

Mobile and Flexible Helium Leak Detector PHOENIX L300i MODUL



PHOENIX L300i MODUL

The PHOENIX L300i MODUL combines the excellent characteristics of the PHOENIX L300i with those of the pump system which has been added to the basic leak detector module.

This results in two basic groups:

- Dry, mobile leak detectors with selectable pumping speed
- Oil sealed, mobile leak detectors offering a high pumping speed at an optimum price-to-performance ratio.

PHOENIX L300i MODUL with Oil Sealed Backing Pump

This combination represents a powerful leak detector, the pumping speed of which is adapted to the particular application in each case.

Advantages to the User

- Cost-effective leak detector
- Pumping speed optimized for the particular application
- Fast response
- Quick recovery
- High sensitivity
- Fast leak rate readout also at low leak rates

Typical Applications

All applications involving short cycles and/or larger volumes and which require a mobile system, for example:

- Automotive industry
- Cooling and air conditioning
- Manufacturers of furnaces/machines/systems
- Packaging

The PHOENIX L300i MODUL represents the basic unit of an entire family of leak detectors. It is based on the PHOENIX L300i, but it does not include an integrated backing pump. The customer has to select and add an external backing pump depending on the special application. For example when large vacuum chambers have to be evacuated or higher leak testing cycles are required.

PHOENIX L300i MODUL with Dry Compressing Scroll Pump

This combination represents a dry high-performance leak detector.

Advantages to the User

- Very high pumping speed which is also acceptable for testing semiconductor production chambers without having to use their own pump systems
- Fast response
- Quick recovery (after helium contamination)
- Absolutely dry
- High sensitivity

Typical Applications

All applications which demand a clean process, for example:

- Semiconductor industry (chip manufacturers)
- Semiconductor industry (tool manufacturers and subcontractors)
- High purity gas industry
- Research and development
- UHV applications

Technical Data

PHOENIX L300i MODUL

		with 1-stage Rotary Vane Pump	with 2-stage Rotary Vane Pump	with Scroll Pump
Minimum detectable helium leak rate				
Vacuum mode	mbar x l x s ⁻¹	≤ 5 x 10 ⁻¹¹	≤ 5 x 10 ⁻¹²	≤ 8 x 10 ⁻¹² ¹⁾ / ≤ 5 x 10 ⁻¹¹ ²⁾
Sniffer mode	mbar x l x s ⁻¹	< 1 x 10 ⁻⁷	< 1 x 10 ⁻⁷	< 1 x 10 ⁻⁷
Minimum detectable hydrogen leak rate				
Vacuum mode	mbar x l x s ⁻¹	≤ 1 x 10 ⁻⁸	≤ 1 x 10 ⁻⁸	≤ 1 x 10 ⁻⁸
Sniffer mode	mbar x l x s ⁻¹	< 1 x 10 ⁻⁷	< 1 x 10 ⁻⁷	< 1 x 10 ⁻⁷
Max. permissible inlet pressure	mbar (Torr)	15	15	15
with partial flow system	mbar (Torr)	1000	1000	1000
Pumping speed during thre evacuation process with the pump (50 Hz)				
SOGEVAC SV 16 BI	m ³ x h ⁻¹ (cfm)	16	–	–
SOGEVAC SV 28 BI	m ³ x h ⁻¹ (cfm)	25	–	–
SOGEVAC SV 40 BI	m ³ x h ⁻¹ (cfm)	40	–	–
TRIVAC D 16 B	m ³ x h ⁻¹ (cfm)	–	16	–
TRIVAC D 25 B	m ³ x h ⁻¹ (cfm)	–	26	–
SCROLLVAC SC 15 D	m ³ x h ⁻¹ (cfm)	–	–	13
SCROLLVAC SC 30 DL	m ³ x h ⁻¹ (cfm)	–	–	26
Pumping speed for helium at the inlet flange	l/s	> 2,5	> 2,5	> 2,5
Time constant of the leak signal (blanked off, 63% of final value)	s	< 1	< 1	< 1
Leak rate measurement range	mbar x l x s ⁻¹	1 x 10 ⁻¹² to 1 · 10 ⁻¹	1 x 10 ⁻¹² to 1 · 10 ⁻¹	1 x 10 ⁻¹² to 1 · 10 ⁻¹
Units of measurement (selectable)				
Pressure		mbar, Pa, atm, Torr	mbar, Pa, atm, Torr	mbar, Pa, atm, Torr
Leak rate		mbar x l x s ⁻¹ , Pa x m ³ x s ⁻¹ , Torr x l x s ⁻¹ , atm x cc x sec ⁻¹ , sft ³ /yr	mbar x l x s ⁻¹ , Pa x m ³ x s ⁻¹ , Torr x l x s ⁻¹ , atm x cc x sec ⁻¹ , sft ³ /yr	mbar x l x s ⁻¹ , Pa x m ³ x s ⁻¹ , Torr x l x s ⁻¹ , atm x cc x sec ⁻¹ , sft ³ /yr
Sniffer mode		ppm, g/a eq, oz/yr eq	ppm, g/a eq, oz/yr eq	ppm, g/a eq, oz/yr eq
Time until ready for operation	min	≤ 2	≤ 2	≤ 2
Mass spectrometer		180° magnetic sector field	180° magnetic sector field	180° magnetic sector field
Ion source		2 yttrium/ iridium long-life cathodes	2 yttrium/ iridium long-life cathodes	2 yttrium/ iridium long-life cathodes
Detectable masses	amu	2, 3 and 4	2, 3 and 4	2, 3 and 4
Test port		1 x DN 25 ISO-KF	1 x DN 25 ISO-KF	1 x DN 25 ISO-KF
Dimensions (W x H x D)	mm	495 x 440 x 315	495 x 440 x 315	495 x 440 x 315
Weight (without pump)	kg (lbs)	30	30	30
Available languages		English, German, Chinese, Japanese (Katakana), Russian, French, Italian, Spanish, Polish, Korean	English, German, Chinese, Japanese (Katakana), Russian, French, Italian, Spanish, Polish, Korean	English, German, Chinese, Japanese (Katakana), Russian, French, Italian, Spanish, Polish, Korean

¹⁾ With SCROLLVAC SC 30 DL

²⁾ With SCROLLVAC SC 15 D

The following Part Numbers contain only the individual components needed for assembly by the customer.

Ordering Information

PHOENIX L300i MODUL

	Part No.	Part No.
PHOENIX L300i MODUL without backing pump 115 - 230 V / 50/60 Hz	250002V01	250002V01
Accessories		
Recommended backing pumps	Euro version 230 V, 50 Hz	US version 115 V, 60 Hz
SOGEVAC SV 16 BI	960 286	upon request
SOGEVAC SV 28 BI	960 277	upon request
SOGEVAC SV 40 BI	upon request	upon request
TRIVAC D 16 B	113 25	upon request
TRIVAC D 25 B	113 35	upon request
SCROLLVAC SC 15 D	133 001	133 101
SCROLLVAC SC 30 DL	133 050	133 051
For further accessories see para. "Accessories for PHOENIX L300i, PHOENIX L300i DRY and PHOENIX L300i MODUL"		