



Vacuum solutions

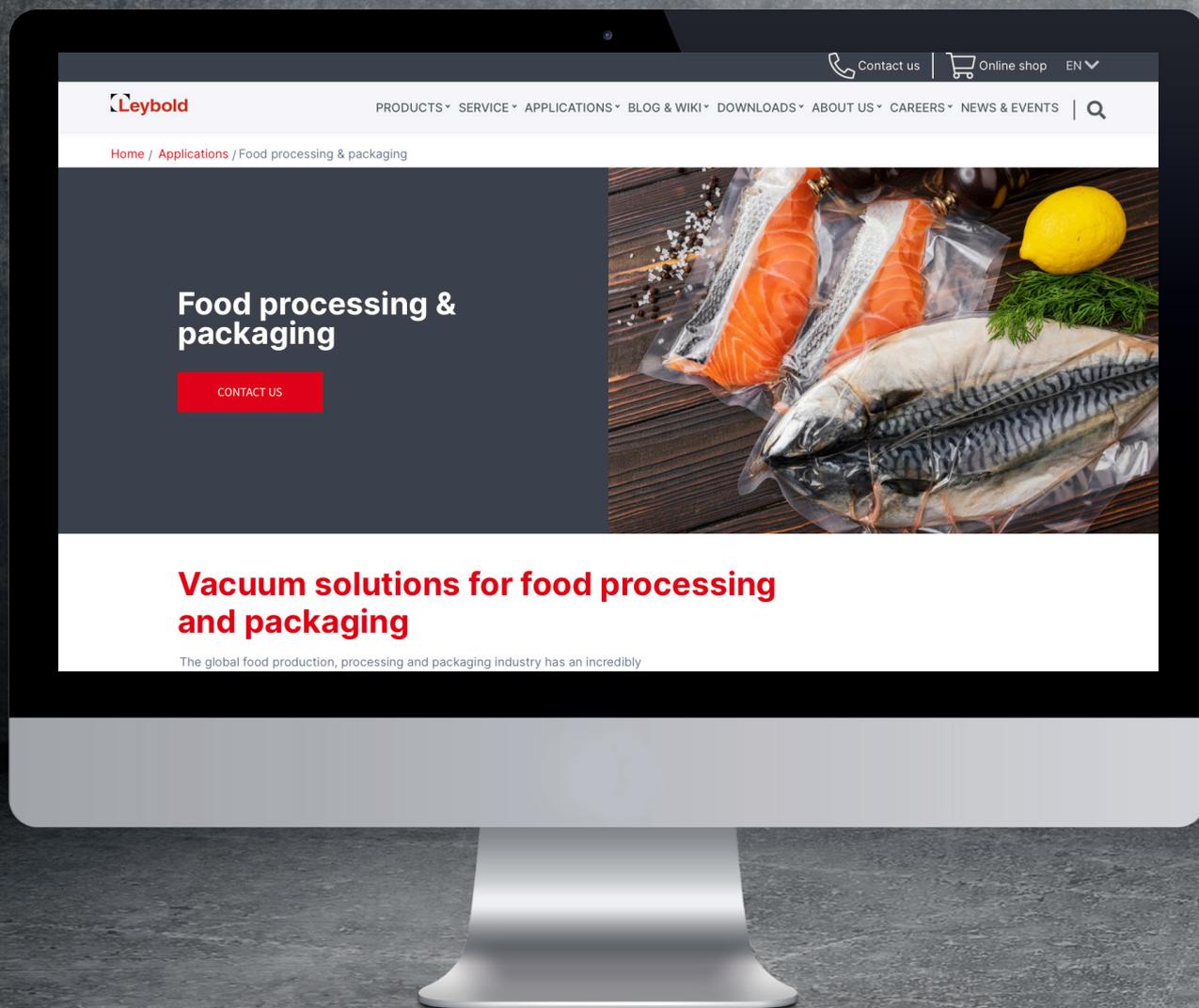
for food processing
and packaging



Explore the world of freshness now

Learn more about the possibilities of vacuum: On our webpage you will not only learn about food processing and packaging, you will also find more about our customer solutions and application specific products.

Please “dive in” and experience our world of freshness.
See for yourself: www.leybold.com



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Applications of the food & packaging market

Vacuum pumps	NOVADRY	DRYVAC	SCREWLINE	CLAWVAC
Size available (m³/h)	65 - 200	200 - 800	630	65 - 1000
Cooling	Air	Water	Air or Water	Air
Washdown	Yes (with enclosure)	Yes (-r version)	No	Yes (with enclosure)
Technology	Dry screws	Dry screws	Dry screws	Dry claws
Pressure range (mbar)	1000 - 0.1	1000 - 0.005	1000 - 0.01	1000-50/140/200

Food processing				
Freeze drying	●	●	■	
Tumbling / Marinating / Mixing	■		■	■
Vacuum cooling	●	■	■	
Slaughterhouse applications	●			■
Filling / Stuffing	■			■
Vacuum cutting / grinding	■			■
Controlled atmosphere storage	●			
Pasta processing	■		■	
Vacuum cooking / frying	■		■	■
Vacuum conveying	●			■
Vacuum microwave drying	■	■	■	
Central vacuum system for processing	●	■	■	■
Food packaging				
Belt chamber packaging machines		■		
Thermoforming / Rollstock	■	■		●
Tray sealing	■	■		
Carousel packaging		■		
Skin packaging	■	■		
MAP with O ₂	■	■		
Leak testing				●
Metal can sealing (powder milk, coffee...)				
Table top packaging machines / Clipping	■			
Central vacuum system for packaging				
Beer bottling	■	■		

- Best in class
- Recommended
- Suitable, lower capital cost with increased user maintenance

VACUBE	RUVAC WAU	SOGEVAC B	SOGEVAC B	SOGEVAC Oxygen	Application challenges			
					Gas and ambient temperature	Average operating pressure	Dust / Powder / Particles	Moisture
400 - 4800	250 - 2000	10 - 320	630 - 750	16 - 320				
Air or Water	Air	Air	Air or Water	Air				
No	Yes	Yes (with enclosure)	No	Yes (with enclosure)				
Lubricated screws	Roots	Oil sealed rotary vane	Oil sealed rotary vane	Oil sealed rotary vane				
1000 - 1	-----	1000 - 0,08	1000 - 0,08	1000 - 0,5				
	■	●	●		L	L	M	H
		●			L	H	H	H
	■	●	●		L	M	L	M
					L	H	H	H
		●			L	M	M	H
					L	H	M	H
●		●	●		L	H	L	L
		●	●		M	H	H	H
					H	M	L	H
					H	M	L	M
					H	M	M	M
■			●					
●	●		●		L	M	L	L
●	●	●	●		L	M	L	L
●	●	●	●		L	M	L	L
●	■		●		L	L	L	L
●	●	●	●		L	L	L	L
				■	L	M	L	L
		●			L	L	L	L
●		●	●		L	M	L	L
		■			L	L	L	L
■	■		●		L	L	L	L
					L	H	L	H

L = Low
M = Medium
H = High

Dry compressing screw pump

NOVADRY



NOVADRY ND 200



The **NOVADRY** sets new standards for the food packaging and processing applications.

It is the only 100% oil free and air cooled vacuum pump on the market. Its noise level is also incredibly low.

Maintenance and service requirement are reduced to the minimum.

Its design already incorporates hygienic design rules, not allowing accumulations of liquids. Full process room wash-down capability can be reached with the optional stainless enclosures.

Our solution

- Dry screw technology
- Air cooled
- Sizes 65, 100, 160 and 200 m³/h

Typical applications

- Thermoforming
- Chamber packaging
- Tray sealing
- Skin packaging
- Tumbling / mixing
- Stuffing filling

Customer benefits

- Maximum food safety (no oil leakage nor oil mist at exhaust)
- High uptime and performance
- Low total cost of ownership by most robust design
- Simple installation and operation
- Comfort of use for the operators: low and comfortable noise thanks to optimized rotor design and, integrated silencer
- Suited to handle Oxygen (> 21%) in MAP applications

Options

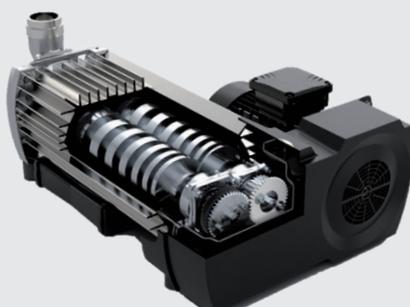
- Stainless steel hygienic enclosures for full wash-down capability
- Dimensions: 1130 x 660 x 530 mm



Link to the principle of operation video



Link to installation



Screw drive by a pulley system - single belt for 100% clean vacuum generation



Technical data

		NOVADRY			
		ND 65	ND 100	ND 160	ND 200
Maximal pumping speed without gas ballast ¹⁾	m ³ x h ⁻¹	65	105	155	185
Ultimate pressure without gas ballast ¹⁾	mbar	0.1	0.1	0.1	0.1
Water vapor tolerance with gas ballast	mbar	60	60	60	60
Water vapor capacity with gas ballast	kg x h ⁻¹	1.9	2.9	5.2	6.9
Permissible ambient temperature	°C	0 to 40	0 to 40	0 to 40	0 to 40
Cooling		Air	Air	Air	Air
Mains voltage					
50 Hz versions	V	400 or 200, ±10%	400 or 200, ±10%	400 or 200, ±10%	400 or 200, ±10%
60 Hz versions	V	460 or 230, ±10%	460 or 230, ±10%	460 or 230, ±10%	460 or 230, ±10%
		200/380, ±10%	200/380, ±10%	200/380, ±10%	200/380, ±10%
Motor power	W	1500	2200	3000	4000
Protection class EN 60529	IP	55	55	55	55
Noise level with integrated silencer at ultimate pressure ²⁾	dB(A)	50Hz: 67 / 60Hz: 70		50Hz: 70 / 60Hz: 73	
Connections					
Intake side	DN	G 2"	G 2"	G 2"	G 2"
Pressure side	DN	G 1 1/2"	G 1 1/2"	G 1 1/2"	G 1 1/2"
Weight, approx.	kg	85	95	105	115
Dimensions (W x H x D)	mm	488 x 315 x 644	488 x 315 x 736	488 x 315 x 889	488 x 315 x 889

¹⁾ To DIN 28 400 ff.²⁾ To DIN EN ISO 2151**Ordering information**

	NOVADRY			
	ND 65 Part No.	ND 100 Part No.	ND 160* Part No.	ND 200* Part No.
NOVADRY dry screw pump with 3 phase motor				
400V+/-10% or 200V+/-10%, 50 Hz	111065N10	111100N10	111160N10	111200N10
460V+/-10% or 230V+/-10%, 60 Hz	111065N11	111100N11	111160N11	111200N11
380V+/-10% or 200V+/-10%, 60 Hz	111065N21	111100N21	111160N21	111200N21
Outlet adapter G1"1/2	111005A32			
Purge upgrade kit (with EM valve)	111005A01			
Flushing kit (including purge gas kit)	111005A00			
Hygienic enclosures NOVADRY	HygEn001			
Soft Starter VD/ND, ≥ 11A, 110-230 V AC	-		111005A65	
Soft Starter VD/ND, ≥ 11A, 24 V DC	-		111005A66	
Soft Starter VD/ND, ≥ 19A, 110-230 V AC	-		111005A67	
Soft Starter VD/ND, ≥ 19A, 24 V DC	-		111005A66	
Replacement timing belt 50 Hz versions	EK6528531			
Replacement timing belt 60 Hz versions	EK6528533			
Optical belt tension measuring device	G9200015			
Belt tension tool	E6534677			
Equipment fail safe gear adjustment	E10015117			

* Soft starter mandatory

Dry compressing screw pump

DRYVAC



**DRY AND
EXTREMELY
COMPACT**

DRYVAC DV FP-r

Our **DRYVAC** is a rugged, dry screws vacuum pump with excellent energy efficiency. Compactness and low noise level enable installation close to the machine resulting in shorter cycle time and lower cost of installation.

The hygienic design (DV 650 and DV 800 only) avoids accumulation of water and dirt on the surface which makes this pump perfectly suitable for installation in washdown environment and easy to clean.

Our DRYVAC DV650 and 800 can be equipped with either:

- Standard stainless steel silencer (assembled on the side) for clean applications (packaging...)
- Serviceable stainless steel silencer (cleanable internally) for the most demanding application with possible accumulation of dirt/particles

Typical applications

- Freeze drying
- Thermoforming
- Vacuum baking and cooling
- Modified Atmosphere Packaging (MAP) and skin packaging
- Vacuum cooling
- Belt chamber packaging machines

Our solution

- Dry screw technology
- Water cooled
- Driven by frequency converter
- ISO-6 certificate for clean rooms
- PFPE versions for MAP of red meat with oxygen
- Direct connection of **RUVAC** Roots blower via adapter
- Options:
 - Plug & Go device to control the purge valves, gas ballast and flushing valve according to the process
 - E-saver allowing up to 50% energy savings at low pressure

Customer benefits

- Extremely compact design and water cooling allows installation directly inside the air-conditioned process area
- High energy efficiency
- Three inlet ports available allowing flexible installation and connection to the machine
- Integrated (or remote) frequency converter for optimal process control and easy networking



DRYVAC DV 650 FP-r designed for wash-down environment

Technical data

		DRYVAC		
		DV 300 50/60 Hz	DV 650 FP-r Hygienic 50/60 Hz	DV 800 FP-r Hygienic 50/60 Hz
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	280 (164.8)	650 (383)	800 (471)
Ultimate pressure ¹⁾	mbar (torr)	≤ 0.01 (< 0.0075)	≤ 0.005 (4 x 10 ⁻³)	
Maximum permissible water vapor capacity	kg x h ⁻¹	5	25	30
Cooling	°C	Water		
Motor power	kW	7.5	15	22
Protection class EN 60529	IP	54		
Lubricant filling	l	1.0	1.2	
Noise level ²⁾	dB(A)	65	70	73
Connections				
Intake side	DN	63 ISO-K	100 ISO-K	
Pressure side	DN	40 ISO-K	63 ISO-K	
Weight, approx.	kg	370	560	
Dimensions (W x H x D)	mm	1115 x 612 x 478	1211 x 450 x 400	

¹⁾ To DIN 28 400 ff.

²⁾ Operated at the ultimate pressure without gas ballast, free-field measurement at a distance of 1 m (3.5 ft)

Ordering information

	DRYVAC		
	DV 300 Part No.	DV 650 FP-r Hygienic Part No.	DV 800 FP-r Hygienic Part No.
With double purge - with LVO 210 With gas ballast and blow-off valve	112030V15	-	-
With remote frequency converter, F&P version with epoxy painting with LVO 210	-	112065FP01-1	112080FP01-1
With remote frequency converter, F&P version with epoxy painting with LVO 210 with cleanable silencer in stainless steel	-	112065FP02-1	112080FP02-1
With remote frequency converter, F&P version with epoxy painting with LVO 410 - PFPE	-	112065FP21-1	112080FP21-1
With remote frequency converter, F&P version with epoxy painting with LVO 410 - PFPE with cleanable silencer in stainless steel	-	112065FP22-1	112080FP22-1
Inlet threaded adapter 3" ¹	-	112005A18	
Inlet threaded adapter 4" ¹	-	112005A19	
Stainless steel inlet plate DV 650/800 FP	-	112005A51	
Exhaust silencer in stainless steel	115005A21	112005A50	
E-Saver device (only for LVO 210 versions) ²⁾	-	112005A60	

¹⁾ For assembly on side inlet ports

²⁾ Not for installation in wash-down area

**Have a look at our dry compressing,
robust vacuum pumps DRYVAC
DV 650. We show you a robustness test
by the ingressing of 10 liter of water:**



Dry compressing screw pump

SCREWLINE



DRY AIR COOLED
ON-SITE CLEANABLE
FOR HARSHTEST
PROCESSES

Our **SCREWLINE** is an extremely robust dry screw pump for food processing applications with on-site cleanability of pump chamber and screw rotors by the user.

Our solution

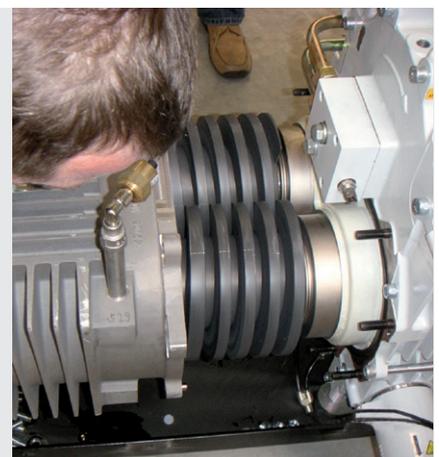
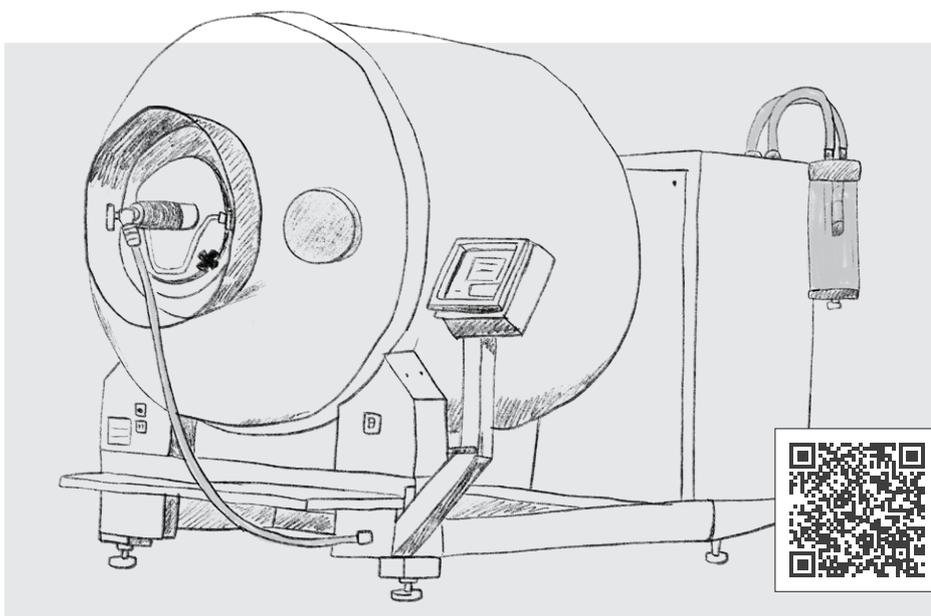
- Dry screw technology
- Cantilevered design
- Air cooled
- Pumping speed 630 m³/h
- Ultimate pressure $\leq 1 \times 10^{-2}$ mbar
- Monitoring system
- Direct connection of **RUVAC** Roots pumps via adapter

Typical applications

- Freeze drying
- Tumbling
- Vacuum conveying
- Vacuum cooling

Customer benefits

- Designed for demanding processes
- High uptime
- Low total cost of ownership
- Easy to disassemble pump chamber for rapid cleaning



SCREWLINE pumps enable simple disassembly of the pump chamber for on-site cleaning by the customer

Technical data

		SCREWLINE
		SP 630 50/60 Hz
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	630 (371)
Ultimate pressure ¹⁾	mbar (torr)	≤ 0.01 (≤ 0.0075)
Maximum permissible water vapor capacity	kg x h ⁻¹	14
Cooling	°C	Air
Motor power	kW	15
Protection class EN 60529	IP	55
Lubricant filling	l	13
Noise level ²⁾	dB(A)	73
Connections		
Intake side	DN	63 ISO-K
Pressure side	DN	100 ISO-K
Weight, approx.	kg	530
Dimensions (W x H x D)	mm	1630 x 880 x 660

¹⁾ To DIN 28 400 ff.

²⁾ Operated at the ultimate pressure without gas ballast, free-field measurement at a distance of 1 m (3.5 ft)

Ordering information

		SCREWLINE
		SP 630 Part No.
With manual gas ballast and SPGuard 400V, 50Hz / 200V, 50Hz / 460V, 60Hz / 210V, 60Hz		- -
With manual gas ballast and SPGuard 190V-210V / 380V-420V, 50Hz 190V-210V / 380V-420V, ±5%, 60Hz		117007 117008
SCREWLINE Oxygen version with electromagnetic gas ballast and SPGuard 190V-210V / 380V-420V, ±5%, 50Hz 190V-210V / 380V-420V, ±5%, 60Hz		117039 117040
Exhaust silencer		119001

Dry rough vacuum pump

CLAWVAC



CLAWVAC CP series

**CORROSION
RESISTANT**

**ON-SITE
CLEANABLE
PUMPING
CHAMBER**

The **CLAWVAC** operates smoothly with a pair of wearfree rotating claw rotors. The **CLAWVAC** differentiates itself from conventional claw pumps mainly through its material selection.

Stainless steel rotors on sizes up to 300 m³/h included as well as the corrosion-resistant coated vacuum chamber deliver stable operation even under very harsh process conditions.

The **CLAWVAC** offers great advantages for a wide range of rough vacuum applications.

The pump design offers extreme robustness, especially for challenging applications, which include handling of particle or vapor contaminated gases.

Our solution

- Dry claw technology
- Air cooled
- Pumping speed 65, 150, 300, 500 and 1000 m³/h
- Compact design, small space requirements
- Extremely efficient air cooling, low heat emission
- Low total cost of ownership

Typical applications

Food processing

- Bottling
- Dairy products (e.g. milking)
- Vacuum conveying (e.g. slaughterhouse)
- Beverage production
- Tumbling / Marinating
- Mixing / Cutting

Food packaging

- Thermoforming of foil containers
- Tray sealing
- Modified Atmosphere Packaging of red meat with O₂ (with Oxygen versions only)

Customer benefits

- Oil free generation (no oil migration into process, no oil contamination to the environment) guarantees maximal food safety
- Comfort of use for the operator thanks to low noise level
- Low maintenance requirements and low operating cost
- Simple and complete on-site cleaning of all surfaces in contact with process media

Options

- Stainless steel hygienic enclosures for full wash-down capability



Stainless steel claws and corrosion resistant pumping chamber

Technical data

		CLAWVAC				
		CP 65 B	CP 150 B	CP 300 B	CP 500	CP 1000
Pumping speed ¹⁾ (50/60 Hz)	m ³ x h ⁻¹	65/79	152/184	295/347	500/600	1000/1140
Ultimate pressure	mbar	50			200	
Continuous operation range	mbar	50-1000		140-1000	200 - 1000	
Permissible ambient temperature range	°C	0 - 40				
Connections						
Inlet		G 1 1/4" or NPT		G 2" or NPT	G3"	DN100 PN6
Outlet		G 1 1/4" or NPT		G 1 1/4" or NPT	G2 1/2"	DN100 PN10
Motor power (50/60 Hz)	kW	1.8/2.2	3.7/4.4	6.2/7.5	9.2/11	18.5/22
Operation range	Hz	20 - 60				
Noise level (50/60 Hz)	dB(A)	66/72	72/75		80/82	82/85
Weight, approx.	kg	153	182	304	313	615
Motor protection class	IP	55				

¹⁾ To DIN 28 400 ff.

Ordering information

		CLAWVAC				
		CP 65 B Part No.	CP 150 B Part No.	CP 300 B Part No.	CP 500 Part No.	CP 1000 Part No.
Dry vacuum pump with 3 phase motor						
200-230V, 50 Hz		10780065V01	10780150V01	10780300V01		
380 V, 60 Hz		10780065V02	10780150V02	10780300V02	10790500V03	10791000V03
400 V, 50 Hz		10780065V03	10780150V03	10780300V03	10790500V02	10791000V02
575 V, 60 Hz		10780065V04	10780300V04	10780300V04		
V, 60 Hz (460 V, 60 Hz only for CP 500 / 1000)		10780065V07	10780150V07	10780300V07	10790500V04	10791000V04
CLAWVAC accessories						
External silencer G1"1/4		178005A05	178005A05	178005A05		
Inlet filter & elbow G3"					10790500A00	
Outlet silencer G2-1/2"					10790500A01	
Inlet filter & elbow DN100						10791000A00
Outlet silencer DN100						10791000A01
Flushing kit		111005A00				

Dry rough vacuum pump

CLAWVAC CPi System NOVADRY NDi System



CPi and NDi are variable speed, dry vacuum systems using multiple pumps: up to three **NOVADRY** screw pumps (NDi) or four **CLAWVAC** claw pumps (CPi B). The smart control allows operation at the selected target pressure to not waste any performance or energy. All pump data is available anytime – from anywhere and intelligent software functions like maintenance and service alerts or the set up of different user profiles guarantee best operation performance.

Our solution

- Dry air-cooled systems- Strong internal chassis with forklifting facilities for easy handling
- Easy accessibility of the pumps for service
- Full monitoring and control facilities

Customers benefits

- Dry vacuum: central vacuum systems without any risk of oil contamination
- Plug & Go: an easy-to-install package to replace old technologies
- Ready for harsh processes providing better uptime
- Economical to run: the on-board controller will enable to optimize pumping speed to the process needs and save energy
- All pumps are equipped with VFD with smart control logic allowing significant energy savings
- Low total cost of ownership

Typical applications

- Conveying of food and waste products (CPi B)
- Pick and place (CPi B)
- Holding, lifting (CPi B)
- CVS for applications requiring pressure above 150 mbar (CPi B)
- Thermoforming (NDi, CPi B)
- CVS for applications with 10 - 100 mbar working pressure (NDi)
- Modified Atmosphere Packaging including with high oxygen concentration (NDi)

Technical data

		CLAWVAC system	
		CP 1200i B	CP 1600i B
Pumping speed	m ³ x h ⁻¹	24 - 1150	24 - 1450
Ultimate pressure	mbar	150 - 1000	
Noise level ¹⁾	dB (A)	74	
Motor power	kW	33	44
Weight	kg	1500	1800
Ambient temperature	°C	0 - 40	
Connections Inlet / Outlet		DN 100	

¹⁾According to DIN EN ISO 2151

Ordering information*

	CLAWVAC system	
	CP 1200i B	CP 1600i B
380 - 480 V 50/60 Hz 3 PH	10781200V01	10781600V01

*For detailed information on our full scope of CLAWVAC pumps and motor versions, please refer to our general catalog.

Visit our webshop www.leyboldproducts.com. Please contact us for technical details on the entire CLAWVAC Systems range.

Technical data

		NOVADRY NDi system	
		ND 400i	ND 600i
Maximum pumping speed (w/o gas ballast)	m ³ /h	400	600
Ultimate pressure w/o gas ballast	mbar	5	
Max. permissible outlet pressure (rel. to ambient)	mbar	200	
Max. permissible inlet pressure	mbar	1200	
Water vapor tolerance with gas ballast	mbar	60	
Water vapor capacity with gas ballast	kg/h	13,8	20,7
Permissible ambient temperature	°C	0 to +40	
Nominal motor power 50Hz / 60Hz	kW	9	13
Weight, approx.	kg	692	997
Dimensions (L x W x H)	mm	1410 x 925 x 1503 x 880	1410 x 925 x 1979
Inlet / outlet connection		DN80 / DN80	

Ordering information

	NOVADRY NDi system	
	ND 400i Part No.	ND 600i Part No.
50 Hz, 200/400V	111400NDi01	111600NDi01
60 Hz, 230/460V	111400NDi02	111600NDi02
60 Hz, 200/380V	111400NDi03	111600NDi03

Oil-sealed screw central vacuum system

VACUBE



The **VACUBE** range is a new generation of intelligent, single-stage, oil-sealed screw vacuum pumps with variable speed drive (VSD) technology.

VACUBE generates vacuum on demand. The pump is controlled and maintained by an internal controller. The system offers superior performance for a wide range of rough vacuum applications.

Two versions are available. Next to the standard model, the „iH“ model should be used for high water vapor handling.

Our solution

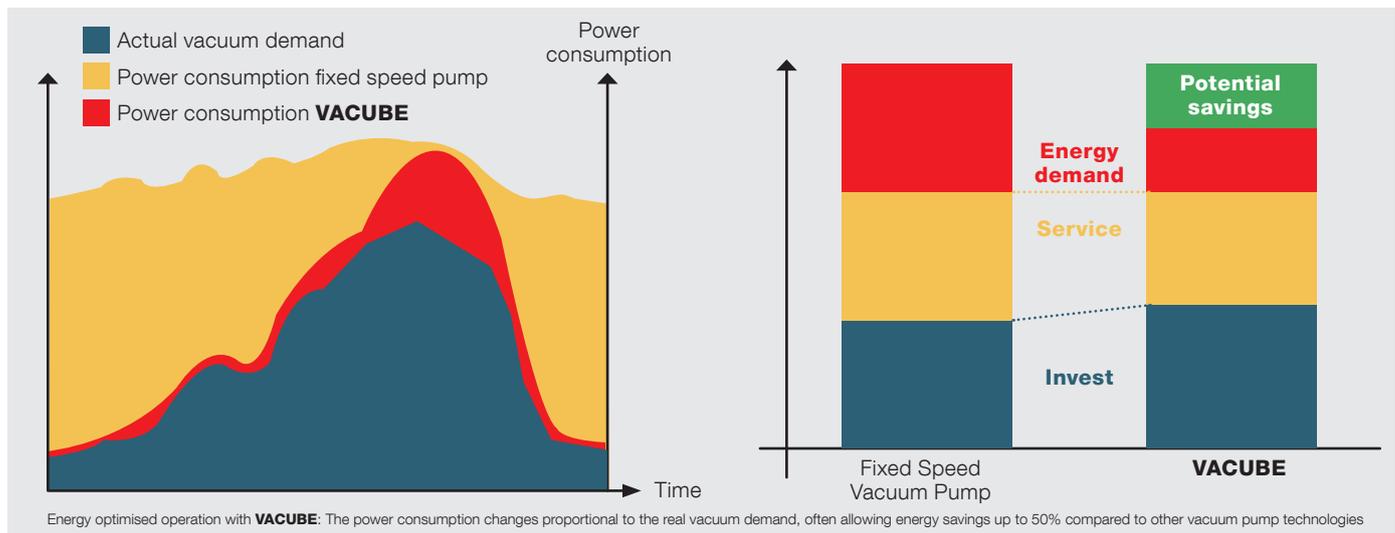
- Plug & Go system set up
- Highly efficient oil-sealed rotary screw technology
- Pumping speed 420 to 4.972 m³/h
- Optimal working pressure range: 5-400 for VQ and 5-1000 for VQ²
- Integrated frequency inverter for load depending speed control
- Controller with intuitive menu navigation for configuration and control
- Air- or water-cooled versions
- Small footprint
- Programmable operation modes
- Long maintenance intervals

Typical applications

- Central vacuum systems for packaging and processing
- Meat packaging under modified atmosphere (no O₂)
- Chamber packaging
- Canning

Customer benefits

- Sustainable power saving due to on-demand vacuum generation
- Low total cost of ownership



Technical data

		VACUBE i - iH			
		VQ 400	VQ 550	VQ 700	VQ 800
Pumping speed, max. eff. ¹⁾	m ³ x h ⁻¹ (cfm)	420 (465)	530 (310)	700 (412)	790 (465)
Motorshaft power	kW	5.5	7.5	11	15
Noise level	dB(A)	51 - 65		51 - 73	51 - 76
Weight	kg	500		510	520
Supply voltages*	Hz	380 - 460 V, 3 phase, 50/60 Hz			

		VQ² 1350	VQ² 1600	VQ² 1800
Pumping speed, max. eff. ¹⁾	m ³ x h ⁻¹	1370	1570	1770
Motorshaft power	kW	22	30	37
Noise level	dB(A)	76	78	78
Weight	kg	1210	1220	1230
Supply voltages*	Hz	380 - 460 V, 3 phase, 50/60 Hz		

		VQ 3600	VQ 4200	VQ 4800
Pumping speed, max. eff. ¹⁾	m ³ x h ⁻¹	3739	4516	4972
Motorshaft power	kW	55	75	90
Noise level	dB(A)	70 - 83	70 - 84	70 - 85
Weight	kg	3945	3980	4000
Supply voltages*	Hz	380 - 460 V, 3 phase, 50/60 Hz		

¹⁾ To DIN 28 400 ff.

* Other voltages available on request

Ordering information

	VACUBE i - iH	
	i Models Part No.	iH Models Part No.
VACUBE VQ 400 HMI	10770400V05	10770400V15
VACUBE VQ 550 HMI	10770550V05	10770550V15
VACUBE VQ 700 HMI	10770700V05	10770700V15
VACUBE VQ 800 HMI	10770800V05	10770800V15
VACUBE VQ ² 1350 HMI	8153690228	8153690231
VACUBE VQ ² 1600 HMI	8153690229	8153690232
VACUBE VQ ² 1800 HMI	8153690230	8153690233
VACUBE VQ 3600	177360V01QD	177360V10QD
VACUBE VQ 4200	177420V01QD	177420V10QD
VACUBE VQ 4800	177480V01QD	177480V10QD
LEYBONOL vacuum oil LVO 320, 20 liter	L320 20	L320 20

Water-cooled versions and other variants available, please contact us.

Roots vacuum blower

RUVAC WAU



Roots blowers, also called boosters are contactless dry impellers pumps.

In combination with forevacuum pumps, the use of RUVAC Roots blowers features:

- increased pumping speed
- improved ultimate pressure
- shortened cycle times

Our solution

- Air-cooled line WAU with four blower sizes
- Reliable and trouble-free operation
- Easy installation, direct coupling without a support frame for SOGEVAC SV 100 or larger
- Integrated pressure equalization line for protection against overloading at high pressures
- Conversion from vertical to horizontal flow
- Maintenance-friendly

Typical applications

- Large capacity chamber packaging machines
- Vacuum cooling of fruits and vegetables
- Freeze drying

Customer benefits

- Shorter cycle time and/or higher production output
- Low total cost of ownership

Technical data

		RUVAC			
		WAU 251	WAU 501	WAU 1001	WAU 2001
Nominal speed ¹⁾					
at 50 Hz	m ³ x h ⁻¹	230 (149)	505 (297)	1000 (589)	2050 (1207)
at 60 Hz	m ³ x h ⁻¹ (cfm)	304 (179)	607 (357)	1200 (707)	2462 (1449)
Ultimate pressure for combination with fore vacuum pump	mbar (Torr)	6.7 x 10 ⁻² (5 x 10 ⁻²)			
Motor power	kW (hp)	1.1 (1.5)	2.2 (3.0)	4.0 (5.4)	7.5 (10.0)
Noise level	dB(A)	< 64	< 67	< 75	< 80
Oil capacity	l (qt)	0.7 (0.74)	1.2 (1.3)	1.8 (1.9)	1.8 (1.9)
Connecting flanges	DN	63 ISO-K		100 ISO-K	160 ISO-K

¹⁾ To DIN 28 400 ff.

Ordering information

	RUVAC			
	WAU 251 Part No.	WAU 501 Part No.	WAU 1001 Part No.	WAU 2001 Part No.
RUVAC WAU ... 3 phase motor 200-240 V / 380-400 V, 50 Hz 200-240 V / 380-480 V, 60 Hz	117 21	117 31	117 41	117 51

Oil-sealed rotary vane vacuum pump

SOGEVAC



SOGEVAC are proven oil sealed rotary vane pumps. This technology has been used by the food industry since decades and is today recognized as a standard.

SOGEVAC are compatible with food grade NSF H1 oil - available on request.

Our solution

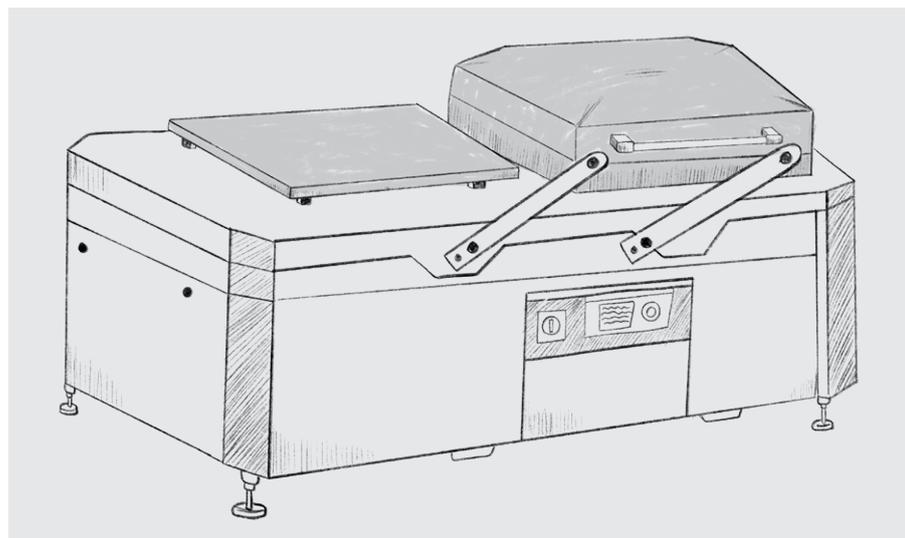
- High pumping speed / footprint ratio by compact design
- Maximum tightness and low complexity thanks to integrated functions and no external pipes
- Lowest noise level on the market
- Wide range of motors available for all pump sizes
- Complete pump range from 10 m³/h to 750 m³/h
- Based on proven **SOGEVAC** design with manual gas ballast and oil filter
- Air or water-cooling options available on SV 320 B and bigger
- Adaptors for direct mounting of Roots blowers on SV 100 B and bigger

Typical applications

- Thermoformers / Rollstock machines
- Chamber packaging machines
- Modified Atmosphere Packaging (except with O₂)
- Rotary chamber packaging
- Blenders
- Stuffers
- Vacuum cutters
- Freeze drying
- Vacuum cooling
- Central vacuum systems

Customer benefits

- Low cost of ownership by easy maintenance and minimized after sales costs



Technical data (50Hz)		SOGEVAC			
		SV 10 B	SV 16 B	SV 25 B	SV 40 B
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	11 (6.5)	16.0 (9.4)	26.0 (15.3)	44.0 (25.9)
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	9.5 (5.6)	15.0 (8.8)	22.5 (13.3)	38.5 (22.7)
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 1.5 (≤ 1.1)	≤ 1.0 (≤ 0.8)	≤ 0.5 (≤ 0.4)	
Ultimate total pressure without gas ballast ¹⁾	mbar (Torr)	≤ 2.5 (≤ 1.9)	≤ 2.0 (≤ 1.5)	≤ 0.8 (≤ 0.6)	≤ 1.5 (≤ 1.1)
Maximum permissible water vapor capacity	kg x h ⁻¹ (qt/hr)	0.02 (0.02)		0.085 (0.09)	0.76 (0.81)
Motor power	kW (hp)	0.55 (0.75)	0.55 (0.75)	0.9 (1.2)	1.1 (1.5)
Noise level ²⁾	dB(A)	60	60	64	58
Oil capacity	l (qt)	0.5 (0.53)			1.0 (1.05)
Connections ³⁾					
Intake side ⁴⁾	G or NPT	3/4" + 1/2"		3/4" + 1/2"	1 1/4"
Pressure side	G or NPT	-		3/4"	1 1/4"
		SV 65 B	SV 100 B	SV 220 B	SV 320 B
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	59.0 (34.8)	97.5 (57.4)	180 (106)	330 (194)
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	54.0 (31.8)	87.5 (51.5)	170 (100)	284 (168)
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.5 (≤ 0.4)		≤ 0.08 (≤ 0.06)	
Ultimate total pressure without gas ballast ¹⁾	mbar (Torr)	≤ 1.5 (≤ 1.1)		≤ 0.7 (≤ 0.5)	
Maximum permissible water vapor capacity	kg x h ⁻¹ (qt/hr)	1.0 (1.1)	1.6 (1.7)	3.4 (3.6)	1.3 (1.4)
Motor power	kW (hp)	1.5 (2.0)	2.2 (3.0)	4.0 (5.4)	7.5 (10)
Noise level ²⁾	dB(A)	60	61	69	70
Oil capacity	l (qt)	2.0 (2.1)		9.0 (9.5)	11.5 (12.2)
Connections ³⁾					
Intake side ⁴⁾	G or NPT	1 1/4"		2"	
Pressure side	G or NPT	1 1/4"		2"	
		SV 630 B	SV 750 B	* Please refer to our general catalogue for the 60 Hz versions specifications	
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	700 (412)	840 (494)		
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	640 (377)	755 (444)		
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.08 (≤ 0.06)			
Ultimate total pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.7 (≤ 0.5)			
Maximum permissible water vapor capacity	kg x h ⁻¹ (qt/hr)	17.0 (18.0)	24.0 (25.4)		
Motor power	kW (hp)	15.0 (20.1)	18.5 (24.8)		
Noise level ²⁾	dB(A)	72	75		
Oil capacity	l (qt)	23.0 (24.3)			
Connections ³⁾					
Intake side ⁴⁾	G or NPT	100 PN / 100 ISO-K			
Pressure side	G or NPT	Option			

¹⁾ To DIN 28 400 and following numbers

²⁾ Operated at the ultimate pressure without gas ballast, free-field measurement at a distance of 1 m (3.5 ft)

³⁾ 1/2" adapter supplied. Basic port is 3/4"

⁴⁾ Single-phase motors do not have plugs, cords or ON/OFF switches

Oil-sealed rotary vane vacuum pump

Ordering information	SV 10 B Part No.	SV 16 B Part No.	SV 25 B Part No.	SV 40 B Part No.	SV 65 B Part No.
Three-phase world motor	960 100	960 160	960 251	960 324	960 424
Three-phase world motor 230 V / 400 V, 50 + 60 Hz / 460 V, 60 Hz	-	-	-	960 307	960 407
Single-phase world motor 230 V, 50/60 Hz; G	960 105	960 165	960 256	-	-
230 V, 50/60 Hz; NPT	-	-	960 257	-	-
110 - 120 V, 60 Hz	960 110	960 170	-	-	-

	SV 100 B Part No.	SV 220 B Part No.	SV 320 B Part No.	SV 630 B Part No.	SV 750 B Part No.
Three-phase Europe motor 230 V / 400 V, 50 Hz and 460 V, 60 Hz	960 507	960602V	960722V	960 863	960 875
Three-phase USA motor ¹⁾ 230 V / 460 V, 60 Hz and 400 V, 50 Hz UL/CSA with terminal board	960 514	10330220V01	960732V1706	960 865	-
Three-phase world motor 230 V / 400 V, 50 + 60 Hz / 460 V, 60 Hz	960 524	960617V	960732V	960 863 V3021	960 875 V2091

¹⁾ Pumps with USA motors have NPT inlet and outlet flanges

Oil for SOGEVAC pumps

LEYBONOL Oils

	SV 10 B SV 16 B	SV 25 B	SV 40 B SV 65 B SV 100 B	SV 220 B SV 320 B	SV 630 B SV 750 B(F)	SV Oxygen version
LVO 120 (Standard Mineral Oil)	■	■				
LVO 130 (Standard Mineral Oil)			■	■		
LVO 140 (Food Grade Oil)	●	●				
LVO 150 (Food Grade Oil)			●	●	●	
LVO 400 (PFPE Oil)						■

■ Standard ● Possible, please contact Leybold

The table only lists general applications. Your specific requirements might be subject to deeper analysis. For further questions, please contact our technical sales support. **For information on oil specifications please refer to our general catalogue.**

SOGEVAC SV oxygen



SOGEVAC SV 100 B

As soon as oxygen is pumped at concentrations exceeding 21% (atmospheric air) the **SOGEVAC** pump needs to be prepared especially for such operation. This is typically the case in red meat Modified Atmosphere Packaging processes (MAP).

Our solution

- **SOGEVAC Oxygen** version pumps are available in the following sizes: SV 25 D, SV 65 B, SV 100 B, SV 320 B
- Hydrocarbon-free pump parts and inert PFPE oil filling for use in oxygen applications, respective when gas mixtures are pumped with O₂ concentrations exceeding 21%
- Air or water cooled
- Available in many different variants, motor voltages, ports etc.

Typical applications

- MAP (Modified Atmosphere Packaging) or red meat and tuna

Customer benefits

- Maximal safety level related to oxygen use
- Low cost of ownership thanks to lifetime of PFPE oil
- Over 10 % cycle time reduction vs. competitors' pumps on many models

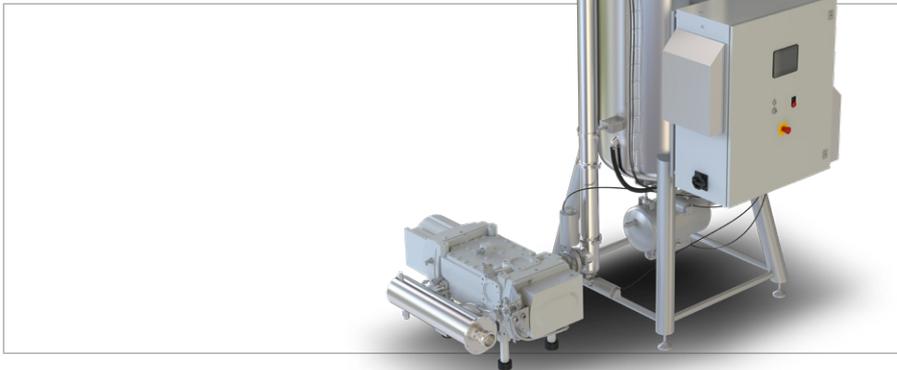
Safety Precautions

As standard, the pumps are equipped with FPM (FKM) seals and an oil filter bypass. Before assembly, all parts are degreased and the pumps are tested with PFPE lubricant. Thereafter the pumps are emptied and delivered without PFPE lubricant. The pumps are supplied with special Operating Instructions (GA) and Spare Parts List (ET).

Pumps	Part No.	Ultimate pressure mbar (Torr)	
		without gas ballast	with gas ballast
SV 25 D	960211V2016 960215V2016	1.0 (0.75)	1.5 (1.13)
SV 65 B	960401V2016 960412V2016	1.0 (0.75)	2.5 (1.88)
SV 100 B	960505V2016 960512V2016	1.0 (0.75)	2.5 (1.88)
SV 320 B	960732V2016	0.5 (0.38)	1.5 (1.13)

Accessories

Beer Bottling Vacuum System



SAVE WATER
AND REDUCE
TCO

Our Beer Bottling Vacuum System BBVS is a turnkey solution to replace Liquid Ring Pumps (LRP) on high-speed glass bottle fillers. Based on the dry screw pump DRYVAC, it allows to reduce dramatically the water consumption compared to LRP. The power consumption is also reduced thanks more efficient pumping principle. The lower end pressure, combined with higher pumping speed provide a lower and more stable bottling pressure which has positive impact on the beer shelf life.

Our solution

- Turnkey solution (1-to-1 replacement of LRP)
- DRYVAC DV 650 or 800FP-r VFD driven dry screw pumps for washdown environments (epoxy finish and cleanable stainless steel silencer)
- Complete system designed for clean-in-place (CIP)
- All components made of stainless steel AISI 316 L
- Use of hygienic valves (dead space free design - EHEDG and FDA Compliant)
- Electrical cabinet with PLC controlling the entire system. Local control via 7" HMI or remote control by WebUI, hardware I/O or industrial Ethernet fieldbus
- Suitable for up to 80,000 bottles per hour depending on bottle format
- Leybold offers commissioning, training, service and software support for system integration

Customer benefits

- Minimal to no water consumption (with optional water chiller)
- Energy saving of up to 20% on average compared to liquid ring pumps
- Lower bottling pressure resulting in better TPO values (up to 50% compared to LRP) providing longer shelf lifetime and possibly CO₂ consumption reduction
- Reduced maintenance and no risk of cavitation
- High robustness handling water vapor and liquid droplets
- Increased food safety through cleaning of complete vacuum system including the vacuum pump

Leybold's latest innovation for the beer industry is primed to focused on increasing the efficiency and sustainability of beer bottling.



Technical data

		BBVS systems	
		BBVS with DV 650	BBVS with DV 800
Pumping speed	m ³ x h ⁻¹	650	800
Permissible ambient temperature	°C	40	
Electrical connection		380 – 460 V, 50/60 Hz	
Noise level at ultimate pressure	dB(A)	73	
Inlet flange		DN 100 DIN 32676-A System inlet	
Exhaust flange system		Welding end 76,1 x 2,3	
Separator drain flange		DN 50 DIN 32676-A Outlet valve drain vessel	
Weight	kg	Approx. 1500	
Dimensions (L x W x H)	mm	2450 x 1600 x 2900	

Ordering information

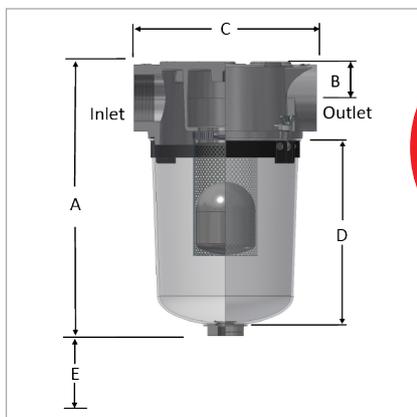
	BBVS systems	
	BBVS with DV 650	BBVS with DV 800
380-460V - 50 & 60 Hz	505583V002	505583V004

Accessories

Liquid separator, see-through



See-through liquid separator with insert for the collection of large particles



Dimensional drawing of the liquid separators. For the dimensions please refer to the technical data

**EASY
VISUAL
INSPECTION
AND
CLEANING**

Operating principle

Liquids and larger particles are separated by the integrated baffle and accumulate in a transparent polycarbonate container.

A float ball in the separator rises with the liquid level. At maximum filling level, it interrupts the gas flow on the outlet side to protect the pump.

Technical features

- High impact, shatter resistant, polycarbonate bucket
- Corrosion resistant cast aluminum head with integrated knockout baffle
- Stainless steel float ball for emergency shut off
- 1/2" drain
- 1/4" differential gauge ports 2" to 4"

Customer benefits

- Protects vacuum valves and pumps from particles and deposits
- Quick visual inspection through transparent collection container
- Simple installation, minimal connection costs due to T-shaped design
- Compact filter, space-saving - ideal for tight installation situations

Technical data

		Liquid separator			
		1" 1/4 FP	2" FP	3" FP	4" FP
Inlet / Outlet flange	BSP	G1"1/4	G2"	G3"	G4"
Rated for flow	m ³ /h	68	178	407	424
Dimensions	mm				
A		362	438	522	522
B		38	51	70	70
C		178	229	343	343
D		286	343	378	378
Suggested service height E	mm	229	229	229	229
Holding capacity	l	1.6	3.7	5.7	5.7
Ordering Information	Part No.	95140FP	95144FP	95146FP	95147FP

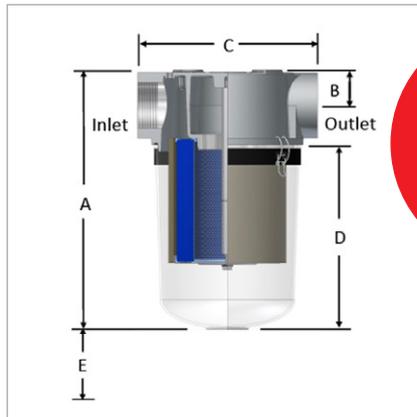
Dust Filter, see-through



See-through dust filter with insert for the collection of large particles

Operating principle

Inlet vacuum filter with exchangeable polyester cartridge (efficiency on 5 microns particles > 99%)



Dimensional drawing of the dust filters. For the dimensions please refer to the technical data

Technical features

- See-through bucket made from polycarbonate material with high tensile strength for dimensional stability
- Cast, corrosion resistant aluminum top with machined connections with integrated baffle design
- Operating temperature range:
Dust filter: max. 104°C (220°F)
Bucket: max. 125°C (257°F)
- Inlet / Outlet:
G1"1/4 to G4" – depending on the size
G1/4" differential gauge ports



Customer benefits

- Protects vacuum valves and pumps from particles and deposits
- Quick visual inspection through transparent collection container
- Simple installation, minimal connection ycosts due to T-shaped design
- Compact filter, space-saving - ideal for tight installation situations
- Simple cleaning and fast filter insert exchange

Technical data

		Dust filter			
		1" 1/4 FP	2" FP	3" FP	4" FP
Inlet / Outlet flange	BSP	G1"1/4	G2"	G3"	G4"
Rated for flow	m ³ /h	102	298	510	883
Dimensions	mm				
A		334	325	473	473
B		32	51	70	70
C		178	229	343	343
D		257	229	330	330
Suggested service height E	mm	229	229	229	229
Ordering Information:					
Dust filter	Part No.	95354FP	95356FP	95358FP	95360FP
Spare filter cartridge	Part No.	EK95354PC	EK95356PC	EK95358PC	
Replacemen tank (+O-Ring)	Part No.	EK95354TS	EK95356TS	EK95358TS	

Accessories

"All in one" inlet filter kits



Inlet filters are crucial for safeguarding vacuum pumps from abrasive dust particles, enhancing long-term efficiency, and extending the overall lifespan of the equipment. Incorporating these filters into your maintenance routine is a prudent investment in the reliable performance of your vacuum pump system. Inlet filters are specifically recommended for Leybold technologies such as SOGEVAC, CLAWVAC, VARODRY and NOVADRY.

Technical features

- Plug & Go: Easy installation with “All in one” pre-assembled kits with filter, elbow, pipe and nipple
- Polyester or paper filter element:
 - Polyester: Medium to heavy duty (Moist process), washable
 - Paper: Light duty application (dry process), not washable
- Pumping speed reduction (clean filter): 2%

Customer benefits

- Filter installed horizontally preventing particles from falling in the pump inlet when disassembling the filter
- Change of filter element possible (paper or polyester)

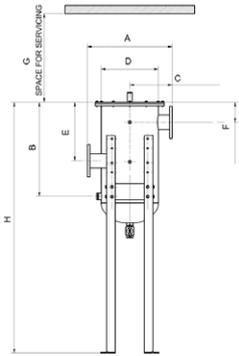
Ordering information

	Inlet filter kits		
	Related pump	Part No.	Replacement Filter element
Filter Kit paper 2"	SV 220-300, CP 300 (B), ND VD 160 – 200	8090360119	8090360135
Filter Kit poly 2"	SV 220-300, CP 300 (B), ND VD 160 – 200	8090360120	8090360136
Filter Kit paper 1 1/4" Oversized	SV 100-120, CP 150 (B)	8090360141	8090360133
Filter Kit paper 1 1/4" Oversized	SV 100-120, CP 150 (B)	8090360118	8090360134
Filter Kit paper 1 1/4"	SV 40-65, CP 65 (B), ND VD 65 – 100	8090360123	8090360139
Filter Kit paper 1 1/4"	SV 40-65, CP 65 (B), ND VD 65 – 100	8090360124	8090360140
Filter Kit paper 1/2"	SV 16-25B	8090360121	8090360137
Filter Kit Poly 1/2"	SV 16-25B	8090360122	8090360138

LF dust filter & liquid separator







Type		A	B	C	øD	E	F	G	H
LF550	mm	522	584	261	261	364	124	550	1556 to 1856
LF1800	mm	900	990	450	750	654	219	800	1770 / 1920

Our LF range offers triple protection:

- Liquid separator: holds the liquids that can potentially be sucked in with the pumped gas
- Demister: catches the mists (thin droplets) and converts them to bigger drops of liquid
- Polyester filter: catches all particles over 5µm

Our solution

- Self supported, adjustable feet
- Two sizes available: 550 and 1800 m³/h
- Auto-drain systems available as an option

Customer benefits

- Increases pump lifetime and reliability: less wear and less corrosion inside the pump
- Reduces maintenance costs: on oil-sealed pumps, the oil and the oil demisters will last longer
- Increases uptime: fewer pump stops
- Easy to clean and service:
 - Wide flange on the top
 - Drain valve at the bottom
 - Piping stays connected during cleaning

Technical data

		LF filter & liquid separator		
		LF550	LF1800	Auto-Drain LFP
Pumping speed	m ³ /h	550	1800	-
Inlet / Outlet		DN80	DN150	G³/₄" F (inlet)
Liquid capacity		19 l	40 l	30 l/h

Ordering information

	LF550	LF1800	Auto-Drain LFP
Part No.	177005A27	10441800A01	10440001A01

Vacuum pressure gauges

Vacuum pressure gauges



**EASY
PRESSURE
MONITORING**

Typical Applications

- Food and packaging industry
- Vacuum process quality assurance

Our solution

- Handheld vacuum gauge
PIEZOVAC PV 201
- Usage possible directly in a vacuum
- Measurement range 1,200 to 1 mbar
(for lower pressure measurement down to 10-5 mbar, use our combined Pirani / Piezoresistive gauge TM201)
- Data logging (1 GB internal storage) for saving multiple measurement series
- USB-C interface: easy charging and fast data transmission
- Bluetooth version available (optional)
- Leak rate / Rate of rise measurement function
- Big graphical display and intuitive menu-driven operation
- Vacuum connection DN 16 ISO-KF, G1/4
- Dimensions : 70 x 105 x 46.4 mm
- Weight : 250 g

Customer benefits

The temperature compensated handheld gauge PIEZOVAC PV 201 is equipped with an internal piezoresistive silicone sensor and offers gas type independent measurement in the range of 1,200 to 1 mbar.

The PIEZOVAC PV 201 measurement gauges are universal to use - as a mobile handheld instrument or fixed to a vacuum installation. Operates even under full vacuum conditions.

For example: These gauges can be enclosed to the packaging during the packing process to monitor the real pressure in the inner packaging.

Ordering information

Vacuum pressure gauges

	Part No.
PV201 - DN16KF	2300810RN
PV201 (Bluetooth) - DN16KF	2300815RN
Protective case only	2300811RN
USB C - Interface cable	2300812RN
Charger Kit	2300813RN

For detailed information please refer to our General Catalog or contact us.

Oil

LEYBONOL LVO vacuum oil



LEYBONOL food-grade oil

LEYBONOL oils and lubricants from Leybold are especially designed with regard to the high demands in vacuum technology.

Their vapour pressure is low at high temperatures and the water content and water uptake is minimal. Their viscosity characteristics are flat, lubricating properties excellent, and they have high resistance against thermal decomposition and increased mechanical stress.

The food-grade LEYBONOL is registered at NSF (Lev. H1). So it is ideal for use in food processing and packaging areas.

LVO 140 and LVO 150

Mineral oil with additives

- Resistant against oxidation
- Highly resistant to contamination

Product examples:

- LVO 140: SOGEVAC (A-series ≤ SV65, B-series ≤ SV25B)
- LVO 150: SOGEVAC (A-series ≥ SV 100, B-series ≥ SV 40 B)

LVO 300 and LVO 320

Synthetic oil (PAO with additives)

- High thermal and oxidative stability

Product examples:

- SOGEVAC, VACUBE

LVO 400 and LVO 410

Synthetic oil (perfluoropolyether PFPE, free of additives)

- Chemical inert, highest thermal stability; for MAP packaging of red meat with high oxygen concentration

Product examples:

- RUVAC, DRYVAC, SOGEVAC

Ordering information

	Part No.		Part No.
LEYBONOL LVO 140, 1 liter	L14001	LEYBONOL LVO 400, 1 liter	L40001
LEYBONOL LVO 150, 1 liter	L15001	LEYBONOL LVO 410, 0,6 liter	L41000
LEYBONOL LVO 150, 20 liter	L15020	LEYBONOL LVO 410, 1 liter	L41001
LEYBONOL LVO 300, 1 liter	L30001		
LEYBONOL LVO 300, 5 liter	L30005		
LEYBONOL LVO 300, 20 liter	L30020		
LEYBONOL LVO 320, 20 liter	L32020		

For detailed information please refer to our General Catalog or contact us.

Range of stainless steel fittings

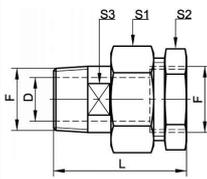
Fittings

- Made of stainless steel 316 or 316L grade for withstanding daily washdown process
- Sealing to be made with PTFE tape or suitable sealing glue
- Allows to connect the vacuum pump inlet to your process



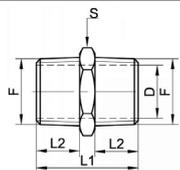
Union coupling

To be mounted at the pump inlet. Allows orientating the pipe / filter in any wished position.

		F	G1/2"	G1"1/4	G2"
		L	50	68	78
		D	15,5	33	48
		S1	32	55	75
		S2	30	52	70
		S3	18	38	54
		Part. No.	UC050SST	UC125SST	UC200SST

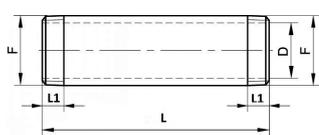
Double nipple

To be inserted between the union coupling and the filter (or between the pump and filter directly).

		F	G1/2"	G1"1/4	G2"	G3"	G4"
		L1	34	52.5	62	78.4	94
		D	14	32	50	77	102
		S	22	46	65	90	120
		Part. No.	DN050SST	DN125SST	DN200SST	DN300SST	DN400SST

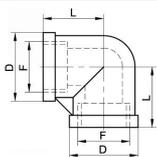
Double nipple - long version

Same as above. In longer version to move filter away from pump inlet in case of space restriction.

		F	G2"	G3"	G4"
		D	53.3	80.9	106.4
		L	100	200	100
		L1	20	30	35
		Part. No.	DNL200SST	DNL300SST	DNL400SST

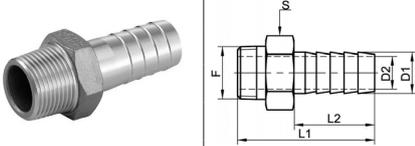
Elbow 90°

Always use an elbow when mounting a filter to protect the pump from particles falling in the inlet when cleaning or replacing the filtering cartridge.

		F	G1/2"	G1"1/4	G2"	G3"	G4"
		D	27	49	69	99	125
		L	27.5	45.5	57.5	78.5	96.5
		Part. No.	EL050SST	EL125SST	EL200SST	EL300SST	EL400SST

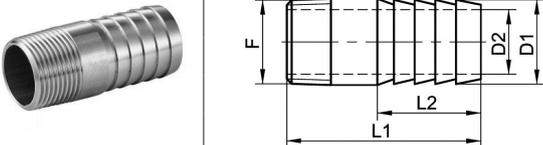
Hose adapter (hexagonal)

To be used for flexible hose (PVC) connection.

	F	G1/2"	G3/4"	G1"1/4	G1"1/2	G2"
	D1	14	20.5	33	39.5	52
	D2	9	14.5	25.5	32	42.5
	S	24	31	46	52	62
	L1	64	69	81	95	106
	L2	40	40	46	59	65
	Part. No.	HA050SST	HA075SST	HA125SST	HA150SST	HA200SST

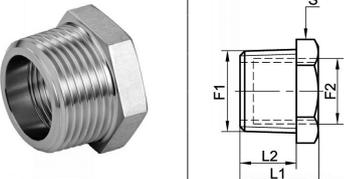
Hose adapter (cylindrical)

Same as above for bigger diameters.

	F	G3"	G4"
	D1	89	114
	D2	80.9	106.3
	L1	120	140
	L2	60	70
	Part. No.	HA300SST	HA400SST

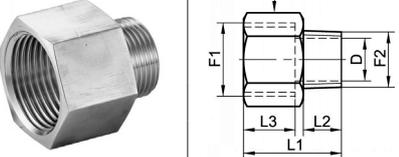
Male - Female reduction

Allows all possible mounting combinations.

	F1	G3/4"	G1"1/2	G2"	G3"
	F2	G1/2"	G1"1/4	G1"1/4	G2"
	S	27	50	65	90
	L1	21	31	33	42
	L2	15	20	22	30
	Part. No.	R075050SST	R150125SST	R200125SST	R300200SST

Female - Male reduction

Allows to mount hose adapter HA150SST (with D1 = 39.5 mm) on G1"1/4 port.

	F1	G1"1/2
	F2	G1"1/4
	S	55
	D	34
	L1	49
	L2	18
	L3	26
	Part. No.	R125150SST

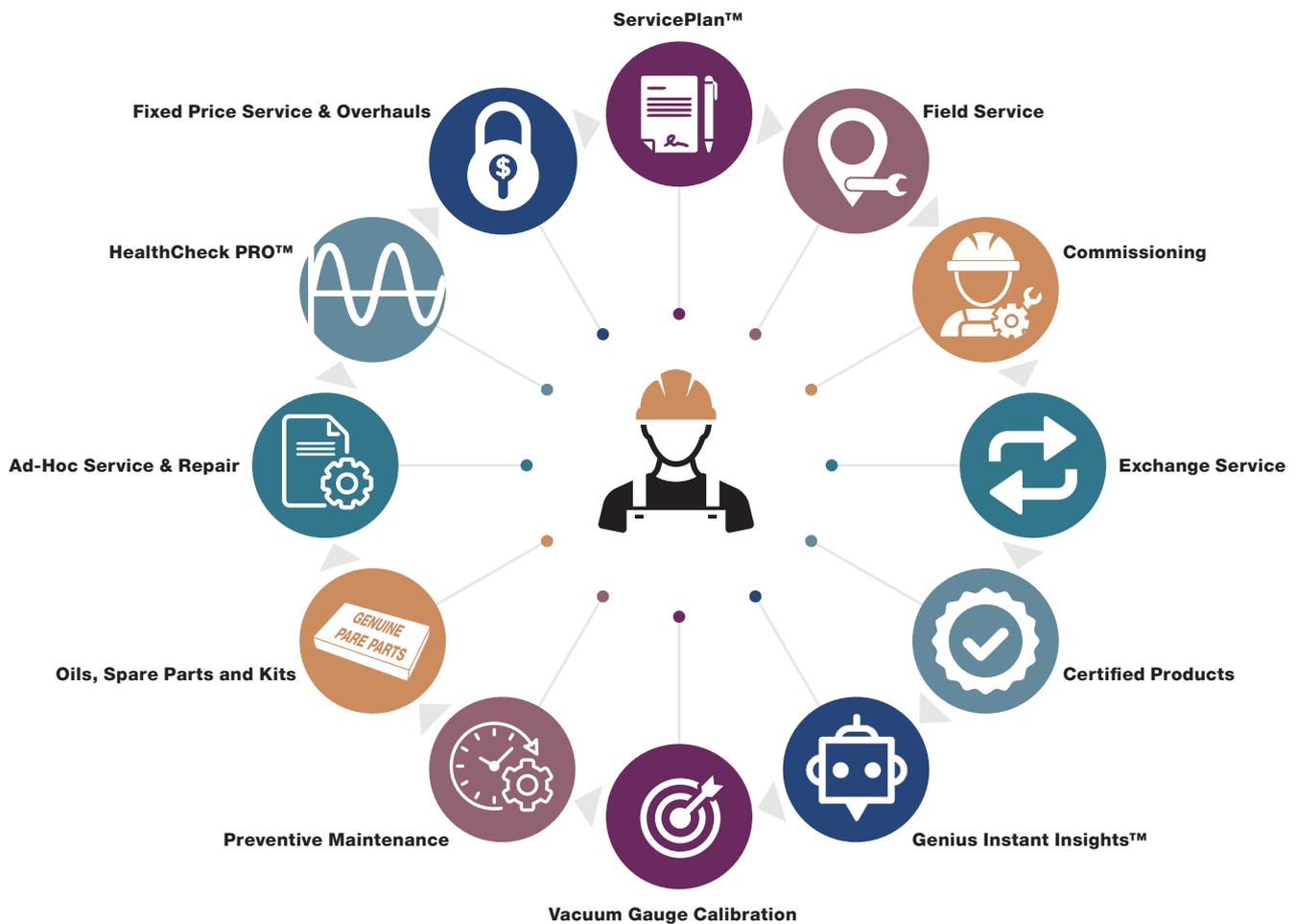
Service

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.

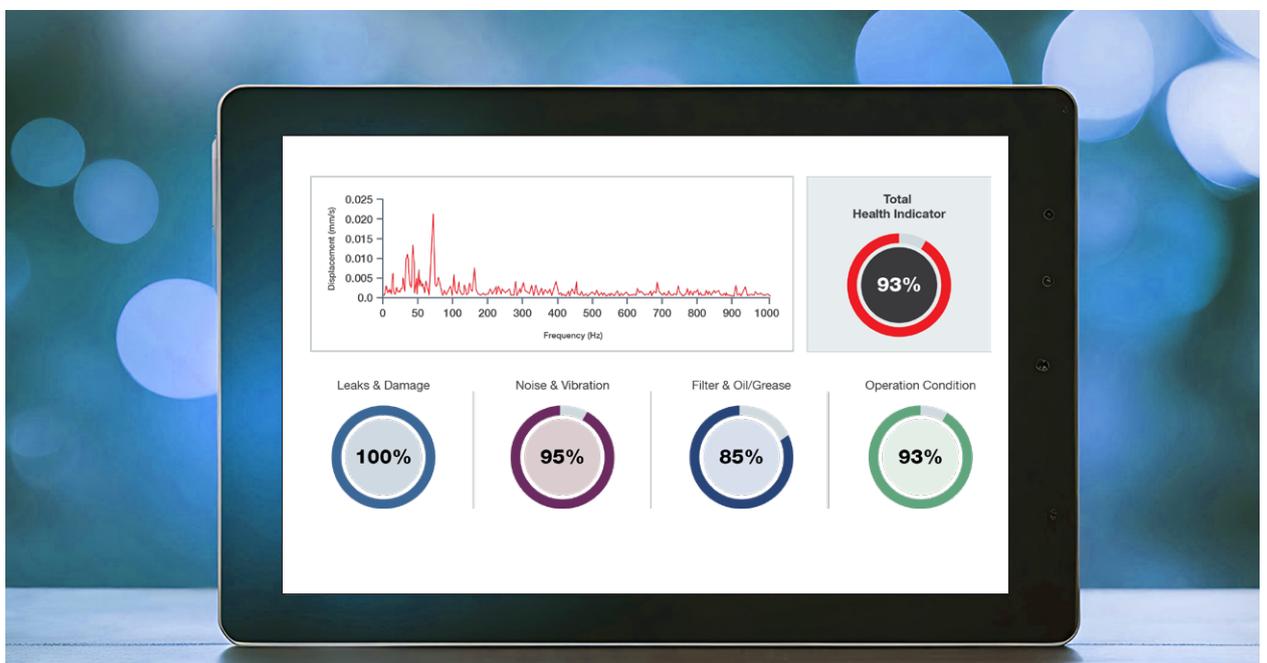
During HealthCheck PRO™ visits, our specialists will inspect your equipment and generate reports with valuable recommendations and insights regarding the health of your pumps. This is achieved through measuring vibrational data and analyzing operating conditions, ensuring your process reliability is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

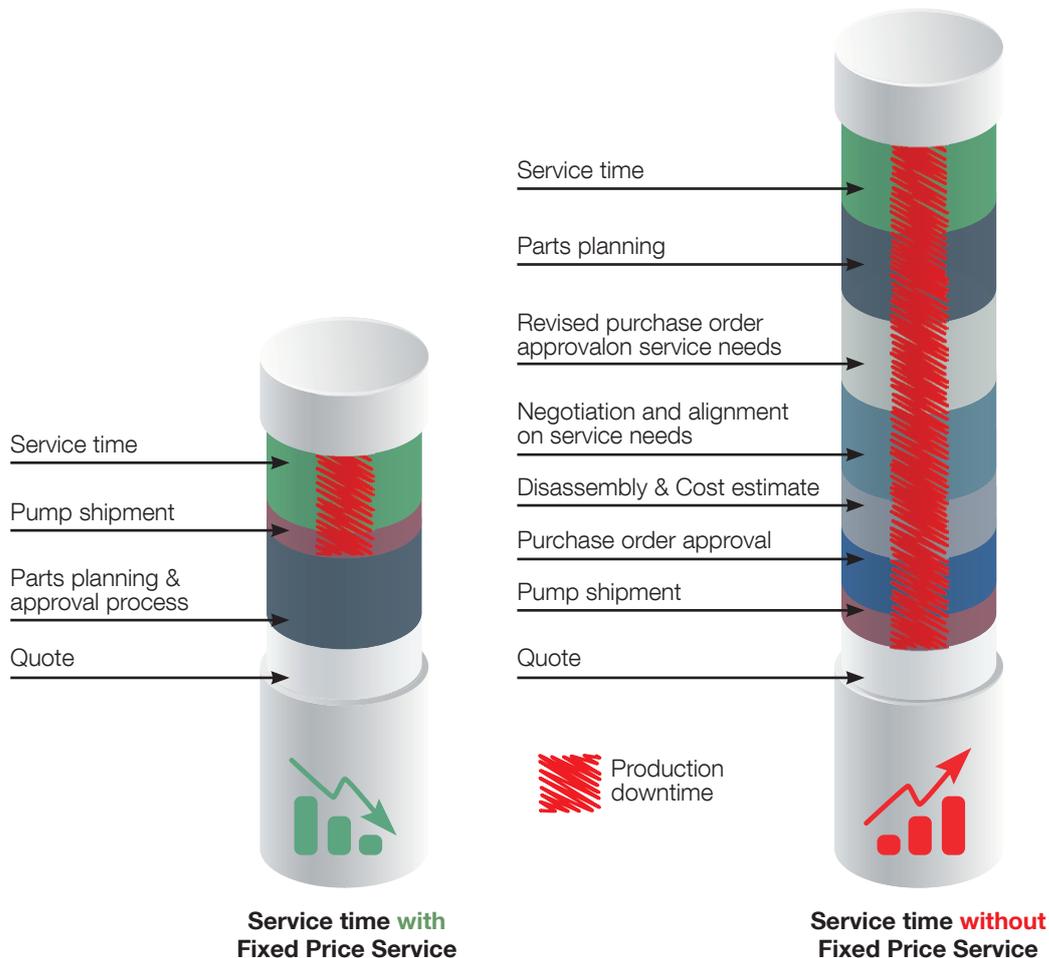


Fixed Price Service & Overhauls

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.



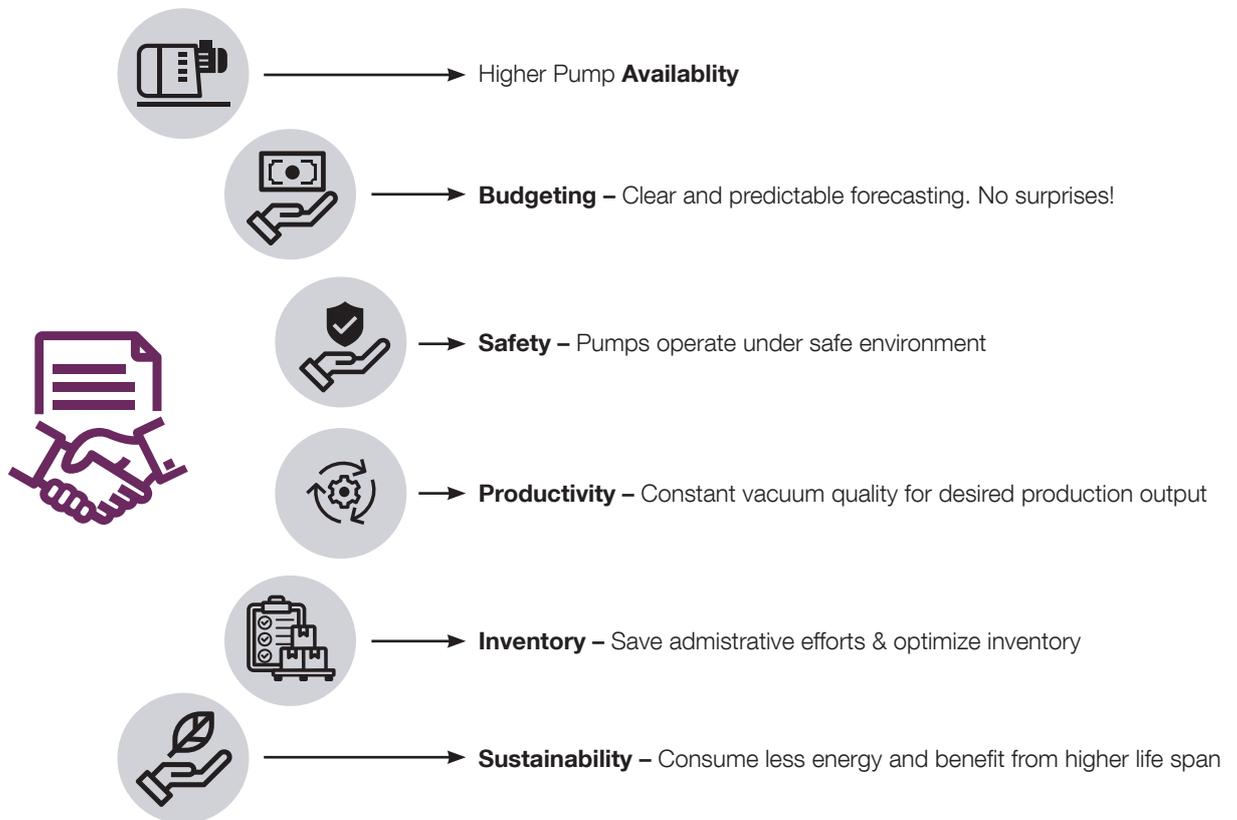
Eliminate the challenges of complicated approval processes, fluctuating budgets and unclear service requirements with our Fixed Price Service. Benefit from cost savings through fewer interruptions, reduced administrative work and lower expenses. Our preventive maintenance strategy is tailored to each 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.

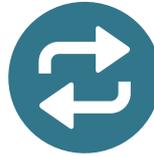


Service



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.

Online shop

leyboldproducts.com

✓ Shop vacuum technology online

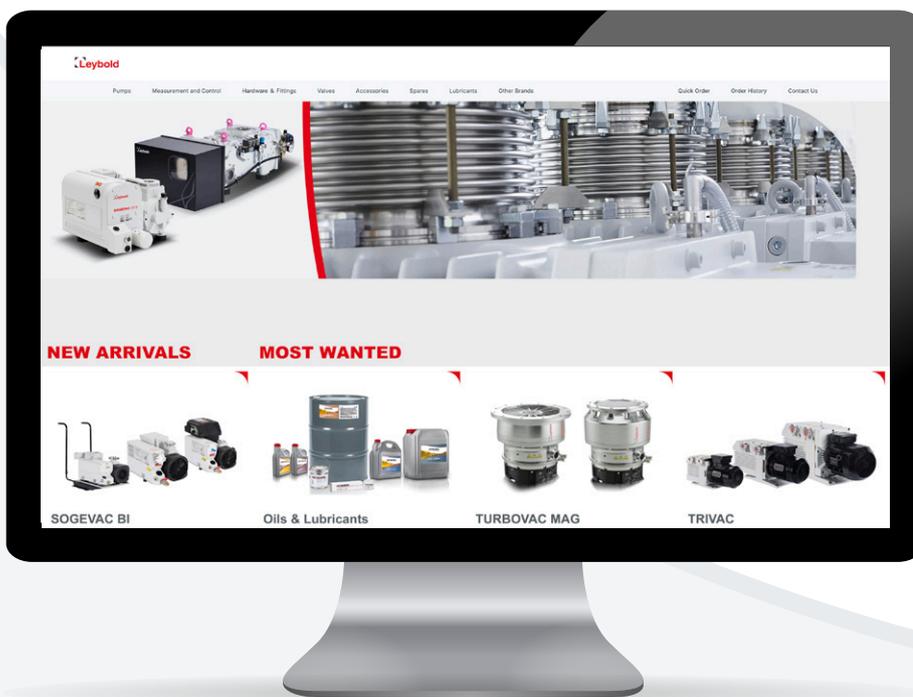
✓ Available in more than 12 countries worldwide

Your expectations:

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

Our solutions:

- Purchase vacuum components which do not require consulting, such as fittings, measuring instruments, pumps, spare parts, vacuum oils, lubricants
- Delivery with invoice, credit card or pre-payment
- Order 24 hours online



 **Leybold**

Pioneering products. Passionately applied.