Leybold

SOGEVAC BI²

Reinventing analytical roughing pumps for sustainable operation

The new standard for reliability and sustainability

SOGEVAC BI² provides space efficiency via a compact design facilitated by an integrated PM (Permanent Magnet) motor. It offers a long oil service life, with PFPE variants available specifically for ICPMS instruments. Reliability is a key feature along with integrated lubrication via an oil recovery system that requires no external lines or filters. Quiet operation is achieved throughout the entire pressure range due to low generator speeds, and the pump achieves an extremely low power consumption.. This pump also features a customer-oriented variants concept and single-phase drives with overload protection that's compliant with EN 61010-1 standards.

CO_2 reduction
Up to 20 % power savings

Lower costs
Up to 50 % lower weight

Silent vacuum
Quiet operation

Compact
Smaller size and increased mobility

IoT readiness
On board intelligence

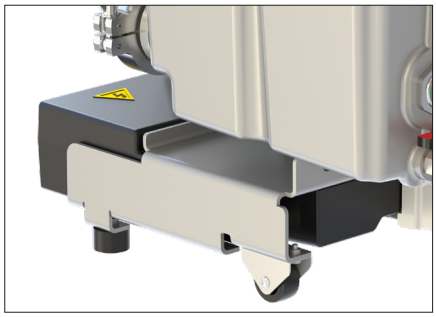
Easy maintenance
Up to three years/24,000 h maintenance-free operation

Applications

- ICP-MS
- LC/MS
- Backing pump for turbopumps

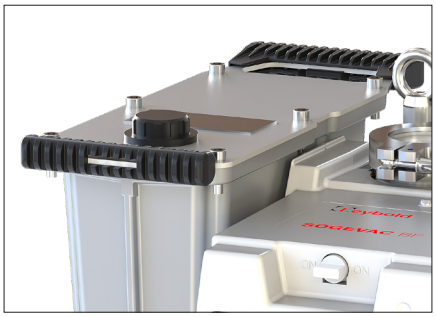
Easy to install and maintain

The new roughing pump for analytical applications, our SOGEVAC BI² is a sustainable product designed with recyclable and biodegradable materials, including wood and cardboard. It has undergone rigorous testing to meet ISTA 3 B transportation and EN/UL 61010-1 safety standards. Packaging include shock indicators for optimal pump protection, a foldable unloading ramp, and easy and safe unpacking. A mobile design and handles on the oil casing cover make the SOGEVAC BI² easy and safe to move and install.



Smart & sustainable packaging:

- Recyclable & biodegradable material (only wood & cardboard)
- ISTA 3 B tested to minimize damage during transport
- Optimal pump protection with shock indicators
- Foldable unloading ramp included



Smart, clean & easy maintenance:

- Only one liter of oil
- Easy oil drain with handy oil drain valve high above the floor
- Easy & quick patented oil demister change
- Handy oil filling from pump top, high above the floor

Pump Control

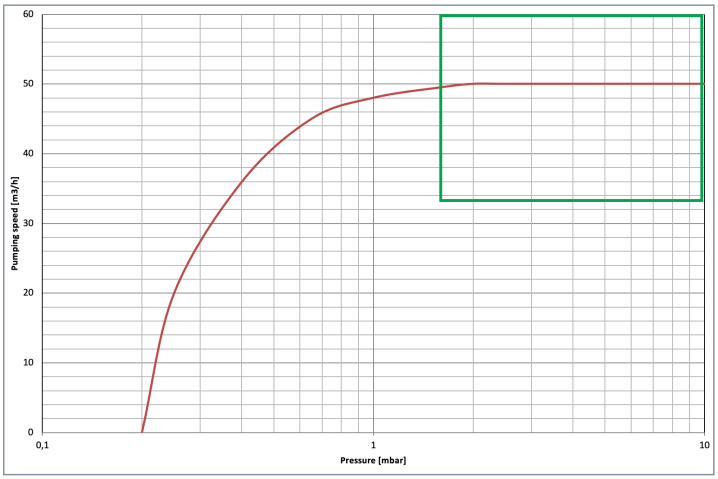
- Pump control (start/stop and speed) through an electronic on/off switch, analog signals, RS485 and Ethernet
- Data acquisition & status control through RS485 and Ethernet

Smart pumping via the SOGEVAC BI²

Introducing the SOGEVAC BI² featuring advanced capabilities via an integrated frequency-converter. Experience unparalleled performance with:

- **Flexible Speed Control:** Tailor your pumping speed to suit your specific needs effortlessly.
- **Pump Protection:** Automatically adjusts pump rotational speed to prevent overheating at high inlet pressures, ensuring optimal performance and longevity.
- **Inrush Current Limitation:** Enjoy the convenience of using standard curve B or C breakers via a controlled inrush current of <7 A!
- **RS 485 & Ethernet interfaces:** Seamlessly manage pump functions with start/stop and speed control.
- **Power Consumption Monitoring:** Keep up with with proactive maintenance by monitoring power consumption and drive temperature.

Controllable rotational speed allows for flexible pumping speed setting. See green pump operating zone below (e.g. SV 70 BI²)



SOGEVAC BI²

Technical Data (50/60 Hz)		SV 55 BI²	SV 70 BI²
Nominal pumping speed	m^3/h	55	70
Effective pumping speed at 2 mbar	m^3/h	≥ 36	≥ 50
Ultimate total pressure without gas ballast	mbar	≤ 0.2	
Ultimate total pressure with gas ballast	mbar	≤ 1.0	
Ambient temperature	°C	18 – 40 °C	
Oil filling	l	1	
Noise level	dB(A)	58	59
Power consumption < 10 mbar	W	< 580	< 600
Power supply	V	200 … 240 V ± 10 %	
Type of protection		IP 20	
Rotational speed min/rated/max	$min.^{-1}$	900/1500/1650	
Connections intake side		DN 25 or 40 ISO-KF	
Pump dimensions (L x W x H)	mm	402 x 304 x 333	
Net weight (with oil)	kg	31	
Pump mobility		Handles on oil casing cover two casters & two rubber feet	

Ordering information[1]					
Inlet	Exhaust	Oil	Control	SV 55 BI²	SV 70 BI²
40 KF	40 KF	LVO702	on/off switch	10330040V01	
25 KF	25 KF	LVO702	RS485	10330040V02	
25 KF	25 KF	PFPE LVO420	RS485	10330040V03	
40 KF	½" barbed	LVO702	RS485		10330065V02
40 KF	½" barbed	LVO702	Analog pins 9 and 8	10330040V10	10330065V07

Accessories[2]	
P/N	
960331NENC	Noise Enclosure for single stage pumps up to 70 m^3/h
140305	Power cable US NEMA 6-15P 250 V 1.8 m
140306	Power cable Euro 250 V 1.8 m
140307	Power cable UK 250 V 1.8 m
E6500825	Power cable C20 250 V
E6505883	Power cable IEC309 250 V 5 m
108153T905	Power cable China 250 V 3 m
L70201	LEYBONOL synthetic oil, 1 l
L42001	PFPE oil LVO 420, 1 l
EK103355M	Small maintenance kit

Noise Enclosure
Leybold has developed a specific noise enclosure for vacuum pumps which reduces the already super quite noise levels by an additional 5dB(A) and ensures that the pump does not overheat due to the open design on both sides.

[1] Other variants available upon request.
[2] Excerpt from our line of products. Details on our full range of LEYBONOL pump fluids are available in our general catalogue or our webshop www.leyboldproducts.com.

Leybold

Pioneering products. Passionately applied.

3611 2403 02 - EN 07/2024
Technical alterations reserved.