



Vacuum Solutions for Food Processing and Packaging

**FRESH.
FRESHER.
LEYBOLD.**

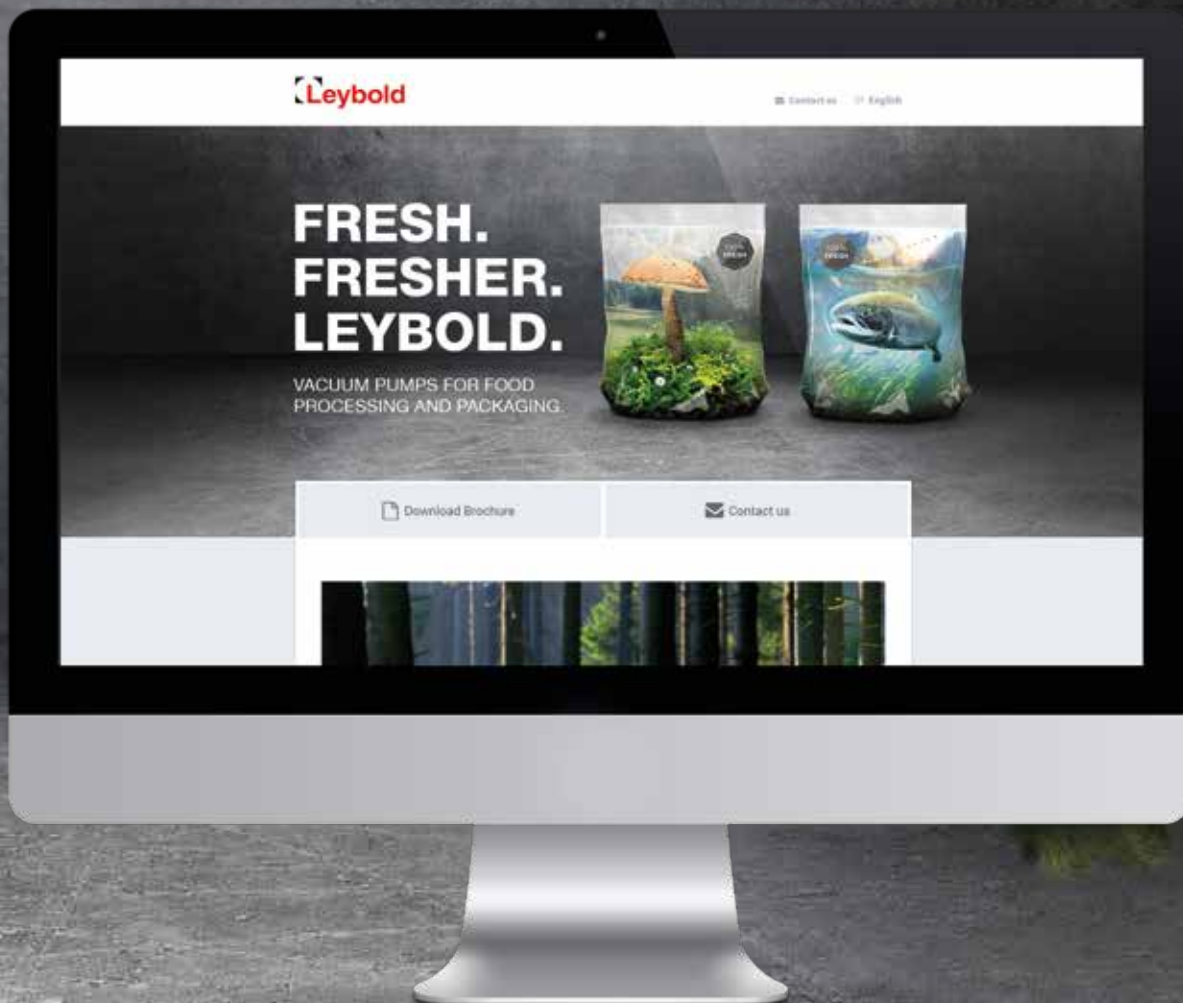
**NEW! 100% OILFREE
NOVADRY PRODUCT SERIES**



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-foodandpack.com**



Vacuum Solutions for Food Processing and Packaging

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Pumps and solutions for every food application

Vacuum Pumps	NOVADRY	DRYVAC	SCREWLINE	CLAWVAC
Size available (m³/h)	65/100/160/200	200 - 650	250 / 630	65/150/300
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
See pages	6	8	10	12

Food Processing

Freeze drying	★★	★★	★★★★	
Tumbling / Marinating / Mixing	★★★★		★★★★	★★★★
Vacuum cooling	★★	★★★★	★★★★	
Slaughterhouse applications	★★			★★★★
Filling / Stuffing	★★★★			★★★★
Vacuum cutting / grinding	★★★★			★★★★
Bottling	★★★★			★★★★
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				

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

VACUBE	RUVAC FP	SOGEVAC FP	SOGEVAC B	SOGEVAC Oxygen		Application Challenges			
						Gas and ambient temperature	Average operating pressure	Dust / Powder / Particles	Moisture
400 - 4800	250 - 2000	10 - 320	470 - 750	16 - 630					
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 - 1	1000 - 1	1000 - 1					
14	16	18	22	24					
	★★★★	★	★			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	M	L	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 Low
M Medium
H High

NOVADRY



NOVADRY ND 65



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

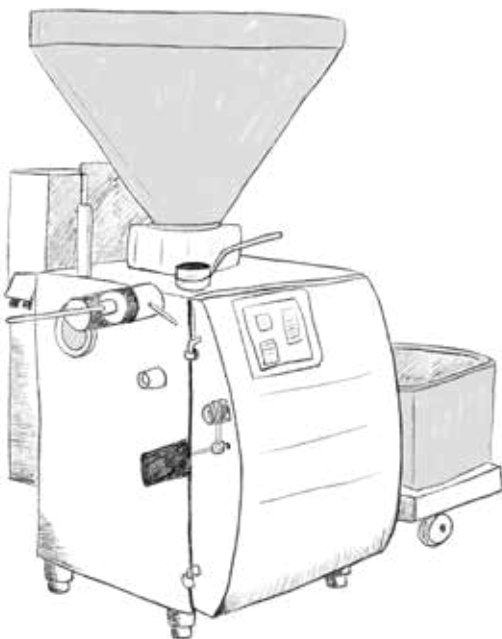
- Thermoforming
- Chamber packaging
- Tray sealing
- Skin packaging
- Tumbling / mixing
- Stuffing filling

Customer Benefits

- Maximum food safety (no oil leakage nor oil mist at exhaust)
- Highest 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



Link to the principle of operation video



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

Technical Data

NOVADRY

		ND 65	ND 100	ND 160	ND 200
Nominal speed without gas ballast ¹⁾	m³ x h ⁻¹	63	96	138	175
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%
Max. power consumption	W	1500	2200	3000	4000
Permissible motor speed ²⁾	Hz	50/60	50/60	50/60	50/60
Protection class EN 60529	IP	55	55	55	55
Noise level with integrated silencer at ultimate pressure ³⁾	dB(A)	67	70	70	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⁾ Depending on version 50 Hz or 60 Hz. Please refer to the pump nameplate.

³⁾ To DIN EN ISO 2151

Ordering Information

NOVADRY

	ND 65	ND 100	ND 160	ND 200
	Part No.	Part No.	Part No.	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 adaptor G1"1/2	111005A32	111005A32	111005A32	111005A32
Purge upgrade kit	111005A01	111005A01	111005A01	111005A01
Flushing kit (purge gas required)	111005A00	111005A00	111005A00	111005A00
Hygienic enclosures NOVADRY	HygEn001	HygEn001	HygEn001	HygEn001
Soft starters (mandatory for VD 160 and VD 200)				
For mains voltage:				
400V/50Hz, 460V/60Hz, 380V/60Hz				
≥ 11A, 110-230 V AC, 200-480V 50/60Hz,	-	-	111005A65	111005A65
control voltage 110-230V AC				
≥ 11A, 24 V DC, 200-480V 50/60Hz,	-	-	111005A66	111005A66
control voltage 24V DC				
For mains voltage:				
200V/50Hz, 230V/60Hz, 200V/60Hz				
≥ 19A, 110-230 V AC, 200-480V 50/60Hz,	-	-	111005A67	111005A67
control voltage 110-230V AC				
≥ 19A, 24 V DC, 200-480V 50/60Hz,	-	-	111005A68	111005A68
control voltage 24V DC				

DRYVAC



**DRY AND
EXTREMELY
COMPACT**

DRYVAC DV 650

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.

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
- “Hygienic design” versions include stainless steel protection housing for installation in wash down areas and optionally:
 - Plug and Play 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

Typical Applications

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

Customer Benefits

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

Options

- Stainless steel hygienic enclosures for full wash-down capability



DRYVAC DV 650 FP Hygienic design with stainless steel housing for installation in wash-down areas

Technical Data

		DV 300 50/60 0Hz	DRYVAC DV 650 50/60 Hz	DV 650 FP Hygienic 50/60 Hz
Nominal speed ¹⁾	m³ x h ⁻¹	280	650	650
Ultimate pressure ¹⁾	mbar	≤ 0.01	≤ 0.005	≤ 0.005
Maximum permissible Water vapor capacity	kg x h ⁻¹	5	25	25
Cooling		Water	Water	Water
Motor power	kW	7.5	15	15
Protection class EN 60529		IP 54	IP 54	IP 65
Lubricant filling	l	1.0	1.2	1.2
Noise level ²⁾	dB(A)	65	65	< 65
Connections				
Intake side	DN	63 ISO-K	100 ISO-K	G 3"
Pressure side	DN	40 ISO-K	63 ISO-K	G 3"
Weight, approx.	kg	370	580	580
Dimensions (W x H x D)	mm	1110 x 613 x 478	1280 x 420 x 570	1468 x 773 x 568

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

	DV 300	DRYVAC DV 650	DV 650 FP Hygienic
	Part No.	Part No.	Part No.
DRYVAC			
with double purge - with LVO210 with gas ballast and blow-off valve	112030V15	-	-
with on-board frequency converter F&P version with epoxy painting	-	112065FP18-1	-
- with LVO210	-	112065FP28-1	-
- with LVO410	-	-	-
without Plug and Play device without E-Saver device - with LVO410	-	-	504807V901
without Plug and Play device with E-Saver - with LVO210	-	-	504816V901
with Plug and Play device with E-Saver - with LVO210	-	-	504779V901
with Plug and Play device without E-Saver - with LVO210 - with flushing valve	-	-	504857V901
with Plug and Play device without E-Saver - with LVO410	-	-	504860V901
Inlet threaded adapter 3"	-	112005A18	-
Inlet threaded adapter 4"	-	112005A19	-
Exhaust silencer	-	119002	already included
E-Saver device (only for LVO210 versions)	115005A21	112005A60	112005A60
Hygienic enclosures DRYVAC	-	HygEn005	already included

SCREWLINE



**DRY
AIR COOLED
ON-SITE CLEANABLE
FOR HARSHEST
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

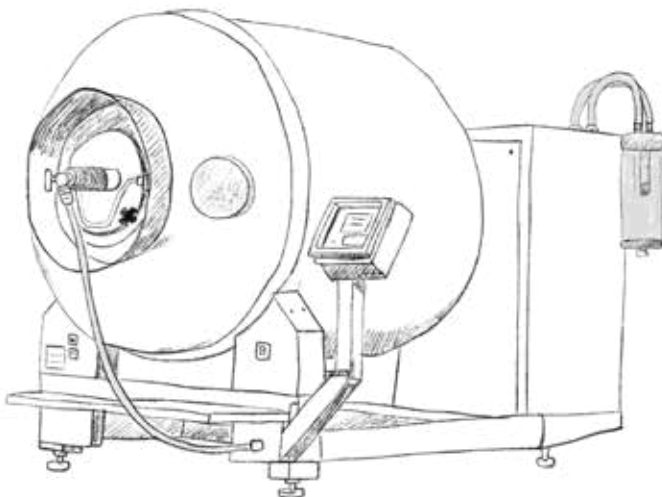
- Dry screw technology
- Cantilevered design
- Air cooled
- Pumping speed 250 and 630 m³/h
- Ultimate pressure $\leq 1 \times 10^{-2}$ mbar
- Monitoring system
- Direct connection of RUVAC Roots pumps via adapter

Typical Applications

- Freeze drying (human food and pet food)
- Tumbling
- SRM and by-products conveying
- Vacuum cooling

Customer Benefits

- Designed for demanding processes
- Highest 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 250		SP 630	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal speed ¹⁾	m³ x h ⁻¹	270	330	630	630
Ultimate pressure ¹⁾	mbar	≤ 0.01	≤ 0.005	≤ 0.01	≤ 0.01
Maximum permissible water vapor capacity	kg x h ⁻¹	10	18	14	14
Cooling		Air	Air	Air	Air
Motor power	kW	7.5	7.5	15	15
Protection class EN 60529		IP 55	IP 55	IP 55	IP 55
Lubricant filling	l	7	7	13	13
Noise level ²⁾	dB(A)	67	72	73	75
Connections					
Intake side	DN	63 ISO-K	63 ISO-K	63 ISO-K	63 ISO-K
Pressure side	DN	100 ISO-K	100 ISO-K	100 ISO-K	100 ISO-K
Weight, approx.	kg	450	450	530	530
Dimensions (W x H x D)	mm	1350 x 880 x 530	1350 x 880 x 530	1630 x 880 x 660	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 250	SP 630
		50/60 Hz	
	Part No.	Part No.	
SCREWLINE with manual gas ballast and SPGuard 400V, 50Hz / 200V, 50Hz / 460V, 60Hz / 210V, 60Hz	115 001	-	
SCREWLINE 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	119002	119001	

CLAWVAC



CLAWVAC CP 150

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 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 and 300 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
- MAP (Modified Oxygen Packaging)

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	CP 150	CP 300
Pumping speed ¹⁾	50 Hz	m ³ x h ⁻¹	65	150	300
	60 Hz	m ³ x h ⁻¹	79	184	347
Ultimate vacuum		mbar	50	50	140
Continuous operation range		mbar	50-1000	50-1000	140-1000
Permissible ambient temperature range		°C	0 - 40	0 - 40	0 - 40
Connections	Inlet Outlet		G 1 1/4" or NPT G 1 1/4" or NPT	G 1 1/4" or NPT G 1 1/4" or NPT	G 2" or NPT G 1 1/4" or NPT
Motor power	50 Hz	kW	1.8	4.0	6.2
	60 Hz	kW	2.2	3.7	7.5
Operation range		Hz	20 - 60	20 - 60	20 - 60
Noise level (50/60 Hz)		dB(A)	66 / 77	75 / 80	77 / 84
Weight		kg	120	160	252
Motor protection class		IP	55	55	55

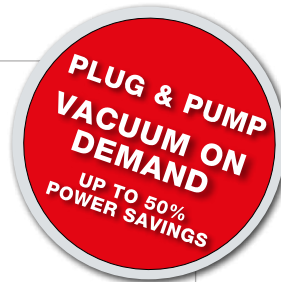
¹⁾ To DIN 28 400 ff.

Ordering Information

CLAWVAC

	CP 65	CP 150	CP 300
	Part No.	Part No.	Part No.
CLAWVAC dry vacuum pump with 3 phase motor			
230 V, 50 Hz	178065V01	178150V01	178300V01
380 V, 60 Hz	178065V02	178150V02	178300V02
400 V, 50 Hz	178065V03	178150V03	178300V03
575 V, 60 Hz	178065V04	178150V04	178300V04
200 V, 60 Hz	178065V05	178150V05	178300V05
460 V, 60 Hz	178065V06	178150V06	178300V06
230/460 V, 60 Hz	178065V07	178150V07	178300V07
200 V, 50 Hz	178065V08	178150V08	178300V08
230 V, 60 Hz	178065V09	178150V09	178300V09
500 V, 50 Hz	178065V10	178150V10	178300V10
Hygienic enclosures CLAWVAC	HygEn006	HygEn006	HygEn007

VACUBE



VACUBE models

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.

Four models are available. Next to the standard model, the „iH“ model should be used for vapour handling, the „iC“ model is ideal for high cycling applications. „iHC“ is there to cover humid cycling applications.

Our Solution

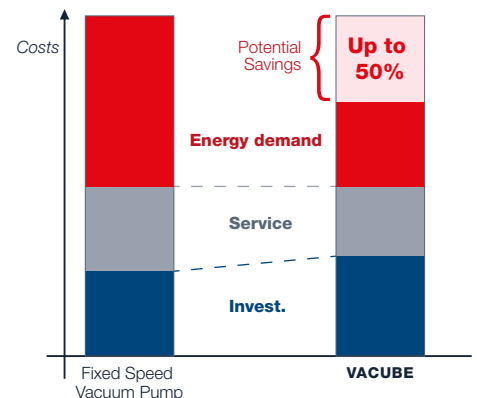
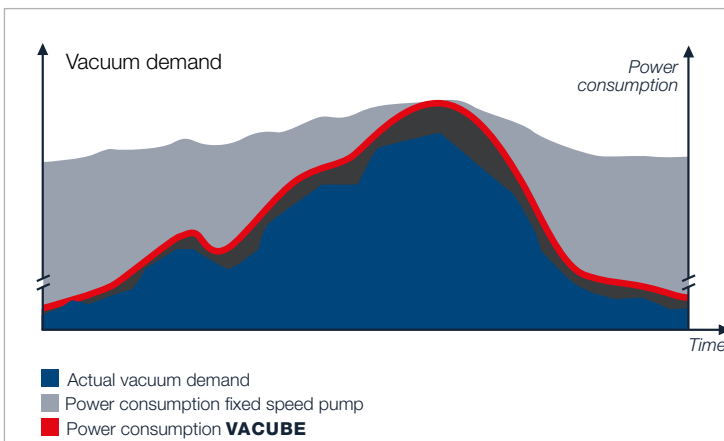
- Plug and pump system set up
- Highly efficient oil-sealed rotary screw technology
- Pumping speed 420 to 4.972 m³/h
- Ultimate pressure ≤ 0.35 mbar
- Integrated frequency inverter for load depending speed control
- Controller with intuitive menu navigation for configuration and control
- Air- or water-cooled 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
- Food freeze drying

Customer Benefits

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



Energy optimised operation with VACUBE: The power consumption changes proportional to the real vacuum demand, often allowing energy savings up to 50% compared to other vacuum pump technologies

Technical Data

		VACUBE i - iH - iC - iCH				
		VQ 400	VQ 550	VQ 700	VQ 800	VQ 1250
Pumping speed, max. eff. ¹⁾	m ³ x h ⁻¹	420	530	700	790	1250
Ultimate pressure	mbar	0.35	0.35	0.35	0.35	0.35
Motorshaft power	kW	5.5	7.5	11	15	22
Noise level	dB(A)	51 - 65	51 - 65	51 - 73	51 - 76	65 - 75
Ambient temperature	°C	0 - 46	0 - 46	0 - 46	0 - 46	0 - 46
Weight	kg	500	500	510	520	1058
Protection class	IP	54	54	54	54	54
Supply voltages*		380 - 460 V, 3 phase, 50/60 Hz				

¹⁾ To DIN 28 400 ff.

* Other voltages available on request

Technical Data

		VACUBE i - iH - iC - iCH				
		VQ 1500	VQ 1650	VQ 3600	VQ 4200	VQ 4800
Pumping speed, max. eff. ¹⁾	m ³ x h ⁻¹	1490	1620	3739	4516	4972
Ultimate pressure	mbar	0.35	0.35	0.35	0.35	0.35
Motorshaft power	kW	30	37	55	75	90
Noise level	dB(A)	65 - 75	65 - 80	70 - 83	70 - 84	70 - 85
Ambient temperature	°C	0 - 46	0 - 46	0 - 46	0 - 46	0 - 46
Weight	kg	1058	1073	3945	3980	4000
Protection class	IP	54	54	54	54	54
Supply voltages*		380 - 460 V, 3 phase, 50/60 Hz				

¹⁾ To DIN 28 400 ff.

* Other voltages available on request

Ordering Information

VACUBE				
	i Models	iH Models	iC Models	iCH Models
	Part No.	Part No.	Part No.	Part No.
VACUBE VQ 400	177040V01	177040V10	-	-
VACUBE VQ 550	177055V01	177055V10	177055V05	177055V15
VACUBE VQ 700	177070V01	177070V10	177070V05	177070V15
VACUBE VQ 800	177080V01	177080V10	177080V05	177080V15
VACUBE VQ 1250	177125V01	177125V10	-	-
VACUBE VQ 1500	177150V01	177150V10	177150V05	177150V15
VACUBE VQ 1650	177165V01	177165V10	177165V05	177165V15
VACUBE VQ 3600	177360V01	177360V10	-	-
VACUBE VQ 4200	177420V01	177420V10	-	-
VACUBE VQ 4800	177480V01	177480V10	-	-
LEYBONOL vacuum oil LVO 320, 20 liter	L320 20	L320 20	L320 20	L320 20

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

RUVAC WAU FP



RUVAC WAU 2001 FP Roots vacuum pump

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 FP with four blower sizes
- Reliable and trouble-free operation
- Easy installation, direct coupling without a support frame for SOGEVAC SV 100 FP or larger
- Available with special motors if required
- Integrated pressure equalization line for protection against overloading at high pressures
- Conversion from vertical to horizontal flow
- Maintenance-friendly
- Mineral oil LVO 100 is used as standard. The required lubricant filling is included with the delivery
- Gasket in the intake flange with dirt sieve

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

Optional Equipment

- Wash-down duty motors
- Base frame with hose barb connections

Technical Data

RUVAC

		WAU 251 FP	WAU 501 FP	WAU 1001 FP	WAU 2001 FP
Nominal speed ¹⁾					
at 50 Hz	m ³ x h ⁻¹	253	505	1000	2050
at 60 Hz	m ³ x h ⁻¹ (cfm)	304 (179)	607 (357)	1200 (707)	2462 (1449)
Ultimate pressure for combination with SOGEVAC ... FP	mbar (Torr)	6.7 x 10 ⁻² (5 x 10 ⁻²)	6.7 x 10 ⁻² (5 x 10 ⁻²)	6.7 x 10 ⁻² (5 x 10 ⁻²)	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	63 ISO-K	100 ISO-K	160 ISO-K

¹⁾ To DIN 28 400 ff.

Ordering Information

RUVAC

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

SOGEVAC SV FP



SOGEVAC FP range

SOGEVAC FP 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 FP are delivered in serial with food grade oil.

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 320 m³/h
- Based on proven SOGEVAC design with manual gas ballast and oil filter
- Delivery with food grade oil NSF H1 (LEYBONOL LVO 140 or LVO 150)

Typical Applications

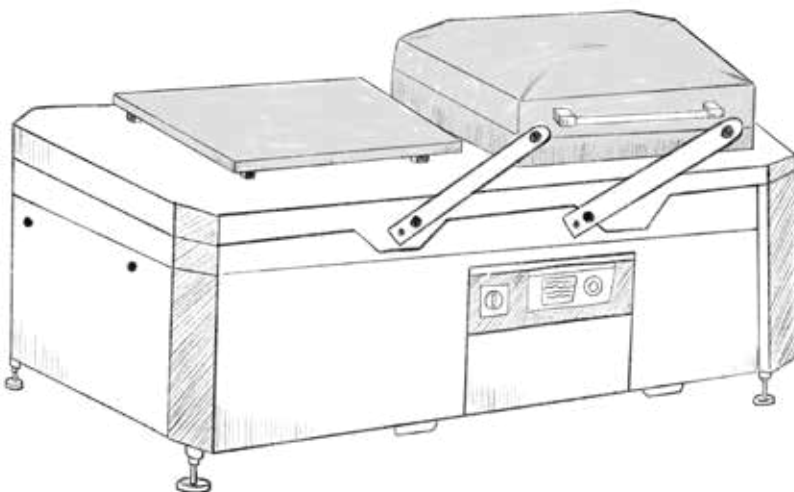
- Thermoformers / Rollstock machines
- Chamber packaging machines
- Modified Atmosphere Packaging (except with O₂)
- Rotary chamber packaging
- Blenders
- Stuffers
- Vacuum cutters
- Freeze drying
- Vacuum cooling

Customer Benefits

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

Options

- Stainless steel hygienic enclosures for full wash-down capability



Technical Data		SOGEVAC SV 10 FP		SOGEVAC SV 16 FP	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	11 (6.5)	13.0 (7.7)	16.0 (9.4)	19.0 (11.2)
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	9.5 (5.6)	11.5 (6.8)	15.0 (8.8)	17.0 (10.0)
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 1.5 (≤ 1.1)	≤ 1.5 (≤ 1.1)	≤ 1.0 (≤ 0.8)	≤ 1.0 (≤ 0.8)
Ultimate total pressure with gas ballast ¹⁾	mbar (Torr)	≤ 2.5 (≤ 1.9)	≤ 2.5 (≤ 1.9)	≤ 2.0 (≤ 1.5)	≤ 2.0 (≤ 1.5)
Maximum permissible Water vapor capacity	kg x h ⁻¹ (qt/hr)	0.02 (0.02)	0.03 (0.03)	0.03 (0.03)	0.05 (0.05)
Motor power	kW (hp)	0.55 (0.75)	0.75 (1.02)	0.55 (0.75)	0.75 (1.02)
Noise level ²⁾	dB(A)	60	64	60	64
Oil capacity	l (qt)	0.5 (0.53)	0.5 (0.53)	0.5 (0.53)	0.5 (0.53)
Connections ³⁾					
Intake side ⁴⁾	G or NPT	3/4" + 1/2"	3/4" + 1/2"	3/4" + 1/2"	3/4" + 1/2"
Pressure side	G or NPT	–	–	–	–

Remark: The SV 10 FP and SV 16 FP cannot work continuously above 150 mbar. Please consult Leybold for this application

Technical Data		SOGEVAC SV 25 FP		SOGEVAC SV 45 FP	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	26.0 (15.3)	31.0 (18.3)	44.0 (25.9)	53.0 (31.2)
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	22.5 (13.3)	25.0 (14.7)	38.5 (22.7)	47.0 (27.7)
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.5 (≤ 0.4)	≤ 0.5 (≤ 0.4)	≤ 0.5 (≤ 0.4)	≤ 0.5 (≤ 0.4)
Ultimate total pressure with gas ballast ¹⁾	mbar (Torr)	≤ 0.8 (≤ 0.6)	≤ 0.8 (≤ 0.6)	≤ 1.5 (≤ 1.1)	≤ 1.5 (≤ 1.1)
Maximum permissible water vapor capacity	kg x h ⁻¹ (qt/hr)	0.085 (0.09)	0.1 (0.11)	0.76 (0.81)	0.9 (0.95)
Motor power	kW (hp)	0.9 (1.2)	1.1 (1.5)	1.1 (1.5)	1.5 (2.0)
Noise level ²⁾	dB(A)	64	67	58	60
Oil capacity	l (qt)	0.5 (0.53)	0.5 (0.53)	1.0 (1.05)	1.0 (1.05)
Connections ³⁾					
Intake side ⁴⁾	G or NPT	3/4" + 1/2"	3/4" + 1/2"	1 1/4"	1 1/4"
Pressure side	G or NPT	3/4"	3/4"	1 1/4"	1 1/4"

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

SOGEVAC SV FP

Technical Data		SOGEVAC SV 70 FP		SOGEVAC SV 105 FP	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	59.0 (34.8)	71.0 (41.8)	97.5 (57.4)	117.0 (68.9)
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	54.0 (31.8)	64.0 (37.7)	87.5 (51.5)	105.0 (61.8)
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.5 (≤ 0.4)	≤ 0.5 (≤ 0.4)	≤ 0.5 (≤ 0.4)	≤ 0.5 (≤ 0.4)
Ultimate total pressure with gas ballast ¹⁾	mbar (Torr)	≤ 1.5 (≤ 1.1)	≤ 1.5 (≤ 1.1)	≤ 1.5 (≤ 1.1)	≤ 1.5 (≤ 1.1)
Maximum permissible Water vapor capacity	kg x h ⁻¹ (qt/hr)	1.0 (1.1)	1.25 (1.33)	1.6 (1.7)	1.7 (1.8)
Motor power	kW (hp)	1.5 (2.0)	1.8 (2.4)	2.2 (3.0)	3.5 (4.7)
Noise level ²⁾	dB(A)	60	64	61	64
Oil capacity	l (qt)	2.0 (2.1)	2.0 (2.1)	2.0 (2.1)	2.0 (2.1)
Connections					
Intake side	G or NPT	1 1/4"	1 1/4"	1 1/4"	1 1/4"
Pressure side	G or NPT	1 1/4"	1 1/4"	1 1/4"	1 1/4"

Technical Data		SOGEVAC					
		SV 200 FP		SV 300 FP		SV 320 FP	
		50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	180 (106)	220 (130)	280 (165)	340 (200)	330 (194)	385 (227)
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	170 (100)	200 (118)	240 (141)	290 (171)	284 (168)	330 (194)
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)
Ultimate total pressure with gas ballast ¹⁾	mbar (Torr)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)
Maximum permissible Water vapor capacity	kg x h ⁻¹ (qt/hr)	3.4 (3.6)	5.4 (5.7)	1.3 (1.4)	1.8 (1.9)	1.3 (1.4)	1.8 (1.9)
Motor power	kW (hp)	4.0 (5.4)	4.6 (6.2)	5.5 (7.4)	6.3 (8.4)	7.5 (10)	7.5 (10)
Noise level ²⁾	dB(A)	69	73	72	76	70	73
Oil capacity	l (qt)	9.0 (9.5)	9.0 (9.5)	11.5 (12.2)	11.5 (12.2)	11.5 (12.2)	11.5 (12.2)
Connections							
Intake side	G or NPT	2"	2"	2"	2"	2"	2"
Pressure side	G or NPT	2"	2"	2"	2"	2"	2"

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

Ordering Information

SOGEVAC

	SV 10 FP	SV 16 FP	SV 25 FP	SV 45 FP	SV 70 FP
	Part No.	Part No.	Part No.	Part No.	Part No.
SOGEVAC SV 10 - 70 FP					
Three-phase world motor	960 100 FP	960 160 FP	960 251 FP	960 324 FP	960 424 FP
Three-phase world motor 230 V / 400 V, 50 + 60 Hz / 460 V, 60 Hz	-	-	-	960 307 FP	960 407 FP
Single-phase world motor					
230 V, 50/60 Hz; G	960 105 FP	960 165 FP	960 256 FP	-	-
230 V, 50/60 Hz; NPT	-	-	960 257 FP	-	-
110 - 120 V, 60 Hz	960 110 FP	960 170 FP	960 261 FP	-	-
Hygienic enclosures SOGEVAC	-	-	-	-	HygEn002

For accessories, see pumps SOGEVAC SV 10 B, SV 16 B, SV 25 B, SV 40 B and SV 65 B

Ordering Information

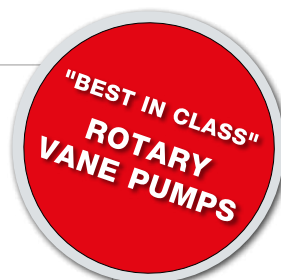
SOGEVAC

	SV 105 FP	SV 200 FP	SV 300 FP	SV 320 FP
	Part No.	Part No.	Part No.	Part No.
SOGEVAC SV 105 - 300 FP				
Three-phase Europe motor 230 V / 400 V, 50 Hz and 460 V, 60 Hz	960 507 FP	109 27 FP	960 702 FP	960 722 FP
Three-phase USA motor ¹⁾ 230 V / 460 V, 60 Hz and 400 V, 50 Hz UL/CSA with terminal board	960 514 FP	950 27 FP	960 707 FP	960722FP01
Three-phase world motor 230 V / 400 V, 50 + 60 Hz / 460 V, 60 Hz	960 524 FP	109 2 791 FP	960 717 FP	960732FP
Hygienic enclosures SOGEVAC	HygEn002	HygEn003	HygEn004	HygEn004

For accessories, see pumps SOGEVAC SV 40 B, SV 65 B, SV 100 B, SV 200 and SV 300 B

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

SOGEVAC SV B



SOGEVAC SV 570 B with air cooling (SV 470 B similar)

SOGEVAC are proven oil sealed rotary vane pumps with high recognition from the industrial market.

Our Solution

- Very low rotational speed increases the lifetime of the pump and leads to noise level reduction
- Extremely low noise level in any working conditions
- Long lifetime of oil and exhaust filters
- Simplified maintenance thanks to an easy access to all key components
- Small footprint
- Air or water-cooling and many motors and options available
- Adaptors for direct mounting of Roots blowers

Typical Applications

- Big thermoforming and chamber packaging machines
- Freeze drying
- Vacuum cooling
- Central vacuum systems for packaging and processing

Customer Benefits

- Low operating costs
- Shorter cycle times versus competition
- Excellent comfort of use thanks to low noise level

Technical Data

SOGEVAC

		SV 470 B 50 Hz	SV 570 B 50 Hz	SV 630 B 50 Hz	SV 750 B 50 Hz
Nominal speed ¹⁾	m ³ x h ⁻¹ (cfm)	470 (277)	570 (366)	700 (412)	840 (494)
Pumping speed ¹⁾	m ³ x h ⁻¹ (cfm)	400 (236)	470 (277)	640 (377)	755 (444)
Ultimate partial pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)	≤ 0.08 (≤ 0.06)
Ultimate total pressure with gas ballast ¹⁾	mbar (Torr)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)	≤ 0.7 (≤ 0.5)
Water vapor tolerance ¹⁾	mbar (Torr)	15.0 (11.3)	20.0 (15.0)	40.0 (30.0)	50.0 (37.5)
Maximum permissible Water vapor capacity	kg x h ⁻¹ (qt/hr)	5.0 (5.3)	7.5 (8.0)	17.0 (18.0)	24.0 (25.4)
Motor power	kW (hp)	9.2 (12.3)	11.0 (14.8)	15.0 (20.1)	18.5 (24.8)
Noise level ²⁾	dB(A)	72	75	72	75
Oil capacity	l (qt)	20.0 (21.1)	20.0 (21.1)	23.0 (24.3)	23.0 (24.3)
Connections					
Intake side	G or NPT	3"	3»	100 PN / 100 ISO-K	100 PN / 100 ISO-K
Pressure side	G or NPT	3"	3»	Option	Option

Please refer to our general catalogue for the 60 Hz versions specifications

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)

Ordering Information

SOGEVAC SV 470 B

SOGEVAC SV 570 B

	Part No.	Part No.
SOGEVAC SV 470 - 570 B		
Three-phase Europe motor 230 V / 400 V, 50 Hz and 460 V, 60 Hz	960 753V	960 765V
Three-phase USA motor 230 V / 460 V, 60 Hz and 400 V, 50 Hz UL/CSA with terminal board	-	960 755V
Three-phase world motor 230 V / 400 V, 50 + 60 Hz / 460 V, 60 Hz	960 754V	960 766V

Ordering Information

SOGEVAC SV 630 B

SOGEVAC SV 750 B

	Part No.	Part No.
SOGEVAC SV 630 - 750 B		
Three-phase Europe motor 230 V / 400 V, 50 Hz and 460 V, 60 Hz	960 863	960 875
Three-phase USA motor 230 V / 460 V, 60 Hz and 400 V, 50 Hz UL/CSA with terminal board	960 865	-
Three-phase world motor 230 V / 400 V, 50 + 60 Hz / 460 V, 60 Hz	960 863 V3021	960 875 V2091

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 B, SV 65 B, SV 100 B, SV 200, SV 300 B, SV 320 B, SV 470 B, SV 630 B (F) and SV 750 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

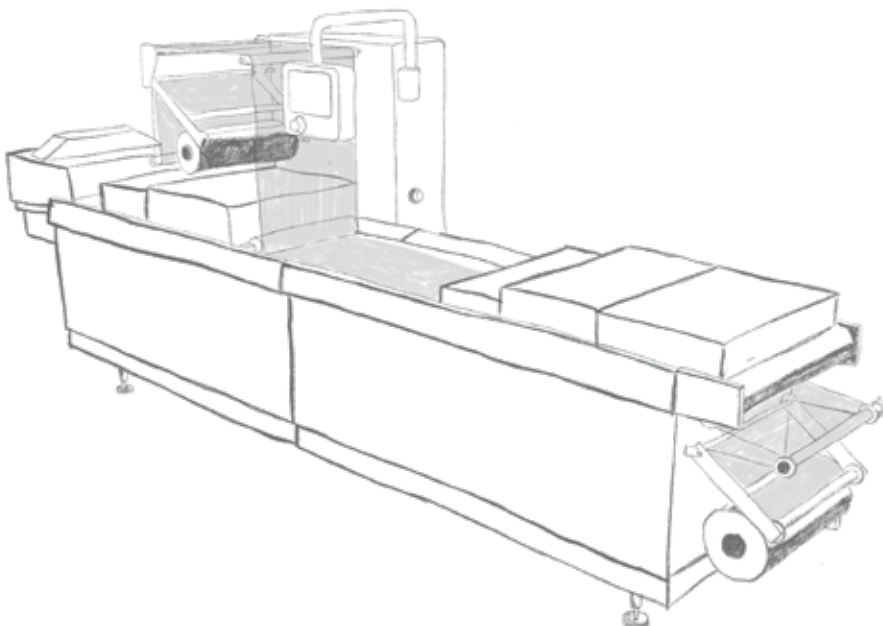
- Maximal safety level related to oxygen use
- Low cost of ownership thanks to lifetime of PFPE oil
- Over 10 % cycle time reduction vs. competitors' pumps on many models

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).



SOGEVAC SV Oxygen

Pumps

Ultimate pressure (mbar (Torr))
without gas ballast with gas ballast

	Part No.		
SV 25 B	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 200	1092716, 9502716	0.5 (0.375)	1.5 (1.13)
SV 300 B	960702V2016, 960707V2016, 960717V2016	0.5 (0.38)	1.5 (1.13)
SV 320 B	960732V2016	0.5 (0.38)	1.5 (1.13)
SV 470 B	960753V2016	1.0 (0.75)	1.5 (1.13)
SV 630 B(F)	960863V3011	1.0 (0.75)	1.5 (1.13)
SV 750 B(F)	960877V3001	1.0 (0.75)	1.5 (1.13)

Oil for SOGEVAC pumps

SOGEVAC models

SV 10 FP / 16 FP	SV 25 FP	SV 45 FP SV 70 FP SV 105 FP	SV 200 FP SV 300 FP SV 320 FP	SV 470 B / 570 B(F)	SV 630 B / 750 B(F)	SV 1200	SV Oxygen version	SV Hydro version
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LEYBONOL Oils

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.**

Stainless steel hygienic enclosures



NOVADRY enclosure



Our range of stainless steel hygienic enclosures allows a perfect protection of your vacuum pump against daily wash-down processes typically encountered in the food industry. They have been designed according hygienic construction rules (for instance with slopped upper metal sheet), to avoid water rentention points allowing to achieve a high level of food safety.

Our Solution

- Six housings to host pumps of different technologies and sizes of 65 to 650 m³/h
- Each enclosure has been designed specifically for a given pump model and tested to ensure proper cooling.
- Delivered as a kit ensuring small footprint during transportation and storage
- Made of stainless steel 316L

Customer Benefits

- Quick and easy to assemble according to Do it Yourself principle
- Possibility to install the pump as close as possible to the process (packaging machine, tumbler, stuffer, etc.) allowing better machine performance and energy savings
- No long and expensive stainless steel pipes required anymore
- Perfectly cooled pump providing optimal functionality

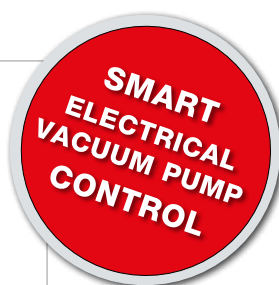
Hygienic enclosures		Ordering Information		Technical Data	
Range of pumps	Model	Part No. vacuum pump	Part No. enclosure	Maximum ambient temperature	Dimensions W x H x D (mm)
NOVADRY	ND 65	1111065N10 - ... -1111065N26	HygEn001	25 °C	1130 x 660 x 530
	ND 100	1111100N10 - ... -1111100N26		15 °C	
	ND 160	1111160N10 - ... -1111160N26			
	ND 200	1111200N10 - ... -1111200N26			
SOGEVAC	SV 70 FP	960 407 FP	HygEn002	15 °C	1130 x 660 x 530
	SV 105 FP	960 507 FP			
	SV 65 B	960 407			
	SV 100 B	960 507			
SOGEVAC	SV 160 FP/B	960 597 FP, 960 582 V	HygEn003	25 °C	1400 x 730 x 796
	SV 200 FP/B	109 27 FP, 109 27			
	SV 220 FP/B	960 617 FP, 960 602 V			
	SV 300 FP/B	960 702 FP, 960 702			
SOGEVAC	SV 320 FP	960 722 FP	HygEn004	25 °C	1400 x 730 x 588
DRYVAC	DV 450	112045V15-1, 112045V20-1	HygEn005	25 °C	1400 x 730 x 588
	DV 650	112065FP18-1, 112065FP28-1			
CLAWVAC	CP 65	178065V01 - ... -178065V10	HygEn006	15 °C	1400 x 730 x 798
	CP 150	178150V01 - ... -178150V10			
	CP 300	178300V01 - ... -178300V10	HygEn007		1400 x 730 x 996



Assembly principle video

To connect the outlet from the pump, an exhaust adapter is included.
For inlet connection, our range of stainless steel fittings can be used (see pages 32-33).

Electrical cabinet ELEC CAB



Smart electrical cabinet ELEC CAB

ELEC CAB is a complete solution for the electrical control of vacuum pumps, providing all necessary electrical components to be fully functional.

The new smart ELEC CAB electrical cabinet system is instantly ready to perform. Connecting ELEC CAB to the power supply, vacuum pump motor(s) and included process pressure sensor installs the hardware. The pressure set point and software can easily be set via the integrated controller.

ELEC CAB is suitable for controlling NOVADRY, CLAWVAC, SCREWLINE and SOGEVAC pumps with no loss in offered values.

Our Solution

- Electrical cabinet for the control of vacuum pumps
- Version for single vacuum pump control (ELEC CAB S) or multi-pump solution (ELEC CAB M)
- Integrated Variable Speed Drive for load depending speed control
- Sustainable power saving due to on-demand vacuum generation
- Controller with intuitive menu navigation for configuration and control
- Programmable operation modes
- Plug and play system set-up

Customer Benefits

- The integrated pressure setpoint control and variable-speed drives immediately offer significant energy savings
- The intelligent control of the vacuum pump(s) guarantees an optimal process pressure
- The ELEC CAB software can contribute to an increase in the stability of the production process
- ELEC CAB S can be used in a range of applications, from pump down to central vacuum systems

Model	Ordering Information			Technical Data	
	Size	Suited Leybold Pumps*	Part No.	Weight [kg]	Dimensions L x W x H [mm]
ELEC CAB S 380-460 V, 50/60 Hz	2.2 kW	I	ECSv01	20	700 x 500 x 250
	7.5 kW	II	ECSv02	25	700 x 500 x 250
	22 kW	III and IV	ECSv03	30	800 x 600 x 400
ELEC CAB M 380-460 V, 50/60 Hz	2 x 2.2 kW	I	ECMv01	25	800 x 600 x 400
	2 x 7.5 kW	II	ECMv02	35	1200 x 600 x 300
	2 x 15 kW	III	ECMv03	50	1200 x 800 x 300
	2 x 22 kW	IV	ECMv04	50	1200 x 800 x 300
	4 x 2.2 kW	I	ECMv05	30	800 x 600 x 400
	4 x 7.5 kW	II	ECMv06	40	1200 x 800 x 300
	4 x 15 kW	III	ECMv07	55	1200 x 800 x 300
	4 x 22 kW	IV	ECMv08	55	1200 x 800 x 300

Maximal permissible ambient temperature: 46 °C

* I < 2.2 kW: VARODRY VD 65 -160, CLAWVAC CP 65, SOGEVAC SV 65 B

* II < 7.5 kW: VARODRY VD 200, CLAWVAC CP 150 - 300, SOGEVAC SV 100 - 320 B, SCREWLINE SP 250

* III < 15 kW: SOGEVAC SV 470 B, SV 570 B

* IV < 22 kW: SOGEVAC SV 630 -750 B(F), SCREWLINE SP 630

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



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

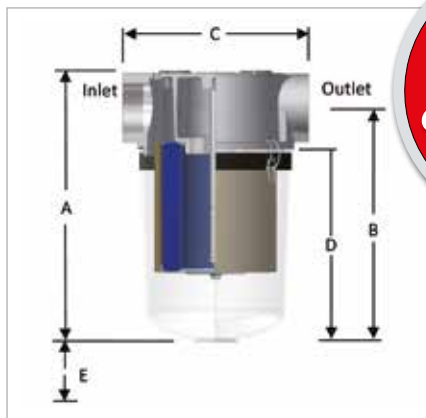
Technical Data

		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	m³/h	102	297	510	850
Dimensions	mm				
A		340	413	502	502
B		303	362	432	432
C		178	229	343	343
D		264	318	356	356
Suggested service height E	mm	228	228	228	228
Weight	kg	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



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

EASY
VISUAL INSPECTION
AND
CLEANING

Operating principle

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

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 costs 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	BSP	G1"1/4	G2"	G3"	G4"
Rated for flow	m³/h	102	298	510	884
Dimensions	mm				
A		340	413	502	502
B		303	362	432	432
C		178	229	343	343
D		264	318	356	356
Suggested service height E	mm	228	228	228	228
Weight	kg	4.7	7.2	13	11
Ordering Information		Part No.	Part No.	Part No.	Part No.
Dust filter		95354FP	95356FP	95358FP	95360FP
Spare filter cartridge		EK95354PC	EK95356PC	EK95358PC	EK95358PC

Dust Filter (Intake side)



Dust filter F 630 and F 200-300

The filters consist of a steel housing and a lid with three quick locking clips.

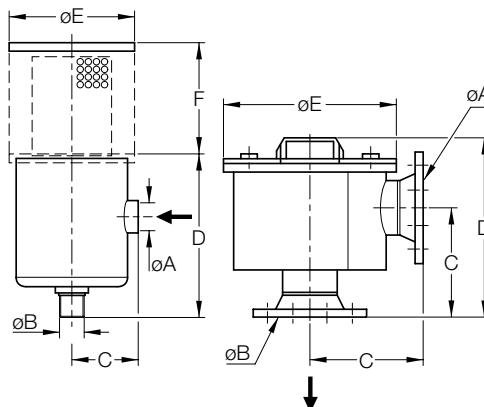
Our Solution

Polyester Filter Cartridge

- Separation of particles down to 5 µm (moist process: dust, powders, chips etc.)

Metal Filter Cartridge

- 0.08 mm (0.003 in.) mesh
- Collects solid particles down to 0.08 mm (0.003 in.), like plastics, paper, packaging materials, foodstuffs



**PROTECTS
YOUR PUMP**

Type		ø A	ø B	C	D	ø E	F	Weight (kg)
F 16-25	mm	G 1/2"	G 1/2"	54	104	100	70	1
	in.	G 1/2"	G 1/2"	2.13	4.09	3.94	2.76	2.2
F 40	mm	G 1 1/4"	G 1 1/4"	74	115	135	75	1.5
	in.	G 1 1/4"	G 1 1/4"	2.91	4.53	5.31	2.95	3.31
F 65-100	mm	G 1 1/4"	G 1 1/4"	98	172	172	130	2
	in.	G 1 1/4"	G 1 1/4"	3.86	6.77	6.77	5.12	4.4
F 200-300	mm	G 2"	G 2"	118	287	200	230	4.5
	in.	G 2"	G 2"	4.65	11.3	7.87	9.06	9.9
F 630	mm	DN 100 PN 10	DN 100 PN 10	220	358	340	250	33
	in.	DN 100 PN 10	DN 100 PN 10	8.66	14.09	13.39	9.84	72.8
F 1200	mm	DN 125 PN 10	DN 125 PN 10	225	498	340	250	44
	in.	DN 125 PN 10	DN 125 PN 10	8.86	19.61	13.39	9.84	1.73

Dimensional drawing for the dust filters F 16-25 to F 1200

Customer Benefits

- Same housing for different cartridges
- High separation capacity
- Quickly exchangeable cartridge

Technical Notes

We recommend installing the filters horizontally on a 90° bend. This will prevent separated particles from falling into the intake line when disassembling the filter.

Technical Data

Dust filter

Dust Filter	Polyester Filter Cartridge	Metal Cartridge
Pumping speed reduction through a clean filter	2%	1%
Efficiency for 5 µm particles	98%	–

Ordering Information

Dust filter

	Part No.	Part No.
Dust Filter	Polyester Filter Cartridge	Metal Cartridge
F 16-25 for pumps from 10 to 25 m³/h (G 1/2")	711 27 094	711 27 093
Spare cartridge for F 16-25	712 61 288	E 710 65 813
F 40 for SV 40 B (G 1 1/4")	711 27 104	711 27 103
Spare cartridge for F 40	712 61 298	710 49 083
F 65-100 for SV 65 B, SV 100 B (G 1 1/4")	711 27 114	711 27 113
Spare cartridge for F 65-100	712 61 308	E 712 13 324
F 200-300 for SV 200, SV 300 B (G 2")	711 27 124	711 27 123
Spare cartridge for F 200-300 (G 2")	712 61 318	712 13 334
F470-570 for SV470-570B (G3")	95170PP	95170MA
Spare cartridge for F470-570	EK95172PP	EK95172MA
F 630 for SV 630 (B/F), SV 750 (B/F) (DN 100 PN 10)	711 27 164	711 27 163
Spare cartridge for F 630 (DN 100 PN 10)	712 61 508	E 710 37 734
F 1200 for SV 1200 (DN 125 PN 10)	711 27 144	711 27 143
Spare cartridge for F 1200 (2 x required)	712 61 508	E 710 37 734


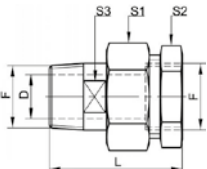
Fittings

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




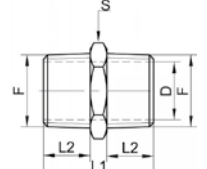
Union coupling

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


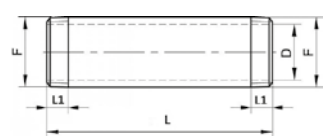
Double nipple

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


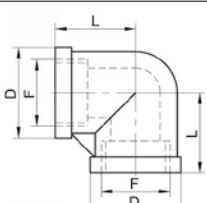
Double nipple - long version

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°


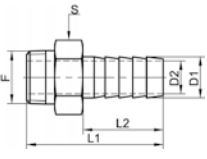
Always use an elbow when mounting a filter to protect the pump from particles falling in the inlet when cleaning or replacing the filtering cartridge.

		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

Fittings


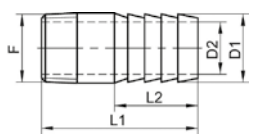
Hose adapter (hexagonal)

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


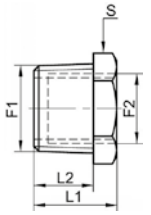
Hose adapter (cylindrical)

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


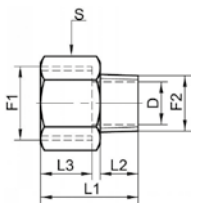
Male - Female reduction

Allows all possible mounting combinations.

		F1	G3/4"	G1"1/2	G1"1/4	G3"
		F2	G1/2"	G1"1/4	G2"	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

Vacuum Pressure Gauges



DIAVAC DV 1000



The DIAVAC DV 1000 is a rugged mechanical diaphragm vacuum gauge with high measurement accuracy for pressure measurements in the rough vacuum range from 1000 to 1 mbar.

Our Solution

- Vacuum connection: DN 40 ISO-KF
- Individual scale calibration
- Absolute pressure gauge
- Readout is independent of gas type and changes in atmospheric pressure
- Dimensions (W x H x D): 180 x 166 x 100 mm

Customer Benefits

- Wide measurement range from 1000 to 1 mbar with high resolution in the 100 to 1 mbar range
- Stainless steel diaphragm for excellent media compatibility
- Easy measurement chamber cleaning due to the removable measurement flange

PIEZOVAC PV 101



Digital Piezo gauge with data logger

Typical Applications

- Food and packaging industry
- Vacuum process quality assurance

Our Solution

- Measurement range 1200 to 0.1 mbar
- Usage possible directly in a vacuum
- Data logging via USB interface and internal memory for up to 2000 measured values
- Online measurement via USB possible; measuring data exportable
- Cordless power supply with standard 9 V battery or 15 V DC adapter
- Pressure unit selectable amongst mbar, Torr and Pascal
- Windows software VacuGraph for measuring data storage and PC analysis (optional)

Customer Benefits

The temperature compensated handheld gauge PIEZOVAC PV 101 is equipped with an internal piezoresistive silicone sensor and offers gas type independent measurement in the range of 1200 to 0.1 mbar.

The PIEZOVAC PV 101 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.
DIAVAC DV 1000, complete with sintered filter, mbar readout / Torr readout	160 67 / 896 06
PIEZOVAC PV 101, DN 16 ISO-KF incl. AIMn block battery, 9V 6LR61	230 080 V01
VacuGraph Windows software accessory set, including USB interface cable (2 m), 12V AC adapter (100-260V, 50/60 Hz), protection case	230 082 V01

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

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

LVO 700

Synthetic cyclic hydrocarbon

- Very high thermal stability and highly resistant against oxidation and decomposition, long lifetime

Product examples:

- 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 700, 2 liter	L70002
LEYBONOL LVO 300, 5 liter	L30005	LEYBONOL LVO 700, 5 liter	L70005
LEYBONOL LVO 300, 20 liter	L30020	LEYBONOL LVO 700, 20 liter	L70020
LEYBONOL LVO 320, 20 liter	L32020		

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

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In addition to high-quality products, Leybold offers you comprehensive services worldwide in accordance with our internationally unified quality standards.

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Our Performance

- Global Sales and Service network
- Factory overhaul of your vacuum components in one of our local service centers
- Preventive maintenance
- On-site service by our field service
- Tailor-made service contracts
- Extended warranty programs
- Exchange and back-up pool
- Remote maintenance
- Calibration of your measuring systems
- Installation and operator trainings
- Expertise and application consulting in all matters of vacuum technology
- Multi brand repairs on request



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