Tracer gas leak detectors

The widest offer of leak testing solutions, using helium and hydrogen

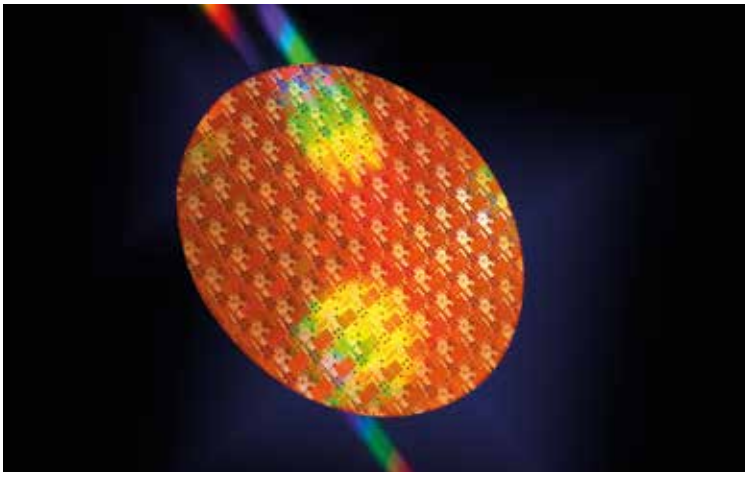
PFEIFFER VACUUM

Leak detectors

Contents

Leak detectors

Advantages and applications



Leak detectors for various needs:

Our portable leak detectors are used both for mobile leak detection „on site“, as well as for worldwide service jobs in a variety of different locations. They stand out above all due to their high performance combined with low weight.

The multipurpose leak detectors are used mainly for stationary applications to localize leaks and to check leak tightness. They are also movable thanks to dedicated carts. They are used in a wide range of industries, from heavy industry right up to large instruments in international research centers and are available with oil sealed or dry pumps.

High-performance leak detectors are used where extremely short cycle times are required. From testing of industrial components in high throughput production up to highly sensitive applications in vacuum and medical technology or in research and development.

Customer benefits:

Portable:
- Ultralight and easy to operate
- Ideal for global servicing work
- Remote controlled for comfortable operation

Multipurpose:
- Suitable for a large variety of leak detection applications
- Powerful and dependable
- Simple design for easy operation

High performance:
- Extremely short pump down times even on large volumes
- Designed for ultra sensitive leak detection limits whatever size and volume of the test parts
- High reliability in clean processes as well as rough environments

Modular:
- Easy and flexible integration into leak detection systems
- Low maintenance for continuous operation
- Broad selection of interfaces to answer all common industry standards

Sniffing:
- Ideal solution for sniffing applications, even in production
- Superior performance and fast testing in a compact design
- Visual management for the operators convenience thanks to color LEDs on the probe

Leak detectors

Series and applications

Overview of series and applications

	Analytics						Semiconductor										Coating										Industry										R&D									
	Electron microscopy	Leak detection	Mass spectrometry	Surface analysis	Plasma monitoring	Residual gas analysis	Lithography	PVD (Physical Vapor Deposition)	CVD (Chemical Vapor Deposition)	Plasma etching	Implantation – Source	Implantation – Beamline	Inspection	Bonding	MBE (Molecular Beam Epitaxy)	Load-locks, transfer chambers, handling systems	Flat Panel Display (FPD)	LED / OLED	Hard disk coating	Photovoltaics	Glass coating (PVD)	CD- / DVD- / Blu-Ray manufacturing (PVD)	Optical coating (PVD)	Wear protection (PVD, CVD)	Web coating	Medical technology	Industrial leak detection	Electron beam welding	Isolation vacuums	Lamp and tube manufacturing	Heat treatment	Vacuum drying	Vacuum furnaces	Nuclear research	Fusion technology	Plasma research	Particle accelerators	Space simulation	Cryogenic research	Elementary particle physics	Nanotechnology	Biotechnology
■ recommended																																											
Portable																																											
ASM 310	■	■		■	■			■	■	■	■	■	■	■		■							■	■		■			■		■	■	■	■	■	■	■	■	■	■	■	■	■
Multipurpose																																												
ASM 340	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ASM 340 D	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ASM 340 I	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
High-performance – mobile																																												
ASM 390	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ASM 392	■	■	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Modular																																												
ASI 35		■																									■																	
Sniffing																																											
ASM 306 S		■						■	■	■																■							■	■	■	■	■	■	■	■	■	

Series at a glance

Portable

ASM 310

Multipurpose

ASM 340
ASM 340 D
ASM 340 I

High-performance – mobile

ASM 390 / 392

Modular

ASI 35

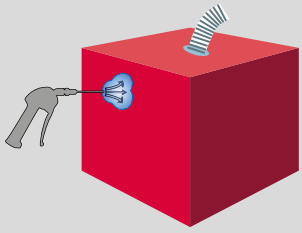
Sniffing

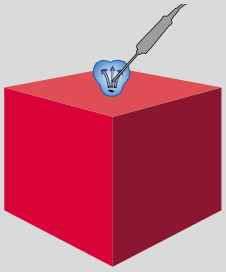
ASM 306 S

Leak detectors

Six test methods for leak detection

Leak localization
Applications in production and maintenance as well as quality control

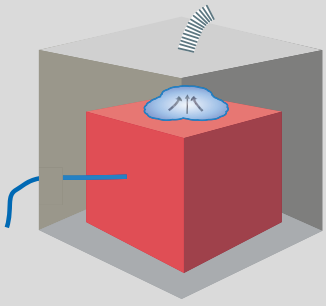




Method	**Vacuum test: Spraying test**	**Sniffing test**
	For leak localization on parts under vacuum	For leak localization on pressurized parts
Description	The leak detector evacuates the air inside the test part. After that, the tracer gas is sprayed on the external surface of the part. The detector measures the gas flow through the leak channel in the wall of the test part. The leak can be localized.	The test part is pressurized with tracer gas. After that, the sniffer probe is moved around the part. If a leak is present, the leak detector will detect the escaping tracer gas, allowing to locate the leak.
Customer benefits	■ Localization of the leak ■ Very high sensitivity ■ Easy to perform ■ Local or integral test	■ Localization of the leak ■ Not necessary to put the test part under vacuum ■ Easy to perform

	Vacuum test: Spraying test	Sniffing test	Integral vacuum test	Vacuum test: Bombing test	Integral test of enclosed parts under vacuum	Sniffing test: Integral test at athomspheric pressure
ASM 310	■	■				
ASM 340 /340 D / 340 I	■	■	■		■	■
ASM 390 / 392	■	■	■		■	■
ASI 35		■	■		■	■
ASM 306 S		■				

Integral test
Industrial applications and quality control

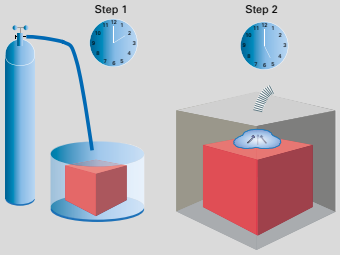


Integral vacuum test

Used in production environments

The test part is placed in a vacuum test chamber and filled with tracer gas. Should a leak be present, the tracer gas will escape from the part into the test chamber and will be measured by the leak detector.

- Very high sensitivity
- High throughput
- Easy to integrate into a production line
- Easy calibration
- High repeatability

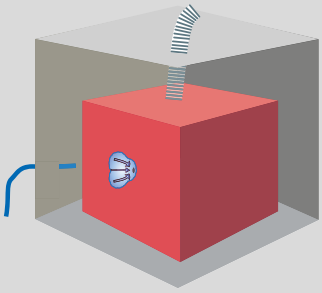


Vacuum test: Bombing test

The test part is sealed and cannot be evacuated or pressurized.

Place the test part in a specific chamber and pressurize it with tracer gas (bombing chamber). Should a leak be present, the tracer gas is forced into the part due t o the gas pressure. After that, the part is placed in a vacuum chamber which is evacuated.
Any tracer gas that was forced inside the part will now escape and be measured by the leak detector.

- The only solution to test sealed components with high sensitivity
- High repeatability

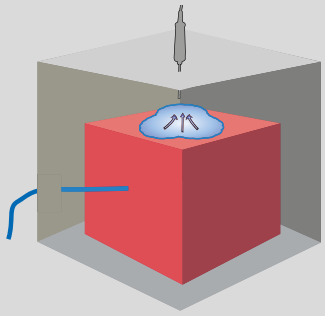


Integral test of enclosed parts under vacuum

It needs to be tested whether tracer gas can enter into the part.

Inside a test chamber, the part is connected to a leak detector and evacuated. The chamber is filled with tracer gas. Should a leak be present, the tracer gas will penetrate the part and be measured by the leak detector.

- High automation level possible
- Very high sensitivity
- High throughput
- High repeatability



Sniffing test: Integral test at atmospheric pressure

The test part can withstand overpressure and needs to be tested as a complete product.

The test part is pressurized with tracer gas in a simple accumulation chamber which is under atmospheric pressure. After an accumulation time, the detector analyzes the air inside the chamber and determines if an increase in the tracer gas concentration can be measured.

- Easy to integrate into a production line

Portable – ASM 310

Combining light weight and superior performance

Powerful

Highly compact and light in weight, the leak detector ASM 310 requires low maintenance. Its low weight and universal voltage enable the ASM 310 to be easily operated anywhere in the world. A transport case to safeguard against shipping damage and a trolley are available as accessories.

Superior performance

■ Backing capacity	1.7 m^3/h
■ Pumping speed for He	1.1 l/s
■ Inlet pressure	15 hPa
■ Minimum detectable leak rate	$5 \cdot 10^{-13}$ Pa m^3/s

User-friendly

The control panel integrates magnets, enabling the operator to place it on a metallic base.

The unique color touchscreen display can be individually adjusted. As a result, only information that the user actually needs for his task are displayed. The menu is password-protected to prevent unauthorized access to the settings of the device.

Detachable control panel (with approx. 2 m long cable)

Compatible

The ASM 310 can likewise be operated with the wireless remote control RC 10. This enables the leak detector to be operated even from a distance of up to 100 meters.

Remote control RC 10

Customer benefits

- Lightweight and portable, only 21 kg
- Smart design with retractable handle
- Easy to move
- Detachable control panel
- On-demand operating interface
- Intuitive and customizable menu
- Small footprint, small size
- Can be operated in any position
- Large, bright color touchscreen
- Color graphics functionality
- Password-protected display
- Integrated SD memory card for recording, downloading data and parameter settings
- Voice synthesizer

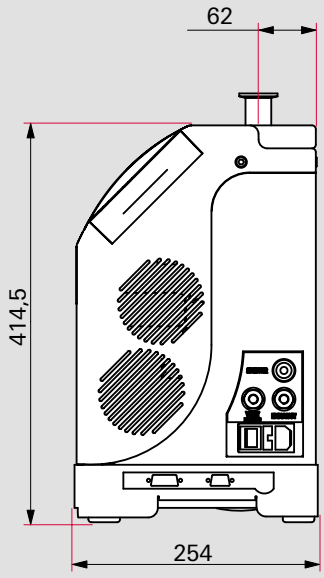
Applications

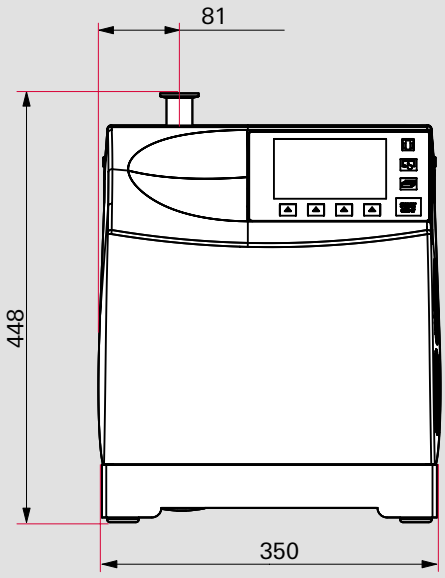
- Semiconductor industry
- Analytics and research
- Industrial applications
- Power plants

Portable – ASM 310

Combining light weight and superior performance

Dimensions





Dimensions in mm

Technical data

Portable leak detector	ASM 310
Test methods	Vacuum and sniffing leak detection
Minimum detectable leak rate for Helium (vacuum leak detection)	$5 \cdot 10^{-13}$ Pa m^3/s
Minimum detectable leak rate for Helium (sniffer leak detection)	$1 \cdot 10^{-8}$ Pa m^3/s
Detectable gases	^4He, ^3He, H_2
Maximum inlet test pressure	15 hPa
Backing pump capacity	1.7 m^3/h
Pumping speed for He	1.1 l/s
Flange (in)	DN 25 ISO-KF
Start-up time (20 °C)	< 2 min (< 3.5 min with auto-calibration)
Response time (sniffing leak detection)	< 1 s
Interface	RS-232
I/O interfaces	Digital input Analog output (mantissa) Analog output (exponent)
Dimensions	350 x 245 x 414 mm
Weight	21 kg
Universal voltage	90 – 240 V AC; 50/60 Hz
Maximum power consumption	300 W
Helium background suppression	Automatic / manual
Operator interface	Color touchscreen
Selectable languages	English, French, German, Italian, Spanish, Russian, Japanese, Chinese, Korean

Order numbers

	Order number
ASM 310	**BSAA0000MM9A**

Order numbers accessories

Accessories	Order number
Country-specific power cables	
UK	**104411**
Italy	**104758**
Switzerland	**103718**
Remote control RC 10, wired/wireless	**124193**
Trolley	**114820**
Transportation case	**119594**

General accessories for our leak detectors will be found on page 30.

Multipurpose – ASM 340, ASM 340 D, ASM 340 I

Best in class leak detector for high reliability testing in various applications, using helium and hydrogen

Top performance

The ASM 340 guarantees top performance in vacuum or sniffing leak detection for various applications – from maintenance to applications in small production environments. This dependable leak detector can be used both for qualitative localization of leaks as well as quantitative global or local testing.

The ASM 340 is characterized by its powerful pumping system and available in conventional or dry versions. It is the only leak detector in its class that offers qualitative leak detection starting at 100 hPa before reaching the inlet test pressure. With an unrivaled performance in sniffing* the ASM 340 is the ideal partner for leak localization on pressurized parts. Easy operation, ultra fast response time and short recovery time are among the outstanding features of this compact multi-purpose unit. The ASM 340 is the perfect solution for everyday testing even in severe test conditions.

*$5 \cdot 10^{-10}$ Pa m^3/s min. detectable leak rate for He

Remote control RC 10

Easy operation

The detachable control panel with magnets enhances ergonomics for leak detection on medium or large size parts. Its large, bright and color touch screen makes for a maximum readability of the leak test results. The menu is customizable and can be protected to avoid any unintended operation. Thanks to the wireless remote control, the ASM 340 can easily be operated from a distance of up to 100 m.

ASM 340 I

For customized applications

As an extension range, the ASM 340 exists also without a backing pump. This ASM 340 I allows to connect a different backing pump, for even more convenience and/or better adaptation to customer application, as for example in case of integration into a leak detection system. The connection for the external backing pump is located at the rear of the leak detector".

Customer benefits

- Fastest time to test in its class
- High backing pump capacity for versatile use
- Rapid response time due to high helium pumping speed
- Unique capability to detect leaks starting at 100 hPa
- Impressive results in sniffing test mode, with $5 \cdot 10^{-10}$ Pa m^3/s minimum detectable leak rate for helium
- Low maintenance due to rugged design
- Integrated SD memory card for recording, downloading and parameter setting
- Detachable color control panel for enhanced ergonomics
- User friendly and customizable interface
- Complete range of I/O and Profibus communication available

More convenience

- Sniffer probe with LEDs that indicate the measurement status and with a zero button facilitates sniffing leak detection
- Bypass option for the installation of an auxiliary primary pump
- Complete range of I/O and Profibus communication available for an easy integration into production lines

Applications

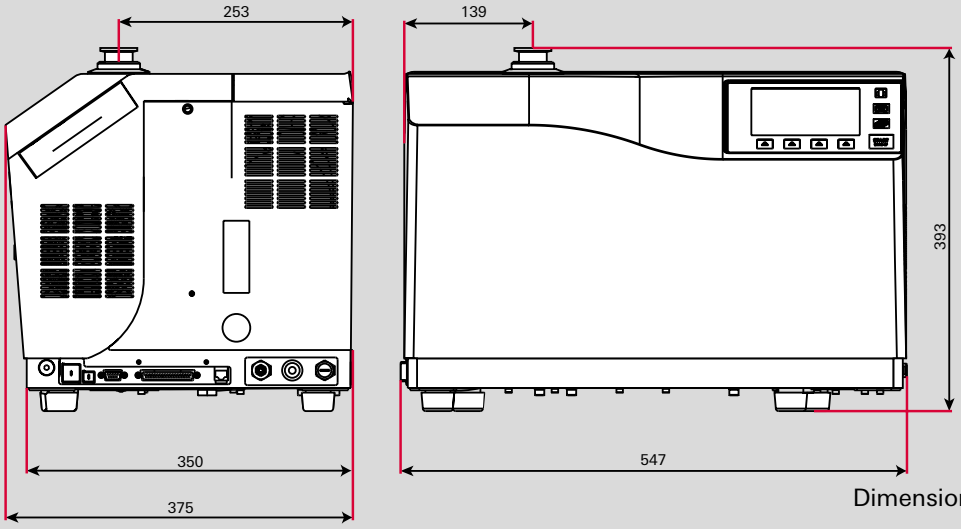
- R & D
- Aeronautic industry
- Mechanical engineering
- Measuring technology
- Refrigeration
- Air conditioning
- Semiconductor technologie

Sniffer probe LP 505

Multipurpose – ASM 340, ASM 340 D, ASM 340 I

Best in class leak detector for high reliability testing in various applications, using helium and hydrogen

Dimensions



Dimensions in mm

Technical data

General technical data	ASM 340
Flange (in)	DN 25 ISO-KF
Test method	Vacuum and sniffing leak detection
Detectable gases	^4He, ^3He, H_2
Minimum detectable leak rate for He (sniffing leak detection)	$5 \cdot 10^{-10}$ Pa m^3/s
Minimum detectable leak rate for He (vacuum leak detection)	$< 5 \cdot 10^{-13}$ Pa m^3/s
Pumping speed for He	2.5 l/s
Maximum inlet test pressure	25 hPa
Start-up time (20 °C) without calibration	~ 3 min
I/O interfaces	Digital and Analog I/O, Relays
Interfaces (see ordering matrix)	RS-232, Ethernet, Bluetooth …
Selectable languages	English, French, German, Italian, Spanish, Russian, Japanese, Chinese, Korean
Dimensions	393 x 547 x 375 mm

Specific technical data	ASM 340	ASM 340 D (dry version)	ASM 340 I
Backing pump	Rotary vane pump	Diaphragm pump	None
Backing pump capacity	15 m^3/h	3.4 m^3/h	–
Power consumption max.	850 W	600 W	350 W
Supply	100–110 V; 50/60 Hz 200–240 V; 50/60 Hz	Universal 100–240 V; 50/60 Hz	Universal
Weight	56 kg	45 kg	32 kg
Operating temperature	0–45 °C (vacuum) 0–40 °C (sniffing)	0–35 °C	0–40 °C

Order number matrix ASM 340

Order number

abc **A 0 0 A** d **M** e **9** f

Leak detector	abc
ASM 340	**JSV**
ASM 340 D (dry version)	**KSB**
ASM 340 I (without backing pump)	**MSX**

Interface board	d
Basic 15 Pins I/O	**0**
Basic 15 Pins I/O + Bluetooth	**1**
37 Pins I/O	**2**
37 Pins I/O + Ethernet[1)]	**4**
37 Pins I/O + Bluetooth	**5**

Supply	e
100–110 V; 50/60 Hz, US Power cable (only for ASM 340)	**L**
200–240 V; 50/60 Hz, EU Power cable (only for ASM 340)	**H**
Universal 100–240 V; 50/60 Hz (only for ASM 340 D + I)	**M**

Personalization	f
No	**A**
Japan (not available for ASM 340 D and ASM 340 I / supply voltage 90–130 V 50/60 Hz)	**B**

[1)] Ethernet will allow to create an additional COM port to operate the leak detector through a computer

Order number accessories

Accessories	Order number
Country-specific power cable	
UK	**104411**
Italy	**104758**
Switzerland	**103718**
Remote control	
Remote control RC 10, wired/wireless	**124193**
Transport cart	
Transport cart, 2 wheels, for ASM 340 (not for ASM 340 I)	**122570**
Spray Gun	
Standard	**112535**
“Elite kit” spray gun with accessories in a compact case	**109951**
Standard sniffer probe	
5 m hose length, rigid 9 cm nozzle	**SNC1E1T1**
Other nozzle and hose lengths upon request	
Sniffer probe with Pass/Fail indication and Zero button	
LP 505, 5 m hose length, rigid 12 cm nozzle	**BG 449 208-T**
Bypass option	**on request**
Interface	
Profibus	**122253**
ECB-Wifi	**125902**

High performance – mobile – ASM 390 and ASM 392

Mobile leak detectors optimized for rapid pump down and short response times on large test objects.

Superior performance, fast testing

The ASM 390 and ASM 392 are the perfect leak detection solutions adapted to the semiconductor and display industries as well as to other demanding applications where rapid pump down and high sensitivity is key. Both models are fully Semi S2 compliant.

These leak detectors are fitted with a dry frictionless backing pump and a powerful high vacuum pump, making them the ideal tools for leak testing of various components in clean environments. Equipped with an additional turbopump, the ASM 392 will speed up your leak detection process to reduce the downtime of your production equipment.

Robust, accurate and reliable

The ASM 390 and ASM 392 were developed to provide full confidence in leak testing regardless of the operator's knowledge. They deliver premium performances and accurate results in a minimal time, making them highly efficient in the field.

Ergonomic and highly maneuverable

ASM 390 and ASM 392 share the same platform and are uniquely ergonomic with a convenient size and height, a secondary handle in the front, a fully rotatable, removable display, an inlet in the front for easy connection to test ports and unrivaled maneuverability for access to all testing areas, even in tight spaces.

Smart and user-friendly

Thanks to a wide, clear color touch display panel, an integrated toolbox with modular compartments and storage space for vacuum bellows, you will be amazed how easy leak detection can be when you have all necessary accessories at the point of use.

Remote control RC 10

Customer benefits

- High maneuverability and compact design
- Superior leak testing performances
- Large rotateable color touch screen
- High roughing capacity (35 m^3/h) for fast evacuation
- Dry and clean pumping technology
- Low maintenance requirements
- Ergonomic design with working surface
- Fast recovery in case of pollution
- Intuitive menu for easy operation
- Integrated toolbox for storage of accessories
- Fast start-up
- High sensitivity and accurate measurements
- Fully Semi S2 compliant

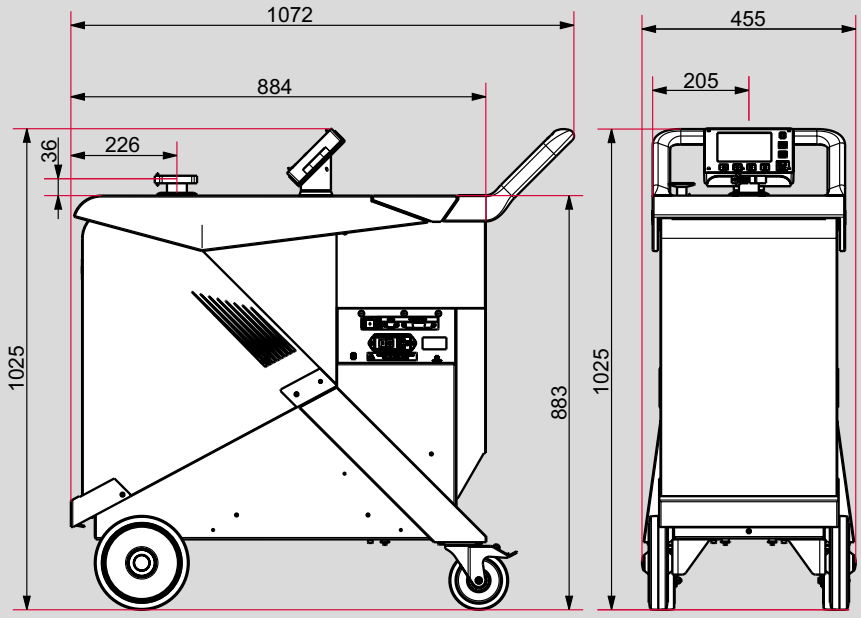
Applications

- Semiconductor industry
- Large area coating
- Solar industry
- Accelerators
- Vacuum components – feedthroughs, valves, bellows, expansion joints
- Laser technology
- Ultra-pure media supply
- Electronics
- Aeronautics
- Medical technology

High performance – mobile – ASM 390 and ASM 392

Mobile leak detectors optimized for rapid pump down and short response times on large test objects.

Dimensions



Dimensions in mm

Technical data

Features	ASM 390	ASM 392
Detectable gases	^4He, ^3He, H_2	
Min. detectable leak rate for Helium (vacuum leak detection)	$1 \cdot 10^{-12}$ mbar l/s	
Min. detectable leak rate for Helium (sniffer leak detection)	$1 \cdot 10^{-8}$ mbar l/s	
Helium pumping speed	10 l/s	25 l/s
Backing capacity	35 m^3/h	
Maximum inlet test pressure	20 mbar (and additional massive mode)	
Start-up time (20°C) without calibration	2 min	
Inlet flange	DN 40 ISO-KF	
Response time	< 1 s	
Interface	RS-232, I/O, Ethernet (consult operating instructions for more details)	
Noise level	≤ 55 dB (A)	
Operating temperature	10-35 °C	
Supply voltage	100-240 V, 50/60 Hz	
Power consumption	800 W	
Power consumption max.	1,600 W	
Weight	125 kg	130 kg
Dimensions (LxWxH)	1,072 x 455 x 1,025 mm	

Order number matrix ASM 390/392

Order number

a G b M M 9 c

Version	a
ASM 390	**CSGB01**
ASM 392	**ESGB02**

Interface board	b
Basic 15 pins I/O	**0**
37 pins I/O	**2**
37 pins I/O + Ethernet[1)]	**4**

Customization on exhaust	c
None (Standard)	**A**
Exhaust DN 25	**B**
Exhaust DN 40	**C**

Accessories

Accessorie	Order number
Bottle holder for ASM 390 and ASM 392	**126561**
Remote control	
RC10 (wired/wireless operation, color touch screen)	**124193**
Locking clamp DN 40 KF	**118801**
Standard sniffer probe[2)]	
5 m hose length, rigid 9 cm nozzle	**SNC1E1T1**
External communication box ECB-Wifi	**125902**
Helium spray gun	
Standard	**112535**
Spray gun "Elite" with accessories in a case	**109951**
Inlet filters for dust[2)]	
Brass, 20 µm, DN 40/40 ISO-KF	**105842**
Stainless steel, 15 µm, DN 40/40 ISO-KF	**127012**
Stainless steel, 5 µm, DN 40/40 ISO-KF	**127040**

[1)] Ethernet will allow to create an additional COM port to operate the leak detector through a computer
[2)] Other configurations available, please contact your local Pfeiffer Vacuum support

Modular – ASI 35

Modular tracer gas leak detector
The highest performance in helium and hydrogen for industrial leak detection systems.

The perfect solution

The ASI 35 is the perfect leak detection solution dedicated to leak detection machine builders and end-users. This unit combines high performance, reliability, and repeatability with maximum uptime. The ASI 35 provides maximum performance for tracer gases helium and hydrogen in integral and localizing test methods or a combination of both. Therefore, it offers flexibility in the testing of demanding samples with minimum signal background and crosstalk, guaranteeing fast overall cycle times.

Flexible and versatile

Due to its modular design, the ASI 35 is optimized for minimum space requirements and maximum integration options. The vacuum module can be installed in any orientation and all other modules are compatible with ½ 19 inch rack format. The user interface becomes optional as the unit can be controlled by PCs or PLCs. Only two cables are needed to connect the vacuum and electronic modules, making the ASI 35 the easiest modular leak detector to set up.

Dependable, fast and sensitive

Further advantages of the ASI 35 are its high helium pumping speed and low maintenance turbopump, its dual independent long life filaments as well as its state-of-the-art electronics. These features guarantee a long-lasting trouble-free operation. The leak detection system can be designed for testing in various operational modes for vacuum or sniffing tests with the highest sensitivity level. The ASI 35 sustains very high throughput, ensures the accuracy and reproducibility of the measurement results and allows ultra fast cycle time as short as 1 second. Thanks to its unrivalled performances in sniffing, the ASI 35 is the perfect leak detector for such specific systems, especially if multipoint sniffing is needed.

Customer benefit

- Integral and localizing test (vacuum and sniffing) for both tracer gases: helium and hydrogen
- Short cycle times due to highest pumping speed
- Maximum reliability and robustness for high uptime
- Wide temperature range allows for operation in challenging environments
- Worldwide operation thanks to universal voltage of the electronic module
- Ability to sustain up to 800 sccm flow in sniffing applications
- Easy substitution of any other modular leak detector model (I/O compatibility mode)

Easy worldwide operation

The electronic module is suitable for universal voltage, making the ASI 35 easy to integrate into systems designated for worldwide operation. The leak detector is designed for working conditions in ambient temperatures of up to 45 °C. The easy mechanical integration is complemented by a wide range of interfaces, allowing data acquisition and complete external control of the system. Thanks to customized I/O configuration, a basic leak detection system can also be considered without PC or PLC. The optional control panel with color touch display provides easy operation through intuitive settings and software menus for both leak detection machine builders and end-users.

Applications

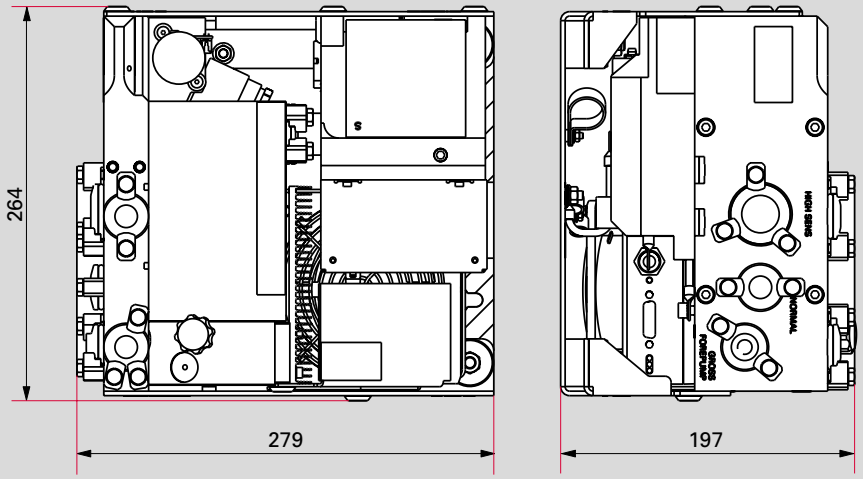
- Automotive: airbag inflators and ignitors, cooling radiators, fuel rails, and injectors
- Refrigeration and air conditioning: evaporators, compressors, tubes, coils
- Packaging: cans and capsules, tubular bags, blisters
- Mechanical parts: valves, fittings, manifolds

Modular – ASI 35

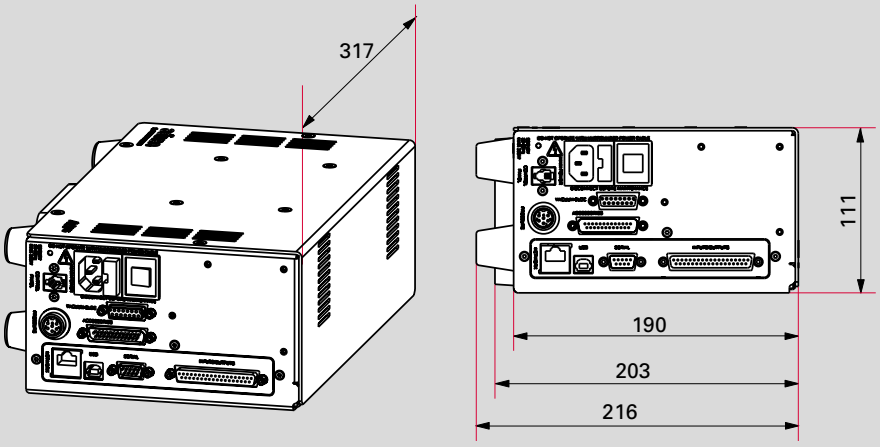
Modular tracer gas leak detector
The highest performance in helium and hydrogen for industrial leak detection systems.

Dimensions

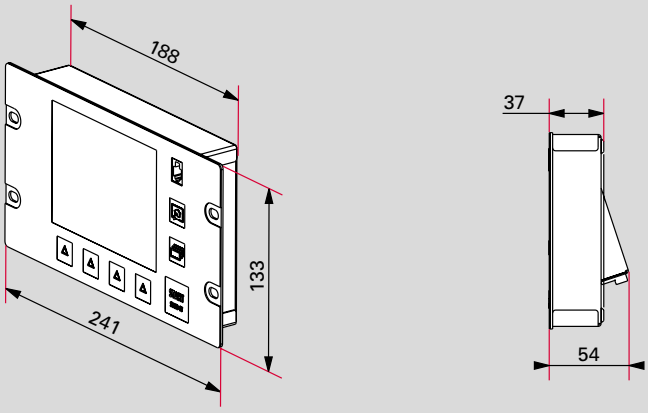
Vacuum module



Electronic module



Control panel



Dimensions in mm

Technical data

Modular Helium Leak Detector	ASI 35
Test methods	Vacuum and sniffing leak detection
Minimum detectable leak rate for He (vacuum leak detection)	$3.5 \cdot 10^{-8}$ mbar l/s (gross leak test mode) $1 \cdot 10^{-10}$ mbar l/s (normal leak test mode) $5 \cdot 10^{-12}$ mbar l/s (high sensitivity test mode)
Minimum detectable leak rate for He (sniffing leak detection)	$1.5 \cdot 10^{-8}$ mbar l/s
Tracer gases	^{4}He, ^{3}He, H_2
Maximum inlet test pressure	18 mbar (gross leak test mode) 1 mbar (normal leak test mode) 0.2 mbar (high sensitivity test mode)
Pumping speed for He	6 l/s (high sensitivity test mode) 1.8 l/s (normal test mode)
Start-up time	< 3 min
Vacuum connections	DN 25 ISO-KF; DN 16 ISO-KF
Interface (see the order matrix for complete options configuration)	RS-232, Ethernet, Profibus, Profinet, USB
I/O interface	6 digital inputs (allocated functions configurable) 3 analog outputs (configurable: helium signal log, mantissa, exponent, inlet pressure) 5 relay outputs (allocated functions configurable) 4 transistor (open collector) outputs (allocated functions configurable)
Dimensions: L × W × H	
Vacuum module:	279 × 264 × 197 mm
Electronic module:	216 × 317 × 111 mm
Control panel:	241 × 54 × 133 mm
Weight	
Vacuum module:	15 kg
Electronic module:	5 kg
Control panel:	1.3 kg
Universal Voltage	90–240 V AC; 50/60 Hz
Maximum power consumption	300 W
Operating temperature	10–45 °C

Order matrix ASI 35

Order number

S a b c 0 d 0 e MM9A

Industrial control panel and associated cable length	a
Without control panel	0
1.8 m	1
5 m	2
10 m	3

Cable length for electronic module	b
1.5 m	1
3.5 m	2
5 m	3
10 m	4

Sniffing	c
Without	X
With	S

Internal calibration	d
Without	0
With	1

Interface board	e
37 pins I/O	2
37 pins I/O + Ethernet	4
Profibus	8
Profinet	9

Sniffer leak detector – ASM 306 S

Helium and hydrogen sniffer leak detector for easy and accurate full-time sniffing operations

Our know-how

Pfeiffer Vacuum is one of the world's leading providers of vacuum and leak testing solutions. In order to complete our leak detection product portfolio, we are introducing a breakthrough unit addressing any industrial sniffing applications, especially refrigeration and air conditioning.
Leakage control using sniffing measurements before the final refrigerant gas charge, is one of the latest step of the production process. Thus it requires the highest testing reliability to increase productivity and quality levels.
The ASM 306 S will help you to meet those challenges.

Superior performance and fast testing

Based on over 50 years of know-how in leak detection, you will get all the advantages of a proven technology regarding sensitivity, accuracy and repeatability.
The ASM 306 S has been design to offer fast and repeatable measurements, whether helium or hydrogen is used as tracer gas. This unit offers the fastest recovery in case of big leaks to maximize uptime.

Compact design

The ASM 306 S offers a compact and rugged design with limited footprint to be easily installed at any workplace. It is also the perfect choice for an integration into a production line whether for manual or automated operation.

Applications

- Cooling systems such as refrigerator and air conditioner
- Heat exchangers
- Valves and manifolds
- Gas circuit components
- Storage tanks, expansion vessels

Customer benefits

- Helium and hydrogen tracer gases
- High sensitivity and accurate measurements
- Intuitive menu for easy operation
- Fast start-up
- Fast recovery in case of pollution
- Compact design and small footprint for easy integration into your production line
- Integrated toolbox
- Latest generation of tactile HMI with a large touch screen
- Low maintenance requirements

Sniffer leak detector – ASM 306 S

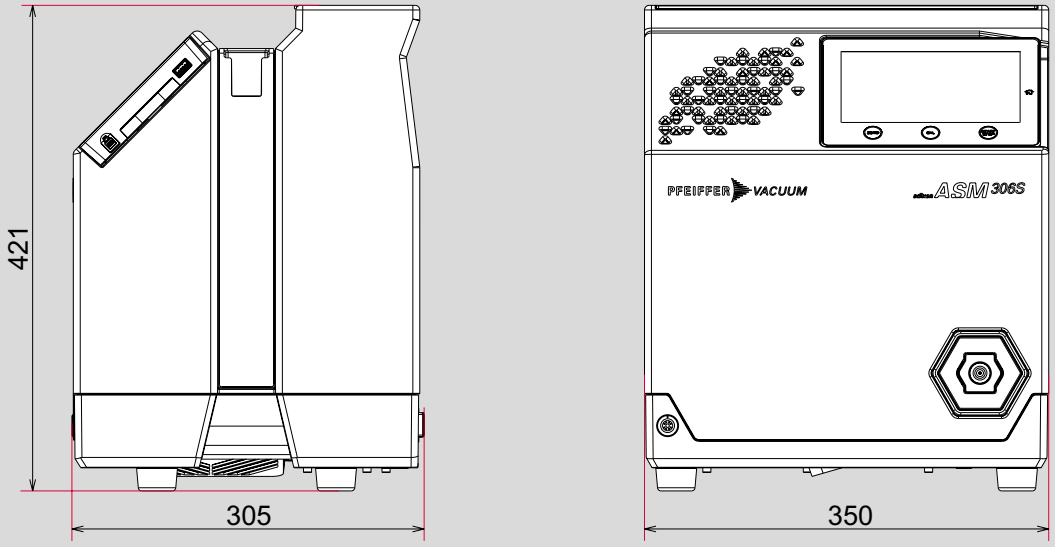
Helium and hydrogen sniffer leak detector for easy and accurate full-time sniffing operations

Technical data

Features	ASM 306 S
Detectable gases	Helium and hydrogen
Min. detectable leak rate for 4He	$1 \cdot 10^{-7}$ mbar l/s
Min. detectable leak rate for H_2	$5 \cdot 10^{-7}$ mbar l/s[1)]
Start up time	2 min
Response time	< 1 s
Sniffer probe flow	300 sccm ± 10%
Noise level	55 dB (A)
Interface	RS-232, I/O, Fieldbus options
Operating temperature	10 – 40 °C
Supply voltage	100 – 240 V, 50/60 Hz
Power consumption max	300 VA
Weight	22 kg
Dimensions (L x W x H)	350 x 305 x 421

1) The best sensitivity is achieved after degassing

Dimensions



Dimensions in mm

Order number matrix ASM 306 S

Order number

R S A S 0 0 A a M M 9 A

Interface board	a
Basic 15 pins I/O	**0**
37 pins I/O	**2**
37 pins I/O + Ethernet[1)]	**4**

[1)] Ethernet will allow to create an additional COM port to operate the leak detector through a computer
Other Fieldbus communication options on request.

Accessories

Accessories	Order number
Hybrid sniffer probe	
2 m hose length, rigid nozzle	**PRB2H02HA**
5 m hose length, rigid nozzle	**PRB2H05HA**
10 m hose length, rigid nozzle	**PRB2H10HA**
Hybrid cables	
2 m length	**A604523**
5 m length	**A602086**
10 m length	**A602106**
Replacement filters for hybrid probes	
Tip filters	**127829S**
Small particles filters	**128051**
Calibrated leaks	
100% Helium, value between 4-6 · 10^{-5} mbar l/s	**127388**
100% Hydrogen, value between 4-6 · 10^{-5} mbar l/s	**127387**
Trolley	**114820**

Leak detector accessories

Universal accessories for ASM leak detectors

Accessories

Various accessories are available for Pfeiffer Vacuum leak detectors.
Please refer to the overview below.

Remote control

The remote control allows to control and display values of the leak detector from a distance. The RC10 can be wireless with an external Bluetooth dongle (part of the delivery) or can connected with 5 m wire to the detector

Accessories	Order number
Remote control	
RC10 (wired/wireless operation, color touch screen)	**124193**

Sniffer probe[1)]

Sniffer probe for leak detection in sniffing mode.
Easy connection to the leak detectors by external coupling.

Accessories	Order number
Sniffer probe	
5 m hose length, rigid 9 cm nozzle	**SNC1E1T1**
10 m hose length, rigid 9 cm nozzle	**SNC2E1T1**
5 m hose length, flexible 15 cm nozzle	**SNC1E3T1**
10 m hose length, flexible 15 cm nozzle	**SNC2E3T1**

Other nozzle and hose lengths available on request.
[1)] Only the SNC1E1T1 is suitable for the ASM 310.

Spray gun

For connection to a gas bottle or gas line for easy tracer gas spraying.

Accessories	Order number
Spray gun, standard	**112535**
Spray gun „Elite" with accessories in a case	**109951**

Bombing chambers

Chambers equipped with valve and pressure measurement, for bombing test on sealed components

Accessories	Order number
Bombing chamber 10 bar (ø 150 mm, l = 200, V = 3.5 l)	**786396**
Bombing chamber 25 bar (ø 100 mm, l = 800, V = 6.4 l)	**786397**

Calibrated leak

Helium calibrated test leak from 10^{-10} to 10^{-5} Pa m^3/s, with helium reservoir.

Inlet filter

Connected to the inlet flange, these dust filters prevent large amounts of dust from entering the leak detector.

Accessories	Order number
Stainless steel, 15 µm, DN 25/25 ISO-KF	**127014**
Stainless steel, 15 µm, DN 25/40 ISO-KF	**127013**
Stainless steel, 15 µm, DN 40/40 ISO-KF	**127012**
Stainless steel, 5 µm, DN 25/25 ISO-KF	**127017**
Stainless steel, 5 µm, DN 25/40 ISO-KF	**127016**
Stainless steel, 5 µm, DN 40/40 ISO-KF	**127015**
Brass, 40 µm, DN 25/25 ISO-KF	**107410**
Brass, 40 µm, DN 25/40 ISO-KF	**107951**
Brass, 40 µm, DN 40/40 ISO-KF	**107952**
Brass, 20 µm, DN 25/25 ISO-KF	**105841**
Brass, 20 µm, DN 25/40 ISO-KF	**105843**
Brass, 20 µm, DN 40/40 ISO-KF	**105842**
Brass, 5 µm, DN 25/25 ISO-KF	**105844**
Brass, 5 µm, DN 25/40 ISO-KF	**105846**
Brass, 5 µm, DN 40/40 ISO-KF	**105845**

Locking clamp

Clamp with specific tool that allows to lock any accessory on a DN 40 flange.

Accessories	Order number
Locking clamp DN 40 KF	**118801**

Transportation cart

Accessories	Order number
Trolley for ASM 310 and ASM 306 S	**114820**
2 wheels trolley for ASM 340 wet and dry, with drawer at front	**122570**
Cart allowing to install the ASM 340 W/D/I on the upper plate and an additional pump on the bottom plate	
Low voltage cart 90–130 V 50/60 Hz	**On request**
High voltage cart 200–240 V 50/60 Hz	**On request**

Test chamber for HLD equipped with 37 pins I/O

Accessories	Order number
Small test chamber DN 25 (hemispherical: 72 mm diameter, 31 mm depth)	**On request**
Medium test chamber DN 25 (cylindrical: 85 mm diameter, 68 mm depth)	**On request**
Large test chamber DN 40 (cylindrical: 160 mm diameter, 100 mm depth)	**On request**

Further accessories are available at
www.pfeiffer-vacuum.com

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