

Technical Data		SOGEVAC SV 40 B		SOGEVAC SV 65 B	
		50 Hz	60 Hz	50 Hz	60 Hz
Nominal speed ¹⁾	m³/h (cfm)	44.0 (25.9)	53.0 (31.2)	59.0 (34.8)	71.0 (41.8)
Pumping speed ¹⁾	m³/h (cfm)	38.5 (22.7)	47.0 (27.7)	54.0 (31.8)	64.0 (37.7)
Ultimate total pressure without gas ballast ¹⁾	mbar (Torr)	≤ 0.5 (≤ 0.4)			
Ultimate total pressure ¹⁾ with standard gas ballast ²⁾ with small gas ballast ²⁾	mbar (Torr)	≤ 1.5 (≤ 1.1)			
	mbar (Torr)	≤ 0.8 (≤ 0.6)			
Water vapor tolerance ¹⁾ with standard gas ballast ²⁾ with small gas ballast ²⁾	mbar (Torr)	30.0 (22.5)			
	mbar (Torr)	10.0 (7.5)			
Water vapor capacity with standard gas ballast ²⁾ with small gas ballast ²⁾	kg/h (qt/hr)	0.76 (0.80)	0.90 (0.95)	1.0 (1.1)0,36	1.25 (1.32)
	kg/h (qt/hr)	0.28 (0.30)	0.34 (0.36)	0.36 (0.38)	0.42 (0.44)
Oil capacity	l l (qt)	1.0 (1.05)	1.0 (1.05)	2.0 (2.1)	2.0 (2.1)
Mean noise level ³⁾	dB(A)	58	60	60	64
Admissible ambient temperature	°C (°F)	12 to 40 (54 to 104)			
Motor power	kW (hp)	1.1 (2.0)	1.5 (2.0)	1.5 (3.0)	1.8 (3.0)
Nominal speed	min ⁻¹ (rpm)	1500 (1500)	1800 (1800)	1500 (1500)	1800 (1800)
Type of protection	IP	55-F			
Weight (with oil filling)	kg (lbs)	43 (94.9)	45 (99.3)	49 (108.2)	52 (114.8)
Dimensions (L x W x H)	mm (in.)	425 x 284 x 265 (16.7 x 11.2 x 10.4)	425 x 284 x 265 (16.7 x 11.2 x 10.4)	480 x 320 x 264 (18.9 x 12.6 x 10.4)	480 x 320 x 264 (18.9 x 12.6 x 10.4)
Connection (inside thread) ⁴⁾ Intake Exhaust	G or NPT	1 1/4"			
	G or NPT	1 1/4"			

¹⁾ To DIN 28 400 and following numbers

²⁾ Ordering Information, see next page

³⁾ Operated at the ultimate pressure without gas ballast, free-field measurement at a distance of 1 m (3.5 ft)

⁴⁾ Pumps with European and Japanese motors have G, pumps with US motors have NPT

Materials (materials in contact with the process gas) Steel cast iron, Aluminium, Bronze, FPM (FKM), Glass, Polyamid 6.6, Filter material, (Polymers, Paper) Epoxy resin and Glass fibre

Ordering Information	SOGEVAC SV 40 B		SOGEVAC SV 65 B	
	50 Hz	60 Hz	50 Hz	60 Hz
	Part No.		Part No.	
SOGEVAC SV 40 B, SV 65 B ¹⁾ with three-phase motor, without gas ballast, without oil filter 230/400 V, 50 Hz and 460 V, 60 Hz (CEI) wide range motor (CEI) ²⁾	960 300		960 420 ²⁾	
with three-phase motor, without gas ballast, with oil filter 230/400 V, 50 Hz und 460 V, 60 Hz (CEI)	960 302		960 402	
with three-phase motor, with small gas ballast, without oil filter 230/400 V, 50 Hz and 460 V, 60 Hz (CEI)				
230/460 V, 60 Hz and 400 V, 50 Hz, NPT flanges (UL/CSA motor) ³⁾ wide range motor (CEI) ²⁾				
200 V, 50/60 Hz	960 316		-	
with three-phase motor, with small gas ballast, without oil filter 230/400 V, 50 Hz and 460 V, 60 Hz (CEI)	960 303			
wide range motor (CEI) ²⁾	960 323 ²⁾			
with three-phase motor,, with standard gas ballast, without oil filter 230/400 V, 50 Hz and 460 V, 60 Hz (CEI) 230/460 V, 60 Hz and 400 V, 50 Hz (CEI),	960 305		960 405	
NPT flanges (UL/CSA motor) ³⁾ wide range motor (CEI) ²⁾	960 312		960 412 960 422 ²⁾	
200 V, 50/60 Hz			960 417	
with three-phase motor, with small gas ballast, without oil filter 230/400 V, 50 Hz and 460 V, 60 Hz (CEI) 230/460 V, 60 Hz and 400 V, 50 Hz (CEI),	960 307		960 407	
NPT flanges (UL/CSA motor) ³⁾ wide range motor (CEI) ²⁾	960 314 960 324 ²⁾		960 414 960 424 ²⁾	
Other voltages/frequencies ⁴⁾	upon request		upon request	
Filling with special oil ⁴⁾	upon request		upon request	

Accessories

Exhaust filter cartridge AFE SV40B AFE SV65/100B	714 21 180 -	- 714 17 300
--	-----------------	-----------------

Spare Parts

Maintenance kit	971 427 660	971 423 440
Repair kit	971 427 650	714 20 420
Seal kit FPM (FKM)	971 427 640	714 20 410
Oil filter ⁵⁾	EK 960 04	EK 960 04
Oil filter bypass	712 30 570	712 30 570

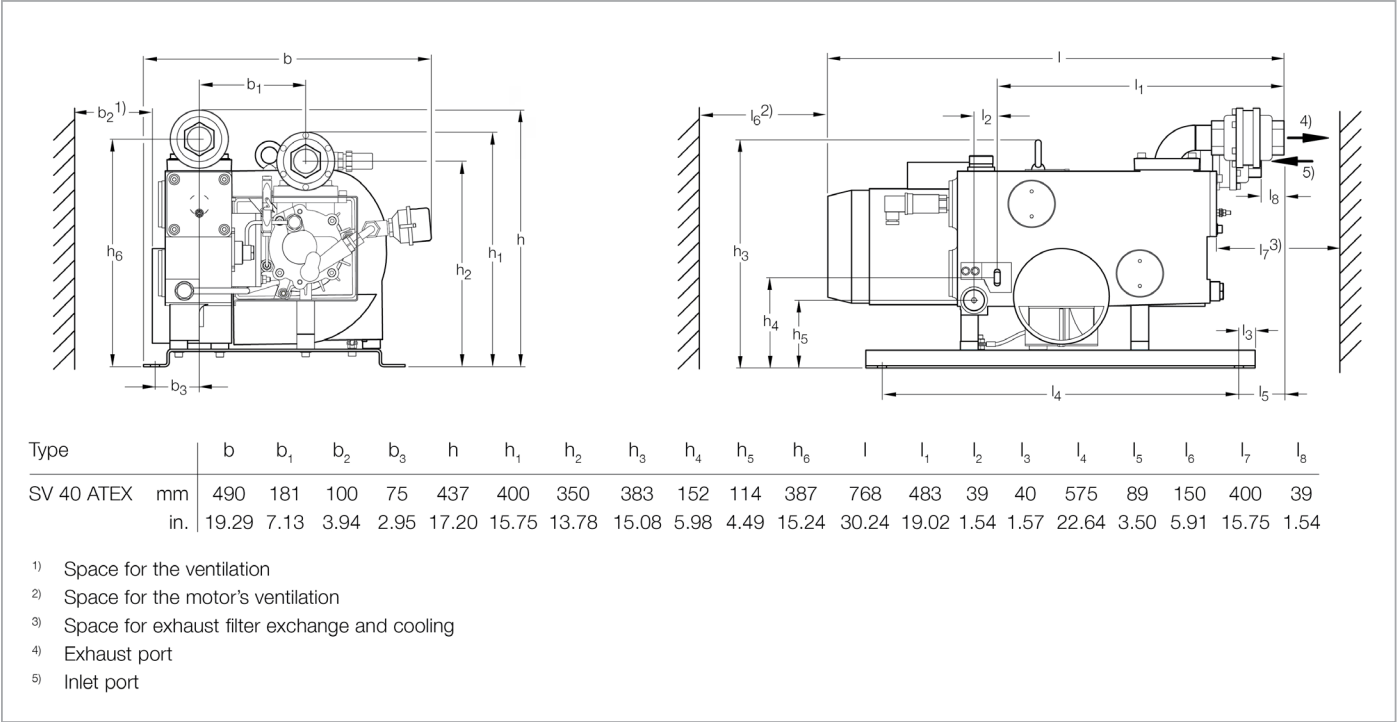
¹⁾ Pumps with Europe and Japan motors in G, pumps with USA voltage in NPT

²⁾ Wide range motor: 210-240 and 360-420 V ±5 %, 50 Hz and 210-260 and 360-460 V ±5 %, 60 Hz

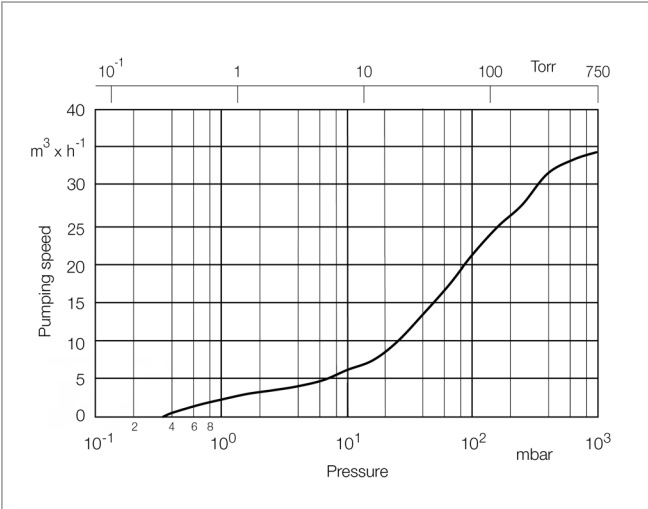
³⁾ With NEMA electrical connections without terminal board

⁴⁾ Please specify when ordering pump

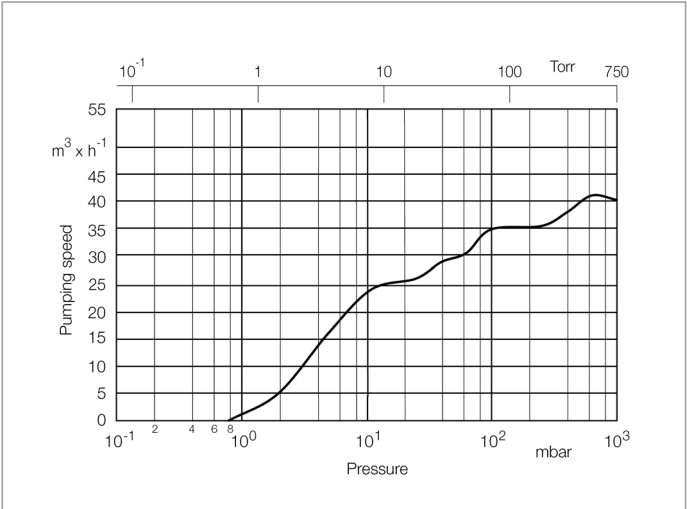
⁵⁾ Not included in maintenance kit



Dimensional drawing for the SOGEVAC SV 40 ATEX with standard motor, European version



Pumping speed characteristics of the SOGEVAC SV 40 ATEX at 50 Hz for gases of the material group IIB + H₂ (60 Hz curves at the end of the chapter)



Pumping speed characteristics of the SOGEVAC SV 40 ATEX at 50 Hz for gases of the material group IIA (60 Hz curves at the end of the chapter)

Technical Data

SOGEVAC SV 40 ATEX

		50 Hz	60 Hz
Nominal pumping speed	m³/h (cfm)	46.0 (27.1)	55.2 (32.5)
Pumping speed (according to PNEUROP)			
IIB + H ₂	m³/h (cfm)	26 (15.3)	29 (17.1)
IIA	m³/h (cfm)	35 (20.6)	42 (24.7)
Ultimate total pressure without gas ballast			
IIA / IIB + H ₂	mbar (Torr)	0.8 (0.6)	
Ultimate total pressure with gas ballast			
II A / IIB + H ₂	mbar (Torr)	1.5 (1.1)	
Noise level (according to DIN 45635)	dB(A)	63	68
Water vapor tolerable load with gas ballast	mbar (Torr)	30 (23)	
Motor power	kW (hp)	1.5 (2.0)	1.8 (2.4)
Rated rotational speed	min ⁻¹ (rpm)	1500 (1500)	1800 (1800)
Standard voltage	V	230/400 (± 10%)	460 (± 10%)
Type of protection	IP	55-F	55-F
Leak rate	mbar x l/s	≤ 1 x 10 ⁻³	
Type of oil		LVO 210	
Oil capacity, approx.	l (qt)	2 (2.1)	
Materials (materials in contact with the gas)		Steel, cast iron, Aluminium, Bronze, FPM (FKM), Glass, Polyamid 6.6, Filter material (Polymers, Paper), epoxy resin & glass fibre	
Weight (with oil filling)	kg (lbs)	110 (243)	
Connections			
intake			
IIB + H ₂ G	G	1 1/4"	
IIA	G	3/4"	
exhaust	G	1 1/4"	
Maximum gas inlet temperature	°C (°F)	40 (104)	

Ordering Information

SOGEVAC SV 40 ATEX		
	50 Hz	60 Hz
	Part No.	Part No.
SOGEVAC SV 40 ATEX LA IIB + H ₂ in accordance with 2014/34/EU [ II 1/2 G Ex h IIB+H2 T4 Ga/Gb (+5°C<Ta<40°C) EC Type Examination Certificate: PTB 04 ATEX 4013 Issue 1 with permanent gas ballast	960 345	–
SOGEVAC SV 40 ATEX LA IIB + H ₂ in accordance with 2014/34/EU [ 1/2 G Ex h IIB+H2 160C Ga/Gb (+5°C<Ta<40°C) EC Type Examination Certificate: PTB 04 ATEX 4013 Issue 1 without gas ballast	–	960 349 V 3060
SOGEVAC SV 40 ATEX IIB + H2 in accordance with 2014/34/EU [ II 1/2 G Ex h IIB+H2 T4 Ga/Gb (+5°C<Ta<40°C) EC Type Examination Certificate: PTB 04 ATEX 4013 Issue 1 without gas ballast	960 346	–
SOGEVAC SV 40 ATEX IIB + H2 in accordance with 2014/34/EU [ II 1/2 G Ex h IIB+H2 T4 Ga/Gb (+5°C<Ta<40°C) EC Type Examination Certificate: PTB 04 ATEX 4013 Issue 1 with gas ballast and MR40 B pressure regulator	960 343	–
SOGEVAC SV 40 ATEX IIA in accordance with 2014/34/EU [ II 1/2 G Ex h IIA T3 Ga/Gb (+5°C<Ta<40°C) EC Type Examination Certificate: PTB 04 ATEX 4011 Issue 1 without gas ballast	960 344	–
SOGEVAC SV 40 ATEX IIA in accordance with 2014/34/EU [ II 1/2 G Ex h IIA T3 Ga/Gb (+5°C<Ta<40°C) EC Type Examination Certificate: PTB 04 ATEX 4011 Issue 1 with gas ballast and MR40 B pressure regulator	960 342	–
Accessories	upon request	upon request
Spare Parts	upon request	upon request

For all enquiries and orders relating to category 1 and 2 ATEX products please exclusively use our ATEX questionnaire. You can find this questionnaire at the end of the full-line catalog together with the fax forms or on the Internet under “www.leybold.com” under Download Documents in the area Documentation.

ATEX Category 2 Pumps

Application

As soon as gases capable of exploding are being pumped or if such gases are present in the vicinity, then the customer must perform a hazard analysis. In Europe, the ATEX Directives 2014/34/EU need to be observed in this regard. For equipment in Zone 1, ATEX Category 3 SOGEVAC pumps are available.

Classification

As in the table below.

Safety Precautions

As standard, the pumps are equipped with FPM (FKM) seals, oil filter bypass and oil LEYBONOL LVO 210. Special ATEX exhaust filters, coupling components, motors, floats and final inspections are used, respectively performed. A DN 16 ISO-KF connection for the gas ballast is supplied.

All pumps are equipped with Pt100 temperature, oil level and oil casing pressure sensors. The motors are equipped with PTC thermistors.

SOGEVAC pumps of the following sizes are available:
SV 40 B, SV 65 B, SV 100 B, SV 200, SV 300 B, SV 630 B and SV 750 B

The pumps are supplied with special Operating Instructions (GA), Spare Parts List (ET) and include a CE declaration. This special information must be observed.

LV Restrictions apply for Service and Repairs: please consult us.

Only special accessories (filters, valves, taps) and original spare parts from Leybold must be used.

Advantages to the User

- High pumping speed down to ultimate pressure
- Operation of the pump at all pressures between 1000 mbar (750 Torr) and ultimate pressure is possible
- Integrated and effective separation of oil mist
- Compact design
- Air or water cooled
- Different gas ballast variants: without, manual and permanent upon request
- Available in many different variants, motor voltages, ports etc.

Oil Sealed Vacuum Pumps