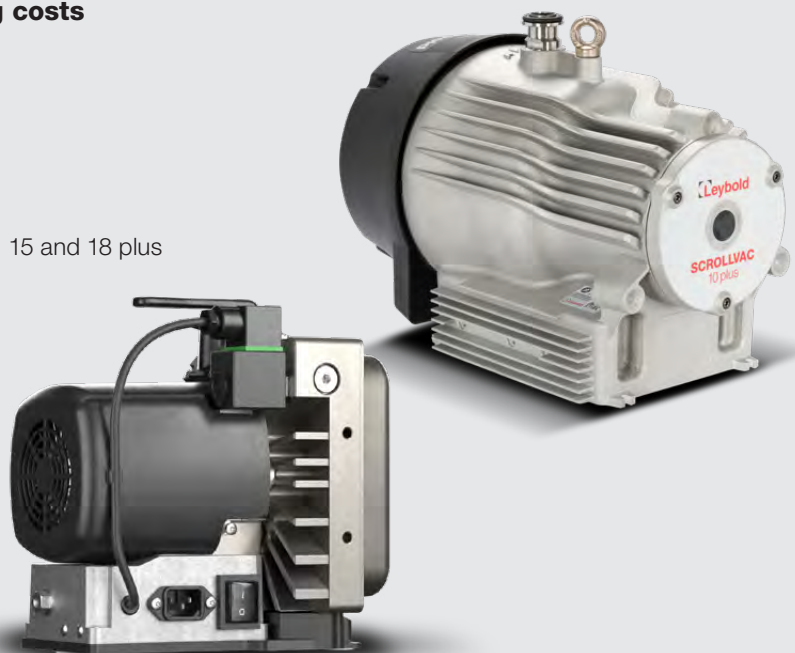
- ✓ **Dry, universal solution, low operating costs**

Your needs:

- Oil-free vacuum pump
- Quiet operation with low vibration
- Long maintenance intervals

Our solutions:

- Five speed variants with the SCROLLVAC 3, 7, 10, 15 and 18 plus
- Single and triple phase available
- Robust, low-maintenance design
- Compatible with GENIUS Instant Insights



Dry-compressing vacuum pumps

VARODRY

Dry-compressing screw pumps

- ✓ **Compact, rugged oil-free vacuum pumps for general industrial applications**

Your needs:

- Industrial vacuum generator
- Low investment and operating costs
- High reliability with extended system uptimes

Our solutions:

- Pumping speeds of 65, 100, 160 and 200 m³/h
- Ultimate pressure $\leq 1 \times 10^{-2}$ mbar
- Fully air-cooled design, no need for water cooling
- Minimal maintenance demands
- Most robust pump design
- HD/O₂ variant can handle up to 100% O₂ and harsher applications
- OEM variant with reduced footprint for optimal system integration



VARODRY VDi+ System

Smart pump down systems with integrated controller

- ✓ **Intelligent pump systems with a little extra performance**
- ✓ **Easy maintenance**
- ✓ **Smart control**

Your needs:

- Adaptivity to various process needs
- Low total cost of ownership and small footprint
- Robust, adjustable performance
- Energy efficient

Our solutions:

- Special software features for advanced application needs
- Low maintenance costs due to decreased need for spare parts
- Performance on demand via intelligent software functions
- Extra Roots to boost pump down
- Additional energy savings with the energy saver kit



DURADRY

Dry screw vacuum pump

- ✓ **High performance, user-friendly dry screw vacuum pumps**
- ✓ **The next stage of high-performance dry screw vacuum technology**

Your needs:

- Stainless steel cooling system avoids corruptions
- Smart drive to monitor rotor frequency, temperatures, etc.
- Less than 64 dB of noise and vibration for easier working
- Gas sealing system prevents contamination of components

Our solutions:

- "Plug and Go" design: multiple connector options, easy operation, simple serviceability
- Enhanced heat distribution, thermal control, dust handling, low power consumption
- Fully hermetic system: sensors, dynamic seal design, no oil leakage, quieter operation
- Suitable for harsh conditions—high temperatures, oxygen, corrosive environments



LEYVAC

Dry-compressing screw pumps

- ✓ **Rugged vacuum pumps for industrial applications and high process throughputs**
- ✓ **Hermetically-sealed design for safe handling of hazardous gases**

Your needs:

- Industrial vacuum generator
- Extended system uptimes
- High pumping speeds at atmospheric pressure

Our solutions:

- Pumping speeds of 80 to 145 m³/h
- Ultimate pressure $\leq 1 \times 10^{-2}$ mbar
- Hermetically-sealed pump
- Direct connection of RUVAC Roots pumps via an adapter



Dry-compressing vacuum pumps

SCREWLINE

Dry-compressing screw pumps



- ✓ **Extremely robust for the harshest industrial applications, simple on-site maintenance**
- ✓ **Simple on-site maintenance**

Your needs:

- High pumping speeds
- Easy to clean
- Air cooling
- ATEX explosion protection (Cat. 2i)

Our solutions:

- Pumping speeds of 630 m³/h
- Ultimate pressure $\leq 1 \times 10^{-2}$ mbar
- Expandable to pump systems through the addition of Roots pumps
- Monitoring system
- Easy to disassemble pump chamber for quick cleaning
- ATEX directive 2014/34/EU certification
- Direct connection of RUVAC Roots pumps via an adapter
- Compatible with GENIUS Instant Insights



DRYVAC

Dry-compressing screw pumps



- ✓ **Rugged, compact vacuum solutions with smart monitoring and control system for coating, photovoltaic and process industry applications**

Your needs:

- Maximum system availability
- Low cost of ownership
- Minimal footprint
- Protected pump and easy communication

Our solutions:

- Pumping speeds from 200 to 1,600 m³/h
- Guaranteed highest uptimes through a robust and high-performance design
- Proven track record in harsh applications
- Higher production yields and long-term stable pumping speeds
- Benchmarking energy savings via a sophisticated rotor design
- Easy installation with compact design
- Quiet - less noise loads at production
- Onboard intelligence - easy-to-use controls and self monitoring via an integrated FC
- A dry solution for every application
- Direct connection of RUVAC Roots pumps via an adapter
- Compatible with GENIUS Instant Insights



DRYVAC Energy Saver

Power saving unit for DRYVAC and DRYVAC Systems

- ✓ **Quick ROI (approximately one year) with energy savings of up to 50%**

Your needs:

- Cost savings through reduced energy consumption
- Improved ultimate pressures

Our solutions:

- Power savings up to 50% at inlet pressures of < 5 mbar
- Ultimate pressure improvements by one decade
- For all pumps and systems with LEYBONOL LVO 210
- To be used in applications with non-flammable gases or oxygen concentrations of $\leq 21\%$
- Compatible with GENIUS Instant Insights



DRYVAC FP-r wash down version

Dry-compressing screw pumps for food & packaging applications

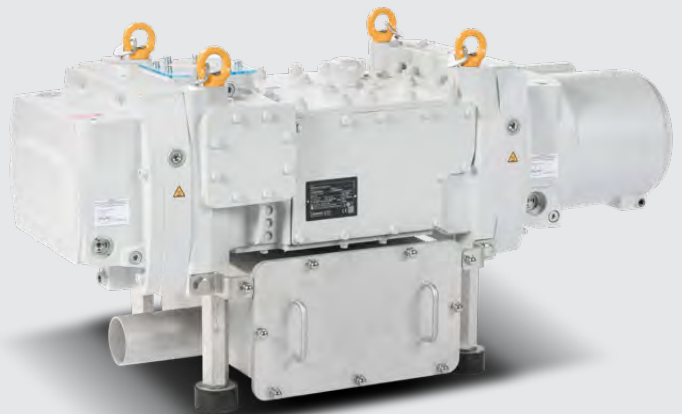
- ✓ **The hygienic pump can be installed in proximity of your production line, increasing your packaging and bottling performance. DV 650/800 FP-r pumps can be washed down with your other production equipment.**

Your needs:

- High and long-term stable pumping speeds
- Low energy consumption
- Low heat dissipation to the food area
- Reduced footprint
- Daily wash down ready

Our solutions:

- A compact, water-cooled and silent dry screw pump
- Pumping speeds of 650 and 800 m³/h
- O₂ compatible versions for MAP of red meat with oxygen
- External frequency converter for easy networking and control
- Optional integrated, easy-to-clean stainless steel silencer
- Optional energy saver allows up to 50% energy savings at low pressure
- Three inlet ports available, allowing for flexible installation and connection



Dry-compressing vacuum pumps

NOVADRY

Dry-compressing screw pumps

- ✓ **Robust, 100% oil-free, air-cooled design with easy on-site maintenance**
- ✓ **Specially designed for use in sensitive applications, such as food processing and packaging**

Your needs:

- Zero oil emissions to avoid oil contamination of products
- Lowest maintenance requirements
- Simple "Plug and Go" installation with no complicated controls or need for utilities
- Lowest cost of ownership
- No need for expensive PFPE

Our solutions:

- 100% oil-free design
- Fully air-cooled design based on hygienic principles
- Standard pump released for "Modified Atmosphere Packaging" (MAP) with O₂
- Maximum robustness and extended uptimes
- Low noise levels
- Low operating cost



NOVADRY NDi System

Smart central vacuum systems with integrated controllers

- ✓ **Intelligent pump systems with vacuum on demand**
- ✓ **Easy maintenance**
- ✓ **Smart control**

Your needs:

- 100% oil free for clean exhaust
- Robust dry screw – at any working pressure
- Plug & Pump – air cooled and ready-to-go

Our solutions:

- Proven performance down to 1 mbar ultimate pressure
- Low maintenance - no oil changes or oil filter changes
- High performance at any working pressure
- Gas ballast & self-draining design
- Smart control via our VAControl software



Accessories and electronics

Hygienic Enclosure

Enables wash-down cleaning of pumps installed inside food processing areas

- ✓ **Protects pumps from contamination (e.g., during food processing) or aggressive wash-down agents**
- ✓ **Standardized design, available for all NOVADRY pumps**

Your needs:

- 100% hygienic operation of vacuum pumps within the food processing area
- No pump corrosion with aggressive cleaning agents
- Cost-effective solution that avoids pumping speed losses over long pips
- No pump overheating due to inappropriate enclosure design
- Easy integration

Our solutions:

- Corrosion-resistant stainless-steel materials - resistant against aggressive wash-down cleaning agents
- Hygienic design with slanted surfaces – no accumulation of wash down liquids
- No contact of pump surfaces with food or wash-down cleaning agents
- Special design prevents pump overheating by enclosure
- Fast & easy onsite assembly



Multi-VAControl

Smart rough vacuum control



- ✓ **Multi-VAControl creates an interconnected system of multiple pumps, ideally with variable speed driven pumps, but also with fixed speed or even competitors' pumps**

Your needs:

- Cost optimizations via energy savings
- An intelligent pump control with extensive communication features
- A solution that's easy to use and install

Our solutions:

- Modes for optimizing energy usage, maintenance intervals (or the best of both)
- Direct communication via various methods, including I/O and field busses
- "Plug and Go" set-up
- Compatible with GENIUS Instant Insights



Accessories and filter

All in one Inlet Filter kits

Inlet filter kits for SV, CP, VD and ND

✓ High performing liquid separators for all high-humidity applications

Your needs:

- Protect pump from debris, abrasion by dust, formation of corrosive slurry
- Prevent permanent damage of pump

Our solutions:

- Preventive maintenance
- Complete kit with required fittings
- Easy maintenance
- Environment friendly solution
- Shortest lead time on filters and elements



LEYTRONIC

Frequency converters

✓ Frequency converters for WA(U) 251-2001 / WS(U) 251-2001

Your needs:

- Save energy
- Increase pump performance
- Pump protection

Our solutions:

- "Plug and Go" system
- Pre-parameterized drives



Liquid separators

LF 550 and LF 1800

✓ High performing liquid separators for all high-humidity applications

Your needs:

- Pump protection
- Reduced corrosion
- Reduced maintenance cost

Our solutions:

- Liquid separation
- Demister for pre-filtration
- Polyester cartridge 5microns
- For 200 to 1,800 m³/hr pumping speed
- Adjustable feet
- Optional auto drain system



Roots pumps

RUVAC WA(U)/WS(U)

Roots blowers

- ✓ **Long-lasting and reliable**
- ✓ **Easy connection to any fore vacuum pump**

Your needs:

- Increased pumping speeds at low pressures
- Easy to use
- Oil-free gas pumping
- ATEX explosion protection

Our solutions:

- Pumping speed ranges from 250 to 4,000 m³/h
- Reliable and robust
- Available with flanged motor or hermetically-sealed drive motor
- Suitable for 100% O₂ applications
- ATEX directive 2014/34/EU certification



RUVAC WH(U)

Roots blowers

- ✓ **An innovative, efficient and cost-effective product line for use in modern process industry applications**

Your needs:

- Flexible pumping speeds with frequency converter
- Rapid pump down times
- Compact design
- Oil-free pumping of gases
- System compatibility
- Low current consumption

Our solutions:

- Pumping speeds from 720 to 9,800 m³/h (with frequency converter)
- Excellent performance and energy consumption specifications
- Hermetically-sealed drive motor
- Small footprint
- Innovative bypass valve
- ATEX directive 2014/34/EU certification and partial certification for ATEX Cat 2i
- Direct connection of large fore vacuum pumps via an adapter
- Compatible with GENIUS Instant Insights



Fluid entrainment pumps

DIFFVAC OB

Oil vapor booster pumps

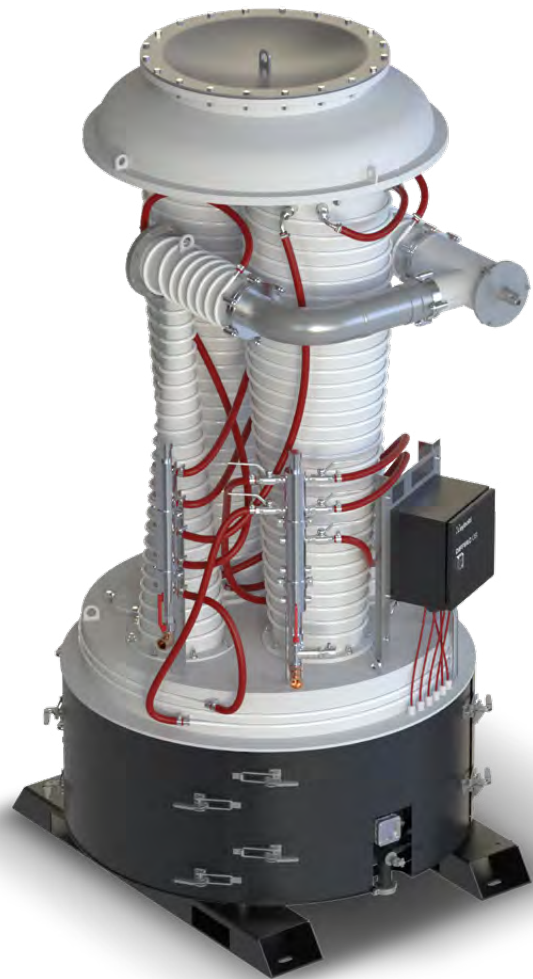
- ✓ **Robust oil booster pumps with high pumping speeds and gas throughput for harsh-process industrial applications**

Your needs:

- High vacuum
- Extremely high critical backing pressure capabilities
- High pumping speeds and throughput
- Safe and economic design
- High energy efficiency requirements

Our solutions:

- Pumping speeds of 6,000 l/s to 12,000 l/s
- Operating range: $<10^{-2}$ to 10^{-4} mbar
- High gas-throughput
- Stable pumping speeds in low pressure ranges
- Small footprint
- Reduced CO₂ footprint and energy savings via our innovative Energy Efficiency Controller



DIFFVAC DP

Oil diffusion pumps

- ✓ **High-performance oil diffusion pumps for high vacuum applications in which high pumping speeds are required**

Your needs:

- Stable high vacuum
- High pumping speeds
- Safe and economic design
- Increased reliability in industrial high vacuum applications

Our solutions:

- Pumping speeds of 20,000 l/s (with helium)
- Pumping speeds 50,000 l/s, 30,000 l/s and 12,000 l/s will be released 2025
- Operating range: $<10^{-3}$ to 10^{-7} mbar
- Innovative direct heater concept for improved warmup times
- Reduction of CO₂ footprint and energy savings via our innovative Energy Efficiency Controller



Big valve

Stainless steel valve for high vacuum

✓ **Long product life, easy service and maintenance**

Your needs:

- Membrane-sealed
- Low leak level

Our solutions:

- Long-lasting, high cycle rates (> 50,000)
- High conduction
- Bypass and measurement flange included
- FPM o-ring sealed
- Single plug, position indicators and connected pilot valve



Energy Efficiency Control (EEC)

Control unit for DIFFVAC pumps

✓ **Quick ROI (< 2 years) with energy savings of up to 30%**

✓ **Easy and convenient to use**

✓ **Optimized power and oil-based power consumption**

Your needs:

- Cost savings through reduced energy consumption
- Easy to use
- PLC-controlled

Our solutions:

- Energy savings of up to 30%
- Improved service life for the oil and heating cartridges
- Simple visual monitoring of parameters through a graphical user interface
- Equipped with USB interface and Ethernet



Turbomolecular pumps

TURBOVAC i/iX

Turbomolecular pumps with hybrid bearing technology

- ✓ **Innovative and flexible product line with outstanding performance data and integrated electronics**

Your needs:

- Clean, high and ultra-high vacuum generation
- Extended service life
- Ease of installation and operation
- Reliable usage under the most varied applications and operation conditions

Our solutions:

- Pumping speeds of up to 1,450 l/s
- Oil free hybrid bearings (mechanical/permanent magnetic)
- Installation in any direction
- Integrated electronics, including a variety of options for communication and control of accessory components
- TURBO.CONTROL i display unit (optionally as rack version or benchtop unit) for controlling and monitoring the pump, including connection facility for two pressure gauges available as accessories

TURBOVAC iR

Turbomolecular pumps with remote drive

- ✓ **Specially designed for challenging R&D applications**

Your needs:

- Remote electronics
- Radiation resistance

Our solutions:

- Oil-free, robust turbomolecular pump
- Installation in any direction
- Remote electronics, including a variety of options for communication



TURBOVAC i/iX MI

Turbomolecular pump multi-inlet line

- ✓ **Flexible custom, turn-key vacuum solution**
- ✓ **Highest productivity and system uptimes at lowest CoO**

Your needs:

- Clean, high and ultra-high vacuum generation
- Suitable for analytical applications
- Small footprint
- Lower cost
- Ease of installation and operation
- Long service life

Our solutions:

- Pumping speeds of up to 1,450 l/s
- Flexible design to satisfy customer's instrument requirements
- Integrated with more than two inlets in one pump system to reduce total footprint and costs
- Hassle-free installation and maintenance
- Oil-free hybrid bearings (mechanical/permanent magnetic)
- Integrated electronics including a variety of options for communication and control of accessory components



TURBOVAC MAG iS

Magnetically levitated turbomolecular pumps

- ✓ **One of the most compact Maglev pumps in its 3,000 l/s class**
- ✓ **Ideal for use in coating applications, as well as research and industrial environments**
- ✓ **Mountable in any orientation**

Your needs:

- Able to withstand industrial environments
- Compact, versatile and easy to deploy
- Minimal maintenance required

Our solutions:

- Pumping speeds up to 3,200 l/s
- The most compact magnetically levitated turbo pump in its class
- Impervious to mechanical shock and exposure to dust/moisture
- Up to 80,000 hours maintenance-free performance
- Clean, hydrocarbon-free, and vibration-free vacuum



TURBOVAC MAGiNTEGRA

Turbomolecular pumps, magnetically levitated

- ✓ **Flexible interface options**
- ✓ **On-board frequency converter and power supply**
- ✓ **Easy, space-saving system integration**

Your needs:

- Clean, high and ultra-high vacuum generation
- Suitable for industrial uses such as PVD and coating processes and display and glass coating
- Impervious to particles or deposits
- Low maintenance requirements

Our solutions:

- Pumping speeds of up to 2,200 l/s
- High pumping speeds and high compression ratios for all gases
- Holweck stage incorporated
- Resistant to particles and deposits
- Insensitive to shock-venting
- Monitoring and self-protection functions
- Maintenance-free in most applications



Cryogenic systems

COOLVAC cryo pump COOLPAK helium compressor

Cryogenic systems

- ✓ High water vapor pumping capabilities
- ✓ Long maintenance direction
- ✓ Installation in any orientation
- ✓ Boost (fast cool down), customized or economical mode

Your needs:

- Hydrocarbon-free vacuum
- High and ultra-high vacuum generation

Our solutions:

- Pumping speeds of up to 60,000 l/sec
- DN ISO-K, ISO-F, CF and ANSI flange variants with vertical or horizontal orientation
- Two variants for manual and for fully-automatic system control and regeneration available
- Pump controller mounted on pump for 100% automatically-controlled iSL version allows for easy process and network system integration



COOLPOWER refrigerator

Cooling systems

- ✓ Gas refrigerating machines for cryogenic temperature generation based on the Gifford-McMahon principle
- ✓ Designed for cooling superconductors (magnets, samples and sensors) for medical applications, research and space simulation

Your needs:

- High refrigeration capacity
- Small footprint
- Long, maintenance-free operation
- Reduced vibration

Our solutions:

- Ultimate temperatures: two-stage models down to 2,7 K
single-stage models down to 25 K
- High refrigeration capacity from the smallest volumes:
 - up to 18 W @ 20 K and up to 110 W @ 80 K for double-stage coolers
 - up to 250 W @ 80 K for single-stage coolers possible
- Impervious to particles and deposits
- Easy key-press operation
- High reliability



UHV (Ultra-high vacuum) solutions

NEG Pumps, TiTan Ion Pumps, HyTan NEG-Ion Pumps, TSP Pumps and Controllers

Pump systems for ultra-high vacuum

- ✓ **A full line of vibration-free and maintenance-free UHV pumps, achieving ultimate pressures in ultra-high vacuum ranges**

Your needs:

- High pumping speeds at ultra-high vacuum
- Hydrocarbon-free vacuum
- Long operating times
- Complete solutions

Our solutions:

- Pumping speeds from 0.2 to 1,200 l/s
- Ultimate pressure $< 1 \times 10^{-11}$ mbar
- Various TiTan pump elements for various requirements:
 - TiTan CV with titanium cathodes for pumping air and reactive gases
 - TiTan DI for pumping air and reactive gases, noble-gas stabilization (titanium and tantalum cathodes)
 - TiTan TR - classic triode for higher pumping speeds in high pressure ranges, noble gas stable
 - A broad variety of NEG pumps and TSPs for separate use or for integration with TiTan ion pumps
- TiTan, NEG and TSP components can withstand temperatures of up to 450 °C
- HyTan NEG-Ion Pump — highly versatile with exchangeable NEG and ion pump modules, suitable for noble and chemically-active gases. Offers a wide range of pumping speeds (up to 500 l/s) in a compact, stable, and reliable design.
- Wide range of accessories
- DIGITEL controller models for operation of ion pumps, TSPs and NEGs in various applications and configurations
- HV cables for connecting your controller and ion pump



Vacuum gauges, vacuum controllers

Measuring instruments

Vacuum pressure gauges

- ✓ **Reliable monitoring and control for all vacuum processes**

Your needs:

- Gauge systems for every application
- Precise pressure measurement of gases and vapors
- Reproducibility across a wide range of pressures

Our solutions:

- Measurement with active and passive sensors in a pressure range from 10^{-12} to 2,000 mbar for every application
- Intuitive operation and flexible data retrieval
- Pressure switches and pressure control instruments
- Handheld versions for easy and reliable pressure measurements
- DAKkS or factory calibration of vacuum gauges in the pressure range from 10^{-8} to 1,000 mbar system integration



GRAPHIX

Vacuum controllers

- ✓ **Universal controllers for the connection of active vacuum sensors for direct pressure measurements from 10^{-10} mbar to 2,000 mbar**

Your needs:

- Operation and control of the entire vacuum system
- Easy handling and "Plug and Go" operation
- Quick data collection and transfer via USB to PC

Our solutions:

- Monitoring and control of the entire vacuum process
- Product line with 1, 2 or 3 measurement channels
- 3.5" TFT touchscreen display with intuitive user interface
- Easy-to-read curve or bar graph display
- Internal and external data-logging (USB port on the front) for configuration and real-time measurement of data
- Displays mbar, Torr, Micron, Pascal or Psi
- Option to connect active vacuum gauges from other brands



Leak detectors

PHOENIX 4

Leak detectors

- ✓ **The PHOENIX 4 product line sets new standards in helium leak detection**
- ✓ **Our product portfolio provides the perfect matching unit for every application**

Your needs:

- Non-destructive components to test for quality assurance
- Reliable technology
- Highest reliability and accuracy of measurements
- Professional consulting and support

Our solutions:

- Suitable for mobile or stationary vacuum and sniffer operations
- Quick start-up, high measurement accuracy
- Internal data logging through the leak detector itself with simple external data acquisition via USB and full, external control and data logging through Leybold LeyAssist software
- Intuitive HMI with simple controls, menu structure and user-friendly multicolored touchscreen
- Integrated webserver featuring easy login via Wi-Fi for remote control via any internet-enabled smartphone or tablet



PHOENIX Cart

Mobile leak testing systems

- ✓ **PHOENIX 4 carts offer a wide range of pre-designed combinations that are fully assembled and leak checked**
- ✓ **Plug in, and they're ready: leak detection to go!**

Your needs:

- Mobile leak detection
- Ready-to-go solution
- Find leaks in the worst conditions
- Safety and performance

Our solutions:

- Pre-assembled system
- Fully customizable
- Best performance
- High reliability

PHOENIX MOBILIS ULTRA

- ✓ **Handheld multiple gas leak detectors**

Your needs:

- Fast, accurate and highly-sensitive leak detection
- Flexibility and ease of use
- Reliability
- Durability

Our solution:

Ideal for standard industrial environments, quick laboratory checks, and magnetic field environments.

- Multiple gas leak detector
- Portable and handheld
- Light weight
- Magnetic protection
- Peace of mind: two-year warranty



Residual gas analyzers

LEYSPEC

Residual gas analyzers

- ✓ **All-in-one devices with integrated control and display for demanding test procedures and residual gas analysis in high vacuum systems and general gas analysis in research and industry or for environmental tracking**

Your needs:

- Highly accurate residual gas analysis
- Easy operation
- Bake out option for high and ultra-high vacuum applications

Our solutions:

- High sensitivity residual gas analysis allowing the detection of the smallest traces of contaminants or process gases
- Product line with solutions for 100, 200 or 300 amu
- Simple residual gas analysis is possible even without connection to a computer
- Intuitively-operated LEYSPEC software and integrated display
- Key gases can be displayed at the push of a button and a spare display channel for additional gases is available
- Preinstalled functions, such as a helium leak test, warnings and error levels for chosen gases, degassing function after starting or venting
- Compact size and mountable in any direction for enhanced flexibility
- Bake out temperatures of up to 300°C for operation in harsh environments

LEYSPEC Cart

Mobile residual gas analyzer systems

- ✓ **Mobile visibility**
- ✓ **Fully integrated differential pumping system**
- ✓ **Easy handling**
- ✓ **Maximum flexibility**

Your needs:

- Mobile gas analysis system
- Complete standalone pumping system
- Easily adaptable to a wide range of measurements
- Operational at various pressures
- Quick startup

Our solutions:

- Independent pumping system with SCROLLVAC 7 plus and TURBOVAC 350i
- Integrated process controls for quick and easy operation
- Easy and intuitive software for LEYSPEC RGA
- Completely integrated in an mobile standalone cart
- UHV needle valve for flexible operation at various pressure levels up to atmospheric pressure



Valves and components

LEYCON

Valves in various designs and drive modes

✓ **Reliable valve technology, widely used in a broad range of applications**

Your needs:

- Reliable leak tightness
- A high number of actuations
- Easy to install and remove
- Single-source delivery

Our solutions:

- Manually actuated valves
- Valves with electromagnetic/electropneumatic drive
- Gate valves
- All-metal valves for UHV systems
- SECUVAC safety valves
- Special valves, including vacuum lock and sealing valves, venting valves, leak valves



Flanges

Connection components

✓ **Proven and widely-used technology**

✓ **Almost any connection possible**

Your needs:

- Easy to install and remove
- Reliable leak tightness
- High-quality materials
- Single-source delivery

Our solutions:

- ISO-KF small flanges in sizes DN 10 to DN 50
- ISO-K flanges in sizes DN 63 to DN 630
- CF flanges in sizes DN 16 to DN 250



Systems + Solutions

Customer first – competence for tailor-made worldwide solutions

The Systems + Solutions business, unit with its **global setup, delivers tailor-made solutions** to meet the customer's demands. Listening carefully to the customer, the core function of our business, means meeting customer expectations by identifying and **providing first-in-class vacuum concepts**. Our portfolio varies from standard to customized and specialized vacuum systems and solutions. **We address a wide range of vacuum applications and markets** including integration with specific production environments.

Working in close collaboration with sales, we support integrated application development, engineering and design. Production sites in North Americas, Europe and China ensure a close proximity to our customers with local assembly and testing capabilities as well as efficient order execution. **This makes our team a true global player and a steadfast partner in the vacuum industry.**



Special systems

Tailor-made vacuum solutions and systems for your applications

- ✓ **A quick look at a few applications from the leading worldwide supplier**
- ✓ **Benefit from our experience dating back to 1850**

Your needs:

- Comprehensive consulting services
- Customer-specific application support
- Design and manufacture of custom vacuum solutions
- Flexibility and reliability
- Efficient solutions

Our solutions:

- System solutions - tailor-made concepts based on customer specifications
- Integrated fore vacuum and high vacuum pump systems for specific requirements
- Worldwide engineering, production and service centers
- Global project coordination
- Custom software programming and customization
- Consistent product improvement and innovation
- On-site setup and training



DURADRY System

Dry-compressing pump systems

- ✓ **A performance-driven, cost-effective dry vacuum system**
- ✓ **High-safety dry screw vacuum system for non-chemical harsh processes**

Your needs:

- Dry pump solutions compatible with non-harsh corrosions
- Flexible and adjustable pump speed (25 – 4,100 m³/h)
- Low noise levels <68 dB
- Increased running time via preventive maintenance
- Lower water demand

Our solutions:

- Two variants: Industrial and electronic

Industrial Style

- Frame structure, roots/screw pump separate maintenance available
- Air cooled roots, minimum 4lpm cooling water
- External Electrical cabinet, HMI/PLC/VFD all in one
- Plug-and-play design for simple installation

Electronic Style

- Full enclosure, water cooled system, environment friendly
- HMI/PLC/VFD integrated design, error log, maintenance reminder, field configurable all in one
- Pump health real-time monitoring by sensors, proactive alarm, longer life cycle
- Roots PFPE optional



Systems + Solutions

EXTRUVAC CP

Vacuum solutions for every application

- ✓ **Vacuum pumping systems used for processing plastics must have the ability to handle solids and liquids in a reliable and efficient way, providing vacuum on demand while ensuring control and reducing environmental impact with a low cost of ownership**

Your needs:

- Low cost of ownership
- Vacuum solutions for controlling and reducing environmental pollution
- Safe, high-quality, reliable and cost-effective designs
- 'Plug and Go' systems with minimal setup requirements or configurable options adapted to specific chemical processes

Our solutions:

- Automatic and manual control options - easy integration with your system
- Proven dry technology
- Kinder to the environment: dry pumps do not generate contaminated oil or water
- Rough to high vacuum pumping technologies for corrosion-free operation with the ability to handle liquids and solids
- Increased productivity between service intervals
- Affordable systems with low cost of ownerships
- Reduced installation, operation, service and maintenance costs



RUTA System

Multistage fore vacuum systems

- ✓ **Combine almost any of Leybold's pumps to create a customized multistage solution for your vacuum needs.**

Your needs:

- High Pumping Speed: Ranges from 200 – 7,000 m³/h for efficient operation and quick process times.
- Reliable Vacuum Solutions: Designed for a wide range of applications.
- Expert Consulting: Tailor our RUTA systems to your specific needs with our expert consulting and system sizing.

Our solutions:

- Customizable Design: Adjustable frame design to fit into tight spaces, ensuring maximum flexibility for your facility layout.
- Decades of Expertise: Backed by our decades of vacuum expertise and support, ensuring long-lasting and reliable performance.
- Low maintenance requirements: Simple service of our product line
- Optional: User-Friendly Control Units: Ensuring precision control and full integration into your process.



DRYVAC System

Dry-compressing pump systems

- ✓ **Leybold has refined its DRYVAC vacuum pump systems, giving them the ability to adapt to a variety of applications**
- ✓ **Basic and smart system configuration**

Your needs:

- Maximum system availability
- Reliable engineering solutions
- Minimal footprint
- Self-protecting of the pump and easy communication

Our solutions:

- Extremely compact design leaves more space in production areas
- Very low noise levels to improve working conditions
- Significant cost reductions through high energy efficiency
- Clean technology with no oil emissions
- Optimized for fast cycle / load lock applications
- Fastest pump down times via high throughput pump mechanisms
- High pumping speeds for dry and booster pumps
- Pumping speeds from 2,000 m³/h up to 9,800 m³/h
- Integrated smart monitoring of major parameters
- Standard Digital I/O interface and Profibus (optional) for the entire product family



DRYVAC PowerBoost

Dry-compressing pump systems

- ✓ **Special optimized design for fast load lock pump-downs**
- ✓ **Equipped with an automatic cycle detection system**

Your needs:

- Fast pump-down times
- High energy efficiency
- Low cost of ownership and initial investment
- Minimal footprint

Our solutions:

- Integrated frequency converters
- Micro-controllers with touchscreens
- Digital I/O communication interfaces (DC37-P)
- Harting connections (power supply)
- Housings, castors and adjustable feet
- Water-cooling and lubrication via synthetic oil



Systems + Solutions

SOGEVAC / NEO D System

Oil-sealed standard vacuum systems

- ✓ **Combination of Dry-compressing roots pumps and oil-sealed rotary vane pumps**
- ✓ **Vacuum systems built with oil-sealed SOGEVAC pumps deliver an excellent cost vs. performance ratio for a wide range of industrial applications**

Your needs:

- Comprehensive consulting service
- Customer-specific application support
- Design and manufacture of custom vacuum solutions
- Flexibility and reliability
- Efficient solutions

Our solutions:

- Tailor-made concepts based on customer specifications
- Engineering, production and service centers around the world
- Global project coordination
- Continuous product improvements and innovations
- On-site setup and training



CVS

Central vacuum stations

- ✓ **Modular systems for improved operational reliability in frequently varying vacuum consumptions**
- ✓ **Delivery of tested, turnkey and ready-to-operate units**

Your needs:

- Industrial grade vacuum pumps
- Individually and simultaneously meeting the demands of numerous small vacuum consumers
- Excellent vacuum performance data
- Modular design for adapting to specific processes

Our solutions:

- Typically consisting of SOGEVAC pump(s), a buffer vessel, an electrical cabinet with controller and all connecting components
- Pumping speeds of 25 to 840 m³/h
- Ultimate pressure $\leq 0,5$ mbar
- Vessel volumes of 60, 160, 300, 500 or 1,000 liters
- Electric power from 0,8 to 18,9 kW
- Basic or full-featured controls
- Low cost of ownership



TURBOLAB and TURBOLAB Core

High vacuum pump systems

- ✓ **"Plug and Go" high vacuum pump systems built with time-proven components**
- ✓ **Various configurations available to meet individual vacuum demands**

Your needs:

- High vacuum pump systems for industry and research
- Choice of fore vacuum pumps; from the oil-free ECODRY (Cart version only), SCROLLVAC 3S, or oil-sealed and dry compressing hydro-carbon options available
- Compact and user-friendly solution

Our solutions:

- Pumping speeds of 78 - 925 l/s provided by the TURBOVAC i pump range
- Ultimate vacuum down to 10^{-10} mbar
- 100% preassembled units with turbomolecular pump, TPU display power unit, frequency converter and fore vacuum pump
- Easy to relocate pumps out and away from the frame
- Backlight display in an innovative TPU power unit
- The ability to cover many applications with a full line of high vacuum and wet or dry fore vacuum pumps
- Integrated data logger and webserver for system control, monitoring and configuration
- Connection of up to six accessories and two gauges
- Benchmark design, reliability and functionality



CS Calibration System

Custom vacuum calibration systems

- ✓ **Process reliability via regular checks, adjustments and recalibration of vacuum gauges and sensors**

Your needs:

- Vacuum gauge checks
- Precise calibration of vacuum gauges in accordance with DAkkS (a nationally-recognized accreditation body in the Federal Republic of Germany)
- Reproducible parameters

Our solutions:

- Universal calibration systems with a special vacuum chamber, turbomolecular pump system, vacuum gauges and additional components, depending on the calibration pressure

Systems + Solutions

UNIVEX

Experimentation and coating systems

- ✓ **Easy operation and accessibility of vacuum chambers**
- ✓ **Manual or automatic process control and documentation**

Your needs:

- Flexible vacuum coating laboratory systems
- University and industrial research systems
- Results transferable to large scale systems or serial production
- A high level of reproducibility

Our solutions:

- Multi-purpose systems for the production of functional layers
- Modular system configurations with a wide range of accessories
- Customized system solutions
- Variable chamber sizes



UNIVEX S

Space simulation systems

- ✓ **Flexible solutions for various space applications**
- ✓ **Highest reliability for uninterrupted test cycles**

Your needs:

- Highly accurate simulation of space conditions
- Reliable equipment for uninterrupted test cycles
- A configurable/extendable equipment platform
- Universal usability in the R&D and space industries

Our solutions:

- An extensive portfolio for thermal cycling, ion thruster testing, MLI-blanket baking etc.
- Optimized layouts in terms of vacuum performance and temperatures
- Automatic process controls and data logging
- Platform design with wide range of accessories
- Customized configurations for intensive use



Systems + Solutions

Beer bottling vacuum system

- Minimal to no water consumption
- Lower energy consumption - energy savings of more than 20% on average compared to water ring pumps
- Better and more stable bottling pressures — reduces CO₂ consumption and results in increased shelf life
- Reduced maintenance through a simple drive concept
- Dry compressing screw technology offers high robustness handling water vapor and liquid droplets
- Longest uptime due to no risk of cavitation and minimized need for internal cleaning due to our low rotor temperature profile
- Increased food safety through CIP of complete vacuum system including the vacuum pump



Steel degassing

- Vacuum systems for efficient steel degassing
- Highest vacuum up-times via high redundancy
- Easy to install - on-site installation available
- Minor pressure increases only in the event that one module or one pump is off
- Users can perform their own service, and single pumps can be changed out in a short time
- Low energy consumption via optimized system design
- Minimal space requirements
- Easy expansion and extension
- In the event of a pump failure for multi-module installations, only one module is switched off, and the remaining modules finish the process!

Revamping Steel Degassing

- Exchange of steam ejector vacuum pumps to dry mechanical vacuum pumps
- Complete turnkey projects incl. erection and commissioning
- Cyclone, gas cooler and filter designed for maximum efficiency and reliability
- Automation package for entire revamping project
- Highest reliability and availability of pump modules on the market
- Very low energy consumption and CO₂ emission
- Process control via stepless adjustable vacuum level
- ROI, CAPEX, OPEX calculation as well as layout can be offered as a study
- Long term service and extended guarantee available



Tailor-made systems

Hyperloop

- Three-stage pump system with a total of 12
- RUVAC WH and DRYVAC pumps entirely contained within a 12 m (40ft) shipping container
- The container has a fully-accessible long side, making it possible to install this complex system with only minor effort
- Inlet and outlet flanges are installed in the wall of the container; the customer only needs to mount the pipework to the container for operation
- Container is self-supplied with compressed air, cooling water and air-conditioning; power is the only externally supplied element
- Future implementation of several advanced solutions for easy accessibility and quick assembly



Vacuum Housing

A vacuum pump system consisting of nine modules connected in parallel; each module includes:

- A WS 2001 FU Roots Pump with a water-cooled motor, an electronic frequency converter for speeds up to 6,000 RPM and a Roots pump adapter
- A SCREWLINE SP 630 with SP-Guard for monitoring of important operating parameters
- A DN 500 Intake Manifold
- Weather protection roof for outdoor installation
- An electrical controller with PLC for speed control
- System controls via a touch panel
- Data communication with the customer's system controller via a ProfiBus interface



PET extruder degassing

- Modern vacuum solutions for extruder degassing
- Stable, non-fluctuating vacuum supply
- Vacuum level is independent of climate or water temperature
- Pressure at venting/degassing dome can be regulated
- Minimal maintenance and service requirements
- Maintenance is reduced to a regular cleanings in parallel with dye cleaning
- Full maintenance (incl. pump cleaning) can be performed by trained users
- Safe system design, even for expected misuse as worst-case pumps and system components build up layers
- The easy maintenance concept enables users to perform service themselves, independent of external service providers
- Flexible use, additionally for other polymers with multi-purpose extrusion systems



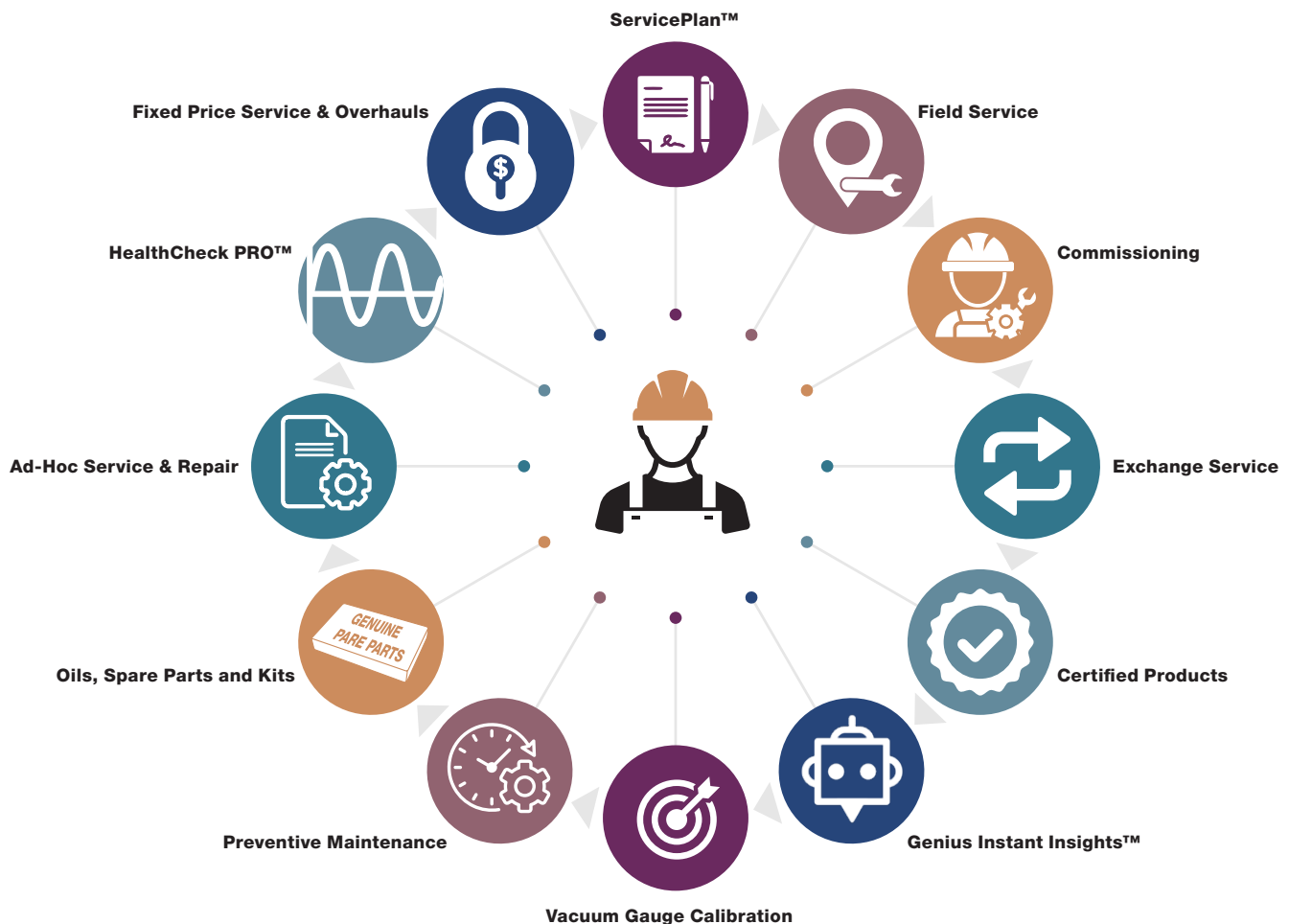
Service

We are where you are

Through our mission of creating sustainable financial value in your business, we offer a comprehensive range of solutions that will match your business and production needs. Our commitments to you are:

- **To create conditions that maximize your pump's uptime through superior service and insights into your system's operation**
- **To enable the reliability of your pump and related production processes through our strategic partnership**
- **To create lasting value by delivering exceptional support where and when you need it**

Read on to learn more about our complete range of vacuum pump services and how our specialists can help you. The rewards include maximized uptimes, low running costs and longer lifecycles.



Are you looking to improve efficiency, reliability, safety and long-term cost savings for your business? Maintaining your vacuum pump is about more than just smooth operation; it's how you increase productivity while reducing your operational costs. Our service offerings help you optimize your operations while helping you focus on what truly matters: **your productivity.**

Preventive Service:

- Prolonged lifespan
- Accurate budgeting
- Continuous production
- Reduced administration work

Reactive Service:

- Higher lifetime costs
- Variable and increased spending
- Unpredictable production interruptions
- Escalations and rushed processes



HealthCheck PRO™

Make informed decisions, control costs and increase the reliability of your vacuum pumps as well as the uptimes of your processes. By identifying early signs of deviations in your vacuum pump, you can plan your maintenance based on actual operating conditions.

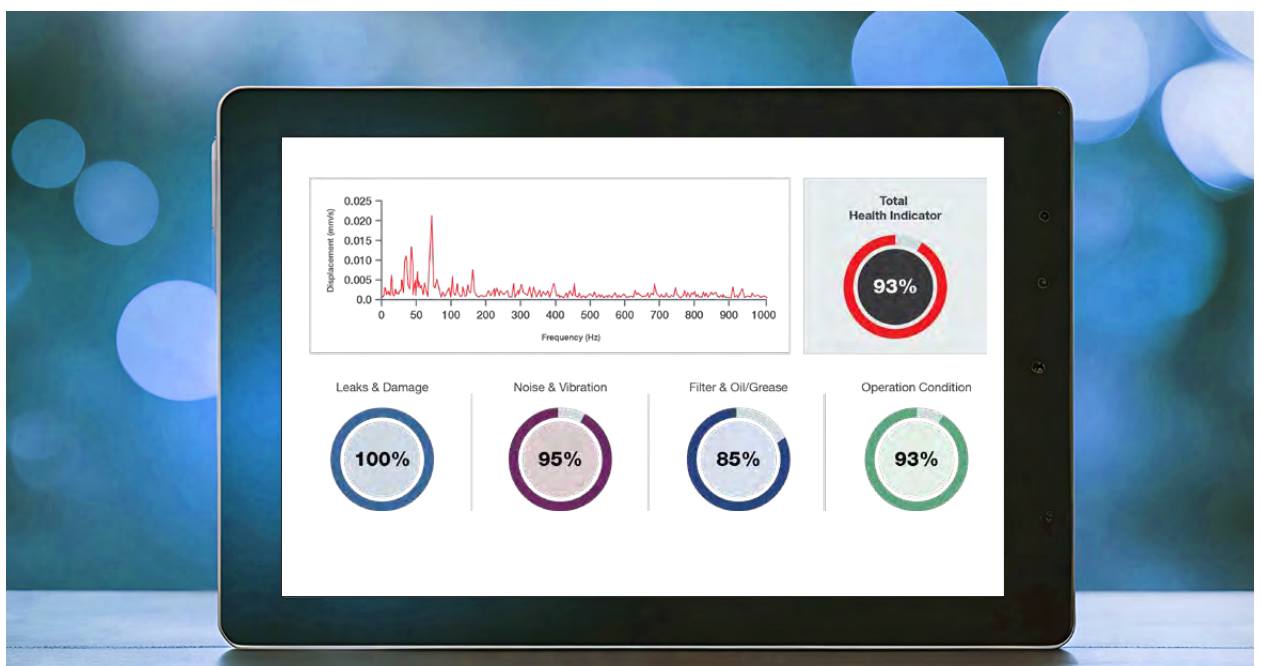
During HealthCheck PRO™ visits, our specialists will inspect your equipment and generate reports with valuable recommendations and insights regarding the health of your pumps. This is achieved through measuring vibrational data and analyzing operating conditions, ensuring your process reliability is maximized. HealthCheck PRO™ visits should be conducted twice per year.

Who can benefit from HealthCheck PRO™? Those having:

More scenarios where you can benefit from HealthCheck PRO:

- **Pumps with long maintenance intervals**
- **Pumps operating under harsh conditions**
- **Pumps placed back into operation after a long standstill (six months or more)**
- **Backup pumps**
- **Condition-based maintenance**

Speak to your Leybold representative NOW and receive your pump's health score!



Service

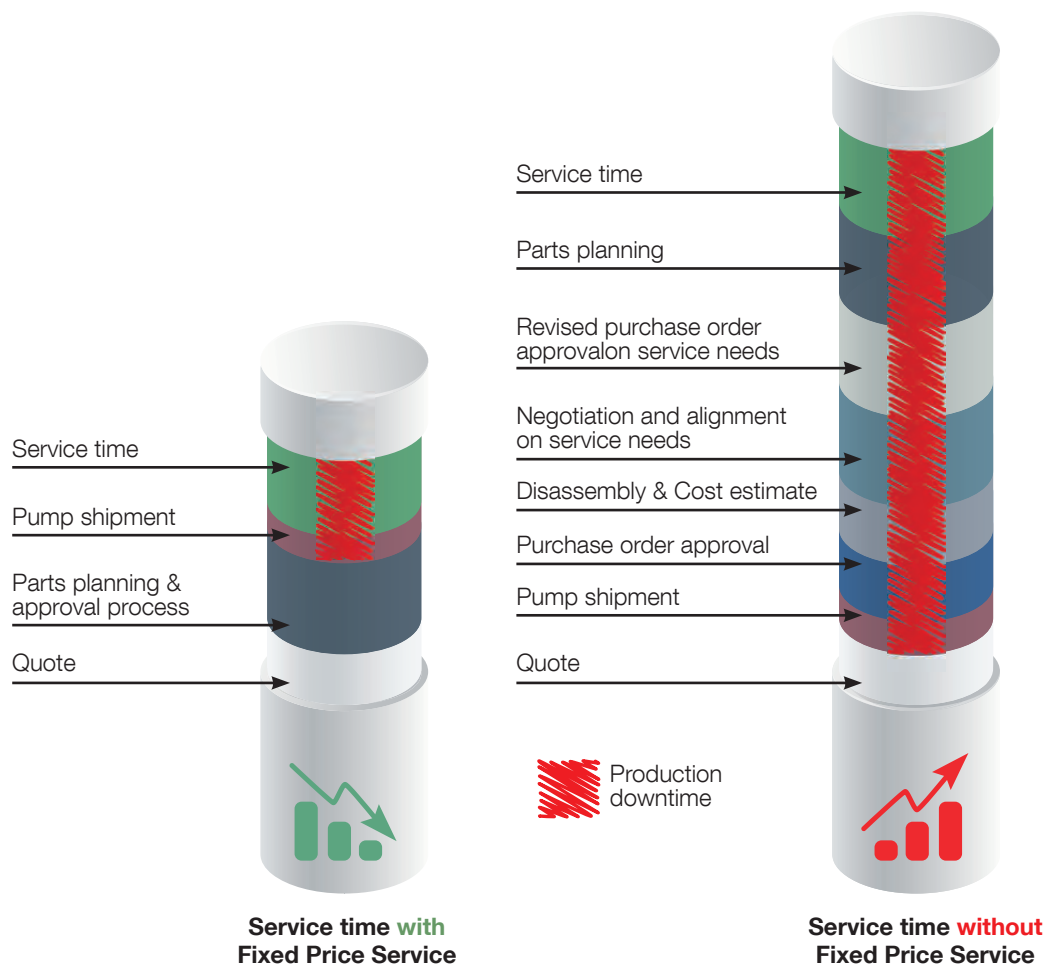


Fixed Price Service & Overhauls

Our Fixed Price Service ensures greater availability, reduced hassles and cost certainties, all of which are essential for efficient production. After aligning on your pumps condition and usage, we provide a single, upfront quote for a service tailored to your specific needs. With Fixed Price Service, you eliminate unnecessary delays and additional administration, providing you with lower costs and fewer process interruptions.

Top Fixed Price Service Benefits:

- Requesting a Fixed Price Service quote keeps your process running until everything is agreed upon.
- Easier financial planning, since the price is fixed and covers everything required to meet your needs.
- Scheduled service delivery that's convenient for you.
- Priority orders which allow for faster service delivery.



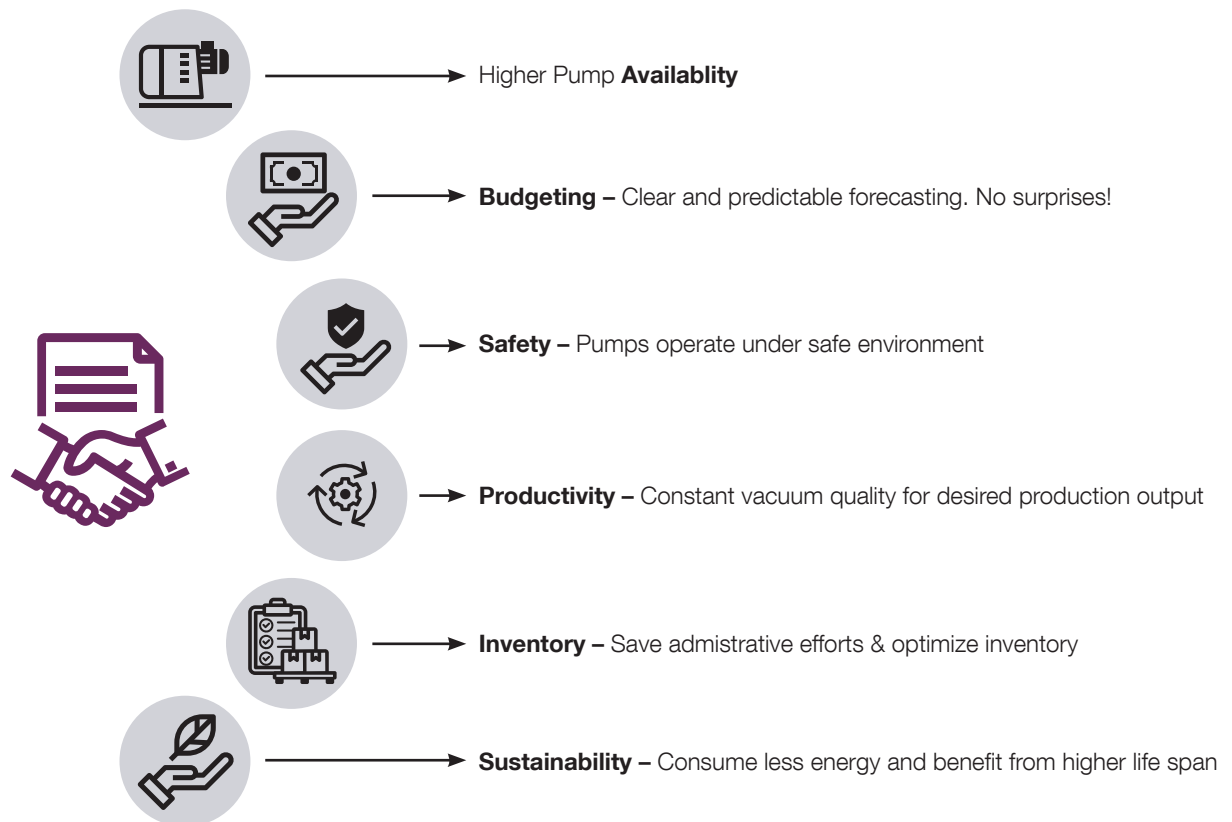
Eliminate the challenges of complicated approval processes, fluctuating budgets and unclear service requirements with our Fixed Price Service. Benefit from cost savings through fewer interruptions, reduced administrative work and lower expenses. Our preventive maintenance strategy is tailored to each of your pumps and their specific conditions, ensuring optimal performance and long-term reliability.



ServicePlan™

Discover the best service solutions to keep your vacuum pumps running reliably and efficiently. Our customized ServicePlan™ ensures more continuous operation and provides prompt professional and technical support. It eliminates the hassle of spare part searches and reduces purchasing-related administrative work. By avoiding unexpected downtime and production losses, you'll achieve predictable revenues and simplified financial budgeting. You'll also enjoy increased operation of your vacuum pump while maintaining a lower total cost of ownership.

Benefits of ServicePlan™:



Field Service

By continuously expanding our team of vacuum experts, we ensure that the support you need is always close at hand, wherever you are. Our Field Service brings the solution to you, offering everything from health checks to on-site troubleshooting in order to minimize process disruptions. When performed preventively, our service can detect wear and contamination in your pump before it affects your uptime. With tailored, process-specific maintenance and customized consultancy, our Field Service maximizes machine availability, allowing you to focus on your expertise: production.

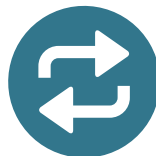


Service



Commissioning

Have you just acquired a new, certified or backup pump to support your production and want to increase its potential? Our dedicated vacuum specialists ensure your setup gets off to a strong start. From fine tuning pump settings to ensuring a leak-tight installation, our experts tailor your setup to meet your unique operating conditions.



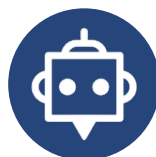
Exchange Service

Our Exchange Service helps you achieve your service needs by maintaining your operational uptime and eliminating the risk of production downtime. We provide you with an identical, fully-tested and refurbished pump from our exchange stock that comes with a 12-month comprehensive warranty at a fixed price, thus eliminating risks and securing your production uptime.



Certified Products

We offer a wide range of certified products that come with the assurance of quality, reliability and performance—plus, they cost less! Serviced to manufacturer standards, they're tested, freshly painted and quickly delivered with a 12-month warranty. Our professional, factory-trained service technicians use genuine Leybold spare parts to refurbish all units.



Genius Instant Insights™

GENIUS Instant Insights™ reduces costs, prevents breakdowns, lowers energy use, and minimizes your vacuum technology's CO₂ footprint. Connect your pumps to enable continuous monitoring by our specialists, who provide recommendations to prevent failures and optimize performance. Access the GENIUS Portal for full transparency on service status, alerts, and telemetry data to maximize pump operation.



Vacuum Gauge Calibration

Profitability and process credibility are two of the most critical aspects of production. Regular calibration supports compliance with international standards, preventing the loss of certification or, even worse, production downtime. In addition to enhancing production credibility, gauge calibration helps avoid costly shutdowns due to regulatory audits, penalties for non-compliance, or issues with production quality and safety caused by inaccurate measurement and control technology. To maintain consistent high performance, it's essential to proactively determine a specific gauge calibration schedule. Our Levels Certified, Factory, and Alignment fit your needs and comply with standards such as ISO 9001, ISO 17025, or DaKKs.



Preventive Maintenance

Our preventive maintenance protects your assets by replacing worn parts and preventing major breakdowns. These planned, cost-effective measures help avoid expensive repairs while keeping your pump operational, ensuring production efficiency and safety. Our skilled technicians tailor maintenance to your specific needs, eliminating the risks of trial and error.



Oils, Spare Parts and Kits

Are you looking for maximized production output, longer pump lifespans and optimized total cost of ownership for your vacuum application? Genuine Spare Parts & Oils make all the difference! Dedicated design, combined with strict quality control ensures optimal pump performance and reliability. To streamline your workflow, we've assembled critical parts into convenient Preventive Maintenance Kits for your pump services.



Ad-Hoc Service & Repair

In the event of an unforeseen interruption, our Ad-Hoc Service & Repair bridges the gap left by a lack of preventive maintenance, helping to restore both your production and the asset value of your pump. Depending on the complexity and nature of the issue, our expert technicians—whether on-site or at our service locations—work to quickly restore your machine's availability while offering insights to prevent future interruptions.

Controllers and calculation tools

Controllers

Innovative pump and system management

- ✓ **Tailor-made controllers and control systems adapted to customer and process requirements for optimum performance and user convenience**

Your needs:

- Customer specific system interfaces
- Simple to complex visualization
- Power distribution integrated within the system
- Convenient control of all system components

Our solutions:

- Control and data acquisition of system parameters via digital I/O interfaces or bus systems, Ethernet, Profibus, RS 232, WiFi, GSM, for example
- Implementation of custom software programming
- Simple digital display via touch panel up to visualization on mobile devices (via apps)



LEYCALC

Smart online vacuum system calculation tool

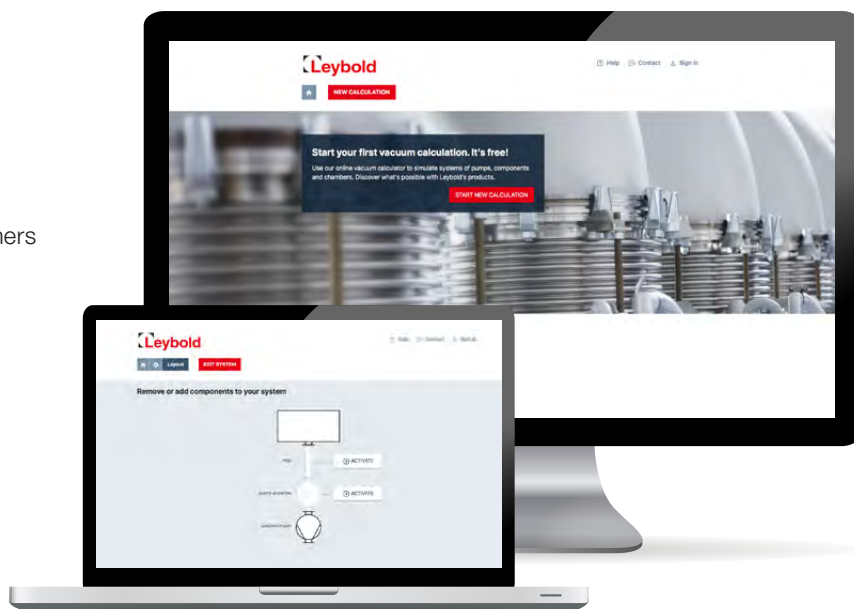
- ✓ **New online tool to help with modeling vacuum systems for various applications, selection and implementation of vacuum pumps and measurement equipment**
- ✓ **With this new web-based tool, users can select and compile their vacuum solutions online**

Your needs:

- Vacuum system calculation tool able to simulate typical vacuum installations
- Easy to use
- Trustworthy results as basis for decision making

Our solutions:

- We make our expert tools available for our customers
- Simple handling, intuitive navigation
- Further access to our expert network on demand, e.g for simulation of complex systems
- Proven calculation results, based on Leybold's long time practical experience



Belt-Tuner app

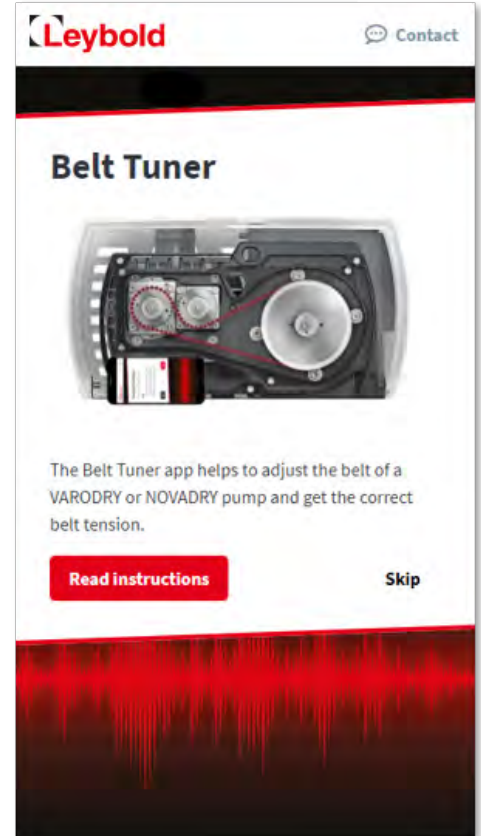
A smart tool that helps you to adjust the belt of your VARODRY & NOVADRY

- ✓ **Smart belt tuning of the innovative VARODRY & NOVADRY belt drive**
- ✓ **Offline & Online belt tuning with additional maintenance details**

Our solutions:

- Easy maintenance: the app can be used offline and online and provides all info needed for easy belt tuning
- Cost effective: the belt tuner is free of charge
- Smart control: further insights like detailed instructions and data for further improvements

Learn more and
check your pump
within seconds on:
[sound.Leybold.com](https://sound.leybold.com)



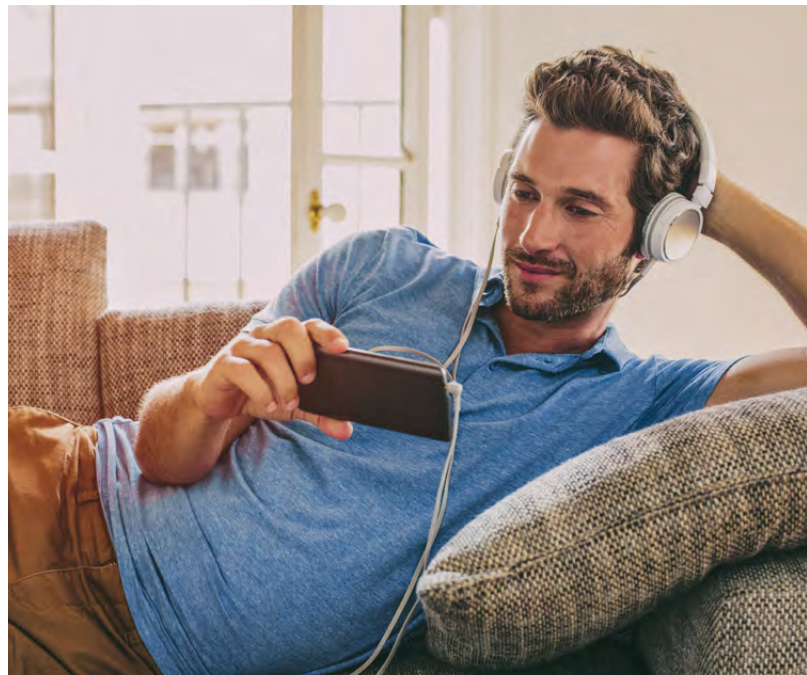
Sound analyzer app

Immediate feedback on your pump's status

- ✓ **Lay back and analyze your pump's status with a simple sound file**
- ✓ **Check out our new sound analyzer app for our NOVADRY and VARODRY pumps**

Our solutions:

- No downloads or installations required
- Perform the sound analysis with five clicks at sound.leybold.com
- Condition of the bearings, gears and hence the belt can be recorded
- Results available within ten seconds
- Direct contact to our service & support team



Online shop

leyboldproducts.com

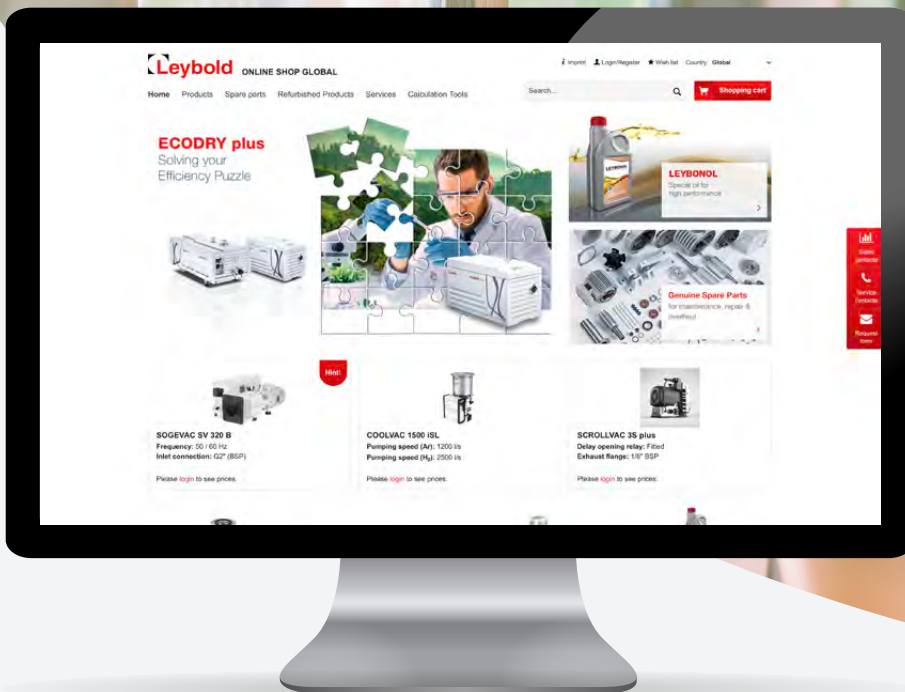
- ✓ Shop vacuum technology online
- ✓ Available in more than 12 countries worldwide

Your needs:

- Easy order process
- Secure payment options
- Large product range, fast delivery

Our solutions:

- Purchase low-consultation vacuum components like fittings, measuring instruments, pumps, spare parts, vacuum oils, lubricants.
- Payment by invoice, credit card or pre-payment
- Order online 24 hours a day



Pioneering products. Passionately applied.